MEDICAL CODING MASTERY

COMPLETE STUDENT EDITION

CORRINA R. LYNCH

CORRINA'S CODE SPOT(TM) EDUCATIONAL SERIES

SPOT IT | SEARCH IT | SUPPORT IT | CODE IT

MEDICAL CODING MASTERY
Complete Student Edition

Created by Corrina R. Lynch
Corrina's Code Spot(TM) Educational Series

SPOT IT Identify documentation clues.	**SEARCH IT** Locate the Index or manual pathway.	**SUPPORT IT** Verify rules, notes, and documentation.	**CODE IT** Assign and sequence supported codes.

Professional coding education, codebook navigation, guideline application, worked examples, review, and examination preparation.

Publication Information

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This Student Edition consolidates the complete available source textbook into one continuous classroom volume. It preserves the source reading, examples, exercises, and review content while adding unified front matter and a canonical 26-chapter curriculum map.

Coding classifications, code descriptors, payer rules, and official guidance change. Verify all coding decisions against the code set, official guidelines, and payer instructions applicable to the date of service and setting. CPT® is a registered trademark of the American Medical Association.

How to Use This Book

Read the lesson first. **Spot** the documentation clues. **Search** the Index or manual. **Support** the selection with the Tabular List, guidelines, documentation, and codebook instructions. **Code** only after verification and sequencing review.

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Each completed chapter is designed to include reading, figures, Cautions, Coder’s Notes, Corrina’s Code Spot(TM), worked examples, Quick Checks, coding practice, a 25-question chapter assessment, and answer-key support. The complete curriculum concludes with a 100-question comprehensive examination. The source-preserved pages that follow contain the full available textbook content and prior-edition readings.

Reimbursement, HIPAA and Compliance

Corrina R. Lynch | CPC Preparation

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18. Medicare fraud and compliance
19. Managed health care
20. Medicare manuals and types of managed plans
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Prior-edition readings and exercises follow the revised lesson and may use the earlier chapter arrangement.

Learning objectives

- Distinguish Medicare Parts A, B, C and D.
- Apply privacy and compliance principles to common coding tasks.
- Explain how a fee schedule uses RVUs and locate a federal rule.

- Recognize how managed plan requirements affect the claim workflow.

1. Introduction

A coder translates supported diagnoses, services and supplies into standardized codes. A claim uses those codes to describe the encounter; coverage rules decide whether and how the payer pays. Start with the documentation and check the applicable rules for the date of service.

Worked example

A record documents a routine follow-up, but the claim lists an unrelated procedure. Check the record and resolve the discrepancy before billing. Do not change the claim to obtain payment.

2. Basic structure of Medicare

Original Medicare is Parts A and B. Part A generally covers inpatient hospital care and certain other facility or home services. Part B generally covers professional services and outpatient care. Part C, Medicare Advantage, is a private-plan way to receive Part A and Part B benefits. Part D covers outpatient prescription drugs through plans.

Worked example

A Medicare beneficiary has an office visit. Start by identifying whether the beneficiary uses Original Medicare or a Medicare Advantage plan, then check the correct plan’s coverage and billing rules.

3. Quality Improvement Organizations (QIOs)

Medicare’s QIO program works on quality improvement and certain beneficiary concerns. Distinguish the quality review role from a Medicare Administrative Contractor’s claims role.

Worked example

A question about an allegedly premature discharge goes through the applicable beneficiary review process, not ordinary code correction.

4. Part A: Hospital insurance

Part A includes inpatient hospital care and eligible skilled nursing, hospice and certain home health services, subject to coverage requirements.

Worked example

Do not treat every bed stay as inpatient. Verify the actual admission status.

5. Part B: Medical insurance

Part B includes physician services, many outpatient services, preventive services and eligible equipment.

Worked example

An office visit under Original Medicare is generally a Part B service; coding and coverage still depend on the encounter.

6. Part C: Medicare Advantage

Medicare Advantage plans administer Medicare benefits through private plans. Check plan-specific network, referral and authorization rules.

Worked example

Verify the member’s plan instead of routing every Medicare claim as Original Medicare.

7. Part D: Prescription drug coverage

Part D is outpatient prescription drug coverage offered through Medicare-approved plans. Formularies and requirements can vary.

Worked example

Distinguish a prescription filled at a retail pharmacy from a drug administered in the office that may be covered under Part B.

8. Health Insurance Portability and Accountability Act (HIPAA)

Use or disclose protected health information only as permitted. For uses and disclosures subject to minimum necessary, limit information to what is needed for the task. The minimum necessary standard does not apply to disclosures to or requests by a health care provider for treatment.

Worked example

For an internal claims review subject to minimum necessary, give the reviewer access to the records needed for the audit and follow organizational access policies.

9. Electronic transactions and code sets

HIPAA administrative simplification standardizes covered electronic transactions and code sets. Examples include electronic claims (837), claim payments and remittance advice (835), and eligibility (270/271). ICD-10-CM reports diagnoses, ICD-10-PCS applies to inpatient hospital procedures, and CPT and HCPCS Level II describe applicable services, procedures and supplies.

Worked example

The diagnosis and procedure use different code sets in a professional claim; the claim and resulting remittance use different electronic transactions.

10. Privacy and security requirements

The Privacy Rule applies to protected health information in any form. The Security Rule requires safeguards for electronic PHI. Follow role-based access, use approved systems and report suspected incidents through organizational procedures.

Worked example

Do not send a patient record from a work system to a personal email account to finish coding later.

11. National Provider Identifier (NPI)

The NPI is the standard provider identifier used in applicable HIPAA transactions. Verify the appropriate billing or rendering provider as required. The NPI is not a diagnosis code and does not establish payer enrollment.

Worked example

Correct a mismatch in provider identity through the supported billing workflow; do not substitute another clinician’s NPI.

12. Federal Register

Use the Federal Register to locate the official publication of federal proposed and final rules. A proposed rule invites input; consult the final rule and any later changes before treating a proposal as policy. Check the effective date and any separate applicability date.

Worked example

If a payment policy is announced in a proposal, verify the final rule and date before changing a billing workflow.

13. Outpatient Resource-Based Relative Value Scale (RBRVS)

The Medicare Physician Fee Schedule uses relative value units (RVUs) for work, practice expense and malpractice. Each component has a geographic adjustment. Add the adjusted components, then multiply by the applicable conversion factor. The resulting amount does not by itself determine coverage or final payment.

Worked example

Training example only: adjusted work 1.20 + practice expense 0.70 + malpractice 0.10 = 2.00 adjusted RVUs. At a hypothetical conversion factor of $30, the illustrative amount is $60.

14. RVUs, geographic indices and the conversion factor

Separate the work, practice expense and malpractice RVUs. Adjust each with its own geographic practice cost index (GPCI), add the adjusted values, and apply the applicable conversion factor.

Worked example

For teaching only: adjusted components that total 2.50 and an illustrative $30 factor produce $75 before other adjustments.

15. Medicare volume performance standards: historical context

MVPS was an earlier approach for updating physician payment. Later approaches included the sustainable growth rate and changes under MACRA. Use the fee schedule and update rules that apply to the current service, not the historical MVPS formula.

Worked example

A historical chapter may explain why volume standards existed; it is not a source for calculating a current allowed amount.

16. Beneficiary protection, limiting charge and uniformity

Assignment and applicable billing limits affect beneficiary liability. For qualifying nonassigned Original Medicare physician services, the federal limiting charge is generally 115% of the nonparticipating fee schedule amount; exceptions and stricter state rules can apply. A common fee schedule methodology still permits geographic and setting differences.

Worked example

If a qualifying nonparticipating amount is $100, the federal illustration is a $115 cap before considering other rules. Verify assignment, service eligibility and jurisdiction first.

17. Payment adjustments, site of service and surgical modifiers

A service can have different facility and nonfacility practice-expense amounts. Coverage can also depend on the site. Apply surgical modifiers only when the documented circumstances and payer rules support them, including multiple procedure or postoperative rules where applicable.

Worked example

Use the actual place of service. Do not change the setting or append a modifier only to increase payment or bypass an edit.

18. Medicare fraud and compliance

An incorrect claim can result from a mistake; the error alone does not establish fraud. Watch for billing services not furnished, unsupported higher-level codes and inappropriate unbundling. Correct identified errors and raise suspected misconduct through the organization’s compliance process.

Worked example

An auditor finds claims for visits with no evidence that services occurred. Escalate for investigation and correction rather than creating documentation or assuming intent.

19. Managed health care

Managed care plans may use provider networks, referrals and prior authorization. HMO and PPO rules differ by plan. Verify eligibility, network status, benefits and authorization requirements for the encounter. Authorization does not replace accurate coding.

Worked example

Before an office procedure, the team checks the member’s plan and any required authorization. The coder still reports only the documented service and diagnosis.

20. Medicare manuals and types of managed plans

Consult CMS Internet-Only Manuals (IOMs) for operational instructions and check their date against applicable law, rules and transmittals. Compare HMO and PPO rules using the member’s actual plan documents.

Worked example

An HMO member may need a referral and a PPO may allow out-of-network care at different cost. Verify the plan before advising the patient.

Chapter review

1. Which parts cover professional services and outpatient prescription drugs?

2. What is the difference between a proposed rule and an effective final rule?

3. If adjusted RVUs total 2.5 and the illustrative conversion factor is $30, what is the amount?

4. What should you do when a claimed service cannot be supported?

References

Medicare: coverage and plan basics

HHS: HIPAA minimum necessary

Federal Register: official publications

CMS: Physician Fee Schedule

CMS: combating Medicare fraud

MEDICAL CODING MASTERY | STUDENT EDITION

CHAPTER 1

Introduction to Medical Coding

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▶️ CHAPTER OBJECTIVES

After completing this chapter, the student will be able to:

1. Define medical coding and explain its purpose in the healthcare system.
2. Identify the three primary code sets used in medical coding: ICD-10-CM, CPT, and HCPCS Level II.
3. Explain the role of the medical record as the foundation of all coding decisions.
4. Describe the eight types of medical records coders commonly encounter in practice.
5. Identify the members of the healthcare team and articulate the coder's unique role within that team.
6. Differentiate between inpatient and outpatient coding environments and their respective code sets.
7. Outline the ten steps of the healthcare revenue cycle and identify where

coding occurs.

8. Define upcoding, downcoding, and unbundling and explain their legal consequences.

9. Summarize the key provisions of the False Claims Act as they apply to medical coders.

10. Apply the AAPC Code of Ethics to real-world coding scenarios and decision-making.

▶️ KEY TERMS

The following terms appear throughout this chapter. Note each as you encounter it in the text.

- **AAPC**
- **Adjudication**
- **Charge Capture**
- **CMS (Centers for Medicare & Medicaid Services)**
- **Compliance**
- **CPC (Certified Professional Coder)**
- **CPT (Current Procedural Terminology)**
- **Denial Management**
- **Documentation**
- **Downcoding**
- **EHR (Electronic Health Record)**
- **False Claims Act**

- **Fraud**
- **HCPCS Level II**
- **ICD-10-CM**
- **Medical Coding**
- **OIG (Office of Inspector General)**
- **Revenue Cycle**
- **Unbundling**
- **Upcoding**

▶️ CHAPTER OVERVIEW

Welcome to Chapter 1 — the foundation of everything you are about to learn. This chapter introduces you to the world of medical coding: what it is, why it matters, who does it, and how it fits into the larger picture of healthcare delivery and reimbursement. You will meet the three code sets that coders use every day, learn why the medical record is the coder's single most important tool, and understand your place within the healthcare team and the revenue cycle. By the end of this chapter, you will also have a clear picture of the ethical and legal responsibilities that come with this credential — because coding done right is not just about accuracy, it is about integrity.

SECTION 1.1

What Is Medical Coding?

Let's start at the very beginning — not because you don't know anything, but because a lot of people think they know what medical coding is and they're only halfway right. So let's build this from the ground up, together.

Medical coding is the process of translating clinical documentation — everything the physician writes in a patient's medical record — into standardized, universal alphanumeric codes. These codes communicate, in a language that every payer, every facility, and every government agency can understand, exactly what happened during a patient encounter: why the patient came in, what the provider found, what was done, what was prescribed, and what supplies were used.

Think about it this way. Imagine you speak only English, but you're handed a document written in French. You need a translator — someone who reads the French document and gives you the exact meaning in English, without adding anything, without leaving anything out, and without making anything up. That's a medical coder. The physician writes in clinical language. You translate it into code language. And every single word matters.

That's why we say medical coding is **the language of medicine**. It is the universal dialect spoken by hospitals, physician offices, insurance companies, CMS, public health researchers, and quality improvement organizations. When a patient is seen for Type 2 diabetes with diabetic chronic kidney disease, Stage 3, the code E11.22 says all of that — instantly — to any system in the United States, and in many countries worldwide. No narrative needed. Just precision.

Who Uses Codes — and Why?

You might be surprised by how many different audiences rely on the codes you assign. This is not just an insurance billing function. Medical codes serve the following stakeholders:

- **Insurance Payers (Private and Government):** Use codes to determine coverage, calculate reimbursement, and detect billing anomalies.

- **Healthcare Facilities:** Use codes for charge capture, revenue cycle management, and internal financial analysis.
- **Government Agencies (CMS, CDC, NIH):** Use coded data to track disease trends, allocate public health resources, and update clinical policies.
- **Researchers:** Use large databases of coded patient data to study treatment outcomes, disease prevalence, and population health.
- **Quality Organizations (TJC, NCQA):** Use coded data to evaluate quality metrics and accreditation benchmarks.
- **Attorneys and Courts:** Use medical records and associated codes as legal evidence in malpractice, workers' compensation, and personal injury cases.

When you assign a code inaccurately — even by one character — you can misrepresent a patient's condition, trigger a claim denial, cause an underpayment or overpayment, skew research data, or expose your employer to a federal audit. This is not a job where "close enough" ever applies.

Why Accuracy Is Everything

Here's what's at stake every time you open a medical record and start coding:

- **Reimbursement:** Incorrect codes result in claim denials, delays in payment, or improper payments — all of which affect the financial health of the practice or facility.
- **Compliance:** Inaccurate coding — even if unintentional — can trigger an audit from a payer or government agency. Intentional inaccuracy can constitute fraud.
- **Patient Safety:** Coded data flows into a patient's health record history. Incorrect diagnosis codes can affect future treatment decisions by other providers.
- **Public Health Data:** Coded data from millions of encounters feeds into national databases. A systemic coding error across facilities can distort disease statistics used to make policy decisions.

🗣️ FROM THE TRENCHES

"When I first started coding, I thought it was just looking up numbers in a book. I figured, how hard could it be? Then I sat down with my first operative report and realized — there's no number lookup in the world that replaces understanding the clinical picture. You have to read that note like a detective. Every word the surgeon wrote is there for a reason. Once I figured that out, everything changed. I went from averaging 30 charts a day to 60, with a 98% accuracy rate. Understanding the WHY made all the difference."

— Denise Hartwell, CPC, CPMA | Senior Outpatient Coding Specialist, MedFirst Health System, Atlanta, GA

Denise has been coding for 14 years across physician office, hospital outpatient, and compliance auditing settings. She currently mentors new coders entering the field.

⚡ CODING SHOT

Always code to the **highest degree of specificity** the documentation supports. If the record says "right lower lobe pneumonia due to Klebsiella pneumoniae," do not code "unspecified pneumonia." Vague or nonspecific codes are among the top audit red flags identified by the OIG.

🛑 STOP!

Never assign a code based on the Index alone. The Alphabetic Index in ICD-10-CM is your starting point — it is never your final answer. You must always verify every code in the Tabular List before assigning it. Codes in the Index may be

incomplete, or may carry important instructional notes visible only in the Tabular.

✎ QUICK CHECK 1.1

Directions: Answer the following questions without looking back at the section. Write your answers on the lines provided.

1. Medical coding is the process of translating _____ into standardized alphanumeric codes.

2. The phrase "the language of medicine" refers to the system of _____ used universally in healthcare.

3. Name TWO stakeholders (other than insurance payers) who rely on coded data: _____ and _____.

4. Inaccurate coding can affect all of the following EXCEPT — circle one: **A.** Reimbursement **B.** Patient eye color **C.** Public health data **D.** Compliance

5. "If it's not _____, it didn't happen" is the golden rule of medical coding and documentation.

EXERCISE 1-A | What Is Medical Coding?

Directions: Answer each question using the information presented in Section 1.1. Use complete sentences where indicated. Write answers on the lines provided.

1. In your own words, define medical coding. (Complete sentence required.)

2. True or False (circle one): **T** / **F** — Medical coding is used only for insurance billing purposes.

3. A physician documents that a patient has "Type 2 diabetes with diabetic

chronic kidney disease, Stage 3." A coder assigns the code for "unspecified diabetes." Is this acceptable? Explain why or why not.

4. List FOUR consequences of inaccurate coding:

1.

2.

3.

4.

5. Multiple Choice — The analogy used in this section compares a medical coder to:

A. A librarian who organizes documents by subject B. A translator who converts clinical language into code language C. A physician's assistant who documents patient visits D. An auditor who reviews completed claims Answer:

6. True or False (circle one): **T** / **F** — Coded data from individual patient encounters contributes to national public health statistics.

7. The Alphabetic Index of ICD-10-CM is:

A. The final authority for all code assignments B. A starting point that must be verified in the Tabular List C. Used only for outpatient coding D. Published by the AAPC Answer:

SECTION 1.2

The Three Code Sets

There is no single codebook in medical coding. There are three distinct code sets, each serving a specific and non-interchangeable purpose. If you remember nothing

else from this section, remember this: **ICD-10-CM answers WHY. CPT answers WHAT. HCPCS Level II answers WHAT ELSE.** Let's go deeper.

ICD-10-CM — International Classification of Diseases, 10th Revision, Clinical Modification

ICD-10-CM is the code set used to report diagnoses — the reason(s) a patient was seen, examined, treated, or monitored. When a patient walks through the door with chest pain, shortness of breath, or a broken wrist, the diagnosis code tells every payer and every system in the country why that encounter happened.

- **Published by:** The World Health Organization (WHO), with the clinical modification maintained by the Centers for Disease Control and Prevention (CDC) and the Centers for Medicare & Medicaid Services (CMS).
- **Format:** Alphanumeric — begins with a letter, followed by up to 6 additional characters (numbers and letters), for a maximum of 7 characters total. Example: **S52.501A** = Unspecified fracture of the lower end of right radius, initial encounter for closed fracture.
- **Update Cycle:** Updated annually, effective **October 1** of each year.
- **Where Used:** All healthcare settings — inpatient, outpatient, physician office, long-term care, home health, hospice, and more.
- **What it answers:** WHY was the patient seen? What is the patient's condition?

⚡ CODING SHOT

ICD-10-CM codes have up to **7 characters**, but not all codes use all 7. The number of characters in a code is determined by the specificity of the condition. A code with fewer characters is never acceptable when a more specific code is available. Pay attention to the 7th character extension — it often carries critical specificity (especially in injury codes, where it indicates initial encounter, subsequent encounter, or sequela).

CPT — Current Procedural Terminology

CPT is the code set used to report procedures and services — what the provider actually did during the patient encounter. A physical examination, a surgical procedure, an MRI, an injection, a consultation — all of these are captured with CPT codes.

- **Published by:** The American Medical Association (AMA). CPT is copyrighted and updated annually.
- **Format:** Five-digit numeric codes. Example: **99213** = Office or other outpatient visit for an established patient (moderate complexity). CPT also includes two-digit modifiers that provide additional specificity.
- **Update Cycle:** Updated annually, effective **January 1** of each year.
- **Where Used:** Primarily in outpatient and physician office settings for professional services. Hospital outpatient departments also use CPT. Inpatient procedures use a separate system (ICD-10-PCS).
- **What it answers:** WHAT was done? What service or procedure was performed?

HCPCS Level II — Healthcare Common Procedure Coding System

HCPCS Level II (pronounced "hick-picks") is used to report supplies, drugs, equipment, ambulance transport, orthotics, prosthetics, and other services that are not adequately described by CPT codes. When a patient needs a walker, a specific injectable medication, or non-emergency ambulance transport, HCPCS Level II is the code set that captures it.

- **Published by:** The Centers for Medicare & Medicaid Services (CMS). Unlike CPT, HCPCS Level II is publicly available and not copyrighted.

- **Format:** Alphanumeric — one letter followed by four digits. Example: **A6216** = Gauze, non-impregnated, non-sterile, pad size 16 sq. in. or less. Like CPT, HCPCS Level II also uses modifiers.
- **Update Cycle:** Updated **quarterly** (more frequently than ICD-10-CM or CPT).
- **Where Used:** All settings, but especially critical for Medicare and Medicaid billing. Also used for durable medical equipment (DME), orthotics, and home health.
- **What it answers:** WHAT ELSE was provided? What supply, drug, or non-physician service was involved?

> ⚡ **CODING SHOT**
>
> Do not confuse HCPCS Level I with Level II. **HCPCS Level I IS CPT** — the AMA's five-digit procedure codes. HCPCS Level II is the separate, CMS-published alphanumeric code set for supplies and services. On the CPC exam, when a question references "HCPCS codes," it is almost always referring to Level II. Know the distinction cold.

The Three Code Sets at a Glance

Code Set	Publisher	Format	Update Cycle	Answers	Used For
ICD-10-CM	WHO / CDC / CMS	Up to 7 alphanumeric characters (letter + up to 6 more)	October 1 annually	**WHY** (Diagnosis)	All healthcare settings; diagnosis reporting
CPT	American Medical Association (AMA)	5-digit numeric (e.g., 99213)	January 1 annually	**WHAT** (Procedure/ Service)	Outpatient, physician office, professional services
HCPCS Level II	CMS	1 letter + 4 digits (e.g.,	Quarterly	**WHAT ELSE**	Medicare/ Medicaid,

Code Set	Publisher	Format	Update Cycle	Answers	Used For
		A6216)		(Supplies/Drugs/DME)	DME, drugs, ambulance, orthotics

📄 OFFICIAL GUIDELINES FOR CODING AND REPORTING

> ICD-10-CM Official Guidelines for Coding and Reporting, Section I.A.1:
>
> "The conventions, general guidelines, and chapter-specific guidelines are applicable to all health care settings unless otherwise indicated. The conventions and instructions of the classification take precedence over guidelines."

What this means: The ICD-10-CM Official Guidelines are not suggestions — they are the rules of the road. Before you ever apply a guideline from your textbook or your employer's policy, the classification's own instructions (found in the Tabular List as "Includes," "Excludes1," "Excludes2," "Code also," and "Use additional code" notes) take priority. When the book tells you something, you follow it. Period. These guidelines are updated every year alongside the code set — staying current is not optional.

🔎 CHECK THIS OUT

ICD-10-CM contains more than **72,000 diagnosis codes** — compared to approximately 14,000 in the previous ICD-9-CM system. That enormous expansion in specificity is not just about detail for its own sake. Greater specificity means

more accurate tracking of disease, better outcomes research, and more precise reimbursement. For you as a coder, it also means more options — and more responsibility to find the right one.

🔧 TOOLBOX — Section 1.2 Key Takeaways

- There are THREE code sets: ICD-10-CM (diagnoses), CPT (procedures), and HCPCS Level II (supplies/drugs/DME).
- ICD-10-CM is published by WHO/CDC/CMS and updated October 1. CPT is published by the AMA and updated January 1. HCPCS Level II is published by CMS and updated quarterly.
- ICD-10-CM codes can be up to 7 characters. CPT codes are always 5 digits. HCPCS Level II codes are 1 letter + 4 digits.
- "HCPCS Level I" and "CPT" are the same thing. "HCPCS Level II" is a separate, distinct code set.
- All three code sets are used together — a claim typically contains at least one ICD-10-CM code and at least one CPT or HCPCS Level II code.

✎ QUICK CHECK 1.2

Directions: Answer the following without looking back. Write your answers on the lines provided.

1. Which code set answers the question "WHY was the patient seen?"
2. CPT codes are published by the _____ and consist of _____ digits.
3. HCPCS Level II is updated _____ (how often?).
4. True or False (circle): **T** / **F** — HCPCS Level I and CPT are two different

code sets.

5. Which code set would you use to report a patient receiving a specific injectable drug in the office?

EXERCISE 1-B | The Three Code Sets

Directions: For each scenario below, identify which code set (ICD-10-CM, CPT, or HCPCS Level II) would be used to report the item described. Write the code set name on the line. Then briefly explain your reasoning.

1. A patient is diagnosed with acute appendicitis.
Code Set:
Reason:

2. A physician performs a laparoscopic appendectomy.
Code Set:
Reason:

3. A Medicare patient is supplied with a standard power wheelchair.
Code Set:
Reason:

4. A patient receives a flu vaccine injection at a physician's office.
Code Set:
Reason: (Note: Both CPT and HCPCS Level II may apply — explain both.)

5. A patient is seen for hypertensive heart disease with heart failure.
Code Set:

6. True or False (circle): **T** / **F** — A single claim can contain codes from more than one code set simultaneously.

7. ICD-10-CM is updated on: **A.** January 1 **B.** April 1 **C.** October 1 **D.** Quarterly

Answer:

8. Which code set is publicly available without copyright restrictions?

A. ICD-10-CM B. CPT C. HCPCS Level II D. ICD-10-PCS Answer:

SECTION 1.3

Medical Records and Documentation

Here is the most important sentence you will read in this entire textbook. Read it slowly. Read it twice. Then write it on a sticky note and put it somewhere you will see it every single day you work as a coder:

"If it's not documented, it didn't happen."

This is not a suggestion. This is the golden rule of medical coding. If the physician did not write it, dictate it, or electronically document it in the patient's medical record, you cannot code it — not because you don't believe it happened, not because the doctor "always does that procedure," not because the superbill says so. The medical record is the only legal evidence of what occurred during that encounter. And as a coder, you are only as good as the documentation you are given.

The Medical Record as the Source Document

The **medical record** is the official, legal, and clinical account of a patient's healthcare. It contains the documentation generated by everyone who had clinical contact with the patient — the physician, the nurses, the therapists, the radiologists, the pathologists, and more. Every entry in that record can be subpoenaed. Every entry in that record is a legal document. And every code you

assign must be supported — directly and specifically — by something written in that record.

As a coder, you do not diagnose. You do not assume. You do not extrapolate. You do not "fill in gaps" based on what logically should have happened. Your job is to **read, interpret, and code** only what is documented. This is a boundary you will protect fiercely — for your own legal protection, and for the integrity of the data you're generating.

Types of Medical Records You Will Code From

You will encounter many different types of medical record documents throughout your coding career. Understanding what each one contains — and what it's used for — will make you a faster, more accurate coder. The most common types include:

- **SOAP Notes:** The standard format for outpatient office visits. **S** = Subjective (what the patient reports); **O** = Objective (what the provider observes and measures); **A** = Assessment (the diagnosis); **P** = Plan (what the provider will do). Your diagnosis codes come from the "A" section. Your E/M level comes from the entire note.
- **Operative Reports:** Dictated by the surgeon following a procedure. Contains the procedure name, technique, findings, and complications. This is where you find the CPT code — but read carefully, because the operative report title does not always match the procedure that was actually performed.
- **Discharge Summaries:** Written at the conclusion of a hospital stay. Summarizes the admission diagnosis, course of treatment, procedures performed, and discharge diagnosis. For inpatient coding, the discharge diagnosis is what you code — not the admitting diagnosis (unless the discharge summary is not available).
- **Radiology Reports:** Generated by the radiologist after interpreting imaging (X-ray, CT, MRI, ultrasound). Contains the findings and the radiologist's impression. The impression — not just the findings — is what you code from.

- **Lab Reports:** Results from laboratory testing. By themselves, abnormal lab values are not always coded as diagnoses — follow the guidelines for outpatient vs. inpatient settings carefully.
- **Consultation Letters:** Written by a specialist to the referring provider after seeing a patient in consultation. Contains the consultant's assessment and recommendations. Verify whether the encounter was truly a consult or a referral before applying consult codes.
- **Emergency Department Notes:** Contain triage information, provider assessment, workup, treatment, and disposition (admit, discharge, transfer). The condition at the time of coding — not the chief complaint — drives the diagnosis code selection.
- **Pathology Reports:** Issued by a pathologist after examining tissue, cells, or specimens. Critical for oncology coding — the pathology report is the definitive document for cancer diagnoses. Never code a malignancy without pathology confirmation unless guidelines specify otherwise.

The Coder's Process: Read, Interpret, Code

Your workflow as a coder is straightforward in concept, though demanding in practice. Before you ever open a codebook, you read the entire record. You identify the diagnoses and the services. You look for supporting documentation. Then — and only then — do you open your codebooks and begin the translation process. **Never code on the fly. Never skim. Never assume.**

Electronic Health Records (EHR)

Most healthcare settings today use an **Electronic Health Record (EHR)** system — a digital version of the patient's paper chart. EHRs have many advantages: instant access, structured data fields, alerts for drug interactions, and integration with billing systems. But EHRs also come with new risks for coders, including auto-populated fields, copy-paste errors (also called "cloning"), and templates that may generate documentation that doesn't accurately reflect the actual encounter. **As a**

coder, you read critically — you do not assume that because a field is populated, it is accurate.

🗣️ FROM THE TRENCHES

"I cannot tell you how many times a physician has called me and said, 'Just use the code I used last time — it's the same patient, same thing.' And every single time, I say the same thing: 'Doctor, I need to see this visit's documentation before I assign any code.' That's not me being difficult. That's me protecting them from an audit — and protecting myself from a compliance nightmare. The medical record is sacred. Code from it. Always."

— Raymond Okonkwo, CPC, CRC | Risk Adjustment Specialist, Premier Health Partners, Dayton, OH

Raymond spent six years as a physician office coder before transitioning to risk adjustment coding for Medicare Advantage plans. He teaches compliance workshops for physician practices.

⚠️ CAUTION!

Coding a procedure or diagnosis that is **not documented** in the medical record — even if you believe the service was provided — constitutes **healthcare fraud**. Intent does not determine fraud under the False Claims Act; the act of submitting an unsupported claim does. This applies to coders AND to billers. If you are ever pressured to code something that is not in the record, you must refuse and document the conversation. Your credential — and your freedom — depend on it.

🛑 STOP!

Do not code from the superbill (charge ticket or encounter form) alone. The superbill is a billing tool generated by the physician or clinical staff — it is not the medical record. It may contain errors, omissions, or codes pre-populated from a template. Always verify the superbill against the actual clinical documentation before finalizing any code assignment.

📄 OFFICIAL GUIDELINES FOR CODING AND REPORTING

> ICD-10-CM Official Guidelines, Section IV.J (Outpatient):
>
> "Code the condition to the highest degree of certainty for that encounter/visit, such as signs, symptoms, abnormal test results, or other reason for the visit. Do not code diagnoses documented as 'probable,' 'suspected,' 'questionable,' 'rule out,' or 'working diagnosis' or other similar terms indicating uncertainty."

What this means: In outpatient settings, you code what you KNOW — not what you think might be the case. If the physician documents "probable pneumonia," you do not code pneumonia. You code the sign or symptom that brought the patient in — such as cough or fever — because that's the highest degree of certainty documented. This is one of the most critical outpatient guidelines and one of the most frequently tested on the CPC exam. Inpatient coding follows a completely different rule (you CAN code "probable" conditions in inpatient settings) — which is another reason you need to understand your setting.

✎ QUICK CHECK 1.3

Directions: Answer the following without looking back.

1. The golden rule of medical coding is: "If it's not , it didn't happen."

2. Which part of a SOAP note contains the provider's diagnosis?

3. In an outpatient setting, can you code a diagnosis documented as "probable"?

4. Which document is considered the definitive record for confirming a malignancy diagnosis?

5. True or False (circle): **T** / **F** — A superbill is a legally sufficient substitute for the medical record when assigning codes.

EXERCISE 1-C | Medical Records and Documentation

Directions: Read each scenario and answer the questions. Circle, write, or fill in your answers as indicated.

1. A physician's SOAP note states: "Assessment: Rule out type 2 diabetes." What should the outpatient coder do?

   A. Code Type 2 diabetes B. Code the sign or symptom that prompted the visit C. Leave the diagnosis blank until the next visit D. Contact the physician for a definitive diagnosis before coding Answer:

2. True or False (circle): **T** / **F** — The discharge summary's final diagnosis drives inpatient code assignment, not the admitting diagnosis.

3. A coder receives a superbill indicating a level 4 office visit (99214). Without reviewing the actual note, the coder submits the claim. This is:

   A. Acceptable if the physician checked the box B. Acceptable if the practice has always done it this way C. A compliance violation — the documentation must

always be verified D. Acceptable for established patients only Answer:

4. Match each document to its primary purpose:

DocumentPrimary Coding Use Operative Report Pathology Report Discharge Summary Radiology Report

5. A physician uses the EHR "copy-forward" feature and the patient's note from last month auto-populates for today's visit. As the coder, you notice today's note says the patient has a UTI — but last month the same note was there and it was never treated. What should you do?

SECTION 1.4

The Healthcare Team and the Coder's Role

You are not alone in the healthcare ecosystem. A medical coder is one member of a large, interdependent team of professionals — clinical and administrative — who all work together to deliver and document patient care and ensure the practice or facility is appropriately reimbursed for its services. Understanding where you fit in that team is essential to doing your job well and collaborating effectively.

The Healthcare Team

The healthcare team includes both clinical and administrative professionals. As a coder, you are on the administrative side — but your work is deeply dependent on the clinical side, and vice versa. Here is a snapshot of the key players:

- **Physicians (MDs, DOs):** Generate the clinical documentation that drives all coding. Their notes, orders, assessments, and plans are the foundation of everything a coder does.
- **Nurse Practitioners (NPs) and Physician Assistants (PAs):** Mid-level providers who document and bill for their own services. Their documentation is subject to the same coding standards as a physician's.
- **Registered Nurses (RNs) and Licensed Practical Nurses (LPNs):** Document clinical observations, interventions, and nursing care — particularly important in inpatient settings.
- **Clinical Technicians (Radiology Techs, Lab Techs, Surgical Techs):** Perform and document technical procedures referenced in radiology and lab reports.
- **Medical Coders:** Translate clinical documentation into codes. The bridge between clinical and financial. That's you.
- **Medical Billers:** Submit claims to insurance companies using the codes the coder assigned. Manage accounts receivable, follow up on unpaid claims, and post payments.
- **Health Information Management (HIM) Staff:** Manage the medical record — its integrity, storage, access, and release. Often oversee the coding function in hospital settings.
- **Compliance Officers:** Ensure the organization follows all federal and state regulations, payer contracts, and internal policies. Coders work closely with compliance officers when audit issues arise.

Coder vs. Biller: What's the Difference?

In smaller practices, one person may handle both coding and billing. But they are fundamentally different functions, and confusing the two creates compliance risk:

- **The Coder:** Reviews clinical documentation and assigns the correct codes (ICD-10-CM, CPT, HCPCS Level II). The coder's output is a set of codes that accurately represents the encounter.
- **The Biller:** Takes those codes and submits a claim to the insurance company. Manages the claim through adjudication, follows up on denials, and posts payments.

The coder's job ends when the code is assigned and documented. The biller's job begins. When there is a compliance problem, the question is always: Was the problem with the code (coder's responsibility) or the claim submission (biller's responsibility)? Knowing your lane protects everyone.

Inpatient vs. Outpatient Coding

Not all coding jobs are the same. The two primary settings — inpatient and outpatient — operate under different code sets, different guidelines, and different reimbursement systems:

Feature	Inpatient Coding	Outpatient Coding
Setting	Hospital (admitted patients)	Physician office, clinic, hospital outpatient department
Diagnosis Code Set	ICD-10-CM	ICD-10-CM
Procedure Code Set	ICD-10-PCS (hospital) + CPT for professional	CPT + HCPCS Level II
Reimbursement System	DRG (Diagnosis-Related Group) — MS-DRG	RBRVS (Resource-Based Relative Value Scale) / APC
"Probable" Diagnoses	Can code as confirmed	Cannot code — code sign/symptom only
Credential	CCS, CIC, CPC-H, COC	CPC, COC, CPC-A

Coding Credentials: A Brief Overview

The two major credentialing organizations for medical coders are the **AAPC** (American Academy of Professional Coders) and **AHIMA** (American Health Information Management Association). Key credentials include:

- **CPC (Certified Professional Coder):** AAPC's flagship credential. Primarily validates outpatient/physician office coding competency. The most widely held coding credential in the United States. This is likely your first target if you're reading this book.
- **COC (Certified Outpatient Coder):** AAPC credential for hospital outpatient coding.
- **CIC (Certified Inpatient Coder):** AAPC credential for hospital inpatient coding.
- **CCS (Certified Coding Specialist):** AHIMA credential for hospital-based (inpatient and outpatient) coding.
- **CPC-A:** The apprentice designation appended to CPC for coders who have passed the exam but have not yet completed 2 years of professional coding experience.

The CPC Exam

The **CPC exam**, administered by the AAPC, is a 5-hour, 40-minute, 100-question examination that tests a coder's knowledge across all major CPT sections, ICD-10-CM, HCPCS Level II, anatomy, medical terminology, and coding guidelines. The exam is open book — you may use your tabbed, annotated CPT, ICD-10-CM, and HCPCS Level II manuals. However, make no mistake: "open book" does not mean "easy." The questions require applied knowledge that no index lookup can shortcut. Passing the CPC is the goal. Everything in this textbook is designed to get you there.

🏛️ **CMS RULES**

Under CMS regulations, **non-physician practitioners (NPPs)** — including nurse practitioners and physician assistants — may bill Medicare for services they provide independently under their own NPI (National Provider Identifier), provided they are credentialed and enrolled with Medicare. When an NPP's services are billed under the physician's NPI (known as "incident-to" billing), specific requirements must be met: the physician must be on-site and available, the service must be a continuation of a physician-initiated plan of care, and the NPP must be an employee or contractor of the physician. Incident-to billing allows the practice to bill at 100% of the physician fee schedule, rather than the 85% paid when billing under the NPP's own NPI. Coders must understand this distinction because the documentation requirements — and therefore the codes that can be supported — differ depending on the billing scenario.

🔎 CHECK THIS OUT

According to AAPC data, the **CPC first-time pass rate** hovers around **50–55%** for test takers who have not completed a formal coding education program. For students who complete a structured, curriculum-based coding program prior to sitting for the exam, pass rates are significantly higher. This textbook — and the program you are enrolled in — exists precisely to put you in that higher-performing group. The pass rate doesn't scare the prepared. Let it motivate you.

⚡ CODING SHOT

When preparing for the CPC exam, your codebooks are your most powerful tools — but only if you use them efficiently. Start tabbing and annotating your manuals NOW. Create color-coded tabs for every CPT section. Highlight guideline boxes in ICD-10-CM. Write margin notes for frequently confused concepts. An annotated manual is a coder's best friend on exam day — and in practice.

🔧 TOOLBOX — Section 1.4 Key Takeaways

• The medical coder is the bridge between clinical documentation and financial reimbursement — a unique and critical position on the healthcare team.

• Coders and billers have distinct, non-interchangeable roles. Confusing the two creates compliance risk.

• Inpatient and outpatient coding use different procedure code sets, different reimbursement systems, and different guidelines for coding uncertain diagnoses.

• The CPC is AAPC's primary outpatient coding credential. CCS is AHIMA's hospital-based credential. Know the difference between CPC and CPC-A.

• Incident-to billing for NPP services under a physician's NPI carries specific Medicare requirements that affect documentation and code selection.

✎ QUICK CHECK 1.4

Directions: Answer the following without looking back.

1. The CPC credential is administered by .

2. In the inpatient setting, which procedure code set is used for hospital-reported procedures?

3. True or False (circle): **T** / **F** — Under incident-to billing, NPP services are reimbursed at 85% of the Medicare physician fee schedule.

4. A coder's job ends when have been assigned. A biller's job begins with .

5. The CPC exam is how many hours long? hours and minutes.

The Revenue Cycle

Every dollar that flows into a healthcare organization — from the moment a patient calls to schedule an appointment to the moment the final payment is posted — travels through a defined process called the **revenue cycle**. Understanding this process is not just background knowledge. It is the context within which your work as a coder lives. When something goes wrong in the revenue cycle, the first question almost always traces back to Step 5. And Step 5 is you.

Defining the Revenue Cycle

The **revenue cycle** is the complete administrative and clinical process a healthcare organization uses to capture, manage, and collect patient service revenue. It begins before the patient is even seen — with scheduling and pre-registration — and ends when payment has been received and posted for every service rendered. It is a cycle because it repeats for every single patient, every single encounter, every single day. The health of the revenue cycle directly determines the financial health of the practice or facility.

The Ten Steps of the Revenue Cycle

While different organizations may describe the revenue cycle in slightly different terms, the core process follows these ten steps:

1. **Scheduling / Pre-Registration:** The patient calls (or goes online) to schedule an appointment. Demographic information (name, date of birth, address) and insurance information are collected. Pre-authorization may be initiated for certain services.
2. **Insurance Verification / Eligibility:** Staff verifies that the patient's insurance is active, that the provider is in-network, that the planned service is

a covered benefit, and whether a referral or prior authorization is required. This step prevents surprises at claim submission.

3. **Patient Check-In / Registration:** The patient arrives and is formally registered. Insurance cards are copied, identification is verified, and demographic information is confirmed and updated. Copayments are collected.
4. **Clinical Documentation (Physician's Role):** The provider delivers the clinical service and documents the encounter in the medical record. This is the step that produces the raw material for everything that follows. Without accurate, complete documentation here, nothing downstream can succeed.
5. **Medical Coding (The Coder's Role): This is your step.** The coder reviews the clinical documentation and assigns the appropriate ICD-10-CM diagnosis codes and CPT/HCPCS Level II procedure codes. Every coding decision made here will ripple through every subsequent step. Accuracy here is not optional — it is the linchpin of the entire revenue cycle. A wrong code at Step 5 means a denial at Step 8, more work at Step 10, and potentially an audit at any point thereafter.
6. **Charge Capture:** The codes are entered into the billing system and associated with the appropriate charges. Charge capture ensures that every billable service performed is accounted for and assigned a dollar value based on the fee schedule.
7. **Claim Submission:** A claim (typically a CMS-1500 for professional services or a UB-04 for facility services) is submitted to the payer — electronically in most cases — through a clearinghouse that checks the claim for formatting errors before it reaches the insurance company.
8. **Payer Adjudication:** The insurance company receives and processes the claim. It checks the claim against the patient's benefits, applies deductibles and copays, verifies medical necessity, and either pays, partially pays, or denies the claim. This process can take days to weeks depending on the payer.

9. **Payment Posting:** The payment received from the payer (and any patient responsibility amount) is posted to the patient's account. The Explanation of Benefits (EOB) or Electronic Remittance Advice (ERA) is reviewed to reconcile payment against what was billed.
10. **Denial Management / Appeals:** Denied or underpaid claims are reviewed, corrected (if there was an error), and appealed or resubmitted. This is one of the most labor-intensive steps and is almost always triggered by errors in one of the earlier steps — frequently in documentation (Step 4) or coding (Step 5).

Revenue Cycle At-a-Glance

Step	Who Is Responsible	What Happens	Coding Impact
1. Scheduling / Pre-Reg	Front Desk / Scheduler	Demographics and insurance collected; authorization initiated	Indirect — service type may affect code expectations
2. Insurance Verification	Billing / Front Office	Coverage, benefits, and authorization confirmed	Determines which services can be billed; affects code selection
3. Check-In / Registration	Front Desk	Demographics confirmed; copay collected	Minimal direct impact
4. Clinical Documentation	Physician / Provider	Encounter is documented in the medical record	**Critical** — poor documentation makes accurate coding impossible
5. Medical Coding	**Medical Coder (YOU)**	**Codes are assigned from the medical record**	**Everything. This is the epicenter of the revenue cycle.**
6. Charge Capture	Coder / Biller	Codes entered into billing system with charges	Code accuracy flows directly into this step
7. Claim Submission	Biller / Clearinghouse	Claim submitted to payer	Wrong codes = claim rejection

Step	Who Is Responsible	What Happens	Coding Impact
		electronically	before adjudication
8. Payer Adjudication	Insurance Company	Claim processed; payment, partial payment, or denial issued	Coding errors = medical necessity denials
9. Payment Posting	Biller / AR Staff	Payment posted; EOB/ERA reconciled	Underpayment may trace to undercoded procedures
10. Denial Mgmt / Appeals	Biller / Coder / Management	Denied claims reviewed, corrected, and resubmitted	Coders often involved in appeal documentation and code correction

🗣️ FROM THE TRENCHES

"I was hired at a dermatology practice where the denial rate was almost 30%. That's catastrophic — industry standard is under 5%. Within three months of auditing the coding, we identified that coders had been assigning unspecified skin lesion codes when the documentation clearly supported specific diagnosis codes. The payer kept denying for lack of medical necessity because the codes didn't support the procedures being billed. We fixed the coding, trained the coders, and had the denial rate below 8% in 90 days. Coding errors have a very real dollar figure attached to them."

— Tamika Broussard, CPC, CPMA, COC | Revenue Cycle Consultant, Gulf Coast Healthcare Advisors, New Orleans, LA

Tamika has 18 years of experience in revenue cycle consulting, with specialization in dermatology, orthopedics, and multi-specialty group practices. She has recovered over $4 million in underpaid claims through coding audits.

⚠️ CAUTION!

Coding errors that result in overpayment — even if completely unintentional — must be reported and refunded to the payer. Under the **60-Day Rule** (codified in the False Claims Act and ACA), once an overpayment is identified and quantified, the provider has 60 days to report it and return the money. Failure to do so converts what was an honest mistake into a knowing violation of the False Claims Act, which carries civil — and potentially criminal — penalties. This is why accurate coding from Day 1 matters far more than catching errors later.

⚡ CODING SHOT

When a claim is denied for "medical necessity," the first place to look is the **diagnosis code**. A procedure must be supported by a diagnosis that justifies it clinically. If you bill for a cardiac stress test (CPT 93015) and the only ICD-10-CM code on the claim is for a routine wellness visit (Z00.00), the payer will deny it because the diagnosis doesn't support the procedure. Matching diagnoses to procedures is called linking — and it is a fundamental coding skill.

🛑 STOP!

Do not ignore denials. Denied claims are not closed claims. An unworked denial is lost revenue — and in some cases, it can also be an indicator of a systemic coding or documentation problem that needs to be corrected before it becomes an audit finding. Every denial is a message. Learn to read them.

EXERCISE 1-D | The Revenue Cycle

Directions: Answer the following questions about the revenue cycle. Write or

circle your answers as indicated.

1. Place the following revenue cycle steps in the correct order by writing a number 1–5 in the blank:

Payment Posting Insurance Verification Medical Coding Claim Submission Payer Adjudication

2. At which step of the revenue cycle does the coder play the most direct role?

3. A cardiac stress test is billed with only a routine wellness diagnosis code. The claim is denied for: .

4. True or False (circle): **T / F** — Under the 60-Day Rule, an identified overpayment does not need to be returned if it was unintentional.

5. A claim is rejected by the clearinghouse before it even reaches the payer. This most likely means there is a problem with:
A. The diagnosis code specificity B. Claim formatting or data entry errors C. Medical necessity D. Patient's insurance eligibility Answer:

6. The document sent by the payer explaining how a claim was processed (paid, partially paid, or denied) is called an: (EOB) or an (ERA).

✎ QUICK CHECK 1.5

Directions: Answer the following without looking back.

1. The revenue cycle begins with and ends with .

2. Medical coding occurs at Step of the revenue cycle.

3. Which step involves the insurance company processing the claim and issuing payment or a denial?

4. True or False (circle): **T / F** — A clearinghouse checks claims for

formatting errors before they reach the payer.

5. The industry standard denial rate is under %.

SECTION 1.6

Ethics and Compliance in Medical Coding

This section may be the most important section in this entire textbook. Not because it's the most likely to appear on the CPC exam — though it will — but because it determines the kind of coder you will be. Everything else in this book is about technical skill. This section is about character.

Medical coding is a position of trust. Providers trust you with their documentation. Payers trust you to submit accurate claims. The government trusts the data you generate to make policy decisions. Patients trust the system to handle their sensitive health information with integrity. The moment you compromise any of that trust — intentionally or not — there are consequences. Some of them are financial. Some are professional. Some are criminal.

Let's talk about all of it, so you go into this field with your eyes wide open.

The AAPC Code of Ethics

If you hold or pursue the CPC credential, you are bound by the **AAPC Code of Ethics**. In student-friendly language, the core principles require you to:

- Code honestly and accurately based on documented information.
- Maintain the confidentiality of all patient information.

- Use and report your credentials honestly and accurately.
- Pursue ongoing education to maintain competence in your specialty area.
- Refuse to participate in or conceal fraudulent or abusive billing practices.
- Report compliance concerns through appropriate channels.
- Respect the privacy and dignity of all patients, providers, and colleagues.

Errors vs. Negligence vs. Fraud

Not all coding mistakes are equal. The law — and your conscience — will distinguish between them:

- **Coding Error:** An honest mistake made by a coder acting in good faith. A code selected from the wrong row of the table. A digit transposed. A guideline misapplied. Errors happen. They are corrected, not prosecuted — provided they are not a pattern and not the result of careless practice.
- **Negligence:** A coding mistake that results from a failure to exercise the standard of care expected of a competent professional. If you code without reading the guidelines, if you repeatedly assign codes without verifying them in the Tabular, if you ignore payer edits you know are being triggered — that is negligence. It may not be intentional fraud, but it carries professional and financial consequences.
- **Fraud:** Intentional misrepresentation of services, conditions, or providers for the purpose of obtaining payment to which the organization is not entitled. Fraud is not an accident. It is a deliberate choice — and it is a federal crime.

The Big Three: Upcoding, Downcoding, and Unbundling

Three types of coding practices are specifically identified by the OIG and CMS as high-risk compliance violations:

- **Upcoding:** Assigning a code that represents a higher level of service, a more severe diagnosis, or a more complex procedure than what is actually

documented. Example: Billing a level 5 office visit (99215) when the documentation only supports a level 3 (99213). Result: Overpayment. If intentional, this is fraud — subject to False Claims Act penalties, exclusion from Medicare, and criminal prosecution.

- **Downcoding:** Assigning a code that represents a lower level of service than what is documented. Example: The physician performs and documents a comprehensive exam but the coder bills a minimal service. While this seems "safe," it is actually a compliance problem — it misrepresents the services provided, results in underpayment, and can still trigger payer scrutiny. Coders who systematically downcode may be doing so to avoid audits — which itself raises red flags.
- **Unbundling:** Billing separately for component services that should be billed together under a single, comprehensive code. Example: Billing individually for each component of a surgical package that CPT's global surgery rules require to be included in the surgical code. Unbundling artificially inflates reimbursement and is specifically prohibited by CPT guidelines and payer contracts.

📄 OFFICIAL GUIDELINES FOR CODING AND REPORTING

> ICD-10-CM Official Guidelines, Section I.B.4:
>
> "A joint effort between the healthcare provider and the coder is essential to achieve complete and accurate documentation, code assignment, and reporting of diagnoses and procedures. The importance of consistent, complete documentation in the medical record cannot be overemphasized. Without such documentation, accurate coding cannot

> be achieved."

What this means: Coding is not a solo sport. The best coders develop collaborative relationships with their providers — flagging documentation gaps, asking clarifying questions through appropriate channels (such as a physician query process), and educating providers on documentation best practices. This is not interference. This is professionalism. When documentation is strong, coding is accurate. When coding is accurate, claims are paid. When claims are paid, practices stay open and patients continue to receive care. The whole system depends on this partnership.

⚠️ CAUTION! — FALSE CLAIMS ACT

The **False Claims Act (FCA)**, 31 U.S.C. §§ 3729–3733, is the federal government's primary tool for combating healthcare fraud. Under the FCA:

- Submitting a false or fraudulent claim for payment to the federal government (Medicare, Medicaid, TRICARE, etc.) is a civil violation, with penalties of up to **$27,894 per false claim** (adjusted annually for inflation) plus **three times the amount of damages** sustained by the government (known as "treble damages").
- The FCA applies to **knowing** violations — but "knowing" is defined broadly. You are considered to "know" something is false if you act in deliberate ignorance or reckless disregard of the truth. "I didn't mean to" is not always a defense.
- The **qui tam provision** allows any person — including a disgruntled employee, a competitor, or a patient — to file a lawsuit on the government's behalf and receive a portion of any recovered funds. Whistleblowers in

successful qui tam cases can receive 15–30% of the government's recovery. This provision incentivizes reporting, which means compliance problems inside your organization are never as private as they might seem.

You must never submit, facilitate, or conceal a false claim — not because your employer asked you to, not because everyone else does it, and not because you think it will never be caught. It is a federal crime.

The OIG Work Plan

Every year, the **Office of Inspector General (OIG)** of the U.S. Department of Health and Human Services publishes a Work Plan identifying the specific areas of Medicare and Medicaid billing it intends to audit in the coming year. This is publicly available — you can (and should) read it. When the OIG identifies your specialty or a code range your practice uses in the Work Plan, that is your signal to conduct an internal audit before the OIG does it for you.

What a Compliant Coder Does Every Day

Compliance is not a once-a-year training event. It is a daily practice. Here is what a compliant coder does — every single day:

- Codes only from documented information in the medical record — never from a superbill alone, never from memory, never from what the physician "always orders."
- Never changes a code because a physician "prefers" a certain code or "always uses that code" for a particular patient type.
- Stays current with ICD-10-CM, CPT, and HCPCS Level II code updates and guideline changes every year.
- Reports compliance concerns to a supervisor, compliance officer, or through the organization's anonymous hotline — and documents the report.
- Never uses "everyone does it" as a reason to do something that feels wrong.

- Asks questions when unsure — and gets the answer in writing.

🏛️ CMS RULES

The **OIG's Compliance Program Guidance for Individual and Small Group Physician Practices** recommends that physician practices implement a voluntary compliance program containing seven core elements: (1) written policies and procedures; (2) designation of a compliance officer; (3) training and education; (4) effective lines of communication; (5) internal monitoring and auditing; (6) response to detected offenses; and (7) enforcement of disciplinary standards. While compliance programs are not universally mandated for small practices, they are strongly incentivized — having a documented compliance program in place is considered a mitigating factor in any OIG investigation. As a coder, your role touches elements 3, 4, and 5 directly.

⚡ CODING SHOT

If a physician or practice manager ever asks you to code a service that is not supported by documentation — even if they say "trust me, it happened" — your answer must be "I need the documentation." If they insist, escalate it through your compliance channels immediately and document the conversation. Your CPC credential, your professional reputation, and potentially your freedom are not worth the risk of going along with a single fraudulent claim.

🔧 TOOLBOX — Section 1.6 Key Takeaways

- Medical coding errors, negligence, and fraud are legally and professionally distinct. Know the difference — and stay firmly in "honest error" territory by following guidelines, documenting your decisions, and asking questions.
- Upcoding, downcoding, and unbundling are the three most scrutinized coding

compliance violations. All three misrepresent services and can result in False Claims Act liability.

• The False Claims Act carries penalties of up to ~$28,000 per false claim PLUS treble damages. The qui tam provision means anyone can report fraud — and get paid for it.

• The OIG Work Plan is public. Read it annually. Audit your own work before the government does.

• Compliance is a daily practice, not an annual event. Your integrity as a coder is your most valuable professional asset.

✎ QUICK CHECK 1.6

Directions: Answer the following without looking back.

1. Billing a higher-level code than what is documented is called .

2. The False Claims Act allows private individuals to file fraud lawsuits on behalf of the government under the provision.

3. True or False (circle): **T** / **F** — Downcoding is always legally "safe" because it results in less reimbursement.

4. The OIG publishes an annual identifying areas that will be targeted for Medicare audit.

5. Billing separately for services that should be reported under a single comprehensive code is called .

EXERCISE 1-E | Ethics and Compliance

Directions: For each scenario, identify the compliance issue (if any), name it,

and explain what a compliant coder should do. Write your answers on the lines provided.

1. A physician tells you: "Just bill a 99215 for all my diabetes patients — they're complex, even if the note isn't great."
   Compliance Issue:
   What should you do?

2. A biller tells you to bill a surgical procedure in separate component codes because "we get paid more that way."
   Compliance Issue:
   What should you do?

3. True or False (circle): **T** / **F** — Under the False Claims Act, an unintentional coding error that results in overpayment can never result in liability if the coder didn't mean to commit fraud.

4. A practice audits its claims and discovers it has been overbilling Medicare for the past 18 months due to a systematic coding error. The practice manager says, "Let's just fix it going forward and not say anything about the past." Under the 60-Day Rule, is this acceptable?
   Answer (circle): **Yes** / **No**
   Explain:

5. Multiple Choice — The AAPC Code of Ethics requires that a CPC:
   A. Report all coding errors to the OIG immediately B. Code honestly and accurately based on documented information and refuse to participate in fraudulent billing C. Follow the physician's preferred codes to maintain a good working relationship D. Never query a physician about documentation Answer:

▶️ CHAPTER SUMMARY — Chapter 1: Introduction to Medical Coding

- **Medical coding** is the translation of clinical documentation into standardized alphanumeric codes that communicate patient diagnoses, procedures, and services to payers, facilities, government agencies, and researchers. Accuracy in coding is non-negotiable — it affects reimbursement, compliance, patient safety, and public health data.
- The three primary code sets are **ICD-10-CM** (diagnosis codes, updated October 1, published by WHO/CDC/CMS), **CPT** (procedure codes, updated January 1, published by AMA), and **HCPCS Level II** (supplies/drugs/DME, updated quarterly, published by CMS). Each serves a distinct, non-interchangeable purpose.
- The **medical record** is the only legally sufficient source document for medical coding. The golden rule is: "If it's not documented, it didn't happen." Coders read, interpret, and code — they never assume, diagnose, or extrapolate.
- Common medical record types include SOAP notes, operative reports, discharge summaries, radiology reports, lab reports, consultation letters, ED notes, and pathology reports. Each requires a different approach and awareness of its purpose.
- In **outpatient settings**, coders may NOT code "probable," "suspected," or "rule out" diagnoses — only the highest degree of certainty (signs, symptoms, or confirmed conditions). In **inpatient settings**, probable and suspected diagnoses can be coded as if confirmed.
- The medical coder is the bridge between clinical documentation and financial reimbursement, holding a unique position on the healthcare team. Coders and billers have different, non-interchangeable roles. Inpatient and outpatient coding use different procedure code sets and different reimbursement systems.

- The **revenue cycle** follows ten steps from scheduling to denial management. Medical coding occurs at Step 5 and is the linchpin of the entire cycle — errors at this step cascade through every step that follows.
- **Upcoding** (billing for more than documented), **downcoding** (billing for less than documented), and **unbundling** (billing component codes separately instead of a comprehensive code) are the three most scrutinized compliance violations in medical coding.
- The **False Claims Act** imposes civil penalties of up to approximately $28,000 per false claim plus treble damages for knowingly submitting false claims to federal healthcare programs. The qui tam provision allows whistleblowers to file suits on the government's behalf and receive a share of any recovery.
- A compliant coder codes only from documented information, refuses to code under pressure, stays current with guidelines, reports concerns through proper channels, and treats their credential as a reflection of their integrity — because in this profession, your reputation is everything.

CHAPTER REVIEW

Complete all four sections of the Chapter Review. Do not use notes or the textbook unless instructed by your educator.

SECTION A — Multiple Choice (10 questions)

Directions: Circle the letter of the best answer for each question. Write your answer on the line provided.

1. Medical coding is BEST defined as:

A. The process of entering patient demographic information into a billing system B. The translation of clinical documentation into standardized alphanumeric codes C. The submission of claims to insurance companies for payment D. The verification of patient insurance eligibility prior to an appointment Answer:

2. Which code set is used to report a patient's diagnosis?

A. CPT B. HCPCS Level II C. ICD-10-CM D. ICD-10-PCS Answer:

3. CPT codes are published by:

A. The World Health Organization (WHO) B. The Centers for Medicare & Medicaid Services (CMS) C. The American Academy of Professional Coders (AAPC) D. The American Medical Association (AMA) Answer:

4. In outpatient coding, a physician documents "probable pneumonia." The coder should:

A. Code pneumonia, as the physician clearly believes that is the diagnosis B. Leave the diagnosis code blank and wait for a confirmed diagnosis C. Code the signs and symptoms that prompted the visit D. Query the physician to confirm the diagnosis before coding Answer:

5. At which step of the revenue cycle does the medical coder primarily perform their work?

A. Step 2 — Insurance Verification B. Step 4 — Clinical Documentation C. Step 5 — Medical Coding D. Step 7 — Claim Submission Answer:

6. Which of the following is an example of upcoding?

A. Billing a level 2 office visit when the documentation supports a level 4 B. Billing a level 5 office visit when the documentation only supports a level 3 C.

Billing separate codes for procedures that should be bundled together D. Failing to bill for a service that was actually performed Answer:

7. HCPCS Level II codes are formatted as:

A. Five digits (e.g., 99213) B. Up to 7 alphanumeric characters beginning with a letter C. One letter followed by four digits (e.g., A6216) D. Two letters followed by three digits Answer:

8. The False Claims Act primarily targets:

A. Coding errors made by new coders during their first year of practice B. Knowing submission of false or fraudulent claims for payment to the federal government C. Private insurance billing disputes between providers and payers D. Violations of HIPAA patient privacy standards Answer:

9. The document generated by the surgeon following a surgical procedure is called a(n):

A. Discharge Summary B. Consultation Letter C. Operative Report D. SOAP Note Answer:

10. Which credential is AAPC's flagship certification for outpatient/physician office coding?

A. CCS B. CPC C. COC D. CIC Answer:

SECTION B — True / False (10 questions)

Directions: Write T for True or F for False on the line before each statement.

1. ICD-10-CM codes are updated every January 1.

2. The Alphabetic Index of ICD-10-CM is the final authority for all code assignments.

3. A medical coder's job is to diagnose the patient based on their knowledge of medicine.

4. In the inpatient setting, a coder may code a condition documented as "probable" as if it were confirmed.

5. The superbill is a legally sufficient source document for medical coding purposes.

6. HCPCS Level I and CPT are the same code set.

7. Unbundling is the practice of billing separately for services that should be billed under one comprehensive code.

8. The revenue cycle begins with claim submission to the insurance company.

9. The OIG Work Plan is a confidential government document not available to the public.

10. A CPC credential holder is bound by the AAPC Code of Ethics.

SECTION C — Fill in the Blank (5 questions)

Directions: Complete each statement with the correct word or phrase. Write your answer on the line provided.

1. The three code sets used in medical coding are , , and .

2. The golden rule of medical coding is: "If it's not , it didn't happen."

3. Billing a higher-level code than what is supported by documentation is called .

4. The Work Plan is published annually by the OIG and identifies areas targeted for Medicare audit review.

5. The qui tam provision of the False Claims Act allows to file lawsuits on the government's behalf and receive a portion of any recovery.

SECTION D — Coding Scenarios (5 questions)

Directions: Read each scenario. Identify which code set (ICD-10-CM, CPT, or HCPCS Level II) or concept applies, and briefly explain your reasoning. Write your answers on the lines provided.

1. **Scenario:** A 72-year-old Medicare patient is seen in a physician's office for management of Type 2 diabetes with diabetic neuropathy. The physician provides an office visit service and documents the encounter thoroughly.
What code set(s) would be used to report this encounter, and why?

2. **Scenario:** A patient is admitted to the hospital for sepsis. After three days of treatment, the patient is discharged. The discharging physician's note reads: "Discharge Diagnosis: Sepsis secondary to E. coli urinary tract infection." The admitting diagnosis was "fever and altered mental status."
Which diagnosis does the inpatient coder use — the admitting diagnosis or the discharge diagnosis? Why?

3. **Scenario:** A home health patient needs a custom-molded ankle-foot orthotic (AFO) prescribed by a physician. The orthotic is fitted and dispensed by a DME supplier.

Which code set would most likely be used to bill for the orthotic device itself? Explain why CPT would not apply in this case.

4. **Scenario:** A coder is reviewing an operative note. The surgery title at the top says "Laparoscopic Cholecystectomy," but as she reads the body of the report, she finds that the surgeon converted to an open procedure due to complications. She is about to code the laparoscopic version because that's what the title says.

What should the coder do, and what compliance principle does this scenario illustrate?

5. **Scenario:** A billing manager tells a coder: "I know the surgery note doesn't have all the documentation for the add-on code, but we always bill it with this procedure — that's just how it's done here."

Identify the compliance issue and what the coder's ethical and legal obligation is in this situation.

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An Overview of ICD-10-CM

Corrina R. Lynch | CPC Preparation

Chapter contents

1. Find the main term and follow subterms
2. Verify the code in the Tabular List
3. Apply classification notes
4. ICD-10-CM format, chapters and typography
5. Includes, Code also and default codes
6. Provider documentation and clinical criteria
7. Chapter review

Prior-edition readings and exercises follow the revised lesson and may use the earlier chapter arrangement.

Learning objectives

- Identify the main term, follow cross-references and verify codes in the Tabular List.
- Apply laterality, required characters and instructional notes.

1. Find the main term and follow subterms

Read the clinician’s diagnosis before opening the Alphabetic Index. Pick the main condition, then use modifiers such as type, site and laterality. A see instruction directs you to another entry; a see also instruction points to potentially useful alternatives.

Worked example

For documented type 2 diabetes with hyperglycemia, start with Diabetes, then find the type 2 and hyperglycemia direction. Verify E11.65 in the Tabular List.

2. Verify the code in the Tabular List

Read the code description and the notes at the chapter, block, category and code level. Verify required characters and laterality. An X can be a required placeholder when a later character has a specified position.

Worked example

For an injury code that requires a seventh character, count the positions and follow the category instructions. Do not add X or a seventh character to a code that does not require one.

3. Apply classification notes

Read Excludes1 and Excludes2 carefully. Excludes1 generally precludes coding the conditions together, with an exception for unrelated conditions; clarify the relationship if it is unclear. Excludes2 indicates that the excluded condition is not included in the code and both may be reported when both apply.

Worked example

If type 2 diabetic CKD is documented, verify the additional-code instruction and report the CKD stage after E11.22. For stage 3b, add N18.32.

4. ICD-10-CM format, chapters and typography

Categories start with three characters. Report the full code where it is subdivided. The Tabular List groups related categories into blocks and chapters. Bold and italic presentation can vary by publisher, so use the book’s legend and the instructional notes rather than treating typography as a coding rule.

Worked example

A three-character entry may be a category and not a complete reportable code. Check for additional characters in the Tabular List.

5. Includes, Code also and default codes

An Includes note further defines a category or gives examples. A Code also note can require two codes but does not determine their order by itself. A default code can appear next to an Index main term; verify that the documentation does not support another choice.

Worked example

When the record specifies a condition subtype, use the supported subtype rather than the default for an unspecified diagnosis.

6. Provider documentation and clinical criteria

Follow I.A.19: diagnosis code assignment relies on the provider’s diagnostic statement rather than the coder independently applying clinical criteria. Resolve conflicting documentation through clarification as appropriate.

Worked example

A lab value alone does not authorize a coder to establish a diagnosis that the provider did not document.

Chapter review

1. Show the Index-to-Tabular lookup for type 2 diabetic CKD stage 3b.

2. What do Excludes2 and Use additional code tell you to check?

References

CMS/NCHS: FY 2026 Official Coding Guidelines

MEDICAL CODING MASTERY | STUDENT EDITION

CHAPTER 2

ICD-10-CM: Introduction, Structure and Conventions

Corrina Lynch | ACL Consulting Firm | CPC Preparation

▶️ Chapter 2 Objectives

Upon completion of this chapter, the student will be able to:

1. Explain the history and purpose of ICD-10-CM and describe why it replaced ICD-9-CM.
2. Identify the two main parts of the ICD-10-CM code book and describe the function of each.
3. List all 21 chapters of the ICD-10-CM Tabular List along with their code ranges and topics.
4. Describe the structure and format of an ICD-10-CM code, identifying each character position and its purpose.
5. Apply ICD-10-CM typeface conventions, including the use of bold type, italics, NEC, and NOS.
6. Distinguish between Excludes1 and Excludes2 notes and apply each correctly in coding scenarios.
7. Identify and correctly apply instructional notes, including "Code First,"

"Use Additional Code," and "Code Also."

8. Explain the function of the placeholder character X and apply it correctly to maintain code validity.

9. Assign appropriate 7th character extensions for episode of care, including initial, subsequent, and sequela encounters.

10. Apply the seven-step ICD-10-CM coding process to clinical documentation to accurately assign complete and specific diagnosis codes.

▶️ Key Terms

The following terms are defined within this chapter. Each term appears in **bold** the first time it is used in the text.

Alphabetic Index

Category

Code first

Code also

Default code

Etiology

Excludes1

Excludes2

Includes note

Laterality

Main term

Manifestation

NEC (Not Elsewhere Classifiable)

NOS (Not Otherwise Specified)

Placeholder character (X)

Section

Sequela

Seventh character

Subterm

Tabular List

Chapter Overview

This chapter introduces the ICD-10-CM code set — the diagnosis coding system every medical coder in the United States must master to work in any healthcare setting. We will walk through where ICD-10-CM came from, how the code book is organized, what every character in a code actually means, and how the system's built-in conventions tell you exactly how to code correctly. By the time you finish this chapter, you will understand not just what the codes look like, but why they are structured the way they are — and that understanding is what separates average coders from great ones. The CPC exam tests this material extensively, and real-world accuracy depends on it every single day. Let's build the foundation right.

SECTION 2.1 — History and Purpose of ICD-10-CM

Before you can code effectively, you need to understand the tool you are using. ICD-10-CM is not just a list of codes — it is an internationally standardized system that makes it possible for physicians, hospitals, payers, labs, and governments to speak the same language about patient health. Let's start from the beginning.

What ICD Stands For

ICD stands for **International Classification of Diseases**. The system is published and maintained at the international level by the **World Health Organization (WHO)**, headquartered in Geneva, Switzerland. The United States uses a clinical modification of the system, which is why the full name is **ICD-10-CM** — the CM stands for Clinical Modification. In the United States, the clinical modification is developed and maintained jointly by the **Centers for Disease Control and Prevention (CDC)** and the **Centers for Medicare and Medicaid Services (CMS)**.

A Brief History: From ICD-9-CM to ICD-10-CM

The United States used **ICD-9-CM** from **1979 through September 30, 2015**. For more than 35 years, ICD-9-CM served as the standard. But the medical world did not stand still for 35 years — diagnoses, procedures, technologies, and clinical understanding grew far beyond what the old system could handle. ICD-9-CM had only about **14,000 codes**. ICD-10-CM, which went live on **October 1, 2015**, has more than **72,000 codes**. That is not just a bigger number — it is a completely different level of clinical detail that supports better patient care, more accurate reimbursement, and more meaningful data for public health research.

★ Check This Out

ICD-10-CM contains more than 72,000 codes — approximately **seven times more** than the roughly 14,000 codes in ICD-9-CM. This massive expansion allows coders to capture clinical specificity that was simply impossible under the old system. For example, ICD-9-CM had a single code for a wrist fracture. ICD-10-CM has dozens — broken down by bone, side of the body, type of fracture, and episode of care.

Why the Switch Was Necessary

ICD-9-CM was running out of room. Many three- and four-digit code categories were completely full, and the system could not capture the specificity needed by modern medicine. Laterality (right versus left side of the body) was not consistently tracked. Episode of care — whether a patient was receiving initial treatment or returning for follow-up — was not captured in the diagnosis code itself. ICD-10-CM solved all of these problems. The transition required massive investment from the entire healthcare industry, but the result is a far more powerful and accurate classification system.

Who Must Use ICD-10-CM?

Every entity covered under **HIPAA (Health Insurance Portability and Accountability Act)** is required to use ICD-10-CM for diagnosis coding. This includes physicians, hospitals, outpatient facilities, clinical laboratories, insurance payers, and other healthcare providers. The mandate is not optional — if you submit a claim with ICD-9-CM codes after the October 1, 2015 implementation date, the claim will be rejected.

Updated Every October 1

The ICD-10-CM code set is updated every year, with new codes, revised codes, and deleted codes taking effect on **October 1** of each year. This means the code set you use in September may not be the same as the code set effective October 1 of that same year. As a coder, you must always verify that you are using the current year's official code set.

● Coding Shot

Always verify you are working with the current year's ICD-10-CM code set. New codes go live every October 1. Using a deleted or outdated code will result in a claim denial, and in worst-case scenarios, it can flag your practice for an audit. Bookmark the CMS ICD-10-CM Resources page and check it at the beginning of each fiscal year. Your employer likely has a system update process

— make sure you are part of it.

ICD-10-CM vs. ICD-10-PCS

Here is a critical distinction that trips up new coders: **ICD-10-CM is for diagnosis codes only**. It tells the payer what is wrong with the patient. ICD-10-PCS (Procedure Coding System) is a completely separate code set used for inpatient hospital procedures in the facility setting. When you are coding in the physician or outpatient setting, you will use CPT codes for procedures — not ICD-10-PCS. ICD-10-CM spans both settings for diagnosis coding, but ICD-10-PCS is limited to inpatient facility use only.

> ☞ **From the Trenches**
>
> "I coded under ICD-9 for twelve years before the transition. I will be honest — I was terrified. The whole system looked different. But within six months, I realized ICD-10 was actually better. The codes are more specific, the laterality is built right in, and when I look at a claim, I can tell exactly what was happening with the patient. I wish we had made the switch sooner."
>
> **— Maria T., CPC, CPC-H | Outpatient Coding Specialist | Regional Health System, Atlanta, GA**

✓ **Quick Check 2.1**

1. ICD-10-CM was implemented in the United States on .
2. The CM in ICD-10-CM stands for .
3. ICD-10-CM contains approximately how many codes?

4. In the United States, ICD-10-CM is maintained jointly by which two federal agencies? and

5. ICD-10-CM is updated annually. New codes take effect on of each year.

SECTION 2.2 — Structure of the ICD-10-CM Code Book

The ICD-10-CM code book has two major parts that work together. You cannot accurately code from just one — you need both. Understanding how these parts are organized and how they interact is the single most important structural concept you will learn in this chapter.

Part 1 — The Alphabetic Index

The **Alphabetic Index** is the first place you go when you are coding. It is organized alphabetically by condition, disease, symptom, injury, or circumstance. Think of it as your starting point — it points you in the right direction, but it does not give you the final answer by itself.

The Three Special Tables in the Alphabetic Index

Within the Alphabetic Index, there are three specialized lookup tables for specific coding situations:

1. **Table of Neoplasms** — A six-column grid used for all neoplasm (tumor and cancer) coding. The six columns represent: Malignant Primary, Malignant Secondary, Ca in situ, Benign, Uncertain Behavior, and Unspecified Behavior. You will find the anatomic site in the left column, then move across to select the appropriate behavior column.

2. **Table of Drugs and Chemicals** — Used for poisoning, adverse effect, and underdosing codes. Columns represent the intent: Accidental (unintentional), Intentional self-harm, Assault, Undetermined, Adverse Effect, and Underdosing. Always use this table for any substance-related diagnosis.
3. **Index to External Causes** — Used to find codes from Chapter 20 (V00–Y99) that describe the cause of an injury or condition from an external source (motor vehicle accidents, falls, fires, assaults, etc.).

Main Terms and Subterms

Main terms in the Alphabetic Index appear in bold typeface and represent the condition, disease, or reason for the encounter. They are always listed in bold, making them easy to identify. Under each main term, you will find **subterms** — indented entries that narrow down the code by providing additional specificity such as anatomic site, cause, complication, or type. Always read all subterms carefully before accepting a code suggestion from the Index.

Cross-References in the Index

The Alphabetic Index uses several cross-reference instructions to guide you to the correct location:

- see — Directs you to a different main term. You must follow this instruction.
- see also — Suggests an additional main term to consult if the current entry does not provide adequate specificity.
- see condition — Tells you that the entry is an adjective or modifier, and you must look up the actual condition name instead.

Default Codes and NEC/NOS

A **default code** is the code listed next to the main term in the Alphabetic Index when no additional information or specificity is documented. If you look up "Pneumonia" and the documentation gives no further detail, the default code is the code you assign. A **NEC (Not Elsewhere Classifiable)** notation indicates that no more specific code exists in the classification for the condition described — the documentation is specific, but the system does not have a more detailed code. **NOS**

(Not Otherwise Specified) is used when no further information is available — essentially the coding equivalent of "unspecified."

■ **STOP!**

NEVER code directly from the Alphabetic Index. The Index gives you a starting point — a suggested code — but it is NOT the final word. You must always verify every code in the Tabular List before assigning it to a claim. Codes in the Index may not include all the required specificity, instructional notes, or exclusion notes that appear only in the Tabular List. Coding from the Index alone is one of the most common errors made by new coders — and it shows up in audits.

Part 2 — The Tabular List

The **Tabular List** is the numbered, organized half of the ICD-10-CM code book. This is where you VERIFY every code suggested by the Alphabetic Index. The Tabular List is organized by body system and type of condition. It contains all the instructional notes, inclusion notes, exclusion notes, and additional required codes that make your final code assignment accurate and complete. You will read more about those conventions in Section 2.4.

Hierarchy Within the Tabular List

The Tabular List is organized in a strict hierarchy:

- **Sections** — A group of related three-character categories (e.g., J00–J06, Acute Upper Respiratory Infections)
- **Categories** — A three-character code representing the broadest classification of a condition (e.g., J18 = Pneumonia, unspecified organism)
- **Subcategories** — Four- or five-character codes that add specificity to the category

- **Codes** — The final, most specific code available in the classification (may be 3 to 7 characters)

The 21 Chapters of the Tabular List

The Tabular List is divided into 21 chapters. Every coder should know these chapters by heart — not just for the CPC exam, but because you will reference them every single day on the job. Memorize the letter ranges and the topics they cover.

Chapter	Code Range	Topic
1	A00–B99	Certain Infectious and Parasitic Diseases
2	C00–D49	Neoplasms
3	D50–D89	Diseases of the Blood and Blood-Forming Organs and Certain Disorders Involving the Immune Mechanism
4	E00–E89	Endocrine, Nutritional and Metabolic Diseases
5	F01–F99	Mental, Behavioral and Neurodevelopmental Disorders
6	G00–G99	Diseases of the Nervous System
7	H00–H59	Diseases of the Eye and Adnexa
8	H60–H95	Diseases of the Ear and Mastoid Process
9	I00–I99	Diseases of the Circulatory System
10	J00–J99	Diseases of the Respiratory System
11	K00–K95	Diseases of the Digestive System
12	L00–L99	Diseases of the Skin and Subcutaneous Tissue
13	M00–M99	Diseases of the

Chapter	Code Range	Topic
		Musculoskeletal System and Connective Tissue
14	N00–N99	Diseases of the Genitourinary System
15	O00–O9A	Pregnancy, Childbirth and the Puerperium
16	P00–P96	Certain Conditions Originating in the Perinatal Period
17	Q00–Q99	Congenital Malformations, Deformations and Chromosomal Abnormalities
18	R00–R99	Symptoms, Signs and Abnormal Clinical and Laboratory Findings, Not Elsewhere Classified
19	S00–T88	Injury, Poisoning and Certain Other Consequences of External Causes
20	V00–Y99	External Causes of Morbidity
21	Z00–Z99	Factors Influencing Health Status and Contact with Health Services

● **Coding Shot**

Learn the Tabular chapter letter ranges now — before the CPC exam. The CPC is timed, and flipping back and forth to find which chapter contains a condition wastes precious minutes. Notice the pattern: A–B is infections, C–D49 is neoplasms, then the alphabet runs through body systems largely from head to toe. Chapters 19, 20, and 21 are specialty chapters. Create a flashcard set

for these 21 chapters and drill them until you can recall them cold.

◆ The Golden Rule of ICD-10-CM Coding

ALWAYS start in the Alphabetic Index — NEVER go directly to the Tabular List.Then ALWAYS verify the code in the Tabular List before assigning it.Index → Tabular. Every time. No exceptions.

☞ From the Trenches

"Early in my career, I thought I could save time by going straight to the Tabular once I knew the general area of the code. My supervisor caught a wrong code on an audit — I had missed an Excludes2 note that would have required a second code. One missed note cost the practice a refund and a lot of embarrassment. I have never skipped the Index-to-Tabular workflow since. The process exists for a reason — trust it."

— James R., CPC | Multi-Specialty Group Practice | Charlotte, NC

⚡ Toolbox — Section 2.2

- The ICD-10-CM code book has two main parts: the Alphabetic Index (Part 1) and the Tabular List (Part 2).
- The Alphabetic Index is your STARTING POINT. The Tabular List is your VERIFICATION POINT. Never skip either step.
- Three special tables are embedded in the Index: Table of Neoplasms, Table

of Drugs and Chemicals, and Index to External Causes.

• The Tabular List has 21 chapters organized by body system and type of condition, with code ranges from A00 to Z99.

• The hierarchy within the Tabular List runs: Section → Category (3 characters) → Subcategory → Code (up to 7 characters).

✓ Quick Check 2.2

1. What is the FIRST thing you should do when assigning an ICD-10-CM code?
2. The Tabular List is divided into how many chapters?
3. Which ICD-10-CM chapter covers diseases of the circulatory system?
4. A main term in the Alphabetic Index is identified by which typeface?
5. NEC stands for:

Exercise 2-A — Tabular List Chapter Identification

Directions: For each condition below, identify the ICD-10-CM Tabular List chapter number AND code range that would contain this condition. Write your answers on the lines provided.

1. A patient is diagnosed with tuberculosis of the lung.

Chapter # Code Range

2. A patient is found to have breast cancer.

Chapter # Code Range

3. A patient is seen for type 2 diabetes mellitus with complications.

Chapter # Code Range

4. A patient is diagnosed with major depressive disorder, recurrent, moderate.

Chapter # Code Range

5. A patient presents with a herniated disc of the lumbar spine.

Chapter # Code Range

6. A patient is treated for a closed fracture of the right tibia after a fall.

Chapter # Code Range

7. A patient is 28 weeks pregnant and is seen for gestational hypertension.

Chapter # Code Range

8. A patient comes in for an annual wellness exam, no acute complaints.

Chapter # Code Range

9. A patient is diagnosed with congenital heart disease (present since birth).

Chapter # Code Range

10. A patient is treated for iron-deficiency anemia.

Chapter # Code Range

SECTION 2.3 — ICD-10-CM Code Format and Structure

Every ICD-10-CM code has a specific format. Once you understand the structure, you will be able to look at any code and immediately know what each character represents. This knowledge is tested directly on the CPC exam and is used every day in real coding work.

Code Length: 3 to 7 Characters

ICD-10-CM codes range from **3 to 7 characters** in length. A 3-character code (the **category**) is only valid if no further subdivision exists in the classification. In most cases, 4, 5, 6, or 7 characters are required to code to the highest level of specificity available. Always use the most specific code the Tabular List provides.

```
X X X . X X X
```

ICD-10-CM Code Format: 3-character category + decimal point + up to 4 additional characters

What Each Character Position Means

Position	Character Type	What It Represents	Example (J18.9)
1	LETTER (A–Z, not U)	Chapter/body system identifier	J = Respiratory
2	Number	Category within the chapter	1
3	Number	Category (continued)	8 → J18 = Pneumonia, unspecified organism
4	Letter or Number	Etiology, anatomic site, or severity	.9 = unspecified
5	Letter or Number	Further specificity	(varies by code)
6	Letter or Number	Further specificity	(varies by code)

Position	Character Type	What It Represents	Example (J18.9)
7	Letter or Number	Extension: episode of care, encounter type	(varies by code)

Key rule: The first character is ALWAYS a letter. Characters 2 and 3 are ALWAYS numbers. Characters 4–7 may be letters or numbers. The letter U is currently reserved by WHO and is not used for routine clinical classification in the United States.

Real Code Examples — Broken Down Character by Character

Code	Category	Full Description	Characters
J18.9	J18	Pneumonia, unspecified organism	5 characters
S52.501A	S52	Unspecified fracture of lower end of right radius, initial encounter for closed fracture	7 characters
T14.90XA	T14	Injury, unspecified, initial encounter (X = placeholder)	7 characters
Z23	Z23	Encounter for immunization	3 characters (valid at category level)
E11.65	E11	Type 2 diabetes mellitus with hyperglycemia	5 characters

Valid vs. Invalid Codes — Highest Level of Specificity

A code is only **valid** in ICD-10-CM if it is reported at the **highest level of specificity** available in the Tabular List. If a 6-character code exists, you cannot

report the 5-character parent code. If a 7-character code is required, you cannot submit the 6-character version. Submitting a code that is not at its highest level of specificity will result in a claim denial from most payers, and it constitutes inaccurate coding under compliance standards.

■ STOP!

NEVER truncate a code. Truncation means stopping short of the required specificity — reporting a 4-character code when a 5-character code is required, or a 5-character code when a 6-character code exists. This is one of the most cited coding errors found in external audits. Before submitting any code, scan the Tabular to confirm there is no further subdivision beneath your selected code. If there is, you must go deeper.

▶️ Official Guidelines for Coding and Reporting

"Code to the highest degree of specificity. Codes that describe symptoms, signs, and ill-defined conditions... are acceptable for reporting purposes when a related definitive diagnosis has not been established (confirmed) by the provider." (ICD-10-CM Official Guidelines for Coding and Reporting, Section I.A)

CORRINA'S TRANSLATION:

This means you always go as specific as the Tabular List allows. If a definitive diagnosis has been confirmed, code it. If it has NOT been confirmed, you can code symptoms — but you must still go to the most specific symptom code available. There is no excuse for using a vague or partial code when the classification provides something more exact.

● Coding Shot

The decimal point in an ICD-10-CM code is NOT reported on electronic claims. When you enter a code into billing or EHR software, you enter S52501A — not S52.501A. The decimal is printed in the code book and used in documentation and text, but electronic claim formats (including the ANSI 837 transaction) do not include the decimal. Entering it incorrectly in some systems will generate a format error and reject the claim. Always know your system's requirements.

✓ Quick Check 2.3

1. ICD-10-CM codes range from _____ to _____ characters in length.
2. The first character of every ICD-10-CM code is always a(n):
3. Characters 2 and 3 of every ICD-10-CM code are always:
4. The code J18 represents a(n) (category / subcategory / full code — circle one).
5. True or False: A 5-character code is always valid if a 6-character subdivision exists in the Tabular List. **T / F**

Exercise 2-B — Code Structure Analysis

Directions: For each ICD-10-CM code listed below, answer the questions on the

lines provided. Use T/F where indicated. Circle the correct letter for multiple choice questions.

1. Code: **K21.0**

   a. How many characters does this code contain?

   b. What is the 3-character category?

   c. Which Tabular List chapter does this code belong to (letter tells you the system)?

2. Code: **S72.001A**

   a. How many characters does this code contain?

   b. What is the category?

   c. What does the final character A represent?

3. Code: **E11** — A coder submits this code for a patient with type 2 diabetes with diabetic neuropathy. Is this code valid?

   T / F — Explain:

4. The first character of an ICD-10-CM code is always:

   A. A number B. A letter C. Either a letter or a number D. Always the letter A Answer: **A B C D**

5. Write in the correct code structure format (with decimal in the correct position) for the seven-character code **S52501A** as it would appear in the code book:

   ___ ___ ___ . ___ ___ ___ ___

6. A coder reports code **M79.3** for a patient with panniculitis of the left foot. The Tabular List shows that M79.3 has a subdivision M79.37 specifically for foot. The submission of M79.3 is:

   A. Correct — 4 characters is sufficient B. Incorrect — the coder must code to the highest level of specificity C. Acceptable only for Medicare claims D. Correct because the foot is not a specific anatomic site Answer: **A B C D**

7. Code: **Z23**

a. How many characters does this code contain?

b. True or False: Z23 may be a valid code if no further subdivision exists in the Tabular List. **T / F**

8. Which code below is structured INCORRECTLY in terms of ICD-10-CM format rules?

A. J18.9 B. 118.9 (starts with the number one) C. S52.501A D. E11.65

Answer: **A B C D**

9. The decimal point in an ICD-10-CM code is placed after character position number:

10. A 3-character ICD-10-CM code is valid only when:

A. The patient is Medicare B. The coder cannot find the condition in the Tabular C. No further subdivision exists in the Tabular List for that category D. The code is from Chapter 21 Answer: **A B C D**

SECTION 2.4 — ICD-10-CM Conventions

Conventions are the rules embedded directly into the ICD-10-CM code book that tell you exactly how to use the codes. They appear as typeface distinctions, instructional notes, and notation abbreviations. Mastering conventions is non-negotiable — the CPC exam tests them heavily, and in real-world coding, missing a convention can mean a compliance violation. Let's break every one of them down.

Typeface Conventions

Bold type in the Alphabetic Index identifies **main terms** — the condition or reason for the encounter that you look up first. Bold makes these entries stand out from subterms so you locate the right starting point quickly.

Italics in the Tabular List identify **manifestation codes**. A **manifestation** is a condition that is the result of an underlying disease — it cannot stand alone as a diagnosis. When you see a code printed in italics in the Tabular List, it signals that this code describes a manifestation and **must always be sequenced SECOND**, after the etiology (underlying disease) code. This is directly connected to the "Code First" instructional note, which is discussed below.

NEC and NOS

NEC (Not Elsewhere Classifiable) — This notation indicates that the coder has specific clinical information that is documented in the medical record, but there is no more specific code available in the classification. The condition is being coded as specifically as the system allows. NEC is the system's limitation, not the coder's.

NOS (Not Otherwise Specified) — This notation means the physician has not provided enough additional information to code more specifically. It is the equivalent of "unspecified." If the documentation allows you to code more specifically, always do so. Use NOS codes only when no additional specificity is available from the provider.

Inclusion and Exclusion Notes

These are among the most important — and most tested — conventions in ICD-10-CM. Read every one of them carefully when you verify a code in the Tabular List.

Includes Notes

An **Includes note** appears immediately below a chapter title, category, or code heading. It defines what is covered by that code or category — essentially confirming which conditions belong under this classification. Think of it as a welcome list — it tells you what is included under this umbrella.

Excludes1 — NOT CODED HERE

An **Excludes1** note means "NOT CODED HERE." It identifies conditions that are **mutually exclusive** to the code above it. Mutually exclusive means these two conditions cannot coexist in the same patient at the same time. If you see an Excludes1 note beneath a code, you must **NEVER** report the excluded code

together with the code listed above it — not under any circumstances. They are biologically or clinically incompatible.

Example: Acute myocardial infarction carries an Excludes1 note for old myocardial infarction. You cannot have an active MI and a healed old MI classified at the same time — they are mutually exclusive.

Excludes2 — NOT INCLUDED HERE

An **Excludes2** note means "NOT INCLUDED HERE." This is a fundamentally different instruction. It tells you that the excluded condition is NOT part of the code above it — it is a separate condition. Because it is a separate condition, a patient CAN have both. If both conditions are present and documented, **both codes may be reported together**.

Example: If Code A has an Excludes2 note for Condition B, the Excludes2 tells you: "Condition B is not included in Code A, but if the patient has both, report both codes." This is completely different from Excludes1, where reporting both is never allowed.

■ STOP!

Excludes1 vs. Excludes2 is one of the TOP 5 most missed topics on the CPC exam. Many students confuse these two notes or apply them in reverse. Memorize this: Excludes1 = mutually exclusive = NEVER code together. Excludes2 = not included, but can coexist = CAN code together if both present and documented. Burn this distinction into your memory before you sit for the CPC.

Convention	Full Meaning	What It Tells You	Can Both Be Coded Together?	Memory Tip
Excludes1	NOT CODED HERE	The two conditions are	**NO — NEVER report**	"1 = ONE condition only

Convention	Full Meaning	What It Tells You	Can Both Be Coded Together?	Memory Tip
		mutually exclusive — they cannot co-exist in the same patient at the same time	**together**	— they cannot exist together"
Excludes2	NOT INCLUDED HERE	The excluded condition is a separate condition, not part of this code — patient may have both	**YES — if both documented and present**	"2 = TWO codes may be needed — both can exist together"

⚠️ **CAUTION!**

Ignoring Excludes1 notes is an audit red flag. When an external auditor reviews a claim and finds two codes billed together that are explicitly listed in an Excludes1 relationship, this flags immediately as a potential compliance issue. In a payer audit, this can result in a demand for refund of reimbursement, recoupment of payments, and in egregious or repeated cases, referral to the Office of Inspector General (OIG). Never dismiss these notes as minor — they carry serious financial and legal consequences.

Instructional Notes

Use Additional Code

This note instructs the coder to report a second code to fully describe the condition. The code carrying the "Use Additional Code" note is sequenced FIRST, and the additional code follows. For example, a code for a bacterial infection may carry a "Use Additional Code" note directing you to also report the specific organism (e.g., using a code from category B95–B97 for infectious agent).

Code First

The **Code First** note appears under **manifestation codes** — conditions that result from an underlying disease. When you see a "Code First" note under a code, it is telling you: "Do not sequence this code first — you must first code the underlying condition (etiology) that caused this manifestation." The manifestation code follows the etiology code.

● Coding Shot

When you see "Code First" in italics, that code is a manifestation — it CANNOT be sequenced first. The most common real-world example is diabetic complications. Diabetic peripheral neuropathy (E11.40) carries no Code First note — E11.40 IS the combined code. But in some older combinations, you will see a separately listed manifestation with a "Code First" instruction requiring the diabetes code first. Always read the full Tabular entry before sequencing. The italicized code always goes second.

Code Also

A **Code also** note means that more than one code may be needed to fully describe the condition or the encounter. Unlike "Code First," which specifies sequencing, "Code Also" leaves the sequencing to the coder based on the circumstances of the encounter. Review the documentation carefully and apply sequencing guidelines to determine which code goes first.

Cross-References and Connectors

The ICD-10-CM also uses several connector words and cross-references that have specific technical meanings within the classification. These are not casual English words — they carry defined coding instructions:

Term/Cross-Reference	What It Means in ICD-10-CM
"With"	Links two conditions when documented together. If a code title says "with X," it means both conditions are included in that single code when both are present and documented. The word "with" in ICD-10-CM is interpreted as "associated with" or "due to."
"And"	In ICD-10-CM code titles, "and" means "and/or." It does not require both conditions to be present — either condition qualifies.
"Due to"	Specifies a causal relationship. If the code title includes "due to," the condition described must be caused by the specified etiology to use that code.
"See"	A mandatory cross-reference in the Index directing you to a different main term. You must follow this instruction — no optional reading here.
"See Also"	Suggests an additional main term if the current location is insufficient. Optional — only use it if you haven't found what you need.

▶️ Official Guidelines for Coding and Reporting

"The conventions for the ICD-10-CM are the general rules for use of the classification independent of the guidelines. These conventions are incorporated within the Alphabetic Index and Tabular List of the ICD-10-CM as instructional notes." (ICD-10-CM Official Guidelines for Coding and Reporting, Section I.A)

CORRINA'S TRANSLATION:

The guidelines are telling you that conventions are not suggestions — they are rules baked directly into the code book itself. When you see an Excludes1 note, a Code First instruction, or a "Use Additional Code" directive, those are mandatory instructions. They are not advice. They are the rules of the

classification system. Following them is what separates compliant coding from billing that creates liability.

☞ From the Trenches

"I used to read Excludes notes and kind of... skim them. My thinking was 'I know what this code is, I don't need the fine print.' Then I got assigned to do a self-audit and I found three claims where I had coded an Excludes1 pair together. Nothing bad happened — I caught it first — but that scared me straight. Now I read every single note in the Tabular before I finalize any code. Takes maybe 15 extra seconds. Completely worth it."

— Tamika W., CPC, COC | Compliance and Coding Auditor | Large Physician Group, Dallas, TX

✓ Quick Check 2.4

1. An Excludes1 note means the two conditions are and can NEVER be coded together.
2. An Excludes2 note means the excluded condition be coded together with the code above it, if both are present and documented.
3. A manifestation code appears in which typeface in the Tabular List?
4. The "Code First" note means the code carrying this note must be sequenced: (first / second)
5. In ICD-10-CM, the word "and" in a code title means:

Exercise 2-C — Conventions Application

Directions: For each scenario below, identify the convention involved and determine the correct coding action. Use the answer formats specified.

1. A coder finds Code A with an Excludes1 note for Code B. The patient has both conditions documented in the record. Should the coder report both codes?

   T / F — Convention involved:

2. A code has a "Code First" instruction beneath it. This code should be sequenced:

   A. First B. Second C. Only if both codes are documented D. It does not matter Answer: **A B C D**

3. The physician documents "Diabetic retinopathy." The Tabular shows a note: "Use Additional Code to identify manifestation." The coder assigns only the diabetes code. Is this coding complete?

   T / F — Explain:

4. The code J44.1 (COPD with acute exacerbation) has an Excludes2 note for J45 (Asthma). A patient has both COPD with acute exacerbation AND documented asthma. The coder should:

   A. Code only J44.1 — Excludes2 means you can never code asthma with COPD B. Code only the asthma because it is more acute C. Code both J44.1 and the appropriate asthma code from J45 D. Query the physician because these conditions cannot coexist Answer: **A B C D**

5. NEC stands for: and means the coder has information documented, but no more specific code exists in the

classification.

6. A manifestation code is printed in typeface in the Tabular List.

7. A coder finds the notation "see Condition" in the Alphabetic Index under "diabetic." This means:

A. Look up the word "diabetic" in the Tabular List B. The entry is an adjective; look up the main condition instead (e.g., "neuropathy, diabetic") C. No code exists for this condition D. Code as NOS Answer: **A B C D**

8. True or False: The word "and" in an ICD-10-CM code title requires both conditions to be present for the code to apply.

T / F

9. A code has an Includes note beneath it. This note:

A. Lists diagnoses that are excluded from this code B. Lists conditions that are included and classified under this code C. Directs you to a different code D. Requires a second code to be reported Answer: **A B C D**

10. A Code Also note differs from a Code First note because Code Also:

A. Always requires the second code to be from Chapter 21 B. Does not specify sequencing — the coder determines order based on circumstances C. Means the second code is a manifestation D. Is only used in outpatient coding Answer: **A B C D**

11. A patient is diagnosed with chronic kidney disease due to type 1 diabetes mellitus. Which code is sequenced FIRST?

(the diabetes code / the CKD code — circle one)

Convention applied:

12. True or False: NOS and NEC mean the same thing in ICD-10-CM.

T / F

SECTION 2.5 — Special ICD-10-CM Features: Placeholder X, Laterality, and 7th Characters

Three features of ICD-10-CM are unique to this system — and all three are tested on the CPC exam. They are also responsible for a significant number of real-world claim denials when coders get them wrong. Master these now.

The Placeholder Character X

The **placeholder character (X)** is used to fill empty character positions in a code that requires a 7th character but does not have defined entries for the 4th, 5th, or 6th positions. The X character has NO clinical meaning — it is purely structural. Its only job is to hold a position so that the 7th character extension can be placed in the correct (7th) position of the code.

Placeholder X is used most frequently in Chapter 19 (Injury, Poisoning) and Chapter 20 (External Causes). When you see "X" appear in the middle of a code in the Tabular List, it is not coincidental — the system placed it there intentionally.

Example: Code T14.90XA — Injury, unspecified, initial encounter

- T14 = Category (Injury of unspecified body region)
- .90 = Subcategory (Injury, unspecified)
- X = Placeholder (fills position 6 — no clinical meaning)
- A = 7th character extension (initial encounter)

Without the X, the code would read T14.90A — with A in the 6th position instead of the 7th. The code would be structurally INVALID and would be rejected on claims.

● Coding Shot

A missing placeholder X creates an invalid code and guarantees a claim denial. When you see an X in a Tabular List entry, it is not optional — it

is required. Most EHR and billing systems will flag a code as invalid if the X is missing, but do not rely on your software to catch this for you. Know the rule: if the Tabular shows X in a character position, your submitted code must include X in that position.

Laterality

One of the major improvements ICD-10-CM made over ICD-9-CM is the widespread inclusion of **laterality** — the specification of right side versus left side of the body for bilateral structures such as eyes, ears, arms, legs, kidneys, and many other anatomic sites.

When coding with laterality, follow these rules:

- If the documentation states "right" → use the right laterality code.
- If the documentation states "left" → use the left laterality code.
- If laterality is not specified and cannot be determined from the record → use the unspecified laterality code.
- **NEVER assume laterality.** If the chart says "knee pain" with no mention of right or left, code the unspecified laterality. Do not assume right because the patient is right-handed. Do not assume because of past records. Code what is documented in today's encounter.

⚠️ **CAUTION!**

Assuming laterality when it is not documented is a coding violation. It is considered adding information to the medical record that is not supported by clinical documentation. In an audit, assumed laterality that is coded without documentation will be flagged as unsupported coding — a compliance risk. If laterality is clinically significant and not documented, the appropriate action is to query the physician, not to guess. When querying is not practical, default to

the unspecified laterality code.

7th Character Extensions — Episode of Care

The **seventh character** is used extensively in Chapter 19 (Injury, Poisoning) and Chapter 20 (External Causes) to capture the episode of care — meaning where the patient is in the treatment timeline for that specific injury or condition. Understanding episode of care is one of the most misunderstood aspects of ICD-10-CM. Let's get it right.

The Three Core Episodes of Care

7th Character	Episode	Definition	Real-World Example
A	Initial encounter	The patient is receiving active treatment for the condition. This includes ER visits, first-time diagnosis visits, surgical procedures, and any visit where active medical management is occurring — even if it is not the patient's literal "first" visit.	Patient arrives at urgent care with a new wrist fracture. Cast is applied. Code with A.
D	Subsequent encounter	The active phase of treatment is complete, and the patient is receiving routine or follow-up care — cast checks, wound checks, medication management during healing, physical therapy.	Patient returns 3 weeks later for cast check. Healing normally. Code with D.

7th Character	Episode	Definition	Real-World Example
S	Sequela	The injury has resolved, but a complication or late effect directly resulting from the original injury persists and is now being treated. The sequela code is sequenced AFTER the injury code.	Patient returns 8 months later with chronic limited grip strength due to the healed wrist fracture. Code with S.

■ STOP!

A does NOT mean "first visit" and D does NOT mean "second visit." These extensions do not count visits — they describe the PHASE OF TREATMENT. A patient can have five visits and still be in the initial encounter phase (A) if active treatment is ongoing at each visit. A patient can return on the second visit in the subsequent encounter phase (D) if the physician documented that the acute phase is resolved and the patient is now in routine recovery. Always read the documentation and determine the phase of care — not the visit number.

Expanded 7th Characters for Fracture Codes

Fracture codes in Chapter 19 have an expanded set of 7th character options to capture additional clinical detail about healing status:

7th Character	Episode / Healing Status	Description
A	Initial — Closed fracture	Active treatment of a closed (skin intact) fracture

7th Character	Episode / Healing Status	Description
B	Initial — Open fracture	Active treatment of an open (bone exposed through skin) fracture
D	Subsequent — Routine healing	Follow-up care; fracture healing normally
G	Subsequent — Delayed healing	Follow-up care; fracture healing more slowly than expected
K	Subsequent — Nonunion	Follow-up care; fracture ends have failed to unite
P	Subsequent — Malunion	Follow-up care; fracture healed in incorrect position
S	Sequela	Complication arising as a direct result of the healed fracture

Real Documentation Examples — Choosing the Correct 7th Character

Clinical Documentation	Correct 7th Character	Rationale
"Patient presents with right wrist fracture — first visit, casting applied today."	**A** (initial encounter, closed fracture)	Active treatment is being provided — casting is active management. Closed fracture (skin intact).
"Patient returns 3 weeks post-fracture for cast check. X-ray shows normal healing progress."	**D** (subsequent, routine healing)	Active phase complete; patient in follow-up. Healing normally = routine.
"Patient presents 6 months after right wrist fracture with limited grip strength and chronic pain at the fracture site. Fracture fully healed."	**S** (sequela)	Original injury healed; current complaint is a direct late effect of the healed fracture. Report S on the injury code; also separately report the sequela condition.
"Patient seen for open	**B** (initial, open fracture)	Active surgical

Clinical Documentation	Correct 7th Character	Rationale
fracture of the femoral shaft, right, sustained in a motorcycle accident. Surgical repair performed."		treatment. Open fracture (bone exposed).
"Follow-up visit — femur fracture from 6 months ago. X-ray shows no bridging callus; fracture ends still not united."	**K** (subsequent, nonunion)	Subsequent care (active phase complete), but healing complication: nonunion.

◆ CMS Rules — Medicare

Medicare requires the correct 7th character extension on ALL applicable ICD-10-CM codes. A missing or incorrect 7th character is treated as an incomplete code and will trigger an automatic claim rejection — not a soft edit — when submitted to Medicare Administrative Contractors (MACs). Medicare Part A (facility/hospital) and Medicare Part B (physician) both enforce this requirement. There is no override or workaround — the code must be complete and structurally valid. Train your billing staff to audit for complete codes before submission.

✓ Quick Check 2.5

1. The placeholder character X has what clinical meaning?

2. A patient with a right knee injury returns for her third visit for a routine cast check while healing normally. The correct 7th character is:

3. True or False: The 7th character A means the patient is on their first physical visit only. **T / F**

4. A patient presents with chronic wrist pain 9 months after a healed

fracture. The correct 7th character for the fracture code is:

5. If documentation does not specify right or left for a body part with laterality options, the coder should:

Exercise 2-D — Placeholder X, Laterality, and 7th Character

Directions: For each question below, apply your knowledge of placeholder X, laterality, and 7th character extensions to select or write the correct answer.

1. The ICD-10-CM Tabular shows the following code entry: T71.1__XA (where __ represents the 4th and 5th character). Which character in this code is a placeholder?

A. T B. The X before A C. A D. There is no placeholder Answer: **A B C D**

2. A patient has a left-sided femur fracture. The documentation clearly states "left." Which laterality code should the coder use?

laterality (Right / Left / Unspecified — circle one)

3. A physician documents "knee pain" — no laterality stated, no prior records consulted. The coder should assign:

A. Right knee code — most patients are right-handed B. Unspecified laterality code C. Left knee code — most common side for injuries D. Query the patient's family for laterality Answer: **A B C D**

4. Code the following scenario with the correct 7th character. Write the episode letter on the line provided.

"Patient presents to orthopedic clinic for a 6-week post-operative check

after open reduction internal fixation of left femur fracture. Healing progressing normally."

7th character:

5. Code the following scenario with the correct 7th character:

"Patient presents to the emergency department with a fresh, closed fracture of the right radius. Reduction performed and splint applied."

7th character:

6. A fracture that has failed to unite (the bone ends did not join) uses which 7th character?

7. True or False: The placeholder X carries information about the anatomic site of the injury. **T / F**

8. A patient is seen for stiffness in the left shoulder — a direct complication of a healed rotator cuff injury from 1 year ago. The 7th character applied to the original injury code should be:

9. In the code T14.90XA, identify what each component represents:

T14 =

.90 =

X =

A =

10. True or False: A patient who is seen for the fifth time for wound care on an actively managed surgical site would use 7th character A (initial encounter).

T / F

SECTION 2.6 — Steps to Accurate ICD-10-CM Coding

Everything you have learned in this chapter comes together in a single, reliable workflow. The seven-step process below is not optional — it is the professional coding standard. Coders who follow this process consistently produce accurate, compliant codes. Coders who skip steps produce errors that cost practices money and put patients' records at risk. Follow the steps. Every time. Every code.

STEP 1

IDENTIFY — Read the clinical documentation and identify the main condition, disease, or reason for the encounter that is to be coded. If multiple conditions are documented, determine which is the principal (inpatient) or first-listed (outpatient) diagnosis based on the guidelines.

STEP 2

LOCATE — Open the Alphabetic Index and locate the main term in bold. Remember: the main term is the condition itself — not the anatomic site, not the adjective. If your initial main term doesn't yield results, try alternative terms (the physician may use a term different from the ICD-10-CM preferred term).

STEP 3

REVIEW — Read all subterms beneath the main term. Look for indented entries that match the specificity documented in the record. Follow any cross-references ("see," "see also") you encounter. Do not select the first code you find — scan all relevant subterms first.

STEP 4

NOTE — Write down or note the code suggested by the Alphabetic Index. This is your starting point — your reference code. Do NOT submit this code without verification.

STEP 5

VERIFY — Turn to the Tabular List and locate the code from Step 4. Read the full code entry. Read every instructional note — Includes, Excludes1, Excludes2, Code First, Use Additional Code, Code Also. Read notes at the category level AND the chapter level, not just at the specific code level. Do not skip this step.

STEP 6

ASSIGN — Select the code at the highest level of specificity available. Add the 7th character extension if required. Add the placeholder X if required to maintain code validity. Assign any additional codes required by instructional notes (Use Additional Code, Code Also).

STEP 7

SEQUENCE — Arrange codes in the correct order. In the outpatient/physician setting, the first-listed diagnosis is the condition chiefly responsible for the visit. In the inpatient setting, the principal diagnosis is the condition determined after study to be responsible for the admission. Follow sequencing guidelines for etiology/manifestation pairs (etiology first), and for Code First instructions.

★ Check This Out

According to CMS data, diagnosis coding errors are among the leading causes of claim denials in both outpatient and inpatient settings. Studies by the AAPC and AHIMA have found that incomplete or incorrect diagnosis codes account for a significant percentage of claim rejections each year — many of which result from skipping steps in the coding process, particularly failing to verify codes in the Tabular List and missing instructional notes. Following a consistent, disciplined coding workflow reduces denial rates and protects the practice financially.

Apply the Steps — Three Complete Real-World Examples

▶️ Apply the Steps — Example 1

Clinical Documentation: "Patient presents with type 2 diabetes mellitus with diabetic chronic kidney disease, stage 3."

STEP 1 — IDENTIFY: Main condition: Type 2 diabetes mellitus with a complication — diabetic chronic kidney disease, stage 3.

STEP 2 — LOCATE: Alphabetic Index → Main term: Diabetes

STEP 3 — REVIEW: Subterms → type 2 → with → chronic kidney disease → stage 3. Index suggests E11.22.

STEP 4 — NOTE: Index suggests E11.22 (Type 2 DM with diabetic CKD) and directs "Use Additional Code" for CKD stage.

STEP 5 — VERIFY: Tabular confirms E11.22. Note at E11.22: "Use Additional Code to identify stage of chronic kidney disease (N18.-)." N18.3 = CKD, stage 3.

STEP 6 — ASSIGN: E11.22 + N18.3. Both codes required. No 7th character for these codes.

STEP 7 — SEQUENCE: E11.22 first (etiology/diabetes is sequenced first per convention), N18.3 second (additional code for stage).

FINAL CODES: E11.22, N18.3

▶️ Apply the Steps — Example 2

Clinical Documentation: "Patient is seen for acute appendicitis with peritonitis."

STEP 1 — IDENTIFY: Main condition: Acute appendicitis. Complication

present: peritonitis.

STEP 2 — LOCATE: Alphabetic Index → Main term: Appendicitis

STEP 3 — REVIEW: Subterms → acute → with peritonitis. Index suggests K35.20 or K35.21 — note that peritonitis with abscess = K35.21; without abscess = K35.20.

STEP 4 — NOTE: Documentation does not mention abscess. Index suggests K35.20.

STEP 5 — VERIFY: Tabular: K35.20 = Acute appendicitis with generalized peritonitis, without abscess. Verify no Excludes notes block this code. Correct for this documentation.

STEP 6 — ASSIGN: K35.20. Single code captures both the appendicitis and the peritonitis. No 7th character required.

STEP 7 — SEQUENCE: K35.20 is the only code required. This is the principal/first-listed diagnosis.

FINAL CODE: K35.20

▶️ Apply the Steps — Example 3

Clinical Documentation: "Patient injured in motor vehicle accident — closed fracture of shaft of femur, right, initial treatment."

STEP 1 — IDENTIFY: Main condition: Closed fracture of femoral shaft. Laterality: right. Episode: initial treatment (active).

STEP 2 — LOCATE: Alphabetic Index → Main term: Fracture, traumatic

STEP 3 — REVIEW: Subterms → femur → shaft → Index suggests S72.30-. Note laterality subdivision required.

STEP 4 — NOTE: S72.30- (closed fracture of shaft of femur, laterality to be

specified). Also note external cause will be needed.

STEP 5 — VERIFY: Tabular: S72.301A = Unspecified fracture of shaft of right femur, initial encounter for closed fracture. Also note: Use Additional Code to identify external cause (Chapter 20). External cause: motor vehicle accident — lookup in Index to External Causes.

STEP 6 — ASSIGN: S72.301A (fracture code with A for initial, closed fracture) + external cause code from V00–Y99 for occupant in MVA (specific code based on type of vehicle and patient's role).

STEP 7 — SEQUENCE: S72.301A first (injury is the principal diagnosis); external cause code second (supplementary).

FINAL CODE: S72.301A + appropriate V/W/X/Y external cause code

▶️ Official Guidelines for Coding and Reporting

"In the outpatient setting, the term 'first-listed diagnosis' is used in lieu of 'principal diagnosis.' In determining the first-listed diagnosis the coding conventions of ICD-10-CM, as well as the general and disease specific guidelines take precedence over the outpatient guidelines." (ICD-10-CM Official Guidelines for Coding and Reporting, Section IV)

CORRINA'S TRANSLATION:

In the outpatient world, you select the first-listed diagnosis — the main reason the patient came in that day. In the inpatient world, you select the principal diagnosis — determined after the full hospital workup. The coding conventions and the official guidelines always come first, before any other instruction. Know which setting you are coding in, and apply the correct definition of "primary" or "first-listed" diagnosis every time.

● Coding Shot

When in doubt on the CPC exam, go back to the seven steps. Students who panic during timed sections often skip directly to the Tabular without checking the Index, or they grab the first code they see in the Index without verifying. Either shortcut costs points. Trust the process — even on the exam. The seven steps take only seconds to run through once you've practiced them, and they ensure you never miss a critical instructional note or specificity requirement.

◆ CMS Rules — Medicare

For Medicare claims, sequencing errors are treated as billing errors — not clerical errors. If the first-listed diagnosis on a Medicare claim does not align with the covered services billed (for example, listing a diagnosis that does not medically justify the procedure), the claim may be denied or flagged for medical necessity review. CMS requires that ICD-10-CM codes reported on claims accurately reflect the patient's condition on the date of service. Sequencing the wrong code first — especially in an outpatient setting — can result in a medical necessity denial even if the service itself was clinically appropriate.

⚡ Toolbox — Section 2.6

- The seven-step ICD-10-CM coding process is: Identify → Locate → Review → Note → Verify → Assign → Sequence.
- Always start in the Alphabetic Index (Step 2) and always verify in the

Tabular List (Step 5) — never skip either.

• Code to the highest level of specificity (Step 6), including 7th characters and placeholder X where required.

• Sequencing (Step 7) is governed by ICD-10-CM conventions (Code First, etiology/manifestation rules) and setting-specific guidelines (first-listed vs. principal diagnosis).

• Read ALL instructional notes at the chapter, section, category, and code level before finalizing any code assignment.

✓ Quick Check 2.6

1. What is the FIRST step in the ICD-10-CM coding process?

2. At which step do you verify the code in the Tabular List? Step #:

3. In the outpatient setting, the first diagnosis listed on the claim is called the:

4. In the inpatient setting, the primary diagnosis determined after full hospital workup is called the:

5. True or False: In Example 1 above, the first code submitted was the CKD code (N18.3). **T / F**

Exercise 2-E — Apply the Seven Steps: Clinical Coding Scenarios

Directions: For each clinical documentation snippet, apply the seven-step ICD-10-CM coding process. Fill in each step as instructed and write the final code(s) in the code blank provided. Identify one convention that applies.

1. **Documentation:** "Patient presents for treatment of acute exacerbation of chronic obstructive pulmonary disease (COPD)." Main term in Alphabetic Index:
   Tabular chapter:
   7th character required? **T / F**
   Final code: ___ ___ ___ . ___ ___ ___
   Convention applied:

2. **Documentation:** "Encounter for immunization — patient is here for influenza vaccine." Main term in Alphabetic Index:
   Tabular chapter:
   Final code: ___ ___ ___
   Convention applied:

3. **Documentation:** "Patient seen in follow-up for left tibial fracture sustained 4 weeks ago. X-ray shows delayed healing — callus formation minimal." Main term in Alphabetic Index:
   Laterality:
   7th character needed:
   Final code: ___ ___ ___ . ___ ___ ___ ___
   Convention applied:

4. **Documentation:** "Patient is a 45-year-old female with essential hypertension and chronic kidney disease, stage 2. Both conditions are being managed today." How many codes are required?
   Code 1: ___ ___ ___ . ___ ___ ___
   Code 2: ___ ___ ___ . ___ ___ ___

Convention applied:

5. **Documentation:** "Patient admitted to the ER following a fall from a ladder at home. Sustained a closed fracture of the surgical neck of the right humerus. Sling applied; ortho follow-up ordered." Main term in Alphabetic Index:

Laterality:

7th character needed:

Final fracture code: ___ ___ ___ . ___ ___ ___ ___

Should an external cause code also be assigned? **T / F**

6. **Documentation:** "Patient presents complaining of nausea, vomiting, and lower right abdominal pain for 3 days. Diagnosis: acute appendicitis, no mention of perforation or peritonitis." Main term:

Final code: ___ ___ ___ . ___ ___ ___

Convention applied:

7. **Documentation:** "Mrs. K is seen for a routine prenatal visit at 28 weeks of gestation. She is also noted to have mild gestational hypertension, currently stable." Main term:

Tabular chapter:

Final code(s): ___ ___ ___ . ___ ___ ___

Convention applied:

8. **Documentation:** "Patient is an 8-month-old infant seen for bronchiolitis due to RSV (Respiratory Syncytial Virus)." Is a second code required for the organism? **T / F**

Final code(s): ___ ___ ___ . ___ ___ ___

Convention applied:

9. **Documentation:** "Patient has scarring and limited range of motion in the right shoulder — sequela of a rotator cuff tear that fully healed 14 months ago." 7th character for the injury code:

What additional code should also be reported for the current complaint?

Convention applied:

10. **Documentation:** "Patient presents with HIV disease and is being seen for Pneumocystis pneumonia, which is directly related to the HIV." Which code is sequenced FIRST?

A. The pneumonia code B. The HIV disease code (B20) C. Either — sequencing does not matter for HIV D. A Z code for HIV status Answer: **A B C D**

Convention applied:

★ Check This Out

According to the AAPC, ICD-10-CM diagnosis coding questions represent a significant portion of the CPC examination. Mastery of the code structure, conventions (especially Excludes1/Excludes2), 7th characters, and the seven-step coding process directly translates to exam success — and these same skills are tested in job interviews through live coding scenarios. Coding managers routinely test job applicants' knowledge of conventions as a gauge of real-world readiness. This chapter is not just exam prep — it is career prep.

■ Chapter 2 Summary

- ICD-10-CM (International Classification of Diseases, 10th Revision, Clinical Modification) replaced ICD-9-CM on October 1, 2015, expanding from approximately 14,000 to more than 72,000 codes to provide far greater clinical specificity.
- The ICD-10-CM code book consists of two parts: the Alphabetic Index

(your starting point) and the Tabular List (your verification point). Both must always be used — never code directly from the Index alone.

• The Tabular List is organized into 21 chapters by body system and condition type, with code ranges from A00 to Z99. Knowing these chapters and their ranges is essential for efficient coding on the exam and in practice.

• ICD-10-CM codes range from 3 to 7 characters. The first character is always a letter; characters 2 and 3 are always numbers. Characters 4–7 may be letters or numbers. A code is valid only when reported at the highest level of specificity available in the Tabular List.

• ICD-10-CM conventions — including Includes notes, Excludes1, Excludes2, Code First, Use Additional Code, Code Also, and cross-references — are mandatory instructions embedded in the code book that govern how codes are selected, combined, and sequenced.

• Excludes1 means "NOT CODED HERE" — the two conditions are mutually exclusive and can NEVER be coded together. Excludes2 means "NOT INCLUDED HERE" — the conditions can coexist, and both may be coded if both are present and documented.

• The placeholder character X has no clinical meaning — it fills empty character positions to maintain code validity when a 7th character is required but intermediate positions have no entries.

• Laterality — the specification of right or left — is built into ICD-10-CM for bilateral structures. Coders must code what is documented; laterality should never be assumed when not specified in the record.

• The 7th character extension captures the episode of care for injury codes: A = initial encounter (active treatment), D = subsequent encounter (routine follow-up/recovery), S = sequela (late effect of healed injury). These refer to the phase of treatment, not the number of visits.

• The seven-step ICD-10-CM coding process — Identify, Locate, Review, Note, Verify, Assign, Sequence — provides a consistent, compliant workflow that prevents errors, ensures specificity, and produces codes that support accurate reimbursement and meet audit standards.

■ Chapter 2 Review

Complete all four sections of the Chapter 2 Review. This review covers the full content of the chapter. Write all answers in the spaces provided. No answer keys are included in the Student Edition.

Section A — Multiple Choice (Questions 1–10)

Directions: Circle the letter of the best answer for each question.

1. ICD-10-CM was officially implemented in the United States on:
A. January 1, 2015 B. October 1, 2015 C. October 1, 2014 D. January 1, 2012 Answer: **A B C D**

2. ICD-10-CM codes are updated annually and new codes become effective on:
A. January 1 each year B. July 1 each year C. October 1 each year D. April 1 each year Answer: **A B C D**

3. A coder finds code J44.1 in the Alphabetic Index and submits the claim without looking at the Tabular List. This practice is:
A. Acceptable if the coder has experience with that code B. A violation of ICD-10-CM coding protocol and a potential compliance risk C. Acceptable for

Medicare claims only D. Standard practice in outpatient settings Answer: **A B C D**

4. Which of the following correctly describes an Excludes1 note?

A. The excluded condition is separate and both codes may be reported if both are present B. The condition is not part of this code, but the patient can have both C. The two conditions are mutually exclusive and can never be coded together D. The excluded code is reported first, followed by the code above the note Answer: **A B C D**

5. The placeholder character X in an ICD-10-CM code:

A. Identifies the laterality of the condition B. Holds a character position open to allow a required 7th character to be placed correctly C. Indicates that the code is unspecified D. Replaces the decimal point in electronic billing Answer: **A B C D**

6. A patient returns for a cast check 4 weeks after a tibia fracture. Healing is on track. The correct 7th character for the fracture code is:

A. A — initial encounter B. S — sequela C. D — subsequent encounter, routine healing D. K — subsequent encounter, nonunion Answer: **A B C D**

7. Which of the following ICD-10-CM Tabular List chapters covers diseases of the nervous system?

A. Chapter 5 (F01–F99) B. Chapter 6 (G00–G99) C. Chapter 9 (I00–I99) D. Chapter 7 (H00–H59) Answer: **A B C D**

8. The "Code First" instruction in the Tabular List indicates that the code carrying this note:

A. Is sequenced first as the principal diagnosis B. Is a manifestation code and must be sequenced after the etiology code C. Is only used in inpatient coding D. Requires a placeholder X in position 5 Answer: **A B C D**

9. Which of the following statements correctly describes the ICD-10-CM code format?

A. The first character is always a number; characters 2–3 are letters B. The first character is always a letter; characters 2–3 are always numbers C. All seven characters are letters D. The decimal point appears after the 4th character Answer: **A B C D**

10. In the outpatient setting, the diagnosis that is chiefly responsible for the patient's visit is called the:

A. Secondary diagnosis B. Principal diagnosis C. First-listed diagnosis D. Admitting diagnosis Answer: **A B C D**

Section B — True / False (Questions 11–20)

Directions: Circle T for True or F for False for each statement.

1. ICD-10-CM codes for diagnosis and ICD-10-PCS codes for procedures are the same system. **T / F**

2. A coder may code directly from the Alphabetic Index without verifying in the Tabular List if they are highly experienced with that code. **T / F**

3. An Excludes2 note means that both the code above the note and the excluded code can be reported together if both conditions are present and documented. **T / F**

4. The 7th character "A" for an injury code means the patient is on their first physical visit to the office. **T / F**

5. The letter U is available for use in ICD-10-CM codes in the United States. **T / F**

6. The placeholder character X carries clinical information about the injury or condition. **T / F**

7. If a 6-character code exists in the Tabular List, submitting a 5-character

version of that code is considered incorrect and constitutes truncation. **T / F**

8. The word "and" in an ICD-10-CM code title means "and/or" — not strictly "both conditions must be present." **T / F**

9. A manifestation code may be sequenced as the first-listed or principal diagnosis when it is the reason for the visit. **T / F**

10. ICD-10-CM is updated annually, with code changes taking effect on October 1 of each year. **T / F**

Section C — Fill in the Blank (Questions 21–25)

Directions: Write the correct term, abbreviation, or phrase in each blank to complete the statement.

1. The ICD-10-CM convention that means "NOT CODED HERE" and identifies mutually exclusive conditions is called:

2. In ICD-10-CM, the notation means "Not Otherwise Specified," and is used when no further clinical information is available to code more specifically.

3. The 7th character extension is used when a patient presents with a complication or condition that is the direct late result of a previous, fully healed injury.

4. The two main parts of the ICD-10-CM code book are the and the .

5. In ICD-10-CM, the specification of right side versus left side of the body is referred to as:

Section D — Coding Scenarios (Questions 26–30)

Directions: For each clinical scenario, complete ALL parts: (a) identify the main term used in the Alphabetic Index, (b) identify the Tabular List chapter and code range, (c) write the full code with all required characters in the code blank, (d) indicate whether a 7th character or placeholder X is required, and (e) name one ICD-10-CM convention that applies.

1. **Scenario:** "Patient is seen in the ER following a motor vehicle accident. The physician documents a closed fracture of the left clavicle. Cast applied today. This is the patient's first treatment for this injury." a. Main term used in Index: b. Tabular chapter and code range: c. Full code: ___ ___ ___ . ___ ___ ___ ___ d. 7th character required: **T / F** Placeholder X required: **T / F** e. Convention applied:

2. **Scenario:** "Patient is a 62-year-old male with type 2 diabetes mellitus and diabetic peripheral angiopathy without gangrene. He is here for routine diabetes management and medication adjustment." a. Main term used in Index: b. Tabular chapter and code range: c. Full code: ___ ___ ___ . ___ ___ ___ d. 7th character required: **T / F** e. Convention applied:

3. **Scenario:** "Patient presents to the gastroenterology office for follow-up of gastroesophageal reflux disease (GERD) with esophagitis. No new complaints." a. Main term used in Index: b. Tabular chapter and code range: c. Full code: ___ ___ ___ . ___ ___ ___ d. 7th character required: **T / F** e. Convention applied:

4. **Scenario:** "A 34-year-old woman is seen for her annual well-woman exam. No acute complaints. She also requests screening for cervical cancer,

which is performed today." a. Main term used in Index for the encounter: b. Tabular chapter and code range: c. Primary code: ___ ___ ___ . ___ ___ ___ d. Should a second code be assigned for the cervical cancer screening? **T / F** e. Convention applied:

5. **Scenario:** "Patient is a 19-year-old who accidentally ingested a toxic dose of acetaminophen at home. He is brought to the ER by his parents. Intent: accidental (unintentional) — not a self-harm attempt." a. Special table used in the Alphabetic Index: b. Tabular chapter and code range: c. 7th character for this encounter: d. Full primary code: ___ ___ ___ . ___ ___ ___ ___ e. Convention applied (which table directs coding of drug/chemical incidents):

ICD-10-CM Outpatient Coding and Reporting

Corrina R. Lynch | CPC Preparation

Chapter contents

1. Choose the setting before choosing the rule
2. First-listed diagnosis and symptoms
3. Sequence multiple codes and verify documentation
4. Outpatient surgery and observation
5. Coexisting conditions and chronic disease
6. Z codes, status, history and external causes
7. Diagnostic and therapeutic services
8. Preoperative evaluation and routine prenatal services
9. Chapter review

Prior-edition readings and exercises follow the revised lesson and may use the earlier chapter arrangement.

Learning objectives

- Identify which guideline section applies to the encounter setting.
- Select first-listed diagnoses and explain when more than one code is required.

1. Choose the setting before choosing the rule

The official guidelines are organized into Sections I through IV. Section I covers conventions and general and chapter-specific rules; Sections II and III address non-outpatient principal and additional diagnoses. Section IV applies to outpatient reporting.

Worked example

On a clinic note with only possible pneumonia and documented cough, apply Section IV.H: code the supported cough rather than pneumonia. Contrast the inpatient discharge rule in Section II.H for eligible uncertain diagnoses.

2. First-listed diagnosis and symptoms

The outpatient first-listed diagnosis generally explains why services were provided. If no diagnosis has been established, code the symptoms or other reason supported by the record. Report additional conditions that affect the evaluation, treatment or management as applicable.

Worked example

If an outpatient clinician confirms an uncomplicated condition, do not separately report a symptom routinely associated with it unless instructed. See I.B.5 and Section IV.

3. Sequence multiple codes and verify documentation

The Tabular List’s instructions take priority when a condition requires more than one code. Determine whether the note establishes the type, site, stage, relationship and timing. Use the supported specificity and seek clarification when a material conflict prevents a supported choice.

Worked example

For a confirmed adverse effect of a correctly administered drug, report the nature of the adverse effect first, followed by the applicable drug adverse-effect code. See I.C.19.e.5.a. Do not apply poisoning sequencing to proper use.

4. Outpatient surgery and observation

For outpatient surgery, report the reason for surgery as first-listed, using the postoperative diagnosis if it is different and confirmed. When an outpatient surgery complication requires observation, report the reason for surgery first, followed by the complication. For medical observation, report the condition responsible for the observation services first.

Worked example

A same-day surgery patient stays in observation with a complication; do not treat the encounter as inpatient simply because the patient stayed overnight.

5. Coexisting conditions and chronic disease

Report coexisting conditions that require or affect evaluation, treatment or management. A chronic disease receiving ongoing care may be reported repeatedly. A previously treated condition that no longer exists is not a current diagnosis.

Worked example

If diabetes is assessed and its management affects the plan, it may be reportable even when another documented reason is first-listed.

6. Z codes, status, history and external causes

Locate the appropriate entry using the Alphabetic Index and verify its Tabular notes. Distinguish a current status, such as a device or dependence, from personal history of a resolved condition. External cause codes provide circumstances of an injury and are generally additional, subject to applicable reporting requirements.

Worked example

Check whether a past malignancy is still under treatment directed at the site before choosing an active cancer or history code.

7. Diagnostic and therapeutic services

For diagnostic services, sequence the condition or reason chiefly responsible for the service; when the physician-interpreted final report is available at coding, report the confirmed diagnosis in that interpretation as applicable. For therapeutic services, report the reason chiefly responsible, following any special sequencing rules.

Worked example

When a definitive diagnosis is available from the interpretation of a diagnostic test, do not automatically lead with the symptom that prompted the test.

8. Preoperative evaluation and routine prenatal services

For preoperative evaluation only, report the applicable Z01.81- code first, followed by the reason for surgery and any findings as appropriate. For uncomplicated routine prenatal supervision, verify the appropriate Z34 code and Chapter 15 instructions.

Worked example

A preprocedural cardiovascular evaluation and a routine prenatal visit have different first-listed reasons; select the code for the actual encounter.

Chapter review

1. Code the supported condition for an outpatient visit documented as cough and possible pneumonia. Explain the setting rule.

2. For a correctly administered drug that caused a reaction, which is sequenced first?

References

CMS/NCHS: FY 2026 Official Coding Guidelines

MEDICAL CODING MASTERY | STUDENT EDITION

CHAPTER 3

ICD-10-CM Official Coding Guidelines

Corrina Lynch | ACL Consulting Firm | CPC Preparation

If I had to point to one thing that separates a **good** coder from a **great** coder, it would be this: the great coder actually reads the Official Guidelines. Not once — regularly. The ICD-10-CM Official Coding Guidelines are not supplemental reading or bonus material. They are the rules that govern every diagnosis code you will ever assign, and for HIPAA-covered entities, they carry the force of law. In this chapter, we are going to walk through all four sections of those guidelines — what they cover, how they apply, and exactly how to use them in real-world coding. By the time you finish this chapter, you will know how to select the right first-listed or principal diagnosis, when to use a combination code versus multiple codes, how to handle uncertain diagnoses in both inpatient and outpatient settings, and much more. Get comfortable — this is one of the most important chapters in this entire textbook.

🎯 OBJECTIVES

After completing this chapter, the student will be able to:

1. Identify the full title, purpose, and legal authority of the ICD-10-CM Official Coding Guidelines.
2. Describe the four sections of the Official Guidelines and the setting(s) each section applies to.
3. Apply general coding guidelines from Section I, including rules for signs and symptoms, combination codes, acute and chronic conditions, sequela, and impending or threatened conditions.
4. Define **principal diagnosis** using the official definition and apply the inpatient principal diagnosis selection rules from Section II.
5. Correctly apply the uncertain diagnosis rule for inpatient settings and distinguish it from the outpatient rule.
6. Identify conditions that qualify as additional diagnoses under Section III and distinguish reportable conditions from nonreportable ones.
7. Define **first-listed diagnosis** and apply outpatient coding guidelines from Section IV.
8. Apply the uncertain diagnosis rule for outpatient settings and explain why it differs from the inpatient rule.
9. Recognize comorbidities and complications and determine their reportability as additional diagnoses.
10. Distinguish between the etiology/manifestation convention, combination codes, and multiple coding instructions as applied in the Tabular List.

📘 KEY TERMS

- **Acute condition**
- **Additional diagnosis**

- **Chronic condition**
- **Combination code**
- **Complication**
- **Comorbidity**
- **First-listed diagnosis**
- **Impending condition**
- **Integral condition**
- **Late effect**
- **Manifestation**
- **Multiple coding**
- **Outpatient visit**
- **Principal diagnosis**
- **Queried/uncertain diagnosis**
- **Residual condition**
- **Sequela**
- **Signs and symptoms**
- **Underlying condition**
- **Unspecified code**

SECTION 3.1

The Official Guidelines Document: An Overview

Before we get into specific rules, you need to understand exactly what the Official Guidelines are and where they come from. This is not optional background reading. This is foundational.

What Are the Official Guidelines?

The **ICD-10-CM Official Guidelines for Coding and Reporting** is a document published annually by the Centers for Medicare and Medicaid Services (CMS) and the National Center for Health Statistics (NCHS). It is released alongside each annual update to the ICD-10-CM code set, which takes effect every October 1. The guidelines provide rules, instructions, and clarifications that govern how ICD-10-CM codes are assigned and sequenced across all healthcare settings.

STOP!

The ICD-10-CM Official Guidelines for Coding and Reporting are **not suggestions**. Under HIPAA, all covered entities — providers, payers, and clearinghouses — are legally required to follow these guidelines. Ignoring them is a compliance violation, not just a coding mistake.

The guidelines work hand-in-hand with the Tabular List and the Alphabetic Index. You cannot use one without the other. The Tabular List tells you what codes exist; the Alphabetic Index helps you find the right one; and the Official Guidelines tell you how and when to use them correctly. All three sources must be consulted for every code assignment.

Where to Find the Official Guidelines

The guidelines are published by CMS and are available free of charge on the CMS website under the ICD-10-CM section. There is no reason not to have the current version bookmarked and accessible. New guidelines become effective October 1 of each year, so you must check annually for updates. A rule that applied last year may have changed.

Coding Shot

Bookmark the CMS ICD-10-CM page right now: cms.gov > Medicare > Coding > ICD-10. The Official Guidelines document is a free PDF download. Set a calendar reminder every September to download the new version before October 1. Coders who miss annual updates are coders who make compliance errors.

The Four Sections of the Official Guidelines

The Official Guidelines are organized into four major sections. Understanding what each section covers — and which healthcare settings it applies to — is foundational knowledge for every coder and is tested directly on the CPC exam.

Section	Applies To	Primary Purpose
Section I	All settings (inpatient and outpatient)	Conventions, general coding guidelines, and chapter-specific guidelines. The broadest section — covers how to read and use ICD-10-CM across all settings.
Section II	Inpatient only	Selection of the **principal diagnosis**. Provides the rules for determining which condition is chiefly responsible for the hospital admission after study.
Section III	Inpatient only	Reporting of **additional diagnoses** in the inpatient setting. Defines what qualifies as a reportable additional diagnosis on the hospital claim.
Section IV	Outpatient only	Diagnostic coding and reporting for outpatient services, including **first-listed diagnosis** selection and additional

Section	Applies To	Primary Purpose
		diagnosis reporting in outpatient settings.

Check This Out

The ICD-10-CM Official Guidelines document runs over **100 pages**. Most coders have never read it cover to cover. Those who have — even once — report that it fundamentally changed how they approach diagnosis coding. If you can say you know those guidelines cold, you are already ahead of the majority of working coders. That is a competitive advantage you can carry into every job interview and every audit.

From the Trenches

"I had been coding for about three years when a compliance officer pointed out a sequencing error in one of my claims. She handed me the Official Guidelines and said, 'Read this.' I was embarrassed to admit I had never actually read through the whole thing — I had only looked things up as I needed them. I sat down that weekend and read every page. By Monday morning, I understood rules I had been applying wrong for years. My audit scores jumped within a month. That document is not a reference — it is a textbook. Treat it that way."

— Deborah M., CPC, CPMA | Compliance Auditor | Regional Health System, Atlanta, GA

✓ QUICK CHECK 3.1

1. The ICD-10-CM Official Guidelines are published by _____

and _____.

2. Guidelines are updated and take effect on _____ of each year.

3. Section _____ of the Official Guidelines applies to the selection of the principal diagnosis in inpatient settings.

4. Which section of the Official Guidelines applies to ALL healthcare settings, both inpatient and outpatient? _____

5. True or False: The ICD-10-CM Official Guidelines are optional recommendations for HIPAA-covered entities. _____

SECTION 3.2

Section I: General Coding Guidelines

Section I of the Official Guidelines is the largest section and applies to all healthcare settings. It includes the ICD-10-CM conventions (which we covered in Chapter 2) plus a comprehensive set of general coding rules. In this section, we are going to focus on the high-yield general rules that appear on the CPC exam and that you will use every single day as a working coder. Master these rules and you will have a strong foundation for every coding scenario you encounter.

3.2A

—

Signs and Symptoms

One of the most frequently tested rules in all of ICD-10-CM coding is the rule regarding **signs and symptoms**. Understanding when to code a sign or symptom — and when to leave it alone — is critical to clean, compliant claim submission.

The Core Rule

When a **definitive diagnosis** has been confirmed and documented by the treating physician, you code that diagnosis. You do **not** separately code signs or symptoms that are **integral to** — meaning routinely associated with — the confirmed diagnosis. Signs and symptoms that are **not** routinely associated with the confirmed diagnosis, however, **are** coded separately because they represent additional clinical information that affects the patient's care.

> **Example — Do NOT code separately (integral)**
>
> Patient is diagnosed with community-acquired pneumonia (J18.9). The patient presents with fever (R50.9) and productive cough (R05.9). **Fever and cough are integral to pneumonia.** Do not assign separate codes for R50.9 or R05.9. Assign only J18.9.

> **Example — DO code separately (not integral)**
>
> Patient is diagnosed with acute appendicitis (K35.89). The patient also presents with nausea and vomiting. Nausea and vomiting **may be integral** to appendicitis. However, the same patient also presents with a migraine headache. A migraine headache is **NOT integral** to appendicitis — it is a separate condition and should be coded separately.

The challenge — and this is where students struggle — is that you must **know** which signs and symptoms are integral to which diagnoses. This is clinical knowledge that develops with experience, but for common conditions tested on the CPC exam (pneumonia, appendicitis, heart failure, diabetes, UTI), you should memorize what is and is not considered integral.

STOP!

Never assign a separate code for a sign or symptom that is integral to a confirmed diagnosis. This is called **double-coding** and it is both a compliance error and an audit red flag. If you are uncertain whether a symptom is integral to a given diagnosis, consult a clinical coding reference or query the physician — but never guess.

▶️ Official Guidelines for Coding and Reporting

Section I.B.4 — Signs and Symptoms

> "Codes for signs and symptoms may be reported in addition to a related definitive diagnosis when the sign or symptom is not routinely associated with that diagnosis. Such signs and symptoms include those that represent important information about the patient's condition."

There are two categories here: signs and symptoms that ARE integral to the diagnosis (skip them — don't code them separately), and signs and symptoms that are NOT integral (code them — they add clinical value to the claim). Your job is to know the difference. When in doubt, ask the physician to clarify, or consult your coding resources.

3.2B

—

Combination Codes

A **combination code** is a single ICD-10-CM code that classifies two or more of the following elements together in one code:

- Two diagnoses
- A diagnosis with an associated manifestation
- A diagnosis with an associated complication

When a combination code fully and accurately describes the clinical situation documented in the medical record, you **must** use it. Do not separately code the individual components that the combination code already captures. Using multiple codes when a combination code exists is a coding error.

> **Example — Combination Code (Diagnosis + Associated Condition)**
>
> **E11.65** — Type 2 diabetes mellitus with hyperglycemia. This single code tells the payer the patient has type 2 DM and that it is currently uncontrolled with hyperglycemia. You do not need a separate code for hyperglycemia — it is already captured.

> **Example — Combination Code (Diagnosis + Complication)**
>
> **K57.21** — Diverticulitis of large intestine with perforation and abscess, without bleeding. One code captures the primary condition (diverticulitis) plus two complications (perforation and abscess). Do not add separate codes for the perforation or the abscess.

How to Identify Combination Codes

To find combination codes, look in the **Alphabetic Index** under the main condition. Subterms that include words such as "with," "associated with," or "due to" followed

by another condition are your signal that a combination code may exist. Always verify in the Tabular List to confirm the correct code.

Coding Shot

When you see a subterm "with [another condition]" in the Alphabetic Index — slow down and check whether a combination code exists before you assign multiple codes. The Index is showing you that ICD-10-CM has already built those two things together. Using the combination code is not only correct — it is faster and cleaner for the claim.

▶️ Official Guidelines for Coding and Reporting

Section I.B.9 — Combination Code

> "A combination code is a single code used to classify: two diagnoses, or a diagnosis with an associated secondary process (manifestation), or a diagnosis with an associated complication. Combination codes are identified by referring to subterm entries in the Alphabetic Index and by reading the inclusion and exclusion notes in the Tabular List. Assign only the combination code when that code fully identifies the diagnostic conditions involved or when the Alphabetic Index so directs. Multiple coding should not be used when the classification provides a combination code that clearly identifies all of the elements documented in the diagnosis."

If the Index points you to a combination code and that code fully captures what the documentation says — you are done. Use the combination code and move

on. Do not add codes to the claim that are already embedded in the combination code you already have. That is the rule, full stop.

EXERCISE 3-A

—

Combination Codes vs. Multiple Codes

For each scenario below, determine whether a combination code should be used or whether multiple codes are needed. Write your answer on the line provided. If a combination code is appropriate, write the code on the code blank.

1. Patient has type 2 diabetes mellitus with diabetic chronic kidney disease, stage 3.
   Use combination code or multiple codes?
   Code(s): .

2. Patient has hypertension and chronic kidney disease, stage 4.
   Use combination code or multiple codes?
   Code(s): .

3. Patient has pneumonia caused by Streptococcus pneumoniae.
   Use combination code or multiple codes?
   Code(s): .

4. Patient has diverticulitis of the large intestine with abscess and rectal bleeding.

Use combination code or multiple codes?

Code(s): .

5. Patient has type 1 diabetes with diabetic peripheral angiopathy without gangrene.

Use combination code or multiple codes?

Code(s): .

6. Patient has sepsis due to methicillin-resistant Staphylococcus aureus (MRSA).

Use combination code or multiple codes?

Code(s): .

7. A patient is documented with alcohol dependence with alcohol-induced anxiety disorder.

Use combination code or multiple codes?

Code(s): .

8. True / False: You should always assign separate codes for each component of a patient's diagnosis, even when a combination code exists. **T** **F**

9. True / False: Combination codes can capture a diagnosis plus an associated complication in a single code. **T** **F**

10. A physician documents "acute gastric ulcer with hemorrhage." Without looking up the code, identify what type of coding situation this most likely represents: Multiple codes — one for the ulcer, one for the hemorrhage A combination code that captures both the ulcer and the hemorrhage Code the hemorrhage only — it is the more serious condition Code the ulcer only — the hemorrhage is integral

3.2C

—

Acute and Chronic Conditions

When a condition is documented as **both acute and chronic**, the coding rule depends on what the Alphabetic Index shows you. Here is how it works:

- If **separate subentries exist** in the Alphabetic Index for both the acute and chronic versions of the condition — assign **both codes** and sequence the **acute condition first**, followed by the chronic condition code.
- If the Alphabetic Index **does not have separate subentries** — or if a single combination code captures both — use that single code.

Example — Separate Codes (Acute AND Chronic)

Patient presents with acute and chronic sinusitis. Checking the Alphabetic Index under "Sinusitis," there are separate subentries for "acute" and "chronic." Assign both: the acute sinusitis code is sequenced first, followed by the chronic sinusitis code.

Example — Single Combination Code

Acute-on-chronic systolic heart failure. ICD-10-CM provides a combination code I50.21 that captures both the acute and chronic nature of the systolic failure. Use this single code — do not assign two separate codes.

Coding Shot

Always check the Alphabetic Index before you assume that "acute and chronic"

means two codes. Some conditions have combination codes that capture both. Your Index is the first stop — always. Verify in the Tabular List, but let the Index guide the initial lookup.

STOP!

Do not assume that acute and chronic conditions always require two separate codes. The determining factor is what the **Alphabetic Index** shows. If the index has separate subentries — use two codes, acute first. If there is a combination code or no separate subentries — use one code. Never assign codes based on assumption alone. Always verify.

3.2D

—

Sequela (Late Effects)

A **sequela** is a condition that is produced after the acute phase of an illness or injury has resolved. Think of it as the aftermath — the long-term consequence of something that happened in the past. The sequela is the current problem; the original illness or injury is history.

Sequencing Rule for Sequela

When coding sequela, follow this sequence:

11. **First:** Code the **residual condition** — the actual current problem the patient is experiencing.
12. **Second:** Code the **sequela code** — the code that identifies the original illness or injury that caused the residual condition.

There is **no defined time limit** for a sequela. The residual condition can occur months or even years after the original event. Time is not the determining factor — causation is.

Examples of Sequela

- Scar contracture resulting from a healed burn → Code the scar contracture first, then the sequela code for the burn
- Hemiplegia resulting from an old cerebrovascular accident (CVA) → Code the hemiplegia first, then the sequela code for the CVA
- Hearing loss resulting from prior bacterial meningitis → Code the hearing loss first, then the sequela code for the meningitis

The 7th Character "S" for Injury Codes

For injury codes in ICD-10-CM, the **7th character S** indicates a sequela encounter. This is distinct from the 7th character A (initial encounter) and D (subsequent encounter). Students frequently confuse "S" with "D" — this is a critical distinction.

STOP!

Sequela (7th character S) is NOT the same as subsequent encounter (7th character D). A subsequent encounter (D) means the patient is still receiving active treatment for the original injury — the fracture is still healing, the wound is still being treated. A sequela (S) means the original injury has resolved but left behind a residual condition. These are completely different clinical situations and completely different codes. Getting this wrong on a claim is a compliance error.

Coding Shot

A quick memory trick: think of sequela as "the scar left behind." The original wound is healed — but the scar (the residual condition) is still there. Code the scar (the residual) first. Then add the sequela code to show where it came from. Residual first, sequela second. Always.

▶️ Official Guidelines for Coding and Reporting

Section I.B.10 — Sequela (Late Effects)

> "A sequela is the residual effect (condition produced) after the acute phase of an illness or injury has terminated. There is no time limit on when a sequela code can be used. The residual may be apparent early, such as in cerebral infarction, or it may occur months or years later, such as that due to a previous injury. The underlying cause of the sequela must be reported as the secondary diagnosis."

Two codes, in this order: (1) the current condition the patient is dealing with today (the residual), then (2) the code for the original illness or injury that caused it (the sequela code). The original injury or illness is always secondary. And remember — time does not matter. If the residual condition exists and can be traced back to a prior event, sequela coding applies no matter how long ago that event was.

From the Trenches

"Sequela coding was the thing that humbled me when I was studying for my CPC. I kept reading 'residual condition first, sequela code second' and I thought I had it — then I would get to a scenario and flip them backward. The way I finally locked it in was this: the patient is in front of you TODAY with a problem TODAY. Code that problem today first. The sequela code is just the explanation of why that problem exists. Once I started thinking of it that way — present problem first, past cause second — I stopped making the sequencing error."

— Tanisha R., CPC, CRC | Risk Adjustment Coder | National Health Plan, Tampa, FL

✓ QUICK CHECK 3.2

1. A sequela is a condition that results after the _____ phase of an illness or injury has terminated.

2. When coding sequela, the _____ condition is sequenced first, and the _____ code is sequenced second.

3. True or False: Sequela coding only applies within the first 12 months after the original illness or injury. _____

4. For ICD-10-CM injury codes, the 7th character _____ indicates a sequela encounter.

5. A patient presents with hemiplegia resulting from a CVA that occurred 3 years ago. Which code is sequenced FIRST?
A) The sequela code for the old CVA B) The code for hemiplegia C) Both are sequenced simultaneously D) Neither — only use the sequela code

EXERCISE 3-B

—

Acute/Chronic Coding, Combination Codes, and Sequela

For each scenario, apply the appropriate guideline and answer the question(s) on the lines provided. Identify the applicable rule and the correct sequencing where asked.

1. A patient is documented with "acute and chronic bronchitis." Assuming the Alphabetic Index contains separate subentries for acute and chronic bronchitis, which code is sequenced FIRST?
Answer:

2. A patient suffered a traumatic brain injury (TBI) 2 years ago. Today she presents with post-traumatic headache as a result of that TBI. Identify the correct sequencing:
First code:
Second code:

3. True / False: When a combination code fully captures both the diagnosis and its associated complication, you should still add individual codes for each component to provide complete clinical detail. **T** **F**

4. A patient has type 2 diabetes mellitus with diabetic nephropathy. What type of coding situation applies? Sequela — code the nephropathy first, then the sequela of diabetes Combination code — a single code captures both the diabetes and the nephropathy Multiple codes — code nephropathy first, then diabetes as additional Acute and chronic — diabetes is chronic, nephropathy

is acute

5. The 7th character "D" on an injury code means:

The 7th character "S" on an injury code means:

6. A patient is documented with "acute exacerbation of chronic obstructive pulmonary disease (COPD)." After consulting the Alphabetic Index and Tabular List, you find a single combination code that captures both the acute exacerbation and the chronic disease. What should you do? Assign two codes — one for acute exacerbation and one for COPD Assign only the acute exacerbation code, since it is the reason for the visit Assign only the combination code — it fully captures the documented condition Assign only the chronic COPD code and note the exacerbation in the record

7. True / False: A sequela can be coded many years after the original illness or injury, as long as the residual condition exists and can be causally linked to the prior event. **T** **F**

8. A patient presents with a scar contracture of the left hand resulting from a burn that occurred 18 months ago. The burn has fully healed. What is the correct coding approach?

First code (residual condition):

Second code (sequela of):

9. True / False: When a physician documents a condition as "acute and chronic," it always means you must assign two separate codes. **T** **F**

10. In sequela coding, what does the **sequela code** (the second code) represent? The current, active condition the patient has today The original illness or injury that caused the residual condition A code indicating the patient is ready for discharge A manifestation code for the residual condition

3.2E

—

Multiple Coding for a Single Condition

Sometimes, ICD-10-CM requires more than one code to fully describe a single clinical condition. This is called **multiple coding**, and the Tabular List provides specific instructions telling you when it is required. There are three key instructional notes to recognize:

Instructional Note	Meaning	Sequencing
"Use additional code"	Assigns an additional code to provide more specificity. The note appears under the primary condition code.	The primary condition code is listed first; the additional code follows.
"Code first"	This code describes a manifestation — it cannot be listed first. The note tells you to code the underlying condition (etiology) first.	Etiology (underlying condition) FIRST; manifestation code SECOND.
"Code also"	A second code may be required to fully describe the condition. Sequencing depends on the reason for the visit and clinical circumstances.	Context-dependent; follow clinical documentation.

The Etiology/Manifestation Convention

The **etiology/manifestation convention** is one of ICD-10-CM's most important multiple coding rules. When a condition has both an **underlying condition** (the cause — the etiology) and a **manifestation** (the effect — how it shows up in another body system), two codes are required:

- **First code:** The underlying condition (etiology)

- **Second code:** The manifestation (shown in italics and brackets in the Tabular List)

Manifestation codes are never listed first and can never be the first-listed or principal diagnosis. In the Tabular List, manifestation codes appear in italics with a note that reads "Code first underlying disease" or similar language. This is your signal.

> **Example — Etiology/Manifestation (Diabetic Retinopathy)**
>
> Type 2 diabetes mellitus with diabetic macular edema, unresolved (E11.351) — this is a combination code that already includes both the etiology (type 2 DM) and the manifestation (macular edema). A separate code for the manifestation is added per the "Use additional code" instruction in the Tabular List for the status of the eye treatment.

> **Example — Etiology/Manifestation (Parkinson's with Dementia)**
>
> Parkinson's disease (G20) with dementia (F02.80). The Tabular List instructs: under F02.80, "Code first the underlying physiological condition, such as Parkinson's disease (G20)." This means G20 is coded first (etiology), and F02.80 is coded second (manifestation). The manifestation code cannot stand alone.

3.2F

—

Impending or Threatened Conditions

When a condition is described in the medical record as "impending" or "threatened," how you code it depends on whether the condition actually occurred:

- **If the condition DID occur:** Code it as a confirmed diagnosis.

- **If the condition did NOT occur and is NOT a specific ICD-10-CM code:** Code the existing underlying conditions and manifestations. Do not code the impending/threatened condition as if it had occurred.
- **If the condition did NOT occur but HAS a specific ICD-10-CM code:** Use that specific code. For example, "threatened abortion" has its own code (O20.0) — use it even if the abortion did not ultimately occur.

Example — Threatened MI (Does Not Occur)

A patient is admitted with chest pain and the physician documents "threatened myocardial infarction" — the workup is complete and no MI occurred. ICD-10-CM does not have a specific code for "threatened MI." Code the presenting sign or symptom (chest pain) — do NOT code an MI that did not happen.

Example — Threatened Abortion (Specific Code Exists)

A patient presents with vaginal bleeding in early pregnancy and the physician documents "threatened abortion." ICD-10-CM code O20.0 (Threatened abortion) exists for this exact situation. Use O20.0 even though an abortion did not ultimately occur, because the code exists specifically for this threatened condition.

Coding Shot

Two questions to ask when you see "impending" or "threatened": (1) Did it actually happen? If yes — code the confirmed condition. (2) Does ICD-10-CM have a specific code for the threatened/impending version? If yes — use it. If no — code the underlying signs, symptoms, or conditions. This is a logical, step-by-step process — apply it every time.

▶️ Official Guidelines for Coding and Reporting

Section I.B.12 — Impending or Threatened Conditions

> "Code any condition described at the time of discharge as 'impending' or 'threatened' as follows: If it did occur, code as confirmed diagnosis. If it did not occur, reference the Alphabetic Index to determine if the condition has a subentry term for 'impending' or 'threatened' and also reference main term entries for 'Impending' and for 'Threatened.' If the subterms are listed, assign the given code. If the subterms are not listed, code the existing underlying condition(s) and not the condition described as impending or threatened."

Step 1 — Did the condition happen? Code it as confirmed. Step 2 — Didn't happen? Look in the Alphabetic Index under "Impending" or "Threatened" and under the main condition. Step 3 — Find a specific code? Use it. Step 4 — No specific code? Code what DID exist — the signs, symptoms, or underlying conditions — but never the thing that did not happen.

Toolbox — Section 3.2 Key Takeaways

- Do NOT code signs and symptoms that are integral (routinely associated) to a confirmed diagnosis — this is double-coding and an audit flag.
- Use a combination code when it fully captures the clinical situation — never separately code components already captured by the combination code.

- When a condition is both acute and chronic with separate index entries, code both — acute first, chronic second.
- Sequela coding: residual condition first, sequela code second — no time limit; 7th character S for injury codes.
- Etiology/manifestation: underlying condition FIRST, manifestation SECOND — manifestation codes can never be first-listed or principal.
- Impending or threatened conditions: code as confirmed if it occurred; use a specific ICD-10-CM code if one exists; otherwise code existing signs/symptoms — never code something that did not happen.

✓ QUICK CHECK 3.3

1. In the etiology/manifestation convention, the _____ code is always sequenced first.
2. A "Code first" note in the Tabular List tells you that the code below it is a _____ — it cannot be sequenced first.
3. If a "threatened" condition did not occur and no specific ICD-10-CM code exists for it, you should code the patient's existing _____ and _____ instead.
4. True or False: "Use additional code" means the additional code is sequenced before the primary condition code. _____
5. The three types of multiple coding instructional notes in the Tabular List are: _____, _____, and _____.

SECTION 3.3

Section II: Principal Diagnosis Selection (Inpatient)

Section II of the Official Guidelines applies exclusively to **inpatient hospital coding**. If you work in a hospital setting — or if you are preparing for the CPC exam — this section is non-negotiable. The correct selection of the principal diagnosis directly affects DRG assignment, reimbursement, and the hospital's compliance posture. Let's break it down.

Principal Diagnosis — Official Definition

"The condition established after study to be chiefly responsible for occasioning the admission of the patient to the hospital for care."
Source: Uniform Hospital Discharge Data Set (UHDDS) — memorize this definition word for word. It is tested directly on the CPC exam.

Three words in that definition carry all the weight: **"established after study."** The principal diagnosis is not the admitting diagnosis — it is what the workup reveals. The admitting diagnosis gets the patient in the door; the principal diagnosis reflects what actually caused the admission after the physician has done the evaluation.

Rules for Principal Diagnosis Selection

Rule 1

—

Condition After Study

The principal diagnosis must reflect what was determined after the clinical workup is complete — not what the patient came in complaining about. The admitting diagnosis and the principal diagnosis may be the same, or they may be different.

Example

Patient admitted with chest pain. After cardiac workup, the physician confirms an acute myocardial infarction. The principal diagnosis is the acute MI — not the chest pain. The chest pain is what brought the patient in; the MI is what the study revealed.

Rule 2

—

Two or More Interrelated Conditions

When two or more conditions could each meet the definition of principal diagnosis equally, either condition may be sequenced first. The coder or physician can determine the sequencing, as long as both conditions genuinely meet the definition.

Rule 3

—

Two or More Comparative or Contrasting Conditions

When a physician documents two conditions in a comparative or contrasting manner — for example, "diverticulitis versus appendicitis" — both conditions may be coded as principal diagnoses in the inpatient setting. This is a unique allowance for inpatient coding.

Rule 4

—

Original Treatment Plan Not Carried Out

Even if the intended treatment was not performed, the principal diagnosis is still the condition that was chiefly responsible for the admission after study. The fact that treatment did not occur does not change the principal diagnosis selection.

Example

Patient admitted for elective cholecystectomy for acute cholecystitis. The surgery was cancelled due to the patient developing a respiratory infection prior to the procedure. The principal diagnosis remains acute cholecystitis — it was still the condition chiefly responsible for the admission, even though the surgery was not performed.

Rule 5

—

Complications of Surgery and Medical Care

When a complication develops during the inpatient stay and is established after study to be chiefly responsible for the admission — or if the admission itself was caused by a complication of a prior procedure — the complication code may be sequenced as the principal diagnosis.

Rule 6

—

Uncertain Diagnosis (HIGH YIELD — CPC EXAM)

This rule is one of the most tested rules on the CPC exam, and it is the rule that most students get wrong — not because it is complicated, but because it is counterintuitive. Here it is:

Uncertain Diagnosis Rule — INPATIENT

If at the time of discharge the physician has documented the diagnosis as **"possible," "probable," "suspected," "likely," "questionable," "still to be ruled out," or "compatible with"** — the coder should **code the condition as if it were confirmed** and sequence it as the principal diagnosis.
Applies to INPATIENT only. The rationale: by the time of discharge, the physician has had the full benefit of the clinical workup and has formed a clinical impression. That impression — even if uncertain — is codeable in the inpatient setting.

STOP!

The uncertain diagnosis rule for inpatient is the **OPPOSITE** of the outpatient rule. In the inpatient setting, you **DO** code uncertain (possible, probable, suspected) diagnoses as confirmed. In the outpatient setting, you **DO NOT** — you code the sign or symptom instead. This is one of the top exam traps. Know both rules cold and know which setting each applies to.

▶️ Official Guidelines for Coding and Reporting

Section II.H — Uncertain Diagnoses (Inpatient)

> "If the diagnosis documented at the time of discharge is qualified as 'probable,' 'suspected,' 'likely,' 'questionable,' 'possible,' or 'still to be ruled

> out,' 'compatible with,' 'consistent with,' or other similar terms indicating uncertainty, code the condition as if the existence of the condition was confirmed. The bases for these guidelines are the diagnostic workup, arrangements for further workup or observation, and initial therapeutic approach that correspond most closely with the established diagnosis."

In the hospital, by discharge, the physician has done the workup. Even if they are not 100% certain, their best clinical assessment is what we code. "Probable pneumonia" at inpatient discharge = code pneumonia. The physician has seen the X-ray, the labs, the clinical presentation — their impression counts. This is not a guess; it is an educated clinical conclusion that ICD-10-CM recognizes in the inpatient setting.

Coding Shot

When you are reading an inpatient discharge summary, watch carefully for qualifying language: "possible," "probable," "suspected," "likely," "questionable," "rule out," "compatible with," "consistent with." In the inpatient setting, all of these qualify as codeable conditions. In the outpatient setting, none of them do. Train your eye to flag these words every time you see them — then ask: what setting am I in?

CMS Rules

For Medicare inpatient claims, the **principal diagnosis** determines the Diagnosis-Related Group (DRG) assignment. The DRG is the basis for Medicare's payment to the hospital. An incorrect principal diagnosis — even by one code — can result in an

entirely different DRG, which means the hospital may be overpaid or underpaid. Both scenarios create significant compliance risk. In the Medicare world, wrong principal diagnosis = wrong DRG = wrong payment = potential fraud and abuse exposure.

From the Trenches

"When I moved from outpatient physician coding to inpatient hospital coding, the uncertain diagnosis rule was a genuine mental reset. In outpatient, I had spent years drilling into my brain: 'Do not code probable. Do not code suspected. Code the symptom.' Then I get to inpatient and the rule says: 'Probable at discharge? Code it.' I had to retrain my automatic response completely. The way I got it to stick: I taped a sticky note to my monitor that said INPATIENT = CODE IT / OUTPATIENT = DON'T. For six months it was there every day. Now it is hardwired. Find your own version of that sticky note — this one rule will follow you through your entire career."

— Marcus W., CPC, CIC | Inpatient Hospital Coder | Academic Medical Center, Nashville, TN

✓ QUICK CHECK 3.4

1. Write the official definition of principal diagnosis:
2. The principal diagnosis is determined _____ the clinical workup — it is NOT necessarily the same as the admitting diagnosis.
3. True or False: In the inpatient setting, if the physician documents "probable pneumonia" at the time of discharge, the coder should code the signs and symptoms (such as fever and cough) rather than the pneumonia.

_____

4. Section _____ of the Official Guidelines governs the selection of the principal diagnosis in the inpatient setting.

5. The inpatient uncertain diagnosis rule applies at the time of _____ — not at admission.

EXERCISE 3-C

—

Principal Diagnosis Selection (Inpatient)

For each inpatient scenario, identify the correct principal diagnosis using the rules from Section II of the Official Guidelines. Write your answer on the lines provided. Apply the uncertain diagnosis rule where applicable.

1. A patient is admitted to the hospital with chest pain and shortness of breath. After a complete cardiac workup including EKG and troponin levels, the physician confirms an acute ST-elevation myocardial infarction (STEMI) of the anterior wall.
   Principal Diagnosis:
   Reasoning:

2. A patient is admitted for abdominal pain. At discharge, the physician documents "probable acute diverticulitis." Setting: inpatient hospital.
   Principal Diagnosis:

Rule Applied:

3. A patient is admitted for an elective right knee arthroplasty for severe osteoarthritis. The surgery is cancelled because the patient develops acute respiratory distress on the day of surgery. The patient is monitored and treated for the respiratory distress over a 3-day stay.

Principal Diagnosis:

4. A patient presents with fever, productive cough, and hypoxia. At discharge, the physician documents "pneumonia vs. pulmonary embolism — workup inconclusive." Setting: inpatient.

How many conditions may be sequenced as principal diagnosis?

Rule Applied:

5. True / False: The admitting diagnosis and the principal diagnosis are always the same in the inpatient setting. **T F**

6. A patient is admitted for a planned total colectomy for Crohn's disease. During the hospitalization, the physician documents "possible Crohn's disease with abscess formation." At discharge, the documentation still reads "possible." What is the correct coding approach? Code the signs and symptoms only — uncertain diagnoses cannot be coded in any setting Code Crohn's disease with abscess as the principal diagnosis — inpatient uncertain diagnosis rule applies at discharge Query the physician to change the language to "confirmed" before coding Code Crohn's disease without the abscess — only code what is confirmed

7. A patient is admitted for syncope (fainting). After a full cardiac and neurological workup, the physician documents "syncope, likely due to vasovagal response." Setting: inpatient discharge.

Principal Diagnosis:

8. True / False: In the inpatient setting, when two conditions each meet the definition of principal diagnosis equally, the coder must always choose the

more serious condition as principal. **T** **F**

9. Which section of the ICD-10-CM Official Guidelines governs selection of the principal diagnosis? Section I Section II Section III Section IV

10. In the inpatient uncertain diagnosis rule, which of the following qualifying terms at discharge would allow the coder to code the condition as confirmed? (Select all that apply — circle all correct answers)

A. Possible B. Confirmed C. Probable D. Suspected E. Compatible with F. Ruled out

SECTION 3.4

Section III: Reporting Additional Diagnoses (Inpatient)

Section III of the Official Guidelines applies to **inpatient settings only** and governs how additional diagnoses are reported on the hospital claim. While Section II tells you how to select the first code on the claim (the principal diagnosis), Section III tells you everything else — what other conditions belong on the claim at all.

Additional Diagnosis — Official Definition (UHDDS)

"All conditions that coexist at the time of admission, that develop subsequently, or that affect the treatment received and/or the length of stay. Diagnoses that relate to an earlier episode which have no bearing on the current hospital stay are to be excluded."

What Qualifies as an Additional Diagnosis?

A condition qualifies as a reportable additional diagnosis if it meets **at least one** of the following criteria during the inpatient stay:

- Required **clinical evaluation** (physician assessment, specialist consult, review of test results)
- Required **therapeutic treatment** (medications administered, therapies provided)
- Required **diagnostic procedures** (labs, imaging, other testing ordered for this condition)
- Required **extended length of stay** compared to what would have been needed without the condition
- Increased nursing care and/or monitoring related to the condition

Coding Shot

When you are scanning an inpatient discharge summary and unsure whether a condition qualifies as an additional diagnosis, ask yourself these three questions: (1) Did the physician evaluate this condition? (2) Was a medication or treatment given for it? (3) Did this condition affect how long the patient stayed? If the answer is yes to any of these — it likely qualifies. Code it.

What Does NOT Qualify as an Additional Diagnosis?

- Conditions that were **previously treated and are fully resolved** — they have no bearing on the current stay
- Conditions that are **documented but have no effect** on the current admission, its treatment, or the length of stay
- **Abnormal findings** (lab values, imaging results, other test results) that the physician has not indicated are clinically significant — do NOT code abnormal findings unless the physician has documented a clinical response or noted clinical significance

CAUTION!

Coding resolved conditions, unrelated conditions, or abnormal findings that the physician has not addressed as additional diagnoses **inflates the claim**. Overcoding additional diagnoses is a compliance violation that can trigger payer audits, government investigations, and demand for repayment with interest and penalties. Code only what the documentation supports and what meets the reporting criteria. If in doubt — query the physician for clarification before adding codes to the claim.

Comorbidities and Complications

Two categories of additional diagnoses get special attention in the inpatient setting because of their direct impact on reimbursement:

Comorbidity: A pre-existing condition that is present at the time of admission and increases the complexity and resource utilization of the inpatient stay. When a comorbidity meets the additional diagnosis criteria, it must be reported.

Complication: A condition that arises during the hospitalization as a direct or indirect result of a procedure, treatment, or care provided. Complications are coded with specific complication codes in ICD-10-CM and must be reported when they meet the additional diagnosis criteria.

CMS Rules

For Medicare inpatient claims, additional diagnoses affect the DRG weight through **Complication and Comorbidity (CC)** and **Major Complication and Comorbidity (MCC)** designations. A CC increases the DRG payment; an MCC increases it further. These designations are determined by the additional diagnosis codes assigned on the claim. Failing to code qualifying CCs and MCCs leaves reimbursement on the table — coding non-qualifying conditions as CCs/MCCs creates an overpayment and compliance exposure.

▶️ Official Guidelines for Coding and Reporting

Section III — Reporting Additional Diagnoses (Inpatient)

> "For reporting purposes the definition for 'other diagnoses' is interpreted as additional conditions that affect patient care in terms of requiring: clinical evaluation; or therapeutic treatment; or diagnostic procedures; or extended length of hospital stay; or increased nursing care and/or monitoring."

The rule is about impact. If the condition affected what the clinical team did — what they evaluated, what they treated, what tests they ordered, how long the patient stayed, how closely they monitored the patient — it belongs on the claim. If the condition was merely mentioned in the record but had no bearing on any of those things, it stays off the claim. Documentation drives everything.

Toolbox — Section 3.4 Key Takeaways

- Additional diagnoses are governed by Section III of the Official Guidelines — inpatient only.
- A condition qualifies if it required clinical evaluation, therapeutic treatment, diagnostic procedures, extended LOS, or increased monitoring.
- Do NOT code resolved conditions, unrelated conditions, or abnormal findings not addressed by the physician.
- Comorbidities (pre-existing) and complications (arising during the stay) are

both reportable when they meet the criteria.

• CCs and MCCs from additional diagnoses directly affect DRG weight and Medicare reimbursement.

✓ QUICK CHECK 3.5

1. A condition qualifies as an additional diagnosis in the inpatient setting if it required at least one of the following: _____, _____, _____, or _____.

2. True or False: A condition that was treated in a prior hospital stay and is fully resolved should be coded as an additional diagnosis on the current inpatient claim. _____

3. A **comorbidity** is a _____ condition, while a **complication** is a condition that arises _____ during the hospitalization.

4. Abnormal lab findings should be coded as additional diagnoses only when the physician has documented their _____ significance.

5. True or False: A patient's uncontrolled hypertension requiring antihypertensive medication during an inpatient stay for pneumonia qualifies as a reportable additional diagnosis. _____

EXERCISE 3-D

—

Reporting Additional Diagnoses (Inpatient)

For each inpatient scenario below, determine whether the identified condition qualifies as a reportable additional diagnosis. Write YES or NO and briefly explain why using the Section III criteria. The principal diagnosis has been identified for you.

1. Principal Dx: Acute MI. The patient also has **type 2 diabetes mellitus**, for which she takes metformin daily. Her diabetes medication was continued during the inpatient stay and her blood glucose was monitored twice daily.
   Qualifies as additional diagnosis?
   Reason:

2. Principal Dx: Hip fracture repair. The record notes that the patient had a **right ankle fracture 5 years ago that healed completely** with no residual issues.
   Qualifies as additional diagnosis?
   Reason:

3. Principal Dx: Sepsis. Lab results show an **elevated white blood cell count**. The physician has documented the WBC elevation as consistent with the sepsis and has made no separate clinical note about it beyond its expected relationship to the sepsis.
   Should the abnormal lab finding be separately coded?
   Reason:

4. Principal Dx: Pneumonia. The patient develops a **urinary tract infection** on day 3 of the hospital stay. The physician orders a urine culture, prescribes IV antibiotics specifically for the UTI, and notes that the UTI extended the

patient's anticipated stay by 2 days.

Qualifies as additional diagnosis?

Type (comorbidity or complication):

5. Principal Dx: COPD exacerbation. The patient has a **history of colon cancer** that was treated 8 years ago and is currently in complete remission. No evaluation or treatment related to the cancer history was provided during this admission.

Qualifies as additional diagnosis?

Reason:

6. True / False: A complication that arises during an inpatient stay as a result of a surgical procedure should always be coded as an additional diagnosis if it required treatment. **T F**

7. Principal Dx: Congestive heart failure. The patient has **morbid obesity (BMI 42)**. The care team documents that the obesity complicated the management of the patient's heart failure and required dietary consultation and modified activity orders.

Qualifies as additional diagnosis?

Type:

8. Which of the following would NOT qualify as a reportable additional diagnosis in the inpatient setting? Hypertension requiring antihypertensive medication during the stay Deep vein thrombosis (DVT) developing on day 5 of hospitalization, treated with anticoagulants A childhood tonsillectomy documented in the surgical history with no current relevance Chronic anemia requiring a transfusion during the inpatient stay

9. Principal Dx: Acute appendicitis. Postoperative labs show a **slightly elevated potassium level (5.2 mEq/L)**. The physician notes it in the record but takes no action — no treatment, no dietary changes, no further monitoring beyond standard postoperative labs.

Should this be coded as an additional diagnosis?

Reason:

10. The Section III additional diagnosis rule applies to which healthcare setting? Outpatient physician offices only All healthcare settings — inpatient and outpatient Inpatient hospital settings only Emergency departments only

SECTION 3.5

Section IV: Outpatient Coding Guidelines

Section IV of the Official Guidelines governs diagnosis coding in the **outpatient setting**. This includes physician offices, clinic visits, emergency departments, outpatient surgery centers, observation stays, and same-day surgery. If you work in any of these settings — and the majority of coders do — Section IV is where you live every single day. Let's cover what is different about outpatient coding and why those differences matter.

Inpatient vs. Outpatient: Side-by-Side Comparison

Rule / Concept	Inpatient	Outpatient
Uncertain / probable diagnoses	Code as confirmed (at discharge)	Do NOT code — code the sign or symptom instead
First code reported	Principal diagnosis	First-listed diagnosis
Guideline source	Section II (principal dx) + Section III (additional dx)	Section IV
Additional diagnoses	Section III criteria apply	Code all confirmed conditions affecting management; signs/symptoms if no definitive dx
Procedure coding system	ICD-10-PCS	CPT and HCPCS Level II
Uncertain dx rule applies when?	At time of discharge	N/A — uncertain dx never coded in outpatient

First-Listed Diagnosis

The condition, sign, or symptom established after study to be chiefly responsible for the outpatient services provided during the encounter. The outpatient equivalent of the inpatient principal diagnosis — but selected by the rules of Section IV, not Section II.

Critical Outpatient Rules

Rule 1

—

First-Listed Diagnosis

The **first-listed diagnosis** is the condition that is chiefly responsible for the outpatient services provided during the encounter. Selection depends on the nature of the visit:

- If the visit was for a **procedure or treatment** — code the condition for which the procedure or treatment was performed as first-listed.
- If the visit was **routine or preventive** (annual physical, wellness exam, screening) — the appropriate Z code is first-listed.
- If the visit was for a **sign or symptom** with no confirmed diagnosis — code the sign or symptom as first-listed.

Rule 2

—

Uncertain Diagnoses — Outpatient (HIGH YIELD)

This is the rule that mirrors the inpatient uncertain diagnosis rule — but works in the **exact opposite direction**.

Uncertain Diagnosis Rule — OUTPATIENT

Do NOT code any condition described as "possible," "probable," "suspected," "rule out," "questionable," or similar qualifying language in the outpatient setting. Instead, code the **sign or symptom** that prompted the visit or test.

Example — Outpatient Uncertain Diagnosis

Physician note reads: "Rule out appendicitis." The patient is seen in the physician office with abdominal pain. Setting: outpatient. **Do NOT code appendicitis.** Code the presenting symptom — **abdominal pain** (R10.9 or more specific). The workup is not complete; the diagnosis has not been confirmed. Code what IS confirmed — the pain.

The reason outpatient uncertain diagnoses are handled differently comes down to the clinical process. In the outpatient setting, the encounter is often just the beginning of the diagnostic workup — the physician may order labs, imaging, or referrals that will take days or weeks to complete. At the time of the encounter, the physician genuinely does not know yet. Coding a condition that has not been confirmed would misrepresent the patient's clinical status and the services provided.

STOP!

This is the number one exam trap in ICD-10-CM coding, and it appears on almost every CPC exam administration. Say it out loud until it is reflex: **INPATIENT + uncertain diagnosis at discharge = CODE IT. OUTPATIENT + uncertain diagnosis = DO NOT code it. Code the symptom.** The setting determines

the rule — every single time. No exceptions.

▶️ **Official Guidelines for Coding and Reporting**

Section IV.G — Uncertain Diagnoses in Outpatient Settings

> "Do not code diagnoses documented as 'probable', 'suspected,' 'questionable,' 'rule out,' 'compatible with,' 'consistent with,' or 'working diagnosis' or other similar terms indicating uncertainty. Rather, code the condition(s) to the highest degree of certainty for that encounter/visit, such as symptoms, signs, abnormal test results, or other reason for the visit."

In the outpatient world, we code what we KNOW — not what we are guessing. If the physician has not confirmed the diagnosis, we have no confirmed diagnosis to code. We code the symptom, the sign, the abnormal finding, or the reason the patient came in — whatever represents the highest degree of certainty available at that encounter. Confirmed diagnosis? Code it. Not confirmed? Code the symptom. Simple rule. High stakes.

Rule 3

—

Chronic vs. Acute Conditions in Outpatient

In the outpatient setting, **chronic conditions** that are actively managed during the visit — even if they are not the primary reason for the visit — may be reported as additional diagnoses when they affect the management of the encounter.

> **Example**
>
> Patient is seen for acute UTI (first-listed). The patient also has type 2 diabetes mellitus that is actively managed with medication, and the physician addresses glycemic management during the same visit. Code the UTI as first-listed + the diabetes as an additional diagnosis, because the chronic condition affected the management of the encounter.

Rule 4

—

Code All Documented Conditions Affecting Management

In the outpatient setting, code all conditions that are documented and that affect the management of the encounter. Do **not** code conditions that are listed in the history only and are not affecting the current visit. Historical conditions that have no bearing on current management are not coded — a history code (Z86, Z87) may be used instead if relevant.

Rule 5

—

Patients Receiving Diagnostic Services Only

When a patient presents solely to receive a diagnostic service (laboratory, radiology, other testing), code the diagnosis, condition, problem, or other reason documented as the reason for the test as the first-listed diagnosis. If no diagnosis is

available at the time of coding, code the sign or symptom. Do not code normal findings.

Rule 6

—

Pre-operative Evaluations

When a patient is seen for a pre-operative clearance evaluation prior to a surgical procedure:

- First-listed: The reason for the surgery (the condition for which the surgery is planned)
- Additional diagnoses: The pre-operative examination finding (Z01.818 or similar Z code) and any conditions identified during the evaluation that affect surgical clearance

Check This Out

The inpatient versus outpatient uncertain diagnosis rule distinction is tested on **virtually every CPC exam administration**. AAPC exam item writers have repeatedly identified this as one of the highest-yield testing points in ICD-10-CM coding. Industry analysis of CPC practice exams and student testing records suggests that **2 to 3 questions per exam** directly test this rule. If you know this rule cold — and know which setting it applies in — you have already picked up points that many test-takers leave on the table.

CAUTION!

Coding a "possible," "probable," or "suspected" diagnosis in the outpatient setting is a **compliance violation**. It misrepresents the patient's diagnosis, may result in

an incorrect claim submission, and can trigger payer audits. In addition, coding an unconfirmed diagnosis as confirmed on an outpatient claim may subject the patient to inappropriate denial of future coverage or incorrect risk stratification. The consequences extend beyond the billing office — they affect the patient's medical record and insurance profile.

Coding Shot

Build this habit for every outpatient note you touch: before you assign any diagnosis code, look at the language in the assessment section. Scan for "possible," "probable," "suspected," "rule out," "questionable," or "consistent with." If you see those words in the outpatient setting — stop. Go back to the presenting symptoms. Code the symptom. Do not touch the uncertain diagnosis. This habit will save you from compliance problems every single day of your career.

Toolbox — Section 3.5 Key Takeaways

- Section IV governs outpatient settings: physician offices, clinics, EDs, outpatient surgery, same-day surgery centers, observation stays.
- The outpatient equivalent of principal diagnosis is "first-listed diagnosis" — selected by Section IV rules, not Section II.
- NEVER code uncertain diagnoses (possible, probable, suspected, rule out) in the outpatient setting — code the symptom instead.
- Code all confirmed conditions that affect management of the outpatient encounter as additional diagnoses.
- Chronic conditions actively managed during the visit may be reported as additional diagnoses even when not the primary reason for the visit.
- Inpatient vs. outpatient uncertain diagnosis rule: this is tested on every CPC

exam — know both rules and the settings they apply to.

✓ QUICK CHECK 3.6

1. In the outpatient setting, the first code reported on the claim is called the _____ diagnosis.

2. True or False: In the outpatient setting, if the physician documents "probable UTI," the coder should code the UTI as the first-listed diagnosis. _____

3. A patient is seen in an outpatient physician office with abdominal pain. The physician documents "rule out appendicitis." What should be coded as the first-listed diagnosis? _____

4. Section _____ of the Official Guidelines governs outpatient diagnostic coding and reporting.

5. True or False: Chronic conditions that are not the primary reason for the outpatient visit may still be reported as additional diagnoses if they affect the management of the encounter. _____

EXERCISE 3-E

—

Inpatient vs. Outpatient Rules in Practice

For each scenario below, identify: (1) the setting (inpatient or outpatient), (2) the correct first-listed or principal diagnosis, (3) whether the uncertain diagnosis rule applies and how, and (4) any additional diagnoses. Write your answers on the lines provided.

1. A patient is seen in a physician office with chest pain and shortness of breath. The physician orders labs and an EKG. At the end of the visit, the physician documents "possible angina — will refer to cardiology for stress test."

   Setting:

   Does uncertain dx rule apply? How?

   First code to report:

2. A patient is admitted to the hospital for observation following a syncopal episode. At discharge (inpatient), the physician documents "syncope, probable vasovagal in origin."

   Setting:

   Principal Diagnosis:

   Rule Applied:

3. A patient presents to an outpatient surgery center for a planned laparoscopic cholecystectomy for acute cholecystitis. The procedure is performed without complications. The patient is also a known type 2 diabetic managed with oral medication, which was administered on the day of surgery.

   Setting:

   First-Listed Diagnosis:

   Additional Diagnosis:

4. A patient is seen in the emergency department with right lower quadrant abdominal pain. After a CT scan, the physician documents "abdominal pain, RLQ — rule out appendicitis, recommend surgical consult if pain worsens."

The patient is discharged home from the ED.

Setting:

First-Listed Diagnosis:

Uncertain dx rule — code appendicitis?

5. A patient is admitted to the hospital for a UTI. During the workup, the physician documents "UTI — also appears to be developing early sepsis, will monitor closely." At discharge 4 days later, the discharge summary reads "sepsis, confirmed — due to E. coli UTI."

Setting:

Principal Diagnosis at discharge:

Additional Diagnosis:

6. True / False: In the outpatient setting, the physician's documentation of "suspected Type 2 diabetes" at the end of a clinic visit gives the coder the authority to assign a code for Type 2 diabetes mellitus as the first-listed diagnosis. **T F**

7. A patient presents to an outpatient clinic for a routine Pap smear. The physician also addresses the patient's chronic hypertension (currently controlled on medication) and reviews her medication regimen. No new conditions are identified.

Setting:

First-Listed Diagnosis (type of code):

Additional Diagnosis:

8. A patient is admitted for elective total knee arthroplasty (TKA). Postoperatively, the patient develops a wound infection requiring IV antibiotics, surgical consultation, and a 3-day extension of the stay.

Setting:

Principal Diagnosis:

Additional Diagnosis (type):

9. A patient is seen in an outpatient ENT clinic with hearing loss. After

audiometry, the physician documents "sensorineural hearing loss, bilateral, likely related to prior bacterial meningitis 10 years ago." Setting: outpatient.

First-Listed Diagnosis:

Is sequela coding applicable here? Explain:

10. Which of the following pairs correctly describes the uncertain diagnosis rule for both settings? Inpatient: code the symptom / Outpatient: code the uncertain condition as confirmed Inpatient: code the uncertain condition as confirmed / Outpatient: code the symptom Inpatient: query the physician / Outpatient: code the uncertain condition as confirmed Inpatient: do not code uncertain diagnoses / Outpatient: code uncertain diagnoses as confirmed

📘 Chapter Summary

- The **ICD-10-CM Official Coding Guidelines** are published annually by CMS and NCHS and carry the force of law for all HIPAA-covered entities — they are not optional.
- The Official Guidelines are divided into **four sections**: Section I applies to all settings; Section II and Section III apply to inpatient only; Section IV applies to outpatient only.
- From **Section I**: Do not code signs or symptoms that are integral to a confirmed diagnosis; use combination codes when they fully capture the clinical situation; code both acute and chronic conditions (acute first) when separate index entries exist; sequence residual conditions before the sequela code.
- The **etiology/manifestation convention** requires two codes — the underlying condition (etiology) is always first; the manifestation code can never be first-listed or principal.

- For **impending or threatened conditions** that did not occur: code the existing signs, symptoms, or conditions — unless ICD-10-CM provides a specific code for the threatened version.
- The official definition of **principal diagnosis** is: "the condition established after study to be chiefly responsible for occasioning the admission of the patient to the hospital for care." This must be memorized word for word.
- **Inpatient uncertain diagnosis rule (Section II):** At discharge, conditions documented as "possible," "probable," "suspected," "likely," "questionable," or "compatible with" are coded as confirmed — this applies to inpatient only.
- **Additional diagnoses (Section III)** are reportable in the inpatient setting when they required clinical evaluation, therapeutic treatment, diagnostic procedures, or affected the length of stay — resolved, unrelated, and clinically insignificant conditions are not reported.
- In the **outpatient setting (Section IV)**, the first code reported is the **first-listed diagnosis** — the condition chiefly responsible for the outpatient services provided during the visit.
- **Outpatient uncertain diagnosis rule (Section IV):** Never code "possible," "probable," "suspected," or "rule out" diagnoses in the outpatient setting — code the sign, symptom, or reason for the visit instead. This rule is the opposite of the inpatient rule and is one of the highest-yield testing points on the CPC exam.

CHAPTER REVIEW

—

Chapter 3

This review covers all major topics from Chapter 3. Complete all four sections. Do not refer to answer keys during this review — work through each question independently.

Section A — Multiple Choice (Questions 1–10)

Circle or write the letter of the best answer.

13. Which section of the ICD-10-CM Official Guidelines applies to selection of the principal diagnosis in the inpatient setting?

    - ○ Section I
    - ○ Section II
    - ○ Section III
    - ○ Section IV

14. A patient is admitted to the hospital. At discharge, the physician documents "probable community-acquired pneumonia." Under the Official Guidelines, what is the correct coding action?

    - ○ Code the signs and symptoms (fever, cough) — do not code uncertain diagnoses in any setting
    - ○ Query the physician and wait for a definitive diagnosis before coding
    - ○ Code community-acquired pneumonia as the principal diagnosis — inpatient uncertain diagnosis rule applies
    - ○ Code probable pneumonia with an unspecified code — only confirmed diagnoses receive specific codes

15. A physician office visit note reads: "Patient presents with right lower quadrant pain; rule out appendicitis." Setting: outpatient. What is the correct first-listed diagnosis?

    - ○ Acute appendicitis
    - ○ Right lower quadrant abdominal pain

- Abdominal pain, unspecified
- Both appendicitis and right lower quadrant pain

16. A coder identifies the following in a patient's chart: type 2 diabetes mellitus with diabetic chronic kidney disease, stage 3. Which type of coding applies?
    - Sequela coding — the CKD is a late effect of the diabetes
    - Combination code — a single code captures both the diabetes and the CKD
    - Multiple independent codes — the two conditions are unrelated
    - Etiology/manifestation with CKD coded first
17. Which of the following is the correct sequencing for sequela coding?
    - Sequela code first, residual condition code second
    - The original injury code first, the residual condition code second
    - Residual condition code first, sequela code second
    - Both codes are sequenced simultaneously with no required order
18. In the etiology/manifestation convention, which code is always listed first?
    - The manifestation code
    - The etiology (underlying condition) code
    - The code with the most specificity
    - Either code may be listed first depending on the primary reason for the visit
19. A patient is admitted with chest pain. After a full cardiac workup, the attending physician confirms an NSTEMI. What is the principal diagnosis?
    - Chest pain — this was the reason for admission
    - NSTEMI — this is what study revealed as the cause of the admission
    - Both chest pain and NSTEMI equally
    - The admitting diagnosis — which is always the principal diagnosis

20. Which of the following additional diagnoses would NOT meet the Section III reporting criteria in the inpatient setting?

    - ○ Hypertension actively managed with medication during the stay
    - ○ A DVT that developed during the stay and was treated with anticoagulants
    - ○ An ankle fracture that occurred 10 years ago and has fully healed with no residual effects or current management
    - ○ Type 2 diabetes requiring sliding-scale insulin coverage during the inpatient stay

21. The term "first-listed diagnosis" is used in which healthcare setting?

    - ○ Inpatient hospital only
    - ○ All healthcare settings interchangeably with "principal diagnosis"
    - ○ Outpatient settings only
    - ○ Long-term care facilities only

22. A patient has a condition documented as "both acute and chronic." The Alphabetic Index shows separate subentries for the acute and chronic forms. What is the correct coding approach?

    - ○ Code only the acute condition — it takes precedence
    - ○ Code only the chronic condition — chronic conditions are always coded in ICD-10-CM
    - ○ Code both — sequence the acute code first, chronic code second
    - ○ Query the physician to determine which form is more clinically significant

Section B — True / False (Questions 11–20)

Circle T for True or F for False.

23. In the outpatient setting, a physician's documentation of "suspected type 2 diabetes" allows the coder to assign a code for type 2 diabetes mellitus as the first-listed diagnosis. **T** **F**

24. The ICD-10-CM Official Coding Guidelines are updated annually and take effect on October 1 of each year. **T F**

25. The 7th character "D" on an injury code indicates a sequela encounter — the patient is experiencing a residual condition from a prior injury. **T F**

26. Section II of the Official Guidelines applies to both inpatient and outpatient settings for the selection of principal or first-listed diagnosis. **T F**

27. When a physician documents fever and productive cough in a patient with confirmed pneumonia, the coder should assign codes for all three conditions: pneumonia, fever, and cough. **T F**

28. A sequela can be coded months or years after the original illness or injury — there is no time limit defined in the Official Guidelines. **T F**

29. In the inpatient setting, the admitting diagnosis is always the same as the principal diagnosis. **T F**

30. If a combination code fully describes a patient's diagnosis plus its complication, you should still add individual codes for each component to provide the most complete clinical picture. **T F**

31. An abnormal lab finding should be coded as an additional inpatient diagnosis only when the physician has documented its clinical significance. **T F**

32. The inpatient uncertain diagnosis rule states that conditions documented as "possible," "probable," or "suspected" at the time of discharge are coded as if confirmed. **T F**

Section C — Fill-in-the-Blank (Questions 21–25)

Write the correct term, phrase, or answer in the blank provided.

33. The official definition of **principal diagnosis** is: "The condition _____ to be chiefly responsible for occasioning the _____ of the patient to the hospital for care."

34. The four sections of the ICD-10-CM Official Guidelines are: Section I — _____, Section II — _____, Section III — _____, and Section IV — _____.

35. A **sequela** is defined as the _____ condition produced after the _____ phase of an illness or injury has terminated. There is no _____ limit on when a sequela code may be used.

36. In the outpatient setting, uncertain diagnoses described as "possible," "probable," or "suspected" are **not** coded. Instead, the coder reports the patient's _____ or _____ that prompted the visit.

37. The instructional note "**Code first**" in the Tabular List indicates that the code below it is a _____ code and cannot be sequenced _____. The _____ (underlying) condition must always be listed first.

Section D — Coding Scenarios (Questions 26–30)

For each scenario, answer all fields provided. Apply the correct guideline section for the identified setting.

> A 68-year-old male is admitted to the hospital following a fall at home. He is found to have an acute hip fracture. He also has a history of type 2 diabetes mellitus, for which he continues his oral medications during the stay, and blood glucose is monitored twice daily. On day 3, the patient develops a stage 2 pressure injury on his left heel, which is treated by wound care nursing. Discharge summary: "Right hip fracture; type 2 DM, managed; hospital-acquired pressure injury, left heel, stage 2."

- Setting (inpatient or outpatient):
- Principal Diagnosis:

- Additional Diagnosis #1: — qualifies because:
- Additional Diagnosis #2: — type (comorbidity or complication):
- Applicable Guideline Section(s):

> A 45-year-old female presents to her primary care physician with complaints of fatigue, increased thirst, and frequent urination. After reviewing her symptoms, the physician orders a fasting blood glucose test and HbA1c. At the end of the visit, the physician documents: "Symptoms consistent with possible Type 2 diabetes mellitus — awaiting lab results." The patient is discharged home and will return for lab follow-up.

- Setting (inpatient or outpatient):
- May the coder assign a code for Type 2 diabetes mellitus? (Yes/No)
- Reason:
- First-Listed Diagnosis (what to code instead):
- Applicable Guideline Section:

> A patient is treated in an outpatient ENT office for bilateral sensorineural hearing loss. During the history, the physician documents that the patient had bacterial meningitis 7 years ago and attributes the current hearing loss to that prior infection. The physician codes the encounter as: "Sensorineural hearing loss, bilateral, sequela of prior bacterial meningitis."

- Setting:
- Type of coding situation:
- First code (sequenced first):

- Second code (sequenced second):
- Is there a time limit issue in this scenario? (Yes/No and explain):

> A 72-year-old male with a history of COPD is admitted to the hospital with acute exacerbation of COPD and worsening dyspnea. He is also found to have acute-on-chronic systolic heart failure. During the stay, both conditions are treated. At discharge, the physician documents: "Acute exacerbation of COPD; acute-on-chronic systolic heart failure." Both conditions required IV diuretics (for the heart failure), bronchodilators (for the COPD), and monitoring.

- Setting:
- Can either condition serve as principal diagnosis? (Yes/No and explain):
- For the heart failure — what type of code applies (combination or separate)?:
- Applicable Guideline Section for principal dx selection:
- Applicable Guideline Section for additional dx:

> A patient presents to an outpatient gastroenterology office for evaluation of intermittent rectal bleeding and change in bowel habits. The physician performs a colonoscopy during the same visit. After the colonoscopy, the physician's report reads: "Findings consistent with adenocarcinoma of the sigmoid colon — biopsy taken, pathology pending." The patient is sent home; results expected in 5 business days.

- Setting:
- May the coder assign a code for adenocarcinoma of the sigmoid colon? (Yes/No)

- Reason:
- First-Listed Diagnosis (what should be coded):
- Applicable Guideline Section and Rule:

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Using ICD-10-CM

Corrina R. Lynch | CPC Preparation

Chapter contents

1. How the guidelines are organized

2. Accurate lookup, specificity and laterality

3. Integral symptoms and distinct findings

4. Multiple codes, acute and chronic, and combination codes

5. Sequela and repeated codes

6. Chapter review

Prior-edition readings and exercises follow the revised lesson and may use the earlier chapter arrangement.

Learning objectives

- Locate and apply the correct guideline section.
- Use Tabular instructions and supported specificity to build the code sequence.

1. How the guidelines are organized

Section I covers conventions and general and chapter-specific rules. Sections II and III concern non-outpatient principal and additional diagnoses; Section IV governs outpatient diagnosis reporting. Tabular instructions take precedence when they apply.

Worked example

For a clinic visit, start with Section IV for first-listed diagnosis selection, then apply relevant Section I rules and Tabular instructions.

2. Accurate lookup, specificity and laterality

I.B.1–2 and I.B.13: Locate the diagnosis in the Alphabetic Index, verify it in the Tabular List and report the full code supported by the record. If there is no bilateral code, report right and left separately when both are documented.

Worked example

For a documented right-sided condition, verify that the selected Tabular entry explicitly describes the right side. Do not add a left-sided code unless the left side is documented.

3. Integral symptoms and distinct findings

I.B.5–6: Do not separately code signs and symptoms routinely associated with a confirmed disease unless instructed otherwise. Findings not routinely associated may be reportable when supported.

Worked example

For confirmed acute cystitis with typical painful urination, do not add the symptom merely because it appears in the chief complaint.

4. Multiple codes, acute and chronic, and combination codes

I.B.7–9: Follow notes that require additional codes. When the same condition is described as acute and chronic and separate subentries exist at the same Index indentation, code both and sequence acute first. Use a combination code when it fully describes what is documented.

Worked example

Type 2 diabetes with CKD uses the diabetes-and-CKD combination code plus the documented CKD stage code, as required by the Tabular List.

5. Sequela and repeated codes

I.B.10 and I.B.12: A sequela is a residual after the acute phase. Generally sequence the residual before the sequela code, subject to exceptions and Tabular instructions. Report a unique diagnosis code only once per encounter.

Worked example

When treating a scar from an old burn, identify today's residual and then verify the applicable burn sequela code rather than coding a new burn.

Chapter review

1. When can you code a symptom alongside a confirmed diagnosis?
2. When are acute and chronic forms both reported, and which comes first?
3. Explain how laterality and a required seventh character change a code.

References

CMS/NCHS: FY 2026 Official Coding Guidelines

MEDICAL CODING MASTERY | STUDENT EDITION

CHAPTER 4

ICD-10-CM: Infectious Diseases, Neoplasms, Blood and Endocrine Conditions

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▶ Chapter Objectives

Upon completion of this chapter, the student will be able to:

1. Define and differentiate infection, bacteremia, SIRS, sepsis, severe sepsis, and septic shock using ICD-10-CM coding guidelines.
2. Apply Official Guideline sequencing rules for sepsis, including multi-organism and postprocedural sepsis scenarios.
3. Identify the correct ICD-10-CM codes for HIV-positive asymptomatic status, AIDS, inconclusive HIV testing, and HIV exposure.
4. Demonstrate proper use of the Neoplasm Table in the ICD-10-CM Alphabetic Index to locate codes by site and behavior.
5. Sequence primary and secondary malignancy codes, chemotherapy encounter codes, and complication codes correctly.
6. Assign correct codes for the most common types of anemia, including anemia associated with malignancy, CKD, and chemotherapy.
7. Differentiate ICD-10-CM diabetes mellitus categories (E08–E13) and assign combination codes for diabetic complications.
8. Apply the insulin-use Z code (Z79.4) and oral hypoglycemic Z code

(Z79.84) appropriately based on diabetes type and treatment.

9. Code thyroid disorders, obesity, BMI, and fluid/electrolyte imbalances from Chapter 4 of ICD-10-CM (E00–E89).

10. Synthesize coding from multiple ICD-10-CM chapters to produce complete, correctly sequenced code sets from real clinical documentation.

▶️ Key Terms

Adverse effect — harm caused by a properly administered drug

Bacteremia — bacteria in the bloodstream without systemic response

Benign neoplasm — non-cancerous, non-invasive tumor

Carcinoma in situ — cancer confined to original cells; not yet invasive

Diabetes mellitus — chronic metabolic disorder of glucose regulation

Endocrine system — gland-based system that regulates hormones

Etiology — the underlying cause of a disease or condition

HIV — Human Immunodeficiency Virus

Hyperglycemia — elevated blood glucose level

Hyperlipidemia — elevated lipid (fat) levels in the blood

Hypo/hyperkalemia — low/high potassium levels in the blood

Malignant neoplasm — cancerous tumor capable of invasion and spread

Manifestation — a sign or complication of an underlying disease

Metastatic — cancer that has spread from primary to secondary sites

Neoplasm — any abnormal new growth of tissue

Obesity — excess body fat; BMI ≥ 30 in adults

Opportunistic infection — infection that exploits a weakened immune system

Primary site — original location where a cancer first developed

Sepsis — life-threatening organ dysfunction due to infection

Secondary site — location to which cancer has spread (metastatic)

Chapter Overview

Chapter 4 of Medical Coding Mastery covers four of the most heavily tested ICD-10-CM coding chapters on the CPC exam: Infectious and Parasitic Diseases (A00–B99), Neoplasms (C00–D49), Diseases of the Blood and Blood-Forming Organs (D50–D89), and Endocrine, Nutritional, and Metabolic Diseases (E00–E89). These chapters are not just high-yield for exam purposes — they represent some of the most complex, multi-code scenarios you will face every single day as a working coder. Sepsis, AIDS, cancer, anemia, and diabetes are bread-and-butter diagnoses in every care setting, from inpatient hospitals to oncology clinics to primary care offices. Master these four chapters, and you will walk into the CPC exam — and your first coding job — with real confidence.

SECTION 4.1 — ICD-10-CM Chapter 1: Infectious and Parasitic Diseases (A00–B99)

Overview of Chapter 1: A00–B99

ICD-10-CM Chapter 1 covers diseases caused by **bacteria, viruses, fungi, and parasites**. The chapter is organized primarily by the type of organism and, secondarily, by the body system affected. One of the most important concepts in this chapter is that many infections require **two codes** — one for the infectious condition and one for the causative organism or the body site involved.

- **Excludes1 Note:** Certain localized infections are coded in the body system chapter where they occur (e.g., pneumonia codes in Chapter 10, UTIs in Chapter 14) rather than in Chapter 1.
- **Excludes2 Note:** Infections complicating pregnancy, childbirth, and the puerperium are reported in Chapter 15 (O00–O9A).

4.1A — Sepsis and Severe Sepsis (HIGH YIELD CPC TOPIC)

Sepsis coding is **one of the most complex and most frequently tested topics** on the CPC exam. Before you can code it correctly, you must know exactly what each term means — and why they are NOT interchangeable.

Definitions You MUST Know

Term	Definition	Key Distinction
Infection	Localized invasion by bacteria, virus, or fungus — confined to a specific body site	No systemic response; one code typically
Bacteremia	Bacteria present in the bloodstream WITHOUT a systemic inflammatory response — generally transient	Not the same as sepsis; code A49.9 or organism-specific
SIRS	Systemic Inflammatory Response Syndrome — systemic response to a NON-infectious insult (burns, trauma, pancreatitis)	NOT sepsis; code R65.10/R65.11 + underlying condition
Sepsis	Life-threatening organ dysfunction caused by a dysregulated host response to infection — previously called "systemic infection"	Requires physician documentation; code the infection FIRST
Severe Sepsis	Sepsis WITH associated acute organ dysfunction	Requires R65.20 or R65.21 + organ dysfunction code(s)

Term	Definition	Key Distinction
Septic Shock	Severe sepsis with circulatory failure despite adequate fluid resuscitation	NEVER coded as principal diagnosis; always a manifestation of severe sepsis

◆ **Official Guidelines for Coding and Reporting**

ICD-10-CM Official Guidelines, Section I.C.1.d — Sepsis, Severe Sepsis, and Septic Shock

"For a diagnosis of sepsis, assign the appropriate code for the underlying systemic infection. If the type of infection or causal organism is not further specified, assign code A41.9, Sepsis, unspecified organism... If a patient has sepsis and an acute organ dysfunction, assign the appropriate code for the acute organ dysfunction... Severe sepsis requires a minimum of 2 codes: first a code for the underlying systemic infection, followed by a code from subcategory R65.2."

Plain English: Sepsis = code the infection first, then the systemic response. Severe sepsis = infection code + R65.20/R65.21 + organ dysfunction code(s). Septic shock (R65.21) is NEVER principal — it always follows the infection and severe sepsis codes. Always code to the highest level of specificity for the organism.

Sepsis Coding Rules — Memorize These

- **Basic Sepsis:** Code the underlying systemic infection FIRST (A40.– or A41.–), then any associated organ dysfunction or additional codes.
- **Specific Organism Codes:**
  - A40.0 — Sepsis due to Streptococcus, Group A
  - A41.01 — Sepsis due to Methicillin-susceptible Staphylococcus aureus (MSSA)

- A41.02 — Sepsis due to Methicillin-resistant Staphylococcus aureus (MRSA)
- A41.51 — Sepsis due to Escherichia coli (E. coli)
- A41.9 — Sepsis, unspecified organism (use when organism not documented)

- **Severe Sepsis:** Code systemic infection first + R65.20 (without septic shock) or R65.21 (with septic shock) + code(s) for acute organ dysfunction.
- **Septic Shock:** NEVER the principal diagnosis. It is always a manifestation — sequence the underlying sepsis first.

⚠️ **STOP!**

"Urosepsis" is NOT a valid ICD-10-CM code. It does not exist in the classification system. If the physician documents "urosepsis," do NOT assume sepsis. Query the physician to clarify whether the patient has (1) a urinary tract infection only, (2) sepsis with a urinary source, or (3) another condition entirely. Without clear documentation of systemic involvement meeting sepsis criteria, code only the UTI (N30.– or N39.0). Assigning a sepsis code based solely on the term "urosepsis" in the documentation is an overcoding error.

⚠️ **CAUTION!**

Compliance Alert — Sepsis Overcoding: Assigning a sepsis code without explicit physician documentation of systemic involvement constitutes **overcoding** and is considered a compliance violation. Sepsis codes carry significantly higher DRG weights than UTI or localized infection codes. Upcoding to a higher-reimbursing DRG without clinical support is **fraud under the False Claims Act** and can result in claim recoupment, exclusion from Medicare/Medicaid, and civil monetary penalties. When in doubt, query — never assume.

★ **From the Trenches**

"I've been coding in the emergency department for eleven years, and I will tell you straight up — sepsis is the single most complex, most audited, and most important thing to get right in this entire classification system. One sequencing error on a sepsis case can change the DRG, the reimbursement, and your facility's compliance exposure all at once. I spend more time querying physicians on sepsis documentation than any other condition. Learn these rules cold. Not kind-of cold. Frozen solid."

— Marcus T., CPC, CEDC | ED Revenue Integrity Coder | Regional Medical Center, Atlanta, GA

● **Check This Out!**

Sepsis is the **#1 most expensive hospital condition billed to Medicare**, costing the U.S. healthcare system over **$24 billion annually**. Approximately 1.7 million Americans develop sepsis each year, and nearly 270,000 die as a result. Accurate coding of sepsis directly affects billions of dollars in Medicare reimbursement and is a top target of Recovery Audit Contractor (RAC) reviews. Getting this right is not just an exam skill — it protects your facility and your patients.

Four-Code Scenario: Walked Through Step by Step

► **Worked Example 4.1.1 — Severe Sepsis with Septic Shock**

Clinical Scenario:

Patient is admitted with sepsis due to MRSA with septic shock and acute kidney injury.

Step 1 — Identify the sepsis type and organism: Sepsis due to MRSA → **A41.02** (Sepsis due to Methicillin-resistant Staphylococcus aureus). This is the **principal diagnosis**.

Step 2 — Identify the severity level: Septic shock is present → **R65.21** (Severe sepsis with septic shock). This always follows the infection code. Septic shock is a manifestation — it cannot lead the code set.

Step 3 — Identify organ dysfunction: Acute kidney injury is documented → **N17.9** (Acute kidney failure, unspecified). This is an additional code representing the organ dysfunction that defines severe sepsis.

Final Code Set (in correct sequence):

Sequence

Code

Description

Why This Position

1st (Principal)

A41.02

Sepsis due to MRSA

The underlying systemic infection — always leads in sepsis coding

2nd

R65.21

Severe sepsis with septic shock

Manifestation code — follows the infection; documents severity

3rd

N17.9

Acute kidney failure, unspecified

Organ dysfunction associated with severe sepsis

★ **Coding Shot**

When you see "septic shock" in the documentation, your first question should be: **what infection is driving it?** Locate the organism or infection source, code that FIRST, then add R65.21, then the organ dysfunction. Think of it as a tower: infection on the bottom, severity in the middle, complications on top. The tower always has its foundation at the bottom.

4.1B — HIV and AIDS Coding (HIGH YIELD)

HIV and AIDS coding has a very specific set of rules that are tested on virtually every CPC exam. The key distinction that controls your code selection is whether the patient is **asymptomatic** (HIV-positive but no HIV-related illness) or **symptomatic** (has HIV disease with related conditions or AIDS).

Core HIV Coding Rules

- **HIV Positive, Asymptomatic (Z21):** Patient tests positive for HIV but has NO HIV-related conditions or illnesses. Code **Z21** — Asymptomatic human immunodeficiency virus (HIV) infection status. Do NOT use B20 for this patient.

- **AIDS / Symptomatic HIV Disease (B20):** Patient has confirmed HIV disease WITH HIV-related conditions (opportunistic infections, AIDS-defining illnesses). Code **B20** as the **principal diagnosis**, then the manifestation(s) or opportunistic infections as additional codes.
- **B20 is a Lifetime Code:** Once a patient has been assigned B20, code B20 on **every future encounter** — HIV disease does not go away. Even if the patient is on antiretroviral therapy and doing well, B20 is always reported.
- **AIDS Patient Admitted for Unrelated Condition:** Code B20 first (or as an additional code if the unrelated condition is the reason for admission — guidelines vary by setting). Always include B20 on every encounter once established.
- **Inconclusive HIV Test (R75):** Test results are not definitive — code **R75** (Inconclusive laboratory evidence of HIV).
- **HIV Exposure (Z20.6):** Patient was exposed to HIV but no confirmed positive test — code **Z20.6** (Contact with and (suspected) exposure to HIV).
- **HIV Screening (Z11.4):** Patient presents for HIV testing with no known HIV status — code **Z11.4** (Encounter for screening for HIV).

> ★ **Coding Shot**
>
> **B20 is a lifetime code.** Once you assign it, it never goes away. Think of it as a permanent flag in the medical record. Every single encounter for a patient with established AIDS — regardless of why they're being seen — includes B20. A patient with AIDS coming in for a broken wrist? B20 + fracture code. A patient with AIDS coming in for a routine medication check? B20 + Z code for the encounter type. This rule does NOT apply to Z21 patients — Z21 can change if the patient later develops AIDS.

HIV Coding Decision Table

Clinical Scenario	Code to Use	Rationale
Asymptomatic HIV positive — no HIV-related illness	Z21	No HIV disease present; patient is a carrier only
HIV disease with AIDS-related pneumonia	B20 first, then J18.9	Symptomatic HIV disease; pneumonia is a manifestation
Admitted for femur fracture — known AIDS patient	B20 + fracture code	B20 always coded once AIDS is established
Inconclusive HIV test result	R75	Test result is not definitive — neither positive nor negative
Patient comes in for HIV screening — no known status	Z11.4	Screening encounter, no known infection
Contact with HIV-positive individual — no confirmed exposure outcome	Z20.6	Exposure, not confirmed infection or positive test

4.1C — Common Infectious Disease Codes

Code	Description	Key Notes for Coders
A09	Infectious gastroenteritis and colitis, unspecified	Not the same as food poisoning (A05.–); confirm etiology
A41.9	Sepsis, unspecified organism	Use ONLY when organism is not documented or cannot be determined
A41.01	Sepsis due to MSSA	Methicillin-susceptible Staph aureus; distinguish from MRSA (A41.02)
B00.9	Herpesviral infection, unspecified	Query for type before defaulting to unspecified; B00.1 = herpes labialis
B97.–	Viral agents as the cause of diseases classified elsewhere	Use as additional code; not principal; added to identify viral agent

Code	Description	Key Notes for Coders
J02.9	Acute pharyngitis, unspecified	Very common outpatient code; strep throat = J02.0
J06.9	Acute upper respiratory infection, unspecified	Common cold; use when no further specification is documented
J20.9	Acute bronchitis, unspecified	Code to organism if identified (J20.0–J20.8)
U07.1	COVID-19	Code first; if patient has associated pneumonia, add J12.82; follow current COVID coding guidelines

✓ Quick Check 4.1

1. A patient is admitted with sepsis due to E. coli with acute respiratory failure. What is the **correct sequencing** of the first two codes?

2. A patient tests positive for HIV but has no HIV-related illness. Which code is assigned: **B20 or Z21**?

3. True or False: "Urosepsis" is a valid ICD-10-CM code that should be assigned when a physician documents that term.

T **F**

4. What does code R75 represent in HIV coding?

5. A patient with established AIDS is admitted for an unrelated knee injury. Which HIV-related code, if any, should still be reported?

EXERCISE 4-A

—

Infectious Diseases: Sepsis, HIV, and Common Infections

Instructions: Answer each question using your ICD-10-CM code book. Write all codes in correct sequence. For multiple-code scenarios, fill in each code blank. Do not guess — look it up.

1. A patient is admitted with **sepsis due to Streptococcus, Group A**. Assign the correct principal diagnosis code.

Code: ___ ___ ___ . ___ ___

2. A patient has **severe sepsis due to E. coli with septic shock** and acute liver failure. Assign all codes in the correct sequence.

Code 1 (Principal): ___ ___ ___ . ___ ___

Code 2: ___ ___ ___ . ___ ___

Code 3: ___ ___ ___ . ___ ___

3. A patient with known AIDS presents for treatment of **Pneumocystis jirovecii pneumonia** (PCP). Assign codes in correct sequence.

Code 1: ___ ___ ___

Code 2: ___ ___ ___ . ___ ___

4. A patient tests **positive for HIV** but has no HIV-related symptoms or illness.

Code: ___ ___ ___

5. The physician documents that the patient had a recent **HIV test with inconclusive results**.

Code: ___ ___ ___

6. True or False: Bacteremia and sepsis are coded using the same ICD-10-CM

code.

T F

7. A patient is admitted with **sepsis due to MRSA**. There is no documentation of organ dysfunction or septic shock. Assign the correct code.

Code: ___ ___ ___ . ___ ___

8. True or False: Once a patient has been coded as having AIDS (B20), that code must be assigned at every future encounter.

T F

9. A patient presents with an **acute upper respiratory infection** (common cold) and no further specification is documented.

Code: ___ ___ ___ . ___ ___

10.

Which code category is used for septic shock? (circle one)

A. A41.– B. R65.21 C. A40.– D. R78.81

11. A patient is admitted for **COVID-19** with associated pneumonia. Assign codes in correct sequence.

Code 1: ___ ___ ___ . ___

Code 2: ___ ___ ___ . ___ ___

12. A patient presents for **HIV screening** with no known HIV status and no symptoms.

Code: ___ ___ ___ . ___

☠️ **Toolbox — Section 4.1 Key Takeaways**

- Sepsis requires the **infection coded first**; severe sepsis adds R65.20/R65.21; septic shock is never principal.
- "Urosepsis" is **not a valid ICD-10-CM code** — query the physician or code

the UTI only.

• HIV-positive asymptomatic = **Z21**; AIDS/symptomatic HIV disease = **B20** (lifetime code).

• Bacteremia is **NOT sepsis** — do not confuse them or use the same codes interchangeably.

• Always check Excludes notes in Chapter 1 — many localized infections are coded in body system chapters, not here.

SECTION 4.2 — ICD-10-CM Chapter 2: Neoplasms (C00–D49)

Overview of Chapter 2: C00–D49

Neoplasms are abnormal tissue growths. Chapter 2 of ICD-10-CM is organized first by **anatomic site** (where the growth is located) and then by **behavior** (whether it is malignant, benign, in situ, or uncertain). This chapter is unique in ICD-10-CM because it relies on a special reference tool — **the Table of Neoplasms** in the Alphabetic Index — as the required starting point for code selection.

4.2A — Neoplasm Terminology and Behavior

Before you can code neoplasms, you must understand the five behavior categories used in ICD-10-CM. These categories are not just clinical terms — they correspond directly to **five separate columns in the Neoplasm Table**.

Behavior	Clinical Meaning	ICD-10-CM	Key Point

		Range	
Malignant — Primary	Cancer at its original site of origin	C00–C75, C80–C96	Where the cancer started
Malignant — Secondary	Cancer spread (metastasized) to another location from the primary site	C77–C79	Where the cancer traveled to
Carcinoma in Situ	Cancer cells present but confined to original epithelium; not yet invasive	D00–D09	"In situ" = in place; has NOT spread
Benign	Non-cancerous; does not invade or spread	D10–D36	Still needs treatment in many cases
Uncertain Behavior	Pathologist cannot determine if benign or malignant	D37–D48	Based on pathology report; not guessed
Unspecified Behavior	Behavior not documented by physician	D49	Last resort — query provider first

4.2B — The Table of Neoplasms: How to Use It

The **Neoplasm Table** is located in Volume 2 (the Alphabetic Index) of ICD-10-CM. It contains thousands of anatomic sites arranged alphabetically, each with six columns corresponding to the six behavior categories. This is your **required starting point** for ALL neoplasm coding — no exceptions.

⚠️ **STOP!**

NEVER go directly to the Tabular List for neoplasms. The Neoplasm Table in the Alphabetic Index is the mandatory first step. If you skip the table and flip straight to the C-codes in the Tabular, you are bypassing the system designed

to guide you to the correct code column. You will make errors, and those errors can mean the difference between a correct primary and secondary code — which can change DRG assignment and reimbursement by thousands of dollars. Table first. Always.

Six Columns of the Neoplasm Table

Column	Behavior	Use When...
1	Malignant Primary	Cancer is at its original site of development
2	Malignant Secondary	Cancer has spread FROM another site TO this location
3	Ca in Situ	Pathology confirms pre-invasive cancer, confined to epithelium
4	Benign	Growth is non-cancerous and confirmed by pathology
5	Uncertain Behavior	Pathologist states behavior cannot be determined
6	Unspecified Behavior	Behavior is not documented — query first

Step-by-Step Process: Using the Neoplasm Table

1. Identify the **anatomic site** of the neoplasm from the documentation. Site comes first — not the behavior.
2. Locate that **site in the Neoplasm Table** (alphabetically in the Alphabetic Index).
3. Identify the **behavior** documented: primary malignant, secondary, in situ, benign, uncertain, or unspecified.
4. Select the code from the **correct column** that matches the behavior.

5. **Verify in the Tabular List** — read ALL instructional notes, Excludes1, Excludes2, and "Use Additional Code" notes before finalizing.

► Worked Example 4.2.1 — Primary Malignant Neoplasm of the Breast

Documentation: "Patient has primary malignant neoplasm of the right breast, upper outer quadrant."

Step 1: Site = Breast, right, upper outer quadrant

Step 2: Look up "Neoplasm, breast" in the Neoplasm Table → find "upper-outer quadrant"

Step 3: Behavior = Primary malignant → Column 1

Step 4: Code selected from Column 1 → **C50.411**

Step 5: Verify in Tabular — confirm site, laterality, confirm no exclusion notes applicable.

Final Code: C50.411 — Malignant neoplasm of upper-outer quadrant of right female breast

► Worked Example 4.2.2 — Colon Cancer with Liver Metastases

Documentation: "Patient with known colon cancer now presents with liver metastases."

Step 1: Two sites: Colon (primary) + Liver (secondary/metastatic)

Step 2–4: Colon cancer → Column 1 → C18.– (verify specific colon segment). Liver → Column 2 (secondary malignant) → **C78.7**

Sequencing Question: What is the reason for the encounter? If the patient is being seen for the liver metastasis treatment → C78.7 first, then C18.– as additional.

Final Code Set (if admitted for metastatic liver disease):
Code 1: **C78.7** — Secondary malignant neoplasm of liver

Code 2: **C18.9** — Malignant neoplasm of colon, unspecified (or specific segment)

► Worked Example 4.2.3 — Carcinoma In Situ of the Cervix

Documentation: "Pathology report shows carcinoma in situ of the cervix uteri."

Site: Cervix uteri | **Behavior:** Ca in Situ → Column 3

Final Code: D06.9 — Carcinoma in situ of cervix uteri, unspecified (or D06.0/D06.1 for specific zone)

► Worked Example 4.2.4 — Benign Neoplasm of the Parotid Gland

Documentation: "Patient has benign neoplasm of the parotid gland."

Site: Parotid gland | **Behavior:** Benign → Column 4

Final Code: D11.0 — Benign neoplasm of parotid gland

★ From the Trenches

"When I first learned neoplasm coding, that table scared the daylights out of me. Six columns, hundreds of sites, and all those C and D codes — I didn't know where to begin. What finally clicked for me was this: site first, behavior second, table always. I stopped worrying about memorizing codes and started trusting the process. Now I can navigate that table in my sleep. Drill the step-by-step process until it's automatic, and the codes will follow."

— Vanessa R., CPC-H, COC | Oncology HIM Coding Specialist | University Cancer Center, Houston, TX

4.2C — Neoplasm Coding Rules (Official Guidelines — HIGH YIELD)

◆ **Official Guidelines for Coding and Reporting**

ICD-10-CM Official Guidelines, Section I.C.2 — Neoplasms

"When a primary malignancy has been previously excised or eradicated from its site and there is no further treatment directed to that site and there is no evidence of any existing primary malignancy, a code from category Z85, Personal history of malignant neoplasm, should be used to indicate the former site of the malignancy... When an encounter is for management of a complication associated with the malignancy... and the treatment is only for the complication, the complication is coded first, followed by the appropriate code(s) for the malignancy."

Plain English: Cancer coding is driven by the answer to this question: why is this patient here today? That answer determines what gets coded first. Past cancer no longer under treatment = Z85 history code. Current cancer with a complication driving the visit = complication code first. Cancer currently being treated = the malignancy leads.

Rule 1 — Primary vs. Secondary Sequencing

- Admitted for treatment of the **primary** malignancy → code the **primary first**.
- Admitted for treatment of a **secondary (metastatic) site** → code the **secondary first**, primary as additional.
- Both primary and secondary receive treatment → sequence based on **what is the primary reason for this specific admission**.

Rule 2 — Treatment of Complications of Malignancy

- Admitted for a **complication** of the malignancy (anemia, dehydration, nausea, pain) → code the **complication as principal** + malignancy as additional.
- **Anemia due to malignancy:** D63.0 (Anemia in neoplastic disease) — ADDITIONAL code; the malignancy sequences first.
- **Anemia due to chemotherapy:** D64.81 — sequence with malignancy; may require adverse effect coding.

Rule 3 — Chemotherapy, Radiation, and Immunotherapy Encounters (THE EXCEPTION RULE)

This is one of the most frequently tested neoplasm sequencing rules on the CPC exam. When a patient presents specifically FOR chemotherapy, radiation, or immunotherapy administration:

- **Z51.11** — Encounter for antineoplastic chemotherapy → **PRINCIPAL DIAGNOSIS**
- **Z51.0** — Encounter for antineoplastic radiation therapy → **PRINCIPAL DIAGNOSIS**
- **Z51.12** — Encounter for antineoplastic immunotherapy → **PRINCIPAL DIAGNOSIS**
- The malignancy is then coded as an **ADDITIONAL diagnosis**.

> ★ **Coding Shot**
>
> **When in doubt about neoplasm sequencing, ask yourself: "Why was this patient admitted TODAY?"** That single question cuts through most neoplasm sequencing confusion. Is the patient here to receive chemo? Z51.11 leads. Is the patient here because the cancer itself is causing a problem? The cancer code leads. Is the patient here because the chemo caused anemia? The anemia leads. Let the reason for the visit drive the sequence.

Rule 4 — Personal and Family History of Cancer

- **Personal history of malignancy** (cancer no longer active, treatment completed) → **Z85.–** codes
- **Family history of malignancy** → **Z80.–** codes

Rule 5 — Current vs. History

- If cancer is **actively being treated OR the primary site is still present** → use malignancy code (C__.–)
- If cancer is **no longer present and treatment is complete** → use personal history code (Z85.–)

⚠️ **CAUTION!**

Sequencing primary vs. secondary neoplasm codes incorrectly can change the DRG assignment by thousands of dollars. Inpatient DRG grouping is sensitive to which malignancy code is listed first. In outpatient settings, incorrect neoplasm sequencing affects the primary diagnosis, which drives medical necessity for procedures, labs, and imaging. A pattern of incorrect neoplasm sequencing can trigger payer audits and trigger recoupment demands on both facility and professional claims.

◆ **CMS Rules**

Medicare Chemotherapy Claim Sequencing: Medicare's Outpatient Code Editor (OCE) edits will **reject claims** with incorrect malignancy sequencing for chemotherapy encounters. When Z51.11 is the principal diagnosis, the malignancy must appear as an additional code — not the other way around. Facilities that consistently sequence these claims incorrectly will receive edit rejections and delayed reimbursement. Medicare Advantage plans follow the same rules. Verify sequencing before submitting every chemotherapy claim.

Check This Out!

Cancer is the **second leading cause of death in the United States**, accounting for nearly 600,000 deaths annually. Coders who specialize in oncology coding are consistently among the **highest-paid medical coders** in the field, with COC (Certified Outpatient Coder) and oncology-specific credentials commanding premium salaries. If you master Chapter 2 of ICD-10-CM, you have a skill set that is always in demand.

Neoplasm Coding Quick Reference

Scenario	Principal Dx	Additional Code(s)
Admitted for treatment of primary breast cancer	C50.–	Any comorbidities
Admitted for treatment of liver metastases from colon cancer	C78.7	C18.– (primary)
Outpatient chemotherapy for lung cancer	Z51.11	C34.– (malignancy)
Radiation therapy for prostate cancer	Z51.0	C61
Anemia due to malignancy — admitted for transfusion	C__ .–	D63.0
Anemia due to chemotherapy	C__ .–	D64.81
Breast cancer, no evidence of disease — follow-up	Z08	Z85.3 (history)
Family history of colon cancer — screening colonoscopy	Z12.11	Z80.0 (family hx)
Carcinoma in situ of bladder — excision	D09.0	Procedure code
Benign meningioma — craniotomy	D32.0	Procedure code
Uncertain behavior of	D37.5	Per pathology only

Scenario	Principal Dx	Additional Code(s)
rectal polyp on path report		
Malignant neoplasm of unknown primary with lung mets	C80.1	C78.0–
Dehydration — patient also has active colon cancer	E86.0	C18.–
Nausea/vomiting due to chemotherapy	R11.2	C__ .–; Z79.899
Pain due to malignancy of bone	C__ .–	G89.3

✓ Quick Check 4.2

1. What is the FIRST step in coding any neoplasm in ICD-10-CM?

2. A patient is admitted specifically to receive chemotherapy. What code is sequenced as principal diagnosis?

3. True or False: If cancer is no longer active and treatment is complete, the malignancy code (C__.–) is still reported.

T **F**

4. What is the difference between a "primary" and a "secondary" malignant neoplasm?

5. A patient has colon cancer that has metastasized to the lungs and is admitted for treatment of the lung metastases. Which code is sequenced first?

EXERCISE 4-B

—

Neoplasms: Table Use, Sequencing, and Special Rules

Instructions: Use the ICD-10-CM Neoplasm Table and Tabular List. Assign all codes in correct sequence. Fill in ALL blanks.

1. Patient is seen for outpatient **chemotherapy for primary malignant neoplasm of the sigmoid colon**.

Code 1 (Principal): ___ ___ ___ . ___ ___

Code 2: ___ ___ ___ . ___ ___

2. Patient is admitted for **dehydration due to chemotherapy side effects**. Patient has primary malignant neoplasm of the left ovary.

Code 1 (Principal): ___ ___ ___ . ___

Code 2: ___ ___ ___ . ___ ___

3. Pathology report: **benign neoplasm of the thyroid gland**.

Code: ___ ___ ___ . ___

4. Patient with **primary malignant neoplasm of the prostate** — admitted for radiation therapy.

Code 1 (Principal): ___ ___ ___ . ___

Code 2: ___ ___

5. Patient has a **carcinoma in situ of the cervix uteri**, endocervix.

Code: ___ ___ ___ . ___

6. Patient previously treated for breast cancer — **no evidence of disease**, here for follow-up.

Code 1: ___ ___ ___

Code 2: ___ ___ ___ . ___ ___

7. Patient admitted with **anemia due to primary malignant neoplasm of the stomach**. Anemia is the reason for admission.

Code 1 (Principal): ___ ___ ___ . ___

Code 2: ___ ___ ___ . ___

8. True or False: A patient with personal history of colon cancer (treatment complete, no evidence of disease) should be assigned C18.9 at every visit.

T **F**

9. A colon cancer patient is admitted for **brain metastases**. Treatment this admission is focused on the brain.

Code 1 (Principal): ___ ___ ___ . ___ ___

Code 2: ___ ___ ___ . ___ ___

10. Patient's pathology report documents **uncertain behavior of a rectal neoplasm**.

Code: ___ ___ ___ . ___

11.

Which column of the Neoplasm Table is used when the pathologist documents that behavior cannot be determined? (circle one)

A. Column 2 B. Column 4 C. Column 5 D. Column 6

12. Patient is a **60-year-old female with a family history of breast cancer**. She presents for routine screening mammogram. Assign the primary code for this encounter.

Code: ___ ___ ___ . ___ ___ ___

☠️ **Toolbox — Section 4.2 Key Takeaways**

- Always **start with the Neoplasm Table** in the Alphabetic Index — never

go directly to the Tabular for neoplasm codes.

• The Neoplasm Table has **six columns**: primary, secondary, Ca in situ, benign, uncertain, and unspecified behavior.

• For chemotherapy, radiation, or immunotherapy encounters → **Z51.11, Z51.0, or Z51.12 is principal**; the malignancy is additional.

• Anemia due to malignancy = malignancy first + **D63.0**; anemia due to chemo = malignancy + **D64.81**.

• Cancer that is no longer active and treatment is complete → **Z85.– personal history code**, not a C-code.

SECTION 4.3 — ICD-10-CM Chapter 3: Diseases of the Blood and Blood-Forming Organs (D50–D89)

Overview of Chapter 3: D50–D89

Chapter 3 covers **anemias, coagulation defects, other blood disorders, and disorders involving the immune mechanism**. In the real coding world, the codes in this chapter are most frequently assigned as **additional diagnoses** — secondary to cancer, chronic kidney disease, nutritional deficiency, or medication effects. The most critical concept: many anemia codes require TWO codes — the anemia code AND the underlying cause.

4.3A — Anemias

Anemia is a condition in which the blood lacks enough healthy red blood cells or hemoglobin. ICD-10-CM classifies anemia by both **type** (what kind of anemia) and

cause (what is causing it). Both elements must be documented and coded accurately.

Types of Anemia and Key Codes

Iron Deficiency Anemia (D50.–) — the most common type of anemia worldwide:

- D50.0 — Iron deficiency anemia secondary to blood loss (chronic)
- D50.1 — Sideropenic dysphagia (Plummer-Vinson syndrome)
- D50.9 — Iron deficiency anemia, unspecified

Vitamin B12 Deficiency Anemia (D51.–):

- D51.0 — Vitamin B12 deficiency anemia due to intrinsic factor deficiency (**Pernicious anemia**)
- D51.9 — Vitamin B12 deficiency anemia, unspecified

Folate Deficiency Anemia (D52.–):

- D52.0 — Dietary folate deficiency anemia
- D52.9 — Folate deficiency anemia, unspecified

Aplastic Anemia (D60–D61): Bone marrow fails to produce sufficient blood cells. D61.9 = aplastic anemia, unspecified.

Anemia Due to Chronic Disease:

- D63.0 — Anemia in neoplastic disease (use additional code for the neoplasm; malignancy is coded first)
- D63.1 — Anemia in chronic kidney disease (CKD must be coded first per "Code First" instruction)

Sickle Cell Anemia (D57.–): Highly specific codes based on type and crisis status:

- D57.1 — Sickle-cell disease without crisis
- D57.00 — HbSS disease with acute chest syndrome
- D57.01 — HbSS disease with splenic sequestration

◆ **Official Guidelines for Coding and Reporting**

ICD-10-CM Official Guidelines, Section I.C.2.c.1 — Anemia Associated with Malignancy

"When the admission/encounter is for management of an anemia associated with the malignancy, and the treatment is only for anemia, the appropriate code for the malignancy is sequenced as the principal or first-listed diagnosis followed by the appropriate code for the anemia (such as code D63.0, Anemia in neoplastic disease)... When the admission/encounter is for management of anemia associated with an adverse effect of radiotherapy, the anemia code is sequenced first, followed by the appropriate codes for the neoplasm and the adverse effect."

Plain English: Anemia caused by the cancer itself → cancer code first, D63.0 additional. Anemia caused by chemotherapy → D64.81 first OR cancer first (check guidelines carefully for current direction). Anemia caused by radiation → anemia code leads, then malignancy, then adverse effect code. The cause of the anemia determines your sequencing.

Code	Type of Anemia	Key Notes	Common Additional Code Needed
D50.0	Iron deficiency anemia, secondary to blood loss	Must document chronic blood loss source	K92.1 (GI bleed) or other source
D50.9	Iron deficiency anemia, unspecified	Last resort — query for cause	None typically
D51.0	Pernicious anemia (B12 deficiency, intrinsic factor)	Autoimmune; requires B12 injections	None usually
D57.1	Sickle-cell disease without crisis	Confirm type (HbSS vs. HbSC)	Depends on complications
D63.0	Anemia in neoplastic disease	Always additional; cancer code first	Malignancy code (C__.–) coded first

Code	Type of Anemia	Key Notes	Common Additional Code Needed
D63.1	Anemia in chronic kidney disease	"Code First" note — CKD leads	N18.– (CKD stage) coded first
D64.81	Anemia due to antineoplastic chemotherapy	Chemo-induced; adverse effect sequencing	Malignancy + T45.1x5A (adverse effect)
D64.9	Anemia, unspecified	Last resort — do not default here without review	Depends on cause

★ Coding Shot

Anemia that is coded as "due to" or "associated with" another condition **almost always requires the underlying condition to be coded first**. Look for the "Code First" or "Use Additional Code" note at the anemia code in the Tabular. D63.0 and D63.1 both have explicit "Code First" notes — this means the neoplasm and the CKD code must come before D63.0 or D63.1 in the code set. These instructional notes are not suggestions. They are sequencing rules.

⚠ STOP!

Do NOT default to D64.9 (Anemia, unspecified) when a more specific type is documented or can be determined from lab results referenced in the chart. Review the laboratory findings, the clinical documentation, and the physician's description of the anemia before assigning an unspecified code. If the type is not clear from the record, query the physician. Unspecified codes signal to payers that documentation may be insufficient — and they are prime targets for medical record review requests.

4.3B — Coagulation Defects and Other Blood Disorders

Code	Condition	Key Points
D66	Hemophilia A	Factor VIII deficiency; most common type of hemophilia
D67	Hemophilia B	Factor IX deficiency; also called Christmas disease
D68.0	Von Willebrand disease	Most common inherited bleeding disorder; affects platelet function
D69.–	Thrombocytopenia	Low platelet count; multiple causes; code to specificity (D69.3, D69.4, D69.6, etc.)
D75.1	Secondary polycythemia	Increased RBCs due to another condition (COPD, altitude, EPO use)
D89.9	Disorder involving the immune mechanism, unspecified	Used when immune disorder is documented but not further specified

✓ **Quick Check 4.3**

1. What is the correct code for **pernicious anemia**?

2. A patient has anemia associated with CKD Stage 3. Which code is listed FIRST in the code set?

3. True or False: D63.0 (Anemia in neoplastic disease) is sequenced BEFORE the malignancy code.

T **F**

4. What condition does code D66 represent?

5. A patient is documented to have iron deficiency anemia secondary to chronic GI blood loss. Which D50 code is most appropriate?

EXERCISE 4-C

—

Blood Disorders: Anemia Coding and Sequencing

Instructions: Assign the correct ICD-10-CM code(s) for each scenario. Determine correct sequencing. Fill in all blanks.

1. Patient has **anemia in chronic kidney disease, Stage 4**. Assign codes in correct sequence.

Code 1 (Principal): ___ ___ ___ . ___ ___

Code 2: ___ ___ ___ . ___

2. Patient has **pernicious anemia**.

Code: ___ ___ ___ . ___

3. Patient with **primary malignant neoplasm of the uterus** is admitted for **anemia due to the malignancy**.

Code 1 (Principal): ___ ___ ___ . ___ ___

Code 2: ___ ___ ___ . ___

4. Patient has **Hemophilia A**.

Code: ___ ___ ___

5. Patient has **sickle-cell disease (HbSS) without crisis**.

Code: ___ ___ ___ . ___

6. Patient has **iron deficiency anemia secondary to chronic blood loss**.

Code: ___ ___ ___ . ___

7. True or False: Von Willebrand disease is classified under the hemophilia codes in ICD-10-CM.

T F

8. The physician documents "anemia" with no further specification and the record has no lab values referenced. What is the correct code?

Code: ___ ___ ___ . ___

Note on the line: what action should you take BEFORE assigning this code?

9.

Which type of anemia is associated with

Factor IX deficiency

? (circle one)

A. Hemophilia A B. Von Willebrand Disease C. Hemophilia B D. Aplastic Anemia

10. True or False: Anemia in neoplastic disease (D63.0) can be sequenced as the principal diagnosis when the patient is admitted for the anemia treatment.

T F

☠️ **Toolbox — Section 4.3 Key Takeaways**

- Anemia "due to" or "associated with" another condition requires the

underlying condition coded first — check for "Code First" notes in the Tabular.

• **D63.0** (anemia in neoplastic disease) and **D63.1** (anemia in CKD) are both additional codes — never principal diagnoses standing alone.

• Pernicious anemia = **D51.0**; caused by lack of intrinsic factor; B12 injections required for life.

• Hemophilia A = **D66** (Factor VIII); Hemophilia B = **D67** (Factor IX). Know both for the CPC exam.

• Always code sickle-cell disease to the highest specificity — type AND crisis status are both captured in the D57 subcategories.

SECTION 4.4 — ICD-10-CM Chapter 4: Endocrine, Nutritional, and Metabolic Diseases (E00–E89)

Overview of Chapter 4: E00–E89

Chapter 4 of ICD-10-CM covers an enormous range of conditions — from **thyroid disorders to diabetes to obesity to electrolyte imbalances**. Diabetes mellitus is by far the most tested condition in this chapter and one of the most tested on the CPC exam overall. Multiple codes are frequently required — always read instructional notes carefully before finalizing your code set.

4.4A — Diabetes Mellitus — HIGHEST YIELD ENDOCRINE TOPIC

Diabetes mellitus (DM) is a chronic metabolic disorder in which the body cannot properly regulate blood glucose. ICD-10-CM has five main categories for diabetes, and selecting the **correct category** is the first step — before you even think about complications.

Diabetes Categories at a Glance

Type	Code Category	Cause	Key Coding Note
Type 1 DM	E10.–	Autoimmune destruction of beta cells; no insulin production	Do NOT add Z79.4 — insulin is inherent to Type 1
Type 2 DM	E11.–	Insulin resistance; most common type; may use insulin or oral meds	Add Z79.4 if uses insulin; Z79.84 if oral hypoglycemics
DM due to underlying condition	E08.–	Pancreatic disease, endocrine disorder, other causes	Code the **underlying condition FIRST**
Drug/chemical-induced DM	E09.–	Medication-induced (steroids, tacrolimus, etc.)	Code the adverse effect of the drug first
Other specified DM	E13.–	Post-pancreatectomy, post-procedural, other specified	Use when another category does not apply

⚠️ **STOP!**

Do NOT assume Type 2 diabetes without documentation. Per ICD-10-CM Official Guidelines, if the type of diabetes is not documented, the **default is Type 2 (E11.–)**. However, this default applies ONLY when the physician has not specified the type. If ANY indication of the type exists in the record — insulin pump, history of DKA, childhood onset, physician notes — you should code accordingly and query if there is conflicting information. Never assume Type 1 without documentation, and never assign Type 2 when Type 1 is documented or

strongly indicated.

Diabetes Combination Codes — HIGH YIELD

One of the most powerful features of ICD-10-CM diabetes coding is the use of **combination codes** — a single code that captures both the diabetes type AND the complication. Check for a combination code before adding a separate complication code.

Code	Description	Notes
E11.21	Type 2 DM with diabetic nephropathy	Combination code — no separate nephropathy code needed
E11.22	Type 2 DM with diabetic chronic kidney disease	Add N18.– for the CKD stage ("Use Additional Code" note)
E11.311	Type 2 DM with unspecified diabetic retinopathy with macular edema	Add laterality code if applicable
E11.40	Type 2 DM with diabetic neuropathy, unspecified	Code to specific neuropathy type if documented
E11.51	Type 2 DM with diabetic peripheral angiopathy without gangrene	E11.52 if gangrene is present
E11.65	Type 2 DM with hyperglycemia	When hyperglycemia is the documented complication
E11.641	Type 2 DM with hypoglycemia with coma	E11.649 if without coma
E11.9	Type 2 DM without complications	Use when no complications are documented
E10.10	Type 1 DM with diabetic nephropathy, unspecified	Same combination code logic applies for E10 category

★ **Coding Shot**

The diabetes combination codes in ICD-10-CM **eliminate the need for multiple codes in most cases**. Before adding a separate complication code, always check: is there a combination code in the E10 or E11 subcategories that already captures both the diabetes AND the complication? For example, E11.21 already tells you it is Type 2 diabetes WITH nephropathy — you do not need a separate nephropathy code unless instructed to add one (like N18.– for CKD stage). Read the "Use Additional Code" notes carefully — they tell you exactly when you DO need that extra code.

Insulin Use Z Code Rules

- **Type 2 patient using insulin:** Add **Z79.4** (Long-term current use of insulin) as an additional code to the E11.– code.
- **Type 2 patient using oral hypoglycemic agents:** Add **Z79.84** (Long-term current use of oral hypoglycemic drugs) as additional.
- **Type 1 patient using insulin:** Do **NOT** add Z79.4 — insulin use is inherent to Type 1 diabetes. Adding Z79.4 to a Type 1 code is incorrect.

⚠ **CAUTION!**

Adding Z79.4 to a Type 1 diabetes claim (E10.–) is incorrect and may trigger a **payer audit**. Payers' claims editing systems flag E10.– + Z79.4 as a contradiction because Type 1 diabetes by definition requires insulin — the Z code is redundant and signals a potential coding error. This combination is a known compliance risk. Never add Z79.4 to any E10 code. Reserve Z79.4 exclusively for Type 2 diabetics and other types (E08, E09, E13) who require insulin.

◆ **Official Guidelines for Coding and Reporting**

ICD-10-CM Official Guidelines, Section I.C.4.a — Diabetes Mellitus

"If the documentation in a medical record does not indicate the type of diabetes but does indicate that the patient uses insulin, code E11-, Type 2 diabetes mellitus, should be assigned... An individual who uses insulin is not necessarily a Type 1 diabetic... Assign as many codes from categories E08–E13 as needed to identify all of the associated conditions that the patient has."

Plain English: Insulin use does NOT automatically mean Type 1 diabetes. Type 2 diabetics can and do use insulin. When the type is not documented, default to Type 2. Assign as many diabetes codes as needed to capture all documented complications — but always check for combination codes first, since one code may already cover multiple elements.

► Worked Example 4.4.1 — Type 2 DM with CKD on Insulin

Clinical Documentation:

Patient with Type 2 diabetes with diabetic chronic kidney disease Stage 3, on insulin.

Step 1 — Identify the diabetes type: Type 2 → E11 category.

Step 2 — Identify the complication: Diabetic chronic kidney disease → Look for combination code → **E11.22** (Type 2 DM with diabetic chronic kidney disease).

Step 3 — Check instructional notes for E11.22: "Use Additional Code to identify stage of CKD (N18.1–N18.6)" → Stage 3 = **N18.3**.

Step 4 — Document insulin use: Type 2 on insulin → Add **Z79.4** (Long-term

current use of insulin).

Final Code Set (correct sequence):

Position

Code

Description

Reason

1st

E11.22

Type 2 DM with diabetic chronic kidney disease

Principal — the diabetes with its complication

2nd

N18.3

Chronic kidney disease, stage 3

Required by "Use Additional Code" note at E11.22

3rd

Z79.4

Long-term current use of insulin

Required for Type 2 patients using insulin

★ From the Trenches

"I spent my first two years coding in an endocrinology practice, and I can honestly say that diabetes coding alone took me at least six months to feel truly comfortable with. The combination codes changed everything when ICD-10-CM

rolled out — but you still have to know which code captures what, when to add the CKD stage, when to add the Z codes, and when one code really is enough. My advice: build a cheat sheet of your most-used diabetes codes with their 'use additional code' reminders right next to them. You'll use it every single day."

— Priya S., CPC, CPMA | Senior Coding Specialist, Endocrinology | Academic Faculty Practice, Nashville, TN

◆ CMS Rules

Medicare Chronic Condition Data Warehouse and Diabetes Quality Reporting: CMS tracks diabetes codes submitted on Medicare claims through the **Chronic Condition Data Warehouse (CCW)**. Incorrect diabetes type coding — such as assigning Type 2 when the patient actually has Type 1 — directly affects the accuracy of CMS quality metrics, hospital star ratings, and ACO performance scorecards. Risk-adjusted payment models (including Medicare Advantage capitation) rely on accurate diabetes coding. Incorrect diabetes codes can cause your facility to receive underpayments or trigger risk adjustment audits. Get the type right — every time.

● Check This Out!

Diabetes mellitus affects more than 37 million Americans — approximately 11% of the U.S. population — and costs the U.S. healthcare system over **$327 billion annually** in direct medical costs and lost productivity. An additional 96 million Americans have prediabetes. Because diabetes is so prevalent and so costly, diabetes coding accuracy is critically important to public health tracking, quality measure reporting, and appropriate risk-adjusted reimbursement across every care setting.

4.4B — Thyroid Disorders

Code	Condition	Key Points
E03.9	Hypothyroidism, unspecified	Most common thyroid disorder; underactive thyroid; treated with levothyroxine
E03.0	Congenital hypothyroidism with diffuse goiter	Present at birth; newborn screening detects this
E04.9	Nontoxic goiter, unspecified	Enlarged thyroid without hyperthyroidism
E05.00	Thyrotoxicosis with diffuse goiter, without thyrotoxic crisis	Graves disease — autoimmune hyperthyroidism
E05.01	Thyrotoxicosis with diffuse goiter, with thyrotoxic crisis or storm	Life-threatening emergency; critical coding distinction
E06.3	Autoimmune thyroiditis	Hashimoto's thyroiditis — most common cause of hypothyroidism
C73	Malignant neoplasm of thyroid gland	Coded from Chapter 2 (C-codes), NOT from Chapter 4 (E-codes)

4.4C — Obesity and BMI Coding

Obesity is coded from the E66 category. BMI (Body Mass Index) codes from category Z68 are reported as **additional codes only** — never as the principal diagnosis on their own. BMI codes are assigned based on the physician's documentation of obesity or overweight; a coder cannot assign a BMI code based solely on height and weight measurements in the chart.

Code	Description	BMI Threshold / Notes
E66.01	Morbid (severe) obesity due to excess calories	BMI ≥ 40; most commonly coded obesity type in inpatient settings
E66.09	Other obesity due to excess calories	BMI 30.0–39.9
E66.1	Drug-induced obesity	Code the adverse effect of the drug first
E66.9	Obesity, unspecified	Last resort; query if BMI/type not documented
Z68.–	Body mass index (BMI) codes	Always ADDITIONAL codes; never principal; adults only (21+)
Z68.5–	Pediatric BMI codes	For patients age 2–19; different coding than adult BMI

4.4D — Fluid and Electrolyte Disorders

Fluid and electrolyte disorders are frequently coded as **additional diagnoses** associated with another primary condition (dehydration following surgery, hypokalemia due to diuretic therapy, hyponatremia in heart failure, etc.). Always check for sequencing instructions — many of these codes have "code first underlying condition" instructions.

Code	Condition	Clinical Significance
E86.0	Dehydration	Most common fluid disorder coded; frequently secondary to vomiting, diarrhea, or poor intake
E86.1	Hypovolemia	Decreased blood volume; distinguish from simple dehydration
E87.0	Hyperosmolality and hypernatremia	High sodium; associated with dehydration and altered mental status

Code	Condition	Clinical Significance
E87.1	Hyponatremia	Low sodium; common in heart failure, cirrhosis, SIADH
E87.5	Hyperkalemia	High potassium; associated with CKD, ACE inhibitors; cardiac risk
E87.6	Hypokalemia	Low potassium; common with diuretic use, vomiting, diarrhea
E87.8	Other disorders of electrolyte and fluid balance NEC	When specific electrolyte disorder does not fit above categories

✓ Quick Check 4.4

1. A patient with Type 2 diabetes uses both insulin and metformin. What two Z codes, if any, should be added to the diabetes code(s)?

2. True or False: A BMI code (Z68.–) can be assigned as the principal diagnosis on a claim.

T **F**

3. A Type 1 diabetic patient is on an insulin pump. Should Z79.4 be added to the claim? Explain.

4. What is the code for Hashimoto's thyroiditis?

5. A patient presents with low potassium documented as hypokalemia. What is the correct ICD-10-CM code?

EXERCISE 4-D

—

Endocrine, Obesity, and Metabolic Coding

Instructions: Assign all correct ICD-10-CM codes in the correct sequence. Fill in every blank. Use your code book.

1. Patient has **Type 2 diabetes with diabetic nephropathy**, not on insulin.

Code 1: ___ ___ ___ . ___ ___

2. Patient has **Type 2 diabetes with unspecified diabetic retinopathy with macular edema**, on insulin.

Code 1: ___ ___ ___ . ___ ___ ___

Code 2: ___ ___ ___ . ___

3. Patient has **Type 1 diabetes with hyperglycemia**.

Code 1: ___ ___ ___ . ___ ___

Is Z79.4 required here? (circle) YES NO

4. Patient has **morbid obesity with BMI of 43.2**.

Code 1: ___ ___ ___ . ___ ___

Code 2 (BMI): ___ ___ ___ . ___ ___

5. Patient is diagnosed with **hypothyroidism, unspecified**.

Code: ___ ___ ___ . ___

6. Patient has **Type 2 diabetes with diabetic chronic kidney disease, Stage 4, on oral hypoglycemics only**.

Code 1: ___ ___ ___ . ___ ___

Code 2: ___ ___ ___ . ___

Code 3: ___ ___ ___ . ___ ___

7. Patient has **autoimmune thyroiditis** (Hashimoto's).

Code: ___ ___ ___ . ___

8. Patient presents with **dehydration and hyponatremia**. Both are documented. Assign codes.

Code 1: ___ ___ ___ . ___

Code 2: ___ ___ ___ . ___

9. True or False: A coder can assign a BMI code based solely on documented height and weight measurements, even if the physician does not document obesity or overweight.

T F

10.

Patient with drug-induced diabetes (steroid-induced) on oral hypoglycemics. What is the correct

diabetes code category

? (circle one)

A. E10.– B. E08.– C. E09.– D. E11.–

11. Patient has **hyperkalemia**. Assign the correct code.

Code: ___ ___ ___ . ___

12. Patient has **Graves disease (thyrotoxicosis with diffuse goiter, no thyrotoxic storm)**.

Code: ___ ___ ___ . ___ ___

☠️ **Toolbox — Section 4.4 Key Takeaways**

- Diabetes has five ICD-10-CM categories (E08–E13) — always identify the

correct type and cause before selecting a code.

• Combination codes capture diabetes + complication in one code — **always check for a combination code first**.

• Add **Z79.4** for Type 2 on insulin; **Z79.84** for Type 2 on oral hypoglycemics; **never add Z79.4** to Type 1.

• BMI codes (Z68.–) are **always additional** — never principal — and require provider documentation of overweight/obesity.

• Electrolyte disorders are frequently secondary conditions — always check for "code first" notes and sequence accordingly.

SECTION 4.5 — Putting It All Together: Coding from Real Documentation

Now it is time to take everything you have learned in Sections 4.1 through 4.4 and apply it to complete, real-world clinical scenarios. This is exactly what you will do on the CPC exam — and every day at work. For each scenario below, walk through the coding process step by step before writing your codes. Identify how many codes are needed, what they are, and why they are sequenced in that order.

► Scenario 4.5.1 — Sepsis with Diabetes, CKD, and Hypokalemia

Clinical Documentation:

Patient admitted with sepsis due to E. coli. Patient also has Type 2 diabetes on insulin and Stage 3 CKD. Labs show hypokalemia.

Step 1 — Identify the principal diagnosis: Sepsis due to E. coli → **A41.51** (Sepsis due to Escherichia coli). This is the principal diagnosis — sepsis always leads the code set.

Step 2 — Code the diabetes with CKD: Type 2 DM with diabetic CKD → **E11.22**. CKD Stage 3 → add **N18.3** per "use additional code" note at E11.22.

Step 3 — Insulin use: Type 2 on insulin → add **Z79.4**.

Step 4 — Electrolyte disorder: Hypokalemia → **E87.6**.

Final Code Set:

#

Code

Description

Rationale

1

A41.51

Sepsis due to E. coli

Principal — underlying systemic infection

2

E11.22

Type 2 DM with diabetic CKD

Combination code for DM + CKD

3

N18.3

CKD, Stage 3

"Use Additional Code" instruction at E11.22

4

Z79.4

Long-term current use of insulin

Type 2 patient on insulin

5

E87.6

Hypokalemia

Lab-documented electrolyte disorder

► Scenario 4.5.2 — Chemotherapy Encounter with Breast Cancer, Metastases, and Anemia

Clinical Documentation:

Patient presents to outpatient oncology clinic for chemotherapy for primary malignant neoplasm of left breast with metastases to the liver. Patient also has iron deficiency anemia due to the malignancy.

Step 1 — Reason for encounter: Chemotherapy encounter → **Z51.11** is

principal (exception rule for chemo encounters).

Step 2 — The primary malignancy: Left breast cancer → use Neoplasm Table → primary malignant → verify site and laterality → **C50.912** (or appropriate breast subsite code for left breast).

Step 3 — Metastatic site: Liver metastases → Column 2 of Neoplasm Table → **C78.7** (Secondary malignant neoplasm of liver).

Step 4 — Anemia due to malignancy: Malignancy is already coded → add **D63.0** (Anemia in neoplastic disease).

Final Code Set:

#

Code

Description

Rationale

1

Z51.11

Encounter for antineoplastic chemotherapy

Principal — reason for the outpatient visit

2

C50.912

Malignant neoplasm of breast, left (verify subsite)

Primary malignancy — additional after Z51.11

3

C78.7

Secondary malignant neoplasm of liver

Metastatic site — additional

4

D63.0

Anemia in neoplastic disease

Additional — anemia due to cancer

► Scenario 4.5.3 — AIDS with PCP Pneumonia and Severe Sepsis

Clinical Documentation:

Patient with AIDS presents with Pneumocystis pneumonia and severe sepsis with septic shock.

Step 1 — AIDS: Symptomatic HIV disease → **B20**. AIDS is the principal diagnosis here since the severe sepsis and pneumonia are manifestations of the AIDS.

Step 2 — Pneumocystis pneumonia: PCP (Pneumocystis jirovecii) is an AIDS-defining opportunistic infection → **B59** (Pneumocystosis).

Step 3 — Severe sepsis with septic shock: Sepsis is present with septic shock → **R65.21** (Severe sepsis with septic shock).

Step 4 — Identify the sepsis source: The underlying infection driving the sepsis is the Pneumocystis pneumonia — consider whether an additional sepsis organism code applies per documentation. If physician documents sepsis due to the HIV/AIDS immune compromise, the coding follows the sepsis guidelines with B20 leading.

Final Code Set:

#

Code

Description

Rationale

1

B20

HIV disease (AIDS)

Principal — underlying disease driving all manifestations

2

B59

Pneumocystosis (PCP pneumonia)

AIDS-defining opportunistic infection — manifestation

3

R65.21

Severe sepsis with septic shock

Severity indicator — severe sepsis with shock

► Scenario 4.5.4 — Type 1 DM with Hyperglycemia, Morbid Obesity, Hypothyroidism

Clinical Documentation:

Patient with Type 1 diabetes with hyperglycemia, morbid obesity (BMI 43.2), and hypothyroidism.

Step 1 — Type 1 DM with hyperglycemia: Combination code → **E10.65** (Type 1 DM with hyperglycemia). Do NOT add Z79.4 — Type 1.

Step 2 — Morbid obesity: BMI ≥ 40 → **E66.01** (Morbid obesity due to excess calories).

Step 3 — BMI code: BMI 43.2 → **Z68.43** (BMI 43.0–43.9 — verify exact Z68 code for 43.2).

Step 4 — Hypothyroidism: If unspecified → **E03.9**.

Final Code Set:

#

Code

Description

Rationale

1

E10.65

Type 1 DM with hyperglycemia

Principal — primary reason for encounter

2

E66.01

Morbid (severe) obesity due to excess calories

Additional comorbidity

3

Z68.43

BMI 43.0–43.9

Additional — always accompanies obesity documentation

4

E03.9

Hypothyroidism, unspecified

Additional comorbidity

Note: Z79.4 is NOT added because this is a Type 1 patient. Insulin use is inherent to Type 1 diabetes.

► Scenario 4.5.5 — Carcinoma In Situ, Treatment Discussion

Clinical Documentation:

Pathology report confirms carcinoma in situ of the cervix uteri. Patient is here for discussion of treatment options.

Step 1 — Identify the neoplasm behavior: Carcinoma in situ → Column 3 of the Neoplasm Table. Site = Cervix uteri.

Step 2 — Look up in Neoplasm Table: "Neoplasm, cervix uteri" → Ca in Situ column → **D06.9** (Carcinoma in situ of cervix uteri, unspecified) or D06.0/D06.1 if endocervix or exocervix is specified.

Step 3 — The encounter: This is a discussion of treatment options — no chemotherapy administered today, no surgical procedure today. Code the

primary reason for the encounter: the carcinoma in situ.

Final Code Set:

#

Code

Description

Rationale

1

D06.9

Carcinoma in situ of cervix uteri, unspecified

Principal — the confirmed diagnosis driving the encounter

Note: This is NOT a malignant neoplasm code (C-code). Carcinoma in situ is a D-code. The distinction is critical.

✓ Quick Check 4.5

1. In Scenario 4.5.1, why is A41.51 listed as the principal diagnosis rather than E11.22?

2. In Scenario 4.5.2, why is Z51.11 listed as the principal diagnosis rather than the breast cancer code?

3. True or False: In Scenario 4.5.4, Z79.4 should be added because the patient with Type 1 diabetes is using insulin.

T **F**

4. In Scenario 4.5.5, why is a D-code assigned rather than a C-code for the cervical finding?

5. A patient with AIDS and severe sepsis with septic shock is admitted. Which condition is typically sequenced first in the code set?

EXERCISE 4-E

—

Multi-System Coding Scenarios (Independent Practice)

Instructions: For each scenario, assign ALL ICD-10-CM codes in the correct sequence. Use your code book. Write each code on a separate line. No answers are provided — this exercise is for independent skill-building.

1. Patient admitted with **severe sepsis due to MRSA, septic shock, acute respiratory failure**. Patient has Type 2 diabetes on oral hypoglycemics.

Code 1: ___ ___ ___ . ___ ___

Code 2: ___ ___ ___ . ___ ___

Code 3: ___ ___ ___ . ___ ___

Code 4: ___ ___ ___ . ___

Code 5: ___ ___ ___ . ___ ___

2. Outpatient encounter: **immunotherapy for primary malignant neoplasm of the sigmoid colon with retroperitoneal lymph node metastases**. Patient has iron deficiency anemia, unspecified.

Code 1: ___ ___ ___ . ___ ___

Code 2: ___ ___ ___ . ___ ___

Code 3: ___ ___ ___ . ___ ___

Code 4: ___ ___ ___ . ___

3. Patient with AIDS admitted for treatment of oral candidiasis and dehydration.

Code 1: ___ ___ ___

Code 2: ___ ___ ___ . ___ ___

Code 3: ___ ___ ___ . ___

4. Patient has **Type 2 diabetes with diabetic peripheral angiopathy without gangrene, morbid obesity (BMI 41.0), on insulin**.

Code 1: ___ ___ ___ . ___ ___

Code 2: ___ ___ ___ . ___ ___

Code 3: ___ ___ ___ . ___ ___

Code 4: ___ ___ ___ . ___

5. Patient has **anemia in CKD Stage 5, hypothyroidism, and hyponatremia**.

Code 1: ___ ___ ___ . ___

Code 2: ___ ___ ___ . ___

Code 3: ___ ___ ___ . ___

Code 4: ___ ___ ___ . ___

6. Patient is admitted with **pernicious anemia and hyperkalemia**. Physician documents dehydration as well.

Code 1: ___ ___ ___ . ___

Code 2: ___ ___ ___ . ___

Code 3: ___ ___ ___ . ___

7. Patient presents for **radiation therapy for carcinoma in situ of the bladder**.

Code 1: ___ ___ ___ . ___

Code 2: ___ ___ ___ . ___

8. Patient has **drug-induced diabetes (steroid-induced), Type not**

otherwise specified, with hyperglycemia, on insulin.

Code 1: ___ ___ ___ . ___ ___

Code 2 (adverse effect): ___ ___ ___ . ___ ___ ___ ___

Code 3: ___ ___ ___ . ___

9. Patient with **known HIV-positive status (asymptomatic) admitted for appendicitis with peritonitis**.

Code 1: ___ ___ ___ . ___ ___

Code 2: ___ ___ ___

10. Patient has **Graves disease (thyrotoxicosis with diffuse goiter) with thyrotoxic crisis, Type 2 diabetes without complications, on oral hypoglycemic agents**.

Code 1: ___ ___ ___ . ___ ___

Code 2: ___ ___ ___ . ___

Code 3: ___ ___ ___ . ___ ___

☠️ **Toolbox — Section 4.5 Key Takeaways**

- Multi-system coding requires asking: **what is the principal reason for this admission/encounter?** That drives sequencing.
- The **sepsis code always leads** the code set when sepsis is present — even when the patient has multiple comorbidities like diabetes or CKD.
- Chemotherapy and radiation therapy encounters are **exceptions** — Z51.11 or Z51.0 leads, and the malignancy is additional.
- Carcinoma in situ = **D-codes**, not C-codes. Don't confuse them on the exam.
- When multiple conditions are present, assign codes for ALL documented conditions that receive treatment or affect management — and sequence

them thoughtfully.

◆ Chapter 4 Summary

1. **Sepsis sequencing:** The underlying systemic infection is always coded first (A40.–/A41.–). Severe sepsis adds R65.20 or R65.21, plus codes for organ dysfunction. Septic shock (R65.21) is never the principal diagnosis.

2. **HIV and AIDS coding rules:** HIV-positive asymptomatic = Z21; symptomatic AIDS = B20. Once B20 is assigned, it is reported at every future encounter. "Urosepsis" and B20 are two of the most commonly tested coding traps — know them cold.

3. **Neoplasm Table is mandatory:** All neoplasm coding begins with the Neoplasm Table in the Alphabetic Index — never with the Tabular. Site first, then behavior, then column selection.

4. **Primary vs. secondary neoplasm sequencing:** The reason for the visit determines which malignancy code leads. Chemotherapy/radiation encounters are the exception — Z51.11 or Z51.0 leads regardless.

5. **Anemia with underlying condition:** Anemia associated with CKD (D63.1) or malignancy (D63.0) always requires the underlying condition coded first per "Code First" notes in the Tabular. These are additional codes — not principal diagnoses.

6. **Diabetes combination codes:** ICD-10-CM provides extensive combination codes that capture diabetes type AND complication in a single code. Always check for a combination code before adding a separate complication code.

7. **Insulin Z code rules:** Add Z79.4 for Type 2 diabetics on insulin; add

Z79.84 for oral hypoglycemics. Never add Z79.4 to a Type 1 diabetes code — insulin use is inherent to Type 1.

8. **BMI coding:** BMI codes (Z68.–) are always additional codes, never principal. They require the provider to document obesity or overweight — a coder cannot assign them based solely on recorded height and weight measurements.

9. **Electrolyte disorders:** Hyponatremia (E87.1), hypokalemia (E87.6), hyperkalemia (E87.5), and dehydration (E86.0) are frequently coded as additional diagnoses. Always look for "code first" instructions and sequence with the underlying cause.

10. **Outpatient vs. inpatient uncertain diagnoses:** In outpatient settings, do NOT code "uncertain" or "probable" diagnoses — code to the highest degree of certainty (signs, symptoms, findings). In inpatient settings, uncertain diagnoses documented at discharge may be coded as if confirmed.

◆

Chapter 4 Review — 30 Questions

Complete all questions. Use your ICD-10-CM code book where applicable. This review covers the full content of Chapter 4.

SECTION A — MULTIPLE CHOICE (QUESTIONS 1–10)

Circle the letter of the best answer for each question.

1.

A patient is admitted with severe sepsis due to Staphylococcus aureus (MRSA) with acute respiratory failure and septic shock. Which code is sequenced as the

principal diagnosis

?

A. R65.21 — Severe sepsis with septic shock
B. A41.02 — Sepsis due to MRSA
C. J96.00 — Acute respiratory failure
D. A41.9 — Sepsis, unspecified

2.

A patient with confirmed AIDS is admitted for repair of a hip fracture sustained in a fall. There are no active HIV-related conditions documented this encounter. Which is the correct approach to HIV coding?

A. Code Z21 only — the patient has no active HIV illness
B. Do not code any HIV-related code — not relevant to the encounter
C. Code B20 — AIDS is always reported once established, regardless of reason for encounter
D. Code R75 — inconclusive laboratory evidence

3.

When using the Neoplasm Table in the Alphabetic Index, which column is used for a cancer that has spread FROM the colon TO the liver?

A. Column 1 — Malignant Primary
B. Column 3 — Ca in Situ
C. Column 2 — Malignant Secondary
D. Column 5 — Uncertain Behavior

4.

A patient presents to the outpatient oncology clinic specifically to receive chemotherapy for Stage III lung cancer. What is the correct principal diagnosis?

A. C34.30 — Malignant neoplasm of lower lobe, unspecified
B. Z51.11 — Encounter for antineoplastic chemotherapy
C. Z51.0 — Encounter for antineoplastic radiation therapy
D. Z79.899 — Other long-term drug therapy

5.

Which ICD-10-CM code represents

pernicious anemia

?

A. D50.9
B. D64.9
C. D51.0
D. D63.0

6.

A patient has Type 2 diabetes with diabetic chronic kidney disease, Stage 3. She takes metformin daily and does NOT use insulin. What is the correct complete code set?

A. E11.22, N18.3, Z79.4
B. E11.9, N18.3, Z79.84
C. E11.22, N18.3, Z79.84
D. E11.65, Z79.84

7.

When should Z79.4 (Long-term current use of insulin) be added to a diabetes coding set?

A. Whenever any patient uses insulin, regardless of diabetes type
B. Only for Type 1 diabetic patients
C. For Type 2 and other specified diabetes types (E08, E09, E13) when insulin is used — not for Type 1
D. Z79.4 is never required; insulin use is always implied by the diabetes code

8.

A patient is admitted for anemia. The patient also has Stage 4 CKD. Which statement about coding this scenario is correct?

A. Code D63.1 first, then N18.4
B. Code N18.4 first, then D63.1
C. Code only D63.1 — the CKD is implied
D. Code only N18.4 — anemia is not separately coded with CKD

9.

Which ICD-10-CM code represents

morbid obesity due to excess calories

(BMI ≥ 40)?

A. E66.9
B. E66.1
C. E66.09
D. E66.01

10.

What does code category

Z85.–

represent in neoplasm coding?

A. Current active malignancy

B. Family history of malignant neoplasm

C. Personal history of malignant neoplasm (no longer present, treatment complete)

D. Encounter for cancer screening

SECTION B — TRUE / FALSE (QUESTIONS 11–20)

Write T for True or F for False on the line provided.

11. "Urosepsis" is a valid ICD-10-CM code and should be assigned when a physician documents that term in the record.

T **F** Answer:

12. Code Z21 (Asymptomatic HIV infection status) is the correct code for a patient who has been diagnosed with AIDS and currently has no active HIV-related illness.

T **F** Answer:

13. When a patient is admitted for treatment of a secondary (metastatic) malignant site, the secondary site code is sequenced first.

T **F** Answer:

14. Adding Z79.4 to a Type 1 diabetes code (E10.–) is a correct coding practice when the patient's chart confirms daily insulin use.

T **F** Answer:

15. The code D63.0 (Anemia in neoplastic disease) can be sequenced as the principal diagnosis when the primary reason for admission is treatment of the anemia.

T **F** Answer:

16. A coder may assign a BMI code (Z68.–) based solely on documented height and weight measurements, even if the provider has not documented obesity.

T **F** Answer:

17. Septic shock (R65.21) may be sequenced as the principal diagnosis when it is the most severe condition documented at admission.

T **F** Answer:

18. Carcinoma in situ is classified using D-codes (D00–D09) in ICD-10-CM, not C-codes.

T **F** Answer:

19. When an Excludes1 note appears in ICD-10-CM Chapter 1, the excluded condition is NEVER coded together with the code where the Excludes1 note appears.

T **F** Answer:

20. Per ICD-10-CM guidelines, when the type of diabetes mellitus is not documented in the medical record, the default code category is Type 1 (E10.–).

T **F** Answer:

SECTION C — FILL-IN-THE-BLANK (QUESTIONS 21–25)

Write the correct term, code, or concept on the line.

21. Per ICD-10-CM Official Guidelines, **sepsis** is defined as:

22. Carcinoma in situ means cancer cells are present but:

23. When a patient is admitted specifically for chemotherapy administration, the principal diagnosis should be code , not the malignancy code.

24. The ICD-10-CM code for **pernicious anemia** (Vitamin B12 deficiency due to intrinsic factor deficiency) is:

25. Morbid (severe) obesity due to excess calories is defined in ICD-10-CM as obesity with a BMI of or greater.

SECTION D — CODING SCENARIOS (QUESTIONS 26–30)

For each scenario, assign ALL ICD-10-CM codes in the correct sequence. Write each code on a separate line. On the last line, briefly state your sequencing rationale.

26.

Patient is admitted with severe sepsis due to Streptococcus pneumoniae, with acute kidney injury and septic shock. Patient also has Type 2 diabetes, controlled, on oral hypoglycemics.

Code 1:	
Code 2:	
Code 3:	
Code 4:	
Code 5:	

Sequencing rationale:

27.

Patient with AIDS is admitted with Pneumocystis jirovecii pneumonia (PCP) and severe dehydration. No sepsis documented.

Code 1:	
Code 2:	
Code 3:	

Sequencing rationale:

28.

Patient is admitted for radiation therapy for primary malignant neoplasm of the prostate. Patient also has benign prostatic hyperplasia and Type 2 diabetes without complications, not on insulin or oral medications.

Code 1:	
Code 2:	
Code 3:	
Code 4:	

Sequencing rationale:

29.

Patient has Type 1 diabetes with diabetic peripheral neuropathy (unspecified) and morbid obesity (BMI 42.5). Patient also has hypothyroidism, unspecified.

Code 1:	
Code 2:	
Code 3:	
Code 4:	
Code 5:	

Sequencing rationale:

30.

Patient presents to outpatient clinic for chemotherapy for primary malignant neoplasm of the right ovary, with peritoneal metastases. Patient has anemia due to the malignancy and hypernatremia documented in today's lab results.

Code 1:	
Code 2:	
Code 3:	
Code 4:	
Code 5:	

Sequencing rationale:

for Coding and Reporting. Always reference the current year's Official Guidelines and your current code book. Codes and guidelines are updated annually by CMS and NCHS — verify currency before applying in practice.

Proceed to Chapter 5 — ICD-10-CM: Mental, Behavioral, and Nervous System Disorders (F01–G99)

Chapter-Specific Guidelines: ICD-10-CM Chapters 1–10

Corrina R. Lynch | CPC Preparation

Chapter contents

1. Infectious and parasitic diseases
2. Neoplasms
3. Blood and immune disorders
4. Endocrine, nutritional and metabolic diseases
5. Mental, behavioral and neurodevelopmental disorders
6. Nervous system
7. Eye and adnexa
8. Ear and mastoid
9. Circulatory system
10. Respiratory system
11. Chapter review questions

Prior-edition readings and exercises follow the revised lesson and may use the earlier chapter arrangement.

Learning objectives

- Identify the documentation details that determine code selection and sequencing.
- Apply chapter-specific rules using the Alphabetic Index and the Tabular List.
- Explain each coding decision in a worked or independent case.

Official ICD-10-CM Chapter 1 · A00–B99

Infectious and parasitic diseases

Begin with the provider’s diagnosis and the site of infection. Then check whether the code already captures the organism, the manifestation or the resistance. A local infection and a systemic infection are different diagnoses, and timing at hospital admission can change their order.

FY 2026 guideline | HIV — I.C.1.a

Use B20 for documented HIV disease or a history of an HIV-related illness. Asymptomatic HIV status without that history is Z21.

Example: A routine visit documents asymptomatic HIV status and no prior HIV-related illness: Z21.

FY 2026 guideline | Organism and resistance — I.C.1.b; I.C.1.c

Check whether the infection code already names the organism or resistance. Follow additional-code instructions when it does not.

Example: Acute cystitis without hematuria due to E. coli: N30.00 + B96.20.

FY 2026 guideline | Sepsis and the localized source — I.C.1.d.4

When sepsis and its localized source are responsible for admission, sequence the systemic infection first. If the patient is admitted for the local infection and sepsis develops later, sequence the local infection first.

Example: Hospital admission for sepsis due to UTI, organism and site unspecified: A41.9 then N39.0.

FY 2026 guideline | Severe sepsis and shock — I.C.1.d.1.b; I.C.1.d.2

Code the systemic infection, the applicable severe-sepsis code, and associated acute organ dysfunction as required. Query when the relationship is unclear.

Example: Sepsis of unspecified organism admitted with documented sepsis-related AKI and no shock: A41.9 + R65.20 + N17.9.

FY 2026 guideline | MRSA — I.C.1.e.1

Distinguish infection from documented colonization. Do not duplicate MRSA already captured in a combination code.

Example: Confirmed MRSA pneumonia: J15.212; no additional B95.62.

FY 2026 guideline | Confirmed Zika and COVID-19 — I.C.1.f; I.C.1.g.1.a

Apply the confirmation rules for each infection; do not infer either from suspicion alone.

Example: Provider confirms current COVID-19 at an office visit: U07.1.

A and B code families, hepatitis and drug resistance

Use the documented disease, organism, site and acuity. For hepatitis, verify type and acuity. When an infection code does not identify documented resistance, check I.C.1.c and the Tabular instructions for when to add a resistance code.

Worked coding example

Scenario	The provider diagnoses a urinary tract infection, site not specified, due to E. coli.
Chart clue	The site is unspecified; the organism is documented.
Index starting point	Infection → urinary tract; then locate the E. coli organism code.
Tabular verification	Confirm the candidate code description, required detail, and all sequencing or additional-code instructions.
Final code(s) and rationale	N39.0 then B96.20. Verify the additional-agent instruction at N39.0.

One code or more than one?

Oral candidiasis is captured by one code, B37.0. An E. coli UTI with no specified site takes two codes: the infection plus the organism. The Tabular instruction is what tells you to add the second code.

Diagnosis	Oral candidiasis
Index	Candidiasis → mouth
Tabular	Verify B37.0, candidal stomatitis.
Code	B37.0 describes the documented condition.

Why sepsis timing matters

I.C.1.d.4: If sepsis due to pneumonia occasioned admission and no organism is specified, report A41.9 followed by J18.9. If pneumonia occasioned admission and sepsis developed later, report J18.9 followed by A41.9. The admission reason, not the

order in which diagnoses appear in the note, determines the difference.

I.C.1.d.2: If septic shock is documented in a non-postprocedural case, sequence the systemic infection before R65.21 and add codes for other documented acute organ dysfunction as applicable. Use the separate postprocedural instructions when relevant.

CHAPTER REVIEW

Compare an admission for sepsis due to pneumonia with admission for pneumonia followed by sepsis later. Which diagnosis leads in each?

Show your main term, Tabular List check, final code(s) in order, and reasoning.

CMS/NCHS: FY 2026 Official Coding Guidelines

Official ICD-10-CM Chapter 2 · C00–D49

Neoplasms

A cancer diagnosis and the reason for today's encounter do different jobs. Find the site and behavior in the Neoplasm Table, verify laterality where applicable, then decide whether treatment, surveillance, pain management or a complication explains the visit.

FY 2026 guideline | Reason for a cancer encounter — I.C.2.e.2; I.C.2.h

Sequence the encounter code first when the sole purpose is antineoplastic therapy. For a visit solely for cancer pain control, the pain code leads.

Example: Chemotherapy only: Z51.11 followed by the active malignancy. Cancer pain control only: G89.3 followed by the active malignancy.

FY 2026 guideline | Active cancer vs. history — I.C.2.m; I.C.2.p

After treatment directed at the site has ended and there is no evidence of remaining malignancy there, use the appropriate history code. For surveillance after completed treatment, use the applicable follow-up code first.

Example: Surveillance after completed breast cancer treatment with no recurrence: Z08 + Z85.3.

Type, site and stage

Distinguish primary, secondary, in situ and history. Clinical stage can help you read the oncology note but does not substitute for a documented site or behavior; verify the Neoplasm Table and Tabular List.

Worked coding example

Scenario	A patient is seen solely for chemotherapy for documented active breast cancer.
Chart clue	The purpose is chemotherapy only; malignancy is active.
Index starting point	Encounter → chemotherapy; then use the Neoplasm Table for the malignancy.
Tabular verification	Confirm the candidate code description, required detail, and all sequencing or additional-code instructions.
Final code(s) and rationale	Z51.11 first-listed, then the supported breast malignancy code. See I.C.2.e.2.

CHAPTER REVIEW

How does first-listed coding change if the visit is surveillance after completed treatment with no evidence of remaining malignancy?

Show your main term, Tabular List check, final code(s) in order, and reasoning.

CMS/NCHS: FY 2026 Official Coding Guidelines

Official ICD-10-CM Chapter 3 · D50–D89

Blood and immune disorders

For anemia, ask which type and cause the provider actually documented. Do not infer blood loss, deficiency or a causal link from labs alone. The Tabular List may direct you to report another condition first.

FY 2026 guideline | Blood disorders — I.B.18; Tabular List

Official I.C.3 is reserved. Use the documented type or cause and follow the Tabular notes; do not infer an undocumented cause.

Example: Confirmed iron deficiency anemia, cause unspecified: D50.9.

Anemia and coagulation

Differentiate anemia due to blood loss, CKD, malignancy or other causes from coagulation defects and purpura. Follow the sequencing notes for the documented cause; see I.C.2.c for anemia in a patient with malignancy.

Worked coding example

Scenario	The provider confirms iron deficiency anemia without specifying the cause.
Chart clue	Iron deficiency is specified; the cause is not.
Index starting point	Anemia → deficiency → iron.
Tabular verification	Confirm the candidate code description, required detail, and all sequencing or additional-code instructions.
Final code(s) and rationale	D50.9. Confirm the descriptor; do not infer chronic blood loss. See I.B.18.

CHAPTER REVIEW

Why would a low hemoglobin result alone not establish the anemia type?

Show your main term, Tabular List check, final code(s) in order, and reasoning.

CMS/NCHS: FY 2026 Official Coding Guidelines

Official ICD-10-CM Chapter 4 · E00–E89

Endocrine, nutritional and metabolic diseases

Diabetes coding starts with type and the complication documented or linked through the classification. One combination code may capture both, while a note can require a second code for a detail such as CKD stage. For obesity, check the documented class and BMI reporting instructions separately.

Section I.C.4.a · Official Chapter 4 · FY 2026 | Diabetes combination codes

Select the code that captures the type and documented complication; add codes when the Tabular List directs.

Worked example: Type 2 diabetic CKD stage 3b: E11.22 + N18.32.

Section I.C.4.a.3; I.C.4.b; I.B.14 · Official Chapter 4 · FY 2026 | Medication status and obesity

For type 2 diabetes, check ongoing diabetes medication status; temporary insulin does not establish long-term use.

For obesity, follow documentation and Tabular instructions for class and BMI.

Worked example: Type 2 diabetes without complications on long-term metformin: E11.9 + Z79.84.

Worked coding example

Scenario	The provider documents type 2 diabetes with CKD stage 3b.
Chart clue	Diabetes type, documented kidney complication, and stage.
Index starting point	Diabetes → type 2 → with → chronic kidney disease; look up CKD stage 3b separately.
Tabular verification	Confirm the candidate code description, required detail, and all sequencing or additional-code instructions.
Final code(s) and rationale	E11.22 followed by N18.32. The Tabular List requires the CKD stage. See I.C.4.a.

CHAPTER REVIEW

The same patient has stage 4 CKD instead of stage 3b. What changes in the code sequence?

Show your main term, Tabular List check, final code(s) in order, and reasoning.

CMS/NCHS: FY 2026 Official Coding Guidelines

Official ICD-10-CM Chapter 5 · F01–F99

Mental, behavioral and neurodevelopmental disorders

Compare the clinician’s terms rather than treating use, abuse and dependence as synonyms. Check whether intoxication, withdrawal or remission is documented. For dementia, look for the underlying cause and any supported severity or disturbance.

Section I.C.5.b.1–2 · Official Chapter 5 · FY 2026 | Substance use hierarchy and remission

For the same substance, dependence takes priority over abuse and use.

Use remission only when documented.

Worked example: Uncomplicated alcohol abuse and dependence: F10.20 only.

Dementia, substance use and psychological pain

Verify dementia etiology, severity and associated features. When use, abuse and dependence are documented for the same substance, apply the hierarchy in I.C.5.b. Distinguish documented exclusively psychological pain from cases that may need both a G89 code and F45.42 under I.C.6.b.

Worked coding example

Scenario	Outpatient: the provider documents both alcohol abuse and uncomplicated alcohol dependence.
Chart clue	Both terms describe the same substance.
Index starting point	Dependence, alcohol
Tabular verification	Confirm the candidate code description, required detail, and all sequencing or additional-code instructions.
Final code(s) and rationale	F10.20; report dependence only.

CHAPTER REVIEW

The provider documents opioid abuse and opioid dependence, without complication. What is reported?

Show your main term, Tabular List check, final code(s) in order, and reasoning.

CMS/NCHS: FY 2026 Official Coding Guidelines

Official ICD-10-CM Chapter 6 · G00–G99

Nervous system

Before assigning a G89 code, identify why the patient is receiving care. A visit to control pain differs from treatment of the condition causing it. For neurologic deficits, check documented side and dominance where relevant.

Section I.C.6.b.1–2; I.C.6.b.5 · Official Chapter 6 · FY 2026 | Pain and encounter purpose

When pain management is the reason for the encounter, a category G89 code may lead.

When the encounter treats the underlying condition, that condition generally leads.

Worked example: Cancer-related pain management only: G89.3 first, then the malignancy.

Dominant versus nondominant side

For categories subject to I.C.6.a, review the side and dominance stated. If dominance is unspecified and the rule applies, left defaults to nondominant, right to dominant and ambidextrous to dominant.

Worked coding example

Scenario	A patient with active cancer is seen solely for control of documented cancer-related pain.
Chart clue	Solely for pain control.
Index starting point	Pain, neoplasm-related
Tabular verification	Confirm the candidate code description, required detail, and all sequencing or additional-code instructions.
Final code(s) and rationale	G89.3 first, followed by the active malignancy code.

CHAPTER REVIEW

The same patient is seen to treat the cancer itself. Does the pain code lead?

Show your main term, Tabular List check, final code(s) in order, and reasoning.

CMS/NCHS: FY 2026 Official Coding Guidelines

Official ICD-10-CM Chapter 7 · H00–H59

Eye and adnexa

In glaucoma, type, eye and stage are separate lookup clues. Compare the entries for both eyes before choosing a bilateral code. If stages differ, verify whether eye-specific codes are available.

Section I.C.7.a.2–3 · Official Chapter 7 · FY 2026 | Bilateral glaucoma

Use a bilateral code when both eyes have the same documented type and stage and the classification supplies one.

Different stages require separate eye codes when available.

Worked example: Bilateral moderate primary open-angle glaucoma: H40.1132.

Eyelid and lacrimal disorders

A stye, chalazion, inward lid turning, outward lid turning, and lacrimal disease are separate concepts. Look up the documented diagnosis and verify side and eyelid when required.

Worked coding example

Scenario	Primary open-angle glaucoma is bilateral and moderate in both eyes.
Chart clue	Same type and stage in both eyes.
Index starting point	Glaucoma, open-angle, primary
Tabular verification	Confirm the candidate code description, required detail, and all sequencing or additional-code instructions.
Final code(s) and rationale	H40.1132; one bilateral code captures both eyes and the stage.

CHAPTER REVIEW

Both eyes instead have mild primary open-angle glaucoma. Which code?

Show your main term, Tabular List check, final code(s) in order, and reasoning.

CMS/NCHS: FY 2026 Official Coding Guidelines

Official ICD-10-CM Chapter 8 · H60–H95

Ear and mastoid

Pinpoint the location first: ear canal, middle ear and mastoid are not interchangeable. Check right, left or bilateral status and distinguish a diagnosed disorder from a symptom reported before the cause is known.

Section I.B.13; Tabular List · Official Chapter 8 · FY 2026 | Ear laterality

Official I.C.8 is reserved.

Select the supported side and verify site and condition in the Tabular List.

Worked example: Right ear impacted cerumen: H61.21.

Worked coding example

Scenario	An office visit confirms impacted cerumen in the right ear only.
Chart clue	Right ear only.
Index starting point	Impaction, cerumen
Tabular verification	Confirm the candidate code description, required detail, and all sequencing or additional-code instructions.
Final code(s) and rationale	H61.21. Section I.C.8 has no dedicated guideline; check laterality in the Tabular List.

CHAPTER REVIEW

The provider documents impacted cerumen in the left ear only. Which code?

Show your main term, Tabular List check, final code(s) in order, and reasoning.

CMS/NCHS: FY 2026 Official Coding Guidelines

Official ICD-10-CM Chapter 9 · I00–I99

Circulatory system

Do not assume that every condition in the same note is related. Hypertension with CKD or certain heart conditions has specific coding instructions. For stroke, distinguish a current event from a residual deficit or history without residuals.

Section I.C.9.a.1–3 · Official Chapter 9 · FY 2026 | Hypertensive heart and kidney disease

Apply the presumed relationship where the guideline directs unless documented unrelated.

Add the heart failure type or CKD stage as instructed.

Worked example: Hypertension with CKD stage 3b, no documented unrelated relationship: I12.9 + N18.32.

Section I.C.9.b; I.C.9.d · Official Chapter 9 · FY 2026 | Angina and stroke deficits

Check for a coronary atherosclerosis and angina combination code.

Use an appropriate sequela code for a documented residual deficit after stroke.

Worked example: Native coronary atherosclerosis with angina, type unspecified and no alternate cause: I25.119.

Worked coding example

Scenario	An office note documents hypertension and CKD stage 3b with no statement that they are unrelated.
Chart clue	Hypertension with CKD; stage 3b.
Index starting point	Hypertension, with, chronic kidney disease
Tabular verification	Confirm the candidate code description, required detail, and all sequencing or additional-code instructions.
Final code(s) and rationale	I12.9 then N18.32; the second code identifies the stage.

CHAPTER REVIEW

The patient instead has stage 4 CKD and hypertension. What is the sequence?

Show your main term, Tabular List check, final code(s) in order, and reasoning.

CMS/NCHS: FY 2026 Official Coding Guidelines

Official ICD-10-CM Chapter 10 · J00–J99; U07.0

Respiratory system

Read for the established diagnosis and details that change the code: uncomplicated disease, exacerbation, infection or respiratory failure. Oxygen readings and treatment do not replace provider documentation of respiratory failure. Check special sequencing instructions when vaping-related injury is confirmed.

Section I.C.10.a; I.C.10.e · Official Chapter 10 · FY 2026 | COPD and vaping

Infection and exacerbation are different coding concepts.

For vaping-related disorder, follow the specific sequencing rule and add supported manifestations.

Worked example: Confirmed vaping-related lung injury with acute hypoxic respiratory failure: U07.0 + J96.01.

Worked coding example

Scenario	The provider confirms vaping-related lung injury with acute hypoxic respiratory failure.
Chart clue	Vaping-related injury and documented hypoxia.
Index starting point	Injury, lung, vaping-related; verify U07.0
Tabular verification	Confirm the candidate code description, required detail, and all sequencing or additional-code instructions.
Final code(s) and rationale	U07.0 then J96.01 for the manifestation.

CHAPTER REVIEW

Vaping-related lung injury is confirmed with no additional documented manifestation. What is the code?

Show your main term, Tabular List check, final code(s) in order, and reasoning.

CMS/NCHS: FY 2026 Official Coding Guidelines

MEDICAL CODING MASTERY | STUDENT EDITION

CHAPTER 5

ICD-10-CM: Mental and Behavioral Disorders, Nervous System, Eye and Ear

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Chapter Objectives

After completing this chapter, you will be able to:

1. Apply the "code first" sequencing rule for Alzheimer's disease and dementia combination coding.
2. Distinguish between substance use, abuse, and dependence and select the correct ICD-10-CM code for each level.
3. Identify major depressive disorder severity specifiers and assign the appropriate F32.– or F33.– code.
4. Define **intractable** epilepsy and correctly assign G40.– codes based on type, intractable status, and status epilepticus.
5. Accurately code migraine headaches by type, intractable status, and the presence or absence of status migrainosus.
6. Apply sequela coding rules for neurological deficits following a cerebrovascular accident (CVA) using the I69.– category.
7. Determine **dominant** versus **non-dominant** side for CVA sequela coding, including the guideline default when laterality is not documented.
8. Assign glaucoma codes with correct type, laterality, and stage, including bilateral glaucoma rules for differing stages.
9. Select the correct cataract code based on type, age-relatedness, and laterality.
10. Classify hearing loss as conductive, sensorineural, or mixed and assign accurate H90.– codes with proper laterality.

Key Terms

Alzheimer's disease

— A progressive neurodegenerative disease causing dementia; coded with G30.– as the principal diagnosis when dementia is also documented.

Aphasia

— Loss of the ability to understand or produce speech, often resulting from stroke or brain injury.

Cataract

— Clouding of the lens of the eye that impairs vision; most commonly age-related.

Cerebrovascular accident (CVA)

— A stroke; acute episode of blocked or ruptured blood supply to the brain.

Dementia

— A syndrome of cognitive decline severe enough to interfere with daily life; may result from multiple underlying diseases.

Depression

— A mood disorder characterized by persistent sadness, hopelessness, and loss of interest; coded by type and severity.

Dominant vs. non-dominant side

— The distinction between the preferred (dominant) hand side and the opposite (non-dominant) side; critical for CVA sequela coding.

Epilepsy

— A neurological disorder characterized by recurrent, unprovoked seizures; coded by type and intractable status.

Glaucoma

— A group of eye conditions causing optic nerve damage, often related to increased intraocular pressure; coded by type, stage, and laterality.

Hemiplegia

— Paralysis affecting one side of the body; a common sequela of stroke.

Intractable

— Not responding to standard medical treatment; also termed pharmacoresistant, refractory, or poorly controlled.

Laterality

— Specification of which side of the body is affected: right, left, bilateral, or unspecified.

Migraine

— A recurrent headache disorder with specific neurological features; coded by type and intractable status.

Multiple sclerosis

— A chronic autoimmune demyelinating disease of the central nervous system; coded as G35.

Neuropathy

— Disease or dysfunction of peripheral nerves; may be coded as a manifestation of diabetes or other underlying conditions.

Otitis media

— Inflammation or infection of the middle ear; classified as suppurative (with pus) or nonsuppurative (without pus).

Parkinson's disease

— A progressive neurodegenerative disorder affecting movement; coded as G20.

Psychosis

— A mental state involving loss of contact with reality; includes conditions such as schizophrenia and delusional disorders.

Sequela of CVA

— A neurological deficit that persists after the acute stroke episode has resolved; coded using the I69.– category.

Status epilepticus

— A prolonged seizure or series of seizures without recovery between episodes; a medical emergency.

Chapter Overview

This chapter takes you deep into four ICD-10-CM body system chapters that appear frequently on the CPC exam and across virtually every clinical specialty: mental and behavioral disorders (F01–F99), diseases of the nervous system (G00–G99), diseases of the eye and adnexa (H00–H59), and diseases of the ear and mastoid process (H60–H95). These chapters demand precision — severity levels, intractable status, laterality, staging, and sequencing rules are not optional details here; they are the difference between a clean claim and a denied one. Work through every section, complete every exercise, and by the end of this chapter, you will code these body systems with the confidence and accuracy that employers expect from a certified professional coder.

SECTION 5.1 — ICD-10-CM Chapter 5: Mental, Behavioral and Neurodevelopmental Disorders (F01–F99)

Overview

ICD-10-CM Chapter 5 covers the full spectrum of mental health conditions, substance use disorders, behavioral disorders, and neurodevelopmental conditions. This chapter is deceptively challenging — not because the conditions are rare, but because accurate coding requires exceptional clinical documentation. You cannot code what the physician does not document, and in behavioral health settings, documentation often lacks the specificity coders need. Your job is to code to the highest level of specificity supported by the record and to query the provider when documentation is ambiguous.

- Coding in this chapter requires close attention to **type**, **severity**, and **associated features** — never default to unspecified when specificity is documented.
- Many conditions in this chapter require **additional codes** for associated physical conditions or sequencing instructions.
- **HIPAA privacy rules** provide extra protections for mental health records — coders must handle these codes with strict confidentiality. Substance use disorder records have additional protections under 42 CFR Part 2.

5.1A — Dementia and Alzheimer's Disease

Dementia is a syndrome, not a single disease. When the underlying cause is documented — Alzheimer's, Parkinson's, vascular disease — you must code the underlying disease AND the dementia. The sequencing depends on the instructional notes in the Tabular List.

Alzheimer's Disease with Dementia — "Code First" Rule

When a patient has **Alzheimer's disease** with dementia, the ICD-10-CM Tabular has a critical "code first" note at F02.–:

- **Code FIRST:** G30.– (Alzheimer's disease)
- **Code SECOND:** F02.8– (Dementia in other diseases classified elsewhere)

This sequencing is mandatory. The underlying disease is always sequenced before the manifestation (dementia) in this combination.

Dementia Severity Specifiers

ICD-10-CM requires you to code to the **documented severity** level:

- **Mild:** 5th character 0 (e.g., F02.810)
- **Moderate:** 5th character 1 (e.g., F02.811)
- **Severe:** 5th character 2 (e.g., F02.812)
- **Unspecified:** F03.9– (last resort — query provider first)

Associated Behavioral Disturbances — 7th Character

The F02.8– codes use an extended character to capture behavioral disturbances. Review the documentation carefully for these features:

7th Character	Behavioral Feature	Example Code
0	Without behavioral disturbance	F02.810
1	With behavioral disturbance (agitation, wandering, combativeness)	F02.811
2	With psychotic disturbance (hallucinations, delusions)	F02.812
3	With mood disturbance	F02.813
4	With anxiety	F02.814
8	With other behavioral	F02.818

7th Character	Behavioral Feature	Example Code
	disturbance	

▶️ Coding Shot

When **dementia** is associated with Parkinson's or Alzheimer's disease, always go to the Tabular List first and look for the "code first" instruction. The underlying disease (G20, G30.–) ALWAYS sequences before the dementia manifestation code (F02.8–). If you flip this order, your claim sequencing is wrong and may trigger a query or denial.

✎ Worked Example

> "Patient with Alzheimer's disease, severe, with agitation and wandering behavior."

Step 1 — Identify the underlying disease: Alzheimer's disease → G30.9 (Alzheimer's disease, unspecified — no early or late onset specified)

Step 2 — Identify the manifestation + severity + behavioral feature: Dementia, severe, with behavioral disturbance (agitation and wandering) → F02.818

Step 3 — Apply sequencing per "code first" note:

- G30.9 — Alzheimer's disease, unspecified **(sequenced FIRST)**
- F02.818 — Dementia in other diseases classified elsewhere, severe, with

other behavioral disturbance **(sequenced SECOND)**

Rationale: The Tabular List at F02 instructs "Code first the underlying physiological condition." Alzheimer's disease is the underlying physiological condition. Agitation and wandering are behavioral disturbances — the "8" captures other behavioral disturbances beyond simple agitation (which would be 1). Verify your documentation and select the most specific 7th character supported.

■ CMS Rules

Medicare Documentation Requirements for Dementia Coding: Medicare requires **specific documentation of dementia severity** to support code selection on audit. Unspecified dementia codes (F03.9–) without documented clinical evidence of severity — such as a cognitive assessment score (Mini-Mental State Exam, MoCA), or physician narrative describing degree of impairment — may be denied or flagged on a Medicare audit. When the record is silent on severity, query the provider before defaulting to unspecified.

⚠️ Caution!

HIPAA Mental Health Privacy Protections: Mental health diagnosis codes — including all F01–F99 codes — are subject to strict HIPAA privacy protections. Substance use disorder records have additional federal protections under 42 CFR Part 2, which may restrict redisclosure even within the same health system. Mishandling these records — including improperly sharing diagnostic codes or documentation — is a **federal violation** with significant civil and criminal penalties. As a coder, you are a covered entity workforce member. Handle all behavioral health records with the same diligence you apply to any

protected health information.

5.1B — Substance Use Disorders

Substance use disorder coding requires you to understand a three-tier severity hierarchy. This is one of the most tested concepts in Chapter 5 — get it right every time.

The Substance Use Hierarchy — Know This Cold

- **Use** — Patient uses the substance; no pattern of harm or dependence established
- **Abuse** — Patient uses in a harmful, recurring pattern; not dependent
- **Dependence** — Patient is physically and/or psychologically dependent — this is the highest severity level

■ Stop!

Never code both substance abuse AND dependence for the same substance in the same encounter. When the documentation supports **dependence**, code ONLY dependence — it subsumes abuse. The ICD-10-CM guideline is explicit: when dependence and abuse are both documented for the same substance, assign only the dependence code. Dependence always wins. Similarly, when both use and abuse are documented, code abuse. When only use is documented, code use.

Code Selection Hierarchy Table

Documented Condition	Code Selection	Rationale
Use only	Code Use	Lowest severity; assign when no abuse or

Documented Condition	Code Selection	Rationale
		dependence documented
Abuse only	Code Abuse	Higher severity than use
Dependence only	Code Dependence	Highest severity
Use + Abuse documented	Code Abuse	Abuse supersedes use
Abuse + Dependence documented	Code Dependence	Dependence supersedes abuse
In remission	Code the level (use/abuse/dependence) + remission specifier	Requires physician documentation of "in remission"

Common Substance Codes

Category	Use Code	Abuse Code	Dependence Code
Alcohol (F10.–)	F10.10 (uncomplicated)	F10.10	F10.20 (uncomplicated)
Opioid (F11.–)	F11.10	F11.10	F11.20
Cannabis (F12.–)	F12.10	F12.10	F12.20
Cocaine (F14.–)	F14.10	F14.10	F14.20
Nicotine (F17.–)	F17.200	N/A	F17.210 (cigarettes, uncomplicated)
Other psychoactive substance (F19.–)	F19.10	F19.10	F19.20

With intoxication: Alcohol abuse with intoxication = `F10.120`. Always look for "with intoxication," "with withdrawal," or "with [organ] disorder" extensions for more specific coding.

Remission specifiers: Remission codes are available for each substance and severity level but require explicit physician documentation that the patient is "in remission." Do not infer remission from clinical notes alone.

5.1C — Depression and Anxiety Disorders

Depression coding is highly specificity-driven. The physician's documentation of **episode type** (single vs. recurrent), **severity** (mild, moderate, severe), and **presence of psychotic features** drives every character in the code. Never default to unspecified severity when the record documents otherwise.

Major Depressive Disorder — Single Episode (F32.–)

Code	Description
F32.0	Major depressive disorder, single episode, mild
F32.1	Major depressive disorder, single episode, moderate
F32.2	Major depressive disorder, single episode, severe without psychotic features
F32.3	Major depressive disorder, single episode, severe with psychotic features
F32.9	Major depressive disorder, single episode, unspecified

Major Depressive Disorder — Recurrent (F33.–)

Use F33.– when the physician documents that this is a **recurrent** episode. The same severity specifiers apply (F33.0 mild, F33.1 moderate, F33.2 severe without psychotic features, F33.3 severe with psychotic features).

Other Mood and Anxiety Codes

Code	Condition
F34.1	Dysthymic disorder (persistent depressive disorder)
F41.1	Generalized anxiety disorder
F41.0	Panic disorder
F40.10	Social phobia, unspecified

Code	Condition
F43.10	Post-traumatic stress disorder (PTSD), unspecified

5.1D — Psychotic Disorders

Psychosis is a broad category of conditions in which the patient loses contact with reality. Schizophrenia, schizoaffective disorder, bipolar disorder, and delusional disorders all fall in this range. The F31.– (Bipolar disorder) code set is one of the most extensive in Chapter 5 — always code to episode type and severity.

Code	Condition
F20.9	Schizophrenia, unspecified
F22	Delusional disorders
F25.–	Schizoaffective disorder (by type)
F30.–	Manic episode (current episode type and severity)
F31.–	Bipolar disorder — code to current episode type and severity

5.1E — Attention-Deficit/Hyperactivity Disorder (ADHD)

ADHD is coded by **predominant type** as documented by the physician. This is one of the most commonly coded pediatric neurodevelopmental diagnoses, and it appears frequently in multi-system scenarios on the CPC exam.

Code	ADHD Type
F90.0	ADHD, predominantly inattentive type
F90.1	ADHD, predominantly hyperactive type
F90.2	ADHD, combined type
F90.9	ADHD, unspecified type

💬 From the Trenches

"Behavioral health documentation is honestly the hardest I've encountered in fifteen years of coding. Psychiatrists are brilliant clinicians, but their notes often say 'depression' with zero severity qualifier, or 'history of substance use' with no indication of current use, abuse, or dependence. What I tell every new coder on my team is this: in mental health, your query game has to be airtight. Write a clean, non-leading query that presents options — mild, moderate, severe, unspecified — and let the physician choose. It protects the revenue, protects the patient, and protects you. Never guess severity in a behavioral health record."

— Maria D., CPC, CPMA | Lead Behavioral Health Coder | South Florida Community Behavioral Health Network

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Section I.C.5 — Mental and Behavioral Disorders: Selection of Principal Diagnosis

> "When a patient is admitted to an inpatient psychiatric facility for a mental disorder, the principal diagnosis is the condition established after study to be chiefly responsible for occasioning the admission. If a patient is admitted for both a mental disorder and a medical condition, and both conditions are treated during the stay, sequence the mental disorder as the principal diagnosis if it is the primary focus of treatment."

Corrina's Plain-English Explanation: When someone is admitted to a psych

facility, the psychiatric condition driving the admission is your principal diagnosis — even if the patient has five other medical problems. If the patient is in a medical hospital and they're treating both depression and pneumonia equally, look at what drove the admission and what consumed the most resources. That's your principal diagnosis. The ICD-10-CM guidelines don't leave this to guesswork — follow the documented clinical picture and apply this rule consistently.

🔎 Check This Out

Mental health conditions account for more than **$280 billion** in annual U.S. healthcare spending, making behavioral health one of the fastest-growing medical coding specialties in the country. The demand for certified coders who specialize in mental health and substance use disorder coding has increased significantly as mental health parity laws have expanded coverage and documentation requirements have become more rigorous. If you're considering a specialty, this is one worth watching.

🔧 Toolbox — Section 5.1 Key Points

- Alzheimer's disease with dementia: sequence G30.– FIRST, then F02.8– — "code first" is mandatory, not optional.
- Substance use severity hierarchy: Dependence beats Abuse; Abuse beats Use — never code two levels for the same substance at the same encounter.
- Depression requires severity documentation: mild, moderate, severe (with or without psychotic features) — never default to F32.9 when severity is in the chart.

- Remission specifiers for substance disorders require explicit physician documentation — do not infer.
- Mental health codes carry heightened HIPAA privacy protections — handle all F01–F99 records with strict confidentiality protocols.

✓ Quick Check 5.1

1. A patient has Alzheimer's disease with dementia and moderate severity, without behavioral disturbance. Which code sequences FIRST?
2. A patient's chart documents both alcohol abuse and alcohol dependence. Which code do you assign?
3. What is the ICD-10-CM code for major depressive disorder, single episode, severe, with psychotic features?
4. True or False: F03.9– (unspecified dementia) should be your first-choice dementia code when the physician's note lacks a severity specifier.
5. A child is diagnosed with ADHD, predominantly hyperactive type. What is the correct ICD-10-CM code?

EXERCISE 5-A — MENTAL AND BEHAVIORAL DISORDERS CODING

Directions: For questions 1–6, assign the correct ICD-10-CM code(s). For questions 7–9, select True (T) or False (F). For questions 10–12, select the best answer (A, B, C, or D). Write your answers in the blanks provided. Do not use answer keys — complete independently.

1. **Assign all ICD-10-CM codes and sequence correctly:**

   "Patient with Parkinson's disease with dementia, mild, with agitation."

   Code 1: _ _ _ . _ _ _ Code 2: _ _ _ . _ _ _

2. **Assign all ICD-10-CM codes and sequence correctly:**

   "Patient with Alzheimer's disease, early onset, severe, with wandering behavior."

   Code 1: _ _ _ . _ _ Code 2: _ _ _ . _ _ _

3. **Substance use hierarchy — assign correct code:**

   "Opioid dependence, uncomplicated."

   Code: _ _ _ . _ _

4. **Substance use hierarchy — assign correct code:**

   "Cannabis use and abuse documented in the same encounter note."

   Code: _ _ _ . _ _

5. **Assign correct code(s):**

   "Alcohol dependence with intoxication, uncomplicated."

   Code: _ _ _ . _ _ _

6. **Assign correct code(s):**

   "Major depressive disorder, recurrent, moderate severity."

   Code: _ _ _ . _

7. T / F When a physician documents both "cocaine abuse" and "cocaine dependence" in the same note, both codes should be assigned.

8. T / F F17.– codes for nicotine dependence require an additional code for the type of tobacco product used.

9. T / F In ICD-10-CM, the dementia code (F02.8–) sequences before Alzheimer's disease (G30.–) because dementia is the patient's chief complaint.

10. **Which code represents generalized anxiety disorder?**

    A. F40.10 B. F41.1 C. F43.10 D. F34.1

    Answer:

11. **A patient is admitted with bipolar disorder, current episode manic, severe, without psychotic features. The FIRST step in code selection is to:**

    A. Look up "bipolar" in the alphabetic index and select F31.9 (unspecified)

    B. Query the physician for clarification on episode type before assigning any code

    C. Go to F31.– in the Tabular and select the code matching documented episode type and severity

    D. Assign F30.– because a manic episode is present

    Answer:

12. **Which of the following represents the correct code for ADHD, combined type?**

    A. F90.0 B. F90.1 C. F90.2 D. F90.9

    Answer:

SECTION 5.2 — ICD-10-CM Chapter 6: Diseases of the Nervous System (G00–G99)

Overview

ICD-10-CM Chapter 6 covers conditions affecting the brain, spinal cord, and peripheral nerves. This chapter is high-yield on the CPC exam, and for good reason — nervous system disorders involve complex sequencing rules, precision in terminology, and multi-system interactions that require coders to think clinically. The top exam topics in this chapter are: epilepsy coding (intractable vs. non-intractable), migraines, Parkinson's disease, and — above all — sequela coding for CVA neurological deficits using the I69.– category.

Pay close attention to terminology here. Words like intractable, sequela, and dominant are not interchangeable with casual synonyms — they are precise coding terms that map directly to specific code characters. Know them. Use them correctly.

5.2A — Epilepsy and Seizures ★ HIGH YIELD

Critical Terminology

- **Intractable:** Epilepsy that does not respond to medication — also referred to as pharmacoresistant, refractory, or poorly controlled. All four terms map to "intractable" in ICD-10-CM.
- **Non-intractable:** Epilepsy that is controlled by medication, or epilepsy not specified as intractable. This is the default when intractable is not documented.
- **Status epilepticus:** A prolonged seizure lasting more than 5 minutes, or a series of seizures without full recovery between episodes. This is a medical emergency requiring an additional character in the code.

Epilepsy Code Structure (G40.–)

Every G40.– code is built from three components:

13. **Type** of epilepsy or syndrome (localization-related, generalized, other, unspecified)
14. **Intractable or not intractable**
15. **With or without status epilepticus**

Code	Description
G40.009	Localization-related (focal/partial) idiopathic epilepsy, NOT intractable, WITHOUT status epilepticus
G40.011	Localization-related epilepsy, NOT intractable, WITH status epilepticus
G40.019	Localization-related epilepsy, INTRACTABLE, WITHOUT status

Code	Description
	epilepticus
G40.011	Localization-related epilepsy, INTRACTABLE, WITH status epilepticus
G40.309	Generalized idiopathic epilepsy, NOT intractable, WITHOUT status epilepticus
G40.319	Generalized idiopathic epilepsy, INTRACTABLE, WITHOUT status epilepticus
G40.901	Epilepsy, unspecified, NOT intractable, WITH status epilepticus
G40.909	Epilepsy, unspecified, NOT intractable, WITHOUT status epilepticus

■ **Stop!**

Seizure Disorder vs. Epilepsy — These Are Not the Same Code: When the physician documents "seizure disorder," assign G40.909. When the physician documents "epilepsy" — that is a confirmed diagnosis and should be coded specifically within G40.–. Do not use "epilepsy" codes when only "seizure" or "seizure disorder" is documented. Equally important: when the physician uses synonyms like "refractory," "pharmacoresistant," or "poorly controlled," those words all mean **intractable** — code accordingly.

5.2B — Migraine Headaches

Migraine coding is highly specific. Three pieces of information drive the code: (1) migraine **type**, (2) **intractable status**, and (3) presence or absence of **status migrainosus** (a migraine lasting more than 72 hours).

Migraine Type	Intractable	Status Migrainosus	Code
Without aura	Not intractable	Without	G43.009

Migraine Type	Intractable	Status Migrainosus	Code
Without aura	Not intractable	With	G43.001
Without aura	Intractable	Without	G43.019
Without aura	Intractable	With	G43.011
With aura	Not intractable	Without	G43.109
With aura	Intractable	Without	G43.119
Chronic migraine without aura	Not intractable	Without	G43.709
Chronic migraine without aura	Intractable	Without	G43.719
Ophthalmoplegic migraine	Not intractable	N/A	G43.B0
Cyclical vomiting	Not intractable	N/A	G43.A0

▶️ Coding Shot

The word **"intractable"** appears in both epilepsy AND migraine codes — and it means exactly the same thing in both: the condition does NOT respond to treatment. When you see "refractory migraine," "treatment-resistant migraine," or "intractable headache" in the documentation, that maps directly to the intractable version of the migraine code. Never assign the non-intractable code when intractable is documented — you'd be undercoding a significant clinical condition.

5.2C — Parkinson's Disease and Related Conditions

Code	Condition	Notes
G20	Parkinson's disease (primary)	No additional characters; when dementia present, G20 sequences first + F02.8–

Code	Condition	Notes
G21.11	Neuroleptic induced parkinsonism	Drug-induced; add adverse effect code
G21.19	Other drug-induced secondary parkinsonism	Add drug code
G30.–	Alzheimer's disease	G30.0 early onset; G30.1 late onset; G30.9 unspecified
G35	Multiple sclerosis	Single code — no additional characters
G31.9	Degenerative disease of the nervous system, unspecified	Query before using unspecified

Parkinson's with Dementia: Sequence `G20` first (code first note at F02.8–), then add `F02.8–` with appropriate severity and behavioral disturbance characters.

5.2D — CVA Sequelae — Neurological Deficits ★ HIGHEST YIELD NERVOUS SYSTEM TOPIC

Understanding the Sequela Concept

This is the most tested topic in ICD-10-CM Chapter 6, and it is also the topic that trips up the most new coders. Get this right and you will have a significant advantage on the CPC exam and in the workplace.

- The **acute CVA codes** (I60–I67) are used ONLY during the acute episode — the active stroke hospitalization or acute-phase visit.
- Once the acute phase has resolved, any neurological deficit that results from the CVA is coded as a **sequela** — a late effect.
- **Sequela codes for CVA:** I69.– category — Sequelae of cerebrovascular disease

I69 Category Structure

Subcategory	Condition
I69.0–	Sequelae of nontraumatic subarachnoid hemorrhage
I69.1–	Sequelae of nontraumatic intracerebral hemorrhage
I69.2–	Sequelae of other nontraumatic intracranial hemorrhage
I69.3–	Sequelae of cerebral infarction **(most common — ischemic stroke)**
I69.8–	Sequelae of other cerebrovascular diseases
I69.9–	Sequelae of unspecified cerebrovascular diseases

Key Neurological Deficit Codes Within I69.–

Deficit	Extension Code Characters	Example (Cerebral Infarction)
Hemiplegia/hemiparesis	.–51 right dominant; .–52 right non-dominant; .–53 left dominant; .–54 left non-dominant	I69.351 (right dominant hemiplegia after cerebral infarction)
Aphasia (loss of language)	.–20	I69.320
Dysphasia (impaired language)	.–21	I69.321
Dysphagia (difficulty swallowing)	.–91	I69.391
Monoplegia — upper limb	.–03– (dominant/non-dominant)	I69.331
Monoplegia — lower limb	.–04– (dominant/non-dominant)	I69.341
Cognitive deficits	.–01	I69.301
Ataxia	.–93	I69.393

Dominant vs. Non-Dominant Side — The Rule That Defines Your Code

This is a four-part rule. Memorize it.

Patient Handedness	Affected Side	Dominant or Non-Dominant?
Right-handed	Right	Dominant
Right-handed	Left	Non-dominant
Left-handed	Left	Dominant
Left-handed	Right	Non-dominant
Ambidextrous	Either side	Affected side = Dominant
Not documented	Either side	**Default: code as DOMINANT**

▶️ Coding Shot

Dominant Side Default Rule: When the physician's documentation does not specify whether the affected side is dominant or non-dominant — and you cannot readily determine it from the record — the ICD-10-CM Official Guidelines instruct you to code the affected side as **dominant**. This is the official default. Do not leave the code at a higher, less specific level just because handedness is not in the chart. Apply the default and move forward.

■ Stop!

After a stroke has resolved — STOP coding the acute CVA code. Once the acute episode is over, any follow-up visit that addresses a persistent neurological deficit (hemiplegia, aphasia, dysphagia, cognitive impairment) must be coded using the I69.– sequela category — NOT the I63.– acute infarction code, NOT a history code. I69.– IS the current-condition code for post-stroke neurological deficits. The only time you use the history code (Z86.73) is when there are NO residual deficits at all.

⚠️ **Caution!**

DRG Assignment Errors from Incorrect Acute CVA Coding: Incorrectly assigning the acute CVA code (I63.–) on a follow-up or rehabilitation visit — when the stroke has already resolved — will trigger an incorrect DRG assignment for any inpatient claim. This is not a minor error: DRG misassignment is a **significant reimbursement and compliance issue** that can result in overpayment, Medicare audit findings, and False Claims Act exposure. Always verify the timeline: is this visit during the acute episode or after? Your answer determines the entire code set.

■ **CMS Rules**

Medicare Inpatient Rehabilitation Facilities (IRF) and I69 Coding: Medicare's Inpatient Rehabilitation Facility (IRF) Prospective Payment System directly relies on accurate I69.– coding to justify admission and to assign the correct Case Mix Group (CMG) for payment. Accurate sequela codes support the medical necessity documentation that qualifies a patient for IRF admission. Wrong sequela codes — or using acute stroke codes when the patient is in rehabilitation — can directly affect IRF payment, trigger medical review, and jeopardize the facility's Medicare certification.

✎ **Worked Example — CVA Sequela Coding**

"Patient with history of left-sided cerebral infarction 8 months ago, presenting for neurological follow-up. Residual deficits include right

hemiplegia. Patient is right-hand dominant. Also presents with expressive aphasia."

Step 1 — Determine the type of CVA: Cerebral infarction → I69.3– subcategory

Step 2 — Determine laterality and dominant/non-dominant for hemiplegia:
The patient has right hemiplegia. The patient is right-hand dominant. Right side = dominant side.
→ I69.351 — Hemiplegia and hemiparesis following cerebral infarction, affecting right dominant side

Step 3 — Code the aphasia sequela:
→ I69.320 — Aphasia following cerebral infarction

Final Code Set (sequence by clinical significance / reason for visit):

- `I69.351` — Hemiplegia and hemiparesis following cerebral infarction, right dominant side
- `I69.320` — Aphasia following cerebral infarction

Note: Do NOT assign I63.– (acute cerebral infarction) — the acute event occurred 8 months ago. The I69.– codes are the correct current-condition codes for all lingering neurological deficits.

> 💬 **From the Trenches**
>
> "CVA sequela coding was the most humbling topic I faced when I moved from clinic coding to acute care. Every time I taught a new coder, I would start with one question: 'Is this the acute stroke visit, or are we treating what's left over?'

That one question unlocks the entire code set. If it's the acute visit — I60 through I67. If the patient is in rehab, outpatient therapy, or coming in months later with residual deficits — I69. I created a laminated flowchart for our team that walked through that decision, and our coding accuracy on stroke cases went from 74% to 97% in three months."

— Tamika W., CPC, CCS | Inpatient Coding Lead | Regional Medical Center, Charlotte, NC

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Section I.C.9.d — Late Effects of Cerebrovascular Disease (Sequelae)

> "Category I69, Sequelae of cerebrovascular disease, specifies codes for use as first-listed or secondary codes to indicate conditions classifiable to categories I60–I67 as the cause of sequelae. The 'sequelae' include conditions specified as such or as residuals which may occur at any time after the onset of the causal condition. Codes from category I69 may be assigned on a health care record with codes from categories I60–I67, if the patient has a current stroke and deficits from an old stroke."

Corrina's Plain-English Explanation: The guideline tells you two important things. First, I69 codes can be used as either the principal or secondary diagnosis — wherever they fit clinically. Second — and this is the part that surprises new coders — if a patient comes in during a NEW acute stroke and also has deficits from a PREVIOUS stroke, you can code BOTH the new acute I63.– code AND the old I69.– sequela code together. They are not mutually

exclusive. Always look at the full clinical picture.

🔧 Toolbox — Section 5.2 Key Points

- Epilepsy codes require THREE components: type, intractable vs. non-intractable, and with/without status epilepticus — all must be captured.
- Synonyms for intractable: pharmacoresistant, refractory, poorly controlled — all map to the intractable code character.
- Migraine codes require type + intractable status + status migrainosus (yes or no).
- For Parkinson's with dementia: G20 first (code first note), then F02.8– with severity and behavioral disturbance characters.
- CVA sequela coding: acute I60–I67 codes are for the acute episode ONLY; I69.– codes are for any lingering neurological deficits after the acute phase.
- Dominant side default: when handedness is not documented, code the affected side as dominant per official guideline.

✓ Quick Check 5.2

1. A patient has "refractory generalized idiopathic epilepsy without status epilepticus." What is the correct code?
2. True or False: A patient presenting six months after an ischemic stroke with residual left-sided weakness should still be coded with I63.– (cerebral infarction).
3. A left-handed patient has right hemiplegia following cerebral infarction. Is

the right side coded as dominant or non-dominant?

4. What does the term "status epilepticus" mean in ICD-10-CM coding?

5. What ICD-10-CM code represents Multiple Sclerosis?

EXERCISE 5-B — NERVOUS SYSTEM CODING

Directions: For questions 1–6, assign all correct ICD-10-CM codes and sequence them properly. For questions 7–9, select True (T) or False (F). For questions 10–12, select the best answer (A, B, C, or D). Use your ICD-10-CM manual — do not guess.

16. "Patient has intractable migraine with aura, with status migrainosus."
    Code: _ _ _ . _ _ _

17. "Patient with generalized idiopathic epilepsy, not intractable, without status epilepticus."
    Code: _ _ _ . _ _ _

18. "Patient with poorly controlled focal epilepsy, with status epilepticus."
    Code: _ _ _ . _ _ _

19. "Patient, right-hand dominant, presents 10 months post-ischemic stroke with left hemiplegia and dysphagia."
    Code 1: _ _ _ . _ _ _ Code 2: _ _ _ . _ _ _

20. "Patient with Parkinson's disease, with dementia, moderate severity, without behavioral disturbance."
    Code 1: _ _ _ Code 2: _ _ _ . _ _ _

21. "Patient (left-handed) with aphasia and right monoplegia of the upper limb following cerebral infarction — documented 14 months ago."
    Code 1: _ _ _ . _ _ _ Code 2: _ _ _ . _ _ _

22. T / F "Pharmacoresistant" epilepsy is coded as non-intractable in ICD-10-CM.

23. T / F When a patient's handedness is not documented, the official ICD-10-CM guideline instructs the coder to default to coding the affected side as dominant.

24. T / F A patient admitted with a new ischemic stroke who also has residual deficits from a stroke two years ago should receive ONLY the new I63.– code — the I69.– codes are not used if an acute stroke is occurring.

25. **Which of the following is the correct code for Parkinson's disease (primary)?**
    A. G21.11 B. G20 C. G30.9 D. G31.9
    Answer:

26. **A patient has "poorly controlled focal epilepsy without status epilepticus." The correct code is:**
    A. G40.009 B. G40.019 C. G40.909 D. G40.919
    Answer:

27. **When coding CVA sequelae, which category is always used for neurological deficits that persist after the acute stroke episode?**
    A. I60.– B. I63.– C. I69.– D. Z86.73
    Answer:

SECTION 5.3 — ICD-10-CM Chapter 7: Diseases of the Eye and Adnexa (H00–H59)

Overview

ICD-10-CM Chapter 7 covers conditions of the eye, eyelids, lacrimal system, orbit, conjunctiva, cornea, iris, lens, retina, and visual disturbances. The biggest rule in this chapter: **laterality is almost always required**. Right eye (1), left eye (2),

bilateral (3), unspecified (9) — these characters appear throughout, and failing to capture them is a red flag on audit.

High-yield CPC exam topics include: cataracts (type and laterality), glaucoma (type, stage, and bilateral coding rules), diabetic eye disease (combination codes from Chapter 4 of ICD-10-CM), and age-related macular degeneration. Each of these requires a specific approach that we will work through now.

5.3A — Glaucoma ★ HIGH YIELD EYE TOPIC

Glaucoma is a group of eye conditions that damage the optic nerve — often, but not always, associated with increased intraocular pressure. Glaucoma coding requires three pieces of information: **type**, **laterality**, and **stage**.

Glaucoma Types (H40.–)

Code	Glaucoma Type
H40.0–	Glaucoma suspect
H40.1–	Open-angle glaucoma (most common; often asymptomatic)
H40.2–	Primary angle-closure glaucoma
H40.3–	Glaucoma secondary to eye trauma
H40.4–	Glaucoma secondary to eye inflammation
H40.5–	Glaucoma secondary to other eye disorders
H40.6–	Glaucoma secondary to drugs (additional code required for drug)
H40.8–	Other glaucoma
H40.9–	Unspecified glaucoma

Glaucoma Stage — 7th Character

7th Character	Stage
0	Stage unspecified
1	Mild stage
2	Moderate stage
3	Severe stage
4	Indeterminate stage

■ **Stop!**

Glaucoma Stage Must Be Coded — Never Default to Unspecified When Stage Is Documented: When the ophthalmologist documents "mild," "moderate," or "severe" glaucoma in the examination findings, you MUST capture that stage in the 7th character. Defaulting to "stage unspecified" (0) when the stage is clearly documented is undercoding — and it will not survive an audit. Ophthalmologists routinely document staging through visual field testing, cup-to-disc ratios, and IOP measurements. That information is in the record; your job is to use it.

Bilateral Glaucoma — The Two-Rule System

- **Same type, different stages in each eye:** Code bilateral (laterality character 3) + use the 7th character for the more severe stage.
- **Different types in each eye:** Code each eye separately with its own code, type, and stage.

✎ **Worked Example — Bilateral Glaucoma**

> "Patient has primary open-angle glaucoma, right eye, moderate stage; left eye, mild stage."

Analysis: Same TYPE (primary open-angle) but different STAGES (moderate right, mild left). Apply Rule 1: code bilateral, use more severe stage (moderate = 7th character 2).

- H40.1132 — Primary open-angle glaucoma, bilateral, moderate stage

If this were open-angle glaucoma in the right eye AND angle-closure glaucoma in the left eye — different types — you would code each separately: H40.1131 (right, moderate) + H40.2021 (left angle-closure, mild).

📚 Official Guidelines for Coding and Reporting

Bilateral Glaucoma with the Same Type but Different Stages

> "When a patient has bilateral glaucoma and both eyes are documented as being the same type and stage, and there is a code for bilateral glaucoma, report only the code for the type of glaucoma, bilateral, with the seventh character for the stage. When a patient has bilateral glaucoma and each eye is documented as having a different stage, and the classification distinguishes laterality, assign the appropriate code for each eye rather than the code for bilateral glaucoma. When a patient has bilateral glaucoma and each eye is documented as having a different stage, and the classification does not distinguish laterality (i.e.,

> subcategory H40.10, H40.20, etc.), assign one code for each eye with the seventh character for the specific glaucoma stage documented for each eye."

Corrina's Plain-English Explanation: The guideline gives you a tiered decision tree for bilateral glaucoma. Same type, same stage = one bilateral code. Same type, different stages = check if the code distinguishes laterality; if yes, code each eye separately; if no bilateral code exists for that type, use one code and pick the more severe stage. Different types = always code each eye separately. Read the Tabular notes carefully for each glaucoma type — they will tell you whether a bilateral option exists.

5.3B — Cataracts

A **cataract** is a clouding of the lens that impairs vision. In ICD-10-CM, cataracts are coded by **type** (age-related vs. other), **morphology** (cortical, nuclear, combined), and **laterality**.

Age-Related Cataracts (H25.–) — Most Common

Code	Description
H25.01–	Cortical age-related cataract (right, left, bilateral)
H25.11–	Age-related nuclear cataract (right, left, bilateral)
H25.21–	Age-related cataract, anterior subcapsular polar
H25.81–	Combined forms of age-related cataract (right, left, bilateral)
H25.9	Unspecified age-related cataract

Other Cataracts (H26.–)

Code	Description
H26.00–	Unspecified infantile and juvenile cataract
H26.1–	Traumatic cataract (laterality required)
H26.3–	Drug-induced cataract (requires additional code for drug)

Post-Surgical Cataract Conditions

- H27.0– — Aphakia: absence of the lens (post-surgical cataract removal)
- H27.1– — Dislocation of lens
- H59.0– — Intraoperative and postprocedural complications of eye following cataract surgery

▶️ Coding Shot

For **every eye code** — cataract, glaucoma, macular degeneration, retinal disorders, conjunctivitis, eyelid conditions — laterality is almost always required. When you see an eye code with an unspecified laterality character on an audit, the first question is: "Did the physician document which eye?" Ophthalmologists always examine both eyes and always know which one is affected. Unspecified laterality on an eye code is a red flag. Before defaulting to "unspecified," check the encounter note carefully — the answer is almost always there.

5.3C — Retinal Disorders

Code	Condition
H33.–	Retinal detachments and breaks
H34.–	Retinal vascular occlusions
H35.30	Unspecified macular degeneration
H35.31	Nonexudative (dry) age-related macular degeneration
H35.32	Exudative (wet) age-related macular degeneration
H35.33	Angioid streaks of macula

Diabetic Retinopathy: Do NOT use H35.– codes alone for diabetic retinopathy. Diabetes combination codes from Chapter 4 (E11.3– for Type 2 diabetes with ophthalmic complications) are the primary code. Add H codes only if needed for additional specificity. This is one of the most common coding errors in ophthalmology — always check whether the retinopathy is related to diabetes first.

5.3D — Eyelid and Conjunctiva Conditions

Eyelid conditions have an additional specificity requirement beyond simple laterality: you must also document **eyelid position** (upper or lower). This gives you four distinct options for any eyelid condition: right upper, right lower, left upper, left lower.

Code	Condition	Laterality Required	Position Required
H00.0–	Hordeolum (stye) — infection of eyelid gland	Yes	Yes (upper/lower)
H00.1–	Chalazion — chronic granulomatous lesion	Yes	Yes (upper/lower)
H10.–	Conjunctivitis (by type)	Yes	No
H02.–	Other eyelid disorders	Yes	Yes (upper/lower)

Code	Condition	Laterality Required	Position Required
	(ectropion, entropion, ptosis, blepharochalasis)		

Common Conjunctivitis Codes

- H10.01– — Acute follicular conjunctivitis (laterality required)
- H10.10– — Simple mucopurulent conjunctivitis (laterality required)
- H10.30– — Unspecified acute conjunctivitis

> 💬 **From the Trenches**
>
> "When I first started coding ophthalmology, I was getting RARCs on eye codes constantly — all for laterality errors. I sat down one Saturday and created a one-page laterality cheat sheet for every major eye condition category: glaucoma, cataract, retina, conjunctiva, eyelid — right, left, bilateral, unspecified — with the code characters mapped out. Printed it, laminated it, put one on every coder's desk. Our denial rate on eye laterality errors dropped to near zero. Simple tools solve real problems. Build your cheat sheets now, while you're learning — they'll follow you through your entire career."
>
> — Sandra K., CPC, COC | Ophthalmology Coding Specialist | Sunshine Eye Associates, Tampa, FL

> 🔧 **Toolbox — Section 5.3 Key Points**
>
> • All eye codes: laterality (right=1, left=2, bilateral=3, unspecified=9) is required — unspecified is a last resort, not a first choice.
>
> • Glaucoma requires type + laterality + stage (7th character) — never omit

the stage when documented by the ophthalmologist.

• Bilateral glaucoma — same type, different stages: use the bilateral code with the more severe stage as the 7th character.

• Cataracts: code by type (age-related vs. other), morphology (cortical, nuclear, combined), and laterality.

• Diabetic retinopathy: use Chapter 4 diabetes combination codes (E11.3–) — not standalone H35.– retinopathy codes.

• Eyelid conditions: require BOTH laterality AND eyelid position (upper or lower) — four distinct options per condition.

✓ **Quick Check 5.3**

1. A patient has primary open-angle glaucoma, right eye severe stage, left eye moderate stage. What is the first coding rule you apply?

2. What is the ICD-10-CM code for cortical age-related cataract, left eye?

3. True or False: Diabetic retinopathy should be coded with standalone H35.– retinopathy codes when the patient has Type 2 diabetes.

4. A patient has a hordeolum (stye) of the right upper eyelid. What two pieces of information beyond the condition name are required for accurate coding?

5. What is the code for exudative (wet) age-related macular degeneration?

EXERCISE 5-C — EYE AND ADNEXA CODING

Directions: For questions 1–6, assign the correct ICD-10-CM code(s). For questions 7–8, select True (T) or False (F). For questions 9–10, select the best answer (A, B, C, or D). Write all answers in the blanks provided.

28. "Primary open-angle glaucoma, right eye, severe stage; left eye, severe stage."
    Code: _ _ _ . _ _ _ _

29. "Primary angle-closure glaucoma, left eye only, mild stage."
    Code: _ _ _ . _ _ _ _

30. "Age-related nuclear cataract, bilateral."
    Code: _ _ _ . _ _ _

31. "Traumatic cataract, right eye."
    Code: _ _ _ . _ _ _

32. "Dry (nonexudative) age-related macular degeneration, right eye."
    Code: _ _ _ . _ _ _

33. "Hordeolum, left lower eyelid."
    Code: _ _ _ . _ _ _

34. T / F For bilateral glaucoma of different types — one eye open-angle, other angle-closure — a single bilateral code is assigned using the more severe stage.

35. T / F H27.0– represents aphakia — the absence of the natural lens, typically after cataract surgery.

36. **Which code is used for glaucoma secondary to drugs?**
    A. H40.3– B. H40.5– C. H40.6– D. H40.8–
    Answer:

37. **A Type 2 diabetic patient has diabetic retinopathy with macular edema, right eye. The correct approach is to:**
    A. Assign H35.32 as the primary code
    B. Assign E11.3– combination code as primary + H code for additional specificity if needed

C. Assign only the E11.– diabetes code; retinopathy is included

D. Assign H35.81 bilateral macular edema code

Answer:

SECTION 5.4 — ICD-10-CM Chapter 8: Diseases of the Ear and Mastoid Process (H60–H95)

Overview

ICD-10-CM Chapter 8 covers conditions of the external ear, middle ear, inner ear, mastoid process, and hearing loss. Like the eye chapter, laterality is required for most ear codes. The highest-yield topics on the CPC exam from this chapter are: otitis media (type and laterality), hearing loss (type, laterality, and severity), tinnitus, and Ménière's disease. Pay careful attention to the distinction between suppurative and nonsuppurative otitis media — this is the most commonly tested differentiation in Chapter 8.

5.4A — Otitis Media ★ HIGH YIELD

Otitis media must be classified as **suppurative** or **nonsuppurative** — these are not the same condition, they are not interchangeable, and selecting the wrong type is a coding error that changes the clinical picture of the claim.

■ Stop!

Suppurative vs. Nonsuppurative — This Distinction Is Not Optional: **Suppurative** otitis media means there is pus present — active bacterial infection. **Nonsuppurative** (also called serous or secretory) means there is

fluid in the middle ear space WITHOUT infection or pus. These are different conditions with different treatment plans. Coding the wrong type misrepresents the severity of the encounter, affects medical decision-making level justification, and creates audit exposure. Always read the physician's note carefully for words like "fluid," "serous," "effusion" (nonsuppurative) vs. "purulent discharge," "pus," "suppurative," or "rupture of eardrum" (suppurative).

Nonsuppurative Otitis Media (H65.–) — No Pus

Code	Description
H65.00	Acute serous otitis media, unspecified ear
H65.01	Acute serous otitis media, right ear
H65.02	Acute serous otitis media, left ear
H65.03	Acute serous otitis media, bilateral
H65.20	Chronic serous otitis media, unspecified ear

Suppurative Otitis Media (H66.–) — With Pus/Active Infection

Code	Description
H66.00–	Acute suppurative otitis media without spontaneous rupture of eardrum (laterality required)
H66.01–	Acute suppurative otitis media WITH spontaneous rupture of eardrum (laterality required)
H66.1–	Chronic tubotympanic suppurative otitis media
H66.3–	Other chronic suppurative otitis media
H66.9–	Otitis media, unspecified

H67.– — Otitis Media in Diseases Classified Elsewhere: When otitis media occurs as a manifestation of another disease (such as influenza or measles), a "code first" note applies. The underlying disease sequences first.

5.4B — Hearing Loss

Hearing loss is classified by the anatomical location and mechanism of the loss. Understanding the three types is essential for accurate code selection.

Three Types of Hearing Loss

- **Conductive hearing loss:** Problem with mechanical transmission of sound through the outer or middle ear (example: fluid, earwax, eardrum perforation). Sound doesn't get through to the inner ear.
- **Sensorineural hearing loss:** Damage to the inner ear (cochlea) or auditory nerve. This is the most common type of permanent hearing loss.
- **Mixed hearing loss:** A combination of conductive AND sensorineural — problems in both the outer/middle ear and the inner ear/nerve.

Code	Description
H90.0	Conductive hearing loss, bilateral
H90.11	Conductive hearing loss, right ear, unilateral, unrestricted hearing on contralateral side
H90.12	Conductive hearing loss, left ear, unilateral, unrestricted hearing on contralateral side
H90.3	Sensorineural hearing loss, bilateral
H90.41	Sensorineural hearing loss, right ear, unilateral
H90.42	Sensorineural hearing loss, left ear, unilateral
H90.6	Mixed conductive and sensorineural hearing loss, bilateral

Code	Description
H91.01	Ototoxic hearing loss, right ear (add code for toxic substance)
H91.1–	Presbycusis (age-related hearing loss)
H91.90	Unspecified hearing loss, unspecified ear

⚠️ **Caution!**

Ototoxic Hearing Loss — Adverse Effect Sequencing: When a patient develops hearing loss as a result of a medication (ototoxic drugs include aminoglycoside antibiotics, loop diuretics, and cisplatin chemotherapy), you must assign: (1) the hearing loss code (H91.01–, H91.02–, or H91.03–), AND (2) an additional code from T36–T65 for the toxic substance, AND (3) the adverse effect sequencing rules from ICD-10-CM Chapter 19 must be applied correctly. The adverse effect code always requires the 6th character for "adverse effect" when the drug was properly administered. Getting adverse effect sequencing wrong on an audited claim is a compliance red flag.

■ **CMS Rules**

Medicare Advantage Quality Measures and Hearing Loss Coding: Medicare Advantage (MA) plans use HEDIS quality measures to evaluate care outcomes — and hearing loss documentation is tracked as part of preventive and chronic condition management. Accurate hearing loss diagnosis coding — including type (conductive, sensorineural, mixed) and laterality — directly affects HEDIS scores and star ratings for Medicare Advantage plans. Low star ratings affect plan bonuses and beneficiary premiums. Sloppy hearing loss coding is not just a clinical documentation issue — it has downstream financial consequences for the entire MA plan.

5.4C — Other Ear Conditions

Code	Condition	Notes
H81.0–	Ménière's disease	Laterality required (right, left, bilateral, unspecified)
H81.3–	Other peripheral vertigo (e.g., BPPV)	Laterality required
H81.4–	Vertigo of central origin	
H83.0–	Labyrinthitis (inner ear infection)	Laterality required
H92.0–	Otalgia (ear pain)	Laterality required
H93.11	Tinnitus, right ear	
H93.12	Tinnitus, left ear	
H93.13	Tinnitus, bilateral	
H93.19	Tinnitus, unspecified ear	Only if laterality truly undeterminable
H95.–	Intraoperative and postprocedural complications of ear	Complication codes — require additional specificity

▶️ Coding Shot

Tinnitus Laterality: Tinnitus is one of the most common ear complaints, and laterality is the most commonly missed element in tinnitus coding. The physician always examines both ears and asks the patient which ear is affected or if both are ringing. That information is in the note. If it is truly not documented, query — or assign H93.19 (unspecified) as a last resort only. Do not assign bilateral if only one ear is documented. Do not assign unspecified when the note clearly states "right ear." Read the documentation before you code.

🔧 Toolbox — Section 5.4 Key Points

- Otitis media: always classify as suppurative (with pus) or nonsuppurative (fluid without infection) — these are not interchangeable.
- Suppurative otitis media: document whether the eardrum has ruptured spontaneously — it changes the 6th character.
- Hearing loss types: conductive (mechanical/outer-middle ear), sensorineural (inner ear/nerve), mixed — all require laterality.
- Ototoxic hearing loss requires the hearing loss code + the toxic substance code + correct adverse effect sequencing.
- Tinnitus, Ménière's, vertigo, labyrinthitis, and otalgia all require laterality — never default to unspecified when it's in the chart.
- Presbycusis (H91.1–) is age-related hearing loss — code by laterality.

✓ Quick Check 5.4

1. What is the clinical distinction between suppurative and nonsuppurative otitis media?
2. A patient has sensorineural hearing loss in the left ear only (right ear normal). What is the correct code?
3. True or False: H93.13 is the correct code for bilateral tinnitus.
4. What is the code for Ménière's disease, right ear?
5. What type of hearing loss is caused by damage to the inner ear or auditory nerve?

EXERCISE 5-D — EAR AND MASTOID PROCESS CODING

Directions: For questions 1–6, assign the correct ICD-10-CM code(s). For questions 7–8, select True (T) or False (F). For questions 9–10, select the best answer (A, B, C, or D). Write all answers in the blanks provided.

38. "Acute suppurative otitis media, left ear, with spontaneous rupture of eardrum."

    Code: _ _ _ . _ _ _

39. "Acute serous otitis media, bilateral."

    Code: _ _ _ . _ _

40. "Mixed conductive and sensorineural hearing loss, bilateral."

    Code: _ _ _ . _

41. "Conductive hearing loss, right ear unilateral."

    Code: _ _ _ . _ _

42. "Ménière's disease, left ear."

    Code: _ _ _ . _ _

43. "Tinnitus, right ear."

    Code: _ _ _ . _ _

44. T / F Otitis media with effusion (fluid) without signs of active infection should be coded as suppurative otitis media.

45. T / F Presbycusis is the ICD-10-CM term for age-related hearing loss, coded under H91.1–.

46. **A patient develops sensorineural hearing loss after receiving gentamicin (an aminoglycoside antibiotic) at the prescribed dose. This is coded as:**

    A. Poisoning by aminoglycoside

    B. Adverse effect of aminoglycoside + hearing loss code (H91.–)

    C. Only the hearing loss code (H91.–)

D. Underdosing of aminoglycoside

Answer:

47. **Which condition requires laterality AND position (upper or lower) for accurate coding?**

A. Tinnitus B. Hordeolum (stye) C. Presbycusis D. Ménière's disease

Answer:

SECTION 5.5 — Putting It All Together: Multi-System Documentation Scenarios

This is where it gets real. The CPC exam will not ask you to code one system at a time. You will be given a clinical scenario that pulls from two, three, or four ICD-10-CM chapters simultaneously. The patient doesn't have just one thing — they have multiple conditions that interact, require sequencing decisions, and demand that you remember everything from every section above. Work through each scenario below fully before moving to Exercise 5-E.

✎ Scenario 1 — Elderly Patient with Alzheimer's, Anxiety, and Parkinson's

"Elderly patient with Alzheimer's disease, moderate, with agitation and wandering. Patient also has generalized anxiety disorder and is maintained on long-term benzodiazepine therapy (Z79.1). Parkinson's disease is noted as contributing to cognitive decline."

Code Analysis:

- **Alzheimer's disease:** G30.9 (Alzheimer's, unspecified — "code first" note applies)
- **Dementia with agitation/wandering:** F02.818 (Dementia in other diseases, moderate, with other behavioral disturbance). Note: Since Parkinson's is documented as contributing — the Alzheimer's/F02 code structure captures the dementia. Parkinson's (G20) would also be coded if it is a current active condition being managed separately.
- **Generalized anxiety disorder:** F41.1
- **Long-term benzodiazepine use:** Z79.1
- **Parkinson's disease:** G20 (if documented as a current active problem and managed at this encounter)

Final Code Set (sequencing by "code first" rule, then principal diagnosis, then additional conditions):

- G30.9 — Alzheimer's disease, unspecified **(sequenced first — code first instruction)**
- F02.818 — Dementia in other diseases classified elsewhere, moderate, with other behavioral disturbance
- G20 — Parkinson's disease
- F41.1 — Generalized anxiety disorder
- Z79.1 — Long-term (current) use of non-steroidal anti-inflammatories — note: Z79.1 is actually long-term use of anticoagulants; long-term benzodiazepine is Z79.899. Always verify Z codes in the Tabular.

Corrina's Note: This scenario tests your "code first" discipline, your ability to add the right behavioral disturbance character, and your awareness that anxiety is a separately reportable condition — not bundled into the dementia code. Every

condition that is monitored and managed at the encounter gets coded.

✎ Scenario 2 — Post-CVA Neurological Follow-Up

> "Patient with history of right-sided cerebral infarction 8 months ago presents for neurological follow-up. Residual deficits include left hemiplegia. Patient is right-hand dominant. Also presents with expressive aphasia."

Code Analysis:

- **CVA type:** Cerebral infarction → I69.3– subcategory
- **Left hemiplegia — dominant vs. non-dominant:** Patient is right-hand dominant. Left side = non-dominant side. → I69.354 — Hemiplegia/hemiparesis following cerebral infarction, left non-dominant side
- **Aphasia:** I69.320 — Aphasia following cerebral infarction

Final Code Set:

- `I69.354` — Hemiplegia and hemiparesis following cerebral infarction, left non-dominant side
- `I69.320` — Aphasia following cerebral infarction

Corrina's Note: Read carefully — this patient had a RIGHT-sided stroke but has LEFT hemiplegia. That is correct clinical anatomy: stroke on one side of the brain causes deficits on the OPPOSITE side of the body (contralateral). For the dominant/non-dominant determination: patient is right-hand dominant, left side is non-dominant → I69.354. Don't let the right-side stroke language confuse you —

you code the AFFECTED LIMB side, not the brain side.

✎ Scenario 3 — Type 2 Diabetes with Glaucoma and Retinopathy

> "Patient with Type 2 diabetes on insulin presents to ophthalmology for bilateral moderate-stage primary open-angle glaucoma and diabetic retinopathy with macular edema, right eye."

Code Analysis:

- **Type 2 diabetes with diabetic retinopathy with macular edema, right eye:** E11.3113 — Type 2 diabetes mellitus with unspecified diabetic retinopathy with macular edema, right eye. (Verify the most specific combination code available in your ICD-10-CM edition.)
- **Insulin use:** Z79.4 — Long-term (current) use of insulin
- **Primary open-angle glaucoma, bilateral, moderate stage:** H40.1132 — Primary open-angle glaucoma, bilateral, moderate stage

Final Code Set:

- E11.3113 — Type 2 diabetes mellitus with retinopathy with macular edema, right eye (verify most current code)
- Z79.4 — Long-term current use of insulin
- H40.1132 — Primary open-angle glaucoma, bilateral, moderate stage

Corrina's Note: This scenario tests your knowledge that diabetic eye conditions go through Chapter 4 combination codes, NOT standalone retinopathy codes. The

glaucoma is unrelated to the diabetes (no documentation linking them), so it is a separate code. Always sequence the diabetes combination code first, then add Z79.4 for insulin use whenever applicable.

✎ Scenario 4 — Alcohol Dependence in Remission with Neuropathy and Hearing Loss

> "Patient with chronic alcohol dependence in early remission presents with alcoholic neuropathy. Exam shows bilateral sensorineural hearing loss, unrelated to alcohol use."

Code Analysis:

- **Alcohol dependence in early remission:** F10.21 — Alcohol dependence, in remission. "Early remission" meets the ICD-10-CM remission specifier. Requires physician documentation of "in remission."
- **Alcoholic neuropathy:** G62.1 — Alcoholic polyneuropathy. Note: check for combination code option within F10.– for associated neuropathy. Also acceptable as separately coded depending on ICD-10-CM edition in use.
- **Bilateral sensorineural hearing loss (unrelated to alcohol):** H90.3 — Sensorineural hearing loss, bilateral

Final Code Set:

- F10.21 — Alcohol dependence, in remission
- G62.1 — Alcoholic polyneuropathy

- `H90.3` — Sensorineural hearing loss, bilateral

Corrina's Note: Note that the hearing loss is documented as UNRELATED to alcohol — so it gets its own standalone code without linkage to the substance use. If it were ototoxic hearing loss caused by alcohol, you'd need a different code set entirely. Documentation drives the code. Always.

✎ Scenario 5 — Pediatric Otitis Media with ADHD

> "Child presents with acute suppurative otitis media, left ear, with spontaneous rupture of the eardrum. Patient also has ADHD, combined type, currently managed with stimulant medication."

Code Analysis:

- **Acute suppurative otitis media, left ear, with spontaneous rupture:** H66.012 — Acute suppurative otitis media with spontaneous rupture of ear drum, left ear
- **ADHD, combined type:** F90.2 — Attention-deficit hyperactivity disorder, combined type
- **Long-term stimulant use:** Z79.899 — Other long-term (current) drug therapy (for chronic stimulant medication — verify specific Z code for the medication type in the Tabular)

Final Code Set:

- `H66.012` — Acute suppurative otitis media with spontaneous rupture of

eardrum, left ear

- F90.2 — ADHD, combined type
- Z79.899 — Other long-term current drug therapy (verify)

Corrina's Note: Sequence the reason for the visit (otitis media) first. ADHD is a comorbidity that is managed at the encounter — include it. Long-term stimulant medication management should be captured with the appropriate Z79.– status code when the medication is being actively managed or monitored at the encounter.

🔎 Check This Out

According to the American Academy of Otolaryngology, **otitis media is the most common diagnosis in pediatric urgent care visits in the United States**, with more than 16 million office visits annually attributed to this single condition. Ear infection coding is one of the highest-volume coding tasks in pediatric and family medicine settings — and laterality errors on these high-volume codes add up quickly. Getting H65 and H66 right on every claim protects both revenue integrity and compliance standing.

🔎 Check This Out

The number of Americans living with some form of hearing loss is estimated at **over 48 million** — making hearing loss one of the most prevalent chronic sensory conditions in the United States. Age-related hearing loss (presbycusis) affects approximately one in three adults over age 65. As the population ages, accurate coding of hearing loss type, laterality, and etiology will become an increasingly important skill for coders in all specialty areas, particularly

geriatrics and primary care.

🔧 Toolbox — Section 5.5 Key Points

- Multi-system scenarios require applying sequencing rules from multiple chapters simultaneously — prioritize "code first" instructions over all other sequencing preferences.
- Diabetes combination codes from Chapter 4 capture diabetic eye, nerve, and kidney complications — do not ignore Chapter 4 when coding eye or neurological manifestations in a diabetic patient.
- Post-stroke deficits: contralateral anatomy applies — a right-brain stroke causes LEFT-side deficits. Code the AFFECTED LIMB side, not the brain lesion side, for dominant/non-dominant determination.
- Every condition monitored and managed at the encounter should be coded — do not drop secondary diagnoses because the primary condition seems more important.
- Long-term medication use (Z79.–) should be coded whenever a patient is on chronic medication therapy being managed at the encounter.

✓ Quick Check 5.5

1. In Scenario 2 above, why was the hemiplegia coded as non-dominant when the stroke was on the right side of the brain?
2. In Scenario 3, why is the glaucoma coded separately from the diabetic retinopathy?
3. True or False: In Scenario 4, the bilateral sensorineural hearing loss would

be coded under the F10.– alcohol dependence codes because the patient has a history of alcohol use.

4. In Scenario 5, what changes in the otitis media code if the eardrum did NOT rupture?

5. What Z code should be added whenever a patient with Type 2 diabetes is managed with insulin at the current encounter?

EXERCISE 5-E — MULTI-SYSTEM CODING SCENARIOS

Directions: For each scenario below, assign ALL correct ICD-10-CM codes, sequence them in the proper order, and write the codes in the blanks provided. Each scenario draws from two or more sections of this chapter. Refer to your ICD-10-CM manual. No answer key is included — complete independently and verify with your instructor.

48. **"Patient with vascular dementia, moderate, with anxiety, presenting for psychiatric follow-up. Patient has a history of cerebral infarction three years ago with no current residual deficits. No behavioral disturbance is documented."**

    Code 1: _ _ _ . _ _ _ Code 2: _ _ _ . _ Code 3: _ _ _ . _ _

49. **"Patient with generalized idiopathic epilepsy, intractable, with status epilepticus, also diagnosed today with bilateral sensorineural hearing loss."**

    Code 1: _ _ _ . _ _ _ Code 2: _ _ _ . _

50. **"Left-handed patient presents 18 months post-cerebral infarction with right hemiplegia and dysphagia. Also has nicotine dependence, cigarettes, uncomplicated."**

Code 1: _ _ _ . _ _ _ Code 2: _ _ _ . _ _ _ Code 3: _ _ _ . _ _ _

51. **"Patient with major depressive disorder, recurrent, severe, without psychotic features, presents with acute serous otitis media, right ear."**

    Code 1: _ _ _ . _ Code 2: _ _ _ . _ _

52. **"Patient with Alzheimer's disease, late onset, mild, without behavioral disturbance, also diagnosed with primary open-angle glaucoma, right eye, severe stage."**

    Code 1: _ _ _ . _ Code 2: _ _ _ . _ _ _ Code 3: _ _ _ . _ _ _ _

53. **"Patient with PTSD, unspecified, also presenting with migraine without aura, not intractable, without status migrainosus, and bilateral tinnitus."**

    Code 1: _ _ _ . _ _ Code 2: _ _ _ . _ _ _ Code 3: _ _ _ . _ _

54. **"Elderly patient with Type 2 diabetes on insulin with age-related nuclear cataract, bilateral, and presbycusis, bilateral."**

    Code 1: _ _ _ . _ _ Code 2: _ _ _ . _ Code 3: _ _ _ . _ _ _ Code 4: _ _ _ . _

55. **"Patient with opioid dependence, uncomplicated, and generalized anxiety disorder, presenting with Ménière's disease, left ear."**

    Code 1: _ _ _ . _ _ Code 2: _ _ _ . _ Code 3: _ _ _ . _ _

56. **"Patient with multiple sclerosis presents with acute suppurative otitis media, bilateral, without spontaneous rupture of eardrum, and bilateral conductive hearing loss."**

    Code 1: _ _ _ Code 2: _ _ _ . _ _ _ Code 3: _ _ _ . _

57. **"Right-handed patient, 6 weeks post-cerebral infarction, admitted to inpatient rehabilitation with right monoplegia of the upper limb**

(dominant), cognitive deficits, and chronic migraine without aura, not intractable."

Code 1: _ _ _ . _ _ _ Code 2: _ _ _ . _ _ _ Code 3: _ _ _ . _ _ _

Chapter Summary

This chapter covered four ICD-10-CM body system chapters — mental/behavioral disorders, nervous system, eye, and ear — with direct application to CPC exam scenarios and real-world clinical coding. Here are the ten most critical takeaways:

1. **Dementia code-first sequencing is mandatory.** When Alzheimer's disease or Parkinson's disease is the underlying cause of dementia, the underlying disease (G30.– or G20) ALWAYS sequences before the dementia manifestation code (F02.8–). Never reverse this order.

2. **The substance use hierarchy is a hard rule.** Dependence beats Abuse; Abuse beats Use. Never code two severity levels for the same substance at the same encounter. When documentation supports the higher level, code only the higher level.

3. **Epilepsy intractable status must be captured.** Synonyms for intractable — pharmacoresistant, refractory, poorly controlled — all map to the intractable code character in G40.–. Intractable is not the default; it must be documented.

4. **CVA sequela coding uses I69.– exclusively after the acute phase.** The I60–I67 acute CVA codes apply only during the active stroke episode. Any persistent neurological deficit on a follow-up or rehabilitation visit is coded with I69.–. This is one of the most tested distinctions on the CPC exam.

5. **The dominant side default is official guideline.** When patient handedness is not documented in the record, code the affected side of CVA sequelae hemiplegia/monoplegia as dominant. This is the ICD-10-CM Official Guidelines default — not a guess.

6. **Glaucoma requires type + stage + laterality — all three.** For bilateral glaucoma of the same type but different stages, use the bilateral

code with the more severe stage as the 7th character. For different types, code each eye separately.

7. **Cataracts are coded by type, morphology, and laterality.** Age-related (H25.–) vs. other types (H26.–), morphology (cortical, nuclear, combined), and right/left/bilateral — all three elements must be captured from the documentation.

8. **Otitis media classification must be precise.** Suppurative (pus, active infection) and nonsuppurative (fluid, no infection) are distinct conditions. For suppurative otitis media, document whether the eardrum has spontaneously ruptured — it changes the code.

9. **Hearing loss is classified by mechanism.** Conductive (outer/middle ear mechanical failure), sensorineural (inner ear/nerve damage), or mixed — each type requires laterality and the appropriate H90.– or H91.– code.

10. **Eyelid conditions require both laterality AND eyelid position.** Right upper, right lower, left upper, left lower — four distinct options for most H00.– and H02.– eyelid codes. Missing either element is an incomplete code.

Chapter Review

Section A — Multiple Choice (Questions 1–10)

Directions: Choose the single best answer for each question. Circle or write the letter of your answer in the blank provided.

58. A patient has Alzheimer's disease, late onset, with dementia and agitation. Which of the following correctly represents the required coding approach?

A. Code F02.811 only — dementia with behavioral disturbance is a complete code

B. Code G30.1 first, then F02.811 per "code first" instruction

C. Code F02.811 first, then G30.1 as secondary

D. Code G30.1 only — dementia is included

Answer:

59. A physician documents cocaine abuse and cocaine dependence for the same patient in the same encounter note. The correct action is to:

A. Code both F14.10 (cocaine abuse) and F14.20 (cocaine dependence)

B. Query the physician because this is contradictory documentation

C. Code only F14.20 (cocaine dependence) — dependence supersedes abuse

D. Code only F14.10 (cocaine abuse) — it was documented first

Answer:

60. Which of the following correctly defines "intractable" epilepsy?

A. Epilepsy that has resolved without residual seizure activity

B. Epilepsy that is controlled with daily oral medication

C. Epilepsy that does not respond to medication; also termed refractory or pharmacoresistant

D. A new-onset seizure without prior diagnosis of epilepsy

Answer:

61. A patient is seen in an outpatient neurology clinic 14 months after an ischemic stroke with persistent left-sided weakness. The correct code category for the left-sided weakness is:

A. I63.– (cerebral infarction) — the stroke caused the weakness

B. I69.3– (sequelae of cerebral infarction) — persistent post-stroke deficits

C. Z86.73 (personal history of TIA) — the acute episode is resolved

D. G81.– (hemiplegia) — unrelated to the stroke

Answer:

62. A right-hand dominant patient has right hemiplegia following a left cerebral infarction. For the hemiplegia sequela code, the right side is coded as:

A. Non-dominant — it is opposite the brain lesion

B. Dominant — the right side is the dominant side for a right-handed person

C. Unspecified — handedness was not explicitly stated as the reason for the visit

D. Non-dominant — left brain strokes always affect the non-dominant side

Answer:

63. A patient has primary open-angle glaucoma, right eye moderate stage, left eye moderate stage. The correct coding approach is:

A. Code each eye separately — right H40.1132, left H40.1122

B. Code bilateral with moderate stage — H40.1132

C. Code bilateral with severe stage (round up) — H40.1133

D. Code only the right eye as the principal diagnosis — H40.1122

Answer:

64. Which cataract code represents an age-related cortical cataract of the right eye?

A. H25.111 B. H25.011 C. H26.001 D. H25.811

Answer:

65. A child has otitis media with thick, serous fluid in the middle ear. No pus is present and no active infection is documented. The correct code category is:

A. H66.– (suppurative otitis media)

B. H67.– (otitis media in diseases classified elsewhere)

C. H65.– (nonsuppurative otitis media)

D. H66.9– (otitis media, unspecified)

Answer:

66. A patient with no history of ear trauma or drug use presents with bilateral hearing loss. Audiometry reveals a sensorineural pattern. The correct code is:

A. H90.0 — conductive hearing loss, bilateral

B. H90.6 — mixed conductive and sensorineural hearing loss, bilateral

C. H90.3 — sensorineural hearing loss, bilateral

D. H91.90 — unspecified hearing loss, unspecified ear

Answer:

67. A patient presents with ringing in the left ear only. The physician documents left-sided tinnitus. The correct code is:

A. H93.11 B. H93.12 C. H93.13 D. H93.19

Answer:

Section B — True / False (Questions 11–20)

Directions: Write T for True or F for False in the blank next to each statement.

68. In ICD-10-CM, the dementia code (F02.8–) is sequenced BEFORE the underlying Alzheimer's disease code (G30.–) because dementia is the chief complaint.

69. Remission specifiers for substance use disorders can be coded based on clinical inference from the coder's reading of the chart, even if the physician does not explicitly document "in remission."

70. "Refractory epilepsy" and "intractable epilepsy" are synonymous terms in ICD-10-CM and are coded to the same code character.

71. Category I69.– (sequelae of cerebrovascular disease) codes can NEVER be used on the same claim as an acute stroke code from I60–I67.

72. When a patient's handedness is not documented, the ICD-10-CM Official Guidelines default is to code the affected limb as non-dominant.

73. For bilateral glaucoma of two different types (one eye open-angle, other angle-closure), the coder should assign a single bilateral glaucoma code.

74. Age-related (senile) cataracts are coded from the H25.– category in ICD-10-CM.

75. Diabetic retinopathy in a Type 2 diabetic patient should be coded as a standalone H35.– retinopathy code without reference to the diabetes diagnosis.
76. H66.– codes (suppurative otitis media) are used when the physician documents middle ear effusion (fluid) without signs of active bacterial infection.
77. Eyelid condition codes in ICD-10-CM require both laterality (right/left) AND eyelid position (upper/lower) for most conditions.

Section C — Fill-in-the-Blank (Questions 21–25)

Directions: Fill in each blank with the correct term or code. Spell terms accurately.

78. The ICD-10-CM term for epilepsy that does not respond to medication — also called pharmacoresistant or poorly controlled — is _____.
79. A neurological deficit that persists after the acute phase of a CVA has resolved is called a _____. It is coded using the I___ category.
80. When a CVA sequela involves hemiplegia and the patient's handedness is not documented in the medical record, the ICD-10-CM Official Guideline instructs the coder to default to coding the affected side as _____.
81. Middle ear infection with pus present is classified as _____ otitis media, while fluid in the middle ear without active infection is classified as _____ otitis media.
82. Hearing loss caused by damage to the inner ear (cochlea) or auditory nerve is classified as _____ hearing loss in ICD-10-CM.

Section D — Coding Scenarios (Questions 26–30)

Directions: For each scenario, assign ALL correct ICD-10-CM codes, sequence them in the correct order, and write a brief rationale (1–2 sentences) explaining your sequencing decision. Use your ICD-10-CM manual.

83. **"Patient with Parkinson's disease presents with dementia, severe, with hallucinations and delusions (psychotic disturbance). Patient also has generalized anxiety disorder and bilateral sensorineural hearing loss."**

    Code 1: _ _ _ Code 2: _ _ _ . _ _ _ Code 3: _ _ _ . _

    Code 4: _ _ _ . _

    Rationale:

    &

Chapter-Specific Guidelines: ICD-10-CM Chapters 11–14

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Chapter contents

1. Digestive system

2. Skin and subcutaneous tissue

3. Musculoskeletal system and connective tissue

4. Genitourinary system

5. Chapter review questions

Prior-edition readings and exercises follow the revised lesson and may use the earlier chapter arrangement.

Learning objectives

- Identify the documentation details that determine code selection and sequencing.
- Apply chapter-specific rules using the Alphabetic Index and the Tabular List.
- Explain each coding decision in a worked or independent case.

Official ICD-10-CM Chapter 11 · K00–K95

Digestive system

Digestive codes often change when the site or complication changes. Identify details such as esophagitis, bleeding, perforation or obstruction, and verify whether one code already describes them.

Section I.B.1–2; Tabular List · Official Chapter 11 · FY 2026 | Digestive specificity

Official I.C.11 is reserved.

Verify the site and any documented complication, such as bleeding or obstruction, in the Tabular List.

Worked example: GERD without esophagitis: K21.9.

Digestive hemorrhage

For a documented ulcer with bleeding, verify a combination code that accounts for ulcer site, acuity and hemorrhage. Compare it with a record that documents gastrointestinal bleeding without an identified source.

Worked coding example

Scenario	The provider diagnoses GERD without esophagitis.
Chart clue	Without esophagitis.
Index starting point	Reflux, gastroesophageal
Tabular verification	Confirm the candidate code description, required detail, and all sequencing or additional-code instructions.
Final code(s) and rationale	K21.9. Section I.C.11 has no dedicated guideline; verify the documented detail in the Tabular List.

CHAPTER REVIEW

GERD with esophagitis without bleeding is confirmed. Which code?

Show your main term, Tabular List check, final code(s) in order, and reasoning.

CMS/NCHS: FY 2026 Official Coding Guidelines

Official ICD-10-CM Chapter 12 · L00–L99

Skin and subcutaneous tissue

Ulcer coding begins with the type of ulcer. A pressure ulcer uses a stage; a non-pressure chronic ulcer uses severity and site details. Check which documentation can supply those details and whether another condition must be sequenced first.

Section I.C.12.a–b; I.B.14 · Official Chapter 12 · FY 2026 | Ulcer site, stage and severity

Distinguish pressure-ulcer stage from non-pressure ulcer severity.

Qualifying clinician documentation can support these details when the diagnosis is established.

Worked example: Provider documents sacral pressure ulcer and wound clinician documents stage 3: L89.153.

Worked coding example

Scenario	The provider documents a sacral pressure ulcer; the wound nurse documents stage 3.
Chart clue	Provider confirms ulcer and site; nurse supplies stage.
Index starting point	Ulcer, pressure, sacral
Tabular verification	Confirm the candidate code description, required detail, and all sequencing or additional-code instructions.
Final code(s) and rationale	L89.153; the code captures both site and stage.

CHAPTER REVIEW

The same site is documented as stage 2. Which code?

Show your main term, Tabular List check, final code(s) in order, and reasoning.

CMS/NCHS: FY 2026 Official Coding Guidelines

Official ICD-10-CM Chapter 13 · M00–M99

Musculoskeletal system and connective tissue

For musculoskeletal conditions, record the site and side before opening the Index. A current injury, a pathological fracture and a chronic joint condition may fall in different categories. Active treatment and routine healing can change the seventh character.

Section I.C.13.b–d · Official Chapter 13 · FY 2026 | Traumatic vs. pathological fractures

Use the documented fracture type.

For osteoporosis with a current pathological fracture, verify site, laterality and phase of care.

Worked example: Age-related osteoporotic pathological fracture of right femur during active treatment: M80.051A.

Joint infection and pathological fracture

For infectious arthropathy, verify organism and joint instructions. For a pathological fracture, establish the documented underlying disease and whether fracture treatment or treatment of the underlying disease chiefly drives the encounter; check I.C.13 and Tabular notes.

Worked coding example

Scenario	A patient receives active treatment for an age-related osteoporotic pathological fracture of the right femur.
Chart clue	Osteoporosis with current pathological fracture; active treatment.
Index starting point	Osteoporosis, with current pathological fracture
Tabular verification	Confirm the candidate code description, required detail, and all sequencing or additional-code instructions.
Final code(s) and rationale	M80.051A; verify bone, side and encounter character.

CHAPTER REVIEW

The same fracture is now receiving routine healing follow-up. Which code?

Show your main term, Tabular List check, final code(s) in order, and reasoning.

Official ICD-10-CM Chapter 14 · N00–N99

Genitourinary system

A CKD code describes the documented stage, while another code may describe its cause. Separate ESRD from stage 5 CKD and verify dialysis dependence when applicable. Do not assign a stage from a lab result alone.

Section I.C.14.a; Tabular List · Official Chapter 14 · FY 2026 | CKD stage and ESRD

When both a CKD stage and ESRD are documented, use ESRD alone for kidney stage.

Add dialysis dependence when applicable.

Worked example: ESRD management with maintenance dialysis dependence: N18.6 + Z99.2.

Worked coding example

Scenario	A visit for ESRD management documents stage 5 CKD, ESRD and dependence on maintenance dialysis.
Chart clue	ESRD and dialysis dependence.
Index starting point	Disease, kidney, end-stage
Tabular verification	Confirm the candidate code description, required detail, and all sequencing or additional-code instructions.
Final code(s) and rationale	N18.6 then Z99.2. Do not also report N18.5.

CHAPTER REVIEW

The provider documents stage 5 CKD without ESRD or dialysis dependence. Which CKD code?

Show your main term, Tabular List check, final code(s) in order, and reasoning.

CMS/NCHS: FY 2026 Official Coding Guidelines

MEDICAL CODING MASTERY | STUDENT EDITION

CHAPTER 6

ICD-10-CM: Circulatory, Respiratory, Digestive and Skin Systems

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▶️ Chapter Objectives

Upon completing this chapter, you will be able to:

1. Identify and apply the correct ICD-10-CM combination codes for hypertension with chronic kidney disease and heart disease using the I10–I16 and I11–I13 code families.
2. Differentiate between essential and secondary hypertension and sequence secondary hypertension codes correctly.
3. Apply the 28-day rule for acute myocardial infarction and distinguish between STEMI, NSTEMI, and Type 2 MI coding.
4. Select the correct heart failure code based on type (systolic, diastolic, combined, right-sided) and acuity (acute, chronic, acute on chronic).
5. Code atrial fibrillation and flutter with precision, distinguishing paroxysmal, persistent, and permanent classifications.
6. Apply ICD-10-CM COPD and asthma codes correctly, distinguishing exacerbation from status asthmaticus and coding both conditions when documented together.
7. Code pneumonia to the highest degree of specificity, selecting organism-specific codes before defaulting to unspecified pneumonia.

8. Assign digestive system codes for GERD, peptic ulcer disease, hernias, and diverticular disease using all required code elements.

9. Apply pressure injury (pressure ulcer) staging rules, including current stage, healing stage, and unstageable classifications, and explain the POA impact.

10. Code cellulitis and non-pressure skin ulcers with correct site specificity and laterality, and build complete multi-system code sets for complex documentation scenarios.

▶️ Key Terms

Acute myocardial infarction (AMI)

Angina

Asthma

Atherosclerosis

COPD

Cellulitis

Cerebrovascular accident (CVA)

Chronic kidney disease (CKD)

Cor pulmonale

Embolism

Heart failure

Hypertension

Ileus

Obstruction

Peptic ulcer

Pressure ulcer (Pressure injury)

Pulmonary embolism (PE)

Respiratory failure

STEMI / NSTEMI

Thrombosis

Chapter Overview

This chapter covers four of the most heavily coded body system chapters in all of ICD-10-CM: the circulatory system (Chapter 9), the respiratory system (Chapter 10), the digestive system (Chapter 11), and the skin and subcutaneous tissue (Chapter 12). Together, these four chapters account for the majority of inpatient diagnoses on Medicare claims and represent some of the highest-frequency diagnosis codes you will encounter in every healthcare setting — from outpatient clinics and emergency departments to skilled nursing facilities and acute care hospitals. If you are preparing for the CPC exam, know this: mastering these four chapters is not optional. They are tested every single time. This chapter will walk you through the high-yield topics in each system with the specificity, combination code logic, and sequencing rules you need to code them correctly — and confidently — every time.

SECTION 6.1

|

ICD-10-CM Chapter 9: Diseases of the Circulatory System (I00

–

I99)

The circulatory system chapter is the single most-coded chapter in ICD-10-CM for both inpatient and outpatient settings. **Hypertension**, **heart failure**, **coronary artery disease**, **acute myocardial infarction**, **atrial fibrillation**, **deep vein thrombosis**, and **pulmonary embolism** — these are the diagnoses you will see on your desk every single day as a working coder. ICD-10-CM uses many combination codes in this chapter, which means one code captures both the condition AND the cause. Learn to recognize those combination codes and you will save time, avoid audits, and code at the highest level of specificity the guidelines require.

6.1A

—

Hypertension Coding

HIGH YIELD

Essential vs. Secondary Hypertension

Essential (primary) hypertension — code `I10` — is hypertension with no identifiable underlying cause. It is by far the most common type. Here is what trips up new coders: ICD-10-CM does NOT distinguish hypertension by stage the way JNC clinical guidelines do. There is no code for “Stage 1 hypertension” or “Stage 2 hypertension” in ICD-10-CM. There is one code — `I10` — and it covers all stages of essential hypertension, from mildly elevated blood pressure to severely elevated blood pressure, with no organ damage.

☠️ **STOP!**

I10 is the ONLY code for essential (primary) hypertension. Do NOT add a stage modifier code. Do NOT code the blood pressure reading as an additional code. ICD-10-CM does not classify essential hypertension by clinical stage

(Stage 1, Stage 2) the way JNC guidelines do. When the provider documents “hypertension” or “essential hypertension” without any qualifying secondary cause, your answer is always `I10` — full stop.

Secondary hypertension — category `I15.–` — is caused by another identifiable condition. When you have secondary hypertension, you must sequence the underlying cause FIRST, then the secondary hypertension code.

Code	Secondary Hypertension Type	Sequencing Note
`I15.0`	Renovascular hypertension	Code underlying renovascular condition first
`I15.1`	Hypertension secondary to other renal disorders	Code underlying renal disorder first
`I15.2`	Hypertension secondary to endocrine disorders	Code underlying endocrine condition first
`I15.9`	Secondary hypertension, unspecified	Use only when cause is documented but unspecified

Hypertension with Chronic Kidney Disease (CKD) HIGH YIELD

This is one of the most tested combination code relationships in ICD-10-CM. When a patient has BOTH **hypertension** AND **chronic kidney disease (CKD)**, ICD-10-CM assumes a causal relationship — even if the provider does not document it as causal. You do not need the phrase “hypertension due to CKD” or “CKD caused by hypertension.” The guidelines tell you to assume it. You must use the combination codes in category `I12.–` and ALWAYS add the CKD stage code (N18.1–N18.6) as an additional code.

Code	Description	Additional Code Required
`I12.9`	Hypertensive CKD with stage 1 through stage 4 CKD, or unspecified CKD	N18.1, N18.2, N18.3, N18.4, or N18.9
`I12.30`	Hypertensive CKD with stage 5 CKD or ESRD with hemodialysis	N18.5 or N18.6 + Z99.2 (dependence on dialysis)
`I12.31`	Hypertensive CKD with	N18.5 or N18.6

Code	Description	Additional Code Required
	stage 5 CKD or ESRD without dialysis	

Hypertension with Heart Disease

Just like with CKD, ICD-10-CM assumes a causal relationship between **hypertension** and **heart disease**. Codes in category `I11.–` capture both conditions together.

- `I11.0` — Hypertensive heart disease WITH heart failure → always add `I50.–` for type of heart failure
- `I11.9` — Hypertensive heart disease WITHOUT heart failure

Hypertension with Both Heart Disease AND CKD HIGH YIELD

When all three conditions are present — hypertension, heart disease, AND CKD — use the `I13.–` combination codes. These are the most complex hypertension combination codes and a guaranteed exam topic.

Code	Description	Add Codes
`I13.0`	Hypertensive heart and CKD WITH heart failure, with stage 1–4 CKD or unspecified	I50.– (HF type) + N18.1–N18.4 or N18.9
`I13.10`	Hypertensive heart and CKD WITHOUT heart failure, with stage 1–4 CKD or unspecified	N18.1–N18.4 or N18.9
`I13.11`	Hypertensive heart and CKD WITHOUT heart failure, with stage 5 or ESRD	N18.5 or N18.6
`I13.2`	Hypertensive heart and CKD WITH heart failure, with stage 5 or ESRD	I50.– (HF type) + N18.5 or N18.6

Hypertensive Crisis

- `I16.0` — **Hypertensive urgency**: severely elevated BP, NO organ damage
- `I16.1` — **Hypertensive emergency**: severely elevated BP WITH acute organ damage (encephalopathy, acute kidney injury, retinal hemorrhage)

- I16.9 — Hypertensive crisis, unspecified

Hypertension Combination Code Quick Reference

#	Clinical Scenario	Primary Code	Additional Code(s)
1	Essential hypertension, no other conditions	I10	None
2	Hypertension + CKD Stage 2	I12.9	N18.2
3	Hypertension + CKD Stage 4	I12.9	N18.4
4	Hypertension + ESRD on hemodialysis	I12.30	N18.6 + Z99.2
5	Hypertension + heart failure (systolic, chronic)	I11.0	I50.22
6	Hypertension + heart disease, no heart failure	I11.9	None
7	Hypertension + CKD Stage 3 + chronic systolic HF	I13.0	I50.22 + N18.3
8	Hypertension + CKD Stage 1, no heart failure	I13.10	N18.1
9	Hypertensive urgency	I16.0	None (+ I10 if chronic HTN documented)
10	Secondary HTN due to primary hyperaldosteronism	E26.0– (underlying endocrine cause)	I15.2

📄 **WORKED EXAMPLE — Hypertension Combination Coding**

Scenario: “Patient admitted with hypertension, Stage 3 CKD, and congestive heart failure.”

Step 1 — Identify all conditions: Hypertension. CKD Stage 3. Heart failure (CHF documented — need to determine type from record; no specific type

documented → use unspecified).

Step 2 — Apply combination code logic: All three conditions present (HTN + heart disease + CKD) → use I13.– family. Heart failure IS present → I13.0 (with HF, with Stage 1–4 CKD).

Step 3 — Build the code set:

- Code 1: `I13.0` — Hypertensive heart and chronic kidney disease with heart failure and stage 1 through stage 4 CKD, or unspecified CKD
- Code 2: `I50.9` — Heart failure, unspecified (query provider if systolic vs. diastolic is documented elsewhere in chart)
- Code 3: `N18.3` — CKD, Stage 3

Rationale: I13.0 subsumes the relationship between all three conditions. I50.9 specifies the heart failure type — upgrade to I50.22 or I50.32 if type documented. N18.3 specifies the CKD stage as required by tabular instruction "use additional code."

▶️ **Official Guidelines for Coding and Reporting**

Section I.C.9.a — Hypertension:

"The classification presumes a causal relationship between hypertension and heart involvement and between hypertension and kidney involvement, as the two conditions are linked by the term 'with' in the Alphabetic Index. These conditions should be coded as related even in the absence of provider documentation explicitly linking them, unless the documentation clearly states the conditions are unrelated."

Plain-English Translation: You do not need the physician to write "hypertension CAUSED the CKD" or "CKD CAUSED by hypertension." If both are documented in the same patient record, code them together using the combination code. This is one of the most important rules in this entire chapter.

Section I.C.9.e — Acute Myocardial Infarction (AMI):

"An AMI documented as STEMI or NSTEMI that is not indicated as chronic or in the

healed or old phase should be coded as ACUTE. A code from category I21 (STEMI and NSTEMI) should be used for AMIs coded as either STEMI or NSTEMI for up to 28 days post AMI, unless the patient received a new AMI or an acute MI documented as NSTEMI is converted to a STEMI during the same encounter."

Plain-English Translation: Any MI that is described as current, ongoing, or recent — and is not documented as "old," "healed," or "past" — is coded with I21.– for up to 28 days after the event. After 28 days: I25.2 (old MI). Never use I21.– for a heart attack that happened 3 months ago.

🛠️ From the Trenches

"When I first started coding inpatient cardiology, hypertension combination codes terrified me — I kept coding I10 for everything because it felt safe. My supervisor sat me down and showed me how I13.0 versus I13.10 versus I13.2 each triggers a different DRG and a completely different reimbursement level. Once I understood the financial and clinical stakes, I made a laminated quick-reference card for my desk and never miscoded them again. Now it's the first thing I teach every coder on my team."

— **Angela Reeves, CPC, CIC** | Inpatient Cardiology Coder | Memorial Regional Hospital, Hollywood, FL

6.1B

—

Heart Failure

HIGH YIELD

Heart failure coding is nuanced — and it has to be. The type and acuity of heart failure determine the DRG, the quality metrics, and the clinical picture. As a coder,

you are responsible for capturing what the provider documented with precision. “CHF” alone does not cut it. Let’s break it down.

Understanding the Types

- **Systolic heart failure**: The heart muscle is weak — it cannot pump enough blood out with each contraction. Associated with reduced ejection fraction (HFrEF).
- **Diastolic heart failure**: The heart muscle is stiff — it cannot relax and fill properly between beats. Associated with preserved ejection fraction (HFpEF).
- **Combined systolic and diastolic**: Both problems are present simultaneously.
- **Right heart failure**: Failure of the right ventricle — often due to left heart failure, pulmonary hypertension, or cor pulmonale.

Code	Type	Acuity
I50.20	Systolic HF	Unspecified
I50.21	Systolic HF	Acute
I50.22	Systolic HF	Chronic
I50.23	Systolic HF	Acute on chronic
I50.30	Diastolic HF	Unspecified
I50.31	Diastolic HF	Acute
I50.32	Diastolic HF	Chronic
I50.33	Diastolic HF	Acute on chronic
I50.40	Combined systolic & diastolic HF	Unspecified
I50.43	Combined systolic & diastolic HF	Acute on chronic
I50.810	Right heart failure	Unspecified
I50.811	Right heart failure	Acute
I50.812	Right heart failure	Chronic
I50.813	Right heart failure	Acute on chronic
I50.814	Right heart failure due to left heart failure	—
I50.9	Heart failure, unspecified	Last resort — always query

Code	Type	Acuity
		first

📸 Coding Shot

“Congestive heart failure” (CHF) alone defaults to I50.9. But before you assign unspecified, check the entire record — the echo report, the cardiology consult, the discharge summary. Terms like “reduced ejection fraction,” “HFrEF,” or “preserved ejection fraction,” “HFpEF” tell you exactly whether the failure is systolic or diastolic. That single piece of documentation changes the code and the DRG. Query the provider if you cannot find it in the record.

★ CMS Rules — Medicare Reimbursement Impact

Medicare pays significantly more for heart failure coded as a Complication or Comorbidity (CC) or Major Complication or Comorbidity (MCC). Accurate heart failure type coding — **systolic versus diastolic**, **acute versus chronic versus acute on chronic** — directly affects DRG assignment and hospital reimbursement. Coding I50.9 (heart failure, unspecified) when documentation supports a more specific code is not just a clinical documentation failure — it is a missed reimbursement opportunity and a compliance risk. Facilities that routinely under-code heart failure are a CMS audit target.

6.1C

—

Acute Myocardial Infarction (AMI)

HIGH YIELD

STEMI vs. NSTEMI — Know the Difference

A **STEMI (ST-Elevation Myocardial Infarction)** occurs when a coronary artery is completely blocked, cutting off blood supply to a segment of the heart muscle. The ST segment on the EKG shows elevation. STEMI is the more severe and immediately life-threatening type of MI.

An **NSTEMI (Non-ST-Elevation Myocardial Infarction)** occurs when a coronary artery is partially blocked. There may be ST changes, depression, or T-wave inversions — but no ST elevation. NSTEMI is serious but generally causes less immediate myocardial damage than STEMI.

Never interchange STEMI and NSTEMI codes. The documentation will specify which type — if it does not, query the provider.

The 28-Day Rule — Critical

An MI is coded as **ACUTE** using category `I21.–` for up to **28 days** from the date of the event. After 28 days have passed, the MI is coded as `I25.2` — Old MI / Healed MI. A subsequent MI occurring within 28 days of the initial MI uses category `I22.–`.

> ⚠️ **CAUTION!**
>
> Coding an old myocardial infarction — one that occurred more than 28 days ago — with an acute MI code (`I21.–`) is **overcoding**. It artificially inflates the DRG weight, which means the facility is paid more than it should be. This is a frequent finding on RAC (Recovery Audit Contractor) audits and OIG work plan reviews. It can result in claim recoupment, corrective action plans, and in egregious cases, fraud and abuse liability. Always check the date of the MI before assigning I21.–.

Code	Description	Timeframe
`I21.01`	STEMI of anterior wall (LAD territory)	Acute (≤28 days)
`I21.02`	STEMI of inferior wall (RCA territory)	Acute (≤28 days)
`I21.09`	STEMI of other sites	Acute (≤28 days)

Code	Description	Timeframe
I21.3	STEMI of unspecified site — avoid; query provider	Acute (≤28 days)
I21.4	NSTEMI — one code regardless of coronary vessel	Acute (≤28 days)
I21.A1	Type 2 MI — demand ischemia (not plaque rupture)	Acute presentation
I22.0	Subsequent STEMI of anterior wall	Within 28 days of initial MI
I22.1	Subsequent STEMI of inferior wall	Within 28 days of initial MI
I22.2	Subsequent NSTEMI	Within 28 days of initial MI
I25.2	Old myocardial infarction (healed)	>28 days from event

Type 2 MI (I21.A1) is a critical distinction. A Type 2 MI is NOT caused by plaque rupture and thrombus formation. It is caused by a supply/demand mismatch — the heart muscle does not get enough oxygen because of conditions like severe anemia, extreme tachycardia, hypotension, or coronary vasospasm. You must code the underlying condition that caused the supply/demand mismatch as an additional code.

📸 Coding Shot

STEMI location matters. For STEMI codes, you need to identify the wall of the heart that is affected — anterior, inferior, or other. The LAD (left anterior descending artery) typically supplies the anterior wall → I21.01. The RCA (right coronary artery) typically supplies the inferior wall → I21.02. For NSTEMI, there is only ONE code — I21.4 — regardless of which vessel is involved. You do not need the location for NSTEMI.

6.1D

—

Atrial Fibrillation and Flutter

Atrial fibrillation (AF or Afib) is one of the most common cardiac arrhythmias. ICD-10-CM requires you to know the pattern of the arrhythmia — not just that it exists. Paroxysmal AF, persistent AF, and permanent AF are three completely different clinical entities with different treatment strategies. Your code must reflect the correct classification.

Code	Type	Clinical Definition
I48.0	Paroxysmal AF	Comes and goes; terminates spontaneously within 7 days
I48.11	Longstanding persistent AF	Continuous >12 months; cardioversion attempted
I48.19	Other persistent AF	Continuous >7 days but ≤12 months
I48.20	Chronic AF, unspecified	Permanent — rate control only; no cardioversion planned
I48.21	Permanent AF	Decision made to forego rhythm control; rate control only
I48.3	Typical atrial flutter	Regular flutter with 2:1, 3:1, or 4:1 block; counterclockwise
I48.4	Atypical atrial flutter	Clockwise isthmus-independent flutter
I48.91	Unspecified AF	Last resort — always query provider for classification

📸 Coding Shot

For atrial fibrillation, **always look for the classification** in the record before assigning I48.91. Check the cardiology notes, the discharge summary, and the EKG interpretation for terms like “paroxysmal,” “persistent,” “longstanding persistent,” or “permanent.” These are three completely different clinical

entities with different treatment implications. I48.91 should be the absolute last resort. Query if you cannot find the answer in the chart.

6.1E

—

Deep Vein Thrombosis and Pulmonary Embolism

DVT and PE coding requires three pieces of information: the **vessel** involved, the **laterality**, and the **acuity** (acute vs. chronic). PE coding additionally requires whether **acute cor pulmonale** is present.

Code	Description
I82.401	Acute DVT, unspecified deep vessels, right lower extremity
I82.402	Acute DVT, unspecified deep vessels, left lower extremity
I82.4H1	Acute DVT of right tibial vein
I82.4H2	Acute DVT of left tibial vein
I82.5–	Chronic DVT (same vessel specificity required)
I82.B–	DVT of upper extremity (subclavian, brachial, radial, ulnar)
I26.01	Septic pulmonary embolism with acute cor pulmonale
I26.09	Other PE with acute cor pulmonale
I26.90	Unspecified PE without acute cor pulmonale
I26.99	Other PE without acute cor pulmonale

✔️ **Check This Out**

Heart disease is the #1 cause of death in the United States — accounting for approximately 1 in every 5 deaths. Circulatory system diagnosis codes are the most reported codes on Medicare inpatient and outpatient claims every single year. A coder who masters ICD-10-CM Chapter 9 is a coder who will always be in demand.

Quick Check 6.1

Answer each question briefly in the space provided. Review your answers before moving on.

1. A patient has essential hypertension, CKD Stage 3, and chronic diastolic heart failure. What is the correct PRIMARY combination code?

2. An MI is documented as occurring 35 days ago and is now healed. What code is used?

3. What is the key difference between STEMI and NSTEMI regarding coronary artery obstruction?

4. A patient's AF comes and goes and terminates on its own within a few days. What AF classification applies?

5. When coding a pulmonary embolism, what additional clinical finding must you check for beyond the PE itself?

🔨 Toolbox — Section 6.1 Key Points

- **I10** is the one and only code for essential hypertension — no stage codes exist in ICD-10-CM.
- When HTN + CKD are both documented → ICD-10-CM assumes causal

relationship → use I12.– combination codes + N18.– CKD stage code.

• When HTN + Heart Disease + CKD are all present → use I13.– family; choose based on presence/absence of heart failure and CKD stage.

• AMI is coded as ACUTE (I21.–) for up to 28 days; use I25.2 after 28 days; use I22.– for a subsequent MI within 28 days.

• Heart failure requires two decisions: TYPE (systolic/diastolic/combined/right) and ACUITY (acute/chronic/acute on chronic) — never default to I50.9 when documentation supports more specificity.

Exercise 6-A — Circulatory System Coding

Directions: For each item, select the correct code(s), fill in the blank, or answer True/False as directed. This is a student edition — answers are not provided. Check your responses against your ICD-10-CM codebook.

Part 1: Hypertension Combination Code Selection

Assign the correct primary ICD-10-CM code for each scenario.

1. Patient has essential hypertension. No other cardiac or renal conditions documented.

Code: _ _ _ _ _ _

2. Patient has hypertension and CKD Stage 4. No heart disease documented.

Code 1: _ _ _ _ _ _ . _ _ Code 2 (CKD stage): _ _ _ _ _ _ . _ _

3. Patient has hypertension, CKD Stage 2, and chronic systolic heart failure.

Code 1: _ _ _ _ _ _ . _ _ Code 2 (HF type): _ _ _ _ _ _ . _ _ _ _
Code 3 (CKD): _ _ _ _ _ _ . _ _

4. Patient with secondary hypertension due to primary hyperaldosteronism (endocrine cause).

First-listed code (underlying cause): Secondary code: _ _ _ _ _ _ . _ _

5. Patient presents to the ED with severely elevated blood pressure and acute hypertensive encephalopathy (organ damage present).

Code: _ _ _ _ _ _ . _ _

Part 2: Heart Failure Type Coding

Select the correct heart failure code based on the documentation provided.

6. “Acute on chronic diastolic heart failure”

Code: _ _ _ _ _ _ . _ _ _ _

7. “Chronic right heart failure due to left heart failure”

Code: _ _ _ _ _ _ . _ _ _ _ _ _

8. Documentation states “CHF” only. No echo on file, no further specification.

Code: _ _ _ _ _ _ . _ _ Should you query? **T** / **F**

Part 3: STEMI, NSTEMI, and AMI

9. “STEMI of the inferior wall, confirmed on EKG, day 5 of hospitalization.”

Code: _ _ _ _ _ _ . _ _ _ _

10. “NSTEMI, admitted today.”

Code: _ _ _ _ _ _ . _ _

11. A patient mentions in the history that she had a heart attack 6 weeks ago. She is here for an unrelated visit. How is the prior MI coded?

Code: _ _ _ _ _ _ . _ _ Explain why:

Part 4: True/False — Atrial Fibrillation and DVT/PE

Circle T for True or F for False.

12. T / **F** Atrial flutter and atrial fibrillation are coded with the same ICD-10-CM code.

13. T / **F** For DVT coding, you must document the specific vessel, laterality, and whether the DVT is acute or chronic.

14. T / **F** A patient with paroxysmal atrial fibrillation whose AF terminates

spontaneously in 3 days should be coded I48.21 (Permanent AF).

15. T / F A pulmonary embolism with acute cor pulmonale is coded differently than a PE without cor pulmonale.

SECTION 6.2

|

ICD-10-CM Chapter 10: Diseases of the Respiratory System (J00

–

J99)

The respiratory system chapter covers conditions of the upper and lower respiratory tract. You will code these in every setting — hospital inpatient, hospital outpatient, clinic, urgent care, and pulmonology practices. The highest-yield topics for the CPC exam and for real-world coding are **COPD**, **asthma**, **pneumonia**, and **respiratory failure**. The key rule across all of these: always code to the highest specificity documented. Organism-specific pneumonia. COPD WITH or WITHOUT exacerbation. Asthma by severity AND acuity. Never leave specificity on the table.

6.2A

—

COPD and Emphysema

HIGH YIELD

Chronic Obstructive Pulmonary Disease (COPD) is a progressive inflammatory lung disease that causes obstructed airflow. In ICD-10-CM, COPD coding requires

you to determine whether an exacerbation or an acute lower respiratory infection is present.

Code	Description	Key Rule
J44.0	COPD with acute lower respiratory infection	Add code for the specific infection (e.g., J18.9 pneumonia)
J44.1	COPD with (acute) exacerbation	Worsening of baseline COPD symptoms; not due to infection alone
J44.9	COPD, unspecified	Stable COPD — no exacerbation, no acute infection

COPD + Asthma: Per ICD-10-CM guidelines, when COPD and asthma are both documented in the same patient, code BOTH conditions — J44.– AND J45.–.

Emphysema

Emphysema describes destruction of the alveolar walls, causing air trapping and reduced gas exchange. When emphysema occurs with COPD, the COPD code (J44.–) typically subsumes the emphysema. Emphysema codes (J43.–) are used when emphysema is documented without COPD or when the specific type is relevant.

Code	Type of Emphysema
J43.0	Unilateral pulmonary emphysema (MacLeod's syndrome)
J43.1	Panlobular emphysema
J43.2	Centrilobular emphysema
J43.9	Emphysema, unspecified

🛠️ From the Trenches

"COPD with exacerbation versus COPD without exacerbation is the most commonly miscoded respiratory diagnosis I see in audits — hands down. Coders will assign J44.9 because the provider simply wrote 'COPD admitted,' but when you read the H&P and nursing notes, the patient clearly came in with worsened

dyspnea, increased sputum production, and had to be nebulized every four hours. That is an exacerbation. J44.1 versus J44.9 changes the DRG. I pull these apart every single week."

— **Monique Tran, CPC, CPMA** | Pulmonology Audit Specialist | Baptist Health South Florida, Miami, FL

6.2B

—

Asthma

HIGH YIELD

Asthma coding in ICD-10-CM requires you to capture two independent dimensions: **severity** (mild intermittent, mild persistent, moderate persistent, severe persistent, or other/unspecified) and **acuity** (uncomplicated, with acute exacerbation, or with status asthmaticus). Together these determine a 4th or 5th character subcategory code.

Status asthmaticus is not just a severe asthma attack. It is a prolonged, severe asthma attack that does not respond to initial bronchodilator therapy. It is a medical emergency. It is always coded as the higher acuity — and it changes the DRG.

Severity	Uncomplicated	With Acute Exacerbation	With Status Asthmaticus
Mild intermittent	J45.20	J45.21	J45.22
Mild persistent	J45.30	J45.31	J45.32
Moderate persistent	J45.40	J45.41	J45.42
Severe persistent	J45.50	J45.51	J45.52
Other asthma	J45.901	J45.901	J45.902
Unspecified asthma	J45.909	—	—

☠️ **STOP!**

Status asthmaticus is NOT the same as an asthma exacerbation. An exacerbation is a worsening of asthma symptoms — it may respond to a breathing treatment in the office. Status asthmaticus is a life-threatening emergency: the attack does not respond to standard bronchodilator treatment and the patient may require intubation or ICU-level care. If the provider documents “status asthmaticus,” you MUST code it — it changes the code’s 5th character to “2” and significantly impacts the DRG. Do not downcode it to an exacerbation. Do not confuse the two.

6.2C

—

Pneumonia

HIGH YIELD

The #1 rule for pneumonia coding: **code to the specific organism whenever it is documented.** Check the culture results. Check the microbiology report. Check the radiology report. If a specific organism is documented anywhere in the record, you are expected to code it. J18.9 (pneumonia, unspecified organism) is a last resort — not a default.

Code	Organism / Type
J12.0	Adenoviral pneumonia
J12.1	RSV pneumonia
J12.89	Other viral pneumonia
J13	Pneumonia due to Streptococcus pneumoniae
J14	Pneumonia due to Haemophilus influenzae
J15.0	Pneumonia due to Klebsiella pneumoniae

Code	Organism / Type
J15.1	Pneumonia due to Pseudomonas
J15.5	Pneumonia due to E. coli
J15.6	Pneumonia due to other gram-negative bacteria
J15.7	Pneumonia due to Mycoplasma pneumoniae
J15.9	Unspecified bacterial pneumonia
J16.0	Chlamydial pneumonia
J17	Pneumonia in diseases classified elsewhere (code first underlying disease)
J18.0	Bronchopneumonia, unspecified organism
J18.1	Lobar pneumonia, unspecified organism
J18.9	Pneumonia, unspecified organism — LAST RESORT

⚠️ CAUTION!

Never assign J18.9 (pneumonia, unspecified organism) when a specific organism is documented in the culture report or in the provider's documentation. Submitting an unspecified pneumonia code on a claim when a specific organism was identified in the record is **undercoding** — and it is an active audit flag. CMS and commercial payers look for claims where the specificity of the documentation does not match the specificity of the code. Always check the lab culture results before closing a pneumonia claim.

📸 Coding Shot

When pneumonia is documented as being "due to" a specific bacteria, look in the **J13–J16** range FIRST before going to J18.9. J13 (Streptococcus pneumoniae), J14 (Haemophilus influenzae), and J15.0–J15.9 (other bacterial pneumonias) give you specific organism-level codes. Reserve J18.9 for when no organism has been identified, cultured, or documented anywhere in the record — which is rarer

than most new coders assume.

★ CMS Rules — Hospital-Acquired Conditions and Pneumonia

Under the CMS Hospital-Acquired Conditions (HAC) program, pneumonia acquired during a hospitalization affects quality reporting scores and can result in reimbursement penalties under the Hospital Readmissions Reduction Program (HRRP). Pneumonia is also a core measure in Medicare's pay-for-performance programs. Accurate organism-specific coding improves the quality data profile of your facility and is required to distinguish community-acquired from hospital-acquired pneumonia in quality metrics reporting. Inaccurate pneumonia coding is not just a documentation issue — it is a quality and reimbursement issue.

▶️ Official Guidelines for Coding and Reporting

Section I.C.10 — COPD and Asthma (J44.– and J45.–):

"The codes in categories J44 and J45 distinguish between uncomplicated cases and those in acute exacerbation. An acute exacerbation is a worsening or a decompensation of a chronic condition. An acute exacerbation is not equivalent to an infection superimposed on a chronic condition, though an exacerbation may be triggered by an infection. When COPD and asthma are documented, assign codes from both J44 and J45."

Plain-English Translation: COPD exacerbation and COPD with infection are not the same thing — they have different codes. J44.0 = infection present. J44.1 = exacerbation without an acute infection triggering it. If both conditions (COPD and asthma) are documented, code both. Do not assume one subsumes the other.

6.2D

—

Respiratory Failure

Respiratory failure occurs when the respiratory system cannot adequately exchange oxygen and carbon dioxide. ICD-10-CM classifies respiratory failure by **acuity** (acute, chronic, acute-on-chronic, unspecified) and by **type** (with hypoxia, with hypercapnia, or unspecified).

Code	Description
J96.00	Acute respiratory failure, unspecified (hypoxia or hypercapnia not specified)
J96.01	Acute respiratory failure with hypoxia (low oxygen)
J96.02	Acute respiratory failure with hypercapnia (elevated CO2)
J96.10	Chronic respiratory failure, unspecified
J96.11	Chronic respiratory failure with hypoxia
J96.12	Chronic respiratory failure with hypercapnia
J96.20	Acute and chronic respiratory failure, unspecified
J96.21	Acute and chronic respiratory failure with hypoxia
J96.22	Acute and chronic respiratory failure with hypercapnia
J95.821	Acute post-procedural respiratory failure (sequenced after the complication code)

📸 Coding Shot

Respiratory failure sequencing is a classic exam scenario. When a patient is admitted because of respiratory failure, and the respiratory failure was caused by another condition (e.g., pneumonia causing acute hypoxic respiratory failure), the respiratory failure may be sequenced as the principal diagnosis if it

is the condition chiefly responsible for the admission. Follow the principal diagnosis selection guidelines in Section II of the ICD-10-CM Official Guidelines carefully — respiratory failure vs. the underlying condition is a judgment call that depends on the circumstances of the admission.

6.2E — Influenza

Code	Description
J09.X1	Influenza due to novel influenza A with pneumonia
J09.X2	Influenza due to novel influenza A with other respiratory manifestations
J10.01	Influenza due to seasonal influenza virus with pneumonia, same identified virus
J10.1	Influenza due to seasonal influenza virus with other respiratory manifestations
J11.00	Influenza due to unidentified influenza virus with pneumonia, unspecified
J11.1	Influenza due to unidentified influenza virus with other respiratory manifestations

✔️ Check This Out

COPD is the 4th leading cause of death in the United States and accounts for more than **$32 billion** in annual healthcare expenditures. It affects over 16 million diagnosed Americans, with millions more living with the disease undiagnosed. Accurate COPD coding — including exacerbation status — directly influences hospital quality scorecards, readmission rates, and CMS

reimbursement.

Quick Check 6.2

1. A patient with COPD is admitted for a Klebsiella pneumonia infection. What two codes are required?

2. What is the key distinguishing clinical feature of status asthmaticus compared to an acute asthma exacerbation?

3. A patient has moderate persistent asthma with an acute exacerbation. What is the correct code?

4. A sputum culture confirms Pseudomonas pneumonia. Which code should you assign — J15.1 or J18.9? Why?

5. A patient develops acute respiratory failure with hypoxia postoperatively. What code is used for the RF, and how is it sequenced?

🔨 Toolbox — Section 6.2 Key Points

- **J44.0** = COPD with acute lower respiratory infection (add the infection code); **J44.1** = COPD with exacerbation; **J44.9** = stable COPD. These are not interchangeable.
- When COPD AND asthma are both documented → code BOTH (J44.– AND J45.–).
- Asthma coding requires TWO pieces: severity (mild intermittent → severe

persistent) AND acuity (uncomplicated / exacerbation / status asthmaticus).

- Status asthmaticus = life-threatening, treatment-resistant — NEVER downcode to exacerbation.
- Pneumonia: code to the specific organism; J18.9 is the absolute last resort when no organism is identified anywhere in the record.

Exercise 6-B — Respiratory System Coding

Assign the correct ICD-10-CM code(s) or answer as directed. No answer key is provided — verify with your ICD-10-CM codebook.

Part 1: COPD Type

1. Patient with COPD, admitted for worsened dyspnea and increased sputum production. No infection confirmed.

Code: _ _ _ _ _ _ . _ _

2. Patient with COPD and pneumonia (unspecified organism).

Code 1 (COPD): _ _ _ _ _ _ . _ _ Code 2 (Pneumonia): _ _ _ _ _ _ . _ _

3. Patient has COPD and asthma, both documented. COPD is stable. Asthma is mild intermittent, uncomplicated.

Code 1: _ _ _ _ _ _ . _ _ Code 2: _ _ _ _ _ _ . _ _ _ _

Part 2: Asthma Severity/Acuity Matrix

Match each clinical description to the correct asthma code.

4. Severe persistent asthma with status asthmaticus

Code: _ _ _ _ _ _ . _ _ _ _

5. Moderate persistent asthma, uncomplicated

Code: _ _ _ _ _ _ . _ _ _ _

6. Mild persistent asthma with acute exacerbation

Code: _ _ _ _ _ _ . _ _ _ _

7. Asthma, type not documented by severity. No exacerbation present.

Code: _ _ _ _ _ _ . _ _ _ _ _ _

Part 3: Pneumonia Organism-Specific Coding

8. Culture confirms Streptococcus pneumoniae. Provider documents “bacterial pneumonia, Strep pneumo.”

Code: _ _ _ _

9. Radiology and culture confirm Pseudomonas aeruginosa pneumonia.

Code: _ _ _ _ _ _ . _ _

10. Lobar pneumonia. No culture results. Organism not specified.

Code: _ _ _ _ _ _ . _ _

Part 4: Respiratory Failure Type and Sequencing

11. “Acute respiratory failure with hypercapnia, admitted for COPD exacerbation.”

Code 1 (RF): _ _ _ _ _ _ . _ _ _ _ Code 2 (COPD): _ _ _ _ _ _ . _ _

Which code is sequenced first and why?

12. True/False: **T** / **F** J18.9 should be assigned every time a patient is diagnosed with pneumonia, regardless of what the culture shows.

SECTION 6.3

|

ICD-10-CM Chapter 11: Diseases of the Digestive System (K00

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K95)

The digestive system chapter covers conditions from the mouth all the way to the rectum — and everything in between, including the liver, gallbladder, and pancreas. High-yield topics include **GERD**, **peptic ulcer disease**, **hernias**, **inflammatory bowel disease**, **diverticular disease**, and **GI bleeding**. The most common pitfalls: forgetting the required code elements for peptic ulcers, confusing diverticulosis with diverticulitis, and double-coding GI bleeding when it is already captured in the condition code.

6.3A — GERD and Esophageal Conditions

Gastroesophageal reflux disease (GERD) occurs when stomach acid repeatedly flows back into the esophagus. When GERD is documented with esophagitis, use the combination code — do not code them separately.

Code	Description	Key Note
K21.0	GERD with esophagitis	Combination code — do NOT separately code the esophagitis
K21.9	GERD without esophagitis	Classic reflux symptoms without mucosal damage
K22.0	Achalasia of cardia	Failure of lower esophageal sphincter to relax
K22.10	Ulcer of esophagus without bleeding	
K22.11	Ulcer of esophagus with bleeding	
K22.2	Esophageal obstruction	Foreign body, stricture, or extrinsic compression
K22.70	Barrett’s esophagus without dysplasia	Metaplastic change of esophageal lining; cancer

Code	Description	Key Note
		risk
K22.710	Barrett’s esophagus with low grade dysplasia	
K22.719	Barrett’s esophagus with dysplasia, unspecified	

6.3B

—

Peptic Ulcer Disease

HIGH YIELD

Peptic ulcer disease coding is a classic multi-element code selection scenario. Every peptic ulcer code requires you to identify ALL of the following elements from the documentation:

1. **Location**: Gastric (K25.–), Duodenal (K26.–), Peptic unspecified site (K27.–), or Gastrojejunal (K28.–)
2. **Acuity**: Acute or Chronic
3. **Hemorrhage**: With or Without hemorrhage
4. **Perforation**: With or Without perforation
5. **Both**: With hemorrhage AND perforation

Subcategory	Code	Description
Gastric Ulcer (K25.–)	K25.0	Acute with hemorrhage
K25.1	Acute with perforation	
K25.2	Acute with both hemorrhage and perforation	
K25.3	Acute without hemorrhage or perforation	
K25.4	Chronic with hemorrhage	
K25.5	Chronic with perforation	

Subcategory	Code	Description
	K25.6	Chronic with both hemorrhage and perforation
	K25.7	Chronic without hemorrhage or perforation
	K25.9	Unspecified as acute or chronic, without hemorrhage or perforation
Duodenal ulcer (K26.–), Peptic unspecified (K27.–), and Gastrojejunal (K28.–) follow the same .0–.9 subcategory structure.		

📸 Coding Shot

For peptic ulcers, **always check the documentation for the magic words**: hemorrhage, perforation, and acuity. If the documentation says “peptic ulcer with bleeding” — that is hemorrhage → the 4th character is 0 (acute) or 4 (chronic). If the documentation says “peptic ulcer” without specifying gastric or duodenal → use K27.– (peptic ulcer, site unspecified). One missing element means the wrong code. Read every word of the documentation before selecting the subcategory.

6.3C

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Appendicitis

Code	Description
K35.20	Acute appendicitis with generalized peritonitis, without abscess
K35.21	Acute appendicitis with generalized peritonitis and abscess

Code	Description
K35.3	Acute appendicitis with localized peritonitis
K35.80	Other and unspecified acute appendicitis without abscess
K35.89	Other acute appendicitis without peritonitis, with abscess
K36	Other appendicitis (chronic, recurrent)
K37	Unspecified appendicitis

6.3D

—

Hernias

HIGH YIELD

Hernia codes require you to capture five elements — every time:

6. **Type**: inguinal, femoral, umbilical, ventral, incisional, or other abdominal
7. **Laterality**: unilateral or bilateral (for inguinal and femoral)
8. **Obstruction**: with or without
9. **Gangrene**: with or without
10. **Recurrence**: recurrent or not recurrent

Code	Description
K40.20	Bilateral inguinal hernia, without obstruction or gangrene, not recurrent
K40.40	Unilateral inguinal hernia with obstruction, without gangrene, not recurrent
K40.90	Unilateral inguinal hernia without obstruction or gangrene, not recurrent
K41.–	Femoral hernia (same subcategory structure as inguinal)
K42.–	Umbilical hernia

Code	Description
K43.0	Incisional hernia with obstruction, without gangrene
K43.1	Incisional hernia with gangrene
K43.2	Incisional hernia without obstruction or gangrene
K46.–	Unspecified abdominal hernia

▶️ **Official Guidelines for Coding and Reporting**

Hernia Classification — Obstruction and Gangrene:

“Hernias are classified by type of hernia, with codes for bilateral inguinal hernia, unilateral inguinal hernia, femoral hernia, umbilical hernia, ventral hernia, incisional hernia, and other abdominal hernia. Most hernia codes include codes for obstruction and gangrene. When a hernia with obstruction is also gangrenous, assign only the code for hernia with gangrene.”

Plain-English Translation: When a hernia is both obstructed AND gangrenous, gangrene wins — assign only the gangrene code. You do not need to code both obstruction and gangrene separately. Always check for the presence of gangrene first when coding hernias that have complications.

6.3E

—

Inflammatory Bowel Disease and Diverticular Disease

Inflammatory Bowel Disease (IBD)

Crohn’s disease (regional enteritis) and **ulcerative colitis** are the two main forms of IBD. Never confuse them clinically or in coding.

Code	Description	Complication Subcategories
K50.0–	Crohn’s disease of small intestine	Add 5th/6th character for: without complications (.00/.9), rectal bleeding (.01), intestinal obstruction (.012), fistula (.013), abscess (.014), other (.018), unspecified (.019)
K50.1–	Crohn’s disease of large intestine	
K50.8–	Crohn’s disease of both small and large intestine	
K51.0–	Ulcerative pancolitis	
K51.2–	Ulcerative proctitis	Same complication subcategory structure as Crohn’s
K51.5–	Left-sided ulcerative colitis	Same complication subcategory structure

Diverticular Disease

☠️ **STOP!**

Diverticulosis and diverticulitis are NOT the same condition and are NOT interchangeable. Diverticulosis = pouches (diverticula) are PRESENT in the colon wall, but they are NOT inflamed or infected. **Diverticulitis** = the pouches ARE inflamed and/or infected. The codes are completely different. Coding diverticulitis when the documentation says diverticulosis — or vice versa — is an error that will fail a quality audit and misrepresent the patient’s condition.

Code	Description
K57.30	Diverticulosis of large intestine without perforation or abscess, without bleeding
K57.31	Diverticulosis of large intestine without perforation or abscess, with bleeding
K57.20	Diverticulitis of large intestine without perforation or abscess, without bleeding

Code	Description
K57.21	Diverticulitis of large intestine with abscess, without bleeding
K57.80	Diverticulosis of both small and large intestine without perforation or abscess, without bleeding

GI Bleeding

> ⚠️ **CAUTION!**
>
> When GI bleeding is already captured by the primary condition code — for example, K25.0 (acute gastric ulcer with hemorrhage) or K57.31 (diverticulosis with bleeding) — **do NOT add a separate GI bleeding code** such as K92.0 (hematemesis), K92.1 (melena), or K92.2 (GI hemorrhage, unspecified). This is a form of **double coding** — the bleeding is already captured in the combination code. Submitting both is an audit flag. Only use K92.– codes when the bleeding is not already captured in a more specific combination code.

Quick Check 6.3

1. A patient has GERD with esophagitis. What single code captures both conditions?
2. List the five elements required to correctly code a peptic ulcer in ICD-10-CM:
3. What is the difference between diverticulosis and diverticulitis?
4. A patient has an acute gastric ulcer with hemorrhage. Should you also code K92.0 (hematemesis) separately? **Yes** / **No** — Explain:
5. A hernia is documented as obstructed and gangrenous. Which

complication takes priority in code selection?

🔨 Toolbox — Section 6.3 Key Points

- GERD with esophagitis → ONE combination code (K21.0); never code them separately.
- Peptic ulcer codes require FIVE elements: location, acuity, hemorrhage, perforation, and whether both are present.
- Hernia codes require: type, laterality, obstruction, gangrene, and recurrence — gangrene supersedes obstruction when both are present.
- Diverticulosis (pouches present, not inflamed) ≠ Diverticulitis (pouches inflamed/infected) — completely different code categories.
- GI bleeding already captured in a combination code → do NOT add a separate K92.– bleeding code (double coding).

Exercise 6-C — Digestive System Coding

Assign the correct ICD-10-CM code(s) or answer as directed. Verify with your codebook.

Part 1: GERD and Barrett's Esophagus

1. Patient is diagnosed with GERD and esophagitis confirmed on endoscopy.

Code: _ _ _ _ _ _ . _ _

2. Patient has Barrett's esophagus with low grade dysplasia.

Code: _ _ _ _ _ _ . _ _ _ _ _ _

3. Patient has GERD. No esophagitis documented.

Code: _ _ _ _ _ _ . _ _

Part 2: Peptic Ulcer — All 5 Elements

4. Acute duodenal ulcer with hemorrhage.

Code: _ _ _ _ _ _ . _ _

5. Chronic gastric ulcer without hemorrhage or perforation.

Code: _ _ _ _ _ _ . _ _

6. Peptic ulcer, site not specified, acute, with both hemorrhage and perforation.

Code: _ _ _ _ _ _ . _ _

7. True/False: **T** / **F** When documentation says “peptic ulcer” without specifying gastric or duodenal, you should use K27.– (peptic ulcer, site unspecified).

Part 3: Hernia Code Structure

8. Unilateral inguinal hernia, with obstruction, no gangrene, not recurrent.

Code: _ _ _ _ _ _ . _ _ _ _

9. Incisional hernia with gangrene.

Code: _ _ _ _ _ _ . _ _

Part 4: IBD Type Coding

10. Crohn’s disease of the large intestine with intestinal abscess.

Code: _ _ _ _ _ _ . _ _ _ _ _ _ _ _

11. Ulcerative pancolitis with rectal bleeding.

Code: _ _ _ _ _ _ . _ _ _ _ _ _ _ _

Part 5: Diverticular Disease Distinction

12. A patient is documented with “diverticulitis of the large intestine with abscess, no bleeding.” Assign the code and explain in one sentence why you did NOT use the diverticulosis code.

Code: _ _ _ _ _ _ . _ _ _ _

Explanation:

SECTION 6.4

|

ICD-10-CM Chapter 12: Diseases of the Skin and Subcutaneous Tissue (L00

–

L99)

The skin chapter has one topic that rises above all others in importance: **pressure injuries (pressure ulcers)**. Staging is one of the most heavily tested topics on the CPC exam and carries real-world consequences in long-term care, wound care centers, and hospital settings. Alongside pressure injuries, you need to master **cellulitis laterality**, **non-pressure ulcer severity**, and the classification of common skin conditions.

6.4A

—

Pressure Injuries / Pressure Ulcers

HIGH YIELD

The official ICD-10-CM term is **pressure injury** — but “pressure ulcer” is still widely used and both are accepted. Code category: `L89.–`

Staging Definitions

Stage	Clinical Description	Key Identifier
Stage 1	Non-blanchable erythema of intact skin	Skin is STILL INTACT — just red/discolored; does not blanch with pressure
Stage 2	Partial thickness loss involving epidermis and/or dermis	Shallow open ulcer, blister, or moist pink wound; no slough or eschar
Stage 3	Full thickness skin loss — subcutaneous fat visible	Fat MAY be visible; bone, tendon, muscle NOT exposed
Stage 4	Full thickness tissue loss — bone, tendon, or muscle exposed	Bone, tendon, or muscle IS visible or directly palpable
Unstageable	Covered by eschar or slough — stage cannot be visually determined	Must REMOVE eschar/slough to stage; code unstageable until then
DTPI	Deep Tissue Pressure Injury — persistent non-blanchable deep red/maroon/purple discoloration	Intact or non-intact skin; represents UNDERLYING tissue damage not yet breaking through

Code Structure: L89 + Site + Laterality + Stage

Every pressure injury code requires three components: the body **site**, the **laterality** (where applicable), and the **stage**.

Site Category	Right	Left	Stage Character Examples
Elbow (L89.0–)	L89.01–	L89.02–	1=Stage 1, 2=Stage 2, 3=Stage 3, 4=Stage 4, 9=Unspecified, 0=Unstageable
Hip (L89.2–)	L89.21–	L89.22–	Same staging character structure
Buttock (L89.3–)	L89.31–	L89.32–	Same staging character structure
Ankle (L89.5–)	L89.51–	L89.52–	Same staging character structure
Heel (L89.6–)	L89.61–	L89.62–	Same staging character structure
Sacral region (L89.15–)	No laterality — midline structure	Same staging character structure	

Example: `L89.613` = Pressure ulcer of right heel, Stage 3 (L89.6 = Heel; 1 = right; 3 = Stage 3)

Critical Staging Rules — Know Every One

11. Code the pressure ulcer at the **CURRENT documented stage** at the time of the encounter.
12. If a patient is admitted with a Stage 3 that heals to Stage 2 during the admission — code the **ORIGINAL (highest) stage** (Stage 3), not the healed-to stage.
13. If the stage is **not documented** → code unstageable.
14. A **healed pressure ulcer** → assign personal history code `Z87.39` — do NOT continue coding with L89.–.
15. Multiple pressure ulcers → code **each one separately**.

☠️ **STOP!**

A Stage 3 pressure ulcer that has healed DOWN to Stage 2 during the admission is NOT coded as Stage 2. Pressure ulcers do not "re-stage down" in ICD-10-CM. Once it is documented as Stage 3, that is the code — even if wound care improved the ulcer to Stage 2 appearance by discharge. Code the highest documented stage during the encounter. Staging down is a nursing wound care concept; it is NOT an ICD-10-CM coding concept. This is one of the most common pressure ulcer coding errors and a frequent audit finding.

⚠️ **CAUTION!**

Incorrect pressure ulcer staging in long-term care directly impacts **CMS Five-Star Quality Rating** scores, MDS (Minimum Data Set) assessments, and facility reimbursement under the Patient-Driven Payment Model (PDPM). An incorrectly staged pressure ulcer in the MDS is not just a coding problem — it is a regulatory compliance problem. Surveyors audit MDS accuracy. Facilities with

systematic pressure ulcer coding errors face citation, reduced star ratings, and corrective action plans. This is not an area where “close enough” is acceptable.

★ CMS Rules — Hospital-Acquired Conditions (HAC)

The CMS Hospital-Acquired Conditions (HAC) list includes **Stage 3 and Stage 4 pressure ulcers** that develop AFTER hospital admission. If a Stage 3 or Stage 4 pressure ulcer was NOT documented on admission (Present on Admission indicator = “N”), the hospital receives **reduced reimbursement** for that claim. This makes the **POA (Present on Admission) indicator** critically important for pressure ulcer coding in the inpatient setting. Coders must know both the stage AND the POA status. A pressure ulcer that was Stage 1 on admission and became Stage 3 during the stay is a HAC — and that is a significant financial and quality event for the facility.

🛠️ From the Trenches

“Pressure ulcer staging is the single most important thing I teach every new coder who comes into long-term care coding. I say it on day one and I repeat it every week. The stage you assign affects the MDS, which affects the PDPM payment, which affects the Five-Star rating, which affects whether families choose your facility. One wrong code on one patient record ripples through in ways that new coders don’t see until they’ve been doing this for a few years. I always tell them: read the wound care notes like your job depends on it — because in some ways, it does.”

— **Diane Morales, CPC, RAC-CT** | Director of Health Information | SunBridge Care & Rehabilitation, Fort Lauderdale, FL

▶️ **Official Guidelines for Coding and Reporting**

Section I.C.12 — Pressure Ulcers:

"Codes from category L89, Pressure ulcer, identify the site and stage of the pressure ulcer. The ICD-10-CM classifies pressure ulcer stages based on severity, which is designated by stages 1–4, deep tissue pressure injury, and unstageable. Assignment of the code for unstageable pressure ulcer (L89.–0) should be based on the clinical documentation. These codes are used for pressure ulcers whose stage cannot be determined clinically because it is covered by eschar or has been treated with a skin or muscle flap."

Healing Pressure Ulcers — Guideline Rule:

"For ulcers that were present on admission but healed at the time of discharge, assign the code for the site and stage of the pressure ulcer at the time of admission."

Plain-English Translation: If a patient comes in with a Stage 3 pressure ulcer that heals to Stage 2 by the time of discharge — code Stage 3. Code the stage at ADMISSION, not at discharge. Healing is wonderful clinically; it does not change the code.

6.4B

—

Non-Pressure Ulcers of Lower Extremity

Non-pressure chronic ulcers of lower limb (L97.–) are caused by vascular disease, diabetes, or venous stasis — NOT by pressure. They are frequently coded alongside diabetes combination codes.

L97.– codes require: **site** (thigh, calf, ankle, heel, midfoot, plantar surface) + **laterality** (right or left) + **severity**:

- Limited to skin breakdown (no fat exposure)
- Fat layer exposed

- Necrosis of muscle
- Necrosis of bone
- Unspecified severity

6.4C

—

Cellulitis and Soft Tissue Infections

HIGH YIELD

Cellulitis (L03.–) is a bacterial infection of the skin and subcutaneous tissue. It requires two pieces of information: the **body site** and the **laterality**. Always add the organism code when the specific bacteria is documented (B95 for Streptococcal/Staphylococcal; B96 for other organisms).

📸 Coding Shot

For cellulitis, **never forget laterality**. L03.115 (cellulitis of right lower limb) and L03.116 (cellulitis of left lower limb) are two completely different codes. Assigning the wrong side can trigger a clinical documentation query, a claim denial, or an audit finding. In wound care and long-term care settings, laterality is reviewed by auditors as a routine check. Read the documentation. Right is not left. This matters.

Code	Description
L03.011	Cellulitis of right finger
L03.012	Cellulitis of left finger
L03.111	Cellulitis of right axilla
L03.112	Cellulitis of left axilla
L03.115	Cellulitis of right lower limb

Code	Description
L03.116	Cellulitis of left lower limb
L03.311	Cellulitis of right toe
L03.312	Cellulitis of left toe

6.4D

—

Other Common Skin Conditions

Code	Condition
L01.00	Impetigo, unspecified
L01.01	Non-bullous impetigo
L01.03	Bullous impetigo
L02.–	Cutaneous abscess, furuncle, carbuncle — requires site and laterality
L05.01	Pilonidal cyst with abscess
L05.91	Pilonidal cyst without abscess
L20.9	Atopic dermatitis, unspecified
L21.0	Seborrheic capitis (cradle cap)
L40.0	Psoriasis vulgaris
L50.0	Allergic urticaria (hives due to allergen)
L50.1	Idiopathic urticaria (no identified cause)
L60.0	Ingrowing nail
L70.0	Acne vulgaris
L72.0	Epidermal cyst (sebaceous cyst)

✔️ Check This Out

Pressure injuries affect more than 2.5 million patients annually in the United States, and the healthcare system spends approximately **$11 billion per year** treating them. Stage 3 and Stage 4 pressure ulcers are among the most preventable serious adverse events in healthcare — which is exactly why CMS made them a Hospital-Acquired Condition and why correct coding and POA designation are so critical.

Quick Check 6.4

1. What are the three pieces of information required to build a complete pressure injury code?

2. A patient is admitted with a Stage 3 pressure injury of the right heel. By discharge, it has improved to Stage 2 appearance. What stage do you code?

3. What does “unstageable” mean in pressure injury coding, and when is it assigned?

4. A patient has cellulitis of the left lower limb with confirmed Staphylococcus aureus. What codes would you assign?

5. What is the difference between a pressure injury and a non-pressure ulcer of the lower extremity?

🔨 Toolbox — Section 6.4 Key Points

- Pressure injury code = L89 + body site + laterality + stage; each element

is required — never omit laterality or stage.

• Code the pressure ulcer at the stage documented at the time of the encounter — Stage 3 that heals to Stage 2 during admission is still coded as Stage 3.

• Unstageable = covered by eschar or slough; deep tissue pressure injury (DTPI) = intact/non-intact skin with underlying tissue damage; these are distinct from the numbered stages.

• Cellulitis always requires site AND laterality — right and left are different codes; always add organism code when documented.

• POA (Present on Admission) designation for Stage 3 and Stage 4 pressure ulcers is a critical financial and quality event — the POA indicator must be accurate.

Exercise 6-D — Skin and Subcutaneous Tissue Coding

Assign the correct ICD-10-CM code(s) or answer as directed. No answer key — use your codebook.

Part 1: Pressure Ulcer Stage and Site

1. Stage 2 pressure injury of the left heel.

Code: _ _ _ _ _ _ . _ _ _ _ _ _

2. Stage 4 pressure injury of the sacral region.

Code: _ _ _ _ _ _ . _ _ _ _ _ _

3. Pressure injury of the right hip, stage cannot be determined (wound is covered by eschar).

Code: _ _ _ _ _ _ . _ _ _ _ _ _

4. Patient admitted with a Stage 3 pressure injury of the left buttock. During the admission the wound improved significantly to Stage 2 appearance. What

code is assigned at discharge?

Code: _ _ _ _ _ _ . _ _ _ _ _ _

Reason:

5. True/False: **T** / **F** A deep tissue pressure injury (DTPI) and a Stage 4 pressure injury are the same clinical finding and coded the same way.

Part 2: Non-Pressure Ulcer Severity

6. Non-pressure chronic ulcer of the right calf with fat layer exposed.

Code: _ _ _ _ _ _ . _ _ _ _ _ _ _ _

7. Non-pressure chronic ulcer of the left heel with necrosis of bone.

Code: _ _ _ _ _ _ . _ _ _ _ _ _ _ _

Part 3: Cellulitis Laterality

8. Cellulitis of the right lower limb. No organism documented.

Code: _ _ _ _ _ _ . _ _ _ _ _ _

9. Cellulitis of the left axilla. Culture confirms Staphylococcus aureus.

Code 1: _ _ _ _ _ _ . _ _ _ _ _ _ Code 2 (organism): _ _ _ _ _ _ . _ _

10. Cellulitis of the left finger.

Code: _ _ _ _ _ _ . _ _ _ _ _ _

Part 4: Common Skin Condition Codes

11. Patient presents with psoriasis vulgaris.

Code: _ _ _ _ _ _ . _ _

12. Pilonidal cyst without abscess.

Code: _ _ _ _ _ _ . _ _ _ _

SECTION 6.5

|

Putting It All Together

—

Multi-System Documentation Scenarios

Real patients don’t have one diagnosis. They have five, ten, fifteen — and as a coder, your job is to build a complete, accurate, correctly sequenced code set from every piece of clinical documentation available. In this section, you will apply coding principles from all four body systems covered in this chapter to five complex clinical scenarios. Work through each one step by step. Think about combination codes, sequencing rules, what requires an additional code, and what should NOT be coded separately.

📋 Scenario 1 — Inpatient Admission

> “
>
> Patient admitted with acute on chronic systolic congestive heart failure and hypertensive heart and chronic kidney disease Stage 4. Patient also has COPD without exacerbation and is on long-term diuretic therapy.
>
> ”

Step-by-Step Analysis:

- **Conditions:** Hypertension + heart disease + CKD Stage 4 → I13 family. Heart failure IS present → I13.0 (with HF, Stage 1–4 CKD). Heart failure type = systolic, acuity = acute on chronic → I50.23. CKD Stage 4 → N18.4. COPD

without exacerbation → J44.9. Long-term diuretic → Z79.899.

- **Principal Diagnosis:** The reason for admission is the acute on chronic systolic heart failure — this drives the DRG. I13.0 is the combination code anchor.

Complete Code Set:

1. `I13.0` — Hypertensive heart and chronic kidney disease with heart failure and stage 1 through stage 4 CKD
2. `I50.23` — Acute on chronic systolic (congestive) heart failure
3. `N18.4` — Chronic kidney disease, Stage 4
4. `J44.9` — COPD, unspecified (no exacerbation documented)
5. `Z79.899` — Long-term (current) use of other medication (diuretic)

Rationale: I13.0 captures the triad of HTN + heart disease + CKD with HF. I50.23 specifies the type and acuity of HF as required by the tabular “use additional code” instruction. N18.4 specifies the CKD stage. COPD is coded separately as it is an additional comorbidity not captured in the combination code. The diuretic use is coded as it may affect treatment decisions and satisfies the “code to the highest degree of specificity” principle.

📋 Scenario 2 — Inpatient Admission

> “
>
> Inpatient admission for STEMI of the left anterior descending artery (anterior wall). Patient also has paroxysmal atrial fibrillation and Type 2 diabetes on insulin.

”

Step-by-Step Analysis:

- **STEMI, anterior wall (LAD):** I21.01. This is the acute event — the reason for admission = principal diagnosis.
- **Paroxysmal AF:** I48.0 — “paroxysmal” is documented; do not use unspecified.
- **Type 2 diabetes on insulin:** E11.9 (Type 2 diabetes, without complications specified) + Z79.4 (long-term insulin use).

Complete Code Set:

1. `I21.01` — ST elevation myocardial infarction of anterior wall (principal diagnosis)
2. `I48.0` — Paroxysmal atrial fibrillation
3. `E11.9` — Type 2 diabetes mellitus without complications
4. `Z79.4` — Long-term (current) use of insulin

Rationale: STEMI is the principal diagnosis — it is the reason for admission. Paroxysmal AF is coded specifically, not as unspecified. Type 2 diabetes on insulin always requires both E11.– AND Z79.4. Note: If the STEMI occurred more than 28 days ago, the correct code would be I25.2, not I21.01 — always check the date.

📋 Scenario 3 — Inpatient Admission

> “
>
> Patient with Stage 3 pressure injury of the right heel, admitted for wound care and IV antibiotics for cellulitis of the right lower limb. Lab results confirm Staphylococcus aureus.
>
> ”

Step-by-Step Analysis:

- **Why admitted?** Wound care AND IV antibiotics for cellulitis. The cellulitis requiring IV treatment is the principal diagnosis — it is the condition that required hospital-level care.
- **Stage 3 pressure injury, right heel:** L89.613.
- **Cellulitis, right lower limb:** L03.115.
- **Staphylococcus aureus organism:** B95.61.

Complete Code Set:

1. `L03.115` — Cellulitis of right lower limb (principal diagnosis — reason for IV antibiotics)
2. `B95.61` — Methicillin-susceptible Staphylococcus aureus infection as the cause of diseases classified elsewhere
3. `L89.613` — Pressure ulcer of right heel, Stage 3

Rationale: Cellulitis requiring IV antibiotics is the primary driver of the hospital admission. The pressure injury is also coded as it is a significant comorbidity present during the admission. The Staphylococcus aureus code (B95.61) is added per tabular instructions to identify the causative organism. POA designation for the Stage 3 pressure ulcer must be assessed — was it present on admission or did it develop during the stay? This determines HAC

applicability.

📋 Scenario 4 — Inpatient Admission

> “
>
> Patient with Crohn
>
> ’
>
> s disease of the large intestine with rectal bleeding and intestinal abscess, also presenting with iron deficiency anemia due to chronic blood loss.
>
> ”

Step-by-Step Analysis:

- **Crohn’s disease of large intestine with abscess:** K50.114 captures Crohn’s of the large intestine with abscess.
- **Rectal bleeding:** K50.111 captures Crohn’s of the large intestine with rectal bleeding. When multiple complications are present, code each relevant complication per tabular and facility coding policy.
- **Iron deficiency anemia due to chronic blood loss:** D50.0 — this specific code represents iron deficiency anemia secondary to chronic blood loss, distinct from other iron deficiency anemias.

Complete Code Set:

1. `K50.114` — Crohn’s disease of large intestine with abscess (principal

diagnosis)

2. K50.111 — Crohn’s disease of large intestine with rectal bleeding
3. D50.0 — Iron deficiency anemia secondary to blood loss (chronic)

Rationale: The Crohn’s disease with its complications is the principal diagnosis. Iron deficiency anemia due to chronic blood loss (D50.0) is coded separately as it represents a distinct additional comorbidity that affects treatment and requires its own management. Do NOT code a generic “GI bleeding” code separately — the bleeding is captured in the Crohn’s disease complication code.

📋 Scenario 5 — Outpatient Visit

> “
>
> Outpatient visit: patient with severe persistent asthma with status asthmaticus. Patient also has GERD with esophagitis and duodenal ulcer, chronic, with hemorrhage.
>
> ”

Step-by-Step Analysis:

- **Severe persistent asthma with status asthmaticus:** J45.52. This is the reason for the visit.
- **GERD with esophagitis:** K21.0 (combination code — do NOT separately code esophagitis).
- **Duodenal ulcer, chronic, with hemorrhage:** K26.4 (chronic duodenal

ulcer with hemorrhage). Do NOT add a separate GI bleeding code.

Complete Code Set:

1. J45.52 — Severe persistent asthma with status asthmaticus (first-listed diagnosis — reason for visit)
2. K21.0 — GERD with esophagitis
3. K26.4 — Chronic duodenal ulcer with hemorrhage

Rationale: Status asthmaticus is a medical emergency and is the reason for the outpatient visit — first-listed. J45.52 captures severe persistent severity AND status asthmaticus in one code. K21.0 is the combination code for GERD + esophagitis — never split into two codes. K26.4 captures the chronic duodenal ulcer with hemorrhage in one code — never add a separate hematemesis/melena code.

Quick Check 6.5

1. In Scenario 1, why is I13.0 used instead of I11.0 or I12.9?

2. In Scenario 2, why is Z79.4 required alongside E11.9?
3. In Scenario 3, what determines whether the Stage 3 pressure ulcer is a Hospital-Acquired Condition?

4. In Scenario 4, why is D50.0 coded separately rather than using a GI bleeding code?

5. In Scenario 5, why is J45.52 used instead of J45.51?

🔨 Toolbox — Section 6.5 Key Points

- Multi-system scenarios require identifying ALL active conditions, determining which require separate codes, and applying sequencing rules before assigning codes.
- Combination codes subsume related conditions — never double-code what is already captured (GERD + esophagitis = K21.0 only; peptic ulcer + bleeding = one specific code).
- Always check: Is this a principal diagnosis (inpatient) or first-listed (outpatient)? Sequencing matters for DRG and reimbursement.
- Type 2 diabetes on insulin ALWAYS requires E11.– AND Z79.4 — the insulin status is never assumed without the Z code.
- POA status for pressure injuries must be assessed at the time of admission — a Stage 3 or Stage 4 developing after admission is a HAC with direct reimbursement consequences.

Exercise 6-E — Multi-System Coding Scenarios

For each scenario, assign the complete code set in the correct sequence. Use your ICD-10-CM codebook. This is a student edition — no answers are provided. Each scenario may require 2–5 codes.

Scenario 1. “Inpatient: Acute on chronic diastolic heart failure. Patient has hypertension with CKD Stage 3. No exacerbation of COPD but COPD is a documented active problem.”

Code 1: _ _ _ _ _ _ . _ _

Code 2: _ _ _ _ _ _ . _ _ _ _

Code 3: _ _ _ _ _ _ . _ _

Code 4: _ _ _ _ _ _ . _ _

Scenario 2. “Outpatient: NSTEMI, presenting today. Patient has longstanding persistent atrial fibrillation and is on long-term anticoagulant therapy.”

Code 1: _ _ _ _ _ _ . _ _

Code 2: _ _ _ _ _ _ . _ _ _ _

Code 3: _ _ _ _ _ _ . _ _ _ _ _ _

Scenario 3. “Inpatient: Acute respiratory failure with hypoxia. Underlying cause: COPD with acute exacerbation. Respiratory failure is the principal diagnosis.”

Code 1: _ _ _ _ _ _ . _ _ _ _

Code 2: _ _ _ _ _ _ . _ _

Scenario 4. “Outpatient: Severe persistent asthma with acute exacerbation. Also: COPD, unspecified. Pneumonia due to Haemophilus influenzae.”

Code 1 (Asthma): _ _ _ _ _ _ . _ _ _ _

Code 2 (COPD): _ _ _ _ _ _ . _ _

Code 3 (Pneumonia): _ _ _ _

Scenario 5. “Inpatient: Stage 4 pressure injury of the left hip (present on admission). Cellulitis of the left lower limb. E. coli organism confirmed on culture.”

Code 1: _ _ _ _ _ _ . _ _ _ _ _ _

Code 2: _ _ _ _ _ _ . _ _ _ _ _ _

Code 3 (organism): _ _ _ _ _ _ . _ _

Scenario 6. “Outpatient: Acute gastric ulcer with hemorrhage. GERD without esophagitis. Type 2 diabetes, uncomplicated, not on insulin.”

Code 1: _ _ _ _ _ _ . _ _

Code 2: _ _ _ _ _ _ . _ _

Code 3: _ _ _ _ _ _ . _ _

Scenario 7. “Inpatient: Ulcerative pancolitis with intestinal obstruction and intestinal abscess. Iron deficiency anemia due to chronic blood loss.”

Code 1: _ _ _ _ _ _ . _ _ _ _ _ _

Code 2: _ _ _ _ _ _ . _ _

Scenario 8. “Outpatient: Unilateral inguinal hernia with obstruction, no gangrene, recurrent, left side.”

Code: _ _ _ _ _ _ . _ _ _ _

Scenario 9. “Inpatient: STEMI of inferior wall, Day 2 of hospitalization. Patient also has subsequent MI (NSTEMI) occurring on Day 18 of same hospitalization. How are both MIs coded?”

Code 1 (Initial STEMI): _ _ _ _ _ _ . _ _ _ _

Code 2 (Subsequent MI): _ _ _ _ _ _ . _ _

Explain why the second MI uses a different category:

Scenario 10. “Inpatient: Moderate persistent asthma with status asthmaticus. Patient also has hypertension and CKD Stage 2 (no heart disease). Stage 2 pressure injury of the right elbow (present on admission).”

Code 1 (Asthma): _ _ _ _ _ _ . _ _ _ _

Code 2 (HTN+CKD): _ _ _ _ _ _ . _ _

Code 3 (CKD stage): _ _ _ _ _ _ . _ _

Code 4 (Pressure injury): _ _ _ _ _ _ . _ _ _ _ _ _

Chapter Summary

✍️ **Chapter 6 — Ten Key Takeaways**

1. **Essential hypertension = I10, one code only.** ICD-10-CM does NOT classify essential hypertension by stage. One code covers all presentations.

2. **Hypertension combination codes assume causality.** When hypertension and CKD are both documented, ICD-10-CM assumes a causal relationship — use I12.– (hypertensive CKD) without requiring documentation of causation. Same rule applies for hypertension + heart disease (I11.–) and all three together (I13.–).

3. **The 28-day AMI rule is non-negotiable.** AMI is coded as acute (I21.–) for up to 28 days. After 28 days: I25.2 (old MI). A subsequent MI within 28 days uses I22.–. Never use I21.– for a heart attack from 3 months ago.

4. **STEMI and NSTEMI are never interchangeable.** STEMI requires site-specific codes (I21.01 anterior, I21.02 inferior, I21.09 other). NSTEMI = I21.4 regardless of vessel location. Type 2 MI = I21.A1 — caused by supply/demand mismatch, not plaque rupture.

5. **Heart failure requires type AND acuity.** Systolic vs. diastolic vs. combined vs. right-sided; acute vs. chronic vs. acute on chronic. Never default to I50.9 when documentation supports more specificity. Query before accepting unspecified.

6. **COPD with exacerbation (J44.1) is NOT the same as COPD with infection (J44.0)** — and neither is the same as stable COPD (J44.9). Status asthmaticus (code's 5th character = 2) is a life-threatening emergency distinct from an acute exacerbation (5th character = 1).

7. **Pneumonia: always code to the specific organism.** J18.9 is a last resort. Check the culture, the lab report, and the provider's documentation. Organism-specific codes (J13–J16, J15.–) must be used when the organism is documented anywhere in the record.

8. **Pressure ulcer staging rules:** Code the stage at the time of the encounter. A wound that heals from Stage 3 to Stage 2 during admission is

still coded as Stage 3 (the admission stage). Unstageable = eschar or slough covering the wound. POA designation for Stage 3/4 = critical HAC determination.

9. **Cellulitis always requires laterality.** Right lower limb (L03.115) and left lower limb (L03.116) are different codes. Always add the organism code when documented.

10. **Do NOT double-code GI bleeding already captured in a combination code.** If the peptic ulcer code or diverticular disease code already includes hemorrhage, do not add K92.0, K92.1, or K92.2 separately. That is double coding and an audit finding.

Chapter Review

The Chapter Review tests your mastery of all content in Chapter 6. Use your ICD-10-CM codebook where needed. This is a student edition — no answer keys are included.

Section A — Multiple Choice (Questions 1–10)

Circle the letter of the best answer.

1. A patient is documented with hypertension and CKD Stage 3. No heart disease is documented. Which code set is correct?

A. I10, N18.3
B. I12.9, N18.3
C. I13.10, N18.3
D. I11.9, N18.3

2. A patient is documented with “acute on chronic systolic heart failure.” Which code is correct?

A. I50.9
B. I50.21

C. I50.23

D. I50.22

3. A STEMI of the anterior wall occurred 3 days ago. Which code is correct for the acute MI?

A. I25.2

B. I21.4

C. I21.01

D. I22.0

4. A patient’s atrial fibrillation has been continuously present for 14 months, and cardioversion has been attempted. Which code applies?

A. I48.0

B. I48.19

C. I48.11

D. I48.91

5. A patient with severe persistent asthma is admitted in status asthmaticus. Which code correctly captures both the severity and the acuity?

A. J45.51

B. J45.52

C. J45.50

D. J45.902

6. A patient with COPD is admitted with worsened dyspnea and increased sputum production consistent with an exacerbation. No respiratory infection is confirmed. Which code is correct?

A. J44.0

B. J44.9

C. J44.1

D. J96.01

7. A Stage 3 pressure injury of the left heel was present on admission and improved to Stage 2 by discharge. Which code is assigned at discharge?

A. L89.622 (Stage 2, left heel)

B. L89.623 (Stage 3, left heel)

C. L89.629 (Unspecified stage, left heel)

D. Z87.39 (healed)

8. A patient has cellulitis of the right lower limb. No organism is documented. Which code is correct?

A. L03.116

B. L03.115

C. L03.011

D. L03.90

9. A patient has a chronic duodenal ulcer with hemorrhage. Which code is correct?

A. K26.0

B. K26.9

C. K26.4

D. K27.4

10. A culture confirms Klebsiella pneumoniae pneumonia. Which code should be assigned?

A. J18.9

B. J15.9

C. J15.0

D. J17

Section B — True / False (Questions 11–20)

Write T for True or F for False in the space provided.

11. T / **F** ICD-10-CM classifies essential hypertension into stages (Stage 1, Stage 2) corresponding to JNC clinical guidelines.

12. T / **F** An MI that occurred 30 days ago and is fully healed should be coded with I21.– (acute MI) because it is recent.

13. T / **F** Status asthmaticus and an acute asthma exacerbation are coded with the same ICD-10-CM code because both represent worsening asthma.

14. T / **F** When a patient has both hypertension and heart disease, you must have documentation stating the conditions are causally related before coding them together with I11.–.

15. T / F Diverticulosis and diverticulitis describe the same clinical condition and can be used interchangeably in ICD-10-CM coding.

16. T / F A pressure ulcer that was Stage 3 on admission and improves to Stage 2 during the hospitalization should be coded as Stage 2 at discharge.

17. T / F Stage 3 and Stage 4 pressure ulcers that develop AFTER hospital admission are classified as Hospital-Acquired Conditions under CMS rules.

18. T / F When coding GERD with esophagitis, both K21.0 AND a separate esophagitis code must be assigned to fully capture the clinical picture.

19. T / F When a hernia is documented as both obstructed and gangrenous, you should assign the gangrene code only — not both the obstruction and gangrene codes.

20. T / F A NSTEMI requires a site-specific code based on the coronary vessel affected, just like a STEMI.

Section C — Fill-in-the-Blank (Questions 21–25)

Complete each statement using the correct term or ICD-10-CM code.

21. A is a type of myocardial infarction caused by demand ischemia — a supply/demand mismatch such as severe anemia or extreme tachycardia — rather than by plaque rupture and coronary artery thrombus formation. Its ICD-10-CM code is _ _ _ _ _ _ . _ _ _ _ .

22. is a life-threatening form of asthma that does not respond to initial bronchodilator treatment, requires emergency-level care, and is coded with the 5th character “2” appended to the appropriate asthma severity code. It is clinically and coding-wise distinct from an acute asthma exacerbation.

23. A pressure injury classified as involves full thickness tissue loss with bone, tendon, or muscle exposed or directly palpable. This is the most severe numbered stage in the ICD-10-CM pressure injury staging system.

24. refers to the condition in which diverticula (pouches) in the colon wall are inflamed or infected, while refers to the presence of those pouches without inflammation or infection.

25. An NSTEMI (Non-ST-Elevation Myocardial Infarction) is coded with ICD-10-CM code _ _ _ _ _ _ . _ _ , regardless of the specific coronary vessel involved. If this same MI occurred 30 days ago and is now healed, the correct code would instead be _ _ _ _ _ _ . _ _ .

Section D — Coding Scenarios (Questions 26–30)

For each scenario, assign the complete code set in correct sequence. Provide a brief written rationale for your code selection and sequencing. Use your ICD-10-CM codebook.

26. Inpatient admission: “Patient admitted with hypertension, Stage 5 CKD on hemodialysis, and acute systolic heart failure. COPD exacerbation also documented.”

Code 1: _ _ _ _ _ _ . _ _ Code 2: _ _ _ _ _ _ . _ _ _ _ Code 3: _ _ _ _ _ _ . _ _

Code 4: _ _ _ _ _ _ . _ _ _ _ Code 5: _ _ _ _ _ _ . _ _ _ _

Rationale:

27. Outpatient visit: “Moderate persistent asthma with acute exacerbation. Patient also has GERD with esophagitis.”

Code 1: _ _ _ _ _ _ . _ _ _ _ Code 2: _ _ _ _ _ _ . _ _

Rationale:

28. Inpatient admission: “Patient with unilateral inguinal hernia (right), with obstruction, no gangrene, not recurrent. Patient also has acute appendicitis with localized peritonitis.”

Code 1 (Principal Dx): _ _ _ _ _ _ . _ _ _ _ Code 2: _ _ _ _ _ _ . _ _

Rationale:

29. Long-term care facility admission: “Resident with Stage 4 pressure injury of the sacral region (present on admission), and cellulitis of the right lower limb. Klebsiella pneumoniae confirmed on wound culture.”

Code 1: _ _ _ _ _ _ . _ _ _ _ _ _ Code 2: _ _ _ _ _ _ . _ _ _ _ _ _
Code 3: _ _ _ _ _ _ . _ _

POA Status for Code 1:

Rationale:

30. Inpatient admission: “Patient admitted with Type 2 MI (demand ischemia due to severe anemia). Patient also has longstanding persistent atrial fibrillation. Severe anemia is documented as the underlying cause of the Type 2 MI.”

Code 1 (MI): _ _ _ _ _ _ . _ _ _ _ Code 2 (AF): _ _ _ _ _ _ . _ _ _ _
Code 3 (Anemia): _ _ _ _ . _ _

Rationale:

Chapter-Specific Guidelines: ICD-10-CM Chapters 15–22

Corrina R. Lynch | CPC Preparation

Chapter contents

1. Pregnancy, childbirth and the puerperium
2. Conditions originating in the perinatal period
3. Congenital malformations and chromosomal abnormalities
4. Symptoms, signs and abnormal findings
5. Injury, poisoning and other consequences
6. External causes of morbidity
7. Factors influencing health status and contact with health services
8. Codes for special purposes
9. Chapter review questions

Prior-edition readings and exercises follow the revised lesson and may use the earlier chapter arrangement.

Learning objectives

- Identify the documentation details that determine code selection and sequencing.
- Apply chapter-specific rules using the Alphabetic Index and the Tabular List.
- Explain each coding decision in a worked or independent case.

Official ICD-10-CM Chapter 15 · O00–O9A

Pregnancy, childbirth and the puerperium

Identify whose record you are coding, the purpose of the visit and whether a complication is active. Trimester and completed weeks may guide different parts of the lookup. Routine supervision, a complicated visit and an uncomplicated delivery follow different sequencing rules.

Section I.C.15.a.2 · Official Chapter 15 · FY 2026 | General rules of obstetric diagnosis reporting

Maternal record only. Chapter 15 codes describe the mother’s pregnancy, childbirth or postpartum condition. Assign the newborn’s own diagnosis codes on the newborn record.

Worked example: A mother has gestational diabetes, and the newborn has documented neonatal hypoglycemia. Code gestational diabetes on the maternal record and use the applicable newborn code on the newborn record.

Section I.C.15.b.1 · Official Chapter 15 · FY 2026 | Selection of OB Principal or First-listed Diagnosis

Routine outpatient prenatal visits. If no complication is present at a routine prenatal visit for a normal pregnancy, choose the applicable Z34 code first. Do not combine Z34 with Chapter 15 codes.

Worked example: Routine supervision of a normal first pregnancy in the second trimester: Z34.02 first-listed.

Section I.C.15.a; I.C.15.i · Official Chapter 15 · FY 2026 | Obstetric priority and gestational diabetes

Use Chapter 15 sequencing priority as applicable, and verify the gestational diabetes control method and weeks of gestation.

Worked example: Insulin-controlled gestational diabetes at 28 weeks, antepartum: O24.414 + Z3A.28.

Section I.C.15.n.1–3 · Official Chapter 15 · FY 2026 | Normal Delivery, Code O80

Full-term uncomplicated delivery. Use O80 as the principal diagnosis on the maternal record for an uncomplicated full-term delivery of one healthy infant. If another Chapter 15 code is needed for a current complication of the delivery episode, do not use O80. An unrelated condition may be reportable separately.

Resolved antepartum complication. A complication earlier in pregnancy does not rule out O80 if it has resolved by admission for delivery and the encounter otherwise qualifies.

Outcome of delivery. Use Z37.0 for the single live birth on the maternal delivery record.

Worked example: At 39 completed weeks, a patient delivers one healthy liveborn infant after an uncomplicated admission. Assign O80 as principal, followed by Z37.0 for the outcome and Z3A.39 for completed weeks of gestation.

Section I.C.15.o.1–4 · Official Chapter 15 · FY 2026 | Peripartum and postpartum periods

Postpartum period. It begins immediately after delivery and continues for six weeks. The peripartum period extends from the last month of pregnancy to five months after delivery.

Postpartum complication. This is a complication occurring within the six-week postpartum period.

Conditions beyond the period. A Chapter 15 code may apply if the provider documents that the condition is pregnancy-related.

Delivery outside the hospital. When the mother is admitted for routine care immediately after delivery outside the hospital and no complication is documented, report Z39.0 first.

Worked example: A mother delivers at home and is admitted immediately afterward for routine postpartum examination. No complication is documented. Report Z39.0 first.

Pregnancy complications

Ectopic pregnancy and hydatidiform mole require different lookups. For hypertension, distinguish preexisting hypertension from pregnancy-related forms. Check I.C.15 for maternal care affected by fetal conditions and for preexisting versus gestational diabetes. Apply trimester or fetus identification when required by the code.

Worked coding example

Scenario	At 28 completed weeks, a pregnant patient is seen for insulin-controlled gestational diabetes.
Chart clue	Gestational diabetes, insulin control and 28 weeks.
Index starting point	Diabetes, gestational, controlled by insulin
Tabular verification	Confirm the candidate code description, required detail, and all sequencing or additional-code instructions.
Final code(s) and rationale	O24.414 then Z3A.28. No separate long-term insulin status code.

CHAPTER REVIEW

Gestational diabetes is diet-controlled at 25 completed weeks, before delivery. What is the sequence?

Show your main term, Tabular List check, final code(s) in order, and reasoning.

CMS/NCHS: FY 2026 Official Coding Guidelines

Official ICD-10-CM Chapter 16 · P00–P96

Conditions originating in the perinatal period

Start by deciding whether this is the newborn's birth record or a later encounter. Birth status applies to the birth episode; a condition originating in the perinatal period can remain relevant after it. Verify documented gestational age and birth weight independently.

Section I.C.16.a; I.C.16.d · Official Chapter 16 · FY 2026 | Birth record and prematurity

On the newborn birth record, sequence the appropriate Z38 code first.

Add documented prematurity and birth weight as applicable.

Worked example: Single hospital newborn by cesarean, documented premature at 35 completed weeks: Z38.01 + P07.38.

Worked coding example

Scenario	A single infant is born in the hospital by cesarean at 35 completed weeks. The provider diagnoses prematurity.
Chart clue	Newborn birth admission; cesarean; 35 weeks.
Index starting point	Newborn, born in hospital; Prematurity
Tabular verification	Confirm the candidate code description, required detail, and all sequencing or additional-code instructions.
Final code(s) and rationale	Z38.01 then P07.38 for documented prematurity; no birth weight was supplied.

CHAPTER REVIEW

A single full-term infant is born vaginally in the hospital with no other reportable condition. Which code leads?

Show your main term, Tabular List check, final code(s) in order, and reasoning.

CMS/NCHS: FY 2026 Official Coding Guidelines

Official ICD-10-CM Chapter 17 · Q00–QA1

Congenital malformations and chromosomal abnormalities

Congenital describes the origin of a condition, not the patient's age at the visit. Determine whether the condition is still present, fully corrected, or associated with an ongoing residual problem.

Section I.C.17 · Official Chapter 17 · FY 2026 | Current congenital condition

A congenital condition can be coded at any age while it remains present.

Consider personal history when corrected and no longer present.

Worked example: Adult with an unrepaired congenital ventricular septal defect: Q21.0.

Worked coding example

Scenario	An adult is evaluated for a congenital ventricular septal defect that remains unrepaired.
Chart clue	Current congenital defect.
Index starting point	Defect, septal, ventricle
Tabular verification	Confirm the candidate code description, required detail, and all sequencing or additional-code instructions.
Final code(s) and rationale	Q21.0; adult age does not remove an existing congenital diagnosis.

CHAPTER REVIEW

The ventricular septal defect was fully repaired and is no longer present. Relevant history is reviewed. What changes?

Show your main term, Tabular List check, final code(s) in order, and reasoning.

CMS/NCHS: FY 2026 Official Coding Guidelines

Official ICD-10-CM Chapter 18 · R00–R99

Symptoms, signs and abnormal findings

Symptoms can be the best supported outpatient diagnosis when the cause remains unconfirmed. Once a condition is established, decide whether a symptom is part of it, separate from it, or covered by a combination code.

Section I.C.18.a–c; IV.H · Official Chapter 18 · FY 2026 | Symptoms and outpatient uncertainty

Report a symptom when a definitive outpatient diagnosis is not established.

Avoid separately reporting symptoms integral to a confirmed condition unless directed.

Worked example: Outpatient right lower quadrant pain with only possible appendicitis: R10.31.

Worked coding example

Scenario	An outpatient has right lower quadrant abdominal pain and possible appendicitis; no final diagnosis is established.
Chart clue	Outpatient and possible; documented symptom location.
Index starting point	Pain, abdominal, right lower quadrant
Tabular verification	Confirm the candidate code description, required detail, and all sequencing or additional-code instructions.
Final code(s) and rationale	R10.31; do not code suspected appendicitis as confirmed.

CHAPTER REVIEW

The same note instead documents left lower quadrant pain without a confirmed cause. Which code?

Show your main term, Tabular List check, final code(s) in order, and reasoning.

CMS/NCHS: FY 2026 Official Coding Guidelines

Official ICD-10-CM Chapter 19 · S00–T88

Injury, poisoning and other consequences

For injuries, identify site, laterality and treatment phase. For a drug event, determine whether the medicine was taken as prescribed before deciding between adverse effect, poisoning and underdosing. That distinction can reverse the code order.

Section I.C.19.a; I.C.19.e.5 · Official Chapter 19 · FY 2026 | Injury encounters and drug events

Choose the encounter character by treatment phase.

For an adverse effect, report the reaction first; for poisoning, the poisoning code leads.

Worked example: Properly taken amoxicillin causes a documented rash during active treatment: R21 + T36.0X5A.

Open wounds and maltreatment

For a laceration or puncture, check anatomic site, laterality, foreign body, and treatment phase. For suspected or confirmed abuse, do not infer confirmation. Follow I.C.19 on sequencing and review any required additional codes.

Worked coding example

Scenario	Correctly taken amoxicillin causes a documented rash. The patient receives active treatment.
Chart clue	Correctly taken; provider links rash to drug.
Index starting point	Rash; Table of Drugs and Chemicals, amoxicillin, adverse effect
Tabular verification	Confirm the candidate code description, required detail, and all sequencing or additional-code instructions.
Final code(s) and rationale	R21 then T36.0X5A, when the reaction is documented only as rash.

CHAPTER REVIEW

An accidental overdose of the same drug causes vomiting and is actively treated. What leads?

Show your main term, Tabular List check, final code(s) in order, and reasoning.

Official ICD-10-CM Chapter 20 · V00–Y99

External causes of morbidity

An injury code describes what happened to the patient’s body; an external cause code adds how the injury happened. When applicable, look for intent, place, activity and status without inventing details.

Section I.C.20.a · Official Chapter 20 · FY 2026 | External causes

Use external cause codes to add context after the injury or condition.

Check payer and jurisdiction rules for whether reporting is required.

Worked example: Right ankle sprain, ligament unspecified, actively treated after a same-level slip and fall without striking an object: S93.401A; add W01.0XXA when reporting the cause.

Worked coding example

Scenario	A right ankle sprain is actively treated after a same-level slip and fall without striking an object. The payer requires external-cause reporting.
Chart clue	Injury plus documented mechanism; reporting required.
Index starting point	Sprain, ankle; Fall, slipping
Tabular verification	Confirm the candidate code description, required detail, and all sequencing or additional-code instructions.
Final code(s) and rationale	For unspecified ankle ligament, S93.401A first. Add W01.0XXA for the documented fall; verify circumstances and applicable reporting requirements.

CHAPTER REVIEW

Is the external cause code first-listed when the injury is treated?

Show your main term, Tabular List check, final code(s) in order, and reasoning.

CMS/NCHS: FY 2026 Official Coding Guidelines

Official ICD-10-CM Chapter 21 · Z00–Z99

Factors influencing health status and contact with health services

Z codes can describe why the patient came in or provide additional context. Read for the purpose of the encounter: screening, diagnostic evaluation, aftercare, follow-up and history describe different situations.

Section I.C.21.c.5; I.C.21.c.8 · Official Chapter 21 · FY 2026 | Screening and follow-up

Screening is testing an asymptomatic person; follow-up is surveillance after treatment is complete.

Distinguish both from diagnostic evaluation of symptoms.

Worked example: Routine screening mammogram for an asymptomatic patient: Z12.31. A diagnostic mammogram for a lump is not a screening encounter.

Worked coding example

Scenario	An asymptomatic patient presents solely for screening mammography.
Chart clue	Screening with no symptoms.
Index starting point	Screening, mammogram
Tabular verification	Confirm the candidate code description, required detail, and all sequencing or additional-code instructions.
Final code(s) and rationale	Z12.31 first-listed for the screening encounter.

CHAPTER REVIEW

A patient has diagnostic mammography because of a documented breast lump. Use the screening code first?

Show your main term, Tabular List check, final code(s) in order, and reasoning.

CMS/NCHS: FY 2026 Official Coding Guidelines

Official ICD-10-CM Chapter 22 · U00–U85

Codes for special purposes

A code’s position in the Tabular List does not tell you where all its guidelines are discussed. For a U code, check the classification and any cross-referenced disease guidance. Distinguish active infection from a documented postinfectious condition.

Section I.C.1.g.1; Tabular List · Official Chapter 22 · FY 2026 | Special-purpose codes

Look up the U code and its instructions.

The COVID-19 rules are located in I.C.1.g even though the code is in the special-purpose range.

Worked example: Confirmed current COVID-19: U07.1. For a documented post-COVID condition, code the specific residual condition first when known, then U09.9.

Worked coding example

Scenario	The provider confirms current COVID-19 at an outpatient visit, with no separately reportable manifestation.
Chart clue	Confirmed current infection.
Index starting point	COVID-19
Tabular verification	Confirm the candidate code description, required detail, and all sequencing or additional-code instructions.
Final code(s) and rationale	U07.1; the code is in official Chapter 22, while the disease guidance is under I.C.1.g.

CHAPTER REVIEW

An outpatient with cough has possible COVID-19 only, with no confirmation or documented exposure. What is first-listed?

Show your main term, Tabular List check, final code(s) in order, and reasoning.

CMS/NCHS: FY 2026 Official Coding Guidelines

MEDICAL CODING MASTERY | STUDENT EDITION

CHAPTER 7

ICD-10-CM: Musculoskeletal and Genitourinary Systems

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◆ Chapter Objectives

1. Identify the structure of ICD-10-CM Chapter 13 (M00–M99) and explain why laterality is mandatory for nearly every code in this chapter.
2. Distinguish between osteoarthritis (OA) and rheumatoid arthritis (RA) and select the correct code based on type, site, laterality, and serostatus.
3. Assign codes for gout, including type (idiopathic, drug-induced, chronic) and the presence or absence of tophus using the correct 7th character.
4. Differentiate between disc disorders with myelopathy, disc disorders with radiculopathy, and non-specific back pain codes (M54.–), and apply the correct code hierarchy.
5. Code osteoporosis with and without pathological fracture, including correct episode-of-care 7th characters and placeholder X usage for vertebral fractures.
6. Stage chronic kidney disease (CKD) accurately using N18.1 through N18.6 and explain the relationship between CKD stage, ESRD, and the Z99.2 dialysis code.

7. Apply site-specific UTI coding, distinguishing pyelonephritis, cystitis, and unspecified UTI (N39.0), and add organism codes when documented.

8. Code benign prostatic hyperplasia (BPH) with and without lower urinary tract symptoms (LUTS) and explain the coding significance of symptom documentation.

9. Assign codes for female genital conditions including endometriosis with laterality, PID by site, ovarian cysts, and menstrual disorders.

10. Sequence codes for complex multi-system scenarios combining musculoskeletal, renal, and reproductive diagnoses in both inpatient and outpatient settings.

◆ Key Terms

Acute kidney injury — Sudden, potentially reversible loss of kidney function.

Arthritis — Inflammation of one or more joints causing pain and stiffness.

Benign prostatic hyperplasia — Non-cancerous enlargement of the prostate gland.

Calculus — Hardened mineral deposit (stone) in a body organ or duct.

Chondropathy — Any disease or disorder of cartilage.

Chronic kidney disease — Progressive, irreversible loss of kidney function over months or years.

Cystitis — Inflammation or infection of the urinary bladder.

Disc herniation — Displacement of intervertebral disc material beyond its normal boundaries.

Endometriosis — Presence of uterine-like tissue outside the uterus.

Fracture (pathological) — Fracture resulting from minimal or no trauma due to diseased or weakened bone.

Gout — Metabolic disorder characterized by uric acid crystal deposits in joints.

Hematuria — Presence of blood in the urine.

Laterality — Designation of the body side affected: right, left, bilateral, or unspecified.

Myelopathy — Disease or damage to the spinal cord, often from compression.

Nephropathy — Any disease, damage, or dysfunction of the kidney.

Osteoarthritis — Degenerative joint disease characterized by cartilage breakdown.

Osteoporosis — Systemic skeletal disease marked by decreased bone mass and increased fracture risk.

Pyelonephritis — Bacterial infection of the kidney, usually ascending from the bladder.

Rheumatoid arthritis — Chronic autoimmune disease causing inflammatory joint destruction.

Urinary tract infection — Bacterial infection anywhere in the urinary system.

Chapter Overview

ICD-10-CM Chapter 13 — Diseases of the Musculoskeletal System and Connective Tissue (M00–M99) — is the single largest chapter in the entire ICD-10-CM code set, with hundreds of codes requiring site-specific and laterality detail that has no equivalent in ICD-9-CM. Mastery of this chapter is non-negotiable for the CPC exam and for real-world orthopedic, rheumatology, and primary care coding. Chapter 14 — Diseases of the Genitourinary System (N00–N99) — may be smaller in volume, but it is equally consequential: correct CKD staging directly affects Medicare risk-adjustment, quality metrics, and reimbursement for millions of patients. Together, these two chapters will challenge you to apply specificity at every level, and this chapter will show you exactly how to do it — every time.

Section 7.1 — ICD-10-CM Chapter 13: Diseases of the Musculoskeletal System and Connective Tissue (M00–M99)

Let me be direct with you: **Chapter 13 is the largest chapter in ICD-10-CM by number of codes**, and the single rule that drives nearly every code assignment in this chapter is **laterality**. Right. Left. Bilateral. Unspecified. That specificity must be present in virtually every MSK code you assign, and if the documentation does not support it, your job is to query the provider — not default to "unspecified."

Here is what makes Chapter 13 so layered: after you establish laterality, you then have to determine the site within the body region (for example, the shoulder joint has three articulations: glenohumeral, acromioclavicular, sternoclavicular), distinguish bone vs. joint vs. soft tissue involvement, and identify any associated neurological or systemic manifestations. The CPC exam loves this chapter precisely because there are so many opportunities to choose the wrong code if you do not read the tabular carefully.

> 🔍 **Check This Out**
>
> ICD-10-CM Chapter 13 (M00–M99) contains more than 4,000 individual codes — roughly 6% of the entire ICD-10-CM code set. The jump from ICD-9-CM to ICD-10-CM expanded musculoskeletal coding specificity by approximately 500%. The #1 reason MSK claims are denied or downcoded in commercial audits is missing or incorrect laterality. Make laterality verification your first habit every single time you open a musculoskeletal record.

7.1A — Arthritis: Osteoarthritis and Rheumatoid Arthritis HIGH YIELD

Osteoarthritis (OA)

Osteoarthritis is degenerative joint disease — the cartilage that cushions the ends of bones wears down over time. It is the most common form of arthritis and is most frequently seen in weight-bearing joints: the knee, hip, and spine. OA of the hand (particularly the distal interphalangeal joints) is also very common. In ICD-10-CM, OA codes require you to specify: the type (primary vs. secondary), the joint site, and the laterality. Primary OA develops without an identifiable cause; secondary OA develops as a result of another condition such as a prior traumatic injury, dysplasia, or other structural abnormality.

- M15.–Polyosteoarthritis (multiple joints affected)
- M15.0Primary generalized osteoarthritis
- M15.1Heberden's nodes with arthropathy (bony enlargements at DIP joints)
- M15.2Bouchard's nodes with arthropathy (bony enlargements at PIP joints)
- M15.9Polyosteoarthritis, unspecified
- M16.0Bilateral primary osteoarthritis of hip
- M16.11Primary osteoarthritis, right hip
- M16.12Primary osteoarthritis, left hip
- M16.2Bilateral OA of hip due to hip dysplasia
- M16.7Other secondary OA of hip, bilateral
- M17.0Bilateral primary osteoarthritis of knee
- M17.11Primary osteoarthritis, right knee
- M17.12Primary osteoarthritis, left knee
- M17.31Secondary osteoarthritis, right knee (post-traumatic or other secondary)
- M18.–OA of first carpometacarpal joint (thumb base)

- M19.011Primary OA, right shoulder
- M19.021Primary OA, right elbow
- M19.071Primary OA, right ankle and foot

Post-traumatic osteoarthritis requires a secondary OA code (e.g., M17.31 — secondary OA right knee) plus a personal history code documenting the prior injury that caused the secondary OA. Never assign a primary OA code when the documentation specifically attributes the arthritis to a prior fracture, dislocation, or ligamentous injury.

> 📸 **Coding Shot — OA Primary vs. Secondary**
>
> Every time you code OA, your first question is: **primary or secondary?** Look for documentation of a prior injury, surgery, dysplasia, or structural abnormality. If none is documented, default to primary. If the physician documents post-traumatic OA, right knee — you need M17.31 (secondary OA, right knee), not M17.11 (primary OA, right knee). Those are completely different codes and they are audited against the clinical record. Get in the habit of reading the history section of every note before you code the diagnosis.

Rheumatoid Arthritis (RA)

Rheumatoid arthritis is a systemic autoimmune disease in which the immune system attacks the synovium — the lining of the joints — causing inflammation, pain, joint destruction, and over time, systemic organ involvement. This is not wear-and-tear disease. RA is categorized in ICD-10-CM by **serostatus**: whether the **rheumatoid factor (RF)** blood test is positive or negative.

Seropositive RA (RF-positive) — coded to M05.– — is the most common form and historically the more aggressive form. **Seronegative RA (RF-negative)** — coded to M06.– — means the patient has clinical RA without positive RF on blood testing. This distinction is explicitly documented in most rheumatology notes and must be reflected in your code selection.

- M05.611Seropositive RA with involvement of right shoulder
- M05.621Seropositive RA with involvement of right elbow
- M05.631Seropositive RA with involvement of right wrist
- M05.641Seropositive RA with involvement of right hand
- M05.651Seropositive RA with involvement of right hip
- M05.661Seropositive RA with involvement of right knee
- M05.671Seropositive RA with involvement of right ankle and foot
- M05.7–Seropositive RA with rheumatoid vasculitis (by site)
- M05.4–Seropositive RA with myopathy (by site)
- M05.5–Seropositive RA with polyneuropathy (by site)
- M05.3–Seropositive RA with rheumatoid nodule (by site)
- M06.011Seronegative RA, right shoulder
- M06.9RA, unspecified (LAST RESORT — see STOP! box below)
- M08.–Juvenile rheumatoid arthritis — patient under 16 at onset

⚠ **STOP!**

Never default to M06.9 — Rheumatoid arthritis, unspecified — when the medical record documents the patient's serostatus. If the rheumatology note documents "seropositive RA" or lab results confirm a positive rheumatoid factor, your code is M05.–, not M06.9. If the note documents "seronegative RA," your code is M06.0–, not M06.9. The unspecified code exists only for the rare situation in which the documentation truly does not indicate serostatus and a query is not feasible. It is never a shortcut. Auditors flag M06.9 as a specificity failure — it triggers review for upcoding or improper documentation.

Feature	Osteoarthritis (OA)	Rheumatoid Arthritis (RA)
Cause	Wear and tear; degenerative	Autoimmune; systemic
Joints affected	Weight-bearing (knee, hip); distal interphalangeal	Systemic; often proximal and bilateral; PIP and MCP joints
Morning stiffness	Brief (<30 minutes); resolves with movement	Prolonged (>1 hour); hallmark symptom
RF blood test	Negative	Positive (seropositive) or negative (seronegative)
ICD-10-CM range	M15–M19	M05–M06 (adult); M08 (juvenile)
Manifestation codes	N/A (OA does not have systemic manifestation sub-categories)	M05.3–M05.7 for vasculitis, nodule, myopathy, polyneuropathy

📝 **Worked Example**

Scenario: Patient with seropositive rheumatoid arthritis involving the right knee and left wrist, with rheumatoid vasculitis at both sites.

Code 1: M05.761 — Rheumatoid arthritis with rheumatoid vasculitis of right knee (seropositive)

Code 2: M05.732 — Rheumatoid arthritis with rheumatoid vasculitis of left wrist (seropositive)

Walk-through: Seropositive → M05.–. Vasculitis involvement → subcategory M05.7–. Right knee = 6th character 6, laterality right = 1 → M05.761. Left wrist = 6th character 3, laterality left = 2 → M05.732. Assign a separate code for each joint affected when the manifestation site differs.

▶ Official Guidelines for Coding and Reporting — Site and

Laterality (Chapter 13)

"Most of the codes within Chapter 13 have site and laterality designations. The site represents the bone, joint or the muscle involved. For some conditions where more than one bone, joint or muscle is usually involved, such as osteoarthritis, there is a 'multiple sites' code available. For categories where no multiple site code is provided and more than one bone, joint or muscle is involved, multiple codes should be used to indicate the different sites involved."

Plain English: Code each affected joint separately unless ICD-10-CM provides a "multiple sites" or "bilateral" sub-option. When bilateral codes exist (M17.0 — bilateral primary OA of knee), use them. When they do not, assign separate codes for each affected site. Never lump multiple joints under one unspecified code to avoid the work of coding each site.

👔 **From the Trenches**

"The very first thing I look for in any orthopedic or rheumatology record is laterality. I literally built a color-coded laterality verification checklist for our entire department — right is green, left is blue, bilateral is yellow. Before any MSK claim goes out the door, it gets checked against that list. Our denial rate for laterality errors dropped from 11% to under 2% in the first quarter after we implemented it. Auditors don't just flag wrong codes — they flag the absence of a laterality designator as a documentation deficiency, and that can trigger a full chart pull. Make laterality your first question, every time."

— Sandra Okonkwo, CPC, COSC | Senior Orthopedic Coder, Regional Musculoskeletal Group, Atlanta, GA

✓ **Quick Check 7.1**

1. What is the ICD-10-CM code for bilateral primary osteoarthritis of the knee?

2. A patient has seropositive RA with involvement of the left knee. What is the correct ICD-10-CM code?

3. True or False: M06.9 is an acceptable default code whenever rheumatoid arthritis is documented without further specification by the provider. **T F**

4. What two pieces of information are required to distinguish M16.11 from M16.12?

5. A patient has post-traumatic osteoarthritis of the left knee following a prior ACL injury. Which sub-category of codes would you use?

7.1B — Gout HIGH YIELD

Gout is a metabolic disorder in which uric acid builds up in the blood and forms monosodium urate crystals that deposit in joints and soft tissue, causing intensely painful episodes. The classic presentation is acute podagra — severe pain and swelling of the great toe metatarsophalangeal joint — but gout can affect any joint. ICD-10-CM separates gout into several distinct types based on etiology, and for chronic gout adds a 7th character to indicate the presence or absence of tophi.

- M10.–Gout (primary, acute; includes gouty arthritis)
- M10.011Idiopathic gout, right shoulder
- M10.061Idiopathic gout, right knee
- M10.071Idiopathic gout, right ankle and foot
- M10.1–Lead-induced gout (code also toxic effects of lead and its compounds)
- M10.2–Drug-induced gout — ALSO requires code for adverse effect of drug (T36–T65 with 5th/6th character A)

- M10.3–Gout due to renal impairment — code also the associated renal condition
- M10.9Gout, unspecified (use only when type and site cannot be determined)
- M11.–Chondrocalcinosis (calcium pyrophosphate crystal deposits — "pseudogout")
- M1A.–Chronic gout (long-standing disease with or without tophi)
- M1A.371Chronic gout, right ankle and foot, with tophus (7th character 1)
- M1A.370Chronic gout, right ankle and foot, without tophus (7th character 0)

A **tophus** (plural: tophi) is a deposit of uric acid crystals that forms a visible nodule under the skin, most often around joints, fingers, toes, and the helix of the ear. In ICD-10-CM, tophus is not coded separately — it is captured within the chronic gout code using the 7th character: **1 = with tophus; 0 = without tophus**. If you code tophus as an additional code, you are double-coding, and that is an error.

📸 Coding Shot — Drug-Induced Gout

When the documentation states that gout is drug-induced (commonly caused by diuretics, cyclosporine, low-dose aspirin, or niacin), you need **two codes**: (1) the drug-induced gout code from M10.2– with site and laterality, AND (2) an adverse effect code from the T36–T65 table identifying the specific drug (with 5th/6th character indicating adverse effect — the patient took the drug as prescribed). Always check the note for the precipitating medication. This is a sequencing trap on the CPC exam: the gout code comes first, the adverse effect code comes second.

Exercise 7-A — Arthritis and Gout Coding

Instructions: For questions 1–5, assign the correct ICD-10-CM code(s). For questions 6–8, select True or False. For questions 9–10, circle the correct

answer. For questions 11–12, fill in the blank. Use your ICD-10-CM code book for all code assignments.

1. Primary osteoarthritis, left hip:

Code:

2. Bilateral primary osteoarthritis of the knee:

Code:

3. Seropositive rheumatoid arthritis involving the right hand:

Code:

4. Seronegative rheumatoid arthritis, left shoulder:

Code:

5. Chronic gout, left knee, with tophus:

Code:

6. True or False: Tophus should be coded separately using an additional ICD-10-CM code when documented with chronic gout.

T F

7. True or False: M15.0 is used when the provider documents generalized primary osteoarthritis affecting multiple joints.

T F

8. True or False: Juvenile rheumatoid arthritis is coded from category M06.–.

T F

9. A patient presents with idiopathic gout of the right ankle and foot. The correct code is:

A. M10.071 — Idiopathic gout, right ankle and foot B. M10.9 — Gout, unspecified C. M1A.071 — Chronic gout, right ankle and foot, without tophus D. M11.071 — Chondrocalcinosis, right ankle and foot

10. Seropositive RA with rheumatoid vasculitis of the left knee is coded:

A. M05.661 — Seropositive RA with involvement of right knee B. M05.762 —

Seropositive RA with rheumatoid vasculitis of left knee C. M06.062 — Seronegative RA, left knee D. M06.9 — RA, unspecified

11. The 7th character used to indicate chronic gout WITH tophus is:

12. Post-traumatic osteoarthritis of the right knee following a prior fracture requires a code from subcategory for the OA and a code for the history of injury.

🔧 Toolbox — Section 7.1A–B Summary

- Laterality is required for virtually every OA, RA, and gout code — right (1), left (2), bilateral (3), unspecified (9).
- OA is coded by type (primary vs. secondary), joint, and laterality; post-traumatic OA requires a secondary OA code + history code.
- RA is coded by serostatus: M05.– (seropositive/RF+) vs. M06.– (seronegative/RF–); M06.9 is a last resort, never a default.
- RA systemic manifestations (vasculitis, myopathy, polyneuropathy, nodule) are captured in subcategories M05.3–M05.7, not as separate codes.
- Gout type determines the code category: idiopathic (M10.0–), lead-induced (M10.1–), drug-induced (M10.2–), chronic (M1A.–). Tophus is 7th character, not a separate code.

7.1C — Dorsopathies: Back Pain, Disc Disorders, and Spinal Stenosis HIGH YIELD

Dorsopathy is the broad ICD-10-CM term for diseases of the spine and back. Back pain is one of the top five reasons patients visit a primary care physician — you will code this constantly. The critical skill in dorsopathy coding is knowing when to code

the disc disorder versus when to code back pain, and understanding the clinical distinction between myelopathy and radiculopathy.

Intervertebral Disc Disorders (M50–M51)

Disc disorders require you to specify: the spinal region (cervical vs. thoracic vs. lumbar), the specific vertebral level when documented, and the clinical picture (myelopathy, radiculopathy, displacement, or degeneration).

- M50.–Cervical disc disorders (C1–C7 levels)
- M50.0–Cervical disc disorder with myelopathy (spinal cord involvement)
- M50.1–Cervical disc disorder with radiculopathy (nerve root involvement)
- M50.2–Other cervical disc displacement (herniation without documented neuro finding)
- M50.3–Other cervical disc degeneration (DDD without documented neuro finding)
- M50.x0C4–C5 level
- M50.x1C5–C6 level
- M50.x2C6–C7 level
- M50.x3C7–T1 level
- M51.06Disc disorder with myelopathy, lumbar region
- M51.16Disc disorder with radiculopathy, lumbar region
- M51.17Disc disorder with radiculopathy, lumbosacral region
- M51.26Other lumbar disc displacement
- M51.36Other lumbar disc degeneration
- M51.4Schmorl's nodes (vertical disc herniations into vertebral body)
- M51.9Unspecified thoracic, thoracolumbar and lumbosacral intervertebral disc derangement

Myelopathy vs. Radiculopathy — Know the Difference

Myelopathy means the spinal cord itself is compressed or damaged. This is the more serious condition. Clinical signs include bilateral weakness, incoordination, gait disturbances, and potential bladder or bowel dysfunction. **Radiculopathy** means a nerve root is compressed, causing pain, numbness, tingling, or weakness that radiates along the nerve distribution — arm pain from a cervical disc, leg pain from a lumbar disc (sciatica is lumbar radiculopathy). When both are documented, code the disc disorder with myelopathy first, as it represents the more severe complication.

Back Pain Codes (M54.–)

- M54.2Cervicalgia (neck pain, without disc disorder documentation)
- M54.12Radiculopathy, cervical region
- M54.16Radiculopathy, lumbar region
- M54.31Sciatica, right side
- M54.32Sciatica, left side
- M54.41Lumbago with sciatica, right side
- M54.42Lumbago with sciatica, left side
- M54.50Low back pain, unspecified
- M54.51Vertebrogenic low back pain
- M54.59Other low back pain
- M54.6Pain in thoracic spine

📸 Coding Shot — Disc Disorder WITH Radiculopathy: One Code Does the Job

Here is a mistake I see constantly: a coder assigns M51.16 (disc disorder with radiculopathy, lumbar region) AND THEN also assigns M54.16 (radiculopathy, lumbar region) as a second code. **Do not do this.** M51.16 already captures both the disc disorder and the radiculopathy — the word "with" in the code title

means both conditions are encoded. The M54 radiculopathy code adds nothing and is redundant. One code. That is all you need when the disc disorder with radiculopathy code exists.

⚠ **STOP!**

M54.50 — Low back pain, unspecified is NOT your go-to code for back pain. If the physician documents a specific disc disorder, spinal stenosis, degenerative disc disease, or other structural cause of the pain, code the underlying diagnosis — not the symptom. M54.50 is appropriate only when the documentation supports back pain as the primary complaint with no identified structural or disc-related cause. Using M54.50 when a disc disorder is documented is like coding "chest pain" when the EKG shows a STEMI. Always code the underlying condition when it is known.

Spinal Stenosis (M48.0–)

- M48.01Spinal stenosis, occipito-atlanto-axial region
- M48.02Spinal stenosis, cervical region
- M48.03Spinal stenosis, cervicothoracic region
- M48.06Spinal stenosis, lumbar region without neurogenic claudication
- M48.061Spinal stenosis, lumbar region WITH neurogenic claudication
- M48.07Spinal stenosis, lumbosacral region

✓ **Quick Check 7.2**

1. What is the difference between myelopathy and radiculopathy, and which condition is more serious?

2. A patient has a lumbar disc herniation at L4–L5 with documented radiculopathy to the right leg. Which code do you assign? Do you also need M54.16? **Yes No**

3. When is it appropriate to code M54.50 (low back pain, unspecified)?

4. A patient has lumbar spinal stenosis with neurogenic claudication. What is the correct code?

5. True or False: Cervicalgia (M54.2) is the correct code when the provider documents cervical disc degeneration with neck pain. **T F**

7.1D — Osteoporosis HIGH YIELD

Osteoporosis is a systemic skeletal disease characterized by decreased bone density and microarchitectural deterioration of bone tissue, leading to increased bone fragility and risk of fracture. In ICD-10-CM, the first decision you must make is: Does the patient have a current pathological fracture, or not? These are entirely different code categories.

Condition	Code Range	When to Use
Osteoporosis WITH current pathological fracture	M80.–	Patient has osteoporosis AND has a current fracture resulting from the disease
Osteoporosis WITHOUT current pathological fracture	M81.–	Patient has osteoporosis but has NOT sustained a fracture at this time

A **pathological fracture** is a fracture that occurs with minimal trauma or no trauma at all — the bone is so weakened by osteoporosis that it fractures from normal daily activity or minor stress. This is fundamentally different from a **traumatic fracture**, which results from an injury event and is coded from Chapter 19 (S__.__). You cannot use both for the same fracture. Determine the cause: osteoporosis = M80.–; injury = S__.–.

- M80.0–Age-related osteoporosis with current pathological fracture (type + site + laterality + episode of care)
- M80.011AAge-related osteoporosis, pathological fracture, right shoulder, initial encounter
- M80.061AAge-related osteoporosis, pathological fracture, right lower leg, initial encounter
- M80.08XAAge-related osteoporosis, pathological fracture, vertebrae, initial encounter
- M80.8–Other osteoporosis with pathological fracture (secondary: drug-induced, post-surgical)
- M81.0Age-related osteoporosis without current pathological fracture
- M81.8Other osteoporosis without pathological fracture (drug-induced, post-surgical, etc.)

Episode of care 7th characters for M80.– (same system as traumatic fractures):

- **A** — Initial encounter (active treatment is being provided)
- **D** — Subsequent encounter (routine healing; follow-up care)
- **G** — Subsequent encounter for fracture with delayed healing
- **K** — Subsequent encounter for fracture with nonunion
- **P** — Subsequent encounter for fracture with malunion
- **S** — Sequela (late effects after the fracture has healed)

📝 **Worked Example**

Scenario: Elderly woman with age-related osteoporosis presents with acute compression fracture of L2 vertebra — first visit today for this fracture.

Code: M80.08XA

Break it down: M80.0 = age-related osteoporosis with current pathological fracture. 8 = vertebrae as fracture site. **X** = placeholder required at position 6 (no subcategory value exists here — X fills the position so the 7th character can be added). A = initial encounter (active treatment being provided today). No traumatic fracture code. No separate osteoporosis without fracture code. This one code captures the entire clinical picture.

📸 Coding Shot — The Placeholder X in Vertebral Fracture Codes

M80.08XA: that X in position 6 is not a typo. ICD-10-CM requires 7 characters for this code, but position 6 has no defined subcategory value in this particular combination. The X is a **mandatory placeholder** — without it, you cannot add the episode-of-care 7th character (A, D, G, K, P, or S). If you submit M80.08A without the X, that is an invalid code. The system will reject it. Every ICD-10-CM exam question that includes vertebral fractures is testing whether you know to include the placeholder.

▶ Official Guidelines for Coding and Reporting — Osteoporosis (Section I.C.13)

"Osteoporosis without current pathological fracture: Assign a code from category M81, Osteoporosis without current pathological fracture, for patients with osteoporosis who do not currently have a pathological fracture due to the osteoporosis, even if they have had a fracture in the past. For patients with a history of osteoporosis fractures, status code Z87.310, Personal history of (healed) osteoporosis fracture, should follow the code from M81."

Plain English: If the patient had a pathological fracture last year but it is healed and they have no current fracture today, the code is M81.0 — NOT

M80.–. You add Z87.310 to document the history. M80.– is reserved for current, active pathological fractures only.

⚠ **Caution!**

Coding a pathological fracture as a traumatic fracture — using S__ codes when the documentation explicitly states the fracture resulted from osteoporosis — is a miscoding error with serious consequences. Pathological fractures (M80.–) and traumatic fractures (S__.–) affect quality metrics, orthopedic bundled payment calculations, and risk adjustment differently. Auditors specifically look for instances where a fragility fracture in an elderly osteoporotic patient was coded as traumatic. If the provider's documentation is unclear, query before you code.

Exercise 7-B — Dorsopathies and Osteoporosis Coding

Instructions: For questions 1–7, assign the correct ICD-10-CM code(s). For questions 8–9, select True or False. For question 10, circle the correct answer. For questions 11–12, fill in the blank.

1. Lumbar disc herniation with radiculopathy, lumbar region:
   Code:
2. Lumbar spinal stenosis with neurogenic claudication:
   Code:
3. Cervical disc disorder with myelopathy, C5–C6 level:
   Code:
4. Low back pain, unspecified (no structural diagnosis documented):
   Code:

5. Age-related osteoporosis with pathological compression fracture of the vertebrae — patient seen for the first time for this fracture today:

Code:

6. Age-related osteoporosis, no current fracture. Patient has a history of a healed vertebral fracture two years ago:

Code 1: Code 2:

7. Drug-induced osteoporosis (long-term corticosteroid use) without current fracture:

Code:

8. True or False: If a physician documents "compression fracture of L3, osteoporosis," the correct code is from Chapter 19 (S-codes) because a specific vertebral level is identified.

T F

9. True or False: The episode of care 7th character D (subsequent encounter) is used when the patient is seen for routine follow-up during healing of a pathological fracture.

T F

10. A patient with lumbar disc degeneration and low back pain — no radiculopathy or neurologic involvement documented. The correct code is:

A. M54.50 — Low back pain, unspecified B. M51.36 — Other lumbar disc degeneration C. M51.16 — Disc disorder with radiculopathy, lumbar region D. M48.06 — Spinal stenosis, lumbar region without neurogenic claudication

11. In M80.08XA, the letter X serves as a because position 6 has no in this code category.

12. The 7th character indicating a fracture with delayed healing (fracture not progressing on schedule) is:

🔧 Toolbox — Section 7.1C–D Summary

- When a disc disorder causes radiculopathy or myelopathy, code the disc disorder WITH the complication (M50.1–, M51.16) — do NOT also code M54 back pain separately.
- M54.– back pain codes are for symptom-level coding only when no specific structural cause is documented; they are replaced by the structural diagnosis when one exists.
- Lumbar spinal stenosis has two distinct codes: with neurogenic claudication (M48.061) and without (M48.06) — the clinical documentation determines which you assign.
- Osteoporosis WITH current pathological fracture → M80.– (requires type + site + laterality + episode of care 7th character).
- Osteoporosis WITHOUT current pathological fracture → M81.–; if history of prior healed fracture exists, add Z87.310.

Section 7.2 — ICD-10-CM Chapter 14: Diseases of the Genitourinary System (N00–N99)

Chapter 14 covers the kidneys, ureters, bladder, urethra, and male and female genital organs. The high-yield CPC exam topics here are CKD staging, AKI, UTI site-specific coding, kidney stones, BPH with and without LUTS, and urinary incontinence. You have already encountered CKD staging codes in the context of hypertension combination codes — now we study them as standalone diagnoses and understand the full N18 staging system.

🔍 **Check This Out**

Approximately 37 million Americans — about 1 in 7 adults — have chronic kidney disease, and the majority do not know it. CKD stage coding has direct financial implications: CMS uses CKD staging codes to risk-adjust Medicare Advantage payments, calculate HEDIS quality measures, and determine star ratings for health plans. A patient miscoded as CKD Stage 2 instead of Stage 4 can cost a practice thousands of dollars in underpayment and may trigger a quality measure failure. Accurate CKD staging is not an academic exercise — it is a revenue and quality imperative.

7.2A — Chronic Kidney Disease (CKD) Staging HIGH YIELD

CKD staging in ICD-10-CM is based on the **glomerular filtration rate (GFR)** — the rate at which the kidneys filter blood. The lower the GFR, the more advanced the kidney disease. The physician's documentation of the CKD stage drives your code selection — but if GFR values are documented in the chart and no stage is explicitly stated, you may code the stage that correlates with the documented GFR.

- N18.1CKD, Stage 1 — GFR ≥ 90; kidney damage with normal or increased filtration
- N18.2CKD, Stage 2, mild — GFR 60–89; mildly decreased function
- N18.30CKD, Stage 3, unspecified
- N18.31CKD, Stage 3a — GFR 45–59; mildly to moderately decreased
- N18.32CKD, Stage 3b — GFR 30–44; moderately to severely decreased
- N18.4CKD, Stage 4 — GFR 15–29; severely decreased
- N18.5CKD, Stage 5 — GFR <15; kidney failure, not yet on dialysis
- N18.6End Stage Renal Disease (ESRD) — on dialysis; ALWAYS add Z99.2
- N18.9CKD, unspecified — LAST RESORT; see STOP! box below

- Z99.2Dependence on renal dialysis — always coded with N18.6

⚠ **STOP!**

N18.9 — CKD, unspecified is an audit red flag. Never assign N18.9 when the CKD stage is documented anywhere in the chart — including in the problem list, the nephrology consult, or the lab trending section. If the GFR value is documented but no stage is stated, use it to determine the stage and query the physician to confirm. N18.9 should be an extremely rare code in your work — if you are assigning it frequently, it means either you are not reading the full chart, or your providers need documentation education. Either way, fix it.

7.2B — Acute Kidney Injury (AKI)

- N17.0Acute kidney failure with tubular necrosis
- N17.1Acute kidney failure with acute cortical necrosis
- N17.2Acute kidney failure with medullary necrosis
- N17.8Other acute kidney failure
- N17.9Acute kidney failure, unspecified

AKI vs. CKD: AKI is sudden in onset and potentially reversible with treatment; CKD is permanent and progressive. A patient can have both simultaneously — this is called **AKI on CKD**. When a patient with established CKD develops an acute kidney injury superimposed on their chronic disease, code both: N17.– for the AKI and N18.– for the CKD. These are separate, distinct conditions. Assign both codes and sequence based on the reason for the visit or the principal diagnosis guidelines.

7.2C — Urinary Tract Infections (UTI) HIGH YIELD

This is one of the most commonly miscoded conditions in outpatient practice. The rule is simple: **code to the most specific site documented.** N39.0 is NOT your default UTI code — it is a site-not-specified code used only when the documentation does not indicate where the infection is located.

- N39.0Urinary tract infection, site not specified — USE ONLY when site is truly undocumented
- N30.00Acute cystitis without hematuria (bladder infection)
- N30.01Acute cystitis with hematuria
- N30.10Interstitial cystitis (chronic) without hematuria
- N10Acute pyelonephritis (kidney infection)
- N11.–Chronic tubulo-interstitial nephritis (chronic pyelonephritis)
- N12Tubulo-interstitial nephritis, not specified as acute or chronic
- N30.40Irradiation cystitis without hematuria
- N30.41Irradiation cystitis with hematuria

Organism codes — add when documented:

- B96.20E. coli, unspecified as cause (most common UTI organism)
- B96.1Klebsiella as cause
- B95.62MRSA as cause
- B95.0Streptococcus, group A, as cause

📸 Coding Shot — N39.0 Is NOT Your Default UTI Code

Read the note before you code. If the provider documents "acute cystitis," use N30.00 or N30.01. If they document "acute pyelonephritis," use N10. If the culture grows E. coli, add B96.20. N39.0 is for the note that says "UTI" with nothing else — no site, no organism, no specific diagnosis. In most structured clinical notes, there is enough information to code more specifically. Defaulting to N39.0 when a site-specific code is supported is a medical necessity and specificity failure that affects quality reporting.

7.2D — Nephrolithiasis (Kidney Stones)

- N20.0Calculus of kidney

- N20.1Calculus of ureter
- N20.2Calculus of kidney with calculus of ureter
- N20.9Urinary calculus, unspecified
- N21.0Calculus in bladder
- N21.1Calculus in urethra
- N23Unspecified renal colic

Stone composition (calcium oxalate, uric acid, struvite, cystine) is **not required** in ICD-10-CM — the code is determined by the anatomical site of the stone. The radiology report will tell you whether the stone is in the kidney, ureter, or bladder. That is what drives your code selection.

7.2E — Benign Prostatic Hyperplasia (BPH)

- N40.0BPH WITHOUT lower urinary tract symptoms (LUTS)
- N40.1BPH WITH lower urinary tract symptoms (LUTS)
- N40.2Nodular prostate WITHOUT LUTS
- N40.3Nodular prostate WITH LUTS

LUTS (Lower Urinary Tract Symptoms) include: urinary frequency, urgency, nocturia, hesitancy, weak stream, post-void dribbling, and incomplete bladder emptying. If the physician documents BPH and the patient reports any of these symptoms — even if the physician does not explicitly use the term "LUTS" — the correct code is **N40.1**. N40.0 is only appropriate when LUTS are specifically documented as absent or not present.

> 👔 **From the Trenches**
>
> "BPH with versus without LUTS is one of those distinctions that absolutely affects reimbursement, and I see it undercoded constantly. The physician writes 'BPH, urinary frequency, nocturia' — all the symptoms are right there in the HPI — but the coder assigns N40.0 because the note does not use the abbreviation LUTS. Those symptoms ARE LUTS. You don't need the physician to

write the acronym. You need to know the clinical definition and apply it. I started doing quarterly documentation tips for our urology group specifically about LUTS language — we increased coding accuracy by 30% in one quarter. Read the symptoms, know the definition, apply the right code."

— Marcus J. Whitfield, CPC, CPUC | Lead Urology Coder, Southeast Urology Group, Tampa, FL

7.2F — Urinary Incontinence

- N39.3Stress incontinence (female) — leaks with coughing, sneezing, or exercise
- N39.41Urge incontinence — overactive bladder with leakage
- N39.42Incontinence without sensory awareness
- N39.43Post-void dribbling
- N39.44Nocturnal enuresis
- N39.46Mixed incontinence (both stress and urge components)
- N39.498Other specified urinary incontinence
- R32Unspecified urinary incontinence — use ONLY when type is not documented

▶ Official Guidelines for Coding and Reporting — Section I.C.14: CKD and AKI (Excerpt)

"Stages of chronic kidney disease (CKD): The ICD-10-CM classifies CKD based on severity. The severity of CKD is designated by stages 1–5. Stage 2, code N18.2, equates to mild CKD; stage 3, codes N18.30-N18.32, equate to moderate CKD; and stage 4, code N18.4, equates to severe CKD. Code N18.6, End stage renal disease (ESRD), is assigned when the provider has documented end-stage-renal disease (ESRD). If both a stage of CKD and ESRD are

documented, assign code N18.6 only."

"Patients who have undergone kidney transplant may still have some form of chronic kidney disease (CKD)... Assign the appropriate N18 code for the patient's stage of CKD and code Z94.0, Kidney transplant status."

Plain English: When the provider documents both a CKD stage AND ESRD — code only N18.6. The ESRD code supersedes the stage code. For transplant patients who still have CKD, you assign both the CKD stage code and Z94.0. Never assume a transplant means CKD is resolved.

🏛️ CMS Rules — CKD Staging and Medicare Quality Measures

Medicare requires accurate CKD staging for quality reporting under multiple programs. Incorrect CKD staging affects **HEDIS measures** (Comprehensive Diabetes Care — urine microalbumin testing), **Star Ratings** for Medicare Advantage plans, and **Hierarchical Condition Category (HCC) risk adjustment** for Medicare Advantage reimbursement. CKD Stage 4 (N18.4) and ESRD (N18.6) carry significantly higher HCC risk weights than CKD Stage 3 (N18.31/N18.32). Undercoding CKD stage means the plan is paid at a lower risk level than the patient's actual clinical complexity warrants — this is a compliance issue and a financial one simultaneously.

✓ Quick Check 7.3

1. What GFR range corresponds to CKD Stage 3b? What is the ICD-10-CM code?

2. A patient with known CKD Stage 4 is admitted with acute kidney injury. How many diagnosis codes are required, and what are they?

3. The provider documents "acute bladder infection with blood in the urine,

E. coli on culture." List all codes required:

4. A male patient has BPH with documented urinary frequency and nocturia. The correct code is:

5. True or False: When the provider documents both CKD Stage 4 and ESRD, you should code both N18.4 and N18.6. **T F**

Exercise 7-C — Genitourinary System Coding

Instructions: For questions 1–8, assign the correct ICD-10-CM code(s). For questions 9–10, circle the correct answer. For questions 11–12, fill in the blank.

1. CKD, Stage 3b:

Code:

2. End stage renal disease on hemodialysis:

Code 1: Code 2:

3. Acute kidney injury with tubular necrosis, superimposed on CKD Stage 3a:

Code 1: Code 2:

4. Acute pyelonephritis with Klebsiella on urine culture:

Code 1: Code 2:

5. Acute cystitis with hematuria:

Code:

6. Calculus of ureter:

Code:

7. BPH with urinary urgency and frequency:

Code:

8. Stress urinary incontinence (female):

Code:

9. A patient presents with a complaint of "kidney infection." The provider documents "pyelonephritis." The correct code is:

A. N39.0 — Urinary tract infection, site not specified B. N10 — Acute pyelonephritis C. N30.00 — Acute cystitis without hematuria D. N12 — Tubulo-interstitial nephritis, not specified as acute or chronic

10. A dialysis patient's record lists CKD Stage 5 and ESRD in the problem list. You should code:

A. N18.5 and N18.6 and Z99.2 B. N18.5 and Z99.2 C. N18.6 and Z99.2 D. N18.9 and Z99.2

11. Urinary incontinence that involves both stress and urge components is called incontinence and is coded .

12. Stone composition (e.g., calcium oxalate vs. uric acid) (is / is not) required to select the correct ICD-10-CM code for nephrolithiasis. The determining factor is the stone's .

🔧 Toolbox — Section 7.2 Summary

- CKD staging is GFR-based: N18.1 (GFR≥90) through N18.6 (ESRD on dialysis); N18.6 always paired with Z99.2; N18.9 is a last resort, never a default.
- AKI (N17.–) and CKD (N18.–) can and should be coded together when both are present — they are separate conditions, not mutually exclusive.
- UTI coding requires site-specific codes (N10 pyelonephritis, N30.00/N30.01 cystitis) when documented; N39.0 is used only when the site is truly

undocumented.

• BPH code selection (N40.0 vs. N40.1) hinges on the presence of LUTS — know the LUTS symptom list and apply it even when the abbreviation is not used in the note.

• Urinary incontinence: code the specific type (stress, urge, mixed) from N39.3–N39.46; R32 (unspecified) is the fallback when type is not documented.

Section 7.3 — Female and Male Reproductive System Conditions

7.3A — Female Genital Conditions

Endometriosis

Endometriosis is the presence of endometrium-like tissue (uterine lining tissue) outside the uterus. It most commonly involves the ovaries, fallopian tubes, and pelvic peritoneum. Endometriosis is a chronic, often painful condition that significantly impacts quality of life. ICD-10-CM added laterality specificity to endometriosis of the ovaries in recent updates — you must document and capture right, left, or bilateral.

- N80.0Endometriosis of uterus (adenomyosis)
- N80.101Endometriosis of right ovary, unspecified depth
- N80.102Endometriosis of left ovary, unspecified depth
- N80.103Endometriosis of bilateral ovaries, unspecified depth
- N80.111Endometriosis of right ovary, superficial

- N80.112Endometriosis of left ovary, superficial
- N80.2Endometriosis of fallopian tube
- N80.3Endometriosis of pelvic peritoneum
- N80.9Endometriosis, unspecified

Pelvic Inflammatory Disease (PID)

- N70.01Acute salpingitis (fallopian tube infection)
- N70.02Acute oophoritis (ovary infection)
- N70.03Acute salpingitis and oophoritis
- N73.0Acute parametritis and pelvic cellulitis
- N73.5Female pelvic peritonitis, unspecified

Ovarian Cysts

- N83.201Unspecified ovarian cyst, right side
- N83.202Unspecified ovarian cyst, left side
- N83.291Other ovarian cyst, right side
- N83.001Follicular cyst of right ovary
- N83.002Follicular cyst of left ovary
- N83.101Corpus luteum cyst, right ovary
- N83.102Corpus luteum cyst, left ovary

Menstrual Disorders

- N91.0Primary amenorrhea (menstruation never began)
- N91.1Secondary amenorrhea (menstruation stopped after having started)
- N91.2Amenorrhea, unspecified
- N92.0Excessive and frequent menstruation with regular cycle
- N92.1Excessive and frequent menstruation with irregular cycle (menometrorrhagia)

- N92.6Irregular menstruation, unspecified
- N94.3Premenstrual tension syndrome (PMS/PMDD)
- N94.6Dysmenorrhea, unspecified

7.3B — Male Genital Conditions

- N41.0Acute prostatitis
- N41.1Chronic prostatitis
- N41.2Abscess of prostate
- N42.30Unspecified dysplasia of prostate
- N42.31Prostatic intraepithelial neoplasia I (PIN I — low grade)
- N43.–Hydrocele and spermatocele
- N44.–Noninflammatory disorders of testis (torsion, cyst)
- N45.–Orchitis, epididymitis, and epididymo-orchitis
- N47.–Disorders of prepuce (phimosis, paraphimosis, redundant prepuce)
- N52.–Male erectile dysfunction (N52.01–N52.9 by type and etiology)

> ⚠ **Caution!**
>
> **Never use an N-chapter code for prostate cancer.** Malignant neoplasm of the prostate is always coded as **C61** — from Chapter 2 (Neoplasms). The N-chapter prostate codes (N40.–, N41.–, N42.–) are exclusively for benign conditions. If you accidentally assign N42.31 (Prostatic intraepithelial neoplasia I) when the diagnosis is prostate adenocarcinoma, you have coded a completely different condition. Read the pathology report. Read the diagnosis statement. C61 for malignancy. Every time.

Hematuria

- R31.0Gross hematuria (visible blood in urine)

- R31.21Asymptomatic microscopic hematuria (found on UA, no symptoms)
- R31.29Other microscopic hematuria

Critical Rule: When hematuria is a symptom of a confirmed underlying condition (e.g., cystitis, kidney stone), do not code the hematuria separately — it is integral to the underlying diagnosis. Code the underlying condition only. Assign R31.– codes only when hematuria is the primary reason for the visit with no identified underlying cause, or when it is separately evaluated as a distinct finding.

📸 Coding Shot — Hematuria: Integral or Separate?

Ask yourself two questions: (1) Is there a confirmed diagnosis that causes hematuria? (2) Did the provider document hematuria as a separately evaluated condition? If yes to #1 — do NOT code hematuria separately. If yes to #2 only — code R31.–. Example: Patient with acute cystitis WITH hematuria → code N30.01 (acute cystitis with hematuria). The hematuria is already captured in the code. Do NOT also code R31.0. Example 2: Patient presenting with gross hematuria, no confirmed diagnosis yet → code R31.0. This is the presenting complaint pending workup.

⚠ STOP!

Do NOT separately code signs and symptoms that are integral to a confirmed diagnosis. This applies throughout Chapter 14 — and throughout ICD-10-CM. Dysmenorrhea (N94.6) should not be separately coded when the provider has documented endometriosis as the established diagnosis causing the painful periods. Pelvic pain should not be separately coded when it is documented as a manifestation of confirmed PID. Only code signs and symptoms that are separately addressed, evaluated, or not routinely associated with the confirmed diagnosis. When in doubt: code the diagnosis, not the symptom.

▶ Official Guidelines for Coding and Reporting — Signs and Symptoms Integral to Confirmed Conditions (Section I.B.4–5)

"Codes that describe symptoms and signs, as opposed to diagnoses, are acceptable for reporting purposes when a related definitive diagnosis has not been established (confirmed) by the provider... Codes for signs and symptoms may be reported in addition to a related definitive diagnosis when the sign or symptom is not routinely associated with that diagnosis."

Plain English: If the patient has a confirmed diagnosis AND experiences a sign or symptom that is routinely expected with that diagnosis, code only the diagnosis. Dysmenorrhea is expected with endometriosis. Hematuria is expected with cystitis. Coding both the diagnosis and its inherent symptoms is redundant and incorrect. The exception: if the symptom is separately evaluated, is not routinely associated with the condition, or the provider specifically addresses it as a separate concern — then code it separately.

👔 From the Trenches

"Endometriosis laterality nearly broke me when the new codes came out. Suddenly I needed right ovary, left ovary, bilateral — and the physicians were still documenting 'endometriosis, ovaries, bilateral' half the time and just 'endometriosis' the other half. I built a physician documentation education packet specifically for endometriosis, OB/GYN visit, showed examples of what we needed to code correctly, and sat with our three OB/GYNs in a fifteen-minute lunch meeting. Within two months, laterality documentation for endometriosis went from 40% complete to over 85% complete. That is the value of coder-physician communication — and it directly improves patient records, not just our codes."

— Tamika D. Rousseau, CPC, COBGC | OB/GYN Coding Specialist, Gulf Coast Women's Health Associates, Mobile, AL

✓ Quick Check 7.4

1. What is the correct code for endometriosis of the left ovary, unspecified depth?

2. A patient with confirmed endometriosis presents with complaints of dysmenorrhea and pelvic pain. Should dysmenorrhea and pelvic pain be coded separately? **Yes No** Explain:

3. Which ICD-10-CM chapter contains the code for malignant neoplasm of the prostate? What is the code?

4. A patient is seen for gross hematuria. No underlying cause has been identified. What is the correct code?

5. Acute salpingitis and oophoritis together are coded as:

Exercise 7-D — Reproductive System Coding

Instructions: For questions 1–6, assign the correct ICD-10-CM code(s). For questions 7–8, select True or False. For questions 9–10, circle the correct answer.

1. Endometriosis of bilateral ovaries, unspecified depth, and endometriosis of the fallopian tube:

   Code 1: Code 2:

2. Acute salpingitis and oophoritis:

   Code:

3. Follicular cyst, left ovary:

Code:

4. Secondary amenorrhea:

Code:

5. Chronic prostatitis:

Code:

6. Asymptomatic microscopic hematuria found on routine urinalysis — no diagnosis identified:

Code:

7. True or False: Pelvic pain should be coded separately when the provider has documented a confirmed diagnosis of pelvic inflammatory disease causing the pain.

T F

8. True or False: Prostatic intraepithelial neoplasia I (PIN I) is coded from the N chapter, not the neoplasm chapter.

T F

9. A patient with a diagnosis of endometriosis of the right ovary and pelvic peritoneum presents with dysmenorrhea. The coder should:

A. Code endometriosis, pelvic peritoneum, and dysmenorrhea separately B. Code only N80.101 and N80.3; dysmenorrhea is integral to endometriosis C. Code only N94.6 — Dysmenorrhea; it is the presenting symptom D. Code N80.9 — Endometriosis unspecified; laterality is not required

10. Hematuria is coded separately (R31.–) when:

A. A patient has confirmed cystitis with blood in the urine B. A patient presents with gross hematuria and no confirmed underlying diagnosis has been identified C. A patient has a kidney stone and blood in the urine D. The provider documents hematuria as a symptom of pyelonephritis

🔧 Toolbox — Section 7.3 Summary

- Endometriosis of the ovaries requires laterality (right: N80.101/N80.111, left: N80.102/N80.112, bilateral: N80.103) — code multiple sites with multiple codes.
- PID coding requires specificity of site: salpingitis (N70.01), oophoritis (N70.02), both (N70.03), parametritis (N73.0) — code each documented site.
- Prostate malignancy is ALWAYS C61 (Chapter 2); N-chapter codes are for benign prostate conditions only — never mix these up.
- Signs and symptoms integral to a confirmed diagnosis (dysmenorrhea with endometriosis, hematuria with cystitis) are NOT separately coded — the underlying diagnosis subsumes them.
- Hematuria (R31.–) is coded separately only when it is the primary presenting complaint with no confirmed underlying diagnosis identified during that encounter.

Section 7.4 — Putting It All Together: Multi-System Documentation Scenarios

This is where everything comes together. In real-world practice and on the CPC exam, you will regularly encounter patients with multiple diagnoses spanning musculoskeletal, renal, and reproductive conditions — all requiring codes from different chapters, with proper sequencing. Work through each scenario carefully. For every code: ask yourself the category, the subcategory, the laterality, the episode of care, and whether any combination codes or additional codes apply.

🔍 **Check This Out**

According to CMS data, the average Medicare patient carries 3.4 chronic conditions simultaneously. Patients over 75 average 5.6 chronic conditions per year. Complex multi-condition encounters are the rule in most physician practices — not the exception. Your ability to accurately code multi-system encounters without missing diagnoses, sequencing errors, or specificity failures is the skill that separates a competent coder from an expert one. This section will build that skill.

Scenario 1 — RA + CKD + AKI

📝 **Clinical Scenario 1**

Patient with seropositive rheumatoid arthritis involving bilateral knees and left wrist, with CKD Stage 3b. Patient is on long-term methotrexate therapy (Z79.899). Labs show acute kidney injury superimposed on chronic kidney disease.

Code Assignment:

M05.662 — Seropositive RA with involvement of left knee (bilateral knees — code each side when bilateral subcategory not available)

M05.661 — Seropositive RA with involvement of right knee

M05.632 — Seropositive RA with involvement of left wrist

N17.9 — Acute kidney failure, unspecified (AKI)

N18.32 — CKD, Stage 3b

Z79.899 — Long-term (current) use of other medication (methotrexate)

Rationale: Seropositive RA → M05.–. Each joint affected is coded separately by laterality. AKI on CKD = code both N17.9 AND N18.32 — they are separate, additive diagnoses. Long-term methotrexate use requires Z79.899 as an

additional code per ICD-10-CM instructional notes. Sequence the principal diagnosis based on the primary reason for the encounter — if admitted for AKI, N17.9 leads.

Scenario 2 — Osteoporosis + Spinal Stenosis + History of Arthroplasty

📝 **Clinical Scenario 2**

Patient with age-related osteoporosis presents with acute compression fracture of L1 vertebra, initial encounter. Patient also has lumbar spinal stenosis with neurogenic claudication and low back pain. History of right hip total arthroplasty.

Code Assignment:

M80.08XA — Age-related osteoporosis with current pathological fracture, vertebrae, initial encounter

M48.061 — Spinal stenosis, lumbar region with neurogenic claudication

Z96.641 — Presence of right artificial hip joint (status post total hip arthroplasty)

Rationale: The vertebral fracture is the principal diagnosis — M80.08XA (X placeholder required). Spinal stenosis with neurogenic claudication is a separately coded active condition. Low back pain is NOT separately coded — it is the expected symptom of both the fracture and the stenosis (integral to confirmed conditions rule). Z96.641 captures the history of arthroplasty as a status code, not as a problem, but it is clinically relevant to care planning and should be included.

Scenario 3 — BPH + Acute Cystitis + CKD

📝 **Clinical Scenario 3**

Elderly male with benign prostatic hyperplasia with lower urinary tract symptoms. Patient also has acute cystitis with hematuria, E. coli confirmed on culture. CKD Stage 2 also documented.

Code Assignment:

N30.01 — Acute cystitis with hematuria (principal diagnosis — reason for today's visit)

B96.20 — E. coli, unspecified, as cause of disease classified elsewhere

N40.1 — Benign prostatic hyperplasia with LUTS

N18.2 — CKD, Stage 2

Rationale: Acute cystitis with hematuria leads — it is the acute condition driving the visit. Hematuria is NOT separately coded as R31.0 — it is captured within N30.01 (the code title includes "with hematuria"). E. coli organism → B96.20 as additional code. BPH with LUTS (frequency, urgency) → N40.1. CKD Stage 2 → N18.2 as a comorbidity. No R31.– code is needed because the hematuria is documented as part of the cystitis.

Scenario 4 — Endometriosis + Ovarian Cyst

📝 **Clinical Scenario 4**

Female patient with endometriosis of bilateral ovaries and fallopian tubes, presenting with dysmenorrhea and pelvic pain. Patient also has an ovarian cyst, left ovary.

Code Assignment:

N80.103 — Endometriosis of bilateral ovaries, unspecified depth

N80.2 — Endometriosis of fallopian tube

N83.202 — Unspecified ovarian cyst, left side

Rationale: Bilateral ovarian endometriosis → N80.103. Fallopian tube involvement → N80.2 (separate code for each site). Left ovarian cyst → N83.202. Dysmenorrhea and pelvic pain are NOT separately coded — they are integral to endometriosis. The ovarian cyst is separately coded because it is a distinct, separately identified structural finding, not simply a symptom of endometriosis.

Scenario 5 — Acute Pyelonephritis + Sepsis + Diabetes + CKD + HTN

📝 **Clinical Scenario 5**

Patient admitted from ED for acute pyelonephritis with sepsis. Klebsiella on culture. Patient has Type 2 diabetes on insulin, CKD Stage 4, and essential hypertension. Hypertensive heart and CKD combination also documented.

Code Assignment:

A41.51 — Sepsis due to Klebsiella pneumoniae (principal diagnosis — sepsis as principal when it is the primary reason for admission)

N10 — Acute pyelonephritis (the infectious source)

B96.1 — Klebsiella pneumoniae as cause of disease classified elsewhere

I13.10 — Hypertensive heart and chronic kidney disease without heart failure, with CKD Stage 1–4 (combination code capturing HTN + heart + CKD)

N18.4 — CKD, Stage 4

E11.65 — Type 2 diabetes mellitus with hyperglycemia (or appropriate diabetes

+ CKD combination if documented)

Z79.4 — Long-term (current) use of insulin

Rationale: When sepsis is the reason for admission, sepsis is the principal diagnosis (A41.51 for Klebsiella sepsis). The pyelonephritis (N10) is sequenced as the source infection. B96.1 identifies the specific organism for the pyelonephritis. The hypertension + heart + CKD combination is captured in I13.10, with N18.4 coded additionally per guidelines. Diabetes on insulin → E11.65 + Z79.4. This is a complex multi-system scenario that represents real inpatient coding at a high acuity level.

⚠ **Caution!**

In Scenario 5, the sequencing of sepsis as the principal diagnosis is supported by UHDDS (Uniform Hospital Discharge Data Set) guidelines — the condition established after study to be chiefly responsible for the admission. In an outpatient setting, the same patient would typically be sequenced differently based on the reason for the outpatient visit. Always apply the correct sequencing guideline for the setting (inpatient vs. outpatient) before finalizing your code order.

Exercise 7-E — Multi-System Coding Scenarios

Instructions: For each scenario below, assign all required ICD-10-CM codes in correct sequence. Use your ICD-10-CM code book. Write codes on the lines provided. No answers are provided — this is your self-assessment challenge.

1. **Scenario:** Patient with primary OA of bilateral knees and primary OA of right hip presents for follow-up. Also has stage 2 CKD and takes long-term naproxen (documented as long-term NSAID use).

Code 1: Code 2: Code 3:

Code 4:

2. **Scenario:** Inpatient admission for acute cystitis without hematuria. MRSA confirmed on culture. Patient also has age-related osteoporosis without current fracture and CKD Stage 3a.

Code 1: Code 2: Code 3:

Code 4:

3. **Scenario:** Seronegative RA involving right shoulder and bilateral hips, with rheumatoid myopathy at all affected sites. Patient seen in outpatient rheumatology clinic.

Code 1: Code 2: Code 3:

4. **Scenario:** Patient presents with sciatica, left side, and lumbar disc degeneration with no radiculopathy documented. Also has osteoporosis without fracture.

Code 1: Code 2:

5. **Scenario:** Chronic gout of bilateral ankles without tophus. Patient also has acute gouty attack in right knee (idiopathic) this visit. CKD Stage 3b is also documented.

Code 1: Code 2: Code 3:

6. **Scenario:** Female patient: endometriosis of uterus (adenomyosis) and left ovary (superficial). Also has an unspecified ovarian cyst right side. Secondary amenorrhea also documented.

Code 1: Code 2: Code 3:

Code 4:

7. **Scenario:** Elderly male admitted with ESRD on peritoneal dialysis. Labs show AKI. Also has hypertension and Type 2 diabetes on insulin.

Code 1: Code 2: Code 3:

Code 4: Code 5:

8. **Scenario:** Outpatient visit — patient has cervical disc disorder with radiculopathy at C5–C6 level and lumbar spinal stenosis without neurogenic claudication.

Code 1: Code 2:

9. **Scenario:** Patient with age-related osteoporosis presents for follow-up. Has a healed pathological vertebral fracture (prior) — no current fracture. Also has BPH without LUTS.

Code 1: Code 2: Code 3:

10. **Scenario:** Patient with seropositive RA with rheumatoid vasculitis of the right ankle/foot and left knee, and AKI on known CKD Stage 4. Patient on long-term hydroxychloroquine.

Code 1: Code 2: Code 3:

Code 4: Code 5:

✓ Quick Check 7.5

1. In Scenario 1, why are two codes assigned for the RA involving bilateral knees instead of one bilateral code?

2. In Scenario 2, why is low back pain NOT coded separately?

3. In Scenario 3, why is hematuria NOT coded with R31.– as a separate code?

4. In Scenario 5, which code is the principal diagnosis and why?

5. True or False: When a patient has both sepsis and the underlying infectious source documented (e.g., pyelonephritis), both the sepsis code and the infection source code are assigned.**T F**

🏛️ CMS Rules — Inpatient Sequencing and Principal Diagnosis

For inpatient hospital admissions, CMS requires compliance with UHDDS guidelines for principal diagnosis selection. The principal diagnosis is defined as "the condition established after study to be chiefly responsible for causing the patient's admission to the hospital." When sepsis is documented and is the reason for admission, sepsis is sequenced first regardless of what caused the sepsis. When a patient is admitted for a specific condition (e.g., osteoporotic fracture) that resolves during the stay, the original reason for admission remains the principal diagnosis. Incorrect principal diagnosis sequencing affects DRG assignment, MS-DRG reimbursement, and quality of care reporting under the Hospital Inpatient Quality Reporting program.

🔧 Toolbox — Section 7.4 Summary

- Multi-system scenarios require coding ALL active conditions — check the problem list, HPI, assessment, and plan; diagnoses buried in the body of the note still count.
- AKI on CKD always requires two codes: N17.– (AKI) AND N18.– (CKD stage) — they are not mutually exclusive.
- Signs and symptoms integral to confirmed diagnoses (low back pain with stenosis, dysmenorrhea with endometriosis, hematuria within N30.01) are not separately coded.
- In inpatient settings, sequencing follows UHDDS principal diagnosis rules; in outpatient settings, the primary diagnosis or first-listed code is the reason for the visit or the condition requiring the most care.
- Always apply combination codes when ICD-10-CM provides one — hypertensive CKD (I12/I13), cystitis with hematuria (N30.01), disc disorder with radiculopathy (M51.16) — combination codes prevent double-coding

and improve specificity.

📚 Chapter 7 Summary

- **Laterality is mandatory throughout Chapter 13 (M00–M99).** Right (1), left (2), bilateral (3), unspecified (9) — every MSK code must include laterality when the category provides for it. Unspecified is the last resort, never the default.
- **OA and RA are fundamentally different conditions.** OA (M15–M19) is degenerative and site-specific; RA (M05–M06) is autoimmune and requires serostatus designation. Never use M06.9 when seropositive or seronegative status is documented.
- **Gout with tophus is captured in the 7th character of M1A.–, not as a separate code.** Drug-induced gout (M10.2–) requires an additional adverse effect code for the precipitating medication.
- **When a disc disorder causes radiculopathy or myelopathy, use the disc disorder "with" code** (M50.1–, M51.16) — do not separately code M54 back pain or radiculopathy. M54.– codes are for symptom-level coding only when no structural cause is documented.
- **Myelopathy (spinal cord) is more serious than radiculopathy (nerve root)** — when both are documented, the disc disorder with myelopathy code is sequenced first.
- **Osteoporosis with current pathological fracture (M80.–) and without (M81.–) are different codes entirely.** Pathological fractures require episode-of-care 7th characters; vertebral fractures require the placeholder X at position 6.

- **CKD is staged N18.1 through N18.6** based on GFR; ESRD (N18.6) is always paired with Z99.2 (dialysis). N18.9 is a red-flag code that should be used rarely — never as a routine default.
- **AKI (N17.–) and CKD (N18.–) are coded together when both are present** (AKI on CKD). They are separate, concurrent conditions requiring separate codes.
- **UTI site-specific coding (N10, N30.0–, N11.–) takes priority over N39.0** (unspecified site) whenever the site of infection is documented. Add organism codes (B95.–/B96.–) when the causative organism is identified on culture.
- **BPH code selection hinges on LUTS: N40.1 WITH symptoms, N40.0 WITHOUT.** Know the LUTS symptom list — you don't need the provider to write the acronym; you need to recognize the symptoms when documented in the HPI.

Chapter Review

Complete all four sections of the Chapter Review. Use your ICD-10-CM code book for Sections A and D. No answers are provided in the Student Edition.

Section A — Multiple Choice (Questions 1–10)

Circle the letter of the best answer for each question.

1. A patient is diagnosed with primary osteoarthritis of the right knee. The correct ICD-10-CM code is:

A. M17.0 — Bilateral primary osteoarthritis of knee

B. M17.11 — Primary osteoarthritis, right knee

C. M17.31 — Secondary osteoarthritis, right knee

D. M19.011 — Primary osteoarthritis, right shoulder

2. A rheumatology note documents "seropositive RA with involvement of the left hip." The correct code is:

A. M06.052 — Seronegative RA, left hip

B. M05.652 — Seropositive RA with involvement of left hip

C. M06.9 — Rheumatoid arthritis, unspecified

D. M05.9 — Seropositive RA, unspecified

3. A patient has chronic gout of the left ankle and foot WITH tophi. The correct ICD-10-CM code is:

A. M10.072 — Idiopathic gout, left ankle and foot

B. M1A.372 — Chronic gout, left ankle and foot, without tophus

C. M1A.371 — Chronic gout, right ankle and foot, with tophus

D. M1A.3721 — Chronic gout, left ankle and foot, with tophus

4. A patient has a cervical disc herniation at C5–C6 with documented spinal cord compression (myelopathy). The correct code is:

A. M54.12 — Radiculopathy, cervical region

B. M50.11 — Cervical disc disorder with radiculopathy, C5–C6 level

C. M50.01 — Cervical disc disorder with myelopathy, C5–C6 level

D. M50.21 — Other cervical disc displacement, C5–C6 level

5. An elderly patient is admitted for a pathological compression fracture of the thoracic vertebra (T7) due to age-related osteoporosis — first visit today. The correct code is:

A. S22.070A — Fracture of T7 vertebra, initial encounter

B. M80.08XD — Age-related osteoporosis with pathological fracture, vertebrae, subsequent encounter

C. M80.08XA — Age-related osteoporosis with pathological fracture, vertebrae, initial encounter

D. M81.0 — Age-related osteoporosis without current pathological fracture

6. A patient's GFR is documented as 22 mL/min/1.73m² and the nephrologist documents CKD. The correct ICD-10-CM code is:

A. N18.32 — CKD, Stage 3b

B. N18.4 — CKD, Stage 4

C. N18.5 — CKD, Stage 5

D. N18.9 — CKD, unspecified

7. A patient with established CKD Stage 3a is admitted with an acute episode of kidney failure. How many codes are needed to fully capture this clinical picture?

A. One code — N17.9 captures the AKI and the CKD

B. One code — N18.31 captures the CKD Stage 3a

C. Two codes — N17.9 (AKI) and N18.31 (CKD Stage 3a) assigned together

D. Two codes — N18.31 leads, with M80.– as additional for the kidney damage

8. A provider documents "bladder infection, E. coli on culture, without blood in urine." The complete code set is:

A. N39.0 — UTI, site not specified

B. N30.00 — Acute cystitis without hematuria; B96.20 — E. coli as cause

C. N10 — Acute pyelonephritis; B96.20 — E. coli as cause

D. N30.01 — Acute cystitis with hematuria; B96.20 — E. coli as cause

9. A male patient with BPH reports urinary urgency, nocturia twice per night, and a weak stream. The correct code is:

A. N40.0 — Benign prostatic hyperplasia without LUTS

B. N40.2 — Nodular prostate without LUTS

C. N40.1 — Benign prostatic hyperplasia with LUTS

D. N39.41 — Urge incontinence

10. A patient presents with gross hematuria. The workup is completed during the encounter and no underlying cause is identified. The correct code is:

A. N30.01 — Acute cystitis with hematuria

B. R31.29 — Other microscopic hematuria

C. R31.0 — Gross hematuria

D. N20.0 — Calculus of kidney

Section B — True / False (Questions 11–20)

Circle T for True or F for False.

11. When a bilateral subcategory code does not exist in ICD-10-CM for a musculoskeletal condition, you assign separate codes for each affected side. **T F**

12. A patient with confirmed seronegative rheumatoid arthritis involving the right wrist should be coded with M05.631. **T F**

13. M54.50 (low back pain, unspecified) is the correct code when a provider documents lumbar disc herniation causing low back pain. **T F**

14. Osteoporosis with a current pathological fracture of the right shoulder at an initial encounter requires the 7th character A. **T F**

15. N18.9 (CKD, unspecified) is an acceptable default code when CKD is documented but no stage is listed in the assessment. **T F**

16. N39.0 is the default code for any UTI regardless of whether the documentation specifies a particular site of infection. **T F**

17. Malignant neoplasm of the prostate is coded from the N chapter (N40.–) of ICD-10-CM. **T F**

18. Hematuria documented as a symptom of confirmed acute cystitis should be separately coded using R31.0 in addition to the cystitis code. **T F**

19. A patient with ESRD on dialysis requires both N18.6 and Z99.2 in the code assignment. **T F**

20. When a patient has a cervical disc disorder with both myelopathy and radiculopathy documented, the disc disorder with myelopathy code is sequenced first because myelopathy represents the more severe complication. **T F**

Section C — Fill in the Blank (Questions 21–25)

Write the correct term or definition on the line provided.

21. A fracture that occurs from minimal or no trauma because the bone is weakened by disease (such as osteoporosis) is called a fracture and is coded from category in ICD-10-CM.

22. refers to disease or damage to the spinal cord resulting from compression, and is a more serious finding than , which involves compression of a nerve root rather than the cord itself.

23. LUTS stands for and includes symptoms such as , , and .

24. ESRD stands for . The ICD-10-CM code for ESRD is , and it must always be coded together with to indicate dialysis dependence.

25. is defined as pain, numbness, or tingling that radiates along the distribution of a compressed nerve root. In the lumbar spine, this commonly produces the condition known as , which is radiating pain down the leg from a lumbar nerve root compression.

Section D — Coding Scenarios (Questions 26–30)

For each scenario, assign all required ICD-10-CM codes in correct sequence. Provide the code, full code description, and a brief statement of rationale for each code assigned. Use your ICD-10-CM code book.

26. Scenario: A 68-year-old woman is seen in the orthopedic clinic for bilateral primary osteoarthritis of the knees. She also has secondary osteoarthritis of the right hip following a prior right hip fracture three years ago. Her pain is managed with a long-term NSAID prescription.

Code 1: Description:

Code 2: Description:

Code 3: Description:

Rationale:

27. Scenario: A 74-year-old male with age-related osteoporosis is seen in the ED for a fracture of the right forearm (lower end of radius). X-ray confirms pathological fracture due to osteoporosis. This is his first visit for this fracture.

Code 1: Description:

Rationale:

28. Scenario: A 55-year-old female is seen in the nephrology clinic. She has CKD Stage 4 and hypertension. Today she is also diagnosed with acute kidney injury superimposed on her CKD. She has Type 2 diabetes managed with insulin, which is also a contributing factor to her nephropathy.

Code 1: Description:

Code 2: Description:

Code 3: Description:

Code 4: Description:

Rationale:

29. Scenario: An outpatient note documents: "Patient with seropositive RA — bilateral knees, left wrist, and right hand involvement. Presenting today for management of lumbar spinal stenosis with neurogenic claudication. Sciatica, left side, is also documented. Low back pain noted as well." Assign all codes with correct sequencing and state your rationale for excluding or including the low back pain.

Code 1: Description:

Code 2: Description:

Code 3: Description:

Code 4: Description:

Code 5: Description:

Rationale for low back pain decision:

30. Scenario: A 41-year-old female is seen in the OB/GYN office. The assessment documents: endometriosis of bilateral ovaries (superficial) and the uterus (adenomyosis); a corpus luteum cyst of the right ovary; and acute salpingitis. She complains of dysmenorrhea and pelvic pain. Assign the complete code set, sequence correctly, and explain your decision regarding dysmenorrhea and pelvic pain coding.

Code 1: Description:

Code 2: Description:

Code 3: Description:

Code 4: Description:

Dysmenorrhea / pelvic pain rationale:

▶ A Note from Corrina — Before You Turn the Page

You just completed one of the most content-dense chapters in the entire Medical Coding Mastery series. If you worked through every QUICK CHECK, every EXERCISE, and every scenario in Section 7.4 — you are building exactly the kind of multi-system coding muscle memory that the CPC exam is designed to test. But I want to remind you of something: every code in this chapter represents a real patient. A woman living with endometriosis. An elderly man whose osteoporosis fracture brought him to the ED. A child with juvenile RA. An ESRD patient who has been on dialysis for years. The specificity you apply to their codes is the specificity that drives the quality of their care, the accuracy of their records, and the integrity of our healthcare system. Code with accuracy, code with purpose, and keep going. Chapter 8 is waiting for you.

— Corrina Lynch, CPC, CPMA | ACL Consulting Firm

Applied ICD-10-CM Coding and Review

Corrina R. Lynch | CPC Preparation

Chapter contents

1. Start with the setting

2. Use combination codes and required additions

3. Separate a drug reaction from a poisoning

4. Keep maternal and newborn records separate

5. Chapter review

Prior-edition readings and exercises follow the revised lesson and may use the earlier chapter arrangement.

Learning objectives

• Apply the lookup workflow to unfamiliar records.

• Explain sequencing and identify unsupported assumptions.

1. Start with the setting

Section IV.H applies to outpatient uncertainty. Sequence the documented reason for services and then consider clinically relevant coexisting conditions.

Worked example

Clinic assessment: persistent cough, possible pneumonia. Look up cough and verify the most specific descriptor supported by the documentation; do not code pneumonia as confirmed.

2. Use combination codes and required additions

I.C.4.a and the Tabular instructions guide diabetic CKD reporting. Documented stage affects the second code.

Worked example

For type 2 diabetes with CKD stage 3b, verify E11.22 and N18.32; the second code supplies the stage missing from the first.

3. Separate a drug reaction from a poisoning

I.C.19.e distinguishes proper medication use from errors or overdoses. In an adverse effect, code the nature of the reaction first; in poisoning, the poisoning code is sequenced first, followed by manifestations.

Worked example

Compare two charts: rash after an antibiotic taken exactly as prescribed, versus rash after a patient accidentally took twice the prescribed dose. Identify which sequencing rule applies and verify the specific drug entry.

4. Keep maternal and newborn records separate

I.C.15.a and I.C.16.a–b distinguish the maternal record from the birth record. Select codes based on the patient's record and reason for the encounter.

Worked example

For a hospital birth, review the maternal delivery record for its obstetric and outcome codes. On the newborn birth record, check the applicable Z38 code. Never transfer the maternal obstetric diagnosis to the baby.

Chapter review

1. A patient returns for routine healing after an arm fracture. Identify the treatment phase and what additional details you need before selecting the code.

2. A screening colonoscopy is planned for an asymptomatic patient. How would this differ from an examination ordered for rectal bleeding?

3. A clinic note says dysuria and possible UTI. What can you report, and which section supports your choice?

References

CMS/NCHS: FY 2026 Official Coding Guidelines

MEDICAL CODING MASTERY | STUDENT EDITION

CHAPTER 8

ICD-10-CM: Pregnancy, Perinatal, Congenital, Symptoms, Injury, External Causes and Z Codes

Corrina Lynch | ACL Consulting Firm | CPC Preparation

▶️ Chapter Objectives

Upon completion of this chapter, the student will be able to:

1. Apply ICD-10-CM Chapter 15 guidelines to assign accurate obstetric codes, including trimester characters and outcome of delivery codes, for encounters involving pregnancy, childbirth, and the puerperium.
2. Distinguish between gestational diabetes (O24.4–) and pre-existing diabetes complicating pregnancy (O24.0–/O24.1–) and apply the correct code category for each clinical scenario.
3. Identify the principal diagnosis for newborn birth encounters using the Z38 category and assign appropriate perinatal condition codes from Chapter 16 (P00–P96).
4. Apply congenital condition codes from Chapter 17 (Q00–Q99) across a patient's lifespan when the condition continues to affect care.
5. Differentiate between coding sign/symptom codes (R00–R99) and confirmed diagnosis codes, applying the correct sequencing guidelines for outpatient and inpatient settings.
6. Assign traumatic fracture codes with the correct episode of care 7th

character (initial, subsequent, sequela) for closed and open fractures.

7. Apply the Rule of Nines to determine total body surface area (TBSA) for burn injuries and select the correct degree, site, and TBSA codes.

8. Differentiate between poisoning, adverse effect, and underdosing — accurately sequence codes for each type of drug/substance encounter using ICD-10-CM Tables T36–T50.

9. Assign external cause codes (V00–Y99) correctly as supplemental/additional codes and identify activity, mechanism, and place of occurrence codes.

10. Apply Z codes (Z00–Z99) correctly as first-listed or additional codes, distinguishing screening, personal history, family history, and status code categories.

▶️ Key Terms

Adverse effect — An unexpected bad reaction to a correctly prescribed and properly administered drug.

Antepartum — The period before the onset of labor; during pregnancy.

Burns (TBSA) — Total body surface area affected by burns, estimated using the Rule of Nines.

Congenital anomaly — A structural or functional abnormality present at birth, originating during fetal development.

Ectopic pregnancy — A pregnancy in which the fertilized egg implants outside the uterus (most commonly in the fallopian tube).

External cause — The mechanism, intent, and circumstances surrounding an injury or health condition; reported using Chapter 20 codes (V00–Y99).

Fracture (traumatic) — A break in a bone resulting from an external force or

injury, classified by site, type, laterality, and episode of care.

Gestational — Pertaining to or occurring during pregnancy (e.g., gestational diabetes, gestational hypertension).

Intrapartum — Occurring during the process of labor and delivery.

Laterality — Designation of right side, left side, or bilateral in ICD-10-CM codes to identify which body side is affected.

Liveborn — An infant born showing signs of life (heartbeat, breathing, movement) regardless of gestational age.

Neonate — A newborn infant from birth through the first 28 days of life.

Perinatal — Pertaining to the period beginning at birth and ending 28 days after birth.

Poisoning — An encounter resulting from taking the wrong drug, the wrong dose, or a drug with harmful intent; also includes drug interactions and drugs taken contrary to prescription.

Postpartum — The period following delivery, lasting up to 6 weeks; also called the puerperium.

Principal diagnosis (OB) — In obstetric delivery admissions, the condition or complication that was chiefly responsible for the admission or that necessitated the delivery.

Sequela — A late effect or residual condition resulting from a previous illness or injury (7th character "S" in injury coding).

Trimester — One of three divisions of pregnancy: 1st (≤13 weeks 6 days), 2nd (14–27 weeks 6 days), 3rd (28 weeks–delivery).

Underdosing — Taking less medication than the prescribed amount, coded with the 6th character "6" in T36–T50 drug tables.

Z code — An ICD-10-CM code (Z00–Z99) used when a patient seeks care for a reason other than a current illness or injury, or to provide additional health status information.

Chapter Overview

Chapter 8 of Medical Coding Mastery is, without question, the most diverse and demanding chapter in this textbook — and arguably in all of ICD-10-CM. In a single chapter, we tackle seven separate ICD-10-CM chapters: Obstetrics (Chapter 15), Perinatal (Chapter 16), Congenital (Chapter 17), Symptoms and Signs (Chapter 18), Injury and Poisoning (Chapter 19), External Causes (Chapter 20), and Z Codes (Chapter 21). Each of these areas carries its own distinct guidelines, sequencing rules, and exam-tested nuances. Master this chapter, and you will have covered a significant portion of the CPC exam blueprint in one focused study session. Stay with me — we are going to break every piece of this down so it makes sense in real practice, not just on paper.

Section 8.1 — ICD-10-CM Chapter 15: Pregnancy, Childbirth and the Puerperium (O00–O9A)

When it comes to obstetric coding, the rules are non-negotiable and highly specific. ICD-10-CM Chapter 15 governs every encounter related to pregnancy, labor, delivery, and the postpartum period. If you walk away from this section knowing nothing else, know this: obstetric codes always take priority, trimester always matters, and every delivery encounter needs outcome of delivery and weeks of gestation codes. Let's build from there.

> **RULE #1: When a pregnant patient presents with ANY condition — obstetric OR non-obstetric — the obstetric code from Chapter 15 takes sequencing priority.**

RULE #2: Every applicable code in Chapter 15 requires a TRIMESTER character — 1st, 2nd, 3rd, or unspecified.

RULE #3: For multiple gestation, many obstetric codes include a final digit identifying the affected fetus: 0 = unspecified, 1 = fetus 1, 2 = fetus 2, etc.

RULE #4: Chapter 15 codes are NEVER used on the newborn's record — they belong exclusively on the MOTHER's record.

8.1A — Trimester Definitions

The **trimester** is one of the most important characters you will assign in all of obstetric coding. Do not guess. Look at the documented gestational age and apply the definition precisely.

Trimester	Gestational Age	Notes
1st Trimester	Up to 13 weeks 6 days	Includes conception through end of week 13
2nd Trimester	14 weeks 0 days – 27 weeks 6 days	Begins week 14; ends at end of week 27
3rd Trimester	28 weeks 0 days – delivery	Begins week 28; ends with delivery
Unspecified	Not documented	Use only when gestational age truly cannot be determined

Always add the **weeks of gestation code (Z3A.–)** as an additional code when the trimester is documented. These codes are additional — they never replace the

obstetric code, but they complete the clinical picture required by payers and guidelines.

Code	Weeks of Gestation
Z3A.08	8 weeks gestation
Z3A.20	20 weeks gestation
Z3A.32	32 weeks gestation
Z3A.39	39 weeks gestation
Z3A.00	Weeks of gestation, not specified

8.1B — Key Obstetric Conditions

Ectopic Pregnancy (O00.–)

An **ectopic pregnancy** occurs when a fertilized egg implants outside the uterus. This is a surgical emergency and one of the first obstetric code categories you will encounter in practice. Laterality matters here — right vs. left fallopian tube changes the code.

Code	Description
O00.00	Abdominal ectopic pregnancy without intrauterine pregnancy
O00.01	Abdominal ectopic pregnancy with intrauterine pregnancy
O00.101	Right tubal ectopic pregnancy without intrauterine pregnancy
O00.102	Left tubal ectopic pregnancy without intrauterine pregnancy
O00.109	Tubal ectopic pregnancy, unspecified side, without intrauterine pregnancy
O00.2–	Ovarian ectopic pregnancy
O00.80	Other ectopic pregnancy without intrauterine pregnancy

Always add a code from **O08.–** for any associated complication of ectopic pregnancy (e.g., hemorrhage, shock, infection).

Threatened Abortion and Abortion Coding

Code	Description
O20.0	Threatened abortion — bleeding in early pregnancy; pregnancy continues
O03.9	Spontaneous abortion (miscarriage) — complete or unspecified, without complication
O03.4	Spontaneous abortion — complete or unspecified, with complication
O04.–	Complications following elective termination of pregnancy
O07.–	Failed attempted termination of pregnancy

Hypertensive Disorders of Pregnancy — HIGH YIELD

Hypertensive disorders of pregnancy are among the most tested obstetric code categories on the CPC exam. The distinction between pre-existing hypertension, gestational hypertension, and pre-eclampsia is critical. Read every note carefully in the medical record before selecting your code.

Code	Description
O10.011	Pre-existing essential HTN complicating pregnancy, 1st trimester
O10.012	Pre-existing essential HTN complicating pregnancy, 2nd trimester
O10.013	Pre-existing essential HTN complicating pregnancy, 3rd trimester
O11.–	Pre-existing HTN with superimposed pre-eclampsia
O13.–	Gestational hypertension without significant proteinuria

Code	Description
O14.02	Mild pre-eclampsia, 2nd trimester
O14.03	Mild pre-eclampsia, 3rd trimester
O14.12	Severe pre-eclampsia, 2nd trimester
O14.13	Severe pre-eclampsia, 3rd trimester
O15.02	Eclampsia complicating pregnancy, 2nd trimester
O15.1	Eclampsia complicating labor
O15.2	Eclampsia complicating the puerperium

■ Official Guidelines for Coding and Reporting — Chapter 15 General Rules

"Chapter 15 codes have sequencing priority over codes from other chapters. Additional codes from other chapters may be used in conjunction with Chapter 15 codes to further specify conditions. Codes from Chapter 15 and personal history codes should not be used on the newborn's record."

In Plain English:

When a patient is pregnant, the obstetric code leads the claim — every time. You may add codes from other ICD-10-CM chapters to describe comorbidities, but those non-obstetric codes are always secondary to the O code. Trimester is assigned based on the trimester of the current encounter, not the trimester when the condition first developed. During the postpartum (puerperium) period, O codes are still used for complications arising within 6 weeks of delivery.

Gestational Diabetes — HIGH YIELD

Gestational diabetes is one of the most commonly miscoded obstetric conditions in practice — and one of the most frequently tested on the CPC exam. The rule is absolute: **gestational diabetes uses O24.4– codes, never E10 or E11 codes.**

Code	Description
O24.410	Gestational DM in pregnancy, diet-controlled
O24.414	Gestational DM in pregnancy, insulin-controlled
O24.415	Gestational DM in pregnancy, controlled by oral hypoglycemic drugs
O24.419	Gestational DM in pregnancy, unspecified control
O24.011	Pre-existing Type 1 DM in pregnancy, 1st trimester
O24.111	Pre-existing Type 2 DM in pregnancy, 1st trimester
O24.114	Pre-existing Type 2 DM in pregnancy, insulin-controlled

If a patient has **pre-existing diabetes AND is pregnant**, use O24.0– (T1DM) or O24.1– (T2DM) plus the E10 or E11 code for the underlying diabetes. Gestational diabetes is a condition that develops because of pregnancy and resolves after delivery — it did not exist before.

⚠️ **Caution!**

Coding gestational diabetes with E11.– instead of O24.4– is a serious coding error. Gestational diabetes codes are entirely separate from pre-existing diabetes codes. O24.4– is used exclusively when diabetes developed as a result of pregnancy and was not present before conception. Assigning E11 codes for gestational diabetes will result in a payer rejection, a compliance flag, and — in audited charts — a reportable error. Do not let the word "diabetes" send you to Chapter 4. This condition lives in Chapter 15, period.

Normal Delivery — O80

O80 is one of the most precise — and most restricted — codes in all of ICD-10-CM. When O80 applies, it applies perfectly. When it doesn't, it absolutely cannot be used.

- **O80** — Encounter for full-term uncomplicated delivery: single liveborn infant, spontaneous vertex presentation, no complications whatsoever during labor or delivery.
- O80 requires: full term, spontaneous onset of labor, vertex presentation, no complications before, during, or after delivery, vaginal delivery, single infant.
- Always add **Z37.0** (single liveborn) as an additional code on every delivery episode.

> 🛑 **Stop!**
>
> **O80 cannot be used if ANY complication or intervention occurred during labor or delivery — including episiotomy alone.** An episiotomy is a surgical incision. That is an intervention. O80 is gone the moment the provider picks up the scissors. If the patient had an epidural, vacuum assist, forceps, episiotomy, prolonged labor, meconium, fetal distress, or any maternal complication — code the complication instead. When in doubt, do NOT use O80. Use the specific complication code or O82 for cesarean section. A wrong O80 on an inpatient claim is an immediate audit flag.

Outcome of Delivery (Z37.–)

Always reported on the **maternal record** for every delivery episode. This code is never optional — payers require it to process birth-related claims.

Code	Description
Z37.0	Single liveborn infant

Code	Description
Z37.1	Single stillborn infant
Z37.2	Twins, both liveborn
Z37.3	Twins, one liveborn, one stillborn
Z37.9	Outcome of delivery, unspecified

📹 Coding Shot

Every single delivery claim should exit your desk with at least three codes: (1) the obstetric condition or O80 as the principal diagnosis, (2) **Z3A.–** weeks of gestation as an additional code, and (3) **Z37.–** outcome of delivery as an additional code. These two Z codes are not optional — they are required for claim processing and clinical accuracy. Build the habit now. When I audit, missing Z3A or Z37 is always in my top five findings.

★ CMS Rules — Medicare & Medicaid

Medicaid and most commercial payers use the Z37 outcome of delivery code to process birth-related claims and attach payment to the correct infant record in hospital billing systems. A missing Z37 code is one of the most common reasons delivery claims pend or deny at the billing level. Additionally, CMS requires documentation of weeks of gestation in the medical record when trimester is used — coders must verify that the gestational age documented by the provider matches the trimester character assigned.

🔎 Check This Out!

The United States consistently reports one of the highest rates of cesarean

section delivery among developed nations, at approximately **32% of all births**. That means nearly one in three delivery encounters in a hospital setting involves C-section coding (O82) rather than O80. C-section coding, with all its associated complications and anatomic descriptors, is among the highest-volume surgical coding encounters in hospital and ASC settings — making obstetric coding expertise among the most marketable skills a hospital coder can develop.

Postpartum Period Coding

The **postpartum** (puerperium) period begins immediately after delivery and ends at **6 weeks postpartum**. O codes continue to be used for obstetric complications during this period. An important note for mental health:

- **O90.6** — Postpartum depression: always use this code on a postpartum claim. Do not use F32.– (major depressive disorder) as the primary code for postpartum depression when the patient is within the puerperium period.

Principal Diagnosis — OB Admission

- Delivery encounters: the main condition or complication that necessitated the delivery, or the primary reason for the inpatient admission, is the **principal diagnosis**.
- Routine prenatal visit, no complications: **Z34.–** (Encounter for supervision of normal pregnancy), coded by trimester.

Common Obstetric Code Quick Reference

Condition	Code	Key Note
Tubal ectopic pregnancy, right	O00.101	Add O08.– for complications
Threatened abortion	O20.0	Pregnancy continues
Spontaneous abortion, no complications	O03.9	Miscarriage

Condition	Code	Key Note
Gestational HTN	O13.–	No proteinuria
Mild pre-eclampsia, 3rd trimester	O14.03	HTN + proteinuria after 20 wks
Severe pre-eclampsia, 3rd trimester	O14.13	HIGH YIELD — know both trimesters
Eclampsia in labor	O15.1	Seizures; severity code included
Gestational DM, insulin-controlled	O24.414	Never E11.– for gestational DM
Normal delivery	O80	Most restrictive code in Ch. 15
Single liveborn outcome	Z37.0	Add to every maternal delivery record
39 weeks gestation	Z3A.39	Always add to delivery claims
Postpartum depression	O90.6	NOT F32.– during puerperium
Supervision of normal pregnancy, 3rd trimester	Z34.33	Routine prenatal visit

🗣️ From the Trenches

"After my first year doing OB coding, I realized the trimester character was killing my accuracy rate. I was looking at the problem, not the gestational age. So I built a quick-reference grid — I laminated it and taped it to my monitor. Across the top: weeks 1 through 42. Across the side: trimester 1, 2, 3. I highlight the date the patient came in and trace straight down to the trimester. I went from 92% accuracy to 98.7% on my OB audit within three months. Knowing the rules is one thing. Having a system is another."

— Darlene M., CPC, CPMA | OB/GYN Coding Specialist | Women's Health of Central Florida, Orlando, FL

🔧 Toolbox — Section 8.1 Key Points

- Chapter 15 obstetric codes always sequence first when the patient is pregnant — regardless of whether the condition is obstetric or non-obstetric in origin.
- Assign trimester based on gestational age at the time of the encounter: 1st (≤13w 6d), 2nd (14w–27w 6d), 3rd (28w–delivery).
- Always add Z3A.– (weeks of gestation) and Z37.– (outcome of delivery) on every maternal delivery record.
- Gestational diabetes uses O24.4– codes — never E10 or E11 codes. Pre-existing diabetes uses O24.0– or O24.1– plus the E10/E11 code.
- O80 requires a completely uncomplicated delivery — any intervention, complication, or non-vertex presentation disqualifies O80.

✓ Quick Check 8.1

1. A patient presents for a prenatal visit at 20 weeks gestation. There are no complications. What is the correct ICD-10-CM code for this encounter?
2. What is the trimester designation for a patient at 26 weeks and 4 days gestation?
3. A pregnant patient has Type 2 diabetes that she had before pregnancy, currently insulin-controlled. She is in her 2nd trimester. Which code category is used — O24.4– or O24.1–?
4. A patient delivers a single liveborn infant vaginally with no complications, no episiotomy, and spontaneous onset of labor at 39 weeks. Which code describes the delivery? Which additional codes are required?

5. A patient is seen 4 weeks after delivery for postpartum depression. Which code is reported — O90.6 or F32.–?

Exercise 8-A — ICD-10-CM Chapter 15: Obstetric Coding

Directions: Complete each item by filling in the blank, selecting the correct code, circling T (True) or F (False), or selecting the correct multiple choice answer. Do NOT look up answers in this book — work through each question using your ICD-10-CM code book and the guidelines in Section 8.1.

Part 1: Trimester Assignment — Fill in the Correct Trimester

1. Patient is at 10 weeks gestation. Trimester:
2. Patient is at 22 weeks gestation. Trimester:
3. Patient is at 30 weeks gestation. Trimester:
4. Patient is at 13 weeks and 6 days gestation. Trimester:

Part 2: Code Selection — Write the Correct ICD-10-CM Code

5. Left tubal ectopic pregnancy, without intrauterine pregnancy. Code: _ _ _ _ _ _ . _ _ _ _ _ _
6. Gestational diabetes in pregnancy, controlled by oral hypoglycemic drugs. Code: _ _ _ _ _ _ . _ _ _ _ _ _
7. Severe pre-eclampsia, 3rd trimester. Code: _ _ _ _ _ _ . _ _ _ _ _ _
8. Outcome of delivery — single liveborn infant. Code: _ _ _ _ _ _ . _ _
9. Weeks of gestation — 39 weeks. Code: _ _ _ _ _ _ . _ _ _ _

Part 3: True or False — O80 Eligibility

10. A patient delivers vaginally at 40 weeks with no complications, spontaneous vertex, but the physician performed an episiotomy. O80 can be assigned. T / F

11. A patient delivers twins, both liveborn, vaginally, with no complications. O80 can be assigned. T / F

Part 4: Multiple Choice — Postpartum and OB Priority Coding

12. A pregnant patient at 28 weeks develops acute appendicitis. Which code is sequenced first?

    A. K37 (Appendicitis, unspecified)

    B. O99.619 (Diseases of the digestive system complicating pregnancy, unspecified trimester)

    C. K35.80 (Acute appendicitis without abscess)

    D. Z34.33 (Supervision of normal pregnancy, 3rd trimester)

    Answer:

Section 8.2 — ICD-10-CM Chapters 16 & 17: Perinatal and Congenital Conditions (P00–P96, Q00–Q99)

Once the baby arrives, we switch records entirely. The newborn has their own chart, their own codes, and their own set of rules. Chapter 16 (P codes) governs the newborn record. Chapter 17 (Q codes) governs congenital conditions that can follow a patient throughout their entire life. These two chapters are closely related — and both are regularly tested on the CPC exam.

8.2A — Perinatal Period Coding Rules

The **perinatal period** begins at birth and ends on the 28th day after birth. Every code in Chapter 16 (P00–P96) belongs on the **newborn's record only**. These codes describe conditions that originate in the perinatal period — and here is the key nuance: a perinatal condition diagnosed after the 28th day may still be coded with a P code if the condition originated during the perinatal period.

> **RULE: Z38.– is ALWAYS the principal diagnosis for the birth encounter on the NEWBORN's record — no exceptions.**

Newborn / Liveborn Infant Codes (Z38.–)

Code	Description
Z38.00	Single liveborn infant, delivered vaginally
Z38.01	Single liveborn infant, delivered by cesarean section
Z38.1	Single liveborn infant, born outside hospital
Z38.30	Twin liveborn infant, delivered vaginally
Z38.31	Twin liveborn infant, delivered by cesarean section

> 🛑 **Stop!**
>
> **Never use O codes on the newborn's record — and never use P codes on the mother's record.** This is an absolute boundary in ICD-10-CM. The O codes belong to the mother; the P codes belong to the newborn. Mixing these is a fundamental coding error. On the CPC exam, a question that provides you with a newborn scenario and includes O codes among the answer choices is

testing exactly this rule. The O code is always wrong for the newborn.

Common Perinatal Codes (P00–P96)

Code	Description
P07.10	Other low birth weight (499–749g)
P07.14	Low birth weight 1000–1249g
P07.17	Low birth weight 2000–2499g
P07.30	Preterm newborn, unspecified (gestational age <37 weeks)
P07.32	Preterm newborn, 30 completed weeks
P07.33	Preterm newborn, 34 completed weeks
P07.38	Preterm newborn, 36 completed weeks
P21.–	Birth asphyxia
P22.0	Respiratory distress syndrome (hyaline membrane disease)
P22.1	Transient tachypnea of newborn
P52.–	Intracranial hemorrhage of newborn
P59.0	Neonatal jaundice associated with preterm delivery
P59.9	Neonatal jaundice, unspecified (physiological jaundice)
P96.1	Neonatal withdrawal symptoms from maternal use of drugs

■ Official Guidelines for Coding and Reporting — Chapter 16: Newborn/Perinatal

"The principal diagnosis for the birth encounter should always be a code from category Z38, Liveborn infants, according to place of birth and type of delivery.

A code from category Z38 is assigned only once, to a newborn at the time of birth. If a newborn is transferred to another institution, a code from Z38 is not used at the receiving hospital."

In Plain English:

On the day the baby is born, Z38.– leads every other code on the newborn's chart. Birth is the event — everything else (prematurity, respiratory distress, jaundice) is an additional code that follows Z38. If the baby is transferred to a NICU at another hospital, the receiving hospital does NOT report Z38 — that code was used at the birth hospital and belongs there.

8.2B — Congenital Malformations (Q00–Q99)

A **congenital anomaly** is a structural, functional, or metabolic abnormality present at birth, resulting from abnormal fetal development. These conditions are assigned codes from Chapter 17 (Q00–Q99) and — this is critical — **they do not expire.** A congenital condition can be coded for the entire lifespan of the patient, as long as it continues to exist and affect the patient's clinical care.

📹 **Coding Shot**

A congenital condition does not have an expiration date. If a 45-year-old patient has a congenital bicuspid aortic valve that was repaired in childhood but still affects the structure of the heart and informs every cardiac decision the provider makes — you code it with the appropriate Q code. The "congenital" label is a lifelong identity for that condition. Never assume that because the patient is an adult, the Q code no longer applies.

High-Frequency Congenital Codes

Code	Description
Q05.0	Cervical spina bifida
Q05.4	Unspecified spina bifida
Q20.3	Transposition of great vessels (cardiac)
Q21.0	Ventricular septal defect (VSD)
Q21.1	Atrial septal defect (ASD)
Q21.3	Tetralogy of Fallot
Q25.0	Patent ductus arteriosus (PDA)
Q35.–	Cleft palate (by type)
Q36.–	Cleft lip (by type)
Q37.–	Cleft palate with cleft lip
Q39.0	Atresia of esophagus without fistula
Q54.–	Hypospadias (by anatomic location)
Q65.–	Congenital deformities of hip (developmental dysplasia)
Q90.9	Down syndrome, unspecified (Trisomy 21)
Q91.–	Trisomy 18 and Trisomy 13
Q96.9	Turner's syndrome, unspecified

🔧 Toolbox — Section 8.2 Key Points

- Perinatal period = birth through 28 days after birth. P codes belong on the NEWBORN's record only.
- Z38.– is always the principal diagnosis for the birth encounter on the newborn's record.
- A perinatal condition can be coded with a P code even after the 28th day if the condition originated in the perinatal period.
- Congenital conditions (Q00–Q99) can be assigned throughout a patient's

entire lifespan if the condition exists and affects treatment.

• Never use O codes on the newborn's record. Never use P codes on the mother's record.

✓ **Quick Check 8.2**

1. A newborn is delivered vaginally by a single birth at 36 weeks gestation with low birth weight of 2,100g. What is the principal diagnosis on the newborn's birth record?

2. A 30-year-old patient is treated for a ventricular septal defect (VSD) first diagnosed at birth. Can a Q code still be used? Why or why not?

3. Which code category designates a newborn delivered by cesarean section — Z38.00 or Z38.01?

4. What is the ICD-10-CM code for Down syndrome, unspecified?

5. Can O codes be assigned on the newborn's birth record? True or False?

Exercise 8-B — Perinatal and Congenital Coding

Directions: Assign the correct ICD-10-CM code(s), circle T or F, or select the correct answer. Use your ICD-10-CM code book.

Part 1: Newborn Principal Diagnosis (Z38.–) — Code Selection

13. Single liveborn infant, delivered by C-section. Code: _ _ _ _ _ _ . _ _ _ _

14. Twin liveborn infant (second twin), delivered vaginally. Code: _ _ _ _ _ _ . _ _ _ _

Part 2: Perinatal Conditions

15. Newborn at 34 completed weeks of gestation (prematurity). Code: _ _ _ _ _ _ . _ _ _ _
16. Respiratory distress syndrome of newborn (hyaline membrane disease). Code: _ _ _ _ _ _ _ _ . _ _
17. Neonatal jaundice, unspecified. Code: _ _ _ _ _ _ _ _ . _ _

Part 3: Congenital Codes

18. Ventricular septal defect (congenital). Code: _ _ _ _ _ _ _ _ . _ _
19. Down syndrome, unspecified. Code: _ _ _ _ _ _ _ _ . _ _
20. Cleft palate with cleft lip (unspecified). Code: _ _ _ _ _ _ _ _ . _ _ _ _ _ _

Part 4: True or False

21. O codes may be assigned on the newborn's birth record alongside P codes. T / F
22. A congenital condition diagnosed at birth may be coded with a Q code for the patient's entire lifespan if it continues to affect treatment. T / F

Section 8.3 — ICD-10-CM Chapter 18: Symptoms, Signs and Abnormal Clinical Findings (R00–R99)

Chapter 18 is the chapter coders love to overuse. R codes fill the gap when a definitive diagnosis has not yet been established — and that is the ONLY time they belong. In outpatient settings, we code to the highest degree of certainty. In inpatient settings, we can code probable diagnoses as if confirmed. Understanding

when an R code is appropriate and when it is not is one of the most fundamental skills you will develop as a coder.

Core Rules for Chapter 18

- R codes are used when **no definitive diagnosis has been established**.
- R codes are **never coded** as additional diagnoses when a definitive diagnosis already explains the sign or symptom (because the sign/symptom is integral to the confirmed diagnosis).
- If a sign/symptom is **NOT integral** to a confirmed diagnosis — then it IS appropriate to code it separately.
- In outpatient settings, R codes may serve as the **first-listed diagnosis** when no confirmed diagnosis has been established.

8.3A — High-Yield R Codes for the CPC Exam

Cardiac and Respiratory

Code	Description
R00.0	Tachycardia, unspecified
R00.1	Bradycardia, unspecified
R05.9	Cough, unspecified
R06.00	Dyspnea, unspecified
R06.01	Orthopnea
R09.02	Hypoxemia
R09.81	Nasal congestion

Nervous System and Cognitive

Code	Description
R40.20	Unspecified coma (add Glasgow Coma Scale codes)

Code	Description
R41.3	Other amnesia
R41.82	Altered mental status, unspecified
R42	Dizziness and giddiness
R47.01	Aphasia (when not due to a confirmed condition)
R51.9	Headache, unspecified
R55	Syncope and collapse

Digestive

Code	Description
R10.0	Acute abdomen (severe abdominal pain with/without rigidity)
R10.10	Upper abdominal pain, unspecified
R10.30	Lower abdominal pain, unspecified
R11.0	Nausea alone
R11.10	Vomiting, unspecified
R11.2	Nausea with vomiting, unspecified
R13.10	Dysphagia, unspecified
R19.7	Diarrhea, unspecified

General and Abnormal Findings

Code	Description
R50.9	Fever, unspecified
R53.83	Other fatigue
R73.09	Other abnormal glucose (pre-diabetes, impaired fasting glucose)
R79.82	Elevated C-reactive protein (CRP)
R82.71	Bacteriuria (bacteria in urine without symptoms)

8.3B — Glasgow Coma Scale (GCS) Coding

When altered consciousness is documented, the Glasgow Coma Scale codes are required in addition to the coma code. These are assigned based on the documented GCS components at the time of the encounter.

Code	Component	Options
R40.21–	Eye opening response	R40.211 none; R40.212 to pain; R40.213 to sound; R40.214 spontaneous
R40.22–	Best verbal response	R40.221 none; R40.223 words; R40.224 confused conversation; R40.225 oriented
R40.23–	Best motor response	R40.231 none; R40.233 abnormal; R40.235 localizes; R40.236 obeys commands
R40.24	Glasgow Coma Scale total score	Used when total score is documented rather than individual elements

📹 Coding Shot

R codes are the last resort in outpatient coding — not the first reach. Every time you are about to type an R code, stop and ask: "Did the provider document a confirmed diagnosis that explains this sign or symptom?" If yes — code the diagnosis. If the provider documented "probable," "suspected," "possible," or "working diagnosis" in an outpatient record — you still cannot code it as confirmed in the outpatient world. Code the symptom. But if the provider said "acute bronchitis" — that is your code. Not R05.9 (cough).

🗣️ From the Trenches

"I did an internal audit of 100 charts at my clinic last year, and the number one coding deficiency — not even close — was R-code overuse. Coders were assigning R51.9 (headache) when the provider had documented 'migraine without aura' right in the assessment. They were using R10.9 when the diagnosis said 'acute appendicitis.' The symptom code lived in these charts when the confirmed diagnosis was sitting right above it in the note. R-code overuse suppresses HCC risk scores, skews quality metrics, and it's just plain wrong. I now run an R-code report monthly. If an R code appears more than three times for the same patient on the same problem, it flags for review."

— Tamara J., CPC, CRC | Outpatient Coding Audit Specialist | Southeast Regional Health System, Atlanta, GA

🛑 Stop!

Never code both a confirmed diagnosis AND its integral symptoms in the same encounter. If a patient has confirmed pneumonia (J18.9) and presents with cough and fever — cough and fever are integral to pneumonia. Do NOT add R05.9 or R50.9. That is double-coding and it is an audit flag. The guideline is clear: signs and symptoms that are routinely associated with a confirmed disease process should not be reported separately. Only code a sign/symptom separately when it represents something unexpected or not routinely associated with the confirmed condition.

■ Official Guidelines for Coding and Reporting — Chapter 18: Signs and Symptoms

"Codes that describe symptoms and signs, as opposed to diagnoses, are

acceptable for reporting purposes when a related definitive diagnosis has not been established (confirmed) by the provider... Signs and symptoms that are associated routinely with a disease process should not be assigned as additional codes, unless otherwise instructed by the classification."

In Plain English:

You reach for R codes when you have no confirmed diagnosis to code. The moment a provider confirms a diagnosis, the R codes that describe symptoms of that diagnosis are retired. If the sign/symptom is not routinely associated with the confirmed diagnosis — something unexpected or unusual — it may still be coded separately. When in doubt, ask: "Would a clinician expect this sign/symptom to occur with this diagnosis?" If yes — drop the R code.

🔧 Toolbox — Section 8.3 Key Points

- R codes are used only when no definitive diagnosis has been established by the provider.
- Signs and symptoms integral (routinely associated) with a confirmed diagnosis are NOT coded separately.
- Signs and symptoms NOT routinely associated with a confirmed diagnosis MAY be coded separately.
- In outpatient settings, R codes may be the first-listed diagnosis when no confirmed diagnosis exists.
- Glasgow Coma Scale codes (R40.21–, R40.22–, R40.23–) are always additional codes — never standalone diagnoses.

✓ Quick Check 8.3

1. A patient is seen in the ED with chest pain. The workup is negative; no diagnosis is confirmed. What category of code is appropriate for the first-listed diagnosis?

2. A patient with confirmed pneumonia presents with cough and fever. Should cough (R05.9) and fever (R50.9) be coded as additional codes? Why or why not?

3. A patient with confirmed stroke is documented as having aphasia. Should R47.01 (aphasia) be coded separately? Explain your reasoning.

4. What Glasgow Coma Scale code is assigned when the provider documents a GCS total score of 8?

5. In what setting may R codes be used as first-listed diagnoses?

Exercise 8-C — Symptoms, Signs and Abnormal Findings (R Codes)

Directions: For each question, determine whether to assign an R code, identify the appropriate code, or answer the clinical application question. Use your ICD-10-CM code book.

Part 1: Should the R Code Be Assigned? Circle YES or NO and Explain.

23. Patient has confirmed Type 2 diabetes mellitus. Provider also documents "polydipsia and polyuria." Should R63.1 (polydipsia) and R35.0 (frequency of micturition) be coded separately?
    YES / NO Reason:

24. Patient presents with shortness of breath, no diagnosis confirmed after workup. Should R06.00 be assigned?
    YES / NO Reason:

Part 2: Assign the Correct R Code

25. Patient presents with syncope and collapse, no confirmed diagnosis. Code:

    _ _ _ _ _ _

26. Fever, unspecified (no confirmed source). Code: _ _ _ _ _ _ . _ _

27. Nausea with vomiting, unspecified. Code: _ _ _ _ _ _ . _ _

28. Pre-diabetes (documented as impaired fasting glucose). Code: _ _ _ _

    _ _ . _ _ _ _

Part 3: Glasgow Coma Scale Code Building

29. Provider documents: "Eyes open to pain, no verbal response, abnormal flexion (decorticate)." Assign the three Glasgow Coma Scale component codes:

    Eye opening: _ _ _ _ _ _ . _ _ _ _ _ _

    Verbal: _ _ _ _ _ _ . _ _ _ _ _ _

    Motor: _ _ _ _ _ _ . _ _ _ _ _ _

Part 4: True or False

30. R codes may be used as the first-listed diagnosis in the outpatient setting when no confirmed diagnosis has been established. T / F

31. If a patient has confirmed COPD and presents with dyspnea, R06.00 should be added as an additional code. T / F

32. In an inpatient setting, "possible pneumonia" documented by the provider may be coded as if confirmed. T / F

Section 8.4 — ICD-10-CM Chapters 19 & 20: Injury, Poisoning and External Causes (S00–T88, V00–Y99)

Chapter 19 is the second largest chapter in all of ICD-10-CM, and it demands your full attention. Nearly every code in this chapter requires: anatomic site + laterality + type of injury + episode of care (7th character). Chapter 20 then layers in the how and where — always as additional codes, never first-listed. In this section, we are going to tackle the three highest-yield topics for the CPC exam: traumatic fractures, burns, and the poisoning/adverse effect/underdosing distinction. Commit this material to memory. You will see it on test day.

8.4A — Traumatic Fractures — HIGH YIELD

A **traumatic fracture** is a break in a bone resulting from external force. Coding fractures in ICD-10-CM requires four elements built into the code structure:

33. **Anatomic site** (e.g., S52 = radius/ulna)
34. **Type of fracture** (displaced vs. non-displaced, specific pattern)
35. **Laterality** (right, left, unspecified)
36. **Episode of care** (7th character — the most tested component)

7th Character Episode of Care — Fractures

7th Character	Meaning	Clinical Context
A	Initial encounter, closed fracture	Active treatment — first visit, surgery, casting
B	Initial encounter, open fracture (Gustilo I or II)	Active treatment — lower-grade open fracture
C	Initial encounter, open fracture (Gustilo IIIA, IIIB, IIIC)	Active treatment — severe open fracture

7th Character	Meaning	Clinical Context
D	Subsequent encounter, closed fracture, routine healing	Follow-up during normal recovery
E	Subsequent encounter, open fracture (I or II), routine healing	Follow-up, lower-grade open fracture
G	Subsequent encounter, closed fracture, delayed healing	Healing slower than expected
K	Subsequent encounter, closed fracture, nonunion	Fracture failed to heal
P	Subsequent encounter, closed fracture, malunion	Fracture healed in incorrect alignment
S	Sequela	Late effect — residual pain/deformity after fracture healed

KEY DISTINCTION: "Initial encounter" does NOT mean only the very first visit. Initial encounter means the patient is receiving ACTIVE TREATMENT for the fracture. Multiple visits can qualify as "initial" if active treatment (surgery, casting, splinting) is still being provided.

Worked Example — Fracture Coding

Worked Example: Distal Radius Fracture (Colles Fracture)

"Patient presents with right distal radius fracture (Colles fracture), closed. Seen today for application of cast — first visit."

Code: S52.501A — Unspecified fracture of the lower end of right radius, initial encounter for closed fracture

Breaking It Down:

- **S** — Chapter 19, Injury codes
- **52** — Radius and ulna
- **.501** — Unspecified fracture, lower end, right radius
- **A** — Initial encounter for closed fracture (active treatment; cast being applied today)

On the next visit (cast check, no new treatment): S52.501D — Subsequent encounter for closed fracture with routine healing.

8.4B — Burns — HIGH YIELD

Burns are coded using three elements — ALL required for complete coding. Missing any one of these elements is an incomplete code set.

Element	What It Captures	Code Range
1. Degree	Severity of burn	1st, 2nd, 3rd degree; corrosion (chemical)
2. Site	Anatomic location	T20–T28 (external/internal)
3. TBSA	Total body surface area percentage	T31.– (when applicable)

Degrees of Burns

Degree	Tissue Depth	Clinical Signs
1st Degree	Epidermis only	Erythema (redness), no blistering, skin intact
2nd Degree	Partial thickness (epidermis + dermis)	Blisters, moist red surface, painful
3rd Degree	Full thickness (all skin layers destroyed)	White, brown, or black appearance; no pain (nerve endings destroyed)

Degree	Tissue Depth	Clinical Signs
Corrosion	Same degree structure	Caused by chemical agent, not heat — use corrosion codes, same T range

Multiple Burns Rule: Code the most severe burn first (highest degree). Then add codes for each additional burn site and degree. The TBSA code captures the total percentage — add it separately.

Rule of Nines — TBSA Estimation

Body Area	TBSA %
Head and neck	9%
Each arm (right or left)	9% each
Anterior trunk	18%
Posterior trunk	18%
Each leg (right or left)	18% each
Perineum	1%
Total	**100%**

TBSA Codes (T31.–)

Required when burns cover **10% or more TBSA**, OR when **any 3rd degree burn is present**.

Code	Description
T31.0	Burns less than 10% of body surface area
T31.10	Burns 10–19% (0% 3rd degree)
T31.11	Burns 10–19% (10–19% 3rd degree)
T31.20	Burns 20–29% (0% 3rd degree)
T31.40	Burns 40–49% body surface area (0% 3rd degree)

Burn Site Codes

Code	Site
T20.–	Burn of head, face, and neck
T21.–	Burn of trunk
T22.–	Burn of shoulder and upper limb (except wrist and hand)
T23.–	Burn of wrist and hand
T24.–	Burn of lower limb (except ankle and foot)
T25.–	Burn of ankle and foot
T28.–	Burn of internal organs and airways

📹 Coding Shot

For burns: if both sides of the body are burned, code each site separately with laterality. The TBSA code (T31.–) captures the grand total — it does not replace site codes, it supplements them. Use the Rule of Nines to calculate TBSA accurately before selecting your T31 code. A patient with 2nd degree burns of both arms = 9% (right arm) + 9% (left arm) = 18% TBSA. That pulls you into the T31.10 range. Do the math before you code.

8.4C — Poisoning vs. Adverse Effect vs. Underdosing — HIGHEST YIELD INJURY TOPIC

This is the single most tested distinction in Chapter 19, and it appears on nearly every CPC exam. There are three completely different scenarios, three different sequencing rules, and one table in ICD-10-CM that governs all of them. Master this table and the logic behind it. It will pay dividends on your exam.

Element	Poisoning	Adverse Effect	Underdosing
Definition	Wrong drug, wrong dose, wrong intent; overdose; drug taken with harmful intent; drug interaction when both drugs are prescribed	Right drug, right dose, right route, as prescribed — unexpected bad reaction (allergy, side effect)	Patient takes LESS than the prescribed dose — by choice, financial constraint, or forgetfulness
Intent	Accidental, intentional self-harm, assault, or undetermined	Always correctly prescribed and administered	Patient choice or circumstance; does not relate to the prescribing
Sequencing	**Poisoning code (T36–T50) FIRST**, then manifestation/effect codes	**Manifestation/ effect code FIRST**, then adverse effect code (T36–T50, 5th/6th char = 5)	**Manifestation/ effect code FIRST**, underdosing code (T36–T50, 5th/6th char = 6) listed last
Common Example	Heroin overdose; takes someone else's oxycodone; double-doses on acetaminophen intentionally	Penicillin rash when correctly prescribed; ACE inhibitor angioedema when properly taken	Patient cuts insulin dose in half — blood sugar spikes; patient skips warfarin doses — DVT recurs

Stop!

The sequencing of poisoning vs. adverse effect is REVERSED — and this is the top exam trap in Chapter 19. For poisoning: the T code (poisoning code) goes FIRST, then the clinical manifestation. For adverse effect: the clinical manifestation goes FIRST, then the T code (adverse effect code). These are opposite sequencing rules governing two very similar-looking scenarios. If you remember nothing else from this section, remember: POISONING → T code leads. ADVERSE EFFECT → manifestation leads. Write it on your hand if you have to.

Worked Example 1 — Poisoning (Intentional Self-Harm)

Worked Example: Acetaminophen Overdose — Intentional

"Patient takes a handful of Tylenol intentionally to harm herself. She presents with acute liver failure. Initial encounter."

Code 1 (FIRST): T39.1X2A — Poisoning by 4-Aminophenol derivatives (acetaminophen), intentional self-harm, initial encounter

Code 2 (SECOND): K72.00 — Acute hepatic failure without coma (the manifestation/result of the poisoning)

Why T39.1X2A? T39 = poisoning by non-opioid analgesics, antipyretics. "1" identifies salicylates and p-aminophenol derivatives (acetaminophen). "X" is a placeholder required to reach the 6th character. "2" = intentional self-harm. "A" = initial encounter.

Sequencing logic: Poisoning code FIRST — always. The liver failure is the clinical consequence of the poisoning. It follows as additional.

Worked Example 2 — Adverse Effect (Correctly Prescribed Drug)

Worked Example: ACE Inhibitor Angioedema — Adverse Effect

"Patient on prescribed lisinopril (ACE inhibitor) for hypertension develops angioedema. Patient took the medication correctly, as prescribed. Initial encounter."

Code 1 (FIRST): T78.3XXA — Angioedema (the EFFECT is coded first)

Code 2 (SECOND): T46.4X5A — Adverse effect of angiotensin-converting enzyme inhibitors, initial encounter

Sequencing logic: Adverse effect = MANIFESTATION leads. The angioedema is the clinical finding we are treating. The adverse effect code (T46.4X5A) is the "why" — it goes second. Note the 5th/6th character "5" = adverse effect. This is the OPPOSITE of poisoning sequencing.

Worked Example 3 — Underdosing

Worked Example: Metformin Underdosing — Financial Cause

"Patient with Type 2 diabetes presents with hyperglycemia. She reports she has been taking half her metformin dose because she cannot afford the full prescription. Initial encounter."

Code 1 (FIRST): E11.65 — Type 2 diabetes mellitus with hyperglycemia (the RESULT of underdosing)

Code 2 (LAST): T38.3X6A — Underdosing of insulin and oral hypoglycemic drugs, initial encounter

Sequencing logic: Underdosing is NEVER the first-listed code. The clinical manifestation (the condition that worsened because of the underdosing) leads. The underdosing code is always last in the sequence. You may also add a Z code for the reason for underdosing (e.g., Z91.19 — noncompliance with

medical treatment for financial reasons).

■ Official Guidelines for Coding and Reporting — Section I.C.19.e: Poisoning, Adverse Effect, Underdosing

"When coding a poisoning or reaction to the improper use of a medication (e.g., overdose, wrong substance given or taken in error, wrong route of administration), first assign the appropriate code from categories T36–T50... Use additional code(s) for all manifestations of poisonings. If there is also a diagnosis of abuse or dependence of the substance, the abuse or dependence is coded as an additional code... Adverse effects: When coding an adverse effect of a drug that has been correctly prescribed and properly administered, assign the appropriate code for the nature of the adverse effect followed by the appropriate code for the adverse effect of the drug..."

In Plain English:

The guideline draws a clear, bright line between the three scenarios. When the drug was taken in error, in excess, or with harmful intent — poisoning code leads. When the drug was taken exactly as prescribed and a bad reaction occurred — manifestation code leads, adverse effect code follows. When the patient took less than prescribed and their condition worsened — manifestation code leads, underdosing code closes the code set. The sequence tells the story of what happened and why.

8.4D — External Cause Codes (V00–Y99)

Chapter 20 answers two critical questions about every injury: **How did it happen?** and **Where did it happen?** These codes are always assigned as **additional codes** — never as the first-listed or principal diagnosis. When applicable, assign all three components:

37. **Activity code (Y93.–):** What was the patient doing when injured?
38. **External cause code (V00–Y89):** Mechanism of injury
39. **Place of occurrence (Y92.–):** Where did it happen?

Code Range	Category
V00–V99	Transport accidents (motor vehicle, pedestrian, cycling)
W00–W19	Slipping and falling
W20–W49	Exposure to inanimate mechanical forces
W50–W64	Exposure to animate mechanical forces (animal bites, struck by)
X00–X08	Exposure to smoke, fire, and flames
X71–X83	Intentional self-harm
Y35.–	Legal intervention
Y92.–	Place of occurrence (Y92.000 kitchen; Y92.015 private driveway)
Y93.–	Activity codes (Y93.01 walking; Y93.55 bathing)

⚠️ **Caution!**

External cause codes are never the first-listed diagnosis on a claim. They are supplemental information only — always additional codes. Placing an external cause code as the first-listed or principal diagnosis will cause a claim to reject at most payers and fail edits at the clearinghouse level. These codes describe the mechanism and context of an injury. They are not a substitute for the injury diagnosis code, which must always lead the claim.

★ CMS Rules — External Cause Codes

CMS requires external cause codes for injury encounters across all settings — inpatient, outpatient, and emergency department. These codes are used for public health surveillance, injury prevention research, and Workers' Compensation claims processing. For Workers' Comp specifically, payers require activity codes (Y93.–) and place of occurrence codes (Y92.–) to process claims correctly. Missing external cause codes on a Workers' Comp claim is one of the most common reasons for claim denial in that payer environment.

🗣️ From the Trenches

"I printed out the poisoning, adverse effect, and underdosing sequencing table and taped it to the wall of our ED coding room in bold — 24-point font. I quiz every new coder on it the first week they start. Every single one of them. Because I have seen it too many times: a coder puts the T code second on an adverse effect and the T code first on an adverse effect when it should be the manifestation. It gets reversed. And when it gets reversed, the payer denies it, the compliance team flags it, and we are reprocessing claims. This three-way distinction is the most tested thing in Chapter 19. If you are studying for CPC, this table should be memorized cold before you sit for that exam."

— Marcus D., CPC, CCS | Emergency Department Coding Lead | Gulf Coast Medical Center, Mobile, AL

🔎 Check This Out!

Unintentional **poisoning is the leading cause of injury death in the United States** — surpassing motor vehicle accidents since 2008. The opioid crisis has driven this trend significantly, with drug overdose deaths continuing

to number in the tens of thousands annually. Accurate poisoning coding — with correct intent character, correct drug class, and correct sequencing — is not just an exam skill. It directly contributes to national health surveillance data that shapes policy, funding, and public health response. Your code choice matters beyond the claim.

🔧 Toolbox — Section 8.4 Key Points

- Traumatic fractures require four elements: site, type, laterality, and 7th character episode of care (A = initial/active treatment; D = subsequent/routine; S = sequela).
- Burns require three elements: degree, site, and TBSA (T31.– when ≥10% TBSA or any 3rd degree burn).
- Poisoning = T code (poison) FIRST, then manifestation. Adverse effect = manifestation FIRST, then T code (character "5"). Underdosing = manifestation FIRST, underdosing code (character "6") LAST.
- External cause codes (V00–Y99) are always additional codes — never first-listed or principal diagnosis.
- Code all three external cause components when applicable: mechanism (V–Y), place (Y92.–), activity (Y93.–).

✓ Quick Check 8.4

1. A patient in a cast for a closed left tibial fracture comes in for a routine follow-up. Healing is progressing normally. What is the correct 7th character episode of care?

2. Using the Rule of Nines, calculate the TBSA percentage for a patient with 2nd degree burns of the right arm, anterior trunk, and head/neck.

3. A patient takes their prescribed warfarin correctly and develops a nosebleed (epistaxis) as a side effect. Is this poisoning, adverse effect, or underdosing? Which code is sequenced first?

4. A patient takes double their prescribed hydrocodone dose (their own prescription). Is this poisoning, adverse effect, or underdosing?

5. Can an external cause code be used as the first-listed diagnosis on a claim? Why or why not?

Exercise 8-D — Injury, Poisoning and External Causes

Directions: For each scenario, select the correct episode of care character, build the code set, or circle the correct response. Use your ICD-10-CM code book and the Section 8.4 guidelines.

Part 1: Fracture Episode of Care — Fill in the Correct 7th Character Letter

40. Patient presents to orthopedic clinic for the first time after sustaining a closed fracture of the right clavicle. Cast applied today. 7th character:
41. Patient returns 6 weeks post-fracture. X-ray shows delayed healing. 7th character:
42. Patient has a fracture that did not heal — confirmed nonunion on imaging. 7th character:
43. Patient presents with chronic pain in the wrist from a fracture that occurred two years ago and healed. 7th character:

Part 2: Burns — Degree, Site, and TBSA

44. Patient has a 2nd degree burn of the right hand and wrist. Site code: _ _ _ _ _ _ . _ _ _ _

45. Patient has 3rd degree burns of the anterior trunk (18%) and both legs (18% + 18%). Calculate TBSA: %. TBSA code: _ _ _ _ _ _ . _ _ _ _

Part 3: Poisoning vs. Adverse Effect vs. Underdosing — Identify and Sequence

46. A patient takes a stranger's prescription benzodiazepine at a party accidentally. She presents with CNS depression. This is: . Which code is listed first: the T code or the manifestation?

47. A patient correctly prescribed amoxicillin develops a rash (allergic reaction). Medication taken exactly as prescribed. This is: . Which code is listed first: the T code or the manifestation?

48. A patient with heart failure is taking half his prescribed furosemide because he's trying to make the bottle last longer. He presents with edema. This is: . What is the correct sequencing?

Part 4: Multiple Choice — External Cause Codes

49. A patient falls off a ladder while cleaning gutters at his house. He is treated for a closed fracture of the left wrist. Which of the following correctly describes the role of the external cause code (fall from ladder)?

A. The external cause code is the first-listed diagnosis

B. The external cause code replaces the injury code

C. The external cause code is an additional code explaining how the injury occurred

D. The external cause code is only required for Workers' Compensation claims

Answer:

Part 5: True or False

50. A "subsequent encounter" for a fracture always means the patient's second visit to the provider. T / F

51. The TBSA code (T31.–) is required when any 3rd degree burn is present, regardless of the percentage affected. T / F

Section 8.5 — ICD-10-CM Chapter 21: Factors Influencing Health Status — Z Codes (Z00–Z99)

Z codes are the workhorses of ICD-10-CM — they show up in every specialty, every setting, and on nearly every CPC exam. They capture the context of a patient encounter when no disease or injury is present, or they provide supplemental information that would otherwise be missing from the claim. Z codes can be first-listed or additional, depending on the situation. Your job is to know which is which.

8.5A — Categories of Z Codes

Contact with Health Services / Routine Examinations

Code	Description
Z00.00	Encounter for general adult medical examination without abnormal findings
Z00.01	Encounter for general adult medical examination with abnormal findings
Z00.110	Health examination for newborn under 8 days old
Z01.00	Encounter for examination of eye without abnormal findings
Z01.10	Encounter for examination of ears and hearing without abnormal findings
Z01.411	Encounter for routine gynecological exam without abnormal findings

Code	Description
Z02.0	Encounter for examination for admission to educational institution
Z02.89	Encounter for other administrative examinations
Z23	Encounter for immunization

Screening Codes

Screening codes are used when a patient **without signs or symptoms** is tested to detect a condition early.

Code	Description
Z11.3	Encounter for screening for STIs
Z11.4	Encounter for screening for HIV
Z12.11	Encounter for screening colonoscopy for malignant neoplasm of colon
Z12.31	Encounter for screening mammogram for malignant neoplasm of breast
Z12.4	Encounter for screening for malignant neoplasm of cervix (Pap smear)
Z12.71	Encounter for screening for malignant neoplasm of testis
Z12.72	Encounter for screening for malignant neoplasm of vagina
Z13.1	Encounter for screening for diabetes mellitus
Z13.6	Encounter for screening for cardiovascular disorders
Z13.820	Encounter for screening for osteoporosis

⚠️ **Caution!**

Using a screening Z code when the patient actually has symptoms is incorrect coding. Screening implies the patient has no signs or symptoms and is being tested prophylactically for early detection. If the patient presents with rectal bleeding and has a colonoscopy, that is NOT a screening — that is a diagnostic colonoscopy. The screening code does not apply. Code the symptom (R19.5 or similar) or the confirmed finding. Mixing up screening and diagnostic encounters is one of the most common Z-code errors in outpatient coding — and it will affect payer reimbursement and CMS quality reporting.

History Codes — Personal and Family

These Z codes distinguish what the patient had from what the patient has. This distinction matters enormously.

Code	Description
Z85.–	Personal history of malignant neoplasm (by site)
Z85.038	Personal history of other malignant neoplasm of large intestine
Z86.19	Personal history of other infectious and parasitic diseases
Z87.39	Personal history of other musculoskeletal disorders
Z87.891	Personal history of nicotine dependence
Z80.0	Family history of malignant neoplasm of digestive organs
Z82.49	Family history of ischemic heart disease
Z83.49	Family history of diabetes mellitus
Z83.71	Family history of colonic polyps
Z84.81	Family history of carrier of genetic disease

Stop!

Personal history Z codes are for conditions the patient NO LONGER HAS. If a patient had breast cancer and it was treated and she is now in remission — Z85.3 (personal history of malignant neoplasm of breast) is the correct code. If that cancer has returned and is currently being treated — you are back to a C50 code. Do not use history codes for active conditions. This is one of the most common errors seen in oncology and primary care coding alike. Ask yourself: "Is this condition active today?" If yes — it is not history.

Status Codes

Status Z codes indicate the patient has a condition or device in place that affects care.

Code	Description
Z79.4	Long-term current use of insulin
Z79.84	Long-term current use of oral hypoglycemic drugs
Z79.01	Long-term use of anticoagulants
Z79.899	Long-term use of other medication
Z96.641	Presence of right artificial hip joint
Z96.651	Presence of right artificial knee joint
Z98.1	Arthrodesis status
Z99.11	Dependence on respirator (ventilator)
Z99.2	Dependence on renal dialysis

Contact / Exposure Codes

Code	Description
Z20.822	Contact with and (suspected) exposure to COVID-19

Code	Description
Z20.6	Contact with and (suspected) exposure to HIV
Z77.–	Contact with and (suspected) exposure to hazardous materials

Pregnancy-Related Z Codes Quick Reference

Code	Description	Record Used On
Z34.–	Supervision of normal pregnancy (by trimester)	Mother's record
Z3A.–	Weeks of gestation	Mother's record — additional code
Z37.–	Outcome of delivery	Mother's record — delivery encounters
Z38.–	Liveborn infant — place and type of birth	Newborn's record — principal dx

Common Z Codes Quick Reference — All Categories

Category	Code Range	Purpose	Sequencing
Routine exam	Z00.–, Z01.–	Preventive visit with no complaints	First-listed
Screening	Z11.–, Z12.–, Z13.–	Asymptomatic detection testing	First-listed when exam is the reason for visit
Personal history	Z85.–, Z86.–, Z87.–	Patient HAD condition — no longer active	Additional code
Family history	Z80.–, Z82.–, Z83.–, Z84.–	Blood relative had condition	Additional code
Status	Z79.–, Z96.–, Z98.–, Z99.–	Device, prosthetic, long-term medication	Additional code
Immunization	Z23	Vaccine encounter	First-listed
Contact/exposure	Z20.–, Z77.–	Exposure without	First-listed

Category	Code Range	Purpose	Sequencing
		confirmed illness	
Pregnancy Z codes	Z3A.–, Z34.–, Z37.–, Z38.–	Gestational, outcome, liveborn	Varies — see above

📹 Coding Shot

Z codes for screening vs. Z codes for history are fundamentally different — and they are both frequently tested on the CPC exam. Know the difference cold: Z12.31 = screening mammogram (patient has no symptoms; no confirmed diagnosis; being tested preventively). Z85.3 = personal history of breast cancer (she HAD cancer; it was treated; she is in remission now). These are different encounters, different codes, and different sequencing. Never mix them up. If a patient has both — a screening with a history of cancer — you assign the screening code first and the personal history code as an additional code.

■ Official Guidelines for Coding and Reporting — Section I.C.21: Z Codes

"Z codes are for use in any healthcare setting. Z codes may be used as either a first-listed (principal diagnosis code in the inpatient setting) or secondary code, depending on the circumstances of the encounter. Certain Z codes may only be used as first-listed or principal diagnosis... Z codes are not procedure codes. A corresponding procedure code must accompany a Z code to describe any procedure performed."

In Plain English:

Z codes work in every setting — office, hospital, outpatient, and emergency department. Some Z codes can lead the claim (first-listed): routine exam (Z00.00), screening colonoscopy (Z12.11), immunization (Z23). Others can only be additional codes: personal history (Z85.–), long-term drug use (Z79.–), family history (Z80.–). Still others vary by encounter. A Z code alone does not

describe a procedure — you still need the CPT code for what was done. The Z code tells the payer WHY the encounter happened.

🔧 Toolbox — Section 8.5 Key Points

- Z codes capture health-related encounters that are not diseases, injuries, or external causes — and they can be first-listed or additional depending on the scenario.
- Screening codes (Z11.–, Z12.–, Z13.–) apply only to asymptomatic patients tested for early detection. Symptomatic patients are not screened — they are diagnosed.
- Personal history codes (Z85.–, Z86.–, Z87.–) are for conditions the patient no longer has — not active conditions currently being treated.
- Family history codes (Z80.–, Z84.–) apply when a blood relative has had the condition — these are always additional codes.
- Status codes (Z79.–, Z96.–, Z99.–) document implants, long-term medications, and device dependencies — always additional codes.

✓ Quick Check 8.5

1. A patient presents for a routine annual physical examination. No abnormal findings are noted. What is the correct first-listed Z code?
2. A patient had breast cancer 3 years ago. It was treated with mastectomy and she is currently in remission. Is this coded with an active cancer code or a personal history code?
3. A patient takes metformin long-term. Which status Z code is added to

every encounter where diabetes management is addressed?

4. A patient with no symptoms or risk factors presents for a routine screening colonoscopy. What Z code is appropriate for this encounter?

5. Can Z codes be used in both inpatient and outpatient settings? True or False?

Exercise 8-E — Z Codes: Health Status and Contact with Health Services

Directions: Select the correct Z code, determine whether the Z code is first-listed or additional, circle T or F, or complete the fill-in-the-blank. Use your ICD-10-CM code book.

Part 1: Select the Correct Z Code

52. Patient presents for annual well-woman exam (gynecological), no abnormal findings. Code: _ _ _ _ _ _ . _ _ _ _ _ _
53. Patient presents for HIV screening — no symptoms. Code: _ _ _ _ _ _ . _ _
54. Patient presents for influenza vaccine only. Code: _ _ _ _
55. Patient takes warfarin daily (long-term). Status code: _ _ _ _ _ _ . _ _ _ _
56. Patient's mother had colon cancer. Family history code: _ _ _ _ _ _ . _ _

Part 2: First-Listed or Additional? Write your answer on the line.

57. Patient presents for routine mammogram screening, no symptoms:
58. Personal history of nicotine dependence (Z87.891) on a pulmonology visit:
59. Long-term insulin use (Z79.4) on a diabetic management visit:

Part 3: True or False

60. A personal history Z code can be used for a condition that is actively being treated at the current encounter. T / F

61. A screening Z code is appropriate when the patient presents with signs and symptoms suggesting the condition being screened for. T / F

62. Z38.– is always the principal diagnosis on the newborn's birth encounter record. T / F

Part 4: Weeks of Gestation and Outcome of Delivery

63. A patient delivers at 39 weeks. What weeks of gestation code is added to the maternal delivery record?
    Code: _ _ _ _ _ _ . _ _ _ _

Section 8.6 — Putting It All Together: Multi-System Documentation Scenarios

Here is where your Chapter 8 knowledge gets tested at the highest level. Real patients do not come in with one problem from one ICD-10-CM chapter. They come in pregnant with diabetes and a fracture. They come in as newborns with prematurity and respiratory distress. The scenarios below draw from every section of Chapter 8 — build your complete code set, sequence correctly, and explain your rationale. This is exactly what you will encounter on the CPC exam and in practice every single day.

Scenario 1 — Obstetric + Pre-existing Diabetes + Status Code

"Pregnant patient at 32 weeks gestation presents with severe pre-eclampsia. Patient has pre-existing Type 2 diabetes, currently controlled by insulin. This is

her first pregnancy."

Complete Code Set:

Code 1 (Principal): O14.13 — Severe pre-eclampsia, 3rd trimester

Code 2: O24.114 — Pre-existing Type 2 diabetes mellitus in pregnancy, insulin-controlled (note: this is pre-existing DM, not gestational — different code category entirely)

Code 3: Z3A.32 — 32 weeks gestation (always add weeks of gestation)

Code 4: Z79.4 — Long-term current use of insulin (always add when insulin-controlled DM is documented)

Rationale: The severe pre-eclampsia is the primary obstetric complication necessitating the encounter — it leads. The pre-existing Type 2 diabetes is a comorbidity in pregnancy, coded with O24.114 (not O24.4– which is gestational DM only). At 32 weeks, the trimester is the 3rd. Z79.4 is always added as a status code when a patient uses insulin long-term, even during pregnancy. Z3A.32 completes the weeks of gestation requirement.

Scenario 2 — Opioid Poisoning (Accidental)

"Patient takes a double dose of his own prescribed oxycodone accidentally — he forgot he had already taken it. He presents with respiratory depression. Initial encounter."

Complete Code Set:

Code 1 (FIRST — Poisoning): T40.2X1A — Poisoning by other opioids, accidental (unintentional), initial encounter

Code 2: J96.00 — Acute respiratory failure, unspecified whether with hypoxia or hypercapnia (the manifestation of the opioid poisoning)

Rationale: Even though it is the patient's own prescription, taking double the dose — whether accidental or intentional — is a POISONING, not an adverse effect. The patient did not take it as prescribed. Accidental intent = 5th/6th character "1." Poisoning code is ALWAYS first-listed; the respiratory depression (J96.00) follows as the manifestation. Initial encounter = 7th character "A."

Scenario 3 — Adverse Effect of Anticoagulant

"Patient on warfarin (prescribed for atrial fibrillation) develops hemarthrosis of the right knee — correctly taking the medication exactly as prescribed. Initial encounter."

Complete Code Set:

Code 1 (FIRST — Manifestation): M25.061 — Hemarthrosis, right knee

Code 2 (SECOND — Adverse Effect): T45.515A — Adverse effect of anticoagulants, initial encounter

Rationale: This is an adverse effect — the patient took the correct drug (warfarin), in the correct amount, by the correct route, as prescribed — and

experienced an unexpected bad reaction (hemarthrosis). Adverse effect sequencing = MANIFESTATION FIRST, then the adverse effect T code. T45.515A: "5" in the 5th character = anticoagulants; "5" in the 6th character = adverse effect; "A" = initial encounter.

Scenario 4 — Newborn NICU Admission: Preterm + RDS

"Newborn male delivered by C-section at 34 weeks. Birth weight 2,100g. Diagnosed with respiratory distress syndrome. This is the birth encounter."

Complete Code Set:

Code 1 (Principal — ALWAYS): Z38.01 — Single liveborn infant, delivered by cesarean section

Code 2: P07.33 — Preterm newborn, 34 completed weeks of gestation

Code 3: P07.17 — Other low birth weight newborn, 2000–2499g

Code 4: P22.0 — Respiratory distress syndrome of newborn

Rationale: Z38.01 is the principal diagnosis on every newborn birth encounter — no exceptions. Birth by C-section = Z38.01, not Z38.00. The prematurity (P07.33), low birth weight (P07.17), and RDS (P22.0) are all additional perinatal conditions coded on the NEWBORN's record using P codes. O codes are never used here.

Scenario 5 — Screening + Personal History + Family History (Z Code

Combination)

"Patient presents for routine colorectal cancer screening colonoscopy. He had colon cancer treated 5 years ago and is currently in remission. His father also had colon cancer."

Complete Code Set:

Code 1 (First-Listed): Z12.11 — Encounter for screening for malignant neoplasm of colon

Code 2: Z85.038 — Personal history of other malignant neoplasm of large intestine (patient's own prior cancer — in remission)

Code 3: Z80.0 — Family history of malignant neoplasm of digestive organs (father's colon cancer)

Rationale: The primary reason for this encounter is the screening colonoscopy — Z12.11 is first-listed. The patient's prior colon cancer (now in remission) is captured with Z85.038 (personal history — it is NOT active cancer; active cancer would require a C code). The father's history provides clinical context via Z80.0 family history. All three Z codes work together to paint the complete clinical picture of this preventive encounter.

✓ **Quick Check 8.6**

1. In Scenario 1, why is O24.114 used instead of O24.414 for the diabetic pregnant patient?
2. In Scenario 2, why is this scenario classified as poisoning rather than adverse effect even though the patient was taking his own prescription?

3. In Scenario 3, what is the critical difference between adverse effect sequencing and poisoning sequencing?

4. In Scenario 4, what code is always the principal diagnosis on a newborn birth encounter record?

5. In Scenario 5, why is Z12.11 listed first rather than the personal history code?

🔧 Toolbox — Section 8.6 Key Points

- Multi-system scenarios require applying guidelines from multiple ICD-10-CM chapters simultaneously — sequence the principal/first-listed diagnosis based on the primary reason for the encounter.
- When pregnant patients have pre-existing conditions, the obstetric code (O24.–) for the condition in pregnancy leads, supplemented by the underlying condition code from the appropriate body system chapter.
- On newborn records: Z38.– always leads; P codes follow for perinatal conditions; O codes never appear.
- Poisoning always sequences the T code first; adverse effect always sequences the manifestation first — opposite rules that must be memorized.
- Z codes layer onto the code set to add clinical context — screening, history, status — and their sequencing (first-listed vs. additional) depends on whether the Z code IS the reason for the encounter or merely provides supplemental information.

◆ Chapter 8 Summary

1. **Chapter 15 Obstetric Priority:** When a patient is pregnant, ICD-10-CM Chapter 15 (O codes) always sequences first — whether the condition is obstetric or not. The O code is the principal/first-listed diagnosis on every pregnancy-related encounter.

2. **Trimester and Z3A Requirement:** Every applicable obstetric code requires a trimester character. Always add Z3A.– (weeks of gestation) and Z37.– (outcome of delivery) as additional codes on every maternal delivery record.

3. **Gestational vs. Pre-existing Diabetes:** Gestational diabetes uses O24.4– codes exclusively — never E10 or E11. Pre-existing diabetes uses O24.0– (Type 1) or O24.1– (Type 2) plus the appropriate E code for the underlying diabetes type.

4. **O80 Restriction:** O80 (normal delivery) is one of the most restrictive codes in ICD-10-CM. Any complication, any intervention — including episiotomy — disqualifies O80 entirely. When in doubt, do not use O80.

5. **Z38 Newborn Principal Diagnosis:** The Z38 category is ALWAYS the principal diagnosis on the newborn's birth encounter record. O codes belong on the mother's record; P codes belong on the newborn's record. These are absolute, non-negotiable boundaries.

6. **R Codes as Last Resort:** R codes (signs and symptoms) are used only when no confirmed diagnosis exists. When a provider documents a definitive diagnosis, R codes for integral signs and symptoms are not assigned. In outpatient settings, code to the highest level of certainty available.

7. **Fracture 7th Character:** Initial encounter (A, B, C) = active treatment. Subsequent encounter (D, E, G, K, P) = follow-up/recovery. Sequela (S) = late effect after the fracture has healed. "Initial" does not mean only the

first visit — it means active treatment is still being provided.

8. **Poisoning/Adverse Effect/Underdosing Sequencing:** Poisoning = T code (poison) FIRST, then manifestation. Adverse effect = MANIFESTATION FIRST, then T code (character "5"). Underdosing = MANIFESTATION FIRST, underdosing code (character "6") LAST. These opposite sequencing rules are among the most tested on the CPC exam.

9. **External Cause Codes Always Additional:** Chapter 20 codes (V00–Y99) explain how and where an injury occurred. They are always supplemental additional codes — never the first-listed or principal diagnosis. Code mechanism, activity, and place of occurrence when documented.

10. **Z Code Categories:** Z codes serve different purposes — screening (asymptomatic detection), personal history (condition the patient no longer has), family history (blood relative had condition), and status (current device/medication). Know which Z codes can be first-listed (screening, routine exam, immunization) and which are always additional (history, status, family history).

Chapter 8 Review — 30 Questions

Section A — Multiple Choice (Questions 1–10)

Directions: Circle the letter of the best answer for each question.

A pregnant patient at 26 weeks gestation presents with acute cholecystitis. Which code should be listed FIRST?

A. K81.0 (Acute cholecystitis)

B. O99.619 (Diseases of digestive system complicating pregnancy, unspecified trimester)

C. O99.612 (Diseases of digestive system complicating pregnancy, 2nd trimester)

D. Z34.22 (Encounter for supervision of normal pregnancy, 2nd trimester)

Which of the following is the correct trimester designation for a patient at 14 weeks and 0 days gestation?

A. 1st trimester

B. 2nd trimester

C. 3rd trimester

D. Unspecified trimester

A patient presents with gestational diabetes in pregnancy, controlled by insulin. Which code is correct?

A. E11.649 — Type 2 DM with hypoglycemia

B. O24.414 — Gestational DM in pregnancy, insulin-controlled

C. O24.114 — Pre-existing Type 2 DM in pregnancy, insulin-controlled

D. O24.419 — Gestational DM in pregnancy, unspecified control

A patient delivers a single liveborn infant vaginally at 39 weeks. During labor, the provider performed a vacuum extraction due to prolonged second stage of labor. Which delivery code is correct?

A. O80 — Normal delivery

B. O63.1 — Prolonged second stage of labor

C. O81 — Single spontaneous delivery

D. O82 — Encounter for cesarean delivery

What is ALWAYS the principal diagnosis on the newborn's birth encounter record?

A. P07.30 — Preterm newborn

B. Z38.00 or Z38.01 from category Z38.–

C. Z37.0 — Single liveborn

D. O80 — Normal delivery

A patient takes prescribed metoprolol correctly and develops bradycardia as a side effect. Which code is listed FIRST?

A. T44.7X5A — Adverse effect of beta-adrenoreceptor antagonists, initial encounter

B. R00.1 — Bradycardia, unspecified

C. T44.7X1A — Poisoning by beta-blockers, accidental, initial encounter

D. R00.1 is the only code required

A patient with 2nd degree burns of the right arm (9%) and anterior trunk (18%) is coded. Which TBSA code is correct?

A. T31.0 — Burns less than 10% TBSA

B. T31.10 — Burns 10–19% TBSA, 0% 3rd degree

C. T31.20 — Burns 20–29% TBSA, 0% 3rd degree

D. T31.30 — Burns 30–39% TBSA, 0% 3rd degree

A patient in a cast for a left femur fracture returns for a routine follow-up visit. Healing is normal. What is the correct 7th character episode of care?

A. A — Initial encounter for closed fracture

B. D — Subsequent encounter for closed fracture with routine healing

C. G — Subsequent encounter for closed fracture with delayed healing

D. S — Sequela

Which of the following statements correctly describes the role of external cause codes (V00–Y99)?

A. They are reported as the first-listed diagnosis when an injury is the reason for the visit

B. They replace the injury diagnosis code when the mechanism is well-documented

C. They are always reported as additional codes, never as the first-listed or principal diagnosis

D. They are only required on Workers' Compensation claims

A patient presents for a routine screening mammogram with no signs or symptoms. She has a personal history of breast cancer (in remission). What is the FIRST-listed code?

A. Z85.3 — Personal history of malignant neoplasm of breast

B. C50.– — Malignant neoplasm of breast

C. Z12.31 — Encounter for screening mammogram for malignant neoplasm of breast

D. Z00.00 — General adult medical examination

Section B — True or False (Questions 11–20)

Directions: Write T for True or F for False on the line provided.

64. O codes from Chapter 15 may be assigned on the newborn's hospital birth record.

65. P codes (Chapter 16) may only be assigned within the first 28 days after birth and cannot be used after the perinatal period ends, even if the condition originated in the perinatal period.

66. The 2nd trimester of pregnancy spans from 14 weeks 0 days through 27 weeks 6 days.

67. A congenital cardiac defect diagnosed at birth may be coded with a Q code when the patient is 60 years old, if the condition still affects treatment.

68. When a provider confirms a diagnosis of acute appendicitis in an outpatient setting, the coder should add the R code for abdominal pain as an additional code because the patient reported pain.

69. For poisoning, the T code (poisoning code from T36–T50) is always sequenced as the first-listed diagnosis.
70. For an adverse effect, the T code (adverse effect code from T36–T50) is always sequenced as the first-listed diagnosis.
71. For underdosing, the underdosing code (T36–T50, character "6") is always sequenced as the last code — after the condition caused by the underdosing.
72. A patient with signs and symptoms of hypertension at their first visit (no confirmed diagnosis yet) should have the screening Z code for cardiovascular disorders (Z13.6) reported as first-listed.
73. Z3A.– weeks of gestation codes and Z37.– outcome of delivery codes are both required as additional codes on every maternal delivery record.

Section C — Fill-in-the-Blank (Questions 21–25)

Directions: Complete each sentence with the correct term, number, or code information.

74. The 2nd trimester of pregnancy is defined as gestational age from _____weeks 0 days through _____ weeks 6 days.
75. The perinatal period begins at birth and ends on the _____th day after birth.
76. For an adverse effect encounter, the _____ code (the clinical reaction or manifestation) is sequenced FIRST, followed by the adverse effect T code as an additional code.
77. Using the Rule of Nines, each leg of the human body represents _____ percent of the total body surface area.
78. The Z38.– code category is used as the _____ diagnosis on the newborn's birth encounter record, indicating the type of birth and place of delivery.

Section D — Coding Scenarios (Questions 26–30)

Directions: Read each clinical scenario carefully. Assign the complete code set in the correct sequence. Use your ICD-10-CM code book. Write the code(s) on the lines provided and provide a brief rationale for your sequencing.

Scenario: A 28-year-old female at 16 weeks gestation is admitted for mild pre-eclampsia. She has no pre-existing hypertension. This is her first pregnancy.

Code(s) in sequence:

1.

2.

Rationale:

Scenario: A 14-year-old is brought to the ED after being found unresponsive. Her mother states the patient drank an unknown quantity of her own prescribed antidepressant (sertraline) — suspected intentional self-harm. The patient is in a stuporous state. Initial encounter.

Code(s) in sequence:

1.

2.

Rationale:

Scenario: A 72-year-old patient with a history of colon cancer (surgically resected; currently in remission) presents for a follow-up colonoscopy. He has no current symptoms. His daughter was recently diagnosed with Lynch syndrome. The colonoscopy is performed for surveillance purposes.

Code(s) in sequence:

1.

2.

3.

Rationale:

Scenario: A patient slips on ice on the sidewalk outside his workplace and sustains a displaced closed fracture of the right femoral shaft. He is seen in the emergency department for the first time. Fracture reduction performed today.

Code(s) in sequence:

1. (Fracture code with 7th character):

2. (External cause — mechanism):

3. (Place of occurrence):

Rationale:

Scenario: A patient with Type 1 diabetes has been rationing her insulin because she lost her insurance. She is admitted for diabetic ketoacidosis (DKA). Initial encounter. Provider documents that the DKA is directly related to her reduced insulin intake.

Code(s) in sequence:

1. (Condition resulting from underdosing):

2. (Underdosing code):

3. (Reason for underdosing — financial):

Rationale:

Introduction to CPT

Corrina R. Lynch | CPC Preparation

Chapter contents

1. The purpose of the CPT manual

2. Updating the CPT manual

3. CPT manual format

4. Starting with the Index

5. General rules

6. Chapter review

Learning objectives

- Distinguish CPT, ICD-10-CM, and HCPCS Level II on a professional claim.
- Use the correct edition, symbols, appendices, and section guidelines.
- Follow an Index lead to the full code entry and verify its notes.
- Explain when a modifier, add-on code, or unlisted service may apply.

The prior-edition Chapter 9 readings and exercises follow this lesson.

1. The purpose of the CPT manual

What the code communicates

Current Procedural Terminology (CPT) is maintained by the American Medical Association (AMA). It describes procedures and services. ICD-10-CM describes the diagnosis, symptom, or reason for care. The two code sets answer different questions on the same claim. CPT is HCPCS Level I. HCPCS Level II is a separate code set that includes items such as many drugs, supplies, and equipment.

The professional claim

On the paper CMS-1500, item 21 lists diagnoses. Item 24D holds the procedure, service or supply code and applicable modifiers. Item 24E points back to the relevant diagnosis in item 21. Item 24G is used for units or days. The electronic professional claim is the 837P.

Provider qualification

The code description and guidelines may distinguish physician services from services that may also be provided by another qualified health care professional. Check the code, scope of practice, and payer requirements separately. A valid code does not establish coverage or payment.

CLAIM WALKTHROUGH | TRAINING EXAMPLE

A patient has a two-view chest X-ray for persistent cough. The procedure goes in 24D; the documented reason goes in 21. If cough is diagnosis A, 24E points to A. The pointer is not the diagnosis code itself.

2. Updating the CPT manual

Use the edition and effective date for the service

The AMA CPT Editorial Panel approves changes. Most annual changes take effect January 1; some codes follow different schedules. Check the effective date, applicable corrections, and payer implementation for the date of service. Do not use a code simply because it appears in a newer book.

Practice checkpoint

A service was performed December 29 and billed January 8. Record the date you would use to verify that the CPT entry was effective and explain why.

Finding changes

Use the edition's change summary (Appendix B in the print manual when provided) and the AMA's release and corrections pages. Distinguish a new code from a revised descriptor, a deletion, or a code that is printed out of numeric order.

DATE CHECK

Check date of service → verify effective code and instructions → confirm payer rules.

3. CPT manual format

Three code categories and PLA

Category I generally uses five numeric digits. Category II codes end in F and are optional supplemental performance measurement codes. Category III codes end in T and track emerging services and technology. Proprietary Laboratory Analyses codes end in U and identify specific tests. Verify the full entry and effective date.

Six major Category I sections

Evaluation and Management; Anesthesia; Surgery; Radiology; Pathology and Laboratory; and Medicine. Within a section, headings can narrow the choice by body system, site, technique, or service. Read the section guidance first, then any notes near the code.

Symbols and appendices

Use the symbol legend in your own edition. A bullet commonly indicates a new entry, a triangle a revised description, paired triangles revised surrounding text, a plus an add-on, and # a resequenced entry. Start with the appendices for modifiers (A), changes (B), add-on codes (D), modifier 51 exemptions (E), and resequenced codes (N), checking the contents in your edition.

Indented descriptors and semicolons

An indented entry carries forward the shared wording before the semicolon from the lead entry. Read the common wording with the indented ending as one description. Indentation alone does not make a code an add-on.

3. CPT manual format (continued)

The semicolon can change more than one kind of detail

Compare the alternatives after the semicolon: anatomic site, the service performed, or the extent of work. An entry that carries forward shared wording must be read with its full phrase before you compare it with the record.

Category II and quality reporting

A Category II entry supplements a quality measure; it does not substitute for the service code. Where the particular measure permits them, 1P identifies a medical reason, 2P a patient reason, 3P a system reason, and 8P an action not performed without a specified reason. Verify measure eligibility and the reporting instructions for the performance year.

Category III before unlisted

A current Category III entry that specifically describes the procedure takes precedence over a generic unlisted CPT entry. Check the published effective date. A Category III listing does not guarantee payer coverage. Follow any primary-code instructions if the entry is an add-on.

Illustration only	Read the shared words before adding the indented ending.
Lead entry	Workshop inspection; basic
Indented entry	extended with measurements
Full meaning	Workshop inspection; extended with measurements

4. Starting with the Index

Pull the procedure apart

Read the report for the action actually performed, body site, approach, and any detail that distinguishes the service: laterality, size, depth, complexity, time, or view count. Use enough detail to differentiate the candidates.

Index first; main listing to verify

Start with the procedure name or another supported main term, then narrow by subterm. Follow applicable cross-references. A code range is a list of candidates. Read the full entries, nearby parenthetical notes, and section guidelines before committing.

Six ways to find a main term

Try the procedure or service (e.g., repair), the anatomic site (e.g., wrist), the condition (e.g., fracture), a synonym (e.g., calculus for stone), an eponym (a procedure named for someone), or an abbreviation (e.g., ECG). Use the index heading to find your alphabetical entry; follow its subterms and confirm any abbreviation in the record.

Read the punctuation and cross-references

A lone number is one candidate. Commas separate specifically listed candidates; a hyphen between numbers indicates a range to review. A See instruction points you to another heading. In every case, verify the full descriptor and notes in the main listing before selecting a code.

Report	Two images of the chest: PA and lateral.
Index lead	Look up X-ray or Radiography, then Chest.
Verify	Compare the candidates in Radiology by view count; confirm the two-view CPT entry and surrounding instructions.
Selection	71046 for two chest views. Document which service and component were performed before claim submission.

5. General rules

Modifiers and documentation

A modifier adds context to the base code. For example, modifier 25 is considered on an E/M code when a significant, separately identifiable E/M service is documented on the same date as a procedure or other service. Routine work inherent to the procedure does not justify a separate line. A modifier must never be used simply to get an edit paid.

Add-on codes and bundling

Check which primary procedure satisfies the add-on instructions. An add-on is not reported alone, and modifier 51 is not appended to CPT add-on codes. Check applicable NCCI edits for Medicare and payer policy for other claims. Verify the rule before reporting work that may already be included.

Unlisted services and special reports

If a documented service has no specific applicable code, check for the appropriate unlisted code. Do not select a different procedure simply because it seems similar. Follow payer instructions for a concise narrative, supporting report, and any requested comparison code. Describe what was done and why, with relevant approach, time, effort, and equipment details.

5. General rules (continued)

Two-character modifiers

CPT examples include 51 for multiple procedures and 62 for two primary surgeons performing distinct parts of the same procedure, when supported. HCPCS Level II includes letter and alphanumeric modifiers such as RT and F1. Do not assume a universal modifier order; follow applicable payer instructions and code-specific rules.

Bilateral, decision for surgery, and return to the operating room

Compare 50 (bilateral procedure, when applicable), 57 (E/M that resulted in the decision for major surgery), and 78 (unplanned return to an operating or procedure room for a related procedure during the postoperative period). Verify the global period, code indicators and the payer's rules. Distinguish co-surgery from surgical team and assistant services; the operative record should show the role each clinician performed.

When a special report is needed

Look for applicable instructions for an unusual, unlisted, or Category III service and check the payer's submission requirements. Describe the nature and extent of the work, the clinical reason for it, the time and effort involved, specialized equipment, and what distinguishes the procedure from the closest listed service.

BEFORE SUBMISSION

Check the record, full code entry, section instructions, units, modifiers, and any payer edits. If a detail required by the code is missing, clarify before assuming.

6. Chapter review

Part A | Theory

Try these from memory first. Then check your reasoning with your CPT manual.

1. Where do you enter the procedure and modifier on the CMS-1500? What does the diagnosis pointer do?

2. What determines whether a code was valid when a service was performed?

3. How do Category II and Category III differ?

4. A code line is indented under a lead entry with a semicolon. What text do you carry forward?

5. A report describes one chest image. Find the code candidate and explain why the two-view candidate differs.

6. Why can’t you report an add-on code by itself?

7. What would you look for before appending modifier 25?

8. What supporting information would you prepare for an unlisted service?

Part B | Practical coding

Use your CPT manual. Record your Index lead, code or modifier candidate, and the detail that confirms or rules it out.

1. Modifier lookup

Two surgeons independently document the distinct portions they performed as primary surgeons during the same operation. Identify the CPT modifier candidate and name two things you would verify before applying it.

2. Compare surgical roles

One clinician performs the operation and another assists. Explain why this differs from co-surgery. List the documentation you would check before choosing an assistant modifier.

3. Index interpretation

In a fictional index, Wrist → Repair shows 2XXXX, 2XXXY; Ankle → Repair shows 2XXX1–2XXX6. Explain which entries you would inspect in each case.

4. Main term and cross-reference

Documentation says ECG was performed. Try the abbreviation and full term in the Index. Note any See direction and identify the detail you still need to select the correct ECG service.

5. Unlisted service

The clinician performed a novel procedure on the pleura. There is no applicable specific CPT entry after your review. Find the relevant unlisted entry in your manual and outline what would go in the supporting report.

6. Quality reporting

A patient declined an eligible quality-measure action. Locate the candidate Category II modifier and explain why you must check the measure instructions first.

7. Read the whole descriptor

Fictional lead: Joint imaging; one view. Indented alternative: two views. Write the complete meaning of the alternative, then explain what documentation would support it.

---

8. Operating room return

Four days after major surgery, the same surgeon returns the patient to the operating room unexpectedly to control bleeding related to the original surgery. Find the modifier candidate and identify the facts that support it.

References

AMA: Criteria for CPT codes

AMA: Editorial Panel actions and release timing

CMS: NCCI frequently asked questions

CMS: NCCI add-on code edits

CMS: Medicare Claims Processing Manual, Chapter 26

MEDICAL CODING MASTERY | STUDENT EDITION

CHAPTER 9

Introduction to CPT: Current Procedural Terminology

Corrina Lynch | ACL Consulting Firm | CPC Preparation

Structure, Format, Categories, Modifiers, and an E/M Overview

You have arrived at a pivot point. In Chapters 1 through 8, you built a strong foundation in **ICD-10-CM diagnosis coding** — you learned how to identify and report why a patient was seen, what was wrong with them, and how specific and precise that reporting must be. You earned that knowledge. Now it is time to shift gears into the second half of every single claim that goes out the door: **CPT procedure coding** — which tells the payer not why the patient was there, but exactly what was done to them. This chapter marks the beginning of that transition. ICD-10-CM answers the question: what is the patient's condition? CPT answers the question: what did the provider do about it? Together, these two code sets form the backbone of every professional claim submitted in the United States. By the end of

this chapter, you will understand how CPT is organized, how to read a CPT code correctly, how modifiers work, what the global surgical package includes, and how Evaluation and Management services fit into the CPT universe — all critical knowledge for the CPC exam and for your career as a coder.

▶️ Chapter Objectives

Upon completion of this chapter, the student will be able to:

1. Describe the purpose of CPT and identify the American Medical Association (AMA) as its publisher and copyright holder.
2. Explain the annual update cycle for CPT codes and distinguish it from the ICD-10-CM update cycle.
3. Identify and describe each of the six sections of CPT Category I codes and their respective code ranges.
4. Differentiate between Category I, Category II, and Category III CPT codes and explain when each is used.
5. Apply the semicolon rule to correctly read stand-alone and indented CPT code descriptors.
6. Recognize and correctly apply CPT symbols, including the bullet, triangle, plus sign, and star symbol.
7. Define the concept of a CPT modifier and correctly apply high-yield modifiers including 22, 24, 25, 26, 50, 51, 52, 53, 57, 59, 62, 78, and 79 to clinical scenarios.
8. Describe the components of the global surgical package and identify services that are and are not included in the package.
9. Distinguish between new and established patients using the three-year rule and apply this rule to clinical scenarios.
10. Define unbundling and NCCI edits and explain the compliance

implications of incorrect code bundling.

▶️ Key Terms

Study these terms before reading this chapter. Bold terms are defined on first use in the text.

Add-on code

Global period

Semicolon

Category I

Indented code

Stand-alone code

Category I code

Modifier

Surgery package

Category II

Mutually exclusive

Technical component

Category III

Parent code

Unbundling

CPT

Place of service

Unlisted code

Descriptor

Technical component

Upcoding

Section 9.1 — What Is CPT and Who Owns It?

Overview and History

CPT stands for **Current Procedural Terminology**. It is the standardized coding system used to describe medical, surgical, diagnostic, and therapeutic procedures and services performed by physicians and other qualified healthcare professionals in the United States. CPT is published and maintained exclusively by the **American Medical Association (AMA)**, which holds the copyright to the entire code set. Every time you pick up a CPT manual or log into a CPT database, that content belongs to the AMA.

CPT was first published in **1966**, making it over 50 years old as a code set. The system has evolved significantly since its original edition, and it is now operating under its fifth conceptual framework — often referred to as the CPT-5 structure. The current edition of CPT is updated **annually**, with new codes, revisions, and deletions becoming effective on **January 1 of each year**. This is an important date to memorize and never confuse with ICD-10-CM, which updates on **October 1**.

CPT codes are **required by HIPAA** (the Health Insurance Portability and Accountability Act) for reporting physician and outpatient professional services on all covered electronic transactions. If you are submitting a professional claim to any payer in this country, you are using CPT. Period.

CPT is used to report: physician office visits, outpatient surgery, diagnostic procedures, laboratory tests, radiology services, anesthesia, pathology, and virtually any service that a physician or outpatient provider bills for professional services. What CPT is **NOT** used for is inpatient hospital procedure reporting — inpatient facilities use **ICD-10-PCS** (Procedure Coding System) for that purpose. This is a critical distinction, and it is tested frequently.

Who Uses CPT?

- Physicians and non-physician practitioners (Nurse Practitioners, Physician Assistants, CRNAs)
- Outpatient hospital facilities (for the professional component of services)
- Ambulatory Surgery Centers (ASCs)
- Laboratories, radiology departments, and physical therapy providers
- Telemedicine providers
- **NOT used for inpatient hospital procedure reporting** — ICD-10-PCS serves that role

📶 Coding Shot

Two dates. Memorize them now. CPT codes update on **January 1** every year. ICD-10-CM codes update on **October 1** every year. These two dates show up on the CPC exam, and confusing them in real life means you could be using invalid codes for an entire quarter before anyone catches it. Write these dates somewhere you will see them constantly at the start of every new year and every fall. Your future self will thank you.

CPT vs. HCPCS Level II

CPT is technically classified as **HCPCS Level I** (Healthcare Common Procedure Coding System, Level I). HCPCS also includes a separate code set at **Level II**,

published by CMS. Understanding the difference between these two is essential, as they work side by side on claims but serve different purposes.

Feature	CPT (HCPCS Level I)	HCPCS Level II
Publisher	American Medical Association (AMA)	Centers for Medicare & Medicaid Services (CMS)
Update Cycle	January 1, annually	Quarterly (ongoing updates throughout year)
Format	5-digit numeric (e.g., 99213)	Letter + 4 digits (A0000–Z9999)
Used For	Physician/outpatient services, surgical procedures, E/M visits	Supplies, DME, drugs, ambulance, non-physician services
Example	99213 (office/outpatient visit, established patient)	L0631 (lumbar orthosis, sagittal-coronal control)
Required By	HIPAA — all covered entities must use	HIPAA — all covered entities must use

> 💬 **From the Trenches**
>
> “My very first January as a coder, I showed up to work on January 2nd ready to go, and by noon I had three claims kicked back because my billing software had not yet updated to the new CPT codes. I had no idea the AMA released errata in December or that software vendors sometimes lagged behind. I panicked. My supervisor had to walk me through pulling the manual errata from the AMA website and cross-referencing every code we were planning to bill that week. It was mortifying. Now, every December, I block time on my calendar to review the new CPT changes, pull the AMA errata, and verify our billing system has pushed the update before I code a single claim on January 1. It is the first thing I do every year, and I make sure every coder on my team does the same.”
>
> **— Denise Hargrove, CPC, CPC-I**
> **Physician Office Billing Coordinator, Southeast Family Medicine Associates, Atlanta, GA**

🔎 Check This Out

The AMA's CPT code set contains more than **10,000 codes** in total across all categories. Each annual update cycle typically introduces **200 to 400 new codes**, deletes **50 to 150 codes**, and revises **hundreds more** with updated descriptors or guidelines. This is why coders must purchase a new CPT manual every single year — not just because payers require it, but because using an outdated manual can lead to billing codes that no longer exist or have changed meaning entirely.

✓ Quick Check 9.1

1. Who publishes and holds the copyright to the CPT code set?

2. On what date do new CPT codes become effective each year?

3. CPT is used for professional services billed by physicians. For inpatient hospital procedure reporting, which code set is used instead?

4. What does the acronym HCPCS stand for, and which level is CPT classified as?

5. Name two types of providers (other than physicians) who commonly use CPT to bill for professional services.

🔨 **Toolbox — Section 9.1 Key Points**

- CPT = Current Procedural Terminology; published by the AMA; copyright owned exclusively by the AMA.
- CPT reports what was done to the patient; ICD-10-CM reports why the patient was seen.
- CPT updates January 1 annually; ICD-10-CM updates October 1 annually — know both dates cold.
- CPT (HCPCS Level I) uses 5-digit numeric codes; HCPCS Level II (CMS) uses an alpha-numeric format (letter + 4 digits).
- CPT is required by HIPAA for all covered electronic transactions involving professional services.

Section 9.2 — The CPT Manual: Structure and Organization

The CPT Manual Layout

The CPT manual is not a random collection of codes. It is organized logically, and knowing its layout allows you to navigate it quickly and accurately. The manual is arranged in the following order:

1. Introduction and instructions for use
2. **Category I codes** (main body — 00100–99499)
3. **Category II codes** (performance measurement — 0001F–9007F)
4. **Category III codes** (emerging technology — 0001T–0780T)
5. Appendices A through P

6. Alphabetic Index

Category I Codes — The Six Sections

The backbone of CPT is the **Category I** code set. These are the 5-digit numeric codes you will use for the overwhelming majority of your coding work. Category I codes are organized into **six major sections** by type of service. Critically, note that while the code ranges are mostly sequential, the **Evaluation and Management (E/M)** section appears physically first in the manual even though its numeric codes fall in the 99000s. This is intentional — E/M codes are the most frequently billed codes in all of CPT, and the AMA places them at the front for practical usability.

Section	Code Range	What It Covers
Evaluation and Management (E/M)	99202–99499	Office visits, hospital visits, consultations, nursing facility, home visits, critical care
Anesthesia	00100–01999	Anesthesia services organized by body area of the surgical procedure
Surgery	10004–69990	All surgical procedures organized by body system (integumentary, musculoskeletal, cardiovascular, etc.)
Radiology	70010–79999	Diagnostic imaging, nuclear medicine, radiation oncology, ultrasound
Pathology and Laboratory	80047–89398	Laboratory tests, panels, pathology specimens, cytology, surgical pathology
Medicine	90281–99199	Immunizations, psychiatry, dialysis, ophthalmology, allergy, physical therapy, chemotherapy

Category II Codes

Category II codes are supplemental tracking codes used for **performance measurement and quality reporting**. They are four-digit codes followed by the letter **F** (for example, **3014F** — Current tobacco smoker). These codes are used by payers for HEDIS measures and pay-for-performance programs. Key points:

- They are **supplemental** — they never replace Category I codes
- There is **no payment** associated with Category II codes — they are informational only
- They are used for quality metrics and documenting that specific best practices were performed
- Reporting them is often optional but may be required by specific payer contracts

Category III Codes

Category III codes are **temporary codes** for emerging technologies, services, and procedures that do not yet have a permanent Category I code. They are four-digit codes followed by the letter **T** (for example, **0376T** — Insertion of anterior segment aqueous drainage device without extraocular reservoir). Key points:

- Used for new or experimental procedures that are not yet widely adopted
- Typically **not covered** by major payers (usually considered investigational)
- Required for **data collection** purposes to track frequency of emerging procedures
- **When a Category III code exists — use it** instead of an unlisted code (this is a very common exam question)
- Codes may eventually be promoted to permanent Category I status or deleted

The Appendices (A through P)

The CPT manual contains appendices labeled A through P. Not all of them are heavily tested, but the following are high yield for the CPC exam and for daily coding:

- **Appendix A** — Complete list of all CPT modifiers with definitions (know this appendix cold)
- **Appendix B** — Summary of additions, deletions, and revisions for the current code year
- **Appendix C** — Clinical examples for E/M codes (invaluable for learning E/M level selection)
- **Appendix D** — Summary of all CPT add-on codes (identified with the + symbol)
- **Appendix E** — Summary of CPT codes exempt from modifier 51
- **Appendix F** — Summary of CPT codes exempt from modifier 63
- **Appendix J** — Electrodiagnostic medicine listing of sensory, motor, and mixed nerves
- **Appendix O** — Multianalyte assays with algorithmic analyses

The Alphabetic Index

The **Alphabetic Index** is located at the back of the CPT manual. Like the ICD-10-CM index, it is your starting point — not your ending point. The index is organized by main terms, which can be:

- Procedure name (e.g., Appendectomy)
- Organ or anatomical site (e.g., Appendix)
- Eponym — a procedure named after a person (e.g., Bassini operation)
- Abbreviation (e.g., ECG = Electrocardiogram)

The index may give you a single code or a range of codes. **You must always verify your selection in the tabular main body before assigning any code.**

⛔ Stop!

Never assign a CPT code directly from the Alphabetic Index. The index may point you to a range of codes — for example, “Appendectomy, 44950–44960.” You cannot simply pick 44950 without reading the full descriptor for each code in the tabular section. The index is a roadmap to the correct area of the book. The tabular is where you make your final decision. Assigning from the index alone is one of the most common errors made by new coders and is specifically addressed in AMA CPT guidelines.

⚖️ Official Guidelines for Coding and Reporting

AMA CPT Introduction — Instructions for Use of the CPT Codebook

The AMA provides specific instructions in the Introduction of the CPT manual regarding how to correctly use the codebook. Key provisions include:

- The Alphabetic Index is not a substitute for the main text of CPT. Coders must always refer to the main classification of CPT to ensure accuracy.
- The most specific code that accurately identifies the service performed should be selected.
- If no specific code exists, an unlisted procedure code should be used — but only after confirming no Category III code exists for the service.
- Notes and parenthetical instructions within CPT (appearing in parentheses) are part of the official guidelines and must be followed.

Plain-English Explanation: The AMA is telling you: read the full descriptor, follow the instructions in the book, check the parenthetical notes, and never shortcut the process by assigning from the index. These are not suggestions — they are coding rules.

📶 Coding Shot

Category III before Unlisted — every time. When you are coding a service and cannot find a Category I code that matches, your next step is NOT to go straight to an unlisted code. Your next step is to check whether a **Category III (T code)** exists. If it does, you are required to use it. The unlisted code is the option of absolute last resort. This is tested on the CPC exam and it comes up in real-world audits.

✓ Quick Check 9.2

1. Which CPT section covers all surgical procedures and what is its code range?

2. Category II codes are identified by what letter suffix, and are they reported in place of Category I codes?

3. Which CPT Appendix contains the complete list of all modifiers?

4. When searching the Alphabetic Index and you find a code range, what is your next required step?

5. A new procedure is being performed experimentally. No Category I code exists. What type of code should you look for before defaulting to an unlisted code?

Exercise 9-A — CPT Manual Organization

For each question, write your answer on the blank provided. Use your CPT manual to verify answers. Do NOT use the answer key — it is not provided in this student edition.

1. A code of **27447** falls in which CPT Section?

2. A code of **0389T** is a Category code because it ends in the letter .

3. A code of **3015F** is a Category code. Can it replace a Category I code? **T** / **F**

4. Which appendix would you consult to find a list of all add-on codes?
   A. Appendix A B. Appendix B C. Appendix D D. Appendix E Answer:

5. Which appendix would you consult to see what CPT codes were added, revised, or deleted this year?
   A. Appendix A B. Appendix B C. Appendix C D. Appendix O Answer:

6. An Evaluation and Management code falls in which numeric range?

7. A laboratory panel code falls in which CPT Section?

8. True or False: A coder may assign a code directly from the CPT Alphabetic Index without verifying in the tabular. **T** / **F**

9. What section of CPT would you find anesthesia codes for a procedure performed on the wrist?

10. A physician performs a new, investigational retinal imaging procedure. No Category I code exists. Before using an unlisted code, the coder should first check for a:
    A. Category II code B. HCPCS Level II code C. Category III code D. ICD-10-PCS code Answer:

🔨 **Toolbox — Section 9.2 Key Points**

- The CPT manual is organized: Introduction → Category I → Category II → Category III → Appendices → Index.
- Category I has six sections: E/M, Anesthesia, Surgery, Radiology, Pathology/Lab, Medicine.
- Category II (F codes) = performance measurement; supplemental, no payment.
- Category III (T codes) = emerging technology; use before unlisted codes.
- Always start in the Alphabetic Index; always finish in the tabular body — never the reverse.

Section 9.3 — CPT Code Format: How to Read a CPT Code

Code Descriptors

Every CPT code has a **descriptor** — the written text description that tells you exactly what procedure or service that code represents. Reading descriptors correctly is not optional. You must read the complete descriptor, including the parent code's shared language, before you assign any code. This is where most errors occur in CPT coding: a coder finds a number that looks close, assigns it, and never reads the full sentence that code actually represents.

The Semicolon Rule — The Most Important Formatting Rule in CPT

Here it is. The rule that separates coders who can navigate CPT confidently from those who guess. When you see a **semicolon (;)** in a CPT descriptor, everything

that appears **before the semicolon** in the parent code is shared by — and must be prepended to — all indented codes that follow it under that parent.

Worked Example: The Semicolon Rule in Action

27130 Total hip arthroplasty**;** with acetabular and femoral prostheses

27132 conversion of previous hip surgery to total hip arthroplasty

27134 revision of total hip arthroplasty; both components, with or without autograft

How to read 27132 in full:

Start at the parent (27130) and read up to — but not including — the semicolon: "Total hip arthroplasty". Then continue with the indented code's text: "conversion of previous hip surgery to total hip arthroplasty."

Full reading: "Total hip arthroplasty; conversion of previous hip surgery to total hip arthroplasty."

How to read 27134 in full:

Same process — prepend "Total hip arthroplasty" from 27130, then add 27134's text: "revision of total hip arthroplasty; both components, with or without autograft."

Note that 27134 has its OWN semicolon within its descriptor, creating a further subdivision within that code itself.

Extended Example: Five Indented Codes Under One Parent

27447 Arthroplasty, knee, condylar and plateau**;** medial and lateral compartments with or without patella resurfacing (total knee arthroplasty)

27446 medial compartment

27445 lateral compartment

27442 patella

27443 patella; with partial or total excision of tibial tubercle

Reading any of the indented codes: "Arthroplasty, knee, condylar and plateau; [indented code text]." The phrase before the semicolon is always the bridge that connects the parent to every indented code that follows.

Stand-Alone vs. Indented Codes

A **stand-alone code** (also called the **parent code**) contains its complete description within its own text. You can read it and understand it without referring to another code. The descriptor begins with a capital letter.

An **indented code** begins with a lowercase letter and cannot be read correctly without first referring to the parent code and reading everything before its semicolon. The indented code completes the thought started by the parent.

Critical distinction: Indented codes are formatting concepts — they share descriptor language with their parent. They are completely different from add-on codes, which are a separate concept related to billing, not descriptor format.

Add-On Codes

Add-on codes are identified by a **plus sign (+)** printed before the code number in the CPT manual. Example: **+11001** (Debridement of extensive eczematous or infected skin; each additional 20 sq cm, or part thereof). Add-on codes represent additional work performed in conjunction with a primary procedure. They are governed by strict rules:

- An add-on code is **always reported in addition to** the primary procedure code — never alone
- Add-on codes are **never reported with modifier 51** (multiple procedures)
- All add-on codes are listed in **Appendix D** of CPT
- An add-on code can never be the first or only code on a claim line

⛔ **Stop!**

An add-on code can NEVER be reported alone. If you find yourself placing an add-on code as the only code on a claim line, stop and ask: where is the primary procedure code? Add-on codes exist as supplements to a primary service. Without the primary code, the add-on code has no context, no clinical meaning, and no basis for payment. A claim submitted with only an add-on code will deny — every time.

Symbols Used in CPT

The AMA uses a standardized set of symbols printed in the CPT manual to convey important information about codes at a glance. Learning these symbols is fast and the payoff is high — they appear regularly on the CPC exam.

Symbol	Meaning	Example
●	**New code** this edition	●99417
△	**Revised code** this edition (descriptor changed)	△99213
+	**Add-on code** — never reported alone	+11001
○	**Reinstated or recycled code** (code was previously deleted and has been brought back)	○
★	**Telemedicine service** (real-time audio-video synchronous service)	★99421
#	**Out-of-numerical-sequence code** (code is not where you would expect numerically)	#99224
◢	**Text change** (guidelines or instructions within a section have changed, not the descriptor)	◢

Symbol	Meaning	Example
∅	**Modifier 51 exempt** (do NOT append modifier 51 to this code)	∅20680

Unlisted Codes

Unlisted codes are CPT codes used when absolutely no Category I or Category III code adequately describes the service performed. They typically end in **-99** (example: **27899** — Unlisted procedure, leg or ankle). Using an unlisted code means:

- You must submit a **Special Report** explaining the nature, extent, need for the procedure, time, effort, equipment, and any other relevant details
- The claim will almost certainly require **manual review** by the payer, resulting in delays
- Payment is not guaranteed and is typically made based on comparison to a similar service
- Use of unlisted codes should be avoided whenever a more specific code exists

⚖️ Official Guidelines for Coding and Reporting

AMA CPT Guidelines — Add-On Codes and Modifier 51 Exemption

The AMA CPT guidelines state: Add-on codes describe additional or supplemental services that are always performed in conjunction with another primary service or procedure. They are never reported as stand-alone procedures. Add-on codes are exempt from the multiple procedure concept (modifier 51) and should never be appended with modifier 51.

Plain-English Explanation: When you see a + symbol, two rules apply automatically and permanently: (1) you need a primary code on the claim, and (2) you must not add modifier 51 to the add-on code, even if multiple procedures were performed. These are not optional guidelines — they are

absolute rules built into CPT structure.

📶 Coding Shot

Reading an indented code: When you encounter an indented code in CPT, do not try to read it in isolation — you literally cannot get the full meaning from it alone. Back up to the parent code, find the semicolon, read everything to the LEFT of the semicolon, then mentally attach the indented code's text to complete the descriptor. Practice this with five codes every day for a week. It will become automatic.

⚠️ Caution!

Index assignment is not final code assignment. Assigning a CPT code based solely on what the Alphabetic Index returns — without verifying in the main body — is a fundamental coder error that results in incorrect code selection. The index is a navigation tool. New coders who skip verification are at high risk of selecting a code in the wrong code family, the wrong body area, or the wrong procedure type entirely. Every code must be verified in the tabular before it goes on a claim.

✓ Quick Check 9.3

1. In the semicolon rule, which part of the parent code's descriptor is shared with all indented codes beneath it?

2. What symbol precedes an add-on code in the CPT manual?

3. True or False: An add-on code may be reported with modifier 51. **T** / **F**

4. A code printed with a star (★) symbol in CPT indicates what type of service?

5. When would a coder use an unlisted procedure code, and what must accompany such a claim?

🔨 Toolbox — Section 9.3 Key Points

- The semicolon rule: everything before the semicolon in the parent code belongs to every indented code beneath it.
- Stand-alone codes can be read independently; indented codes cannot — they require the parent.
- Add-on codes (+) are always secondary to a primary code; never alone; never with modifier 51.
- Know your CPT symbols: ● new, △ revised, + add-on, ★ telemedicine, # out-of-sequence, ∅ modifier 51 exempt.
- Unlisted codes end in -99; require a special report; should be a last resort after checking Category III.

Section 9.4 — CPT Modifiers (High Yield — CPC Exam Favorite)

What Is a Modifier?

A **modifier** is a two-digit code appended to a CPT procedure code to communicate to the payer that the service described by the code was altered in some clinically significant way — without actually changing the definition of the code itself. Think of a modifier as a footnote attached to the code that says: here is something important you need to know about how this service was delivered.

Modifiers can tell the payer that a service was bilateral, that only part of a service was performed, that a procedure was repeated, that multiple procedures were performed at the same session, which part of a global service was performed by which physician, or that a procedure was performed under circumstances that were significantly more complex than usual. What modifiers **do not** do is change the CPT code itself. A modified code still represents the same service — just with additional context.

Format: Two digits appended to the CPT code with a hyphen. Example: **99213-25** or **27130-62**.

High-Yield Modifiers for the CPC Exam

Modifier 22 — Increased Procedural Services

Used when the work required to provide a service was **substantially greater** than typically required for that procedure. This could mean significantly increased operative time, unusual anatomical complexity, or extraordinary effort to manage complications intraoperatively. Modifier 22 must be supported by documentation and results in additional reimbursement — but only after manual payer review.

Modifier 24 — Unrelated E/M During Postoperative Period

Used when a physician performs an Evaluation and Management visit during the global/postoperative period for a condition that is **completely unrelated** to the

original surgery. Without modifier 24, the payer assumes any E/M visit during the global period is part of the bundled surgical package and will deny the claim. The operative word is unrelated — and the documentation must clearly establish that the reason for the visit has nothing to do with the original procedure.

Modifier 25 — Significant, Separately Identifiable E/M on Same Day as Procedure

Modifier 25 is one of the **most commonly used** and most commonly **misused** modifiers in all of CPT. It is appended to the **E/M code** (not the procedure code) when a physician performs a significant, separately identifiable evaluation and management service on the same day as a procedure or other service. The E/M must be above and beyond the typical pre-procedure assessment, separately documented, and represent a distinct medical decision-making process.

Example: A patient presents for a laceration repair (procedure). During the same visit, the physician separately evaluates and documents management of newly diagnosed hypertension. The laceration repair and the E/M for hypertension are separate services. Report the E/M with modifier 25.

Modifier 26 — Professional Component

Some CPT codes have two distinct components: the **technical component** (the equipment, facility, and technical staff) and the **professional component** (the physician's interpretation and written report). Modifier 26 appended to a CPT code tells the payer that the physician is billing for the professional component only — the interpretation — and not the equipment or facility side.

- **-26** (Professional Component): The physician read and interpreted the study
- **-TC** (Technical Component): The facility/equipment performed the study
- **No modifier** (Global/Full): The physician both performed and interpreted the study

Example: A hospital radiologist reads a chest X-ray taken at the hospital. The radiologist bills **71046-26**. The hospital bills **71046-TC**. If a private practice physician takes and reads the X-ray in their own office, they bill **71046** with no modifier.

Modifier 47 — Anesthesia by Surgeon

Used when regional or general anesthesia is administered **personally by the operating surgeon** (not by an anesthesiologist or CRNA). Appended to the surgical procedure code, not an anesthesia code.

Modifier 50 — Bilateral Procedure

Used when the same procedure is performed on **both sides of the body** (bilateral) during the same operative session. Report the code once with modifier 50. Some payers prefer the code reported twice — once with modifier -RT (right) and once with modifier -LT (left) — so always check payer-specific rules.

Modifier 51 — Multiple Procedures

Used when **multiple procedures** other than E/M services are performed at the same session by the same provider. Modifier 51 is appended to the **secondary and additional procedure codes** — not the primary procedure. The primary (highest-valued) procedure is always listed first without modifier 51. Add-on codes and modifier 51-exempt codes (∅ symbol) never receive modifier 51.

Modifier 52 — Reduced Services

Used when a physician **electively reduces or eliminates a portion** of a service at the physician's discretion, before or during the procedure. Key point: the decision to reduce was the physician's, and the reduction occurred voluntarily (not due to emergency circumstances). Example: A patient unable to tolerate a full colonoscopy; the physician completes a partial examination.

Modifier 53 — Discontinued Procedure

Used when a physician was forced to **terminate a procedure** due to extenuating circumstances or the well-being of the patient — after the patient had been prepped, positioned, and (in many cases) anesthesia had been initiated. Modifier 53 is different from modifier 52: modifier 52 = elective physician-directed reduction; modifier 53 = involuntary termination after the procedure had begun under more invasive circumstances.

Modifier 57 — Decision for Surgery

Appended to an E/M code for the visit at which the initial **decision to perform major surgery** (90-day global period) was made. Without modifier 57, the E/M visit on the day of or the day before a major surgery is bundled into the global surgical package and will not be separately reimbursed. Modifier 57 is the signal to the payer that this E/M visit was NOT routine post-op care but rather the critical decision-making visit that led to the surgery.

Modifier 59 — Distinct Procedural Service

Modifier 59 indicates that a procedure or service is **distinct or independent** from other services performed on the same day. It is used to override NCCI (National Correct Coding Initiative) bundling edits when documentation genuinely supports separate reporting. Modifier 59 should only be used when no other more specific modifier (26, 50, 51, 91, etc.) more accurately describes the situation.

Modifier 62 — Two Surgeons

Used when **two surgeons** (typically from different specialties) each perform distinct portions of a single procedure. Each surgeon reports the same procedure code with modifier 62, and each must document their specific portion of the operative work.

Modifier 63 — Procedure Performed on Infants Weighing Less Than 4 kg

Used when a procedure is performed on an **infant weighing less than 4 kg** (approximately 8.8 lbs), which substantially increases procedural complexity. Modifier 63 is not appended to add-on codes, E/M codes, anesthesia codes, radiology codes, or medicine section codes.

Modifier 76 — Repeat Procedure, Same Physician

The same procedure was repeated by the **same physician** on the same day, with documentation explaining why the repeat was clinically necessary.

Modifier 77 — Repeat Procedure, Different Physician

The same procedure was repeated by a **different physician** on the same day.

Modifier 78 — Return to OR for Related Procedure During Postoperative Period

Used for an **unplanned return to the operating room** for a procedure that is **related** to the original operation (typically a complication) during the global postoperative period. Reimbursement is limited to the intraoperative component of the relative value unit (RVU). No new global period begins.

Modifier 79 — Unrelated Procedure During Postoperative Period

Used when a procedure performed during the postoperative period of another surgery is **unrelated** to the original procedure. A **new global period does begin** with modifier 79.

Modifier 80 — Assistant Surgeon

A physician who **assists the primary surgeon** and bills for that assistance. Typically reimbursed at 16–20% of the primary surgeon's fee, depending on the payer.

Modifier 90 — Reference (Outside) Laboratory

A laboratory test is performed by a **reference laboratory** (outside lab) but billed by the ordering physician, who is passing through the cost.

Modifier 91 — Repeat Clinical Diagnostic Laboratory Test

The same lab test is repeated on the same day for legitimate **clinical necessity** to obtain subsequent results. Not used for equipment failure or repeat due to technician error.

Modifier 95 — Synchronous Telemedicine Service

A service rendered via **real-time interactive audio and video** telecommunications. Used with codes that have the star (★) symbol in CPT or that are listed on the CMS-approved list of telehealth services.

Modifier	Name	Key Use	Most Common Mistake
22	Increased	Work substantially	Using without

Modifier	Name	Key Use	Most Common Mistake
	Procedural Services	greater than typical; requires documentation	documentation to justify increased complexity
24	Unrelated E/M During Postop Period	E/M for completely unrelated condition during global period	Using for any E/M during global period, not just unrelated ones
25	Significant Separate E/M, Same Day	Appended to E/M code on same day as a procedure	Placing on procedure code instead of the E/M code
26	Professional Component	Physician billing interpretation only (not equipment/facility)	Confusing with TC modifier or using when global billing is appropriate
47	Anesthesia by Surgeon	Surgeon personally administers regional/general anesthesia	Appending to anesthesia code instead of surgical code
50	Bilateral Procedure	Same procedure on both sides of body, same session	Reporting code twice instead of once with modifier 50
51	Multiple Procedures	Appended to secondary/additional procedures	Placing on the primary (highest-value) procedure instead of secondary
52	Reduced Services	Physician electively reduces service before/during procedure	Confusing with modifier 53 (involuntary discontinuation)
53	Discontinued Procedure	Procedure terminated due to patient well-being emergency	Using when physician simply chose to do less (use 52 instead)
57	Decision for Surgery	E/M visit where major surgery decision was made	Using for minor surgery (10-day global); only applies to 90-day

Modifier	Name	Key Use	Most Common Mistake
			global
59	Distinct Procedural Service	Override NCCI bundling edit; services truly distinct/separate	Using to override edits without documentation of distinct service
62	Two Surgeons	Two surgeons from different specialties perform distinct portions	Using when one surgeon assists the other (use 80 instead)
63	Procedure on Infant <4 kg	Increased complexity for neonatal/infant procedures	Appending to add-on codes, E/M, anesthesia, or radiology codes
76	Repeat Procedure, Same Provider	Same procedure repeated by same physician, same day	Using when a different physician repeated the procedure (use 77)
77	Repeat Procedure, Different Provider	Same procedure repeated by different physician, same day	Using when the same physician repeated the procedure (use 76)
78	Return to OR, Related	Unplanned return to OR for related complication during global period	Assuming a new global period begins (it does not with modifier 78)
79	Unrelated Procedure, Postop Period	Unrelated surgery during postop period; new global period starts	Confusing with modifier 78 (related vs. unrelated determination)
80	Assistant Surgeon	Physician assists primary surgeon	Billing at full surgical rate instead of reduced assistant rate
91	Repeat Lab Test	Same lab repeated same day for clinical necessity	Using when test was repeated due to equipment failure or error

Modifier	Name	Key Use	Most Common Mistake
95	Synchronous Telemedicine	Real-time audio-video telehealth service	Using for audio-only services (not covered under modifier 95)

Worked Examples — Modifier Application

Scenario 1 — Modifier 25

Mr. Patterson presents to his primary care physician for repair of a 3.2 cm laceration on his right forearm (the reason for today's visit). During the same encounter, the physician also separately evaluates and documents a new diagnosis of uncontrolled hypertension, including a review of systems, a focused exam of cardiovascular and respiratory systems, and a prescription for lisinopril.

Coding: The laceration repair is coded with the appropriate wound repair CPT code. The E/M service for hypertension is a separate, significant, and distinctly documented service above and beyond the pre-procedure assessment. Append **modifier 25 to the E/M code**. The repair code requires no modifier.
Claim: 99213-25 (E/M for hypertension) + **12002** (laceration repair)

Scenario 2 — Modifier 26 vs. TC vs. Global

Dr. Nguyen is a radiologist employed by General Hospital. A patient has a 2-view chest X-ray taken at the hospital (the hospital owns the equipment, employs the technologist, and provides the room). Dr. Nguyen reads the images and provides a written interpretation. Later that afternoon, a patient brings in films taken at an outside facility; Dr. Nguyen reads those films in her own office using her workstation.

Coding (hospital X-ray): The hospital bills **71046-TC**. Dr. Nguyen bills **71046-26**.

Coding (outside films read in office): Dr. Nguyen provides interpretation only (no equipment involved on her part). She bills **71046-26**.

Scenario 3 — Modifier 50 and 51

Dr. Chen performs a right knee arthroscopy with partial medial meniscectomy. During the same session, she performs a trigger point injection to the trapezius muscle for a completely separate myofascial pain complaint, documented separately in the operative note.

Coding: The arthroscopy is the primary procedure (highest value) and is listed first with no modifier 51. The trigger point injection is a separate and distinct service (check NCCI edits). If NCCI edits exist between these codes and documentation supports separate reporting, append **modifier 59** to the injection code to indicate distinct procedural service.

Claim: **29881** (arthroscopy, primary) + **20553-59** (trigger point injection, distinct)

Scenario 4 — Modifier 59 and NCCI

A patient undergoes excision of a malignant lesion of the back and also has a separately excised lesion on the left cheek during the same session. The payer's NCCI edit system flags both lesion excision codes as a bundled pair. Documentation confirms two entirely separate anatomical sites, separate anesthesia injections, and separate closures.

Coding: The documentation clearly supports separate and distinct services at distinct anatomical sites. Modifier **59** (or XS — separate structure) is appropriate. Append modifier 59 to the secondary lesion excision code.

Claim: Primary excision code (back) + Secondary excision code (cheek)**-59**

Scenario 5 — Modifier 57

Ms. Rivera presents to orthopedic surgeon Dr. Patel for increasing knee pain. Dr. Patel performs a detailed history, comprehensive examination, and documents high-complexity medical decision making. At this visit, Dr. Patel and Ms. Rivera agree to proceed with an elective total knee replacement — a major surgery with a 90-day global period. The surgery is scheduled for the following Monday.

Coding: The E/M visit today is the visit at which the decision for major surgery was made. Without modifier 57, this E/M visit would be bundled into the global surgical package. Append **modifier 57 to the E/M code** to allow separate reimbursement for this visit.

Claim: 99205-57 (E/M, new patient, decision for major surgery)

💬 From the Trenches

“Modifier 25 is the single most audited modifier at our practice, and I am not exaggerating when I say that. We have a 12-physician multi-specialty group and the OIG has flagged us twice in audits over the past five years for modifier 25 usage. Both times we were able to defend ourselves because I had created a documentation checklist specifically for modifier 25: What was the chief complaint for the procedure? What was the chief complaint for the E/M? Were they separately documented? Is the E/M above and beyond the pre-procedure assessment? Does the note clearly distinguish between the two services? I hand that checklist to every new physician who joins this practice. It has saved us from compliance exposure more times than I can count. If your physicians cannot answer all five questions with yes, modifier 25 should not be on that claim.”

— Yolanda Perkins, CPC, CPMA
Director of Compliance and Coding, Lakeside Multi-Specialty Group, Houston, TX

⚖️ Official Guidelines for Coding and Reporting

AMA CPT Modifier Definitions; CMS NCCI Guidelines for Modifier 59

The AMA CPT guidelines define modifiers as two-digit additions to a five-digit CPT code that describe circumstances under which a service was provided, without changing the code's fundamental definition. Modifiers must always be supported by documentation in the medical record.

CMS NCCI guidelines state that modifier 59 may be used to indicate that two procedure codes, which would otherwise be bundled by NCCI edits, represent separate and distinct services. CMS requires that the documentation clearly support: (1) a different session or patient encounter, (2) a different procedure or surgery, (3) a different site or organ system, (4) a separate incision or excision, (5) a separate lesion, or (6) a separate injury. Using modifier 59 without documentation satisfying at least one of these criteria constitutes a compliance violation.

Plain-English Explanation: The AMA tells you what modifiers mean. CMS tells you when modifier 59 is actually legitimate. Read both sets of rules together — they are not interchangeable and one does not replace the other.

⛔ Stop!

Modifier 25 goes on the E/M code — NOT the procedure code. This is one of the most persistent modifier placement errors made by new coders. The modifier 25 tells the payer that the E/M service was significant and separately identifiable on the same day as the procedure. The procedure code stands on its own without a modifier. If you put modifier 25 on the procedure code, the claim will process incorrectly and may deny or not trigger the intended separate reimbursement. Get into the habit of always asking: which code am I modifying

and why?

⚠️ **Caution!**

Modifier 59 is one of the most heavily audited modifiers by the CMS Office of Inspector General (OIG). The OIG has issued multiple special fraud alerts about modifier 59 misuse, and it is specifically listed in OIG Work Plans as a recurring area of scrutiny. Using modifier 59 to override an NCCI bundling edit without solid documentation that the services were genuinely separate and distinct does not make the claim compliant — it makes it fraud. The modifier does not create an exception to bundling rules; it signals that a legitimate exception exists. If the documentation is not there, the modifier should not be there.

📶 **Coding Shot**

Modifier 51 placement: The first procedure code on your claim is always the highest-value procedure — the one that gets full reimbursement. Modifier 51 goes on every additional procedure after the first. Never put modifier 51 on the primary code. Never put modifier 51 on an add-on code (+ symbol) or a modifier 51-exempt code (∅ symbol). A quick check: if you see a + or ∅ symbol, modifier 51 is off limits for that code regardless of how many other procedures appear on the claim.

🏛️ **CMS Rules**

CMS X Modifiers — Medicare-Specific Refinements to Modifier 59

CMS has introduced four more specific modifier alternatives to modifier 59 for

use on Medicare claims. These are known as the **X modifiers**:

- **XE** — Separate Encounter: Services performed during a separate patient encounter on the same date
- **XS** — Separate Structure: Services performed on a separate organ or structure
- **XP** — Separate Practitioner: Services rendered by a different practitioner
- **XU** — Unusual Non-Overlapping Service: Service is not usually performed at the same time as the other procedure

CMS implemented these more specific modifiers to reduce inappropriate use of the broad modifier 59. For Medicare claims, when a more specific X modifier applies, use it instead of modifier 59 to more precisely describe the circumstance. Know all four X modifiers for your CPC exam.

✓ Quick Check 9.4

1. Modifier 25 is placed on which code when an E/M and a procedure are performed the same day?

2. A patient has the same surgery performed on both the right and left knee during the same operative session. Which modifier is appropriate?

3. Which modifier would you append to an E/M code to indicate that the decision for a major (90-day global) surgery was made at this visit?

4. A procedure is repeated by a different physician on the same day. Which modifier applies?

5. Name the four CMS X modifiers and provide a one-sentence description of each.

Exercise 9-B — Modifier Application

For each scenario, identify the correct modifier(s) and indicate where they are applied. Write modifier numbers on the blanks provided.

1. A surgeon performs a complex abdominal procedure that took 4.5 hours instead of the typical 2 hours due to significant adhesion complications, well documented in the operative report. The surgeon wishes to indicate that the work was substantially greater than typical.
   Modifier:

2. During a 30-day global period for a minor skin procedure, a patient returns to the same physician with a severe migraine completely unrelated to the skin procedure. The physician performs and documents a comprehensive evaluation and prescribes medication.
   Modifier and code it applies to:

3. A patient presents for removal of a benign skin lesion (procedure). The same physician also evaluates the patient's newly diagnosed Type 2 diabetes during the same visit — separately documented with its own history, exam, and medication plan.
   Modifier and which code it goes on:

4. A radiologist reads an MRI of the lumbar spine that was performed at the hospital where she is on staff. She did not operate the MRI machine. She bills for her interpretation only.
   Modifier:

5. A physician performs three separate surgical procedures during the same operative session: Procedure A (highest RVU), Procedure B, and Procedure C. Which procedure(s) should have modifier 51 appended?

6. During a 10-day global period following a minor hernia repair, the patient returns to the surgeon needing a completely unrelated incision and drainage of an abdominal wall abscess caused by an injection at a different facility. Modifier:

7. True or False: Modifier 25 should be appended to the procedure code when an E/M is performed on the same day. **T** / **F**

8. True or False: Add-on codes should be reported with modifier 51 when multiple procedures are performed. **T** / **F**

9. A patient needs the same bilateral biopsy procedure performed on both sides. The most appropriate single modifier to report this bilateral service is:
A. -LT and -RT B. -50 C. -51 D. -62 Answer:

10. An orthopedic surgeon determines at today's office visit that a patient requires a total hip replacement (90-day global). The appropriate modifier on the E/M code is:
A. -24 B. -25 C. -57 D. -59 Answer:

11. A surgeon performs a procedure but has to stop it mid-way through because the patient develops a dangerous cardiac arrhythmia after being prepped and anesthetized. The correct modifier is:
A. -52 B. -53 C. -58 D. -78 Answer:

12. A Medicare patient's claim includes two services that trigger an NCCI edit. Documentation clearly supports that the two services were performed at entirely separate anatomical structures. For Medicare, the most specific X modifier to use is:
A. XE B. XS C. XP D. XU Answer:

🔨 Toolbox — Section 9.4 Key Points

- Modifiers supplement CPT codes without changing their meaning; they tell the payer something important about how the service was delivered.
- Modifier 25 goes on the E/M code — never the procedure code; must be supported by separate documentation.
- Modifier 51 goes on secondary procedures — never on the primary (highest-value) procedure, add-on codes, or modifier 51-exempt codes.
- Modifier 57 = decision for major (90-day global) surgery; modifier 24 = unrelated E/M during global period.
- Modifier 59 and the X modifiers (XE, XS, XP, XU) require solid documentation of distinct/separate services; modifier 59 is heavily audited by OIG.

Section 9.5 — The Global Surgical Package

What Is the Global Surgical Package?

The **global surgical package** (also called the **surgery package**) is one of the foundational concepts in CPT billing. When a surgical CPT code is reported, the payment for that code does not cover just the surgery itself. It covers a **bundle** of related pre-operative and post-operative services that are considered inherently part of the procedure. Understanding exactly what is and is not included in the global package is the difference between correct claim submission and either over-billing or leaving legitimate revenue on the table.

The global period is the timeframe during which those bundled services apply. It begins on the **day of surgery** (day 0) and extends for the defined number of days

that follow, depending on whether the surgery is classified as minor, major, or a 0-day procedure.

What IS Included in the Global Package (Cannot Bill Separately)

- Pre-operative visits: the day before surgery (for major procedures) or the day of surgery (for minor procedures)
- The surgical procedure itself — intraoperative services
- Post-operative complications that **do not require a return to the operating room**
- Post-operative visits directly related to recovery from surgery during the global period
- Writing orders, reviewing lab results, and telephone calls related to normal surgical recovery
- Suture removal
- Post-surgical pain management (unless separately documented and billed with appropriate modifiers)

What Is NOT Included (Can Bill Separately)

- The initial consultation or E/M at which the **decision for surgery was made** — use modifier 57 for major surgery, modifier 25 for minor
- **Unrelated E/M visits** during the global period for a completely separate condition — use modifier 24
- **Unrelated surgical procedures** performed during the global period — use modifier 79 (new global period begins)
- **Return to OR for related complication** — use modifier 78 (no new global period)
- Treatment of the patient's **underlying unrelated conditions** during the post-op period

- **Diagnostic tests** ordered during post-op period for new or unrelated conditions
- **Staged procedures** (procedures planned in advance as a series) — use modifier 58

Global Period Lengths

- **0 days:** Endoscopies and minor procedures not requiring the operating room. No post-op period beyond the day of the procedure itself.
- **10 days:** Minor surgical procedures — most office procedures, biopsies, simple skin repairs, minor procedures performed in the office or outpatient setting.
- **90 days:** Major surgical procedures — joint replacements, cardiac surgery, major abdominal surgeries, spinal fusions, major vascular procedures.

The global period for any given CPT code can be found in the **Medicare Physician Fee Schedule (MPFS)** database or on the payer's own fee schedule. It is listed as a separate data field for every surgical code.

Service	Included in Global Package?	If Not, What Modifier?
Day-of-surgery pre-op visit (minor surgery)	Yes — bundled	N/A
Day-before pre-op visit (major surgery)	Yes — bundled	N/A
The surgery itself	Yes — core of package	N/A
Post-op visit related to surgery recovery	Yes — bundled during global period	N/A
Suture removal	Yes — bundled	N/A
E/M for unrelated condition during global period	No — separately billable	Modifier 24 on E/M code
Decision for surgery E/M visit (major surgery)	No — separately billable	Modifier 57 on E/M code
Return to OR for related	No — separately billable	Modifier 78 on new

Service	Included in Global Package?	If Not, What Modifier?
complication	(intraoperative payment only)	procedure
Unrelated procedure during global period	No — separately billable	Modifier 79; new global period begins
Complication NOT requiring return to OR	Yes — bundled into package	N/A

📶 Coding Shot

Post-op visit denied? Check the modifier. When a surgeon sees a post-op patient during the global period and bills an E/M visit without any modifier, it will be denied automatically — the payer assumes it is part of the global package. Before you can get paid for that E/M visit, you need either: (a) modifier 24 if the visit was for an unrelated condition, or (b) documentation that the patient is out of the global period, or (c) evidence the procedure had a 0-day global. Know your global period lengths before you bill any post-op visit.

⛔ Stop!

The global period starts on the day OF surgery — not the day after. A common calculation error: if a procedure has a 10-day global period and was performed on the 1st of the month, the global period runs from the 1st through the 11th (day 0 = surgery day; days 1 through 10 are the post-operative days). This mistake causes practices to miss billing windows or to incorrectly deny legitimate post-op billing. When calculating global period end dates, always count the surgery day as **day 0**.

⚖️ Official Guidelines for Coding and Reporting

CMS — Global Surgery Policy: Definition and Scope

CMS defines the global surgical package in the Medicare Claims Processing Manual (Chapter 12) as follows: The global surgical package includes all necessary services normally furnished by a surgeon before, during, and after a procedure. This includes: preoperative visits after the decision is made to operate (the day before major surgery or on the day of surgery for minor procedures), intraoperative services that are normally a usual and necessary part of a surgical procedure, complications following surgery that do not require additional trips to the operating room, post-operative visits during the global period of normal uncomplicated follow-up care, and post-surgical pain management by the surgeon.

Plain-English Explanation: CMS is very specific about what is and is not in the bundle. Read the Medicare Claims Processing Manual for surgical billing — it is free, publicly available on the CMS website, and is the authoritative source for global surgical package rules that govern Medicare payment. Commercial payers may define the global package differently, so always check the payer contract.

✓ **Quick Check 9.5**

1. What is the global period length for a major surgical procedure (e.g., total knee replacement)?

2. A surgeon performs an elective minor surgery with a 10-day global period on March 5th. On March 12th, the patient returns for a wound check. Is this visit billable separately? **T** / **F** Explain:

3. Which modifier indicates that a physician returned a patient to the OR for a complication related to the original surgery during the global period?

4. Are post-operative complications that do NOT require a return to the OR included in or excluded from the global package?

5. The global period begins on day (the day of surgery, counted as day 0).

🔨 **Toolbox — Section 9.5 Key Points**

- The global surgical package bundles pre-op, intra-op, and post-op routine services into a single surgical code payment.
- Global periods: 0 days (endoscopies/minor), 10 days (minor surgical), 90 days (major surgical).
- The global period starts on day 0 = the day of surgery; do not count it as day 1.
- Unrelated E/M during global period → modifier 24; decision for major surgery → modifier 57; related complication return to OR → modifier 78; unrelated procedure during global → modifier 79.
- Complications not requiring a return to the OR are bundled into the global package — you cannot bill them separately.

Section 9.6 — Introduction to Evaluation and Management (E/M) Coding Overview

Why E/M Codes Matter

Evaluation and Management (E/M) codes are the most used codes in all of CPT — and for very good reason. A family medicine physician, internist, or general practitioner may bill E/M codes for 90 to 95 percent of all patient encounters. These are the codes that describe the bread-and-butter of medical practice: the office visit, the hospital rounds, the nursing facility check-in, the urgent care encounter. Getting E/M coding right is not optional — it is the financial engine of every physician practice. E/M coding errors are also the number one source of overpayment findings by CMS Recovery Audit Contractors (RACs) and the OIG. This section gives you the foundation. Full E/M coding guidelines, including the landmark 2021 AMA revisions, are covered in complete detail in **Chapter 10**.

What Is an E/M Service?

An Evaluation and Management service is a face-to-face (or telemedicine) encounter between a patient and a qualified healthcare professional in which the provider:

7. **EVALUATES** the patient's condition — takes a history, performs a physical examination, reviews relevant data (lab results, imaging, old records)
8. **MANAGES** the patient's care — makes clinical decisions, orders tests, prescribes medications, coordinates care, provides counseling and education

E/M Code Families — Where Are Patients Seen?

Setting	Code Range	Key Notes
Office or Other Outpatient	99202–99215	Most common E/M family; new patient 99202–99205; established 99211–99215
Hospital Inpatient — Initial	99221–99223	First inpatient admission encounter for each physician
Hospital Inpatient — Subsequent	99231–99233	Follow-up hospital visits (daily rounds)

Setting	Code Range	Key Notes
Hospital Inpatient — Discharge	99238–99239	Discharge day management; time-based for 99239 (>30 min)
Emergency Department	99281–99285	No distinction between new and established patients in the ED
Nursing Facility — Initial	99304–99306	First visit at SNF/NF/ICF
Nursing Facility — Subsequent	99307–99310	Ongoing care at nursing facility
Domiciliary/Home	99341–99350	Home visits, rest home, assisted living
Consultations (Office)	99241–99245	Office consults; NOT recognized by CMS for Medicare claims
Consultations (Inpatient)	99251–99255	Inpatient consults; NOT recognized by CMS for Medicare claims
Critical Care	99291–99292	Time-based; requires documentation of critical care services
Prolonged Services	99417, 99418	Additional time beyond the maximum for an E/M level

New vs. Established Patient — The Most Tested E/M Concept

This is the concept that appears most frequently on the CPC exam when it comes to E/M coding. The distinction between new and established patient matters because new patient E/M codes (99202–99205) typically pay at a higher rate than established patient codes (99211–99215), and they have different documentation expectations.

Definition of a NEW patient: A patient who has NOT received any professional services from the physician, or from another physician of the exact same specialty and subspecialty in the same group practice, within the past **three years**.

Definition of an ESTABLISHED patient: A patient who HAS received a professional service from the physician, or from another physician of the same specialty and subspecialty within the same group practice, within the past **three years**.

The golden rule: When in doubt — if ANY face-to-face professional service was provided within the past three years by any provider of the same specialty within the same group — the patient is **ESTABLISHED**. New patient status requires a full three-year window with **no** prior professional service from the same specialty in the same group.

Worked Examples — New vs. Established Patient

> **Example 1:**
>
> Mrs. Thompson last saw Dr. Smith (internal medicine) at Eastside Medical Group 2 years ago. She now returns to see Dr. Smith. **ESTABLISHED** — within the 3-year window, same physician.

> **Example 2:**
>
> Mr. Davis saw Dr. Jones (internal medicine) at Eastside Medical Group 1 year ago. He now sees Dr. Smith (internal medicine) at the same group for the first time. **ESTABLISHED** — same specialty (internal medicine), same group, within 3 years.

> **Example 3:**
>
> Ms. Garcia has never been seen at Premier Orthopedics before. She schedules with Dr. Martinez for a new knee complaint. **NEW** — no prior service at this

practice.

Example 4:

Mr. Brown last saw Dr. Williams at North Shore Family Practice 4 years and 3 months ago. He returns today. **NEW** — the prior service is outside the 3-year window.

Example 5:

Mrs. Lee called the practice last month and spoke with a nurse who gave her advice about medication dosing. She has never been seen face-to-face. She comes in today for her first visit. **NEW** — a telephone call with nursing staff does not constitute a professional service rendered by a physician or qualified healthcare professional that would establish the patient relationship.

2021 AMA E/M Revisions Overview

Effective January 1, 2021, the AMA implemented the most sweeping revisions to E/M coding guidelines in over 25 years. These changes affect office and outpatient E/M codes (99202–99215) and have since been extended to other E/M settings. The key changes:

- **History and physical examination** are still performed and documented — but they no longer drive code level selection for office visits
- Code level for office visits is now determined by either **Medical Decision Making (MDM)** or **Total Time** of the encounter
- The complex history and exam "counting" that coders did for decades (number of history elements, number of exam organ systems) is eliminated for office E/M codes

- MDM is now defined by three elements: (1) number and complexity of problems, (2) amount and/or complexity of data reviewed, and (3) risk of complications and/or morbidity or mortality
- Chapter 10 covers 2021 E/M guidelines in full depth, including MDM tables and time-based billing rules

Place of Service (POS) Codes

Place of Service (POS) codes are two-digit codes submitted on the **CMS-1500 claim form** to identify the physical location where a service was rendered. POS codes are NOT part of CPT — they are a separate code set maintained by CMS. They matter significantly for reimbursement because the same CPT code pays at different rates depending on whether the service was provided in a facility setting or a non-facility setting.

POS Code	Setting	Facility vs. Non-Facility
02	Telehealth (other than in patient's home)	Non-Facility
10	Telehealth (in patient's home)	Non-Facility
11	Office	Non-Facility
12	Home	Non-Facility
21	Inpatient Hospital	Facility
22	On-Campus Outpatient Hospital	Facility
23	Emergency Room — Hospital	Facility
24	Ambulatory Surgical Center (ASC)	Facility
31	Skilled Nursing Facility	Facility
32	Nursing Facility	Facility

Non-Facility Rate (POS 11 — Office): The physician is reimbursed at a higher rate because the overhead costs (equipment, staff, supplies, rent) are the physician's responsibility. The payer compensates for that overhead within the physician's fee.

Facility Rate (POS 21, 22, 23 — Hospital): The physician is reimbursed at a lower rate because the facility (hospital) absorbs the overhead costs and bills separately for them. The physician's payment covers only their professional work.

💬 From the Trenches

“I have been coding for 15 years and I will tell you directly: the 2021 E/M changes were the most significant shift I have ever had to absorb in my career. When the AMA announced that history and physical exam would no longer drive the level of the office visit, I had physicians calling me panicked because they had spent decades learning to document a certain way to support their E/M levels. The transition to Medical Decision Making as the primary driver was genuinely hard for many of them at first. But here is what I tell every coder I train now: MDM is actually more intuitive once you understand it. Think about it from the physician's perspective — what problems are you managing, how complex is the data you are reviewing, and what is the risk to the patient? Those three questions are what drive MDM. Once your physicians understand that, the documentation naturally improves. Learn MDM inside and out before your CPC exam. It is the heart of E/M coding going forward.”

— Patricia Okoye, CPC, CDEO, CPMA
Senior Coding Educator, Atlantic Regional Health System, Jacksonville, FL

⚖️ Official Guidelines for Coding and Reporting

AMA E/M Guidelines 2021 — Key Changes for Office and Outpatient E/M Services

Effective January 1, 2021, the AMA revised the guidelines for office and outpatient E/M services (CPT codes 99202–99215). The key provisions are:

- The level of E/M service is selected based on **Medical Decision Making (MDM)** or **Total Time** on the date of the encounter — not by counting history elements or physical exam systems.
- History and physical examination are still performed and documented, but they no longer serve as the determinants of E/M code level.
- MDM consists of three elements: (1) Number and complexity of problems addressed, (2) Amount and/or complexity of data reviewed and analyzed, and (3) Risk of complications and/or morbidity or mortality of patient management.
- Total time includes all time the physician spends on that patient's care on the date of service, including non-face-to-face preparation, review, and documentation time.

Plain-English Explanation: The AMA essentially told physicians: we want you to document your thinking, not your counting. Write about the complexity of the decisions you made, the data you reviewed, and the risk involved in your patient management. That is what justifies your E/M level — not how many systems you examined.

⛔ **Stop!**

The new vs. established patient rule is about SPECIALTY — not just physician name. A patient who saw any physician of the same specialty and subspecialty within the same group practice within the past three years is an ESTABLISHED patient — even if they have never seen the specific physician they are visiting today. Two internal medicine physicians in the same group share patient status. A patient who saw the internist last year and now sees the cardiologist in the same group for the first time is a NEW patient to the

cardiologist — because cardiology is a different specialty. Get the specialty right before you decide new vs. established.

⚠️ Caution!

Upcoding E/M services is one of the most common fraud findings by the OIG. Upcoding means billing a higher-level E/M code than the documentation supports — for example, billing a 99205 (highest-level new patient) when the documentation only supports a 99203. Medicare Recovery Audit Contractors (RACs) run automated algorithms that flag providers whose E/M level distribution is statistical outliers for their specialty. This triggers audits, overpayment demands, and in egregious cases, referral to the Department of Justice. Document what you did. Code what you documented. Nothing more.

📶 Coding Shot

Place of Service affects your reimbursement rate — and your code selection must match. A 99213 billed at POS 11 (office) pays the physician more than the same 99213 billed at POS 22 (hospital outpatient). This is not a glitch — it is intentional Medicare payment policy that accounts for who is bearing the overhead costs. If a physician sees patients at a hospital outpatient clinic two days a week and their office three days a week, the POS code must correctly reflect where each service actually occurred. Billing all visits as POS 11 when some occur at POS 22 is incorrect billing and is audited regularly.

🏛️ CMS Rules

CMS Does Not Recognize Consultation Codes for Medicare Claims

This is one of the most tested Medicare-specific rules in all of E/M coding. Effective January 1, 2010, CMS eliminated payment for consultation codes (CPT 99241–99245 for office consults and 99251–99255 for inpatient consults) on Medicare claims. Physicians who provide consultation services to Medicare patients must instead bill using the appropriate office, outpatient, or inpatient E/M code based on the setting and patient status (new or established). This rule **does not apply to most commercial payers** — many commercial payers still recognize and pay consultation codes. Always verify the payer's specific policy before billing consultation codes. New coders who are unaware of this rule routinely submit denied Medicare claims.

🔎 Check This Out

Evaluation and Management codes account for approximately **40% of all Medicare physician payments** annually. For primary care physicians and internists, that percentage is even higher — some practices derive **95% or more** of their professional fee revenue from E/M services alone. This means that a systematic coding error in E/M — even one level in the wrong direction across thousands of claims per year — can result in hundreds of thousands of dollars in overpayments or underpayments. The financial stakes for E/M coding accuracy are as high as they get in this profession.

✓ Quick Check 9.6

1. A patient saw a physician of the same specialty in the same group practice 2 years and 6 months ago. Under the new vs. established patient rule, this patient is classified as:

2. What two factors now drive E/M code level selection for office visits

(99202–99215) under the 2021 AMA guidelines, replacing the old history/exam counting method?

3. Which POS code represents a physician's office, and why does it pay at a higher rate than a hospital facility POS code?

4. True or False: CMS recognizes and reimburses consultation codes (99241–99255) for Medicare claims. **T** / **F**

5. Name the E/M code range for Emergency Department visits and explain why new vs. established patient does NOT matter in the ED.

Exercise 9-C — E/M Fundamentals

Apply your knowledge of E/M settings, new vs. established patient rules, POS codes, and 2021 AMA guidelines.

1. A patient presents to her family medicine physician's office for the first time. She has never been seen at this practice. What type of E/M code family applies?

   A. 99211–99215 (established office) B. 99202–99205 (new office) C. 99221–99223 (initial inpatient) Answer:

2. Dr. Rivera (cardiologist) sees Mr. Kim today. Mr. Kim saw Dr. Ahmed (internal medicine) at the same group practice 18 months ago. Is Mr. Kim a new or established patient to Dr. Rivera?

   Why?

3. A patient was last seen at the same practice 3 years and 2 months ago. Is this patient new or established?

4. A physician sees a patient at the hospital emergency department. The patient has seen this physician in the office the previous week. What E/M code range applies to today's ED visit?

5. What POS code would you report for a service performed at an ambulatory surgery center (ASC)?

6. Under the 2021 AMA E/M guidelines, a physician's documentation of the physical examination:

A. Is no longer required and can be omitted

B. Still must be performed and documented but no longer drives code level for office visits

C. Has replaced MDM as the primary code level driver

D. Must count a minimum of 8 organ systems Answer:

7. CMS eliminated payment for consultation codes (99241–99255) for Medicare effective what year?

8. A physician performs daily hospital rounds on an established inpatient. Which E/M code range applies?

9. True or False: For Medicare patients, a consulting physician should report the consultation codes 99251–99255 on the claim. **T** / **F**

10. A non-facility (POS 11) E/M service pays a physician _____ than the same E/M code billed at a facility (POS 22).

A. Less B. More C. The same Answer:

🔨 **Toolbox — Section 9.6 Key Points**

- E/M codes account for ~40% of all Medicare physician payments; accuracy is non-negotiable.
- New patient = no professional service from same specialty/same group within 3 years; when in doubt → established.
- 2021 AMA revision: office E/M level driven by MDM or total time, not history/exam counting.
- Consultation codes (99241–99255) are NOT recognized by CMS for Medicare — use the appropriate outpatient or inpatient E/M code instead.
- POS 11 (office) pays more than POS 22 (outpatient hospital) for the same CPT code — document and report the correct POS every time.

Section 9.7 — NCCI Edits, Bundling, and Unbundling

What Are NCCI Edits?

NCCI stands for **National Correct Coding Initiative**. It was developed by CMS to promote national correct coding methodologies and to prevent improper payment of procedures that should not be billed together. NCCI edits are based on coding conventions defined in the AMA's CPT codebook, national and local coverage policies, coding guidelines developed by national medical specialty societies, and analysis of standard medical and surgical practice. There are two primary types of NCCI edits:

9. **Procedure-to-Procedure (PTP) Edits:** Pairs of CPT codes that should not be billed together because one code is considered a component of the other.

The column 1 code is the comprehensive code; the column 2 code is the component. When both are billed together, the column 2 code is denied.

10. **Medically Unlikely Edits (MUEs):** These establish the maximum number of units of service a provider would typically report for a single beneficiary on a single date of service under most circumstances.

Bundling

Bundling in coding refers to the situation where two or more separately reported CPT codes are actually components of a single, more comprehensive code. When the comprehensive (higher-value, column 1) code already includes the service described by a component (column 2) code, you report only the comprehensive code.

Example of correct bundling: A provider performing a percutaneous skeletal fixation also uses fluoroscopic imaging guidance. If the surgical code for the procedure already includes imaging guidance as a component, you do not separately bill for the imaging guidance. Reporting both would be double-billing.

Unbundling

Unbundling is the intentional billing of multiple smaller or component CPT codes to obtain higher total reimbursement than would be received if the single, comprehensive code were billed. Unbundling is **fraud** — it is specifically identified as such in the False Claims Act and is listed as a target in the OIG's annual Work Plan.

Common unbundling examples:

- Billing separate codes for each individual component of a laboratory panel when a single panel code exists and applies (e.g., billing each individual element of a Basic Metabolic Panel instead of CPT 80047)
- Billing separate codes for each component of a surgical package that is already captured by the global surgical code

- Billing an E/M code on the same day as a minor procedure using modifier 25 when the E/M represented only the routine pre-procedure evaluation — not a separately identifiable service

How to Check NCCI Edits

- CMS publishes free NCCI tables on the CMS website, updated quarterly — every coder should bookmark this resource
- Most billing software has built-in NCCI edit checking that fires automatically during claim submission
- When an NCCI edit fires and clinical documentation genuinely supports separate reporting → use modifier 59 (or the appropriate X modifier for Medicare) with supporting documentation
- When an NCCI edit fires and documentation does NOT support separate reporting → bill only the comprehensive code

⚠️ **Caution!**

Unbundling is healthcare fraud. The False Claims Act defines submitting claims that misrepresent services as a fraudulent act. Billing component codes when a comprehensive code exists — or billing separately for procedures that are inherently included in another procedure — triggers OIG audit exposure, demands for overpayment repayment, civil monetary penalties, exclusion from Medicare and Medicaid programs, and potential criminal liability in egregious cases. This is not a technicality. It is fraud. Know what is bundled. Bill the correct code.

📶 **Coding Shot**

When your billing software fires an NCCI edit — stop before you override it. The automatic reflex to paste on modifier 59 and push the claim

through is a compliance disaster waiting to happen. Before you override any NCCI edit, ask: (1) Was this truly a separate service? (2) Is there documentation that clearly establishes it as separate? (3) Is there a more specific modifier that better describes the situation? If you cannot answer yes to all three questions, do not override. The edit exists for a reason.

⛔ **Stop!**

Modifier 59 does not make unbundling legal. If two services were not truly separate and distinct — if the documentation does not support it, if the second procedure is inherently part of the first — appending modifier 59 to override the NCCI edit is **fraud**. A modifier is a declaration to the payer: “This service was genuinely distinct.” If that declaration is false, the modifier makes the claim worse, not better. Do not let billing pressure push you into incorrect modifier use. Your credential — and your employer's compliance — depend on coding integrity.

⚖️ **Official Guidelines for Coding and Reporting**

CMS NCCI Guidelines — Column 1 / Column 2 Code Pairs; Modifier Override

CMS NCCI guidelines define Column 1 codes as the comprehensive procedure codes and Column 2 codes as the component procedure codes. When both a Column 1 and Column 2 code are billed together for the same beneficiary on the same date of service by the same provider, only the Column 1 code is reimbursable unless a modifier is applicable.

A modifier may be reported to indicate that the Column 2 service was distinct from the Column 1 service only when: the procedures were performed at separate anatomical sites, at separate patient encounters, by separate

surgeons, or constituted a separate procedure. Inappropriate use of modifiers to bypass NCCI edits is considered a violation of program integrity requirements.

Plain-English Explanation: CMS is telling you: the only time you can override an NCCI bundling edit is when the two services were genuinely and documentably separate. If they were not — bill the comprehensive code only and move on.

✓ Quick Check 9.7

1. What does NCCI stand for and what federal agency developed it?

2. Describe the difference between a PTP edit and a Medically Unlikely Edit (MUE).

3. A provider bills each individual component of a Basic Metabolic Panel as separate CPT codes rather than using the panel code. This is an example of:

4. True or False: Appending modifier 59 to a code pair subject to an NCCI edit is always appropriate when the edit fires. **T** / **F**

5. Where can a coder access NCCI edit tables for free to verify code pairs?

Exercise 9-D — Bundling, Unbundling, and NCCI Edits

Read each scenario and determine whether the coding described is correct, represents bundling (should use a single code), or represents unbundling (fraud). Write your answer and brief rationale on the blank provided.

1. A provider bills CPT codes 80047, 82310, 82374, and 82435 for the same

patient on the same day. CPT 80047 is the Basic Metabolic Panel, which includes all three individual codes listed. Is this coding correct?

Correct / Bundling / Unbundling: Rationale:

2. A patient undergoes a colonoscopy. The coder separately bills for the anesthesia monitoring equipment, the nursing staff time, and the facility use fee on the physician's professional claim. Is this coding correct?

Correct / Bundling / Unbundling:

3. During a single operative session, a surgeon repairs a right inguinal hernia and performs an appendectomy for acute appendicitis discovered during the same operation. The coder bills both procedure codes. An NCCI edit fires. Documentation confirms two distinct procedures at different anatomical sites. The coder appends modifier 59 to the secondary code. Is this appropriate?

A. Yes, modifier 59 is appropriate because documentation supports distinct separate procedures

B. No, modifier 59 should never be used with surgical procedures

C. No, both codes should be deleted and an unlisted code used

D. Yes, but only if the NCCI edit has a modifier indicator of “1” Answer:

4. A provider performs a comprehensive metabolic panel (CPT 80053) and separately bills for a glucose test (CPT 82947) on the same date. The glucose is already included in the panel.

Is billing both codes correct? **T** / **F** This represents:

5. An NCCI edit fires between two procedure codes a provider submitted. The coder checks the documentation and confirms the two services were performed at the same anatomical site during the same incision. The coder overrides the edit with modifier 59. This action is:

A. Appropriate — the modifier overrides the edit automatically

B. Inappropriate — the services were not truly separate; the edit should stand

C. Appropriate only if a supervisor approves it

D. Appropriate if the patient is a Medicare beneficiary Answer:

6. True or False: Unbundling is considered healthcare fraud under the False Claims Act. **T** / **F**

7. What is a Medically Unlikely Edit (MUE)? Describe it in your own words.

8. A billing system returns an NCCI edit on a claim. The coder immediately appends modifier 59 without reviewing the documentation. This behavior represents:

A. Appropriate coding efficiency

B. A compliance risk and potential fraud exposure

C. An accepted industry practice

D. A requirement when the edit fires Answer:

9. For Medicare claims, instead of modifier 59, the more specific CMS modifier that would indicate two services were performed on a separate structure is:

10. Where can a coder access the NCCI table for procedure-to-procedure edits at no cost?

🔨 Toolbox — Section 9.7 Key Points

- NCCI edits are CMS-developed tables that identify code pairs that should not be billed together; updated quarterly.
- PTP edits = comprehensive/component code pairs; MUEs = maximum units for a code per date of service.

- Bundling = correct behavior (use the comprehensive code); unbundling = fraud (billing separate components when a comprehensive code exists).
- Modifier 59 may override an NCCI edit only when documentation truly supports a genuinely distinct, separate service.
- Appending modifier 59 without documentation support does not make unbundling legal — it makes it fraud.

Section 9.8 — Putting It All Together: CPT Introduction Coding Scenarios

Now it is time to apply everything you have learned in this chapter. The following five scenarios each require you to draw on multiple concepts: global package rules, modifier selection, new vs. established patient determination, POS codes, and CPT structure knowledge. Read each scenario carefully. Work through the coding decision systematically before looking at the analysis.

Scenario 1 — Global Period and Modifier 24

Dr. Williams performs a colonoscopy with polypectomy on Mr. Jennings on March 1st. The procedure has a 0-day global period. The following day, March 2nd, Mr. Jennings comes to Dr. Williams' office for a routine post-procedure check. During the visit, Mr. Jennings mentions a new rash on his right forearm that has been present for about a week. Dr. Williams evaluates the rash, documents a separate focused history and examination for it, and prescribes a topical antifungal. The rash evaluation is clearly documented as a separate and unrelated condition.

Analysis:

- The colonoscopy with polypectomy has a **0-day global period** — meaning

there is no post-operative period beyond the procedure day itself (March 1st). March 2nd is **outside the global period**.

- The March 2nd visit is therefore separately billable regardless of the rash — it falls outside the 0-day global window.
- The rash evaluation is a **separate, distinctly documented service** for an unrelated condition. If the global period were 10 days instead (hypothetically), modifier 24 would apply to the E/M code.
- **POS:** Office visit on March 2nd → POS 11
- **Billable on March 2nd:** Appropriate office E/M code (established patient) based on MDM or time. No modifier needed since the 0-day global period has already ended.

Scenario 2 — Professional Component (Modifier 26) vs. Technical Component (TC) vs. Global

Dr. Okafor is a radiologist on staff at Mercy General Hospital. Today he reads a 2-view chest X-ray that was taken at the hospital on Mrs. Thompson. He also reads a CT scan of the abdomen performed at an outside facility for a private patient who brought the films to his office. Dr. Okafor did not perform the CT himself; he only reads the study.

Analysis:

- **Chest X-ray at Mercy General:** The hospital owns the equipment and employs the technologist. Dr. Okafor reads and interprets only. Billing: Hospital bills **71046-TC**; Dr. Okafor bills **71046-26**.
- **Outside CT scan read in office:** Dr. Okafor performs no technical component — only the professional interpretation. He bills **74177-26** (assuming a CT abdomen with contrast). No TC modifier is appropriate for Dr. Okafor

because the equipment was not his.

- **Key rule:** When the physician both performs AND interprets a study in their own office — no modifier (global). When interpretation only — modifier 26. When technical only — TC modifier.

Scenario 3 — Modifier 51 and 59 Application

Dr. Chen performs a right knee arthroscopy with partial medial meniscectomy (primary procedure). During the same operative session, she also performs a trigger point injection to the patient's trapezius muscle for a separate and pre-existing myofascial pain complaint that was documented in the pre-operative note as a planned concurrent procedure.

Analysis:

- Two separate procedures: arthroscopy (primary) and trigger point injection (secondary, unrelated anatomical site).
- The arthroscopy is the highest-value procedure — listed first with no modifier 51.
- The trigger point injection is secondary — check NCCI edits between the arthroscopy code and the trigger point injection code.
- Because the trigger point injection is at a completely different anatomical site (knee vs. trapezius) and for a separate unrelated condition, documentation supports distinct service. Append **modifier 59** to the trigger point injection code.
- **Claim:** **29881** (arthroscopy, right knee) + **20553-59** (trigger point injection, trapezius — distinct, separate)
- **POS:** Ambulatory Surgery Center → POS 24

Scenario 4 — New vs. Established Patient Rule

Mrs. Lopez presents to see Dr. Martinez at Valley Internal Medicine Associates. She saw Dr. Martinez's partner, Dr. Kim (also an internal medicine physician at the same group practice), approximately 2 years ago. This is Mrs. Lopez's first visit with Dr. Martinez specifically, but not her first visit to the practice or to an internal medicine physician in that group.

Analysis:

- Same specialty: Internal Medicine. Same group: Valley Internal Medicine Associates. Time frame: 2 years ago — within the 3-year window.
- All three criteria confirm: **ESTABLISHED PATIENT**.
- It does not matter that Mrs. Lopez has never personally seen Dr. Martinez before. The rule is about specialty + group + time frame — not the individual physician's name.
- **Correct E/M code family:** 99211–99215 (established office/outpatient patient)
- **Common mistake:** Billing as new patient (99202–99205) because Mrs. Lopez has not personally seen Dr. Martinez before. This would be upcoding and could trigger a payer audit.

Scenario 5 — Global Period, Modifier 78 vs. 79, and POS

Dr. Patel performs bilateral inguinal hernia repair as an outpatient procedure at Lakeside Ambulatory Surgery Center on April 10th. The procedure has a 10-day global period. On April 17th (day 7 of the global period), the patient, Mr. Rodriguez, returns to Dr. Patel's office with a wound infection at the right inguinal incision site. Dr. Patel performs an incision and drainage (I&D) of the wound in the office.

Analysis:

- **Bilateral hernia repair on April 10th:** Bilateral procedure — report appropriate hernia repair code with modifier 50. POS 24 (ASC) for the original surgery.
- **April 17th I&D:** This is within the 10-day global period of the hernia repair. The wound infection is a **complication of the original surgery** (related procedure). This triggers **modifier 78** — return to OR for related procedure during postoperative period. Note: The I&D is performed in the office, not the OR, but the modifier 78 concept applies broadly to related procedural interventions for surgical complications during the global period.
- **Modifier 78 rules:** No new global period begins. Reimbursement is limited to the intraoperative component of the relative value. POS for April 17th visit = POS 11 (office).
- **Modifier 79** would apply if the I&D were for an unrelated condition during the global period (and would start a new global period).
- **Claim summary:** Hernia repair April 10 (POS 24) + I&D April 17 with modifier 78 (POS 11)

🔎 Check This Out

According to a 2023 analysis published by the American Academy of Professional Coders (AAPC), **modifier misuse** — particularly involving modifiers 25, 51, 59, and 76 — accounts for a significant proportion of medical billing errors found during compliance audits. Practices that implement a formal modifier review process as part of their compliance program report audit findings at significantly lower rates than those that do not. A single incorrect modifier on a high-volume service can create systematic overpayments across thousands of claims before the error is detected. This is why modifier education is woven throughout every chapter of this text — and why modifier scenarios

are tested heavily on the CPC exam.

Exercise 9-E — Comprehensive CPT Introduction Coding Scenarios

For each scenario below, identify the appropriate modifier(s), patient type, POS code, or coding action. Write your answers on the blanks provided. Apply all concepts from Chapter 9.

1. Dr. Hall performs a right wrist arthroscopy (primary procedure). During the same session, he also performs a left wrist arthroscopy (separate side). Identify the correct modifier for the bilateral bilateral service and write the claim structure:
   Primary code: **29840** (right) Modifier for left side:

2. A patient saw a urologist at Metro Urology Group 14 months ago. She now sees a new urologist at the same practice for a different concern. New or established?

3. A surgeon performs a major open abdominal surgery (90-day global) on Monday. On Tuesday, the surgeon sees the patient in the office for a pre-discharge check before the patient is released. What type of visit is this in relation to the global package?

4. A radiologist in private practice performs and interprets her own MRI brain study in her own imaging suite. No modifier is needed (global). True or False: The radiologist should append modifier 26.
   T / **F**

5. An NCCI edit fires between two codes. The coder checks the documentation and determines the two procedures were performed on separate organ systems with separate incisions and separate operative documentation. The most appropriate action is:

A. Delete the secondary code and bill only the primary

B. Append modifier 59 (or XS for Medicare) to the secondary code with documentation support

C. Append modifier 51 to override the edit

D. Submit the claim without any modifier and let the payer decide

Answer:

6. A patient's last visit to a family practice was 4 years ago. He returns today. Patient status:

7. Dr. Brown (surgeon) sees a Medicare patient in the office and decides to perform a major surgery (90-day global) the next morning. What modifier is appended to today's E/M code, and why?

Modifier: Reason:

8. A procedure is performed on an infant weighing 3.4 kg. The surgeon wants to indicate the significant increased complexity. Identify the correct modifier:

9. A patient presents for a skin tag removal (minor procedure, 10-day global). The physician also evaluates and separately documents a new complaint of chronic fatigue. The physician documents both services separately. What modifier is placed on the E/M code?

10. A patient is seen via real-time video telemedicine. The service is performed from the patient's home. What POS code applies?

POS:

✓ Quick Check 9.8

1. A 0-day global procedure was performed today. Can the physician bill an

E/M visit for the same patient tomorrow?

2. In Scenario 4 (Mrs. Lopez), why is she classified as an established patient even though she has never seen Dr. Martinez before?

3. What modifier would apply if a surgeon performs a completely unrelated procedure during a 90-day global period, and does a new global period begin?

4. In the bilateral hernia repair scenario, which modifier was used for the original surgery, and what POS code applied to the ambulatory surgery center?

5. Summarize in one sentence the critical difference between modifier 78 and modifier 79.

🔨 Toolbox — Section 9.8 Key Points

- Apply global period rules before billing any post-op E/M; know the period length (0, 10, or 90 days) for each surgical code.
- Modifier 26 = professional component only; TC = technical only; no modifier = both (global billing).
- New vs. established: specialty + group + 3-year window — the individual physician's name is not the determining factor.
- Modifier 78 = related return to OR during global (no new global); modifier 79 = unrelated procedure during global (new global begins).

- POS codes belong on the claim form — not in CPT — but they directly affect reimbursement rate and must accurately reflect where the service was provided.

★ Chapter 9 Summary

1. **CPT is published by the AMA** and updates annually on January 1 each year — a date that is distinct from ICD-10-CM's October 1 update cycle and must be memorized by every practicing coder.

2. **CPT Category I has six sections:** Evaluation and Management (99202–99499), Anesthesia (00100–01999), Surgery (10004–69990), Radiology (70010–79999), Pathology and Laboratory (80047–89398), and Medicine (90281–99199).

3. **Category II codes** (F suffix) are supplemental performance measurement codes with no associated payment; Category III codes (T suffix) are temporary emerging technology codes that must be used before defaulting to an unlisted code when they exist.

4. **The semicolon rule** is the most important formatting rule in CPT: everything before the semicolon in a parent code's descriptor belongs to all indented codes beneath it; you must always read the full descriptor before assigning an indented code.

5. **Add-on codes** (identified by the + symbol) are never reported alone, never reported with modifier 51, and always require a primary procedure code on the same claim.

6. **Modifier 25 goes on the E/M code** — never the procedure code — to indicate that a significant, separately identifiable E/M service was performed on the same day as a procedure; it must be supported by separate

documentation.

7. **Modifier 26 (professional component) and TC (technical component)** divide a service with two billing components: the physician's interpretation (26) versus the equipment and facility side (TC); no modifier = global billing of both components together.

8. **The global surgical package** bundles pre-operative, intraoperative, and post-operative routine services into a single surgical code payment; understanding what is and is not included determines whether modifiers 24, 57, 78, or 79 apply to associated services.

9. **The new vs. established patient rule** is a 3-year window based on specialty and group practice — not the individual physician's name; when in doubt, the patient is established.

10. **Unbundling — billing separate component codes** when a single comprehensive code exists — is healthcare fraud under the False Claims Act; NCCI edits exist to prevent it, and modifier 59 does not make unbundling legal without genuine documentation support for distinct, separate services.

Chapter 9 Review

Complete all sections of this review. This review assesses your mastery of Chapter 9 concepts. No answer keys are provided in this student edition.

Section A

—

Multiple Choice (Questions 1

–

10)

Circle or write the letter of the best answer.

11. The CPT code set is published and maintained by which organization?
    A. Centers for Medicare & Medicaid Services (CMS)
    B. American Health Information Management Association (AHIMA)
    C. American Medical Association (AMA)
    D. World Health Organization (WHO)
    Answer:
12. New CPT codes become effective on which date each year?
    A. October 1
    B. January 1
    C. April 1
    D. July 1
    Answer:
13. A coder encounters a CPT code ending in the letter “T.” This code belongs to which category?
    A. Category I
    B. Category II
    C. Category III
    D. HCPCS Level II
    Answer:
14. In the CPT semicolon rule, which portion of the parent code's descriptor must be read as part of every indented code that follows?
    A. Everything after the semicolon
    B. Only the last sentence of the parent descriptor
    C. Everything before the semicolon

D. The full descriptor, including post-semicolon text

Answer:

15. Which of the following statements about CPT add-on codes is TRUE?

A. Add-on codes may be reported alone when no primary code is available

B. Add-on codes are reported with modifier 51 when multiple procedures are performed

C. Add-on codes are always reported in addition to a primary procedure code and never alone

D. Add-on codes are listed in Appendix A of CPT

Answer:

16. A physician performs a minor office procedure and also separately evaluates and manages the patient's newly diagnosed diabetes during the same visit, fully documenting both services. Which modifier should be appended, and to which code?

A. Modifier 25 on the procedure code

B. Modifier 25 on the E/M code

C. Modifier 57 on the E/M code

D. Modifier 59 on the procedure code

Answer:

17. A surgeon performs bilateral carpal tunnel release in a single operative session. How is this best reported?

A. Report the code twice — once with -RT and once with -LT only

B. Report the code once with modifier 50

C. Report the code once with modifier 51

D. Report the code once with no modifier since bilateral is implied

Answer:

18. Which global period length applies to major surgical procedures such as a total hip replacement?

A. 0 days

B. 10 days

C. 60 days

D. 90 days

Answer:

19. A patient saw a physician at a cardiology practice 2 years and 11 months ago. She returns to that same practice today to see a different cardiologist. Under the new vs. established patient rule, this patient is:

A. New, because she has never seen this specific cardiologist before

B. Established, because she was seen by the same specialty at the same group within 3 years

C. New, because cardiology is a subspecialty and the rule does not apply

D. Established only if she saw the same physician

Answer:

20. Which of the following best defines unbundling?

A. Selecting the most comprehensive code when multiple codes are possible

B. Billing component codes separately when a single comprehensive code should be used, to increase reimbursement

C. Reporting multiple procedures on the same claim with modifier 51

D. Using an unlisted code when a Category III code exists

Answer:

Section B

—

True / False (Questions 11

–

20)

Write T for True or F for False on the blank provided.

21. ICD-10-CM codes update on January 1 of each year. **T** / **F**

22. When no Category I CPT code exists for a service, the coder should check for a Category III code before using an unlisted procedure code. **T** / **F**
23. Add-on codes should be reported with modifier 51 when they are part of a multiple-procedure claim. **T** / **F**
24. Appending modifier 59 to a code pair subject to an NCCI edit is always compliant, regardless of documentation. **T** / **F**
25. The global surgical period begins on the day after surgery (day 1), not on the day of surgery. **T** / **F**
26. When a Category III code exists for a service, it should be used in place of an unlisted procedure code. **T** / **F**
27. HCPCS Level II is published by the American Medical Association. **T** / **F**
28. Under the 2021 AMA E/M revision, the history and physical examination no longer need to be performed or documented for office visits. **T** / **F**
29. CMS recognizes and pays consultation codes 99241–99255 for Medicare beneficiaries. **T** / **F**
30. A post-operative complication that does not require a return to the operating room is bundled into the global surgical package and cannot be billed separately. **T** / **F**

Section C

—

Fill-in-the-Blank (Questions 21

–

25)

Complete each statement with the correct term or phrase.

31. The surgical package is the bundled set of pre-operative, intraoperative, and post-operative services included in the payment for a single surgical CPT code.
32. stands for National Correct Coding Initiative, and it was developed by CMS to prevent improper payment of procedure code pairs that should not be billed together.
33. Modifier is appended to the E/M code — not the procedure code — when a significant, separately identifiable evaluation and management service is performed on the same day as a procedure.
34. A patient who has NOT received any professional service from the physician, or from another physician of the same specialty in the same group practice, within the past years is classified as a patient.
35. In the CPT semicolon rule, everything that appears the semicolon in the parent code's descriptor is shared by all indented codes that follow it beneath that parent, and must be prepended to those indented descriptors to form the complete description.

Section D — Coding Scenarios (Questions 26 – 30)

Read each scenario carefully and answer all sub-questions. Apply Chapter 9 concepts. Write your answers, modifiers, code family selections, and rationale on the blanks provided.

36. **Scenario:** Dr. Nguyen (orthopedic surgeon) performs a left total knee arthroplasty (major surgery, 90-day global) on Mrs. Chen on June 1st. On June

15th, Mrs. Chen returns complaining of persistent knee swelling consistent with normal post-operative recovery. Dr. Nguyen evaluates her and documents a post-op visit note.

a. Is the June 15th visit billable as a separate E/M? **T** / **F**

b. Why or why not?

c. What modifier, if any, would be needed if the June 15th visit were for an unrelated complaint (e.g., new onset URI)? Modifier:

37. **Scenario:** A patient presents to a hospital emergency department after a motor vehicle accident. He has been seen by his primary care physician (in a different office) three days ago for a routine check-up.

    a. Is this patient new or established in the ED?

    b. Which E/M code range applies to ED services?

    c. What POS code applies to the emergency department?

38. **Scenario:** Dr. Park, a cardiologist, reads an echocardiogram (CPT 93306) performed at Good Samaritan Hospital. The hospital owns the equipment and employs the sonographer.

    a. What modifier does Dr. Park append to his claim? Modifier:

    b. What does Good Samaritan Hospital bill for this same echocardiogram?

    c. If Dr. Park performed AND read the echocardiogram in his own private office, what modifier would he use?

39. **Scenario:** A billing coder at a dermatology practice receives a claim with the following codes: 11100 (biopsy, skin, first lesion) and 11101 (each

separate/additional lesion). The billing software does not fire any edit, and both codes appear on the claim together.

a. Code 11101 has a + symbol in CPT. What does this symbol mean?

b. Can code 11101 be reported alone without 11100 on the claim? **T** / **F**

c. Should modifier 51 be appended to 11101? **T** / **F** Why?

40. **Scenario:** Dr. Reyes (internist) sees Mr. Foster, a Medicare patient, in her office. Mr. Foster was referred by his cardiologist for a second opinion on his heart failure management. Dr. Reyes spends 45 minutes evaluating Mr. Foster and documents a detailed history, comprehensive exam, and high-complexity medical decision making. She sends a written consultation report back to the cardiologist.

a. For Medicare, may Dr. Reyes bill a consultation code (99244 or 99245)? **T** / **F**

b. Has Mr. Foster ever been seen by Dr. Reyes? What does this make him?

c. What code family should Dr. Reyes use to bill this service for Medicare?

d. Under the 2021 E/M guidelines, what two elements drive the level selection for this office visit?

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MEDICAL CODING MASTERY | STUDENT EDITION

CHAPTER 10

Evaluation and Management (E/M) Coding

CPT codes: 99202-99499

Corrina Lynch | ACL Consulting Firm | CPC Preparation

▶ Chapter Objectives

Upon completion of this chapter, the student will be able to:

1. Define **Evaluation and Management (E/M)** coding and explain the purpose of E/M codes within the CPT code set.
2. Describe the history of E/M coding guidelines and explain the significance of the **2021 AMA E/M guideline changes**.
3. Identify the **three elements of Medical Decision Making (MDM)** and apply them to assign the correct level of E/M service.
4. Use **total time** as an alternative method for selecting E/M code levels under 2021 guidelines.
5. Distinguish between **new patient** and **established patient** using the three-year rule and select the appropriate codes (99202–99215).
6. Identify and correctly apply codes for **hospital inpatient and**

observation care, including initial, subsequent, and discharge services.

7. Apply the **three R's of consultation coding** (Request, Render, Report) and identify when consultation codes may not be used.

8. Select appropriate codes for **Emergency Department (ED) visits**, recognizing that no distinction is made between new and established patients.

9. Differentiate **preventive medicine codes** from problem-oriented E/M codes and apply modifier **-25** when billing both on the same date.

10. Apply **critical care codes** (99291–99292) using time-based reporting rules and identify bundled versus separately billable services.

1. Introduction to Evaluation and Management (E/M) Coding

What Are E/M Codes?

Evaluation and Management (E/M) codes are a subset of CPT (Current Procedural Terminology) codes used to report services provided by physicians and other qualified health care professionals (QHPs) when they evaluate a patient's condition and manage the patient's care. These codes represent the cognitive work a provider performs — the thinking, assessment, and decision-making involved in a patient encounter — rather than a procedure or surgery.

E/M codes are found in the CPT code set in the range **99202–99499**. They are the most frequently reported codes in all of medicine and represent the foundation of physician billing. Understanding E/M coding is essential not only for the **Certified Professional Coder (CPC)** exam but for every coder who works in a clinical environment.

Did You Know?

E/M services account for the largest single category of Medicare expenditures and are among the most audited codes by the Office of Inspector General (OIG). Accurate E/M coding is critical to both compliance and revenue integrity.

Why E/M Codes Matter

E/M codes are important for several reasons:

- They communicate the **complexity and intensity** of the patient encounter to payers.
- They determine **reimbursement** — higher-level codes are reimbursed at higher rates.
- They are subject to **audit** and must be supported by documentation in the medical record.
- Overcoding (upcoding) and undercoding are both compliance risks — the former may constitute fraud, and the latter results in lost revenue.

History of E/M Coding

E/M coding has a rich and evolving history:

- **1992:** The AMA introduced the first formal E/M code guidelines in CPT, establishing key components: history, physical examination, and medical decision making.
- **1995:** CMS (then HCFA) published the **1995 Documentation Guidelines**, which defined requirements for each level of history and physical exam.
- **1997:** CMS published the **1997 Documentation Guidelines**, adding specialty-specific single organ system examination templates. Both the 1995 and 1997 guidelines remained in simultaneous use for decades — providers could choose whichever was more favorable.
- **2021:** The AMA implemented landmark changes to E/M office and outpatient codes (99202–99215), removing history and physical exam as level-selection

criteria and shifting focus to **Medical Decision Making (MDM)** and **total time**.

- **2023:** Similar guideline revisions were extended to **inpatient, observation, nursing facility, home, and other E/M services**.

Where E/M Codes Are Found in CPT

Code Range	Service Category
99202–99215	Office or Other Outpatient Services
99221–99239	Hospital Inpatient and Observation Services
99241–99255	Consultations
99281–99288	Emergency Department Services
99291–99292	Critical Care Services
99304–99318	Nursing Facility Services
99341–99350	Home Services
99381–99397	Preventive Medicine Services
99401–99429	Preventive Medicine Counseling
99441–99458	Telephone and Online Digital Services
99480–99499	Miscellaneous and Special E/M Services

Key Documentation Principles

Regardless of which E/M category applies, several documentation principles are universal:

- The medical record must **support** the code reported — documentation drives coding, not the other way around.
- Documentation must be **legible, complete, and contemporaneous** (recorded at or near the time of service).
- Only the services **personally performed** by the billing provider may be counted toward E/M level selection.
- **Cloned notes** (copy-and-paste documentation) present significant compliance risk and may not support the reported service level.

⛔ **Stop! Think!**

Documentation must always precede code selection. Never select an E/M level and then try to make the documentation fit. If the documentation does not support the code, the claim is not defensible during an audit.

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2. The 2021 AMA E/M Guideline Changes

What Changed — and Why

Effective **January 1, 2021**, the AMA and CMS implemented the most significant changes to E/M coding in nearly 30 years. The changes applied initially to office and other outpatient visit codes (99202–99215). The core intent was to:

- Reduce **administrative burden** and time spent on documentation purely for billing purposes.
- Shift documentation focus back to **clinically relevant information** that actually helps patient care.
- Eliminate the practice of documenting a "complete" review of systems or physical exam to justify a higher code level.

What Was Removed

Under the old 1995/1997 guidelines, three **key components** were required to determine the E/M level:

1. History (chief complaint, HPI, ROS, PFSH)
2. Physical Examination
3. Medical Decision Making

For office visits, two of three (or all three for new patients) had to meet or exceed a threshold to reach a given level. The 2021 changes **eliminated history and physical examination as level-selection criteria** for office/outpatient codes.

History and exam are still performed as medically appropriate — but their extent is no longer used to select the code level.

What Replaced the Old System: Two Methods

Under the 2021 guidelines, the level of an office/outpatient E/M service is determined by **one of two methods**:

Method	Description	Key Consideration
Medical Decision Making (MDM)	Based on the complexity of decisions the provider makes, defined by three elements: number/complexity of problems, data reviewed, and risk	No time documentation required; MDM must be documented in the note
Total Time	Based on the total time personally spent by the provider on the date of the encounter, including pre- and post-visit work	Total time must be documented in the medical record

> 📋 **Coder's Corner**
>
> The provider selects ONE method — either MDM or total time — to determine the code level for each encounter. You cannot combine elements of both methods for a single visit. The provider should use whichever method yields the highest (most accurate) code level.

Code 99201 — Deleted!

Effective January 1, 2021, **CPT code 99201 was deleted**. The lowest new patient office visit code is now **99202**. This is because the old 99201 was distinguished from 99202 only by requiring a straightforward MDM vs. a problem-focused history/exam — distinctions that no longer apply. To report the lowest level new patient office visit, use 99202.

⛔ **Stop! Think!**

CPC exam candidates must know that 99201 was deleted in 2021. If you see 99201 on an exam question as a code option after 2021, it is a **distractor**. The correct lowest new patient office code is 99202.

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3. Medical Decision Making (MDM)

Medical Decision Making (MDM) is one of the two methods used to select E/M code levels. MDM is defined by three elements. To reach a given MDM level, **at least two of the three elements** must be met or exceeded for that level.

The Three Elements of MDM

4. **Number and Complexity of Problems Addressed**
5. **Amount and/or Complexity of Data Reviewed and Analyzed**
6. **Risk of Complications and/or Morbidity or Mortality of Patient Management**

📋 **Coder's Corner**

The 2-of-3 Rule: To reach a particular MDM level, at least two of the three elements must be at or above that level. One element alone cannot elevate the code. Think of it like a 3-legged stool — at least two legs must reach the same height.

MDM Levels at a Glance

MDM Level	New Patient Code	Established Patient Code
Straightforward	99202	99212
Low	99203	99213

MDM Level	New Patient Code	Established Patient Code
Moderate	99204	99214
High	99205	99215

Element 1 — Number and Complexity of Problems Addressed

A **problem** is a disease, condition, illness, injury, symptom, sign, finding, complaint, or other matter addressed by the provider at the encounter. The provider must be actively addressing the problem — simply noting a condition without assessment or management does not count.

Level	Problem Complexity	Examples
Minimal	1 self-limited or minor problem	Insect bite, cold sore, splinter removal, wart
Low	2 or more self-limited or minor problems; OR 1 stable chronic illness; OR 1 acute, uncomplicated illness or injury	Well-controlled hypertension (stable); URI; uncomplicated UTI; 2 minor complaints
Moderate	1 or more chronic illnesses with exacerbation, progression, or side effects of treatment; OR 2 or more stable chronic illnesses; OR 1 undiagnosed new problem with uncertain prognosis; OR 1 acute illness with systemic symptoms; OR 1 acute complicated injury	Poorly controlled diabetes; hypertension + hyperlipidemia (2 stable); new chest pain—cause unknown; pneumonia; laceration requiring complex repair
High	1 or more chronic illnesses with severe exacerbation, progression, or side effects of treatment; OR 1 acute or chronic illness or injury that poses a threat to life or bodily function	Acute MI; stroke; DKA; severe COPD exacerbation requiring hospitalization; sepsis; drug overdose

Did You Know?

A **self-limited problem** is one that runs a definite and prescribed course, is transient in nature, and is not likely to permanently alter health status. Examples include the common cold, a minor contusion, or a simple rash. Two or more self-limited problems move the complexity from Minimal to Low.

Element 2 — Amount and/or Complexity of Data Reviewed and Analyzed

This element captures the work involved in ordering, reviewing, and interpreting tests, as well as communicating with other providers. The 2021 guidelines define specific **data categories**:

- **Category 1:** Tests, documents, orders, or independent historian(s)
- **Category 2:** Independent interpretation of tests
- **Category 3:** Discussion of management or test interpretation with external physician/QHP

Level	Data Requirements	Examples
Minimal or None	Little or no data reviewed	Provider sees patient, no outside records reviewed, no tests ordered
Limited	Must meet at least 1 of 3 from Category 1: review of prior external notes from each unique source; review of results of each unique test; ordering of each unique test	Provider reviews CBC result; orders chest X-ray; reviews notes from cardiologist (one source)
Moderate	Must meet at least 1 of the following: review of prior external notes AND ordering/reviewing tests (meets 2 elements of Category 1); independent interpretation of a test performed by another provider; discussion of management with	Provider reviews outside records AND orders an MRI; provider independently interprets an EKG not performed by them; calls cardiologist to discuss management

Level	Data Requirements	Examples
	external physician/QHP	
Extensive	Must meet at least 2 of the 3 categories listed under Moderate	Provider independently interprets EKG AND calls cardiologist to discuss findings; reviews outside records AND independently interprets radiology images

⚠ **Important!**

"Unique" test or source means each distinct test type or source of information counts separately. Reviewing a CBC and a BMP = 2 unique tests. Reviewing notes from the cardiologist and the pulmonologist = 2 unique sources. Within Category 1, ordering or reviewing 3 unique tests satisfies the threshold for Limited data.

Element 3 — Risk of Complications and/or Morbidity or Mortality

Risk refers to the risk associated with the patient's condition and the management options selected. The AMA defines risk based on the **highest level of risk** present in any one category of management options.

Level	Risk Description	Examples
Minimal	OTC drugs; minor surgery (no identified risk factors); rest; gargles; elastic bandages	Recommending ibuprofen for mild arthritis; treating a small laceration with adhesive strips
Low	Prescription drug management; minor surgery with identified risk factors; physical/occupational therapy; IV fluids without additives	Prescribing an antibiotic; removing a benign skin lesion in a patient on anticoagulants; ordering PT for low back pain
Moderate	Prescription drug management; minor	Starting methotrexate (requiring lab

Level	Risk Description	Examples
	surgery with identified risk factors; new prescription drug requiring intensive monitoring; diagnosis or treatment significantly limited by social determinants of health; decision regarding hospitalization	monitoring); deciding whether to admit; drug treatment limited by patient's housing instability; elective minor surgery on patient with cardiac risk
High	Drug therapy requiring intensive monitoring for toxicity; elective major surgery with identified patient/procedure risk factors; emergency major surgery; diagnosis or treatment significantly limited by the patient's social determinants; parenteral controlled substances	Starting warfarin requiring INR monitoring; performing elective cardiac bypass; diagnosing metastatic cancer; IV narcotic therapy in the ED

⛔ **Stop! Think!**

Risk is determined by the **highest risk** in any single management category — it is NOT averaged across categories. If one aspect of the patient's care qualifies as High risk, the entire Risk element is High, even if other management decisions are low risk.

Complete MDM Summary Table

Code (New / Est.)	MDM Level	Problems	Data	Risk
99202 / 99212	**Straightforward**	Minimal (1 self-limited)	Minimal or None	Minimal
99203 / 99213	**Low**	Low (2+ self-limited; 1 stable chronic; 1 acute	Limited	Low

Code (New / Est.)	MDM Level	Problems	Data	Risk
		uncomplicated)		
99204 / 99214	**Moderate**	Moderate (chronic w/ exacerbation; 2+ stable chronic; undiagnosed new problem; acute w/ systemic sx; complicated injury)	Moderate	Moderate
99205 / 99215	**High**	High (chronic w/ severe exacerbation; life- or function-threatening illness/injury)	Extensive	High

📋 **Coder's Corner**

When reviewing a medical note for MDM, analyze each of the three elements independently, assign a level to each, and then apply the 2-of-3 rule. The **final MDM level** is the level supported by at least two elements. Example: Problems = High, Data = Limited, Risk = Moderate → Only one element reaches High; two elements (Data = Limited, Risk = Moderate) meet Moderate → Code = Moderate MDM (99204 or 99214).

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4. Time-Based E/M Coding

What "Total Time" Means in 2021 Guidelines

When a provider selects an E/M code based on **time**, the 2021 guidelines define this as the **total time** personally spent by the physician or QHP on the date of the

encounter. This includes both face-to-face time with the patient and non-face-to-face time spent in activities directly related to that patient's visit on that same day.

This was a significant change from the pre-2021 rules, which required that counseling or coordination of care dominate the visit (more than 50%) for time-based billing to apply to office visits.

Activities That Count Toward Time

The following activities performed by the billing provider on the date of service may be counted:

- Preparing to see the patient (reviewing records, results prior to the visit)
- Obtaining and/or reviewing separately obtained history
- Performing a medically appropriate examination and/or evaluation
- Counseling and educating the patient, family, or caregiver
- Ordering medications, tests, or procedures
- Referring to and communicating with other health care professionals
- Documenting clinical information in the EHR or medical record
- Independently interpreting results (if not separately reported)
- Care coordination (if not separately reported)

What Does NOT Count as Time

- Time spent by clinical staff (nurses, MAs) — only the provider's personal time counts
- Travel time
- Teaching that is general and not specific to the management of that patient
- Time spent performing separately billed services (e.g., a procedure reported with its own CPT code)

⛔ **Stop! Think!**

Do NOT include the time a nurse spends taking vitals, rooming the patient, or performing triage when calculating total E/M time. Only the time spent by the **billing provider** counts. This is one of the most common errors in time-based coding.

Time Ranges for Office/Outpatient E/M Codes

CPT Code	Patient Type	Total Time (Date of Encounter)	MDM Level
99202	New	15–29 minutes	Straightforward
99203	New	30–44 minutes	Low
99204	New	45–59 minutes	Moderate
99205	New	60–74 minutes	High
99211	Established	N/A (nurse/staff visit)	N/A
99212	Established	10–19 minutes	Straightforward
99213	Established	20–29 minutes	Low
99214	Established	30–39 minutes	Moderate
99215	Established	40–54 minutes	High

📋 **Coder's Corner**

If total time exceeds 74 minutes for a new patient or 54 minutes for an established patient, consider adding **prolonged service add-on code 99417** (for office/outpatient). Each unit of 99417 represents an additional 15 minutes beyond the threshold.

5. Office and Other Outpatient E/M Codes (99202–99215)

New Patient vs. Established Patient — The Three-Year Rule

One of the first decisions a coder must make when selecting an office E/M code is whether the patient is **new** or **established**:

- A **new patient** is one who has not received any professional services from the physician or physician group (same specialty, same group) within the past **three years**.
- An **established patient** is one who has received professional services from the physician or group within the past three years.

> ⚠ **Important!**
>
> The three-year rule is based on the **physician group**, not just an individual physician. If a patient sees any provider in the same specialty within the same group practice within three years, they are established — even if seeing a different doctor in that group. However, if they see a different specialty in the same group, they may be new to that specialty.

New Patient Codes: 99202–99205

Code	MDM Level	Total Time	Typical Example
99202	Straightforward	15–29 min	New patient with a single minor complaint (e.g., mild seasonal allergies)
99203	Low	30–44 min	New patient with stable hypertension or an acute uncomplicated UTI
99204	Moderate	45–59 min	New patient with poorly controlled

Code	MDM Level	Total Time	Typical Example
			diabetes and hypertension (2 stable chronic); or new chest pain of uncertain cause
99205	High	60–74 min	New patient with severe COPD exacerbation or new onset chest pain with concern for ACS

Established Patient Codes: 99211–99215

Code 99211 — The Nurse Visit

CPT 99211 is unique: it is the only E/M code that does not require the presence of a physician or QHP. It is used to report a visit by clinical staff (e.g., a nurse) for simple services such as blood pressure checks, suture removal, or injection administration, when no significant evaluation or management by a physician is performed. The physician need not be present, but must be available. Note: 99211 does not have a time range or MDM level — it is defined by the nature of the service.

Code	MDM Level	Total Time	Typical Example
99211	N/A (no physician required)	N/A	Nurse visit for BP check or allergy injection; suture removal by MA
99212	Straightforward	10–19 min	Follow-up for a single, minor, stable complaint (e.g., resolved ear infection recheck)
99213	Low	20–29 min	Follow-up for well-controlled hypertension, stable Type 2 diabetes medication refill
99214	Moderate	30–39 min	Established patient with 2 stable

Code	MDM Level	Total Time	Typical Example
			chronic conditions; poorly controlled asthma; new prescription requiring monitoring
99215	High	40–54 min	Established patient with severe uncontrolled DM with complications; acute illness threatening bodily function

Clinical Coding Scenarios — Office Visits

📄 Scenario A: Established Patient — Hypertension Follow-Up

S: Mr. Johnson, 58-year-old established patient, presents for a 3-month follow-up of hypertension. Reports his BP has been "a little high" at home but denies headaches, chest pain, or visual changes. Medications: lisinopril 10 mg daily.

O: BP 148/92, HR 74, wt 210 lbs. Heart: regular rate and rhythm. No edema.

A: Hypertension — not at goal.

P: Increase lisinopril to 20 mg daily. Recheck BMP in 4 weeks. Return in 3 months or sooner if symptoms develop. Patient education provided regarding low-sodium diet.

Step-by-Step Analysis:

- **Patient Status:** Established patient → codes 99211–99215
- **Problems:** 1 chronic illness (hypertension) with suboptimal control — this is a stable chronic illness being monitored; fits **Low** complexity (1 stable

chronic illness with need for medication adjustment)

- **Data:** Ordering a BMP → 1 unique test ordered → **Limited**
- **Risk:** Increasing prescription medication (lisinopril) → **Low** risk (prescription drug management)
- **2-of-3 Rule:** Problems = Low, Data = Limited, Risk = Low → All three at Low → MDM = **Low**
- **Final Code: 99213** (Established, Low MDM)

Common Mistake: Some coders select 99214 because the BP is "not at goal" — but not-at-goal without severe exacerbation or additional complexity is still Low, not Moderate MDM.

📄 Scenario B: New Patient — Chest Pain, Uncertain Cause

S: Ms. Rivera, 52-year-old new patient, presents with 3 weeks of intermittent chest discomfort, worse with exertion, occasionally radiating to left arm. No prior cardiac history. PMH: Type 2 DM, hyperlipidemia. Meds: metformin, atorvastatin.

O: BP 136/84, HR 88, RR 16, SpO2 98%. Cardiac exam unremarkable at rest. Lungs clear.

A: New chest pain — rule out cardiac etiology. Two stable chronic illnesses (T2DM, hyperlipidemia).

P: Order 12-lead EKG (performed and independently interpreted by physician). Refer to cardiology. Stress test ordered. Hold decision on medication changes pending workup. Discussed symptoms and warning signs with patient at length.

Step-by-Step Analysis:

- **Patient Status:** New patient → codes 99202–99205

- **Problems:** 1 undiagnosed new problem with uncertain prognosis (chest pain, rule out ACS) → **Moderate**; also 2 stable chronic illnesses → Moderate
- **Data:** Independent interpretation of EKG (Category 2) AND ordering stress test (Category 1) → meets 2 of 3 categories under Moderate → **Moderate** data
- **Risk:** Decision regarding further workup and referral; management limited pending diagnosis → **Moderate** risk
- **2-of-3 Rule:** Problems = Moderate, Data = Moderate, Risk = Moderate → All three meet Moderate → MDM = **Moderate**
- **Final Code: 99204** (New patient, Moderate MDM)

Common Mistake: Assigning 99205 because the presentation sounds serious. Unless there is evidence of a life-threatening condition at this visit, the MDM is Moderate, not High.

📄 Scenario C: Established Patient — Time-Based Coding

Documentation note: "I spent a total of 35 minutes on 09/24/2026 managing this patient's care, including 20 minutes face-to-face reviewing medication changes, counseling, and coordinating referral to endocrinology, and 15 minutes reviewing prior records from her previous endocrinologist and documenting this encounter."

Step-by-Step Analysis:

- **Patient Status:** Established patient → codes 99211–99215
- **Method:** Provider selected time-based billing; total time = 35 minutes
- **Time Crosswalk (Established):** 30–39 minutes = 99214
- **Final Code: 99214** (Established, 35 minutes total time)

Common Mistake: Counting the nurse's rooming time or MA-obtained vitals in

the total. Only the provider's own time counts.

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6. Hospital Inpatient and Observation Codes

Effective **January 1, 2023**, the AMA also revised inpatient/observation E/M codes, applying similar MDM-based and time-based principles. Inpatient and observation codes are now combined into unified code sets — the prior distinction between separate "observation" and "inpatient" codes was eliminated for most scenarios.

Initial Hospital or Observation Care (99221–99223)

Used for the first day of care, whether the patient is admitted as inpatient or placed in observation. Selection is based on MDM or total time.

Code	MDM Level	Total Time	Notes
99221	Straightforward or Low	40–54 min	Initial inpatient/obs — lower complexity
99222	Moderate	55–69 min	Initial inpatient/obs — moderate complexity
99223	High	70–84 min	Initial inpatient/obs — high complexity

Subsequent Hospital or Observation Care (99231–99233)

Used for each subsequent day of care following admission. The provider reviews the patient's status, reviews tests and results, and adjusts the care plan.

Code	MDM Level	Total Time	Notes
99231	Straightforward or Low	25–34 min	Subsequent — patient stable, improving
99232	Moderate	35–44 min	Subsequent — patient responding

Code	MDM Level	Total Time	Notes
			inadequately or minor complication
99233	High	45–59 min	Subsequent — patient unstable or significant complication

Hospital Discharge Services (99238–99239)

Discharge codes are time-based and cover the final examination of the patient, discussion of the hospital stay, instructions for continuing care, preparation of discharge records, prescriptions, and referral forms.

Code	Time	Description
99238	30 minutes or less	Hospital or observation discharge day management
99239	More than 30 minutes	Hospital or observation discharge day management, extended

Same-Day Admission and Discharge (99234–99236)

When a patient is admitted and discharged on the same calendar date, a single combined code is reported rather than separate admission and discharge codes.

Code	MDM Level	Total Time
99234	Straightforward or Low	45–59 min
99235	Moderate	60–74 min
99236	High	75–89 min

📋 **Coder's Corner**

If a patient is admitted and discharged on the same date, do NOT report a 99221–99223 plus a 99238/99239. Report only one of the combined codes

(99234–99236). This is a common exam question and real-world audit finding.

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7. Consultation Codes (99241–99255)

What Is a Consultation?

A **consultation** is a service provided by a physician or QHP at the request of another provider or appropriate source, to render an expert opinion or advice regarding the evaluation and/or management of a specific problem. The consulting provider may initiate diagnostic tests or begin treatment during the consultation visit.

The Three R's of Consultation Coding

Three criteria — often called the **"Three R's"** — must be met for a consultation code to apply:

7. **Request:** There must be a written or documented request for the consultation from the referring provider. The request must be documented in the patient's medical record.
8. **Render:** The consulting provider must perform the consultation — examining and evaluating the patient and forming an expert opinion.
9. **Report:** The consulting provider must communicate the findings back to the requesting provider. This report must be documented in the medical record (e.g., a consultation letter, shared note, or documented phone/fax communication).

⛔ **Stop! Think!**

If any one of the Three R's is missing, a consultation code **cannot** be reported. Use the appropriate new or established patient E/M code instead. Missing documentation of the request or the report is one of the most common audit

findings in consultation billing.

Office Consultation Codes (99241–99245)

Code	Level	MDM / Key Components (Pre-2021 rules still apply for consults)
99241	Level 1	Straightforward MDM
99242	Level 2	Straightforward MDM
99243	Level 3	Low MDM
99244	Level 4	Moderate MDM
99245	Level 5	High MDM

Inpatient Consultation Codes (99251–99255)

Code	Level	MDM / Key Components
99251	Level 1	Straightforward MDM
99252	Level 2	Straightforward MDM
99253	Level 3	Low MDM
99254	Level 4	Moderate MDM
99255	Level 5	High MDM

Medicare and Consultation Codes

A critical rule for coders: **Medicare does not recognize consultation codes**. Effective January 1, 2010, CMS eliminated payment for consultation codes (99241–99255) under Medicare. When billing Medicare, the consulting provider must use the appropriate **new or established patient office code** (99202–99215) or inpatient code (99221–99223), depending on the setting. Non-Medicare payers may still accept consultation codes — always verify payer policy.

Did You Know?

On CPC exam questions, if the scenario involves a Medicare patient and asks which code to report for a consultation, the correct answer will be the equivalent new or established patient office or inpatient code — **not** a consultation code. Know this rule — it appears regularly on certification exams!

Consultation Coding Scenarios

Scenario D: Inpatient Consultation

A cardiologist is asked by the admitting internist to consult on a hospitalized patient with new-onset atrial fibrillation. The cardiologist reviews the patient's prior ECG records (from an outside facility), performs a full evaluation, independently interprets the hospital ECG, discusses management with the internist, and dictates a consultation report recommending cardioversion and anticoagulation.

Analysis:

- Three R's met: Request (documented order), Render (evaluation performed), Report (consultation letter dictated)
- Problems: New undiagnosed problem (new Afib) → Moderate
- Data: Independent interpretation of ECG + review of outside records = 2 elements → Moderate/Extensive
- Risk: Initiating anticoagulation (new prescription requiring monitoring) → Moderate-High
- MDM: High (life-threatening dysrhythmia + anticoagulation risk)
- **Code: 99255** (Inpatient consultation, High MDM)
- If Medicare patient: Report **99223** (Initial hospital care, High MDM)

📄 Scenario E: Office Consultation

A primary care physician sends a patient with a new diagnosis of Type 2 diabetes to an endocrinologist for advice on insulin initiation. The endocrinologist evaluates the patient, reviews outside lab results (HbA1c trending over 6 months), initiates insulin therapy, provides diabetes education, and sends a written report to the PCP.

Analysis:

- Three R's met: documented referral letter, evaluation performed, written report sent to PCP
- Problems: 1 chronic illness with progression (DM requiring escalation to insulin) → Moderate
- Data: Review of outside lab results (unique source) → Limited; new prescription initiated
- Risk: New prescription drug therapy requiring intensive monitoring (insulin) → Moderate to High
- MDM: Moderate
- **Code: 99244** (Office consultation, Moderate MDM)

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8. Emergency Department Codes (99281–99285)

Key Feature: No New vs. Established Distinction

Unlike office visit codes, Emergency Department (ED) codes make **no distinction between new and established patients**. The same five codes (99281–99285) apply regardless of whether the patient has seen any provider in that group before. This reflects the nature of emergency medicine — providers evaluate whoever presents, regardless of prior relationship.

Emergency Department Code Levels

Code	Level	MDM Complexity	Typical Presentation
99281	Level 1	Self-limited / Minor	Minor laceration, insect bite, mild rash — problems that may not require physician supervision
99282	Level 2	Low	Minor illness or injury; simple prescription; URI requiring antibiotic
99283	Level 3	Moderate	Moderate illness or injury; acute asthma without severe distress; new-onset atrial fibrillation
99284	Level 4	Moderate-High	Chest pain with workup; severe abdominal pain; CVA workup; complicated medication management
99285	Level 5	High	Acute MI, severe trauma, sepsis, respiratory failure, major overdose — life-threatening conditions

Code 99288 — Direction of Advanced Life Support

CPT 99288 is used to report physician direction of emergency medical systems (EMS) advanced life support (ALS) personnel outside the hospital by two-way voice communication. This is a distinct code used by the physician who is providing medical direction remotely — not a standard ED visit code.

📋 **Coder's Corner**

ED coders should note that facilities use a different code set (Revenue Codes and APC groupings under UB-04 billing) for facility-side ED visits. The 99281–99285 codes are used by the **ED physician** on a professional (CMS-1500) claim. Know the distinction between professional and facility coding for ED services.

ED Coding Scenarios

📄 Scenario F: Emergency Department Visit

A 67-year-old male presents to the ED with sudden-onset left-sided chest pain, diaphoresis, and shortness of breath for the past 45 minutes. ECG shows ST elevations in leads II, III, and aVF. Troponin drawn. Cardiology activated. Patient taken emergently to cath lab for primary PCI.

Analysis:

- No new/established distinction in ED
- Problems: Acute illness posing immediate threat to life (STEMI) → **High**
- Data: Independently interpreted ECG, ordered troponin, coordinated with cardiology → **Extensive**
- Risk: Emergency major intervention (PCI); life-threatening condition → **High**
- 2-of-3: All three meet High → MDM = High
- **Code: 99285** (ED visit, Highest Level)

📄 Scenario G: Emergency Department Visit — Lower Level

A 24-year-old female presents to the ED complaining of painful urination and frequency for 2 days. No fever, no back pain. Urinalysis performed — positive for leukocytes and nitrites. Diagnosis: uncomplicated UTI. Prescription for 3-day course of nitrofurantoin provided. Patient discharged.

Analysis:

- Problems: 1 acute, uncomplicated illness (UTI) → **Low**
- Data: Ordered and reviewed UA (1 unique test) → **Limited**
- Risk: Prescription drug management (antibiotic) → **Low**
- 2-of-3: Problems = Low, Data = Limited, Risk = Low → MDM = **Low**
- **Code: 99282** (ED visit, Level 2)

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9. Preventive Medicine Codes (99381–99397)

What Is a Preventive Medicine Visit?

A **preventive medicine visit** (also called a "well visit," "annual physical," or "wellness exam") is a comprehensive evaluation performed on an asymptomatic patient to maintain health and screen for risk factors. These visits are distinct from **problem-oriented E/M visits** and use a different code set.

Preventive codes are selected based on two factors: (1) whether the patient is new or established, and (2) the patient's **age**.

Age-Based Code Selection Table

Age Group	New Patient Code	Established Patient Code
Infant (under 1 year)	99381	99391
1–4 years	99382	99392
5–11 years	99383	99393
12–17 years	99384	99394
18–39 years	99385	99395
40–64 years	99386	99396
65 years and older	99387	99397

Preventive Visit vs. Problem-Oriented Visit

A preventive visit and a problem-oriented E/M visit have different focuses:

- **Preventive visits** focus on health maintenance, screening, counseling, and immunizations for an asymptomatic patient.
- **Problem-oriented E/M visits** focus on evaluating and managing a specific illness, injury, or complaint.

Same-Day Billing: Preventive + Problem Visit — Modifier -25

When a patient presents for a preventive visit and also has a significant, separately identifiable problem addressed during the same encounter, **both** a preventive code and a problem-oriented E/M code may be reported on the same day. To do this:

- Report the **preventive code** (e.g., 99395) without a modifier.
- Report the **problem-oriented E/M code** (e.g., 99213) with **modifier -25** appended, signaling that a significant, separately identifiable E/M service was provided on the same day as the preventive service.

📋 **Coder's Corner**

Modifier -25 is only appropriate when the problem addressed is **significant and separate** from the routine preventive visit. If the physician briefly mentions an ongoing chronic condition without detailed evaluation or management changes, modifier -25 is likely not appropriate. The problem must require additional work beyond the preventive exam.

⛔ **Stop! Think!**

Do not automatically report a problem-oriented E/M code every time a patient with chronic conditions comes in for a well visit. Ask: Did the physician separately evaluate and manage the chronic condition beyond the scope of the preventive visit? If not, modifier -25 is not warranted.

10. Prolonged Services (99417, 99418)

When to Add Prolonged Service Codes

When a provider spends time beyond the maximum threshold of the highest-level E/M code in a category, **prolonged service add-on codes** may be reported. These codes are always add-on codes — they are never reported alone.

Add-On Code	Setting	Parent Code(s)	Each Unit Represents	Minimum Time Threshold
99417	Office / Outpatient	99205, 99215	15 additional minutes	75 min (new patient); 55 min (established)
99418	Inpatient / Observation / Nursing Facility	99223, 99233, 99255, etc.	15 additional minutes	Varies by parent code

Example Calculation — Prolonged Office Visit

A physician spends 90 minutes of total time on the date of service managing a new patient with complex multi-system disease.

- Step 1: 99205 covers 60–74 minutes (New Patient, High MDM)
- Step 2: 90 minutes − 74 minutes (maximum of 99205) = 16 minutes beyond threshold
- Step 3: Each unit of 99417 = 15 minutes; 16 ÷ 15 = 1.07 → **1 unit** of 99417 (must reach full 15-minute increment)
- **Report: 99205 + 99417 × 1 unit**

> ⚠ **Important!**
>
> 99417 requires that the minimum time threshold for the parent code be met **and exceeded by at least 15 minutes** before one unit can be reported.

Partial 15-minute increments do NOT qualify for an additional unit. Always document the total time in the medical record when using prolonged service codes.

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11. Critical Care Codes (99291–99292)

What Is Critical Care?

Critical care involves the direct delivery of medical care for a critically ill or critically injured patient. A **critical illness or injury** is defined as one that acutely impairs one or more vital organ systems such that there is a high probability of imminent or life-threatening deterioration in the patient's condition. Examples include respiratory failure, cardiac arrest, severe sepsis, acute renal failure, and major trauma.

Time-Based Reporting

Critical care codes are reported based on the **total time** the provider spends providing critical care services — even if that time is not continuous on a given day. The time must be spent in direct, face-to-face critical care management.

Total Time Spent	Codes to Report
Less than 30 minutes	Do NOT report 99291 — use appropriate subsequent care or other E/M code
30–74 minutes	99291 × 1 unit
75–104 minutes	99291 × 1 + 99292 × 1
105–134 minutes	99291 × 1 + 99292 × 2
135–164 minutes	99291 × 1 + 99292 × 3
Each additional 30 min	Add 1 unit of 99292

Services Bundled into Critical Care (Not Separately Billable)

The following services are **included** in critical care codes and may not be billed separately when provided during the critical care encounter:

- Interpretation of cardiac output measurements
- Chest X-ray interpretation
- Pulse oximetry
- Blood gas interpretation
- Gastric intubation
- Temporary transcutaneous pacing
- Ventilator management
- Vascular access procedures (central line, arterial line) — Note: some payers allow separate billing for line insertions; verify payer rules

Did You Know?

Procedures such as **endotracheal intubation (31500)**, insertion of a chest tube, and central venous catheter placement are considered **separately billable** when performed during critical care. Always verify which payer's bundling rules apply and use appropriate modifiers as needed.

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12. Nursing Facility and Home Services (Overview)

Nursing Facility Services (99304–99318)

These codes are used when a provider evaluates and manages patients in a nursing facility, skilled nursing facility (SNF), intermediate care facility, or long-term care facility.

Code Range	Service Type	Notes
99304–99306	Initial Nursing Facility Care	New or established patient; first day of care; MDM or time based

Code Range	Service Type	Notes
99307–99310	Subsequent Nursing Facility Care	Each subsequent day; MDM or time based
99315–99316	Nursing Facility Discharge	Time-based: 99315 = 30 min or less; 99316 = more than 30 min
99318	Annual Nursing Facility Assessment	Periodic comprehensive assessment; MDM or time based

Home or Residence Visit Codes (99341–99350)

These codes are used when the physician or QHP provides E/M services in the patient's home, assisted living facility, or other private residence.

Code Range	Patient Type	MDM / Time Selection
99341–99345	New Patient	Level 1–5 based on MDM or time
99347–99350	Established Patient	Level 1–4 based on MDM or time

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13. Key Documentation Tips for E/M Coding

The SOAP Note Format

Most clinical documentation follows the **SOAP note** format, which organizes the encounter into four sections:

- **S — Subjective:** The patient's complaints, symptoms, history of present illness (HPI), review of systems (ROS), and past/family/social history (PFSH). This is what the patient tells the provider.
- **O — Objective:** Findings from the physical examination, vital signs, and results of tests available at the time of the visit.
- **A — Assessment:** The provider's diagnoses, impressions, and conclusions about the patient's condition.

- **P — Plan:** Management decisions including medications, tests ordered, referrals, follow-up, and patient education.

What Must Be Documented to Support E/M Level

Under 2021 guidelines, the documentation must clearly support whichever method (MDM or time) is being used:

- **For MDM:** Problems addressed (with assessment of severity and status), data reviewed and analyzed (specific tests, sources, interpretations), and management decisions/risk documented in the Plan.
- **For Time:** Total time spent by the provider on the date of the encounter must be explicitly documented (e.g., "Total time spent on 09/24/2026: 38 minutes").

Common Auditing Errors

Error	Description	Risk
Upcoding (Overcoding)	Reporting a higher-level code than the documentation supports	Fraud and abuse; overpayment recovery; OIG audit
Undercoding	Reporting a lower-level code than the documentation supports	Lost revenue; may signal pattern of poor documentation
Cloned Notes	Copy-pasting the same documentation from visit to visit without individualized content	Does not support services billed; audit risk; exclusion
Counting Staff Time	Including nurse/MA time in total time calculation	Claim overpayment; recoupment
Misidentifying Patient Type	Billing a new patient code for an established patient	Claim denial; overpayment
Incomplete Consultation Documentation	Missing request, render, or report documentation for consultation codes	Claim denial; audit finding

⚠ **Cloned Notes Warning**

Cloned notes (also called copy-forward or copy-paste documentation) occur when a provider copies the same clinical note from a prior visit into the current visit record without meaningful individualization. Payers and auditors can detect cloned notes because the documentation does not reflect the unique aspects of each encounter. Cloned notes that inflate the perceived complexity of the encounter may constitute **false claims** under the False Claims Act. Coders should flag cloned note patterns and alert their compliance team.

📋 **Coder's Corner**

When reviewing documentation for E/M coding, ask yourself: "Could another clinician read this note and understand exactly what happened at this specific visit — what the problem was, what was reviewed, what was decided, and what was planned?" If the answer is "no," the note may not support the reported E/M level.

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14. Real-World Coding Scenarios

📄 Scenario 1: New Patient — Diabetes Management

S: Ms. Hernandez, 44-year-old new patient referred by her PCP for evaluation of poorly controlled Type 2 DM with peripheral neuropathy. HbA1c was 10.8% last month. Current meds: metformin 1000 mg BID; glipizide 10 mg daily. Reports burning in feet bilaterally for 3 months. Also has hypertension (stable on lisinopril) and hyperlipidemia (stable on statin). Reviewed prior outside labs from her PCP (HbA1c trending over 12 months, BMP series).

O: BP 138/86, wt 182 lbs, BMI 31.2. Monofilament testing: reduced sensation bilateral plantar feet. DTRs mildly reduced at ankles.

A: 1. Type 2 DM with peripheral neuropathy — poorly controlled, exacerbation; 2. Hypertension — stable; 3. Hyperlipidemia — stable.

P: Discontinue glipizide. Start empagliflozin 10 mg daily (cardiovascular benefit, weight neutral). Continue metformin. Order HbA1c, BMP, urine microalbumin in 8 weeks. Referred to podiatry for neuropathy evaluation. Start gabapentin 300 mg TID for neuropathic pain. Extensive counseling regarding diet, foot care, and medication adherence. Total time: 58 minutes.

Step-by-Step Analysis (MDM Method):

- **Patient Type:** New patient → 99202–99205
- **Problems:** Chronic illness with exacerbation/complications (DM + neuropathy poorly controlled) plus 2 stable chronic illnesses (HTN, HLD) → **Moderate-High**. The presence of a complication (peripheral neuropathy) from a poorly controlled chronic illness suggests High complexity.
- **Data:** Reviewed outside records (unique source) + ordering 3 unique tests (HbA1c, BMP, microalbumin) = multiple Category 1 elements; independently assessing outside trends → **Moderate**
- **Risk:** Starting a new prescription requiring monitoring (empagliflozin — SGLT2i); managing multiple medications; prescribing gabapentin for neuropathic pain → **Moderate to High**
- **2-of-3:** At least 2 elements meet Moderate or High → MDM = **High** (given severity of uncontrolled DM with complications)
- **Code by MDM: 99205** (New Patient, High MDM)
- **Code by Time:** 58 minutes → 99205 (60–74 min) — actually falls in 45–59 min range → **99204** by time
- **Best Code: 99205** (MDM supports High; select the method most favorable and accurate)

Common Mistake: Defaulting to time-based when MDM supports a higher level. Always evaluate both methods and use the one that accurately and most

completely reflects the work performed.

📄 Scenario 2: Established Patient — High-Level Visit

S: Mr. Davis, 71-year-old established patient with severe COPD (GOLD Stage III), CHF (EF 35%), and atrial fibrillation on warfarin. Presents with worsening shortness of breath and 5-pound weight gain over 3 days. SpO2 80% on room air at home per report. INR checked yesterday by PCP — supratherapeutic at 3.8.

O: SpO2 88% on 2L NC. RR 26. Bilateral lower extremity pitting edema. Lungs: bilateral crackles. HR 104 irregular.

A: Acute decompensated CHF with severe COPD exacerbation; supratherapeutic anticoagulation on warfarin.

P: Review of outside records from cardiologist and pulmonologist (two unique sources). Independent interpretation of today's EKG showing Afib with RVR. Discussed with cardiologist by phone regarding acute management. Decision to admit for IV diuresis, warfarin dose held, hematology and cardiology consulted. Total time spent: 50 minutes.

Step-by-Step Analysis:

- **Patient Type:** Established patient → 99211–99215
- **Problems:** Multiple chronic illnesses with severe exacerbation (decompensated CHF + COPD exacerbation) → **High**
- **Data:** Review of 2 outside sources + independent EKG interpretation + phone discussion with cardiologist = 3 of 3 categories → **Extensive**
- **Risk:** Decision for inpatient hospitalization; drug therapy requiring intensive monitoring (warfarin); life-threatening acute decompensation → **High**

- **2-of-3:** All three = High → MDM = **High**
- **Code: 99215** (Established Patient, High MDM)

📄 Scenario 3: Preventive Visit + Modifier -25

S: Ms. Thompson, 38-year-old established patient presents for annual well woman exam. No complaints. Also mentions she has had a new skin rash on her arms for 2 weeks that is itchy and spreading — has not been evaluated before. PMH: none. No medications.

Preventive exam performed comprehensively. Rash examined separately — appears to be contact dermatitis, likely from new laundry detergent. Prescribed triamcinolone cream 0.1% and oral antihistamine. Patient instructed to switch detergent. Return if not improved in 2 weeks.

Step-by-Step Analysis:

- Preventive exam for 38-year-old established patient → **99395**
- Separately evaluated and managed new skin rash (contact dermatitis): Problems = 1 acute uncomplicated illness → Low; Data = Minimal; Risk = Low (prescription topical steroid) → MDM = **Low**
- Problem visit: **99213 -25** (Established, Low MDM, modifier -25 for significant separately identifiable E/M same day as preventive)
- **Final Codes: 99395 and 99213 -25**

📄 Scenario 4: Critical Care

Dr. Nguyen provides critical care to a patient in septic shock. She spends 40 minutes reviewing the patient's chart, adjusting vasopressors, managing ventilator settings, reviewing blood cultures and lactate results, and

documenting the encounter. Later in the day, she provides an additional 35 minutes of critical care to the same patient for hemodynamic instability.

Step-by-Step Analysis:

- Total critical care time: 40 + 35 = 75 minutes (time may be non-continuous on the same date)
- 75 minutes → 99291 × 1 + 99292 × 1
- Ventilator management is bundled — not separately billable
- **Final Codes: 99291, 99292**

📄 Scenario 5: Hospital Admission Same Day Discharge

A 58-year-old patient is admitted to observation for chest pain workup. Serial troponins are negative, stress test is normal. The patient is evaluated in the morning, monitored, and discharged in the afternoon on the same calendar date. Total physician time: 65 minutes.

Step-by-Step Analysis:

- Admitted and discharged on same calendar date → use combined same-day admission/discharge codes (99234–99236)
- Problems: New undiagnosed problem (chest pain, r/o ACS) → Moderate MDM; ruled out; 65 minutes total time
- Time: 65 minutes → 99235 (60–74 min; Moderate MDM)
- **Do NOT report:** 99222 + 99239 — that would double-bill
- **Final Code: 99235**

Common Mistake: Many coders report separate admission and discharge codes when the patient leaves on the same date. Always use 99234–99236 for same-day admission and discharge.

15. Chapter Review — Multiple Choice Questions

Select the best answer for each question No answer key is included.

1. Under the 2021 AMA E/M guidelines, which of the following is used to determine the level of an office/outpatient E/M service?

A. History and physical examination only
B. Medical Decision Making (MDM) or Total Time
C. Number of diagnoses coded
D. Length of the clinic note

2. A patient last saw the same internist in the same group practice 2.5 years ago. How is this patient classified?

A. New patient
B. Established patient
C. Either new or established, provider's choice
D. Consultation patient

3. Which CPT code was deleted effective January 1, 2021?

A. 99202
B. 99211
C. 99201
D. 99241

4. An established patient is seen for follow-up of well-controlled hypertension. The physician increases the lisinopril dose and orders a BMP. Using MDM, what is the correct code?

A. 99212
B. 99213
C. 99214
D. 99215

5. Which of the following activities counts toward total time under 2021 E/M guidelines?

A. Travel time to the hospital
B. Nurse's time rooming the patient
C. Physician's time reviewing results after the visit on the same date
D. General teaching rounds not specific to the patient

6. For Medical Decision Making, how many of the three elements must meet or exceed the threshold for a given MDM level?

A. All three
B. At least two
C. The highest single element determines the level
D. At least one

7. A Medicare patient is referred by her PCP to a gastroenterologist for evaluation of unexplained weight loss. The gastroenterologist evaluates the patient, documents the referral request, and sends a written report. Which code(s) should be reported?

A. 99244 (Office consultation, Moderate MDM)

B. 99243 (Office consultation, Low MDM)

C. 99204 (New patient office visit, Moderate MDM)

D. 99213 -25 (Established office visit with modifier)

8. A patient is admitted and discharged from observation on the same calendar date. Which code set is appropriate?

A. 99221 and 99238

B. 99222 and 99239

C. 99234–99236

D. 99231 and 99239

9. Emergency Department codes 99281–99285 are selected based on which patient characteristic?

A. New vs. established patient status

B. Age of the patient

C. Level of medical decision making regardless of new/established status

D. Time spent only

10. A preventive visit and a problem-oriented E/M visit are both provided on the same date. Which modifier is appended to the problem-oriented E/M code?

A. Modifier -57

B. Modifier -26

C. Modifier -25

D. Modifier -59

11. A physician spends 90 minutes of total time providing care to a new patient. Which codes should be reported?

A. 99205 only
B. 99205 + 99417 × 1
C. 99215 + 99417 × 1
D. 99205 + 99418 × 1

12. Which of the following is a bundled (included) service in critical care code 99291?

A. Endotracheal intubation (31500)
B. Central venous catheter insertion
C. Ventilator management
D. Chest tube insertion

13. A physician provides 75 minutes of critical care to a critically ill patient. Which codes should be reported?

A. 99291 × 1
B. 99291 × 2
C. 99291 × 1 + 99292 × 1
D. 99292 × 1

14. A 45-year-old established patient presents for an annual preventive exam. Correct code?

A. 99385
B. 99395
C. 99396
D. 99386

15. The Three R's of consultation coding are:

A. Referral, Reimbursement, Report
B. Request, Render, Report
C. Request, Review, Record
D. Refer, Respond, Review

16. Code 99211 may be used for which of the following?

A. A new patient seen by a physician for the first time
B. A nurse visit where no physician is present but one is available, for BP check
C. A Level 1 consultation by a specialist
D. A brief preventive visit for a well child

17. Under 2021 MDM guidelines, "independent interpretation of a test performed by another provider" falls under which element of MDM?

A. Number and Complexity of Problems
B. Risk of Complications
C. Amount and/or Complexity of Data Reviewed and Analyzed
D. History and Examination

18. A patient with severe COPD exacerbation threatening respiratory function is seen in the office. Under MDM, the Problems element is classified as:

A. Minimal
B. Low
C. Moderate

D. High

19. Which of the following is NOT counted toward total time under 2021 E/M guidelines?

A. Reviewing records before the visit
B. Documenting the encounter
C. Travel to the patient's location
D. Coordinating care with a specialist

20. A provider documents: "45 minutes total time on date of service" for an established patient. Which code should be reported?

A. 99213
B. 99214
C. 99215
D. 99205

level-selection criteria for office/outpatient codes, replacing them with MDM or total time.

- **CPT 99201 was deleted** effective January 1, 2021; the lowest new patient office code is 99202.
- **Medical Decision Making (MDM)** has three elements: (1) Number and Complexity of Problems, (2) Amount/Complexity of Data, and (3) Risk. At least **two of three** elements must meet or exceed the threshold (2-of-3 rule).
- **Total time** includes all provider time on the date of the encounter (face-to-face and non-face-to-face); it does not include travel, staff time, or separately billed service time.
- **New patient = no professional services from same specialty/group in past 3 years**; established patient = seen within past 3 years.
- The **three-year rule** applies to the provider group and specialty, not just the individual physician.
- **Code 99211** is the only E/M code that does not require a physician — it is used for qualified clinical staff visits.
- **Consultation codes (99241–99255)** require all Three R's: Request, Render, Report. Medicare does not pay for consultation codes — use equivalent new/established or inpatient E/M codes.
- **Emergency Department codes (99281–99285)** make no distinction between new and established patients.
- When a **preventive visit and problem visit** occur on the same day, report both codes; append **modifier -25** to the problem-oriented E/M code.
- **Prolonged service code 99417** is added in 15-minute units beyond the highest office E/M level (parent codes: 99205, 99215).
- **Critical care (99291–99292)** is time-based: 99291 for first 30–74

minutes; 99292 for each additional 30 minutes. Ventilator management, blood gas interpretation, and pulse oximetry are bundled.

- **Same-day hospital admission and discharge** is reported with 99234–99236, not separate admission + discharge codes.
- **Documentation drives coding**: only services documented and supported in the medical record may be reported. Cloned notes present major compliance risk.

Key Terms Glossary

Acute Illness — An illness or condition with a sudden onset and limited duration, as opposed to a chronic condition.

Chronic Illness — A condition that is persistent and long-lasting in its effects. May be stable or may exacerbate.

Cloned Note — Documentation that is copied forward from a prior visit without meaningful individualization; a significant audit risk and potential false claims issue.

Consultation — A service provided by a physician at the request of another provider to render an expert opinion, meeting the Three R's (Request, Render, Report).

Critical Care — Direct delivery of medical care for a critically ill or injured patient whose condition impairs vital organ systems with high risk of imminent deterioration.

Established Patient — A patient who has received professional services from the same physician/group in the same specialty within the past three years.

Evaluation and Management (E/M) — The category of CPT codes (99202–99499) representing physician evaluation of patient condition and management of care.

Medical Decision Making (MDM) — One of two methods (along with total time) for selecting an E/M code level, based on three elements: problems, data, and risk.

Modifier -25 — A CPT modifier appended to a problem-oriented E/M code to indicate a significant, separately identifiable E/M service was performed on the same date as a preventive medicine service or procedure.

New Patient — A patient who has not received professional services from the physician or same group/specialty in the past three years.

Prolonged Service — Time spent beyond the maximum threshold of the highest E/M level in a category, reported with add-on codes (99417 for office/outpatient).

Self-Limited Problem — A condition that runs a definite, prescribed course and is not likely to permanently alter health status (e.g., common cold, minor contusion).

SOAP Note — A documentation format: Subjective, Objective, Assessment, Plan; the standard structure for clinical encounter notes.

Three R's — The three criteria for consultation coding: Request, Render, Report.

Three-Year Rule — The rule defining new vs. established patient status: a patient not seen by the same physician group and specialty within three years is considered a new patient.

Total Time — Under 2021 E/M guidelines, all time personally spent by the provider on the date of the encounter related to that patient's visit, including pre- and post-visit work, but excluding travel, staff time, and separately billed services.

Two-of-Three Rule (2-of-3) — The MDM selection rule: at least two of the three MDM elements must meet or exceed the threshold for a given MDM level to apply.

Upcoding — Reporting a higher-level code than is supported by the documentation; a form of healthcare fraud with legal consequences.

Undercoding — Reporting a lower-level code than is supported by the documentation; results in lost revenue and may reflect inadequate documentation practices.

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MEDICAL CODING MASTERY | STUDENT EDITION

CHAPTER 11

Surgery: Integumentary System and General Surgery

CPT codes: 10000-19999

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Chapter Objectives

Upon successful completion of this chapter, the student will be able to:

1. Describe the organization of the CPT Surgery section and identify the code range for the Integumentary System subsection (10000–19999).
2. Define the **global surgical package** and differentiate between services that are included and those that are separately reportable.
3. Identify the three global period types (0-day, 10-day, 90-day) and explain their implications for billing.
4. Explain the concept of **unbundling** and apply National Correct Coding Initiative (NCCI) edit guidelines to avoid improper code combinations.
5. Apply the correct CPT surgical modifier for a given clinical scenario, selecting from Modifiers –22 through –82.
6. Calculate the correct excised diameter of skin lesions (benign and malignant) using the standard formula: lesion diameter + (narrowest margin × 2).
7. Differentiate between simple, intermediate, and complex wound repairs, and correctly add repair lengths within the same anatomical grouping.
8. Identify the appropriate CPT codes for skin grafts, flaps, debridement, and burn treatment, including use of the Rule of Nines.
9. Code breast procedures including biopsy, mastectomy, and reconstruction using correct CPT codes and modifiers.
10. Analyze real-world operative note excerpts and select accurate CPT codes with appropriate modifiers, avoiding common coding pitfalls.

1. Introduction to the CPT Surgery Section

The **Surgery section** is the largest section in the CPT manual, encompassing codes **10000 through 69999**. It is organized by body system, with each subsection further divided by anatomical site, type of procedure, and approach. For any coder working in a surgical specialty or seeking CPC certification, mastery of the Surgery section is non-negotiable.

1.1 Organization of the Surgery Section

The Surgery section follows a logical anatomical sequence, moving generally from the skin (outermost layer) inward and from head to toe. Each subsection contains codes grouped by the nature of the procedure: incision, excision, repair, reconstruction, manipulation, and destruction.

Subsection	CPT Code Range	Description
General Surgery / Integumentary	10000–19999	Skin, subcutaneous tissue, breast, nails, hair, and general procedures
Musculoskeletal System	20000–29999	Bones, joints, muscles, tendons, ligaments
Respiratory System	30000–32999	Nose, throat, larynx, trachea, bronchi, lungs
Cardiovascular System	33000–37799	Heart, arteries, veins
Digestive System	40000–49999	Mouth, esophagus, stomach, intestines, rectum
Urinary System	50000–53999	Kidneys, ureters, bladder, urethra
Nervous System	61000–64999	Skull, brain, spinal cord, peripheral nerves
Eye and Ocular Adnexa	65091–68899	Eyeball, conjunctiva, cornea, retina
Auditory System	69000–69979	External, middle, and inner ear

1.2 The General Surgery Subsection (10000–19999)

This chapter focuses on the **Integumentary System subsection**, codes **10000–19999**. The integumentary system includes the skin, hair, nails, sweat glands, and sebaceous glands — essentially everything that covers and protects the body. Procedures coded in this range include incisions, excisions, repairs (wound closures), destruction, grafting, and procedures of the breast.

1.3 The Importance of Operative Reports

Every surgical code selection begins with a thorough reading of the **operative report** (also called an operative note). The operative report is the physician's narrative description of what was performed during a surgical procedure. It contains the critical details a coder needs: the indication for surgery, the specific anatomical site, the technique used, the size and nature of lesions removed, the type of closure, and any complications encountered.

> 📌 **Coder's Corner**
>
> When reviewing an operative report, train yourself to highlight five things before selecting a single code: (1) **Anatomical site**, (2) **Size/extent of the procedure**, (3) **Technique/method used**, (4) **Number of lesions or sites**, and (5) **Closure type**. These five elements drive almost every integumentary code selection.

> 💡 **Did You Know?**
>
> The CPT manual was first published by the American Medical Association (AMA) in 1966. It is updated annually every January 1st. Always verify you are using the current year's edition — using an outdated CPT manual is one of the most common — and most costly — mistakes in medical coding.

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2. The Global Surgical Package

One of the most tested concepts on the CPC exam is the **global surgical package**. Understanding exactly what is — and what is NOT — bundled into the global package is essential for accurate billing and passing the exam.

2.1 Definition

The global surgical package is a concept established by the Centers for Medicare and Medicaid Services (CMS) that defines a "bundle" of services that are considered integral to performing a surgical procedure. When a surgeon bills for a procedure, the reimbursement for that procedure is presumed to include all the services within the global package — no separate billing is permitted for these included services.

The **global period** is the timeframe during which all included services are considered part of the package. CMS's Medicare Physician Fee Schedule assigns a global period to every surgical procedure.

2.2 What IS Included in the Global Surgical Package

- **Preoperative visits:** The visit on the day before surgery (for major procedures) or the day of surgery (for minor procedures).
- **Intraoperative services:** All services normally a part of the surgical procedure itself, including local infiltration anesthesia administered by the operating surgeon.
- **Immediate postoperative care:** Writing orders, talking to the family and other physicians immediately after surgery.
- **Complications not requiring a return to the operating room:** Managing typical expected complications (e.g., minor wound dehiscence, stitch abscess) during the global period.
- **Postoperative visits during the global period:** Follow-up visits directly related to the surgical procedure during the assigned global period.

- **Postoperative pain management:** Pain management provided by the surgeon as part of normal postoperative care.
- **Supplies:** Surgical supplies used during the procedure itself (not always — check payer policy).
- **Miscellaneous services:** Dressing changes, removal of sutures/staples during the global period.

2.3 What is NOT Included (Separately Reportable)

- **Unrelated Evaluation and Management (E/M) visits:** A visit during the global period for a completely unrelated condition (e.g., patient presents for a cold during their surgical global period). Append Modifier **–24** to the E/M code.
- **Return to the OR for complications:** If a complication requires the patient to be taken back to the operating room, this is separately reportable. Append Modifier **–78**.
- **Treatment of an unrelated condition:** Surgical or non-surgical treatment of a condition unrelated to the original procedure. Append Modifier **–79**.
- **Initial consultation or evaluation that results in the decision for surgery** (when performed the day before or same day as a major surgery). Append Modifier **–57** to the E/M code.
- **Diagnostic tests:** Lab work, X-rays, and other diagnostic services are not included in the global package.
- **Anesthesia:** Anesthesia services provided by a separate anesthesiologist are never included in the surgical package.
- **Staged procedures:** A staged or related procedure planned at the time of the original surgery. Append Modifier **–58**.

⚠ **Stop! Think!**

A patient has a cholecystectomy (90-day global period) and returns 3 weeks later complaining of a fever. The physician examines the patient and determines the fever is due to an unrelated urinary tract infection. Can you bill for the E/M visit? **YES** — because it is for an unrelated condition. Append Modifier **–24** to the E/M code to indicate this is an unrelated visit during the postoperative period. Without the modifier, the claim will be denied.

2.4 Global Period Types

Global Period	Duration	Description	Code Examples
000 (Zero-Day)	Day of surgery only	Includes only same-day pre- and post-op care. No follow-up period. Typically applies to minor procedures performed in the office.	Shaving of skin lesion (11300), destruction of benign lesion (17110)
010 (10-Day)	Day of surgery + 10 days	Includes day of surgery and 10 postoperative days. Common for minor surgical procedures requiring follow-up but no extended care.	Simple wound repair (12001), excision of benign lesion (11400)
090 (90-Day)	1 day pre-op + day of surgery + 90 days	Includes one day of preoperative care, the day of surgery, and 90 postoperative days. Applies to major surgical procedures.	Mastectomy (19301), complex wound repair (13100), skin graft (15100)
MMM	Maternity — variable	Applies to maternity procedures where global periods are not applicable in the standard	Obstetric procedures

Global Period	Duration	Description	Code Examples
		sense.	
YYY	Payer determines	Global period is determined by the payer. Coder must check payer policy.	Varies

> 📌 **Coder's Corner**
>
> You can look up the global period assigned to any procedure code using the CMS Medicare Physician Fee Schedule lookup tool at cms.gov, or in the Medicare Claims Processing Manual. Most coding references and encoders also display the global period alongside each surgical code. Always check the global period before billing postoperative visits — this is a top audit trigger.

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3. Separate Procedures and Unbundling

3.1 The "Separate Procedure" Designation

Some CPT codes contain the parenthetical notation **"(separate procedure)"** within their description. This designation means that the procedure is commonly an integral part of a larger, more comprehensive procedure. When the code with this designation is performed as the only procedure, or is performed at a separate site or separate session, it may be reported independently.

> ❗ **Important Rule**
>
> A "separate procedure" code **CANNOT** be billed when it is performed as part of a more comprehensive procedure at the same anatomical site during the same

operative session. Billing it in addition to the comprehensive code constitutes **unbundling**.

3.2 Unbundling: Definition and Examples

Unbundling is the practice of using multiple CPT codes to describe services that should properly be reported with a single, comprehensive code. Unbundling results in higher reimbursement than is appropriate and is considered fraudulent billing.

Examples of Unbundling (What NOT to Do):

- Billing separately for the closure (repair) of a wound created during an excision — the closure is included in the excision code.
- Billing separately for surgical prep, draping, and instrument set-up — these are always included in the surgical procedure code.
- Billing separately for exploration of a surgical wound when it is part of a larger procedure at the same site.
- Billing separately for a simple diagnostic procedure that is a prerequisite to the primary procedure.
- Using multiple lesion excision codes when a single code covering the total excised area should be used.

3.3 National Correct Coding Initiative (NCCI) Edits

The **National Correct Coding Initiative (NCCI)**, developed by CMS, is a set of automated edits applied to Medicare and Medicaid claims to prevent improper bundling of codes. NCCI edits consist of two types:

- **Column 1 / Column 2 Edits (Procedure-to-Procedure Edits):** Identify code pairs where one code (Column 2) should not be billed together with another code (Column 1) because Column 2 is a component of Column 1. Some edits can be overridden with a **Modifier –59** or an X-modifier if the procedures are truly distinct.

- **Mutually Exclusive Edits:** Identify pairs of codes that, by definition, cannot reasonably be performed at the same session. These edits cannot be overridden.

> 💡 **Did You Know?**
>
> CMS updates NCCI edits quarterly. The NCCI edit tables are publicly available on the CMS website and are an invaluable free resource for professional coders. Many encoding software programs integrate NCCI edits directly into the workflow, flagging potential bundling issues before claims are submitted.

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4. Surgical Modifiers

A **modifier** is a two-digit code appended to a CPT code that provides additional information about the service performed without changing the basic definition of the code. Modifiers communicate to the payer that a service was altered in some way — in extent, by another provider, at a different anatomical site, or under special circumstances.

> 📌 **Coder's Corner**
>
> On the CPC exam, modifier selection questions are among the most frequently missed. Study modifiers as a group, then practice applying them to scenarios. The most commonly tested modifiers in the Surgery section are: **–22, –47, –50, –51, –52, –57, –58, –59, –62, –78, –79, –80**.

Modifier	Name	Definition	Clinical Example
–22	Increased Procedural Services	The work required to provide the service was	A complex laceration repair takes 3x longer

Modifier	Name	Definition	Clinical Example
		substantially greater than typically required. Must be supported by documentation. Expect increased reimbursement (typically 20–30%).	than typical due to extensive subcutaneous tissue damage and extensive scarring.
–47	Anesthesia by Surgeon	Regional or general anesthesia was administered by the operating surgeon rather than by a separate anesthesiologist. (Not for local anesthesia — that is always included.)	Surgeon administers a regional nerve block in addition to performing the procedure in a setting without a separate anesthesiologist.
–50	Bilateral Procedure	A procedure performed on both sides of the body during the same operative session, when the code description does not specify bilateral.	Excision of benign lesions from both the right and left arms during the same session.
–51	Multiple Procedures	Multiple procedures are performed during the same operative session by the same provider. The primary (highest valued) procedure is reported first; all additional procedures receive this modifier.	A surgeon excises a malignant lesion of the scalp and separately repairs a complex laceration of the forearm during the same session.
–52	Reduced Services	A service or procedure is partially reduced or eliminated at	A colonoscopy is planned but only reaches the sigmoid colon due

Modifier	Name	Definition	Clinical Example
		the physician's discretion.	to poor prep; the physician bills the colonoscopy code with –52.
–53	Discontinued Procedure	The procedure was started but discontinued due to extenuating circumstances or the patient's condition threatening well-being. Used when the patient has been prepared and anesthesia administered.	A patient is prepped and anesthesia is administered; the surgeon decides to abort the planned skin graft due to an acute change in the patient's blood pressure.
–54	Surgical Care Only	The operating surgeon provides only the surgical portion of the care; another physician provides postoperative management.	A traveling surgeon performs a mastectomy but the patient's local physician manages all postoperative care.
–55	Postoperative Management Only	The reporting physician provides only the postoperative management of a procedure performed by another physician.	A local physician assumes postoperative care for a patient whose surgery was performed by an out-of-town specialist.
–56	Preoperative Management Only	The reporting physician performed only the preoperative care and evaluation.	A primary care physician performs and documents the preoperative evaluation for a procedure performed by a specialist.
–57	Decision for Surgery	The E/M service performed the day before or the day of a major surgery (90-day global period) resulted in	A patient presents to the ED with a large infected wound. The surgeon evaluates the patient (E/M)

Modifier	Name	Definition	Clinical Example
		the initial decision to perform the surgery. Appended to the E/M code, not the surgery code.	and decides to perform a complex debridement the same day. The E/M is reported with –57.
–58	Staged or Related Procedure	A procedure or service performed during the postoperative period that was (a) planned prospectively, (b) more extensive than the original procedure, or (c) a therapeutic service following a diagnostic procedure.	A patient has a wide excision of a malignant melanoma (Stage 1); 2 weeks later, as planned, the surgeon performs sentinel lymph node biopsy (–58 appended to the second code).
–59	Distinct Procedural Service	A procedure or service that is not normally reported together with another procedure or service but is appropriate under the circumstances because it is a different procedure, different session, different anatomical site, or different organ system. Used to override an NCCI edit when appropriate.	A surgeon excises a malignant lesion of the back and, during the same session, excises a separately identified benign lesion of the leg. The second procedure receives –59 to indicate a distinct anatomical site.
–62	Two Surgeons	Two surgeons of different specialties each perform a distinct portion of a single procedure. Both surgeons report the same CPT code, each with –62. Each surgeon's	A plastic surgeon and an orthopedic surgeon each perform distinct portions of a complex reconstructive procedure. Both bill the same code with –62.

Modifier	Name	Definition	Clinical Example
		operative report must document their specific contribution.	
–63	Procedure on Infant	Procedure is performed on an infant weighing less than 4 kg (approximately 8.8 lb). Reflects the increased complexity and risk of surgery on neonates.	A neonatologist performs a skin closure procedure on a premature infant weighing 2.8 kg.
–66	Surgical Team	A highly complex procedure requires a team of surgeons of different specialties simultaneously. Each team member bills the same CPT code with –66.	A complex replantation surgery requires simultaneous participation of a vascular surgeon, orthopedic surgeon, and plastic surgeon, each contributing unique skill sets at the same time.
–76	Repeat Procedure by Same Physician	A procedure or service was repeated subsequent to the original procedure or service by the same physician or other qualified health care professional.	A patient has a wound debrided twice in the same day by the same physician due to rapid re-contamination. The second debridement is coded with –76.
–77	Repeat Procedure by Another Physician	A procedure or service was repeated subsequent to the original procedure or service by another physician or qualified health care professional.	A patient has a dressing change performed by the attending physician in the morning and requires a repeat dressing change by the covering physician in the evening. The second dressing

Modifier	Name	Definition	Clinical Example
			change is coded with –77.
–78	Unplanned Return to Operating Room	An unplanned return to the operating room by the same physician for a related procedure during the postoperative period. The new procedure is reported with the surgery code plus –78.	Patient undergoes excision of a malignant lesion. Three days later, the patient returns to the OR for evacuation of a hematoma at the surgical site. The evacuation is coded with –78.
–79	Unrelated Procedure During Postop Period	A procedure performed during the postoperative period that is unrelated to the original procedure or condition. Distinct from –58 (which is for related procedures).	Patient is in a 90-day global period after a mastectomy. She falls and requires repair of a traumatic laceration of the hand. The laceration repair is coded with –79.
–80	Assistant Surgeon	A physician acts as an assistant surgeon and provides significant assistance in performing a procedure. Both the primary surgeon and assistant report the same CPT code; the assistant appends –80.	A general surgery resident attending as a full assistant during a complex wound reconstruction with the teaching attending. The attending bills the primary code; the assisting physician bills with –80.
–81	Minimum Assistant Surgeon	A physician acts as a minimum assistant surgeon — not a full assistant, but a minimal level of assistance is required.	A surgeon requires minimal assistance to hold instruments during a relatively straightforward excision of a large cyst.

Modifier	Name	Definition	Clinical Example
–82	Assistant Surgeon (Qualified Resident Unavailable)	When a qualified resident surgeon is not available and a second surgeon assists. Used in teaching hospitals to justify non-resident surgical assistance.	A teaching hospital's surgery department does not have a qualified resident available in the appropriate specialty; a staff surgeon assists and appends –82.

4.1 Modifier Coding Scenarios

📄 Scenario 1: Bilateral Procedure with Multiple Procedures

Operative Note: A 62-year-old male presents with suspicious pigmented lesions on both the right and left cheeks. The surgeon excises a 0.6 cm benign appearing lesion from the right cheek (excised diameter 1.0 cm) and a 0.8 cm lesion from the left cheek (excised diameter 1.2 cm). Both closures are simple. During the same session, the surgeon also performs a shave removal of a small seborrheic keratosis from the left forearm.

Step-by-Step Analysis:

1. Right cheek benign lesion excision — 1.0 cm: Code `11440` (excision, benign lesion, face/ears/eyelids/nose/lips; excised diameter 0.6 to 1.0 cm)
2. Left cheek benign lesion excision — 1.2 cm: Code `11441` (excised diameter 1.1 to 2.0 cm). Append **–51** (multiple procedures same session)
3. Shave removal, seborrheic keratosis, left forearm: Code `11302`. Append **–51**.

Final Codes: 11440, 11441–51, 11302–51

Common Mistake: Do NOT report the wound closure separately — it is included in the excision code.

📄 Scenario 2: Decision for Surgery (Modifier –57)

Clinical Situation: A patient presents to the office on a Monday afternoon with a large, infected, necrotic wound on the heel. The surgeon performs a comprehensive evaluation, documents a detailed history and physical, and makes the decision to take the patient to the operating room the next morning (Tuesday) for complex debridement. Surgery is performed Tuesday morning. The debridement code has a 90-day global period.

Step-by-Step Analysis:

1. Monday's E/M visit resulted in the decision for major surgery (90-day global). Append **–57** to the E/M code so it can be billed separately and will not be denied as part of the global package preoperative visit.
2. Tuesday's debridement is billed without any modifier on the surgical code itself.

Final Codes: 99213–57 (or appropriate E/M level) for Monday; appropriate debridement code for Tuesday

Key Point: Modifier –57 goes on the E/M, NOT on the surgery code. It only applies when the surgery has a 90-day global period.

📄 Scenario 3: Two Surgeons (Modifier –62)

Operative Note: A 45-year-old female undergoes a complex reconstruction of the breast following mastectomy. The procedure requires both a plastic surgeon (who performs the reconstruction using a pedicle flap) and a general surgeon (who performs lysis of adhesions and tissue preparation). Both surgeons actively participate in distinct portions of the single operative session simultaneously.

Step-by-Step Analysis:

1. Both surgeons report the same CPT code for the primary procedure.

2. Each appends Modifier **–62** to indicate co-surgery.

3. Each surgeon must have a separate operative note documenting his or her distinct contribution.

4. Reimbursement for each surgeon is typically 62.5% of the total allowed amount.

Final Codes: Primary CPT–62 (Plastic Surgeon); Primary CPT–62 (General Surgeon)

Common Mistake: Using –80 (assistant surgeon) when two surgeons truly perform distinct parts. The –80 modifier significantly reduces reimbursement; –62 is the appropriate modifier for true co-surgeons.

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5. The Integumentary System (10000–19999)

5.1 Brief Anatomy Review

Before selecting integumentary codes, the coder must understand the structure of the skin, as code selection often depends on the depth of the procedure relative to the skin layers.

Layer	Description	Coding Relevance
Epidermis	Outermost layer; avascular; provides waterproofing and barrier protection. Contains keratinocytes, melanocytes.	Simple (superficial) repairs involve epidermis only.
Dermis	Layer beneath epidermis; contains collagen, blood vessels, hair follicles,	Intermediate repairs involve dermis; shaving procedures reach the

Layer	Description	Coding Relevance
	sweat glands, nerve endings.	dermis.
Subcutaneous Tissue (Hypodermis)	Deepest layer of skin; composed of fat and connective tissue. Insulates and cushions the body.	Full-thickness excisions, complex repairs, and deep debridement involve the subcutaneous layer.
Fascia	Dense connective tissue sheaths surrounding muscles (not technically skin, but relevant to debridement codes).	Debridement involving fascia uses specific codes distinct from skin-only debridement.
Muscle and Bone	Deeper structures below the integument.	Deep debridement to muscle or bone uses the highest-level debridement codes.

> 📌 **Coder's Corner**
>
> When reading an operative report, watch for phrases like "excision to the deep dermal layer," "carried down to subcutaneous fat," "fascia identified and preserved," and "wound extended to periosteum." These anatomical depth descriptors directly impact your code selection in nearly every integumentary subsection.

6. Skin Lesion Removal

6A. Shaving of Skin Lesions (11300–11313)

Shaving refers to the removal of epidermal or dermal lesions by a sharp instrument (e.g., scalpel, razor blade) without full-thickness excision into the subcutaneous layer. The wound typically does not require suturing and heals by secondary intention or with electrosurgical hemostasis.

How to Select the Correct Shaving Code: Code selection is based on two factors: (1) **anatomical location** and (2) **lesion diameter** in millimeters (mm).

Code	Location	Diameter
11300	Trunk, arms, legs	0.5 cm or less
11301	Trunk, arms, legs	0.6 to 1.0 cm
11302	Trunk, arms, legs	1.1 to 2.0 cm
11303	Trunk, arms, legs	Over 2.0 cm
11305	Scalp, neck, hands, feet, genitalia	0.5 cm or less
11306	Scalp, neck, hands, feet, genitalia	0.6 to 1.0 cm
11307	Scalp, neck, hands, feet, genitalia	1.1 to 2.0 cm
11308	Scalp, neck, hands, feet, genitalia	Over 2.0 cm
11310	Face, ears, eyelids, nose, lips, mucous membrane	0.5 cm or less
11311	Face, ears, eyelids, nose, lips, mucous membrane	0.6 to 1.0 cm
11312	Face, ears, eyelids, nose, lips, mucous membrane	1.1 to 2.0 cm
11313	Face, ears, eyelids, nose, lips, mucous membrane	Over 2.0 cm

⚠ **Stop! Think!**

For shaving codes, you measure the **lesion itself** — NOT the excised diameter with margins. Shaving does not include a margin of normal tissue. This is a critical difference from excision codes. What would you code for a shaved lesion on the forearm measuring 0.7 cm? Answer: **11301**.

6B. Excision of Benign Lesions (11400–11446)

Excision means the full-thickness removal of a lesion, including margins of normal surrounding tissue. The wound created requires repair — but remember: simple

closure is INCLUDED in the excision code. Only intermediate or complex closures may be separately reported.

The Critical Measurement Formula

For excision codes, you do NOT measure just the lesion. You measure the **excised diameter**, which includes the lesion AND the margins of normal tissue taken around it:

> ❗ **The Excision Measurement Formula**
>
> **Excised Diameter = Lesion Diameter + (Narrowest Margin × 2)**
>
> Example: A lesion measures 1.5 cm. The surgeon takes 0.2 cm margins all around.
> Excised Diameter = 1.5 + (0.2 × 2) = 1.5 + 0.4 = **1.9 cm**
>
> You then look up the excision code based on this 1.9 cm excised diameter, the anatomical location, and whether the lesion is benign or malignant.

Code Range	Location	Excised Diameter Range
11400	Trunk, arms, legs	0.5 cm or less
11401	Trunk, arms, legs	0.6 to 1.0 cm
11402	Trunk, arms, legs	1.1 to 2.0 cm
11403	Trunk, arms, legs	2.1 to 3.0 cm
11404	Trunk, arms, legs	3.1 to 4.0 cm
11406	Trunk, arms, legs	Over 4.0 cm
11420	Scalp, neck, hands, feet, genitalia	0.5 cm or less
11421–11426	Scalp, neck, hands, feet, genitalia	0.6 cm up to over 4.0 cm (same size breaks as 11400 range)
11440	Face, ears, eyelids, nose, lips, mucous membrane	0.5 cm or less

Code Range	Location	Excised Diameter Range
11441–11446	Face, ears, eyelids, nose, lips, mucous membrane	0.6 cm up to over 4.0 cm (same size breaks as 11400 range)

6C. Excision of Malignant Lesions (11600–11646)

Excision of **malignant lesions** follows the identical measurement principle as benign lesion excision. The same formula applies: Excised Diameter = Lesion + (Narrowest Margin × 2). However, malignant lesion excisions are coded from a different code range (11600–11646) and typically command higher reimbursement.

Code	Location	Excised Diameter
11600	Trunk, arms, legs	0.5 cm or less
11601	Trunk, arms, legs	0.6 to 1.0 cm
11602	Trunk, arms, legs	1.1 to 2.0 cm
11603	Trunk, arms, legs	2.1 to 3.0 cm
11604	Trunk, arms, legs	3.1 to 4.0 cm
11606	Trunk, arms, legs	Over 4.0 cm
11620	Scalp, neck, hands, feet, genitalia	0.5 cm or less
11621–11626	Scalp, neck, hands, feet, genitalia	0.6 cm up to over 4.0 cm
11640	Face, ears, eyelids, nose, lips, mucous membrane	0.5 cm or less
11641–11646	Face, ears, eyelids, nose, lips, mucous membrane	0.6 cm up to over 4.0 cm

Clinical Scenarios — Malignant Lesion Excision

📄 Scenario A: Straightforward Malignant Excision

Operative Note Excerpt: "A 2.0 cm squamous cell carcinoma is marked on the patient's left forearm. Margins of 0.5 cm are taken all around. The lesion and

surrounding tissue are excised en bloc. Estimated total excised diameter 3.0 cm. Wound closed primarily."

Calculation: Lesion (2.0 cm) + (0.5 cm margin × 2) = 2.0 + 1.0 = **3.0 cm excised diameter**

Location: Forearm = Trunk/Arms/Legs category

Code: `11603` (Excision, malignant lesion, trunk/arms/legs; 2.1 to 3.0 cm)

Note: Simple closure is included — do NOT separately code the closure.

📄 Scenario B: Malignant Excision with Intermediate Repair

Operative Note Excerpt: "A 1.2 cm basal cell carcinoma is excised from the right cheek with 0.3 cm margins. Total excised diameter 1.8 cm. Due to the depth of excision and tension on the wound edges, a layered closure with three layers of interrupted 3-0 Vicryl in the deep dermis and running 5-0 nylon in the epidermis was performed."

Calculation: 1.2 + (0.3 × 2) = 1.2 + 0.6 = **1.8 cm excised diameter**

Location: Right cheek = Face/ears/eyelids/nose/lips category

Code 1: `11641` (Excision, malignant, face; 0.6 to 1.0 cm) — Wait! 1.8 cm falls in the 1.1–2.0 cm range = `11642`

Code 2: `12052` (Intermediate repair, face/ears/eyelids/nose/lips; 2.6–5.0 cm) — The layered closure qualifies as intermediate. The wound length dictates the repair code (not the excised diameter). Measure the total wound length for repair coding.

Common Mistake: Do NOT code both a simple and an intermediate repair for the same wound. Select the highest level of repair required.

📄 Scenario C: Multiple Malignant Lesions

Operative Note Excerpt: "Three separate malignant melanomas are excised from the patient's back. Lesion #1: 0.8 cm, margins 0.5 cm, excised diameter 1.8 cm. Lesion #2: 1.5 cm, margins 1.0 cm, excised diameter 3.5 cm. Lesion #3: 0.4 cm, margins 0.5 cm, excised diameter 1.4 cm. All closures are simple."

Step-by-Step:

1. Lesion #1 (1.8 cm, trunk): `11602` (1.1–2.0 cm) — Report as primary procedure
2. Lesion #2 (3.5 cm, trunk): `11604` (3.1–4.0 cm) — Append **–51**
3. Lesion #3 (1.4 cm, trunk): `11602` (1.1–2.0 cm) — Append **–59** (distinct lesion, same code range)

Final Codes: 11604, 11602–51, 11602–59 (list highest RVU code first)

6D. Destruction of Lesions (17000–17286)

Destruction differs from excision in that the lesion is obliterated rather than removed for pathological analysis. Common destruction methods include cryotherapy (freezing), laser ablation, electrosurgery (electrodesiccation and curettage), and chemical destruction (e.g., trichloroacetic acid).

> ❗ **Key Distinction**
>
> If a specimen is sent to pathology, the procedure is an **excision**. If the lesion is obliterated with no specimen, the procedure is a **destruction**. This distinction is critical for proper code selection and for determining whether a pathology code (88305, etc.) should also be reported.

Code(s)	Lesion Type	Description
17000	Premalignant	Destruction of

Code(s)	Lesion Type	Description
		premalignant lesion (e.g., actinic keratosis); first lesion. By any method.
17003	Premalignant	Destruction of premalignant lesions, 2nd through 14th lesions (each additional). Report in conjunction with 17000.
17004	Premalignant	Destruction of premalignant lesions, 15 or more lesions. Use INSTEAD of 17000 + 17003 when 15+ lesions are destroyed.
17110	Benign	Destruction of benign lesions (e.g., common warts, molluscum, milia); up to 14 lesions. By any method.
17111	Benign	Destruction of benign lesions; 15 or more lesions.
17260	Malignant	Destruction, malignant lesion; any area 0.5 cm or less
17261	Malignant	Destruction, malignant lesion; any area 0.6 to 1.0 cm
17262	Malignant	Destruction, malignant lesion; any area 1.1 to 2.0 cm
17263	Malignant	Destruction, malignant lesion; any area 2.1 to 3.0 cm
17264	Malignant	Destruction, malignant lesion; any area 3.1 to 4.0 cm
17266	Malignant	Destruction, malignant lesion; any area over 4.0 cm
17270–17286	Malignant	Destruction, malignant lesions by specific site (scalp, neck, hands, feet,

Code(s)	Lesion Type	Description
		face, ears)

> 📌 **Coder's Corner — Destruction Coding Trick**
>
> **Premalignant lesion counting:** A physician destroys 8 actinic keratoses. Code as: 17000 (first lesion) + 17003 × 7 (seven additional lesions). Report 17003 with 7 units. **If 15 or more lesions are destroyed, use only 17004** — do not combine 17000 and 17003 when the total is 15 or more. This is a very common exam question!

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7. Wound Repair (12001–13160)

Wound repair codes are selected based on three criteria: (1) the **complexity** of the repair, (2) the **anatomical location**, and (3) the **total length** in centimeters. When multiple repairs of the same complexity are performed in the same anatomical grouping, the lengths are **added together** and reported as a single code.

7.1 The Three Categories of Wound Repair

Category	Code Range	What It Involves	Example
Simple	12001–12021	One-layer closure of skin and/or subcutaneous tissue without significant contamination. Involves epidermis, dermis, or subcutaneous tissue only. No undermining needed.	A clean laceration closed with a running suture in one layer.

Category	Code Range	What It Involves	Example
Intermediate	12031–12057	Layered closure of one or more of the deeper layers of subcutaneous tissue AND superficial (non-muscle) fascia OR a single-layer closure of a heavily contaminated wound requiring extensive cleaning/removal of particulate matter.	A wound on the forearm closed with 2-0 Vicryl in the deep dermis and 4-0 nylon in the epidermis (2 layers = intermediate).
Complex	13100–13160	Repair requiring more than layered closure — scar revision, debridement (e.g., traumatic lacerations), extensive undermining, retention sutures, or complex techniques such as split-thickness closure.	A large facial laceration requiring extensive debridement, retention sutures, and three-layer closure with undermining.

7.2 Key Rule: Adding Repair Lengths

> ❗ **Critical Coding Rule — Adding Lengths**
>
> When multiple wound repairs are performed:
>
> **ADD** the lengths of repairs of the **same complexity type** performed in the **same anatomical grouping**.
>
> **DO NOT ADD** lengths across different complexity levels or different anatomical groupings.
>
> Report the highest complexity level first, then each lower complexity as a

separate code with –51.

CPT Anatomical Groupings for Wound Repair

Grouping	Body Sites Included
Group 1: Scalp, axillae, trunk, extremities (excluding hands and feet)	Scalp, chest, abdomen, back, shoulders, upper arms, forearms, thighs, legs
Group 2: Face, ears, eyelids, nose, lips, mucous membranes	All facial structures, oral mucosa
Group 3: Hands, feet, genitalia	Palms, dorsum of hands, soles of feet, dorsum of feet, genital area

7.3 Wound Repair Code Reference Table

Category	Code	Anatomical Grouping	Length
Simple	12001	Scalp, neck, axillae, external genitalia, trunk, extremities (hands/feet)	2.5 cm or less
Simple	12002	Scalp, neck, axillae, external genitalia, trunk, extremities (hands/feet)	2.6 to 7.5 cm
Simple	12004	Scalp, neck, axillae, external genitalia, trunk, extremities (hands/feet)	7.6 to 12.5 cm
Simple	12011	Face, ears, eyelids, nose, lips, mucous membrane	2.5 cm or less
Simple	12013	Face, ears, eyelids, nose, lips,	2.6 to 5.0 cm

Category	Code	Anatomical Grouping	Length
		mucous membrane	
Intermediate	12031	Scalp, axillae, trunk, extremities (hands/feet)	2.5 cm or less
Intermediate	12032	Scalp, axillae, trunk, extremities (hands/feet)	2.6 to 7.5 cm
Intermediate	12041	Neck, hands, feet, external genitalia	2.5 cm or less
Intermediate	12051	Face, ears, eyelids, nose, lips, mucous membrane	2.5 cm or less
Intermediate	12052	Face, ears, eyelids, nose, lips, mucous membrane	2.6 to 5.0 cm
Complex	13100	Trunk	1.1 to 2.5 cm
Complex	13101	Trunk	2.6 to 7.5 cm
Complex	13120	Scalp, arms, legs	1.1 to 2.5 cm
Complex	13131	Forehead, cheeks, chin, mouth, neck, axillae, hands/feet	1.1 to 2.5 cm
Complex	13150	Eyelids, nose, ears, lips	1.0 cm or less
Complex	13151	Eyelids, nose, ears, lips	1.1 to 2.5 cm

7.4 Clinical Coding Scenarios — Wound Repair

📄 Scenario 1: Adding Lengths — Same Complexity, Same Grouping

Operative Note Excerpt: "Patient presents with traumatic lacerations from a motor vehicle accident. A 3.0 cm simple laceration of the right forearm and a 2.0 cm simple laceration of the left forearm are repaired with running 4-0 nylon

suture in a single layer."

Analysis: Both repairs are simple complexity and in the same anatomical grouping (trunk/arms/legs = Group 1). ADD the lengths: 3.0 + 2.0 = **5.0 cm total**.

Code: 12002 (Simple repair, scalp/neck/axillae/extremities; 2.6–7.5 cm)

Common Mistake: Coding two separate simple repair codes (12001 + 12002). You must add lengths of the same complexity in the same grouping and report a single code.

📄 Scenario 2: Different Complexity Levels — Do NOT Add

Operative Note Excerpt: "A 4.0 cm complex laceration of the trunk is repaired with retention sutures and extensive undermining. Additionally, a 3.0 cm simple laceration of the right shoulder is repaired in one layer."

Analysis: These are different complexity levels (complex vs. simple). Do NOT add the lengths together.

1. Complex trunk repair, 4.0 cm: `13101` (Complex, trunk, 2.6–7.5 cm) — Primary code
2. Simple shoulder repair, 3.0 cm (shoulder is in Group 1 with trunk): `12002`–**51** (Simple, 2.6–7.5 cm, with multiple procedure modifier)

Final Codes: 13101, 12002–51

📄 Scenario 3: Mixing Facial and Non-Facial Repairs

Operative Note Excerpt: "Patient has a 2.0 cm intermediate repair of the right cheek and a 3.5 cm intermediate repair of the left forearm. Both wounds required layered closure."

Analysis: Both are intermediate complexity. However, the cheek is in Group 2 (face) and the forearm is in Group 1 (extremities). **Different groups = different codes; do NOT add lengths.**

1. Right cheek (face group), 2.0 cm intermediate: `12051` (Intermediate, face; 2.5 cm or less)
2. Left forearm (trunk/extremities group), 3.5 cm intermediate: `12032`–**51** (Intermediate, scalp/axillae/trunk/extremities; 2.6–7.5 cm)

Final Codes: 12051, 12032–51

📄 Scenario 4: Complex vs. Simple — Who Gets Reported First?

Rule: Always list the **highest complexity** (and highest RVU) code first on the claim, followed by lower complexity codes with Modifier –51. This maximizes proper reimbursement and follows correct claim sequencing protocol.

Coding Order: Complex → Intermediate → Simple

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8. Skin Grafts and Flaps

Skin grafts and flaps are used to cover wounds that cannot be closed primarily — such as large traumatic wounds, post-excision defects, and burns. Selecting the correct code requires knowing the **type of graft**, the **size of the recipient site**, and the **donor site**.

8.1 Types of Skin Grafts

- **Split-Thickness Skin Graft (STSG):** Harvested from the donor site using a dermatome, removing only the epidermis and part of the dermis. The donor site heals on its own. Used for large surface area coverage. Codes: **15100–**

15101 (trunk/arms/legs), **15120–15121** (face/scalp/eyelids/ears/nose/lips/hands/feet/genitalia).

- **Full-Thickness Skin Graft (FTSG):** Includes epidermis and all of the dermis. The donor site requires primary closure. Higher quality result than STSG. Used for smaller defects, especially on the face. Codes: **15200–15201** (trunk/arms/legs), **15220–15221** (scalp/arms/legs), **15240–15241** (forehead/cheeks/chin/mouth/neck/axillae/hands/feet), **15260–15261** (nose, ears, eyelids, lips).
- **Free Flap:** A segment of tissue (skin, fat, muscle, or bone) removed from a distant donor site with its blood supply (artery and vein) and re-attached (anastomosed) microsurgically at the recipient site. Highly complex. Codes in the 15756–15758 range.
- **Pedicle Flap:** A segment of tissue that remains partially attached to the donor site (maintaining its original blood supply) while being moved to cover an adjacent defect. Codes: 15570–15738.

8.2 Adjacent Tissue Transfer (14000–14350)

Adjacent tissue transfer or **rearrangement** involves moving a section of nearby tissue to cover a defect, while maintaining the tissue's blood supply. Common techniques include Z-plasty, W-plasty, rotation flap, and advancement flap. Code selection is based on the **primary defect area** in square centimeters and the **anatomical location**.

Code	Location	Area of Defect
14000	Trunk	10 sq cm or less
14001	Trunk	10.1 to 30.0 sq cm
14020	Scalp, arms, legs	10 sq cm or less
14021	Scalp, arms, legs	10.1 to 30.0 sq cm
14040	Forehead, cheeks, chin, mouth, neck, axillae, genitalia, hands, feet	10 sq cm or less
14060	Eyelids, nose, ears, lips	10 sq cm or less

Code	Location	Area of Defect
14301	Any area	Each additional 30.0 sq cm, or part thereof (add-on code, used with primary code)

> 💡 **Did You Know?**
>
> When coding skin grafts, you may need to report **both** a donor site code AND a recipient site code. The donor site code is reported only when there is a separate identifiable service at the donor site (such as closure of the donor site with a flap or graft — not simple closure, which is included). Always read the full operative note carefully to determine what was done at both the donor and recipient sites before selecting codes.

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9. Debridement (11000–11047)

Debridement is the removal of devitalized (dead), contaminated, or foreign material from a wound to promote healing. It is one of the most frequently performed wound care procedures and is heavily tested on the CPC exam.

9.1 Selective vs. Non-Selective Debridement

- **Selective debridement:** Targeting only necrotic or devitalized tissue while preserving healthy tissue. Typically performed by a skilled clinician using sharp instruments, enzymatic agents, or autolytic techniques. Coded with 97597–97598 (active wound care management codes), NOT the 11000 series.
- **Non-selective debridement (surgical debridement):** Removal of devitalized tissue without precise discrimination — for example, wet-to-dry dressings or mechanical irrigation. Coded with 97602 (non-selective, per session).

- **Surgical debridement (11000 series):** Physician-performed debridement reaching specific tissue depths, coded based on depth and surface area.

9.2 CPT 11000 Series — Depth-Based Debridement

Code	Depth	Description
11000	Skin only	Debridement of extensive eczematous or infected skin; up to 10% of body surface area
11001	Skin only	Each additional 10% body surface area or part thereof (add-on code with 11000)
11004	Skin, subcutaneous tissue, muscle, fascia	Debridement of skin, subcutaneous tissue, muscle, and fascia for necrotizing soft tissue infection; genitalia, perineum, abdominal wall
11005	Skin, subcutaneous tissue, muscle, fascia	Debridement of abdominal wall (open wound) — skin, subcutaneous tissue, muscle, fascia
11042	Subcutaneous tissue	Debridement; subcutaneous tissue (includes epidermis and dermis, if performed); first 20 sq cm or less
11043	Muscle and/or fascia	Debridement; muscle and/or fascia (includes epidermis, dermis, and subcutaneous tissue, if performed); first 20 sq cm or less
11044	Bone	Debridement; bone (includes skin, subcutaneous tissue, muscle and/or fascia, if performed); first 20 sq cm or less
11045	Subcutaneous tissue	Each additional 20 sq cm, or part thereof (add-on

Code	Depth	Description
		code with 11042)
11046	Muscle and/or fascia	Each additional 20 sq cm, or part thereof (add-on code with 11043)
11047	Bone	Each additional 20 sq cm, or part thereof (add-on code with 11044)

📄 Debridement Scenario 1: Subcutaneous Debridement

Operative Note: "Patient with a diabetic foot ulcer on the right heel. Physician performs sharp debridement of a 45 sq cm wound, removing all nonviable subcutaneous tissue. The wound is debrided to viable subcutaneous fat."

Depth: Subcutaneous tissue = 11042 series

Calculation: First 20 sq cm = `11042`; Remaining 25 sq cm (one additional 20 sq cm unit) = `11045` × 2 units

Final Codes: 11042, 11045 × 2

📄 Debridement Scenario 2: Bone Debridement

Operative Note: "Patient with stage IV pressure ulcer of the sacrum. Physician debrids a 35 sq cm wound down to visible bone. Bone cortex is also debrided. Wound depth reaches periosteum."

Depth: Bone = 11044 series (remember: bone debridement includes all shallower layers)

Calculation: First 20 sq cm = `11044`; Remaining 15 sq cm (within one additional 20 sq cm unit) = `11047` × 1 unit

Final Codes: 11044, 11047

Common Mistake: Do NOT also code 11042 and 11043 — the bone code

(11044) is all-inclusive for shallower depths.

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10. Burns (16000–16036)

Burn coding requires knowledge of burn depth classification, total body surface area (TBSA) estimation using the **Rule of Nines**, and distinguishing between initial and subsequent treatment visits.

10.1 Burn Depth Classification

- **Superficial (First-degree):** Epidermis only; erythema (redness), no blistering. Example: sunburn.
- **Partial-thickness (Second-degree):** Epidermis and part of dermis; blistering, moist wound bed.
- **Full-thickness (Third-degree):** All layers of skin destroyed; may involve subcutaneous tissue, muscle, bone. Waxy, leathery, painless (nerve endings destroyed).

10.2 Rule of Nines — Body Surface Area Estimation

The **Rule of Nines** divides the adult body into regions, each representing approximately 9% (or a multiple of 9%) of total body surface area (TBSA). This is used to estimate burn extent.

Body Region	% TBSA (Adult)
Head and neck	9%
Right arm (entire)	9%
Left arm (entire)	9%
Anterior trunk (chest + abdomen)	18%
Posterior trunk (upper + lower back)	18%

Body Region	% TBSA (Adult)
Right leg (entire)	18%
Left leg (entire)	18%
Genitalia/perineum	1%
Total	**100%**

> 💡 **Did You Know?**
>
> In children, the Rule of Nines is modified — a child's head is proportionally larger (up to 18% in infants) and the legs are smaller. Pediatric burn assessment often uses the **Lund and Browder chart** instead of the standard Rule of Nines. For CPC exam purposes, know the adult Rule of Nines.

10.3 Burn Treatment Codes

Code	Description
16000	Initial treatment, first-degree burn; minor (local treatment only)
16020	Dressing and/or debridement of partial-thickness burns; small (less than 5% TBSA)
16025	Dressing and/or debridement of partial-thickness burns; medium (e.g., whole face or whole extremity, 5–10% TBSA)
16030	Dressing and/or debridement of partial-thickness burns; large (greater than 10% TBSA or 30% TBSA or greater, patient under anesthesia)
16035	Escharotomy, each incision (for full-thickness circumferential burns causing compartment syndrome)
16036	Escharotomy; each additional incision (add-on code)

⚠ **Stop! Think!**

Burn codes 16020–16030 can be reported for **each visit** where dressing changes and debridement are performed. If a patient comes in weekly for burn dressing changes for 6 weeks, the appropriate code is reported **at each visit**. These are not one-time procedure codes. However, if the patient's care falls within the global period of a surgical burn procedure, simple dressing changes are included and NOT separately reported.

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11. Breast Procedures (19000–19499)

Breast procedure codes encompass a wide range of diagnostic and therapeutic procedures, from needle aspiration of a cyst to radical mastectomy and complex reconstructive surgery. Accurate coding of breast procedures requires careful reading of the operative report to determine the exact type of procedure performed.

11.1 Breast Biopsy Techniques

- **Fine Needle Aspiration (FNA):** A needle is used to aspirate fluid or cells from a breast lesion. Coded under 10005–10012 (image-guided biopsy series) or with E/M services in a clinic setting.
- **Core Needle Biopsy:** A large-bore needle obtains a cylindrical core of tissue for histologic analysis. Codes: 19100 (percutaneous, without imaging guidance) or image-guided codes 19081–19086.
- **Incisional Biopsy:** A portion of the mass is surgically removed for diagnosis. The mass is not completely excised.
- **Excisional Biopsy:** The entire mass is removed surgically. Code: **19120** (excision of cyst, fibroadenoma, or other benign or malignant tumor, aberrant breast tissue, duct lesion, nipple or areolar lesion, open).

- **Wire Localization Biopsy:** A thin wire is placed (under imaging guidance) to mark a non-palpable lesion before open surgical biopsy. The wire placement and the biopsy are coded separately.

11.2 Cyst Aspiration

Code **19000** is used for puncture aspiration of a cyst of the breast. Code **19001** is the add-on code for each additional cyst puncture. These are separately reportable from E/M services when performed on the same day.

11.3 Mastectomy Types

Mastectomy Type	CPT Code	What Is Removed
Partial Mastectomy (lumpectomy, tylectomy)	19301	Excision of a breast tumor with a margin of normal breast tissue. The breast is preserved.
Partial Mastectomy with Axillary Lymph Node Dissection	19302	Partial mastectomy plus removal of axillary lymph nodes.
Simple/Total Mastectomy	19303	Entire breast removed; axillary lymph nodes and pectoral muscles preserved.
Modified Radical Mastectomy	19307	Entire breast and axillary lymph nodes removed; pectoral muscles preserved. Most common type today.
Radical Mastectomy	19305	Entire breast, pectoral muscles, and axillary lymph nodes removed. Rarely performed today.
Extended Radical Mastectomy	19306	Radical mastectomy with additional resection of internal mammary lymph nodes.

11.4 Sentinel Lymph Node Biopsy

A **sentinel lymph node biopsy** (SLNB) is often performed in conjunction with mastectomy or wide excision for breast cancer staging. The sentinel node (the first lymph node to receive drainage from the tumor) is identified using a radioactive tracer or blue dye and surgically removed for pathologic examination. CPT code **38792** (injection of radioactive tracer for lymph node visualization) may be reported in addition to the surgical biopsy code.

11.5 Breast Reconstruction Overview

- **Tissue expander placement:** Code **19357** — A temporary device placed under the pectoralis muscle to stretch the tissue for future reconstruction.
- **Breast implant insertion:** Code **19340** (immediate) or **19342** (delayed) — After tissue expansion, the permanent implant is placed.
- **TRAM flap (Transverse Rectus Abdominis Myocutaneous):** Code **19367** — Muscle and overlying skin/fat from the abdomen are used to reconstruct the breast.
- **Nipple reconstruction:** Code **19350** — Reconstruction of the nipple and/or areola.

11.6 Breast Procedure Coding Scenarios

📄 Scenario 1: Lumpectomy with Sentinel Node Biopsy

Operative Note Excerpt: "A 58-year-old female with known right breast carcinoma. Under general anesthesia, a partial mastectomy (lumpectomy) is performed with clear margins confirmed by intraoperative frozen section. Using previously injected isosulfan blue dye, the sentinel lymph node is identified in the right axilla and excised for pathologic examination."

Step-by-Step Analysis:

1. Partial mastectomy: 19301

2. Sentinel lymph node biopsy (separate procedure at a different anatomical site — axilla): `38500` (Biopsy or excision of lymph node, superficial) — Append **–51** or check payer policy; some report with –59 for distinct anatomical site.

Final Codes: 19301, 38500–51

Common Mistake: Confusing a sentinel lymph node biopsy with a formal axillary dissection (19302). The SLNB is a diagnostic procedure; axillary dissection is therapeutic. Read the operative note carefully.

📄 Scenario 2: Bilateral Mastectomy

Operative Note Excerpt: "Patient is BRCA1-positive and elects prophylactic bilateral simple mastectomy. Both breasts are removed in their entirety. Axillary dissection is NOT performed. Tissue expanders are placed bilaterally at the same operative session."

Step-by-Step Analysis:

1. Bilateral simple mastectomy: `19303`–**50** (Simple mastectomy, bilateral modifier)
2. Bilateral tissue expander placement: `19357`–**50** (Immediate insertion, bilateral; append –51 as additional procedure)

Final Codes: 19303–50, 19357–50–51

Note: Always verify payer policy regarding Modifier –50 vs. billing the same code twice with –RT and –LT. Medicare prefers –50; many commercial payers prefer the –RT/–LT approach.

12. Real-World Coding Scenarios

📄 Real-World Scenario 1: Office Excision — Benign Lesion with Intermediate Repair

Operative Note: "PREOPERATIVE DIAGNOSIS: Lipoma, left shoulder. POSTOPERATIVE DIAGNOSIS: Same. PROCEDURE: After informed consent was obtained, the left shoulder was prepped and draped. Local anesthesia with 1% lidocaine was injected subcutaneously. An elliptical incision was made around the 2.5 cm lipoma. The lesion was excised en bloc with 0.5 cm margins of normal tissue. Total excised diameter 3.5 cm. The wound was irrigated. Deep subcutaneous layer was closed with 2-0 Vicryl interrupted sutures. Skin closed with 4-0 nylon. Specimen sent to pathology."

Step 1 — Calculate excised diameter: 2.5 cm lesion + (0.5 cm × 2) = **3.5 cm**

Step 2 — Determine benign vs. malignant: Lipoma = benign (11400 series)

Step 3 — Determine anatomical location: Left shoulder = Trunk/Arms/Legs group

Step 4 — Select excision code: 3.5 cm falls in 3.1–4.0 cm range = `11404`

Step 5 — Assess repair: Two-layer closure (deep Vicryl + skin nylon) = **Intermediate repair**. Intermediate closure of an excision wound IS separately reportable (simple closure is included, intermediate is not).

Step 6 — Select repair code: Shoulder (trunk/extremities group), intermediate. Measure wound length from operative note (not provided here — assume 4.0 cm) = `12032`–51 (2.6–7.5 cm)

Step 7 — Pathology: `88305` (Level IV surgical pathology, gross and microscopic examination) — billed by pathology department

Final Codes: 11404, 12032–51, 88305

Common Mistakes: (1) Forgetting to add margins to the lesion size. (2) Not coding the intermediate repair separately. (3) Using the malignant excision code

before pathology results.

📄 Real-World Scenario 2: ER Visit — Multiple Lacerations

Operative Note: "A 35-year-old male is brought to the ER following an altercation. Examination reveals: (1) A 5.0 cm deep laceration of the left forehead with visible galea — heavily contaminated with gravel; (2) a 2.0 cm laceration of the left cheek, simple; (3) a 3.0 cm laceration of the right forearm, simple; and (4) a 2.5 cm laceration of the left forearm, simple. Wounds are copiously irrigated. Forehead wound: galea sutured with 2-0 Vicryl, deep dermis with 3-0 Vicryl, skin with 5-0 nylon (complex due to galea involvement). Cheek: simple closure 5-0 nylon. Forearms: simple closures 4-0 nylon."

Step-by-Step:

1. Forehead laceration — galea involvement + three-layer closure = **Complex**. Forehead is in the complex repair code grouping (forehead/cheeks/chin/mouth/neck/axillae/hands/feet): 5.0 cm = `13132` (Complex, forehead...; 2.6–7.5 cm)
2. Left cheek, 2.0 cm simple: Face/ear group. `12011` (Simple, face; 2.5 cm or less)
3. Right and left forearms, simple: 3.0 + 2.5 = **5.5 cm** total (same complexity, same group = add lengths). `12002` (Simple, extremities; 2.6–7.5 cm)

Final Codes: 13132 (complex, primary), 12011–51 (simple facial), 12002–51 (simple extremities)

Common Mistake: Not adding the two forearm lacerations together. Do NOT code 12002 + 12001 separately for the two forearm wounds — they are in the same grouping with the same complexity, so add the lengths.

📄 Real-World Scenario 3: Return to OR During Global Period

Clinical Situation: A 67-year-old patient underwent a modified radical mastectomy (19307) on September 1. On September 12 (within the 90-day global period), the patient is taken back to the operating room by the same surgeon for evacuation of a postoperative hematoma at the mastectomy site. The hematoma is directly related to the original surgery and required a return to the OR under general anesthesia.

Step-by-Step:

1. Is this within the global period? **Yes** — day 11 of a 90-day global period.
2. Is this an unplanned return to the OR for a related complication? **Yes**.
3. Modifier to use: **–78** (Unplanned return to OR for related procedure during postoperative period)
4. Code the hematoma evacuation procedure: Drainage/evacuation of hematoma — select appropriate code (e.g., 10140 — incision and drainage of hematoma, seroma, or fluid collection)

Final Code: 10140–78

Important: When Modifier –78 is used, only the intraoperative portion of the global package is reimbursed — not a new pre- and post-op period. The original 90-day global period continues from the original mastectomy date.

📄 Real-World Scenario 4: Actinic Keratosis Destruction — Multiple Lesions

Operative Note: "A 72-year-old male with extensive sun damage presents for treatment of multiple actinic keratoses. In today's session, cryotherapy with liquid nitrogen is applied to 11 actinic keratoses on the face, scalp, and arms."

Step-by-Step:

1. Actinic keratosis = premalignant lesion (17000 series)
2. 11 lesions total: First lesion = `17000`; Lesions 2–11 (10 additional) = `17003` × 10 units
3. Do NOT report the anatomical location separately — 17000/17003 cover "any area."

Final Codes: 17000, 17003 × 10

CPC Exam Tip: If the question states 15 or more lesions, use **17004 only** — do NOT combine 17000 and 17003 when the total reaches 15+.

📄 Real-World Scenario 5: Skin Graft for Burn

Operative Note: "A 42-year-old male with second-degree burns of the anterior trunk (18% TBSA). After 10 days of wound care, granulation tissue has formed and the patient is taken to the OR for skin grafting. A split-thickness skin graft (STSG) measuring 200 sq cm is harvested from the right thigh using a dermatome. The graft is applied to the anterior trunk wound. The donor site on the right thigh is covered with a synthetic skin substitute."

Step-by-Step:

1. STSG recipient site — trunk — 200 sq cm: `15100` (STSG, trunk; first 100 sq cm) + `15101` (each additional 100 sq cm, or part thereof — 1 unit)
2. Donor site: Simple closure of donor site on the thigh is included. The application of a skin substitute to the donor site may be separately reportable depending on the product used.

Final Codes: 15100, 15101

Common Mistake: Coding the donor site harvesting separately when it is included in the graft code. Only separately report the donor site if a graft or flap was required to close it.

📄 Real-World Scenario 6: Complex Wound Debridement with Modifier –22

Operative Note: "Patient with a chronic, infected, necrotic wound of the right sacrum, 60 sq cm. Extensive sharp debridement performed down to bone. Due to the extensive nature of the wound, the unusual depth, involvement of three separate anatomical compartments, and the 4-hour operative time required (versus typical 1.5 hours), Modifier –22 is appropriate. Documentation of increased work and time is noted in the operative report."

Step-by-Step:

1. Bone debridement, 60 sq cm: `11044` (first 20 sq cm) + `11047` × 2 units (two additional 20 sq cm increments)
2. Significantly increased complexity and time documented: Append **–22** to the primary debridement code
3. Attach a written explanation/letter to the claim supporting the –22 modifier with documentation

Final Codes: 11044–22, 11047 × 2

Important: Modifier –22 requires thorough documentation. Without compelling documentation, the claim will be returned. Expect the carrier to request medical records.

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13. Chapter Review — Multiple Choice Questions

Select the best answer for each question. Answer key with rationale follows on the next page.

Which of the following services is INCLUDED in the global surgical package?

- An E/M visit for an unrelated condition during the global period
- Return to the OR for a complication requiring general anesthesia
- Suture removal at a postoperative follow-up visit
- Anesthesia services provided by a separate anesthesiologist

A surgeon excises a malignant lesion from the right arm. The lesion measures 1.8 cm. The surgeon takes 0.4 cm margins all around. What is the correct excised diameter?

- 1.8 cm
- 2.2 cm
- 2.6 cm
- 3.0 cm

A physician destroys 17 actinic keratoses using cryotherapy during a single office visit. Which CPT code(s) should be reported?

- 17000 and 17003 × 16
- 17110
- 17004
- 17000 and 17003 × 14, then 17004

During the same operative session, a patient has a 3.0 cm simple repair of the left arm and a 2.5 cm simple repair of the right forearm. How should the wound repairs be coded?

- 12002, 12001–51
- 12002 (total 5.5 cm, one code)
- 12004
- 12001, 12001–51

A surgeon performs a partial mastectomy on a patient on October 1. On October 20, the patient returns to the office with a fever due to an upper respiratory infection — completely unrelated to the mastectomy. The surgeon evaluates and treats the URI. Which modifier should be appended to the E/M code?

- Modifier –57
- Modifier –24
- Modifier –25
- No modifier needed

Two surgeons of different specialties each perform distinct portions of a single operative procedure simultaneously. Which modifier is correct?

- Modifier –80 for both
- Modifier –62 for both
- Modifier –66 for both
- Modifier –51 for both

Which of the following describes an intermediate wound repair?

- Simple, one-layer closure of a clean wound
- Closure involving the galea aponeurotica
- Layered closure of subcutaneous tissue and dermis, or single-layer closure of a heavily contaminated wound
- Closure involving retention sutures and extensive undermining

A patient undergoes a debridement of a pressure ulcer. The wound is 45 sq cm and is debrided down to the fascia and muscle. Which codes should be reported?

- 11042, 11045 × 2
- 11043, 11046 × 1
- 11044, 11047 × 2
- 11042 only

A patient is 35 days into a 90-day global period following a complex skin graft. The surgeon performs a procedure that was planned at the time of the original surgery. Which modifier is appended to the second procedure?

- Modifier –24
- Modifier –78

- Modifier –58
- Modifier –79

What does the Rule of Nines assign to the anterior trunk in an adult?

- 9%
- 18%
- 27%
- 36%

A surgeon shaves a 0.8 cm lesion from the right forearm. Which code is correct?

- 11300
- 11301
- 11401
- 11306

The NCCI edits are designed to prevent which of the following?

- Coding an E/M during a global period
- Unbundling of component codes that should be reported as a single comprehensive code
- Using Modifier –50 for bilateral procedures
- Reporting surgical team modifiers

Which CPT code describes a modified radical mastectomy?

- 19303
- 19305
- 19307
- 19301

A split-thickness skin graft is harvested from the thigh and applied to a 150 sq cm area on the trunk. Which codes should be reported for the graft procedure?

- 15100 only
- 15100, 15101 × 1

- 15200, 15201 × 1
- 15100, 15101 × 2

Which modifier indicates an unplanned return to the operating room by the same surgeon for a complication related to the original procedure?

- Modifier –58
- Modifier –76
- Modifier –78
- Modifier –79

A procedure note states: "The wound was closed with a single running suture of 4-0 nylon after removal of visible particulate matter (gravel) from a contaminated laceration." This wound repair is classified as:

- Simple
- Intermediate
- Complex
- Cannot be determined from this information

An E/M service performed the day before a major (90-day) surgery that resulted in the decision to perform that surgery should be reported with which modifier?

- Modifier –25
- Modifier –57
- Modifier –24
- Modifier –32

What is the correct formula for calculating the excised diameter when excising a skin lesion?

- Lesion diameter only
- Lesion diameter + total margins taken
- Lesion diameter + (narrowest margin × 2)
- Lesion diameter + (widest margin × 2)

Which code is used for the first actinic keratosis destroyed, regardless of method?

- 17110
- 17260
- 17000
- 11400

A 90-day global period includes which of the following preoperative services?

- All preoperative visits in the 30 days before surgery
- One preoperative visit on the day before or the day of surgery
- The initial consultation only
- All E/M services within the global period regardless of reason

Answer Key with Rationale

1. C — Suture removal at a postoperative follow-up visit

Postoperative visits related to the surgery, including suture removal, dressing changes, and routine follow-up during the global period, are all included in the global package. Return to OR, unrelated E/M visits, and separately contracted anesthesia services are NOT included.

2. C — 2.6 cm

Formula: 1.8 cm + (0.4 cm × 2) = 1.8 + 0.8 = 2.6 cm. Use the narrowest margin × 2 formula, not total margins.

3. C — 17004

When 15 or more premalignant lesions are destroyed, report only 17004. Do not combine 17000 + 17003 when the total reaches 15 or more.

4. B — 12002 (total 5.5 cm, one code)

Both repairs are simple and in the same anatomical grouping (extremities). Add lengths: 3.0 + 2.5 = 5.5 cm = code 12002 (2.6–7.5 cm).

5. B — Modifier –24

Modifier –24 is used for an unrelated E/M service during a postoperative global period. Modifier –57 is used when the E/M results in the decision for surgery (appended to the E/M, not the post-op visit).

6. B — Modifier –62 for both

When two surgeons of different specialties each perform a distinct part of a single procedure, both report the same CPT code with –62. Modifier –66 applies when three or more surgeons work simultaneously as a true surgical team.

7. C — Layered closure of subcutaneous tissue and dermis, or single-layer closure of a heavily contaminated wound

This is the CPT definition of intermediate repair. Choices A and D describe simple and complex repair, respectively.

8. B — 11043, 11046 × 1

Debridement to muscle/fascia uses the 11043 series. For 45 sq cm: first 20 sq cm = 11043; next 25 sq cm rounds up to one additional 20 sq cm increment = 11046 × 1 (covers up to 40 sq cm additional, but you only have one additional 20 sq cm unit for 25 sq cm). Answer B (11043, 11046 × 1) covers 40 sq cm total,

which encompasses the 45 sq cm at the correct increment level. Note: 25 sq cm of additional area = 1 unit of 11046 (each 20 sq cm, or part thereof).

9. C — Modifier –58

A staged or related procedure planned at the time of the original surgery is reported with Modifier –58. Modifier –79 is for an unrelated procedure, and –78 is for an unplanned return for complications.

10. B — 18%

The anterior trunk (chest + abdomen) = 18% TBSA in the Rule of Nines for adults. Each arm = 9%; each leg = 18%; posterior trunk = 18%.

11. B — 11301

Shaving of the forearm (trunk/arms/legs category), 0.8 cm = code 11301 (0.6–1.0 cm). Note: 11300 is for ≤0.5 cm; 11306 is for the scalp/neck/hands/feet/genitalia group.

12. B — Unbundling of component codes that should be reported as a single comprehensive code

NCCI edits specifically address code pair combinations where one code is a component of another, preventing improper unbundling and overpayment.

13. C — 19307

Modified radical mastectomy (entire breast + axillary nodes, pectoral muscles preserved) = 19307. Code 19303 = simple/total mastectomy; 19305 = radical mastectomy; 19301 = partial mastectomy.

14. B — 15100, 15101 × 1

STSG, trunk: 15100 covers the first 100 sq cm. 15101 is the add-on for each additional 100 sq cm or part thereof. 150 sq cm = first 100 (15100) + 50 sq cm additional (one unit of 15101).

15. C — Modifier –78

Modifier –78 = unplanned return to OR by same surgeon for a related procedure. Modifier –58 = planned staged procedure; –79 = unrelated procedure; –76 = repeat procedure by same physician (not necessarily in OR).

16. B — Intermediate

A single-layer closure of a heavily contaminated wound (one requiring extensive cleaning of particulate matter) qualifies as intermediate repair, even if only one

suture layer is used.

17. B — Modifier –57

Modifier –57 is appended to the E/M code when the visit resulted in the initial decision to perform a major surgery (90-day global) on the same day or the day before. It prevents the E/M from being denied as a preoperative visit within the global package.

18. C — Lesion diameter + (narrowest margin × 2)

This is the standard CPT formula. Using the widest margin would overestimate the excised diameter. Using only the lesion diameter ignores the required margins.

19. C — 17000

Code 17000 is used for destruction of the first premalignant lesion (actinic keratosis). Code 17110 is for benign lesions; 17260 for malignant destruction; 11400 for excision.

20. B — One preoperative visit on the day before or the day of surgery

The 90-day global package includes only ONE preoperative visit — on the day before or the day of surgery. All other preoperative visits prior to that are separately reportable. This is a commonly tested and commonly missed exam point.

14. Chapter Summary

Key Concepts at a Glance

- The CPT Surgery section (10000–69999) is the largest section and is organized by body system. The Integumentary System covers codes 10000–19999.
- The **global surgical package** bundles pre-, intra-, and postoperative services into one reimbursement. Know what is included vs. separately reportable for every exam scenario.
- The three global periods are: **0-day** (day of surgery only), **10-day** (minor procedures), and **90-day** (major procedures).
- **Unbundling** is using multiple codes to describe what should be one comprehensive code. NCCI edits are the enforcement mechanism — know how and when to use Modifier –59 to override.
- For lesion **shaving** codes (11300–11313): measure the lesion diameter only, then select by anatomical location.
- For lesion **excision** codes (11400–11646): always calculate excised diameter = lesion + (narrowest margin × 2). Then select by benign/malignant, location, and size.
- For lesion **destruction** (17000–17286): no specimen is sent to pathology. Code premalignant (17000/17003/17004), benign (17110/17111), or malignant (17260–17286).
- Wound repairs are classified as **simple**, **intermediate**, or **complex**. Add lengths of the same complexity within the same anatomical grouping. Do NOT add across different complexities or different groups.
- Skin graft coding requires identifying STSG vs. FTSG, the recipient site location, and the area in square centimeters.

- Debridement codes (11042–11047) are selected by the deepest layer reached: subcutaneous, muscle/fascia, or bone. The higher-depth code is all-inclusive.
- Burns are coded by depth (1st, 2nd, 3rd degree) and TBSA using the **Rule of Nines**.
- Breast procedures range from biopsy (19100 series) to mastectomy (19301–19307) to reconstruction (19340–19369).
- Surgical modifiers are critical for correct reimbursement. The most tested: **–22, –50, –51, –57, –58, –59, –62, –78, –79, –80**.
- Always read the full operative report before assigning codes. The five keys are: site, size, technique, number, and closure type.

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15. Key Terms Glossary

Adjacent Tissue Transfer: Movement of nearby tissue to cover a wound defect, maintaining the original blood supply; includes Z-plasty, rotation flap, and advancement flap (codes 14000–14350).

Debridement: The removal of devitalized, necrotic, or contaminated tissue from a wound to promote healing. Coded by depth of tissue removed.

Dermis: The middle layer of skin beneath the epidermis, containing collagen, blood vessels, nerve endings, hair follicles, and sweat glands.

Epidermis: The outermost, avascular layer of skin that provides a protective barrier.

Escharotomy: A surgical incision through burned (eschar) tissue to relieve compartment pressure caused by circumferential full-thickness burns (code 16035).

Excised Diameter: The total diameter of tissue removed during lesion excision, calculated as: lesion diameter + (narrowest margin × 2). Used for code selection.

Full-Thickness Skin Graft (FTSG): A graft containing all layers of the skin (epidermis + full dermis), requiring primary closure of the donor site.

Global Surgical Package: The bundle of services (pre-op, intra-op, post-op) included in the reimbursement for a surgical procedure, as defined by CMS.

Global Period: The timeframe during which post-operative services are bundled into the surgical package (0-day, 10-day, or 90-day).

Intermediate Repair: A wound closure requiring layered closure of subcutaneous tissue and dermis, or single-layer closure of a heavily contaminated wound (codes 12031–12057).

Modifier: A two-digit alphanumeric code appended to a CPT code to indicate that a service was altered without changing the basic definition of the code.

NCCI (National Correct Coding Initiative): CMS-established automated edits that identify code pairs that should not be billed together due to bundling relationships.

Operative Report: The physician's written account of a surgical procedure; the primary source document used by coders to assign surgical CPT codes.

Rule of Nines: A method of estimating total body surface area (TBSA) affected by burns; divides the adult body into regions of 9% or multiples thereof.

Separate Procedure: A CPT designation indicating that a code may be reported independently when performed alone, but is included in a more comprehensive procedure when performed as part of that procedure at the same site.

Split-Thickness Skin Graft (STSG): A graft containing the epidermis and a portion of the dermis; harvested with a dermatome; the donor site heals spontaneously.

Unbundling: The improper practice of using multiple codes to describe services that should be reported under a single, more comprehensive code; considered fraudulent billing.

Wound Repair: Surgical closure of a wound, classified as simple, intermediate, or complex. Code selection is based on repair complexity, anatomical location, and total wound length in centimeters.

> "Coding is the art of translating the physician's clinical story into the universal language of healthcare. Master the details — the measurements, the modifiers, the global rules — and the codes will follow."
>
> — Step-by-Step Medical Coding, Carol J. Buck

Medical Coding Mastery — Chapter 11 | Surgery Section: Integumentary System & General Surgery

Student Edition | CPC Examination Preparation | CPT Codes: 10000–19999

Prepared for Corrina | September 24, 2026 | Plantation, FL

Disclaimer: CPT codes are updated annually by the American Medical Association. Always verify codes using the current year's CPT manual and payer-specific guidelines. This document is intended for educational purposes only.

MEDICAL CODING MASTERY | STUDENT EDITION

CHAPTER 12

Surgery: Musculoskeletal System

CPT codes: 20000-29999

Corrina Lynch | ACL Consulting Firm | CPC Preparation

Chapter Objectives

Upon successful completion of this chapter, the student will be able to:

1. Identify the anatomical structures of the musculoskeletal system and apply that knowledge to accurate CPT code selection within the range 20000–29999.
2. Differentiate between closed treatment, open treatment, and percutaneous skeletal fixation of fractures, and select the appropriate code based on operative report documentation.
3. Assign codes for general musculoskeletal procedures including arthrocentesis, bone biopsy, soft tissue tumor excision, bone grafts, and replantation.
4. Code spinal procedures involving laminectomy, diskectomy, spinal fusion, vertebroplasty, and instrumentation, including multilevel reporting rules.
5. Select correct codes for upper extremity procedures of the shoulder, humerus, elbow, forearm, wrist, hand, and fingers.

6. Assign codes for lower extremity procedures including hip arthroplasty, total knee arthroplasty, ACL reconstruction, meniscectomy, ankle fractures, bunionectomy, and Achilles tendon repair.
7. Apply arthroscopy coding rules, including the rule that when an arthroscopic procedure is converted to open, only the open procedure is coded.
8. Determine when cast and strapping codes are separately reportable versus bundled into fracture care.
9. Apply musculoskeletal-specific modifiers including -50, -LT/-RT, -51, -59, -62, and -80 correctly.
10. Analyze operative note excerpts and assign complete, accurate code sets with appropriate modifiers for CPC examination-style scenarios.

Section 1: Introduction to the Musculoskeletal System

Anatomy Overview

The **musculoskeletal system** is the largest system in the human body and encompasses the bones, joints, muscles, tendons, ligaments, and cartilage that give the body its structure and enable movement. For medical coders, a solid command of musculoskeletal anatomy is not optional — it is essential for selecting codes with precision from one of the most extensive sections of the CPT manual.

The skeleton is divided into two major regions:

- **Axial skeleton:** The central bony framework — skull, vertebral column, sternum, and ribs. These 80 bones form the core axis of the body and protect vital organs.
- **Appendicular skeleton:** The 126 bones of the upper and lower limbs and their girdles (shoulder girdle and pelvic girdle). These structures enable locomotion and fine motor function.

Key soft tissue components of the musculoskeletal system include:

- **Tendons:** Dense connective tissue bands that attach muscle to bone.
- **Ligaments:** Fibrous connective tissue connecting bone to bone across a joint.
- **Cartilage:** Smooth, avascular connective tissue covering articular surfaces of bones; includes hyaline cartilage (articular surfaces), fibrocartilage (menisci), and elastic cartilage.
- **Fascia:** Sheets of connective tissue enclosing muscles and muscle groups.
- **Bursae:** Small fluid-filled sacs that reduce friction between tendons and bone at joints.

CPT Organization: Musculoskeletal System (20000–29999)

The CPT Surgery section for the Musculoskeletal System spans codes **20000 through 29999**. This range is one of the longest in the CPT manual, reflecting the complexity and frequency of musculoskeletal procedures.

Codes are organized in two primary ways:

11. **By body area:** General → Spine → Upper Extremity → Hand → Lower Extremity → Foot → Application of Casts/Strapping → Endoscopy/Arthroscopy
12. **By procedure type within each area:** Incision → Excision → Introduction/Removal → Repair, Revision, and Reconstruction → Fracture/Dislocation → Arthrodesis → Amputation → Other

★ Coder's Corner

Before assigning any musculoskeletal code, ask yourself three questions: **(1) What body area is involved? (2) What type of procedure was performed? (3) What approach was used?** These three anchors guide you to the correct code every time.

The Importance of Reading the Operative Report

In no section of the CPT manual is careful operative report analysis more critical than in the Musculoskeletal System. The difference between a closed and open fracture treatment, or between a total and partial joint replacement, can mean thousands of dollars in reimbursement difference and can trigger payer audits if coded incorrectly.

Always read the **entire operative note** — including the preoperative diagnosis, postoperative diagnosis, anesthesia type, procedure description, and closure — before assigning a single code. The preoperative and postoperative diagnoses must align with the procedures performed.

> 💡 **Did You Know?**
>
> The Musculoskeletal System section of CPT accounts for a significant portion of CPC exam questions. Mastery of fracture coding rules, arthroscopy guidelines, and spinal procedure layering is consistently tested. Expect 15–20% of your CPC exam questions to come from this section.

Section 2: General Musculoskeletal Procedures (20000–20999)

Wound Exploration (20100–20103)

Wound exploration codes are used when a traumatic wound requires surgical exploration to determine the extent of injury to underlying structures. These codes are NOT used for simple wound repair; they are appropriate only when the physician explores beneath the skin and subcutaneous tissue.

- **20100:** Exploration of penetrating wound (separate procedure); neck
- **20101:** Exploration of penetrating wound; chest

- **20102:** Exploration of penetrating wound; abdomen/flank/back
- **20103:** Exploration of penetrating wound; extremity

> ⚠️ **Stop! Think!**
>
> Wound exploration (20100–20103) is designated as a **separate procedure**. This means it is typically bundled when performed as part of a more extensive procedure at the same site. Only report these codes when wound exploration is the primary service performed.

Excision of Soft Tissue Tumors (20200–20251)

Soft tissue tumor excision codes are selected based on **depth of the tumor** (subcutaneous vs. subfascial/deep) and the **specific anatomical site**. These codes apply to benign and malignant tumors of soft tissue (not bone). Documentation must specify the site and depth of excision.

- **Subcutaneous tumors:** Located above the investing fascia (superficial)
- **Subfascial/deep tumors:** Located beneath the investing fascia, within or below muscle

Bone Biopsy (20220–20251)

Bone biopsy codes are categorized by technique:

- **20220:** Biopsy, bone, trocar or needle; superficial (e.g., ilium, sternum, spinous process, ribs)
- **20225:** Biopsy, bone, trocar or needle; deep (e.g., vertebral body, femur)
- **20240:** Biopsy, bone, open; superficial
- **20245:** Biopsy, bone, open; deep
- **20250:** Biopsy, vertebral body, open; thoracic
- **20251:** Biopsy, vertebral body, open; lumbar or cervical

Grafts (20900–20938)

Bone grafts are among the most frequently coded adjunctive procedures in musculoskeletal surgery. Understanding the distinctions between graft types is essential for accurate reporting.

Autograft vs. Allograft

- **Autograft (autogenous graft):** Bone harvested from the same patient. Considered the gold standard because it contains osteogenic cells and growth factors. Requires a separate donor site incision.
- **Allograft:** Bone obtained from a cadaver or bone bank. No donor site harvesting is required; the allograft bone is purchased. No separate donor site code is reported.

Morselized vs. Structural Grafts

- **Morselized graft:** Cancellous (spongy) bone chips packed into a defect. Used to fill voids. Code: 20900 (minor) or 20902 (major)
- **Structural graft:** Cortical bone with intact architecture providing mechanical support. Code: 20931–20938

Donor Site Coding Rules

When an autograft is harvested from a **separate anatomical site** during the same operative session, the bone graft harvest may be reported separately using the appropriate graft code. However, when the graft is harvested from the same incision as the primary procedure, it is typically included and not separately reported.

★ Coder's Corner

Key rule: **Allograft = no donor site code.** The bone was purchased — there is no patient donor site. Only autografts involve a potential separate donor site code. Always check the operative report for the phrase "autogenous" or "patient's own bone" before reporting a separate graft harvest code.

Replantation (20802–20838)

Replantation refers to the surgical reattachment of a completely amputated body part. These procedures are complex, involving repair of bone, tendons, nerves, and vessels. Codes are organized by the part replanted:

- **20802:** Replantation, arm (includes surgical neck of humerus through elbow joint), complete amputation
- **20816:** Replantation, digit, excluding thumb (includes partial hand), complete amputation; single digit
- **20824:** Replantation, thumb (includes partial hand), complete amputation
- **20838:** Replantation, foot (includes ankle joint), complete amputation

Arthrocentesis — Joint Aspiration/Injection (20600–20611)

Arthrocentesis is the aspiration of fluid from a joint space, often for diagnostic analysis or therapeutic relief. These codes are also used for injection of therapeutic substances (e.g., corticosteroids) into joint spaces. Code selection depends on **joint size** and whether **ultrasound guidance** was used.

Code	Joint Size	Ultrasound	Example Joints
20600	Small	Without	Finger, toe, interphalangeal
20604	Small	With US guidance, permanent record	Finger, toe, interphalangeal
20605	Intermediate	Without	Temporomandibular, acromioclavicular, wrist, elbow, ankle
20606	Intermediate	With US guidance, permanent record	Wrist, elbow, ankle
20610	Large	Without	Shoulder, hip, knee, sacroiliac
20611	Large	With US guidance, permanent record	Shoulder, hip, knee, sacroiliac

⚠️ Stop! Think!

When ultrasound guidance is used (codes 20604, 20606, 20611), it must be documented with a **permanent record** (image storage). If the physician uses ultrasound for real-time visualization but does not document and store an image, the guidance code cannot be reported. **Documentation is everything.**

Arthrocentesis Coding Scenarios

📄 Coding Scenario 2-A

Scenario: A patient presents with right knee effusion. The physician aspirates fluid from the right knee joint and injects a corticosteroid. No imaging guidance is used.

Analysis: The knee is a large joint. Ultrasound guidance was not documented.

Code: 20610 — Arthrocentesis, aspiration and/or injection, large joint or bursa; without ultrasound guidance

Diagnosis note: Pair with ICD-10-CM code for right knee effusion (M25.361).

📄 Coding Scenario 2-B

Scenario: A patient with rheumatoid arthritis receives an injection into the left wrist joint. The physician uses real-time ultrasound guidance and documents permanent image storage.

Analysis: The wrist is an intermediate joint. Ultrasound guidance was used with permanent record.

Code: 20606 — Arthrocentesis, aspiration and/or injection, intermediate joint or bursa; with ultrasound guidance, with permanent recording and reporting

Section 3: Spine and Vertebral Column (22000–22899)

Vertebral Anatomy Review

The vertebral column consists of 33 vertebrae organized into five regions:

- **Cervical (C1–C7):** 7 vertebrae; the neck region; most mobile segment
- **Thoracic (T1–T12):** 12 vertebrae; rib-bearing; limited mobility
- **Lumbar (L1–L5):** 5 large vertebrae; weight-bearing; frequent surgery site
- **Sacral (S1–S5):** 5 fused vertebrae forming the sacrum
- **Coccygeal:** 4 fused vertebrae forming the coccyx (tailbone)

The **intervertebral disc** is a fibrocartilaginous structure between adjacent vertebral bodies, consisting of an outer **annulus fibrosus** and inner **nucleus pulposus**. Disc herniation, degeneration, and instability are the primary drivers of spinal surgical procedures.

Excision Procedures

- **Laminectomy:** Removal of the lamina (the posterior arch of a vertebra) to decompress the spinal cord or nerve roots. Coded by the number of vertebral segments involved and the region (cervical, thoracic, lumbar).
- **Diskectomy (discectomy):** Removal of the intervertebral disc, or a portion of it, to relieve nerve compression. Often performed in conjunction with laminectomy. When a laminectomy and diskectomy are performed at the same level, only the more comprehensive code is reported.
- **Foraminotomy:** Enlargement of the intervertebral foramen (the opening through which a nerve root exits the spinal canal) to relieve nerve root compression. Can be performed via open or endoscopic approach.

Spinal Fusion (22554–22819)

Spinal fusion (arthrodesis) is the surgical joining of two or more vertebrae to eliminate motion between them, typically used to treat instability, deformity, or degenerative disc disease. Spinal fusion coding is among the most complex in the CPT manual because it requires reporting multiple codes to capture the full procedure.

Approach: Anterior vs. Posterior

- **Anterior approach:** The surgeon approaches the spine from the front of the body (22548–22558). Used primarily for cervical and lumbar fusion.
- **Posterior approach:** The surgeon approaches from the back (22600–22614). Most common approach for thoracic and lumbar fusion.
- **Lateral approach (XLIF/LLIF):** Extreme/lateral lumbar interbody fusion through the side (22558 with modifier).

Reporting Spinal Fusion — The Layered Approach

Spinal fusion procedures typically require three categories of codes reported together:

13. **Fusion approach code** (22548–22819): The primary arthrodesis code identifying body region and approach
14. **Instrumentation code** (22840–22855): Pedicle screws, rods, plates, or other hardware
15. **Bone graft code** (22830 for exploration; 20930–20938 for graft material)

Instrumentation (22840–22855)

Spinal instrumentation codes are **add-on codes** and are never reported alone. They are always reported in addition to the primary arthrodesis code.

- **22840:** Posterior non-segmental instrumentation (e.g., Harrington rod)
- **22841:** Internal spinal fixation by wiring of spinous processes
- **22842:** Posterior segmental instrumentation (e.g., pedicle screws); 3–6 vertebral segments

- **22843:** Posterior segmental instrumentation; 7–12 vertebral segments
- **22844:** Posterior segmental instrumentation; 13 or more vertebral segments
- **22845:** Anterior instrumentation; 2–3 vertebral segments
- **22853:** Insertion of interbody biomechanical device; 1 interspace
- **22854:** Insertion of interbody biomechanical device; each additional interspace (add-on)

Vertebroplasty and Kyphoplasty (22510–22515)

Vertebroplasty involves injection of bone cement (polymethylmethacrylate) directly into a fractured vertebral body to stabilize it. **Kyphoplasty** goes one step further: a balloon is first inflated within the fractured vertebra to restore height, then cement is injected into the void created.

- **22510:** Percutaneous vertebroplasty (bone cement injection); 1 vertebral body; unilateral or bilateral; cervicothoracic
- **22511:** Percutaneous vertebroplasty; 1 vertebral body; lumbosacral
- **22512:** Each additional thoracic or lumbar vertebral body (add-on)
- **22513:** Percutaneous vertebral augmentation (kyphoplasty); 1 vertebral body; thoracic
- **22514:** Percutaneous vertebral augmentation; 1 vertebral body; lumbar
- **22515:** Each additional thoracic or lumbar vertebral body (add-on)

Multilevel Spinal Procedures — Key Rules

16. Spinal fusion codes specify the number of vertebral **interspaces** (for interbody fusion) or **vertebral segments** (for posterolateral fusion). Read the code descriptor carefully.
17. When fusion is performed at multiple levels, report the primary code for the first level, then the appropriate add-on code for each additional level.
18. Instrumentation add-on codes specify the number of vertebral **segments** spanned — count carefully from the operative note.

19. Approach procedure codes (such as the anterior exposure performed by a co-surgeon) may be reported separately with modifier **-62** (Two Surgeons).

★ Coder's Corner

Spinal Cord Stimulator Note: Spinal cord stimulator insertion codes (63650–63688) are found in the **Nervous System** section of CPT, not the Musculoskeletal section. Even though a neurosurgeon or orthopedic surgeon may perform the procedure, the codes live in CPT 63000s. Always use the CPT index — "Stimulator, Spinal Cord" — to navigate correctly.

Spinal Coding Scenarios

📄 Coding Scenario 3-A: Single-Level ACDF

OPERATIVE NOTE EXCERPT

PREOP DX: C5-C6 herniated nucleus pulposus with radiculopathy

POSTOP DX: Same

PROCEDURE: Anterior cervical discectomy and fusion, C5-C6, with allograft and anterior plate instrumentation

DESCRIPTION: Patient positioned supine. Transverse anterior neck incision. C5-C6 disc space identified under fluoroscopy. Disc material removed with rongeurs and curettes. Nerve root decompressed. Allograft spacer placed in disc space. Anterior cervical plate affixed with 4 screws spanning C5 to C6.

Step-by-Step Analysis:

1. Anterior cervical discectomy and fusion, C5-C6 (1 interspace, anterior approach): **22551**
2. Anterior instrumentation, 2 vertebral segments (plate): **22845**
3. Allograft used — no separate graft harvest code (allograft is included)

Final Codes: 22551, 22845

Common Mistake: Reporting a bone graft code for allograft. Allograft is not separately reportable with a harvest code — only autograft donor site harvesting may be reported separately.

📄 Coding Scenario 3-B: Lumbar Laminectomy

OPERATIVE NOTE EXCERPT

PREOP DX: L4-L5 spinal stenosis

POSTOP DX: Same

PROCEDURE: L4-L5 laminectomy with nerve root decompression, bilateral

DESCRIPTION: Patient prone. Posterior midline incision at L4-L5. L4 and L5 laminae removed bilaterally. Hypertrophied ligamentum flavum excised. Bilateral L5 nerve roots decompressed. No disc herniation identified. Wound closed in layers.

Step-by-Step Analysis:

1. Laminectomy at L4-L5 (2 vertebral segments): **63047** (primary) + **63048** (each additional segment, add-on) — NOTE: These codes are in the Nervous System chapter. The MSK approach codes apply to fusion; decompression-only laminectomies are in the Nervous System section.

Final Codes: 63047, 63048

Teaching Point: Decompressive laminectomies without fusion are coded from the Nervous System section (63000s), not the Musculoskeletal section. Only spinal arthrodesis and its add-ons are in 22000–22899.

📄 Coding Scenario 3-C: Two-Level Lumbar Fusion with Instrumentation

OPERATIVE NOTE EXCERPT

PREOP DX: L3-L4 and L4-L5 degenerative disc disease, lumbar instability

POSTOP DX: Same

PROCEDURE: Posterior lumbar interbody fusion (PLIF) L3-L4 and L4-L5 with posterior segmental instrumentation L3–L5 and iliac crest autograft

DESCRIPTION: Patient positioned prone. Posterior midline incision L3 to L5. Bilateral pedicle screws placed at L3, L4, and L5. Rods connected. L3-L4 disc space prepared and interbody cage with autograft placed. L4-L5 disc space prepared and interbody cage with autograft placed. Autograft harvested from right posterior iliac crest through same incision. Posterolateral fusion beds prepared and autograft packed bilaterally.

Step-by-Step Analysis:

1. PLIF L3-L4 (first interspace, posterior technique): **22630**
2. PLIF L4-L5 (additional interspace, add-on): **22632**
3. Posterior segmental instrumentation, 3 vertebral segments (L3, L4, L5): **22842**
4. Autograft harvested from same incision — included, NOT separately reported

Final Codes: 22630, 22632, 22842

Common Mistake: Reporting a bone graft harvest code (20902) when the operative note says "harvested through same incision." Same-incision autograft harvest is bundled.

Section 4: Fracture Care — Fundamentals

Three Types of Fracture Treatment

CPT defines fracture treatment by the **method used to treat the fracture**, not by the type of fracture. This is a critical concept that confuses many students. The type of treatment is documented in the operative note and must be carefully read before code assignment.

1. Closed Treatment

Closed treatment means the fracture site is not surgically opened. The skin over the fracture remains intact throughout treatment.

- **Without manipulation:** No reduction is performed; the fracture is treated with immobilization only (cast, splint, or traction)
- **With manipulation:** The physician manually reduces (repositions) the fracture fragments without making an incision

2. Open Treatment

Open treatment means the fracture site is surgically exposed — an incision is made, and the physician can directly visualize the fracture. Open treatment does NOT mean the fracture was an open (compound) fracture. It refers to the **treatment approach**.

- Includes internal fixation (plates, screws, intramedullary nails)
- May include bone grafting

3. Percutaneous Skeletal Fixation

Percutaneous skeletal fixation is neither closed nor open treatment. The fracture is not directly visualized, but fixation devices (pins or screws) are placed through the skin across the fracture site, typically under imaging guidance (fluoroscopy).

Key Fracture Definitions

Term	Definition	Coding Impact
Displaced fracture	Bone fragments are out of normal anatomical alignment	Usually requires manipulation (reduction) → higher-value code
Nondisplaced fracture	Bone is broken but fragments remain in alignment	May only require immobilization → lower-value code
Open (compound) fracture	Bone has broken through the skin, or wound communicates with fracture	Fracture TYPE — affects ICD-10, may require wound care
Closed fracture	Skin over fracture site is intact	Fracture TYPE — most common fracture type
Internal fixation	Fixation hardware (plates, screws, rods) placed inside the body	Typically associated with open treatment codes
External fixation	Fixation frame attached to bone via pins that exit the skin	May be reported separately with add-on codes (20690–20697)

⚠️ Stop! Think! — Critical Concept

An open fracture is NOT the same as open treatment! An open fracture describes the injury (bone through skin). Open treatment describes the surgical approach (incision made to access the fracture). A patient can have an open (compound) fracture that is treated with closed reduction. A patient can have a closed fracture that requires open surgical treatment with internal fixation. **These are completely independent concepts.** Confusing them is one of the most common errors on the CPC exam.

How to Select Fracture Codes

Use this systematic approach for every fracture coding scenario:

20. Identify the **anatomical site** (e.g., distal radius, femoral shaft)
21. Identify the **type of treatment** (closed without manipulation, closed with manipulation, open, percutaneous)
22. Note any **internal or external fixation**
23. Determine if **skeletal traction** was applied
24. Check whether this is an **initial or subsequent** encounter (affects ICD-10 code but not usually CPT)

Fracture Treatment Terminology Table

Treatment Type	Incision?	Hardware?	Typical Setting
Closed, without manipulation	No	No	ER/Office; cast or splint applied
Closed, with manipulation	No	No (or external)	ER/OR; fracture manually reduced
Percutaneous skeletal fixation	Small skin puncture only	Pins/screws through skin	OR; imaging guidance used
Open treatment	Yes	Usually (plates, screws, rods)	OR; fracture surgically exposed

Fracture Coding Scenarios

📄 Coding Scenario 4-A: Colles Fracture, Closed Treatment with Manipulation

EMERGENCY DEPARTMENT NOTE EXCERPT

Patient fell on outstretched hand. X-ray shows distal radius fracture with dorsal angulation (Colles fracture). Fracture reduced by hematoma block and manual manipulation. Adequate reduction confirmed by post-reduction films. Short arm cast applied.

Analysis: Site = distal radius. Treatment = closed with manipulation. Cast included in fracture care code.

Code: 25600 — Closed treatment of distal radial fracture (eg, Colles or Smith type) or epiphyseal separation; without manipulation — WRONG.

Correct Code: 25600 is without manipulation. Since manipulation WAS performed: **25605** — with manipulation.

Common Mistake: Reporting a separate cast code (e.g., 29075) in addition to 25605. Cast application is bundled into fracture care for the initial encounter.

📄 Coding Scenario 4-B: Femoral Shaft Fracture, Open Treatment

OPERATIVE NOTE EXCERPT

PREOP DX: Closed fracture, right femoral shaft

PROCEDURE: Open reduction and internal fixation (ORIF), right femoral shaft with intramedullary nail

DESCRIPTION: Patient supine on fracture table. Guide wire placed under fluoroscopy. Incision over greater trochanter. Intramedullary nail introduced and advanced across fracture site under image intensifier. Proximal and distal interlocking screws placed.

Analysis: Even though the fracture is CLOSED (skin intact from injury), the treatment is OPEN (incision made). Site = femoral shaft. Treatment = open with internal fixation (IM nail).

Code: 27506 — Open treatment of femoral shaft fracture, with plate/screws, with or without cerclage — note: 27506 is for plate. For IM nail: **27506** refers to plate/screw; for IM rod, see **27507** (with intramedullary implant).

Final Code: 27506 -RT (right side)

📄 Coding Scenario 4-C: Phalangeal Fracture, Percutaneous Fixation

OPERATIVE NOTE EXCERPT

PREOP DX: Displaced fracture, proximal phalanx, right index finger

PROCEDURE: Percutaneous pinning, proximal phalanx, right index finger

DESCRIPTION: Under fluoroscopy, the fracture was reduced by manipulation. Two 0.035-inch K-wires driven percutaneously across the

fracture site and secured. Wires trimmed and bent outside skin.

Analysis: No incision — small skin puncture for K-wires only. Treatment = percutaneous skeletal fixation (pins). Site = proximal phalanx, finger.

Code: 26727 — Percutaneous skeletal fixation of unstable phalangeal shaft fracture, proximal or middle phalanx, finger or thumb; each

Final Code: 26727 -F7 (right hand, second digit)

📄 Coding Scenario 4-D: Open Ankle Fracture with External Fixation

OPERATIVE NOTE EXCERPT

PREOP DX: Open fracture, distal tibia and fibula (bimalleolar), right ankle

PROCEDURE: Irrigation and debridement, open fracture; external fixation, right ankle

DESCRIPTION: Wound irrigated with 9 liters normal saline. Devitalized tissue debrided. External fixator pins placed in tibia and calcaneus. Frame assembled and ankle stabilized in neutral.

Analysis: This is a true open fracture (bone through skin). External fixation applied — this is separately reportable. I&D of open fracture wounds should also be reported.

Codes:

- **27829** — Open treatment of distal tibiofibular joint disruption
- **20690** — Application of uniplanar external fixation system, not including pins
- **11012** — Debridement including skin, subcutaneous tissue, muscle fascia, and bone (open fracture)

Section 5: Upper Extremity (23000–25999)

Shoulder (23000–23929)

The shoulder joint (glenohumeral joint) is a ball-and-socket joint formed by the humeral head and the glenoid fossa of the scapula. It is the most mobile joint in the body, and that mobility comes at the cost of stability — making shoulder surgery one of the most common orthopedic procedures performed.

Shoulder Arthroplasty

- **23470:** Glenohumeral arthroplasty; hemiarthroplasty (humeral head replacement only)
- **23472:** Glenohumeral arthroplasty; total shoulder (glenoid and proximal humerus)
- **23473:** Revision of total shoulder arthroplasty, including removal of implants, without reimplantation
- **23474:** Revision of total shoulder arthroplasty, with reimplantation of prosthesis

Rotator Cuff Repair

The **rotator cuff** is comprised of four muscles and their tendons: supraspinatus, infraspinatus, teres minor, and subscapularis. Tears are classified as partial or complete (full-thickness) and by acuity.

- **23410:** Repair of ruptured musculotendinous cuff (rotator cuff); acute
- **23412:** Repair of ruptured musculotendinous cuff; chronic
- **23420:** Reconstruction of complete shoulder (rotator) cuff avulsion, chronic (including acromioplasty)

SLAP Repair and Bankart Repair

- **SLAP tear (Superior Labrum Anterior to Posterior):** A tear of the superior glenoid labrum. Repaired arthroscopically — see arthroscopy codes (29806 for Bankart, 29807 for SLAP repair).
- **Bankart repair:** Repair of the anterior-inferior labrum and capsule following anterior shoulder dislocation. Code 29806 (arthroscopic) or 23455/23460 (open).

Acromioplasty (Subacromial Decompression)

- **23130:** Acromioplasty or acromionectomy, partial; without coracoacromial ligament release
- **23415:** Coracoacromial ligament release, with or without acromioplasty

💡 Did You Know?

When open acromioplasty (23130) is performed in conjunction with rotator cuff repair (23410/23412), the acromioplasty is typically considered an **integral part** of the rotator cuff repair and is not separately reported. However, when acromioplasty is performed without rotator cuff repair, 23130 is reportable. Always check the NCCI (National Correct Coding Initiative) edits!

Shoulder Coding Scenarios

📄 Coding Scenario 5-A: Total Shoulder Replacement

OPERATIVE NOTE EXCERPT

PREOP DX: End-stage glenohumeral osteoarthritis, right shoulder

PROCEDURE: Total shoulder arthroplasty, right shoulder

DESCRIPTION: Deltopectoral approach. Subscapularis tenotomy performed. Humeral head osteotomy. Canal reamed and humeral stem trialed and cemented. Glenoid reamed, keel cut made, glenoid component cemented. Components reduced. Full range of motion confirmed. Subscapularis reattached.

Code: 23472-RT — Glenohumeral arthroplasty; total shoulder replacement, right side

Common Mistake: Separately reporting the subscapularis repair. Soft tissue repair performed as part of the approach and closure of an arthroplasty is bundled into the arthroplasty code.

📄 Coding Scenario 5-B: Chronic Rotator Cuff Repair

OPERATIVE NOTE EXCERPT

PREOP DX: Full-thickness rotator cuff tear, chronic, left shoulder

PROCEDURE: Open repair of chronic rotator cuff tear, left shoulder

DESCRIPTION: Anterolateral approach. Supraspinatus tendon identified with large full-thickness tear at insertion. Tendon margins freshened. Sutures placed and anchors inserted into greater tuberosity. Tendon reattached under appropriate tension.

Code: 23412-LT — Repair of ruptured musculotendinous cuff; chronic, left side

Humerus, Elbow, Radius/Ulna (24000–25999)

Tennis Elbow Release (Lateral Epicondylitis)

- **24357:** Tenotomy, elbow, lateral or medial; percutaneous
- **24358:** Tenotomy, elbow, lateral or medial; open, partial
- **24359:** Tenotomy, elbow, lateral or medial; open, complete, with or without tendon repair

Carpal Tunnel Release

Carpal tunnel release is cross-referenced to **29848** in the Endoscopy/Arthroscopy section (endoscopic approach) or **64721** in the Nervous System section (neuroplasty). The open approach for carpal tunnel release is coded from the nervous system chapter, not the musculoskeletal chapter — a common source of confusion.

Elbow and Forearm Coding Scenarios

📄 **Coding Scenario 5-C: Radial Head Fracture**

OPERATIVE NOTE EXCERPT

PREOP DX: Displaced fracture, radial head, left elbow

PROCEDURE: Open reduction and internal fixation, left radial head fracture

DESCRIPTION: Lateral approach to elbow. Radial head exposed. Three fragments identified, reduced anatomically, and secured with 2 headless compression screws. Full pronation-supination confirmed.

Code: 24665-LT — Open treatment of radial head fracture, articular, with internal fixation, left elbow

📄 Coding Scenario 5-D: Open Tennis Elbow Release

Scenario: Patient with chronic right lateral epicondylitis unresponsive to conservative treatment. Surgeon performs complete open tenotomy of the extensor carpi radialis brevis origin with tendon repair.

Code: 24359-RT — Tenotomy, elbow, lateral; open, complete, with or without tendon repair, right side

Section 6: Hand and Fingers (26000–26989)

Trigger Finger Release (26055)

Trigger finger (stenosing tenosynovitis) is caused by a thickening of the A1 pulley at the base of the finger, causing catching or locking of the flexor tendon. Treatment involves releasing the A1 pulley.

- **26055:** Tendon sheath incision (e.g., trigger finger), each

The descriptor states "each" — report once per trigger finger release. If bilateral or multiple fingers are released in the same session, use modifier -51 for multiple procedures and report the code multiple times with HCPCS digit modifiers (FA–F9).

Dupuytren's Contracture (26040–26045)

Dupuytren's contracture is a fibrous tissue disorder causing the palmar fascia to thicken and contract, pulling fingers into flexion. Surgical treatment involves fasciotomy (incision of the cord) or fasciectomy (excision of the cord).

- **26040:** Fasciotomy, palmar; open, partial
- **26045:** Fasciotomy, palmar; open, complete

Tendon Repair: Flexor vs. Extensor

Tendon repairs are among the most nuanced codes in the hand section. Code selection is based on: (1) which tendon (flexor vs. extensor), (2) which zone of injury, and (3) primary vs. secondary (delayed) repair.

- **26350:** Repair or advancement, flexor tendon, not in zone 2; primary or secondary, without free graft, each tendon
- **26352:** Repair or advancement, flexor tendon, not in zone 2; secondary with free graft (includes obtaining graft), each tendon
- **26356:** Repair or advancement, flexor tendon, zone 2; primary, each tendon

- **26358:** Repair or advancement, flexor tendon, zone 2; secondary, without free graft, each tendon
- **26410:** Repair, extensor tendon, hand; primary or secondary; without free graft, each tendon
- **26415:** Repair, extensor tendon, hand; secondary, with free graft

💡 **Did You Know?**

Zone 2 of the hand (also called "no man's land") runs from the distal palmar crease to the middle of the middle phalanx. Flexor tendon repairs in Zone 2 are technically the most demanding due to the constricted tendon sheath, and are coded separately from zones 1, 3, 4, and 5.

Amputation of Finger

- **26910:** Amputation, metacarpal, with finger; single, complete
- **26951:** Amputation, finger or thumb, primary; each finger
- **26952:** Amputation, finger or thumb, primary; with local advancement flaps

Hand Coding Scenarios

📄 **Coding Scenario 6-A: Trigger Finger Release, Multiple Fingers**

Scenario: Patient undergoes trigger finger release of right index finger and right ring finger in the same operative session.

Codes:

- 26055-F7 (right index finger)
- 26055-F9-51 (right ring finger, multiple procedures)

Teaching Point: HCPCS level II digit modifiers (FA–F9) identify which specific finger was treated. Use modifier -51 on the second and subsequent same-code

procedures in the same session.

📄 Coding Scenario 6-B: Zone 2 Flexor Tendon Repair

OPERATIVE NOTE EXCERPT

PREOP DX: Laceration with complete transection of FDP and FDS tendons, right long finger, Zone 2

PROCEDURE: Primary repair, flexor digitorum profundus and flexor digitorum superficialis tendons, Zone 2, right long finger

DESCRIPTION: Brunner incision extended. Both FDS and FDP identified and ends freshened. Modified Kessler core sutures placed in both tendons. Epitendinous suture completed. ROM confirmed.

Codes:

- 26356-F8 (FDP primary repair, Zone 2, right long finger)
- 26356-F8-51 (FDS primary repair, Zone 2, right long finger — second tendon in same zone)

Note: Code 26356 states "each tendon" so it is reported twice for two tendons repaired at the same level.

Section 7: Lower Extremity (27000–27899)

Pelvis and Hip (27000–27299)

Hip Arthroplasty — Total Hip Replacement

Total hip arthroplasty (THA) is one of the most frequently performed elective orthopedic procedures in the United States. The procedure involves replacement of both the femoral head and the acetabulum.

- **27130:** Arthroplasty, acetabular and proximal femoral prosthetic replacement (total hip arthroplasty), with or without autograft or allograft
- **27132:** Conversion of previous hip surgery to total hip arthroplasty, with or without autograft or allograft
- **27134:** Revision of total hip arthroplasty; both components, with or without autograft or allograft
- **27137:** Revision of total hip arthroplasty; acetabular component only
- **27138:** Revision of total hip arthroplasty; femoral component only

★ Coder's Corner

Total vs. Conversion vs. Revision: Total (27130) = first-time replacement of both components. **Conversion (27132)** = converting a prior procedure (such as a hemiarthroplasty or hip pinning) to a full THA. **Revision (27134–27138)** = revising (removing and replacing) a previously placed total hip prosthesis. Read the operative report for prior surgical history!

Hip Fracture Care

- **27230:** Closed treatment of femoral fracture, proximal end, neck; without manipulation

- **27232:** Closed treatment of femoral fracture, proximal end, neck; with manipulation, with or without skeletal traction
- **27235:** Percutaneous skeletal fixation of femoral fracture, proximal end, neck, with image guidance
- **27236:** Open treatment of femoral fracture, proximal end, neck, internal fixation or prosthetic replacement
- **27244:** Treatment of intertrochanteric, peritrochanteric, or subtrochanteric femoral fracture; with plate/screw type implant, with or without cerclage
- **27245:** Treatment of intertrochanteric, peritrochanteric, or subtrochanteric femoral fracture; with intramedullary implant, with or without interlocking screws and/or cerclage

Hip Coding Scenarios

📄 Coding Scenario 7-A: Total Hip Arthroplasty

OPERATIVE NOTE EXCERPT

PREOP DX: Left hip osteoarthritis, end-stage

PROCEDURE: Total hip arthroplasty, left hip

DESCRIPTION: Posterior approach. Capsule incised. Femoral head dislocated. Femoral neck osteotomy. Acetabulum reamed to appropriate size, press-fit cup seated with supplemental screws. Femoral canal prepared, stem press-fit. 32mm ceramic head engaged. Hip reduced, stable through full ROM.

Code: 27130-LT — Total hip arthroplasty, left side

📄 Coding Scenario 7-B: Intertrochanteric Fracture, IM Nail

Scenario: 78-year-old female with right intertrochanteric hip fracture treated with cephalomedullary nail under fluoroscopy in the OR.

Code: 27245-RT — Treatment of intertrochanteric fracture with intramedullary implant, right side

Femur and Knee (27300–27599)

Total Knee Arthroplasty

- **27446:** Arthroplasty, knee, condyle and plateau; medial or lateral compartment (unicompartmental — partial knee replacement)
- **27447:** Arthroplasty, knee, condyle and plateau; medial and lateral compartments with or without patella resurfacing (total knee replacement)

ACL Reconstruction (27407–27409)

The **anterior cruciate ligament (ACL)** is the primary restraint to anterior tibial translation. ACL tears commonly occur in athletes during cutting or pivoting activities. Reconstruction uses a graft to replace the torn ligament.

- **27407:** Repair, primary, torn ligament and/or capsule; cruciate
- **27409:** Repair, primary, torn ligament and/or capsule; collateral and cruciate ligaments
- For ACL reconstruction with autograft (patellar tendon or hamstring graft), see arthroscopy codes: **29888** — Arthroscopically aided ACL repair/augmentation or reconstruction

Meniscectomy

- **27332:** Arthrotomy with excision of semilunar cartilage (meniscectomy); medial or lateral

- **27333:** Arthrotomy with excision of semilunar cartilage; medial and lateral
- Arthroscopic meniscectomy: see **29880** (both medial and lateral) and **29881** (medial or lateral)

Knee Coding Scenarios

📄 Coding Scenario 7-C: Total Knee Replacement

OPERATIVE NOTE EXCERPT

PREOP DX: Tricompartmental osteoarthritis, right knee

PROCEDURE: Total knee arthroplasty, right knee, with patellar resurfacing

DESCRIPTION: Medial parapatellar approach. Distal femur cut, proximal tibia cut, and patellar osteotomy performed. Trialing confirmed appropriate sizing. Final components cemented in place: femoral, tibial tray with polyethylene insert, and patella button. Wound irrigated and closed.

Code: 27447-RT — Total knee arthroplasty with patellar resurfacing, right side

Common Mistake: Separately reporting the patellar resurfacing — it is included in the 27447 code descriptor ("with or without patella resurfacing").

📄 Coding Scenario 7-D: ACL Reconstruction with Autograft

OPERATIVE NOTE EXCERPT

PREOP DX: Complete ACL tear, left knee

PROCEDURE: Arthroscopically aided ACL reconstruction with bone-patellar tendon-bone autograft, left knee

DESCRIPTION: Arthroscopic portals established. ACL stump debrided. BTB graft harvested from central third of patellar tendon with bone plugs. Tibial and femoral tunnels drilled. Graft passed and secured with interference screws.

Codes:

- 29888-LT — Arthroscopically aided ACL repair/augmentation or reconstruction (includes arthroscopy)

Teaching Point: Code 29888 includes the arthroscopic assistance AND the graft harvest from the patellar tendon donor site. Do not separately report the graft harvest (27418 or a graft code) as it is bundled with 29888.

📄 Coding Scenario 7-E: Distal Femur Fracture, ORIF

Scenario: Patient sustains a displaced distal femur fracture (supracondylar) from a motor vehicle accident. ORIF performed with distal femoral locking plate.

Code: 27513 — Open treatment of femoral supracondylar or transcondylar fracture, with or without intercondylar extension; with internal fixation

Leg, Ankle, and Foot (27600–28899)

Achilles Tendon Repair

- **27650:** Repair, primary, open or percutaneous, ruptured Achilles tendon; without graft
- **27652:** Repair, primary, open or percutaneous, ruptured Achilles tendon; with graft
- **27654:** Repair, secondary, Achilles tendon, with or without graft

Bunionectomy — Hallux Valgus Correction (28090–28299)

Hallux valgus (bunion) is a lateral deviation of the great toe at the first metatarsophalangeal (MTP) joint with prominence of the medial first metatarsal head. Surgical correction ranges from simple exostectomy to complex osteotomy with fixation.

- **28090:** Excision of lesion; tendon, tendon sheath, or capsule of foot (not bunion)
- **28150:** Phalangectomy, toe, each toe
- **28160:** Hemiphalangectomy or interphalangeal joint excision, toe, proximal end of phalanx, each
- **28292:** Correction, hallux valgus (bunion), with sesamoidectomy, when performed; with resection of proximal phalanx base, when performed, any method
- **28296:** Correction, hallux valgus (bunion); with distal metatarsal osteotomy, any method
- **28297:** Correction, hallux valgus (bunion); with first metatarsal and medial cuneiform joint arthrodesis
- **28298:** Correction, hallux valgus (bunion); with proximal phalanx osteotomy
- **28299:** Correction, hallux valgus (bunion); with double osteotomy, any method

Plantar Fasciectomy

- **28119:** Ostectomy, calcaneus; for spur, with or without plantar fascial release
- **28120:** Partial excision (craterization, saucerization, sequestrectomy, or diaphysectomy) bone (e.g., osteomyelitis); talus or calcaneus

★ Coder's Corner

Plantar fascia release is also found at code **28060** (Fasciectomy, plantar fascia; partial) and **28062** (radical, including digital flexor tendon release). These are distinct from calcaneal spur excision (28119). Read the operative note carefully to determine whether the procedure was a fasciotomy/fasciectomy, an ostectomy, or both.

Foot and Ankle Coding Scenarios

📄 Coding Scenario 7-F: Achilles Tendon Repair

OPERATIVE NOTE EXCERPT

PREOP DX: Acute complete Achilles tendon rupture, left

PROCEDURE: Primary open repair, left Achilles tendon, without graft

DESCRIPTION: Prone position. Posteromedial incision over Achilles tendon. Paratenon opened. Complete tendon rupture identified 4 cm proximal to insertion. Ends debrided and apposed. Krackow suture technique with #2 FiberWire. Paratenon closed, skin closed.

Code: 27650-LT — Primary open repair, ruptured Achilles tendon, without graft, left

📄 Coding Scenario 7-G: Bunionectomy with Osteotomy

Scenario: Patient undergoes correction of right hallux valgus deformity with distal metatarsal osteotomy (chevron procedure) and fixation with 2 screws.

Code: 28296-RT — Correction, hallux valgus with distal metatarsal osteotomy, right foot

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Section 8: Arthroscopy (29000–29999)

Arthroscopy Overview

Arthroscopy is a minimally invasive surgical technique in which a small camera (arthroscope) is inserted into a joint through a small portal incision to visualize and treat intra-articular pathology. The CPT arthroscopy codes (29800–29999) cover both diagnostic and surgical arthroscopic procedures.

Critical Arthroscopy Rules

Rule 1: Surgical Arthroscopy Includes Diagnostic Arthroscopy

When a surgical arthroscopy is performed, the diagnostic component is bundled and cannot be reported separately. You may not report a diagnostic arthroscopy code (e.g., 29870) in addition to a surgical arthroscopy code (e.g., 29881) for the same joint on the same day.

Rule 2: Conversion to Open — Code Only the Open Procedure

When an arthroscopic procedure is **converted to an open procedure**, code **only the open procedure**. The arthroscopy is not separately reported. This is an absolute rule with no exceptions.

Rule 3: Arthroscopy is Joint-Specific

Each joint is coded separately. Arthroscopy of both knees in the same session is reported twice (with modifier -50 or -LT/-RT as appropriate).

> ⚠️ **Stop! Think!**
>
> If the operative note states: "Arthroscopy attempted but converted to open due to poor visualization" — you code **ONLY** the open procedure. The arthroscopy portal placements, scope insertion, and diagnostic survey are all bundled into the open code. **Never report both.**

Common Arthroscopy Codes

Code	Joint	Description
29800	Temporomandibular	Arthroscopy, temporomandibular joint; diagnostic, includes synovial biopsy
29804	Temporomandibular	Arthroscopy, TMJ; surgical
29806	Shoulder	Arthroscopy, shoulder, surgical; with capsulorrhaphy (Bankart repair)
29807	Shoulder	Arthroscopy, shoulder, surgical; with repair of SLAP lesion
29819	Shoulder	Arthroscopy, shoulder, surgical; with removal of loose body or foreign body
29820	Shoulder	Arthroscopy, shoulder, surgical; synovectomy, partial

Code	Joint	Description
29821	Shoulder	Arthroscopy, shoulder, surgical; synovectomy, complete
29822	Shoulder	Arthroscopy, shoulder, surgical; debridement, limited
29823	Shoulder	Arthroscopy, shoulder, surgical; debridement, extensive
29824	Shoulder	Arthroscopy, shoulder, surgical; distal claviculectomy (Mumford procedure)
29825	Shoulder	Arthroscopy, shoulder, surgical; with lysis and resection of adhesions, with or without manipulation
29826	Shoulder	Arthroscopy, shoulder, surgical; decompression of subacromial space with partial acromioplasty, with or without coracoacromial release
29827	Shoulder	Arthroscopy, shoulder, surgical; with rotator cuff repair
29828	Shoulder	Arthroscopy, shoulder, surgical; biceps tenodesis
29840	Wrist	Arthroscopy, wrist; diagnostic, includes synovial biopsy
29843	Wrist	Arthroscopy, wrist, surgical; with synovectomy
29844	Wrist	Arthroscopy, wrist, surgical; with internal fixation for fracture
29846	Wrist	Arthroscopy, wrist, surgical; with excision and/or repair of triangular fibrocartilage and/or joint debridement
29848	Wrist	Endoscopy, wrist, surgical, with release of transverse carpal ligament (carpal tunnel release)
29870	Knee	Arthroscopy, knee;

Code	Joint	Description
		diagnostic, includes synovial biopsy
29871	Knee	Arthroscopy, knee; for infection, lavage and drainage
29873	Knee	Arthroscopy, knee, surgical; with lateral release
29874	Knee	Arthroscopy, knee, surgical; for removal of loose body or foreign body
29875	Knee	Arthroscopy, knee, surgical; synovectomy, limited (e.g., plica or shelf resection)
29876	Knee	Arthroscopy, knee, surgical; synovectomy, major, two or more compartments
29877	Knee	Arthroscopy, knee, surgical; debridement/shaving of articular cartilage
29880	Knee	Arthroscopy, knee, surgical; with meniscectomy (medial and lateral, including any meniscal shaving)
29881	Knee	Arthroscopy, knee, surgical; with meniscectomy (medial or lateral, including any meniscal shaving)
29882	Knee	Arthroscopy, knee, surgical; with meniscus repair (medial or lateral)
29883	Knee	Arthroscopy, knee, surgical; with meniscus repair (medial and lateral)
29888	Knee	Arthroscopically aided ACL repair/augmentation or reconstruction
29889	Knee	Arthroscopically aided PCL repair/augmentation or reconstruction
29894	Ankle	Arthroscopy, ankle, surgical; with removal of loose body or foreign body
29895	Ankle	Arthroscopy, ankle, surgical; synovectomy, partial

Code	Joint	Description
29897	Ankle	Arthroscopy, ankle, surgical; debridement, limited
29898	Ankle	Arthroscopy, ankle, surgical; debridement, extensive

Arthroscopy Coding Scenarios

📄 Coding Scenario 8-A: Knee Arthroscopy with Medial Meniscectomy and Chondroplasty

OPERATIVE NOTE EXCERPT

PREOP DX: Medial meniscus tear and chondromalacia, right knee

PROCEDURE: Arthroscopy, right knee, with medial meniscectomy and chondroplasty of medial femoral condyle

DESCRIPTION: Standard portals established. Diagnostic survey performed — medial meniscus posterior horn tear confirmed. Torn portion of medial meniscus excised with shaver. Medial femoral condyle with Grade III chondromalacia. Loose cartilage edges debrided.

Analysis: Two procedures performed: meniscectomy (medial only) and chondroplasty. The chondroplasty (29877) is a separate surgical service from the meniscectomy (29881).

Codes:

- 29881-RT (arthroscopy, knee, with medial meniscectomy)
- 29877-RT-51 (arthroscopy, knee, chondroplasty — multiple procedures)

Note: Check NCCI edits — 29877 may be bundled with 29881 per payer policy. Document medical necessity carefully.

📄 Coding Scenario 8-B: Shoulder Arthroscopy — Rotator Cuff Repair with Subacromial Decompression

OPERATIVE NOTE EXCERPT

PREOP DX: Full-thickness rotator cuff tear and impingement syndrome, right shoulder

PROCEDURE: Arthroscopy, right shoulder, with rotator cuff repair and subacromial decompression

DESCRIPTION: Posterior portal. Glenohumeral survey — full-thickness supraspinatus tear confirmed. Subacromial space entered. Bursectomy performed. Acromioplasty performed with arthroscopic burr. Three suture anchors placed in greater tuberosity. Supraspinatus tendon repaired.

Codes:

- 29827-RT (arthroscopy, shoulder, with rotator cuff repair)
- 29826-RT-51 (subacromial decompression with acromioplasty — multiple procedures)

Teaching Point: Both 29827 and 29826 are separately reportable when both rotator cuff repair and subacromial decompression are performed. Append modifier -51 to the lesser-valued code.

📄 Coding Scenario 8-C: Arthroscopy Converted to Open

OPERATIVE NOTE EXCERPT

PREOP DX: Medial meniscus tear with locked knee, left

PROCEDURE: Knee arthroscopy, converted to open meniscectomy, left knee

DESCRIPTION: Arthroscopic portals established. Arthroscope introduced. Due to complete bucket-handle tear displacing into notch and inability to adequately visualize with arthroscope, decision made to convert to open. Medial parapatellar arthrotomy performed. Bucket-handle meniscus tear excised under direct visualization.

Code: 27332-LT — Arthrotomy with excision of semilunar cartilage (open meniscectomy), medial, left knee

Common Mistake: Reporting 29870 (diagnostic arthroscopy) in addition to 27332. When converted to open, code ONLY the open procedure. The arthroscopy is not separately reported.

Section 9: Application of Casts and Strapping (29000–29750)

When Cast/Strapping Is Separately Reportable

Cast and strapping codes are separately reportable in these specific circumstances:

25. **Initial cast/strapping applied by a different physician** than the one who performed the procedure
26. **Cast change or recasting** at a subsequent encounter (not the initial application visit when fracture care is also coded)
27. **Cast applied for a condition other than fracture** (e.g., cast for tendon repair, post-surgical immobilization without fracture)
28. **Preoperative casting** prior to a scheduled surgical procedure

When Cast/Strapping Is INCLUDED (NOT Separately Reportable)

The initial application of a cast or splint by the treating physician is **included** in the fracture care code global period and is NOT separately reported:

- Initial cast applied at the same encounter as fracture reduction (closed treatment with manipulation)
- Initial splinting following arthroscopy or soft tissue repair (included in the surgical package)

> ⚠️ **Stop! Think!**
>
> The global period for most fracture care includes: the initial E/M encounter, the fracture treatment, the initial cast application, and all follow-up visits for the duration of normal, uncomplicated fracture healing. Billing a separate cast code at the initial fracture encounter (when the treating physician applies the cast) is a **billing error** that can result in overpayment recovery.

Common Cast Types and Codes

Code	Cast Type	Location
29000	Body cast (Risser or	Trunk; spinal correction

Code	Cast Type	Location
	Localizer)	
29010	Risser jacket cast	Head to hips
29035	Body cast	Trunk/shoulder spica
29049	Figure-of-eight cast	Shoulder/clavicle
29065	Shoulder to hand (long arm)	Upper extremity
29075	Elbow to finger (short arm)	Forearm/wrist/hand
29085	Gauntlet (thumb to elbow)	Wrist/hand with thumb spica
29105	Long arm splint	Shoulder to hand
29125	Short arm splint; static	Elbow to finger
29126	Short arm splint; dynamic	Elbow to finger
29355	Long leg cast (hip to toe)	Lower extremity
29365	Cylinder cast (thigh to ankle)	Knee
29405	Short leg cast (knee to toe)	Ankle/foot
29435	Patellar tendon-bearing cast	Tibia/fibula fractures
29515	Short leg splint (static)	Ankle/foot
29550	Strapping; toes	Toes
29580	Unna boot	Ankle/lower leg

Modifier -58 for Cast Changes

When a cast change is required and is performed by the same treating physician during the global period of a fracture care or post-surgical code, modifier **-58** (Staged or Related Procedure) may be applicable to indicate a planned or necessary return for cast change. Not all payers recognize -58 for cast changes — verify with individual payer policies.

Cast Coding Scenarios

📄 **Coding Scenario 9-A: Separately Reportable Cast Application**

Scenario: A child is seen in the pediatric orthopaedic clinic 3 weeks after a distal radius fracture. The original treating physician in the ER applied the initial cast. Today, the clinic physician removes the cast, confirms healing, and applies a new short arm cast.

Analysis: The treating physician today did not perform the original fracture care. The cast change is by a different provider and is separately reportable.

Code: 29075 — Application of cast, short arm (elbow to finger) — new cast application

📄 Coding Scenario 9-B: Cast for Non-Fracture Indication

Scenario: Physician applies a short leg cast to a patient with a severe ankle sprain to provide immobilization and pain relief. No fracture is present.

Analysis: No fracture care was rendered. The cast is separately reportable as the primary service.

Code: 29405 — Application of cast, short leg (knee to toes)

Section 10: Common Musculoskeletal Modifiers

Modifiers are two-character alphanumeric suffixes appended to CPT codes to indicate that a service was altered in some way but not changed in its definition. In the Musculoskeletal System, modifiers are used frequently and must be applied correctly to avoid claim denials and compliance issues.

Modifier	Name	Definition	MSK Example
-50	Bilateral Procedure	Procedure performed	Bilateral knee arthroscopy: 29881-

Modifier	Name	Definition	MSK Example
		bilaterally in same session	50
-LT	Left Side	Identifies the left side of the body	Left total knee: 27447-LT
-RT	Right Side	Identifies the right side of the body	Right total hip: 27130-RT
-51	Multiple Procedures	Additional procedure performed in same session by same provider	29881-RT, 29877-RT-51 (meniscectomy + chondroplasty)
-59	Distinct Procedural Service	Distinct, independent procedure not normally reported together	When two procedures are bundled by NCCI but were performed at different anatomical sites
-62	Two Surgeons	Two surgeons of different specialties each perform distinct parts of a single procedure	Spinal fusion with orthopedic spine surgeon (posterior approach, 22630-62) and vascular surgeon (anterior approach, same code -62)
-80	Assistant Surgeon	A second surgeon assists the primary surgeon throughout the procedure	Resident or PA assists with total hip arthroplasty: 27130-80
-22	Unusual Procedural Services	Service substantially greater than typically required	Severely comminuted, morbidly obese patient requiring extra time; 27447-22
-58	Staged/Related Procedure	Planned procedure during postoperative period	Cast change during fracture care global period: 29075-58

Detailed Modifier Notes for MSK Coding

Modifier -50 vs. -LT/-RT

Use **-50** when both sides are treated in the same encounter with the same code. Report the code once with -50. Alternatively, some payers prefer the code listed

twice — once with -LT and once with -RT. Know your individual payer's preference. Medicare generally prefers -LT and -RT reported on two separate line items.

Modifier -62 in Spine Surgery

In complex spinal fusions involving both an anterior approach (e.g., by a vascular or general surgeon) and a posterior approach (by the orthopedic or neurosurgeon), modifier -62 is appended to the same CPT code by both surgeons on their separate claims. Each surgeon receives approximately 62.5% of the total allowed amount.

Modifier -59 vs. XS/XE/XP/XU (X-modifiers)

The -59 modifier indicates a distinct procedural service. CMS has refined this concept with four more specific X-modifiers: **-XE** (Separate Encounter), **-XS** (Separate Structure), **-XP** (Separate Practitioner), **-XU** (Unusual Non-Overlapping Service). Use X-modifiers when available to provide more specificity.

Section 11: Real-World Coding Scenarios

The following six comprehensive scenarios mirror the complexity of real CPC examination questions. Read each operative note carefully, follow the step-by-step analysis, and study the common mistakes to avoid.

Scenario A: Distal Radius Fracture — Open Treatment

OPERATIVE NOTE

DATE: September 24, 2026

PATIENT: 52-year-old female

SURGEON: Dr. Marcus Henley, MD

PREOP DX: Comminuted, intraarticular distal radius fracture with radial shortening,

right wrist

POSTOP DX: Same

ANESTHESIA: General

PROCEDURE: Open reduction and internal fixation of distal radius fracture with volar locking plate, right wrist

DESCRIPTION OF PROCEDURE: Patient positioned supine with right arm extended on hand table. Standard Henry approach to distal radius. Pronator quadratus elevated. Fracture fragments identified — three large intraarticular fragments. Fragments reduced anatomically under fluoroscopy. Low-profile volar locking plate positioned on volar aspect of distal radius and secured with 2 shaft screws proximally and 5 locking screws distally. Excellent stability and alignment confirmed. Full range of pronation, supination, flexion, and extension confirmed. Pronator quadratus re-approximated. Subcutaneous tissue and skin closed in layers. Volar splint applied.

Step-by-Step Analysis:

29. **Identify site:** Distal radius, right wrist
30. **Identify treatment type:** Open reduction (incision made), internal fixation (locking plate)
31. **Identify complexity:** Intraarticular (involving joint surface)
32. **Find the code:** 25609 — Open treatment of intraarticular distal radial fracture requiring 3 or more fragments, with or without external fixation, including any fixation of ulnar styloid fracture
33. **Side modifier:** -RT (right side)
34. **Volar splint:** Applied by treating surgeon — bundled into fracture care global period. Not separately reported.

Final Code: 25609-RT

Common Mistakes to Avoid:

- Reporting 25606 (extraarticular) when the fracture is explicitly intraarticular — these are different codes
- Reporting a separate splint code (29125) — bundled
- Reporting a bone graft code when no graft was used

Scenario B: Total Hip Arthroplasty — Conversion

OPERATIVE NOTE

DATE: September 24, 2026

PATIENT: 71-year-old male

SURGEON: Dr. Priya Nair, MD

PREOP DX: Failed left hip pinning (screw fixation, 3 years prior for femoral neck fracture) with avascular necrosis of the femoral head, left hip

POSTOP DX: Same

PROCEDURE: Conversion of previous left hip fixation to total hip arthroplasty, left hip

DESCRIPTION: Patient lateral decubitus position, left side up. Posterior approach utilizing prior scar. Prior guide wires and 3 cancellous screws removed. Femoral head removed — consistent with Grade IV AVN. Acetabulum reamed and press-fit porous titanium cup placed with 2 supplemental screws. 28mm femoral head with +4 neck, press-fit stem. Hip reduced, stable through ROM. Capsule repaired, fascia and skin closed.

Step-by-Step Analysis:

35. **Key phrase:** "Conversion of previous hip surgery to total hip arthroplasty" — this is a conversion, not a primary THA
36. **Prior hardware was removed** — this is part of the conversion procedure, not a separately reported hardware removal
37. **Code:** 27132 — Conversion of previous hip surgery to total hip arthroplasty, with or without autograft or allograft
38. **Side modifier:** -LT

Final Code: 27132-LT

Common Mistakes to Avoid:

- Coding 27130 (primary THA) — incorrect; prior surgical history mandates conversion code 27132
- Separately reporting removal of implant (20680) — bundled into the conversion procedure
- Forgetting the side modifier

Scenario C: Knee Arthroscopy — Bilateral

OPERATIVE NOTE

DATE: September 24, 2026

PATIENT: 44-year-old male, competitive cyclist

SURGEON: Dr. Samuel Wren, MD

PREOP DX: Bilateral symptomatic plica syndrome with chondromalacia, bilateral knees

POSTOP DX: Same

PROCEDURE: Bilateral knee arthroscopy with synovectomy (plica resection) and chondroplasty

RIGHT KNEE: Standard anterior portals. Medial plica visualized — thickened, fibrotic, impinging on medial femoral condyle. Plica resected with shaver. Grade II chondromalacia, medial femoral condyle — fibrillated cartilage debrided.

LEFT KNEE: Same procedure performed on left knee. Medial plica resected. Grade II-III chondromalacia lateral femoral condyle debrided.

Step-by-Step Analysis:

39. Right knee: arthroscopy with synovectomy (plica) = 29875; chondroplasty = 29877
40. Left knee: same procedures performed
41. Two different procedures per knee, both knees treated = bilateral coding required

Final Codes:

- 29875-RT (right knee synovectomy, plica)
- 29877-RT-51 (right knee chondroplasty)
- 29875-LT-51 (left knee synovectomy)
- 29877-LT-51 (left knee chondroplasty)

Common Mistakes to Avoid:

- Using modifier -50 instead of -LT/-RT when the same code applies to both sides — both methods may be acceptable depending on payer; confirm policy
- Forgetting to append modifier -51 to the lesser procedures
- Reporting diagnostic arthroscopy (29870) in addition to surgical codes — bundled

Scenario D: Soft Tissue Injury — Multicode

OPERATIVE NOTE

DATE: September 24, 2026

PATIENT: 29-year-old male, MVC

SURGEON: Dr. Theresa Block, MD

PREOP DX: Penetrating wound, right thigh with vascular and muscular injury

PROCEDURE: Exploration of penetrating wound, right extremity; repair of lacerated quadriceps muscle

DESCRIPTION: Extending the wound longitudinally. Devitalized tissue debrided. Quadriceps muscle belly laceration repaired with 0-PDS sutures in figure-of-eight fashion. No vascular injury identified. Wound irrigated with 3L saline. Drain placed. Closed in layers.

Step-by-Step Analysis:

42. Wound exploration, extremity: 20103
43. Muscle repair, single: This is encompassed within the exploration code when performed at the same site — review whether 27385 (suture of quadriceps/hamstring muscle rupture) is separately reported or bundled
44. Wound irrigation and debridement: 11042–11047 if significant devitalized tissue removed; if minimal, bundled

Final Code(s): 20103-RT (wound exploration, extremity)

Teaching Point: When muscle repair is integral to wound exploration and performed through the same wound, it is typically not separately reportable. Always verify NCCI edits between 20103 and repair codes before reporting separately.

Scenario E: Spinal Fusion — Three Levels

OPERATIVE NOTE

DATE: September 24, 2026

PATIENT: 58-year-old female

SURGEON: Dr. Eric Chambers, MD (Orthopedic Spine) / Dr. Daniel Voss, MD (Vascular Surgery — anterior exposure)

PREOP DX: L3-L4, L4-L5, L5-S1 degenerative disc disease with lumbar spondylolisthesis, Grade II L4-L5

PROCEDURE: Anterior lumbar interbody fusion (ALIF), L3-L4, L4-L5, L5-S1; then posterior segmental instrumentation L3-S1 (4 segments), performed by Dr. Chambers; anterior exposure by Dr. Voss

DESCRIPTION (Dr. Voss): Left flank retroperitoneal approach. Great vessels mobilized, L3-S1 discs exposed.

DESCRIPTION (Dr. Chambers): L3-L4, L4-L5, L5-S1 discs completely excised. Vertebral endplates decorticated. Allograft cages packed with local bone graft and rhBMP placed in each interspace. Posterior incision: pedicle screws placed bilaterally at L3, L4, L5, and S1. Rods connected and compressed/distracted as needed.

Step-by-Step Analysis:

45. ALIF L3-L4 (first interspace): **22558** (reported by Dr. Chambers with -62)
46. ALIF L4-L5 (second interspace, add-on): **22558** (per segment add-on — actually 22585 for each additional interspace)
47. ALIF L5-S1 (third interspace, add-on): **22585** (second additional interspace)
48. Posterior segmental instrumentation, 4 vertebral segments (L3, L4, L5, S1): **22842** (3–6 segments)

49. Anterior exposure by Dr. Voss — vascular surgeon bills separately using anterior exposure code (22206 area); each surgeon appends **-62**

Final Codes (Dr. Chambers): 22558-62, 22585 (x2), 22842

Common Mistakes to Avoid:

- Failing to append -62 when two surgeons each perform distinct portions
- Reporting only one ALIF code when three interspaces were fused
- Counting segments vs. interspaces — instrumentation uses segments, interbody fusion uses interspaces

Scenario F: Ankle Fracture with ORIF

OPERATIVE NOTE

DATE: September 24, 2026

PATIENT: 37-year-old male, sports injury

SURGEON: Dr. Monica Osei, MD

PREOP DX: Bimalleolar fracture, right ankle (displaced lateral malleolus + medial malleolus)

PROCEDURE: Open reduction and internal fixation, bimalleolar fracture, right ankle

DESCRIPTION: Lateral approach to fibula. Fibular fracture reduced and plated with one-third tubular plate, 6 screws. Medial approach to medial malleolus. Medial malleolus reduced and fixed with 2 cancellous screws. Mortise alignment confirmed under fluoroscopy. Wounds closed in layers.

Step-by-Step Analysis:

50. Bimalleolar ankle fracture, open treatment: **27814** — Open treatment of bimalleolar ankle fracture, includes fibula and tibia, when both are fractured

51. Side modifier: -RT
52. Two separate surgical approaches performed, but this is one procedure (bimalleolar ORIF) captured by a single comprehensive code

Final Code: 27814-RT

Common Mistakes to Avoid:

- Coding fibula and medial malleolus separately — 27814 is the comprehensive bilateral malleolus code
- Coding as trimalleolar (27822/27823) when only two malleoli are fractured

---

Section 12: Chapter Review — Multiple Choice Questions

Directions: Select the best answer for each question. Answers and rationales follow the question set.

A patient undergoes aspiration of the right shoulder joint for effusion. No ultrasound guidance is used. Which code is correct?

A) 20600 B) 20605 C) 20610 D) 20611

A surgeon performs open reduction and internal fixation of a distal radius fracture with a volar locking plate. Three intraarticular fragments are reduced. Which CPT code is most appropriate?

A) 25600 B) 25606 C) 25607 D) 25609

A patient has a right femoral neck fracture treated with percutaneous cannulated screws under fluoroscopic guidance. No incision was made into the hip joint. Which code applies?

A) 27230 B) 27232 C) 27235 D) 27236

An arthroscopic procedure is begun on the left knee but is converted to an open meniscectomy due to technical difficulty. What should be coded?

A) 29870-LT and 27332-LT B) 27332-LT only C) 29881-LT only D) 29870-LT only

A patient undergoes ALIF at L4-L5 and L5-S1. Which codes best represent the fusion procedure?

A) 22558, 22558-51 B) 22558, 22585 C) 22630, 22632 D) 22551, 22552

The physician documents harvesting of bone graft from the left posterior iliac crest through the same posterior incision as a lumbar fusion. How should this be coded?

A) Report 20902 separately B) Included in the fusion code — not separately reported C) Report 20900 separately D) Report 20937 separately

Two surgeons perform a complex spinal fusion — a vascular surgeon performs the anterior exposure while the orthopedic surgeon performs the arthrodesis. Which modifier applies?

A) -51 B) -62 C) -80 D) -22

A patient has an "open fracture of the right humerus" treated with a splint and no incision. How should this be coded?

A) Closed treatment, because no incision was made B) Open treatment, because the fracture is "open" C) Percutaneous treatment D) This cannot be coded from CPT

Which code represents endoscopic carpal tunnel release?

A) 64721 B) 64719 C) 29848 D) 26045

A patient undergoes total knee arthroplasty, right knee, with patellar resurfacing. Which code is reported?

A) 27446-RT B) 27447-RT C) 27447-RT and 27424-RT D) 27438-RT

The treating orthopaedic surgeon applies a short leg cast following closed treatment of a right ankle fracture with manipulation in the same session. How should the cast be coded?

A) Report 29405 in addition to the fracture care code B) The cast is bundled into the fracture care code — do not report separately C) Report 29515 in addition D) Use modifier -59 to report the cast separately

Which code describes primary open repair of an acute Achilles tendon rupture without graft?

A) 27658 B) 27650 C) 27654 D) 27680

A surgeon performs trigger finger release on the right index finger and right middle finger during the same session. How should this be reported?

A) 26055 once with modifier -50 B) 26055-F7, 26055-F8-51 C) 26055 once with modifier -59 D) 26010 and 26020

Which code is used for conversion of a prior hip surgery (hemiarthroplasty) to a total hip arthroplasty?

A) 27130 B) 27132 C) 27134 D) 27138

A physician performs kyphoplasty at two lumbar vertebral levels. Which codes are reported?

A) 22514 x 2 B) 22514, 22515 C) 22510, 22512 D) 22513, 22514

An arthroscopic shoulder procedure includes rotator cuff repair and subacromial decompression with acromioplasty. Which codes apply?

A) 29827 and 29826-51 B) 29827 only C) 23420 and 23130 D) 29823 and 29826-51

Bone graft taken from a cadaver source for use in a spinal fusion is best described as:

A) Autograft B) Xenograft C) Allograft D) Morselized autograft

A patient has Zone 2 flexor tendon repair of both the FDS and FDP tendons of the right ring finger, performed as a primary repair. Which codes apply?

A) 26350, 26350-51 B) 26356-F9, 26356-F9-51 C) 26356-F9 once only D) 26410, 26356-51

Which modifier is used to indicate a bilateral procedure when the same code applies to both sides performed in a single session?

A) -51 B) -62 C) -50 D) -59

Which CPT code range covers arthroscopic procedures of the musculoskeletal system?

A) 20000–20999 B) 27600–27899 C) 29000–29999 D) 22000–22899

✓ ANSWER KEY WITH RATIONALE

1. **C — 20610.** The shoulder is a large joint. No ultrasound guidance was used, so 20611 does not apply.

2. **D — 25609.** Three or more intraarticular fragments, open treatment = 25609. Codes 25607/25608 cover fewer fragments.

3. **C — 27235.** Percutaneous skeletal fixation with image guidance; no incision into the joint = percutaneous, not open or closed with manipulation.

4. **B — 27332-LT only.** When converted from arthroscopic to open, code only the open procedure. Never report both.

5. **B — 22558, 22585.** ALIF = anterior approach lumbar fusion. 22558 = first interspace; 22585 = each additional interspace (add-on).

6. **B — Included — not separately reported.** Same-incision autograft harvest is bundled into the primary fusion code.

7. **B — -62.** Two surgeons performing distinct portions of the same procedure. Each bills the code with -62.

8. **A — Closed treatment.** Fracture type (open = bone through skin) does NOT equal treatment type. Treatment type = no surgical incision = closed.

9. **C — 29848.** Endoscopic (arthroscopic) carpal tunnel release. Code 64721 is the open neuroplasty approach from the Nervous System chapter.

10. **B — 27447-RT.** Total knee arthroplasty with patellar resurfacing is included in 27447. Do not separately report patellar resurfacing.

11. **B — Bundled.** Initial cast application by the treating surgeon at the same encounter as fracture treatment is included in the global fracture care package.

12. **B — 27650.** Primary, acute, open repair, without graft = 27650. Code 27654 is secondary repair.

13. **B — 26055-F7, 26055-F8-51.** Each finger reported separately with digit

modifier. Modifier -51 on the second procedure.

14. **B — 27132.** Conversion of prior hip surgery to THA = 27132. Code 27130 = primary THA (no prior hardware).

15. **B — 22514, 22515.** Kyphoplasty lumbar = 22514; each additional lumbar vertebra = 22515 (add-on).

16. **A — 29827 and 29826-51.** Both are separately reportable. 29827 = rotator cuff repair; 29826 = subacromial decompression.

17. **C — Allograft.** Cadaver bone = allograft. Autograft = patient's own bone. Xenograft = across species.

18. **B — 26356-F9, 26356-F9-51.** Zone 2, primary, each tendon = 26356. Report twice for two tendons. HCPCS F9 = right ring finger.

19. **C — -50.** Bilateral procedure modifier. Modifier -51 = multiple different procedures; -62 = two surgeons; -59 = distinct service.

20. **C — 29000–29999.** The arthroscopy/endoscopy subsection is 29000–29999 within the Musculoskeletal Surgery section.

Section 13: Chapter Summary

Key Concepts at a Glance

- The Musculoskeletal System CPT codes span **20000–29999** and are organized by body area, then by procedure type.
- The skeleton is divided into the **axial skeleton** (skull, spine, thorax) and the **appendicular skeleton** (limbs and girdles).

- Arthrocentesis codes (20600–20611) are selected based on **joint size** (small, intermediate, large) and whether **ultrasound guidance** with permanent recording was used.
- Spinal fusion requires **three layers of codes**: the arthrodesis approach code, the instrumentation add-on code, and the bone graft code.
- The three fracture treatment types — **closed, open, and percutaneous** — describe the surgical approach to treatment, NOT the type of fracture.
- An **open fracture** (bone through skin) is a fracture classification. **Open treatment** (surgical incision) is a treatment method. These are independent concepts.
- When an arthroscopic procedure is **converted to open**, code only the open procedure. Never report both.
- A **surgical arthroscopy** always includes the diagnostic component — never report diagnostic arthroscopy in addition to surgical arthroscopy for the same joint.
- Cast application by the treating surgeon is **bundled** into the initial fracture care — not separately reportable at the same encounter.
- **Autograft** harvested through a separate incision may be separately reported. Autograft from the same incision is bundled. **Allograft** never generates a separate harvest code.
- Modifier **-62** (Two Surgeons) is used when two surgeons of different specialties perform distinct portions of a single procedure, each billing the same code with -62.
- **Spinal decompression laminectomies** (without fusion) are coded from the Nervous System section (63000s), not the Musculoskeletal section.
- **Carpal tunnel release** codes are also NOT in the Hand subsection — open release is in the Nervous System chapter (64721); endoscopic is 29848.
- Total hip arthroplasty codes differentiate between **primary (27130)**, **conversion (27132)**, and **revision (27134–27138)** procedures.

- HCPCS digit modifiers (**FA–F9, TA–T9**) identify specific fingers and toes and are required when the same code applies to multiple digits in the same session.

Key Terms Glossary

Term	Definition
Allograft	Bone or tissue harvested from a cadaver or donor of the same species; used as grafting material without a patient donor site.
Arthrocentesis	Needle aspiration of fluid from a joint space, performed for diagnostic or therapeutic purposes.
Arthrodesis	Surgical fusion of a joint to eliminate motion between bones; also called joint fusion or spinal fusion when applied to the spine.
Arthroscopy	Minimally invasive surgery using a small camera inserted through a portal incision to visualize and treat intra-articular pathology.
Autograft	Bone or tissue harvested from the same patient for use as graft material in the same surgical procedure.
Axial skeleton	The 80 bones forming the central framework of the body: skull, vertebral column, sternum, and ribs.
Closed fracture	A fracture in which the skin overlying the fracture site remains intact; no bone protrudes through the skin.
Closed treatment	A fracture treatment method in which the fracture site is not surgically opened; may be performed with or without manipulation.
Diskectomy	Surgical removal of all or part of an intervertebral disc to relieve nerve root or spinal cord compression.
External fixation	A method of fracture stabilization using a rigid external frame attached to bone via transcutaneous pins or wires.
Internal fixation	Surgical stabilization of a fracture using implants (plates, screws, rods, wires) placed inside the body at the fracture site.

Term	Definition
Kyphoplasty	A minimally invasive procedure in which a balloon is inflated within a fractured vertebral body to restore height, followed by injection of bone cement.
Laminectomy	Surgical removal of the vertebral lamina to decompress the spinal cord or nerve roots.
Manipulation	Manual realignment of fracture fragments by external force, without surgical incision, to restore anatomical alignment.
Meniscectomy	Surgical removal of the meniscus (fibrocartilaginous shock absorber) of the knee, either partially or completely.
Open fracture	A fracture in which the bone penetrates through or communicates with the skin, exposing the fracture to the external environment.
Open treatment	A fracture treatment method in which a surgical incision is made to expose and directly visualize the fracture site.
Percutaneous skeletal fixation	Fracture fixation using pins or screws placed through small skin punctures — neither open nor closed treatment.
Replantation	Surgical reattachment of a completely amputated body part, involving reconstruction of bone, tendon, nerve, and vascular structures.
Vertebroplasty	Percutaneous injection of bone cement directly into a fractured vertebral body to stabilize it and reduce pain, without prior balloon inflation.

🎓 Final Coder's Corner — CPC Exam Tips for Chapter 12

- **Memorize the big rules:** Open fracture ≠ open treatment. Converted arthroscopy = open code only. Allograft = no harvest code. Same-incision autograft = bundled.
- **Always check the add-on codes** for spinal fusion — 22585, 22632, and

22515 are among the most commonly missed codes on the exam.

- **Use the CPT index liberally:** "Arthroplasty, knee" takes you directly to 27446/27447. "Tendon repair, flexor" takes you to the hand section. The index is your best tool under exam pressure.
- **Review NCCI edits** for commonly paired MSK codes — 29877 + 29881, 23130 + 23412, and cast codes with fracture care codes are classic bundling exam traps.
- **Know your modifiers:** -62 (two surgeons) vs. -80 (assistant) vs. -51 (multiple procedures) — these appear on virtually every CPC exam.

Medical Coding Mastery — Chapter 12: Surgery Section, Musculoskeletal System | Student Edition | CPC Exam Preparation | September 2026

This document is intended for educational purposes. Always reference the current year's CPT manual, ICD-10-CM, and HCPCS Level II codebooks for official code assignments. Payer-specific policies, LCD/NCD guidelines, and NCCI edits may affect final code selection.

MEDICAL CODING MASTERY | STUDENT EDITION

CHAPTER 13

Surgery: Respiratory System

CPT codes: 30000-32999

Corrina Lynch | ACL Consulting Firm | CPC Preparation

▶️ Chapter Objectives

Upon completion of this chapter, the student will be able to:

1. Identify the CPT code range for the Respiratory System Surgery section (30000–32999) and describe how codes are organized within each anatomical subsection.
2. Apply correct CPT codes for procedures of the nose, including incision and drainage, nasal polyp removal, turbinate procedures, rhinoplasty, and septoplasty.
3. Distinguish between sinusotomy and sinusectomy, and accurately assign codes for functional endoscopic sinus surgery (FESS) including bilateral procedures with modifier -50.
4. Correctly code laryngeal procedures including direct and indirect laryngoscopy, laryngoscopy with biopsy or polyp removal, and laryngectomy (partial vs. total).
5. Apply the fundamental rule that surgical endoscopy always includes diagnostic endoscopy and never code both separately for the same

anatomical site on the same date.

6. Assign CPT codes for bronchoscopy procedures including biopsy, BAL, foreign body removal, stent placement, and endobronchial ultrasound (EBUS).

7. Accurately code procedures of the lungs and pleura, including thoracentesis (with and without imaging guidance), chest tube insertion, VATS procedures, and open lung resections (pneumonectomy, lobectomy, segmentectomy, wedge resection).

8. Select the appropriate modifier(s) — including -50, -51, -52, -LT, -RT, and -59 — for respiratory system procedures and justify each modifier selection with documentation evidence.

9. Analyze complete operative note excerpts to extract billable procedures, apply correct codes with modifiers, and identify common coding errors and NCCI bundling pitfalls.

10. Demonstrate proficiency with respiratory system coding sufficient for the CPC examination, including recognition of National Correct Coding Initiative (NCCI) edits common to this section.

📚 How to Use This Chapter

This chapter follows the Carol Buck Step-by-Step methodology. Read all narrative content thoroughly, study each table, and complete the coding scenarios before reviewing the answers. Watch for **bold terms** — these are key vocabulary words that may appear on the CPC exam. Pay close attention to the Coder's Corner, Did You Know?, and Stop! Think! boxes — these highlight the most commonly tested concepts.

Section 1: Introduction to the Respiratory System

Anatomy Overview

To code accurately for respiratory system procedures, the medical coder must have a firm understanding of the anatomy. The respiratory system is responsible for gas exchange — bringing oxygen into the body and expelling carbon dioxide. It consists of the upper respiratory tract and the lower respiratory tract.

The **upper respiratory tract** includes the **nose** (external nose and nasal cavity), the **paranasal sinuses** (maxillary, frontal, ethmoid, and sphenoid), the **pharynx** (nasopharynx, oropharynx, and laryngopharynx), and the **larynx** (voice box). The **lower respiratory tract** includes the **trachea** (windpipe), the right and left **mainstem bronchi**, the smaller **bronchioles**, and the **lungs** themselves, each surrounded by a double-layered membrane called the **pleura**.

Structure	Location / Description	Key Coding Notes
Nose / Nasal Cavity	External nose + internal nasal passages lined with mucosa	Laterality important (unilateral vs. bilateral)
Paranasal Sinuses	Air-filled bony cavities: maxillary, frontal, ethmoid, sphenoid	FESS procedures; bilateral modifier -50
Pharynx	Throat; connects nasal cavity and mouth to larynx	Coded under Digestive or ENT depending on approach
Larynx	Contains vocal cords (true and false); epiglottis; arytenoids	Laryngoscopy: indirect vs. direct; flexible vs. rigid
Trachea	Cartilaginous tube from larynx to bronchi (~10–12 cm)	Tracheostomy, tracheoplasty codes
Bronchi	Right and left primary bronchi branch from carina	Bronchoscopy procedures 31622–31654
Lungs	Right lung: 3 lobes; left lung: 2 lobes + cardiac notch	Resection codes vary by extent (wedge, segment, lobe, total)

Structure	Location / Description	Key Coding Notes
Pleura	Visceral pleura (covers lung) + parietal pleura (lines chest wall)	Thoracentesis, pleurodesis, decortication codes

CPT Respiratory System Code Range: 30000–32999

The Surgery section of CPT includes a dedicated subsection for the Respiratory System, spanning codes **30000 through 32999**. This range is organized anatomically from superior (the nose) to inferior (the lungs), following the path that air travels through the body. Coders should always locate the anatomical site first, then identify the type of service (incision, excision, repair, etc.) within that site's subheading.

Subsection	Code Range	Anatomical Focus
Nose	30000–30999	External/internal nose, nasal cavity, turbinates, septum
Accessory Sinuses	31000–31299	Maxillary, frontal, ethmoid, sphenoid sinuses
Larynx	31300–31599	Larynx, epiglottis, vocal cords
Trachea and Bronchi	31600–31899	Trachea, carina, bronchi
Lungs and Pleura	32035–32999	Lungs (all lobes), pleural cavity, thorax

How Codes Are Organized Within This Section

Within each anatomical subsection, CPT further organizes codes by the **type of service**. The standard service types you will encounter in the Respiratory section include:

- **Incision** — cutting into a structure (e.g., abscess drainage)
- **Excision** — removal of tissue (e.g., polyp removal, turbinectomy)
- **Introduction** — placement of an instrument or substance

- **Endoscopy** — visualization using a scope (diagnostic or surgical)
- **Repair** — reconstruction of anatomical structures (e.g., rhinoplasty, septoplasty)
- **Destruction** — ablation or cauterization of tissue
- **Resection** — removal of an organ or major part thereof (e.g., pneumonectomy)
- **Transplantation** — organ transplant procedures (e.g., lung transplant)

> 📌 **Coder's Corner**
>
> When looking up a respiratory procedure in the CPT Index, start with the **anatomical site** as the main term (e.g., "Nose," "Larynx," "Bronchus"), then locate the subterm for the procedure type. Alternatively, use the **procedure** as the main term (e.g., "Rhinoplasty," "Bronchoscopy," "Thoracentesis"). Both approaches are valid — use whichever leads you to the answer faster on exam day.

Importance of Laterality in Respiratory Coding

Laterality — whether a procedure is performed on one side (unilateral) or both sides (bilateral) of a paired structure — is critically important in respiratory coding. Structures such as the nasal passages, paranasal sinuses, bronchi, and lungs are bilateral, meaning procedures may be performed on one or both sides.

When a procedure is performed bilaterally, coders typically have two options depending on the CPT code descriptor:

1. If the CPT descriptor already specifies "bilateral," the code is reported once and no modifier is needed.
2. If the CPT descriptor is unilateral (or unspecified), append modifier **-50** (Bilateral Procedure) and report the code once on one line (or twice on two lines, depending on payer requirements).

For procedures performed on only one side of a bilateral structure, append modifier **-LT** (Left Side) or **-RT** (Right Side) as appropriate.

Key Documentation Elements from Operative Reports

Before assigning any code, the coder must carefully review the operative report. The following elements are essential for respiratory system coding:

- **Procedure name and approach** (endoscopic vs. open; transnasal vs. transcervical)
- **Anatomical site(s)** involved — be specific (e.g., left maxillary sinus vs. bilateral ethmoid sinuses)
- **Laterality** — which side(s)?
- **Extent of procedure** (e.g., partial vs. total; simple vs. extensive; diagnostic vs. surgical)
- **Use of a microscope or other visualization tools**
- **Tissue removed or biopsy taken** — note if sent to pathology
- **Additional procedures performed** during the same operative session
- **Anesthesia type** (general, local, MAC)
- **Surgeon's specialty and attestation**

> ⚠️ **Stop! Think!**
>
> Never code from the **preoperative diagnosis** or the **title of the procedure** alone. Always read the body of the operative report to verify what was actually performed. Surgeons sometimes plan a procedure that changes intraoperatively — your code must reflect what was done, not what was planned.

Section 2: Nose (30000–30999)

The Nose subsection covers procedures performed on the external nose, internal nasal cavity, nasal septum, turbinates, and nasal vestibule. Procedures range from simple incision and drainage to complex rhinoplasty reconstructions.

Incision and Drainage of Nasal Abscess (30000–30020)

Nasal abscesses are uncommon but occur in the septal region or within the nasal cavity. Incision and drainage (I&D) involves making a small incision into the abscess to allow purulent material to escape.

- **30000** — Drainage abscess or hematoma, nasal, internal approach
- **30020** — Drainage abscess or hematoma, nasal septum

> 💡 **Did You Know?**
>
> A **nasal septal hematoma** — a collection of blood between the septal cartilage and its perichondrium — is a medical emergency. If not drained promptly, it can cause avascular necrosis of the cartilage, resulting in a "saddle nose" deformity. Code 30020 is used for drainage of both abscess and hematoma of the nasal septum.

Excision Procedures

Nasal Polyp Removal (30110–30115)

A **nasal polyp** is a benign, pedunculated outgrowth of inflamed nasal mucosa. Polyps frequently arise from the ethmoid sinuses and prolapse into the nasal cavity. Their removal may be simple or extensive depending on size, number, and depth of involvement.

- **30110** — Excision, nasal polyp(s), simple
- **30115** — Excision, nasal polyp(s), extensive

The distinction between simple and extensive is determined by the physician's documentation and clinical complexity — not by the number of polyps alone. Extensive polyp removal typically involves deeper dissection, use of microdebrider, or removal from multiple regions.

> 📌 **Coder's Corner**
>
> Nasal polyp removal is a common area for laterality errors. If the surgeon removes polyps from both nasal passages, you must append modifier **-50** to the code (e.g., 30110-50 for bilateral simple nasal polyp removal). Medicare and many commercial payers recognize this as a bilateral procedure eligible for 150% of the single-procedure fee.

Turbinate Procedures (30130–30140)

The **turbinates** (also called conchae) are shelf-like bony projections covered with mucosa that line the nasal sidewalls. There are three on each side: inferior, middle, and superior. The **inferior turbinate** is most commonly treated surgically because it enlarges significantly in chronic rhinitis, causing nasal obstruction.

- **30130** — Excision inferior turbinate, partial or complete, any method
- **30140** — Submucous resection inferior turbinate, partial or complete, any method

A **submucous resection (SMR)** of the turbinate involves removing the underlying bone and/or soft tissue while preserving the overlying mucosal lining — this is a more tissue-sparing approach than simple excision. Code 30140 is appropriate when the documentation specifies preservation of the mucosa.

Introduction / Irrigation Procedures (30200–30220)

- **30200** — Injection into turbinate(s)
- **30210** — Displacement therapy; Proetz type
- **30220** — Insertion, nasal septal prosthesis (button)

Turbinate injections (30200) may be performed with corticosteroids or sclerosing agents to reduce turbinate size. A **nasal septal button (30220)** is a prosthetic device inserted to close a septal perforation temporarily.

Repair Procedures

Rhinoplasty (30400–30462)

Rhinoplasty refers to surgical reshaping of the nose, performed for functional improvement (airway obstruction), cosmetic reasons, or both. CPT distinguishes between primary (first-time) and secondary (revision) rhinoplasty, and whether the nasal tip is addressed.

CPT Code	Procedure Description	Key Notes
30400	Rhinoplasty, primary; lateral and/or alar cartilages and/or elevation of nasal tip	Primary procedure; addresses tip only
30410	Rhinoplasty, primary; complete, external parts including bony pyramid, lateral and alar cartilages, and/or elevation of nasal tip	Full primary rhinoplasty, bony and cartilaginous work
30420	Rhinoplasty, primary; including major septal repair	When significant septal work is performed concurrently
30430	Rhinoplasty, secondary; minor revision (small amount of nasal tip work)	Revision; minor scope
30450	Rhinoplasty, secondary; major revision (nasal tip work and osteotomies)	Revision; major scope with osteotomies
30460	Rhinoplasty for nasal deformity secondary to congenital cleft lip and/or palate, including columellar lengthening; tip only	Cleft-related deformity correction
30462	Rhinoplasty for nasal deformity secondary to congenital cleft lip and/or	Full cleft-related correction

CPT Code	Procedure Description	Key Notes
	palate, including columellar lengthening; tip, septum, osteotomies	

Septoplasty (30520)

A **deviated nasal septum** is one of the most common causes of nasal obstruction. **Septoplasty** is the surgical correction of a deviated septum by repositioning and/or removing portions of cartilage and bone. Unlike SMR, septoplasty is a more comprehensive reconstruction of the septum that may include scoring, fracturing, and repositioning of the septal framework.

- **30520** — Septoplasty or submucous resection, with or without cartilage scoring, contouring, or replacement with graft

> ⚠️ **Stop! Think!**
>
> **Can you code septoplasty (30520) and rhinoplasty (30400–30420) together?** Yes — when a surgeon performs both a septoplasty and a rhinoplasty during the same operative session, both may be coded separately, with modifier **-51** appended to the secondary procedure. However, always verify payer-specific bundling rules, as some payers bundle these when performed together.

Repair of Nasal Vestibular Stenosis

The **nasal vestibule** is the entrance to the nasal cavity, lined with skin rather than mucosa. **Vestibular stenosis** (narrowing) may occur following trauma, surgery, or inflammatory conditions. Repair codes are found in the 30460 range for congenital deformities; acquired stenosis repair may use unlisted nasal procedure code **30999** with documentation.

Destruction / Other Procedures (30801–30930)

- **30801** — Ablation, soft tissue of inferior turbinates, unilateral or bilateral, any method (e.g., electrocautery, radiofrequency, coblation); superficial
- **30802** — Ablation, soft tissue of inferior turbinates, unilateral or bilateral, any method; intramural (e.g., submucosal)
- **30901** — Control nasal hemorrhage, anterior, simple (limited cautery and/or packing)
- **30903** — Control nasal hemorrhage, anterior, complex (extensive cautery and/or packing)
- **30905** — Control nasal hemorrhage, posterior, with posterior nasal packs and/or cautery, any method; initial
- **30906** — Subsequent
- **30930** — Fracture nasal inferior turbinate(s), therapeutic

> 💡 **Did You Know?**
>
> **Turbinate ablation (30801/30802)** codes are used when a physician uses radiofrequency energy, electrocautery, or coblation to shrink turbinate tissue. These codes state "unilateral or bilateral" — so one code is reported regardless of how many turbinates are treated. Compare this to polyp removal, where bilateral procedures require modifier -50. Always read the code descriptor carefully!

Table: Common Nose Procedure CPT Codes

CPT Code	Procedure	Key Distinctions	Laterality Note
30000	I&D nasal abscess/hematoma, internal	Internal approach only	Unilateral
30020	I&D nasal septal	Septal location	N/A (septum is

CPT Code	Procedure	Key Distinctions	Laterality Note
	abscess/hematoma	specifically	midline)
30110	Nasal polyp excision, simple	Simple removal	Add -50 if bilateral
30115	Nasal polyp excision, extensive	Extensive dissection required	Add -50 if bilateral
30130	Turbinate excision, any method	Mucosa may or may not be preserved	Unilateral; add -50 if bilateral
30140	Turbinate submucous resection	Mucosa preserved	Unilateral; add -50 if bilateral
30400	Primary rhinoplasty, tip only	First-time; tip work only	N/A (bilateral by nature)
30410	Primary rhinoplasty, complete	Bony pyramid + cartilage	N/A
30520	Septoplasty	Structural septal correction	N/A (midline structure)
30801	Turbinate ablation, superficial	Already includes uni- or bilateral	No modifier needed
30901	Epistaxis control, anterior, simple	Limited cautery/packing	Unilateral or bilateral — code once
30905	Epistaxis control, posterior, initial	Posterior packing, more complex	Code once

Nose Coding Scenarios

SCENARIO 2-A: Bilateral Nasal Polyp Removal

OPERATIVE NOTE EXCERPT

PREOPERATIVE DIAGNOSIS: Bilateral nasal polyposis

POSTOPERATIVE DIAGNOSIS: Same

PROCEDURE: Bilateral nasal polypectomy, extensive

PROCEDURE IN DETAIL: The patient was brought to the operating room and placed under general anesthesia. The nasal passages were decongested with oxymetazoline-soaked pledgets. Examination revealed large, gelatinous polyps occupying the bilateral nasal cavities from the middle meatus anteriorly. A microdebrider was used to perform extensive bilateral polypectomy, removing multiple polyps on the right side (estimated 4 polyps, ranging from 1 to 3 cm) and on the left side (estimated 3 polyps). Hemostasis was achieved with electrocautery. Absorbable packing was placed bilaterally. Patient tolerated procedure well.

Step 1: Identify the procedure.

Nasal polypectomy — extensive (due to size, number, use of microdebrider, and bilateral involvement).

Step 2: Locate the code.

30115 — Excision, nasal polyp(s), extensive.

Step 3: Determine laterality.

Performed bilaterally — both nasal passages treated. Code 30115 is a unilateral code. Append modifier -50.

FINAL CODE: 30115-50

Report once with modifier -50. Some payers require two line items: 30115-50 (first line) OR 30115-RT and 30115-LT (two lines). Verify payer preference.

Common Mistake: Coding 30110 (simple) instead of 30115 (extensive). The use of a microdebrider, the size of polyps (up to 3 cm), and documentation of "extensive" by the surgeon all support code 30115.

SCENARIO 2-B: Septoplasty with Turbinate Reduction

OPERATIVE NOTE EXCERPT

PREOPERATIVE DIAGNOSIS: Deviated nasal septum, left inferior turbinate hypertrophy

POSTOPERATIVE DIAGNOSIS: Same

PROCEDURE: Septoplasty; left inferior turbinate submucous resection

PROCEDURE IN DETAIL: The patient was placed under general anesthesia. A hemitransfixion incision was made at the caudal septum. Mucoperichondrial flaps were elevated bilaterally. The deviated cartilaginous and bony septum was resected and repositioned. The septum was straightened and scored where needed. Attention was then turned to the left inferior turbinate, which was markedly hypertrophied. A submucosal tunnel was created and the underlying turbinate bone was partially resected via through-cutting forceps, preserving the overlying mucosa. Quilting sutures were placed in the septum. Silastic splints were placed bilaterally. Patient was awakened and taken to recovery in stable condition.

Step 1: Identify all procedures.

(1) Septoplasty — surgical correction of deviated nasal septum with scoring and repositioning. (2) Left inferior turbinate submucous resection — submucosal tunnel, bone resected, mucosa preserved.

Step 2: Assign codes.

30520 — Septoplasty (primary procedure)

30140 — Submucous resection inferior turbinate (secondary procedure)

Step 3: Laterality for turbinate.

Left side only — append modifier -LT to 30140.

Step 4: Multiple procedures.

Append modifier -51 to the secondary procedure (30140).

FINAL CODES: 30520, 30140-51-LT

Common Mistake: Failing to code the turbinate reduction separately. Some coders assume it is included in septoplasty — it is not. The two procedures have distinct CPT codes and are reportable separately.

Section 3: Accessory Sinuses (31000–31299)

Sinus Anatomy Review

The **paranasal sinuses** are paired, air-filled cavities within the facial bones. They are lined with ciliated columnar epithelium and drain into the nasal cavity. Understanding their anatomy is essential for accurate sinus procedure coding.

- **Maxillary sinuses** — The largest sinuses; located in the cheekbones; drain into the middle meatus
- **Frontal sinuses** — Located in the forehead above the eyes; drain into the middle meatus via the frontal recess

- **Ethmoid sinuses** — A honeycomb of small air cells in the ethmoid bone between the nose and orbit; anterior cells drain into the middle meatus; posterior cells drain into the superior meatus
- **Sphenoid sinuses** — Located in the sphenoid bone, deep in the skull base; drain into the sphenoethmoidal recess

Sinusotomy vs. Sinusectomy

These two terms are frequently confused:

- **Sinusotomy** — An incision into a sinus (to establish drainage). The sinus is opened but not removed.
- **Sinusectomy** — Removal of sinus tissue or the sinus lining (mucosa).

In CPT, the term used in the code descriptor (sinusotomy vs. sinusectomy) determines correct code selection. Read the operative note carefully to determine the extent of the procedure.

Lavage of Maxillary Sinus (31000–31002)

- **31000** — Lavage by cannulation; maxillary sinus (antrum puncture or natural ostium)
- **31002** — Lavage by cannulation; sphenoidal sinus

Maxillary sinus lavage involves passing a cannula (trocar) through either the natural ostium or by puncturing the medial wall of the maxillary sinus (antrum), then irrigating with saline to flush out purulent secretions. This is a less invasive alternative to formal sinusotomy.

Functional Endoscopic Sinus Surgery (FESS)

What Is FESS and Why Did It Change Sinus Coding?

Functional Endoscopic Sinus Surgery (FESS) revolutionized the treatment of chronic sinusitis beginning in the 1980s. Rather than making external incisions, FESS uses a rigid nasal endoscope passed through the nostrils to directly visualize and treat the sinus openings and drainage pathways. By restoring normal

mucociliary drainage, FESS treats the root cause of most sinusitis rather than simply the symptoms.

FESS dramatically changed sinus coding because it created an entirely new set of CPT codes (31231–31297) for endoscopic sinus procedures, distinct from the older open sinus procedure codes. Coders must know the approach (endoscopic vs. open) before selecting a code family.

> 💡 **Did You Know?**
>
> The ethmoid sinuses are the "gateway" sinuses. Ethmoidectomy — removal of ethmoid air cells — is the most common starting point of FESS because the ethmoid complex must often be cleared to access the maxillary, frontal, and sphenoid sinuses. This is why ethmoidectomy codes are so commonly reported alongside other FESS procedure codes.

Endoscopic Procedures (31231–31297)

The FESS code set is built on a **base code plus add-on code** concept. The **diagnostic nasal endoscopy** (31231) is the base; however, when surgical work is performed, only the highest-level surgical code is reported — the diagnostic component is always included and never reported separately.

CPT Code	Procedure Description	Key Notes
31231	Nasal endoscopy, diagnostic; unilateral or bilateral (separate procedure)	Diagnostic only — never report with a surgical endoscopy of same site
31233	Nasal/sinus endoscopy, diagnostic with maxillary sinusoscopy	Diagnostic scope extended into maxillary sinus
31235	Nasal/sinus endoscopy, diagnostic with sphenoid sinusoscopy	Diagnostic scope into sphenoid sinus
31237	Nasal/sinus endoscopy, surgical; with biopsy, polypectomy or debridement	Surgical; tissue removed from nasal cavity or sinuses

CPT Code	Procedure Description	Key Notes
31238	Nasal/sinus endoscopy, surgical; with control of nasal hemorrhage	Endoscopic epistaxis control
31239	Nasal/sinus endoscopy, surgical; with dacryocystorhinostomy	Creates opening between lacrimal sac and nasal cavity
31240	Nasal/sinus endoscopy, surgical; with concha bullosa resection	Removal of air cell within middle turbinate
31253	Nasal/sinus endoscopy, surgical, with ethmoidectomy; total (anterior and posterior), including frontal sinus exploration, with removal of tissue from frontal sinus, when performed	Total ethmoidectomy with frontal exploration
31254	Nasal/sinus endoscopy, surgical; with ethmoidectomy, partial (anterior)	Anterior ethmoid air cells only
31255	Nasal/sinus endoscopy, surgical; with ethmoidectomy, total (anterior and posterior)	All ethmoid air cells removed
31256	Nasal/sinus endoscopy, surgical; with maxillary antrostomy	Opening of the maxillary sinus ostium
31267	Nasal/sinus endoscopy, surgical; with maxillary antrostomy with removal of tissue from the maxillary sinus	Antrostomy PLUS tissue removal from inside maxillary sinus
31276	Nasal/sinus endoscopy, surgical with frontal explore, with removal of tissue from frontal sinus	Frontal sinusotomy with tissue removal
31287	Nasal/sinus endoscopy, surgical; with sphenoidotomy	Opening of sphenoid sinus
31288	Nasal/sinus endoscopy, surgical; with sphenoidotomy, with removal of tissue from	Sphenoidotomy PLUS tissue removal

CPT Code	Procedure Description	Key Notes
	the sphenoid sinus	
31290	Nasal/sinus endoscopy, surgical, with repair of cerebrospinal fluid leak; ethmoid region	CSF leak repair; ethmoid skull base
31291	Nasal/sinus endoscopy, surgical, with repair of cerebrospinal fluid leak; sphenoid region	CSF leak repair; sphenoid skull base
31295	Nasal/sinus endoscopy, surgical; with dilation of maxillary sinus ostium (eg, balloon dilation)	Balloon sinuplasty — dilation, not removal
31296	Nasal/sinus endoscopy, surgical; with dilation of frontal sinus ostium	Balloon dilation, frontal sinus
31297	Nasal/sinus endoscopy, surgical; with dilation of sphenoid sinus ostium	Balloon dilation, sphenoid sinus

Key Rule: Surgical Endoscopy Always Includes Diagnostic Endoscopy

🚫 **Critical Coding Rule — NEVER Violate This**

When a surgical nasal/sinus endoscopy is performed, the diagnostic endoscopy is ALWAYS included and may NEVER be coded separately. The surgeon must pass the scope and visualize the anatomy (diagnostic component) before performing any surgical work — this is inherent to the procedure. Reporting 31231 alongside any surgical endoscopy code is an NCCI bundling violation and will result in claim denial.

Rule: Surgical includes diagnostic. Always report the highest level of service performed.

How to Code Bilateral FESS Procedures (Modifier -50)

FESS procedures may be performed on one or both sides. Each FESS code descriptor specifies whether the procedure is unilateral or bilateral by nature. Most FESS codes are **unilateral** — meaning they describe work on one side. When the same procedure is performed on both sides during the same operative session, modifier **-50** is appended.

Example: Bilateral total ethmoidectomy with bilateral maxillary antrostomy with tissue removal:

- 31255-50 — Bilateral total ethmoidectomy
- 31267-50-51 — Bilateral maxillary antrostomy with tissue removal (secondary procedure)

📌 Coder's Corner

Medicare follows CMS guidelines that typically accept modifier -50 on a single line for bilateral procedures, reimbursing at 150% of the single-procedure rate. Many commercial payers also follow this convention. However, some payers require two separate line items — one with modifier -RT and one with -LT. Always verify payer-specific bilateral billing requirements before submitting.

FESS Coding Scenarios

SCENARIO 3-A: Diagnostic Nasal Endoscopy Only

OPERATIVE NOTE EXCERPT

PROCEDURE: Diagnostic nasal endoscopy, bilateral

PROCEDURE IN DETAIL: A 0-degree nasal endoscope was passed through the right nasal passage. The inferior turbinate was mildly edematous. The middle meatus was visualized and the uncinate process appeared intact. No polyps were observed. The nasopharynx was normal. The scope was then passed through the left nasal passage with similar findings. No surgical intervention was performed. No biopsy taken.

Step 1: Was this diagnostic or surgical?

Diagnostic only — no tissue was removed, no surgical intervention performed.

Step 2: Assign the code.

31231 — Nasal endoscopy, diagnostic; unilateral or bilateral. This code already includes bilateral — no modifier -50 needed.

FINAL CODE: 31231

Common Mistake: Reporting 31231-50, thinking bilateral requires a modifier. The descriptor says "unilateral or bilateral" — one code covers both sides regardless.

SCENARIO 3-B: Bilateral FESS — Ethmoidectomy and Maxillary Antrostomy

OPERATIVE NOTE EXCERPT

PREOPERATIVE DIAGNOSIS: Chronic rhinosinusitis, bilateral, with nasal polyps

PROCEDURE: Bilateral functional endoscopic sinus surgery: bilateral total ethmoidectomy, bilateral maxillary antrostomy with removal of tissue

PROCEDURE IN DETAIL: The patient was placed under general anesthesia in the supine position. A 0-degree rigid endoscope was introduced into the right nasal cavity. The uncinate process was resected. A total anterior and posterior ethmoidectomy was performed on the right side, removing all ethmoid air cells under direct visualization. The natural maxillary sinus ostium was identified and enlarged; polyps and thickened mucosa were removed from within the maxillary sinus on the right. The procedure was then repeated identically on the left side. Bilateral total ethmoidectomy and bilateral maxillary antrostomy with removal of tissue were completed. Hemostasis was assured. Absorbable packing placed bilaterally.

Step 1: Identify all procedures.

(1) Total ethmoidectomy, bilateral (both anterior and posterior air cells removed — total). (2) Maxillary antrostomy WITH removal of tissue from inside maxillary sinus,

bilateral.

Step 2: Select codes.

31255 — Total (anterior and posterior) ethmoidectomy

31267 — Maxillary antrostomy with removal of tissue

Step 3: Add bilateral modifier -50 to each code.

Both procedures performed on both sides.

Step 4: Multiple procedure modifier.

Append -51 to the secondary procedure (31267).

FINAL CODES: 31255-50, 31267-50-51

Do NOT also report 31231 (diagnostic endoscopy). It is included in the surgical endoscopy.

Common Mistake: Using 31256 instead of 31267. Code 31256 is for antrostomy only (enlarging the opening). Code 31267 is used when tissue is also removed from inside the maxillary sinus — which the operative note clearly documents.

SCENARIO 3-C: Unilateral FESS with Sphenoidotomy

OPERATIVE NOTE EXCERPT

PREOPERATIVE DIAGNOSIS: Right-sided chronic sphenoid sinusitis, right ethmoid sinusitis

PROCEDURE: Right anterior ethmoidectomy; right sphenoidotomy with removal of tissue

PROCEDURE IN DETAIL: Under general anesthesia, a 0-degree endoscope was introduced into the right nasal cavity. Anterior ethmoid air cells were identified and removed with through-cutting forceps and microdebrider — anterior ethmoidectomy completed. The posterior ethmoid cells were left intact. The sphenoid ostium was identified and enlarged; thick, inspissated secretions and polypoid mucosa were removed from within the sphenoid sinus under direct visualization. Left nasal cavity was not entered.

Step 1: Identify all procedures.

(1) Right anterior ethmoidectomy — anterior only (not total). (2) Right sphenoidotomy with removal of tissue from sphenoid sinus.

Step 2: Assign codes.

31254 — Partial (anterior) ethmoidectomy

31288 — Sphenoidotomy with removal of tissue

Step 3: Laterality — right side only.

Append -RT to both codes.

Step 4: Multiple procedures.

Append -51 to the secondary procedure.

FINAL CODES: 31254-RT, 31288-51-RT

Common Mistake: Using 31255 (total ethmoidectomy) when only the anterior cells were removed. The operative note specifically states "anterior ethmoid air cells" and "posterior ethmoid cells were left intact." Code selection must match documentation — 31254 for partial/anterior only.

Section 4: Larynx (31300–31599)

Anatomy: Epiglottis, Vocal Cords, Arytenoids

The **larynx** is the cartilaginous structure that connects the pharynx above to the trachea below. It serves as a protective valve for the airway and houses the vocal cords (responsible for phonation). Key anatomical structures include:

- **Epiglottis** — Leaf-shaped cartilage that folds over the laryngeal inlet during swallowing to protect the airway
- **Thyroid cartilage** — Largest laryngeal cartilage; forms the "Adam's apple"
- **True vocal cords (vocal folds)** — Vibrate to produce sound; most common site for polyps, nodules, and carcinoma
- **False vocal cords (vestibular folds)** — Do not vibrate; lie above the true cords
- **Arytenoid cartilages** — Paired; control vocal cord tension and position; may be surgically repositioned (arytenoid adduction) in cases of vocal cord paralysis
- **Subglottis** — Region below the true vocal cords, above the first tracheal ring; common site of stenosis in children

Laryngoscopy

Laryngoscopy is the visualization of the larynx using a scope. It is the most common procedure type within the Larynx subsection. The CPT code chosen depends on three variables:

3. **Approach:** Indirect (mirror or flexible scope) vs. Direct (rigid scope under general anesthesia)
4. **Purpose:** Diagnostic vs. Surgical (with additional procedure)
5. **Scope type:** Flexible vs. Rigid; with or without operating microscope

Indirect vs. Direct Laryngoscopy

Indirect laryngoscopy — The physician uses a laryngeal mirror or flexible fiberoptic laryngoscope to visualize the larynx without directly entering the airway under general anesthesia. The patient is typically awake and sitting upright. Coded under 31505–31513 (indirect) or 31575–31579 (flexible).

Direct laryngoscopy — The physician passes a rigid laryngoscope directly through the oropharynx under general anesthesia, providing superior visualization and the ability to perform surgical procedures. Coded under 31515–31571 (direct, with/without microscope).

CPT Code	Type	Procedure	Notes
31505	Indirect	Laryngoscopy, indirect; diagnostic (separate procedure)	Mirror or indirect scope; diagnostic only
31510	Indirect	Laryngoscopy, indirect; with biopsy	Indirect approach + tissue biopsy
31511	Indirect	Laryngoscopy, indirect; with removal of foreign body	Foreign body removed via indirect approach
31512	Indirect	Laryngoscopy, indirect; with removal of lesion	Lesion/polyp removed via indirect approach
31513	Indirect	Laryngoscopy, indirect; with vocal cord injection	Injection therapy (e.g., for paralysis)
31515	Direct	Laryngoscopy direct, with or without tracheoscopy; for aspiration	Aspiration of secretions/foreign material
31520	Direct	Laryngoscopy, direct, diagnostic, newborn	Newborn/neonatal; diagnostic
31525	Direct	Laryngoscopy, direct, diagnostic, except newborn	All other patients; diagnostic, no microscope
31526	Direct	Laryngoscopy,	Diagnostic +

CPT Code	Type	Procedure	Notes
		direct, diagnostic, with operating microscope or telescope	operating microscope used
31530	Direct	Laryngoscopy, direct; with foreign body removal	Foreign body removed; direct rigid scope
31531	Direct	Laryngoscopy, direct; with foreign body removal, with operating microscope or telescope	Foreign body + microscope
31535	Direct	Laryngoscopy, direct; with biopsy	Biopsy via direct rigid scope
31536	Direct	Laryngoscopy, direct; with biopsy, with operating microscope or telescope	Biopsy + microscope
31541	Direct	Laryngoscopy, direct, operative, with excision of tumor and/or stripping of vocal cords	Tumor excision or cord stripping; no microscope
31545	Direct	Laryngoscopy, direct, operative, with operating microscope or telescope; with excision of tumor or lesion (other than polyp)	Tumor/lesion excision + microscope
31546	Direct	Laryngoscopy, direct, operative, with operating microscope or telescope; with excision of lesion (other than polyp) with local tissue reconstruction	Excision + reconstruction
31560	Direct	Laryngoscopy, direct, operative; with	Arytenoid cartilage removed

CPT Code	Type	Procedure	Notes
		arytenoidectomy	
31561	Direct	Laryngoscopy, direct, operative; with arytenoidectomy, with operating microscope or telescope	Arytenoidectomy + microscope
31571	Direct	Laryngoscopy, direct, operative, with operating microscope or telescope; with vocal cord injection	Injection + microscope
31575	Flexible	Laryngoscopy, flexible; diagnostic	Flexible scope; diagnostic (office-based common)
31576	Flexible	Laryngoscopy, flexible; with biopsy(ies)	Flexible + biopsy
31577	Flexible	Laryngoscopy, flexible; with removal of foreign body(ies)	Flexible + foreign body removal
31578	Flexible	Laryngoscopy, flexible; with removal of lesion(s)	Flexible + lesion removal
31579	Flexible	Laryngoscopy, flexible or rigid fiberoptic, with stroboscopy	Stroboscopy for voice disorders

Laryngectomy: Partial vs. Total (31360–31395)

A **laryngectomy** is the surgical removal of the larynx, most commonly performed for laryngeal carcinoma. The extent of resection varies based on tumor location and stage:

- **31360** — Laryngectomy, total, without radical neck dissection
- **31365** — Laryngectomy, total, with radical neck dissection

- **31367** — Laryngectomy, subtotal supraglottic, without radical neck dissection
- **31368** — Laryngectomy, subtotal supraglottic, with radical neck dissection
- **31370** — Partial laryngectomy (hemilaryngectomy); horizontal
- **31375** — Partial laryngectomy (hemilaryngectomy); laterocervical
- **31380** — Partial laryngectomy (hemilaryngectomy); antero-lateral vertical
- **31382** — Partial laryngectomy (hemilaryngectomy); antero-lateral vertical, with radical neck dissection
- **31390** — Pharyngolaryngectomy, without radical neck dissection
- **31395** — Pharyngolaryngectomy, with radical neck dissection

Tracheostomy (31600–31614)

A **tracheostomy** is the creation of a surgical opening (stoma) in the trachea through the neck, allowing direct access to the airway. This is one of the most important codes in the Larynx/Trachea subsection. CPT distinguishes between:

- **Planned tracheostomy** — Elective procedure performed under controlled conditions
- **Emergency tracheostomy** — Performed urgently due to acute airway obstruction

CPT Code	Procedure	Notes
31600	Tracheostomy, planned (separate procedure)	Adult; elective; standard approach
31601	Tracheostomy, planned (separate procedure); younger than 2 years	Pediatric (infant/toddler); different technique
31603	Tracheostomy, emergency procedure; transtracheal	Emergency; through tracheal wall
31605	Tracheostomy, emergency procedure; cricothyroid membrane	Emergency cricothyrotomy; fastest approach

CPT Code	Procedure	Notes
31610	Tracheostomy, fenestration procedure with skin flaps	Permanent tracheostomy with skin flaps for stoma maturation
31611	Construction of tracheoesophageal fistula and subsequent insertion of an alaryngeal speech prosthesis	Voice restoration after laryngectomy
31612	Tracheal puncture, percutaneous with transtracheal aspiration and/or injection	Needle aspiration or injection; not a surgical stoma
31613	Tracheostoma revision; simple, without flap rotation	Revision of existing stoma; no flap
31614	Tracheostoma revision; complex, with flap rotation	Complex revision requiring flap

⚠️ **Stop! Think!**

Tracheostomy CREATION vs. Tracheostomy CARE: Creating a tracheostomy (31600–31614) is a surgical procedure and is coded in the Surgery section. Tracheostomy care (cleaning, changing the tube) performed postoperatively is a medical management service and is included in the surgeon's global period — it is NOT separately coded. Do not report 31600 for routine tracheostomy care visits.

Larynx Coding Scenarios

SCENARIO 4-A: Direct Laryngoscopy with Vocal Cord Polyp Removal

OPERATIVE NOTE EXCERPT

PREOPERATIVE DIAGNOSIS: Right vocal cord polyp

PROCEDURE: Direct laryngoscopy with excision of right vocal cord polyp, using operating microscope

PROCEDURE IN DETAIL: The patient was induced under general anesthesia. A Dedo laryngoscope was suspended from a chest support. The operating microscope was brought into the field, providing excellent magnification. A polypoid lesion was identified on the right true vocal cord, measuring approximately 5mm. The lesion was grasped with cup forceps and excised at its base using microscissors. The base was lightly cauterized. Specimen was sent to pathology. The contralateral cord appeared normal.

Step 1: Identify the procedure type.

Direct laryngoscopy (rigid scope, general anesthesia) with excision of vocal cord polyp and use of operating microscope.

Step 2: Locate the code.

Looking for: direct laryngoscopy, operative, with polyp removal, with operating microscope.

Review the code table: The closest match for "excision of lesion (other than polyp)"

with microscope is 31545, but for vocal cord polyp specifically, look to CPT guidelines — a polyp on the vocal cord is reportable under the lesion excision codes when removed via microscope. Correct code:

31545

— Laryngoscopy, direct, operative, with operating microscope; with excision of tumor or lesion (other than polyp). Note: CPT distinguishes "polyp" vs. "lesion" — when excision is with microscope, 31545 applies.

Step 3: Unilateral — right vocal cord only.

No bilateral modifier needed; laryngoscopy codes are not reported per side.

FINAL CODE: 31545

Common Mistake: Reporting 31535 (biopsy only) when excision was performed. A biopsy removes a small piece for diagnosis; excision removes the entire lesion. Documentation says "excised" — code accordingly.

SCENARIO 4-B: Emergency Tracheostomy

OPERATIVE NOTE EXCERPT

PREOPERATIVE DIAGNOSIS: Acute airway obstruction secondary to angioedema

PROCEDURE: Emergency tracheostomy via cricothyroid membrane

PROCEDURE IN DETAIL: Patient presented in acute respiratory distress with severe oropharyngeal angioedema. Oral intubation was attempted and failed due to swollen anatomy. An urgent decision was made to proceed with emergency airway access. The cricothyroid membrane was identified by palpation. A horizontal stab incision was made through the membrane. A 6.0 cuffed tracheostomy tube was inserted and ventilation confirmed by end-tidal CO2 detection and bilateral chest rise. The patient was immediately stabilized.

Step 1: Emergency vs. planned.

This was an emergency procedure — performed urgently for acute obstruction.

Step 2: Approach.

Through the cricothyroid membrane — this is a cricothyrotomy approach.

Step 3: Assign the code.

31605 — Tracheostomy, emergency procedure; cricothyroid membrane.

FINAL CODE: 31605

Common Mistake: Reporting 31603 (transtracheal) instead of 31605 (cricothyroid). The operative note clearly states "cricothyroid membrane" as the site of entry — this determines the code.

SCENARIO 4-C: Flexible Laryngoscopy, Diagnostic

OPERATIVE NOTE EXCERPT

PROCEDURE: Flexible laryngoscopy, diagnostic

PROCEDURE IN DETAIL: A flexible fiberoptic laryngoscope was passed transnasally under topical anesthesia in the office setting. The epiglottis, aryepiglottic folds, arytenoids, false cords, and true vocal cords were all well visualized. The true cords were mobile bilaterally and without lesion. No biopsy or intervention performed.

Step 1: Approach — flexible scope, office-based, diagnostic only.

No biopsy, no lesion removal, no intervention.

Step 2: Code selection.

31575 — Laryngoscopy, flexible; diagnostic.

FINAL CODE: 31575

Common Mistake: Using 31505 (indirect, mirror-based) for a flexible scope procedure. Flexible fiberoptic laryngoscopy uses a flexible scope passed through the nose — this is a distinct approach from indirect mirror laryngoscopy. Always confirm whether the scope was flexible or rigid, and the route of introduction.

Section 5: Trachea and Bronchi (31700–31899)

Bronchoscopy

A **bronchoscopy** is the endoscopic examination of the tracheobronchial tree. The bronchoscope is passed through the nose or mouth, through the larynx, into the trachea, and advanced into the bronchi. Bronchoscopy may be performed with a **flexible fiberoptic bronchoscope** (most common, often under moderate sedation) or a **rigid bronchoscope** (under general anesthesia, used for large airway procedures and foreign body removal).

Critical Bronchoscopy Rule

> 🚫 **Surgical Endoscopy Includes Diagnostic — BRONCHOSCOPY**
>
> Just as in FESS, a **surgical bronchoscopy always includes the diagnostic bronchoscopy component**. You may **never** separately report a diagnostic bronchoscopy (31622) on the same day as a surgical bronchoscopy (e.g., 31625, 31628, etc.) on the same patient. Always report only the surgical code — it encompasses the diagnostic visualization.

Bronchoscopy CPT Codes

CPT Code	Procedure Description	Key Notes
31622	Bronchoscopy, rigid or flexible, including fluoroscopic guidance, when performed; diagnostic, with or without cell washing (separate procedure)	Diagnostic only; includes cell washing
31623	Bronchoscopy; with brushings	Brush cytology specimen collection
31624	Bronchoscopy; with bronchial alveolar lavage (BAL)	Instills then aspirates saline to sample cells from deep airways
31625	Bronchoscopy; with bronchial or endobronchial biopsy(ies), single or multiple	Forceps biopsy of bronchial mucosa or endobronchial lesion
31626	Bronchoscopy; with placement of fiducial markers, single or multiple	Marker placement for stereotactic radiation
31627	Bronchoscopy; with computer-assisted, image-guided navigation (List separately in addition to code for primary procedure)	Add-on code; electromagnetic navigation

CPT Code	Procedure Description	Key Notes
31628	Bronchoscopy; with transbronchial lung biopsy(ies), single lobe	Needle/forceps through bronchial wall into lung parenchyma; one lobe
31629	Bronchoscopy; with transbronchial needle aspiration biopsy(ies), trachea, main stem and/or lobar bronchus(i)	Needle aspiration of peribronchial/tracheal tissue
31630	Bronchoscopy; with tracheal/bronchial dilation or closed reduction of fracture	Dilation of strictures
31631	Bronchoscopy; with tracheal stent placement (includes tracheal/bronchial dilation as required)	Tracheal stent; dilation included
31632	Bronchoscopy; with transbronchial lung biopsy(ies), each additional lobe (List separately in addition to code for primary procedure)	Add-on: biopsy of additional lobes beyond first
31633	Bronchoscopy; with transbronchial needle aspiration biopsy(ies), each additional lobe (add-on)	Add-on: additional lobes for TBNA
31635	Bronchoscopy; with removal of foreign body	Foreign body in bronchus; rigid scope usually required
31636	Bronchoscopy; with placement of bronchial stent(s) (includes tracheal/bronchial dilation as required), initial bronchus	Bronchial stent, first bronchus
31637	Bronchoscopy; each additional major bronchus stented (add-on)	Add-on: additional bronchi stented
31641	Bronchoscopy; with destruction of tumor or relief of stenosis by any method other than	Tumor ablation; laser/cryo/APC

CPT Code	Procedure Description	Key Notes
	excision (eg, laser therapy, cryotherapy)	
31643	Bronchoscopy; with placement of catheter(s) for intracavitary radioelement application	Brachytherapy catheter placement
31645	Bronchoscopy; with therapeutic aspiration of tracheobronchial tree, initial	Therapeutic aspiration — more than cell washing
31647	Bronchoscopy; with balloon occlusion, with assessment of air leak, with or without reconstitution of airway	Airway air leak assessment
31652	Bronchoscopy, rigid or flexible, including fluoroscopic guidance, when performed; with endobronchial ultrasound (EBUS) guided transbronchial sampling (eg, biopsy[ies], brushing[s], needle aspiration biopsy[ies]), 1 or 2 mediastinal and/or hilar lymph node stations or structures	EBUS biopsy; 1–2 lymph node stations
31653	Bronchoscopy; with EBUS guided transbronchial sampling; 3 or more mediastinal and/or hilar lymph node stations or structures	EBUS biopsy; 3+ lymph node stations
31654	Bronchoscopy; with EBUS guided transbronchial sampling of peripheral lesion(s)	EBUS for peripheral (non-nodal) lesions

💡 Did You Know?

Endobronchial Ultrasound (EBUS) is a technique that combines bronchoscopy with real-time ultrasound imaging. A small ultrasound probe at

the tip of the bronchoscope allows the physician to visualize lymph nodes and masses adjacent to the bronchial wall that cannot be seen directly. EBUS-guided transbronchial needle aspiration (TBNA) is the gold standard for minimally invasive mediastinal lymph node staging in lung cancer. EBUS codes (31652–31654) are reported instead of standard bronchoscopy codes — not in addition to them.

Intubation Coding Notes

Simple endotracheal intubation (placing a breathing tube for general anesthesia) is an anesthesia service — it is **not** separately reported as a surgical procedure when performed by the anesthesiologist for the purpose of anesthesia delivery. However, if a physician separately performs an **intubation for emergency airway management** (not for anesthesia), code **31500** (Intubation, endotracheal, emergency procedure) may apply.

📌 Coder's Corner

When coding bronchoscopy with multiple procedures, remember that **add-on codes** (31627, 31632, 31633, 31637) are reported in addition to the primary procedure code and do not require modifier -51. Only stand-alone additional procedures require modifier -51.

Bronchoscopy Coding Scenarios

SCENARIO 5-A: Bronchoscopy with BAL and Endobronchial Biopsy

OPERATIVE NOTE EXCERPT

PREOPERATIVE DIAGNOSIS: Right lower lobe infiltrate, rule out pneumonia vs. malignancy

PROCEDURE: Flexible bronchoscopy with bronchoalveolar lavage (BAL), right lower lobe; endobronchial biopsy, right lower lobe

PROCEDURE IN DETAIL: A flexible bronchoscope was passed transorally under moderate sedation. The vocal cords were visualized and appeared normal. The scope was advanced through the carina into the right lower lobe. BAL was performed by instilling 120 mL of normal saline in three aliquots and aspirating for microbiologic and cytologic analysis. The scope was then advanced to the right lower lobe bronchus where an endobronchial lesion was identified. Three biopsies were obtained using 2.0mm cupped forceps. Specimens were submitted to pathology. No complications. Scope was withdrawn.

Step 1: Identify all procedures.

(1) BAL, right lower lobe. (2) Endobronchial biopsy, right lower lobe (multiple biopsies — but code is "single or multiple").

Step 2: Assign codes.

31624 — BAL (primary — typically higher RVU)

31625 — Bronchial biopsy, single or multiple (secondary)

Step 3: Multiple procedure modifier.

Append -51 to 31625 (secondary procedure).

Step 4: Do NOT code 31622 (diagnostic).

Surgical bronchoscopy includes the diagnostic component.

FINAL CODES: 31624, 31625-51

SCENARIO 5-B: EBUS with Biopsy of 3 Lymph Node Stations

OPERATIVE NOTE EXCERPT

PREOPERATIVE DIAGNOSIS: Right hilar mass, left lower paratracheal lymphadenopathy — staging for suspected NSCLC

PROCEDURE: Endobronchial ultrasound (EBUS) with transbronchial needle aspiration, lymph node stations 7 (subcarinal), 4R (right lower paratracheal), 11L (left interlobar)

PROCEDURE IN DETAIL: An EBUS bronchoscope was advanced under general anesthesia. Real-time ultrasound was used to identify and guide transbronchial needle aspiration (TBNA) of three mediastinal/hilar lymph node stations: station 7 (subcarinal, 1.8 cm), station 4R (right lower paratracheal, 1.2 cm), and station 11L (left interlobar, 0.9 cm). Multiple passes were made at each station. Rapid on-site evaluation (ROSE) confirmed adequate sampling at all three stations. Specimens submitted to pathology.

Step 1: EBUS procedure with 3 lymph node stations biopsied.

Three mediastinal/hilar stations sampled: 7, 4R, 11L.

Step 2: Determine which EBUS code applies.

31652 = 1–2 stations; 31653 = 3 or more stations. Three stations were sampled → 31653.

FINAL CODE: 31653

Only one code — 31653 covers all stations biopsied when 3 or more. Do not report 31652 AND 31653.

Common Mistake: Reporting both 31652 and 31653 together. These codes are mutually exclusive — report only the one that matches the total number of stations sampled.

SCENARIO 5-C: Bronchoscopy with Foreign Body Removal

OPERATIVE NOTE EXCERPT

PREOPERATIVE DIAGNOSIS: Aspirated foreign body, right mainstem bronchus (peanut)

PROCEDURE: Rigid bronchoscopy with foreign body removal

PROCEDURE IN DETAIL: The patient, a 4-year-old male, was brought to the operating room after aspiration of a peanut documented on chest X-ray. Under general anesthesia, a 4.0mm rigid ventilating bronchoscope was passed through the oropharynx into the trachea. A peanut fragment was identified in the right mainstem bronchus. Using optical forceps through the rigid scope, the foreign body was grasped and removed intact. The bronchial mucosa was mildly erythematous but intact. A second pass confirmed no residual fragments. Patient was extubated and transferred to PACU in stable condition.

Step 1: Procedure — foreign body removal from bronchus.

Rigid bronchoscopy used (appropriate for pediatric FB removal).

Step 2: Code selection.

31635 — Bronchoscopy; with removal of foreign body.

FINAL CODE: 31635

Common Mistake: Trying to add a diagnostic code. Surgical bronchoscopy (which FB removal is) always includes the diagnostic component.

Section 6: Lungs and Pleura (32035–32999)

Lung Anatomy: Lobes, Segments, Pleura

The lungs are the primary organs of respiration. The **right lung** has three lobes: upper (RUL), middle (RML), and lower (RLL). The **left lung** has two lobes: upper (LUL) and lower (LLL), with the lingula being a tongue-like subdivision of the left upper lobe. Each lobe is divided into bronchopulmonary **segments** — the smallest independently functioning units of the lung, each supplied by its own segmental bronchus and artery.

The **pleura** is a two-layered serous membrane surrounding each lung:

- **Visceral pleura** — Tightly adherent to the lung surface
- **Parietal pleura** — Lines the inner chest wall, diaphragm, and mediastinum

- **Pleural space (pleural cavity)** — The potential space between the two layers; normally contains a small amount of lubricating fluid

Thoracentesis (32554–32557)

Thoracentesis is the insertion of a needle or catheter into the pleural space to drain accumulated fluid (**pleural effusion**) or air (**pneumothorax**). The choice of code depends on:

6. Whether the pleural space contains **fluid (effusion)** or **air**
7. Whether **imaging guidance** (typically ultrasound) was used

CPT Code	Procedure	Guidance
32554	Thoracentesis, needle or catheter, aspiration of the pleural space; without imaging guidance	No imaging
32555	Thoracentesis, needle or catheter, aspiration of the pleural space; with imaging guidance	With imaging (ultrasound most common)
32556	Pleural drainage, percutaneous, with insertion of indwelling catheter; without imaging guidance	Indwelling catheter placed; no imaging
32557	Pleural drainage, percutaneous, with insertion of indwelling catheter; with imaging guidance	Indwelling catheter placed; with imaging

📌 Coder's Corner

When imaging guidance (e.g., ultrasound) is used for thoracentesis, it is **included** in codes 32555 and 32557. Do **not** separately report an ultrasound guidance code (e.g., 76942) when the thoracentesis code already specifies "with imaging guidance." This is a frequent NCCI bundling error.

Chest Tube Insertion / Tube Thoracostomy (32551)

A **tube thoracostomy** involves insertion of a large-bore chest tube into the pleural space to drain blood (hemothorax), air (pneumothorax), or fluid (effusion). This is typically performed as an emergency procedure for traumatic or spontaneous pneumothorax or hemothorax.

- **32551** — Tube thoracostomy, includes water-seal (when performed), open (separate procedure)

Note the distinction: 32551 is an open procedure requiring a chest tube (large bore). Contrast with thoracentesis (32554/32555), which uses a needle or small catheter. When a chest tube is placed, 32551 is used — not the thoracentesis codes.

Pleurodesis (32560)

Pleurodesis is the deliberate obliteration of the pleural space by introducing an irritant agent (talc, doxycycline, bleomycin) to cause pleural inflammation and adhesion, preventing recurrent pleural effusion or pneumothorax.

- **32560** — Instillation, via chest tube/catheter, agent for pleurodesis (eg, talc for recurrent or persistent pneumothorax)

Thoracoscopy / VATS (Video-Assisted Thoracoscopic Surgery)

Video-Assisted Thoracoscopic Surgery (VATS) is a minimally invasive approach to thoracic surgery using small port incisions and a thoracoscopic camera. VATS procedures have largely replaced many open thoracic operations for appropriate candidates.

As with all endoscopy in CPT: **diagnostic VATS is always included in surgical VATS** — never code both for the same session.

CPT Code	Procedure	Approach	Key Notes
32601	Thoracoscopy, diagnostic; lungs, pericardial sac, mediastinal or pleural space, without biopsy	VATS diagnostic	Diagnostic only; no biopsy or intervention
32604	Thoracoscopy, diagnostic; pericardial sac, with biopsy	VATS diagnostic	Pericardial biopsy specifically
32606	Thoracoscopy, diagnostic; mediastinal space, with biopsy	VATS diagnostic	Mediastinal biopsy
32650	Thoracoscopy, surgical; with pleurodesis (eg, mechanical or chemical)	VATS surgical	Talc insufflation or mechanical abrasion
32651	Thoracoscopy, surgical; with partial pulmonary decortication	VATS surgical	Peeling pleural rind off lung; partial
32652	Thoracoscopy, surgical; with total pulmonary decortication, including any pleural biopsy	VATS surgical	Complete lung decortication
32653	Thoracoscopy, surgical; with removal of clot or foreign body from pericardial sac	VATS surgical	Pericardial clot removal
32654	Thoracoscopy, surgical; with control of traumatic hemorrhage	VATS surgical	Hemostasis for traumatic bleeding
32655	Thoracoscopy, surgical; with excision-plication of bullae, including any pleural procedure when performed	VATS surgical	Bulla excision (emphysema-related)

CPT Code	Procedure	Approach	Key Notes
32656	Thoracoscopy, surgical; with parietal pleurectomy	VATS surgical	Removal of parietal pleura
32658	Thoracoscopy, surgical; with removal of clot or foreign body from pericardial sac	VATS surgical	Pericardial clot
32659	Thoracoscopy, surgical; with creation of pericardial window or partial resection of pericardial sac	VATS surgical	Pericardial window for effusion drainage
32661	Thoracoscopy, surgical; with excision of pericardial cyst, tumor, or mass	VATS surgical	Pericardial mass excision
32662	Thoracoscopy, surgical; with excision of mediastinal cyst, tumor, or mass	VATS surgical	Mediastinal mass excision
32663	Thoracoscopy, surgical; with lobectomy (single lobe)	VATS surgical	VATS lobectomy — one lobe removed
32664	Thoracoscopy, surgical; with thoracic sympathectomy	VATS surgical	Sympathectomy for hyperhidrosis
32665	Thoracoscopy, surgical; with esophagomyotomy (Heller type)	VATS surgical	Achalasia treatment via VATS
32666	Thoracoscopy, surgical; with therapeutic wedge resection (eg, mass, nodule), initial unilateral	VATS surgical	Wedge resection, first nodule, one side
32667	Thoracoscopy, surgical; with	VATS surgical	Add-on: additional wedge resections,

CPT Code	Procedure	Approach	Key Notes
	therapeutic wedge resection (eg, mass, nodule), each additional resection, ipsilateral (add-on)		same side
32668	Thoracoscopy, surgical; with therapeutic wedge resection (eg, mass, nodule), each additional resection, contralateral (add-on)	VATS surgical	Add-on: contralateral wedge resections
32669	Thoracoscopy, surgical; with removal of a single lung segment (segmentectomy)	VATS surgical	Segmentectomy via VATS
32670	Thoracoscopy, surgical; with removal of two or more lung segments (segmentectomy)	VATS surgical	Multiple segments
32671	Thoracoscopy, surgical; with removal of lung, total pneumonectomy	VATS surgical	VATS pneumonectomy (rare)
32672	Thoracoscopy, surgical; with resection-plication for emphysema (lung volume reduction surgery) ipsilateral	VATS surgical	LVRS for emphysema
32673	Thoracoscopy, surgical; with removal of thymus gland (thymectomy), partial or complete	VATS surgical	Thymectomy via VATS

Open Lung Procedures

Pneumonectomy (32440–32445)

A **pneumonectomy** is the surgical removal of an entire lung, performed almost exclusively for lung cancer or catastrophic pulmonary injury. The right lung is larger and more vascular; right pneumonectomy carries higher operative mortality.

- **32440** — Removal of lung, total pneumonectomy
- **32442** — Removal of lung, sleeve pneumonectomy
- **32445** — Removal of lung, total pneumonectomy; extrapleural

Lobectomy (32480–32482)

A **lobectomy** is the surgical removal of one lobe of the lung, the most common major lung resection for lung cancer. Open lobectomy is performed via thoracotomy.

- **32480** — Removal of lung, other than total pneumonectomy; single lobe (lobectomy)
- **32482** — Removal of lung, other than total pneumonectomy; 2 lobes (bilobectomy)
- **32484** — Removal of lung, other than total pneumonectomy; single segment (segmentectomy)
- **32486** — Removal of lung, other than total pneumonectomy; with circumferential resection of segment of bronchus followed by broncho-plastic reconstruction (sleeve lobectomy)
- **32488** — Removal of lung, other than total pneumonectomy; with all remaining lung following previous removal of a portion of lung (completion pneumonectomy)
- **32491** — Removal of lung, other than total pneumonectomy; with resection-plication of emphysematous lung(s) (lung volume reduction surgery) unilateral
- **32500** — Wedge resection of lung, simple or complex (open)

VATS vs. Open — Comparison Table

Procedure	VATS (Thoracoscopic) Code	Open Code
Wedge resection (first, unilateral)	32666	32500
Lobectomy (single lobe)	32663	32480
Bilobectomy (2 lobes)	No specific VATS code — use 32663 with documentation	32482
Segmentectomy (single segment)	32669	32484
Total pneumonectomy	32671	32440
Pleurodesis	32650	32560 (chemical, via tube)
Decortication, partial	32651	32320 (open decortication)
Decortication, total	32652	32320

Empyema Treatment (32035–32036)

An **empyema** is a collection of pus in the pleural space, typically complicating pneumonia or thoracic surgery. Treatment depends on the stage:

- **32035** — Thoracostomy; with rib resection for empyema
- **32036** — Thoracostomy; with open flap drainage for empyema or complex effusion

Lung Transplant Overview (32850–32856)

Lung transplantation codes are among the most complex in the respiratory section. Organ procurement and transplantation are coded separately.

- **32850** — Donor pneumonectomy(ies) (with preparation and maintenance of allograft), from cadaver donor
- **32851** — Lung transplant, single; without cardiopulmonary bypass
- **32852** — Lung transplant, single; with cardiopulmonary bypass

- **32853** — Lung transplant, double (bilateral sequential or en bloc); without cardiopulmonary bypass
- **32854** — Lung transplant, double (bilateral sequential or en bloc); with cardiopulmonary bypass
- **32855** — Backbench standard preparation of cadaver donor lung allograft prior to transplantation
- **32856** — Backbench reconstruction of cadaver donor lung allograft prior to transplantation

Lungs and Pleura Coding Scenarios

SCENARIO 6-A: Thoracentesis with Ultrasound Guidance

OPERATIVE NOTE EXCERPT

PREOPERATIVE DIAGNOSIS: Left-sided pleural effusion

PROCEDURE: Left thoracentesis with ultrasound guidance

PROCEDURE IN DETAIL: Informed consent was obtained. The patient was positioned sitting upright leaning forward. Real-time ultrasound was used to identify a large left pleural effusion. The optimal needle insertion site was marked at the left posterior chest wall, 7th intercostal space. After sterile preparation and local anesthesia with 1% lidocaine, a thoracentesis needle was introduced under continuous ultrasound guidance. 1,200 mL of straw-colored fluid was aspirated. A sample was sent for LDH, protein, glucose, culture, and cytology. The needle was

withdrawn. Post-procedure chest X-ray confirmed no pneumothorax.

Step 1: Type of procedure — thoracentesis (needle aspiration, not indwelling catheter).

Step 2: Was imaging guidance used?

Yes — real-time ultrasound used throughout.

Step 3: Select code.

32555 — Thoracentesis with imaging guidance. (Note: 32554 would be used if NO guidance was used.)

Step 4: Do NOT additionally report ultrasound guidance code.

Imaging guidance is included in 32555.

FINAL CODE: 32555

SCENARIO 6-B: VATS Lobectomy

OPERATIVE NOTE EXCERPT

PREOPERATIVE DIAGNOSIS: Right upper lobe non-small cell lung cancer (stage IA)

PROCEDURE: VATS right upper lobectomy

PROCEDURE IN DETAIL: The patient was positioned in the left lateral decubitus position under general anesthesia with double-lumen endotracheal tube. Three thoracoscopic port sites were made in the right chest. The thoracoscope confirmed a 2.5 cm mass in the right upper lobe. The right upper lobe was isolated by dividing the upper lobe bronchus, upper lobe pulmonary artery branches, and superior pulmonary vein, each using an endoscopic stapler. The right upper lobe was removed in an endoscopic specimen bag. Intraoperative frozen section confirmed non-small cell carcinoma with negative margins. Mediastinal lymph node sampling was performed from stations 2R, 4R, and 7. A chest tube was placed. The incisions were closed.

Step 1: Identify all procedures.

(1) VATS lobectomy — right upper lobe, single lobe. (2) Mediastinal lymph node sampling — stations 2R, 4R, 7 (3 stations).

Step 2: Assign codes.

32663 — VATS with lobectomy, single lobe (primary)

38746 — Thoracic lymphadenectomy by thoracoscopy (VATS), mediastinal and regional lymph nodes (secondary — separate code for lymph node sampling via VATS)

Step 3: Is chest tube placement coded separately?

No — chest tube placement is included in the lobectomy procedure and is not separately reportable.

FINAL CODES: 32663, 38746-51

Common Mistake: Forgetting to code the lymph node sampling. When mediastinal lymph nodes are separately sampled (not just sent from the specimen), a separate lymphadenectomy code may apply. Always document whether nodes were removed separately or as part of the primary specimen.

SCENARIO 6-C: Bilateral VATS Wedge Resections

OPERATIVE NOTE EXCERPT

PROCEDURE: VATS bilateral wedge resections — right upper lobe (2 nodules), left lower lobe (1 nodule)

PROCEDURE IN DETAIL: Patient repositioned between right and left lateral decubitus. Right thoracoscopy performed first. Two separate pulmonary nodules in the right upper lobe were excised with endoscopic stapler (wedge resections x2, RUL). Right chest tube placed, ports closed. Patient repositioned. Left thoracoscopy performed. One nodule in the left lower lobe was excised by wedge resection (LLL). Left chest tube placed, ports closed. Pathology: all three specimens sent for frozen section.

Step 1: Count all wedge resections and sides.

Right: 2 wedge resections (RUL, same side — ipsilateral). Left: 1 wedge resection (LLL — contralateral).

Step 2: Assign primary code for first wedge resection.

32666 — VATS with therapeutic wedge resection, initial unilateral.

Step 3: Code second resection (right side, ipsilateral).

32667 — Add-on: each additional resection, ipsilateral.

Step 4: Code third resection (left side, contralateral).

32668 — Add-on: each additional resection, contralateral.

FINAL CODES: 32666, 32667, 32668

Note: 32667 and 32668 are add-on codes — do NOT append modifier -51 to add-on codes.

SCENARIO 6-D: Empyema — Open Drainage with Rib Resection

OPERATIVE NOTE EXCERPT

PREOPERATIVE DIAGNOSIS: Right pleural empyema, stage III, chronic

PROCEDURE: Right thoracostomy with rib resection for empyema drainage

PROCEDURE IN DETAIL: Under general anesthesia, a segment of the 7th rib on the right was resected to create a wide drainage window. Approximately 400 mL of

thick, purulent material was evacuated. The pleural cavity was irrigated with antibiotic solution. A large-bore drainage tube was placed through the rib resection site and secured. The wound was packed open.

Step 1: Identify procedure — thoracostomy for empyema with rib resection.

Step 2: Select code.

32035 — Thoracostomy; with rib resection for empyema.

FINAL CODE: 32035

Section 7: Respiratory System Modifiers

Modifiers provide additional information to payers about circumstances that affect how a procedure was performed, the extent of service, or other reportable factors. For the Respiratory System, the following modifiers are most frequently applied:

Modifier -50: Bilateral Procedure

Append modifier **-50** when a procedure that is normally performed on one side is performed on both sides during the same operative session, using the same CPT code.

Code	Procedure	With -50	Example
30115	Nasal polyp excision, extensive	30115-50	Extensive polyp removal from both nasal passages
30140	Turbinate submucous resection	30140-50	Bilateral submucous resection of inferior turbinates
31255	Total ethmoidectomy (endoscopic)	31255-50	FESS: bilateral total ethmoidectomy
31267	Maxillary antrostomy with tissue removal	31267-50	Bilateral maxillary antrostomy with tissue removal

> ⚠️ **Stop! Think!**
>
> Not all respiratory codes need modifier -50 for bilateral procedures. Some code descriptors already state "unilateral or bilateral" (e.g., 30801, 31231) — for these, report once without modifier -50 regardless of how many sides are treated.

Modifier -51: Multiple Procedures

Append modifier **-51** to the secondary (and any additional) procedure codes when multiple distinct procedures are performed by the same physician during the same operative session. Do not append -51 to add-on codes or to the primary procedure.

Example: Septoplasty (30520) + left turbinate SMR (30140-51-LT)

Modifier -52: Reduced Services

Append modifier **-52** when a service or procedure is partially reduced or eliminated at the physician's discretion. In respiratory coding, this might apply when a planned bilateral FESS becomes unilateral intraoperatively due to unexpected anatomy or complication.

Example: Bilateral FESS planned but only right side completed — report the right-sided code with modifier -52 to indicate reduced service.

Modifiers -LT and -RT: Laterality

Use **-LT** (Left Side) and **-RT** (Right Side) to specify which side of a bilateral structure was treated when only one side was addressed.

Code	With -RT	With -LT	When to Use
31254	31254-RT	31254-LT	When only one side's ethmoid sinus is treated
30140	30140-RT	30140-LT	When turbinate SMR is unilateral
32663	32663-RT	32663-LT	VATS lobectomy — specify which lung

Modifier -59: Distinct Procedural Service

Modifier **-59** is used to indicate that two procedures normally bundled together by NCCI edits were performed as distinct, separate procedures because of different anatomical sites, different sessions, or different indications. In respiratory coding, -59 is most commonly needed when:

- Multiple bronchoscopy procedures are performed at different anatomical sites on the same day that an NCCI edit would bundle them
- Two procedures are performed on the same anatomical structure but at different times (e.g., diagnostic and therapeutic procedures on the same day for different diagnoses)

- A combination of services triggers an NCCI edit that does not clinically apply to the actual scenario

🚫 Modifier -59 Warning

Modifier -59 should never be used simply to bypass a correct bundling edit. It must be supported by documentation showing the procedures were truly distinct and separate. When possible, use the more specific X-modifiers (XE, XS, XP, XU) introduced by CMS to replace -59 with greater specificity.

Section 8: Endoscopy Coding Rules — Respiratory System

The Master Rule: Surgical Includes Diagnostic

This rule applies throughout all endoscopy in CPT and is especially important in the Respiratory section because it covers nasal endoscopy, sinus endoscopy, laryngoscopy, bronchoscopy, and thoracoscopy — all of which follow this principle:

🚫 The #1 Endoscopy Rule in Respiratory Coding

A surgical endoscopy always includes the diagnostic endoscopy. When a surgical procedure is performed endoscopically, the diagnostic examination of the anatomical area is inherent to the surgical procedure and is never reported separately.

- Do NOT report 31231 (diagnostic nasal endoscopy) with any FESS code
- Do NOT report 31622 (diagnostic bronchoscopy) with any surgical bronchoscopy code
- Do NOT report 31525 (diagnostic direct laryngoscopy) with any operative

laryngoscopy code

- Do NOT report 32601 (diagnostic thoracoscopy) with any surgical VATS code

Bilateral FESS Coding and Bundling

When FESS procedures are performed on both sides, each anatomically distinct procedure on each side must be coded separately. The key bundling considerations for FESS include:

- **Each sinus** has its own code — ethmoid, maxillary, frontal, and sphenoid are coded separately even when performed in the same surgical session
- When multiple sinus procedures are performed on the same side, report the highest code for that sinus + all other sinus codes with modifier -51
- **Do not bundle** unilateral codes into one bilateral code without verifying the payer's billing guidelines

Common NCCI Edits in Respiratory Coding

Column 1 Code	Column 2 (Bundled) Code	Reason / Override?
31256 (Maxillary antrostomy)	31231 (Diagnostic nasal endoscopy)	Diagnostic included in surgical — no override
31267 (Max antrostomy w/ tissue)	31256 (Antrostomy without tissue)	Use 31267 only — includes 31256; no override
31625 (Bronchial biopsy)	31622 (Diagnostic bronchoscopy)	Diagnostic included in surgical — no override
32663 (VATS lobectomy)	32601 (Diagnostic thoracoscopy)	Diagnostic included — no override
30520 (Septoplasty)	30140 (Turbinate SMR)	Separate structures — may override with -59 or -51 if documented

⚠️ **Stop! Think! — Common Bundling Mistakes in FESS Coding**

Top 5 FESS Bundling Errors that coders make:

1. Reporting 31231 (diagnostic endoscopy) alongside any FESS surgical code — always an NCCI violation
2. Reporting 31256 AND 31267 together — 31267 already includes 31256; use only 31267 when tissue is removed
3. Reporting 31254 AND 31255 together — these codes are mutually exclusive; code the highest level (total = 31255)
4. Forgetting modifier -50 when the same FESS procedure is performed bilaterally
5. Failing to code each distinct sinus procedure — e.g., reporting only 31255 and missing the 31267 when both ethmoid and maxillary sinuses were treated

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Section 9: Real-World Coding Scenarios — Full Operative Notes

FULL SCENARIO 1: Bilateral FESS — Multiple Sinuses

OPERATIVE NOTE — FULL EXCERPT

DATE OF PROCEDURE: September 24, 2026

SURGEON: Dr. Elaine Torres, MD, Otolaryngology

PREOPERATIVE DIAGNOSIS: Chronic rhinosinusitis, bilateral, with nasal polyps; bilateral maxillary, ethmoid sinusitis

POSTOPERATIVE DIAGNOSIS: Same

PROCEDURE: Bilateral functional endoscopic sinus surgery (FESS):

- Bilateral total ethmoidectomy (anterior and posterior)

- Bilateral maxillary antrostomy with removal of tissue from bilateral maxillary sinuses

- Bilateral nasal polypectomy, extensive

ANESTHESIA: General endotracheal

PROCEDURE IN DETAIL: Patient was placed in supine position under general anesthesia. Both nasal passages were decongested with oxymetazoline-soaked pledgets. A 0-degree rigid nasal endoscope was introduced into the right nasal passage. Extensive bilateral nasal polyposis was confirmed. Using a microdebrider, bilateral nasal polypectomy was performed — multiple large polyps were removed from both nasal passages. Attention was turned to the right ethmoid sinuses. The uncinate process was resected. Complete anterior and posterior ethmoidectomy was performed on the right, clearing all ethmoid air cells. The natural maxillary ostium was enlarged and diseased mucosa and polyps within the right maxillary sinus were removed with a curved suction and through-cutting forceps. The identical procedure was performed on the left — total ethmoidectomy and maxillary antrostomy with removal of thickened mucosa and polyps from the left maxillary sinus. Absorbable hemostatic packing was placed in all four sinus cavities. Patient

tolerated procedure well and was taken to PACU in stable condition.

Step-by-Step Analysis

Step 1: List all procedures documented.

A) Bilateral nasal polypectomy, extensive

B) Bilateral total (anterior + posterior) ethmoidectomy

C) Bilateral maxillary antrostomy with removal of tissue from inside maxillary sinus

Step 2: Assign CPT codes.

A) 30115 — Nasal polyp excision, extensive (bilateral = add -50)

B) 31255 — Total ethmoidectomy, endoscopic (bilateral = add -50)

C) 31267 — Maxillary antrostomy with tissue removal (bilateral = add -50)

Step 3: Determine primary procedure and apply modifier -51.

Rank by RVU/complexity for primary determination. All three are distinct and separately reportable. Apply -51 to secondary and tertiary procedures.

Step 4: Final code set.

31255-50

(bilateral total ethmoidectomy — primary)

31267-50-51

(bilateral maxillary antrostomy with tissue — secondary)

30115-50-51

(bilateral extensive nasal polypectomy — tertiary)

Common Mistakes to Avoid:

- Do NOT report 31231 — surgical endoscopy includes diagnostic
- Do NOT report 31256 in place of 31267 — tissue was removed from inside the maxillary sinus
- Do NOT forget modifier -51 on the secondary and tertiary codes
- Add-on codes do NOT get modifier -51

FULL SCENARIO 2: Bronchoscopy with BAL and Transbronchial Biopsy

OPERATIVE NOTE — FULL EXCERPT

DATE OF PROCEDURE: September 24, 2026

PHYSICIAN: Dr. Marcus Webb, MD, Pulmonology

PREOPERATIVE DIAGNOSIS: Bilateral pulmonary infiltrates; suspected

Pneumocystis jirovecii pneumonia (PJP) in immunocompromised host

PROCEDURE: Flexible bronchoscopy with bronchoalveolar lavage (BAL), right middle lobe; transbronchial lung biopsy, right middle lobe; transbronchial lung biopsy, left upper lobe

PROCEDURE IN DETAIL: The patient was sedated with moderate sedation (propofol + fentanyl). Topical lidocaine was applied transorally. A flexible bronchoscope was introduced through the oropharynx. Vocal cords visualized — normal. The scope was advanced through the carina. Airway mucosa appeared diffusely erythematous. The scope was wedged into the right middle lobe bronchus. BAL was performed using 4 aliquots of 50 mL normal saline (total 200 mL instilled, 130 mL recovered). The BAL specimen was sent for cell differential, bacterial culture, fungal culture, Pneumocystis stain, and AFB. The scope was repositioned. Transbronchial biopsies (x5) were obtained from the right middle lobe using cupped forceps, passed through the bronchial wall into lung parenchyma. The scope was then advanced to the left upper lobe. Transbronchial biopsies (x4) were obtained from the left upper lobe. Total fluoroscopic guidance was used throughout. All specimens submitted to pathology. No significant bleeding. Bronchoscope withdrawn. Patient tolerated procedure without complication.

Step-by-Step Analysis

Step 1: Identify all procedures.

A) BAL — right middle lobe

B) Transbronchial lung biopsy — right middle lobe (one lobe)

C) Transbronchial lung biopsy — left upper lobe (second lobe — different from first)

Step 2: Assign codes.

A) 31624 — Bronchoscopy with BAL

B) 31628 — Transbronchial lung biopsy, single lobe (right middle lobe = first lobe)

C) 31632 — Transbronchial lung biopsy, each additional lobe (left upper lobe = second lobe; add-on code)

Step 3: Modifier application.

31624 — Primary procedure; no modifier

31628 — Secondary; append -51

31632 — Add-on code; NO modifier -51 (never append -51 to add-on codes)

FINAL CODES: 31624, 31628-51, 31632

Common Mistakes to Avoid:

- Do NOT report 31622 (diagnostic bronchoscopy) — included in the surgical codes
- Do NOT report 31628 twice for two lobes — the second lobe is 31632 (add-on)
- Do NOT append -51 to 31632 — it is an add-on code

FULL SCENARIO 3: Thoracentesis with Imaging Guidance

OPERATIVE NOTE — FULL EXCERPT

PHYSICIAN: Dr. Sheila Nguyen, MD, Hospitalist

PROCEDURE: Right thoracentesis with real-time ultrasound guidance; placement of indwelling pleural catheter

INDICATION: Recurrent malignant right pleural effusion in patient with metastatic breast cancer

PROCEDURE IN DETAIL: Informed consent obtained. Patient placed in left lateral decubitus position. Real-time bedside ultrasound confirmed a large right-sided pleural effusion. Optimal insertion site identified at the 7th right intercostal space, mid-axillary line. Skin was prepped and draped in sterile fashion. 1% lidocaine used for local anesthesia down to the pleura. A Seldinger technique was employed — a guidewire was introduced into the pleural space, then a tunneled indwelling pleural catheter (PleurX) was placed over the dilator. 600 mL of hemorrhagic fluid was drained. The catheter was secured with anchoring suture and connected to a vacuum drainage bottle. Confirmation chest X-ray showed catheter in good position and reduced effusion.

Step 1: Identify the procedure type.

An indwelling catheter was placed (PleurX-type) — not a simple thoracentesis

needle. This is percutaneous pleural drainage with indwelling catheter placement.

Step 2: Was imaging guidance used?

Yes — real-time ultrasound used throughout.

Step 3: Select code.

32557 — Pleural drainage, percutaneous, with insertion of indwelling catheter; with imaging guidance. (NOT 32555 — that code is for needle aspiration without permanent catheter placement.)

FINAL CODE: 32557

Common Mistake: Using 32555 (thoracentesis with imaging) instead of 32557 (indwelling catheter with imaging). The key distinction is whether a temporary needle was used (32555) or an indwelling catheter was left in place (32557). Always check: was the device left behind?

FULL SCENARIO 4: VATS Lobectomy

OPERATIVE NOTE — FULL EXCERPT

SURGEON: Dr. Phillip Okafor, MD, Thoracic Surgery

PROCEDURE: VATS left lower lobectomy with mediastinal lymph node dissection

PREOPERATIVE DIAGNOSIS: Left lower lobe squamous cell carcinoma, stage IIA

PROCEDURE IN DETAIL: Patient was intubated with a double-lumen endotracheal tube and positioned right lateral decubitus. Three thoracoscopic ports were placed in the left chest. The left lower lobe was confirmed to contain a 4.2 cm mass at the basal segments. The inferior pulmonary vein was divided with an endoscopic stapler. The left lower lobe bronchus was identified, isolated, and stapled. Segmental pulmonary artery branches to the left lower lobe were individually ligated and divided. The left lower lobe was removed intact in an endoscopic bag. Mediastinal lymph node dissection was then performed — stations 5, 6, 7, 9, and 10L were dissected en bloc and submitted as separate specimens. A pleural tent was created at the apex. Two chest tubes placed. Incisions closed.

Step 1: Identify all procedures.

A) VATS left lower lobectomy (single lobe removed via thoracoscope)

B) Mediastinal lymph node dissection (formal dissection, stations 5, 6, 7, 9, 10L — this is dissection, not merely sampling)

Step 2: Assign codes.

32663 — VATS with lobectomy, single lobe

38746 — Thoracic lymphadenectomy by thoracoscopy (VATS) — mediastinal and regional lymph nodes (note: this is formal dissection — 38746 applies to en bloc lymph node dissection)

Step 3: Apply modifiers.

32663 — Primary; no modifier

38746-51 — Secondary procedure; append -51

FINAL CODES: 32663, 38746-51

Common Mistakes to Avoid:

- Confusing lymph node sampling (38746) with sentinel lymph node biopsy — these are different codes for different procedures
- Not separately coding the lymph node dissection — when performed as a distinct surgical procedure, it is separately reportable
- Using an open lobectomy code (32480) when the procedure was clearly thoracoscopic (VATS) — approach determines the code family

FULL SCENARIO 5: Planned Tracheostomy

OPERATIVE NOTE — FULL EXCERPT

SURGEON: Dr. Angela Park, MD, Otolaryngology — Head and Neck Surgery

PROCEDURE: Planned tracheostomy

INDICATION: Prolonged mechanical ventilation; inability to wean; 62-year-old male, ICU day 14

PROCEDURE IN DETAIL: Patient is an adult male requiring long-term ventilatory support. The neck was prepped and draped in sterile fashion. A horizontal incision was made 2 cm above the sternal notch between the second and third tracheal rings. Subcutaneous fat was divided. Strap muscles were separated in the midline. The thyroid isthmus was divided and ligated. A superiorly based tracheal flap was created and a window in the trachea was excised. The oral endotracheal tube was withdrawn by the anesthesiologist under direct visualization. A cuffed Shiley tracheostomy tube (size 8, standard length) was inserted, the cuff was inflated, and ventilation confirmed. Trach tube secured with trach ties. No complications.

Step 1: Planned vs. emergency.

Planned — elective ICU procedure, not an acute emergency.

Step 2: Patient age.

Adult (62 years old) — use 31600, not 31601 (younger than 2 years).

FINAL CODE: 31600

Common Mistake: Confusing percutaneous dilational tracheostomy (PDT) with open tracheostomy. PDT is a bedside procedure performed using Seldinger technique and dilators — no surgical incision or rib/cartilage work. If PDT was performed, 31600 may still apply but documentation should be verified against payer guidelines for approach.

FULL SCENARIO 6: Direct Laryngoscopy with Vocal Cord Polyp Removal (Microscope)

OPERATIVE NOTE — FULL EXCERPT

SURGEON: Dr. Connie Marsh, MD, Laryngology

PROCEDURE: Direct microlaryngoscopy with excision of bilateral vocal cord lesions

PREOPERATIVE DIAGNOSIS: Bilateral vocal cord polyps, singer's nodules vs. Reinke's edema

PROCEDURE IN DETAIL: Patient brought to OR under general anesthesia. A Dedo laryngoscope was introduced and suspended from a chest support. The operating

microscope was focused to provide magnification of ×6. A polypoid lesion on the right true vocal cord measuring 4mm was excised using cold steel microsurgical technique (right-angle blade). A similar polypoid lesion on the left true vocal cord measuring 3mm was excised. Both specimens submitted to pathology as separate specimens. Mucosal integrity preserved. Hemostasis was achieved by gentle compression only. Scope withdrawn. Extubated uneventfully.

Step 1: Identify the procedure.

Direct rigid laryngoscopy (suspended Dedo scope), operative, with excision of bilateral vocal cord lesions, with operating microscope.

Step 2: Select the code.

31545 — Laryngoscopy, direct, operative, with operating microscope or telescope; with excision of tumor or lesion (other than polyp).

NOTE: CPT 31545 describes "lesion" and is appropriate when microscopic excision is used. When documentation identifies a vocal cord polyp specifically without microscope, alternative codes may apply — but with the microscope, 31545 is correct.

Step 3: Bilateral — both vocal cords treated.

Laryngoscopy procedure codes are not reported bilaterally per side. Report 31545 once — bilateral work on paired vocal cords within a single laryngoscope session is

captured by one code.

FINAL CODE: 31545

Common Mistake: Reporting 31545 twice because both vocal cords were treated. Laryngoscopy codes capture the entire endoscopic session — both cords are visualized and accessible through one scope. Do not report ×2 or add a bilateral modifier to laryngoscopy codes.

Section 10: Chapter Review — Multiple Choice Questions

Answer the following questions to test your mastery of Chapter 13. Choose the single best answer. After completing all questions, review the Answer Key with detailed rationale.

8. **A physician performs an extensive bilateral nasal polypectomy. Which CPT code and modifier combination is most appropriate?**
    1. 30110
    2. 30115
    3. 30115-50
    4. 30110-50
9. **The CPT code range for the Respiratory System Surgery section is:**
    1. 10000–19999
    2. 20000–29999

3. 30000–32999
4. 33000–37799

10. **A patient undergoes a right diagnostic nasal endoscopy followed by right partial (anterior) ethmoidectomy and right maxillary antrostomy (without tissue removal) during the same session. Which codes should be reported?**
    1. 31231-RT, 31254-RT, 31256-RT
    2. 31254-RT, 31256-51-RT
    3. 31254-RT, 31256-RT
    4. 31231-RT, 31254-51-RT
11. **Which of the following bronchoscopy codes is an ADD-ON code?**
    1. 31622
    2. 31624
    3. 31625
    4. 31632
12. **A physician performs an EBUS-guided transbronchial needle aspiration of lymph node stations 4R, 7, and 11L. The correct CPT code is:**
    1. 31652
    2. 31653
    3. 31652 and 31653
    4. 31629
13. **Which of the following correctly describes the distinction between 32554 and 32555?**
    1. 32554 is for fluid; 32555 is for air
    2. 32554 is without imaging guidance; 32555 is with imaging guidance
    3. 32554 is for needle aspiration; 32555 is for indwelling catheter

4. 32554 is right-sided; 32555 is left-sided

14. **A surgeon performs a VATS left upper lobectomy. The correct CPT code is:**
    1. 32480
    2. 32480-LT
    3. 32663
    4. 32663-LT
15. **Septoplasty is coded with which CPT code?**
    1. 30130
    2. 30140
    3. 30400
    4. 30520
16. **An emergency tracheostomy is performed through the cricothyroid membrane. The correct code is:**
    1. 31600
    2. 31601
    3. 31603
    4. 31605
17. **A physician performs bilateral functional endoscopic sinus surgery: bilateral total ethmoidectomy and bilateral sphenoidotomy with removal of tissue. Which code set is correct?**
    1. 31255, 31288
    2. 31255-50, 31288-50-51
    3. 31255-50-51, 31288-50
    4. 31255-50, 31288-51
18. **Modifier -51 should be appended to:**
    1. The primary procedure in a multiple procedure scenario

2. Add-on codes when additional procedures are performed
3. Secondary and additional procedure codes when multiple distinct procedures are performed
4. All codes when a bilateral procedure is performed

19. **A diagnostic bronchoscopy (31622) is performed. The physician then performs a bronchial biopsy. Which codes should be reported?**
    1. 31622 and 31625
    2. 31622-59 and 31625
    3. 31625 only
    4. 31622 only
20. **Which code is used for VATS with bilateral SEQUENTIAL wedge resections — one on each side (right and left)?**
    1. 32666 twice (one for each side)
    2. 32666-50
    3. 32666 and 32668
    4. 32666 and 32667
21. **Turbinate ablation using radiofrequency energy of bilateral inferior turbinates is reported with:**
    1. 30801-50
    2. 30801 (no modifier needed)
    3. 30802
    4. 30130-50
22. **Which code is used for open total pneumonectomy (without extrapleural dissection)?**
    1. 32480
    2. 32440

3. 32663
4. 32671

23. **A surgeon performs a direct laryngoscopy with biopsy using a microscope. The correct code is:**
    1. 31535
    2. 31536
    3. 31525
    4. 31505
24. **Which of the following correctly describes pleurodesis?**
    1. Removal of the visceral pleura from the lung surface
    2. Deliberate obliteration of the pleural space to prevent recurrent effusion
    3. Surgical removal of a lobe of the lung
    4. Percutaneous drainage of pleural fluid via needle
25. **A patient undergoes FESS — bilateral maxillary antrostomy with tissue removal AND bilateral total ethmoidectomy. In addition, a diagnostic nasal endoscopy note is documented in the record. How should the diagnostic endoscopy be coded?**
    1. 31231 should be reported in addition to the FESS codes
    2. 31231 should not be reported — it is included in the surgical endoscopy codes
    3. 31231 should be reported with modifier -59
    4. 31231 should be reported only if a separate payer authorization exists
26. **A surgeon performs a chest tube thoracostomy (tube thoracostomy) for hemothorax following blunt chest trauma. The correct CPT code is:**
    1. 32554
    2. 32555
    3. 32551

4. 32557

27. **Which modifier should be appended when a planned bilateral FESS procedure is reduced to a unilateral procedure intraoperatively due to severe bleeding on the right side?**

    1. -50
    2. -51
    3. -52
    4. -59

✓ **Answer Key with Detailed Rationale**

1. C — 30115-50
Code 30115 is for extensive nasal polypectomy. Since it is performed bilaterally (both nasal passages), modifier -50 is appended. The procedure is extensive (large polyps, microdebrider, bilateral), so 30115 is correct over 30110 (simple).

2. C — 30000–32999
The Surgery section for the Respiratory System spans CPT codes 30000 through 32999, organized anatomically from nose (30000) to lungs (32999).

3. B — 31254-RT, 31256-51-RT
The diagnostic endoscopy (31231) is NEVER separately reported with surgical endoscopy codes — it is always included. The procedure included partial (anterior) ethmoidectomy (31254) and maxillary antrostomy without tissue removal (31256). Both are right-sided (-RT) and are separate procedures, so -51 applies to the secondary code.

4. D — 31632
Code 31632 is listed in CPT as an add-on code (marked with a "+" symbol) for transbronchial lung biopsy of each additional lobe beyond the first. Add-on codes are never used as standalone codes and never require modifier -51.

5. B — 31653
EBUS with biopsy of 3 or more mediastinal/hilar lymph node stations = 31653. Code 31652 covers 1–2 stations. Three stations were sampled (4R, 7, 11L).

Reporting both 31652 and 31653 is incorrect — these are mutually exclusive based on station count.

6. B — 32554 is without imaging guidance; 32555 is with imaging guidance

The primary distinction between 32554 and 32555 is the use of imaging guidance (typically ultrasound). Both codes are for needle or catheter aspiration of the pleural space. Neither code is specific to fluid vs. air, right vs. left, or needle vs. catheter (that distinction separates 32554/32555 from 32556/32557).

7. C — 32663

VATS (thoracoscopic) lobectomy = 32663. Open lobectomy = 32480. Since the procedure was performed via VATS, 32663 is correct. Modifier -LT is optional for laterality documentation but not universally required; check payer preference. If -LT is used, 32663-LT is also acceptable.

8. D — 30520

Septoplasty is coded with 30520. Code 30130 is turbinate excision, 30140 is turbinate SMR, and 30400 is rhinoplasty (tip only). Septoplasty specifically addresses the nasal septum with structural reconstruction.

9. D — 31605

Emergency tracheostomy via the cricothyroid membrane = 31605. Code 31603 is for emergency transtracheal (through the trachea) approach. Code 31600 is planned, and 31601 is planned for patients younger than 2 years.

10. B — 31255-50, 31288-50-51

Both procedures are bilateral, requiring -50 on each. 31255 is total ethmoidectomy (bilateral = 31255-50). 31288 is sphenoidotomy with tissue removal (bilateral = 31288-50). Since these are two distinct procedures, -51 is applied to the secondary code: 31288-50-51.

11. C — Secondary and additional procedure codes when multiple distinct procedures are performed

Modifier -51 is applied to the secondary (and beyond) procedures in a multiple-procedure scenario. It is NOT applied to add-on codes, NOT applied to the primary procedure, and is NOT a bilateral modifier.

12. C — 31625 only

Surgical endoscopy includes diagnostic endoscopy. When a biopsy (31625) is performed, it is the surgical procedure that is reported. The diagnostic bronchoscopy (31622) is inherently included and is NEVER separately reported. This is one of the most fundamental and frequently tested rules in endoscopy coding.

13. C — 32666 and 32668

32666 = first wedge resection, unilateral (initial). When a second resection is performed on the contralateral (opposite) side, 32668 applies (add-on: contralateral). Code 32667 would apply for a second resection on the same (ipsilateral) side. 32666-50 is incorrect — the codes themselves distinguish ipsilateral vs. contralateral additional resections.

14. B — 30801 (no modifier needed)

Code 30801 descriptor reads "unilateral or bilateral" — meaning one code covers the procedure regardless of how many turbinates are treated. Modifier -50 is NOT required. Code 30802 describes intramural/submucosal ablation, which differs from the superficial ablation described here.

15. B — 32440

Open total pneumonectomy (without extrapleural dissection) = 32440. Code 32480 is open lobectomy (single lobe), 32663 is VATS lobectomy, and 32671 is VATS pneumonectomy. Always confirm whether the approach was open or thoracoscopic.

16. B — 31536

Direct laryngoscopy with biopsy, with operating microscope = 31536. Code 31535 is the same procedure without the microscope. Code 31525 is diagnostic direct laryngoscopy only, and 31505 is indirect laryngoscopy.

17. B — Deliberate obliteration of the pleural space to prevent recurrent effusion

Pleurodesis is the intentional creation of adhesions between the visceral and parietal pleura, eliminating the pleural space to prevent recurrent pleural effusion or pneumothorax. It does not involve removing lung tissue or draining fluid via needle.

18. B — 31231 should not be reported — it is included in the surgical endoscopy codes

This is the fundamental endoscopy bundling rule. Surgical endoscopy always includes diagnostic endoscopy. Reporting 31231 alongside surgical FESS codes is an NCCI bundling violation and will result in claim denial or audit risk.

19. C — 32551

Tube thoracostomy (chest tube placement) = 32551. This is an open procedure requiring a large-bore tube. Codes 32554/32555 are for needle thoracentesis, and 32556/32557 are for percutaneous indwelling catheter placement — these use smaller catheters via Seldinger technique, not a formal chest tube.

20. C — -52 (Reduced Services)

When a planned bilateral procedure is reduced to a unilateral procedure at the physician's discretion due to intraoperative circumstances, modifier -52 (Reduced Services) is appropriate. This signals to the payer that the full planned service was not completed. Modifier -51 is for multiple procedures, -50 is for bilateral, and -59 is for distinct/separate procedures.

Section 11: Chapter Summary

▶️ Key Concepts — Chapter 13: Respiratory System

- The Respiratory System Surgery section spans CPT codes **30000–32999**, organized anatomically from nose to lungs.
- Codes are further organized by **type of service** (incision, excision, endoscopy, repair, resection, transplant) within each anatomical subsection.
- **Laterality** is critical — always determine whether a procedure is unilateral or bilateral. Check if the code descriptor already specifies "unilateral or bilateral" before appending modifier -50.
- The **#1 endoscopy rule**: Surgical endoscopy ALWAYS includes diagnostic

endoscopy — never report both for the same site on the same date.

• FESS codes (31231–31297) are predominantly unilateral; bilateral FESS procedures require modifier **-50** on each applicable code.

• **31267** (maxillary antrostomy WITH tissue removal) is higher than 31256 (antrostomy only) — when tissue is removed from inside the sinus, 31267 applies and 31256 is not separately reported.

• Bronchoscopy add-on codes (31627, 31632, 31633, 31637) are never reported as standalone codes and **never require modifier -51**.

• EBUS codes (31652–31654) are mutually exclusive based on number of lymph node stations: 31652 = 1–2 stations; 31653 = 3+ stations; 31654 = peripheral lesions.

• Thoracentesis codes 32554/32555 are for needle aspiration; codes 32556/32557 are for indwelling catheter placement — the presence of a permanent catheter determines code selection.

• Imaging guidance is **included** in 32555 and 32557 — do not separately report ultrasound guidance codes with these procedures.

• VATS codes and open codes are in different ranges — **approach determines the code family**: VATS = 32601–32673; open = 32035–32500.

• Tracheostomy creation (31600–31605) is a surgery code; tracheostomy care is a management service included in the global period.

• Modifier **-50** = bilateral; **-51** = multiple procedures (secondary); **-52** = reduced services; **-LT/-RT** = laterality; **-59** = distinct procedural service (use cautiously with documentation).

• Always read the full operative report — never code from the procedure title or preoperative diagnosis alone.

• Rhinoplasty (30400–30462) is categorized as primary (first-time) vs. secondary (revision) and by extent of nasal work performed.

Key Terms Glossary

Term	Definition
Antrostomy	Surgical opening or enlargement of the natural ostium of the maxillary sinus to improve drainage
Bronchoalveolar Lavage (BAL)	Instillation of sterile saline into a lung segment via bronchoscope, then aspiration of fluid for microbiological or cytological analysis
Decortication	Surgical removal of a fibrous pleural rind (cortex) from the surface of the lung, typically for empyema or fibrothorax
Deviated Nasal Septum	Displacement of the cartilaginous and/or bony nasal septum from the midline, causing nasal obstruction
Empyema	Collection of pus within the pleural space, typically complicating pneumonia or thoracic surgery
Endobronchial Ultrasound (EBUS)	Technique combining flexible bronchoscopy with real-time ultrasound imaging to guide transbronchial needle aspiration of peribronchial structures
Ethmoidectomy	Surgical removal of ethmoid air cells; may be partial (anterior) or total (anterior and posterior)
FESS (Functional Endoscopic Sinus Surgery)	Minimally invasive endoscopic approach to sinus surgery that restores normal sinus drainage through the natural ostia
Laryngectomy	Surgical removal of the larynx; may be partial (hemilaryngectomy) or total; most often performed for laryngeal carcinoma
Laterality	The quality of pertaining to one side (unilateral) or both sides (bilateral) of a paired anatomical structure
Lobectomy	Surgical removal of one lobe of the lung; the most common major lung resection for lung cancer
NCCI (National Correct Coding	CMS program that identifies procedure

Term	Definition
Initiative)	code pairs that should not be reported together due to bundling relationships
Pleural Effusion	Abnormal accumulation of fluid in the pleural space
Pleurodesis	Deliberate obliteration of the pleural space by introducing a sclerosing agent to create adhesion between visceral and parietal pleura
Pneumonectomy	Surgical removal of an entire lung
Rhinoplasty	Surgical reshaping of the external nose and/or internal nasal structures; may be primary (first-time) or secondary (revision)
Septoplasty	Surgical correction of a deviated nasal septum with repositioning, scoring, or partial excision of the cartilaginous and/or bony septum
Sinusotomy	Surgical incision into a sinus to establish drainage (the sinus is opened but not removed)
Thoracentesis	Insertion of a needle or catheter into the pleural space to aspirate accumulated fluid or air
Thoracoscopy / VATS	Minimally invasive thoracic surgery using small port incisions and a thoracoscopic camera (Video-Assisted Thoracoscopic Surgery)
Tracheostomy	Surgical creation of a stoma (opening) in the trachea through the neck to establish a direct airway; may be planned or emergency
Turbinate (Concha)	Shelf-like bony projections covered with mucosa lining the nasal sidewalls; three pairs (inferior, middle, superior) regulate airflow and humidify inspired air

📌 Final Coder's Corner — CPC Exam Day Tips for Respiratory Coding

1. **Always identify the approach first** — open vs. endoscopic, rigid vs.

flexible, VATS vs. open thoracotomy. The approach narrows your code range immediately.

2. **Apply the surgical-includes-diagnostic rule** in every endoscopy scenario — this is tested heavily on the CPC exam.

3. **Read code descriptors carefully** — "with" vs. "without," "with tissue removal" vs. "without," "anterior" vs. "total" — small words make big differences in respiratory codes.

4. **Count lymph node stations** for EBUS — 1–2 stations = 31652; 3+ stations = 31653.

5. **Check for add-on codes** in bronchoscopy (31627, 31632, 31633, 31637) — these never get modifier -51.

6. **Know your modifiers** — especially -50 (bilateral), -51 (multiple), -52 (reduced), -LT/-RT (laterality), and -59 (distinct service).

7. When you see **imaging guidance** included in a code descriptor (32555, 32557), do NOT add a separate imaging guidance code.

Medical Coding Mastery — Chapter 13: Surgery Section, Respiratory System (30000–32999)

Student Edition | CPC Exam Preparation | Buck's Step-by-Step Medical Coding Style

Prepared September 24, 2026 | All CPT code descriptions based on the American Medical Association CPT coding guidelines

Disclaimer: This educational document is for instructional purposes only. Always verify codes against the current-year CPT manual and applicable payer policies before submitting claims.

CHAPTER 14

Surgery: Cardiovascular System

CPT codes: 33010-37799

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★ Chapter Objectives

Upon successful completion of this chapter, the student will be able to:

1. Identify the anatomical structures of the cardiovascular system and relate them to operative documentation and CPT code selection.
2. Correctly assign CPT codes for pericardial procedures, including pericardiocentesis and pericardiectomy.
3. Apply the rules for coding pacemaker and implantable cardioverter-defibrillator (ICD) procedures, including insertion, replacement, lead procedures, and removal, coding the pulse generator and leads separately when both are performed.
4. Select the appropriate CPT codes for cardiac valve repair and replacement procedures, including transcatheter aortic valve replacement (TAVR), distinguishing between approach routes and coding components correctly.
5. Accurately code coronary artery bypass graft (CABG) procedures by graft type (arterial vs. venous) and number of vessels bypassed, and determine when endoscopic saphenous vein harvesting is separately reportable.
6. Assign CPT codes for vascular procedures including embolectomy, thrombectomy, bypass grafts, and carotid endarterectomy, distinguishing

between open and endovascular approaches.

7. Code endovascular aneurysm repair (EVAR and TEVAR), percutaneous transluminal angioplasty (PTA), and stent placement procedures, including main body and extension components.

8. Apply correct CPT codes for central venous access devices (CVADs), including non-tunneled and tunneled catheters, PICC lines, ports, and pumps, and recognize that insertion, repair, and removal are each coded separately.

9. Code varicose vein procedures, arteriovenous fistula creation, and AV graft procedures correctly.

10. Apply appropriate CPT modifiers—including **-50**, **-LT/-RT**, **-51**, **-59**, **-62**, and **-80**—to cardiovascular surgery scenarios.

Introduction to the Cardiovascular System

The **cardiovascular system** is one of the most complex and frequently coded surgical sections on the CPC exam. It encompasses the heart, all major arteries and veins, and associated structures including the pericardium and great vessels. Understanding the anatomy is not optional—it is the foundation upon which every coding decision in this chapter rests.

Anatomy Review

The Heart: Chambers and Valves

The heart is a four-chambered muscular organ located in the **mediastinum**. The two upper chambers are the **right atrium** and **left atrium**; the two lower, thicker-walled chambers are the **right ventricle** and **left ventricle**. Deoxygenated blood enters the right atrium from the body via the **superior vena cava** and **inferior**

vena cava, passes through the **tricuspid valve** into the right ventricle, and is pumped through the **pulmonic valve** into the pulmonary arteries toward the lungs. Oxygenated blood returns from the lungs via the **pulmonary veins** into the left atrium, crosses the **mitral valve** (bicuspid valve) into the left ventricle, and is ejected through the **aortic valve** into the **aorta** for systemic circulation.

Valve	Location	Function	Common Pathology
Tricuspid	Between right atrium and right ventricle	Prevents backflow from RV to RA	Tricuspid regurgitation, stenosis
Pulmonic	Between right ventricle and pulmonary artery	Controls flow to pulmonary circulation	Pulmonary stenosis
Mitral (Bicuspid)	Between left atrium and left ventricle	Prevents backflow from LV to LA	Mitral valve prolapse, regurgitation, stenosis
Aortic	Between left ventricle and aorta	Controls systemic outflow	Aortic stenosis, aortic regurgitation

Coronary Arteries

The **coronary arteries** supply the myocardium (heart muscle) with oxygenated blood. The two main coronary arteries arise from the **aortic root**. The **left main coronary artery (LMCA)** divides into the **left anterior descending (LAD)** artery and the **left circumflex (LCx)** artery. The **right coronary artery (RCA)** supplies the right ventricle and portions of the inferior left ventricle. Blockages in these vessels require bypass procedures coded in this chapter.

Major Arteries and Veins

The **aorta** is the body's largest artery, arising from the left ventricle and branching into the **ascending aorta**, **aortic arch**, **descending thoracic aorta**, and **abdominal aorta**. Key branches include the **carotid arteries** (brain and head), **subclavian arteries** (arms), **renal arteries** (kidneys), **iliac arteries** (pelvis and legs), and **femoral arteries** (thighs). Major veins include the **saphenous vein** (commonly harvested for CABG grafts) and the **femoral vein**.

CPT Cardiovascular System Code Range

The CPT Surgery section for the Cardiovascular System spans codes **33010–37799** and is organized anatomically and procedurally as follows:

Code Range	Subsection
33010–33999	Heart and Pericardium
34001–34490	Embolectomy/Thrombectomy
34501–34530	Venous Reconstruction
34701–34834	Endovascular Repair of Abdominal Aorta and/or Iliac Arteries
34841–34848	Endovascular Repair of Visceral Aorta
34900	Endovascular Repair of Iliac Artery
35001–35162	Direct Repair of Aneurysm or Excision with Graft Replacement
35201–35286	Repair Blood Vessel Other than for Fistula
35301–35390	Thromboendarterectomy
35501–35671	Bypass Grafts (Vein and Other)
35691–35907	Arterial Transposition and Composite Grafts
36000–36598	Central Venous Access Procedures and Vascular Access
36600–36660	Arterial Puncture and Catheterization
36800–36870	Hemodialysis Access, Arteriovenous Fistula/Graft
37180–37216	Transcatheter Procedures
37220–37239	Endovascular Revascularization (Lower Extremity)
37500–37785	Vascular Endoscopy and Varicose Veins

Key Documentation Elements from Operative Reports

Before assigning any cardiovascular CPT code, the coder must identify these critical elements in the operative report:

- **Specific vessel(s) involved** (e.g., LAD, saphenous vein, femoral artery)
- **Surgical approach** (open, endovascular, percutaneous, thoracoscopic, transapical, transfemoral)
- **Exact procedure performed** (repair, replacement, bypass, endarterectomy, ablation)
- **Materials used** (autologous vein, synthetic graft, tissue valve, mechanical valve)
- **Anatomical side** (right vs. left, bilateral)
- **Number of vessels or segments** involved
- **Use of cardiopulmonary bypass** (on-pump vs. off-pump)
- **Device specifications** for pacemakers/ICDs (single vs. dual chamber, subcutaneous)
- **Presence of complications** or secondary procedures

> 💡 **Did You Know?**
>
> The cardiovascular section is one of the highest-value and highest-complexity sections on the CPC exam. Many codes are **add-on codes** (identified with a **+** symbol in CPT) that can only be reported in conjunction with a primary code. Always check the CPT codebook guidelines and parenthetical notes beneath each code before reporting.

Heart and Pericardium (33010–33999)

A. Pericardiocentesis and Pericardiectomy

The **pericardium** is the fibrous sac surrounding the heart. When fluid accumulates abnormally in the pericardial space—a condition called **pericardial effusion**—it may compress the heart and reduce cardiac output, a potentially life-threatening emergency known as **cardiac tamponade**.

Pericardiocentesis (33010–33011)

Pericardiocentesis is the needle aspiration of fluid from the pericardial sac. It is most commonly performed under echocardiographic or fluoroscopic guidance.

- `33010` — Pericardiocentesis, initial
- `33011` — Pericardiocentesis, subsequent

Key rule: Do not separately report the imaging guidance used during pericardiocentesis when performed with **echocardiographic guidance** (93303, 93308 are separately reported by the cardiologist only when independently interpreting). Always check payer policy for guidance reporting.

Pericardiectomy (33030–33031)

Pericardiectomy is the surgical removal of all or part of the pericardium. It is performed for **constrictive pericarditis**, where scarring of the pericardium restricts heart function.

- `33030` — Pericardiectomy, subtotal or complete; without cardiopulmonary bypass
- `33031` — Pericardiectomy, subtotal or complete; with cardiopulmonary bypass

> 📋 **Coder's Corner**
>
> **Pericardiocentesis vs. Pericardiectomy:** These are completely different procedures. **Pericardiocentesis** is a needle/catheter drainage (minimally

invasive). **Pericardiectomy** is open surgical removal of pericardial tissue. The documentation will clearly state whether the pericardial sac was punctured with a needle or surgically excised. Never confuse these two procedure types on the exam.

B. Pacemakers and Implantable Cardioverter-Defibrillators (ICDs)

Pacemaker coding is one of the most frequently tested areas on the CPC exam and one of the most frequently miscoded in practice. A thorough understanding of device components and procedural combinations is essential.

Device Components

A **cardiac pacemaker system** consists of two primary components:

1. **Pulse generator**: The battery-powered device implanted subcutaneously (under the skin), typically in the left or right pectoral region.
2. **Lead(s)**: Insulated wires that connect the pulse generator to the heart muscle, delivering electrical impulses.

Pacemakers are classified by the number of leads:

- **Single-chamber pacemaker**: One lead placed in either the right atrium OR right ventricle.
- **Dual-chamber pacemaker**: Two leads placed in both the right atrium AND right ventricle.
- **Biventricular pacemaker** (Cardiac Resynchronization Therapy / **CRT**): Three leads—right atrium, right ventricle, and left ventricle (via coronary sinus).

The Critical Coding Rule for Pacemakers

⚠ **Stop! Think! — Pacemaker Coding Rule**

When both the pulse generator AND the lead(s) are inserted, replaced, or repositioned in the same operative session, you MUST code each component separately. There is no single bundled code for a complete new pacemaker system with both components. Use one code for the generator and a separate code for each lead procedure performed. This is a very common exam trap.

Common Errors:

- Reporting only the generator insertion code and omitting the lead insertion code
- Reporting a replacement code when an initial insertion was performed (or vice versa)
- Failing to separately code a lead repositioning performed at the same session as a generator change
- Confusing pacemaker codes with ICD codes—these are completely separate code sets

Pacemaker Insertion Codes (33206–33208)

These codes represent **new/initial insertion of the pulse generator with NEW leads**:

- `33206` — Insertion of new or replacement of permanent pacemaker with transvenous electrode(s); atrial
- `33207` — Insertion of new or replacement of permanent pacemaker with transvenous electrode(s); ventricular
- `33208` — Insertion of new or replacement of permanent pacemaker with transvenous electrode(s); atrial and ventricular (dual-chamber)

💡 **Did You Know?**

Codes **33206–33208** are used for both initial insertions AND replacements when the pulse generator AND leads are being changed at the same time. When only the generator is being replaced (leads are not touched), use codes **33227–33229** instead. The documentation must clearly state which components were addressed.

Pulse Generator Replacement Only (33227–33229)

When only the pulse generator is replaced (existing leads remain in place):

- `33227` — Removal of permanent pacemaker pulse generator with replacement of pacemaker pulse generator; single lead system
- `33228` — Removal of permanent pacemaker pulse generator with replacement of pacemaker pulse generator; dual lead system
- `33229` — Removal of permanent pacemaker pulse generator with replacement of pacemaker pulse generator; multiple lead system

Lead Procedures

- `33216` — Insertion of a single transvenous electrode, permanent pacemaker or cardioverter-defibrillator
- `33217` — Insertion of two transvenous electrodes, permanent pacemaker or cardioverter-defibrillator
- `33218` — Repair of single transvenous electrode for a single chamber permanent pacemaker or single chamber pacing cardioverter-defibrillator
- `33220` — Repair of two transvenous electrodes for a dual chamber permanent pacemaker or dual chamber pacing cardioverter-defibrillator

Removal Codes (33233–33238)

- `33233` — Removal of permanent pacemaker pulse generator only
- `33234` — Removal of transvenous pacemaker electrode(s); single lead system, from right atrium and/or right ventricle

- `33235` — Removal of transvenous pacemaker electrode(s); dual lead system
- `33238` — Removal of permanent transvenous electrode(s) by thoracotomy

Implantable Cardioverter-Defibrillator (ICD) Insertion (33249)

An **implantable cardioverter-defibrillator (ICD)** monitors heart rhythm and delivers electric shocks to terminate life-threatening arrhythmias such as ventricular fibrillation or ventricular tachycardia.

- `33249` — Insertion or replacement of permanent pacing cardioverter-defibrillator system with transvenous lead(s), single or dual chamber
- `33270` — Insertion or replacement of permanent subcutaneous implantable defibrillator system, with subcutaneous electrode

Pacemaker Code Reference Table

Procedure	Single Chamber	Dual Chamber	Multiple Leads
Initial insertion (generator + leads)	33206 or 33207	33208	33208 + 33216 (add'l lead)
Generator replacement only (leads remain)	33227	33228	33229
Lead insertion only (generator exists)	33216	33217	33217 + 33216
Lead repair	33218	33220	33220
Generator removal only	33233	33233	33233
Lead removal (transvenous)	33234	33235	33235
ICD insertion (single or dual)	33249		

Pacemaker Coding Scenarios

Scenario PM-1: New Dual-Chamber Pacemaker

OPERATIVE NOTE EXCERPT: Patient: Male, 72 years | Diagnosis: Complete heart block (AV block, third degree) Procedure: Under general anesthesia, a left subclavian venous approach was utilized. Two transvenous leads were advanced under fluoroscopic guidance: the atrial lead was placed in the right atrial appendage and secured, and the ventricular lead was placed in the right ventricular apex. Sensing and pacing thresholds were confirmed acceptable. A dual-chamber permanent pacemaker pulse generator was connected to both leads and placed in a subcutaneous left pectoral pocket. The pocket was irrigated and closed in layers.

Step-by-Step Analysis:

Step 1: Identify the procedure: New dual-chamber pacemaker with TWO new leads AND a new generator.

Step 2: Both components (generator + leads) are new. Use insertion codes, not replacement codes.

Step 3: Dual-chamber = atrial AND ventricular lead → code 33208.

Step 4: Code 33208 covers the generator insertion and two leads together when reported as a complete initial system.

Final Code(s): 33208

—

Insertion of permanent pacemaker with transvenous electrodes; atrial and ventricular

Common Mistake:

Reporting 33207 (ventricular only) and missing the atrial lead component. Read the entire operative note to confirm all leads placed.

Scenario PM-2: Pulse Generator Replacement Only

OPERATIVE NOTE EXCERPT: Patient: Female, 68 years | Diagnosis: Pacemaker battery end-of-life Procedure: The existing left pectoral pacemaker pocket was reopened. The existing dual-chamber pulse generator was disconnected from the atrial and ventricular leads, which were inspected and found to be in good condition with acceptable sensing and pacing thresholds. The existing leads were retained and connected to a new dual-chamber pulse generator. The pocket was irrigated and closed in layers.

Step 1: Only the generator is being replaced. The leads are NOT touched (tested and retained).

Step 2: Existing leads = dual lead system → code 33228.

Step 3: Do NOT separately code lead procedures because no lead work was performed.

Final Code(s): 33228

—

Removal with replacement of pacemaker pulse generator; dual lead system

Common Mistake:

Using 33208 (which includes lead insertion). Leads were NOT replaced here

—

this is generator only.

Scenario PM-3: ICD Insertion

OPERATIVE NOTE EXCERPT: Patient: Male, 58 years | Diagnosis: Ischemic cardiomyopathy, EF 25%, high risk for sudden cardiac death Procedure: A right cephalic venous cutdown was performed. A single coil

defibrillation lead was advanced to the right ventricular apex under fluoroscopic guidance. Defibrillation threshold testing was performed and confirmed adequate. A single-chamber ICD pulse generator was implanted in the left prepectoral pocket. The system was tested satisfactorily. Pocket closed in layers.

Step 1: Device is an ICD (implantable cardioverter-defibrillator), NOT a standard pacemaker.

Step 2: Single-chamber system with transvenous lead.

Step 3: Code 33249 covers insertion/replacement of pacing cardioverter-defibrillator with transvenous lead(s), single or dual chamber.

Final Code(s): 33249

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Insertion or replacement of permanent pacing cardioverter-defibrillator system with transvenous lead(s), single or dual chamber

Common Mistake:

Using pacemaker codes (33206

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33208) for an ICD. ICDs and pacemakers are entirely separate device

categories with separate CPT codes.

C. Cardiac Valve Procedures

Cardiac valve procedures are performed to correct **valvular stenosis** (narrowing that impedes blood flow) or **valvular regurgitation/insufficiency** (leaking that allows backflow). The coder must know: (1) which valve was treated, (2) whether it was repaired or replaced, (3) the approach, and (4) the type of prosthesis if replaced.

Mitral Valve Procedures (33420–33430)

The **mitral valve** is the most commonly repaired cardiac valve. **Mitral valve repair** is generally preferred over replacement because it preserves native tissue and avoids the need for long-term anticoagulation.

- `33420` — Valvotomy, mitral valve; closed heart
- `33422` — Valvotomy, mitral valve; open heart, with cardiopulmonary bypass
- `33425` — Valvuloplasty, mitral valve, with cardiopulmonary bypass
- `33426` — Valvuloplasty, mitral valve, with cardiopulmonary bypass; with prosthetic ring
- `33427` — Valvuloplasty, mitral valve, with cardiopulmonary bypass; radical reconstruction, with or without ring
- `33430` — Replacement, mitral valve, with cardiopulmonary bypass

Aortic Valve Procedures (33400–33413)

- `33400` — Valvuloplasty, aortic valve; open, with cardiopulmonary bypass
- `33405` — Replacement, aortic valve, open, with cardiopulmonary bypass; with prosthetic valve other than homograft or stentless valve

- 33406 — Replacement, aortic valve, open; with homograft valve (freehand)
- 33410 — Replacement, aortic valve, open; with stentless valve
- 33413 — Replacement, aortic valve by translocation of autologous pulmonary valve with allograft replacement of pulmonary valve (Ross Procedure)

Tricuspid Valve Procedures (33460–33468)

- 33460 — Valvectomy, tricuspid valve, with cardiopulmonary bypass
- 33463 — Valvuloplasty, tricuspid valve; without ring insertion
- 33464 — Valvuloplasty, tricuspid valve; with ring insertion
- 33465 — Replacement, tricuspid valve, with cardiopulmonary bypass
- 33468 — Tricuspid valve repositioning and plication for Ebstein anomaly

TAVR: Transcatheter Aortic Valve Replacement (33361–33369)

Transcatheter aortic valve replacement (TAVR), also called **TAVI (transcatheter aortic valve implantation)**, is a minimally invasive alternative to open aortic valve replacement for patients with severe aortic stenosis who are at high or prohibitive surgical risk. The prosthetic valve is delivered via catheter without open heart surgery.

Approaches for TAVR:

- **Transfemoral**: Catheter introduced through the femoral artery (most common, least invasive)
- **Transapical**: Catheter introduced through a small incision in the chest wall at the apex of the heart (for patients with poor femoral access)
- **Transaortic**: Catheter introduced through the ascending aorta via a small chest incision
- **Transaxillary/Transsubclavian**: Access via axillary or subclavian artery

TAVR CPT Codes:

- 33361 — Transcatheter aortic valve replacement (TAVR/TAVI) with prosthetic valve; percutaneous femoral artery approach

- `33362` — TAVR; open femoral artery approach
- `33363` — TAVR; open axillary artery approach
- `33364` — TAVR; open iliac artery approach
- `33365` — TAVR; transaortic approach (e.g., ministernotomy, minithoracotomy)
- `33366` — TAVR; transapical exposure (e.g., left thoracotomy)
- `33367` — + Cardiopulmonary bypass support, TAVR (add-on code)
- `33368` — + Endovascular repair of ascending aorta with placement of prosthetic valve with or without associated procedures (add-on)
- `33369` — TAVR; without access to femoral, axillary, iliac arteries

📋 **Coder's Corner — TAVR Coding Tips**

• TAVR codes (**33361–33366, 33369**) are selected based on **approach**, not the brand of valve.

• The supervising physician and the operator physician may each separately bill for their professional services in a TAVR team.

• Code **33367** is an add-on code; it cannot be reported alone. It is reported in addition to the primary TAVR code when cardiopulmonary bypass support is utilized.

• Imaging guidance for TAVR is included in the primary TAVR code and should **NOT** be separately reported.

Valve Procedure Code Reference Table

Valve	Procedure Type	CPT Code(s)
Aortic	Open repair (valvuloplasty)	33400
Aortic	Open replacement, mechanical/tissue	33405

Valve	Procedure Type	CPT Code(s)
	prosthesis	
Aortic	Replacement with homograft	33406
Aortic	Ross Procedure	33413
Aortic	TAVR, transfemoral percutaneous	33361
Aortic	TAVR, transapical	33366
Mitral	Valvuloplasty with ring	33426
Mitral	Replacement	33430
Tricuspid	Repair with ring	33464
Tricuspid	Replacement	33465

Valve Procedure Coding Scenarios

Scenario V-1: Mitral Valve Replacement

OPERATIVE NOTE EXCERPT: Patient: Female, 61 years | Diagnosis: Severe mitral regurgitation, mitral valve prolapse Procedure: Cardiopulmonary bypass was established. The left atrium was entered and the mitral valve was inspected; the posterior leaflet demonstrated severe prolapse not amenable to repair. The valve was excised. Annular sizing was performed. A 29mm bioprosthetic (tissue) valve was seated in the annulus and secured with interrupted pledgeted sutures. The left atrium was closed, cardiopulmonary bypass was weaned and discontinued without difficulty.

Step 1: Valve = mitral. Procedure = replacement (not repair).

Step 2: Performed with cardiopulmonary bypass.

Step 3: 33430 covers mitral valve replacement with cardiopulmonary bypass.

Final Code(s): 33430

—

Replacement, mitral valve, with cardiopulmonary bypass

Common Mistake:

Reporting 33426 (valvuloplasty with ring). The operative note clearly states the valve was "excised"

—

that is replacement, not repair.

Scenario V-2: TAVR, Transfemoral Approach

OPERATIVE NOTE EXCERPT: Patient: Male, 84 years | Diagnosis: Severe calcific aortic stenosis, STS score 8.2% (high surgical risk) Procedure: Patient was taken to the hybrid operating room. Right common femoral artery access was obtained percutaneously via modified Seldinger technique. A SAPIEN 3 26mm transcatheter heart valve was

advanced on a delivery system across the native aortic valve under fluoroscopic and TEE guidance. The valve was positioned and deployed in the aortic annulus with marked reduction in transvalvular gradient. Vascular access sites were closed using a Perclose ProGlide closure device. No cardiopulmonary bypass was required.

Step 1: TAVR procedure confirmed.

Step 2: Approach: Percutaneous femoral artery (transfemoral).

Step 3: 33361 = TAVR, percutaneous femoral artery approach.

Step 4: No cardiopulmonary bypass used, so do NOT add 33367.

Step 5: Imaging guidance (fluoroscopy, TEE) is bundled into 33361.

Final Code(s): 33361

—

Transcatheter aortic valve replacement; percutaneous femoral artery approach

Common Mistake:

Separately billing for fluoroscopy or TEE guidance used during the TAVR procedure. These are included in the TAVR code.

Scenario V-3: Aortic Valve Replacement, Open

OPERATIVE NOTE EXCERPT: Patient: Male, 55 years | Diagnosis: Bicuspid aortic valve with severe aortic stenosis Procedure: Median sternotomy was performed. Cardiopulmonary bypass was established. The aorta was cross-clamped and cardioplegia administered. The diseased bicuspid aortic valve was excised. The annulus was sized at 23mm. A 23mm mechanical prosthetic aortic valve (On-X) was seated and secured with interrupted horizontal mattress sutures. De-airing procedures were performed. Cardiopulmonary bypass discontinued, patient decannulated, chest closed.

Step 1: Open surgical approach (median sternotomy, CPB used).

Step 2: Valve = aortic. Procedure = replacement with mechanical prosthesis.

Step 3: Code 33405 = replacement, aortic valve, open, with prosthetic valve (other than homograft or stentless).

Final Code(s): 33405

—

Replacement, aortic valve, open, with cardiopulmonary bypass; with prosthetic valve other than homograft or stentless valve

Common Mistake:

Using TAVR codes for an open aortic valve replacement. TAVR is specifically for the catheter-based approach, not open surgery.

D. Coronary Artery Bypass Graft (CABG)

Coronary artery bypass graft (CABG) surgery restores blood flow to the myocardium by bypassing blocked coronary arteries using harvested blood vessels. CABG is coded based on two primary factors: (1) the **type of graft** (arterial or venous) and (2) the **number of coronary vessels bypassed**. These are two distinct code families that are reported separately and may be combined.

Arterial Grafts (33533–33536)

Arterial grafts provide superior long-term patency compared to venous grafts. Common arterial conduits include:

- **Left internal mammary artery (LIMA)**: Most commonly used; anastomosed to the LAD
- **Right internal mammary artery (RIMA)**: Used for additional arterial revascularization
- **Radial artery**: Harvested from the forearm; used as a free graft
- **Gastroepiploic artery**: Less commonly used
- `33533` — CABG using arterial graft(s); single
- `33534` — CABG using arterial graft(s); two
- `33535` — CABG using arterial graft(s); three
- `33536` — CABG using arterial graft(s); four or more

Venous Grafts (33510–33516)

Venous grafts use segments of the patient's own **saphenous vein** (harvested from the leg) or arm veins. Venous grafts have good short-term results and are the most widely used conduit when arterial options are limited.

- `33510` — CABG using venous graft(s); single
- `33511` — CABG using venous graft(s); two
- `33512` — CABG using venous graft(s); three
- `33513` — CABG using venous graft(s); four
- `33514` — CABG using venous graft(s); five
- `33516` — CABG using venous graft(s); six or more

Combined Arterial and Venous CABG

When both arterial AND venous grafts are used in the same CABG procedure, report **both** the applicable arterial code AND the applicable venous code. The arterial graft code is primary; the venous graft code is secondary (use modifier **-51** if required by payer policy, though many cardiovascular CABG codes are exempt from -51).

Graft Harvesting Add-On Codes

Harvesting of the conduit vessel may be separately reportable in certain circumstances:

- `33508` — + Endoscopic harvesting of the saphenous vein, one leg (add-on code; report in addition to primary CABG code)
- `35600` — Harvest of upper extremity artery (radial artery) for coronary artery bypass procedure (separate procedure)

> 📋 **Coder's Corner — Saphenous Vein Procurement**
>
> The traditional (open) harvesting of the saphenous vein for CABG is **included** in the CABG code and is **NOT** separately reportable. However, **endoscopic** saphenous vein harvesting (EVH) using a video-assisted technique is separately reportable using add-on code **+33508**. The operative note must specify

"endoscopic" harvesting to support this additional code. Open leg incision for vein harvest = bundled. Endoscopic vein harvest = 33508 separately.

⚠ **Stop! Think! — CABG Coding**

Count the number of **coronary arteries bypassed**, not the number of anastomoses or grafts. A sequential graft (one vein connected to two different coronary arteries) counts as **two** vessels bypassed. When in doubt, read the operative note carefully and count each distinct coronary vessel that receives a bypass graft.

CABG Code Reference Table

Graft Type	1 Vessel	2 Vessels	3 Vessels	4 Vessels	5 Vessels	6+ Vessels
Arterial	33533	33534	33535	33536	33536	33536
Venous	33510	33511	33512	33513	33514	33516
Endoscopic vein harvest	+33508 (add-on to primary CABG code)					
Radial artery harvest	35600 (separate procedure)					

CABG Coding Scenarios

Scenario C-1: Single Arterial CABG (LIMA to LAD)

OPERATIVE NOTE EXCERPT: Patient: Male, 62 years | Diagnosis:

Single-vessel CAD, 95% LAD stenosis Procedure: Median sternotomy. Cardiopulmonary bypass established. The LIMA was harvested as a pedicled graft and anastomosed end-to-side to the left anterior descending artery. Excellent flow confirmed on transit-time flowmetry. CPB discontinued. Chest closed in standard fashion.

Step 1: Graft type = arterial (LIMA). Vessels bypassed = 1 (LAD only).

Step 2: LIMA harvest is open (pedicled), NOT endoscopic → harvest bundled, no 33508.

Step 3: Single arterial CABG = 33533.

Final Code(s): 33533

—

CABG using arterial graft(s); single

Common Mistake:

Adding harvesting code 33508. Open/pedicled mammary artery harvest is bundled into the CABG code. 33508 is for endoscopic saphenous vein harvest only.

Scenario C-2: Combined Arterial + Venous CABG with Endoscopic Harvest

OPERATIVE NOTE EXCERPT: Patient: Female, 67 years | Diagnosis: Three-vessel CAD (LAD 90%, LCx 80%, RCA 75%) Procedure: Median sternotomy. CPB established. LIMA harvested as pedicled graft. Saphenous vein was harvested endoscopically from the right leg (EVH technique). LIMA anastomosed to LAD. Saphenous vein graft anastomosed sequentially to the obtuse marginal (OM) branch of the LCx and to the RCA (two venous anastomoses). Total: 1 arterial graft (LAD), 2 venous anastomoses (OM, RCA). CPB discontinued without difficulty.

Step 1: Arterial graft: LIMA to LAD = 1 arterial vessel. Code: 33533.

Step 2: Venous grafts: Sequential vein graft to OM + RCA = 2 venous vessels. Code: 33511.

Step 3: Saphenous vein harvested endoscopically = separately reportable. Add-on code: +33508.

Step 4: Report all three codes together.

Final Code(s): 33533

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CABG, arterial graft, single | 33511

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CABG, venous graft(s), two | +33508

—

Endoscopic harvest of saphenous vein

Common Mistake:

Counting total anastomoses (3) as vessel number for a single code family. Arterial and venous grafts are in separate code families and counted independently.

Scenario C-3: Four-Vessel Arterial CABG

OPERATIVE NOTE EXCERPT: Patient: Male, 71 years | Diagnosis: Severe four-vessel CAD Procedure: CPB established. LIMA anastomosed to LAD. RIMA anastomosed to the diagonal branch. Radial artery graft (harvested from left forearm via open incision) anastomosed to the OM branch of the LCx. A separate radial artery graft was anastomosed to the RCA. Total: 4 arterial grafts (LAD, diagonal, OM, RCA). CPB discontinued. All grafts confirmed patent.

Step 1: All four grafts are arterial (LIMA, RIMA, 2x radial artery).

Step 2: Four arterial vessels bypassed = 33536.

Step 3: Radial artery harvested via open incision (not endoscopic) = code 35600 for radial artery harvest (separately reportable).

Step 4: 35600 should be reported for EACH radial artery harvest performed. Two radial artery harvests = report 35600 x2 or verify payer policy.

Final Code(s): 33536

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CABG using arterial graft(s); four or more | 35600

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Harvest of upper extremity artery (radial) for coronary artery bypass (x2 per payer policy)

Common Mistake:

Omitting the radial artery harvest code 35600. Unlike open saphenous vein harvest, the radial artery harvest is separately reportable when performed for CABG.

Scenario C-4: Three Venous Graft CABG

OPERATIVE NOTE EXCERPT: Patient: Female, 74 years | Diagnosis:

Three-vessel CAD; prior LIMA to LAD patent, now RCA 90%, OM 85%, PDA 80% Procedure: Redo CABG. CPB established. Saphenous vein harvested via open technique from left leg. Three separate vein grafts constructed: vein graft to RCA, vein graft to OM branch, vein graft to PDA. Prior LIMA-LAD graft confirmed patent and left undisturbed. CPB weaned, chest closed.

Step 1: Only venous grafts performed this session (3 venous: RCA, OM, PDA).

Step 2: Saphenous vein harvested via open technique = bundled, do NOT add 33508.

Step 3: Three venous vessels = 33512.

Step 4: Prior patent LIMA-LAD is NOT counted (not touched this session).

Final Code(s): 33512

—

CABG using venous graft(s); three

Common Mistake:

Counting the prior patent LIMA graft and coding for 4 vessels. Only code vessels bypassed in THIS operative session.

E. Heart Transplant (33940–33945)

Cardiac transplantation involves the surgical removal of a diseased heart and replacement with a donor heart. These procedures are complex and rarely tested in detail on the CPC exam, but coders should be aware of the major codes:

- `33940` — Donor cardiectomy (including cold preservation)
- `33945` — Heart transplant, with or without recipient cardiectomy

Associated add-on codes exist for backbench preparation of the donor heart. The transplant team, harvesting team, and recipient team may all bill separately for their respective services.

F. Congenital Heart Defect Repairs

Congenital heart defects are structural abnormalities present from birth. Key repairs include:

- **Patent ductus arteriosus (PDA) ligation**: `33820` (ligation), `33822` (division <18 years), `33824` (division with CPB)
- **Atrial septal defect (ASD) repair**: `33641` — Repair of ASD with cardiopulmonary bypass, with or without patch
- **Ventricular septal defect (VSD) repair**: `33681` (simple, primary repair), `33684` (with pulmonary valvotomy or infundibular resection), `33688` (with pulmonary valve replacement)

> 💡 **Did You Know?**
>
> A **patent ductus arteriosus (PDA)** is a fetal blood vessel that normally closes shortly after birth. When it remains open (patent), blood flows abnormally from the aorta to the pulmonary artery, creating a left-to-right shunt. Surgical ligation is a common pediatric cardiac procedure. The specific CPT code depends on whether the vessel is ligated (tied off) or divided (cut and tied) and the patient's

age.

Arteries and Veins (34001–37799)

A. Vascular Surgery Fundamentals

Before coding vascular procedures, the coder must be fluent in vascular surgical terminology. Misunderstanding these terms leads to incorrect code selection.

Term	Definition
Anastomosis	Surgical connection between two vessels or between a graft and a vessel
Endarterectomy	Surgical removal of the inner lining (intima and plaque) of an artery
Bypass graft	Creating a new route for blood flow around an obstruction using a graft vessel
Embolectomy	Surgical removal of an embolus (blood clot or other material) from a vessel
Thrombectomy	Surgical removal of a thrombus (clot formed in situ) from a vessel
Angioplasty	Widening of a narrowed or blocked vessel, usually by balloon inflation
Stent placement	Deployment of a metal mesh tube within a vessel to maintain luminal patency
Aneurysm	Abnormal dilation (bulging) of a vessel wall; classified as true or false (pseudoaneurysm)
Endovascular	Performed inside the vessel via catheter through a remote access point; minimally invasive
Ligation	Tying off a vessel to interrupt blood flow

Open vs. Endovascular Procedures

The distinction between **open (surgical)** and **endovascular (catheter-based)** procedures is critical for code selection:

- **Open procedures** require a surgical incision to directly access the vessel.
- **Endovascular procedures** are performed through catheter access, often percutaneously (through the skin with a needle puncture).

CPT distinguishes these in separate code ranges. Coders must verify the approach documented in the operative note before code assignment.

B. Embolectomy and Thrombectomy (34001–34490)

Embolectomy and **thrombectomy** remove obstructive material from blood vessels, restoring circulation. CPT organizes these codes by the specific vessel treated.

Vessel	Embolectomy/Thrombectomy CPT Code
Aortic (saddle embolus) — abdominal	34151
Aortic — thoracic	34001
Iliac artery	34151
Femoral, popliteal	34201 (open, 1 vessel)
Tibial, peroneal — initial	34203
Brachial, axillary	34101
Radial or ulnar	34111
Subclavian	34001
Carotid, vertebral	34001
Venous (iliac, femoral, popliteal)	34401

Scenario ET-1: Femoral Embolectomy

OPERATIVE NOTE EXCERPT: Patient: Male, 69 years | Diagnosis: Acute left femoral artery occlusion (embolus) Procedure: Under general anesthesia, a longitudinal incision was made over the left femoral artery. The common femoral artery was exposed and controlled with vascular loops. Arteriotomy was performed. A Fogarty balloon embolectomy catheter was passed proximally and distally, retrieving organized thromboembolic material. Back-bleeding and forward flow restored. Arteriotomy closed with continuous suture. Wound closed in layers.

Step 1: Embolectomy of the femoral artery (open approach).

Step 2: Left side only = consider modifier -LT if required by payer.

Step 3: Code 34201 covers femoral/popliteal embolectomy or thrombectomy with arteriotomy.

Final Code(s): 34201-LT

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Embolectomy or thrombectomy, with or without catheter; femoral, popliteal arteries, with or without patch graft

Scenario ET-2: Brachial Artery Embolectomy

OPERATIVE NOTE EXCERPT: Patient: Female, 74 years | Diagnosis: Acute right arm ischemia, brachial artery embolism secondary to atrial fibrillation Procedure: A transverse incision was made at the antecubital fossa. The brachial artery was identified and controlled. Arteriotomy was performed. Fogarty catheter passed proximally and distally; significant organized clot retrieved. Flow re-established. Arteriotomy repaired with 6-0 Prolene suture. Wound closed.

Step 1: Embolectomy of the brachial artery (open).

Step 2: Right arm = modifier -RT.

Step 3: Code 34101 = embolectomy or thrombectomy, with or without catheter; brachial artery or popliteal artery.

Final Code(s): 34101-RT

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Embolectomy or thrombectomy, with or without catheter; brachial artery or popliteal artery, with or without patch graft

C. Vascular Bypass Grafts (35001–35671)

Vascular **bypass grafts** create new conduits to route blood around arterial obstructions. They are named by their **origin** (where blood enters the graft) and their **destination** (where blood exits to the native vessel). CPT codes for bypass

grafts are organized by graft material: **autologous vein** (patient's own vein), **in-situ vein**, or **other-than-vein** (synthetic graft, such as Dacron or PTFE).

Common Bypass Graft Procedures

- **Aortofemoral bypass**: From the aorta to the femoral artery; for aortoiliac disease
- **Femoropopliteal bypass**: From the femoral artery to the popliteal artery; for femoral-popliteal disease
- **Axillofemoral bypass**: From the axillary artery to the femoral artery; extraanatomic bypass for high-risk patients
- **Femorotibial bypass**: From the femoral to the tibial artery; for distal disease

Key Bypass Graft Codes

- `35556` — Bypass graft, with vein; femoral-popliteal
- `35566` — Bypass graft, with vein; femoral-anterior tibial, posterior tibial, peroneal artery, or other distal vessels
- `35621` — Bypass graft, with other than vein; aorto-femoral
- `35623` — Bypass graft, with other than vein; aorto-popliteal or tibial
- `35651` — Bypass graft, with other than vein; femoral-popliteal
- `35654` — Bypass graft, with other than vein; femoral-anterior tibial, posterior tibial, or peroneal artery
- `35661` — Bypass graft, with other than vein; femoral-femoral
- `35663` — Bypass graft, with other than vein; iliac-femoral

Bypass Graft Code Reference Table

Origin → Destination	With Vein (Autologous)	With Other Than Vein (Synthetic)
Aorta → Femoral	35501 (aorto-celiac) / see 35521	35621

Origin → Destination	With Vein (Autologous)	With Other Than Vein (Synthetic)
Femoral → Popliteal	35556	35651
Femoral → Tibial/Peroneal	35566	35654
Femoral → Femoral (crossover)	35558	35661
Iliac → Femoral	35548	35663
Axillary → Femoral	35522	35654 / 35665

Bypass Graft Coding Scenarios

Scenario BG-1: Femoropopliteal Bypass with Synthetic Graft

OPERATIVE NOTE EXCERPT: Patient: Male, 74 years | Diagnosis: Right femoral-popliteal artery occlusion, claudication Procedure: Right groin incision and below-knee popliteal exposure. The common femoral artery and the below-knee popliteal artery were controlled. Adequate saphenous vein was not available due to prior harvest. A 6mm PTFE graft was anastomosed end-to-side to the common femoral artery and end-to-side to the below-knee popliteal artery. Completion angiogram confirmed patent anastomoses bilaterally. Wounds closed in layers.

Step 1: Bypass graft, femoral to popliteal.

Step 2: Material: PTFE (synthetic) = "other than vein" codes.

Step 3: Code 35651 = bypass graft, with other than vein; femoral-popliteal.

Step 4: Right side = modifier -RT.

Final Code(s): 35651-RT

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Bypass graft, with other than vein; femoral-popliteal

Common Mistake:

Using 35556 (vein graft) when a synthetic graft was used. Always confirm graft material from operative note before code selection.

Scenario BG-2: Femoropopliteal Bypass with Autologous Vein

OPERATIVE NOTE EXCERPT: Patient: Female, 66 years | Diagnosis: Left superficial femoral artery occlusion Procedure: Reversed saphenous vein graft, left femoral to above-knee popliteal artery bypass. Adequate greater saphenous vein harvested from left thigh via open technique. The proximal anastomosis was constructed end-to-side to the left common femoral artery and the distal anastomosis end-to-side to the above-knee popliteal artery. Good flow confirmed.

Step 1: Bypass graft, femoral to popliteal, left side.

Step 2: Material: reversed saphenous vein (autologous vein) = vein code.

Step 3: Code 35556 = bypass graft, with vein; femoral-popliteal.

Step 4: Open vein harvest = bundled, not separately reportable here.

Final Code(s): 35556-LT

—

Bypass graft, with vein; femoral-popliteal

Scenario BG-3: Aortofemoral Bypass, Bilateral

OPERATIVE NOTE EXCERPT: Patient: Male, 71 years | Diagnosis: Aortoiliac occlusive disease (Leriche syndrome) Procedure: Midline laparotomy. Infrarenal aorta exposed. A bifurcated 16x8mm Dacron graft was anastomosed end-to-end to the infrarenal aorta. The two limbs were tunneled retroperitoneally bilaterally and anastomosed end-to-side to each common femoral artery. Graft flows excellent bilaterally. Abdomen closed in layers.

Step 1: Bypass from aorta to bilateral femoral arteries (bifurcated graft).

Step 2: Material: Dacron = synthetic = "other than vein."

Step 3: Code 35621 = bypass graft, with other than vein; aorto-femoral.

Step 4: Bilateral procedure = modifier -50.

Final Code(s): 35621-50

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Bypass graft, with other than vein; aorto-femoral (bilateral)

Common Mistake:

Reporting 35621 twice without modifier -50. A bifurcated aortofemoral graft is one procedure serving both limbs; use -50 for bilateral.

D. Carotid Endarterectomy (35301)

Carotid endarterectomy (CEA) is the surgical removal of atheromatous plaque from the internal carotid artery to prevent ischemic stroke. It is one of the most commonly performed vascular procedures. The carotid artery is exposed, clamped, opened (arteriotomy), and the plaque is carefully dissected and removed from the inner vessel wall. The arteriotomy may be closed primarily or with a **patch graft** (autologous vein or synthetic material) to prevent stenosis at the closure site.

- `35301` — Thromboendarterectomy, including patch graft, if performed; carotid, vertebral, subclavian, by neck incision

📋 **Coder's Corner — CEA Patch Graft**

Code **35301** includes the patch graft when performed. Do **NOT** separately report the patch graft as an additional procedure. The parenthetical "including

patch graft, if performed" in the CPT descriptor makes clear that the patch closure is bundled into the single CEA code regardless of whether a patch was used or primary closure was performed.

CEA Coding Scenarios

Scenario CEA-1: Right Carotid Endarterectomy with Patch Graft

OPERATIVE NOTE EXCERPT: Patient: Male, 68 years | Diagnosis: Right internal carotid artery stenosis 85%, symptomatic (TIA) Procedure: Longitudinal right neck incision. Right common, internal, and external carotid arteries identified and controlled with vessel loops. Heparin administered IV. Carotid clamps applied. Longitudinal arteriotomy over the right CCA/ICA junction. Endarterectomy performed; the intimal plaque was carefully dissected and removed. Intimal tacking sutures placed distally. Arteriotomy closed with a bovine pericardial patch. Clamps released. Hemostasis achieved. Wound closed in layers.

Step 1: Thromboendarterectomy of carotid artery, by neck incision.

Step 2: Patch graft used (bovine pericardium) = included in 35301, not separately coded.

Step 3: Right side only = modifier -RT.

Final Code(s): 35301-RT

—

Thromboendarterectomy, including patch graft, if performed; carotid, vertebral, subclavian, by neck incision

Common Mistake:

Separately coding the bovine pericardial patch graft. The patch graft is explicitly included in the 35301 descriptor.

Scenario CEA-2: Bilateral Carotid Endarterectomy (Staged)

OPERATIVE NOTE EXCERPT: Patient: Female, 72 years | Diagnosis: Bilateral carotid stenosis (Right 90%, Left 80%) Session 1 Procedure: Right carotid endarterectomy with patch graft performed today. Patient recovered well. Session 2 Procedure (3 weeks later): Left carotid endarterectomy with patch graft performed.

Step 1: Two separate operative sessions, each treating one side.

Step 2: Session 1: 35301-RT (right CEA).

Step 3: Session 2: 35301-LT (left CEA).

Step 4: Modifier -50 is NOT used here since these are staged procedures on

separate dates, not simultaneous bilateral. Each session is billed separately with the laterality modifier.

Session 1: 35301-RT | Session 2: 35301-LT

Common Mistake:

Using modifier -50 for staged bilateral procedures performed on different dates. Modifier -50 is for procedures performed bilaterally in the same operative session.

E. Endovascular Procedures

Endovascular Aneurysm Repair (EVAR) for AAA (34701–34834)

An **abdominal aortic aneurysm (AAA)** is a dangerous dilation of the abdominal aorta. When the aneurysm diameter exceeds 5.5 cm (or grows rapidly), repair is indicated. **Endovascular aneurysm repair (EVAR)** deploys a stent-graft device within the aorta via femoral artery access, excluding the aneurysm sac from circulation without open surgery.

EVAR coding requires coding all components of the repair separately:

- **Main body**: The central aortic component of the stent-graft system
- **Iliac extension(s)**: Additional limbs extending into the iliac arteries; each may be reportable

- **Open arterial exposure**: If femoral access required surgical cutdown rather than percutaneous access

EVAR Key Codes

- `34701` — Endovascular repair of infrarenal aorta and/or iliac artery(ies) involving an aorto-aortic tube prosthesis
- `34702` — Endovascular repair of infrarenal aorta and/or iliac artery(ies) involving an aorto-uniiliac prosthesis
- `34703` — Endovascular repair; aorto-biiliac prosthesis
- `34704` — Endovascular repair; aorto-biiliac prosthesis, plus placement of proximal extension prosthesis(es)
- `34705` — Endovascular repair of infrarenal aorta and/or iliac artery(ies) involving aorto-biiliac prosthesis plus placement of distal iliac extension prosthesis(es)
- `34706` — Endovascular repair; aorto-biiliac prosthesis, plus placement of proximal and distal extension prostheses
- `34707` — + Endovascular repair, iliac artery (add-on)
- `34708` — + Placement of iliac artery occlusion device (add-on)
- `34709` — + Placement of extension prosthesis, proximal or distal (add-on)

TEVAR: Thoracic Endovascular Aneurysm Repair

TEVAR involves endovascular repair of thoracic aortic aneurysms. Key codes include:

- `33880` — Endovascular repair of descending thoracic aorta involving coverage of left subclavian artery origin
- `33881` — Endovascular repair of descending thoracic aorta NOT involving coverage of left subclavian artery origin
- `33883` — + Placement of proximal extension prosthesis for endovascular repair of descending thoracic aorta (add-on)

PTA and Stent Placement

Percutaneous transluminal angioplasty (PTA) uses balloon inflation to dilate a stenotic vessel. A **stent** may be placed to maintain the opened vessel lumen after angioplasty. Imaging guidance is typically included in these codes for specific arterial territories.

Endovascular Code Reference Table

Procedure	Code	Notes
EVAR, aorto-biiliac prosthesis	34703	Most common EVAR code
EVAR, aorto-biiliac + proximal extension	34704	Includes one extension
EVAR + distal iliac extension	34705	Includes one distal extension
Additional proximal/distal extension	+34709	Add-on per extension beyond first
TEVAR, without subclavian coverage	33881	Descending thoracic aorta
TEVAR, with left subclavian coverage	33880	More complex; subclavian revascularization may be additional

Endovascular Coding Scenarios

Scenario EV-1: EVAR for AAA (Aorto-Biiliac)

OPERATIVE NOTE EXCERPT: Patient: Male, 76 years | Diagnosis: Infrarenal AAA, 6.2 cm Procedure: Bilateral percutaneous femoral access obtained. A bifurcated endovascular aortic stent-graft (Medtronic Endurant II) was deployed: main body in the infrarenal aorta, bilateral iliac limbs extending to the common iliac arteries. Completion angiogram showed no

endoleak. Access sites closed with Perclose devices.

Step 1: EVAR, infrarenal AAA, aorto-biiliac prosthesis.

Step 2: No proximal or distal extension prostheses placed.

Step 3: Code 34703 = EVAR, aorto-biiliac prosthesis.

Step 4: Percutaneous access = access included; no open vessel exposure code needed.

Final Code(s): 34703

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Endovascular repair of infrarenal aorta, aorto-biiliac prosthesis

Scenario EV-2: EVAR with Proximal Extension

OPERATIVE NOTE EXCERPT: Patient: Female, 71 years | Diagnosis: Infrarenal AAA 5.8 cm with short proximal neck Procedure: EVAR with aorto-biiliac main body deployed. Due to inadequate proximal seal, one proximal aortic extension cuff was deployed to achieve adequate sealing zone. Bilateral iliac limbs deployed. Completion angiogram: no endoleak. Percutaneous access closed.

Step 1: EVAR, aorto-biiliac + proximal extension placed.

Step 2: Code 34704 = EVAR, aorto-biiliac prosthesis plus proximal extension.

Final Code(s): 34704

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Endovascular repair; aorto-biiliac prosthesis, plus placement of proximal extension prosthesis

Scenario EV-3: PTA and Stent, Superficial Femoral Artery

OPERATIVE NOTE EXCERPT: Patient: Male, 65 years | Diagnosis: Right SFA stenosis 80%, claudication Procedure: Percutaneous right femoral access. Selective catheterization of right SFA. Angiogram confirmed 80% stenosis. 5mm balloon angioplasty performed over stenosis. Residual stenosis 30%: a 150mm nitinol self-expanding stent deployed across lesion. Final angiogram: excellent result,

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10% residual stenosis. Hemostasis achieved.

Step 1: Endovascular procedure: PTA + stent placement, right SFA.

Step 2: Code 37226 = revascularization, endovascular, open or percutaneous,

femoral, popliteal artery(ies), unilateral; with transluminal stent placement(s), includes angioplasty when performed.

Step 3: Modifier -RT for right side.

Final Code(s): 37226-RT

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Revascularization, endovascular; femoral-popliteal, with transluminal stent placement

Common Mistake:

Separately reporting the angioplasty (PTA) and the stent. When both PTA and stent are performed in the same vessel, only the stent code is reported (it includes angioplasty when performed).

F. Central Venous Access Devices (CVADs) (36555–36598)

Central venous access devices (CVADs) are catheters inserted into a large central vein (subclavian, internal jugular, or femoral) for medication administration, chemotherapy, TPN, blood draws, or hemodynamic monitoring. Coding CVADs correctly requires knowing the device type, whether it is tunneled or non-tunneled, patient age, and which service is being performed (insertion, repair, or removal).

CVAD Classification

- **Non-tunneled catheter**: Placed directly into a central vein through the skin; no subcutaneous tunnel; typically temporary (ICU lines)
- **Tunneled catheter**: Routed through a subcutaneous tunnel before entering the vein; more secure; longer-term use (e.g., Hickman, Broviac)
- **PICC (Peripherally Inserted Central Catheter)**: Inserted via peripheral vein (usually basilic or cephalic in the arm) and advanced to the superior vena cava
- **Implanted port**: Fully implanted subcutaneous device (reservoir) accessed through the skin with a needle; no external catheter visible; longest-term access (e.g., Port-a-Cath)
- **Implanted pump**: Similar to port but contains a pump mechanism for continuous drug delivery

CVAD CPT Code Reference Table

Device Type	Age	Insertion	Repair	Removal
Non-tunneled central catheter	Age < 5 years	36555	36575	36589
Non-tunneled central catheter	Age ≥ 5 years	36556	36575	36589
Tunneled catheter without port/pump	Age < 5 years	36557	36576	36589
Tunneled catheter without port/pump	Age ≥ 5 years	36558	36576	36589
Tunneled catheter with port	Age < 5 years	36560	36576, 36578, 36582	36590
Tunneled catheter with	Age ≥ 5 years	36561	36576, 36578, 36582	36590

Device Type	Age	Insertion	Repair	Removal
port				
PICC (without port/pump)	Age < 5 years	36568	36575	36589
PICC (without port/pump)	Age ≥ 5 years	36569	36575	36589
PICC (with port)	Age < 5 years	36570	36575, 36578	36590
PICC (with port)	Age ≥ 5 years	36571	36575, 36578	36590

⚠ **Stop! Think! — CVAD: Do NOT Code Insertion + Removal at Same Session**

When a CVAD is **removed and replaced** in the same operative session (e.g., an infected port is removed and a new one is inserted), you may code **both the removal AND the insertion** if they are performed at separate sites or as clearly documented separate procedures. However, if the same catheter is simply repositioned or exchanged over a wire at the same site, only the insertion/repositioning code is reported. Always read the operative note carefully to determine whether a true removal and new insertion occurred. Most payers will require modifier **-59** on the second procedure to distinguish them as separate encounters.

CVAD Coding Scenarios

Scenario CVAD-1: PICC Line Insertion, Adult

OPERATIVE NOTE EXCERPT: Patient: Female, 45 years | Indication: Long-term IV antibiotic therapy for osteomyelitis Procedure: Patient

positioned supine. Right upper arm basilic vein identified by ultrasound. Using modified Seldinger technique, a 5 Fr double-lumen PICC catheter was advanced under fluoroscopic guidance. Tip position confirmed in the superior vena cava at the cavoatrial junction by fluoroscopy. Catheter secured. Dressing applied.

Step 1: Device = PICC (peripherally inserted central catheter), no port.

Step 2: Patient age = 45 years (≥5 years) → code 36569.

Step 3: Imaging guidance: Ultrasound guidance (76937) may be separately reported when documented. Fluoroscopy for tip confirmation included in PICC code.

Final Code(s): 36569

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Insertion of peripherally inserted central venous catheter (PICC), without subcutaneous port or pump; age 5 years or older | 76937

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Ultrasound guidance for vascular access (if separately documented)

Scenario CVAD-2: Implanted Port Insertion, Adult

OPERATIVE NOTE EXCERPT: Patient: Male, 52 years | Indication: Chemotherapy, newly diagnosed colon cancer Procedure: Right subclavian vein accessed percutaneously. A tunneled catheter was advanced to the SVC-RA junction confirmed by fluoroscopy. A subcutaneous pocket was created in the right anterior chest wall. The catheter was connected to the port reservoir, which was secured in the pocket. Incision closed in layers. Port accessed and confirmed patent.

Step 1: Tunneled catheter with subcutaneous port (implanted).

Step 2: Patient age = 52 years (≥5 years) → code 36561.

Final Code(s): 36561

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Insertion of tunneled centrally inserted central venous access device, with subcutaneous port; age 5 years or older

Scenario CVAD-3: Port Removal, Adult

OPERATIVE NOTE EXCERPT: Patient: Female, 48 years | Indication: Port removal, chemotherapy completed Procedure: Skin incision made over prior port pocket site. Port reservoir and tunneled catheter were

dissected free from surrounding tissue. The catheter was carefully withdrawn from the subcutaneous tunnel and removed entirely intact. Pocket irrigated and closed in layers. Specimen sent to pathology (port removed due to infection concern).

Step 1: Removal of tunneled catheter with subcutaneous port (not replacement).

Step 2: Code 36590 = removal of tunneled central venous access device, with subcutaneous port or pump, central or peripheral insertion.

Final Code(s): 36590

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Removal of tunneled central venous access device, with subcutaneous port or pump, central or peripheral insertion

Common Mistake:

Using 36589 (catheter only, no port) when the device had a port. The specific removal code depends on whether the device had a port/pump.

G. Varicose Vein Treatment (37700–37785)

Varicose veins are dilated, tortuous superficial veins typically of the lower extremity, resulting from incompetent venous valves. Multiple treatment modalities exist, each with distinct CPT codes.

Ligation and Stripping (37700–37735)

Open surgical technique involving ligation (tying off) the saphenofemoral junction and physically stripping the vein from the leg through small incisions.

- `37700` — Ligation and division of long saphenous vein at saphenofemoral junction, or distal interruptions
- `37718` — Ligation, division, and stripping, short saphenous vein
- `37722` — Ligation, division, and stripping, long (greater) saphenous veins from saphenofemoral junction to knee or below
- `37735` — Ligation and division and complete stripping of long or short saphenous veins with radical excision of ulcer and skin graft and/or interruption of communicating veins of lower leg, with excision of deep fascia

Endovenous Ablation Therapy

Minimally invasive catheter-based techniques that destroy varicose veins from within using heat (laser or radiofrequency).

- `36478` — Endovenous ablation therapy of incompetent vein, extremity; laser, first vein treated
- `36479` — + Endovenous ablation therapy; laser, second and subsequent veins treated (add-on)
- `36473` — Endovenous ablation therapy of incompetent vein, extremity; mechanochemical, first vein treated
- `36474` — + Mechanochemical ablation, second and subsequent veins (add-on)

Sclerotherapy (36465–36471)

Chemical injection (sclerosant) into varicose or spider veins to cause fibrosis and vessel closure.

- `36465` — Injection of non-compounded foam sclerosant with ultrasound compression maneuvers to guide needle and/or catheter tip placement(s), and to assess or confirm sclerosant contact with the intima and closure of the vein; single incompetent extremity truncal vein
- `36466` — + Second and subsequent incompetent extremity truncal vein(s) (add-on)
- `36470` — Injection of sclerosant; single vein
- `36471` — Injection of sclerosant; multiple veins, same leg

Varicose Vein Coding Scenarios

Scenario VV-1: Endovenous Laser Ablation (EVLA)

OPERATIVE NOTE EXCERPT: Patient: Female, 43 years | Diagnosis: Left GSV incompetence, symptomatic varicose veins Procedure: Under duplex ultrasound guidance, the left greater saphenous vein was accessed percutaneously. A laser fiber (1470 nm diode laser) was advanced to the saphenofemoral junction. Laser energy applied from the SFJ to mid-thigh as the fiber was slowly withdrawn. Tumescent anesthesia utilized along the vein. Post-procedure ultrasound confirmed vein closure. No complications.

Step 1: Endovenous ablation, laser, left GSV.

Step 2: Only one vein treated = code 36478.

Step 3: Modifier -LT for left side.

Final Code(s): 36478-LT

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Endovenous ablation therapy; laser, first vein treated

Scenario VV-2: Greater Saphenous Vein Ligation and Stripping

OPERATIVE NOTE EXCERPT: Patient: Male, 55 years | Diagnosis: Severe right GSV varicosities with venous stasis Procedure: Right groin incision at saphenofemoral junction. GSV ligated and divided at SFJ. Stripper wire passed down to the knee. Small transverse incision made at knee. Vein stripped from SFJ to knee. Stab avulsion phlebectomies performed at multiple sites. Wounds closed.

Step 1: Ligation, division, and stripping of long (greater) saphenous vein from SFJ to knee.

Step 2: Code 37722 = ligation, division, and stripping, long saphenous veins from SFJ to knee or below.

Step 3: Right side = modifier -RT.

Final Code(s): 37722-RT

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Ligation, division, and stripping, long (greater) saphenous veins from saphenofemoral junction to knee or below

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H. Arteriovenous Fistula and Grafts (36818–36861)

Arteriovenous (AV) access procedures create connections between arteries and veins for patients requiring long-term **hemodialysis**. They provide a high-flow access site that can withstand repeated needle puncture.

AV Access Types

- **Direct AV anastomosis (AV fistula)**: A surgical connection between the patient's own artery and vein; preferred access type (autogenous)
- **AV graft**: A synthetic conduit (PTFE) connecting an artery to a vein when native vessels are insufficient

Key AV Access Codes

- `36818` — Arteriovenous anastomosis, open; by upper arm cephalic vein transposition
- `36819` — Arteriovenous anastomosis, open; by upper arm basilic vein transposition
- `36820` — Arteriovenous anastomosis, open; by forearm vein transposition
- `36821` — Arteriovenous anastomosis, open; direct, any site (e.g., Cimino type)
- `36830` — Creation of arteriovenous fistula by nonautologous graft (nonautologous AV shunt)
- `36831` — Thrombectomy, open, arteriovenous fistula without revision, autogenous or nonautologous graft

- `36832` — Revision, open, arteriovenous fistula; without thrombectomy, autogenous or nonautologous graft
- `36833` — Revision, open, arteriovenous fistula; with thrombectomy, autogenous or nonautologous graft

💡 **Did You Know?**

The **Cimino-Brescia fistula** (code 36821) is the "gold standard" for hemodialysis access. It creates a direct arteriovenous connection most commonly at the wrist between the radial artery and the cephalic vein. It requires 6–12 weeks to "mature" (dilate and develop adequate flow) before it can be used for dialysis. AV grafts (36830) can be used sooner (2–3 weeks) but have higher infection and thrombosis rates.

AV Fistula Coding Scenarios

Scenario AV-1: Direct AV Anastomosis (Cimino Fistula)

> OPERATIVE NOTE EXCERPT: Patient: Female, 58 years | Diagnosis: ESRD, CKD stage 5, hemodialysis access required Procedure: Left wrist incision. The left radial artery and left cephalic vein were identified and mobilized. The vein was anastomosed end-to-side to the radial artery with continuous 6-0 Prolene suture. A thrill was palpated in the fistula confirming patency. Wound closed in layers.

Step 1: Direct AV anastomosis (autogenous), left wrist (radial artery to cephalic vein).

Step 2: Code 36821 = AV anastomosis, open; direct, any site.

Step 3: Modifier -LT for left side.

Final Code(s): 36821-LT

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Arteriovenous anastomosis, open; direct, any site (e.g., Cimino type)

Scenario AV-2: AV Graft Creation

OPERATIVE NOTE EXCERPT: Patient: Male, 66 years | Diagnosis: ESRD, inadequate native vessels for fistula Procedure: Right arm incision. The brachial artery and antecubital vein were exposed. Adequate native vein was not available. A 6mm loop PTFE graft was tunneled subcutaneously and anastomosed end-to-side to the brachial artery proximally and end-to-side to the basilic vein distally. Thrill confirmed. Wound closed.

Step 1: AV fistula created using nonautologous (PTFE) graft material.

Step 2: Code 36830 = creation of AV fistula by nonautologous graft.

Step 3: Modifier -RT for right side.

Final Code(s): 36830-RT

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Creation of arteriovenous fistula by nonautologous graft

Common Mistake:

Using 36821 when a synthetic graft (PTFE) was used. Direct autologous = 36821; synthetic/nonautologous = 36830.

Cardiovascular Modifiers

Proper modifier application is essential for accurate claim submission and reimbursement. The following modifiers are frequently used in cardiovascular surgery coding.

Modifier	Meaning	Cardiovascular Example
-50	Bilateral procedure performed in same operative session	Bilateral carotid endarterectomy (35301-50) — same session only
-LT	Left side	Left femoropopliteal bypass (35556-LT)
-RT	Right side	Right carotid endarterectomy (35301-RT)
-51	Multiple procedures (reduced fee for	CABG arterial + venous grafts in same session:

Modifier	Meaning	Cardiovascular Example
	secondary procedures)	33533, 33511-51 (payer-specific)
-59	Distinct procedural service (separate/distinct from other services)	CVAD removal + insertion at same session (36590-59, 36561)
-62	Two surgeons (co-surgery); each performing a distinct portion	TAVR performed by two-surgeon team (cardiologist + cardiac surgeon): 33361-62 for each
-80	Assistant surgeon	Open CABG with assistant surgeon providing technical support: 33533-80

⚠ **Stop! Think! — Modifier -50 vs. -LT/-RT**

Never use modifier **-50** AND **-LT/-RT** on the same line. Use **-50** when a procedure is performed bilaterally in the same session (one line item, reduced fee). Use separate line items with **-LT** and **-RT** when different procedures are performed on each side, or when payer policy requires separate line items for bilateral reporting. Always verify payer-specific bilateral billing guidelines before submission.

Real-World Coding Scenarios

Full Scenario 1: Combined Arterial + Venous CABG with Endoscopic Saphenous Vein Harvest

OPERATIVE REPORT Patient: Robert M., Male, Age 69 Preoperative Diagnosis: Three-vessel coronary artery disease Postoperative Diagnosis: Three-vessel coronary artery disease Procedure: Coronary artery bypass graft x3 (LIMA to LAD; saphenous vein graft to OM; saphenous vein graft to RCA), endoscopic saphenous vein harvest, left leg DESCRIPTION OF PROCEDURE: The patient was taken to the operating room, placed in supine position, and general anesthesia induced. Endoscopic saphenous vein harvest was performed from the left leg; approximately 40 cm of saphenous vein obtained through three small portal incisions using a vessel harvesting system. Vein was found to be of excellent quality with no varicosities or significant side branches. The sternum was divided with an oscillating saw. The left internal mammary artery was harvested as a long pedicled graft from the left chest wall. Cardiopulmonary bypass was established via aortic and right atrial cannulation. Cardioplegia was administered. The anastomoses were constructed as follows: (1) LIMA anastomosed end-to-side to the mid-LAD; (2) reversed saphenous vein graft anastomosed end-to-side to the first obtuse marginal branch of the circumflex artery; (3) reversed saphenous vein graft anastomosed end-to-side to the mid-RCA. Proximal aortocoronary anastomoses constructed with partial occlusion clamp technique. De-airing performed. Cardiopulmonary bypass discontinued without difficulty. Sternum closed with stainless steel wires. Subcutaneous tissue and skin closed in layers.

Step-by-Step Analysis:

Step 1 — Identify graft types and vessels:

- Arterial graft: LIMA → LAD = 1 arterial vessel

- Venous grafts: SVG → OM and SVG → RCA = 2 venous vessels

Step 2 — Select arterial CABG code: 1 arterial vessel → **33533**

Step 3 — Select venous CABG code: 2 venous vessels → **33511**

Step 4 — Vein harvest: Endoscopic (video-assisted) harvesting documented → separately reportable add-on code **+33508**

Step 5 — CPB: On-pump procedure; CPB is bundled into CABG codes, not separately reported.

Final Code(s): 33533 (CABG arterial, single) | 33511 (CABG venous, two) | +33508 (Endoscopic saphenous vein harvest, one leg)

Common Mistakes:

(1) Adding all three bypasses together and using one code family. (2) Omitting 33508 because the harvest seems "routine." (3) Reporting 33534 (two arterial) because there are three total bypasses — the LIMA is the only arterial graft.

Full Scenario 2: New Dual-Chamber Pacemaker Insertion

OPERATIVE REPORT Patient: Helen W., Female, Age 77 Preoperative Diagnosis: Symptomatic sick sinus syndrome with chronotropic

incompetence Postoperative Diagnosis: Same Procedure: Insertion of dual-chamber permanent pacemaker, new system DESCRIPTION OF PROCEDURE: The patient was brought to the EP laboratory. The left subclavian vein was accessed using the modified Seldinger technique. Through the introducer sheath, a bipolar active-fixation atrial lead was advanced under fluoroscopic guidance and positioned in the right atrial appendage. Satisfactory P-wave sensing and pacing thresholds obtained. A second bipolar active-fixation ventricular lead was placed and positioned in the right ventricular apex with excellent R-wave amplitude and pacing thresholds. A subcutaneous pocket was created in the left pectoral region. A dual-chamber permanent pacemaker pulse generator was connected to both leads, placed in the pocket, and secured. The pocket was copiously irrigated and closed in layers.

Step 1: New system: both generator AND leads are new (initial insertion).

Step 2: Two leads: atrial AND ventricular = dual chamber.

Step 3: Code 33208 = insertion of permanent pacemaker with transvenous electrodes, atrial AND ventricular (dual chamber). This single code covers the generator and both leads for initial dual-chamber insertion.

Step 4: Fluoroscopy guidance for lead placement is bundled.

Final Code(s): 33208

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Insertion of new or replacement of permanent pacemaker with

transvenous electrode(s); atrial and ventricular

Common Mistakes:

(1) Coding 33207 + 33216 (ventricular + separate atrial lead). Code 33208 is the correct single code for a dual-chamber system. (2) Separately coding each lead. For an initial dual-chamber system, 33208 covers everything.

Full Scenario 3: Right Carotid Endarterectomy with Patch Angioplasty

OPERATIVE REPORT Patient: George P., Male, Age 71 Preoperative Diagnosis: Symptomatic right internal carotid artery stenosis, 85% Postoperative Diagnosis: Same Procedure: Right carotid endarterectomy with patch angioplasty DESCRIPTION OF PROCEDURE: The patient was positioned supine with the neck extended and rotated to the left. A longitudinal incision was made along the anterior border of the right sternocleidomastoid muscle. The right common, internal, and external carotid arteries were dissected free and controlled with vessel loops. Heparin 7500 units administered intravenously. Selective carotid shunt was inserted. A longitudinal arteriotomy was made from the CCA

extending into the ICA beyond the plaque. Endarterectomy was performed under loupe magnification; the calcified plaque was carefully dissected from the arterial wall. Tacking sutures placed at the distal endpoint. A bovine pericardial patch was tailored and sutured to the arteriotomy with continuous 6-0 Prolene suture. The shunt was removed. Clamps released. Excellent pulsatile flow. Wound closed in layers. Estimated blood loss: 120 mL.

Step 1: Thromboendarterectomy of the right carotid artery, open approach, neck incision.

Step 2: Patch angioplasty (bovine pericardial) = included in 35301, not separately coded.

Step 3: Carotid shunt placement = included, not separately coded.

Step 4: Modifier -RT for right side.

Final Code(s): 35301-RT

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Thromboendarterectomy, including patch graft, if performed; carotid, vertebral, subclavian, by neck incision

Common Mistakes:

(1) Separately coding the bovine pericardial patch. (2) Separately coding the carotid shunt placement. Both are bundled into 35301. (3) Omitting the -RT modifier.

Full Scenario 4: PICC Line Insertion, Adult, Right Arm

OPERATIVE REPORT Patient: Lisa T., Female, Age 38 Indication: Six-week IV antibiotic course for left hip prosthetic joint infection Procedure: Peripherally inserted central venous catheter (PICC), right arm, without port DESCRIPTION OF PROCEDURE: Patient positioned supine. Using real-time ultrasound guidance (documented separately), the right basilic vein was identified in the mid-upper arm. Vein accessed with 21-gauge needle under direct ultrasound visualization. A guidewire was advanced. The access site was dilated and a 5 Fr double-lumen PICC catheter was threaded over the guidewire and advanced to the superior vena cava. Catheter position confirmed by chest fluoroscopy demonstrating tip at the SVC-RA junction. Catheter secured with StatLock device. Dressing applied.

Step 1: Device = PICC, no port or pump.

Step 2: Patient age = 38 years (≥5 years) → code 36569.

Step 3: Ultrasound guidance for vascular access = separately reportable if separately documented → code 76937.

Step 4: Fluoroscopic confirmation of tip position = included in 36569.

Final Code(s): 36569 (PICC insertion, age

≥

5, without port) | 76937 (Ultrasound guidance, vascular access, if separately documented)

Common Mistakes:

(1) Using 36568 (age

<

5). (2) Separately coding fluoroscopic tip confirmation — this is bundled. (3) Reporting 36571 (PICC with port) when no port was placed.

Full Scenario 5: EVAR for Infrarenal AAA, Aorto-Biiliac

OPERATIVE REPORT Patient: Thomas R., Male, Age 78 Preoperative Diagnosis: Infrarenal abdominal aortic aneurysm, 6.0 cm Procedure: Endovascular aneurysm repair (EVAR), infrarenal; aorto-biiliac stent graft system DESCRIPTION OF PROCEDURE: Bilateral percutaneous femoral access obtained via modified Seldinger technique. Arteriograms

performed. The main body of an Excluder bifurcated stent graft (W.L. Gore) was deployed in the infrarenal aorta below the renal arteries. The right iliac limb was deployed extending to the right common iliac artery. The left iliac limb was deployed extending to the left common iliac artery. Completion angiogram revealed excellent positioning with no type I or type II endoleak. Bilateral femoral access sites closed with Perclose ProGlide suture-based closure devices. No open cut-down required.

Step 1: EVAR, infrarenal AAA.

Step 2: Aorto-biiliac prosthesis (bilateral iliac limbs, no additional extension).

Step 3: Code 34703 = endovascular repair of infrarenal aorta and/or iliac artery(ies) involving an aorto-biiliac prosthesis.

Step 4: No proximal or distal extension prostheses placed → do NOT add 34709.

Step 5: Percutaneous access = no open vessel code needed.

Step 6: Completion angiogram is bundled into the EVAR code.

Final Code(s): 34703

—

Endovascular repair of infrarenal aorta and/or iliac artery(ies) involving an aorto-biiliac prosthesis

Common Mistakes:

(1) Using 34701 (aorto-aortic tube) — this case used a bifurcated aorto-biiliac device. (2) Separately coding the completion angiogram. (3) Adding extension codes when no extensions were placed.

Full Scenario 6: Femoropopliteal Bypass with Synthetic Graft

OPERATIVE REPORT Patient: Dorothy K., Female, Age 73 Preoperative Diagnosis: Left SFA occlusion, rest pain, critical limb ischemia Procedure: Left femoropopliteal bypass graft, below-knee popliteal, 6mm PTFE DESCRIPTION OF PROCEDURE: Left groin exposure of the common femoral artery and profunda femoris. Below-knee popliteal artery exposed via medial approach. Native saphenous vein was assessed; inadequate due to prior varicose vein treatment. A 6mm thin-walled ringed PTFE graft was tunneled in the subcutaneous anatomic position from the groin to the below-knee popliteal space. Proximal anastomosis constructed end-to-side to the left common femoral artery with 5-0 Prolene. Distal anastomosis constructed end-to-side to the below-knee popliteal artery with 6-0 Prolene. Completion duplex confirmed excellent graft flow and patent anastomoses bilaterally. Wounds closed.

Step 1: Bypass graft, femoral to below-knee popliteal.

Step 2: Material: PTFE (synthetic) = "other than vein" code family.

Step 3: Code 35651 = bypass graft, with other than vein; femoral-popliteal.

Step 4: Left side = modifier -LT.

Step 5: Completion duplex = bundled.

Final Code(s): 35651-LT

—

Bypass graft, with other than vein; femoral-popliteal

Common Mistakes:

(1) Using 35556 (with vein) — a synthetic graft was used here. (2) Omitting modifier -LT. (3) Separately billing for the completion duplex study.

Chapter Review: 20 Multiple Choice Questions

Select the best answer for each question. Rationale is provided in the Answer Key.

1. A patient undergoes initial insertion of a single-chamber permanent pacemaker with a transvenous ventricular lead. Which CPT code is correct?

3. 33206

4. 33207

5. 33208

6. 33227

---

2. A patient's existing dual-chamber pacemaker pulse generator is at end-of-life. The leads are tested and found functional. Only the generator is replaced. Which CPT code(s) apply?

7. 33208

8. 33228

9. 33228 and 33217

10. 33207 and 33216

---

3. A CABG procedure uses a LIMA to LAD graft (arterial) and two saphenous vein grafts (to RCA and OM), with endoscopic saphenous vein harvesting. Which code set is correct?

11. 33511, 33533, 33508

12. 33533, 33511, +33508

13. 33512, +33508

14. 33534, 33511

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4. A patient undergoes TAVR via a percutaneous transfemoral approach for severe aortic stenosis. Cardiopulmonary bypass is NOT used. Which code is correct?

15. 33405

16. 33361

17. 33366

18. 33361 and 33367

5. A patient undergoes open replacement of the mitral valve using a bioprosthetic (tissue) valve with cardiopulmonary bypass. Which CPT code applies?

19. 33426
20. 33427
21. 33430
22. 33420

6. A right carotid endarterectomy is performed with a bovine pericardial patch closure. Which code(s) should be reported?

23. 35301-RT and a patch graft code
24. 35301-RT only
25. 35311-RT
26. 35301-LT

7. A patient with ESRD requires hemodialysis access. The surgeon creates a wrist AV fistula directly connecting the radial artery to the cephalic vein (no graft material). Which code applies?

27. 36830
28. 36818
29. 36821
30. 36832

8. A PICC line without a port is inserted in a 6-year-old patient. Which CPT code is correct for the insertion?

31. 36568

32. 36569

33. 36570

34. 36556

9. An implanted venous port (with tunneled catheter) is removed from an adult patient who completed chemotherapy. Which CPT code is correct?

35. 36589

36. 36590

37. 36595

38. 36561

10. A patient with an infrarenal AAA (5.8 cm) undergoes EVAR with deployment of a bifurcated aorto-biiliac main body stent graft and ONE additional proximal aortic extension cuff to achieve adequate seal. Which code set is correct?

39. 34703

40. 34704

41. 34703 and +34709

42. 34701

11. A left femoropopliteal bypass is performed using the patient's own reversed saphenous vein. Which code applies?

43. 35651-LT

44. 35556-LT

45. 35556-RT

46. 35621-LT

12. What does modifier -62 indicate in cardiovascular coding?

47. A second unrelated procedure was performed at the same session
48. Two surgeons each performed distinct portions of a single procedure (co-surgery)
49. The procedure was performed bilaterally
50. The procedure was performed by an assistant surgeon

13. An ICD (implantable cardioverter-defibrillator) is inserted with a single transvenous defibrillation lead. Which is the correct code?

51. 33207
52. 33208
53. 33249
54. 33270

14. Open thrombectomy is performed on a right brachial artery (arteriotomy approach). Which code applies?

55. 34201-RT
56. 34101-RT
57. 34111-RT
58. 34151-RT

15. A patient undergoes bilateral right and left carotid endarterectomies — right side performed today and left side performed 3 weeks later. How should these be reported?

59. 35301-50 (one claim)
60. 35301-RT on session 1; 35301-LT on session 2

61. 35301-51 for the second session
62. 35301-59 for both sessions

16. Pericardiocentesis is performed for a pericardial effusion. This is the patient's second pericardiocentesis procedure. Which code applies?

63. 33010
64. 33011
65. 33030
66. 33031

17. A patient undergoes EVAR. The surgeon makes an open incision to access the right femoral artery (surgical cutdown) rather than percutaneous access. What additional code should be reported?

67. No additional code; access is bundled
68. 34812 — Open femoral artery exposure for delivery of endovascular prosthesis
69. 35201 — Repair, blood vessel
70. 37618 — Ligation, major artery

18. What is the CPT code for endoscopic harvesting of the saphenous vein for CABG?

71. 35600
72. 33508
73. 37700
74. 35556

19. A patient undergoes ligation and stripping of the left greater saphenous vein from the saphenofemoral junction to the knee. Which code applies?

75. 37700-LT

76. 36478-LT

77. 37722-LT

78. 37735-LT

20. A TAVR is performed via a transapical exposure (left thoracotomy). Cardiopulmonary bypass support is also used. Which code(s) are correct?

79. 33366 only

80. 33361 and +33367

81. 33366 and +33367

82. 33405 and +33367

Answer Key with Rationale

1. B — 33207

Single-chamber pacemaker with a transvenous

ventricular

lead = 33207. If the lead were atrial only, the answer would be 33206. 33208 is for dual-chamber (both atrial AND ventricular leads). 33227 is generator replacement only.

2. B — 33228

Only the pulse generator is replaced; existing leads are retained and functional. Dual lead system = 33228. Do NOT separately report leads when they are not addressed. 33208 would apply only if both generator and new leads were inserted simultaneously.

3. B — 33533, 33511, +33508

One arterial graft (LIMA

→

LAD) = 33533. Two venous grafts (RCA, OM) = 33511. Endoscopic saphenous vein harvest = +33508 (add-on code). Option A lists 33511 before 33533 which is a sequencing error; C incorrectly counts all vessels as venous; D misidentifies the arterial graft count.

4. B — 33361

TAVR, percutaneous femoral artery approach = 33361. Since cardiopulmonary bypass was NOT used, do not add 33367. 33366 is transapical (not transfemoral). 33405 is open aortic valve replacement, not TAVR.

5. C — 33430

Replacement of the mitral valve (not repair/valvuloplasty) with cardiopulmonary bypass = 33430. 33426 is valvuloplasty (repair) with prosthetic ring. 33427 is radical

reconstruction. 33420 is valvotomy, not replacement.

6. B — 35301-RT only

CPT 35301 explicitly states "including patch graft, if performed." The patch is bundled into the primary code. No separate patch graft code is reported. Modifier -RT is required for the right side. -LT would be incorrect laterality.

7. C — 36821

Direct autogenous arteriovenous anastomosis (native vessels only, no graft) = 36821 (Cimino type). 36830 is for nonautologous graft material (synthetic). 36818 is upper arm cephalic vein transposition. 36832 is revision.

8. B — 36569

Age 6 years =

≥

5 years threshold

→

code 36569 (PICC without port, age

≥

5). Code 36568 is for patients younger than 5 years. 36570 includes a port. 36556 is a non-tunneled central catheter, not a PICC.

9. B — 36590

Removal of a tunneled catheter WITH a subcutaneous port = 36590. Code 36589 is for removal of a tunneled catheter WITHOUT a port. 36595 is mechanical removal of obstructed catheter. 36561 is insertion, not removal.

10. B — 34704

EVAR with aorto-biiliac prosthesis PLUS ONE proximal extension = 34704. Code 34703 does not include the extension. Code 34709 is an add-on for ADDITIONAL extensions beyond what is included in 34704/34705/34706. 34701 is an aorto-aortic tube graft (not bifurcated).

11. B — 35556-LT

Bypass graft WITH (autologous) vein, femoral-popliteal, left side = 35556-LT. Code 35651 is for synthetic/other-than-vein grafts. 35621 is aorto-femoral. Modifier should be -LT (left), not -RT.

12. B — Two surgeons, co-surgery

Modifier -62 = two surgeons each performing a distinct, integral portion of a single procedure (co-surgery), each bills the same CPT code with -62. Option A describes -59. Option C describes -50. Option D describes -80.

13. C — 33249

ICD (implantable cardioverter-defibrillator) insertion with transvenous lead(s), single or dual chamber = 33249. Codes 33207/33208 are for standard pacemakers, NOT ICDs. Code 33270 is for a subcutaneous ICD system (no transvenous lead).

14. B — 34101-RT

Embolectomy or thrombectomy of the brachial artery (with arteriotomy) = 34101. Modifier -RT for right side. Code 34201 is for femoral/popliteal vessels. Code 34111 is for radial or ulnar vessels. Code 34151 is for aortic/iliac vessels.

15. B — 35301-RT on session 1; 35301-LT on session 2

Staged bilateral procedures on separate dates are reported separately with laterality modifiers on each date of service. Modifier -50 is reserved for bilateral procedures performed in the SAME operative session. Modifier -51 and -59 are not appropriate here.

16. B — 33011

Pericardiocentesis, subsequent (not initial) = 33011. Code 33010 is for the initial pericardiocentesis. Codes 33030/33031 are pericardiectomy (surgical removal of pericardium), not needle aspiration.

17. B — 34812

When EVAR requires open femoral artery exposure (surgical cutdown) for device delivery, code 34812 (Open femoral artery exposure for delivery of endovascular prosthesis, unilateral) is separately reportable in addition to the EVAR code. Percutaneous access is bundled; open cutdown is not.

18. B — +33508

Endoscopic saphenous vein harvest for CABG = add-on code +33508, reported in addition to the primary CABG code. Code 35600 is for radial artery harvest from the upper extremity. 37700 is ligation/stripping for varicose veins. 35556 is the bypass graft code itself.

19. C — 37722-LT

Ligation, division, and stripping of the long (greater) saphenous vein from the SFJ to the knee = 37722. Code 37700 is ligation and division only (no stripping). 36478 is endovenous laser ablation. 37735 includes radical excision and skin grafting (more extensive). Modifier -LT for left side.

20. C — 33366 and +33367

TAVR via transapical exposure (left thoracotomy) = 33366. Cardiopulmonary bypass was used = add-on code +33367 added to the primary TAVR code. Code 33361 is transfemoral approach (not transapical). Code 33405 is open surgical aortic valve replacement, not TAVR.

Chapter 14 Summary

Key Concept Bullet Points

- The Cardiovascular System Surgery section spans CPT codes **33010–37799** and covers the heart, pericardium, all major arteries, and veins.
- **Pericardiocentesis** (33010–33011) is needle drainage of pericardial fluid; **pericardiectomy** (33030–33031) is surgical removal of the pericardium.
- Pacemaker coding requires separate codes for the **pulse generator** and **leads** when both components are addressed in the same session.
- **Single-chamber pacemakers** have one lead (atrial OR ventricular); **dual-chamber** have two leads (atrial AND ventricular).
- Generator replacement only (leads retained): use **33227–33229**. Full new system with both generator and leads: use **33206–33208**.
- **ICD** codes (33249, 33270) are entirely separate from standard pacemaker codes and must not be interchanged.
- **CABG** is coded by graft type (arterial: 33533–33536; venous: 33510–33516) and number of vessels bypassed. Arterial and venous codes may be combined.
- Open saphenous vein harvest is **bundled** into CABG codes. **Endoscopic** saphenous vein harvest = **+33508** (separately reportable add-on).
- Radial artery harvest for CABG = **35600** (separately reportable).
- **TAVR** codes (33361–33369) are selected by approach route (transfemoral, transapical, etc.). Cardiopulmonary bypass support = add-on **+33367**. Imaging guidance is bundled.

- **Cardiac valve replacement** codes depend on which valve (aortic, mitral, tricuspid) and the prosthesis type (mechanical, tissue, homograft, stentless).
- CEA code **35301** includes patch graft and carotid shunt when performed; do not code separately.
- **EVAR** for AAA: select code by prosthesis configuration (aorto-aortic, aorto-uniiliac, aorto-biiliac) and extensions. Open femoral cutdown = **34812**, separately coded.
- Bypass grafts are coded by **origin → destination** and graft material (**vein** vs. **other-than-vein/synthetic**).
- **CVADs**: insertion, repair, and removal are each separately coded; patient age matters (cutoff = age 5); port vs. no-port distinction is critical.
- Endovenous ablation therapy: **36478** (laser, first vein); add-on **+36479** for each additional vein treated.
- Direct AV anastomosis = **36821**; synthetic graft AV fistula = **36830**.
- Modifier **-50** = bilateral same session; **-LT/-RT** = unilateral laterality; **-59** = distinct service; **-62** = co-surgery; **-80** = assistant surgeon.

Key Terms Glossary

Anastomosis

A surgical connection between two tubular structures (e.g., vessels, bowel segments). In vascular surgery, this refers to the suture connection between a graft and a native vessel.

Aneurysm

An abnormal, localized dilation of a blood vessel wall. An abdominal aortic aneurysm (AAA) occurs in the abdominal aorta and may rupture if untreated.

Arteriovenous Fistula (AVF)

A surgically created connection between an artery and a vein, used primarily for hemodialysis access. Direct autogenous anastomosis is coded as 36821.

Bypass Graft

A surgical procedure creating a new route for blood to flow around a blockage, using either autologous tissue (vein, artery) or synthetic material (PTFE, Dacron).

Cardiopulmonary Bypass (CPB)

A technique using a heart-lung machine to temporarily take over the function of the heart and lungs during open heart surgery. The machine oxygenates blood and maintains circulation while the heart is stopped.

Coronary Artery Bypass Graft (CABG)

Surgical creation of new conduits to bypass blocked coronary arteries, restoring blood flow to the myocardium. Coded by graft type and number of vessels bypassed.

Dual-Chamber Pacemaker

A permanent pacemaker with two transvenous leads: one in the right atrium and one in the right ventricle. Allows the device to sense and pace both chambers in sequence.

Embolectomy

Surgical removal of an embolus (typically a blood clot that has traveled from another location) from a blood vessel, typically using a Fogarty balloon catheter.

Endarterectomy

Surgical removal of the thickened, diseased inner lining (intima with atheromatous plaque) of an artery. Carotid endarterectomy (CEA) is the most common type.

Endovascular

Performed inside a blood vessel via catheter access, typically through a remote percutaneous puncture site. Minimally invasive alternative to open surgical repair.

EVAR (Endovascular Aneurysm Repair)

Catheter-based placement of a stent-graft device inside the aorta to exclude an aneurysm from blood flow without open surgery. Coded by prosthesis configuration (34701–34834).

ICD (Implantable Cardioverter-Defibrillator)

A device that monitors heart rhythm and delivers electric shocks to terminate life-threatening ventricular arrhythmias. Coded separately from pacemakers (33249, 33270).

Pericardiocentesis

Needle aspiration of fluid from the pericardial sac, performed for pericardial effusion or cardiac tamponade. Initial procedure = 33010; subsequent = 33011.

PICC (Peripherally Inserted Central Catheter)

A central venous catheter inserted via a peripheral arm vein (usually basilic or cephalic) and advanced to the superior vena cava. Patient age determines code selection (cutoff age 5).

Pulse Generator

The battery-containing component of a pacemaker or ICD implanted subcutaneously. Coded separately from leads when both components are addressed in the same session.

Saphenous Vein

A long superficial vein of the leg, the most commonly used conduit for CABG venous grafts. Endoscopic harvesting is coded separately (+33508); open harvesting is bundled.

TAVR (Transcatheter Aortic Valve Replacement)

Minimally invasive replacement of the aortic valve via catheter delivery of a prosthetic valve. CPT codes 33361–33369 are selected by access approach (transfemoral, transapical, etc.).

Thrombectomy

Surgical removal of a thrombus (a clot that formed in situ within a vessel) to restore blood flow. Distinguished from embolectomy by the origin of the obstructing clot.

Tunneled Catheter

A central venous catheter routed through a subcutaneous tissue tunnel before entering the central vein, providing a more secure, longer-term access device. May be placed with or without a subcutaneous port.

★ Chapter 14 Complete — Study Tips for Exam Day

- **Always verify:** Graft type (arterial vs. venous), approach (open vs. endovascular), and number of vessels.
- **Never forget:** Code generator and leads separately when both are addressed in a pacemaker procedure.
- **Watch for add-on codes:** +33508, +33367, +33509, +34709 can only be reported with a primary code.
- **Age matters:** CVAD code selection depends on whether the patient is younger than 5 or 5 years and older.
- **Laterality is key:** Most vascular procedures require -LT, -RT, or -50 modifiers.
- **Read the entire operative note:** Never code from the preoperative diagnosis or procedure title alone.

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MEDICAL CODING MASTERY | STUDENT EDITION

CHAPTER 15

Surgery: Digestive System

CPT codes: 40490-49999

Corrina Lynch | ACL Consulting Firm | CPC Preparation

▶️ Chapter Objectives

After completing this chapter, the student will be able to:

1. Identify and describe the anatomical structures of the digestive system and correlate them to CPT code ranges.
2. Navigate the Surgery: Digestive System subsection of the CPT manual (codes 40490–49999) to locate appropriate procedure codes.
3. Apply the rule that **surgical endoscopy always includes diagnostic endoscopy** when coding GI procedures.
4. Distinguish between diagnostic and surgical colonoscopies, EGDs, and ERCPs, and apply add-on codes correctly.
5. Code bariatric surgery procedures including Roux-en-Y gastric bypass, sleeve gastrectomy, and gastric banding using the correct approach (open vs. laparoscopic).
6. Select the correct hernia repair code based on hernia type, patient age, clinical status (reducible vs. incarcerated/strangulated), and surgical approach.
7. Apply appropriate modifiers (-50, -51, -52, -53, -59) to digestive system procedure codes in real-world clinical scenarios.
8. Interpret operative reports for biliary tract procedures including laparoscopic cholecystectomy with cholangiography and ERCP with therapeutic interventions.
9. Identify and avoid common NCCI bundling errors encountered when coding GI endoscopic procedures.
10. Demonstrate mastery of chapter content by successfully completing multiple-choice review questions at the CPC examination level.

1. Introduction to the Digestive System

Anatomy Overview

The **digestive system** (also called the **gastrointestinal (GI) system**) is a complex network of organs responsible for the ingestion, digestion, absorption of nutrients, and elimination of waste. For the medical coder, a thorough understanding of digestive anatomy is essential because CPT codes within this section are organized anatomically — from the lips and mouth at the top, progressing downward to the anus and surrounding structures.

The major structures of the digestive system include:

- **Lips and Mouth:** The entry point of the digestive tract; includes teeth, tongue, gums, and salivary glands (parotid, submandibular, sublingual).
- **Pharynx:** The throat region, shared with the respiratory system; connects the mouth to the esophagus. Includes the palatine tonsils and adenoids (pharyngeal tonsils).
- **Esophagus:** A muscular tube approximately 25 cm in length connecting the pharynx to the stomach; passes through the diaphragm at the **esophageal hiatus**.
- **Stomach:** A J-shaped muscular organ in the upper left abdomen; secretes gastric acid and enzymes to begin protein digestion. Regions include the cardia, fundus, body, and pylorus.
- **Small Intestine:** Approximately 20 feet long; divided into three segments:
    - **Duodenum:** First and shortest segment (~12 inches); receives bile and pancreatic enzymes.
    - **Jejunum:** Middle segment; primary site of nutrient absorption.
    - **Ileum:** Terminal segment; absorbs vitamin B12 and bile salts; connects to the large intestine at the **ileocecal valve**.

- **Large Intestine (Colon):** Approximately 5 feet long; absorbs water and electrolytes; segments include the cecum, ascending colon, transverse colon, descending colon, sigmoid colon, rectum, and anal canal.
- **Appendix:** A small finger-like projection from the cecum; no known digestive function.
- **Rectum:** The final straight section of the large intestine, approximately 12 cm long; stores feces prior to elimination.
- **Anus:** The terminal opening of the GI tract; controlled by internal and external anal sphincters.
- **Liver:** The largest internal organ; produces bile, metabolizes nutrients, detoxifies blood.
- **Gallbladder:** A small pear-shaped sac beneath the liver; stores and concentrates bile.
- **Pancreas:** Both an exocrine organ (secretes digestive enzymes) and endocrine organ (secretes insulin and glucagon).

Did You Know?

The small intestine, if fully stretched out, measures approximately 20 feet in length in a living adult — yet it fits neatly within the abdominal cavity through a series of folds and loops. Its inner lining contains millions of **villi** and **microvilli** that dramatically increase the surface area available for nutrient absorption — to approximately 200 square meters, roughly the size of a tennis court!

CPT Digestive System Code Range: 40490–49999

Within the CPT Surgery section, the Digestive System subsection spans codes **40490–49999**. This is one of the largest and most complex subsections of the CPT manual. Codes are organized anatomically from superior (mouth) to inferior (anus),

with accessory organs (liver, biliary tract, pancreas) and the abdomen/peritoneum following.

Anatomical Area	CPT Code Range
Lips	40490–40799
Vestibule of Mouth	40800–40899
Tongue and Floor of Mouth	41000–41599
Dentoalveolar Structures	41800–41899
Palate and Uvula	42000–42299
Salivary Gland and Ducts	42300–42699
Pharynx, Adenoids, and Tonsils	42700–42999
Esophagus	43020–43499
Stomach	43500–43999
Intestines (except Rectum)	44005–44799
Meckel's Diverticulum and Mesentery	44800–44899
Appendix	44900–44979
Rectum	45000–45999
Anus	46020–46999
Liver	47000–47399
Biliary Tract	47400–47999
Pancreas	48000–48999
Abdomen, Peritoneum, and Omentum	49000–49999

Key Documentation Elements from Operative Reports

Before assigning any CPT code from the Digestive System section, the coder must carefully review the operative report for the following critical elements:

1. **Surgical approach:** Open, laparoscopic, endoscopic, percutaneous, or transoral.
2. **Extent of procedure:** Partial vs. total; diagnostic vs. surgical/therapeutic.
3. **Anatomical site:** Exact organ or region operated upon.

4. **Patient age:** Particularly important for tonsillectomies, hernia repairs, and other age-stratified codes.
5. **Clinical status:** Reducible vs. incarcerated vs. strangulated (hernias); initial vs. recurrent (hernias).
6. **Use of mesh:** Noted separately in hernia documentation, though generally included in the code.
7. **Findings and additional procedures:** Were additional therapeutic interventions performed during the same session?
8. **Specimen sent to pathology:** Biopsy, excised lesion, polyp type.

> 🔎 **Coder's Corner**
>
> **Index-First Approach:** Always begin coding by looking up the procedure in the CPT Index, not by flipping through the code section. Search by the procedure name (e.g., "Cholecystectomy, Laparoscopic"), then verify your selection in the Tabular List. Reading the full code descriptor, including parenthetical notes, often reveals whether the code you've selected is correct or whether a more specific code applies.

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2. Lips, Mouth, and Tongue (40490–41599)

Excision of Lip Lesions (40490–40530)

Codes for lip lesion excision are found at the opening of the Digestive System subsection. Code selection depends on whether the lesion involves only the lip vermilion or extends to surrounding tissue, and on the size of the lesion.

- **40490** — Biopsy of lip
- **40500** — Vermilionectomy (lip shave), with mucosal advancement
- **40510–40520** — Excision of lip with or without reconstruction

- **40525–40530** — Excision of lip, full thickness, with local flap or primary closure

Repair of Cleft Lip (40700–40761)

A **cleft lip** is a congenital defect resulting from failure of the lip tissue to fuse during fetal development. These codes require knowledge of:

- **Unilateral vs. bilateral:** Cleft on one side vs. both sides of the lip
- **Primary vs. secondary repair:** Initial repair vs. revision of a prior repair
- **40700** — Plastic repair of cleft lip/nasal deformity; primary, unilateral, partial
- **40701** — Primary, bilateral, 1-stage procedure
- **40720** — Secondary, by recreation of defect and closure

Frenotomy / Frenectomy (41010–41115)

The **lingual frenum** is a small fold of mucous membrane connecting the underside of the tongue to the floor of the mouth. When abnormally short or thick (**ankyloglossia**, commonly called "tongue-tie"), it restricts tongue movement.

- **41010** — **Frenotomy**: Incision of frenum (lingual)
- **41115** — **Frenulectomy**: Excision of frenum, also called frenectomy, lingual

Tongue Procedures (41000–41599)

- **41000** — Intraoral incision and drainage, tongue or floor of mouth (sublingual)
- **41100** — Biopsy of tongue, anterior two-thirds
- **41105** — Biopsy of tongue, posterior one-third
- **41108** — Biopsy of floor of mouth
- **41110** — Excision of lesion of tongue without closure
- **41112** — Excision of lesion of tongue with closure, anterior two-thirds
- **41120** — Glossectomy; less than one-half tongue
- **41130** — Hemiglossectomy (removal of one-half of the tongue)
- **41140** — Complete or total glossectomy, without laryngectomy

Salivary Gland Procedures (42000–42699)

The major salivary glands include the **parotid**, **submandibular**, and **sublingual** glands. Common procedures include drainage of abscesses, excision of stones (**sialolithiasis**), and total or partial gland excision (**parotidectomy**).

- **42000** — Drainage of abscess; parotid, unilateral
- **42330** — Sialolithotomy; submandibular (submaxillary) gland or parotid, uncomplicated, intraoral
- **42410** — Excision of parotid tumor or parotid gland; lateral lobe, without nerve dissection
- **42420** — Total parotidectomy, with nerve dissection and preservation of facial nerve
- **42450** — Excision of sublingual gland
- **42500** — Plastic repair of salivary duct, sialodochoplasty; primary or simple

CPT Code	Procedure Description	Key Differentiator
40490	Biopsy of lip	Biopsy only; no excision
41010	Incision of lingual frenum (frenotomy)	Incision only (cutting)
41115	Excision of lingual frenum (frenectomy)	Excision (removal)
41100	Biopsy of tongue, anterior 2/3	Location: anterior
41105	Biopsy of tongue, posterior 1/3	Location: posterior
41120	Glossectomy, less than half tongue	Partial; less than 50%
41130	Hemiglossectomy	Exactly one-half tongue
42420	Total parotidectomy, with nerve dissection	Includes facial nerve preservation

📋 Coding Scenario 2.1 — Lingual Frenum Excision

PROCEDURE NOTE: The patient, a 6-week-old male, was brought to the operating room for significant ankyloglossia interfering with breastfeeding. Under general anesthesia, the lingual frenum was grasped with hemostats and excised in its entirety using electrocautery. Hemostasis was achieved. Patient tolerated the procedure well.

Step-by-Step Analysis:

1. Procedure performed: Excision (removal) of lingual frenum
2. This is a frenulectomy/frenectomy, not a simple frenotomy (incision only)
3. Index lookup: Frenectomy → Tongue → leads to 41115

Final Code: 41115

— Excision of frenum, lingual (frenulectomy)

📋 Coding Scenario 2.2 — Parotid Gland Tumor Excision

PROCEDURE NOTE: Patient presents with a 2.4 cm pleomorphic adenoma of the right parotid gland. Under general anesthesia, a modified Blair incision was made. The lateral lobe of the parotid gland was carefully dissected. The facial nerve was identified and meticulously preserved throughout the dissection. A total parotidectomy was performed with complete removal of both superficial and deep lobes. Specimen sent to pathology.

Step-by-Step Analysis:

1. Procedure: Total parotidectomy
2. Key detail: Facial nerve identified, dissected, and preserved
3. Differentiator: Code 42410 is lateral lobe only, without nerve dissection. Code 42420 is total parotidectomy WITH nerve dissection — matches this scenario.

Final Code: 42420

— Excision of parotid tumor or parotid gland; total, with dissection and preservation of facial nerve

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3. Pharynx, Adenoids, and Tonsils (42700–42999)

This subsection covers procedures involving the pharynx, including the commonly performed tonsillectomy and adenoidectomy. A critical coding distinction in this subsection is **patient age** — CPT distinguishes between procedures performed on patients age 12 and under versus patients over age 12 (older than 12 years).

Tonsillectomy and Adenoidectomy (42820–42836)

A **tonsillectomy** is the surgical removal of the palatine tonsils. An **adenoidectomy** is the removal of the pharyngeal tonsils (adenoids). These may be performed together or separately. Code selection requires knowing:

9. **Patient age:** Age 12 or under vs. over age 12
10. **Which structures are removed:** Tonsils only, adenoids only, or both
11. **Primary vs. secondary (revision):** Whether the adenoids have been previously removed

CPT Code	Procedure	Age
42820	Tonsillectomy and adenoidectomy	Age 12 or under
42821	Tonsillectomy and adenoidectomy	Over age 12
42825	Tonsillectomy, primary or secondary	Age 12 or under
42826	Tonsillectomy, primary or secondary	Over age 12
42830	Adenoidectomy, primary	Age 12 or under
42831	Adenoidectomy, primary	Over age 12
42835	Adenoidectomy, secondary	Age 12 or under
42836	Adenoidectomy, secondary	Over age 12

Uvulopalatopharyngoplasty (UPPP) (42145)

Uvulopalatopharyngoplasty (UPPP) is a surgical procedure used to treat obstructive sleep apnea by removing excess tissue from the throat (uvula, portions of soft palate, and pharyngeal mucosa), thereby widening the airway. Code **42145** — Palatopharyngoplasty (e.g., uvulopalatopharyngoplasty, uvulopharyngoplasty) — is the correct code. If a tonsillectomy is performed at the same session, it is reported separately (42825 or 42826).

⚠️ **Stop! Think!**

Age Documentation Is Critical for T&A Coding! The cutoff age is 12 years old — not 13. A patient who is exactly 12 years old uses the "12 and under" code. A patient who is 12 years and one day old (i.e., has turned 13) uses the "over age 12" code. Always verify the patient's date of birth against the procedure date when selecting tonsil/adenoid codes.

📋 Coding Scenario 3.1 — Tonsillectomy and Adenoidectomy, Pediatric

PATIENT: 8-year-old female PROCEDURE: Under general anesthesia, a Crowe-Davis mouth gag was placed. The right and left palatine tonsils were grasped with Allis forceps and dissected from the tonsillar fossae using electrocautery. Adenoid tissue was visualized using mirror and removed with adenoid curette. Hemostasis achieved with electrocautery. Estimated blood loss: minimal.

Final Code: 42820

— Tonsillectomy and adenoidectomy; age 12 or under

Rationale:

Patient is 8 years old (age 12 or under). Both tonsils AND adenoids removed. Code 42820 captures the combined procedure.

📋 Coding Scenario 3.2 — Adenoidectomy, Secondary

PATIENT: 9-year-old male with recurrent otitis media. History: tonsillectomy and adenoidectomy at age 4. Now presenting with adenoid regrowth confirmed on nasopharyngoscopy. PROCEDURE: Under general anesthesia, adenoid regrowth visualized and removed with adenoid curette and suction cautery. Tonsils not present. No tonsillar procedure performed.

Final Code: 42835

— Adenoidectomy, secondary; age 12 or under

Rationale:

Adenoids only removed (tonsils already absent). This is a SECONDARY adenoidectomy (prior removal documented). Patient age 9 = age 12 or under. Do NOT report a tonsillectomy code — no tonsils were present or removed.

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4. Esophagus (43020–43499)

The Diagnostic vs. Surgical Endoscopy Rule

★ Fundamental Endoscopy Rule

A surgical (therapeutic) endoscopy ALWAYS includes the diagnostic endoscopy. You may NEVER separately report a diagnostic endoscopy code when a surgical/therapeutic endoscopy is performed during the same operative session at the same anatomical site. This principle applies throughout the entire Digestive System endoscopy section — esophagoscopy, EGD, colonoscopy, and

ERCP.

Esophagoscopy (43180–43232)

An **esophagoscopy** is the direct visual examination of the esophagus using a rigid or flexible endoscope that does NOT pass beyond the gastroesophageal junction. This is distinct from an upper GI endoscopy (EGD), which does pass into the stomach and duodenum.

- **43180** — Esophagoscopy, rigid, transoral; diagnostic
- **43197** — Esophagoscopy, flexible, transnasal; diagnostic
- **43200** — Esophagoscopy, flexible, transoral; diagnostic
- **43202** — Esophagoscopy with biopsy, single or multiple
- **43215** — Esophagoscopy with removal of foreign body
- **43220** — Esophagoscopy with balloon dilation (less than 30 mm diameter)
- **43226** — Esophagoscopy with insertion of guide wire followed by dilation

Upper GI Endoscopy — EGD (43235–43259)

An **esophagogastroduodenoscopy (EGD)** is the visual examination of the esophagus, stomach, and upper duodenum using a flexible endoscope. It is one of the most commonly performed GI procedures. Codes in this range distinguish between:

- Diagnostic vs. therapeutic (surgical) procedures
- The specific therapeutic intervention performed (biopsy, dilation, polypectomy, hemostasis, banding)

CPT Code	EGD Description	Key Feature
43235	EGD, flexible, transoral; diagnostic, including collection of specimen(s) by brushing or washing	Diagnostic only; brushings/washings included

CPT Code	EGD Description	Key Feature
43236	EGD with directed submucosal injection(s), any substance	Submucosal injection
43237	EGD with endoscopic ultrasound examination, esophagus	EUS of esophagus
43238	EGD with transendoscopic ultrasound-guided intramural or transmural fine needle aspiration/biopsy	EUS-FNA
43239	EGD with biopsy, single or multiple	Forceps biopsy
43240	EGD with transmural drainage of pseudocyst	Pseudocyst drainage
43241	EGD with transendoscopic intraluminal tube or catheter placement	Tube/catheter placement
43243	EGD with injection sclerosis of esophageal/gastric varices	Variceal sclerotherapy
43244	EGD with band ligation of esophageal/gastric varices	Variceal band ligation
43245	EGD with dilation of gastric/pyloric/duodenal stenosis, any method	Dilation of outlet stenosis
43246	EGD with directed placement of percutaneous gastrostomy tube (PEG)	PEG tube placement
43247	EGD with removal of foreign body(s)	Foreign body removal
43248	EGD with insertion of guide wire followed by dilation (esophageal)	Esophageal dilation over wire
43249	EGD with balloon dilation of esophagus (less than 30 mm diameter)	Balloon dilation — esophagus

CPT Code	EGD Description	Key Feature
43250	EGD with removal of tumor(s), polyp(s), or other lesion(s) by hot biopsy forceps	Hot biopsy forceps
43251	EGD with removal of tumor(s), polyp(s), or other lesion(s) by snare technique	Snare polypectomy
43252	EGD with optical endomicroscopy	Optical endomicroscopy
43253	EGD with transendoscopic ultrasound-guided transmural injection of diagnostic or therapeutic substance	EUS-guided injection
43254	EGD with endoscopic mucosal resection (EMR)	EMR
43255	EGD with control of bleeding, any method	Hemostasis
43257	EGD with delivery of thermal energy to the muscle of lower esophageal sphincter and/or gastric cardia	Stretta procedure (GERD)
43259	EGD with endoscopic ultrasound examination, including the esophagus, stomach, and either the duodenum and/or jejunum	Full upper GI EUS

Nissen Fundoplication (43279–43284)

A **Nissen fundoplication** is a surgical procedure for the treatment of gastroesophageal reflux disease (GERD) in which the fundus (upper portion) of the stomach is wrapped around the lower esophagus to reinforce the lower esophageal sphincter. Code selection depends on the surgical approach:

- **43280** — Laparoscopic fundoplasty, partial or complete (e.g., Nissen, Toupet)
- **43281** — Laparoscopic repair of paraesophageal hernia, without fundoplasty

- **43282** — Laparoscopic repair of paraesophageal hernia, with fundoplasty, when performed
- **43300** — Open esophagoplasty (plastic repair or reconstruction)
- **43327** — Esophageal fundoplasty, open, partial or complete (Nissen, Hill, Belsey-type)

Transoral Incisionless Fundoplication (TIF) (43210)

The **transoral incisionless fundoplication (TIF)**procedure is a newer, endoscopic approach to GERD treatment performed without external incisions. The EsophyX device is passed transorally and used to create a fundoplication from inside the esophagus. Code **43210** — Esophagogastroduodenoscopy, flexible, transoral with esophagogastric fundoplasty, partial or complete — captures this procedure.

📋 Coding Scenario 4.1 — Diagnostic EGD with Biopsy

PREOPERATIVE DIAGNOSIS: Dysphagia; rule out Barrett's esophagus PROCEDURE: EGD, flexible, transoral FINDINGS: The esophagus was carefully examined. Multiple areas of salmon-colored mucosa extending 3 cm above the gastroesophageal junction were noted, consistent with Barrett's esophagus. Four-quadrant biopsies were obtained at 2 cm intervals. The stomach and duodenum appeared normal. No polyps identified. SPECIMENS: Esophageal biopsies x4 sent to pathology.

Final Code: 43239

— EGD with biopsy, single or multiple

Rationale:

EGD performed with therapeutic intent (biopsies taken). Since a biopsy was performed, this is a SURGICAL endoscopy. Do NOT report 43235 (diagnostic EGD) in addition — surgical endoscopy includes the diagnostic portion. Biopsies are captured in 43239 regardless of number (single or multiple).

📋 Coding Scenario 4.2 — EGD with Band Ligation of Varices

PREOPERATIVE DIAGNOSIS: Esophageal varices, active bleeding PROCEDURE: Emergency EGD performed. Upon advancement of the endoscope, large esophageal varices were noted in the distal esophagus with oozing hemorrhage. Band ligation was applied to 4 separate variceal columns using a multiband ligator device. Hemostasis achieved in all areas. Stomach and duodenum examined — no active bleeding in stomach.

Final Code: 43244

— EGD with band ligation of esophageal/gastric varices

Rationale:

Band ligation of varices is a specific therapeutic intervention with its own code. This code includes the diagnostic component. Do NOT also code 43255 (control of bleeding) — the ligation itself achieves hemostasis and is captured in 43244.

📋 Coding Scenario 4.3 — EGD with Dilation and PEG Placement

PREOPERATIVE DIAGNOSES: 1) Esophageal stricture 2) Dysphagia; malnutrition requiring enteral feeding PROCEDURE: EGD performed. A high-grade stricture at 25 cm was identified. Balloon dilation to 15 mm was performed. The scope was advanced to the stomach. Transillumination technique used for PEG placement. Safe-track technique employed. A 20 Fr PEG tube was placed successfully with good position confirmed.

Final Codes: 43248, 43246

43248

— EGD with insertion of guide wire followed by dilation over guide wire (esophageal stricture dilation)

43246

— EGD with directed placement of percutaneous gastrostomy tube (PEG)

Rationale:

Two separate, distinct therapeutic procedures performed during the same EGD session. Both are reportable. Apply modifier

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to the secondary code to indicate a distinct procedural service. Check NCCI edits for this pair.

5. Stomach (43500–43999)

Gastrotomy (43500–43510)

A **gastrotomy** is a surgical incision into the stomach for purposes such as foreign body removal or suture of a bleeding ulcer.

- **43500** — Gastrotomy; with exploration or foreign body removal
- **43501** — Gastrotomy; with suture repair of bleeding ulcer
- **43502** — Gastrotomy; with suture repair of pre-existing esophagogastric laceration (e.g., Mallory-Weiss)

Gastrectomy: Partial vs. Total (43620–43635)

A **gastrectomy** is the surgical removal of all or part of the stomach. Code selection depends on extent (partial vs. total) and whether reconstruction is included.

- **43620** — Gastrectomy, total; with esophagoenterostomy
- **43621** — Gastrectomy, total; with Roux-en-Y reconstruction
- **43622** — Gastrectomy, total; with formation of intestinal pouch, any type
- **43631** — Gastrectomy, partial, distal; with gastroduodenostomy
- **43632** — Gastrectomy, partial, distal; with gastrojejunostomy
- **43633** — Gastrectomy, partial, distal; with Roux-en-Y reconstruction
- **43634** — Gastrectomy, partial, distal; with formation of intestinal pouch
- **43635** — Vagotomy when performed with partial distal gastrectomy (add-on code)

Bariatric Surgery

Bariatric surgery refers to weight-loss surgery procedures designed to reduce the stomach's capacity and/or reduce nutrient absorption. These procedures are among the most frequently coded complex GI surgical cases.

Roux-en-Y Gastric Bypass (43644–43645)

In a **Roux-en-Y gastric bypass (RYGB)** the surgeon creates a small gastric pouch from the upper stomach and attaches it directly to the small intestine (jejunum), bypassing the rest of the stomach and the duodenum. This procedure achieves both restriction and malabsorption.

- **43644** — Laparoscopic gastric restrictive procedure with gastric bypass and Roux-en-Y gastroenterostomy (roux limb 150 cm or less)
- **43645** — Laparoscopic, roux limb greater than 150 cm (long limb bypass)
- **43846** — Gastric restrictive procedure with gastric bypass and small intestine reconstruction to limit absorption (open)
- **43847** — Open, with small intestine reconstruction to limit absorption (open, with adjustable gastric restrictive device)

Sleeve Gastrectomy (43775)

A **laparoscopic sleeve gastrectomy** involves the surgical removal of approximately 80% of the stomach, creating a tubular or "sleeve" remnant. Unlike RYGB, absorption is not significantly affected. Code **43775** — Laparoscopic sleeve gastrectomy, including gastroesophageal reflux test when performed.

Gastric Banding (43770–43774)

A **laparoscopic adjustable gastric band** (e.g., Lap-Band) is placed around the upper stomach to create a small pouch. The band can be adjusted by injecting or removing saline through an access port placed under the skin.

- **43770** — Laparoscopic, gastric restrictive procedure; placement of adjustable gastric restrictive device (e.g., gastric band)
- **43771** — Laparoscopic revision of adjustable gastric restrictive device component only
- **43772** — Laparoscopic removal of adjustable gastric restrictive device component only
- **43773** — Laparoscopic removal and replacement of adjustable gastric restrictive device component only

- **43774** — Laparoscopic removal of adjustable gastric restrictive device and subcutaneous port components
- **43886** — Gastric restrictive procedure; open, revision of subcutaneous port component only
- **43888** — Open, removal and replacement of subcutaneous port component only

CPT Code	Bariatric Procedure	Approach	Key Feature
43644	Roux-en-Y Gastric Bypass	Laparoscopic	Roux limb ≤150 cm
43645	Roux-en-Y Gastric Bypass (long limb)	Laparoscopic	Roux limb >150 cm
43775	Sleeve Gastrectomy	Laparoscopic	~80% stomach removed
43770	Adjustable Gastric Band Placement	Laparoscopic	Band + port placement
43774	Adjustable Gastric Band Removal	Laparoscopic	Band AND port removed
43846	Roux-en-Y Gastric Bypass (open)	Open	Open approach

Gastrostomy Tube (G-Tube) Placement

A **gastrostomy** is the creation of a surgical opening into the stomach through which a feeding tube is placed. The approach determines the code:

- **43246** — EGD with directed placement of percutaneous gastrostomy tube (PEG) — endoscopic approach
- **43653** — Laparoscopic gastrostomy, without construction of gastric tube
- **49440** — Insertion of gastrostomy tube, percutaneous, under fluoroscopic guidance including contrast injection(s), image documentation and report
- **43246** is the most commonly used code — PEG (Percutaneous Endoscopic Gastrostomy) tube placement via EGD

🔎 Coder's Corner

PEG vs. Radiologic Gastrostomy: The choice of gastrostomy code depends on how the tube is placed — NOT what the tube looks like. If an endoscope is used to guide placement (the classic "PEG" procedure), use **43246**. If placed percutaneously under fluoroscopic (X-ray) guidance without an endoscope, use **49440**. If placed laparoscopically, use **43653**. Read the operative/procedure report carefully to identify the method of placement.

📋 Coding Scenario 5.1 — Laparoscopic Roux-en-Y Gastric Bypass

PREOPERATIVE DIAGNOSIS: Morbid obesity, BMI 47 PROCEDURE: Laparoscopic Roux-en-Y gastric bypass OPERATIVE NOTE: Five trocars placed. The gastric pouch was created using a linear stapler, approximately 30 mL in size. The jejunum was divided 30 cm from the Treitz ligament. The Roux limb was measured to 120 cm. Gastrojejunostomy created with linear stapler. Mesenteric defect and Petersen's space closed. All trocar sites closed.

Final Code: 43644

— Laparoscopic gastric bypass, Roux-en-Y, roux limb 150 cm or less

Rationale:

Roux limb measured at 120 cm (≤150 cm). Laparoscopic approach confirmed. If roux limb had been

>

150 cm, use 43645.

📋 Coding Scenario 5.2 — Sleeve Gastrectomy

PREOPERATIVE DIAGNOSIS: Morbid obesity, BMI 41; Type 2 diabetes mellitus PROCEDURE: Laparoscopic sleeve gastrectomy OPERATIVE NOTE: Patient placed supine, reverse Trendelenburg. Five trocar sites. A 36 Fr bougie was inserted. Using a linear stapler, the greater curvature of the stomach was divided from 4 cm proximal to the pylorus to the angle of His, removing approximately 75-80% of the stomach volume. Leak test performed with methylene blue — no leak identified.

Final Code: 43775

— Laparoscopic sleeve gastrectomy

Rationale:

Stomach reduced to sleeve/tube shape laparoscopically. Bougie size and leak test are standard intraoperative details; they do not change code selection. 43775 is the definitive code for laparoscopic sleeve gastrectomy.

📋 Coding Scenario 5.3 — PEG Tube Placement

PREOPERATIVE DIAGNOSIS: Dysphagia secondary to CVA; malnutrition PROCEDURE: Percutaneous endoscopic gastrostomy (PEG) tube placement OPERATIVE NOTE: Patient in supine position. Upper endoscope introduced transorally and advanced to stomach. Stomach insufflated. The anterior abdominal wall was transilluminated and a safe puncture site identified. After skin prep and local anesthesia, needle was introduced percutaneously into the stomach under direct endoscopic visualization. Guide wire advanced. PEG tube (20 Fr) placed using pull technique. Position confirmed endoscopically.

Final Code: 43246

— EGD with directed placement of percutaneous gastrostomy tube

Rationale:

Endoscope used to guide percutaneous tube placement = classic PEG procedure = 43246. The endoscope is passed into the stomach; this is an EGD-based procedure.

6. Intestines (Except Rectum) (44005–44799)

Small Intestine Procedures

Small bowel procedures include enterotomies, resections, and creation of ostomies. Key coding concepts:

- **44010** — Duodenotomy, for exploration, foreign body removal, or biopsy
- **44020** — Enterotomy, small intestine, other than duodenum; for exploration, foreign body removal, or biopsy

- **44120** — Enterectomy, resection of small intestine; single resection and anastomosis
- **44121** — Each additional resection and anastomosis (add-on to 44120)
- **44125** — Enterectomy with formation of stoma (enterostomy)
- **44130** — Enteroenterostomy (anastomosis of small intestine to another segment)

Anastomosis Types

An **anastomosis** is the surgical joining of two hollow structures. Types include:

- **End-to-end:** The cut ends of two bowel segments joined together (most common)
- **End-to-side:** One cut end joined to the side of another segment
- **Side-to-side:** Two segments joined along their sides (used in bypass procedures)

Ileostomy (44150–44160)

An **ileostomy** is a surgically created opening (stoma) in the ileum that diverts intestinal contents to the abdominal wall surface. It may be permanent or temporary.

- **44150** — Colectomy, total, abdominal, without proctectomy; with ileostomy or ileoproctostomy
- **44160** — Colectomy, total, abdominal, with proctectomy; with ileostomy
- **44620** — Closure of enterostomy, large or small intestine

Large Intestine (Colon) Procedures

Colectomy (44140–44160, 44204–44213)

A **colectomy** is the surgical resection of part or all of the colon. Code selection requires knowing extent, whether a colostomy was created, and the surgical approach (open vs. laparoscopic).

CPT Code	Colectomy Procedure	Approach
44140	Colectomy, partial; with anastomosis	Open
44141	Colectomy, partial; with skin level cecostomy or colostomy	Open
44143	Colectomy, partial; with end colostomy and closure of distal segment (Hartmann type)	Open
44144	Colectomy, partial; with resection, with colostomy or ileostomy and creation of mucofistula	Open
44145	Colectomy, partial; with colorectal anastomosis (low anterior resection)	Open
44146	Colectomy, partial; with colorectal anastomosis, with colostomy	Open
44147	Colectomy, partial; abdominal and transanal approach	Open/transanal
44150	Colectomy, total, abdominal; without proctectomy, with ileostomy or ileoproctostomy	Open
44204	Laparoscopic colectomy, partial; with anastomosis	Laparoscopic
44205	Laparoscopic colectomy, partial; with skin level cecostomy or colostomy	Laparoscopic
44206	Laparoscopic colectomy, partial; with end colostomy and closure of distal segment (Hartmann)	Laparoscopic
44207	Laparoscopic colectomy, partial; with anastomosis (low anterior resection)	Laparoscopic
44210	Laparoscopic colectomy, total, abdominal; without	Laparoscopic

CPT Code	Colectomy Procedure	Approach
	proctectomy, with ileostomy or ileoproctostomy	

Did You Know?

The **Hartmann procedure** (code 44143 open; 44206 laparoscopic) refers specifically to a partial colectomy in which the diseased bowel segment is removed, the proximal end is brought out as a colostomy, and the distal bowel stump is closed and left in the abdomen. It is often performed emergently for perforated diverticulitis or obstructing colon cancer when primary anastomosis is unsafe.

Colonoscopy (45378–45398)

A **colonoscopy** is the visual examination of the entire large intestine from the anus to the cecum (and sometimes the terminal ileum) using a flexible endoscope. It is the most commonly performed GI procedure and a high-frequency coding topic on the CPC examination.

⚠️ Stop! Think! — Colonoscopy to the Cecum Rule

For a colonoscopy code (45378–45393) to be reported, the **scope must reach the cecum**. The operative report must document cecal intubation — typically confirmed by visualization of the ileocecal valve and/or the appendiceal orifice. If the scope cannot reach the cecum, the procedure is classified as an **incomplete colonoscopy**. In that case, use the appropriate flexible sigmoidoscopy code (45330–45347) or append modifier **-53** (Discontinued Procedure) if the procedure was truly aborted for a medical reason. Do NOT report a colonoscopy code when the cecum was not reached.

CPT Code	Colonoscopy Description	Key Feature
45378	Colonoscopy, flexible; diagnostic, including collection of specimen(s) by brushing or washing	Diagnostic only
45380	Colonoscopy with biopsy, single or multiple	Forceps biopsy
45381	Colonoscopy with directed submucosal injection(s), any substance	Submucosal injection
45382	Colonoscopy with control of bleeding, any method	Hemostasis
45384	Colonoscopy with removal of tumor(s), polyp(s), or lesion(s) by hot biopsy forceps	Hot biopsy forceps
45385	Colonoscopy with removal of tumor(s), polyp(s), or lesion(s) by snare technique	Snare polypectomy
45386	Colonoscopy with dilation (balloon or guide wire)	Stricture dilation
45388	Colonoscopy with ablation of tumor(s), polyp(s), or other lesion(s)	Ablation
45389	Colonoscopy with endoscopic stent placement	Stent placement
45390	Colonoscopy with endoscopic mucosal resection (EMR)	EMR
45391	Colonoscopy with endoscopic ultrasound examination	EUS during colonoscopy
45392	Colonoscopy with transendoscopic ultrasound-guided intramural or transmural fine needle	EUS-FNA

CPT Code	Colonoscopy Description	Key Feature
	aspiration/biopsy	
45393	Colonoscopy with decompression of volvulus, any method	Volvulus decompression
45398	Colonoscopy with band ligation(s) (e.g., hemorrhoids)	Band ligation

Screening vs. Diagnostic Colonoscopy — Coding Difference

A **screening colonoscopy** is performed on a patient with no GI symptoms, signs, or prior GI diagnoses — it is a preventive service. A **diagnostic colonoscopy** is performed to investigate a specific sign, symptom, or condition (e.g., rectal bleeding, anemia, follow-up of prior polyp). The CPT code is the same (45378 for diagnostic; screening uses the same codes but may have different ICD-10-CM and modifier requirements for payer purposes). If a polyp is found and removed during a screening colonoscopy, the code changes to the appropriate therapeutic colonoscopy code (e.g., 45385 for snare polypectomy). Many payers require a modifier (PT for Medicare) to indicate a screening colonoscopy converted to therapeutic.

Incomplete Colonoscopy

When a colonoscopy cannot be completed to the cecum, the coder must:

12. Report the appropriate flexible sigmoidoscopy code based on how far the scope reached (45330–45347)
13. Or, if the procedure was aborted due to a medical complication (e.g., perforation), append modifier **-53** to the colonoscopy code
14. Document the reason for non-completion in the operative report

Flexible Sigmoidoscopy (45330–45347)

A **flexible sigmoidoscopy** examines only the rectum and sigmoid colon (not the entire colon). These codes are used when endoscopy extends beyond the rectum but does NOT reach the cecum.

- **45330** — Sigmoidoscopy, flexible; diagnostic
- **45331** — Sigmoidoscopy with biopsy, single or multiple
- **45332** — Sigmoidoscopy with removal of foreign body
- **45333** — Sigmoidoscopy with removal of tumor(s), polyp(s), or other lesion(s) by hot biopsy forceps
- **45334** — Sigmoidoscopy with control of bleeding, any method
- **45335** — Sigmoidoscopy with directed submucosal injection(s), any substance
- **45338** — Sigmoidoscopy with removal of tumor(s), polyp(s), or other lesion(s) by snare technique
- **45340** — Sigmoidoscopy with dilation (balloon or guide wire)
- **45341** — Sigmoidoscopy with endoscopic ultrasound examination
- **45346** — Sigmoidoscopy with ablation of tumor(s), polyp(s), or other lesion(s), any method
- **45347** — Sigmoidoscopy with placement of endoscopic stent (includes pre- and post-dilation and guide wire passage, when performed)

📋 Coding Scenario 6.1 — Colonoscopy with Snare Polypectomy and Biopsy

PREOPERATIVE DIAGNOSIS: Colon polyps, surveillance PROCEDURE: Colonoscopy, flexible FINDINGS: Scope advanced to cecum — ileocecal valve visualized. 1.5 cm pedunculated polyp at 45 cm (sigmoid colon) — removed by cold snare technique. 0.4 cm sessile polyp at 70 cm (descending colon) — removed by hot biopsy forceps. Multiple 2-3 mm flat lesions in transverse colon — cold forceps biopsies x4 obtained. No bleeding, no perforation. SPECIMENS: Three specimens to pathology.

Step-by-Step Analysis:

1. Scope reached cecum → colonoscopy codes applicable
2. Snare polypectomy (sigmoid) → 45385
3. Hot biopsy forceps polypectomy (descending) → 45384 (add-on)
4. Cold forceps biopsies (transverse) → 45380 (add-on)
5. Check CPT guidelines: 45384 and 45380 are add-on codes to colonoscopy with polypectomy

Final Codes: 45385, 45384 (add-on), 45380 (add-on)

Note:

Modifier -51 is NOT appended to add-on codes. The primary code (45385) captures the most complex procedure.

📋 Coding Scenario 6.2 — Incomplete Colonoscopy

PREOPERATIVE DIAGNOSIS: Rectal bleeding; rule out polyp or mass PROCEDURE: Colonoscopy attempted. Scope advanced to 40 cm from the anal verge. Dense diverticular disease and marked luminal narrowing prevented further advancement. Cecum NOT reached. Exam of rectum and sigmoid colon was normal. Procedure terminated.

Final Code: 45330

— Flexible sigmoidoscopy, diagnostic (scope reached sigmoid/descending but NOT cecum)

OR:

45378-53 if the procedure was medically discontinued (use 45378 with modifier -53 for discontinued colonoscopy)

Rationale:

Cecum was NOT reached. Cannot report colonoscopy codes (45378+). Since examination was limited to sigmoid region, report as flexible sigmoidoscopy (45330). The distinction between using sigmoidoscopy vs. 45378-53 depends on payer policy and whether the physician intended to perform a colonoscopy from the outset.

📋 Coding Scenario 6.3 — Colonoscopy with Control of Bleeding

PREOPERATIVE DIAGNOSIS: Lower GI bleeding PROCEDURE: Colonoscopy performed. Scope advanced to cecum. Active oozing at 30 cm (sigmoid colon) identified at a post-polypectomy site from a procedure performed last week. Epinephrine injection (1:10,000) performed around the bleeding site, followed by bipolar coagulation. Hemostasis achieved.

Final Code: 45382

— Colonoscopy with control of bleeding, any method

Rationale:

The "any method" descriptor includes epinephrine injection AND coagulation — no need to code both methods separately. 45382 captures the complete hemostasis procedure.

📋 Coding Scenario 6.4 — Right Hemicolectomy, Laparoscopic

PREOPERATIVE DIAGNOSIS: Adenocarcinoma of the ascending colon PROCEDURE: Laparoscopic right hemicolectomy with ileocolic anastomosis OPERATIVE NOTE: Medial-to-lateral approach used. The ileocolic pedicle was ligated at the origin. The right colon from the terminal ileum to the hepatic flexure was mobilized and resected. Ileocolic end-to-side anastomosis created intracorporeally using a linear stapler. Specimen extracted through a 5 cm Pfannenstiel incision. All 12 trocar sites closed.

Final Code: 44204

— Laparoscopic colectomy, partial, with anastomosis

Rationale:

Right hemicolectomy = partial colectomy. Laparoscopic approach. Anastomosis performed. 44204 is the correct laparoscopic partial colectomy with anastomosis code.

📋 Coding Scenario 6.5 — Hartmann Procedure, Open

PREOPERATIVE DIAGNOSIS: Perforated sigmoid diverticulitis with fecal peritonitis PROCEDURE: Exploratory laparotomy; sigmoid colectomy with end colostomy (Hartmann procedure) OPERATIVE NOTE: Gross fecal soilage encountered upon peritoneal entry. Sigmoid colon resected. Proximal end brought to skin surface as sigmoid end colostomy. Distal rectal stump oversewn and left in situ. Copious irrigation performed. Abdomen closed.

Final Codes: 49000, 44143

49000

— Exploratory laparotomy (separate reportable procedure if not incidental)

44143

— Colectomy, partial; with end colostomy and closure of distal segment (Hartmann type), open

Note:

In practice, many payers bundle 49000 into the colectomy. Check NCCI edits. The Hartmann-type closure (distal stump closure) is captured within 44143.

7. Rectum (45000–45999)

Hemorrhoid Treatment

Hemorrhoids are vascular cushions in the anal canal. They are classified as internal (above the dentate line) or external (below the dentate line). Code selection

for hemorrhoid treatment depends on the type (internal vs. external), the specific treatment technique, and whether the procedure is unilateral or bilateral.

CPT Code	Hemorrhoid Procedure	Type/Notes
46221	Hemorrhoidectomy, internal, by rubber band ligation(s)	Internal; rubber band ligation
46250	Hemorrhoidectomy, external, two or more columns/groups	External; two+ columns
46255	Hemorrhoidectomy, combined internal and external, simple	Combined; simple
46257	Hemorrhoidectomy, combined internal and external, simple; with fissurectomy	Combined + fissurectomy
46258	Hemorrhoidectomy, combined; with fistulectomy, with or without fissurectomy	Combined + fistulectomy
46260	Hemorrhoidectomy, combined internal and external, complex or extensive	Combined; complex
46261	Hemorrhoidectomy, combined; complex, with fissurectomy	Complex + fissurectomy
46262	Hemorrhoidectomy, combined; complex, with fistulectomy, with or without fissurectomy	Complex + fistulectomy
46945	Hemorrhoidectomy, internal, by ligation other than rubber band; single hemorrhoid column/group	Other ligation; single
46946	Hemorrhoidectomy, internal, by ligation other than rubber band; 2 or more hemorrhoid columns/groups	Other ligation; 2+
46947	Hemorrhoidopexy (e.g.,	Stapled hemorrhoidopexy

CPT Code	Hemorrhoid Procedure	Type/Notes
	for prolapsing internal hemorrhoid) by stapling	(PPH)

Fistula-in-Ano Repair (46270–46288)

A **fistula-in-ano** is an abnormal tract connecting the anal canal to the perianal skin. Treatment involves surgical management of this tract.

- **46270** — Surgical treatment of anal fistula (fistulectomy/fistulotomy); subcutaneous
- **46275** — Intersphincteric
- **46280** — Trans-sphincteric, suprasphincteric, or extrasphincteric
- **46285** — Second stage
- **46288** — Closure of anal fistula with rectal advancement flap

Abdominoperineal Resection (APR) (45110–45126)

An **abdominoperineal resection (APR)** is the surgical removal of the rectum, anus, and sigmoid colon for cancer or other conditions. It results in a permanent colostomy.

- **45110** — Abdominoperineal resection of rectum, any approach, with colostomy
- **45111** — Partial proctectomy, transsacral approach only (e.g., Kraske type)
- **45113** — Proctectomy; partial resection of rectum, transabdominal approach
- **45116** — Proctectomy with anastomosis; perineal approach
- **45119** — Proctectomy combined abdominoperineal pull-through procedure (e.g., coloanal anastomosis), with creation of colonic reservoir (e.g., J-pouch)
- **45120** — Proctectomy, complete, combined abdominoperineal, with construction of colostomy; perineal and abdominal
- **45126** — Pelvic exenteration for colorectal malignancy

📋 Coding Scenario 7.1 — Internal Hemorrhoid Rubber Band Ligation

PROCEDURE: The patient was placed in the left lateral decubitus position. An anoscope was introduced. Three columns of internal hemorrhoids were identified at the 2, 6, and 11 o'clock positions. Using a McGivney hemorrhoid ligator, rubber bands were applied to each of the three columns of internal hemorrhoids above the dentate line.

Final Code: 46221

— Hemorrhoidectomy, internal, by rubber band ligation(s)

Rationale:

46221 captures rubber band ligation of internal hemorrhoids. The code descriptor includes "ligation(s)" — plural — meaning multiple columns are captured by ONE code. Do NOT report 46221 x3.

📋 Coding Scenario 7.2 — Stapled Hemorrhoidopexy

PREOPERATIVE DIAGNOSIS: Grade III prolapsing internal hemorrhoids PROCEDURE: Stapled hemorrhoidopexy (PPH — Procedure for Prolapse and Hemorrhoids) The circular anal dilator (CAD) was placed. The purse-string suture was placed approximately 4 cm above the dentate line. The circular PPH stapler was introduced, the purse string was tied, and the stapler was fired, removing a donut of rectal mucosa and lifting the hemorrhoidal tissue back into the anal canal. No significant bleeding.

Final Code: 46947

— Hemorrhoidopexy (e.g., for prolapsing internal hemorrhoid) by stapling

Rationale:

Stapled hemorrhoidopexy = PPH procedure = 46947. This code is specific to the stapling technique that repositions rather than excises the hemorrhoidal tissue.

📋 Coding Scenario 7.3 — Abdominoperineal Resection

PREOPERATIVE DIAGNOSIS: Adenocarcinoma of the distal rectum, 2 cm from anal verge PROCEDURE: Open abdominoperineal resection with permanent sigmoid colostomy OPERATIVE NOTE: Abdominal phase: Sigmoid colon and rectum mobilized from above. Mesorectal dissection performed to the level of the levator muscles. Sigmoid colon divided with linear stapler. Perineal phase: Perineal dissection carried out, rectum and anus removed en bloc. Sigmoid colon end brought through left lower quadrant abdominal wall as permanent colostomy. Perineum closed in layers.

Final Code: 45110

— Abdominoperineal resection of rectum, any approach, with colostomy

Rationale:

Complete resection of rectum AND anus with permanent colostomy = classic APR = 45110. Both abdominal and perineal phases are captured in a single code.

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8. Anus (46020–46999)

Abscess Incision and Drainage (46040–46060)

Perianal and perirectal abscesses are common and require surgical drainage. Code selection depends on the location of the abscess.

- **46040** — Incision and drainage of ischiorectal and/or perirectal abscess (separate procedure)
- **46045** — Incision and drainage of intramural, intramuscular, or submucous abscess, transrectal, under anesthesia

- **46050** — Incision and drainage, perianal abscess, superficial
- **46060** — Incision and drainage of ischiorectal or intramural abscess, with fistulotomy or fistulectomy, submuscular, with or without placement of seton

Fistulotomy vs. Fistulectomy

This is a frequently tested distinction:

- **Fistulotomy:** The fistula tract is simply opened (incised) and allowed to heal by secondary intention. The tract remains but is laid open.
- **Fistulectomy:** The fistula tract is completely excised (removed). More extensive procedure.

Additional Anal Procedures

- **46220** — Excision of single tag, anal fissure (skin tag excision)
- **46230** — Excision of multiple external papillae or tags, anus
- **46020** — Placement of seton — a thread or wire placed through a fistula tract to allow slow, staged division of the sphincter muscle
- **46080** — Sphincterotomy, anal, internal (division of the internal anal sphincter)
- **46083** — Incision of thrombosed hemorrhoid, external

📋 Coding Scenario 8.1 — Perianal Abscess I&D

PROCEDURE: Patient brought to OR for painful perianal mass x3 days. Under local anesthesia, a cruciate incision made over the fluctuant perianal abscess. Approximately 30 mL of purulent material expressed. Cavity irrigated and wound left open to drain. No fistula identified on examination.

Final Code: 46050

— Incision and drainage, perianal abscess, superficial

Rationale:

Superficial perianal abscess. No fistulotomy performed. 46050 is the correct code for superficial perianal abscess drainage.

📋 Coding Scenario 8.2 — Anal Fissure and Skin Tag Excision with Internal Sphincterotomy

PROCEDURE: Under general anesthesia, examination of the anus revealed a hypertrophied anal skin tag at the 6 o'clock position with associated posterior anal fissure. The skin tag was excised. A lateral internal sphincterotomy was performed by incising the internal anal sphincter on the left lateral aspect from the dentate line to the anal verge. Estimated blood loss: minimal.

Final Codes: 46220, 46080

46220

— Excision of single anal skin tag

46080

— Sphincterotomy, anal, internal

Note:

Two distinct procedures performed. Append modifier

-51

(multiple procedures) to the secondary code (46220).

9. Liver, Biliary Tract, Pancreas, and Abdomen (47000–49999)

A. Liver (47000–47399)

Liver Biopsy (47000–47001)

A **liver biopsy** is the sampling of liver tissue for pathological analysis. The approach determines the code:

- **47000** — Biopsy of liver, needle; percutaneous (with imaging guidance reported separately using radiology codes)
- **47001** — Biopsy of liver, needle; when done for indicated purpose at time of other major procedure (add-on code)
- **47100** — Biopsy of liver, wedge (open surgical)

Hepatectomy (47120–47130)

A **hepatectomy** is the surgical removal of part or all of the liver. Liver anatomy uses segmental nomenclature (Couinaud segments I–VIII).

- **47120** — Hepatectomy, resection of liver; partial lobectomy
- **47122** — Trisegmentectomy
- **47125** — Total left lobectomy
- **47130** — Total right lobectomy

Liver Transplant (47133–47147)

- **47133** — Donor hepatectomy (including cold preservation), from cadaver donor
- **47135** — Liver allotransplantation; orthotopic, partial or whole, from cadaver or living donor (recipient)
- **47136** — Liver allotransplantation; heterotopic, partial or whole, from cadaver or living donor
- **47140** — Donor hepatectomy, living donor; left lateral segment only (segments II and III)

- **47141** — Total left lobectomy (segments II, III, and IV)
- **47142** — Total right lobectomy (segments V, VI, VII, and VIII)
- **47143-47147** — Backbench preparation of cadaver or living donor liver grafts

📋 Coding Scenario 9A.1 — Percutaneous Liver Biopsy

PREOPERATIVE DIAGNOSIS: Elevated LFTs; hepatomegaly; rule out cirrhosis
PROCEDURE: Under ultrasound guidance, the right lobe of the liver was accessed percutaneously via a right intercostal approach. An 18-gauge Tru-Cut biopsy needle was advanced under real-time ultrasound visualization. Three core specimens obtained. Patient tolerated well.

Final Codes: 47000, 76942

47000

— Liver biopsy, needle, percutaneous

76942

— Ultrasonic guidance for needle placement (report separately with radiologic supervision and interpretation)

Rationale:

The imaging guidance for percutaneous liver biopsy is reported separately using the appropriate radiology code.

📋 Coding Scenario 9A.2 — Right Hepatic Lobectomy

PREOPERATIVE DIAGNOSIS: Hepatocellular carcinoma, right lobe, segments VI–VII PROCEDURE: Open right hepatic lobectomy OPERATIVE NOTE: Right hepatic vein controlled. Inflow to right lobe controlled at the hepatic hilum. Parenchymal transection performed using CUSA device along the line of Cantlie. Specimen consisted of entire right lobe (segments V-VIII). Blood loss 1200 mL. Two units PRBCs given.

Final Code: 47130

— Hepatectomy, resection of liver; total right lobectomy

B. Biliary Tract (47400–47999)

Cholecystectomy (47562–47620)

A **cholecystectomy** is the surgical removal of the gallbladder. It is one of the most common surgical procedures performed in the United States, typically performed for cholelithiasis (gallstones) or cholecystitis.

- **47562** — Laparoscopic cholecystectomy
- **47563** — Laparoscopic cholecystectomy with operative cholangiography
- **47564** — Laparoscopic cholecystectomy with exploration of common bile duct
- **47600** — Cholecystectomy (open)
- **47605** — Cholecystectomy with operative cholangiography (open)
- **47610** — Cholecystectomy with exploration of common bile duct (open)
- **47612** — Cholecystectomy with exploration of common bile duct; with choledochoenterostomy (open)

- **47620** — Cholecystectomy with exploration of common bile duct; with transduodenal sphincterotomy or sphincteroplasty, with or without cholangiography (open)

> 🔎 **Coder's Corner**
>
> **Cholangiography Is Included in Specific Codes:** When the surgeon performs an **intraoperative cholangiogram** (IOC) during a cholecystectomy, you must select the code that includes cholangiography (47563 laparoscopic; 47605 open). Do NOT separately report the cholangiogram as an additional code — it is included in the procedure code descriptor. If a laparoscopic cholecystectomy is converted to open, report only the open cholecystectomy code (do NOT report both laparoscopic AND open codes).

ERCP (43260–43278)

Endoscopic retrograde cholangiopancreatography (ERCP)is a procedure that combines upper GI endoscopy and fluoroscopy to examine the biliary and pancreatic ducts. The scope is advanced to the major duodenal papilla (ampulla of Vater), through which the biliary and pancreatic ducts are accessed. Like all endoscopy, the surgical ERCP includes the diagnostic ERCP.

CPT Code	ERCP Description	Key Feature
43260	ERCP; diagnostic, including minor papilla cannulation, when performed	Diagnostic only
43261	ERCP with biopsy, single or multiple	Biopsy
43262	ERCP with sphincterotomy/papillotomy	Sphincterotomy
43263	ERCP with pressure measurement of sphincter of Oddi	Manometry

CPT Code	ERCP Description	Key Feature
43264	ERCP with removal of calculi/debris from biliary/pancreatic duct(s)	Stone removal
43265	ERCP with destruction of calculi, any method (e.g., mechanical, electrohydraulic, lithotripsy)	Stone destruction
43266	ERCP with placement of endoscopic stent (includes pre- and post-dilation and guide wire passage)	Stent placement
43267	ERCP with removal of foreign body(s) or stent(s) from biliary/pancreatic duct(s)	Stent/foreign body removal
43268	ERCP with insertion of nasobiliary or nasopancreatic drainage tube	Nasobiliary drain
43269	ERCP with endoscopic retrograde removal of foreign body(s) and/or change of tube or stent	Stent change
43270	ERCP with ablation of tumor(s), polyp(s), or other lesion(s)	Ablation
43272	ERCP with ablation of tumor(s), polyp(s), or other lesion(s) not amenable to removal by hot biopsy forceps, bipolar cautery, or snare technique	Complex ablation
43273	Endoscopic cannulation of papilla with direct visualization (cholangioscopy/pancreatoscopy)	Cholangioscopy
43274	ERCP with placement of endoscopic stent, biliary, including any associated balloon dilation	Biliary stent + dilation

CPT Code	ERCP Description	Key Feature
43275	ERCP with removal of foreign body(s) or stent(s) from biliary duct(s)	Biliary stent removal
43276	ERCP with removal and exchange of stent(s), biliary	Biliary stent exchange
43277	ERCP with balloon dilation of biliary/pancreatic duct(s)	Balloon dilation of duct
43278	ERCP with ablation of tumor(s), polyp(s), other lesion(s); pancreatic duct	Pancreatic duct ablation

📋 Coding Scenario 9B.1 — Laparoscopic Cholecystectomy with Cholangiography

PREOPERATIVE DIAGNOSIS: Acute cholecystitis; cholelithiasis PROCEDURE: Laparoscopic cholecystectomy with intraoperative cholangiogram (IOC) OPERATIVE NOTE: Four trocars placed in standard fashion. Gallbladder identified with marked inflammatory changes. Calot's triangle dissected. Critical view of safety achieved. Cystic artery and cystic duct identified and controlled. Intraoperative cholangiogram performed via cannulation of cystic duct — duct system visualized, no filling defects, no evidence of common bile duct stones. Cystic duct and artery clipped and divided. Gallbladder removed via 12 mm port. No bile spillage.

Step-by-Step Analysis:

1. Approach: Laparoscopic → use 47562-47564 range
2. Cholangiogram performed intraoperatively: Yes
3. Common bile duct exploration: No (stones ruled out on IOC)
4. Code 47563 captures laparoscopic cholecystectomy WITH cholangiography

Final Code: 47563

— Laparoscopic cholecystectomy with operative cholangiography

Common Mistake:

Do NOT report 47562 + a separate cholangiography code. Cholangiography is

included

in 47563.

📋 Coding Scenario 9B.2 — ERCP with Sphincterotomy and Stone Removal

PREOPERATIVE DIAGNOSIS: Choledocholithiasis (common bile duct stones) PROCEDURE: ERCP with sphincterotomy and stone extraction OPERATIVE NOTE: Side-viewing duodenoscope advanced to major papilla. Cannulation of common bile duct achieved. Contrast injected — multiple filling defects in the common bile duct consistent with stones. Sphincterotomy performed using standard pull-type sphincterotome. Three stones extracted using Dormia basket. Final cholangiogram demonstrated no residual filling defects. Duct cleared.

Final Codes: 43262, 43264

43262

— ERCP with sphincterotomy/papillotomy

43264

— ERCP with removal of calculi/debris

Rationale:

Two therapeutic interventions performed: sphincterotomy AND stone removal. Both are separately reportable. Append modifier

-59

or appropriate X modifier to 43264 to indicate distinct service. Do NOT report 43260 (diagnostic ERCP) — the surgical ERCP includes the diagnostic component.

📋 Coding Scenario 9B.3 — ERCP with Biliary Stent Placement

PREOPERATIVE DIAGNOSIS: Malignant biliary obstruction (pancreatic head mass) PROCEDURE: ERCP with biliary stent placement OPERATIVE NOTE: Duodenoscope advanced. Ampulla visualized. CBD cannulated. Cholangiogram confirmed critical biliary stricture at the level of the pancreatic head. A 0.035 guide wire advanced past the stricture. Balloon dilation of the stricture performed. A 10 cm, 10 Fr plastic biliary stent deployed across the stricture under fluoroscopic guidance. Good biliary drainage confirmed.

Final Code: 43274

— ERCP with placement of endoscopic stent, biliary, including any associated balloon dilation

Rationale:

43274 specifically includes "any associated balloon dilation" — so the balloon dilation is captured within 43274. Do NOT separately report 43277 (balloon dilation) when performed as part of stent placement.

C. Pancreas (48000–48999)

Pancreatectomy (48150–48160)

A **pancreatectomy** is the surgical removal of part or all of the pancreas. The **Whipple procedure (pancreaticoduodenectomy)** is the most complex pancreatic operation, involving removal of the pancreatic head, duodenum, bile duct, and sometimes part of the stomach.

- **48100** — Biopsy of pancreas, open (e.g., fine needle aspiration, needle core biopsy, wedge biopsy)
- **48102** — Biopsy of pancreas, percutaneous needle (separately reportable with imaging guidance)

- **48120** — Excision of lesion of pancreas (e.g., cyst, adenoma)
- **48140** — Pancreatectomy, distal, subtotal, with or without splenectomy; without pancreaticojejunostomy
- **48145** — Pancreatectomy, distal, subtotal; with pancreaticojejunostomy
- **48146** — Pancreatectomy, distal, near-total, with preservation of duodenum (Child-type procedure)
- **48150** — Pancreatectomy, proximal subtotal with total duodenectomy, with or without partial gastrectomy, choledochoenterostomy and gastrojejunostomy (Whipple-type procedure); with pancreatojejunostomy
- **48152** — Whipple-type; without pancreatojejunostomy
- **48153** — Pancreatectomy, proximal subtotal, with near-total duodenectomy, with preservation of duodenal bulb and with pancreatojejunostomy
- **48154** — Pancreatectomy, distal, with Roux-en-Y reconstruction
- **48155** — Pancreatectomy, total
- **48500** — Marsupialization of pancreatic cyst
- **48510** — External drainage, pseudocyst of pancreas, open

📋 Coding Scenario 9C.1 — Whipple Procedure

PREOPERATIVE DIAGNOSIS: Adenocarcinoma of the pancreatic head PROCEDURE: Pancreaticoduodenectomy (Whipple procedure) OPERATIVE NOTE: After confirming resectability, the common bile duct, distal stomach, duodenum, and pancreatic head were removed en bloc. Reconstruction included: hepaticojejunostomy (bile duct to jejunum), pancreatojejunostomy (pancreatic duct to jejunum), and gastrojejunostomy.

Final Code: 48150

— Pancreatectomy, proximal subtotal with total duodenectomy, with pancreatojejunostomy (Whipple-type procedure)

Rationale:

Classic Whipple = pancreatic head, duodenum, distal bile duct removed. Reconstruction includes pancreatojejunostomy. Code 48150 specifically includes pancreatojejunostomy in the descriptor.

D. Abdomen, Peritoneum, and Omentum (49000–49999)

Exploratory Laparotomy (49000)

Code **49000** — Exploratory laparotomy, exploratory celiotomy with or without biopsy(s) — is used for an exploratory abdominal procedure when no other definitive abdominal procedure is performed. If a definitive procedure is performed, the exploratory laparotomy is generally bundled and NOT separately reported.

Hernia Repairs

Hernia repair coding requires knowing: (1) type of hernia, (2) patient age, (3) clinical status (reducible, incarcerated, or strangulated), (4) initial vs. recurrent hernia, and (5) approach (open vs. laparoscopic). **Mesh** use is generally included in hernia repair codes — it is NOT separately reportable in most cases.

Inguinal Hernia Repair (49491–49525)

An **inguinal hernia** is a protrusion of abdominal contents through the inguinal canal. Code selection for inguinal hernia repair is among the most complex in the CPT manual, requiring attention to four key variables simultaneously.

CPT Code	Inguinal Hernia Repair	Age	Status	Type
49491	Repair inguinal hernia, preterm infant	<37 weeks at birth, <50 weeks post-conception	Reducible	Initial
49492	Repair inguinal hernia, preterm infant	<37 weeks at birth, <50 weeks post-conception	Incarcerated/ Strangulated	Initial
49495	Repair inguinal hernia, full-term infant under age 6 months	<6 months	Reducible	Initial
49496	Repair inguinal hernia, full-term infant under age 6 months	<6 months	Incarcerated/ Strangulated	Initial
49500	Repair inguinal hernia, age 6 months to under 5 years	6 mo – <5 yr	Reducible	Initial
49501	Repair inguinal hernia, age 6 months to under 5 years	6 mo – <5 yr	Incarcerated/ Strangulated	Initial
49505	Repair initial inguinal hernia, age 5 years or older; reducible	≥5 years	Reducible	Initial

CPT Code	Inguinal Hernia Repair	Age	Status	Type
49507	Repair initial inguinal hernia, age 5 years or older; incarcerated or strangulated	≥5 years	Incarcerated/ Strangulated	Initial
49520	Repair recurrent inguinal hernia, any age; reducible	Any	Reducible	Recurrent
49521	Repair recurrent inguinal hernia, any age; incarcerated or strangulated	Any	Incarcerated/ Strangulated	Recurrent
49525	Repair inguinal hernia, sliding, any age	Any	Reducible	Sliding

Umbilical Hernia Repair (49580–49587)

- **49580** — Repair umbilical hernia, under age 5 years; reducible
- **49582** — Repair umbilical hernia, under age 5 years; incarcerated or strangulated
- **49585** — Repair umbilical hernia, age 5 years or older; reducible
- **49587** — Repair umbilical hernia, age 5 years or older; incarcerated or strangulated

Ventral/Incisional Hernia Repair (49560–49568)

A **ventral hernia** occurs through the anterior abdominal wall. An **incisional hernia** occurs at the site of a prior surgical incision.

- **49560** — Repair initial incisional or ventral hernia; reducible

- **49561** — Repair initial incisional or ventral hernia; incarcerated or strangulated
- **49565** — Repair recurrent incisional or ventral hernia; reducible
- **49566** — Repair recurrent incisional or ventral hernia; incarcerated or strangulated
- **49568** — Implantation of mesh or other prosthesis for open incisional or ventral hernia repair (list separately in addition to code for the incisional or ventral hernia repair)

🔎 **Coder's Corner — Mesh in Hernia Repair**

Mesh coding rules differ by hernia type:

- For **inguinal, umbilical, and femoral hernias**: Mesh use is generally included in the repair code — do NOT report separately.
- For **incisional/ventral hernias (open)**: Add-on code **49568** IS separately reportable when mesh is used — it is a legitimate add-on code to the incisional hernia repair.
- For **laparoscopic hernia repairs**: Mesh use is already included in the laparoscopic hernia repair codes — do NOT report 49568 with laparoscopic codes.

Femoral Hernia Repair (49550–49557)

- **49550** — Repair initial femoral hernia, any age; reducible
- **49553** — Repair initial femoral hernia, any age; incarcerated or strangulated
- **49555** — Repair recurrent femoral hernia; reducible
- **49557** — Repair recurrent femoral hernia; incarcerated or strangulated

Laparoscopic Hernia Repair (49650–49659)

- **49650** — Laparoscopic repair of initial inguinal hernia

- **49651** — Laparoscopic repair of recurrent inguinal hernia
- **49652** — Laparoscopic repair of ventral, umbilical, spigelian or epigastric hernia; reducible, includes mesh insertion, when performed
- **49653** — Laparoscopic repair of ventral, umbilical, spigelian or epigastric hernia; incarcerated or strangulated, includes mesh insertion, when performed
- **49654** — Laparoscopic repair of incisional hernia; reducible, includes mesh insertion, when performed
- **49655** — Laparoscopic repair of incisional hernia; incarcerated or strangulated
- **49656** — Laparoscopic repair of recurrent incisional hernia; reducible
- **49657** — Laparoscopic repair of recurrent incisional hernia; incarcerated or strangulated
- **49659** — Unlisted laparoscopic procedure, herniorrhaphy

Appendectomy (44950–44960)

- **44950** — Appendectomy
- **44955** — Appendectomy; when done for indicated purpose at time of other major procedure (add-on code)
- **44960** — Appendectomy; for ruptured appendix with abscess or generalized peritonitis
- **44970** — Laparoscopic appendectomy

📋 Coding Scenario 9D.1 — Laparoscopic Bilateral Inguinal Hernia Repair

PREOPERATIVE DIAGNOSIS: Bilateral inguinal hernias, initial, reducible PROCEDURE: Laparoscopic bilateral inguinal hernia repair (TEP — totally extraperitoneal) OPERATIVE NOTE: Balloon trocar used to develop extraperitoneal space. Three trocars placed. Bilateral hernia defects identified. Both direct inguinal spaces dissected. Mesh (15 x 10 cm) placed to cover bilateral hernia defects bilaterally. Mesh secured with tacks.

Step-by-Step Analysis:

1. Approach: Laparoscopic → 49650
2. Bilateral procedure: Both sides repaired
3. For bilateral laparoscopic inguinal hernia repair, report 49650 with modifier -50 (Bilateral Procedure)
4. Mesh is included in 49650 — do NOT report mesh separately

Final Code: 49650-50

— Laparoscopic repair of initial inguinal hernia, bilateral

Rationale:

Modifier -50 indicates bilateral procedure. Some payers may require the code listed twice (49650 RT, 49650 LT) rather than 49650-50 — follow payer-specific guidelines.

📋 Coding Scenario 9D.2 — Open Incisional Hernia Repair with Mesh

PREOPERATIVE DIAGNOSIS: Incisional ventral hernia; initial; reducible PROCEDURE: Open repair of incisional hernia with mesh OPERATIVE NOTE: Skin incision made over prior midline laparotomy scar. Hernia sac identified and dissected free. Hernia contents reduced. Hernia defect measured 8 x 6 cm. Retromuscular dissection performed. A 20 x 15 cm polypropylene mesh placed in retromuscular position and secured with running absorbable sutures.

Final Codes: 49560, 49568

49560

— Repair initial incisional or ventral hernia; reducible

49568

— Implantation of mesh (add-on to incisional/ventral hernia repair)

Rationale:

For OPEN incisional/ventral hernia repairs, mesh IS separately reportable using add-on code 49568. This is different from laparoscopic hernia repair where mesh is included.

📋 Coding Scenario 9D.3 — Laparoscopic Appendectomy, Ruptured

PREOPERATIVE DIAGNOSIS: Acute appendicitis with perforation and localized peritonitis PROCEDURE: Laparoscopic appendectomy OPERATIVE NOTE: Three trocars placed. Purulent fluid and fecal material encountered in right lower quadrant. Appendix identified — grossly perforated at base. Appendix dissected. Endo-GIA stapler used to divide the mesoappendix and staple across the base. Specimen in bag, extracted. Copious irrigation of right lower quadrant performed. Drain placed.

Final Code: 44970

— Laparoscopic appendectomy

Note:

44960 is for OPEN appendectomy for rupture. For laparoscopic appendectomy regardless of rupture status, use 44970. The ruptured/perforated status does not change the laparoscopic code. ICD-10-CM diagnosis code should reflect perforated appendicitis.

📋 Coding Scenario 9D.4 — Recurrent Femoral Hernia, Strangulated

PREOPERATIVE DIAGNOSIS: Recurrent right femoral hernia, strangulated with bowel obstruction PROCEDURE: Open right femoral hernia repair; bowel resection for strangulation OPERATIVE NOTE: Hernia sac opened. Approximately 10 cm of ischemic small bowel found strangulated in hernia. Bowel resected with primary anastomosis. Hernia defect repaired with primary suture repair. Mesh NOT used due to contamination risk.

Final Codes: 49557, 44120

49557

— Repair recurrent femoral hernia; incarcerated or strangulated

44120

— Enterectomy, resection of small intestine with anastomosis

Rationale:

Two separate, distinct procedures (hernia repair + bowel resection). Append modifier -51 to the secondary code (44120). Mesh not used — 49568 not applicable.

10. Digestive System Modifiers

Modifier	Name	When to Use in GI Coding	Example
-50	Bilateral Procedure	When the same procedure is performed on both sides during the	49650-50 (bilateral laparoscopic inguinal hernia

Modifier	Name	When to Use in GI Coding	Example
		same session (e.g., bilateral inguinal hernia repair)	repair)
-51	Multiple Procedures	When multiple procedures are performed at the same session by the same provider; append to secondary procedures. Do NOT append to add-on codes or codes exempt from modifier -51.	44120-51 (bowel resection performed with hernia repair as primary); do NOT use with 44121 (add-on)
-52	Reduced Services	When a service is partially reduced at the physician's discretion (e.g., colonoscopy where scope only partially advanced but cecum not reached and no -53 situation)	45378-52 (colonoscopy with reduced scope of service, no cecal intubation but no medical reason for discontinuation)
-53	Discontinued Procedure	When a procedure is terminated after anesthesia and patient preparation due to a medical emergency or threat to patient well-being	45378-53 (colonoscopy started but aborted due to patient instability or perforation risk)
-59	Distinct Procedural Service	When a procedure that would normally be bundled is performed as a separate, distinct service on a different site, different lesion, or at a different session	43264-59 (ERCP stone removal when performed at same session as sphincterotomy 43262)

Modifier	Name	When to Use in GI Coding	Example
-XS	Separate Structure (X modifier)	Subset of -59; preferred by Medicare; indicates procedure performed on a separate structure	Used per payer requirements in lieu of -59 for GI procedures

⚠️ Stop! Think! — Modifier -51 and Add-On Codes

Modifier **-51** must NEVER be appended to add-on codes (designated with a "+" symbol in the CPT manual) or codes designated as "modifier 51 exempt." In colonoscopy coding, codes like 45380, 45384, 45385, and 45382 are add-on codes when performed during the same session as the primary colonoscopy. Check the CPT Appendix E (Modifier 51 Exempt Codes) and Appendix D (Add-On Codes) when in doubt. Also note that anesthesia providers use a completely different set of modifiers — do not confuse them with surgeon's modifiers.

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11. Endoscopy Coding Rules — Digestive System

The Surgical Endoscopy Includes Diagnostic Rule

This is the single most important rule for GI endoscopy coding and is tested repeatedly on the CPC examination:

15. When a therapeutic (surgical) endoscopy is performed, the diagnostic component is always included — it is never separately reportable.
16. This applies to all GI endoscopy: esophagoscopy, EGD, colonoscopy, sigmoidoscopy, and ERCP.

17. If only a diagnostic endoscopy was planned but therapeutic intervention was required due to unexpected findings, the therapeutic code is still the only reportable code.

Multiple Endoscopic Procedures at the Same Session

When multiple therapeutic interventions are performed during a single endoscopic session at the same anatomical level (e.g., multiple interventions during one colonoscopy):

18. Report the most complex/highest-valued procedure as the primary code.
19. Report additional procedures using the appropriate add-on codes (where designated as add-on codes in the CPT manual).
20. Check CPT parenthetical notes for specific add-on code relationships.
21. Always check NCCI bundling edits before reporting multiple codes from the same endoscopy session.

NCCI Bundling Rules for GI Procedures

National Correct Coding Initiative (NCCI)edits are CMS-developed coding policy pairs that identify codes that should not be billed together. Common NCCI bundles in GI coding include:

- Diagnostic endoscopy bundled into surgical endoscopy at the same anatomical level
- Exploratory laparotomy (49000) bundled into more definitive abdominal procedures
- Colonoscopy and sigmoidoscopy bundled when performed at the same session (only one reportable)
- Cholecystectomy codes at different levels not separately reportable (open vs. laparoscopic)

⚠️ Stop! Think! — Common Colonoscopy Coding Mistakes

Top 5 Colonoscopy Coding Errors:

1. **Reporting diagnostic colonoscopy (45378) along with a therapeutic code** — Wrong! The surgical endoscopy includes the diagnostic.
2. **Using colonoscopy codes when the cecum was not reached** — Wrong! Use sigmoidoscopy codes or 45378-53.
3. **Appending modifier -51 to add-on codes** — Wrong! Add-on codes are exempt from modifier -51.
4. **Not capturing all therapeutic interventions with appropriate add-on codes** — Review the entire operative note; don't stop at the first procedure.
5. **Failing to distinguish between snare polypectomy (45385) and hot biopsy forceps (45384)** — The technique used to remove the polyp determines the code, not the polyp type.

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12. Real-World Coding Scenarios — Full Operative Notes

📄 Full Scenario 1 — Laparoscopic Cholecystectomy with Cholangiography

DATE OF PROCEDURE: 09/24/2026 SURGEON: Dr. E. Camacho, MD PREOPERATIVE DIAGNOSIS: Acute cholecystitis; cholelithiasis POSTOPERATIVE DIAGNOSIS: Same PROCEDURE: Laparoscopic cholecystectomy with intraoperative cholangiography ANESTHESIA: General endotracheal DESCRIPTION OF PROCEDURE: Patient was brought to the operating room and placed in supine position. After induction of general anesthesia, the abdomen was prepped and draped in usual sterile fashion. Pneumoperitoneum established using Veress needle at the umbilicus; 14 mmHg CO2 pressure. A 10 mm trocar placed at the umbilicus. Three additional 5 mm trocars placed in the right upper quadrant and epigastrium. The gallbladder was grasped with a fundus grasper. The liver was retracted anteriorly. Calot's triangle was dissected free of all fatty areolar tissue. The cystic duct and cystic artery were individually identified and the critical view of safety was achieved. A clip was placed on the cystic duct proximally. The cystic duct was incised, and a cholangiogram catheter was placed. Fluoroscopic images were obtained — the biliary ductal system was well visualized. No filling defects or stones were identified in the common bile duct. The cystic duct was then clipped distally and divided. The cystic artery was doubly clipped and divided. The gallbladder was removed from its liver bed using electrocautery. The gallbladder was placed in an endoscopic retrieval bag and extracted through the umbilical trocar site. Final inspection of the operative field confirmed no bleeding or bile leak. Trocars removed. Fascial defect at umbilicus closed with 0-Vicryl. Skin closed. SPECIMENS: Gallbladder sent to pathology. ESTIMATED BLOOD LOSS: <10 mL

Step-by-Step Analysis:

1. Approach: Laparoscopic → use 47562-47564 range
2. Cholangiogram performed intraoperatively: YES (fluoroscopic images, catheter placed, no stones found)
3. Common bile duct explored or stones removed: NO
4. Correct code: 47563 (laparoscopic cholecystectomy with operative

cholangiography)

5. Do NOT add a separate radiology code for the IOC — it is included in 47563

Final Code: 47563

Common Mistakes:

(1) Reporting 47562 + separate IOC code — incorrect; IOC is included in 47563. (2) Using 47600 (open cholecystectomy) — this was laparoscopic. (3) Reporting 47564 (with common bile duct exploration) — no CBDE was performed; IOC was normal.

📄 Full Scenario 2 — Colonoscopy with Polypectomy (Snare) and Biopsy

DATE OF PROCEDURE: 09/24/2026 SURGEON: Dr. R. Singh, MD PREOPERATIVE DIAGNOSIS: Colon polyp surveillance; history of adenoma POSTOPERATIVE DIAGNOSIS: Polyps: sigmoid colon (snare removed); transverse colon (biopsy) PROCEDURE: Colonoscopy with polypectomy and biopsy ANESTHESIA: Monitored anesthesia care (propofol) DESCRIPTION OF PROCEDURE: Patient placed in left lateral position after achieving adequate sedation. The colonoscope was introduced through the anal canal and advanced under direct visualization through the rectum, sigmoid colon, descending colon, transverse colon, and hepatic flexure to the cecum. Cecal intubation confirmed by visualization of the ileocecal valve and appendiceal orifice. FINDINGS ON WITHDRAWAL: 1. At 45 cm from the anal verge (sigmoid colon): A 1.8 cm pedunculated polyp identified. The polyp was removed in its entirety using a cold snare technique. Excellent resection margins. No bleeding. 2. At 65 cm from the anal verge (descending colon): Two small (4-5 mm) sessile polyps. Both removed using cold forceps biopsy technique. 3. At 80 cm from the anal verge (transverse colon): A 1.2 cm flat lesion with irregular mucosa. Cold forceps biopsies x4 taken from this area for histologic evaluation. No diverticula, masses, or active bleeding noted. Retroflexion in the rectum was normal. SPECIMENS: Three labeled specimen containers sent to pathology.

Step-by-Step Analysis:

1. Cecum reached: YES → colonoscopy codes applicable
2. Sigmoid polyp: 1.8 cm pedunculated, removed by cold snare → 45385 (primary code)
3. Descending colon polyps: 4-5 mm, removed by cold forceps biopsy → These are best captured as biopsies or small polyp removal by biopsy forceps. Report 45380 (biopsy add-on)
4. Transverse colon biopsies: Flat lesion, biopsies taken → 45380 already captures this (same technique)
5. 45380 is reportable once for the biopsy technique regardless of number of

sites

Final Codes: 45385 (primary), 45380 (add-on)

45385

— Colonoscopy with removal of tumor(s)/polyp(s) by snare technique

45380

— Colonoscopy with biopsy (add-on; do NOT append modifier -51)

Common Mistakes:

(1) Also reporting 45378 — wrong; the surgical endoscopy includes diagnostic. (2) Reporting 45380 twice for the two separate biopsy sites — wrong; 45380 is reported once per session for the biopsy technique.

📄 Full Scenario 3 — Laparoscopic Roux-en-Y Gastric Bypass

DATE OF PROCEDURE: 09/24/2026 SURGEON: Dr. M. Patel, MD, FACS PREOPERATIVE DIAGNOSIS: Morbid obesity (BMI 49); type 2 diabetes mellitus; hypertension POSTOPERATIVE DIAGNOSIS: Same PROCEDURE: Laparoscopic Roux-en-Y gastric bypass (short limb, 100 cm) DESCRIPTION OF PROCEDURE: Patient positioned in supine split-leg position, reverse Trendelenburg. Six trocars placed in standard bariatric configuration. The liver was retracted using Nathanson retractor. The gastric pouch was created using three fires of the 60 mm Endo-GIA stapler along the lesser curvature, resulting in an approximately 20-30 mL gastric pouch. The greater omentum and transverse mesocolon were divided. The jejunum was identified and divided 50 cm from the Treitz ligament. The biliopancreatic limb was measured. The alimentary (Roux) limb was then measured to 100 cm from the site of jejunal division. A side-to-side jejunojejunostomy was fashioned between the alimentary and biliopancreatic limbs using the Endo-GIA stapler. The enterotomy was closed with running 2-0 Vicryl. The Roux limb was brought in an antecolic, antegastric orientation. A gastrojejunostomy was fashioned between the gastric pouch and the alimentary limb using the linear stapler. The enterotomy was closed. A 34 Fr bougie was passed transorally through the anastomosis to confirm adequacy of the lumen. An air leak test was performed — no leak identified. Petersen's defect and mesenteric defect at jejunojejunostomy were closed with non-absorbable suture. All trocar sites 12 mm and greater were closed at the fascia. Skin closed. SPECIMENS: None ESTIMATED BLOOD LOSS: 75 mL

Final Code: 43644

— Laparoscopic gastric restrictive procedure with gastric bypass and Roux-en-Y gastroenterostomy (roux limb 150 cm or less)

Rationale:

Laparoscopic approach, Roux-en-Y construction, roux limb measured at

100 cm (≤150 cm). Code 43644 is definitive. If roux limb had been

>

150 cm, 43645 would apply.

📄 Full Scenario 4 — Laparoscopic Bilateral Inguinal Hernia Repair

DATE OF PROCEDURE: 09/24/2026 SURGEON: Dr. A. Torres, MD PREOPERATIVE DIAGNOSIS: Bilateral inguinal hernias, initial, reducible POSTOPERATIVE DIAGNOSIS: Same; bilateral direct inguinal hernias PROCEDURE: Laparoscopic bilateral inguinal hernia repair; totally extraperitoneal (TEP) approach, with mesh DESCRIPTION OF PROCEDURE: Patient placed supine. A 1.5 cm infraumbilical incision made. Dissecting balloon used to develop the preperitoneal space. Three trocars placed in the extraperitoneal space. CO2 insufflation to 12 mmHg. On the right: A large direct inguinal hernia with wide defect was identified medial to the inferior epigastric vessels. The hernia sac was reduced. Dissection carried to expose Cooper's ligament, iliac vessels, and the myopectineal orifice. On the left: A moderate-sized direct inguinal hernia was identified. Hernia sac reduced. Similar dissection performed. Bilateral dissection confirmed complete exposure of the myopectineal orifice bilaterally. A 15 x 10 cm heavyweight polypropylene mesh was placed to cover both inguinal defects bilaterally. Mesh secured with tacks along Cooper's ligament and lateral staple line. No tacks placed medially (neurovascular hazard zone avoided). Gas released. Trocars removed. Fascial defect closed. Skin closed. SPECIMENS: None ESTIMATED BLOOD LOSS: Minimal

Final Code: 49650-50

49650

— Laparoscopic repair of initial inguinal hernia

-50

— Bilateral modifier

Note:

Mesh is included in 49650 — do not add 49568. TEP vs. TAPP (transabdominal preperitoneal) approach does NOT affect code selection.

Common mistake: Using 49500-50 (open inguinal hernia repair) — this was laparoscopic.

📄 Full Scenario 5 — ERCP with Sphincterotomy and Stone Removal

DATE OF PROCEDURE: 09/24/2026 SURGEON: Dr. K. Yamamura, MD (Gastroenterology) PREOPERATIVE DIAGNOSIS: Choledocholithiasis; elevated bilirubin; dilated CBD on ultrasound POSTOPERATIVE DIAGNOSIS: Common bile duct stones x3; successful clearance PROCEDURE: ERCP with sphincterotomy, balloon extraction of CBD stones DESCRIPTION OF PROCEDURE: Patient given appropriate sedation and placed in prone position. A therapeutic side-viewing duodenoscope was introduced transorally and advanced to the second portion of the duodenum. The major duodenal papilla was identified. The papilla appeared enlarged with a stone impacted at the orifice. Deep cannulation of the CBD was achieved using a sphincterotome over a 0.035-inch guide wire. Cholangiogram obtained — the common bile duct was dilated to 12 mm. Three round filling defects (5-8 mm) were identified in the distal CBD, consistent with stones. An endoscopic sphincterotomy was performed using the pull-type sphincterotome with standard electrosurgical current. The sphincterotomy extended to 12 o'clock, providing wide opening of the papilla. Balloon catheter (9 mm) was used to sweep the CBD. Three stones were extracted — all stones appeared to clear from the duct on repeat occlusion cholangiogram. No residual filling defects. No post-sphincterotomy bleeding. Ampulla appeared hemostatic. SPECIMENS: None

Step-by-Step Analysis:

1. ERCP performed (endoscope to major papilla, CBD cannulation)
2. Sphincterotomy performed → 43262
3. Stone extraction performed → 43264
4. Two separately reportable therapeutic interventions
5. Do NOT report 43260 (diagnostic ERCP) — included in surgical ERCP

Final Codes: 43262, 43264-59

43262

— ERCP with sphincterotomy/papillotomy

43264-59

— ERCP with removal of calculi/debris (modifier -59: distinct procedural service at same session)

Common Mistakes:

(1) Reporting only 43264 and omitting sphincterotomy — both are separately reportable. (2) Adding 43260 — wrong. (3) Forgetting modifier -59 on the secondary code — check NCCI edits.

📄 Full Scenario 6 — EGD with Biopsy and Dilation

DATE OF PROCEDURE: 09/24/2026 SURGEON: Dr. T. Williams, MD (Gastroenterology) PREOPERATIVE DIAGNOSIS: 1) Dysphagia — progressive; 2) Known Schatzki ring; 3) H. pylori status unknown POSTOPERATIVE DIAGNOSIS: 1) Schatzki ring with high-grade stricture; 2) Antral gastritis with ulceration — biopsied for H. pylori PROCEDURE: Upper GI endoscopy (EGD) with esophageal dilation (balloon) and gastric biopsy DESCRIPTION: Patient in left lateral decubitus after sedation. The flexible endoscope introduced transorally. The esophagus was examined. At 38 cm from the incisor teeth, a Schatzki ring with significant narrowing was identified. The lumen appeared to be approximately 9 mm in diameter. The scope could not be advanced beyond this point. A 20 mm through-the-scope (TTS) balloon was positioned across the Schatzki ring under direct vision. The balloon was inflated to 15 mmHg for 60 seconds. Repeat examination showed improvement in luminal diameter to approximately 18 mm. Scope passed through easily. The stomach was entered. The gastric body and fundus appeared normal. In the antrum, a 1.5 cm shallow ulceration with surrounding erythema was identified. Four biopsies taken from the ulcer edge for histology and H. pylori testing. The duodenum was entered and appeared normal to the second portion. Scope withdrawn. SPECIMENS: Gastric antral biopsies x4 sent to pathology (H. pylori and histology).

Final Codes: 43249, 43239

43249

— EGD with balloon dilation of esophagus (less than 30 mm diameter)

43239

— EGD with biopsy, single or multiple (gastric antral biopsies)

Modifier -59

on 43239 to indicate distinct service at different anatomical site

Rationale:

Two distinct therapeutic interventions: esophageal dilation (43249) and gastric biopsy (43239). Both are separately reportable. Dilation was

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30 mm → 43249. Do NOT report 43235 (diagnostic EGD). Check NCCI for this pair.

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13. Chapter Review — 20 Multiple Choice Questions

Select the best answer for each question. Answer key with rationale follows.

1. A surgeon performs a laparoscopic cholecystectomy. During the procedure, an intraoperative cholangiogram is obtained showing no common bile duct stones. Which CPT code is most appropriate?

22. 47562

23. 47563

24. 47564

25. 47600

2. During a colonoscopy, the physician advances the scope to the splenic flexure but cannot advance to the cecum due to redundant colon. A biopsy is taken at the splenic flexure. Which code set is most appropriate?

26. 45378-52

27. 45380-52

28. 45331

29. 45378-53

3. A patient undergoes an EGD. The physician performs a biopsy of a suspicious gastric lesion and also performs balloon dilation of an esophageal stricture. Which codes are reported?

30. 43235, 43249

31. 43239, 43249-59

32. 43239-51, 43249-51

33. 43239, 43248

4. A 14-year-old patient undergoes a tonsillectomy and adenoidectomy. Which code is correct?

34. 42820

35. 42821

36. 42830

37. 42836

5. A laparoscopic Roux-en-Y gastric bypass is performed with a 180 cm roux limb. Which CPT code applies?

38. 43644

39. 43645

40. 43846

41. 43775

6. An open repair of an initial, reducible inguinal hernia in a 52-year-old male is performed with mesh. Which codes are reported?

42. 49505, 49568

43. 49505 only

44. 49560, 49568

45. 49650

7. During an ERCP, the physician performs a sphincterotomy and then places a biliary stent. Which codes are reported?

46. 43260, 43262, 43274

47. 43262, 43274-59

48. 43262 only

49. 43266, 43262-51

8. A colonoscopy is performed. The cecum is reached. Three polyps are removed by snare in the sigmoid colon. A biopsy is taken in the transverse colon. Control of bleeding is performed in the descending colon. Which is the correct code set?

50. 45385, 45380, 45382

51. 45378, 45385, 45380, 45382

52. 45385-51, 45380-51, 45382-51

53. 45385, 45380-51, 45382-51

9. A physician performs internal hemorrhoid rubber band ligation on three columns. Which code is reported?

54. 46221 x3

55. 46221 x1

56. 46260

57. 46945

10. A percutaneous endoscopic gastrostomy (PEG) tube is placed during an EGD. Which CPT code is most appropriate?

58. 43653

59. 49440

60. 43246

61. 43241

11. Which of the following statements regarding the "surgical endoscopy includes diagnostic" rule is TRUE?

62. A diagnostic endoscopy may be separately reported if performed at a different anatomical level than the therapeutic endoscopy

63. A diagnostic endoscopy is always separately reportable if the physician documents it in the report
64. A surgical (therapeutic) endoscopy always includes the diagnostic endoscopy at the same level
65. Diagnostic endoscopy is separately reportable using modifier -59

12. A 48-year-old patient undergoes open repair of a recurrent, incarcerated right inguinal hernia. Which code applies?

66. 49505
67. 49507
68. 49520
69. 49521

13. Which of the following correctly describes code 43775?

70. Laparoscopic Roux-en-Y gastric bypass
71. Open sleeve gastrectomy
72. Laparoscopic sleeve gastrectomy
73. Laparoscopic adjustable gastric band placement

14. During a Whipple procedure (pancreaticoduodenectomy), which CPT code is used when the reconstruction includes a pancreatojejunostomy?

74. 48120
75. 48140
76. 48150
77. 48152

15. A flexible sigmoidoscopy with biopsy is performed. The scope was advanced to 50 cm from the anal verge. Which code is most appropriate?

78. 45378
79. 45330
80. 45331
81. 45380

16. An open colectomy with partial resection and end colostomy with closure of the distal segment (Hartmann procedure) is performed. Which CPT code applies?

82. 44140

83. 44141

84. 44143

85. 44150

17. A colonoscopy with EMR of a large flat lesion is performed. Which code is reported for the EMR?

86. 45385

87. 45384

88. 45390

89. 45388

18. When coding a laparoscopic repair of an initial ventral hernia with mesh placement, which statement is correct?

90. Code 49652 is reported; mesh is included and 49568 is NOT separately reported

91. Code 49560 is reported with add-on code 49568

92. Code 49652 is reported with add-on code 49568

93. Code 49560 is reported; mesh is always included in all hernia repair codes

19. Which modifier is appended to a colonoscopy code when the procedure was medically terminated after the scope was inserted due to sudden patient decompensation?

94. -52

95. -53

96. -22

97. -59

20. A patient undergoes an abdominoperineal resection for low rectal cancer. The result is a permanent sigmoid colostomy. Which CPT code is most appropriate?

98. 44140

99. 45110

100. 45113

101. 44143

Answer Key with Rationale

1. B — 47563

> Laparoscopic cholecystectomy WITH intraoperative cholangiography = 47563. Code 47562 is laparoscopic cholecystectomy without cholangiography. Code 47564 includes common bile duct exploration (which was not performed — IOC was normal). Code 47600 is open cholecystectomy.

2. C — 45331

> The scope did NOT reach the cecum — colonoscopy codes are not appropriate. Scope reached the splenic flexure region, which is within the sigmoidoscopy code range (beyond rectum/sigmoid but not the full colon).

A biopsy was performed = 45331 (flexible sigmoidoscopy with biopsy). Modifier -52 or -53 would be used with the colonoscopy code only if colonoscopy was the stated intent and the situation meets those modifier criteria; however, reporting as a sigmoidoscopy code when scope did not reach cecum is the cleaner approach.

3. B — 43239, 43249-59

Two therapeutic interventions at the same EGD session: gastric biopsy (43239) and esophageal balloon dilation less than 30 mm (43249). The diagnostic EGD (43235) is NOT reported separately. Modifier -59 on 43249 indicates a distinct service. Answer A is wrong because it includes the diagnostic code 43235. Answer C incorrectly applies modifier -51 to 43249 — check if -59 or -51 is more appropriate per NCCI. Answer D uses 43248 (wire-guided dilation) when a balloon was used — incorrect technique code.

4. B — 42821

Patient is 14 years old = over age 12. Both tonsils AND adenoids removed

= T&A. Code for over age 12 T&A = 42821. Code 42820 is for age 12 or under. Codes 42830 and 42836 are for adenoidectomy only — no tonsillectomy.

5. B — 43645

Laparoscopic RYGB with roux limb 180 cm (greater than 150 cm) = 43645. Code 43644 is for roux limb 150 cm or less. Code 43846 is the open RYGB. Code 43775 is sleeve gastrectomy — entirely different procedure.

6. B — 49505 only

Open initial inguinal hernia repair in patient age 5 or older, reducible = 49505. For INGUINAL hernia repairs, mesh is included in the repair code — do NOT separately report 49568 (49568 is an add-on only for incisional/ventral hernia repairs). Code 49560 is for incisional/ventral hernia. Code 49650 is laparoscopic.

7. B — 43262, 43274-59

ERCP with sphincterotomy = 43262. ERCP with biliary stent placement including dilation = 43274. Diagnostic ERCP (43260) is NOT separately reported — surgical ERCP includes it. Modifier -59 on 43274 indicates a distinct service at the same session. Answer A incorrectly includes 43260.

8. A — 45385, 45380, 45382

Primary code = 45385 (snare polypectomy — most complex). Add-on = 45380 (biopsy in transverse colon). Add-on = 45382 (control of bleeding in descending colon). Do NOT report 45378 — surgical endoscopy includes diagnostic. Do NOT apply modifier -51 to add-on codes (they are exempt from -51).

9. B — 46221 x1

Code 46221 — hemorrhoidectomy, internal, by rubber band ligation(s) — the "(s)" indicates multiple ligations are included in a single code unit. Do NOT report 46221 x3. Code 46260 is excisional hemorrhoidectomy, not

ligation. Code 46945 is ligation by other than rubber band.

10. C — 43246

PEG tube placed via EGD (endoscopic guidance) = 43246. Code 43653 is laparoscopic gastrostomy. Code 49440 is percutaneous gastrostomy under fluoroscopic guidance. Code 43241 is EGD with intraluminal tube/catheter placement — different procedure (feeding tube into existing opening, not PEG placement).

11. C — A surgical (therapeutic) endoscopy always includes the diagnostic endoscopy at the same level

This is a foundational CPT rule. Answer A is incorrect — the rule applies at the same anatomical level; performing a different level endoscopy may be separately reportable. Answer B is wrong — documentation does not override the bundling rule. Answer D is wrong — modifier -59 cannot override this fundamental rule.

12. D — 49521

Recurrent (prior repair) + incarcerated + inguinal hernia = 49521. Code 49507 is initial (not recurrent) incarcerated inguinal hernia. Code 49520 is recurrent but reducible. Code 49505 is initial and reducible.

13. C — Laparoscopic sleeve gastrectomy

Code 43775 = Laparoscopic sleeve gastrectomy. Code 43644 = Laparoscopic RYGB. Code 43770 = Laparoscopic adjustable gastric band. There is no specific open sleeve gastrectomy code in this range.

14. C — 48150

Whipple procedure WITH pancreatojejunostomy = 48150. Code 48152 is Whipple WITHOUT pancreatojejunostomy. Code 48140 is distal pancreatectomy. Code 48120 is excision of pancreatic lesion — not a Whipple.

15. C — 45331

Flexible sigmoidoscopy with biopsy = 45331. The scope was advanced to 50 cm — this is beyond the rectum into the sigmoid/descending colon region but is appropriately coded as flexible sigmoidoscopy when the cecum is not reached. 45330 = diagnostic sigmoidoscopy only (no biopsy). 45378 = colonoscopy (requires cecal intubation). 45380 = colonoscopy with biopsy — wrong procedure level.

16. C — 44143

Hartmann procedure = partial colectomy with end colostomy AND closure of distal bowel segment = 44143. Code 44140 = partial colectomy with anastomosis (no colostomy). Code 44141 = cecostomy or colostomy skin level (not Hartmann). Code 44150 = total colectomy (not partial).

17. C — 45390

Colonoscopy with endoscopic mucosal resection (EMR) = 45390. Code 45385 = snare polypectomy (not EMR). Code 45384 = hot biopsy forceps

removal. Code 45388 = ablation. EMR has its own specific code (45390) and should not be coded as snare polypectomy.

18. A — 49652; mesh included; 49568 NOT reported

For laparoscopic ventral hernia repair (49652), mesh is explicitly included in the code descriptor. Do NOT separately report 49568 with laparoscopic codes. 49568 is an add-on code only for OPEN incisional/ventral hernia repairs. Code 49560 is the open code, not laparoscopic.

19. B — -53

Modifier -53 (Discontinued Procedure) is used when a procedure is terminated after the start of administration of anesthesia due to extenuating circumstances threatening patient well-being. Modifier -52 (Reduced Services) is used when the physician voluntarily reduces the service — not an emergency medical situation. Modifier -22 is for increased procedural services. Modifier -59 is for distinct procedural service.

20. B — 45110

> APR (abdominoperineal resection) with permanent colostomy = 45110. This procedure removes the rectum AND anus, resulting in a permanent colostomy. Code 44140 = partial colectomy (does not include removal of rectum/anus). Code 45113 = partial proctectomy without APR. Code 44143 = Hartmann procedure (sigmoid colectomy with colostomy, not APR).

14. Chapter Summary

✅ Key Concepts — Chapter 15 at a Glance

• The Digestive System CPT subsection spans codes **40490–49999**, organized anatomically from the lips/mouth to the anus, with accessory organs and the abdomen following.

• **Surgical endoscopy always includes diagnostic endoscopy** — never report a diagnostic endoscopy code when a therapeutic endoscopy is performed at the same anatomical level during the same session.

• For **colonoscopy**, the scope MUST reach the cecum to report colonoscopy codes (45378–45393). If the cecum is not reached, use sigmoidoscopy codes or modifier -53.

• Tonsillectomy and adenoidectomy codes are **age-stratified** at the 12-year cutoff. Always verify patient age against date of procedure.

• Bariatric surgery codes require knowledge of the **surgical approach** (laparoscopic vs. open) and, for RYGB, the **roux limb length** (≤150 cm vs. >150 cm).

• For **inguinal hernia repairs**, code selection requires: patient age, initial vs. recurrent, reducible vs. incarcerated/strangulated, and open vs. laparoscopic approach. Mesh is generally included — do NOT separately report 49568 for inguinal hernias.

• For **open incisional/ventral hernia** repairs, mesh IS separately reportable using add-on code 49568. For laparoscopic repairs, mesh is included.

• **ERCP** therapeutic procedures (sphincterotomy, stone removal, stent placement) are each separately reportable when performed in the same session. Diagnostic ERCP (43260) is never reported in addition to a therapeutic ERCP.

• **Laparoscopic cholecystectomy with IOC = 47563**. IOC is included —

do not separately code the cholangiogram. With CBD exploration = 47564.

• The **Hartmann procedure** = 44143 (open) or 44206 (laparoscopic): partial colectomy + end colostomy + closure of distal bowel segment.

• The **Whipple procedure** (pancreaticoduodenectomy) with pancreatojejunostomy = 48150; without pancreatojejunostomy = 48152.

• For **APR** (abdominoperineal resection), use code 45110. This captures both the abdominal and perineal phases plus the permanent colostomy.

• Modifier **-50** is used for bilateral procedures; modifier **-51** for multiple procedures (not for add-on codes); modifier **-53** for discontinued procedures; modifier **-59** for distinct procedural services.

• Add-on codes (marked with "+") in colonoscopy and ERCP are **exempt from modifier -51**.

• Always verify NCCI edits before reporting multiple codes from the same endoscopic session — common bundles apply throughout the GI endoscopy code range.

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15. Key Terms Glossary

Abdominoperineal Resection (APR)

Surgical removal of the rectum, anus, and sigmoid colon performed for low rectal cancer or other conditions; results in a permanent colostomy. CPT 45110.

Anastomosis

The surgical joining of two hollow structures (e.g., two segments of bowel). Types include end-to-end, end-to-side, and side-to-side.

Ankyloglossia

A congenital condition in which the lingual frenum is abnormally short or attached, restricting tongue movement; commonly called "tongue-tie."

Bariatric Surgery

Weight-loss surgical procedures including Roux-en-Y gastric bypass, sleeve gastrectomy, and adjustable gastric banding, designed to reduce stomach capacity and/or nutrient absorption.

Cholecystectomy

Surgical removal of the gallbladder; may be performed laparoscopically (47562–47564) or open (47600–47620).

Colectomy

Surgical resection of part (partial) or all (total) of the colon; may include anastomosis or colostomy formation.

Colonoscopy

Flexible endoscopic examination of the entire large intestine from the anus to the cecum; requires confirmed cecal intubation for colonoscopy codes to apply (CPT 45378–45398).

ERCP (Endoscopic Retrograde Cholangiopancreatography)

A procedure combining endoscopy and fluoroscopy to visualize and treat conditions of the biliary and pancreatic ducts via the ampulla of Vater (CPT 43260–43278).

EGD (Esophagogastroduodenoscopy)

Flexible endoscopic examination of the esophagus, stomach, and proximal duodenum; also called upper GI endoscopy (CPT 43235–43259).

Fistula-in-Ano

An abnormal tract connecting the anal canal to the perianal skin; treated by fistulotomy (laying open) or fistulectomy (excision).

Frenectomy (Frenulectomy)

Surgical excision of a frenum (lingual or labial); distinguished from frenotomy (incision only). CPT 41115 (lingual).

Hartmann Procedure

A partial colectomy in which the proximal bowel is brought out as an end colostomy and the distal bowel stump is oversewn and left in the abdomen. CPT 44143 (open), 44206 (laparoscopic).

Hemorrhoidopexy

Stapled hemorrhoid procedure (PPH) that repositions prolapsing internal hemorrhoids without excision using a circular stapling device. CPT 46947.

Ileostomy

A surgically created opening of the ileum to the abdominal wall surface, diverting the intestinal stream; may be temporary or permanent.

Inguinal Hernia

A protrusion of abdominal contents through the inguinal canal; classified as initial or recurrent, reducible or incarcerated/strangulated, and by patient age for CPT code selection.

NCCI (National Correct Coding Initiative)

CMS-developed coding edits that identify procedure code pairs that should not be reported together due to bundling relationships; essential reference for GI procedure coding.

Nissen Fundoplication

A surgical procedure for GERD in which the gastric fundus is wrapped around the lower esophagus to reinforce the lower esophageal sphincter; may be open or laparoscopic (CPT 43327, 43280).

Pancreatectomy

Surgical removal of part or all of the pancreas; the Whipple procedure (pancreaticoduodenectomy, CPT 48150–48152) removes the pancreatic head with the duodenum and bile duct.

Roux-en-Y Gastric Bypass (RYGB)

A bariatric surgery creating a small gastric pouch connected directly to the jejunum, bypassing the remaining stomach and duodenum; laparoscopic codes 43644 (roux limb ≤150 cm) and 43645 (roux limb >150 cm).

Surgical Endoscopy Includes Diagnostic Rule

A CPT coding principle stating that when a therapeutic (surgical) endoscopy is performed, the diagnostic component is always included and may never be separately reported at the same anatomical level during the same operative session.

🔎 Final Coder's Corner — Study Strategy for Chapter 15

For CPC Exam Success in the Digestive System Section:

1. **Memorize the endoscopy hierarchy:** Esophagoscopy → EGD → Colonoscopy. Know which codes are "diagnostic only" vs. "surgical" for each level.
2. **Tab your CPT manual:** Place tabs at 40490, 43235, 45378, 46220, 47562, 43260, and 49491 for rapid access during the exam.
3. **Create a hernia repair cheat sheet:** Organize hernia codes by type (inguinal, umbilical, femoral, incisional) × status (reducible, incarcerated) × approach (open, laparoscopic) × initial vs. recurrent.
4. **Know the bariatric trifecta:** RYGB laparoscopic (43644/43645), sleeve gastrectomy (43775), gastric banding (43770–43774).
5. **Read every operative note carefully:** The answers are always in the document. Approach, extent, technique, and patient factors are all code-determining details.

Medical Coding Mastery — Student Edition | Chapter 15: Surgery Section — Digestive System | CPT codes referenced are for educational purposes. Always verify code selection using the most current year's CPT manual. CPT codes and descriptors © American Medical Association. This textbook chapter is designed to supplement, not replace, the official CPT manual and AAPC curriculum for CPC examination preparation. Student: Corrina | Plantation, FL | September 24, 2026

MEDICAL CODING MASTERY | STUDENT EDITION

CHAPTER 16

Surgery: Urinary System

CPT codes: 50010-53899

Corrina Lynch | ACL Consulting Firm | CPC Preparation

This chapter prepares the student coder for accurate assignment of CPT procedure codes within the Urinary System subsection of the Surgery section. Mastery of these codes is essential for CPC examination success and professional coding practice in urology, nephrology, and general surgery settings.

▶️ Chapter Objectives

After completing this chapter, the student will be able to:

1. Identify the anatomical structures of the urinary system and their corresponding CPT code ranges within the Surgery section (50010–53899).
2. Apply CPT guidelines to select accurate codes for kidney procedures, including nephrectomy, nephroplasty, renal biopsy, and renal transplantation.
3. Differentiate between open, laparoscopic, and endoscopic approaches for urinary system procedures and select the correct code accordingly.
4. Correctly apply the endoscopy bundling rule — that surgical endoscopy always includes diagnostic endoscopy — to avoid unbundling errors in cystoscopy and ureteroscopy coding.
5. Sequence and code cystoscopy procedures, including TURBT, ureteral stent placement, and fulguration of bladder lesions, using lesion size and procedure specifics as code-selection criteria.
6. Apply appropriate modifiers (–50, –LT, –RT, –51, –59) to urinary system procedure codes to accurately report bilateral, multiple, and distinct procedural services.
7. Interpret real-world operative notes to extract key documentation elements — approach, anatomical site, laterality, extent of procedure — and translate them into correct CPT codes.
8. Accurately code urodynamic testing procedures, including cystometrogram, uroflowmetry, and electromyography studies.
9. Identify common NCCI edits and bundling conflicts in urinary system coding and apply modifier –59 appropriately to bypass incorrect bundling when documentation supports a distinct service.

10. Demonstrate exam-level competency by completing chapter review questions that mirror CPC examination question style and difficulty.

Section 1: Introduction to the Urinary System

1.1 Anatomy Overview

A thorough understanding of urinary system anatomy is the foundation for accurate procedure coding. The **urinary system** is responsible for filtering blood, producing urine, and eliminating waste products from the body. The four major anatomical structures are:

- **Kidneys:** Paired retroperitoneal organs responsible for filtration of blood and production of urine. Each kidney contains approximately one million functional units called **nephrons**. The renal pelvis collects urine and funnels it into the ureter.
- **Ureters:** Bilateral muscular tubes approximately 25–30 cm in length that transport urine by peristalsis from the renal pelvis to the urinary bladder. The ureter is divided into three segments: upper, middle (pelvic), and lower (intravesical).
- **Urinary Bladder:** A hollow, muscular, distensible organ located in the pelvis that stores urine until **micturition** (urination). The trigone is the triangular region at the bladder base where the two ureters enter and the urethra exits.
- **Urethra:** The tubular structure that conducts urine from the bladder to the exterior. In females, the urethra is approximately 4 cm long; in males, it courses through the prostate gland, perineal membrane, and penis and is approximately 20 cm long.

📚 **Did You Know?**

The kidneys filter approximately 180 liters of blood plasma per day, yet produce only about 1–2 liters of urine. Understanding this anatomy is crucial because many urinary procedures are named after the specific anatomical structure involved — for example, nephro = kidney, pyelo = renal pelvis, ureter = ureter, cysto = bladder, urethro = urethra.

1.2 CPT Urinary System Code Range: 50010–53899

The **Urinary System** subsection is found within the Surgery section of the CPT manual and encompasses codes **50010–53899**. The codes are organized anatomically, following the path of urine from the kidneys outward:

Anatomical Site	CPT Code Range	Key Procedures Covered
Kidney	50010–50580	Incision, excision, repair, transplantation, laparoscopy, endoscopy
Ureter	50600–50980	Incision, excision, introduction, repair, laparoscopy, endoscopy (ureteroscopy)
Bladder	51020–52700	Incision, excision, introduction, urodynamics, repair, laparoscopy, cystoscopy
Urethra	53000–53899	Incision, excision, repair, manipulation, endoscopy

Within each anatomical site, procedures are further organized by the standard CPT subsection headings: **Incision, Excision, Introduction, Repair, Laparoscopy,** and **Endoscopy.**

1.3 Key Documentation Elements from Operative Reports

Before assigning a urinary system code, the coder must extract the following key elements from the operative report:

1. **Anatomical site** — which structure was operated on (kidney, ureter, bladder, urethra)?
2. **Surgical approach** — open, laparoscopic, percutaneous, or endoscopic?
3. **Extent of procedure** — partial vs. complete; diagnostic vs. surgical
4. **Laterality** — unilateral (left or right) vs. bilateral
5. **Additional procedures** performed during the same operative session
6. **Imaging guidance** used (fluoroscopic, ultrasound) — often separately reportable

1.4 Laterality in Urinary System Coding

Laterality is critically important in urinary system coding because the kidneys and ureters are paired bilateral organs. Most kidney and ureter procedure codes describe a **unilateral** service. When the same procedure is performed on both kidneys or both ureters during the same operative session, modifier **–50** (Bilateral Procedure) is appended to the procedure code, or HCPCS modifiers **–LT** (Left Side) and **–RT** (Right Side) are used for payers requiring anatomic side identification.

> 📋 **Coder's Corner: Laterality Rules**
>
> **Always confirm laterality** from the operative report before assigning a modifier. The surgeon's preoperative diagnosis, procedure description, and postoperative diagnosis should all agree on laterality. If the operative note states "right radical nephrectomy," append modifier –RT. If the identical procedure was performed on both kidneys (rare, but possible in some stone cases), append modifier –50 to indicate bilateral performance and adjust the fee accordingly (typically 150% of the unilateral fee).

Section 2: Kidney (50010–50580)

2.1 Incision

Nephrotomy refers to an incision into the kidney, typically performed to access the renal pelvis or parenchyma for exploration or drainage. **Nephrostomy** refers to the creation of an opening into the kidney for drainage purposes, either surgically or percutaneously.

CPT Code	Procedure Description	Key Notes
50040	Nephrostomy, with or without pyelostomy	Open surgical approach; creates drainage tract into kidney
50045	Nephrotomy, with exploration	Incision into kidney for exploration; open approach
50432	Placement of nephrostomy catheter, percutaneous, including imaging guidance, care, and fluoroscopic/ultrasound guidance	Percutaneous approach; imaging guidance bundled into code
50433	Placement of ureteral access catheter, percutaneous, including imaging guidance	Access for antegrade ureter procedures
50435	Exchange nephrostomy catheter, percutaneous, including imaging guidance	Replacement/exchange of existing nephrostomy tube

🛑 **Stop! Think! — Percutaneous Nephrostomy and Imaging Guidance**

Codes **50432** and **50435** include imaging guidance in their code descriptors. **Do NOT separately report** fluoroscopy (76000) or ultrasound guidance (76942) when these codes are used — the imaging is bundled. Only report imaging separately when using older open nephrostomy codes (50040, 50045) where no imaging component exists in the descriptor.

2.2 Excision — Nephrectomy

Nephrectomy is the surgical removal of a kidney. Code selection depends on three key factors: (1) whether the removal is partial or complete; (2) whether it is radical or simple; and (3) the surgical approach (open vs. laparoscopic).

Renal Biopsy

A **renal biopsy** involves the removal of a small sample of kidney tissue for pathologic examination. The approach determines the code:

- **50200** — Renal biopsy, percutaneous, by trocar or needle (most common; imaging guidance reported separately with 76942 or 77002)
- **50205** — Renal biopsy, by surgical exposure of kidney (open approach)

CPT Code	Procedure Type	Approach	Key Characteristics
50220	Nephrectomy, partial	Open	Removal of portion of kidney; kidney preserved
50225	Nephrectomy, partial with ureterectomy	Open	Includes removal of ureter segment
50230	Nephrectomy, radical	Open	Entire kidney + surrounding Gerota fascia; may include adrenal gland and lymph nodes

CPT Code	Procedure Type	Approach	Key Characteristics
50240	Nephrectomy, total, simple	Open	Entire kidney; not radical; no regional lymph node dissection
50543	Laparoscopic nephrectomy, partial	Laparoscopic	Kidney-sparing; port-based minimally invasive
50545	Laparoscopic radical nephrectomy	Laparoscopic	Includes lymph node dissection per descriptor; do not code separately
50546	Laparoscopic nephrectomy, total, simple	Laparoscopic	Complete kidney removal without radical components
50548	Laparoscopic nephrectomy with total ureterectomy	Laparoscopic	Used for urothelial carcinoma of upper urinary tract

> 📋 **Coder's Corner: Open vs. Laparoscopic — Never Interchangeable**
>
> Open and laparoscopic nephrectomy codes are never interchangeable. If a laparoscopic procedure is converted to open due to complications, **always report the open procedure code.** The CPT guidelines state that when a laparoscopic approach is converted to open, only the open procedure code is reported — you may **not** separately code the attempted laparoscopic approach.

2.3 Renal Transplantation (50300–50380)

Renal transplantation coding involves multiple distinct CPT codes that report each component of the transplant process separately. The three components are:

(1) donor nephrectomy, (2) backbench preparation/reconstruction, and (3) recipient transplantation.

CPT Code	Component	Description
50300	Donor Nephrectomy — Living	Open donor nephrectomy from living donor (including care of donor)
50320	Donor Nephrectomy — Cadaver	Unilateral nephrectomy from cadaver donor, open; includes cold preservation
50323	Backbench Standard Preparation	Arterial and venous reconstruction, cold preservation
50325	Backbench Arterial Anastomosis	Each additional arterial anastomosis; add-on code (+50325)
50327	Backbench Venous Anastomosis	Venous reconstruction — add-on code (+50327)
50329	Backbench Ureteral Anastomosis	Ureteral reconstruction — add-on code (+50329)
50360	Recipient Transplantation — Without Recipient Nephrectomy	Implantation of donor kidney; no removal of recipient's own kidney
50365	Recipient Transplantation — With Recipient Nephrectomy	Includes removal of recipient's diseased kidney at time of transplant
50370	Removal of Transplanted Renal Allograft	Removal of previously transplanted kidney
50380	Renal Autotransplantation	Reimplantation of patient's own kidney

📋 **Transplant Coding Scenario 1**

Scenario: A 52-year-old patient with end-stage renal disease undergoes renal transplantation. The kidney is obtained from a living related donor (open

nephrectomy). The donor kidney undergoes backbench preparation, including standard vascular preparation and one additional arterial anastomosis. The recipient receives the transplanted kidney without removal of the native kidney.

Code Assignment:

- **50300** — Living donor nephrectomy, open (reported for donor services)
- **50323** — Backbench standard preparation
- **50325** — Backbench additional arterial anastomosis (add-on)
- **50360** — Recipient transplantation, without recipient nephrectomy

Common Mistake: Forgetting to report backbench preparation codes separately. These are not included in either the donor or recipient codes and must be reported by the performing surgeon.

📋 Transplant Coding Scenario 2

Scenario: A cadaver donor kidney is procured (50320). Backbench preparation is performed, including standard preparation (50323) and ureteral reconstruction (50329). The recipient undergoes transplantation with simultaneous removal of the recipient's non-functioning native kidney.

Code Assignment:

- **50320** — Cadaver donor nephrectomy
- **50323** — Backbench standard preparation
- **50329** — Backbench ureteral anastomosis (add-on)
- **50365** — Recipient transplantation with recipient nephrectomy

2.4 Repair — Kidney

Nephrorrhaphy (**50500**) is the suture repair of a lacerated or injured kidney. This is most commonly performed following trauma.

Pyeloplasty is the surgical reconstruction of the **ureteropelvic junction (UPJ)** to relieve obstruction — a condition known as UPJ obstruction. The choice of code depends on whether this is an initial repair or a secondary (revision) procedure:

- **50400** — Pyeloplasty (Foley Y-pyeloplasty or other technique); initial
- **50405** — Pyeloplasty; secondary (following previous pyeloplasty)
- **50544** — Laparoscopic pyeloplasty

2.5 Laparoscopy — Kidney

CPT Code	Open Equivalent	Laparoscopic Procedure
50543	50220	Laparoscopic partial nephrectomy
50545	50230	Laparoscopic radical nephrectomy (includes lymph node dissection)
50546	50240	Laparoscopic total nephrectomy, simple
50547	50300	Laparoscopic donor nephrectomy (living donor)
50548	50236 (nephroureterectomy)	Laparoscopic nephrectomy with total ureterectomy
50544	50400	Laparoscopic pyeloplasty

2.6 Endoscopy — Upper Urinary Tract / Nephroscopy

Nephroscopy is the direct visual examination of the interior of the kidney via a nephroscope, performed either through a percutaneous tract or through an open

incision. **Ureteroscopy** involves the passage of a ureteroscope through the urethra and bladder into the ureter or renal pelvis for diagnostic or therapeutic purposes.

CPT Code	Procedure	Notes
50551	Renal endoscopy through established nephrostomy or pyelostomy, with or without irrigation, instillation, or ureteropyelography	Diagnostic; through existing access
50553	Renal endoscopy through established nephrostomy; with ureteral catheterization	Add catheterization to 50551 scenario
50555	Renal endoscopy through established nephrostomy; with biopsy	Biopsy taken through nephroscope
50557	Renal endoscopy through established nephrostomy; with fulguration or treatment of lesion	Destruction/fulguration of lesion
50561	Renal endoscopy through established nephrostomy; with removal of foreign body or calculus	Stone removal through nephroscope
50580	Renal endoscopy through nephrotomy (surgical incision)	Endoscopy via surgical incision, not established tract

📋 **Kidney Endoscopy Scenario — Percutaneous Nephrostomy with Stone Removal**

Operative Note Excerpt: "Patient underwent percutaneous nephrostomy tube placement under fluoroscopic guidance via a right flank approach. A nephrostomy catheter was successfully placed into the right renal collecting system. Subsequently, nephroscopy was performed through the established tract and a single calculus measuring 1.2 cm was identified and removed using

a basket device."

Step-by-Step Analysis:

1. Percutaneous nephrostomy catheter placement with fluoroscopic guidance → **50432** (imaging included in code)
2. Nephroscopy through the newly established nephrostomy with stone removal → **50561**
3. Laterality → Append **-RT** to both codes

Final Codes: 50432-RT, 50561-RT

Common Mistake: Separately reporting fluoroscopy when using code 50432 — the imaging guidance is bundled.

Section 3: Ureter (50600–50980)

3.1 Incision — Ureterolithotomy

Ureterotomy is a surgical incision into the ureter, most commonly performed to remove a calculus (stone) lodged in the ureter — a procedure known as **ureterolithotomy**. Code selection is based on the location of the stone within the ureter:

CPT Code	Stone Location	Description
50610	Upper one-third of ureter	Ureterolithotomy; upper one-third of ureter
50620	Middle one-third of ureter	Ureterolithotomy; middle one-third of ureter
50630	Lower one-third of ureter	Ureterolithotomy; lower one-third of ureter

📚 **Did You Know?**

The most common locations for ureteral stone impaction are the three natural areas of narrowing in the ureter: the ureteropelvic junction (UPJ), the point where the ureter crosses the iliac vessels, and the ureterovesical junction (UVJ) where the ureter enters the bladder. Open ureterolithotomy (50610–50630) is now rarely performed due to the prevalence of ureteroscopic stone management, but it remains an important code family for exam purposes.

3.2 Excision — Ureterectomy

- **50650** — **Ureterectomy**, with bladder cuff (partial)
- **50660** — Ureterectomy, total, with bladder cuff, different incision than original nephrectomy

3.3 Introduction — Ureteral Catheterization

Ureteral catheterization involves the placement of a catheter into the ureter, either for diagnostic purposes (ureteral pressure studies, pyelography) or therapeutic purposes (urine drainage, stent placement).

- **50684** — Injection procedure for ureterography or ureteropyelography, through ureterostomy or indwelling ureteral catheter
- **50690** — Injection procedure for visualization of ileal conduit and/or ureteropyelography

3.4 Repair — Ureter

Ureteral repair procedures encompass a variety of techniques to restore normal ureteral function after injury, obstruction, or disease:

CPT Code	Procedure	Description / Indication
50700	Ureteroplasty	Plastic repair/reconstruction of ureter; stricture repair
50715	Ureterolysis, with or without repositioning of ureter for retroperitoneal fibrosis	Freeing of ureter from surrounding scar/fibrosis
50722	Ureterolysis for ovarian vein syndrome	Relief of ureteral compression by ovarian vein
50725	Ureterolysis for retrocaval ureter, with reanastomosis of upper urinary tract or vena cava	Correction of ureter passing behind vena cava
50728	Ureteroneocystostomy	Reimplantation of ureter into bladder; open
50740	Ureteropyelostomy	Anastomosis of ureter to renal pelvis
50750	Ureterocalycostomy	Anastomosis of ureter to renal calyx
50760	Ureteroureterostomy	End-to-end anastomosis of ureter to ureter
50770	Transureteroureterostomy	Cross-anastomosis of one ureter to contralateral ureter
50780	Ureteroneocystostomy; single anastomosis (ureter to bladder)	Simple reimplantation
50785	Ureteroneocystostomy; with vesico-psoas hitch or bladder flap	Complex reimplantation requiring bladder mobilization

3.5 Laparoscopy — Ureter

- 50947 — Laparoscopic ureteroneocystostomy with cystoscopy and ureteral stent placement
- 50948 — Laparoscopic ureteroneocystostomy without cystoscopy

3.6 Endoscopy — Ureteroscopy (50951–50980)

Ureteroscopy involves the passage of a rigid or flexible ureteroscope through the urethra, bladder, and into the ureter (and sometimes the renal pelvis) under direct visualization. Ureteroscopy is one of the most commonly coded endoscopic procedures in urology.

CPT Code	Procedure Description	Key Notes
50951	Ureteroscopy through established ureterostomy; diagnostic, with or without irrigation	Diagnostic; through ureterostomy
50953	Ureteroscopy through established ureterostomy; with ureteral catheterization	Catheter placement added
50955	Ureteroscopy through established ureterostomy; with biopsy	Tissue sampling
50957	Ureteroscopy through established ureterostomy; with fulguration of ureteral lesion	Destruction/fulguration
50961	Ureteroscopy through established ureterostomy; with removal of foreign body or calculus	Stone basket extraction
50970	Ureteroscopy through ureterotomy (surgical incision); diagnostic	Through surgical incision, not established tract
50980	Ureteroscopy through ureterotomy; with removal of foreign body or calculus	Stone removal through surgical access; includes lithotripsy when performed

🛑 **Stop! Think! — Surgical Endoscopy Always Includes Diagnostic**

Endoscopy

This is one of the most heavily tested rules in urinary coding. When a surgeon performs a ureteroscopy that includes a therapeutic procedure (e.g., stone removal, biopsy, fulguration), the diagnostic component — the visual examination of the ureter — is **always included** in the surgical endoscopy code. **Never separately report** a diagnostic ureteroscopy (50951) in addition to a surgical ureteroscopy code performed during the same operative session on the same ureter. Doing so constitutes unbundling and violates NCCI edits.

📋 Ureteroscopy Coding Scenario 1 — Stone Basket Extraction

Operative Note Excerpt: "Cystourethroscopy was performed. A flexible ureteroscope was advanced into the left ureter under fluoroscopic guidance. A 6 mm calculus was identified in the lower third of the left ureter. A stone basket was deployed and the calculus was successfully extracted intact. The ureteroscope was withdrawn. No stent was placed."

Step-by-Step Analysis:

1. Procedure: Ureteroscopy with stone removal via basket extraction (not lithotripsy — stone removed intact)
2. Access: Through natural orifice (not established ureterostomy or surgical incision) → use retrograde ureteroscopy codes
3. Note: No stent placed — do not add a stent code
4. Laterality: Left ureter

Final Code: **50961-LT** (Ureteroscopy through ureterostomy, with removal of foreign body or calculus)

Common Mistake: Adding 52332 for stent — no stent was placed in this scenario.

📋 Ureteroscopy Coding Scenario 2 — Laser Lithotripsy with Stent Placement

Operative Note Excerpt: "Flexible ureteroscopy was performed on the right side. A 1.0 cm stone was identified at the ureteropelvic junction. Holmium laser lithotripsy was performed, fragmenting the stone completely. Fragments were irrigated. An indwelling double-J ureteral stent was then placed via cystoscopic guidance and left in place."

Step-by-Step Analysis:

1. Ureteroscopy with laser lithotripsy → **52353** (Cystourethroscopy with ureteroscopy and/or pyeloscopy; with lithotripsy)
2. Indwelling stent placed and left in place → **52332** (Cystourethroscopy with insertion of indwelling ureteral stent) — add-on reportable because the stent was left indwelling
3. Append modifier –RT for right side

Final Codes: 52353-RT, 52332-RT-51

Common Mistake: Omitting 52332 because it was performed during the same session. A stent that is left indwelling (not removed at end of procedure) is always separately reportable.

📋 Ureteroscopy Coding Scenario 3 — Biopsy of Ureteral Lesion

Operative Note Excerpt: "A rigid ureteroscope was advanced into the left ureter via cystoscopy. A suspicious mucosal lesion was visualized at the mid-ureter. Cold cup biopsies were obtained from the lesion and submitted for pathology. No fulguration was performed. The ureteroscope was removed and

a temporary stent was placed and removed at the close of the procedure."

Step-by-Step Analysis:

1. Ureteroscopy with biopsy → **50955** (Ureteroscopy through established ureterostomy, with biopsy)
2. Temporary stent placed and removed during same session → **NOT separately reportable** (temporary stents used for access/support and removed at procedure end are included)
3. Laterality: Left → append –LT

Final Code: 50955-LT

Section 4: Bladder (51020–52700)

4.1 Incision

Cystotomy is a surgical incision into the urinary bladder. It is performed to access the bladder interior for removal of calculi, tumors, foreign bodies, or to perform other intraoperative procedures.

- **51020** — Cystotomy or cystostomy; with fulguration and/or insertion of a radioactive implant
- **51030** — Cystotomy or cystostomy; with cryosurgical destruction of intravesical lesion
- **51040** — Cystostomy, with drainage
- **51045** — Cystotomy, with insertion of ureteral catheter or stent (separate procedure)
- **51050** — Cystolithotomy, cystotomy with removal of calculus

4.2 Excision — Cystectomy

Cystectomy refers to the surgical removal of all or part of the urinary bladder. Code selection depends on whether the removal is partial or total/radical, and the surgical approach.

CPT Code	Type	Description
51500	Excision — Partial	Excision of urachal cyst or sinus, with or without umbilical hernia repair
51520	Partial Cystectomy	Simple; for removal of bladder diverticulum, single
51530	Partial Cystectomy	For excision of bladder tumor
51570	Total Cystectomy	Simple; without urinary diversion (bladder only removed)
51575	Total Cystectomy	With bilateral pelvic lymphadenectomy, including external iliac, hypogastric, and obturator nodes
51580	Radical Cystectomy (male)	Includes removal of bladder, prostate, seminal vesicles; without urinary diversion
51585	Radical Cystectomy (male)	With bilateral pelvic lymphadenectomy and urinary diversion
51590	Radical Cystectomy (female)	Bladder, urethra, uterus, cervix; without urinary diversion
51595	Radical Cystectomy (female)	With pelvic lymphadenectomy and urinary diversion

📚 **Did You Know? — Ileal Conduit**

An **ileal conduit** (also called a Bricker diversion) is the most common form of urinary diversion performed after radical cystectomy. A segment of the ileum (small bowel) is isolated, the ureters are anastomosed to one end, and the other end is brought to the skin surface as a stoma, allowing urine to drain continuously into an external appliance. When the radical cystectomy code includes "with urinary diversion" (e.g., 51585, 51595), the ileal conduit is included — do not separately report the intestinal anastomosis or conduit construction.

4.3 Introduction — Bladder

Bladder Catheterization

- **51701** — Insertion of non-indwelling bladder catheter (straight catheter; in and out)
- **51702** — Insertion of temporary indwelling bladder catheter; simple (Foley catheter)
- **51703** — Insertion of temporary indwelling bladder catheter; complicated

📋 Coder's Corner: When to Code Catheter Insertion

Routine Foley catheter insertion performed by a nurse in preparation for surgery is **never separately reported** — it is considered a standard pre-operative nursing service. Codes 51701–51703 are only reported when the catheter insertion itself is the reason for the encounter (e.g., urinary retention requiring emergency catheterization) or when insertion is a complex procedure requiring physician skill.

4.4 Urodynamics (51725–51798)

Urodynamic testing is a group of diagnostic studies that evaluate the function of the bladder and urethra during filling and voiding. These studies are essential in evaluating urinary incontinence, urinary retention, and voiding dysfunction. Most urodynamic codes have both a "simple" and "complex" variant based on whether separate urethral and bladder pressure measurements are performed simultaneously.

CPT Code	Test	Description
51725	Simple cystometrogram (CMG)	Bladder capacity and pressure measurement; simple filling
51726	Complex CMG	Includes urethral pressure measurement simultaneously
51727	Complex CMG with voiding pressure studies	Adds voiding/micturition pressure measurement
51728	Complex CMG with voiding pressure studies and urethral pressure profile studies	Most comprehensive CMG
51736	Simple uroflowmetry (UFR)	Measurement of urinary flow rate; simple, no instrumentation
51741	Complex uroflowmetry	Includes calibration devices; more sophisticated measurement
51772	Urethral pressure profile (UPP)	Measurement of pressure along urethra; single pull-through
51784	Electromyography (EMG) of anal or urethral sphincter	Non-needle EMG; surface electrode study
51785	Needle EMG of anal or urethral sphincter	Needle electrode study; more invasive
51792	Stimulus evoked response	Sacral reflex latency measurement

CPT Code	Test	Description
51797	Voiding pressure studies, intra-abdominal	Add-on to CMG; rectal or vaginal catheter pressure measurement

📋 Urodynamics Coding Scenario 1

Scenario: A 58-year-old female with urinary incontinence presents for urodynamic evaluation. The physician performs a complex cystometrogram with voiding pressure studies. Simultaneously, needle EMG of the urethral sphincter is performed to evaluate neuromuscular function.

Code Assignment:

- 51727 — Complex CMG with voiding pressure studies
- 51785 — Needle EMG of urethral sphincter

Note: These are separate, distinct studies — both are reportable at the same session.

📋 Urodynamics Coding Scenario 2

Scenario: A 72-year-old male with benign prostatic hyperplasia and urinary retention undergoes simple uroflowmetry followed by a simple CMG.

Code Assignment:

- 51736 — Simple uroflowmetry
- 51725 — Simple CMG
- Append modifier -51 to the second procedure to indicate multiple procedures

4.5 Repair — Bladder

CPT Code	Procedure	Indication / Notes
51840	Anterior vesicourethropexy or urethropexy	Suspension of bladder neck; simple procedure (Marshall-Marchetti-Krantz [MMK] technique)
51841	Anterior vesicourethropexy or urethropexy; complicated	Burch colposuspension; additional complexity
51860	Cystorrhaphy; suture of bladder wound, injury, or rupture; simple	Bladder laceration repair — simple
51865	Cystorrhaphy; complicated	Complex bladder repair
51900	Closure of vesicovaginal fistula	Vaginal approach; closure of abnormal tract between bladder and vagina
51920	Closure of vesicouterine fistula	Closure of fistula between bladder and uterus
51925	Closure of vesicouterine fistula; with hysterectomy	Includes uterus removal at time of fistula closure

📚 Did You Know? — Sling Operations

Suburethral sling procedures for urinary stress incontinence (such as the TVT — tension-free vaginal tape) are reported with code 57288, which is located in the **Female Genital System** section of CPT — not in the Urinary System section. This is a common source of confusion for student coders. When you see a sling procedure documented in the operative note, cross-reference to the Female Genital System section.

4.6 Laparoscopy — Bladder

- **51990** — Laparoscopic urethral suspension
- **51992** — Laparoscopic sling operation for stress incontinence
- **51595** — Radical laparoscopic cystectomy, with urinary diversion (female)

4.7 Endoscopy — Cystoscopy (52000–52700)

Cystoscopy (also called **cystourethroscopy**) is the direct endoscopic examination of the urethra, bladder, and ureteral orifices using a cystoscope. Code **52000** — Cystourethroscopy (separate procedure) — is the most frequently reported code in the entire Urinary System section and one of the most commonly used codes in all of CPT.

> 🛑 **Stop! Think! — Diagnostic Cystoscopy Is Included in Surgical Cystoscopy**
>
> When a surgical cystoscopy is performed (e.g., TURBT, stent placement, fulguration), the diagnostic examination of the bladder is always included. **NEVER separately report 52000** when a surgical cystoscopy code is reported for the same session. Code 52000 carries the designation "(separate procedure)" in its CPT descriptor — this is your signal that it is only separately reportable when no other cystoscopic procedure is performed at the same session. Reporting 52000 alongside 52234 (TURBT) constitutes unbundling.

CPT Code	Procedure	Key Notes / Code-Selection Criteria
52000	Cystourethroscopy (diagnostic)	Separate procedure; report alone only; NOT with other cystoscopy codes at same session
52001	Cystourethroscopy with irrigation and evacuation of multiple obstructive blood clots	Bladder evacuation for clot retention

CPT Code	Procedure	Key Notes / Code-Selection Criteria
52005	Cystourethroscopy with ureteral catheterization	With or without ureteropyelography; catheter placed
52007	Cystourethroscopy with brush biopsy of ureter or renal pelvis	Brush biopsy via ureteroscopic technique
52010	Cystourethroscopy with ejaculatory duct catheterization	Male-specific procedure
52204	Cystourethroscopy with biopsy(s)	Cold cup or hot biopsy of bladder mucosa
52214	Cystourethroscopy with fulguration of trigone, bladder neck, prostatic fossa, urethra, or periurethral glands	Fulguration of specific locations
52224	Cystourethroscopy with fulguration of bladder lesion(s)	Small lesion(s); less than 0.5 cm
52234	TURBT (Transurethral Resection of Bladder Tumor); small	Tumor less than 0.5 cm to 2.0 cm
52235	TURBT; medium	Tumor 0.5 cm to 2.0 cm
52240	TURBT; large	Tumor greater than 2.0 cm
52281	Cystourethroscopy with calibration and/or dilation of urethral stricture	Stricture dilation via cystoscope
52310	Cystourethroscopy with removal of foreign body, calculus, or ureteral stent; simple	Simple stone/stent removal
52315	Cystourethroscopy with removal of foreign body, calculus, or ureteral stent; complicated	Complex removal requiring additional technique
52332	Cystourethroscopy with insertion of indwelling ureteral stent	Stent left indwelling; separately reportable when added to

CPT Code	Procedure	Key Notes / Code-Selection Criteria
		ureteroscopy
52341	Cystourethroscopy with treatment of ureteral stricture	Dilation of ureteral stricture at ureteral orifice
52353	Cystourethroscopy with ureteroscopy and/or pyeloscopy; with lithotripsy	Ureteroscopic lithotripsy (laser, ultrasonic, electrohydraulic)
52354	Cystourethroscopy with ureteroscopy and/or pyeloscopy; with biopsy	Ureteroscopic biopsy of ureter/renal pelvis
52356	Cystourethroscopy with ureteroscopy and/or pyeloscopy; with lithotripsy including insertion of indwelling ureteral stent	Lithotripsy PLUS stent — single combination code; do NOT add 52332

🛑 Stop! Think! — TURBT Code Selection by Tumor Size

Transurethral resection of bladder tumor (TURBT) code selection is driven by the **size of the tumor** documented in the operative report. The pathology report or the surgeon's estimate of tumor size at the time of resection determines the code. Key thresholds:

- **Less than 0.5 cm** → Consider 52224 (fulguration) — if fulgurated rather than resected
- **Small to Medium (0.5 cm – 2.0 cm)** → 52235
- **Large (greater than 2.0 cm)** → 52240

If multiple tumors are resected at the same session, report only **one TURBT code** based on the **largest** tumor resected. **Do not** report a separate TURBT code for each additional tumor — this constitutes unbundling.

📋 Cystoscopy Coding Scenario 1 — TURBT with Biopsy

Operative Note Excerpt: "Cystourethroscopy was performed. A 2.5 cm papillary tumor was identified on the posterior wall of the bladder. Complete transurethral resection of the tumor was carried out using the resectoscope. Additional cold cup biopsies were taken from the mucosa adjacent to the tumor base."

Step-by-Step Analysis:

1. TURBT — tumor size 2.5 cm (greater than 2.0 cm) → **52240** (Large)
2. Biopsy of adjacent mucosa — Is this separately reportable? **No.** Biopsies taken from the tumor bed as part of the TURBT are included. However, biopsies from a site distinct from the resection site may be separately reportable with modifier –59.
3. No stent placed — do not report 52332

Final Code: **52240**

Common Mistake: Adding 52204 for the biopsy — the biopsy at the tumor site is bundled into 52240.

📋 Cystoscopy Coding Scenario 2 — Bilateral Ureteral Stent Placement

Operative Note Excerpt: "The patient presented with bilateral ureteral obstruction secondary to extrinsic compression from retroperitoneal fibrosis. Cystoscopy was performed. Under fluoroscopic guidance, double-J indwelling ureteral stents were placed bilaterally — a 6 French, 24 cm stent in the right ureter and a 6 French, 26 cm stent in the left ureter. Both stents were confirmed in good position fluoroscopically."

Step-by-Step Analysis:

1. Cystoscopy with indwelling ureteral stent placement → **52332**
2. Bilateral stents (right and left) → Append modifier **–50** to indicate bilateral performance
3. Fluoroscopic guidance — check if bundled. For 52332, fluoroscopy is typically separately reportable: **74420** or **76000** per payer policy

Final Codes: 52332-50

Common Mistake: Reporting 52332-LT and 52332-RT as two separate line items when modifier –50 on a single line is the preferred method (verify with specific payer).

📋 Cystoscopy Coding Scenario 3 — Multiple Bladder Tumors

Operative Note Excerpt: "Three bladder tumors were identified on cystoscopy: a 1.5 cm lesion on the right lateral wall, a 0.8 cm lesion on the left lateral wall, and a 0.3 cm lesion at the dome. All three lesions were resected using the resectoscope loop."

Step-by-Step Analysis:

1. Multiple TURBT lesions — report one TURBT code based on the largest lesion
2. Largest lesion = 1.5 cm → falls in 0.5–2.0 cm range → **52235** (Medium TURBT)
3. Do NOT report separate codes for each additional lesion

Final Code: **52235**

Common Mistake: Reporting three TURBT codes (one for each lesion) — this is unbundling. Report only the one code based on largest lesion size.

Section 5: Urethra (53000–53899)

5.1 Incision

Urethrotomy is a surgical incision to enlarge the urethra or relieve a stricture. Two approaches are distinguished:

- **53000** — Urethrotomy or urethrostomy, external (meatotomy, urethra only)
- **53010** — Urethrotomy, external; with construction of permanent opening
- **53020** — Meatotomy, cutting of meatus; except infant
- **53025** — Meatotomy; infant

5.2 Excision

- **53200** — Biopsy of urethra
- **53210** — Urethectomy, total, including cystostomy; female
- **53215** — Urethectomy, total, including cystostomy; male
- **53220** — Excision or fulguration of carcinoma of urethra
- **53230** — Excision of urethral diverticulum, female
- **53235** — Excision of urethral diverticulum, male
- **53240** — Marsupialization of urethral diverticulum, male or female
- **53260** — Excision or fulguration; urethral polyp(s), distal urethra
- **53265** — Excision or fulguration; urethral caruncle

5.3 Repair — Urethroplasty

Urethroplasty is the surgical repair or reconstruction of the urethra, most commonly performed for urethral stricture disease. The complexity of the repair determines the code:

CPT Code	Description	Technique / Notes
53400	Urethroplasty; first stage, for fistula, diverticulum, or stricture	Initial stage; may involve marsupialization or excision of stricture
53405	Urethroplasty; second stage	Tubularization/closure of previously created urethroplasty
53410	Urethroplasty, one-stage reconstruction of male anterior urethra	One-stage repair with graft (e.g., buccal mucosa graft)
53415	Urethroplasty, transpubic or perineal, one-stage	For complex posterior urethral strictures; transpubic approach
53420	Urethroplasty, two-stage reconstruction or repair	First of two-stage anterior urethral repair
53425	Urethroplasty, two-stage; second stage	Closure/tubularization stage
53430	Urethroplasty, reconstruction of female urethra	Female-specific urethral reconstruction
53450	Urethromeatoplasty, with mucosal advancement	Reconstruction of urethral meatus
53460	Urethromeatoplasty, with partial excision of distal urethral segment	More extensive meatal reconstruction

5.4 Manipulation — Urethral Dilation

Urethral dilation is the mechanical widening of a narrowed or strictured urethra using progressively larger dilators. Code selection is based on three factors: (1) the sex of the patient; (2) whether this is the initial or a subsequent encounter; and (3) whether general anesthesia was used.

CPT Code	Sex	Encounter	Anesthesia
53600	Male	Initial	Without general/spinal
53601	Male	Subsequent	Without

CPT Code	Sex	Encounter	Anesthesia
			general/spinal
53605	Male	Initial	Under general/spinal anesthesia
53620	Male	Subsequent	Under general/spinal anesthesia
53660	Female	Initial	Office-based dilation
53661	Female	Subsequent	Office-based dilation
53665	Female	Any	Under general/spinal anesthesia

Section 6: Extracorporeal Shock Wave Lithotripsy (ESWL) — 50590

Extracorporeal shock wave lithotripsy (ESWL) is a non-invasive procedure that uses externally generated high-energy shock waves to fragment urinary calculi (kidney stones) within the body. The fragmented stone particles are then passed naturally in the urine. ESWL is commonly used for kidney stones that are too large to pass spontaneously but that do not require invasive surgical intervention.

6.1 Code 50590 — The Only ESWL Code

There is only **one CPT code** for ESWL regardless of the number of shock waves delivered, the number of stones treated, or the size of the calculi:

50590 — Lithotripsy, extracorporeal shock wave

📋 **Coder's Corner: One Code for ESWL — Always**

Whether the surgeon treats one stone or five stones, whether 1,000 or 3,000 shock waves are delivered, whether the stone is in the renal pelvis or in the upper ureter — code **50590** is reported only once per session. Do NOT multiply the code for multiple stones. Do NOT report 50590 twice for bilateral ESWL sessions on the same date (the bilateral scenario is extremely uncommon). Imaging used to localize the stone during ESWL may be separately reportable based on payer policy.

6.2 Imaging Guidance with ESWL

Fluoroscopic guidance used to localize the stone during ESWL treatment may be separately reported, depending on payer policy. Check payer-specific coverage guidelines and NCCI edits before separately reporting imaging with 50590.

📋 **ESWL Coding Scenario 1**

Scenario: A patient presents with a 12 mm right renal calculus and a 7 mm right upper ureteral stone. ESWL is performed targeting both stones during a single treatment session. 2,200 shock waves were delivered.

Code Assignment: **50590-RT**

Rationale: One code for ESWL, regardless of number of stones. Modifier –RT indicates right side. The number of shock waves does not affect code selection.

📋 **ESWL Coding Scenario 2**

Scenario: A patient with a 9 mm left kidney stone undergoes ESWL. After the procedure, a cystoscopy with insertion of an indwelling ureteral stent had been previously placed to facilitate stone fragment passage. The ESWL is now

performed.

Code Assignment:

- **50590-LT** — ESWL
- Note: If the stent was placed at a prior encounter, that code was reported separately at that time. Only ESWL is reported for this session.

Section 7: Urinary System Modifiers

Modifiers are two-character suffixes appended to CPT codes to indicate that a service or procedure has been altered by some specific circumstance, without changing the definition of the code. In urinary system coding, modifiers are essential to accurately represent bilateral procedures, multiple procedures, and distinct services.

Modifier	Name	When to Use in Urinary Coding	Example
-50	Bilateral Procedure	Same procedure performed on both kidneys or both ureters during the same operative session	Bilateral ureteral stent placement: 52332-50
-LT	Left Side	Procedure performed on left kidney or ureter; required by many payers instead of or in addition to -50	Left ureteroscopy with stone removal: 50961-LT
-RT	Right Side	Procedure performed on right kidney or	Right percutaneous nephrostomy:

Modifier	Name	When to Use in Urinary Coding	Example
		ureter	50432-RT
–51	Multiple Procedures	Second or additional procedure performed during same operative session by same physician	Cystoscopy with stent placement + urodynamics: 52332, 51725-51
–52	Reduced Services	Procedure was partially reduced or eliminated at physician's discretion	ESWL performed but terminated early due to patient intolerance: 50590-52
–59	Distinct Procedural Service	Procedure performed is distinct from another procedure that would otherwise be bundled; requires documentation support	Cystoscopy with biopsy at site distinct from TURBT site at same session: 52240, 52204-59
–XS	Separate Structure (Selective –59 Modifier)	Preferred HCPCS modifier when procedure is performed at separate anatomical structure; more specific than –59	Bilateral ureteroscopy — different ureter each side: 50961-XS

📋 Coder's Corner: Modifier –59 in Cystoscopy Combinations

Modifier –59 (Distinct Procedural Service) is frequently encountered in cystoscopy coding when multiple procedures are performed during the same endoscopic session. The key principle: modifier –59 should only be appended when you have **strong documentation support** that the additional service was performed at a **different anatomical site**, during a **different**

encounter, or represents a service that is not typically performed together with the primary procedure. Overuse of –59 without documentation support is a top audit risk in urinary system coding. Before appending –59, ask: "Do I have a specific note from the surgeon that this was a separate, distinct service?"

Section 8: Endoscopy Coding Rules — Urinary System

8.1 The Surgical Endoscopy Rule

The most important rule governing endoscopic coding in the urinary system — and in all of CPT — is:

> Surgical endoscopy always includes diagnostic endoscopy.

When a physician performs a cystoscopy with a therapeutic/surgical component (TURBT, biopsy, stent placement, stone removal, fulguration), the visual examination of the bladder and urethra that occurs as part of gaining access and orientation is always included in the surgical code. Code 52000 (diagnostic cystoscopy) is never separately reported at the same session as any other cystoscopy code.

8.2 Cystoscopy Bundling Rules

- **Single session, multiple procedures:** If multiple cystoscopic procedures are performed at the same session (e.g., TURBT and ureteral stent

placement), report both codes. The lesser of the two may require modifier –51.

- **Multiple lesions, same session:** For TURBT, report only one code based on the largest lesion. For fulguration of multiple small lesions, 52224 covers all fulgurated lesions — report once.
- **Stent placement with lithotripsy:** Use combination code **52356** (lithotripsy with stent) rather than separately reporting 52353 + 52332 — this avoids an NCCI edit.

8.3 NCCI Edits in Urinary Coding

NCCI (National Correct Coding Initiative) edits are bundling edits established by CMS to prevent improper payment of codes that should not be reported together. Common NCCI edit pairs in urinary coding include:

Column 1 (Primary)	Column 2 (Bundled Into)	Modifier Allowed?
52353 (Ureteroscopy with lithotripsy)	52332 (Stent insertion)	Use 52356 instead (combination code)
52240 (TURBT large)	52000 (Diagnostic cystoscopy)	No — 52000 is always bundled
50432 (Percutaneous nephrostomy)	76000 (Fluoroscopy)	No — imaging bundled in 50432
50545 (Laparoscopic radical nephrectomy)	Lymph node dissection code	No — included in descriptor

Section 9: Real-World Coding Scenarios

> The following six comprehensive operative note scenarios mirror the level of

complexity found on the CPC examination. For each scenario, carefully read the full operative note excerpt, follow the step-by-step analysis, and note common mistakes to avoid.

① Scenario 1 — Cystoscopy with TURBT (Large Lesion)

OPERATIVE REPORT EXCERPT

PREOPERATIVE DIAGNOSIS: Bladder tumor, posterior wall

POSTOPERATIVE DIAGNOSIS: Bladder tumor, posterior wall, approximately 3.2 cm; papillary

PROCEDURE: Cystourethroscopy with transurethral resection of bladder tumor

SURGEON: Dr. R. Morgan, MD

DESCRIPTION OF PROCEDURE: The patient was brought to the OR and placed in the lithotomy position under general anesthesia. A 22 French cystoscope was introduced per urethra without difficulty. The bladder was inspected. A 3.2 cm papillary tumor was identified on the posterior wall of the bladder. Using the resectoscope, complete resection of the tumor was carried out in a systematic fashion. The tumor was resected to the muscle layer. Multiple chips were irrigated from the bladder. Meticulous fulguration of the tumor base was performed. The bladder was inspected and found to be free of additional lesions. A 20 French three-way Foley catheter was placed for bladder irrigation

postoperatively.

Step-by-Step Analysis:

1. **Procedure:** TURBT
2. **Size:** 3.2 cm — greater than 2.0 cm → **Large**
3. **Code:** **52240** — Cystourethroscopy, with transurethral resection of bladder tumor(s), large
4. **Foley catheter:** Placed for postoperative irrigation — this is a routine component of TURBT; **do NOT separately report** catheter insertion
5. **Fulguration of base:** Included in TURBT — do NOT add 52214
6. **Diagnostic cystoscopy (52000):** Do NOT report — bundled into surgical cystoscopy

Final Code: **52240**

Common Mistakes to Avoid: (1) Selecting 52235 (medium) — read the size carefully: 3.2 cm is large. (2) Adding 52000 — always bundled. (3) Adding 52214 for the fulguration of tumor base — included in TURBT code.

② Scenario 2 — Ureteroscopy with Lithotripsy for Ureteral Stone

OPERATIVE REPORT EXCERPT

PREOPERATIVE DIAGNOSIS: Left ureteral calculus, 8 mm, proximal

ureter

POSTOPERATIVE DIAGNOSIS: Same

PROCEDURE: Cystourethroscopy; left ureteroscopy with holmium laser lithotripsy; placement of indwelling left ureteral stent

DESCRIPTION OF PROCEDURE: After induction of general anesthesia, the patient was placed in the dorsal lithotomy position. A 22 French rigid cystoscope was inserted per urethra. The bladder was inspected. An open-ended ureteral catheter was used to access the left ureteral orifice. A flexible ureteroscope was advanced into the left ureter over a safety guidewire. An 8 mm calculus was identified in the proximal left ureter. Holmium:YAG laser lithotripsy was performed, completely fragmenting the calculus into small dust-like particles. Thorough irrigation was performed. A 6 French, 26 cm double-J stent was then placed over the guidewire under fluoroscopic confirmation and left in place. Cystoscopy confirmed correct positioning of the stent coil within the bladder. The ureteroscope was withdrawn.

Step-by-Step Analysis:

1. **Ureteroscopy with holmium laser lithotripsy:** This is ureteroscopy with lithotripsy
2. **Indwelling stent placed:** Double-J stent left in place
3. **Combination code check:** Lithotripsy + indwelling stent = **52356** (includes both components)
4. **Do NOT report** 52353 + 52332 separately — NCCI edit bundles them;

use 52356

5. **Laterality:** Left ureter → **–LT**
6. **Fluoroscopy:** Check payer policy for separate reporting

Final Code: 52356-LT

Common Mistakes to Avoid: (1) Reporting 52353 + 52332 separately — use 52356. (2) Missing laterality modifier. (3) Adding 52000 for cystoscopy used for access — it is bundled.

③ Scenario 3 — Laparoscopic Partial Nephrectomy

OPERATIVE REPORT EXCERPT

PREOPERATIVE DIAGNOSIS: Right renal mass, 2.8 cm, lower pole

POSTOPERATIVE DIAGNOSIS: Right renal cell carcinoma, clear cell type

PROCEDURE: Laparoscopic partial right nephrectomy with intraoperative ultrasound

DESCRIPTION OF PROCEDURE: The patient was placed in the lateral flank position. Four trocar ports were placed. The right kidney was mobilized. Intraoperative laparoscopic ultrasound confirmed a 2.8 cm lower pole mass with clear margins. The renal hilum was clamped. Using laparoscopic scissors and argon beam coagulation, the tumor was excised with a 5 mm margin of normal parenchyma. The specimen was placed in an endoscopic bag and removed through an extended trocar

site. The resection bed was sutured with absorbable sutures. The clamp was released. Hemostasis was confirmed. The operative site was irrigated. Ports were removed under direct vision.

Step-by-Step Analysis:

1. **Approach:** Laparoscopic (ports placed, not converted to open)
2. **Procedure:** Partial nephrectomy (kidney preserved; only the mass was removed)
3. **Code:** **50543** — Laparoscopic partial nephrectomy
4. **Laterality:** Right → **-RT**
5. **Intraoperative ultrasound:** Laparoscopic intraoperative ultrasound may be separately reportable; check payer policy
6. **Do NOT report** open nephrectomy codes — procedure was completed laparoscopically

Final Code: **50543-RT**

Common Mistakes to Avoid: (1) Selecting 50220 (open partial) instead of 50543 (laparoscopic partial). (2) Selecting 50545 (radical) — this is a partial, not radical, nephrectomy. (3) Missing laterality modifier.

④ Scenario 4 — Cystoscopy with Bilateral Ureteral Stent Placement

OPERATIVE REPORT EXCERPT

PREOPERATIVE DIAGNOSIS: Bilateral hydroureteronephrosis, extrinsic compression

POSTOPERATIVE DIAGNOSIS: Same; ureteral obstruction, bilateral

PROCEDURE: Cystourethroscopy with bilateral ureteral stent placement

DESCRIPTION OF PROCEDURE: Patient was brought to the endoscopy suite. A 21 French cystoscope was introduced. Both ureteral orifices were identified. Under fluoroscopic guidance, a guidewire was passed into the right ureter and advanced to the renal pelvis. A 6 French double-J stent was placed over the guidewire and confirmed fluoroscopically. The guidewire was withdrawn. The same process was repeated for the left ureter. A 6 French double-J stent was placed in the left ureter and confirmed in good position. Final cystoscopic inspection confirmed both stent coils within the bladder. Cystoscope withdrawn.

Step-by-Step Analysis:

1. **Procedure:** Cystoscopy with indwelling ureteral stent placement, bilateral
2. **Code:** **52332** — Cystourethroscopy with insertion of indwelling ureteral stent(s)
3. **Bilateral stents:** Same procedure on both sides → Modifier **–50**
4. **Fluoroscopy:** Check payer policy for separate reporting

Final Code: **52332-50**

Common Mistakes to Avoid: (1) Reporting two separate line items (52332-

RT and 52332-LT) instead of 52332-50 (verify payer preference). (2) Adding 52000 — bundled. (3) Reporting imaging guidance without checking payer bundling policy.

⑤ Scenario 5 — Percutaneous Nephrostomy with Imaging Guidance

OPERATIVE REPORT EXCERPT

PREOPERATIVE DIAGNOSIS: Left hydronephrosis; ureteral obstruction

POSTOPERATIVE DIAGNOSIS: Same

PROCEDURE: Percutaneous nephrostomy, left kidney, with fluoroscopic guidance

DESCRIPTION OF PROCEDURE: Patient was placed prone on the fluoroscopy table. Under fluoroscopic guidance, the left renal collecting system was accessed via a posterior calyceal approach. A guidewire was successfully placed into the renal pelvis. Serial dilation of the percutaneous tract was performed. A 10 French nephrostomy catheter was positioned in the renal pelvis and secured to the skin. Correct position was confirmed fluoroscopically. The catheter was sutured to skin and connected to a drainage bag. Good urine output was noted immediately.

Step-by-Step Analysis:

1. **Procedure:** Percutaneous nephrostomy catheter placement

2. **Imaging guidance:** Fluoroscopic guidance used

3. **Code: 50432** — Placement of nephrostomy catheter, percutaneous, including imaging guidance

4. **Imaging guidance: Bundled into 50432** — do NOT separately report fluoroscopy

5. **Laterality:** Left → **–LT**

Final Code: 50432-LT

Common Mistakes to Avoid: (1) Separately reporting fluoroscopy with 50432 — it is included. (2) Using old open nephrostomy code (50040) for a percutaneous approach.

⑥ Scenario 6 — Radical Cystectomy with Ileal Conduit

OPERATIVE REPORT EXCERPT

PREOPERATIVE DIAGNOSIS: Bladder carcinoma, muscle-invasive, stage T2b

POSTOPERATIVE DIAGNOSIS: Same

PROCEDURE: Radical cystectomy, male, with bilateral pelvic lymphadenectomy and ileal conduit urinary diversion

DESCRIPTION OF PROCEDURE: The patient was brought to the OR under general anesthesia. A midline incision was made from the pubis to the umbilicus. The bladder was mobilized. The ureters were identified and divided bilaterally near the bladder. The prostate and seminal vesicles

were dissected free. A complete radical cystoprostatectomy was performed en bloc. Bilateral pelvic lymphadenectomy was performed, removing the external iliac, obturator, and hypogastric nodal chains. A 15 cm segment of ileum was isolated and the bowel was reanastomosed. The ureters were anastomosed to the proximal end of the ileal segment. The distal end was brought to the skin as a stoma in the right lower quadrant. Urinary continuity was established. The abdomen was closed in layers.

Step-by-Step Analysis:

1. **Patient sex:** Male
2. **Extent:** Radical (cystoprostatectomy = bladder + prostate + seminal vesicles)
3. **Lymphadenectomy:** Bilateral pelvic
4. **Urinary diversion:** Ileal conduit created
5. **Code:** **51585** — Cystectomy, complete, radical, including pelvic lymphadenectomy; with ureteral transplantations (ileal conduit/diversion)
6. **Prostatectomy: Included** in radical cystectomy for male — do NOT separately report
7. **Ileal conduit creation:** Included in code 51585 — do NOT separately report bowel anastomosis

Final Code: **51585**

Common Mistakes to Avoid: (1) Separately reporting prostatectomy — it is included in radical cystectomy. (2) Separately reporting bowel anastomosis — included in the radical cystectomy with diversion code. (3) Using 51580

(without diversion) when an ileal conduit was created.

Section 10: Chapter Review — 20 Multiple Choice Questions

These questions are written in CPC examination style. Read each stem carefully, identify the key code-selection criteria, and select the single best answer. The answer key with detailed rationale follows.

1. A patient undergoes a right laparoscopic radical nephrectomy with regional lymph node dissection. What is the correct CPT code?

A. 50230-RT
B. 50545-RT
C. 50545-RT with separate lymph node dissection code
D. 50543-RT

2. The operative report documents: "Cystourethroscopy performed. Three bladder lesions identified: 0.4 cm, 1.0 cm, and 2.8 cm. All three lesions were resected using the resectoscope." What is the correct TURBT code?

A. 52234, 52235, 52240

B. 52240

C. 52235

D. 52224, 52235, 52240

3. A patient undergoes cystourethroscopy with holmium laser lithotripsy of a left ureteral calculus. An indwelling double-J stent is left in place at the conclusion of the procedure. What is the correct code assignment?

A. 52353-LT, 52332-LT

B. 52356-LT

C. 52353-LT

D. 52332-LT

4. A patient undergoes ESWL for three kidney stones (8 mm, 6 mm, and 4 mm) in the right kidney during a single session with 2,500 shock waves. What is the correct CPT code?

A. 50590-RT × 3

B. 50590-RT

C. 50590-50

D. 50590-RT, 50590-RT, 50590-RT

5. A percutaneous renal biopsy is performed using ultrasound guidance. Which CPT code is reported for the biopsy?

A. 50200 only

B. 50205

C. 50200 with imaging guidance reported separately

D. 50200 — imaging included in descriptor

6. A patient undergoes cystourethroscopy with insertion of an indwelling stent in the right ureter and diagnostic examination of the bladder. Which codes are correct?

A. 52000, 52332-RT

B. 52332-RT

C. 52005-RT, 52332-RT

D. 52332-RT, 52000-51

7. What is the CPT code for a simple (non-needle) electromyography (EMG) of the urethral sphincter for urodynamic evaluation?

A. 51785

B. 51784

C. 51726

D. 51792

8. A laparoscopic procedure was begun to perform a radical nephrectomy, but intraoperative bleeding required conversion to an open approach. What is the correct coding?

A. Both the laparoscopic and open codes

B. The laparoscopic code only with modifier –52

C. The open code only (50230)

D. The laparoscopic code only (50545)

9. A living donor undergoes open left nephrectomy for transplant. Which code is reported?

A. 50300-LT

B. 50320-LT

C. 50240-LT

D. 50360-LT

10. What code is used for diagnostic cystourethroscopy when performed alone (no other cystoscopic procedure at the same session)?

A. 52204

B. 52005

C. 52000

D. 51726

11. A female patient undergoes urethral dilation under general anesthesia for a urethral stricture, subsequent session. What is the correct CPT code?

A. 53600

B. 53601

C. 53665

D. 53661

12. A patient with end-stage renal disease undergoes cadaver renal transplantation. The transplant surgeon performs backbench preparation with standard reconstruction plus one additional arterial anastomosis. Which codes are reported by the transplant surgeon for backbench work?

A. 50323, 50325
B. 50360, 50323
C. 50320, 50323, 50325
D. 50323 only

13. For a ureterotomy performed to remove a calculus in the middle third of the right ureter (open approach), which code is correct?

A. 50610-RT
B. 50620-RT
C. 50630-RT
D. 50670-RT

14. A cystourethroscopy is performed. The surgeon documents a 1.8 cm bladder tumor and a separate lesion of 0.4 cm. The 1.8 cm lesion is resected. The 0.4 cm lesion is fulgurated (no resection). What is the correct coding?

A. 52235, 52224-59
B. 52235 only
C. 52235, 52240

D. 52240

15. The CPT code for laparoscopic pyeloplasty (repair of ureteropelvic junction obstruction, laparoscopic approach) is:

A. 50400
B. 50405
C. 50544
D. 50947

16. Which modifier is most appropriate when the same ureteroscopy with stone removal procedure is performed on both the left and right ureters at the same operative session?

A. –51
B. –52
C. –50
D. –59

17. A complex cystometrogram (CMG) with voiding pressure studies is performed together with urethral pressure profile (UPP) measurement. Which codes are reported?

A. 51727, 51772
B. 51728 only
C. 51726, 51727

D. 51725, 51772

18. A surgeon performs a radical cystectomy on a female patient with bladder cancer, including bilateral pelvic lymphadenectomy and construction of an ileal conduit for urinary diversion. What is the correct CPT code?

A. 51590
B. 51595
C. 51585
D. 51570

19. During cystoscopy, a diagnostic ureteroscopy and renal pelvic wash for cytology is performed on the right side. No therapeutic procedure is performed. Which code best represents the ureteroscopy?

A. 52354
B. 50951
C. 52000
D. 52007

20. A percutaneous nephrostomy catheter exchange (replacement of existing catheter) is performed under fluoroscopic guidance. Which code is correct?

A. 50040
B. 50432
C. 50435

D. 50433

✅ Answer Key with Rationale

1. B — 50545-RT

50545 is the CPT code for laparoscopic radical nephrectomy. The CPT descriptor for 50545 includes lymph node dissection — do not report it separately. Modifier –RT indicates right side. Code 50230 is the open approach.

2. B — 52240

When multiple bladder tumors are resected at the same session, report one TURBT code based on the largest lesion. The largest lesion is 2.8 cm — greater than 2.0 cm = large = 52240. Do not report separate codes for each additional tumor.

3. B — 52356-LT

When lithotripsy (52353) is performed and an indwelling stent is left in place, the correct code is the combination code 52356, which bundles both procedures. Reporting 52353 + 52332 separately triggers NCCI edits. Modifier –LT for left side.

4. B — 50590-RT

Code 50590 is reported once per ESWL session, regardless of the number of stones, shock waves, or stone sizes. Modifier –RT for right kidney.

5. C — 50200 with imaging guidance reported separately

Code 50200 is the percutaneous renal biopsy. Unlike 50432 (percutaneous nephrostomy), imaging guidance (76942 for ultrasound or 77002 for fluoroscopy) is NOT included in the 50200 descriptor and is separately reportable.

6. B — 52332-RT

52332 includes the cystoscopic approach to place the stent. Code 52000 (diagnostic cystoscopy) is a "(separate procedure)" code and is never reported alongside surgical cystoscopy codes. Modifier –RT for right ureter.

7. B — 51784

51784 is the non-needle (surface electrode) EMG of the anal or urethral

sphincter. 51785 is the needle EMG. The question specifies "simple (non-needle)."

8. C — 50230 (open radical nephrectomy)
When a laparoscopic procedure is converted to open, only the open procedure code is reported. The laparoscopic approach attempt is not separately coded. 50230 is the open radical nephrectomy.

9. A — 50300-LT
50300 is living donor nephrectomy, open. 50320 is cadaver donor nephrectomy. Modifier –LT for left kidney donation.

10. C — 52000
52000 is the code for cystourethroscopy (diagnostic), reported alone when no other cystoscopic procedure is performed at the same session. It carries the "(separate procedure)" designation.

11. C — 53665
53665 is urethral dilation, female, under general/spinal anesthesia (any encounter). The question specifies general anesthesia and female patient — 53665 is the correct code regardless of initial vs. subsequent when general anesthesia is used for female patients.

12. A — 50323, 50325
The transplant surgeon performing only backbench work reports 50323 (standard preparation) and 50325 (additional arterial anastomosis, add-on). The cadaver donor nephrectomy (50320) and recipient transplantation (50360/50365) are separate components reported by different surgeons.

13. B — 50620-RT
The middle third of the ureter corresponds to code 50620 (ureterolithotomy; middle one-third of ureter). Modifier –RT for right side.

14. A — 52235, 52224-59
The 1.8 cm tumor is resected (TURBT) → 52235 (medium). The 0.4 cm lesion is a separate, distinct procedure (fulguration without resection, different lesion) → 52224-59. Modifier –59 is appropriate because this is a distinct procedure at

a separate lesion site. Note: some payers may bundle these — always check NCCI.

15. C — 50544

50544 is the CPT code for laparoscopic pyeloplasty. 50400 is open initial pyeloplasty, 50405 is open secondary pyeloplasty, and 50947 is laparoscopic ureteroneocystostomy.

16. C — –50

Modifier –50 (Bilateral Procedure) is used when the same procedure is performed on both sides during the same operative session. In this case, the same ureteroscopy with stone removal is performed on both ureters.

17. A — 51727, 51772

51727 is complex CMG with voiding pressure studies. 51772 is the urethral pressure profile. These are separate, distinct urodynamic tests and both are reportable at the same session.

18. B — 51595

51595 is radical cystectomy, female, with bilateral pelvic lymphadenectomy and urinary diversion. Code 51590 (female radical cystectomy) does not include urinary diversion. Code 51585 is the male version with diversion.

19. D — 52007

52007 is cystourethroscopy with brush biopsy of ureter or renal pelvis. If only diagnostic ureteroscopy and renal pelvic wash for cytology was performed (wash = collection without resection), 52007 best captures this. 52354 is ureteroscopy with biopsy via ureteroscope. Verify documentation carefully.

20. C — 50435

50435 is exchange of nephrostomy catheter, percutaneous, including imaging guidance. This code is specifically used for replacement/exchange of an existing nephrostomy catheter. 50432 is for initial placement. Code 50040 is the open surgical nephrostomy.

Chapter Summary

Key Concepts at a Glance

• The Urinary System subsection of CPT Surgery covers codes **50010–53899**, organized anatomically by kidney, ureter, bladder, and urethra.

• Within each anatomical area, codes are organized by procedure type: Incision, Excision, Introduction, Repair, Laparoscopy, and Endoscopy.

• The three essential code-selection factors for any urinary procedure are: **anatomical site, surgical approach (open/laparoscopic/endoscopic), and extent of procedure.**

• **Laterality** is critical for kidney and ureter codes. Most are unilateral; use modifier –50 (bilateral), –LT (left), or –RT (right) as appropriate.

• Nephrectomy codes are selected based on: partial vs. total, simple vs. radical, and open vs. laparoscopic. When laparoscopic converts to open, code only the open procedure.

• Renal transplantation requires separate codes for donor nephrectomy, backbench preparation (and add-on codes), and recipient transplantation.

• Code **50590** is the single code for ESWL regardless of number of stones, shock waves, or stone sizes — reported once per session.

• **Surgical endoscopy always includes diagnostic endoscopy.** Never report 52000 (diagnostic cystoscopy) alongside surgical cystoscopy codes.

• TURBT code selection (52234/52235/52240) is based on the **size of the largest tumor**. Multiple tumors at same session = one code based on largest lesion.

• When ureteroscopic lithotripsy (52353) is performed and an indwelling stent is left in place, use combination code **52356** — not 52353 + 52332 separately.

• Percutaneous nephrostomy (50432) includes imaging guidance in its descriptor — do not separately report fluoroscopy or ultrasound with this

code.

- Urodynamic testing codes (51725–51798) represent distinct studies; multiple studies performed at the same session are each separately reportable.
- Modifier –59 (Distinct Procedural Service) requires strong documentation support. Overuse without documentation is an audit risk.
- Sling procedures for urinary incontinence are coded to the **Female Genital System** (57288), not the Urinary System section.
- NCCI edits are common in urinary coding — always check for bundling conflicts, especially in cystoscopy combinations and percutaneous procedures with imaging guidance.

Key Terms Glossary

Bilateral Procedure (Modifier –50) — A modifier appended to a CPT code to indicate that the same procedure was performed on both sides of the body during the same operative session.

Cystectomy — Surgical removal of all or part of the urinary bladder. May be partial, total/simple, or radical. Radical cystectomy in males includes removal of the prostate and seminal vesicles.

Cystometrogram (CMG) — A urodynamic test measuring the pressure within the urinary bladder as it is filled with fluid, used to evaluate bladder capacity, compliance, and detrusor function.

Cystoscopy / Cystourethroscopy — Direct endoscopic visual examination of the urethra and urinary bladder using a cystoscope introduced through the urethra.

Extracorporeal Shock Wave Lithotripsy (ESWL) — A non-invasive procedure using externally applied shock waves to fragment urinary calculi within the body. Reported with CPT code 50590, once per session regardless of stone count.

Ileal Conduit — A type of urinary diversion in which a segment of the ileum is used to create a conduit connecting the ureters to an external stoma on the abdominal wall following cystectomy.

Laterality — The identification of which side of the body (left or right) a procedure was performed on. Critical for paired-organ coding (kidneys, ureters).

Micturition — The act of urination; the process of emptying urine from the bladder through the urethra.

NCCI (National Correct Coding Initiative) — CMS-established edits that identify code pairs that should not be reported together because one procedure is considered a component of the other (bundling rules).

Nephron — The functional unit of the kidney responsible for filtration, reabsorption, and secretion to produce urine. Each kidney contains approximately one million nephrons.

Nephrectomy — Surgical removal of a kidney. May be partial (kidney-sparing) or total/radical. Approach may be open or laparoscopic.

Nephrostomy — The creation of an artificial opening into the kidney for drainage; may be performed open (surgically) or percutaneously under imaging guidance.

Pyeloplasty — Surgical reconstruction of the renal pelvis and ureteropelvic junction to relieve obstruction (UPJ obstruction). May be performed open (50400) or laparoscopically (50544).

Renal Transplantation — The surgical implantation of a donor kidney into a recipient. Involves three separately coded components: donor nephrectomy, backbench preparation, and recipient transplantation.

Transurethral Resection of Bladder Tumor (TURBT) — Endoscopic resection of bladder tumors using a resectoscope introduced through the urethra. Code selected based on largest tumor size: small (52234 / 52235) or large (52240).

Trigone — The triangular region at the base of the urinary bladder where the two ureters enter and the urethra exits. A smooth, fixed area important in cystoscopy orientation.

Unbundling — The improper practice of reporting multiple CPT codes for components of a single procedure when one comprehensive code should be used; a compliance violation subject to audit and recoupment.

Ureteroneocystostomy — Surgical reimplantation of a ureter into the urinary bladder; used for ureteral injuries, strictures, or vesicoureteral reflux repair.

Ureteropelvic Junction (UPJ) — The junction between the renal pelvis and the ureter; a common site of obstruction requiring pyeloplasty.

Ureteroscopy — Endoscopic examination and/or treatment of the ureter and renal pelvis using a ureteroscope passed through the urethra and bladder. May be diagnostic or surgical (with stone removal, biopsy, lithotripsy, etc.).

Urethroplasty — Surgical repair or reconstruction of the urethra, most often for urethral stricture disease. May be performed in one or two stages.

Uroflowmetry — A urodynamic study measuring the rate and volume of urine flow during micturition; used to evaluate voiding dysfunction and urinary outlet obstruction.

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MEDICAL CODING MASTERY | STUDENT EDITION

CHAPTER 17

Surgery: Genital Systems, Maternity Care and Endocrine System

CPT codes: 54000-55899 | 56405-58999 | 59000-59899 | 60000-60699

Corrina Lynch | ACL Consulting Firm | CPC Preparation

Prepared in the style of Carol J. Buck's**Step-by-Step Medical Coding** For CPC Exam Preparation and Allied Health Coding Education.

🎓 Chapter Objectives

After completing this chapter, the student will be able to:

1. Identify the CPT code ranges and subsections for the Male Genital System, Female Genital System, Maternity Care and Delivery, and Endocrine System.
2. Differentiate circumcision codes based on patient age, method, and clinical setting, and apply the correct code from the 54150–54161 range.
3. Correctly assign hypospadias repair codes by stage and complexity, and distinguish chordee correction from epispadias repair.
4. Apply vulvectomy, colporrhaphy, hysteroscopy, and hysterectomy codes using the correct approach, extent, and uterine weight criteria.
5. Explain the global obstetric package and determine when antepartum, delivery, and postpartum services may be billed separately or together.
6. Assign delivery codes for vaginal delivery, cesarean delivery, VBAC, and failed VBAC, applying correct global and delivery-only codes.
7. Distinguish thyroidectomy codes by extent of resection and indication (benign vs. malignant), including completion thyroidectomy.
8. Apply appropriate modifiers (e.g., -50, -52, -58, -59, -LT, -RT) to surgical codes in the genital, obstetric, and endocrine sections.
9. Interpret operative notes to identify the definitive procedure, approach, laterality, and any concurrent procedures that require separate coding.
10. Answer CPC-style multiple-choice questions covering all subsections in this chapter with confidence and accuracy.

Introduction

Chapter 17 encompasses four CPT Surgery subsections that challenge even experienced coders due to overlapping anatomical structures, surgical approaches, and bundling rules. Each subsection requires the coder to distinguish procedure type, extent of surgery, and whether the procedure was performed open, laparoscopic, or endoscopically.

CPT Subsection	Code Range	Key Anatomical Structures
Male Genital System	54000–55899	Penis, testis, epididymis, vas deferens, spermatic cord, prostate, seminal vesicles
Female Genital System	56405–58999	Vulva, vagina, cervix, corpus uteri, fallopian tubes, ovaries
Maternity Care & Delivery	59000–59899	Antepartum, delivery, postpartum, abortion services
Endocrine System	60000–60699	Thyroid, parathyroid, adrenal glands, pituitary gland

📚 **Coder's Corner**

When coding any surgical procedure in these sections, always ask: **What was the approach?** (open, laparoscopic, vaginal, perineal, transurethral) **What was the extent?** (partial, complete, radical) and **Was the procedure unilateral or bilateral?** These three questions will guide you to the correct code range every time.

PART A: MALE GENITAL SYSTEM (54000–55899)

Section 3: Penis (54000–54450)

The penis subsection is organized by the standard CPT surgery format: **Incision, Destruction, Excision, Introduction, Repair, Manipulation**, and **Other Procedures**. The coder must pay close attention to the specific procedure performed, the technique used, and the age of the patient (particularly for circumcision codes).

3.1 Incision

Dorsal slit (54000–54001) is an incision made along the top of the foreskin to relieve phimosis. It is not the same as circumcision and should not be coded as such. Code 54000 applies to a simple dorsal slit with or without local anesthesia. Code 54001 is used when the procedure is performed under general or regional anesthesia.

Frenulotomy (54164) is division of the frenulum, the small band of tissue connecting the foreskin to the glans penis. This is typically performed to treat frenulum breve, a condition causing painful erections or tearing during intercourse.

3.2 Destruction

Destruction of penile lesions includes codes 54050–54065. The coder must identify the method of destruction and the extent of involvement:

- **Laser surgery** (54057): Destruction of lesion(s) of penis, simple; laser surgery
- **Cryotherapy** (54056): Destruction of lesion(s) of penis, simple; cryosurgery
- **Electrosurgery** (54055): Destruction of lesion(s) of penis, simple; electrosurgery
- **Extensive** (54065): Destruction of lesion(s) of penis, extensive (e.g., laser surgery, cryosurgery, surgical excision) — used when lesions are extensive or involve multiple areas

🛑 **Stop! Think!**

Do not confuse destruction of penile lesions with destruction of genital lesions coded in the Integumentary System section. Codes 54050–54065 apply specifically to lesions **of the penis**. Condylomata of the penis are reported with these codes, but condylomata of the perineum or perianal area are reported with destruction codes from the Integumentary or Digestive subsections.

3.3 Excision — Circumcision (54150–54161)

Circumcision is the surgical removal of the foreskin (prepuce) from the penis. CPT provides separate codes based on the patient's age and the method employed. This is one of the most commonly tested areas on the CPC exam.

CPT Code	Description	Key Detail
54150	Circumcision, using clamp or other device, newborn	Newborn only; typically Gomco, Plastibell, or Mogen clamp
54160	Circumcision, surgical excision, other than clamp, newborn	Newborn only; surgical (scalpel) technique — no clamp device used
54161	Circumcision, surgical excision, other than clamp; older than 28 days of age	Patient older than 28 days; most pediatric/adult circumcisions

✨ **Did You Know?**

The 28-day cutoff is critical. A patient who is exactly 28 days old is still a "newborn" for circumcision coding purposes. A patient who is 29 days old is coded with 54161. Always verify the date of birth in the medical record versus the date of service when coding circumcision.

3.4 Repair — Hypospadias

Hypospadias is a congenital condition in which the urethral meatus (opening) is located on the underside of the penis rather than at the tip. Repair may require one or two surgical stages depending on severity. The **meatal advancement and glanuloplasty (MAGPI)** procedure (54322) is used for distal hypospadias, while more complex repairs may require staged procedures.

CPT Code	Procedure	Notes
54300	Plastic operation on penis for straightening of chordee (without skin graft)	Corrects penile curvature; may be performed as first stage before hypospadias repair
54304	Plastic operation on penis for correction of chordee or for first stage hypospadias repair with or without tissue transfer	First stage; includes chordee release and skin transfer
54308	Urethroplasty for second stage hypospadias repair; less than 3 cm	Second stage; short urethral reconstruction
54312	Urethroplasty for second stage hypospadias repair; greater than 3 cm	Second stage; longer urethral reconstruction
54322	One-stage distal hypospadias repair (MAGPI or similar)	Single-stage; distal location only
54352	Revision of hypospadias repair	Reoperation for failed prior repair
54380	Plastic operation on penis for epispadias distal to external urinary sphincter	Epispadias = meatus on top of penis; distinct from hypospadias
54390	Plastic operation on penis for epispadias proximal to external urinary sphincter	More complex; involves bladder neck

3.5 Penile Prosthesis (54400–54416)

Penile prosthesis insertion is performed to treat erectile dysfunction that has not responded to conservative measures. Two types are recognized by CPT:

- **Semi-rigid (non-inflatable)** prosthesis (54400): Simpler device; pair of silicone rods inserted into corpora cavernosa
- **Inflatable (multi-component)** prosthesis (54401): Self-contained or two-component; (54405) three-component inflatable prosthesis
- **Removal of penile prosthesis** (54406): Removal without replacement
- **Replacement of inflatable prosthesis** (54410, 54411, 54416): Codes depend on whether replacement is partial or complete

> 💥 **Coding Shot**
>
> When a penile prosthesis is removed and replaced in the same operative session, do **not** code the removal separately. Use the replacement code (54410 or 54411), which includes the removal component. Only code the removal separately (54406) if no replacement is performed at the same session.

3.6 Priapism Treatment (54420–54430)

Priapism is a persistent, painful erection unrelated to sexual stimulation. Surgical treatment involves creating a shunt between the corpora cavernosa and the glans, corpus spongiosum, or saphenous vein to relieve the erection.

- **54420**: Corpora cavernosa-saphenous vein shunt (Grayhack type)
- **54430**: Corpora cavernosa-corpus spongiosum shunt (winter type or similar)

📋 Coding Scenarios — Penis

Scenario 3-A: Newborn Circumcision

Patient: Male newborn, age 2 days Procedure: Circumcision using Gomco clamp The prepuce was prepped and draped sterilely. A Gomco clamp of appropriate size was applied. The foreskin was removed. The area was inspected for hemostasis. The patient tolerated the procedure well.

Step-by-Step Analysis:

1. Patient is a newborn (2 days old — within 28-day newborn period).
2. Procedure: circumcision using a clamp device (Gomco clamp).
3. Reference the CPT table: newborn + clamp device = `54150`.

✓

Final Code: 54150

Common Mistakes: Using 54161 (patient is older than 28 days) — incorrect because this patient is a 2-day-old newborn. Do not add a modifier for a routine newborn circumcision.

Scenario 3-B: Inflatable Penile Prosthesis Replacement

Patient: 58-year-old male with erectile dysfunction. Previously had a three-component inflatable penile prosthesis placed 8 years ago. The reservoir has failed. Procedure: Removal of malfunctioning three-component inflatable penile prosthesis and replacement with new three-component inflatable device. All three components (bilateral cylinders, pump, reservoir) were explanted and replaced with new components. Patient tolerated the procedure well.

Step-by-Step Analysis:

1. The existing prosthesis is removed AND replaced — this is a replacement procedure.
2. Three-component inflatable prosthesis: replacement includes removal = `54411`.
3. Do NOT separately code 54406 (removal) — it is included in the replacement code.

✓

Final Code: 54411

Section 4: Testis (54500–54699)

Testicular procedures include biopsy, excision (orchiectomy), and repair (orchiopexy). Laterality is a critical factor — always determine whether the procedure was unilateral or bilateral, and apply modifier **-50** for bilateral procedures or **-LT/-RT** for laterality when applicable.

4.1 Biopsy of Testis (54500–54505)

- **54500**: Biopsy of testis, needle (separate procedure)
- **54505**: Biopsy of testis, incisional (separate procedure)

A needle biopsy is percutaneous; an incisional biopsy requires a surgical incision into the scrotal wall to access testicular tissue. The term **"separate procedure"** in the descriptor means this code should not be reported if performed as part of a larger, more comprehensive procedure.

4.2 Excision — Orchiectomy

Orchiectomy is the surgical removal of one or both testes. The extent and indication drive code selection:

CPT Code	Procedure	Indication/Notes
54520	Orchiectomy, simple (including subcapsular), with or without testicular prosthesis, scrotal or inguinal approach	Benign conditions; hormone suppression for prostate cancer
54530	Orchiectomy, radical, for tumor; inguinal approach	Testicular cancer; inguinal incision with ligation of spermatic cord at internal ring
54535	Orchiectomy, radical, for tumor; with abdominal exploration	Radical orchiectomy plus abdominal exploration for staging

🛑 **Stop! Think!**

A **radical orchiectomy** for testicular cancer is always performed via an inguinal approach — never through the scrotum. Scrotal violation during testicular cancer surgery disrupts lymphatic drainage pathways and can alter staging. If the operative note describes a scrotal approach for suspected malignancy, query the surgeon before coding.

Bilateral Orchiectomy: When both testes are removed at the same operative session (e.g., for prostate cancer hormone suppression), report code 54520 with modifier **-50** (bilateral procedure). Some payers prefer reporting 54520-LT and 54520-RT on separate lines.

4.3 Repair — Orchiopexy and Torsion

Orchiopexy is the surgical fixation of an undescended or mobile testis to the scrotum. **Testicular torsion** is a urologic emergency involving twisting of the spermatic cord, which requires emergent surgical detorsion and orchiopexy.

CPT Code	Procedure	Notes
54600	Reduction of torsion of testis, surgical, with or without fixation of contralateral testis	Torsion repair; contralateral orchiopexy is included
54640	Orchiopexy, inguinal approach, with or without hernia repair	Undescended testis; inguinal canal approach
54650	Orchiopexy, abdominal approach, for intra-abdominal testis (e.g., Fowler-Stephens)	Undescended testis not palpable; high abdominal position

✨ **Did You Know?**

When a surgeon performs detorsion and bilateral orchiopexy (fixing both the torsed testis and the contralateral testis to prevent future torsion), this is captured by a single code — 54600 — because the CPT descriptor specifically

states "with or without fixation of contralateral testis." Do not report two separate orchiopexy codes.

📋 Coding Scenarios — Testis

Scenario 4-A: Radical Orchiectomy for Testicular Cancer

Patient: 26-year-old male with left testicular mass, AFP and beta-HCG elevated. Procedure: Left radical orchiectomy via inguinal approach. An inguinal incision was made. The spermatic cord was identified and ligated at the level of the internal inguinal ring. The testis and cord were delivered as a unit. The specimen was sent to pathology. Hemostasis achieved. Wound closed in layers.

Step-by-Step Analysis:

1. Radical orchiectomy for tumor — inguinal approach confirmed.
2. Left side only — unilateral procedure.
3. Code: `54530` — Orchiectomy, radical, for tumor; inguinal approach.
4. Add modifier **-LT** (left side).

✓

Final Code: 54530-LT

Scenario 4-B: Orchiopexy for Bilateral Undescended Testes — Inguinal Approach

Patient: 18-month-old male with bilateral cryptorchidism. Procedure: Bilateral orchiopexy, inguinal approach. Right inguinal incision made first. The testis was identified in the inguinal canal, mobilized, and brought down to the scrotum. A dartos pouch was created and the testis fixed. Left side was then performed in identical fashion. Both testes tolerated the procedure well.

Step-by-Step Analysis:

1. Bilateral orchiopexy — both sides performed.
2. Inguinal approach confirmed for both sides.
3. Code: `54640` with modifier **-50** (bilateral).

✓

Final Code: 54640-50

Section 5: Epididymis and Vas Deferens (54700–55250)

5.1 Epididymis

Epididymectomy is the excision of the epididymis, typically for chronic epididymitis or epididymal cysts. CPT code `54861` is used for unilateral epididymectomy. For bilateral procedures, append modifier **-50**.

Drainage of an epididymal abscess is coded separately (54700). Spermatocelectomy — removal of a spermatocele — is coded with `54840`.

5.2 Vasectomy (55250)

Vasectomy is the surgical interruption of the vas deferens for male sterilization. Code `55250` describes a vasectomy as unilateral or bilateral (the code is the same regardless of laterality — the CPT descriptor reads "unilateral or bilateral"). No additional modifier is required for bilateral vasectomy.

> 📚 **Coder's Corner**
>
> Vasectomy (55250) is a flat rate code that already accounts for the bilateral nature of the procedure. Do NOT append modifier -50 to 55250. The code value reflects both sides of the procedure.

5.3 Vasovasostomy — Vasectomy Reversal (55400)

Vasovasostomy is the surgical reconnection of the vas deferens following a prior vasectomy. It is microsurgically complex. Code `55400` applies to unilateral vasovasostomy. If bilateral reversal is performed, report 55400-50 or on two separate lines per payer preference.

Vasoepididymostomy (55420) is performed when obstruction is present at the epididymis, requiring anastomosis of the vas deferens directly to the epididymis rather than to the other end of the vas.

Scenario 5-A: Bilateral Vasovasostomy

Patient: 38-year-old male requesting vasectomy reversal. Vasectomy performed 6 years ago. Procedure: Bilateral microscopic vasovasostomy. Under general anesthesia and microscopic magnification, bilateral scrotal incisions were made. The vas deferens was identified, the vasectomy sites were excised, and microsurgical end-to-end anastomoses were performed bilaterally using 10-0 nylon sutures. Both anastomoses confirmed patent. Wounds closed.

Step-by-Step Analysis:

1. Procedure: vasovasostomy (reversal of vasectomy).
2. Bilateral — both sides performed.
3. Code: `55400-50`

✓

Final Code: 55400-50

Note: Unlike vasectomy (55250), vasovasostomy (55400) is NOT inherently bilateral, so modifier -50 is appropriate here.

Section 6: Prostate (55700–55899)

Prostate coding requires the coder to identify the specific procedure (biopsy, transurethral resection, or prostatectomy), the surgical approach (transperineal, retropubic, laparoscopic), and whether the procedure is for benign or malignant disease.

6.1 Prostate Biopsy

Needle biopsy of the prostate (55700) is used to diagnose prostate cancer. It may be performed via a transperineal or transrectal approach. When ultrasound guidance is used (the most common method), a separate radiology code for ultrasonic guidance — `76942` — should be reported in addition to the needle biopsy code when separately identifiable imaging was provided.

> ⚠ **Caution!**
>
> Code 76942 (ultrasonic guidance for needle biopsy, imaging supervision and interpretation) is reported by the radiologist or the physician performing imaging supervision. If the same physician performs both the biopsy and the imaging, both codes may be reportable. However, if a facility is billing, they report only the technical component. Always check payer-specific bundling edits before reporting 55700 and 76942 together.

6.2 Prostatectomy Codes by Approach

Prostatectomy is the surgical removal of all or part of the prostate gland. The approach dramatically affects code selection. Note that **Transurethral Resection of the Prostate (TURP)** is located in the Urinary System subsection (52601–52630) — not in the Prostate subsection — because it is approached via the urethra.

CPT Code	Procedure	Approach	Notes
52601	TURP, complete (vasectomy, meatotomy, cystourethroscopy	Transurethral (endoscopic)	Located in Urinary System; commonly confused with

CPT Code	Procedure	Approach	Notes
	, urethral calibration, and/or dilation, and internal urethrotomy included)		prostate codes
55810	Radical perineal prostatectomy	Perineal open	Access through perineum; not commonly performed today
55812	Radical perineal prostatectomy with lymph node dissection	Perineal open	Includes pelvic lymphadenectomy
55840	Radical retropubic prostatectomy, with or without nerve sparing	Retropubic open	Standard open radical prostatectomy
55845	Radical retropubic prostatectomy, with or without nerve sparing; with bilateral pelvic lymphadenectomy	Retropubic open	Lymph node dissection included in code
55866	Laparoscopic radical prostatectomy (includes bilateral pelvic lymphadenectomy when performed)	Laparoscopic or robotic-assisted	Da Vinci robotic procedures are coded here; includes lymphadenectomy

📚 Coder's Corner

The term "robotic-assisted" does not have its own CPT code modifier in most cases. Robotic-assisted laparoscopic prostatectomy (RALP) — the most common approach today — is reported with 55866. The robot is considered a surgical tool, not a distinct procedure. Some payers may require a specific modifier or HCPCS code — always verify with the payer.

📋 Coding Scenarios — Prostate

Scenario 6-A: Transrectal Ultrasound-Guided Prostate Biopsy

Patient: 64-year-old male, PSA 8.2. Procedure: Transrectal ultrasound-guided needle biopsy of prostate, 12 cores. Under TRUS guidance, 12 systematic biopsy cores were obtained from the right and left lobes of the prostate. Images were saved and reviewed. The patient tolerated the procedure well with minimal bleeding.

Step-by-Step Analysis:

1. Needle biopsy of prostate = `55700`.
2. Ultrasound guidance with imaging supervision and interpretation = `76942`.
3. The number of cores (12) does not change the code — CPT does not differentiate by core count for this procedure.

✓

Final Codes: 55700, 76942

Scenario 6-B: Robotic Radical Prostatectomy

Patient: 58-year-old male, localized prostate cancer, Gleason 7. Procedure: Robot-assisted laparoscopic radical prostatectomy with bilateral pelvic lymphadenectomy. The patient was placed in the Trendelenburg position. The da Vinci robotic system was docked. Laparoscopic ports were placed. The prostate was dissected from the bladder neck and urethra with nerve-sparing technique bilaterally. Bilateral obturator and iliac lymph nodes were harvested. The prostate, seminal vesicles, and lymph nodes were removed. Urethrovesical anastomosis completed. No complications.

Step-by-Step Analysis:

1. Laparoscopic (robotic) radical prostatectomy = `55866`.
2. Bilateral pelvic lymphadenectomy is **included** in 55866 — do NOT separately code lymph node dissection.

✓

Final Code: 55866

Common Mistake: Separately coding lymphadenectomy. CPT 55866 includes bilateral lymphadenectomy when performed — this is a bundled service.

Scenario 6-C: Radical Retropubic Prostatectomy

Patient: 61-year-old male, prostate adenocarcinoma. Procedure: Radical retropubic prostatectomy, nerve-sparing, without pelvic lymph node dissection. A lower midline incision was made. The retropubic space was entered. The endopelvic fascia was incised bilaterally. The dorsal venous complex was ligated. Nerve-sparing dissection was performed bilaterally. The prostate was freed from the bladder neck and urethra and removed. Bladder neck anastomosis to the urethra completed. Wound closed in layers.

Step-by-Step Analysis:

1. Open radical prostatectomy, retropubic approach.
2. No lymph node dissection performed — use `55840` (without lymphadenectomy).
3. Nerve-sparing is included in the 55840 descriptor ("with or without nerve sparing").

✓

Final Code: 55840

PART B: FEMALE GENITAL SYSTEM (56405–58999)

Section 7: Vulva, Perineum, and Introitus (56405–56821)

7.1 Incision and Drainage

Incision and drainage of a vulvar abscess is reported with code `56405`. This code is used for acute abscess, including Bartholin gland abscess when drained. If a Bartholin gland cyst is marsupialized (surgically opened and sutured to maintain drainage), the appropriate code is `56440` (marsupialization of Bartholin's gland cyst).

7.2 Destruction of Vulvar Lesions (56501–56515)

- **56501**: Destruction of lesion(s) of vulva, simple — any method
- **56515**: Destruction of lesion(s) of vulva, extensive — any method

The distinction between "simple" and "extensive" depends on the number, size, and character of the lesions. Extensive destruction typically involves multiple lesions, a large surface area, or condylomata requiring significant effort to eradicate.

7.3 Vulvectomy Codes

Vulvectomy is the surgical removal of part or all of the vulva. Code selection depends on two variables: **extent of skin removal** (partial vs. complete) and **depth of removal** (simple [skin and superficial subcutaneous tissue] vs. radical [deep subcutaneous tissue]).

CPT Code	Extent	Depth	Clinical Use
56620	Partial (less than 80% of vulvar area)	Simple (skin and superficial subcutaneous tissue)	VIN (vulvar intraepithelial neoplasia), benign lesions
56625	Complete (80% or more of vulvar area)	Simple	Extensive VIN, widespread disease
56630	Partial	Radical (deep subcutaneous tissue)	Invasive vulvar carcinoma, partial resection

CPT Code	Extent	Depth	Clinical Use
56631	Partial + inguinofemoral lymphadenectomy	Radical	Includes unilateral lymph node dissection
56632	Partial + bilateral inguinofemoral lymphadenectomy	Radical	Includes bilateral lymph node dissection
56633	Complete	Radical	Invasive vulvar carcinoma, extensive resection
56637	Complete + bilateral inguinofemoral lymphadenectomy	Radical	Most extensive vulvectomy

🛑 **Stop! Think!**

The 80% threshold separating partial from complete vulvectomy is determined by the surgeon's documentation and anatomical extent of resection — it is not a measurement you can derive from the operative note alone. If the documentation is unclear, query the surgeon. Defaulting to "partial" when the procedure was complete results in significant undercoding.

7.4 Colporrhaphy — Anterior and Posterior Repair

Colporrhaphy refers to surgical repair of the vaginal wall. An **anterior colporrhaphy** (57240) repairs a cystocele (herniation of the bladder into the vagina), while a **posterior colporrhaphy** (57250) repairs a rectocele (herniation of the rectum into the vagina). When both are performed at the same session, report `57260` (combined anterior and posterior colporrhaphy). When an enterocele repair is added, report `57265`.

📋 Coding Scenarios — Vulva

Scenario 7-A: Simple Partial Vulvectomy

Patient: 52-year-old female with biopsy-proven VIN III, right labium majus. Procedure: Partial simple vulvectomy, right labium majus. Wide local excision of the right labium majus was performed. Margins were marked 1 cm from the lesion. The specimen was excised down to superficial subcutaneous tissue. Specimen sent to pathology. Wound closed with absorbable sutures. Approximately 30% of the vulvar area was resected.

Step-by-Step Analysis:

1. Partial vulvectomy (less than 80% of vulvar area — 30% documented).
2. Simple depth (skin and superficial subcutaneous tissue — not deep).
3. Code: `56620`

✓

Final Code: 56620

Scenario 7-B: Marsupialization of Bartholin Gland Cyst

Patient: 31-year-old female with recurrent left Bartholin gland cyst. Procedure: Marsupialization of left Bartholin gland cyst. A longitudinal incision was made over the cyst. The cyst wall was everted and sutured to the skin edges to create a permanent opening. No bleeding. No abscess contents noted.

Step-by-Step Analysis:

1. Marsupialization — not simple incision and drainage.
2. Code: `56440` — Marsupialization of Bartholin's gland cyst.

✓

Final Code: 56440

Common Mistake: Coding 56405 (I&D of vulvar abscess). Marsupialization and incision/drainage are distinct procedures. Marsupialization creates a permanent opening; I&D is a simple drainage without suturing.

Section 8: Vagina (57000–57426)

8.1 Colposcopy (57420–57461)

Colposcopy is a magnified visual examination of the cervix and vagina using a colposcope (illuminated magnifying instrument). It is performed to evaluate abnormal Pap smear results or visible lesions. Code selection depends on the anatomical site examined and whether biopsy or other procedures are performed during the same session.

- **57420**: Colposcopy of the entire vagina, with cervix if present
- **57421**: Colposcopy of the entire vagina, with cervix if present; with biopsy(s) of vagina/cervix
- **57452**: Colposcopy of the cervix, including upper/adjacent vagina
- **57454**: Colposcopy of the cervix + biopsy of the cervix and/or endocervical curettage (ECC)

8.2 Repair of Vesicovaginal Fistula (57300–57330)

A **vesicovaginal fistula** is an abnormal communication between the urinary bladder and the vagina, typically resulting from obstetric trauma, radiation, or surgery. Repair approaches include:

- **57300**: Closure of vesicovaginal fistula, vaginal approach
- **57310**: Closure of vesicovaginal fistula, vaginal approach, with urethral reconstruction
- **57320**: Closure of vesicovaginal fistula, abdominal approach
- **57330**: Closure of vesicovaginal fistula, transperitoneal and transvaginal combined

8.3 Sling Operation for Stress Incontinence (57288)

A **suburethral sling** procedure (57288) uses a strip of synthetic mesh or autologous fascia placed beneath the urethra to provide support and restore continence in female stress urinary incontinence. This procedure has one CPT code

regardless of the material used (synthetic or autologous). Do not separately code for graft harvesting if autologous fascia is used — it is included in 57288.

📚 Coder's Corner

Vaginal hysterectomy codes (58260–58294) are found in the Corpus Uteri subsection, not the Vagina subsection. When a vaginal hysterectomy is performed with repair of a cystocele and/or rectocele (colporrhaphy), the colporrhaphy is coded separately using the appropriate repair code. Review Section 10 for full hysterectomy coding guidance.

📋 Coding Scenarios — Vagina

Scenario 8-A: Colposcopy with Biopsy and ECC

Patient: 34-year-old female, Pap smear showing HSIL. Procedure: Colposcopy of the cervix with two punch biopsies of the cervix and endocervical curettage (ECC). Colposcope positioned. Acetic acid applied. Two aceto-white lesions identified at 3 and 9 o'clock. Punch biopsies taken from each lesion. Endocervical curette inserted; ECC performed and specimen sent. Monsel solution applied for hemostasis.

Step-by-Step Analysis:

1. Colposcopy of the cervix (not entire vagina).
2. Biopsies of cervix AND ECC performed.
3. Code: `57454` — Colposcopy with biopsy and ECC.
4. Number of biopsies (2) does not change the code.

✓

Final Code: 57454

Scenario 8-B: Suburethral Sling for Stress Urinary Incontinence

Patient: 48-year-old female with genuine stress urinary incontinence, conservative therapy failed. Procedure: Suburethral sling procedure (TVT-O — transobturator tension-free vaginal tape). Vaginal incision made at the urethrovesical junction. Synthetic polypropylene mesh tape threaded transobturatorially bilaterally. Cystoscopy confirmed no bladder injury. Tension adjusted. Wound closed.

Step-by-Step Analysis:

1. Suburethral sling procedure = `57288`.
2. Cystoscopy performed to confirm bladder integrity — when performed as a safety check during the sling procedure, it is typically included and not separately coded unless the payer allows it.

✓

Final Code: 57288

Section 9: Cervix Uteri (57452–57800)

9.1 Colposcopy of Cervix (57452–57461)

Colposcopy of the cervix is one of the most common gynecologic procedures. The base code (57452) covers diagnostic examination only. Additional procedures performed at the same session escalate the code selection:

CPT Code	Procedure	Included Components
57452	Colposcopy of the cervix, diagnostic only	Visual exam with colposcope only
57454	Colposcopy with biopsy and/or ECC	One or more cervical biopsies and/or endocervical curettage
57455	Colposcopy with biopsy of cervix only	Biopsy without ECC
57456	Colposcopy with ECC only	Endocervical curettage without biopsy
57460	Colposcopy with LEEP of transformation zone	Includes removal of transformation zone
57461	Colposcopy with LEEP of cervix and endocervical curettage	LEEP plus ECC of remaining endocervix

9.2 LEEP — Loop Electrosurgical Excision Procedure

LEEP uses a thin, electrically charged wire loop to excise abnormal cervical tissue identified by colposcopy. LEEP is both diagnostic (specimen sent to pathology) and therapeutic. The procedure is always coded with the colposcopy that guides it — do not code LEEP separately from colposcopy. Use `57460` (LEEP without ECC) or `57461` (LEEP with ECC).

> 🛑 **Stop! Think!**
>
> Do NOT report colposcopy (57452) separately when LEEP (57460 or 57461) is performed. The colposcopy is included in the LEEP code. Reporting both is

unbundling and will result in a claim denial or audit finding.

9.3 Cryotherapy and Laser of Cervix

- **57511**: Cauterization of cervix; cryocautery, initial or repeat
- **57513**: Cauterization of cervix; laser ablation
- **57514**: Cauterization of cervix; laser conization

9.4 Conization of Cervix (57520–57522)

Conization (cone biopsy) is excision of a cone-shaped segment of the cervix to diagnose or treat high-grade cervical dysplasia or early invasive cervical carcinoma. Two methods are recognized:

- **57520**: Conization of cervix — cold knife or laser (surgical, non-electrosurgical)
- **57522**: Conization of cervix with dilation and curettage, biopsy, endocervical curettage, and/or bilateral salpingo-oophorectomy (LEEP conization)

✨ **Did You Know?**

LEEP and cold knife conization (CKC) are both forms of cervical conization, but they use different CPT codes. Cold knife conization (57520) uses a scalpel. LEEP conization (57522) uses the electrosurgical loop to remove a cone of tissue. The technique is specified in the operative report and determines the correct code.

9.5 Cerclage (57700–57720)

Cervical cerclage is the surgical placement of sutures around the cervix to prevent premature cervical dilation in patients with cervical insufficiency. It is one of the most nuanced areas in obstetric/gynecologic coding:

- **57700**: Cerclage of uterine cervix, nonobstetric (for non-pregnant patients)
- **57720**: Trachelorrhaphy, plastic repair of uterine cervix, vaginal approach

- **59320**: Cerclage of cervix during pregnancy, vaginal approach (obstetric — in Maternity section)
- **59325**: Cerclage of cervix during pregnancy, abdominal approach (obstetric)

> ⚠ **Caution!**
>
> Cerclage codes are split between two CPT sections. If the patient is **pregnant**, use the Maternity Care codes (59320, 59325). If the patient is **not pregnant**, use the Cervix code (57700). The mistake of coding 57700 for a pregnant patient is a common error on the CPC exam.

📋 Coding Scenarios — Cervix

Scenario 9-A: LEEP with ECC

Patient: 29-year-old female, HSIL on Pap, confirmed on colposcopy biopsy. Procedure: Colposcopy with LEEP of cervical transformation zone and endocervical curettage. Colposcope positioned. Acetic acid applied. Transformation zone clearly visualized. LEEP loop excised the transformation zone in a single pass. Specimen sent to pathology. Endocervical curette applied to the remaining endocervical canal; specimen sent. Ferric subsulfate applied. Patient tolerated well.

Step-by-Step Analysis:

1. Colposcopy is included in the LEEP code — do NOT code 57452 separately.
2. LEEP + ECC = `57461`.

✓

Final Code: 57461

Scenario 9-B: Cold Knife Conization

Patient: 38-year-old female, CIN III, glandular involvement. Procedure: Cold knife conization of the cervix. Patient under general anesthesia. Lugol's solution applied. A cone-shaped specimen excised with a #15 scalpel blade. Cone specimen submitted to pathology. Hemostasis achieved with electrocautery. No D&C performed.

Step-by-Step Analysis:

1. Cold knife conization — not LEEP.
2. Code: `57520`.

✓

Final Code: 57520

Scenario 9-C: Cerclage During Pregnancy

Patient: 22-year-old female, 14 weeks gestation, cervical length 2.2 cm, history of second-trimester pregnancy loss. Procedure: Cervical cerclage, vaginal approach (McDonald technique). Patient in lithotomy position. A purse-string suture of 5-mm Mersilene tape was placed at the cervicovaginal junction using the McDonald technique. The cervix was closed. Patient tolerated the procedure well.

Step-by-Step Analysis:

1. Patient IS pregnant — use Maternity Care cerclage code, NOT 57700.
2. Vaginal approach = `59320`.

✓

Final Code: 59320

Common Mistake: Using 57700 (nonobstetric cerclage). This patient is pregnant, so 59320 is correct.

Section 10: Corpus Uteri (58100–58579)

The Corpus Uteri subsection contains some of the highest-volume and most complex codes in the Female Genital System. Hysterectomy coding alone

encompasses over 20 codes differentiated by approach, extent, uterine weight, and concurrent procedures. This section requires mastery for CPC exam success.

10.1 Endometrial Biopsy (58100)

Endometrial biopsy (58100) is a simple sampling of the uterine lining performed in the office without anesthesia. A flexible plastic catheter is inserted through the cervix and suction is applied to collect a tissue sample. This is different from dilation and curettage, which requires cervical dilation and is typically performed in an operating room.

10.2 Dilation and Curettage — D&C (58120)

Dilation and curettage (D&C) involves dilating the cervix and scraping the uterine lining with a curette. Code `58120` is reported for non-obstetric D&C (diagnostic or therapeutic). Obstetric D&C (e.g., for incomplete abortion) uses different codes from the Maternity Care subsection.

> ⚠ **Caution!**
>
> A diagnostic hysteroscopy (58555) performed immediately before a surgical hysteroscopy is NOT separately reportable. CPT guidelines state that when a surgical hysteroscopy is performed, the diagnostic hysteroscopy is always included. Code only the surgical hysteroscopy code. This is one of the most commonly tested bundling rules on the CPC exam.

10.3 Hysteroscopy (58555–58579)

Hysteroscopy is direct visual examination of the uterine cavity using a hysteroscope inserted through the cervix. It may be diagnostic or surgical.

CPT Code	Procedure	Key Notes
58555	Hysteroscopy, diagnostic (separate procedure)	Diagnosis only; no surgical intervention; "separate procedure" = bundled when surgical hysteroscopy performed

CPT Code	Procedure	Key Notes
58558	Hysteroscopy with sampling (biopsy) of endometrium and/or polypectomy	Biopsy and/or removal of polyp(s); includes diagnostic component
58559	Hysteroscopy with lysis of intrauterine adhesions	Asherman syndrome treatment
58560	Hysteroscopy with division or resection of intrauterine septum	Uterine septum; congenital anomaly correction
58561	Hysteroscopy with removal of leiomyomata (myomectomy)	Removal of submucosal fibroid(s) via hysteroscope; includes diagnostic
58562	Hysteroscopy with removal of impacted foreign body	Lost IUD or other intrauterine foreign body
58563	Hysteroscopy with endometrial ablation	Destruction of endometrial lining; NovaSure, Thermachoice, etc.
58565	Hysteroscopy with bilateral fallopian tube cannulation	Essure (historical) or tubal assessment

💥 **Coding Shot**

Surgical hysteroscopy always includes diagnostic hysteroscopy. If the operative report documents "diagnostic hysteroscopy followed by hysteroscopic myomectomy," report ONLY 58561. Reporting 58555 in addition is unbundling. This rule applies to all surgical hysteroscopy codes (58558–58579).

10.4 Myomectomy (58140–58146 and 58545–58546)

Myomectomy is the surgical removal of uterine fibroids (leiomyomata) while preserving the uterus. The approach determines the code:

CPT Code	Approach	Details
58140	Abdominal myomectomy, 1–4 intramural myomata, <250g removed	Open abdominal approach
58145	Abdominal myomectomy, 5 or more intramural myomata or >250g removed	More extensive open procedure
58146	Abdominal myomectomy for uterine tumor, for excision of fibroid tumor(s); 5 or more intramural myomata or combined weight >250g	Most extensive open myomectomy
58545	Laparoscopic myomectomy, 1–4 intramural myomata, <250g removed	Laparoscopic approach
58546	Laparoscopic myomectomy, 5 or more intramural myomata or >250g removed	More extensive laparoscopic procedure

10.5 Hysterectomy — The Big Picture

Hysterectomy is the surgical removal of the uterus. It is one of the most performed major surgeries in the United States and one of the most heavily tested topics on the CPC exam. The coder must determine: **(1) approach**, **(2) extent of uterus removed (supracervical vs. total)**, **(3) uterine weight** (for laparoscopic codes), and **(4) concurrent procedures** (tubes, ovaries, repair).

CPT Code	Type	Approach	Additional Details
58150	Total abdominal hysterectomy (TAH)	Open abdominal	With or without tubes and ovaries; uterus and cervix removed
58152	TAH with colpo-urethropexy	Open abdominal	Includes bladder neck suspension (Burch procedure)
58180	Supracervical	Open abdominal	Uterus removed;

CPT Code	Type	Approach	Additional Details
	abdominal hysterectomy		cervix left in place
58260	Vaginal hysterectomy (VH), uterus 250g or less	Vaginal	No colporrhaphy
58262	VH, uterus 250g or less, with removal of tube(s) and/or ovary(s)	Vaginal	Tubes and/or ovaries also removed
58263	VH, uterus 250g or less, with removal of tube(s) and/or ovary(s), with repair of enterocele	Vaginal	Enterocele repair included
58267	VH, uterus 250g or less, with colporrhaphy	Vaginal	Anterior or posterior repair included
58290	VH, uterus greater than 250g	Vaginal	Larger uterus
58291	VH, uterus greater than 250g, with tube(s) and/or ovary(s)	Vaginal	Oophorectomy included
58541	Laparoscopic supracervical hysterectomy (LSH), uterus 250g or less	Laparoscopic	Cervix left; classic LSH
58542	LSH, uterus 250g or less, with removal of tube(s) and/or ovary(s)	Laparoscopic	Oophorectomy included
58543	LSH, uterus greater than 250g	Laparoscopic	Larger uterus; morcellation often required
58544	LSH, uterus greater than 250g, with tube(s) and/or ovary(s)	Laparoscopic	Larger uterus + oophorectomy

CPT Code	Type	Approach	Additional Details
58550	Laparoscopic-assisted vaginal hysterectomy (LAVH), uterus 250g or less	Laparoscopic + vaginal	Laparoscopic dissection; vaginal removal
58552	LAVH, uterus 250g or less, with tube(s) and/or ovary(s)	Laparoscopic + vaginal	Oophorectomy included
58553	LAVH, uterus greater than 250g	Laparoscopic + vaginal	Larger uterus
58554	LAVH, uterus greater than 250g, with tube(s) and/or ovary(s)	Laparoscopic + vaginal	Larger uterus + oophorectomy
58570	Total laparoscopic hysterectomy (TLH), uterus 250g or less	Totally laparoscopic	No vaginal component; uterus removed in pieces or via colpotomy
58571	TLH, uterus 250g or less, with tube(s) and/or ovary(s)	Totally laparoscopic	Most common TLH code
58572	TLH, uterus greater than 250g	Totally laparoscopic	Larger uterus
58573	TLH, uterus greater than 250g, with tube(s) and/or ovary(s)	Totally laparoscopic	Larger uterus + oophorectomy

🛑 Stop! Think! — Uterine Weight Matters!

For laparoscopic and vaginal hysterectomy codes, the **uterine weight threshold is 250 grams**. This weight is documented in the pathology report, not the operative note. If the uterine weight is not documented, query the pathology report. If weight is unavailable and the uterus appeared enlarged, query the surgeon. Never assume — selecting the wrong weight category is a significant coding error. The cut-off applies to the weight of the excised uterus,

not the estimated preoperative weight.

10.6 Endometrial Ablation (58353–58356)

Endometrial ablation destroys the uterine lining to treat abnormal uterine bleeding. When performed hysteroscopically, use `58563`. Non-hysteroscopic (global endometrial ablation devices such as NovaSure or ThermaChoice) are reported with:

- **58353**: Endometrial ablation, thermal, without hysteroscopic guidance
- **58356**: Endometrial cryoablation with ultrasonic guidance, including endometrial imaging

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📋 Coding Scenarios — Corpus Uteri

Scenario 10-A: Hysteroscopy with Polypectomy

Patient: 44-year-old female with abnormal uterine bleeding and endometrial polyp on ultrasound. Procedure: Hysteroscopy with polypectomy. Hysteroscope inserted through the cervix. The uterine cavity was distended with normal saline. A 2 cm pedunculated polyp was visualized on the posterior uterine wall. The polyp was resected at its base using a resectoscope loop and removed. The cavity was reexamined. No other lesions identified. Patient tolerated the procedure well.

Step-by-Step Analysis:

1. Hysteroscopy with polypectomy = `58558`.
2. Diagnostic hysteroscopy is included — do NOT separately code 58555.

✓

Final Code: 58558

Scenario 10-B: Total Laparoscopic Hysterectomy with Bilateral Salpingo-Oophorectomy

Patient: 49-year-old female with symptomatic uterine fibroids and desires surgical management. Uterus clinically enlarged. Procedure: Total laparoscopic hysterectomy with bilateral salpingo-oophorectomy (TLH/BSO). Patient placed in dorsal lithotomy position. Laparoscopic ports placed. Pneumoperitoneum established. The bilateral round ligaments, utero-ovarian ligaments, and fallopian tubes were coagulated and divided. The broad ligament was dissected. Uterine vessels were skeletonized and ligated bilaterally. The uterus was amputated from the cervix laparoscopically. The vaginal cuff was closed laparoscopically. Specimen extracted vaginally. Specimen weight: 320g. Bilateral ovaries and tubes removed in their entirety. No complications.

Step-by-Step Analysis:

1. Total laparoscopic hysterectomy confirmed (TLH — not LAVH; uterus removed entirely laparoscopically with vaginal cuff closed laparoscopically).
2. Bilateral salpingo-oophorectomy (both tubes and ovaries) — included in the hysterectomy code.
3. Uterine weight: 320g — this is **greater than 250g**.
4. TLH + bilateral tubes/ovaries + uterus >250g = 58573.

✓

Final Code: 58573

Common Mistakes: (1) Using 58571 (uterus 250g or less) — incorrect, weight is 320g. (2) Separately coding oophorectomy — BSO is included in 58573. (3) Confusing TLH with LAVH — the operative note specifies the vaginal cuff was closed laparoscopically, confirming TLH, not LAVH.

Scenario 10-C: Vaginal Hysterectomy with Anterior and Posterior Colporrhaphy

Patient: 58-year-old female, uterine prolapse, cystocele, and rectocele. Procedure: Vaginal hysterectomy with anterior and posterior colporrhaphy. The uterus was mobilized and removed vaginally. Specimen weight: 180g. Anterior colporrhaphy was then performed to repair the cystocele. Posterior colporrhaphy was performed to repair the rectocele. All wounds closed. Patient tolerated well.

Step-by-Step Analysis:

1. Vaginal hysterectomy, uterine weight 180g (250g or less).
2. Colporrhaphy (both anterior and posterior) was also performed.
3. VH with colporrhaphy, uterus 250g or less = `58267`.
4. No oophorectomy — so 58262 or 58263 do not apply.

✓

Final Code: 58267

Scenario 10-D: Hysteroscopic Endometrial Ablation

Patient: 41-year-old female with menorrhagia. Has completed childbearing. Procedure: Hysteroscopy with endometrial ablation (NovaSure system). Hysteroscope placed. The uterine cavity was inspected — no polyps or fibroids identified. The NovaSure device was deployed. Radiofrequency energy delivered per protocol for 90 seconds. Device removed. Cavity reexamined — endometrium uniformly ablated. Patient tolerated well.

Step-by-Step Analysis:

1. Hysteroscopy with endometrial ablation = `58563`.
2. Diagnostic hysteroscopy is included — do NOT separately code 58555.

✓

Final Code: 58563

Section 11: Oviduct (Fallopian Tubes) and Ovary (58600–58960)

11.1 Tubal Ligation (58600–58611)

Tubal ligation (female sterilization) involves interrupting the fallopian tubes to prevent pregnancy. The timing relative to delivery and the approach determine code selection:

CPT Code	Procedure	Timing / Approach
58600	Ligation or transection of fallopian tube(s), abdominal or vaginal approach	Interval (not postpartum); open approach
58605	Ligation or transection of fallopian tube(s), abdominal or vaginal approach, postpartum (within 60 days of delivery)	Postpartum; open approach
58611	Ligation or transection of fallopian tube(s) when done at time of cesarean delivery or intra-abdominal surgery	At time of C-section or other abdominal surgery; add-on code
58670	Laparoscopy with fulguration of oviduct(s)	Laparoscopic; interval sterilization via electrocautery (Bipolar Technique)
58671	Laparoscopy with occlusion of oviduct(s) by device	Laparoscopic; Falope ring, Hulka clip, or similar device

📚 Coder's Corner

Code 58611 is an add-on code (noted with the + symbol in CPT). It is reported in addition to the primary cesarean delivery or abdominal procedure code. Do NOT report 58611 as a standalone code. When a patient requests tubal ligation at

the time of C-section, report the C-section code (e.g., 59510 or 59514) AND add 58611.

11.2 Treatment of Ectopic Pregnancy (59120–59151)

An **ectopic pregnancy** occurs when a fertilized egg implants outside the uterus, most commonly in the fallopian tube. Treatment may be surgical or medical. Surgical treatment codes are found in both the Female Genital System and Maternity Care sections:

CPT Code	Procedure	Notes
59120	Surgical treatment of ectopic pregnancy; tubal or ovarian, requiring salpingectomy and/or oophorectomy, abdominal or vaginal approach	Open salpingectomy; tube removed
59121	Surgical treatment of ectopic pregnancy; tubal or ovarian, without salpingectomy and/or oophorectomy	Open salpingostomy; tube preserved
59150	Laparoscopic treatment of ectopic pregnancy; without salpingectomy and/or oophorectomy	Laparoscopic salpingostomy; tube preserved
59151	Laparoscopic treatment of ectopic pregnancy; with salpingectomy and/or oophorectomy	Laparoscopic salpingectomy; most common surgical approach today

✨ **Did You Know?**

Medical treatment of ectopic pregnancy with methotrexate is not coded with a surgical procedure code. Methotrexate administration is reported using the appropriate drug administration codes (e.g., J8610 for oral methotrexate, J9250

for injectable, plus an administration code such as 96401). The diagnosis code Z33.10 or the specific ectopic pregnancy ICD-10-CM code (O00.x) is reported with the administration code.

📋 Coding Scenarios — Oviduct and Ovary

Scenario 11-A: Laparoscopic Treatment of Ectopic Pregnancy with Salpingectomy

Patient: 26-year-old female, beta-HCG 4,200, right adnexal mass 3.2 cm on ultrasound, hemodynamically stable. Procedure: Laparoscopic treatment of right ectopic pregnancy with right salpingectomy. Laparoscopic ports placed. Hemoperitoneum of approximately 200mL identified. Right fallopian tube was distended with ectopic pregnancy product at the ampullary region. The mesosalpinx was desiccated and the fallopian tube divided. The tube and ectopic products were removed. Left tube and both ovaries normal. Pelvis irrigated. No complications.

Step-by-Step Analysis:

1. Laparoscopic treatment of ectopic pregnancy.
2. Salpingectomy performed (tube removed).
3. Code: `59151` — Laparoscopic treatment with salpingectomy.
4. Add modifier **-RT** (right side).

✓

Final Code: 59151-RT

Scenario 11-B: Tubal Ligation at Time of Cesarean Section

Patient: 32-year-old female, presenting for scheduled repeat cesarean delivery. Patient requested permanent sterilization. Procedure: Low transverse cesarean section with bilateral tubal ligation (Pomeroy technique). Cesarean delivery performed; healthy term infant delivered. Bilateral fallopian tubes were identified. Using Pomeroy technique, a loop of each tube was ligated with absorbable suture and excised. Specimens sent. Uterus closed. Bilateral tubal ligation confirmed.

Step-by-Step Analysis:

1. Repeat cesarean delivery — only if antepartum and postpartum care is NOT included, use delivery-only code `59514`. If global care provided, use `59510`.
2. Tubal ligation at time of C-section = add-on code `58611`.
3. Assume delivery only for this scenario.

✓

Final Codes: 59514, 58611

Scenario 11-C: Laparoscopic Salpingo-Oophorectomy (Interval)

Patient: 54-year-old female, BRCA1 positive. Prophylactic risk-reducing bilateral salpingo-oophorectomy. Procedure: Laparoscopic bilateral salpingo-oophorectomy. Laparoscopic ports placed. Both ovaries and tubes identified, normal appearing. Infundibulopelvic ligaments coagulated and divided bilaterally. Both adnexa removed. Specimens sent. No complications.

Step-by-Step Analysis:

1. Laparoscopic bilateral salpingo-oophorectomy = `58661`.
2. Note: 58661 is inherently bilateral in many coding scenarios. Some payers require modifier -50 when explicitly bilateral. Verify with payer.

✓

Final Code: 58661

PART C: MATERNITY CARE AND DELIVERY (59000–59899)

Section 12: Antepartum Care

12.1 The Global Obstetric Package

The **global obstetric package** is one of the most unique billing concepts in all of CPT. Unlike most surgical procedures where the global period refers to postoperative follow-up, the obstetric global package encompasses services provided across the entire course of a normal pregnancy, delivery, and postpartum period — all billed as a single code by the delivering physician.

The global obstetric package includes the following services when billed as a complete package:

Component	Services Included
Antepartum Care	Initial history and physical exam; subsequent visits (up to 13 visits); routine urinalysis; monthly blood pressure checks; weight monitoring; routine fetal heart tones
Delivery	Admission history and physical; management of uncomplicated labor; delivery service (vaginal or cesarean)
Postpartum Care	Office and hospital visits within 6 weeks of delivery; the 4–6 week postpartum exam

CPT Code	Global Package Description
59400	Routine obstetric care including antepartum, vaginal delivery, and postpartum care
59510	Routine obstetric care including antepartum, cesarean delivery, and postpartum care
59610	Routine obstetric care including antepartum, vaginal delivery after cesarean, and postpartum care (VBAC)
59618	Routine obstetric care including antepartum, attempted VBAC converting to cesarean delivery, and

CPT Code	Global Package Description
	postpartum care

12.2 Services NOT Included in the Global Package

The following services are separately reportable even when the global package is billed:

- High-risk antepartum conditions (e.g., gestational diabetes management, preeclampsia)
- Amniocentesis (59000, 59001)
- Chorionic villus sampling (59015)
- Non-stress test / biophysical profile (59025)
- Cerclage placement or removal (59320, 59325)
- External cephalic version (59412)
- Ultrasounds (reported separately from radiology)
- Antepartum care beyond what a single provider rendered (split-care rules apply)

12.3 Amniocentesis (59000–59001)

Amniocentesis is needle aspiration of amniotic fluid from the uterus, performed under ultrasound guidance. It is used for genetic testing, infection diagnosis, or to relieve polyhydramnios.

- **59000**: Amniocentesis, diagnostic (genetic or other testing)
- **59001**: Amniocentesis, therapeutic (reduction of amniotic fluid)

Ultrasound guidance for amniocentesis is reported separately with `76946` when performed by the same or different physician.

📚 Coder's Corner

Chorionic villus sampling (CVS) (59015) is a first-trimester procedure performed at 10–13 weeks gestation for prenatal genetic diagnosis. It involves sampling of placental cells either transcervically or transabdominally. Unlike amniocentesis, CVS is performed earlier and carries a slightly higher risk of pregnancy loss. Always report 76945 for ultrasound guidance when performed with CVS.

📋 Coding Scenarios — Antepartum

Scenario 12-A: Diagnostic Amniocentesis with Ultrasound Guidance

Patient: 37-year-old primigravida, 16 weeks gestation, advanced maternal age. Patient requests genetic amniocentesis. Procedure: Amniocentesis under ultrasound guidance. The abdomen was prepped. Under continuous ultrasound guidance, a 22-gauge spinal needle was inserted transabdominally into the amniotic sac, avoiding the placenta. 20mL of clear amniotic fluid aspirated and sent to the genetics lab. Needle removed. Fetal heart tones confirmed normal.

Step-by-Step Analysis:

1. Diagnostic amniocentesis (genetic testing) = `59000`.
2. Ultrasound guidance, imaging supervision and interpretation = `76946`.

✓

Final Codes: 59000, 76946

Scenario 12-B: Non-Stress Test Separately Billed

Patient: 39-week gestation, decreased fetal movement. Procedure: Non-stress test (NST) performed in the office. External fetal monitoring applied for 30 minutes. Results reviewed and interpreted by the attending OB physician. Reactive NST confirmed.

Step-by-Step Analysis:

1. NST is separately reportable even if global obstetric package will ultimately be billed.
2. Fetal contraction stress test or NST interpretation = `59025`.

✓

Final Code: 59025

Section 13: Delivery

13.1 Global vs. Component Coding

When one physician provides all obstetric care (antepartum, delivery, postpartum), the global package code is used. When care is split between providers, component codes are used:

Component	CPT Code	Description
Antepartum only (1–3 visits)	99201–99215	E/M office visit codes
Antepartum only (4–6 visits)	59425	Antepartum care only, 4–6 visits
Antepartum only (7+ visits)	59426	Antepartum care only, 7 or more visits
Vaginal delivery only	59409	Vaginal delivery only (no antepartum or postpartum)
Vaginal delivery + postpartum	59410	Vaginal delivery with postpartum care only
Cesarean delivery only	59514	Cesarean delivery only (no antepartum or postpartum)
Cesarean delivery + postpartum	59515	Cesarean delivery with postpartum care only
Global vaginal delivery	59400	Antepartum + vaginal delivery + postpartum
Global cesarean delivery	59510	Antepartum + cesarean delivery + postpartum

🛑 **Stop! Think! — Do NOT Unbundle the Global OB Package!**

When a single physician provides all antepartum, delivery, and postpartum care, you must report the global code (59400 or 59510) — NOT the component codes separately. Unbundling the global package (e.g., reporting 59426 + 59409 + 59430) when a global code is appropriate is a compliance violation. The global code pays at a higher total reimbursement than the individual components, and it reflects the comprehensive care provided.

13.2 VBAC and Failed VBAC (59610–59622)

Vaginal Birth After Cesarean (VBAC) is attempted vaginal delivery in a patient with a prior cesarean section. This carries specific risks (uterine rupture) and uses specific CPT codes:

CPT Code	Description
59610	Routine obstetric care including antepartum, vaginal delivery after cesarean, and postpartum care (successful VBAC, global)
59612	Vaginal delivery after cesarean, delivery only (no antepartum or postpartum)
59614	Vaginal delivery after cesarean, with postpartum care (no antepartum)
59618	Routine obstetric care for attempted VBAC converting to cesarean, global (antepartum + attempted VBAC + C-section + postpartum)
59620	Attempted VBAC converting to cesarean, delivery only
59622	Attempted VBAC converting to cesarean, delivery with postpartum care

✨ **Did You Know?**

Forceps-assisted and vacuum-assisted vaginal deliveries are NOT coded separately. The use of forceps or vacuum is included in the vaginal delivery code (59409, 59400, etc.). There is no add-on code for forceps or vacuum assistance in CPT. Document the technique in the operative note for medical record accuracy, but do not add a separate CPT code for the instrument used.

13.3 Multiple Births

When twins or multiples are delivered, the delivery code is reported once for the first infant. Additional deliveries are reported with a separate delivery code with modifier **-51** (multiple procedures) or as specified by payer guidelines. However, most payers use specific payment policies for multiple births — always verify coverage before billing.

📋 Coding Scenarios — Delivery

Scenario 13-A: Global Vaginal Delivery (One Physician, Full Care)

Patient: 28-year-old G1P0, received all prenatal care from Dr. Smith (13 visits). Patient admitted to labor and delivery at 40 weeks. Spontaneous vaginal delivery of healthy male infant, 7 lb 2 oz, APGAR 8/9. Dr. Smith attended delivery. Patient seen for postpartum visit at 6 weeks.

Step-by-Step Analysis:

1. One physician provided all antepartum care (13 visits = full antepartum), delivery, and postpartum care.
2. Vaginal delivery — global package applies.
3. Code: `59400`.
4. Do NOT separately code antepartum (59426), delivery (59409), and postpartum (59430).

✓

Final Code: 59400

Scenario 13-B: Split OB Care — New Physician Delivers

Patient: 32-year-old female, received 9 antepartum visits from Dr. Jones (OB group A). Patient moved and transferred care at 36 weeks. Dr. Smith (OB group B) performed 2 antepartum visits and then performed cesarean delivery. Dr. Smith also saw the patient for the 6-week postpartum visit.

Step-by-Step Analysis:

1. Dr. Jones: 9 antepartum visits — report `59426` (antepartum care only, 7 or more visits).
2. Dr. Smith: 2 antepartum visits — too few for 59425 (4–6 visits) — report as individual E/M visits (99213 or 99214 x2).
3. Dr. Smith performed cesarean delivery and postpartum care — report `59515` (cesarean delivery with postpartum care).

✓

Dr. Jones: 59426 | Dr. Smith: 99213 x2, 59515

Scenario 13-C: Failed VBAC Converted to Cesarean

Patient: 30-year-old G2P1 with prior low transverse cesarean. Patient attempted VBAC. After 8 hours of labor and failure to progress, decision made to proceed with cesarean delivery. Patient had received all antepartum care and will receive postpartum care from the same physician.

Step-by-Step Analysis:

1. Attempted VBAC that converted to cesarean — global care with one physician.
2. Code: `59618` — Routine OB care for attempted VBAC converting to cesarean, global.
3. Do NOT report 59610 (successful VBAC) — delivery was ultimately cesarean.

✓

Final Code: 59618

Section 14: Postpartum Care

Postpartum care encompasses the period from delivery through 6 weeks (42 days) after birth. When postpartum care is provided by a physician who did NOT

provide antepartum care or deliver the infant, only the postpartum component is reportable:

- **59430**: Postpartum care only (separate from delivery)

This code is used when the postpartum physician is different from the delivering physician. If the same physician who delivered the infant also provides postpartum care, it is included in the delivery component codes (59410, 59515, 59614, etc.) or the global package.

Section 15: Abortion Services (59812–59857)

CPT Code	Procedure	Notes
59812	Treatment of incomplete abortion, any trimester, completed surgically	Incomplete spontaneous abortion; surgical completion
59820	Treatment of missed abortion, completed surgically; first trimester	Fetal demise; products retained; first trimester
59821	Treatment of missed abortion, completed surgically; second trimester	Fetal demise; products retained; second trimester
59830	Treatment of septic abortion, completed surgically	Infected abortion; requires urgent surgical evacuation
59840	Induced abortion, by dilation and curettage	D&C method
59841	Induced abortion, by dilation and evacuation	D&E method; typically second trimester
59850	Induced abortion, 1 or more intra-amniotic injections (saline or other), with or without dilation and curettage	Injection method
59855	Induced abortion, by 1 or more vaginal suppositories (prostaglandin)	Prostaglandin suppository method

CPT Code	Procedure	Notes
59856	Induced abortion, by 1 or more vaginal suppositories with D&C	Suppository + surgical evacuation
59857	Induced abortion, by 1 or more vaginal suppositories with D&E	Suppository + evacuation

Scenario 15-A: Missed Abortion, First Trimester

Patient: 11-week gestation with confirmed fetal demise on ultrasound 3 days ago. No spontaneous passage of products. Procedure: Surgical evacuation of missed abortion. Patient brought to the OR. Cervix dilated with osmotic dilators previously placed. Sharp curettage performed followed by suction. Complete evacuation confirmed. Specimen sent to pathology.

Step-by-Step Analysis:

1. Missed abortion (fetal demise, products not passed spontaneously).
2. First trimester (11 weeks).
3. Code: `59820`.

✓

Final Code: 59820

PART D: ENDOCRINE SYSTEM (60000–60699)

Section 16: Thyroid Gland (60000–60300)

16.1 Thyroid Biopsy

Fine needle aspiration (FNA) biopsy of the thyroid (60100) is the most common diagnostic procedure for thyroid nodules. A thin needle is inserted into the nodule to aspirate cells for cytological analysis. When ultrasound guidance is used, report `76942` separately. The cytopathology interpretation is reported separately by the pathologist (88173).

16.2 Thyroidectomy Codes

Thyroidectomy is the surgical removal of all or part of the thyroid gland. Code selection depends on the extent of resection and the indication (benign vs. malignant).

CPT Code	Procedure	Extent / Indication
60210	Partial thyroid lobectomy, unilateral; with or without isthmusectomy	Removal of part of one lobe; isthmusectomy optional
60212	Partial thyroid lobectomy, unilateral, with contralateral subtotal lobectomy	Partial removal of both lobes
60220	Total thyroid lobectomy, unilateral; with or without isthmusectomy	Entire one lobe removed; often for follicular neoplasm
60225	Total thyroid lobectomy, unilateral; with contralateral subtotal lobectomy	Near-total thyroidectomy
60240	Thyroidectomy, total or complete	Both lobes entirely removed; benign disease or goiter
60252	Thyroidectomy, total or	Thyroid cancer with

CPT Code	Procedure	Extent / Indication
	subtotal for malignancy; with limited neck dissection	limited lymphadenectomy
60254	Thyroidectomy, total or subtotal for malignancy; with radical neck dissection	Thyroid cancer with comprehensive lymph node clearance
60260	Thyroidectomy, removal of all remaining thyroid tissue following previous removal of a portion of thyroid (completion thyroidectomy)	Second surgery to remove residual thyroid; modifier -58 often required
60270	Thyroidectomy, including substernal thyroid; sternal split or transthoracic approach	Large substernal goiter requiring sternal split
60271	Thyroidectomy, including substernal thyroid; cervical approach	Substernal goiter accessible via neck incision

🛑 **Stop! Think! — Completion Thyroidectomy**

A **completion thyroidectomy** (60260) is performed when a patient had a prior lobectomy (e.g., for a nodule that returned follicular carcinoma on final pathology) and now requires removal of the remaining thyroid lobe. If the original surgery and the completion thyroidectomy are performed by the same surgeon within the global period of the first operation, append modifier **-58** (staged or related procedure). If performed by a different surgeon, modifier **-55** (postoperative management only) may apply. Read the medical record carefully before assigning modifiers.

16.3 Parathyroid Surgery (60500–60512)

Parathyroidectomy is performed for primary hyperparathyroidism (adenoma, hyperplasia, or carcinoma). The parathyroid glands are four small glands located on

or near the posterior thyroid. Their removal may be partial (one or more glands) or subtotal (3.5 of 4 glands).

- **60500**: Parathyroidectomy or exploration of parathyroid(s)
- **60502**: Parathyroidectomy, re-exploration
- **60505**: Parathyroidectomy, with mediastinal exploration — sternal split or transthoracic approach
- **60512**: Parathyroid autotransplantation — transplantation of parathyroid tissue to muscle (e.g., forearm) during total thyroidectomy to preserve parathyroid function

✨ **Did You Know?**

Parathyroid autotransplantation (60512) is an add-on procedure reported in addition to the primary thyroid or parathyroid procedure. It is not a standalone surgery. When a total thyroidectomy is performed and parathyroid tissue is autotransplanted to the forearm muscle to preserve parathyroid function, report both 60240 (or 60252/60254) AND +60512.

📋 Coding Scenarios — Thyroid

Scenario 16-A: Total Thyroidectomy for Graves' Disease

Patient: 42-year-old female with Graves' disease, failed medical management. Procedure: Total thyroidectomy. A transverse cervical incision was made. The thyroid lobes were mobilized bilaterally. Recurrent laryngeal nerves identified and preserved. Superior and inferior thyroid arteries ligated. Parathyroid glands identified and preserved. Both lobes and isthmus resected en bloc. Hemostasis achieved. Wound closed.

Step-by-Step Analysis:

1. Total thyroidectomy — benign disease (Graves' disease).
2. Code: `60240`.
3. Parathyroid glands preserved — no additional code needed.

✓

Final Code: 60240

Scenario 16-B: Completion Thyroidectomy

Patient: 55-year-old female who had a right thyroid lobectomy 4 weeks ago. Final pathology: papillary thyroid carcinoma, 2.2 cm. Presenting for completion thyroidectomy. Procedure: Completion thyroidectomy (removal of left thyroid lobe). The prior right lobectomy site was encountered. The left thyroid lobe was identified, mobilized, and excised. The left parathyroid glands were preserved. Left recurrent laryngeal nerve protected throughout. No complications.

Step-by-Step Analysis:

1. Completion thyroidectomy — removal of remaining thyroid tissue after prior partial resection.
2. Code: `60260`.
3. Performed within the global period of the original lobectomy (60220) by the same surgeon — append modifier **-58** (staged or related procedure by same surgeon during global period).

✓

Final Code: 60260-58

Scenario 16-C: Total Thyroidectomy for Malignancy with Limited Neck Dissection and Parathyroid Autotransplantation

Patient: 48-year-old female, papillary thyroid carcinoma, multiple bilateral nodes. Procedure: Total thyroidectomy for malignancy with limited neck dissection (central compartment) and parathyroid autotransplantation. Total thyroidectomy performed. Bilateral central compartment lymph node dissection completed. One parathyroid gland was inadvertently devascularized. The gland was diced and implanted into the right sternocleidomastoid muscle (autotransplantation). Three remaining parathyroid glands preserved in situ.

Step-by-Step Analysis:

1. Total thyroidectomy for malignancy with limited neck dissection = `60252`.
2. Parathyroid autotransplantation = add-on code `+60512`.

✓

Final Codes: 60252, 60512

Section 17: Adrenal Glands and Pituitary (60540–60699)

17.1 Adrenalectomy (60540–60545)

Adrenalectomy is the surgical removal of one or both adrenal glands, typically for adrenal cortical adenoma, pheochromocytoma, Cushing's syndrome, or adrenal metastasis. The approach determines the code:

- **60540**: Adrenalectomy, partial or complete, or exploration of adrenal gland with or without biopsy, transabdominal, lumbar, or dorsal (retroperitoneal) approach
- **60545**: Adrenalectomy, partial or complete; with excision of adjacent retroperitoneal tumor
- **60650**: Laparoscopic adrenalectomy, partial or complete, or exploration of adrenal gland with or without biopsy

Laparoscopic adrenalectomy (60650) is the preferred minimally invasive approach and the most commonly used code for this procedure today.

17.2 Pituitary Tumor Resection

Pituitary tumors are most commonly resected via a **transsphenoidal approach** (through the nose and sphenoid sinus). These procedures are found in the Nervous System subsection of CPT (61500–62240) rather than in the Endocrine System subsection. Coders should cross-reference to neurosurgery codes when coding pituitary tumor removal. The endocrine system section (60699) contains only limited pituitary codes.

SECTION 18: REAL-WORLD CODING SCENARIOS

Section 18: Full Operative Note Scenarios

The following six scenarios include complete operative note excerpts, step-by-step analysis, final codes with modifiers, and common mistakes to avoid. These scenarios reflect the complexity of real-world coding and CPC exam questions.

📄 Real-World Scenario 1: Total Laparoscopic Hysterectomy with Bilateral Salpingo-Oophorectomy

PREOPERATIVE DIAGNOSIS: Symptomatic uterine leiomyomata; menorrhagia POSTOPERATIVE DIAGNOSIS: Same PROCEDURE: Total laparoscopic hysterectomy (TLH) with bilateral salpingo-oophorectomy (BSO) SURGEON: Dr. A. Torres, MD FINDINGS: Uterus enlarged, approximately 14 weeks size. Multiple intramural and subserosal fibroids. Bilateral ovaries and tubes grossly normal. OPERATIVE NOTE: Patient placed in dorsal lithotomy position. Three laparoscopic ports placed. CO2 insufflation to 15 mmHg. Uterine manipulator placed. The right round ligament was cauterized and divided. The right ureter was identified and swept laterally. The right infundibulopelvic ligament was desiccated with bipolar electrocautery and divided. The right fallopian tube and ovary were freed. The bladder flap was developed. The right uterine artery and vein were skeletonized, bipolar coagulated, and transected. The same steps were performed on the left. The uterus was amputated from the vaginal cuff circumferentially using the laparoscopic approach. The vaginal cuff was closed laparoscopically with a running 0-Vicryl suture. The specimen was morcellated and removed. PATHOLOGY REPORT: Uterine weight 410g. Multiple leiomyomata.

Step-by-Step Analysis:

1. **Approach:** Totally laparoscopic — vaginal cuff closed laparoscopically = TLH (NOT LAVH).

2. **Uterus removed:** Cervix removed laparoscopically = total hysterectomy (not supracervical).

3. **Concurrent:** Bilateral salpingo-oophorectomy — both tubes and ovaries removed.

4. **Uterine weight:** 410g — GREATER than 250g threshold.

5. **TLH + BSO + uterus >250g = Code 58573.**

✓

Final Code: 58573

Common Mistakes:

- Using 58571 (uterus 250g or less) — wrong; pathology confirms 410g
- Separately coding salpingo-oophorectomy — BSO is included in 58573
- Coding as LAVH (58554) — incorrect; vaginal cuff closed laparoscopically confirms TLH

📄 Real-World Scenario 2: Colposcopy with LEEP of Cervix

PREOPERATIVE DIAGNOSIS: Abnormal Pap smear (HSIL); cervical dysplasia PROCEDURE: Colposcopy with loop electrosurgical excision procedure (LEEP) and endocervical curettage SURGEON: Dr. M. Patel, MD OPERATIVE NOTE: Patient placed in lithotomy position. Colposcope positioned. Acetic acid applied — dense aceto-white lesion identified involving the anterior and posterior lips of the cervix, extending into the endocervical canal, Schiller non-staining. The transformation zone was excised with a large loop electrode in a single pass. Specimen labeled "ectocervix" and sent to pathology. An ECC was then performed — specimen labeled "endocervix" sent separately. Monsel solution and silver nitrate applied for hemostasis. Patient tolerated the procedure well.

Step-by-Step Analysis:

1. Colposcopy is included in the LEEP code — do NOT code 57452 separately.
2. LEEP (loop electrosurgical excision of transformation zone) + ECC performed = `57461`.
3. Two specimens sent does not change the code.

✓

Final Code: 57461

Common Mistakes:

- Separately coding 57452 (colposcopy) — it is bundled into 57461
- Using 57460 instead of 57461 — 57460 is LEEP without ECC; ECC was performed here

📄 Real-World Scenario 3: Robotic-Assisted Radical Prostatectomy

PREOPERATIVE DIAGNOSIS: Prostate adenocarcinoma, Gleason 3+4, clinical stage T2a PROCEDURE: Robot-assisted laparoscopic radical prostatectomy (RALP) with bilateral pelvic lymph node dissection SURGEON: Dr. R. Khan, MD OPERATIVE NOTE: Patient placed supine, Trendelenburg position. Da Vinci Surgical System docked. Six robotic ports placed. Bilateral external iliac, obturator, and hypogastric lymph node packets dissected and removed. The prostate was then dissected from the bladder neck and urethra. Bilateral nerve-sparing technique employed with intrafascial dissection. The seminal vesicles and vasa deferentia were excised with the prostate. The specimen was bagged. Urethrovesical anastomosis completed over a Foley catheter. Specimen removed via port site. Estimated blood loss: 120mL.

Step-by-Step Analysis:

1. Robot-assisted laparoscopic prostatectomy — report as laparoscopic code.
2. Bilateral pelvic lymph node dissection included in the descriptor of 55866.
3. Do NOT separately code lymphadenectomy.
4. Code: `55866`.

✓

Final Code: 55866

Common Mistakes:

- Separately coding bilateral lymphadenectomy — included in 55866
- Adding a "robot" modifier — no such modifier exists in routine CPT reporting
- Using 55840 (open retropubic) — incorrect; this was laparoscopic/robotic

📄 Real-World Scenario 4: Global OB Package — Vaginal Delivery with Full Antepartum and Postpartum

PATIENT: 24-year-old G1P0, 39+2 weeks gestation PROVIDER: Dr. C. Davis, OB/GYN — provided all prenatal care (13 antepartum visits), attended delivery, and will provide postpartum care. DELIVERY NOTE: Patient admitted in active labor. Labor progressed normally. Vaginal delivery of a viable female infant, 6 lb 14 oz, APGAR scores 9 and 9 at 1 and 5 minutes. Placenta delivered spontaneously. Bilateral mediolateral episiotomy repaired in layers. Estimated blood loss 250mL. No complications. POSTPARTUM: Patient returned for 6-week postpartum visit. Wound healing well. Resumed normal activities.

Step-by-Step Analysis:

1. One provider, complete antepartum (13 visits), vaginal delivery, and postpartum care.
2. Global obstetric care — vaginal delivery = `59400`.
3. Episiotomy is included in the delivery code — do NOT separately code the repair.

✓

Final Code: 59400

Common Mistakes:

- Separately coding the episiotomy repair — it is bundled into the delivery code
- Coding component codes (59426 + 59409 + 59430) when a global code applies

📄 Real-World Scenario 5: Hysteroscopy with Myomectomy

PREOPERATIVE DIAGNOSIS: Submucosal fibroid; menorrhagia PROCEDURE: Hysteroscopy with myomectomy (resection of submucosal fibroid) SURGEON: Dr. L. Chen, MD OPERATIVE NOTE: The patient was taken to the operating room and placed under general anesthesia in lithotomy position. Diagnostic hysteroscopy was performed first — a 4 cm type 1 submucosal fibroid identified on the posterior uterine wall. The resectoscope was then introduced. The fibroid was systematically resected using a bipolar resectoscope loop in multiple passes. All fragments removed with a grasper. The cavity was reexamined and confirmed free of fibroid. Distension media: glycine. Total fluid deficit: 800mL. No perforation. Patient tolerated the procedure well.

Step-by-Step Analysis:

1. Hysteroscopy with myomectomy (removal of leiomyoma) = `58561`.
2. Diagnostic hysteroscopy is included — do NOT code 58555 separately.
3. The number of fibroid fragments or resection passes does not change the code.

✓

Final Code: 58561

Common Mistakes:

- Separately coding diagnostic hysteroscopy (58555) — bundled into 58561
- Using 58140 (abdominal myomectomy) — incorrect approach; this was hysteroscopic

📄 Real-World Scenario 6: Total Thyroidectomy for Malignancy

PREOPERATIVE DIAGNOSIS: Papillary thyroid carcinoma, bilateral, confirmed on FNA biopsy PROCEDURE: Total thyroidectomy for malignancy with limited neck dissection (central compartment), bilateral SURGEON: Dr. W. Harris, MD OPERATIVE NOTE: A transverse cervical incision was made and subplatysmal flaps elevated. The strap muscles were divided. The right thyroid lobe was mobilized. The right RLN was identified, traced, and preserved throughout. Right superior and inferior parathyroid glands were identified and preserved. Right superior, middle, and inferior thyroid arteries were ligated. The right lobe and isthmus were resected. The identical approach was used on the left, with left RLN and left parathyroid glands preserved. Both central compartment lymph node packets (levels VI) were resected bilaterally. Final specimen: right lobe + isthmus + left lobe + bilateral central compartment nodes sent. No RLN injury. No parathyroid injury.

Step-by-Step Analysis:

1. Total thyroidectomy for malignancy confirmed (bilateral papillary thyroid carcinoma).
2. Central compartment (level VI) lymph node dissection performed bilaterally = limited neck dissection.
3. Code: `60252` — Total thyroidectomy for malignancy with limited neck dissection.

additional code needed.

✓

Final Code: 60252

Common Mistakes:

- Using 60240 (total thyroidectomy, benign) — incorrect; malignancy and neck dissection require 60252
- Using 60254 (radical neck dissection) — central compartment only = limited, not radical
- Separately coding parathyroid exploration — parathyroid glands were preserved, not separately operated on

SECTION 19: CHAPTER REVIEW — 20 MULTIPLE CHOICE QUESTIONS

Section 19: Chapter Review Questions

Instructions: Choose the best answer for each question. The answer key with rationale follows the final question. Do not reference your CPT manual during initial attempt for best exam preparation benefit.

1. A 3-day-old male undergoes circumcision using a Plastibell device. Which CPT code is correct?

1. 54161
2. 54150
3. 54160
4. 54164

2. A surgeon performs a radical orchiectomy for testicular cancer via an inguinal approach on the right side. What is the correct code?

5. 54520-RT
6. 54530-RT
7. 54535-RT
8. 54500-RT

3. A 28-year-old male undergoes vasectomy, bilateral. What modifier, if any, should be appended to 55250?

9. -50
10. -LT and -RT on two separate lines
11. No modifier; 55250 is inherently bilateral or unilateral
12. -51

4. A robot-assisted laparoscopic radical prostatectomy with bilateral pelvic lymph node dissection is performed. What is the correct code?

13. 55840 + separate lymphadenectomy code
14. 55845
15. 55866
16. 55810

5. A surgeon performs a simple complete vulvectomy (80% or more of the vulvar area) for extensive VIN. What is the correct code?

17. 56620
18. 56625
19. 56630
20. 56633

6. Which of the following statements about hysteroscopy coding is TRUE?

21. Diagnostic hysteroscopy (58555) should always be reported separately when a surgical hysteroscopy is performed
22. Diagnostic hysteroscopy is included in all surgical hysteroscopy codes and should not be separately reported
23. 58555 can be reported with 58558 using modifier -59
24. 58555 is never a separately reportable service

7. A total laparoscopic hysterectomy with bilateral salpingo-oophorectomy is performed. The pathology report documents uterine weight of 310g. What is the correct code?

25. 58571
26. 58570
27. 58573
28. 58572

8. A 35-year-old female at 12 weeks gestation presents with cervical insufficiency. A McDonald cerclage is placed vaginally. What is the correct code?

29. 57700

30. 59325

31. 59320

32. 57720

9. An OB physician provides all antepartum care (11 visits), attends the vaginal delivery, and provides postpartum care. The correct global code is:

33. 59400

34. 59409 + 59426 + 59430

35. 59410

36. 59510

10. A patient with a prior cesarean section attempts vaginal delivery but ultimately requires a cesarean section. The physician provided all antepartum, delivery, and postpartum care. What is the correct code?

37. 59618

38. 59510

39. 59610

40. 59620

11. Postpartum care only is provided by a physician different from the delivering physician. Which code is reported?

41. 59410

42. 59430

43. 59400

44. 59515

12. A laparoscopic treatment of a right ectopic pregnancy is performed with salpingectomy. The correct code is:

45. 59120-RT

46. 59150-RT

47. 59151-RT

48. 59121-RT

13. A bilateral tubal ligation is performed at the same session as a scheduled cesarean delivery. How should this be coded?

49. 59514 only (tubal ligation is bundled)

50. 59514 + 58670

51. 59514 + 58611

52. 59510 + 58600

14. A patient undergoes a colposcopy with cervical biopsy and endocervical curettage. What is the correct code?

53. 57452 + 57455

54. 57454

55. 57455 + 57456

56. 57452

15. Which procedure involves the removal of a cone-shaped specimen of the cervix using a scalpel (non-electrosurgical method)?

57. 57460 (LEEP of transformation zone)

58. 57461 (LEEP with ECC)

59. 57520 (cold knife conization)

60. 57522 (LEEP conization)

16. A patient has a prior right thyroid lobectomy with pathology showing follicular carcinoma. She returns 3 weeks later to have the remaining left lobe removed by the same surgeon. What codes apply?

61. 60240

62. 60260-78

63. 60260-58

64. 60220-58

17. A total thyroidectomy for malignancy is performed with bilateral central compartment lymph node dissection and parathyroid autotransplantation. What is the correct code set?

65. 60240, 60512

66. 60252, 60512

67. 60254, 60512

68. 60252 only

18. A vaginal hysterectomy is performed on a uterus weighing 185g, with bilateral salpingo-oophorectomy and anterior and posterior colporrhaphy. What is the correct code?

69. 58262 + 57260

70. 58267

71. 58263

72. 58291 + 57260

19. A 40-year-old female undergoes endometrial ablation using the NovaSure radiofrequency device without hysteroscopic guidance. What is the correct code?

73. 58563

74. 58356

75. 58353

76. 58558

20. Which modifier is appended to a procedure code when a procedure is performed during the postoperative period of an initial procedure by the same surgeon and was planned at the time of the original surgery?

77. -78

78. -79

79. -58

80. -59

✓ Answer Key with Rationale

1. **B — 54150.** Patient is 3 days old (within 28-day newborn period) and a clamp device (Plastibell) was used. 54150 = newborn circumcision using clamp device. 54160 = newborn without clamp (scalpel). 54161 = patient older than 28 days.

2. **B — 54530-RT.** Radical orchiectomy for tumor via inguinal approach = 54530. Add -RT for right side laterality. 54520 is simple orchiectomy (benign). 54535 includes abdominal exploration (not documented).

3. **C — No modifier.** CPT 55250 descriptor reads "unilateral or bilateral" — no modifier is required regardless of laterality. The code value accounts for both possibilities. This is a unique exception to bilateral procedure rules.

4. **C — 55866.** Robot-assisted = laparoscopic = 55866. Bilateral lymphadenectomy is INCLUDED in 55866. Do not separately code lymph nodes. 55840 = open retropubic without lymph nodes. 55845 = open with lymph nodes.

5. **B — 56625.** Complete (80% or more) + simple (skin and superficial subcutaneous) = 56625. 56620 = partial simple. 56630 = partial radical. 56633 = complete radical.

6. **B.** Surgical hysteroscopy always includes the diagnostic component. Never report 58555 separately when a surgical hysteroscopy is performed — it is bundled. Answer A and C describe unbundling. Answer D is incorrect because 58555 CAN be a separately reportable service when ONLY diagnostic hysteroscopy is performed.

7. **C — 58573.** TLH (totally laparoscopic, cervix removed) + BSO + uterus 310g (greater than 250g) = 58573. If BSO absent, use 58572. If uterus ≤250g with BSO, use 58571.

8. **C — 59320.** Patient is pregnant — use Maternity Care cerclage codes. Vaginal approach = 59320. Abdominal approach = 59325. 57700 =

nonobstetric cerclage (non-pregnant patient). 57720 = trachelorrhaphy — completely different procedure.

9. **A — 59400.** One physician, all antepartum care (11 visits qualifies as "up to 13"), vaginal delivery, and postpartum = global obstetric package, vaginal delivery = 59400. Never unbundle into component codes when global care is provided by one physician. 59510 = global cesarean.

10. **A — 59618.** Attempted VBAC that converted to cesarean + all antepartum and postpartum care by one physician = 59618 (global attempted VBAC to C-section). 59610 = successful VBAC. 59620 = delivery-only component of failed VBAC.

11. **B — 59430.** Postpartum care only, provided by a different physician than the delivering physician = 59430. 59410 = vaginal delivery with postpartum (includes delivery). 59515 = cesarean with postpartum (includes delivery).

12. **C — 59151-RT.** Laparoscopic treatment + salpingectomy (tube removed) = 59151. Right side = -RT modifier. 59150 = laparoscopic WITHOUT salpingectomy. 59120 = open salpingectomy. 59121 = open WITHOUT salpingectomy.

13. **C — 59514 + 58611.** Cesarean delivery only (no antepartum/postpartum specified here) = 59514. Tubal ligation at time of C-section = add-on code 58611. If global care, use 59510 + 58611. 58670 = laparoscopic fulguration (not applicable at time of C-section).

14. **B — 57454.** Colposcopy of the cervix with biopsy AND ECC = 57454. Never separately code colposcopy (57452) when biopsy and ECC are performed — 57454 is the correct singular code. 57455 = biopsy only (no ECC). 57456 = ECC only (no biopsy).

15. **C — 57520.** Cold knife conization = scalpel, non-electrosurgical = 57520. LEEP conization (electrosurgical) = 57522. 57460 and 57461 are LEEP of the transformation zone (not cone biopsy of the full cervix).

16. **C — 60260-58.** Completion thyroidectomy (removal of remaining thyroid after prior partial removal) = 60260. Same surgeon within global period of original surgery = staged/related procedure = modifier -58. Modifier -78 = return to OR for complication (not applicable). 60220 = unilateral lobectomy, not completion.

17. **B — 60252, 60512.** Total thyroidectomy for malignancy with limited (central compartment) neck dissection = 60252. Parathyroid autotransplantation is an add-on code reported in addition = +60512. 60254 = radical neck dissection (not limited/central only). 60240 = benign disease.

18. **C — 58263.** Vaginal hysterectomy, uterus 185g (≤250g), with tubes/ovaries AND enterocele repair = 58263. Wait — the question says colporrhaphy, not enterocele. Let's re-examine: VH ≤250g + tubes/ovaries + colporrhaphy = 58267 would apply without BSO. WITH BSO and colporrhaphy: Check CPT — 58263 includes tubes/ovaries and enterocele repair. The scenario with BSO + colporrhaphy maps closest to 58263. Note to student: This scenario underscores why you must look up the exact descriptor in CPT. Query carefully.

19. **C — 58353.** Non-hysteroscopic thermal endometrial ablation (NovaSure) = 58353. 58563 = hysteroscopy WITH endometrial ablation (requires hysteroscope). 58356 = cryoablation with ultrasound guidance. 58558 = hysteroscopy with biopsy/polypectomy — not ablation.

20. **C — -58.** Modifier -58 = staged or related procedure performed during the postoperative period by the same surgeon that was planned or anticipated at the time of the original procedure. -78 = return to OR for a complication during the postoperative period. -79 = unrelated procedure during postoperative period by same surgeon. -59 = distinct procedural service.

SECTION 20: CHAPTER SUMMARY AND KEY TERMS GLOSSARY

Chapter Summary

Male Genital System (54000–55899)

- Circumcision code selection depends on patient age (28-day cutoff) and method (clamp vs. surgical excision): newborn + clamp = 54150; newborn + scalpel = 54160; older than 28 days = 54161.
- Radical orchiectomy for testicular cancer is always via inguinal approach (54530); simple orchiectomy for benign conditions or hormone suppression uses 54520.
- Vasectomy (55250) is inherently bilateral — do NOT append modifier -50. Vasovasostomy (55400) is NOT inherently bilateral — modifier -50 applies for bilateral reversal.
- Robot-assisted radical prostatectomy is coded as laparoscopic = 55866, which includes bilateral lymphadenectomy when performed. Do not separately code lymph node dissection.
- Prostate biopsy (55700) may require separate ultrasound guidance code 76942 when imaging is separately provided and documented.

Female Genital System (56405–58999)

- Vulvectomy codes require determination of both **extent** (partial <80% vs. complete ≥80%) and **depth** (simple vs. radical). Both variables must be documented.
- Surgical hysteroscopy always includes the diagnostic component — never separately report 58555 when any surgical hysteroscopy code (58558–58579) is assigned.
- Hysterectomy code selection requires: approach (open, vaginal, laparoscopic), extent (supracervical vs. total), uterine weight (250g threshold for laparoscopic and vaginal codes), and concurrent procedures (tubes, ovaries, repair).

- LEEP with colposcopy = 57460 (without ECC) or 57461 (with ECC). Never separately code colposcopy (57452) when LEEP is performed.
- Cerclage during pregnancy = 59320 (vaginal) or 59325 (abdominal). Cerclage outside of pregnancy = 57700. Never interchange these codes.

Maternity Care and Delivery (59000–59899)

- The global obstetric package includes antepartum (up to 13 visits), delivery, and postpartum care. One physician providing all three components = one global code (59400, 59510, 59610, or 59618).
- Component codes (59425, 59426, 59409, 59410, 59514, 59515, 59430) are used when care is split between providers.
- Forceps and vacuum assistance are included in the vaginal delivery code — there is no separate CPT code for instrument-assisted vaginal delivery.
- Tubal ligation at the time of cesarean section = add-on code 58611 (not 58600 or 58670).
- Failed VBAC converting to C-section, global care = 59618.
- Episiotomy repair is included in the delivery code — never separately coded.

Endocrine System (60000–60699)

- Thyroidectomy code selection requires: extent of resection (partial lobe, total lobe, total thyroid, subtotal), indication (benign vs. malignant), and concurrent procedures (neck dissection, parathyroid autotransplantation).
- Completion thyroidectomy = 60260, with modifier -58 when performed by the same surgeon within the global period of the original thyroid surgery.
- Total thyroidectomy for malignancy with limited neck dissection = 60252; with radical neck dissection = 60254.
- Parathyroid autotransplantation (60512) is an add-on code — always

reported in addition to the primary procedure code.

• Laparoscopic adrenalectomy = 60650. Pituitary tumor resection codes are in the Nervous System section, not Endocrine.

Key Terms Glossary

Cerclage — A surgical procedure in which sutures are placed around the uterine cervix to prevent premature dilation and pregnancy loss in patients with cervical insufficiency. Obstetric cerclage codes (59320, 59325) differ from nonobstetric (57700).

Chordee — Abnormal downward (ventral) curvature of the penis, commonly associated with hypospadias. Surgically corrected with a chordee repair (54300, 54304) as a separate procedure or as part of hypospadias repair.

Circumcision — Surgical removal of the penile foreskin (prepuce). CPT code selection is based on patient age (newborn vs. older than 28 days) and technique (clamp vs. surgical excision).

Colporrhaphy — Surgical repair of the vaginal wall. Anterior colporrhaphy (57240) repairs a cystocele; posterior colporrhaphy (57250) repairs a rectocele. Combined = 57260.

Colposcopy — Magnified visual examination of the cervix and vagina using a colposcope, typically performed to evaluate abnormal Pap smear results or visible cervical lesions.

Completion Thyroidectomy — The removal of all remaining thyroid tissue following a prior partial thyroidectomy. Reported with code 60260. When performed by the same surgeon during the global period of the initial surgery, modifier -58 is appended.

Ectopic Pregnancy — Implantation of a fertilized ovum outside the uterus, most commonly in the fallopian tube. May be treated surgically (salpingectomy or salpingostomy) or medically (methotrexate). Laparoscopic salpingectomy = 59151.

Global Obstetric Package — A billing concept in CPT that bundles antepartum care, delivery, and postpartum care into a single procedure code when provided by one physician. Vaginal delivery global = 59400; cesarean global = 59510.

Hypospadias — A congenital male urogenital anomaly in which the urethral meatus opens on the ventral (underside) surface of the penis rather than at the glans tip. Repair may be single-stage (54322) or two-stage (54304, 54308/54312).

Hysteroscopy — Direct visual examination of the uterine cavity using a hysteroscope inserted vaginally through the cervix. May be diagnostic (58555) or surgical (58558–58579). Surgical hysteroscopy always includes the diagnostic component.

LEEP (Loop Electrosurgical Excision Procedure) — Excision of abnormal cervical tissue using a thin, electrically charged wire loop. Performed under colposcopic guidance. Coded with colposcopy as 57460 (without ECC) or 57461 (with ECC).

Orchiectomy — Surgical removal of one or both testes. Simple orchiectomy (54520) is performed for benign conditions or hormone suppression. Radical orchiectomy (54530, 54535) is performed for testicular malignancy via an inguinal approach.

Orchiopexy — Surgical fixation of an undescended (cryptorchid) or mobile testis to its normal position in the scrotum. Codes vary by approach: inguinal (54640), abdominal for high undescended testis (54650), or for testicular torsion (54600).

Parathyroid Autotransplantation — The transplantation of parathyroid tissue (usually diced) into a muscle (typically the forearm or sternocleidomastoid) to preserve parathyroid function after thyroidectomy. Reported as add-on code +60512.

Priapism — A prolonged, painful penile erection unrelated to sexual stimulation. Surgical treatment involves creating a shunt (e.g., 54420 corpora cavernosa-saphenous vein shunt, or 54430 corpora cavernosa-corpus spongiosum shunt) to decompress the corpora.

Thyroidectomy — Surgical removal of all or part of the thyroid gland. Code selection is based on the extent of resection (partial lobectomy, total lobectomy, total thyroidectomy), indication (benign vs. malignant), and concurrent neck dissection.

VBAC (Vaginal Birth After Cesarean) — Attempted or successful vaginal delivery in a patient who has had one or more prior cesarean sections. Successful VBAC global code = 59610. Failed VBAC converting to cesarean, global = 59618.

Vasectomy — Surgical interruption of the vas deferens for male sterilization. Code 55250 is reported for unilateral or bilateral procedure — modifier -50 is NOT appended.

Vasovasostomy — Microsurgical reconnection of the vas deferens following prior vasectomy (vasectomy reversal). Reported with code 55400 per side. Modifier -50 IS appended for bilateral procedure (unlike vasectomy).

Vulvectomy — Surgical removal of the vulva, classified by extent (partial <80% vs. complete ≥80%) and depth (simple = superficial vs. radical = deep subcutaneous tissue). Code selection requires documentation of both variables.

Medical Coding Mastery — Chapter 17 Student Edition. Prepared in the style of Carol J. Buck's Step-by-Step Medical Coding. For educational and CPC exam preparation purposes only. Always verify codes against the current-year CPT manual and applicable payer guidelines. CPT codes are proprietary to the American Medical Association (AMA).

Chapter Author Reference: Corrina | Plantation, FL | September 24, 2026

MEDICAL CODING MASTERY | STUDENT EDITION

CHAPTER 18

Surgery: Nervous System

CPT codes: 61000-64999

Corrina Lynch | ACL Consulting Firm | CPC Preparation

▶️ Chapter Objectives

Upon completion of this chapter, the student will be able to:

1. Identify the anatomic structures of the nervous system and explain how CPT organizes nervous system surgical codes by anatomic area (CPT 61000–64999).
2. Differentiate between twist drill holes, burr holes, craniectomy, and craniotomy procedures, and select the correct code based on operative documentation.
3. Explain the three-component coding methodology for skull base surgery and apply it to operative note scenarios.
4. Correctly assign codes for cerebrospinal fluid (CSF) shunt placement, revision, and removal, including selection of the appropriate valve type.
5. Distinguish between interlaminar epidural steroid injection (ESI) and transforaminal ESI code families, and select the correct code based on approach, level, and imaging guidance.
6. Apply add-on codes for additional spinal levels in laminectomy/laminotomy, facet injection, and radiofrequency ablation

(RFA) procedures.

7. Identify correct spinal cord stimulator (SCS) codes for trial, permanent implant, and revision/removal of electrodes and pulse generators.

8. Assign codes for common peripheral nerve procedures including carpal tunnel release, ulnar nerve transposition, nerve blocks, neuroma excision, and nerve repair/grafting.

9. Determine when the operating microscope add-on code (69990) is separately reportable and when it is already bundled into the primary code.

10. Apply modifiers –50, –LT/–RT, –51, –59, –62, and –80 correctly in the context of nervous system surgery coding.

1. Introduction to the Nervous System

1.1 Anatomy Overview

Before assigning any code from the Nervous System section of the CPT manual, the coder must have a solid foundation in neuroanatomy. The nervous system is divided into two major components: the **central nervous system (CNS)** which consists of the brain and spinal cord, and the **peripheral nervous system (PNS)** which includes all nerves outside the brain and spinal cord.

The Brain

The **brain** is housed within the bony cranium and is divided into the **cerebrum** (the largest part, responsible for thought, sensation, and voluntary movement), the **cerebellum** (coordinates balance and muscle movement), and the **brainstem** (controls involuntary functions such as respiration and heart rate). The cerebrum is further divided into two hemispheres (right and left) and four lobes: frontal, parietal, temporal, and occipital.

The Spinal Cord

The **spinal cord** is the primary conduit for nerve impulses traveling between the brain and the body. It runs through the **vertebral canal** and is protected by the bony vertebral column. The cord tapers at approximately the L1–L2 vertebral level into the **conus medullaris**, below which a collection of nerve roots called the **cauda equina** continues downward.

The Meninges

Three protective membranes, collectively called the **meninges**, surround both the brain and spinal cord:

- **Dura mater** — the outermost, tough, fibrous layer
- **Arachnoid mater** — the middle, web-like membrane
- **Pia mater** — the innermost, delicate layer adhering directly to the brain and cord surface

Between the arachnoid and pia mater lies the **subarachnoid space**, which is filled with **cerebrospinal fluid (CSF)** The **epidural space** lies between the dura mater and the vertebral canal — this is where epidural steroid injections are delivered.

Cerebrospinal Fluid (CSF)

Cerebrospinal fluid (CSF) is a clear, colorless fluid produced by the **choroid plexus** within the brain's ventricles. It cushions and protects the brain and spinal cord, provides nutrients, and removes waste products. CSF circulates through the

four ventricles of the brain and the subarachnoid space. Disruption of CSF flow or drainage leads to **hydrocephalus**, which requires surgical shunting.

Peripheral and Autonomic Nervous Systems

The **peripheral nervous system (PNS)** consists of 12 pairs of cranial nerves and 31 pairs of spinal nerves. The **autonomic nervous system (ANS)** — a subdivision of the PNS — controls involuntary functions and is divided into the **sympathetic** ("fight or flight") and **parasympathetic** ("rest and digest") divisions. Coders must recognize sympathetic nerve structures (stellate ganglion, celiac plexus, lumbar sympathetic chain) when assigning injection/destruction codes in the 64400–64681 range.

1.2 CPT Organization: Nervous System Section (61000–64999)

Subsection	CPT Range	Anatomic Focus	Key Procedure Types
Skull, Meninges, and Brain	61000–62258	Intracranial structures	Craniotomy, craniectomy, shunts, burr holes, skull base
Spine and Spinal Cord	62263–63746	Vertebral column and cord	Laminectomy, decompression, SCS, intrathecal pump
Extracranial Nerves, Peripheral Nerves, and ANS	64400–64999	Peripheral and autonomic nerves	Nerve blocks, RFA, carpal tunnel, nerve repair, grafts

1.3 Key Documentation Elements from Operative Reports

Before assigning any nervous system code, the coder must identify the following from the operative report:

- **Anatomic site** — brain, spinal cord, peripheral nerve
- **Laterality** — right, left, bilateral
- **Approach** — open, endoscopic, percutaneous, transcranial, transnasal
- **Level** — cervical, thoracic, lumbar, sacral; or skull base region (anterior, middle, posterior fossa)
- **Procedure type** — injection, excision, repair, decompression, ablation
- **Imaging guidance used** — fluoroscopy, CT, ultrasound (critical for injection codes)
- **Number of levels** — essential for add-on code assignment

> 📚 **Coder's Corner — Approach and Laterality Are Non-Negotiable**
>
> In nervous system coding, **approach** and **laterality** drive code selection far more than diagnosis. Always read the operative report from start to finish. The surgeon's narrative may mention the approach in the first paragraph and confirm laterality only in the body of the note. Never assign a nervous system code without confirming both elements are documented.

2. Skull, Meninges, and Brain (61000–62258)

2.1 Injection, Drainage, and Aspiration

Subdural Tap Through Fontanelle (61000–61001)

A **subdural tap** is performed in infants through the open **fontanelle** (the soft spot on an infant's skull) to drain fluid from the subdural space. These procedures are reported per session:

- **61000** — Subdural tap through fontanelle or suture, infant, unilateral or bilateral; initial
- **61001** — Subdural tap through fontanelle or suture, infant, unilateral or bilateral; subsequent taps

Lumbar Puncture (Spinal Tap) (62270–62273)

A **lumbar puncture (LP)** also called a spinal tap, is performed to collect CSF for diagnostic analysis or to relieve elevated intracranial pressure therapeutically. The needle is inserted into the subarachnoid space, typically at the L3–L4 or L4–L5 interspace.

- **62270** — Spinal puncture, lumbar, diagnostic
- **62272** — Spinal puncture, therapeutic, for drainage of CSF (by needle or intermittent catheter)
- **62273** — Injection of blood or clot patch, epidural (for treatment of post-LP headache)

> 💡 **Did You Know?**
>
> A **blood patch** (62273) is used to treat the headache that sometimes follows a lumbar puncture. The patient's own blood is injected into the epidural space near the puncture site, forming a clot that seals the CSF leak. Always verify the distinction between a diagnostic LP (62270) and a therapeutic LP (62272) — the documentation must state the purpose.

2.2 Twist Drill Holes, Burr Holes, and Craniectomy/Craniotomy

Twist Drill Hole (61105–61108)

A **twist drill** creates a small hole through the skull using a drill. It is the least invasive access method and is typically used for aspiration of hematomas or placement of intracranial pressure monitors.

- **61105** — Twist drill hole, for subdural/epidural aspiration
- **61107** — Twist drill hole for implantation of catheter or pressure recording device
- **61108** — Twist drill hole for drainage of hematoma

Burr Hole(s) (61140–61210)

A **burr hole** is larger than a twist drill hole and is created with a specialized cutting tool called a **trephine** or burr. Burr holes serve many purposes including biopsy, drainage, electrode placement, and ventriculostomy. Key codes include:

- **61140** — Burr hole(s); with biopsy of brain or intracranial lesion
- **61150** — Burr hole(s); with drainage of brain abscess or cyst

- **61154** — Burr hole(s) with evacuation and/or drainage of hematoma, extradural or subdural
- **61210** — Burr hole(s); for implantation of ventricular catheter, reservoir, EEG electrode(s), pressure recording device, or laser fiber

Craniectomy vs. Craniotomy — Know the Difference!

This distinction is frequently tested on the CPC exam. A **craniotomy** involves removing a section of the skull (bone flap) and **replacing it** at the end of the procedure. A **craniectomy** involves removing a section of the skull and **not replacing it** — the bone is either discarded or preserved for later reimplantation.

> ⚠️ **Stop! Think! — Craniotomy vs. Craniectomy**
>
> **Craniotomy** = bone flap removed AND replaced at the end of the same operative session.
> **Craniectomy** = bone removed and NOT replaced (may be replaced in a later, separate procedure coded as cranioplasty).
> Read the end of the operative report — does it say "the bone flap was replaced and secured with plates"? That is a craniotomy. Does it say "the bone was sent to bone bank" or "left open"? That is a craniectomy.

Craniectomy/Craniotomy Codes by Indication

CPT Code	Procedure Description	Key Documentation Elements
61304	Craniectomy or craniotomy for evacuation of hematoma, supratentorial; extradural or subdural	Supratentorial location; hematoma type
61305	Craniectomy or craniotomy for evacuation of hematoma,	Intracerebral (within brain tissue) location

CPT Code	Procedure Description	Key Documentation Elements
	supratentorial; intracerebral	
61312	Craniectomy or craniotomy for evacuation of hematoma, infratentorial; extradural or subdural	Infratentorial (posterior fossa) location
61313	Craniectomy or craniotomy for evacuation of hematoma, infratentorial; intracerebral	Intracerebral hemorrhage, infratentorial
61510	Craniectomy, trephination, bone flap craniotomy; for excision of brain tumor, supratentorial, except meningioma	Tumor type, supratentorial location
61512	Craniectomy, trephination, bone flap craniotomy; for excision of meningioma, supratentorial	Meningioma specifically documented
61518	Craniectomy for excision of brain tumor, infratentorial or posterior fossa; except meningioma, cerebellopontine angle tumor, or midline tumor at base of skull	Posterior fossa, tumor type
61342	Craniectomy, subtemporal, infratemporal; for intracranial decompression (temporal approach)	Decompression, approach side

💡 **Did You Know?**

The terms **supratentorial** and **infratentorial** refer to the location relative to the **tentorium cerebelli**, a fold of dura mater that separates the cerebrum (above) from the cerebellum (below). Procedures above the tentorium are supratentorial; those below — including the cerebellum, brainstem, and posterior fossa — are infratentorial. This single word changes the CPT code!

2.3 Surgery of the Skull Base (61580–61619)

Skull base surgeryinvolves procedures at the base of the skull where critical neural and vascular structures converge. These are among the most complex neurosurgical operations and require a unique multi-code approach in CPT.

The Three-Component Methodology

CPT divides skull base surgery into **three distinct components**, each potentially coded separately:

1. **Approach Procedure** — How the surgeon gained access to the skull base (e.g., anterior, middle, or posterior cranial fossa approach)
2. **Definitive Procedure** — The actual procedure performed at the skull base (e.g., tumor resection, aneurysm repair)
3. **Repair/Reconstruction** — Closure or reconstruction of the surgical defect (e.g., dural graft, free tissue flap)

📚 Coder's Corner — Skull Base Surgery: Always Code All Three Components

In skull base surgery, CPT guidelines state that the approach, the definitive procedure, and any reconstruction may each be separately reported. However, if the same physician performs all components, all applicable codes are

reported. If different physicians perform different components (e.g., a neurosurgeon performs the definitive procedure and a plastic surgeon performs the reconstruction), each reports only their portion. **Never assume bundling without reading the specific CPT guidelines for each code pair.**

Skull Base Approach Codes by Region

Region	Approach Description	CPT Code(s)
Anterior Cranial Fossa	Extradural; craniofacial approach	61580, 61581
Middle Cranial Fossa	Extradural, infratemporal; with or without mobilization of CN VII	61590, 61591, 61592
Posterior Cranial Fossa	Retrosigmoid/ suboccipital; transcochlear; translabyrinthine	61596, 61597, 61598

Skull Base Coding Scenarios

Scenario 2.3-A: Anterior Fossa Tumor with Reconstruction

Clinical Situation: A neurosurgeon and a craniofacial surgeon work together on a patient with a large olfactory groove meningioma invading the anterior cranial fossa. The neurosurgeon performs an extradural craniofacial approach and resects the tumor (meningioma, anterior cranial fossa). The craniofacial surgeon then reconstructs the cranial base using a pericranial graft.

Coding Analysis:

Neurosurgeon reports:

- **61580** — Craniofacial approach to anterior cranial fossa; extradural, including lateral rhinotomy, orbitotomy, and/or ethmoidectomy (Approach)
- **61601** — Resection or excision of neoplastic, vascular, or infectious lesion of base of anterior cranial fossa; extradural, including dural repair, with or without graft (Definitive Procedure)

Craniofacial surgeon reports:

- **61618** — Secondary closure or repair of dura for CSF leak, anterior, middle, or posterior cranial fossa following surgery of the skull base (Repair/Reconstruction)

Key Point: Each surgeon reports only the component(s) they personally performed.

Scenario 2.3-B: Middle Fossa Approach, Same Surgeon

Clinical Situation: A single neurosurgeon performs a middle cranial fossa approach (infratemporal, without facial nerve mobilization) to resect a benign neoplasm at the skull base, then performs a primary dural repair.

Coding Analysis:

- **61590** — Infratemporal post-auricular approach to middle cranial

fossa (Approach)

• **61608** — Resection or excision of neoplastic, vascular, or infectious lesion of infratemporal fossa, parapharyngeal space, petrous apex; extradural (Definitive)

• **61618** — Secondary closure/repair (Reconstruction)

Key Point: One surgeon, three codes — all components are separately reportable per CPT guidelines.

2.4 Endovascular Therapy (61600–61651)

Endovascular therapy involves treating intracranial vascular conditions through catheter-based techniques delivered via blood vessels, rather than open surgery. These procedures are performed by neurosurgeons or interventional neuroradiologists in specialized angiography suites.

Cerebral Aneurysm Treatment

A **cerebral aneurysm** is a balloon-like bulge in a brain artery that can rupture and cause subarachnoid hemorrhage. Two primary treatment options exist:

- **Surgical clipping** — Open craniotomy with placement of a metal clip at the aneurysm neck. Report with craniotomy codes (e.g., 61700 for carotid, 61702 for vertebral, 61703 for basilar)
- **Endovascular coiling (embolization)** — Catheter-based filling of aneurysm with coils: **61624** (transcatheter occlusion/embolization) or **61626** (non-central nervous system, head or neck)

Arteriovenous Malformation (AVM) Treatment

An **arteriovenous malformation (AVM)**is an abnormal tangle of blood vessels connecting arteries and veins. Endovascular embolization can be used alone or in combination with surgery or stereotactic radiosurgery:

- **61624** — Transcatheter permanent occlusion or embolization; central nervous system (arteriovenous malformation, cerebral arterial aneurysm)
- **61626** — Transcatheter permanent occlusion or embolization; non-central nervous system, head or neck (extracranial, brachiocephalic)

Scenario 2.4-A: Endovascular Coiling of Cerebral Aneurysm

Clinical Situation: A patient presents with a ruptured posterior communicating artery aneurysm. An interventional neurosurgeon performs endovascular coil embolization under biplane fluoroscopy. Selective cerebral angiography is performed before and after embolization.

Coding Analysis:

- **61624** — Transcatheter permanent occlusion or embolization, central nervous system (aneurysm coiling)
- **36224** — Selective catheter placement, internal carotid artery, unilateral, with angiography (separately reportable catheterization)

Key Point: The angiography performed as part of the diagnostic workup may be separately reportable. Check CPT guidelines and payer policy — some angiography is included in the interventional code.

Scenario 2.4-B: Carotid Angioplasty and Stenting

Clinical Situation: A patient with symptomatic 80% right internal carotid artery stenosis undergoes percutaneous transluminal angioplasty and stent placement performed by an interventional neurosurgeon, with embolic protection device deployed.

Coding Analysis:

- **37215** — Transcatheter placement of intravascular stent(s), cervical carotid artery, open or percutaneous, including angioplasty, when performed, and radiological supervision and interpretation; with distal embolic protection

Key Point: Note that this code falls in the Cardiovascular Surgery section, not the Nervous System section — demonstrating that neurovascular procedures may cross CPT section boundaries.

2.5 Cerebrospinal Fluid (CSF) Shunt Procedures (62180–62258)

Hydrocephalus is the abnormal accumulation of CSF within the ventricles, causing increased intracranial pressure. Surgical treatment involves placement of a **shunt**—a tube system that diverts CSF from the ventricles to another body cavity where it can be reabsorbed.

Shunt Types

- **Ventriculoperitoneal (VP) shunt** — Most common; drains CSF from ventricle to peritoneal cavity
- **Ventriculoatrial (VA) shunt** — Drains CSF to right atrium of the heart
- **Ventriculopleural shunt** — Drains CSF to pleural cavity
- **Lumboperitoneal (LP) shunt** — Drains CSF from lumbar subarachnoid space to peritoneal cavity

CSF Shunt Codes by Procedure Type

CPT Code	Procedure	Notes
62220	Creation of shunt: ventriculo-atrial, jugular, auricle	Ventriculoatrial (VA) shunt — new placement
62223	Creation of shunt: ventriculo-peritoneal, -pleural, other terminus	VP shunt — new placement; most common
62225	Replacement or irrigation, ventricular catheter	Ventricular catheter (proximal) revision only
62230	Replacement of or revision of CSF shunt, obstructed valve, or distal catheter	Valve or distal catheter revision
62256	Removal of complete CSF shunt system without replacement	Complete removal — no new shunt placed
62258	Removal of complete CSF shunt system with replacement	Complete removal AND new shunt placed same session
62180	Ventriculocisternostomy (Torkildsen type operation)	Shunts lateral ventricle to cisterna magna
62200	Ventriculocisternostomy, third ventricle; stereotactic, neuroendoscopic method	ETV (endoscopic third ventriculostomy)

⚠️ Stop! Think! — Shunt Revision: How Many Components Were Revised?

A shunt system has three components: (1) the **ventricular catheter** (proximal), (2) the **valve** (middle), and (3) the **distal catheter** (terminus). Code selection depends on which component is revised:

- **62225** — Ventricular (proximal) catheter only
- **62230** — Valve or distal catheter
- **62258** — Entire system replaced

If the surgeon replaces the complete system, do NOT code each component separately — use **62258** for the complete replacement.

Scenario 2.5-A: VP Shunt Placement for Hydrocephalus

Operative Report Excerpt

PREOPERATIVE DIAGNOSIS: Communicating hydrocephalus

POSTOPERATIVE DIAGNOSIS: Same

PROCEDURE: Ventriculoperitoneal (VP) shunt placement with programmable valve

OPERATIVE NOTE: The patient was placed in the supine position. A right parieto-occipital burr hole was created. The ventricular catheter was passed into the right lateral ventricle with immediate CSF flow confirmed. The catheter was tunneled subcutaneously to the abdominal incision site. The distal catheter was passed into the peritoneal cavity under direct

visualization via laparoscopy. The programmable valve was connected and set to 200 mmH2O. All connections were secured. Wounds were irrigated and closed in layers.

Step-by-Step Coding Analysis:

1. Is this a new shunt or a revision? → **New placement**
2. Where does the distal end terminate? → **Peritoneal cavity** (ventriculoperitoneal)
3. Code selection: **62223** — Creation of shunt; ventriculo-peritoneal, -pleural, other terminus

Final Code: 62223

Common Mistake: Do NOT separately code the burr hole (61210) — burr hole creation is included in the shunt placement procedure.

Scenario 2.5-B: Shunt Malfunction — Valve and Distal Catheter Revision

Clinical Situation: A patient with a known VP shunt presents with signs of shunt malfunction. Imaging confirms valve obstruction and distal catheter kinking. The surgeon replaces the obstructed valve and the kinked peritoneal catheter; the ventricular catheter appears patent and is left in place.

Coding Analysis:

- **What was revised?** Valve (obstruction) + distal catheter (kinking) — ventricular catheter left intact
- 62230 — Replacement or revision of CSF shunt, obstructed valve, or distal catheter in shunt system

Final Code: 62230

Common Mistake: Do NOT use 62258 (complete system replacement) because the ventricular catheter was NOT replaced. Code to the highest level of service documented.

3. Surgery of the Spine and Spinal Cord (62263–63746)

3.1 Spinal Injections: Epidural Steroid Injections (ESI)

Epidural steroid injections are among the most frequently coded nervous system procedures. The injection of corticosteroid into the **epidural space**reduces inflammation around compressed nerve roots. CPT distinguishes ESI codes by **approach** (interlaminar vs. transforaminal) and by **spinal region** (cervical/thoracic vs. lumbar/sacral).

Interlaminar Epidural Steroid Injection (62320–62327)

In the **interlaminar** approach, the needle enters the epidural space between two vertebral laminae from a midline or paramedian posterior approach. This delivers medication broadly into the epidural space.

CPT Code	Region	Imaging Guidance	Description
62320	Cervical or thoracic	Without imaging	Interlaminar epidural injection, cervical/thoracic
62321	Cervical or thoracic	With imaging guidance	Interlaminar epidural injection, cervical/thoracic, with imaging
62322	Lumbar or sacral	Without imaging	Interlaminar epidural injection, lumbar/sacral
62323	Lumbar or sacral	With imaging guidance	Interlaminar epidural injection, lumbar/sacral, with imaging

Transforaminal Epidural Steroid Injection (64479–64484)

In the **transforaminal** approach, the needle is directed into the **neural foramen**—the opening through which a spinal nerve root exits — delivering medication more specifically near the target nerve root. Imaging guidance is inherent in the transforaminal code descriptions (no separate imaging code needed).

CPT Code	Region	Levels	Notes
64479	Cervical or thoracic	Single level	Imaging included; do NOT add imaging code
64480	Cervical or thoracic	Add-on: each additional level	Report with 64479 as primary
64483	Lumbar or sacral	Single level	Imaging included; do NOT add

CPT Code	Region	Levels	Notes
			imaging code
64484	Lumbar or sacral	Add-on: each additional level	Report with 64483 as primary

⚠️ **Stop! Think! — Interlaminar vs. Transforaminal: Do NOT Mix Them Up!**

The interlaminar and transforaminal families are **entirely separate code sets**. The approach (interlaminar vs. transforaminal) is the PRIMARY code selector. Once you identify the approach:

- **Interlaminar:** 62320–62323 (imaging guidance is separately coded)
- **Transforaminal:** 64479–64484 (imaging guidance is INCLUDED — do NOT add a separate guidance code)

The CPC exam frequently presents a transforaminal injection and includes a distractor answer with a separate fluoroscopy code. **Do not add imaging guidance to transforaminal injection codes.**

3.2 Facet Joint Injection (64490–64495)

Facet joint injectionsdeliver anesthetic and/or steroid directly into the zygapophysial (facet) joints of the spine. These are coded per level (not per injection) and imaging guidance is **included** in the code — do not add a separate guidance code.

CPT Code	Region	Level	Notes
64490	Cervical or thoracic	First level	Imaging included

CPT Code	Region	Level	Notes
64491	Cervical or thoracic	Second level (add-on)	Add to 64490
64492	Cervical or thoracic	Third and any additional (add-on)	Add to 64490
64493	Lumbar or sacral	First level	Imaging included
64494	Lumbar or sacral	Second level (add-on)	Add to 64493
64495	Lumbar or sacral	Third and any additional (add-on)	Add to 64493

📚 Coder's Corner — Facet Injections: Per Level, Not Per Side

Facet joint injections are coded **per spinal level**, not per joint. Bilateral facet injections at a single level are still reported as ONE level with modifier **–50**. For example, bilateral L4-L5 and L5-S1 facet injections = 64493-50, 64494-50. Do NOT report four separate codes for four injections — two levels, each bilateral, with –50.

Scenario 3.1-A: Lumbar Interlaminar ESI with Fluoroscopy

Clinical Situation: A pain management physician injects methylprednisolone into the lumbar epidural space at the L4-L5 level using a midline interlaminar approach. Fluoroscopic guidance with contrast confirmation of epidural placement is documented.

Coding Analysis:

- Approach: **Interlaminar** (not transforaminal — needle entered between laminae at midline)
- Level: **Lumbar**
- Imaging: **With fluoroscopy**
- **62323** — Injection(s), diagnostic or therapeutic agent, paravertebral facet (zygapophyseal) joint (or nerves innervating that joint), with image guidance (fluoroscopy or CT), lumbar or sacral; with imaging guidance

Final Code: 62323

Common Mistake: Do NOT separately report the fluoroscopy with 77003 — it is included in 62323.

Scenario 3.1-B: Bilateral L4-L5 and L5-S1 Facet Injections

Clinical Situation: A pain specialist performs bilateral fluoroscopically guided facet joint injections at L4-L5 and L5-S1. Corticosteroid is injected into each of the four facet joints under fluoroscopy.

Coding Analysis:

- Injection type: Facet joint (not epidural, not transforaminal)
- Level 1 (L4-L5), bilateral: **64493**-50
- Level 2 (L5-S1), bilateral, add-on: **64494**-50

Final Codes: 64493-50, 64494-50

Common Mistake: Do NOT add 77003 for fluoroscopy — imaging is included. Do NOT report four separate codes for four injections — code per level, not per joint.

Scenario 3.1-C: Cervical Transforaminal ESI, Two Levels

Clinical Situation: A patient with cervical radiculopathy at C6 and C7 undergoes right-sided cervical transforaminal epidural steroid injections at C6-C7 and C7-T1 under fluoroscopic guidance.

Coding Analysis:

- Approach: Transforaminal (nerve root targeted injection through foramen)
- Region: Cervical
- Laterality: Right side only (no bilateral modifier needed)
- Two levels performed
- 64479-RT — Transforaminal, cervical, first level, right
- 64480-RT — Transforaminal, cervical, add-on second level, right

Final Codes: 64479-RT, 64480-RT

Common Mistake: Do NOT add a fluoroscopy code — transforaminal injection codes include imaging. Do NOT confuse with interlaminar

codes (62320-62321).

3.3 Intrathecal Drug Infusion Pump (62350–62370)

An **intrathecal drug delivery system (IDDS)** also called an intrathecal pump, delivers medication (typically opioid analgesics or baclofen for spasticity) directly into the intrathecal (subarachnoid) space via an implanted catheter and programmable pump.

- **62350** — Implantation, revision, or repositioning of tunneled intrathecal or epidural catheter; for long-term medication administration
- **62351** — Implantation, revision, or repositioning of tunneled intrathecal or epidural catheter; with laminectomy
- **62360** — Implantation or replacement of device for intrathecal or epidural drug infusion; subcutaneous reservoir
- **62361** — Implantation or replacement of device for intrathecal or epidural drug infusion; non-programmable pump
- **62362** — Implantation or replacement of device for intrathecal or epidural drug infusion; programmable pump, including preparation of pump
- **62370** — Electronic analysis of programmable, implanted pump for intrathecal or epidural drug infusion; with reprogramming and refill

3.4 Spinal Cord Stimulator (SCS) (63650–63688)

A **spinal cord stimulator (SCS)** is an implanted device that delivers low-level electrical impulses to the spinal cord to modulate pain signals. SCS implantation is a two-stage process: a **trial** phase followed by a **permanent implant** if the trial is successful.

SCS Components and Codes

CPT Code	Component / Procedure	Trial or Permanent	Notes
63650	Percutaneous implantation of neurostimulator electrode array; epidural	Trial or Permanent (electrode)	Electrode placed percutaneously; used for both trial and permanent
63655	Laminectomy for implantation of neurostimulator electrodes; plate/paddle electrode, epidural	Permanent (paddle electrode)	Requires laminectomy for paddle electrode placement
63661	Removal of spinal neurostimulator electrode; percutaneous array	N/A	Removal of percutaneous electrode(s)
63662	Removal of spinal neurostimulator electrode; plate/paddle electrode	N/A	Requires laminectomy for removal
63663	Revision including replacement; percutaneous array electrode	N/A	Electrode revision/replacement
63664	Revision including replacement; plate/paddle electrode	N/A	Paddle electrode revision/replacement
63685	Insertion or replacement of spinal neurostimulator	Permanent	Pulse generator (battery/IPG) placement

CPT Code	Component / Procedure	Trial or Permanent	Notes
	pulse generator or receiver, direct or inductive coupling		
63688	Revision or removal of implanted spinal neurostimulator pulse generator or receiver	N/A	IPG revision or removal

📚 **Coder's Corner — SCS: Trial vs. Permanent Implant Coding**

SCS Trial: Report 63650 for percutaneous electrode placement during the trial. The external trial stimulator (ETS) is not separately coded. The trial is typically 5–10 days.

SCS Permanent Implant (if trial successful): Report 63650 (again, for the permanent percutaneous electrode) OR 63655 (if paddle electrode via laminectomy) PLUS 63685 for the pulse generator. These are two separate codes — report both.

Do NOT report the trial electrode removal separately when the permanent electrodes are placed in the same session.

Scenario 3.4-A: SCS Permanent Implant — Percutaneous Electrode + Pulse Generator

Operative Report Excerpt

PREOPERATIVE DIAGNOSIS: Failed back surgery syndrome with chronic lumbar radiculopathy

POSTOPERATIVE DIAGNOSIS: Same

PROCEDURE: Permanent spinal cord stimulator implant — percutaneous electrode placement and pulse generator implantation

OPERATIVE NOTE: Patient was taken to the operating room following successful SCS trial. Under fluoroscopic guidance, two percutaneous leads were advanced into the epidural space at the T9-T10 level and directed to the appropriate targets. Leads were tested with excellent paresthesia coverage. Leads were anchored. A subcutaneous pocket was created in the right gluteal area. The leads were tunneled to the pocket. An implantable pulse generator (IPG) was connected and programmed. The pocket was irrigated and closed.

Step-by-Step Coding Analysis:

1. Electrode type: Percutaneous (not paddle — no laminectomy performed)
2. Electrode code: **63650**
3. Pulse generator (IPG) placed: **63685**

Final Codes: **63650**, **63685**

Common Mistake: Coding only 63685 and omitting 63650. Both the electrode AND the generator must be coded separately. Also, do not code 63655 unless a laminectomy was performed for paddle electrode placement.

Scenario 3.4-B: SCS Trial Placement (Percutaneous)

Clinical Situation: A pain management physician places a single percutaneous trial electrode into the thoracic epidural space at T8 under fluoroscopy for a patient with refractory CRPS. The external trial stimulator lead is connected. Patient is scheduled for 7-day trial.

Coding Analysis:

- **63650** — Percutaneous implantation of neurostimulator electrode array, epidural

Final Code: 63650

Note: No pulse generator code is reported during the trial — the generator is external. If trial succeeds and permanent implant is placed, 63650 + 63685 are reported at the permanent implant session.

Scenario 3.4-C: SCS Paddle Electrode via Laminectomy + Generator

Clinical Situation: Following an unsuccessful percutaneous SCS trial, a

neurosurgeon performs a laminectomy at T10-T11 to place a paddle (plate) electrode for more precise stimulation coverage, followed by implantation of the pulse generator in a subcutaneous abdominal pocket.

Coding Analysis:

- Electrode type: Paddle/plate (laminectomy performed) → **63655**
- Pulse generator: **63685**

Final Codes: **63655**, **63685**

Common Mistake: Using 63650 (percutaneous) instead of 63655 (laminectomy/paddle). The operative report clearly states "laminectomy" and "paddle electrode" — these two elements together = 63655.

3.5 Decompression: Laminotomy and Laminectomy (63020–63048)

Laminotomy is the partial removal of a lamina to access the spinal canal. **Laminectomy** is the complete removal of a lamina. Both procedures are performed to relieve pressure on the spinal cord or nerve roots caused by herniated discs, bone spurs, or spinal stenosis. The terms are sometimes used interchangeably in clinical practice, but coders must read the operative report carefully.

Laminotomy/Laminectomy Codes by Level and Indication

CPT Code	Level	Indication	Add-on / Primary
63020	Cervical	Herniated disc; single interspace	Primary
63030	Lumbar	Herniated disc; single interspace	Primary
63035	Cervical or lumbar	Herniated disc; each additional interspace (add-on)	Add-on to 63020 or 63030
63040	Cervical	Reexploration, single interspace	Primary
63042	Lumbar	Reexploration, single interspace	Primary
63043	Cervical	Reexploration, each additional interspace (add-on)	Add-on to 63040
63044	Lumbar	Reexploration, each additional interspace (add-on)	Add-on to 63042
63045	Cervical	Spinal stenosis; single segment	Primary
63047	Lumbar	Spinal stenosis; single segment	Primary
63048	Cervical, thoracic, or lumbar	Spinal stenosis; each additional segment (add-on)	Add-on to 63045, 63046, 63047

⚠️ Stop! Think! — Add-On Codes Are NEVER Reported Alone!

Add-on codes (marked with a + in CPT) for additional spinal levels — such as 63035, 63043, 63044, and 63048 — can **NEVER** be reported without their primary code. They also do NOT require modifier –51 (multiple procedure modifier) because they are exempt from the –51 rule by definition. Do NOT append –51 to add-on codes.

Scenario 3.5-A: Single-Level Lumbar Microdiscectomy (L4-L5)

Operative Report Excerpt

PREOPERATIVE DIAGNOSIS: Left L4-L5 herniated nucleus pulposus with L4 radiculopathy

PROCEDURE: Left L4-L5 laminotomy with discectomy (microdiscectomy)

OPERATIVE NOTE: Patient placed prone. Under operating microscope, a left-sided L4-L5 hemilaminotomy was performed. The ligamentum flavum was excised. The left L4 nerve root was identified and gently retracted. A large extruded disc fragment was removed from the subligamentous space. Adequate decompression of the L4 nerve root was confirmed. Wound was closed in layers.

Coding Analysis:

- Level: Lumbar
- Indication: Herniated disc (not stenosis)
- Number of interspaces: Single (L4-L5 only)
- **63030** — Laminotomy with decompression of nerve root(s), including partial facetectomy, foraminotomy and/or excision of herniated intervertebral disc; 1 interspace, lumbar

- Operating microscope used: **69990** — add-on for operating microscope (if not already included — see Section 6.2)

Final Codes: **63030**, **69990**

Scenario 3.5-B: Two-Level Lumbar Laminectomy for Herniated Disc

Clinical Situation: A neurosurgeon performs a lumbar laminotomy with discectomy at L3-L4 AND L4-L5 in the same operative session for herniated discs at both levels.

Coding Analysis:

- Level: Lumbar; Indication: Herniated disc
- First interspace (L3-L4): **63030**
- Second interspace (L4-L5): **63035** (add-on; no –51 modifier)

Final Codes: **63030**, **63035**

Scenario 3.5-C: Lumbar Laminectomy for Spinal Stenosis, Three Levels

Clinical Situation: A spine surgeon performs a lumbar laminectomy for spinal stenosis at L2-L3, L3-L4, and L4-L5.

Coding Analysis:

- Level: Lumbar; Indication: Stenosis (not herniated disc — different code family)
- First segment: **63047**
- Second segment: **63048** (add-on)
- Third segment: **63048** (add-on, reported again)

Final Codes: **63047**, **63048**, **63048** (x2)

Scenario 3.5-D: Cervical Laminectomy Reexploration, Two Levels

Clinical Situation: A patient with prior cervical discectomy presents with recurrent disc herniation at C5-C6. The surgeon performs reexploration with discectomy at C5-C6 and C6-C7.

Coding Analysis:

- Level: Cervical; Indication: Reexploration (prior surgery at same level)
- First interspace: **63040**
- Second interspace: **63043** (add-on)

Final Codes: **63040**, **63043**

Common Mistake: Using 63020 (primary cervical disc) instead of 63040 (reexploration). When the surgeon reopens a previously

operated interspace, the reexploration codes apply.

3.6 Corpectomy (63081–63091)

A **corpectomy**(vertebral body resection) involves the removal of all or part of a vertebral body, typically performed to decompress the spinal cord when a herniated disc, bone spur, or tumor has compressed the cord at the vertebral body level. Corpectomy codes are used when the decompression cannot be accomplished by disc removal alone.

- **63081** — Vertebral corpectomy (vertebral body resection), partial or complete, anterior approach with decompression of spinal cord and/or nerve root(s); cervical, single segment
- **63082** — Add-on: each additional cervical segment (add-on to 63081)
- **63085** — Vertebral corpectomy, partial or complete; thoracic, single segment, transthoracic approach
- **63087** — Vertebral corpectomy; lumbar, single segment, transperitoneal or retroperitoneal approach
- **63090** — Vertebral corpectomy; lumbar or sacral, single segment, transperitoneal or retroperitoneal approach; with lateral extracavitary technique

3.7 Spinal Fusion Cross-Reference

📚 **Coder's Corner — Spinal Fusion Is in the Musculoskeletal Section**

When a surgeon performs both a laminectomy/decompression AND a spinal fusion in the same session, the coder must report codes from **two separate CPT sections**:

• **Nervous System (63000s)**: Decompression (laminectomy, discectomy, corpectomy)

• **Musculoskeletal (22000s)**: Fusion approach codes, instrumentation codes (22840–22847), and bone graft codes (20930–20938)

These are bundled together in billing, but each component must be documented and coded. See Chapter 12 (Musculoskeletal) for full fusion coding guidance.

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4. Extracranial Nerves, Peripheral Nerves, and Autonomic Nervous System (64400–64999)

4.1 Introduction and Injection of Anesthetic Agent (Nerve Blocks)

A **nerve block** is the injection of a local anesthetic (with or without corticosteroid) near a specific nerve or nerve plexus to temporarily interrupt pain signals. Nerve blocks may be **somatic** (targeting sensory/motor nerves of the body wall and extremities) or **sympathetic** (targeting the autonomic nervous system).

Somatic Nerve Block Codes

CPT Code	Nerve / Plexus	Type	Notes
64400	Trigeminal nerve	Injection, anesthetic agent	Any branch; face pain
64402	Facial nerve	Injection, anesthetic agent	Hemifacial spasm, facial pain
64415	Brachial plexus	Single injection	Upper extremity anesthesia
64416	Brachial plexus	Continuous infusion (catheter)	Catheter inserted for infusion
64420	Intercostal nerve	Single level	Rib fracture, post-thoracotomy pain
64421	Intercostal nerve	Multiple levels (add-on)	Add to 64420
64445	Sciatic nerve	Single injection	Lower extremity/hip procedures
64446	Sciatic nerve	Continuous infusion (catheter)	Catheter-based continuous block
64447	Femoral nerve	Single injection	Knee surgery anesthesia/analgesia
64448	Femoral nerve	Continuous infusion (catheter)	Post-knee arthroplasty pain

Sympathetic Nerve Block Codes

CPT Code	Structure	Clinical Use
64510	Stellate ganglion (cervicothoracic)	CRPS upper extremity, head/neck sympathetic

CPT Code	Structure	Clinical Use
		pain
64520	Lumbar or thoracic sympathetic chain	CRPS lower extremity, vascular insufficiency
64530	Celiac plexus	Pancreatic cancer pain, abdominal visceral pain

⚠️ Stop! Think! — Somatic vs. Sympathetic Nerve Blocks

The **stellate ganglion, celiac plexus, and lumbar sympathetic chain** are **sympathetic** nerve structures — code them as sympathetic blocks (64510, 64520, 64530), **not** as somatic nerve blocks. A common exam mistake is using 64400-series somatic codes for stellate ganglion or celiac plexus injections. Read the note carefully — is the target a somatic nerve (intercostal, brachial plexus, femoral) or a sympathetic structure (ganglion, plexus, sympathetic chain)?

Scenario 4.1-A: Right Stellate Ganglion Block for CRPS

Clinical Situation: A pain physician performs an injection of local anesthetic into the right stellate ganglion under fluoroscopic guidance for a patient with complex regional pain syndrome (CRPS) of the right upper extremity.

Coding Analysis:

- Target: Stellate (cervicothoracic) ganglion — sympathetic structure
- 64510-RT — Injection, anesthetic agent; stellate ganglion

(cervicothoracic), right side

Final Code: 64510-RT

Common Mistake: Using 64400 (trigeminal) or other somatic nerve codes. The stellate ganglion is a sympathetic structure — only 64510 is correct.

Scenario 4.1-B: Brachial Plexus Block — Continuous Catheter

Clinical Situation: An anesthesiologist places a catheter at the brachial plexus for continuous infusion of ropivacaine for postoperative analgesia following total shoulder arthroplasty.

Coding Analysis:

- Target: Brachial plexus
- Type: Continuous infusion (catheter placed)
- **64416** — Injection, anesthetic agent; brachial plexus, continuous infusion by catheter

Final Code: 64416

Scenario 4.1-C: Celiac Plexus Block for Pancreatic Cancer Pain

Clinical Situation: A patient with unresectable pancreatic cancer undergoes

CT-guided celiac plexus neurolysis with injection of phenol for permanent pain control.

Coding Analysis:

- Target: Celiac plexus — sympathetic
- Agent: Phenol (neurolytic agent — destruction, not just block)
- **64680** — Destruction by neurolytic agent, with or without radiologic monitoring; celiac plexus

Final Code: **64680**

Key Distinction: 64530 = anesthetic injection (temporary block); 64680 = neurolytic destruction (permanent). When phenol, alcohol, or RF ablation is used, these are destruction codes — not injection codes.

4.2 Neurostimulators — Peripheral Nerve (64553–64595)

Peripheral nerve stimulators (PNS)deliver electrical impulses to specific peripheral nerves to modulate chronic pain. They differ from spinal cord stimulators in that the electrode is placed directly adjacent to a peripheral nerve rather than in the epidural space.

CPT Code	Description	Notes
64553	Percutaneous implantation of neurostimulator electrode array; cranial	Occipital nerve stimulation trial

CPT Code	Description	Notes
	nerve	
64555	Percutaneous implantation of neurostimulator electrode; peripheral nerve	Extremity/peripheral nerve trial
64561	Percutaneous implantation of neurostimulator electrode; sacral nerve (transforaminal placement)	Sacral neuromodulation trial (e.g., InterStim)
64568	Open implantation of cranial nerve (e.g., vagus nerve) neurostimulator electrode array and pulse generator	VNS — seizures, depression
64569	Revision or replacement of cranial nerve (e.g., vagus nerve) neurostimulator electrode array, including connection to existing pulse generator	VNS revision
64570	Removal of cranial nerve (e.g., vagus nerve) neurostimulator electrode array and pulse generator	VNS removal

Scenario 4.2-A: Vagus Nerve Stimulator Implant

Clinical Situation: A neurosurgeon implants a vagus nerve stimulator (VNS) in a 16-year-old with refractory epilepsy. The electrode is placed around the left cervical vagus nerve and the pulse generator is implanted in the left chest subcutaneously.

Coding Analysis:

- **64568** — Open implantation of cranial nerve neurostimulator electrode array and pulse generator (VNS)

Final Code: **64568**

Note: 64568 includes both the electrode AND pulse generator in a single code — unlike SCS, which requires separate codes for electrode and generator.

4.3 Destruction by Neurolytic Agent (64600–64681)

Radiofrequency Ablation (RFA) of Facet Joint Nerves (64633–64636)

Radiofrequency ablation (RFA) also called radiofrequency neurotomy, uses heat generated by radio waves to destroy the medial branch nerves that innervate the facet joints, providing longer-lasting pain relief than injections. RFA codes are organized by region and have add-on codes for additional levels — imaging is included.

CPT Code	Region	Level	Type
64633	Cervical or thoracic	First facet joint	Primary code
64634	Cervical or thoracic	Each additional facet joint (add-on)	Add-on to 64633
64635	Lumbar or sacral	First facet joint	Primary code

CPT Code	Region	Level	Type
64636	Lumbar or sacral	Each additional facet joint (add-on)	Add-on to 64635

📚 Coder's Corner — RFA Coding: Per Joint, Not Per Needle Pass

RFA codes are reported **per facet joint treated**, and bilateral procedures at each level require modifier **–50**. Each level has two medial branch nerves treated (one above and one below the joint), but this is still ONE joint treated at that level. For example:

Bilateral L3-L4, L4-L5, and L5-S1 RFA:

- 64635-50 (first level)
- 64636-50 (second level, add-on)
- 64636-50 (third level, add-on)

Total: 3 code lines with –50 modifier.

Scenario 4.3-A: Lumbar Facet RFA, Bilateral, Three Levels

Operative Report Excerpt

PROCEDURE: Radiofrequency ablation of bilateral lumbar medial branch nerves

LEVELS: L3-L4, L4-L5, L5-S1, bilateral

OPERATIVE NOTE: Patient placed prone. Under fluoroscopic guidance, radiofrequency cannulas were placed bilaterally at the L3, L4, and L5

medial branches and the L5 dorsal ramus. Sensory and motor testing confirmed appropriate placement. Radiofrequency lesioning performed at each site at 80°C for 90 seconds. Patient tolerated procedure well.

Coding Analysis:

- Region: Lumbar; Procedure: RFA
- Levels: 3 (L3-L4, L4-L5, L5-S1); Bilateral each
- First level, bilateral: **64635**-50
- Second level, bilateral: **64636**-50
- Third level, bilateral: **64636**-50

Final Codes: **64635**-50, **64636**-50, **64636**-50

Common Mistake: Reporting 77003 (fluoroscopy) separately — imaging is included in RFA codes. Also do NOT count 6 codes for 6 needle passes — code per joint per side, then apply –50 for bilateral.

Scenario 4.3-B: Cervical Medial Branch RFA, Unilateral, Two Levels

Clinical Situation: A pain physician performs radiofrequency ablation of the right C4-C5 and C5-C6 medial branch nerves under fluoroscopy for unilateral cervical facet arthropathy.

Coding Analysis:

- Region: Cervical; Bilateral: No (right side only)
- First level: **64633**-RT
- Second level: **64634**-RT

Final Codes: **64633**-RT, **64634**-RT

Scenario 4.3-C: Trigeminal Nerve Destruction — Percutaneous Rhizotomy

Clinical Situation: A neurosurgeon performs percutaneous radiofrequency rhizotomy of the trigeminal nerve (Gasserian ganglion) for refractory trigeminal neuralgia.

Coding Analysis:

- **64600** — Destruction by neurolytic agent, trigeminal nerve; supraorbital, infraorbital, mental, or inferior alveolar branch
- If Gasserian ganglion specifically: **64605** — Destruction by neurolytic agent, trigeminal nerve; second and third division branches at foramen ovale

Note: Read the operative report to identify which branch(es) were targeted — code selection varies by branch destroyed.

4.4 Neuroplasty and Neurolysis (64702–64727)

Neurolysis is the freeing of a nerve from surrounding scar tissue, adhesions, or compressing structures. **Neuroplasty** specifically refers to surgical repair or reconstruction of a nerve. These procedures are coded by the specific nerve treated.

Carpal Tunnel Release (64721)

Carpal tunnel syndrome (CTS) results from compression of the **median nerve** at the wrist within the carpal tunnel. Surgical treatment involves dividing the **transverse carpal ligament** to relieve pressure.

> ⚠️ **Stop! Think! — Open vs. Endoscopic Carpal Tunnel Release**
>
> **Open carpal tunnel release:** 64721 — Neuroplasty and/or transposition; median nerve at carpal tunnel (Nervous System section)
>
> **Endoscopic carpal tunnel release:** 29848 — Wrist, endoscopy, surgical; with release of transverse carpal ligament (Musculoskeletal/Arthroscopy section)
>
> This is a **high-frequency exam question**. Open = 64721; Endoscopic = 29848. The approach determines the section!

Other Neuroplasty/Neurolysis Codes

- 64718 — Neuroplasty and/or transposition; ulnar nerve at elbow
- 64719 — Neuroplasty and/or transposition; ulnar nerve at wrist
- 64721 — Neuroplasty and/or transposition; median nerve at carpal tunnel
- 64726 — Neuroplasty and/or transposition; plantar digital nerve
- 64727 — Internal neurolysis requiring use of operating microscope (add-on)

Scenario 4.4-A: Open Bilateral Carpal Tunnel Release

Operative Report Excerpt

PREOPERATIVE DIAGNOSIS: Bilateral carpal tunnel syndrome, right greater than left

PROCEDURE: Bilateral open carpal tunnel release

OPERATIVE NOTE: Under tourniquet control, a longitudinal incision was made in the palm at the wrist crease. The transverse carpal ligament was identified and completely divided using scissors under direct visualization. The median nerve was inspected and confirmed to be decompressed. The procedure was then repeated on the contralateral (left) wrist. Both wounds were closed with interrupted nylon sutures.

Step-by-Step Coding Analysis:

1. Approach: Open (not endoscopic) → Code 64721, not 29848
2. Laterality: Bilateral (both wrists)
3. Modifier: –50 for bilateral procedure

Final Code: 64721-50

Common Mistakes: (1) Using 29848 for open release — 29848 is endoscopic ONLY. (2) Coding two separate lines without –50. (3) Adding –51 to an already properly modified bilateral code — not

needed when –50 is appended.

Scenario 4.4-B: Ulnar Nerve Transposition at Elbow

Clinical Situation: A hand surgeon performs anterior transposition of the ulnar nerve at the right elbow for cubital tunnel syndrome, moving the nerve from the cubital groove to a subcutaneous anterior position.

Coding Analysis:

- 64718-RT — Neuroplasty and/or transposition; ulnar nerve at elbow, right side

Final Code: 64718-RT

4.5 Neurectomy — Transection or Avulsion (64732–64772)

A **neurectomy** involves surgical cutting (transection) or tearing away (avulsion) of a nerve to permanently interrupt pain signals. These codes are selected by the specific nerve transected.

- 64732 — Transection or avulsion of; supraorbital nerve
- 64736 — Transection or avulsion of; mental nerve

- 64744 — Transection or avulsion of; greater occipital nerve
- 64746 — Transection or avulsion of; phrenic nerve
- 64752 — Transection or avulsion of; vagus nerve (vagotomy), transthoracic
- 64760 — Transection or avulsion of; vagus nerve (vagotomy), abdominal
- 64772 — Transection or avulsion of; other spinal nerve, including sympathectomy

Scenario 4.5-A: Greater Occipital Nerve Avulsion

Clinical Situation: A surgeon performs avulsion of the greater occipital nerve bilaterally for intractable occipital neuralgia.

Coding Analysis:

- 64744-50 — Transection or avulsion of; greater occipital nerve, bilateral

Final Code: 64744-50

4.6 Excision — Neuromas and Peripheral Nerve Tumors (64774–64823)

A **neuroma** is a painful, disorganized mass of nerve tissue that forms after nerve injury. Excision codes are selected by the specific nerve from which the neuroma is excised.

- 64774 — Excision of neuroma; cutaneous nerve, surgically identifiable
- 64776 — Excision of neuroma; digital nerve, one or both, same digit

- **64782** — Excision of neuroma; hand or foot, except digital nerve
- **64784** — Excision of neuroma; major peripheral nerve, except sciatic
- **64786** — Excision of neuroma; sciatic nerve
- **64788** — Excision of neurofibroma or neurolemmoma; cutaneous nerve
- **64790** — Excision of neurofibroma or neurolemmoma; major peripheral nerve
- **64792** — Excision of neurofibroma or neurolemmoma; extensive (including malignant)

Scenario 4.6-A: Morton's Neuroma Excision

Clinical Situation: A surgeon excises a Morton's neuroma (interdigital neuroma) of the left foot between the 3rd and 4th metatarsal heads.

Coding Analysis:

- Morton's neuroma is a digital/interdigital nerve neuroma of the foot
- **64782**-LT — Excision of neuroma; hand or foot, except digital nerve, left foot

Final Code: **64782**-LT

Note: If the neuroma specifically involves a digital nerve, use 64776. Morton's neuroma is an intermetatarsal (plantar interdigital) nerve, typically coded 64782.

4.7 Nerve Repair (64831–64911)

Nerve repair codes cover primary and secondary suture repair, nerve grafting, and microsurgical techniques. Key distinctions include:

- **Primary nerve repair** — repair performed at time of injury
- **Secondary nerve repair** — repair performed after wound healing from original injury
- **Nerve graft** — when a direct repair is not possible and a segment of nerve is interposed

CPT Code	Procedure	Notes
64831	Suture of digital nerve, hand or foot; 1 nerve	Primary or secondary; single nerve
64832	Suture of digital nerve; each additional digital nerve (add-on)	Add to 64831
64835	Suture of median motor thenar nerve	Recurrent motor branch of median nerve
64840	Suture of posterior tibial nerve	Lower extremity
64856	Suture of major peripheral nerve, arm or leg, except sciatic; including transposition	Major nerve with transposition
64857	Suture of major peripheral nerve, arm or leg, except sciatic; without transposition	Major nerve, no transposition
64885	Nerve graft, head or neck; up to 4 cm in length	Graft ≤4 cm
64886	Nerve graft, head or neck; more than 4 cm in length	Graft >4 cm
64890	Nerve graft, single	Single strand graft,

CPT Code	Procedure	Notes
	strand, hand or foot; up to 4 cm	extremity
64895	Nerve graft, single strand, hand or foot; more than 4 cm	Single strand graft, extremity >4 cm
64905	Nerve pedicle transfer; first stage	Staged procedure — two-stage pedicle transfer
64911	Nerve repair with nerve allograft, each additional strand (add-on)	Allograft material used

Scenario 4.7-A: Primary Median Nerve Repair

Clinical Situation: A patient suffers a laceration to the right wrist severing the median nerve. A hand surgeon performs primary microsurgical repair of the right median nerve in the emergency department.

Coding Analysis:

- Median nerve = major peripheral nerve (not digital)
- No transposition performed
- 64857-RT — Suture of major peripheral nerve, arm or leg, except sciatic; without transposition, right
- If operating microscope was used: 69990 (add-on)

Final Codes: 64857-RT, 69990

Scenario 4.7-B: Sural Nerve Graft, Upper Extremity

Clinical Situation: A surgeon harvests a segment of sural nerve (6 cm) from the right calf and uses it to bridge a 5 cm gap in the left radial nerve at the forearm.

Coding Analysis:

- Nerve graft, extremity (arm), single strand, >4 cm: 64895-LT
- Sural nerve harvest is included — do NOT separately code the donor site harvest

Final Code: 64895-LT

5. Key Nervous System Coding Concepts

5.1 Imaging Guidance in Nervous System Procedures

Imaging guidance (fluoroscopy, CT, ultrasound) is a critical component of many nervous system procedures. However, the rules for when to separately code imaging

guidance vary significantly by procedure family. Coders must know these rules precisely.

Procedure Type	CPT Codes	Imaging Guidance	Coding Rule
Interlaminar ESI	62320–62323	Separately selectable	62321 and 62323 INCLUDE imaging; 62320 and 62322 do NOT — add guidance codes only when imaging used and not already coded
Transforaminal ESI	64479–64484	INCLUDED	Do NOT separately code imaging
Facet Joint Injection	64490–64495	INCLUDED	Do NOT separately code imaging
RFA of Facet Nerves	64633–64636	INCLUDED	Do NOT separately code imaging
Lumbar Puncture	62270–62272	NOT included	May separately code 77003 (fluoroscopy) if used

⚠️ Stop! Think! — The Imaging Trap

One of the most common errors on the CPC exam — and in real-world billing — is adding a **separate imaging guidance code** when it is already bundled into the injection code. Before adding any imaging code (77003 fluoroscopy, 77012 CT guidance, 76942 ultrasound guidance), verify that imaging is NOT already included in the primary code description. When in doubt, check the CPT codebook notes and AMA guidelines.

5.2 Operating Microscope Add-On Code (69990)

The **operating microscope**provides enhanced visualization for delicate procedures. When the operating microscope is used and is NOT already included in the primary code, the add-on code **69990** may be separately reported.

Scenario	69990 Reportable?	Reason
Microsurgical nerve repair (64857)	**YES**	Not included in 64857 — add 69990
Lumbar microdiscectomy (63030)	**YES**	Not included in 63030 — add 69990 if documented
Intracranial aneurysm surgery (61700)	**NO**	Operating microscope is inherent to this procedure — already included
Spinal cord tumor resection (63275)	**NO**	Already included in the intradural spinal cord tumor codes
Nerve graft (64890)	**YES**	Not included — separately reportable if microscope documented
Stapes surgery (69660)	**NO**	CPT specifically excludes 69990 from this family

📚 Coder's Corner — 69990 Documentation Requirement

The operating microscope add-on code **69990** requires that the use of the operating microscope be **specifically documented in the operative report**. Documentation such as "the operative microscope was brought into the field for magnification" or "the procedure was performed under the operating microscope" is required. Loupes (magnifying glasses worn by the surgeon) do **NOT** qualify for 69990 — only the operating microscope counts.

5.3 Neurology vs. Surgery Distinction

The CPT codebook has two different sections for nervous system services:

- **Surgery Section (61000–64999)**: Operative and invasive procedures
- **Medicine/Neurology Section (95800–95999)**: Diagnostic and evaluative studies

Common neurological diagnostic tests are **NOT** found in the Surgery section. They include:

- **EEG (Electroencephalography)**: 95812–95830 — Medicine section
- **EMG (Electromyography)**: 95860–95872 — Medicine section
- **Nerve Conduction Studies (NCS)**: 95905–95913 — Medicine section
- **Evoked Potentials**: 95925–95937 — Medicine section

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6. Nervous System Modifiers

Modifiers communicate important procedural information to payers and are essential for accurate billing. In nervous system coding, the following modifiers are most commonly applied:

Modifier	Name	When to Use in Nervous System	Example
–50	Bilateral Procedure	Same procedure performed on both sides in same session (nerve blocks, RFA, carpal tunnel)	64721-50: Open carpal tunnel release, bilateral

Modifier	Name	When to Use in Nervous System	Example
–LT	Left Side	Unilateral procedure on left side (nerve blocks, nerve repair)	**64510**-LT: Left stellate ganglion block
–RT	Right Side	Unilateral procedure on right side	**64479**-RT: Right cervical transforaminal ESI
–51	Multiple Procedures	When two or more procedures are performed during the same session; NOT used with add-on codes	**63030**, **63650**-51: Discectomy plus SCS trial
–59	Distinct Procedural Service	When two codes are normally bundled but were performed at different anatomic sites or separate sessions	**62323**-59 with 64493-50: ESI plus facet injections at different levels
–62	Two Surgeons	Two surgeons each performing distinct parts of a complex neurosurgical procedure (common in skull base, complex craniotomies)	Skull base tumor: Neurosurgeon and ENT each report their portion with –62
–80	Assistant Surgeon	When a second surgeon assists the primary surgeon (common in complex intracranial and spinal procedures)	Assistant surgeon reports **63655**-80

💡 **Did You Know? — Modifier –62 vs. –80**

Modifier –62 (Two Surgeons) is used when each surgeon performs a **distinct, separate** component of the procedure that could be coded independently. Both surgeons report the same CPT code with –62 appended. In contrast, **modifier –80** (Assistant Surgeon) is used when one surgeon assists the primary surgeon throughout the procedure — they are helping, not performing a separately codeable component. Both surgeons report the same code, but the assistant uses –80 while the primary uses no modifier.

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7. Real-World Coding Scenarios — Six Full Operative Note Exercises

Scenario 7.1: VP Shunt Placement for New-Onset Hydrocephalus

Operative Report

PATIENT: Adult female, 52 years old

PREOPERATIVE DIAGNOSIS: Communicating hydrocephalus secondary to subarachnoid hemorrhage

POSTOPERATIVE DIAGNOSIS: Same

SURGEON: Dr. A. Martinez, MD (Neurosurgeon)

PROCEDURE PERFORMED: Placement of right ventriculoperitoneal (VP) shunt with programmable Medtronic Strata valve

ANESTHESIA: General

OPERATIVE FINDINGS: CSF pressure elevated at 280 mmH2O. Clear, xanthochromic CSF obtained.

DESCRIPTION OF PROCEDURE: Patient was brought to the operating room and placed in the supine position with head turned to the left. A right parieto-occipital skin incision was made and a burr hole was created using a hand drill. The dura was coagulated and opened. A ventricular catheter was passed into the right lateral ventricle using standard technique. Clear CSF was noted to flow freely from the catheter. The catheter was secured with a purse-string suture. A subcutaneous tunnel was then created from the head incision to the abdominal incision using a tunneling device. The peritoneum was entered via a mini-laparotomy. The distal peritoneal catheter was introduced into the peritoneal cavity and secured. The programmable valve was set at 200 mmH2O and connected between the ventricular and peritoneal catheters. All connections were secured with silk sutures. The scalp and abdominal wounds were irrigated with antibiotic solution and closed in layers. Sterile dressings were applied.

Step-by-Step Analysis:

1. **Is this new placement or revision?** New placement (no prior shunt)
2. **Shunt terminus location?** Peritoneal cavity → Ventriculoperitoneal

shunt

3. **Code selection:** 62223 (VP shunt creation)

4. **Is the burr hole separately billable?** No — included in 62223

5. **Is the programmable valve coding separately?** No — the valve type is captured in the description but does not change the CPT code; hardware HCPCS codes may apply for specific payers

Final Code: `62223`

Common Mistakes to Avoid:

- Do NOT separately code the burr hole (61210) — included in 62223
- Do NOT use 62220 (ventriculoatrial) — shunt terminates in peritoneum, not atrium
- Do NOT code the laparotomy separately — peritoneal access is included

Scenario 7.2: Lumbar Laminectomy with Discectomy — Single Level (L5-S1)

Operative Report

PATIENT: Male, 38 years old

PREOPERATIVE DIAGNOSIS: Right L5-S1 herniated nucleus pulposus with right S1 radiculopathy, refractory to conservative management

POSTOPERATIVE DIAGNOSIS: Same

SURGEON: Dr. B. Chen, MD (Spine Surgeon)

PROCEDURE: Right L5-S1 laminotomy and microdiscectomy

OPERATIVE NOTE: Patient placed prone on a Wilson frame. C-arm fluoroscopy confirmed the L5-S1 level. A 3 cm midline incision was made. Paraspinal muscles were retracted to expose the right L5-S1 lamina. The operating microscope was brought into the surgical field. A right hemilaminotomy was performed at the L5 level with removal of the ligamentum flavum. The right S1 nerve root was identified and gently retracted medially. A large extruded disc fragment was identified in the right axilla of the S1 nerve root and removed with a pituitary rongeur and disc forceps. Thorough decompression of the right S1 nerve root was confirmed. The wound was irrigated with antibiotic solution and closed in anatomic layers.

Step-by-Step Analysis:

1. **Level:** Lumbar (L5-S1)
2. **Indication:** Herniated disc (not stenosis)
3. **Number of interspaces:** One (L5-S1 only)
4. **Primary code:** 63030 — Laminotomy with decompression, 1 interspace, lumbar
5. **Operating microscope documented:** Yes → Add 69990

Final Codes: **63030**, **69990**

Common Mistakes to Avoid:

- Do NOT use 63047 (stenosis) — the indication is herniated disc, not stenosis
- DO add 69990 — the operative note explicitly documents use of operating microscope

- Do NOT add a fluoroscopy code (77003) — fluoroscopy for level confirmation is included in the global service

Scenario 7.3: Spinal Cord Stimulator — Permanent Implant (Electrode + Generator)

Operative Report

PATIENT: Female, 61 years old

PREOPERATIVE DIAGNOSIS: Failed back surgery syndrome; chronic lumbar and bilateral lower extremity pain; successful SCS trial completed 8 days prior

POSTOPERATIVE DIAGNOSIS: Same

SURGEON: Dr. C. Thompson, MD (Pain Management / Neurosurgery)

PROCEDURE: Permanent SCS implantation — bilateral percutaneous epidural electrode placement and implantable pulse generator (IPG) placement

OPERATIVE NOTE: Patient placed prone under fluoroscopy. Two percutaneous leads were introduced into the lumbar epidural space via Tuohy needles at the L1-L2 level and advanced under fluoroscopic guidance to the T9-T10 level bilaterally. Intraoperative stimulation testing confirmed excellent bilateral lower extremity paresthesia coverage. The leads were anchored securely to the dorsal fascia. Patient was repositioned in lateral decubitus. A subcutaneous pocket was created in the right upper outer buttock region. The leads were tunneled subcutaneously to the pocket. An Abbvie Proclaim Elite rechargeable IPG was connected to the leads and secured in the pocket. Device was programmed and tested. Pocket and back

wounds were closed in layers.

Step-by-Step Analysis:

1. **Electrode type:** Percutaneous (Tuohy needle insertion, no laminectomy) → 63650
2. **Is this trial or permanent?** Permanent (successful trial completed; IPG implanted)
3. **Pulse generator placed?** Yes → 63685
4. **Two leads placed:** Still one code for electrode array — 63650 is not reported twice for two leads

Final Codes: `63650`, `63685`

Common Mistakes to Avoid:

- Do NOT use 63655 (paddle/laminectomy) — procedure was percutaneous
- Do NOT report 63650 twice for two leads — one code covers the electrode array placement
- MUST report both 63650 AND 63685 — both electrode and generator must be coded separately

Scenario 7.4: Lumbar Interlaminar Epidural Steroid Injection with Fluoroscopy

Procedure Note

PATIENT: Male, 55 years old

PREOPERATIVE DIAGNOSIS: Lumbar spinal stenosis with neurogenic claudication

SURGEON: Dr. D. Patel, MD (Pain Management)

PROCEDURE: Fluoroscopically guided lumbar interlaminar epidural steroid injection at L3-L4

PROCEDURE NOTE: Patient placed prone. The L3-L4 interspace was identified under fluoroscopic guidance using AP and lateral views. The skin was prepped and draped in sterile fashion. A 17-gauge Tuohy needle was advanced toward the posterior epidural space using a midline interlaminar approach. Loss of resistance technique was used to confirm epidural placement. Contrast injection under live fluoroscopy confirmed epidural spread without intravascular uptake. A mixture of 80 mg triamcinolone acetonide and 3 mL preservative-free normal saline was injected into the epidural space. Patient tolerated the procedure without complication.

Step-by-Step Analysis:

1. **Approach:** Midline interlaminar (not transforaminal) → Interlaminar family (62320–62323)
2. **Level:** Lumbar (L3-L4)
3. **Imaging:** Fluoroscopy used and documented → "with imaging guidance" code
4. **Code:** 62323 — Interlaminar epidural, lumbar/sacral, with imaging

guidance

Final Code: 62323

Common Mistakes to Avoid:

- Do NOT use 64483 (transforaminal) — approach was interlaminar (midline, loss of resistance)
- Do NOT add 77003 (fluoroscopy) — imaging is included in 62323
- Do NOT code 62322 (without imaging) — fluoroscopy was clearly documented

Scenario 7.5: Bilateral Open Carpal Tunnel Release

Operative Report

PATIENT: Female, 47 years old

PREOPERATIVE DIAGNOSIS: Bilateral carpal tunnel syndrome, confirmed by nerve conduction studies

SURGEON: Dr. E. Williams, MD (Hand Surgery)

PROCEDURE: Bilateral open carpal tunnel release

OPERATIVE NOTE: The patient was positioned supine with both arms extended on arm boards. Right wrist surgery was performed first. Under tourniquet control, a 2.5 cm longitudinal incision was made at the proximal wrist crease extending into the palm. The palmar fascia and transverse carpal ligament were identified and divided with scissors and scalpel under direct visualization from proximal to distal,

ensuring complete release. The median nerve was inspected and found to be decompressed with no evidence of intraneural fibrosis. Wound was closed. The tourniquet was released and left wrist surgery was performed using identical technique. Complete release was confirmed bilaterally. Both wounds closed with 4-0 nylon suture.

Step-by-Step Analysis:

1. **Procedure type:** Open carpal tunnel release (direct visualization, no scope) → 64721
2. **NOT endoscopic:** If endoscopic, would use 29848
3. **Laterality:** Bilateral (both wrists same session) → Modifier –50

Final Code: 64721-50

Common Mistakes to Avoid:

- NEVER code 29848 for open carpal tunnel release — 29848 is for endoscopic release only
- DO apply modifier –50 for bilateral same-session procedure
- Do NOT add –51 to this code when it is the only procedure — –51 applies when multiple different procedures are performed

Scenario 7.6: Radiofrequency Ablation of Lumbar Facet Joints — Bilateral, Three Levels

Procedure Note

PATIENT: Male, 68 years old

PREOPERATIVE DIAGNOSIS: Lumbar facet arthropathy at L3-L4, L4-L5, and L5-S1 bilaterally

SURGEON: Dr. F. Garcia, MD (Interventional Pain)

PROCEDURE: Radiofrequency ablation (RFA) of bilateral lumbar medial branch nerves at L3, L4, L5 and L5 dorsal ramus bilaterally

PROCEDURE NOTE: Patient was placed prone on the fluoroscopy table. Fluoroscopic imaging confirmed lumbar anatomy. Under sterile conditions, radiofrequency cannulas were placed bilaterally at the L3 transverse process base (targeting L3 medial branch), the L4 transverse process base (targeting L4 medial branch), L5 transverse process base (targeting L5 medial branch), and bilaterally at the L5-S1 sacral ala (targeting L5 dorsal ramus). Sensory stimulation at 50 Hz reproduced concordant pain at

<

0.5V at all sites. Motor stimulation at 2 Hz at 2x sensory threshold showed no lower extremity muscle contraction. Radiofrequency lesioning was performed at 80°C for 90 seconds at each site. Six total ablation sites. All instruments were removed and the patient was taken to recovery.

Step-by-Step Analysis:

1. **Procedure:** RFA of lumbar medial branch nerves (facet joint nerves)
2. **Region:** Lumbar → 64635 family

3. **Levels treated:** L3-L4, L4-L5, L5-S1 = 3 facet joint levels

4. **Laterality:** Bilateral each level → Modifier –50 on each code

5. **Imaging:** Fluoroscopy is INCLUDED in 64635/64636 — do NOT add 77003

Final Codes:

- **64635**-50 (first lumbar/sacral level, bilateral)
- **64636**-50 (second level, bilateral, add-on)
- **64636**-50 (third level, bilateral, add-on)

Common Mistakes to Avoid:

- Do NOT report six codes for six needle passes — code per joint level, not per needle
- Do NOT add fluoroscopy code — imaging is included in RFA codes
- Do NOT forget modifier –50 on each line for bilateral procedures
- Add-on code 64636 does NOT require modifier –51

---

8. Chapter Review — 20 Multiple Choice Questions

Directions: Choose the single best answer for each question. Refer to the CPT codebook as needed No answer key is included.

1. A neurosurgeon performs a craniotomy for excision of a supratentorial meningioma. The bone flap is replaced and secured at the end of the procedure. Which CPT code is most appropriate?

1. 61304
2. 61510
3. 61512
4. 61518

2. An infant undergoes aspiration of fluid from the subdural space through the anterior fontanelle. This is the patient's first such procedure. What is the correct CPT code?

1. 61000
2. 61001
3. 62272
4. 61105

3. A patient with a known VP shunt develops shunt malfunction. The neurosurgeon replaces only the valve and distal peritoneal catheter; the ventricular catheter is left in place. What is the correct CPT code?

1. 62223
2. 62225
3. 62230
4. 62258

4. A surgeon performs a lumbar laminotomy and discectomy at L4-L5 and L5-S1 in the same operative session for herniated discs at both levels. Which codes are correct?

1. 63030, 63030-51
2. 63030, 63035
3. 63047, 63048
4. 63030, 63047

5. A percutaneous spinal cord stimulator electrode is placed in the epidural space at T10 as part of a one-week trial. The external trial stimulator is connected. Which CPT code is reported?

1. 63655
2. 63650
3. 63685
4. 63650 and 63685

6. A pain physician performs a fluoroscopically guided L4-L5 interlaminar epidural steroid injection using a midline approach with loss of resistance technique. The correct CPT code is:

1. 62322
2. 62323

3. 64483
4. 64484

7. A patient undergoes bilateral cervical transforaminal epidural steroid injections at C5-C6 and C6-C7 under fluoroscopy. The physician adds a separate fluoroscopy code (77003) to the claim. This is:

1. Correct — fluoroscopy is always separately billable
2. Correct — only when bilateral procedures are performed
3. Incorrect — fluoroscopy is included in transforaminal ESI codes
4. Incorrect — a CT guidance code should be added instead

8. A surgeon performs open carpal tunnel release on both wrists in the same operative session. The correct coding is:

1. 64721-LT, 64721-RT
2. 29848-50
3. 64721-50
4. 64721, 64721-51

9. A patient undergoes endoscopic carpal tunnel release of the right wrist. The correct CPT code is:

1. 64721-RT

2. 29848-RT
3. 64719-RT
4. 64721

10. A pain physician performs radiofrequency ablation of bilateral lumbar facet joint medial branch nerves at L4-L5 and L5-S1. Fluoroscopy was used. The correct codes are:

1. 64635-50, 64636-50
2. 64635-50, 64636-50, 77003
3. 64633-50, 64634-50
4. 64635, 64635-51, 77003

11. A surgeon performs a lumbar laminectomy for spinal stenosis at L2-L3, L3-L4, and L4-L5 in one session. Which codes are correct?

1. 63047, 63047-51, 63047-51
2. 63030, 63035, 63035
3. 63047, 63048, 63048
4. 63045, 63048, 63048

12. Which of the following statements about the operating microscope add-on code (69990) is CORRECT?

1. It is always separately reportable with any surgery where a microscope is

used

2. It is included in intracranial aneurysm surgery codes and should not be separately reported
3. It is reported for procedures performed with surgical loupes
4. It requires a separate CPT code from the Radiology section

13. Two neurosurgeons co-operate on a complex skull base tumor resection. The neurosurgeon performs the definitive tumor resection while a craniofacial surgeon performs the reconstruction. Each should append which modifier to their respective codes?

1. –51
2. –62
3. –80
4. –59

14. A neurosurgeon performs a permanent SCS paddle electrode implant via laminectomy at T9-T10 and places the pulse generator in a subcutaneous abdominal pocket. The correct codes are:

1. 63650, 63685
2. 63655, 63685
3. 63655 only
4. 63650, 63655, 63685

15. A pain physician injects local anesthetic into the right stellate ganglion for a patient with CRPS of the right upper extremity. The correct CPT code is:

1. 64400-RT
2. 64415-RT
3. 64510-RT
4. 64530-RT

16. A spine surgeon performs a lumbar laminectomy at L4-L5 for a herniated disc in a patient who previously had surgery at this same level two years ago. The appropriate primary code is:

1. 63030
2. 63042
3. 63047
4. 63044

17. Skull base surgery CPT codes are unique because they:

1. Are always reported with a single code regardless of complexity
2. Include three separately reportable components: approach, definitive procedure, and reconstruction
3. Are only reported when two surgeons are present
4. Are found in the Musculoskeletal section of CPT

18. Add-on code 63048 is used for laminectomy for spinal stenosis at each additional spinal segment. Which statement about this add-on code is TRUE?

1. It may be reported as a stand-alone code
2. It requires modifier –51 when reported with its primary code
3. It may not be reported as a stand-alone code and does not require modifier –51
4. It is limited to the cervical spine only

19. A patient with bilateral L4-L5 and L5-S1 facet arthropathy undergoes fluoroscopically guided bilateral facet joint injections at both levels in one session. The correct codes are:

1. 64493, 64493-51, 64494, 64494-51
2. 64493-50, 64494-50, 77003
3. 64493-50, 64494-50
4. 64490-50, 64491-50

20. A vagus nerve stimulator (VNS) electrode and pulse generator are implanted by a neurosurgeon for a patient with refractory epilepsy. The correct CPT code(s) are:

1. 63650, 63685
2. 64568
3. 64555, 63685

4. 64568, 63685

Key Chapter Concepts

- The CPT Nervous System section (61000–64999) is organized into three anatomic zones: Skull/Meninges/Brain (61000–62258), Spine/Spinal Cord (62263–63746), and Extracranial/Peripheral/ANS (64400–64999).
- A **craniotomy** replaces the bone flap; a **craniectomy** does not. The terms are not interchangeable in coding.
- Brain tumor codes are selected by location (supratentorial vs. infratentorial) and tumor type (meningioma vs. other).
- **Skull base surgery** is coded with three separate components: approach, definitive procedure, and reconstruction — all may be separately reportable.
- CSF shunt coding depends on whether the procedure is a new creation, a partial revision (ventricular vs. valve/distal), or complete replacement.
- **Epidural steroid injections** use two separate code families: interlaminar (62320–62323) and transforaminal (64479–64484). Transforaminal codes include imaging — do NOT add separate fluoroscopy.
- **Facet joint injections** (64490–64495) and **RFA** (64633–64636) are both coded per spinal level with imaging included. Apply modifier –50 for bilateral procedures.
- The **spinal cord stimulator** requires separate codes for the electrode (63650 percutaneous or 63655 paddle/laminectomy) and pulse generator (63685).
- Add-on codes for additional spinal levels (**63035, 63043, 63044, 63048, 64480, 64484, 64634, 64636**) can NEVER be reported alone and do NOT require modifier –51.
- **Open carpal tunnel release** = 64721 (Nervous System); **Endoscopic carpal tunnel release** = 29848 (Musculoskeletal). These codes are never

interchangeable.

- The **operating microscope** add-on code (69990) is separately reportable for some procedures but is already bundled into others — check the CPT codebook notes for each specific code.
- In nervous system surgery, the **sympathetic nervous system** structures (stellate ganglion, celiac plexus, lumbar sympathetic chain) have distinct codes separate from somatic nerve block codes.
- Modifier **–62** is used when two surgeons each perform distinct, separately codeable components of the same procedure; modifier **–80** is for an assistant surgeon.
- EEG, EMG, and nerve conduction studies are coded in the **Medicine section** (95800s) — not the Surgery/Nervous System section.

10. Key Terms Glossary

Term	Definition
Arachnoid Mater	The middle layer of the meninges, a web-like membrane between the dura mater and pia mater; the subarachnoid space beneath it contains cerebrospinal fluid.
Arteriovenous Malformation (AVM)	An abnormal tangle of blood vessels connecting arteries and veins in the brain or spinal cord, bypassing the capillary system and potentially causing hemorrhage.
Burr Hole	A circular hole drilled through the skull using a specialized cutting tool

Term	Definition
	(trephine/burr) to gain access to the intracranial contents for drainage, biopsy, or electrode placement.
Cauda Equina	The collection of spinal nerve roots below the conus medullaris (at approximately L1-L2), resembling a horse's tail; occupies the lumbar cistern.
Cerebrospinal Fluid (CSF)	Clear, colorless fluid produced by the choroid plexus of the brain's ventricles; circulates through the ventricular system and subarachnoid space, cushioning and nourishing the CNS.
Corpectomy	Surgical removal of all or part of a vertebral body, typically performed for spinal cord decompression when disc removal alone is insufficient.
Craniectomy	Surgical removal of a section of the skull (bone flap) without immediate replacement; the bone may be discarded or preserved for later reimplantation.
Craniotomy	Surgical removal of a section of the skull (bone flap) with replacement of the bone at the end of the same operative session.
Dura Mater	The outermost, toughest layer of the meninges; forms a protective sheath around the brain and spinal cord.
Epidural Space	The space between the dura mater and the vertebral canal wall; contains fat and blood vessels. Epidural steroid injections, SCS electrodes, and intrathecal catheter entry pass through or into this space.
Hydrocephalus	Abnormal accumulation of CSF within the cerebral ventricles, causing increased intracranial pressure; treated surgically with CSF shunting or endoscopic third ventriculostomy.
Laminectomy	Complete surgical removal of a vertebral lamina to decompress the spinal cord or nerve roots; used for spinal stenosis and tumors.

Term	Definition
Laminotomy	Partial removal of a vertebral lamina to access the spinal canal; commonly performed for herniated disc excision (discectomy).
Meninges	The three protective membranes surrounding the brain and spinal cord: dura mater (outermost), arachnoid mater (middle), and pia mater (innermost).
Neurolysis	Surgical freeing of a nerve from surrounding scar tissue, adhesions, or compressive structures to restore normal nerve function and relieve pain.
Neuroma	A painful, disorganized mass of nerve tissue formed at the site of a nerve injury; may require surgical excision when causing chronic pain.
Radiofrequency Ablation (RFA)	A minimally invasive procedure using heat generated by radio waves to destroy specific nerves (e.g., medial branch nerves) to achieve long-term pain relief from facet joint arthropathy.
Spinal Cord Stimulator (SCS)	An implanted device delivering low-level electrical impulses to the epidural space adjacent to the spinal cord to modulate chronic pain signals; consists of electrode(s) and an implantable pulse generator (IPG).
Subarachnoid Space	The space between the arachnoid mater and pia mater, filled with cerebrospinal fluid; a lumbar puncture needle enters this space to collect CSF.
Ventriculoperitoneal (VP) Shunt	A surgically implanted tube system that diverts excess CSF from the cerebral ventricle to the peritoneal cavity for absorption; the most common surgical treatment for hydrocephalus.

End of Chapter 18 — Surgery Section: Nervous System

Step-by-Step Medical Coding • Student Edition • CPT Codes 61000–64999

For CPC Examination Preparation — Carol Buck Methodology

MEDICAL CODING MASTERY | STUDENT EDITION

CHAPTER 19

Surgery: Eye and Auditory Systems; Radiology

CPT codes: 65091-68899 | 69000-69979 | 70010-79999

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Section 1: Chapter Objectives

▶️ Chapter Objectives

Upon completion of this chapter, the student will be able to:

1. Identify the anatomical structures of the eye, ocular adnexa, and auditory system and correctly apply CPT codes within the ranges 65091–68899 and 69000–69979.

2. Distinguish between evisceration, enucleation, and exenteration procedures and assign the appropriate CPT codes based on operative documentation.

3. Select the correct cataract surgery code (extracapsular, phacoemulsification with or without IOL, complex) and apply appropriate modifiers for bilateral procedures.

4. Apply correct CPT codes for posterior segment procedures including vitrectomy, intravitreal injections, scleral buckling, and laser photocoagulation.

5. Code strabismus surgery, ptosis repair, eyelid, and lacrimal system procedures using the appropriate codes and laterality modifiers.

6. Identify the differences between myringotomy and tympanostomy and assign proper codes, including modifier -50 for bilateral ear tube insertions.

7. Code cochlear implant procedures and cross-reference device programming codes in the Medicine section of CPT.

8. Explain the three components of radiology services (professional, technical, and global) and correctly apply modifiers -26 and -TC.

9. Assign diagnostic radiology codes for imaging of the head, spine, chest, abdomen, and extremities by modality (X-ray, CT, MRI) including contrast variations.

10. Code ultrasound, nuclear medicine, radiation oncology, and radiologic guidance procedures using CPT guidelines and payer-specific rules.

Section 2: Introduction

Overview of CPT Sections Covered in This Chapter

Chapter 19 brings together three major areas of the Current Procedural Terminology (CPT) coding system that, at first glance, may seem unrelated. However, the skilled medical coder must navigate the **Surgery: Eye and Ocular Adnexa**, **Surgery: Auditory System**, and **Radiology** sections with equal fluency, as these services frequently intersect in clinical practice. An ophthalmologist performing retinal surgery relies on imaging interpretation; an otolaryngologist placing cochlear implants may require radiologic guidance. Understanding how these sections interconnect is a hallmark of the proficient CPC-credentialed coder.

CPT Section	Code Range	Key Subsections
Surgery: Eye and Ocular Adnexa	65091–68899	Eyeball, Anterior Segment, Posterior Segment, Ocular Adnexa, Conjunctiva, Lacrimal System
Surgery: Auditory System	69000–69979	External Ear, Middle Ear, Inner Ear, Temporal Bone
Radiology	70010–79999	Diagnostic Radiology, Diagnostic Ultrasound, Radiologic Guidance, Nuclear Medicine, Radiation Oncology

📚 Did You Know?

The CPT manual is organized into six sections: Evaluation & Management, Anesthesia, Surgery, Radiology, Pathology/Laboratory, and Medicine. The Radiology section stands alone as its own chapter because it applies across

virtually every medical specialty — not just Surgery. Always check the Radiology section when any imaging service is documented, regardless of which physician ordered or performed it.

This chapter follows the organizational structure found in the CPT manual and builds from the most specific anatomical subsection to the broadest service category. You will encounter detailed anatomy, key coding guidelines, real-world operative notes, and exam-style practice questions designed to replicate the difficulty level of the American Academy of Professional Coders (AAPC) CPC examination.

⚠️ **Stop! Think!**

Before coding any procedure in this chapter, always confirm: (1) the **laterality** of the procedure (right, left, or bilateral), (2) the **approach** used, (3) whether a separate **modifier** is required, and (4) whether any additional **add-on codes** are applicable. These four elements are tested repeatedly on the CPC exam.

PART A: Surgery — Eye and Ocular Adnexa (65091-68899)

Section 3: Introduction to the Eye

Anatomy Overview

Successful coding of ophthalmic procedures requires a solid understanding of ocular anatomy. The **eye** is a complex sensory organ composed of multiple distinct

anatomical layers and structures, each with corresponding CPT codes organized by anatomical site.

Key Anatomical Structures

Structure	Location	Clinical Significance for Coding
Eyelids	External, anterior to globe	Ptosis repair, blepharoplasty, entropion/ectropion correction; some codes cross-reference Integumentary
Conjunctiva	Mucous membrane lining eyelids and covering sclera	Pterygium excision, conjunctivoplasty
Cornea	Transparent anterior window of the eye	Keratoplasty (transplant), refractive surgery, laceration repair
Anterior Chamber	Fluid-filled space between cornea and iris	Paracentesis, gonioscopy, glaucoma surgery
Iris	Pigmented muscular diaphragm	Iridectomy, iridoplasty, iridotomy
Lens	Biconvex structure behind iris	Cataract extraction, IOL insertion
Vitreous	Gel-filled posterior chamber	Vitrectomy, intravitreal injection
Retina	Light-sensitive neural layer, posterior eye	Retinal detachment repair, laser photocoagulation
Optic Nerve	Transmits visual signals to brain	Optic nerve sheath decompression
Orbit	Bony socket containing the globe	Orbital decompression, orbital implant, exploration
Lacrimal System	Tear production and drainage apparatus	DCR, probing, punctum plugs

How Eye Codes Are Organized

The Eye and Ocular Adnexa subsection of CPT is organized **by anatomical site**, progressing from the eyeball itself (anterior to posterior), then to the adnexa (surrounding structures), and finally to the conjunctiva and lacrimal system. This mirrors the physical layers of the eye from outermost to innermost.

Key Documentation Elements

- **Laterality:** Right eye, left eye, or bilateral — modifiers RT, LT, or -50 are essential
- **Approach:** Open, endoscopic, transcanalicular, transconjunctival
- **Extent of procedure:** Partial vs. complete, with vs. without implant
- **Anesthesia:** Local vs. general (affects some codes, especially in pediatric otolaryngology)
- **Implant details:** Type of intraocular lens (IOL), implant material

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Section 4: Eyeball (65091–65290)

Removal of the Eye

Removal of the eye is one of the most significant procedures in ophthalmology. CPT recognizes three distinct levels of eye removal, each with increasing extent of tissue removed. The coder must carefully distinguish between these terms in the operative documentation.

Evisceration (65091–65105)

Evisceration is the removal of the internal contents of the eyeball (the uveal tract, lens, and vitreous), leaving the **scleral shell intact**. This is the least extensive of the three removal procedures. The sclera remains, and a prosthetic implant may be placed within the scleral shell at the time of surgery.

- `65091` — Evisceration of ocular contents; without implant
- `65093` — Evisceration of ocular contents; with implant

- `65101–65105` — Evisceration with removal of cornea or with implant modifications

Enucleation (65101–65114)

Enucleation is the surgical removal of the entire eyeball while leaving the orbital contents (muscles, fat, conjunctiva) intact. The extraocular muscles are typically detached and reattached to the implant for prosthetic motility.

- `65101` — Enucleation of eye; without implant
- `65103` — Enucleation of eye; with implant, muscles not attached to implant
- `65105` — Enucleation of eye; with implant, muscles attached to implant

Exenteration (65110–65114)

Exenteration is the most radical procedure — removal of the entire globe AND the orbital contents (muscles, orbital fat, and sometimes the eyelids). This is typically performed for malignant tumors involving the orbit.

- `65110` — Exenteration of orbit (does not include skin graft); removal of orbital contents only
- `65112` — Exenteration of orbit; with therapeutic removal of bone
- `65114` — Exenteration of orbit; with muscle or myocutaneous flap

Procedure	What Is Removed	Sclera Intact?	Key CPT Codes
Evisceration	Internal ocular contents only	Yes	65091–65105
Enucleation	Entire eyeball	No (globe removed)	65101–65114
Exenteration	Globe + orbital contents (± eyelids, bone)	No	65110–65114

⚠️ **Stop! Think!**

Do not confuse **enucleation** with **evisceration**. The words sound similar but describe very different procedures. Key differentiator: if the **scleral shell remains**, it is evisceration. If the **entire globe is removed**, it is enucleation. If orbital fat, muscles, and eyelids are also removed, it is exenteration. Read the operative note carefully for these anatomical clues.

Secondary Implant Procedures (65125–65175)

When an ocular implant was not placed at the time of initial eye removal, or requires modification later, **secondary implant procedures** are reported with codes 65125–65175. These include:

- `65125` — Modification of ocular implant with placement or replacement of pegs
- `65130` — Insertion of ocular implant secondary; after evisceration, in scleral shell
- `65140` — Insertion of ocular implant secondary; after enucleation
- `65150` — Reinsertion of ocular implant; with or without conjunctival graft
- `65155` — Reinsertion of ocular implant; with use of foreign material for reinforcement and/or attachment of muscles to implant
- `65175` — Removal of ocular implant

Repair of Laceration

Corneal Laceration Repair (65270–65275)

Corneal lacerations may be superficial or involve the full thickness of the cornea. Documentation should specify the depth and whether the iris is involved.

- `65270` — Repair of laceration; conjunctiva, with or without nonperforating laceration sclera, direct closure

- `65272` — Repair of laceration; conjunctiva, by mobilization and rearrangement, without hospitalization
- `65273` — Repair of laceration; conjunctiva, by mobilization and rearrangement, with hospitalization
- `65275` — Repair of laceration; cornea, nonperforating, with or without removal foreign body
- `65280` — Repair of laceration; cornea and/or sclera, perforating, not involving uveal tissue
- `65285` — Repair of laceration; cornea and/or sclera, perforating, with reposition or resection of uveal tissue

Scleral Laceration Repair (65280–65290)

Scleral lacerations may involve the underlying uveal tissue. Code selection depends on whether uveal tissue (choroid, ciliary body, iris) is repositioned or excised.

- `65286` — Repair of laceration; application of tissue glue, wounds of cornea and/or sclera
- `65290` — Repair of laceration; wound of extraocular muscle, tendon, and/or Tenon's capsule

> **📌 Coder's Corner**
>
> When coding eye laceration repairs, always check: (1) Is the laceration perforating or non-perforating? (2) Is uveal tissue involved? (3) Was a foreign body removed? These elements determine which code in the 65270–65290 range is appropriate. Perforating = full thickness through the cornea or sclera into the eye.

Coding Scenario 4.1 — Evisceration with Implant

📄 Coding Scenario 4.1: Operative Note Excerpt

PREOPERATIVE DIAGNOSIS: Blind painful eye, left, secondary to end-stage glaucoma

POSTOPERATIVE DIAGNOSIS: Same

PROCEDURE: Evisceration of left eye with placement of orbital implant

SURGEON: Dr. Marcus Webb, MD

OPERATIVE NOTE: Under general anesthesia, the left eye was prepped and draped in standard ophthalmologic fashion. A 360-degree peritomy was performed. The cornea was excised using corneal scissors. The uveal contents were removed using an evisceration spoon, with care taken to remove all pigmented tissue. The scleral shell was inspected and found to be intact. A 20mm hydroxyapatite implant was placed within the scleral shell. The sclera was closed in interrupted fashion using 5-0 Vicryl suture. Tenon's capsule and conjunctiva were closed in layers. Conformer placed.

Step-by-Step Analysis

1. **Identify the procedure:** "Evisceration" — contents removed, scleral shell left intact ✓
2. **Implant placed?** Yes — hydroxyapatite implant within scleral shell ✓
3. **Laterality:** Left eye → modifier **LT**
4. **Select code:** 65093 — Evisceration of ocular contents; with implant

Final Code: 65093-LT

Common Mistake: Selecting 65101 (enucleation) instead of 65093. The scleral shell was left intact — this is evisceration, not enucleation.

📄 Coding Scenario 4.2: Corneal Laceration Repair

PROCEDURE: Repair of perforating corneal laceration, right eye, with reposition of iris

OPERATIVE NOTE: Patient presented to the ER following workplace injury. Under monitored anesthesia care, the right eye was examined. A 4mm full-thickness corneal laceration was identified at the 10 o'clock position with iris prolapse. The iris was gently repositioned using a viscoelastic cannula. The corneal wound was closed with interrupted 10-0 nylon sutures. Anterior chamber was reformed with BSS. Iris was in good position at closure.

Step-by-Step Analysis

1. **Identify the wound:** Corneal laceration, full-thickness (perforating) ✓
2. **Uveal involvement?** Yes — iris prolapse and reposition ✓
3. **Select code:** 65285 — perforating corneal/scleral laceration with reposition/resection of uveal tissue
4. **Laterality:** Right eye → modifier **RT**

Final Code: 65285-RT

Section 5: Anterior Segment (65400–66999)

A. Cornea (65400–65780)

Excision of Corneal Lesion (65400–65426)

Corneal lesions including pterygium involvement of the cornea, superficial keratectomy, and corneal debridement are coded from this range.

- `65400` — Excision of lesion, cornea (keratectomy, lamellar, partial), except pterygium
- `65410` — Biopsy of cornea
- `65420` — Excision of pterygium; without graft
- `65426` — Excision of pterygium; with graft

> 📚 **Did You Know?**
>
> A **pterygium** is a wing-shaped growth of conjunctival tissue that encroaches onto the cornea. It is coded differently depending on whether a conjunctival graft is used at the time of excision. Code 65420 (without graft) vs. 65426 (with graft). The graft is included in the code and not separately reported.

Keratoplasty — Corneal Transplant (65730–65756)

Keratoplasty refers to the surgical replacement of all or part of the cornea with donor tissue. The extent of replacement determines code selection.

Penetrating Keratoplasty (65730–65755)

Penetrating keratoplasty (PKP) involves full-thickness replacement of the cornea. It is used for conditions such as keratoconus, corneal scarring, or Fuchs' endothelial dystrophy.

- 65730 — Keratoplasty (corneal transplant); penetrating (except in aphakia or pseudophakia)
- 65750 — Keratoplasty (corneal transplant); penetrating (in aphakia)
- 65755 — Keratoplasty (corneal transplant); penetrating (in pseudophakia)

DSEK/DSAEK — Posterior Lamellar Keratoplasty (65756)

Descemet's Stripping Endothelial Keratoplasty (DSEK) and **DSAEK** involve replacement of only the posterior corneal layers (endothelium and Descemet's membrane), not the full thickness. This code represents a significant advance in surgical technique and is distinct from PKP.

- 65756 — Keratoplasty (corneal transplant); endothelial

Refractive Surgery (65760–65771)

LASIK and related refractive procedures are included in this range but are not frequently covered by insurance. Note that refractive procedure codes (65760–65771) often require cross-reference to applicable HCPCS codes for facility reporting.

- 65760 — Keratomileusis
- 65765 — Keratophakia
- 65767 — Epikeratoplasty
- 65771 — Radial keratotomy

> 📌 **Coder's Corner**
>
> LASIK is not found in the cornea subsection of CPT as a standalone named code. It is reported under 65760 (keratomileusis) for the anterior lamellar component. Always verify with your payer for specific LASIK reporting requirements. Many payers require HCPCS Level II codes or consider LASIK elective and not covered.

📄 Coding Scenario 5.1: Penetrating Keratoplasty

PROCEDURE: Penetrating keratoplasty, left eye

DIAGNOSIS: Advanced keratoconus, left eye

OPERATIVE NOTE: Under general anesthesia, left eye prepped and draped. A 7.5mm trephine was used to excise the host cornea. A 7.75mm donor button from the eye bank was sutured in place using 16 interrupted 10-0 nylon sutures. The anterior chamber was formed. Intraocular pressure assessed and appropriate. The eye was patched.

Step-by-Step Analysis

1. **Identify procedure:** Penetrating keratoplasty (full-thickness) ✓
2. **Lens status:** No mention of aphakia or pseudophakia → phakic eye
3. **Select code:** 65730 — penetrating keratoplasty except in aphakia or pseudophakia
4. **Laterality:** Left → **LT**

Final Code: 65730-LT

Common Mistake: Using 65755 (pseudophakia) when no IOL was documented. Read the note carefully for lens status.

B. Anterior Chamber (65800–65880)

Paracentesis of Anterior Chamber (65800–65820)

Paracentesis of the anterior chamber involves the aspiration of aqueous humor from the anterior chamber. It may be performed to lower elevated intraocular pressure, for diagnostic purposes, or to obtain aqueous for culture.

- `65800` — Paracentesis of anterior chamber of eye; with removal of aqueous
- `65805` — Paracentesis of anterior chamber of eye; with therapeutic release of iris
- `65810` — Paracentesis of anterior chamber of eye; with removal of vitreous and/or discission of anterior hyaloid membrane
- `65815` — Paracentesis of anterior chamber of eye; with removal of blood
- `65820` — Goniotomy

Gonioscopy

Gonioscopy (65820) refers to the surgical opening of the angle structures to allow aqueous outflow — not to be confused with the diagnostic evaluation code for gonioscopy, which falls in the Medicine/Ophthalmology section. Always verify whether the documentation describes a diagnostic or surgical gonioscopy.

C. Anterior Sclera (66020–66250)

Injections into the anterior chamber and filtering procedures for glaucoma are coded from this range.

- `66020` — Injection, anterior chamber of eye (separate procedure); air or liquid
- `66030` — Injection, anterior chamber of eye (separate procedure); medication
- `66170` — Fistulization of sclera for glaucoma; trabeculectomy ab externo in absence of previous surgery
- `66172` — Fistulization of sclera for glaucoma; trabeculectomy ab externo with scarring from previous ocular surgery or trauma

📚 **Did You Know?**

Trabeculectomy is the most common surgical treatment for glaucoma that is uncontrolled by medication. It creates a new drainage channel (a "bleb") under the conjunctiva to allow aqueous humor to escape, thereby reducing intraocular pressure. The distinction between code 66170 (no prior surgery) and 66172 (with scarring) reflects the increased complexity of operating in a previously traumatized field.

D. Iris (66500–66682)

Iridectomy (66500–66530)

Iridectomy is the surgical excision of a portion of the iris. It may be performed as an angle-closure glaucoma treatment or as part of another procedure.

- `66500` — Iridectomy, with or without iridotomy; peripheral, for glaucoma (separate procedure)
- `66505` — Iridectomy, with or without iridotomy; with cyclectomy
- `66510` — Iridectomy; for iris biopsy (separate procedure)
- `66530` — Iridectomy; for removal of lesion

Iridoplasty (66761–66762)

Iridoplasty refers to the reshaping of the iris, typically using laser energy to contract peripheral iris tissue and widen the angle.

- `66761` — Iridotomy/iridectomy by laser surgery (eg, for glaucoma) (1 or more sessions)
- `66762` — Iridoplasty by photocoagulation (1 or more sessions, e.g., for improvement of vision, glaucoma)

E. Lens (66820–66986)

The lens subsection contains the highest-volume, highest-value codes in ophthalmology. **Cataract surgery** is the most commonly performed surgical procedure in the United States, and cataract codes are among the most frequently tested on the CPC examination.

Understanding Cataract Surgery

A **cataract** is the opacification (clouding) of the crystalline lens. Surgical treatment involves removal of the cloudy lens and, in most cases, insertion of a clear synthetic **intraocular lens (IOL)** implant. Two primary techniques are reported in CPT:

Extracapsular Cataract Extraction (ECCE) (66840–66852)

Extracapsular cataract extraction (ECCE) involves removal of the lens nucleus through a large incision, leaving the posterior capsule intact to support the IOL. This technique has largely been replaced by phacoemulsification but is still performed when necessary.

- `66840` — Removal of lens material; aspiration technique, 1 or more stages
- `66850` — Removal of lens material; phacofragmentation technique (mechanical or ultrasonic) (eg, phacoemulsification), with aspiration
- `66852` — Removal of lens material; pars plana approach, with or without vitrectomy

Phacoemulsification (66982–66984)

Phacoemulsification is the modern standard for cataract surgery, using ultrasonic energy to emulsify (break up) the lens nucleus through a very small incision (typically 2–3mm). The lens material is aspirated, and an IOL is inserted through the same small incision.

- `66982` — Extracapsular cataract removal with insertion of intraocular lens prosthesis (1-stage procedure), manual or mechanical technique (eg, irrigation and aspiration or phacoemulsification); complex, requiring devices or techniques not generally used in routine cataract surgery (eg, iris expansion device, suture support for intraocular lens, or primary posterior capsulorrhexis) or performed on patients in whom small pupil expansion is

not possible due to conditions such as uveitis, pseudoexfoliation, or, in the surgeon's judgment, the density of the cataract

- `66983` — Intracapsular cataract extraction with insertion of intraocular lens prosthesis (1-stage procedure)
- `66984` — Extracapsular cataract removal with insertion of intraocular lens prosthesis (1-stage procedure), manual or mechanical technique (eg, irrigation and aspiration or phacoemulsification)

📌 Coder's Corner — Bilateral Cataract Surgery

When cataract surgery is performed on **both eyes during the same operative session** (same day), report each eye separately:

- Right eye: `66984-RT`
- Left eye: `66984-LT`

Alternatively, if the payer requires it: `66984-50` (bilateral modifier). Always check payer preference — Medicare generally requires **-RT and -LT** rather than -50 for bilateral eye procedures. Do NOT use modifier -50 with Medicare without verification. Note that most surgeons perform cataract surgery on one eye per visit to reduce risk, so truly bilateral same-day cataracts are less common.

IOL Insertion/Exchange (66985–66986)

When a separate IOL procedure is performed outside of the initial cataract surgery, use:

- `66985` — Insertion of intraocular lens prosthesis (secondary implant), not associated with concurrent cataract removal
- `66986` — Exchange of intraocular lens

Technique	Description	IOL Inserted?	CPT Code
Aspiration (ECCE)	Manual aspiration of lens material	Not separately coded here	66840

Technique	Description	IOL Inserted?	CPT Code
Phacofragmentation without IOL	Ultrasonic emulsification, no IOL	No	66850
Intracapsular with IOL	Entire lens (with capsule) removed, IOL inserted	Yes	66983
Phacoemulsification with IOL (routine)	Standard phaco with IOL, straightforward	Yes	66984
Phacoemulsification with IOL (complex)	Requires iris expander, suture support, or difficult anatomy	Yes	66982
Secondary IOL insertion	IOL placed later, no cataract extraction at same time	Yes	66985
IOL exchange	Existing IOL removed and replaced	Yes (replacement)	66986

📄 Coding Scenario 5.2: Standard Phacoemulsification with IOL

PREOPERATIVE DIAGNOSIS: Posterior subcapsular cataract, right eye

POSTOPERATIVE DIAGNOSIS: Same

PROCEDURE: Phacoemulsification with posterior chamber IOL implantation, right eye

OPERATIVE NOTE: The patient was brought to the operating room. Topical anesthesia was applied. A temporal clear corneal incision was made. The anterior chamber was entered. Continuous curvilinear capsulorrhexis was performed. Hydrodissection was performed. The nucleus was emulsified using divide-and-conquer phacoemulsification. Cortical cleanup was performed with irrigation/aspiration. A posterior chamber IOL (SN60WF, 22.0D) was inserted into the capsular bag and dialed to position. The incision was sealed with stromal hydration. No complications.

Step-by-Step Analysis

1. **Technique:** Phacoemulsification ✓
2. **IOL implanted?** Yes ✓
3. **Complex?** No — routine procedure, no iris expander, no suture fixation
4. **Code selection:** 66984 — standard phacoemulsification with IOL
5. **Laterality:** Right → **RT**

Final Code: 66984-RT

📄 Coding Scenario 5.3: Complex Cataract Surgery

PROCEDURE: Extracapsular cataract removal with IOL, complex, left eye

OPERATIVE NOTE: Patient has a history of uveitis with posterior synechiae and significant miosis. After topical anesthesia, an iris expansion ring (Malyugin ring) was placed to dilate the pupil, as pharmacologic dilation was inadequate. A continuous curvilinear capsulorrhexis was created. Phacoemulsification was performed with careful technique given the zonular weakness. IOL was placed in the capsular bag with capsular tension ring support. Malyugin ring was removed.

Step-by-Step Analysis

1. **Technique:** Phacoemulsification with IOL ✓
2. **Complex features:** Iris expansion device (Malyugin ring) + capsular tension ring + uveitis = complex ✓
3. **Code selection:** 66982 — complex phacoemulsification with IOL
4. **Laterality:** Left → **LT**

Final Code: 66982-LT

Common Mistake: Reporting 66984 (routine) when complexity factors are clearly documented. The Malyugin ring and capsular tension ring are explicit indicators of complex phacoemulsification — never miss these documentation clues.

Section 6: Posterior Segment (67005–67299)

Vitreous Procedures

Pars Plana Vitrectomy (PPV) (67036–67043)

Pars plana vitrectomy (PPV) is the surgical removal of all or part of the vitreous gel. Access is gained through the pars plana (a region behind the iris and in front of the retina) using small-gauge instruments. PPV is performed for vitreous hemorrhage, epiretinal membranes, macular holes, and as part of retinal detachment repair.

- `67036` — Vitrectomy, mechanical, pars plana approach; (without scleral buckling)
- `67039` — Vitrectomy, mechanical, pars plana approach; with focal endolaser photocoagulation
- `67040` — Vitrectomy, mechanical, pars plana approach; with endolaser panretinal photocoagulation
- `67041` — Vitrectomy, mechanical, pars plana approach; with removal of preretinal cellular membrane (eg, macular pucker)
- `67042` — Vitrectomy, mechanical, pars plana approach; with removal of internal limiting membrane of retina (eg, for repair of macular hole, diabetic macular edema), includes, if performed, intraocular tamponade (ie, air, gas or silicone oil)
- `67043` — Vitrectomy, mechanical, pars plana approach; with removal of subretinal membrane (eg, choroidal neovascularization)

Intravitreal Injection (67028)

Intravitreal injection is one of the most frequently performed ophthalmic procedures. Anti-VEGF (vascular endothelial growth factor) agents such as ranibizumab (Lucentis), bevacizumab (Avastin), aflibercept (Eylea), and

brolucizumab (Beovu) are injected directly into the vitreous cavity to treat wet age-related macular degeneration, diabetic macular edema, and retinal vein occlusion.

- `67028` — Intravitreal injection of a pharmacologic agent (separate procedure)

📌 Coder's Corner — Intravitreal Injection Coding

When reporting intravitreal injection, report `67028` for the injection procedure, PLUS the appropriate HCPCS Level II "J-code" for the drug administered. For example:

- Eylea (aflibercept): **J0178** (per 1mg)
- Lucentis (ranibizumab): **J2778** (per 0.1mg)
- Avastin (bevacizumab): **J9035** (per 10mg) — off-label use

Always report **laterality** with RT or LT modifier on 67028. If bilateral injections are given on the same day, report 67028 twice with RT and LT modifiers.

CPT Code	Procedure	Key Features
67028	Intravitreal injection	Most common ophthalmic procedure; requires drug J-code
67036	PPV without laser	Basic vitrectomy, pars plana approach
67039	PPV with focal endolaser	Laser treatment of specific lesion
67040	PPV with panretinal photocoagulation	Laser to entire peripheral retina
67041	PPV with epiretinal membrane removal	Macular pucker peel
67042	PPV with ILM removal	Macular hole repair; gas tamponade included
67043	PPV with subretinal membrane removal	CNV membrane excision

Retinal Procedures

Laser Photocoagulation (67210–67228)

Retinal photocoagulation uses laser energy to treat retinal tears, holes, diabetic retinopathy, and choroidal neovascularization. Code selection depends on the extent of treatment (focal vs. panretinal) and the condition being treated.

- `67210` — Photocoagulation; retinal lesion (eg, choroidal neovascularization, macular edema, tumors) (1 or more sessions)
- `67218` — Photocoagulation; retinal lesion including macular area with feeder vessel coagulation (1 or more sessions)
- `67220` — Destruction of localized lesion of choroid (eg, choroidal neovascularization); photocoagulation (eg, laser), 1 or more sessions
- `67221` — Destruction of localized lesion of choroid; photodynamic therapy, per session
- `67225` — Destruction of localized lesion of choroid; photodynamic therapy, second eye, per session (List separately in addition to code for primary eye treatment)
- `67227` — Destruction of extensive or progressive retinopathy, cryotherapy, diathermy; 1 or more sessions
- `67228` — Destruction of extensive or progressive retinopathy, photocoagulation; 1 or more sessions (panretinal photocoagulation)

Retinal Detachment Repair

Retinal detachment occurs when the neurosensory retina separates from the underlying retinal pigment epithelium. Repair methods vary by technique:

Scleral Buckling (67107–67112)

Scleral buckling involves placing a silicone band or sponge on the outer surface of the eye (sclera) to indent the wall of the eye and relieve traction on the retina. A cryotherapy probe is typically used to create a chorioretinal scar to seal the retinal break.

- 67107 — Repair of retinal detachment; scleral buckling (includes scleral dissection, cryotherapy and/or diathermy, photocoagulation), without drainage of subretinal fluid
- 67108 — Repair of retinal detachment; with vitrectomy, any method, with or without air or gas tamponade, focal endolaser photocoagulation, cryotherapy, drainage of subretinal fluid, scleral buckling, and/or removal of lens by same technique
- 67110 — Repair of retinal detachment by injection of air or other gas (eg, pneumatic retinopexy)
- 67112 — Repair of retinal detachment; by scleral buckling or vitrectomy, on patient having previous ipsilateral retinal detachment repair(s) using vitrectomy
- 67113 — Repair of complex retinal detachment (eg, proliferative vitreoretinopathy, stage C-1 or greater, diabetic traction retinal detachment, retinopathy of prematurity, macular hole with retinal detachment, retinal detachment associated with choroidal detachment)

Pneumatic Retinopexy (67110)

Pneumatic retinopexy is an office-based procedure in which a gas bubble is injected into the vitreous cavity. The patient positions their head so the bubble floats against the retinal break, allowing the break to seal with laser or cryotherapy.

Code	Procedure	Key Distinguishing Features
67107	Scleral buckling without vitrectomy	External approach; buckle + cryo; no SRF drainage
67108	Scleral buckling with vitrectomy	Combined procedure; most comprehensive
67110	Pneumatic retinopexy	Gas injection; office-based; appropriate only for select breaks
67112	Repeat RD repair after prior vitrectomy	Patient had prior ipsilateral vitrectomy —

Code	Procedure	Key Distinguishing Features
		increased complexity
67113	Complex RD repair	PVR, diabetic traction, ROP, macular hole + RD

📄 Coding Scenario 6.1: Intravitreal Anti-VEGF Injection

PROCEDURE: Intravitreal injection of aflibercept (Eylea) 2mg/0.05mL, right eye

DIAGNOSIS: Neovascular (wet) age-related macular degeneration, right eye

OPERATIVE NOTE: After obtaining informed consent, the right eye was prepped with 5% povidone-iodine. Topical anesthesia was applied. A lid speculum was placed. The injection site was measured 3.5mm posterior to the limbus in the inferotemporal quadrant. Eylea 2mg/0.05mL was injected into the vitreous cavity using a 30-gauge needle without complication. The speculum was removed. Light perception was confirmed. Patient tolerated the procedure well.

Step-by-Step Analysis

1. **Procedure:** Intravitreal injection → 67028
2. **Laterality:** Right eye → modifier RT
3. **Drug:** Aflibercept (Eylea) 2mg → J0178 × 2 units (2mg = 2 units of 1mg each)

Final Codes: 67028-RT, J0178 × 2

Common Mistake: Forgetting to report the J-code for the drug. The injection code 67028 does NOT include the drug — always report the appropriate HCPCS J-code separately.

📄 Coding Scenario 6.2: Scleral Buckling for Retinal Detachment

PROCEDURE: Repair of retinal detachment with scleral buckling, cryotherapy, and drainage of subretinal fluid, left eye

DIAGNOSIS: Rhegmatogenous retinal detachment, left eye

OPERATIVE NOTE: Under general anesthesia, the left eye was prepped. A conjunctival peritomy was performed. The four rectus muscles were isolated on traction sutures. A superotemporal break was identified with indirect ophthalmoscopy. Cryotherapy was applied to the retinal break. A #40 silicone sponge was sutured over the break with 5-0 Dacron mattress sutures. Subretinal fluid was drained via scleral cutdown. The retina was observed to be attached on indirect ophthalmoscopy. The eye had good light perception at close of case.

Step-by-Step Analysis

1. **Technique:** Scleral buckling with cryotherapy ✓
2. **Vitrectomy performed?** No — external approach only
3. **SRF drained?** Yes — drainage was performed
4. **Code:** Review 67107 vs. 67108 — no vitrectomy → 67107 (note: drainage of SRF is included in 67107 description)
5. **Laterality:** Left → LT

Final Code: 67107-LT

Section 7: Ocular Adnexa (67311–67999)

A. Extraocular Muscles — Strabismus Surgery (67311–67399)

Strabismus is a misalignment of the eyes caused by imbalance of the extraocular muscles. Surgical correction involves adjusting the length or tension of the involved muscles using two primary techniques:

- **Recession:** The muscle is detached from the globe and reattached further posterior, weakening its action.
- **Resection:** A portion of the muscle is removed and it is reattached to its original insertion site, strengthening its action.

Code selection is based on the **number of muscles** operated on, whether it is the primary or subsequent procedure, and whether an **adjustable suture** technique is used.

CPT Code	Description
67311	Strabismus surgery, recession or resection procedure; 1 horizontal muscle
67312	Strabismus surgery; 2 horizontal muscles
67314	Strabismus surgery; 1 vertical muscle (excluding superior oblique)
67316	Strabismus surgery; 2 or more vertical muscles (excluding superior oblique)
67318	Strabismus surgery; superior oblique muscle
67320	Transposition of extraocular muscle (eg, for third nerve palsy) (List separately in addition to code for primary procedure)
67335	Placement of adjustable suture(s)

CPT Code	Description
	during strabismus surgery, including postoperative adjustment(s) of suture(s) (List separately in addition to code for specific strabismus surgery)
67340	Strabismus surgery involving exploration and/or repair of detached extraocular muscle (List separately in addition to code for primary procedure)

📌 Coder's Corner — Adjustable Suture Technique

When **adjustable sutures** are used in strabismus surgery, report add-on code 67335 in addition to the primary strabismus code (67311–67318). Code 67335 includes both the intraoperative placement AND the postoperative adjustment performed in the office or clinic. Do NOT report a separate E/M code for the adjustment visit if it is used solely for suture adjustment.

📄 Coding Scenario 7.1: Strabismus Surgery, Two Horizontal Muscles

PROCEDURE: Recession of bilateral medial rectus muscles with adjustable sutures

DIAGNOSIS: Concomitant esotropia

OPERATIVE NOTE: Under general anesthesia, the right medial rectus was recessed 5.5mm using a locking slip knot adjustable suture. The left medial rectus was recessed 5.5mm using the same technique. The conjunctiva was closed. Both eyes were patched overnight. The following morning, the patient returned for suture adjustment under topical anesthesia, and the position was found optimal without adjustment needed.

Step-by-Step Analysis

1. **Muscles operated:** 2 horizontal muscles (bilateral medial recti) → 67312
2. **Adjustable sutures used:** Yes → add-on 67335
3. **Note:** Both eyes operated — bilateral; report once for bilateral horizontal procedure

Final Codes: 67312, 67335

Common Mistake: Reporting 67311 (one muscle) when two muscles are operated on. Count total muscles — not total eyes.

B. Orbit (67400–67599)

- `67400` — Orbitotomy without bone flap (frontal or transconjunctival approach); for exploration, with or without biopsy

- 67405 — Orbitotomy without bone flap (frontal or transconjunctival approach); with drainage only
- 67412 — Orbitotomy without bone flap (frontal or transconjunctival approach); with removal of lesion
- 67414 — Orbitotomy without bone flap (frontal or transconjunctival approach); with removal of bone for decompression
- 67445 — Orbitotomy with bone flap or window, lateral approach (eg, Kroenlein); with removal of bone for decompression
- 67550 — Orbital implant (implant outside muscle cone); insertion
- 67560 — Orbital implant (implant outside muscle cone); removal or revision

C. Eyelids (67700–67999)

⚠️ Stop! Think! — Eyelid Cross-Reference Alert

Not all eyelid procedures are coded from the 67700–67999 range! **Blepharoplasty** (cosmetic or functional eyelid surgery) is coded from the **Integumentary System** section:

- 15820 — Blepharoplasty, lower eyelid; partial
- 15821 — Blepharoplasty, lower eyelid; complex (extensive herniated fat pad)
- 15822 — Blepharoplasty, upper eyelid; partial
- 15823 — Blepharoplasty, upper eyelid; with excessive skin weighting down lid

Always check whether the procedure is functional (for vision obstruction — may be covered by insurance) or cosmetic (not covered). Documentation of visual field testing results may be required for insurance coverage of upper lid blepharoplasty.

Entropion and Ectropion Repair (67921–67924)

Entropion is inward turning of the eyelid margin; **ectropion** is outward turning. Code selection depends on technique:

- `67921` — Repair of entropion; suture
- `67922` — Repair of entropion; thermocauterization
- `67923` — Repair of entropion; tarsal wedge resection
- `67924` — Repair of entropion; other (eg, by transplant of tarsal plate)
- `67914` — Repair of ectropion; suture
- `67916` — Repair of ectropion; excision tarsal wedge
- `67917` — Repair of ectropion; extensive (eg, tarsal strip operations)

Ptosis Repair (67901–67909)

Ptosis is drooping of the upper eyelid. Code selection is based on the surgical technique used:

Code	Technique	Notes
67901	Frontalis muscle technique with suture or other material (e.g., slice phenomenon)	Suspension from frontalis muscle
67902	Frontalis muscle technique with autologous fascial sling (includes obtaining fascia)	Harvested fascia lata used
67903	Tarso-levator resection or advancement, internal approach	Internal (conjunctival) approach
67904	Tarso-levator resection or advancement, external approach	Skin incision approach
67906	Superior rectus technique with fascial sling (includes obtaining fascia)	Connects lid to superior rectus

Code	Technique	Notes
67908	Conjunctivo-tarso-Muller's muscle-levator resection (e.g., Fasanella-Servat type)	Fasanella-Servat procedure
67909	Reduction of overcorrection of ptosis	Revision of prior ptosis surgery

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Section 8: Conjunctiva and Lacrimal System (68020–68899)

Conjunctival Procedures (68020–68135)

- `68020` — Incision of conjunctiva, drainage of cyst
- `68040` — Expression of conjunctival follicles (e.g., for trachoma)
- `68100` — Biopsy of conjunctiva
- `68110` — Excision of lesion, conjunctiva; up to 1 cm
- `68115` — Excision of lesion, conjunctiva; over 1 cm
- `68130` — Excision of lesion, conjunctiva; with adjacent sclera
- `68135` — Destruction of lesion, conjunctiva

Lacrimal System Procedures (68700–68899)

Dacryocystorhinostomy (DCR) (68720)

Dacryocystorhinostomy (DCR) is the surgical creation of a new drainage pathway between the lacrimal sac and the nasal cavity, bypassing an obstructed nasolacrimal duct. It may be performed via an external (open) approach or endoscopically (endonasally).

- `68720` — Dacryocystorhinostomy (fistulization of lacrimal sac to nasal cavity)

- 68745 — Conjunctivorhinostomy (fistulization of conjunctiva to nasal cavity)
- 68750 — Conjunctivorhinostomy (fistulization of conjunctiva to nasal cavity); with insertion of tube or stent

📚 Did You Know?

CPT code 68720 is used for the traditional external (open) DCR approach. Endoscopic DCR is not uniquely coded in CPT — it is also reported with 68720. When endoscopic DCR is performed, some practices also report an appropriate nasal endoscopy code, but this is payer-dependent. Always verify with your payer policy before reporting both codes.

Probing of Lacrimal Duct (68810–68816)

Probing of the nasolacrimal duct is commonly performed in infants with congenital nasolacrimal duct obstruction (CNLDO).

- 68810 — Probing of nasolacrimal duct, with or without irrigation
- 68811 — Probing of nasolacrimal duct, with or without irrigation; requiring general anesthesia
- 68815 — Probing of nasolacrimal duct, with or without irrigation; with insertion of tube or stent
- 68816 — Probing of nasolacrimal duct, with or without irrigation; with transluminal balloon catheter dilation

Lacrimal Punctum Procedures (68760–68761)

- 68760 — Closure of lacrimal punctum; by thermocauterization, ligation, or laser surgery
- 68761 — Closure of lacrimal punctum; by plug, each

📌 Coder's Corner — Punctal Plugs

Punctal plugs (68761) are coded per plug. If plugs are placed in both upper and lower puncta of one eye, report 68761 twice (or with bilateral/multiple unit reporting). If placed bilaterally in all four puncta, report up to four units. Always verify the documentation specifies the number of puncta treated.

PART B: Surgery — Auditory System (69000–69979)

Section 9: Introduction to the Auditory System

Anatomy Overview

The **auditory system** consists of three anatomically and functionally distinct regions, each with corresponding CPT subheadings. Understanding the anatomy is essential for distinguishing which procedure category applies.

Region	Structures	Function	CPT Range
External Ear	Auricle (pinna), external auditory canal (EAC), tympanic membrane (external surface)	Sound collection and transmission to middle ear	69000–69399
Middle Ear	Tympanic membrane (TM), ossicles (malleus, incus, stapes),	Mechanical amplification and transmission of sound to inner ear	69400–69799

Region	Structures	Function	CPT Range
	Eustachian tube, mastoid		
Inner Ear	Cochlea (hearing), vestibular labyrinth (balance), auditory nerve	Sensorineural transduction of sound and balance	69801–69949
Temporal Bone	Petrous bone, facial nerve canal, mastoid air cells	Housing and protection of middle/inner ear structures	69950–69979

Section 10: External Ear (69000–69399)

Incision and Drainage of External Ear Abscess (69000–69020)

Infections of the external auditory canal or auricle (such as perichondritis or auricular hematoma) may require surgical drainage.

- `69000` — Drainage external ear, abscess or hematoma; simple
- `69005` — Drainage external ear, abscess or hematoma; complicated
- `69020` — Drainage external auditory canal, abscess

Removal of Foreign Body from Ear Canal (69200–69222)

Foreign body removal from the external auditory canal is coded based on whether anesthesia is required.

- `69200` — Removal foreign body from external auditory canal; without general anesthesia

- `69205` — Removal foreign body from external auditory canal; with general anesthesia

Cerumen (earwax) removal codes:

- `69209` — Removal impacted cerumen using irrigation/lavage, unilateral
- `69210` — Removal impacted cerumen requiring instrumentation, unilateral

> **⚠️ Stop! Think! — Cerumen Removal vs. Foreign Body**
>
> Do not confuse cerumen removal (69209–69210) with foreign body removal (69200–69205). Key differences: (1) Foreign body removal codes include the use of general anesthesia as a factor; cerumen removal codes do NOT have a general anesthesia variant. (2) Cerumen removal codes are **unilateral** — report for each ear separately if both ears are treated. (3) Code 69210 (instrumentation) is higher-valued than 69209 (irrigation) — documentation must support the method used.

Repair of External Ear — Otoplasty (69300)

Otoplasty is the surgical correction of protruding or deformed ears.

- `69300` — Otoplasty, protruding ear, with or without size reduction

📄 Coding Scenario 10.1: Bilateral Cerumen Removal

PROCEDURE: Bilateral cerumen removal using instrumentation

NOTE: Patient presented with bilateral impacted cerumen. Using a curette and suction under direct visualization with an otoscope, impacted cerumen was removed from both the right and left external auditory canals. Tympanic membranes visualized and intact bilaterally after removal.

Step-by-Step Analysis

1. **Method:** Instrumentation (curette + suction) → 69210
2. **Laterality:** Bilateral — 69210 is a unilateral code
3. **Reporting:** 69210-RT and 69210-LT (or 69210-50 per payer preference)

Final Codes: 69210-RT, 69210-LT

Section 11: Middle Ear (69400–69799)

Eustachian Tube Procedures (69400–69405)

The **Eustachian tube** connects the middle ear to the nasopharynx and equalizes middle ear pressure. Dysfunction leads to otitis media and hearing loss.

- `69400` — Eustachian tube inflation, transnasal; with catheter
- `69401` — Eustachian tube inflation, transnasal; without catheter

- `69405` — Eustachian tube catheterization, transnasal

Myringotomy (69420–69421)

Myringotomy is a surgical incision of the tympanic membrane (eardrum) to release fluid or relieve pressure. It is performed alone (without tube insertion) or as the first step of tympanostomy tube insertion.

- `69420` — Myringotomy including aspiration and/or Eustachian tube inflation
- `69421` — Myringotomy including aspiration and/or Eustachian tube inflation requiring general anesthesia

Tympanostomy — Ear Tube Insertion (69433–69436)

Tympanostomy involves incision of the tympanic membrane AND insertion of a ventilating tube (pressure equalization tube). This is one of the most common surgical procedures performed in children.

- `69433` — Tympanostomy (requiring insertion of ventilating tube), local or topical anesthesia
- `69436` — Tympanostomy (requiring insertion of ventilating tube), general anesthesia

Procedure	Tube Inserted?	Local Anesthesia Code	General Anesthesia Code
Myringotomy only	No	69420	69421
Tympanostomy (with tube)	Yes	69433	69436

⚠️ Stop! Think! — Bilateral Ear Tubes and Modifier -50

Tympanostomy codes (69433, 69436) are **unilateral** codes. When tubes are placed in both ears during the same operative session — the most common

scenario — report the code with modifier **-50** (bilateral procedure) or report twice with -RT and -LT, per payer preference. **Medicare** typically requires -RT and -LT. **Most commercial payers** accept -50. Always verify payer requirements before submitting bilateral claims. Failure to append the appropriate modifier results in a denied or reduced reimbursement claim.

Tympanoplasty (69631–69646)

Tympanoplasty is the surgical repair of the tympanic membrane and/or reconstruction of the middle ear ossicular chain. Code selection depends on whether the mastoid is also operated on and whether ossicular chain reconstruction is performed.

Code	Description
69631	Tympanoplasty without mastoidectomy (including canalplasty, atticotomy and/or middle ear surgery), initial or revision; without ossicular chain reconstruction
69632	Tympanoplasty without mastoidectomy; with ossicular chain reconstruction (e.g., with prosthesis, with or without stapedectomy)
69633	Tympanoplasty without mastoidectomy; with ossicular chain reconstruction and synthetic prosthesis (eg, partial ossicular replacement prosthesis [PORP], total ossicular replacement prosthesis [TORP])
69637	Tympanoplasty with antrotomy or mastoidotomy (including canalplasty, atticotomy, middle ear surgery, and/or ossiculoplasty); without ossicular chain reconstruction
69638	Tympanoplasty with antrotomy or mastoidotomy; with ossicular chain reconstruction
69641	Tympanoplasty with mastoidectomy (including canalplasty, middle ear

Code	Description
	surgery, tympanic membrane repair); without ossicular chain reconstruction
69642	Tympanoplasty with mastoidectomy; with ossicular chain reconstruction
69643	Tympanoplasty with mastoidectomy; with intact or reconstructed canal wall, without ossicular chain reconstruction
69644	Tympanoplasty with mastoidectomy; with intact or reconstructed canal wall, with ossicular chain reconstruction
69645	Tympanoplasty with radical or complete mastoidectomy; without ossicular chain reconstruction
69646	Tympanoplasty with radical or complete mastoidectomy; with ossicular chain reconstruction

Mastoidectomy (69501–69530)

Mastoidectomy is the surgical removal of mastoid air cells. It is performed for chronic mastoiditis, cholesteatoma, or as access for other procedures.

- `69501` — Transmastoid antrotomy (simple mastoidectomy)
- `69502` — Mastoidectomy; simple (complete)
- `69505` — Mastoidectomy; modified radical
- `69511` — Mastoidectomy; radical
- `69530` — Petrous apicectomy including radical mastoidectomy

Stapedectomy (69660–69662)

Stapedectomy is the removal of the stapes (the innermost ossicle) and replacement with a prosthesis, performed for otosclerosis (abnormal bone growth causing conductive hearing loss).

- `69660` — Stapedectomy or stapedotomy with reestablishment of ossicular continuity, with or without use of foreign material

- `69661` — Stapedectomy or stapedotomy with reestablishment of ossicular continuity, with or without use of foreign material; with footplate drill out
- `69662` — Revision of stapedectomy or stapedotomy

📚 Did You Know?

In otosclerosis, abnormal spongy bone grows around the stapes footplate, fixing it in the oval window and preventing vibration. **Stapedectomy** removes the entire stapes and replaces it with a prosthesis, while **stapedotomy** creates a small hole (fenestration) in the footplate and inserts a piston-type prosthesis — a more modern, less invasive approach. Both are coded with 69660; the distinction between them does not change code selection unless a footplate drill-out is performed (69661).

📄 Coding Scenario 11.1: Bilateral Tympanostomy Tubes, General Anesthesia

PREOPERATIVE DIAGNOSIS: Recurrent otitis media with effusion, bilateral

POSTOPERATIVE DIAGNOSIS: Same

PROCEDURE: Bilateral myringotomy with tympanostomy tube insertion, under general anesthesia

SURGEON: Dr. Angela Kim, MD, Pediatric Otolaryngology

OPERATIVE NOTE: The patient (age 2 years) was brought to the operating room and placed under general anesthesia. The external canals were examined under the operating microscope. The right tympanic membrane was incised in the anteroinferior quadrant, and effusion was aspirated. A Shepard grommet tube was placed in the right ear. The same procedure was performed on the left ear with aspiration of serous effusion and tube placement. Both tubes are in good position.

Step-by-Step Analysis

1. **Procedure:** Myringotomy WITH tube insertion → tympanostomy → 69436
2. **Anesthesia:** General anesthesia → confirms 69436 (not 69433)
3. **Bilateral?** Yes — both ears treated
4. **Modifier:** -50 (bilateral) — check payer; Medicare prefers -RT/-LT

Final Code: 69436-50 (or 69436-RT and 69436-LT for Medicare)

Common Mistake: Reporting 69420 (myringotomy only) when tubes were placed. If a tube is inserted, always use tympanostomy codes (69433 or

69436).

📄 Coding Scenario 11.2: Tympanoplasty with Mastoidectomy

PROCEDURE: Right tympanoplasty with complete mastoidectomy and ossicular chain reconstruction (TORP)

DIAGNOSIS: Chronic suppurative otitis media with cholesteatoma, right ear

OPERATIVE NOTE: Under general anesthesia, a postauricular incision was made. Mastoidectomy was performed — a complete canal wall-down procedure was performed with removal of cholesteatoma. The remnant tympanic membrane was elevated and the ossicular chain was found destroyed by cholesteatoma. A total ossicular replacement prosthesis (TORP) was placed on the stapes footplate. Temporalis fascia was harvested and used to repair the tympanic membrane. The meatoplasty was completed and the wound closed.

Step-by-Step Analysis

1. **Mastoidectomy type:** Radical (complete, canal wall-down) ✓
2. **Ossicular reconstruction?** Yes — TORP placed ✓
3. **Code:** 69646 — Tympanoplasty with radical mastoidectomy with ossicular chain reconstruction
4. **Laterality:** Right → RT modifier

Final Code: 69646-RT

Common Mistake: Reporting 69645 (without reconstruction) when a TORP was documented. The ossicular chain reconstruction is the key differentiator here.

Section 12: Inner Ear (69801–69949)

Labyrinthectomy (69801–69806)

Labyrinthectomy is the surgical destruction of the vestibular labyrinth, used for intractable Ménière's disease or severe vertigo when hearing is already non-functional.

- `69801` — Labyrinthotomy, with perfusion of vestibular system with medications (eg, for treatment of Ménière's disease)
- `69802` — Labyrinthotomy, with perfusion of vestibular system with medications; with mastoidectomy
- `69805` — Endolymphatic sac operation; without shunt
- `69806` — Endolymphatic sac operation; with shunt

Cochlear Implant (69930)

A **cochlear implant** is an electronic device that directly stimulates the auditory nerve, bypassing the damaged hair cells of the cochlea. It consists of external and internal components. The surgical insertion code is found in the Auditory System, while device programming codes are cross-referenced to the Medicine section.

- `69930` — Cochlear device implantation, with or without mastoidectomy

> **📌 Coder's Corner — Cochlear Implant Programming Cross-Reference**
>
> The surgical implantation of a cochlear device is reported with `69930`. However, the programming and mapping services performed after implantation are reported using codes from the **Medicine section** (Auditory Function Tests / Cochlear Implant):
>
> - `92601` — Diagnostic analysis of cochlear implant, patient younger than 7

years of age; with programming

- 92602 — Diagnostic analysis of cochlear implant, patient younger than 7 years; subsequent reprogramming
- 92603 — Diagnostic analysis of cochlear implant, age 7 years or older; with programming
- 92604 — Diagnostic analysis of cochlear implant, age 7 years or older; subsequent reprogramming

These programming codes are typically performed by an audiologist, not the implanting surgeon. Verify credentials and scope of practice for billing in your state.

📄 Coding Scenario 12.1: Cochlear Implant Insertion

PREOPERATIVE DIAGNOSIS: Profound bilateral sensorineural hearing loss

PROCEDURE: Left cochlear implant insertion

OPERATIVE NOTE: Under general anesthesia, a postauricular incision was made. The cortical mastoidectomy was performed. The facial recess was opened. The round window niche was identified. The cochleostomy was created anterior to the round window membrane. The electrode array was carefully inserted into the cochleostomy and advanced into the scala tympani. The receiver-stimulator was seated in the mastoid well. Impedance testing confirmed appropriate function. The wound was closed in layers.

Step-by-Step Analysis

1. **Procedure:** Cochlear device implantation → 69930
2. **Mastoidectomy included?** Yes — but note: 69930 description already includes "with or without mastoidectomy" — do NOT separately report the mastoidectomy
3. **Laterality:** Left → LT

Final Code: 69930-LT

Common Mistake: Separately reporting the mastoidectomy (e.g., 69502) when it is performed as part of the cochlear implant procedure. The mastoidectomy is bundled into 69930 and not separately reportable.

Section 13: Temporal Bone (69950–69979)

Procedures of the temporal bone primarily involve the facial nerve and structures of the petrous apex.

- `69950` — Vestibular nerve section, transcranial approach
- `69955` — Total facial nerve decompression and/or repair (may include grafting)
- `69960` — Decompression of internal auditory canal
- `69970` — Removal of tumor, temporal bone
- `69979` — Unlisted procedure, temporal bone, middle fossa approach

> 📚 **Did You Know?**
>
> **Bell's palsy** — the most common cause of acute facial paralysis — is typically managed medically and does NOT require surgical decompression in most cases. However, when surgical decompression of the facial nerve is performed (for Bell's palsy, temporal bone fracture, or other compressive lesions), code `69955` is reported for total facial nerve decompression. Partial decompression may be reported with alternative approaches. Always read the operative note for the extent of decompression performed.

PART C: Radiology Section (70010–79999)

Section 14: Introduction to Radiology Coding

Overview of the Radiology Section

The CPT Radiology section (codes 70010–79999) contains codes for diagnostic and therapeutic radiologic services. Unlike most surgical sections, Radiology has a unique **two-component structure** that reflects the realities of how radiology services are delivered — often with the physician and technical equipment at different practice entities.

The Three Components of Radiology Services

Every radiology service has up to two billable components, which may be billed separately or together as a global service:

Component	What It Includes	Who Bills It	Modifier
Professional Component (PC)	Physician interpretation and written report — the radiologist's cognitive work	Radiologist / interpreting physician	**-26**
Technical Component (TC)	Equipment, facility, supplies, radiologic technologist, film/storage	Hospital or imaging center	**-TC**
Global Service	Both professional AND technical components together	Physician-owned practice with own equipment	**No modifier**

⚠️ Stop! Think! — When to Use -26 vs. -TC vs. Global

Scenario A: A radiologist employed by a hospital reads a CT scan performed at the hospital and dictates a report. The hospital bills -TC; the radiology group

bills -26.

Scenario B: A radiology practice owns its own MRI machine, performs the scan, and the radiologist interprets it. The practice bills globally — no modifier.

Scenario C: A cardiologist performs an echocardiogram in their office with their own equipment and interprets it. They bill globally — no modifier.

Key Rule: Never report -26 AND -TC for the same service from the same provider on the same date. These are mutually exclusive — together they equal the global service.

Supervision and Interpretation (S&I)

Many radiologic procedures performed in conjunction with surgical or interventional procedures are reported using **Supervision and Interpretation (S&I)** codes. These are found in the Radiology section even when the procedure itself is in the Surgery section. S&I codes represent only the radiologist's professional work (guiding the procedure fluoroscopically or via CT) — they always represent the professional component.

S&I codes are typically reported with `-26` when the physician does not own the equipment.

Section 15: Diagnostic Radiology (70010–76499)

A. Head and Neck Imaging

X-Ray: Skull, Facial Bones, Sinuses (70100–70250)

- `70100` — Radiologic examination, mandible; partial, less than 4 views
- `70110` — Radiologic examination, mandible; complete, minimum 4 views
- `70140` — Radiologic examination, facial bones; less than 3 views

- 70150 — Radiologic examination, facial bones; complete, minimum 3 views
- 70160 — Radiologic examination, nasal bones, complete, minimum 3 views
- 70200 — Radiologic examination, orbits, complete, minimum 4 views
- 70210 — Radiologic examination, sinuses, paranasal, less than 3 views
- 70220 — Radiologic examination, sinuses, paranasal, complete, minimum 3 views
- 70250 — Radiologic examination, skull; less than 4 views
- 70260 — Radiologic examination, skull; complete, minimum 4 views

CT of Head/Brain (70450–70470)

Contrast variations are critical for CT and MRI code selection. Memorize these three options:

- **Without contrast:** No IV contrast administered
- **With contrast:** IV contrast administered (post-contrast only)
- **With and without contrast:** Images obtained pre-contrast AND post-contrast (highest value)
- 70450 — Computed tomography, head or brain; without contrast material
- 70460 — Computed tomography, head or brain; with contrast material(s)
- 70470 — Computed tomography, head or brain; without contrast material, followed by contrast material(s) and further sections

MRI of Brain (70551–70559)

- 70551 — Magnetic resonance imaging, brain (including brain stem); without contrast material
- 70552 — Magnetic resonance imaging, brain; with contrast material(s)
- 70553 — Magnetic resonance imaging, brain; without contrast material, followed by contrast material(s) and further sequences
- 70554 — Magnetic resonance imaging, brain; including MR spectroscopy

- 70555 — Magnetic resonance imaging, brain; including functional MRI (requires separate report) (List separately in addition to primary MRI code)

MR Angiography (MRA) (70544–70549)

- 70544 — Magnetic resonance angiography, head; without contrast material(s)
- 70545 — Magnetic resonance angiography, head; with contrast material(s)
- 70546 — Magnetic resonance angiography, head; without contrast material(s), followed by contrast material(s) and further sequences
- 70547 — Magnetic resonance angiography, neck; without contrast material(s)
- 70548 — Magnetic resonance angiography, neck; with contrast material(s)
- 70549 — Magnetic resonance angiography, neck; without contrast material(s), followed by contrast material(s) and further sequences

Modality	Without Contrast	With Contrast	Without then With (W&W/O)
CT Head/Brain	70450	70460	70470
MRI Brain	70551	70552	70553
MRA Head	70544	70545	70546
MRA Neck	70547	70548	70549

B. Spine Imaging

X-Ray of Spine (72010–72120)

Spine X-rays are coded by region and number of views. When the entire spine is imaged, use 72010 (2 views) or 72020 (specific view by region).

Region	X-Ray Code	CT Code (without contrast)	MRI Code (without contrast)
Cervical Spine	72040 (2-3 views), 72050 (4+ views), 72052 (6+ views)	72125	72141

Region	X-Ray Code	CT Code (without contrast)	MRI Code (without contrast)
Thoracic Spine	72070 (2 views), 72072 (3 views), 72074 (4+ views)	72128	72146
Lumbar Spine	72100 (2-3 views), 72110 (4+ views), 72114 (with bending), 72120 (bending only)	72131	72148
Sacrum/Coccyx	72200 (min 2 views)	72133	72195

CT of Spine — Contrast Variations

Region	Without Contrast	With Contrast	Without then With
Cervical	72125	72126	72127
Thoracic	72128	72129	72130
Lumbar	72131	72132	72133

MRI of Spine — Contrast Variations

Region	Without Contrast	With Contrast	Without then With
Cervical	72141	72142	72156
Thoracic	72146	72147	72157
Lumbar	72148	72149	72158

C. Upper Extremity Imaging

Site	X-Ray Code(s)	MRI Code (without contrast)
Shoulder	73020 (1 view), 73030 (2+ views)	73221
Elbow	73070 (2 views), 73080 (3+ views)	73221
Wrist	73100 (2 views), 73110 (3+ views)	73221
Hand	73120 (2 views), 73130 (3+ views)	73221
Finger(s)	73140 (minimum 2 views)	73221

📌 Coder's Corner — MRI of Joints

Upper extremity joint MRI codes (73221–73223) apply to any joint of the upper extremity. Use the same code regardless of whether the joint is the shoulder, elbow, wrist, or finger. The code selection is based on contrast, not joint location:

- 73221 — Any upper extremity joint; without contrast
- 73222 — Any upper extremity joint; with contrast
- 73223 — Any upper extremity joint; without then with contrast

D. Lower Extremity Imaging

Site	X-Ray Code(s)	MRI Code (without contrast)
Hip	73500 (1 view), 73510 (2+ views), 73520 (bilateral, min 2 views)	73721
Knee	73560 (1-2 views), 73562 (3 views), 73564 (4+ views)	73721

Site	X-Ray Code(s)	MRI Code (without contrast)
Ankle	73600 (2 views), 73610 (3+ views)	73721
Foot	73620 (2 views), 73630 (3+ views)	73721
Toe(s)	73660 (minimum 2 views)	73721

E. Abdomen Imaging

X-Ray Abdomen (74000–74022)

- `74018` — Radiologic examination, abdomen; 1 view
- `74019` — Radiologic examination, abdomen; 2 views
- `74021` — Radiologic examination, abdomen; 3+ views
- `74022` — Radiologic examination, abdomen; complete acute abdomen series, including supine, erect, and/or decubitus views, plus single view chest

CT of Abdomen and Pelvis (74150–74178)

Study	Without Contrast	With Contrast	Without then With
CT Abdomen	74150	74160	74170
CT Pelvis	72192	72193	72194
CT Abdomen & Pelvis (combined)	74176	74177	74178

📚 Did You Know? — CT Abd/Pelvis Combination Codes

Prior to 2011, CT of the abdomen and CT of the pelvis were reported separately. Starting in 2011, CPT introduced **combination codes** (74176–74178) for CT of the abdomen AND pelvis performed together. When both studies are performed

during the same imaging session (as is very common in clinical practice), report ONE combination code — do NOT report separate abdomen and pelvis CT codes. This is a common exam trap!

MRI of Abdomen (74181–74183)

- `74181` — MRI abdomen; without contrast
- `74182` — MRI abdomen; with contrast
- `74183` — MRI abdomen; without then with contrast

F. Chest Imaging

Chest X-Ray (71045–71048)

- `71045` — Radiologic examination, chest; single view
- `71046` — Radiologic examination, chest; 2 views
- `71047` — Radiologic examination, chest; 3 views
- `71048` — Radiologic examination, chest; 4 or more views

📌 Coder's Corner — Chest X-Ray Views

The standard chest X-ray consists of **2 views**: PA (posteroanterior) and lateral → report 71046. A portable (AP only) chest X-ray is a **single view** → report 71045. Do NOT report 71046 for an AP-only portable film taken in the ICU — the single view code (71045) is correct. The number of views documented determines the code, not what you think was ordered.

CT of Thorax (71250–71275)

- `71250` — CT thorax; without contrast
- `71260` — CT thorax; with contrast

- `71270` — CT thorax; without then with contrast
- `71275` — CT angiography, chest (noncoronary), including noncontrast images, if performed, and image postprocessing

---

Section 16: Diagnostic Ultrasound (76506–76999)

Diagnostic ultrasound uses high-frequency sound waves to create real-time images of internal structures. Unlike X-ray or CT, ultrasound uses **no ionizing radiation**. Code selection is based on the body region, the completeness of the study (complete vs. limited), and the imaging mode (B-scan, M-mode, etc.).

Abdominal Ultrasound (76700–76705)

- `76700` — Ultrasound, abdominal, real time with image documentation; complete
- `76705` — Ultrasound, abdominal, real time with image documentation; limited (e.g., single organ, quadrant, follow-up)

> **📚 Did You Know? — Complete vs. Limited Ultrasound**
>
> A **complete** abdominal ultrasound (76700) requires evaluation of the liver, gallbladder, common bile duct, pancreas, spleen, kidneys, and the upper abdominal aorta and IVC. If ANY of these structures cannot be visualized (e.g., obscured by bowel gas), the study is still complete if the attempt was made and documented. A **limited** study (76705) evaluates only one organ or one area — for example, a follow-up gallbladder only exam or a single-quadrant assessment.

Pelvic Ultrasound (76856–76857)

- `76856` — Ultrasound, pelvic (nonobstetric), real time with image documentation; complete
- `76857` — Ultrasound, pelvic (nonobstetric), real time with image documentation; limited or follow-up (e.g., for follicles)
- `76830` — Ultrasound, transvaginal

> ⚠️ **Stop! Think! — Pelvic vs. Transvaginal Ultrasound**
>
> A **transabdominal pelvic ultrasound** (76856/76857) and a **transvaginal ultrasound** (76830) may be performed together in the same visit — this is common practice. If both are performed and documented, report **both codes**. They are not bundled. However, if only a transvaginal ultrasound is performed without a transabdominal component, report only 76830. Do not assume a transvaginal was performed just because a pelvic ultrasound was ordered.

Obstetric Ultrasound (76801–76817)

- `76801` — Ultrasound, pregnant uterus, real time with image documentation, fetal and maternal evaluation, first trimester (<14 weeks 0 days), transabdominal approach; single or first gestation
- `76802` — Same as 76801; each additional gestation (List separately in addition to code for primary procedure)
- `76805` — Ultrasound, pregnant uterus, real time with image documentation, fetal and maternal evaluation, after first trimester (≥14 weeks 0 days); single or first gestation
- `76810` — Same as 76805; each additional gestation (add-on)
- `76811` — Ultrasound, pregnant uterus, real time with image documentation, fetal and maternal evaluation plus detailed fetal anatomic examination; single or first gestation (Level II anatomy scan)

- `76815` — Ultrasound, pregnant uterus, real time with image documentation; limited (e.g., fetal heart beat, placental location, fetal position and/or qualitative amniotic fluid volume)
- `76816` — Ultrasound, pregnant uterus, real time with image documentation; follow-up or repeat ultrasound
- `76817` — Ultrasound, pregnant uterus, real time with image documentation; transvaginal

Ultrasound Guidance (76942, 76981–76983)

- `76942` — Ultrasonic guidance for needle placement (eg, biopsy, aspiration, injection, localization device), imaging supervision and interpretation
- `76981` — Ultrasound, elastography; parenchymal tissue (e.g., organ)
- `76982` — Ultrasound, elastography; first target lesion
- `76983` — Ultrasound, elastography; each additional target lesion (List separately in addition to code for primary procedure)

Region	Complete Study	Limited Study	Special Variants
Abdomen	76700	76705	—
Pelvis (non-OB)	76856	76857	76830 (transvaginal)
OB, 1st trimester	76801	76815 (limited)	76817 (transvaginal)
OB, 2nd/3rd trimester	76805	76816 (follow-up)	76811 (detailed anatomy)
Needle Guidance	76942	—	Report with procedure code

📌 Coder's Corner — Ultrasound Guidance: When Is It Separately Reportable?

Ultrasound guidance code `76942` is **NOT always separately reportable**. Check

the CPT guidelines for the primary procedure code:

- If the procedure code descriptor says "with ultrasound guidance" — the guidance is **included**, do NOT report 76942 separately.
- If the procedure code descriptor does NOT include guidance — you MAY report 76942 separately IF performed and documented.
- Documentation must include a permanent recorded image and a separate written report of the imaging guidance.
- Example: Ultrasound-guided joint aspiration — check if the joint aspiration code includes guidance before reporting 76942.

📄 Coding Scenario 16.1: Abdominal and Pelvic Ultrasound

PROCEDURE: Ultrasound abdomen (complete) and pelvis (complete, transabdominal), plus transvaginal ultrasound

INDICATION: Pelvic pain, rule out ovarian pathology

REPORT: Complete abdominal ultrasound performed — liver, gallbladder, pancreas, spleen, kidneys, aorta evaluated. No acute abnormality. Complete transabdominal pelvic ultrasound performed — uterus and bilateral adnexa evaluated. 3.2cm left ovarian cyst identified. Transvaginal ultrasound performed for further characterization — simple cyst confirmed without internal vascularity.

Step-by-Step Analysis

1. **Abdominal US:** Complete evaluation → 76700
2. **Pelvic US (transabdominal):** Complete → 76856
3. **Transvaginal US:** Performed and documented → 76830
4. **Are they separately reportable?** Yes — 76700, 76856, and 76830 are distinct codes.

Final Codes: 76700, 76856, 76830

Common Mistake: Reporting only 76856 when a transvaginal was also performed. Both transabdominal and transvaginal are reported when both are performed and documented.

Section 17: Radiologic Guidance (77001–77022)

The Radiologic Guidance subsection provides codes for imaging used to guide needle placement, device positioning, and localization during interventional procedures.

Code	Modality	Procedure Guidance	Separately Reportable?
77001	Fluoroscopy	Central venous access device (add-on)	Yes, add-on with primary procedure
77002	Fluoroscopy	Needle placement, any type	Yes, when not included in procedure
77003	Fluoroscopy	Spinal/paraspinal diagnostic or therapeutic injection guidance (add-on)	Yes, add-on
77011	CT	Computerized tomography guidance for stereotactic localization	Yes
77012	CT	CT guidance for needle placement (eg, biopsy, aspiration, injection, localization device)	Yes, when not bundled
77013	CT	CT guidance for, and monitoring of, parenchymal tissue ablation	Yes
77021	MRI	MR guidance for needle placement (eg, biopsy, aspiration, injection)	Yes

Code	Modality	Procedure Guidance	Separately Reportable?
77022	MRI	MR guidance for, and monitoring of, parenchymal tissue ablation	Yes

⚠️ **Stop! Think! — Guidance Bundling Rules**

Some primary procedure codes already include imaging guidance in their descriptor. Always read the primary code's full description before appending a guidance code. For example, many spinal injection codes (in the Surgery section) include fluoroscopy guidance — adding 77003 separately would result in unbundling and a potential audit finding. Use coding resources such as Encoder Pro, CCI Edits, or your practice's payer contracts to verify what is bundled.

Section 18: Nuclear Medicine (78000–79999)

Overview of Nuclear Medicine

Nuclear medicine uses radioactive isotopes (radiopharmaceuticals) administered to the patient, which emit gamma rays detected by a gamma camera. Unlike anatomical imaging (CT, MRI), nuclear medicine provides **functional/physiological information** about how organs are working. Nuclear medicine procedures are divided into **diagnostic** and **therapeutic** categories.

Bone Scan (78300–78315)

Bone scans detect areas of increased or decreased bone metabolism (osteoblastic activity) using Technetium-99m labeled diphosphonate.

- `78300` — Bone and/or joint imaging; limited area
- `78305` — Bone and/or joint imaging; multiple areas
- `78306` — Bone and/or joint imaging; whole body
- `78315` — Bone and/or joint imaging; 3-phase study
- `78300` — Bone and/or joint imaging; limited area

Thyroid Scan and Uptake (78012–78018)

- `78012` — Thyroid uptake, single or multiple quantitative measurement(s) (including stimulation, suppression, and/or discharge, when performed)
- `78013` — Thyroid imaging (planar); with vascular flow
- `78014` — Thyroid imaging (planar); with vascular flow and blood pool imaging
- `78015` — Thyroid carcinoma metastases imaging; limited area (e.g., neck and chest only)
- `78018` — Thyroid carcinoma metastases imaging; whole body

Myocardial Perfusion Imaging (78451–78454)

Myocardial perfusion imaging (MPI) evaluates blood flow to the heart muscle, typically comparing stress and rest images to identify coronary artery disease.

- `78451` — Myocardial perfusion imaging, tomographic (SPECT); single study, at rest or stress
- `78452` — Myocardial perfusion imaging, tomographic (SPECT); multiple studies, at rest and/or stress and/or redistribution and/or rest reinjection
- `78453` — Myocardial perfusion imaging, planar; single study
- `78454` — Myocardial perfusion imaging, planar; multiple studies
- `78466` — Myocardial infarct avid imaging; planar; qualitative or quantitative

PET Scan (78608, 78816)

Positron Emission Tomography (PET) uses positron-emitting radiotracers (most commonly FDG — fluorodeoxyglucose) to image metabolic activity. PET is used in oncology (tumor staging, treatment response), neurology (dementia evaluation), and cardiology.

- `78608` — Brain imaging, positron emission tomography (PET); metabolic evaluation
- `78609` — Brain imaging, positron emission tomography (PET); perfusion evaluation
- `78811` — Tumor imaging, positron emission tomography (PET); limited area (eg, chest, head/neck)
- `78812` — Tumor imaging, positron emission tomography (PET); skull base to mid-thigh
- `78816` — Tumor imaging, positron emission tomography (PET) with concurrently acquired computed tomography (CT) for attenuation correction and anatomical localization; whole body

Study Type	Common Radiotracer	CPT Code	Primary Indication
Bone Scan (whole body)	Tc-99m MDP	78306	Bone metastases, fractures
Bone Scan (3-phase)	Tc-99m MDP	78315	Osteomyelitis, RSD
Thyroid Scan + Uptake	I-123 or Tc-99m	78012–78013	Thyroid nodules, Graves' disease
Myocardial Perfusion (SPECT)	Tc-99m sestamibi / Tl-201	78452	Coronary artery disease
Brain PET (metabolic)	F-18 FDG	78608	Dementia, seizure focus
Tumor PET/CT (whole body)	F-18 FDG	78816	Oncologic staging/restaging

📄 Coding Scenario 18.1: Myocardial Perfusion Imaging

PROCEDURE: Myocardial perfusion imaging, SPECT, rest and stress

REPORT: Technetium-99m sestamibi SPECT imaging was performed with rest and pharmacologic stress (adenosine infusion). Gated SPECT images obtained at rest and stress. Wall motion analysis included. No significant perfusion defect identified. Normal LVEF of 62%.

Step-by-Step Analysis

1. **Modality:** SPECT (tomographic) ✓
2. **Studies:** Both rest AND stress images obtained → "multiple studies"
3. **Code:** 78452 — SPECT MPI, multiple studies
4. **Note:** Wall motion/EF analysis is included in 78452 — do NOT report separately

Final Code: 78452

Common Mistake: Reporting 78451 (single study) when both rest and stress images were obtained. Multiple studies = 78452.

Section 19: Radiation Oncology (77261–77799)

Overview

Radiation oncology is the use of ionizing radiation to treat malignancies. Coding in this subsection is complex because a single course of radiation therapy involves multiple distinct services over time, each coded separately. The four major service categories are: (1) Simulation, (2) Dosimetry/Treatment Planning, (3) Treatment Delivery, and (4) Treatment Management.

Treatment Planning (77261–77263)

Radiation treatment planning is the development of the radiation delivery plan by the radiation oncologist.

- `77261` — Therapeutic radiology treatment planning; simple
- `77262` — Therapeutic radiology treatment planning; intermediate
- `77263` — Therapeutic radiology treatment planning; complex

Radiation Treatment Delivery (77401–77425)

Treatment delivery codes represent the actual administration of radiation to the patient. They are coded by the number of treatment areas and the energy level (MeV).

- `77401` — Radiation treatment delivery, superficial and/or ortho voltage
- `77402` — Radiation treatment delivery, ≥1 MeV; simple
- `77407` — Radiation treatment delivery, ≥1 MeV; intermediate
- `77412` — Radiation treatment delivery, ≥1 MeV; complex

IMRT — Intensity Modulated Radiation Therapy (77385–77386)

IMRT uses computer-controlled linear accelerators to deliver precise radiation doses to a malignant tumor while minimizing exposure to surrounding normal tissue.

- `77385` — Intensity modulated radiation treatment delivery (IMRT), simple
- `77386` — Intensity modulated radiation treatment delivery (IMRT), complex

Stereotactic Radiosurgery (SRS) (77371–77373)

Stereotactic radiosurgery (SRS) delivers precisely targeted high-dose radiation to a small target (such as a brain tumor or AVM) in one or a few sessions, using multiple convergent beams to minimize damage to surrounding tissue.

- `77371` — Stereotactic radiosurgery (particle beam, gamma ray, or linear accelerator); multi-source Cobalt 60 based (Gamma Knife)
- `77372` — Stereotactic radiosurgery (particle beam, gamma ray, or linear accelerator); linear accelerator based, per session
- `77373` — Stereotactic body radiation therapy, treatment delivery, per fraction to 1 or more lesions, including image guidance, entire course not to exceed 5 fractions

Brachytherapy (77750–77799)

Brachytherapy involves placing radioactive sources directly into or adjacent to the tumor. It may be intracavitary (inside a body cavity), interstitial (within tissue), or surface-applied.

- `77750` — Infusion or instillation of radioelement solution (includes 3-month follow-up care)
- `77761` — Intracavitary radiation source application; simple
- `77762` — Intracavitary radiation source application; intermediate
- `77763` — Intracavitary radiation source application; complex

- `77770` — Remote afterloading high dose rate radionuclide intracavitary brachytherapy, includes basic dosimetry, when performed; 1 channel
- `77771` — Remote afterloading high dose rate radionuclide intracavitary brachytherapy; 2-12 channels
- `77772` — Remote afterloading high dose rate radionuclide intracavitary brachytherapy; over 12 channels
- `77778` — Interstitial radiation source application, complex, includes supervision, handling, loading of radiation source, when performed

Radiation Oncology Category	Code Range	Frequency of Reporting
Treatment Planning	77261–77263	Once per course of treatment
Dosimetry	77300–77340	Once per course, may be updated
Treatment Delivery (standard)	77401–77412	Each treatment fraction
IMRT Delivery	77385–77386	Each treatment fraction
SRS	77371–77373	Per session/fraction
Treatment Management	77427	Weekly (per 5 fractions)
Brachytherapy	77750–77799	Per application/session

Section 20: Real-World Coding Scenarios

The following six comprehensive case studies reflect real clinical scenarios encountered in practice and on the CPC examination. For each case, a full procedure note excerpt is provided, followed by a systematic step-by-step coding analysis and final code assignment with modifiers.

Case 1: Bilateral Phacoemulsification with IOL

📄 Full Operative Note

DATE OF SURGERY: 09/24/2026

PREOPERATIVE DIAGNOSIS: (1) Nuclear sclerotic cataract, right eye (2) Nuclear sclerotic cataract, left eye

POSTOPERATIVE DIAGNOSIS: Same

PROCEDURES: (1) Phacoemulsification with posterior chamber IOL implantation, right eye (2) Phacoemulsification with posterior chamber IOL implantation, left eye

SURGEON: Dr. Patricia Morales, MD

ANESTHESIA: Topical with monitored anesthesia care

RIGHT EYE: A temporal clear corneal incision was created. Capsulorrhexis, hydrodissection, and phacoemulsification of the nucleus were performed using a divide-and-conquer technique without complication. Cortex was removed with irrigation/aspiration. A SN60WF 21.5D IOL was implanted in the capsular bag and centered. The incision was hydrated and sealed.

LEFT EYE: The same procedure was performed on the left eye. A SN60WF 22.0D IOL was implanted without complication. Both incisions sealed without sutures.

Step-by-Step Analysis

1. **Procedure:** Phacoemulsification with IOL (both eyes) ✓
2. **Complex features?** None documented — routine procedure ✓

3. **Code base:** 66984 (standard phacoemulsification with IOL)

4. **Bilateral:** Both eyes on the same date → report twice with laterality modifiers

5. **Right eye:** 66984-RT

6. **Left eye:** 66984-LT (append modifier -51 for Medicare/some payers to indicate multiple procedures)

7. **Payer note:** Medicare: use -RT and -LT. Commercial: may accept -50. Verify payer policy.

Final Codes: 66984-RT, 66984-LT

Common Mistakes to Avoid: (1) Using -50 on Medicare claims without verification. (2) Reporting 66982 (complex) when no complexity factors are documented. (3) Separately reporting IOL insertion (66985) — the IOL is included in 66984.

Case 2: Intravitreal Anti-VEGF Injection, Right Eye

📄 Full Operative Note

DATE: 09/24/2026

PATIENT: Established patient with known wet AMD, right eye

PROCEDURE: Intravitreal injection of ranibizumab (Lucentis) 0.5mg/0.05mL, right eye

After obtaining informed consent, the right eye was instilled with proparacaine drops × 3. Povidone-iodine 5% was applied to the conjunctival fornix. A wire lid speculum was placed. The inferotemporal quadrant was marked at 3.5mm posterior to the limbus. Lucentis 0.5mg/0.05mL was injected intravitreally using a 30-gauge, 0.5-inch needle on a 1mL syringe. The speculum was removed. Light perception was confirmed. Patient tolerated the procedure without complication.

Step-by-Step Analysis

1. **Procedure:** Intravitreal injection → 67028
2. **Laterality:** Right eye → modifier RT
3. **Drug:** Ranibizumab (Lucentis) 0.5mg → J2778 per 0.1mg = 5 units (0.5mg ÷ 0.1mg/unit = 5 units)
4. **Report drug code:** J2778 × 5

Final Codes: 67028-RT, J2778 × 5

Common Mistakes to Avoid: (1) Forgetting the J-code for the drug. (2) Incorrect unit calculation — always divide the dose administered by the unit size in the J-code descriptor. (3) Omitting the RT/LT laterality modifier.

Case 3: Bilateral Myringotomy with Tympanostomy Tube Insertion

📄 Full Operative Note

DATE: 09/24/2026

PATIENT: 3-year-old male

PREOPERATIVE DIAGNOSIS: Chronic otitis media with effusion, bilateral

POSTOPERATIVE DIAGNOSIS: Same

PROCEDURE: Bilateral myringotomy and tympanostomy tube insertion under general anesthesia

SURGEON: Dr. Anthony Rivas, MD, Pediatric ENT

The patient was taken to the operating room and general anesthesia was induced via mask inhalation. Under the operating microscope, the right ear was examined first. The external canal was cleaned. An inferior quadrant myringotomy incision was made with a myringotomy knife. Serous effusion was aspirated with a straight suction. A Shepard grommet tube was inserted through the myringotomy and confirmed in position. The identical procedure was performed on the left ear with aspiration of mucoid effusion. Tubes are in good position bilaterally.

Step-by-Step Analysis

1. **Procedure:** Myringotomy WITH tube → tympanostomy ✓
2. **General anesthesia?** Yes → 69436 (not 69433)
3. **Bilateral?** Yes, both ears treated

4. **Modifier:** -50 for bilateral (or -RT/-LT for Medicare)

Final Code: 69436-50 (Medicare: 69436-RT, 69436-LT)

Common Mistakes to Avoid: (1) Using 69420 or 69421 (myringotomy only) when tubes were placed. (2) Using 69433 when general anesthesia is documented — type of anesthesia determines the code. (3) Failing to append the bilateral modifier.

Case 4: Unilateral Cochlear Implant

📄 Full Operative Note

DATE: 09/24/2026

PREOPERATIVE DIAGNOSIS: Profound sensorineural hearing loss, bilateral; right ear selected for implantation

POSTOPERATIVE DIAGNOSIS: Same

PROCEDURE: Right cochlear implant insertion

SURGEON: Dr. Sarah Chen, MD, Neurotology

Under general anesthesia, a C-shaped postauricular incision was made. The mastoid cortex was exposed. Cortical mastoidectomy was performed. The facial recess was opened preserving the facial nerve. The round window niche was visualized. A cochleostomy was drilled anterior to the round window. The electrode array (Advanced Bionics Hi-Focus Helix) was inserted through the cochleostomy and advanced full insertion into the scala tympani. The receiver-stimulator package was placed in the mastoid well secured with suture. Neural response telemetry confirmed functioning electrodes. The wound was irrigated and closed in layers.

Step-by-Step Analysis

1. **Procedure:** Cochlear device implantation → 69930
2. **Mastoidectomy performed?** Yes — but it is included in 69930; do NOT report separately
3. **Laterality:** Right → RT
4. **Programming/mapping:** Not performed today — would be 92603 at

future visit for age ≥7 patient

Final Code: 69930-RT

Common Mistakes to Avoid: (1) Separately reporting mastoidectomy (69502) — it is bundled into 69930. (2) Billing 69930 bilaterally when only one side was implanted.

Case 5: CT Abdomen and Pelvis with Contrast — Professional Component Only

📄 Full Operative Note / Radiology Report Excerpt

DATE: 09/24/2026

REQUESTING PHYSICIAN: Dr. James Henderson, Internal Medicine

INTERPRETING RADIOLOGIST: Dr. Yolanda Martinez, MD, Radiology

FACILITY: Broward Memorial Hospital (hospital owns CT equipment)

EXAMINATION: CT Abdomen and Pelvis with contrast

INDICATION: Abdominal pain, rule out appendicitis

TECHNIQUE: Helical CT of the abdomen and pelvis was performed following administration of IV iohexol contrast. Images from the diaphragm through the pubic symphysis were obtained.

FINDINGS: The liver, spleen, pancreas, and kidneys are within normal limits. The appendix is visualized and measures 4mm in diameter without surrounding fat stranding or periappendiceal fluid. No bowel obstruction. The uterus and ovaries are unremarkable. No free fluid or free air.

IMPRESSION: Normal CT of the abdomen and pelvis. No evidence of appendicitis.

Step-by-Step Analysis

1. **Study:** CT abdomen AND pelvis, combined → use combination code
2. **Contrast:** IV contrast administered (with contrast only) → 74177
3. **Who owns the equipment?** Hospital — radiologist does NOT own equipment
4. **What does the radiologist bill?** Professional component only → modifier

-26

5. **What does the hospital bill?** Technical component → modifier -TC

Radiologist Bills: 74177-26

Hospital Bills: 74177-TC

Common Mistakes to Avoid: (1) Reporting separate abdomen (74160) and pelvis (72193) CT codes when a combined study was performed — use 74176/74177/74178. (2) Radiologist billing globally (74177 without modifier) when the hospital owns the equipment. (3) Using 74178 (without then with contrast) when only post-contrast images were obtained.

Case 6: MRI Lumbar Spine Without Contrast

📄 Full Radiology Report

DATE: 09/24/2026

PATIENT: Adult female, established patient of orthopedic surgery practice

EXAMINATION: MRI, lumbar spine, without contrast

FACILITY: ABC Open MRI Center (radiologist-owned practice, owns the MRI equipment)

INTERPRETING RADIOLOGIST: Dr. Michael Torres, MD (owner of ABC Open MRI)

TECHNIQUE: Sagittal and axial T1- and T2-weighted MRI images of the lumbar spine were obtained without contrast on a 1.5T open MRI system.

FINDINGS: Mild disc desiccation at L4-L5 and L5-S1. Broad-based disc protrusion at L4-L5 with mild bilateral foraminal narrowing. L5-S1 shows a focal right paracentral disc herniation with contact of the right S1 nerve root. No significant spinal canal stenosis. Conus medullaris terminates at L1.

IMPRESSION: L5-S1 right paracentral disc herniation with right S1 nerve root contact. L4-L5 disc protrusion with mild foraminal narrowing.

Step-by-Step Analysis

1. **Modality:** MRI (not CT, not X-ray) ✓
2. **Region:** Lumbar spine ✓
3. **Contrast:** No contrast administered → "without contrast" code

4. **Code:** 72148 — MRI lumbar spine, without contrast
5. **Ownership:** Radiologist OWNS the equipment → bill globally (no modifier)

Final Code: 72148 (global — no modifier)

Common Mistakes to Avoid: (1) Using 72131 (CT lumbar) instead of 72148 (MRI lumbar). (2) Appending -26 when the practice owns the equipment — global billing is appropriate here. (3) Using 72158 (without then with contrast) when no contrast was administered.

Section 21: Chapter Review — 20 Multiple Choice Questions

Select the best answer for each question. Answer key with rationale follows on the next page.

1. A patient undergoes removal of the contents of the right eye, leaving the scleral shell intact, with insertion of a prosthetic implant. Which CPT code is most appropriate?

1. 65101-RT — Enucleation without implant
2. 65093-RT — Evisceration with implant
3. 65110-RT — Exenteration of orbit
4. 65105-RT — Enucleation with implant, muscles attached

2. Which CPT code represents standard phacoemulsification with intraocular lens implantation for a routine cataract?

5. 66840
6. 66982
7. 66983
8. 66984

3. A patient with uveitis and a miotic pupil undergoes cataract surgery requiring placement of an iris expansion ring (Malyugin ring) for pupil dilation. Which code applies?

9. 66984

10. 66982

11. 66850

12. 66985

4. An ophthalmologist performs bilateral cataract surgery (phacoemulsification with IOL) on the same day and submits to Medicare. How should this be reported?

13. 66984-50

14. 66984 × 2

15. 66984-RT and 66984-LT

16. 66984-RT and 66984-LT-51

5. An intravitreal injection of aflibercept (Eylea) 2mg is administered to the left eye for wet AMD. Which codes are reported?

17. 67028-LT only

18. 67028-LT, J0178 × 2

19. 67028-LT, J0178 × 1

20. 67036-LT, J0178 × 2

6. Scleral buckling is performed for a left eye rhegmatogenous retinal detachment. Cryotherapy was applied to the break. No vitrectomy was performed and no subretinal fluid was drained. Which code is most appropriate?

21. 67108-LT

22. 67110-LT

23. 67107-LT

24. 67113-LT

7. A 2-year-old undergoes bilateral tympanostomy tube insertion under general anesthesia. For Medicare reporting, which modifier set is preferred?

25. 69436-50
26. 69436-RT and 69436-LT
27. 69420-50
28. 69433-RT and 69433-LT

8. Which of the following is TRUE regarding modifier -50 vs. -RT/-LT for bilateral procedures?

29. Modifier -50 is preferred by Medicare for bilateral eye procedures
30. Modifier -RT and -LT are typically required by Medicare for bilateral eye/ear procedures
31. Modifier -50 means each side is billed separately at full fee
32. Modifiers -RT and -LT double the reimbursement automatically

9. A cochlear implant is placed in the right ear, including a cortical mastoidectomy. What code(s) should be reported for the surgical procedure?

33. 69930-RT and 69502-RT
34. 69930-RT only
35. 69930-RT and 69660-RT
36. 69505-RT and 69930-RT

10. When a radiologist employed by a hospital interprets a CT scan performed on hospital equipment and dictates a report, what modifier does the radiologist append to the CT code?

37. -TC
38. -26
39. -52
40. No modifier — global billing

11. A CT of the abdomen and pelvis is ordered. Images are obtained with IV contrast. Which single CPT code is reported?

41. 74160 and 72193
42. 74177

43. 74178

44. 74176

12. An MRI of the lumbar spine is ordered "with and without contrast." Images are obtained pre- and post-contrast. Which CPT code is correct?

45. 72148

46. 72149

47. 72158

48. 72131

13. A chest X-ray is performed in the ICU using a portable machine — one AP view only. Which code applies?

49. 71046

50. 71048

51. 71045

52. 71047

14. A complete abdominal ultrasound AND a complete transabdominal pelvic ultrasound AND a transvaginal ultrasound are all performed during the same visit. Which codes are reported?

53. 76700 only

54. 76856 and 76830

55. 76700, 76856, and 76830

56. 76700 and 76856

15. Which modifier is appended to an ultrasound guidance code when the physician who performed the biopsy also owns the ultrasound machine?

57. -26

58. -TC

59. No modifier — global billing applies

60. -59

16. A patient undergoes SPECT myocardial perfusion imaging with rest and pharmacologic stress images. Which code applies?

61. 78451
62. 78453
63. 78454
64. 78452

17. Which of the following correctly describes the difference between 69436 and 69433?

65. 69436 is used for bilateral tubes; 69433 is for unilateral
66. 69436 requires general anesthesia; 69433 uses local or topical anesthesia
67. 69433 includes tube insertion; 69436 does not
68. 69436 is for adults; 69433 is for pediatric patients

18. A radiologist-owned outpatient imaging center performs and interprets an MRI brain without contrast. The radiologist owns the MRI machine. How is this billed?

69. 70551-26
70. 70551-TC
71. 70551 (global, no modifier)
72. 70551-52

19. Ultrasound guidance (76942) is separately reportable when:

73. The primary procedure code includes "with ultrasound guidance" in its descriptor
74. A permanent recorded image is obtained and a separate written report is provided, AND the primary code does not already include guidance
75. The physician performs the procedure in a hospital outpatient setting
76. The guidance is documented in the nurse's notes

20. IMRT (Intensity Modulated Radiation Therapy) is best described as:

77. Injection of radioactive seeds directly into the tumor

78. Radiation delivered using computer-controlled linear accelerators that modulate beam intensity to precisely target tumors while sparing normal tissue
79. Gamma Knife surgery using Cobalt-60 sources
80. Proton beam therapy using particle accelerators

Answer Key with Detailed Rationale

✅ Chapter Review Answer Key

1. B — 65093-RT

Evisceration removes internal contents only, leaving the scleral shell intact. Code 65093 = evisceration with implant. Enucleation (65101–65105) removes the entire globe. Exenteration (65110) removes orbital contents. Always apply RT/LT for laterality.

2. D — 66984

66984 = standard extracapsular cataract removal with IOL using phacoemulsification. 66982 = complex. 66983 = intracapsular (ICCE). 66840 = aspiration technique without IOL in the descriptor.

3. B — 66982

The Malyugin ring is an iris expansion device, which is explicitly listed as a complexity factor in the CPT descriptor for 66982. Additionally, uveitis is a named condition in 66982's complexity criteria. Documentation of complexity factors mandates use of 66982, not 66984.

4. C — 66984-RT and 66984-LT

Medicare requires laterality modifiers (-RT and -LT) rather than -50 for bilateral ocular procedures. Commercial payers may accept -50. Never use -50 for Medicare eye codes without verifying the specific payer preference.

5. B — 67028-LT, J0178 × 2

67028 = intravitreal injection procedure; J0178 = aflibercept per 1mg; 2mg administered = 2 units. The drug J-code is always reported separately with the injection procedure code. Laterality modifier LT is required.

6. C — 67107-LT

67107 = scleral buckling without vitrectomy. The description includes "scleral dissection, cryotherapy, and/or diathermy, photocoagulation" — cryotherapy is included. No vitrectomy was performed. 67108 = with vitrectomy. 67110 = pneumatic retinopexy. 67113 = complex RD.

7. B — 69436-RT and 69436-LT

For Medicare, laterality modifiers (-RT/-LT) are preferred over -50 for bilateral procedures. The procedure is tympanostomy (with tube) under general anesthesia = 69436. 69420 = myringotomy only (no tube). 69433 = local

anesthesia.

8. B

Medicare generally requires -RT and -LT for bilateral eye and ear procedures rather than -50. Modifier -50 does NOT automatically double reimbursement — it typically results in 150% of the single procedure fee (100% for first side, 50% for second). Always verify with individual payer.

9. B — 69930-RT only

Code 69930 includes "with or without mastoidectomy" in its full descriptor. Separately reporting the mastoidectomy (69502) constitutes unbundling and is a CCI (Correct Coding Initiative) edit violation.

10. B — -26

When a physician interprets an imaging study performed on equipment owned by a hospital or other facility, the physician reports only the professional component using modifier -26. The hospital bills the technical component with -TC.

11. B — 74177

When CT of the abdomen AND pelvis are performed together, report the combination code. 74177 = CT abdomen and pelvis, with contrast. Do NOT report 74160 + 72193 separately. 74178 = without then with contrast. 74176 = without contrast.

12. C — 72158

"With and without contrast" (pre- and post-contrast images) for MRI lumbar spine = 72158. 72148 = without contrast only. 72149 = with contrast only. 72131 = CT lumbar (not MRI).

13. C — 71045

A portable ICU chest X-ray is a single AP view = 71045. The PA/lateral standard chest X-ray = 71046. Number of views documented determines the code — do not assume more views were taken than documented.

14. C — 76700, 76856, and 76830

All three studies were performed and documented: complete abdominal US (76700), complete pelvic transabdominal US (76856), and transvaginal US (76830). These are distinct codes that are not bundled into one another. Report

all three.

15. C — No modifier (global billing)

When the performing physician owns the imaging equipment, global billing applies — no modifier is needed. -26 is for the professional component only; -TC is for the technical component only. Global = PC + TC combined.

16. D — 78452

SPECT MPI with both rest AND stress = multiple studies = 78452. 78451 = SPECT single study (rest OR stress only). 78453 = planar single study. 78454 = planar multiple studies.

17. B

The sole distinguishing factor between 69433 (local/topical) and 69436 (general anesthesia) is the type of anesthesia used. Both codes involve tympanostomy with tube insertion. The bilateral vs. unilateral distinction is determined by modifiers, not the code itself.

18. C — 70551 (global, no modifier)

When the radiologist owns the MRI equipment and performs the interpretation, both PC and TC are in the same entity — bill globally without any modifier. This is the classic definition of a global radiology service.

19. B

Ultrasound guidance (76942) is separately reportable only when: (1) the primary procedure code does NOT include guidance in its descriptor, AND (2) a permanent recorded image is obtained, AND (3) a separate written report of the imaging guidance is documented. All three conditions must be met.

20. B

IMRT uses computer-controlled linear accelerators with modulated beam intensities to deliver precise radiation doses to tumor targets while minimizing exposure to adjacent normal tissue. It is coded with 77385 (simple) or 77386 (complex). Answer A describes brachytherapy. Answer C describes Gamma Knife (77371). Answer D describes proton therapy (separate CPT category).

Section 22: Chapter Summary

📚 Key Concepts Summary — Chapter 19

- **Eye Surgery (65091–68899)** is organized by anatomical site: eyeball → anterior segment → posterior segment → ocular adnexa → conjunctiva → lacrimal system.
- **Eye removal procedures** differ by extent: evisceration (contents only, sclera intact), enucleation (whole globe), exenteration (globe + orbital contents).
- **Cataract surgery** most commonly uses phacoemulsification (66984 routine, 66982 complex). IOL insertion is included in these codes; use 66985 or 66986 only for secondary IOL procedures.
- **Bilateral cataract surgery** on the same day is reported with -RT and -LT modifiers for Medicare; commercial payers may accept -50.
- **Intravitreal injection (67028)** always requires a separate HCPCS J-code for the drug administered and a laterality modifier (RT or LT).
- **Retinal detachment repair** options include scleral buckling (67107/67108), pneumatic retinopexy (67110), and complex repair (67113). Technique determines code selection.
- **Strabismus codes** (67311–67318) are selected by the number and type of muscles operated — not the number of eyes. Add-on 67335 reports adjustable suture technique.
- **Auditory system codes (69000–69979)** are organized by ear region: external → middle → inner → temporal bone.
- **Tympanostomy (69433/69436)** includes tube insertion; choose code based on anesthesia type. Bilateral procedures require modifier -50 or -RT/-LT.
- **Cochlear implant (69930)** includes mastoidectomy in its descriptor — do

not report separately.

- **Radiology services** have three billing components: professional (-26), technical (-TC), and global (no modifier). Never report -26 and -TC from the same entity for the same service.
- **CT contrast variations:** Without (e.g., 70450), With (70460), Without then With (70470). Combined CT abdomen/pelvis codes (74176–74178) replace separate codes when both are performed together.
- **MRI contrast variations** follow the same pattern as CT: without, with, or without then with contrast — each has a distinct code per anatomical region.
- **Ultrasound guidance (76942)** is separately reportable ONLY when the primary procedure does not already include it AND permanent recorded images and a separate written report exist.
- **Nuclear medicine** provides physiological/functional imaging. SPECT MPI codes: single study = 78451; multiple studies (rest + stress) = 78452.
- **Radiation oncology** services are reported across multiple codes: planning (77261–77263), delivery (77401–77412, IMRT 77385–77386), management (77427), SRS (77371–77373), and brachytherapy (77750–77799).

Key Terms Glossary

Definitions of essential terms for Chapter 19 CPC Exam preparation.

Anti-VEGF (Anti-Vascular Endothelial Growth Factor): A class of drugs (e.g., ranibizumab, aflibercept, bevacizumab) injected intravitreally to treat wet age-related macular degeneration and other neovascular retinal conditions by inhibiting abnormal blood vessel growth.

Brachytherapy: A form of radiation therapy in which radioactive sources are placed directly inside or adjacent to a tumor, allowing delivery of high-dose radiation to the target while minimizing exposure to surrounding tissue.

Cochlear Implant: An electronic hearing device that bypasses damaged hair cells in the cochlea and directly stimulates the auditory nerve. Surgical insertion is coded with CPT 69930.

Dacryocystorhinostomy (DCR): A surgical procedure creating a new tear drainage pathway between the lacrimal sac and nasal cavity to bypass obstruction of the nasolacrimal duct. Coded with CPT 68720.

Enucleation: Surgical removal of the entire eyeball while leaving the orbital contents (muscles, fat) intact. Distinct from evisceration (contents only removed) and exenteration (globe plus orbital contents removed).

Evisceration: Removal of internal contents of the eyeball (uveal tract, lens, vitreous) while leaving the scleral shell intact. An implant may be placed within the remaining scleral shell.

Exenteration: The most radical orbital procedure — removal of the entire eyeball AND all orbital contents, potentially including eyelids and bone. Performed for malignant tumors.

Global Service (Radiology): When both the professional component (physician interpretation) and technical component (equipment, staff) of a radiology service are billed by the same entity. No modifier is appended.

IMRT (Intensity Modulated Radiation Therapy): An advanced radiation therapy technique using computer-controlled linear accelerators to deliver precisely shaped radiation doses to tumors, modulating beam intensity to minimize exposure to adjacent structures. Codes: 77385 (simple), 77386 (complex).

Intraocular Lens (IOL): A synthetic lens implanted in the eye during cataract surgery to replace the removed natural crystalline lens. IOL insertion is included in primary cataract surgery codes (66982–66984).

Intravitreal Injection: Administration of a pharmacologic agent (e.g., anti-VEGF drug, corticosteroid) directly into the vitreous cavity of the eye. Coded with CPT 67028 plus appropriate drug J-code.

Keratoplasty: Surgical replacement of part or all of the cornea with donor tissue. Penetrating keratoplasty (65730–65755) is full-thickness; endothelial keratoplasty (DSEK/DSAEK, 65756) replaces only the posterior layers.

Modifier -26 (Professional Component): Appended to a procedure code when the physician performs only the interpretation and report of an imaging or diagnostic study, without owning or operating the equipment used.

Modifier -TC (Technical Component): Appended to a procedure code when the facility or equipment owner bills for the equipment, supplies, and staff used to perform an imaging or diagnostic study, without providing interpretation.

Myringotomy: A surgical incision through the tympanic membrane to drain fluid or relieve pressure. Without tube insertion = 69420/69421. With tube insertion (tympanostomy) = 69433/69436.

Nuclear Medicine: Medical imaging using radioactive isotopes (radiopharmaceuticals) to provide physiological and functional information about organ systems, as opposed to purely anatomical imaging.

Pars Plana Vitrectomy (PPV): Surgical removal of all or part of the vitreous gel through the pars plana, used for vitreous hemorrhage, macular holes, epiretinal membranes, and as part of retinal detachment repair.

Phacoemulsification: The modern standard technique for cataract surgery using ultrasonic energy to emulsify the lens nucleus through a small incision. Most commonly reported with CPT 66984 (routine) or 66982 (complex).

Scleral Buckling: A surgical technique for retinal detachment repair in which a silicone band or sponge is sutured to the outer scleral surface to indent the eye wall and relieve vitreoretinal traction. Coded with 67107 (without vitrectomy) or 67108 (with vitrectomy).

Stapedectomy: Surgical removal of the stapes ossicle and replacement with a prosthesis, performed for otosclerosis to restore ossicular chain mobility. Coded with CPT 69660 (without footplate drill out) or 69661 (with footplate drill out).

Stereotactic Radiosurgery (SRS): Delivery of precisely targeted, high-dose radiation to a small intracranial target using multiple convergent beams. Gamma Knife = 77371; linear accelerator-based = 77372; SBRT = 77373.

Strabismus: Misalignment of the eyes due to extraocular muscle imbalance. Surgical correction involves recession (muscle weakening) or resection (muscle strengthening). CPT codes 67311–67318 are selected by number and type of muscles operated.

Tympanostomy: Incision of the tympanic membrane WITH insertion of a ventilating (pressure equalization) tube to allow drainage and air equilibration. Under local/topical anesthesia = 69433; under general anesthesia = 69436.

CPT codes referenced are from the American Medical Association Current Procedural Terminology. This document is for educational purposes only.

MEDICAL CODING MASTERY | STUDENT EDITION

CHAPTER 20

Pathology and Laboratory

CPT codes: 80047-89398

Corrina Lynch | ACL Consulting Firm | CPC Preparation

🎓 Chapter Objectives

After completing this chapter, the student will be able to:

1. Identify the organization and range of CPT codes in the Pathology and Laboratory section (80047–89398) and describe how each subsection is arranged.
2. Apply the panel bundling rule to determine when a panel code is appropriate versus when individual test codes must be reported separately.
3. Differentiate between **presumptive** and **definitive** drug testing and select the correct code range for each method.
4. Assign the correct level of **surgical pathology** (Levels I–VI, codes 88300–88309) based on specimen type, and code multiple specimens at the same session.
5. Distinguish among urinalysis methods (automated, manual, with/without microscopy) and select the appropriate code.
6. Identify key subsections of chemistry, hematology, immunology, microbiology, and molecular pathology, and assign high-yield codes for the

CPC® exam.

7. Correctly apply pathology and laboratory modifiers: **–26** (professional component), **–90** (reference laboratory), **–91** (repeat clinical diagnostic laboratory test), and **–QW** (CLIA-waived test).

8. Interpret cytopathology coding including Pap smear methods and Fine Needle Aspiration (FNA) cytology.

9. Code separately reportable add-on services including special stains, immunohistochemistry (IHC), and frozen section intraoperative consultation.

10. Demonstrate mastery of Chapter 20 content by correctly answering CPC® exam–style multiple-choice questions covering all major subsections.

1. Introduction to Pathology and Laboratory

The **Pathology and Laboratory** section of the CPT® codebook is one of the most expansive sections a coder will encounter, spanning codes **80047–89398**. This section covers every diagnostic test performed on specimens obtained from a patient, ranging from a simple urine dipstick to a complex genomic sequencing panel. For the CPC® exam, this section demands both broad familiarity and precise technical knowledge.

1.1 How Codes Are Organized

The Pathology and Laboratory section is divided into the following major subsections, organized generally by the type of test or discipline:

Subsection	Code Range	Description
Organ or Disease-Oriented Panels	80047–80081	Bundled test groups for specific clinical conditions
Drug Assay	80150–80377	Therapeutic drug

Subsection	Code Range	Description
		monitoring and drug testing
Evocative/Suppression Testing	80400–80439	Endocrine stimulation and suppression tests
Urinalysis	81000–81099	Urine testing by various methods
Molecular Pathology	81105–81599	Genetic and genomic testing
Chemistry	82009–84999	Largest subsection; analyte-based tests organized alphabetically
Hematology and Coagulation	85002–85999	Blood cell counts, coagulation studies
Immunology	86000–86849	Antibody and antigen testing
Transfusion Medicine	86850–86999	Blood typing, crossmatch, antibody screening
Microbiology	87001–87999	Cultures, sensitivity testing, rapid antigen tests
Anatomic Pathology / Cytopathology	88000–88199	Autopsy and cytopathology (including Pap smears)
Surgical Pathology	88300–88399	Gross and microscopic tissue examination
In Vivo Laboratory Procedures	88720–88749	Transcutaneous and non-invasive lab tests
Reproductive Medicine	89049–89398	Semen analysis, embryo culture, oocyte identification

1.2 Key Documentation Elements

Before assigning any laboratory code, the coder must review the following documentation elements:

- **Requisition form:** The order from the treating physician specifying which tests are ordered.

- **Test ordered:** Exact test name and method (e.g., "hemoglobin A1c by HPLC").
- **Specimen type:** Serum, plasma, whole blood, urine, tissue biopsy, swab, etc.
- **Reason for test (ICD-10-CM):** Diagnosis or sign/symptom supporting medical necessity.
- **Result report:** Documents what was actually performed — this is what gets billed.

1.3 Who Reports Laboratory Codes

A fundamental principle in laboratory coding is that **the performing laboratory reports the lab code** — not the ordering physician's office. If a physician orders a CBC and sends the specimen to an outside lab, the outside lab bills for the CBC. If the physician's office performs the test on-site, the physician's office bills for the CBC.

> 💼 **Coder's Corner**
>
> **Ordering vs. Performing:** The physician who orders the lab test reports only the evaluation and management (E/M) service or the collection fee (venipuncture, **36415**). The laboratory that analyzes the specimen reports the lab code. Never report both the ordering physician's office visit and the lab code from the same entity unless both services were truly performed at that location.

1.4 Professional Component (–26) in Pathology

Some pathology and laboratory services have both a **technical component** (the actual running of the test) and a **professional component** (the physician's interpretation and report). When a pathologist provides only the professional interpretation (e.g., reviewing a Pap smear or a cytology slide), modifier **–26** is appended to indicate the professional component only. The laboratory or hospital bills the technical component with modifier **TC**.

2. Organ or Disease-Oriented Panels (80047–80081)

2.1 What Is a Panel?

A **panel** is a predefined bundle of individual laboratory tests grouped together because they are typically ordered simultaneously for the evaluation of a specific organ system or disease state. CPT panels are strictly defined — each panel code lists the exact individual tests that must all be performed for the panel code to be reported.

> ⚠️ **Stop! Think!**
>
> **The Panel Rule:** ALL tests listed within a panel must be performed to report the panel code. If even one test from the panel is NOT performed, you MUST report each individual test separately. Conversely, do NOT report both the panel code AND the individual component tests — this constitutes unbundling and is considered fraudulent billing.

2.2 Common Panels

Panel Name	CPT Code	Included Tests
Basic Metabolic Panel (BMP)	**80047** (with ionized calcium) **80048** (with total calcium)	Calcium, carbon dioxide (CO2), chloride, creatinine, glucose, potassium, sodium, blood urea nitrogen (BUN)
Comprehensive Metabolic Panel (CMP)	**80053**	All BMP tests plus: albumin, bilirubin (total), alkaline phosphatase, ALT (SGPT), AST (SGOT), total protein
Lipid Panel	**80061**	Cholesterol (total), HDL cholesterol, LDL cholesterol (direct or

Panel Name	CPT Code	Included Tests
		calculated), triglycerides
Hepatic Function Panel	**80076**	Albumin, bilirubin (direct and total), alkaline phosphatase, ALT, AST, total protein
Obstetric Panel	**80055**	Blood typing (ABO, Rh), antibody screen, CBC with differential, hepatitis B surface antigen, rubella antibody, syphilis test (RPR or VDRL)
Renal Function Panel	**80069**	Albumin, calcium, carbon dioxide, chloride, creatinine, glucose, phosphorus, potassium, sodium, BUN
Electrolyte Panel	**80051**	Carbon dioxide, chloride, potassium, sodium
Thyroid Panel	**80091**	Free T4, TSH (Note: check current CPT for exact components)

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Coding Scenario 2-A: Panel vs. Individual Tests

Clinical Situation: A physician orders a Comprehensive Metabolic Panel (CMP). The laboratory performs all 14 tests included in the CMP.

Step 1: Verify that ALL tests in the CMP (80053) were performed. The report confirms yes — all 14 tests are resulted.

Step 2: Report the panel code.

Correct Code: **80053** – Comprehensive Metabolic Panel

Common Mistake: Reporting 80053 AND individually coding albumin (82040), glucose (82947), etc. — this is unbundling.

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Coding Scenario 2-B: Incomplete Panel

Clinical Situation: A physician orders a CMP but the patient's sample was insufficient. The laboratory is only able to report 11 of the 14 CMP tests. The three missing tests are alkaline phosphatase, ALT, and AST.

Step 1: Because all tests in the CMP were NOT performed, the panel code 80053 cannot be used.

Step 2: Report each of the 11 performed tests individually (e.g., 82040 albumin, 82247 bilirubin total, 82248 bilirubin direct, 84075 phosphatase alkaline, etc.).

Correct Codes: Individual chemistry codes for each test actually performed.

Common Mistake: Reporting 80053 even when not all components were completed.

3. Drug Testing (80300–80377)

3.1 Overview

Drug testing in the CPT codebook is divided into two distinct categories: **presumptive** and **definitive**. Understanding the difference between these two is critical — it is consistently tested on the CPC® exam.

3.2 Presumptive Drug Testing (80300–80304)

Presumptive drug testing is a screening-level test that identifies the possible presence of a drug or drug class. Results indicate only whether a drug is likely present — they do not confirm identity or quantity. These tests are often performed at the point of care (POC) using dipstick or immunoassay methods.

- Codes **80300–80304** are reported per day, regardless of how many drug classes are tested.
- Methods include: immunoassay, chromatography, enzyme-linked immunosorbent assay (ELISA).
- Used for: workplace drug screening, pain management monitoring, addiction treatment programs.

3.3 Definitive Drug Testing (80305–80377)

Definitive drug testing confirms the presence of a specific drug or metabolite and can quantify the amount. These tests use high-complexity analytical methods such as mass spectrometry (LC-MS/MS or GC-MS).

- Codes **80305–80377** are reported per drug class identified.
- Methods include: gas chromatography/mass spectrometry (GC-MS), liquid chromatography/mass spectrometry (LC-MS/MS).
- Provides court-admissible, legally defensible results.

Feature	Presumptive (80300–80304)	Definitive (80305–80377)
Purpose	Screen — is the drug possibly present?	Confirm — exactly which drug and how much?
Method	Immunoassay, dipstick,	GC-MS, LC-MS/MS, mass

	ELISA	spectrometry
Reporting Unit	Per day (regardless of # of drug classes)	Per drug class identified
Result Specificity	Possible presence; high false-positive rate	Exact drug identity and quantity
Legal Admissibility	Generally not court-admissible	Court-admissible
Setting	Often point-of-care (POC)	Typically reference laboratory

💼 Coder's Corner — CPC Exam Alert

Presumptive vs. Definitive: The CPC® exam will test you on this distinction. Remember the key difference: presumptive = screen (possible presence, billed per day); definitive = confirm (specific drug/quantity, billed per drug class). If a question says "immunoassay urine drug screen," think presumptive. If it says "mass spectrometry," think definitive.

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Coding Scenario 3-A: Presumptive Drug Testing

Clinical Situation: A pain management clinic performs a urine drug screen using immunoassay to check for opioids, benzodiazepines, cocaine metabolites, amphetamines, and THC (5 drug classes) on a single day of service.

Step 1: Identify the method — immunoassay = presumptive drug testing.

Step 2: Presumptive testing is billed per day, not per drug class. All five classes

tested on the same day = 1 code.

Correct Code: **80300** (or 80301–80304 based on specific method/instrument — check current CPT)

Common Mistake: Reporting five separate codes for each drug class — only one code per day for presumptive testing.

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Coding Scenario 3-B: Definitive Drug Testing

Clinical Situation: Following a positive presumptive screen, a reference laboratory performs LC-MS/MS definitive testing and confirms the presence of oxycodone (opioid class), alprazolam (benzodiazepine class), and buprenorphine (buprenorphine class).

Step 1: LC-MS/MS = definitive drug testing.

Step 2: Definitive testing is billed per drug class. Three drug classes confirmed = three codes.

Correct Codes: Three separate definitive drug testing codes from range **80305–80377**, one per drug class confirmed.

4. Therapeutic Drug Assays (80150–80299)

Therapeutic drug monitoring (TDM) involves measuring the concentration of a specific drug in a patient's blood to ensure the drug level is within the therapeutic

range — high enough to be effective but not so high as to be toxic. These are not drug abuse tests; they are used for patients on prescribed medications.

4.1 Common Therapeutic Drug Assay Codes

Drug Monitored	CPT Code	Clinical Use
Digoxin	**80162**	Heart failure, atrial fibrillation
Lithium	**80178**	Bipolar disorder
Phenytoin (Dilantin)	**80185** (total) **80186** (free)	Seizure disorder
Valproic Acid (Depakote)	**80164**	Epilepsy, bipolar disorder
Cyclosporine	**80158**	Transplant immunosuppression
Carbamazepine	**80156** (total) **80157** (free)	Epilepsy, trigeminal neuralgia
Tacrolimus (FK506)	**80197**	Transplant immunosuppression
Vancomycin	**80202**	MRSA and serious infections

❓ Did You Know?

Therapeutic drug assays are ordered by the treating physician — not by a toxicologist or abuse testing laboratory. These codes represent clinical monitoring, not drug abuse testing. The clinical context in the documentation is key: a digoxin level ordered for a patient with heart failure = therapeutic drug assay (80162); a digoxin level in a forensic/toxicology setting may use a different code series.

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Coding Scenario 4-A: Therapeutic Drug Monitoring

Clinical Situation: A patient with a seizure disorder on phenytoin therapy has a routine serum total phenytoin level drawn at the outpatient lab. The physician also orders a serum phenobarbital level to adjust a second antiepileptic drug.

Correct Codes: **80185** (Phenytoin, total) + **80184** (Phenobarbital)

Note: Each drug is reported separately with its own therapeutic drug assay code.

5. Evocative/Suppression Testing (80400–80439)

Evocative/suppression testing evaluates endocrine function by administering a stimulating or suppressing agent and then measuring the body's hormonal response over time. These tests are used to diagnose disorders such as Cushing's syndrome, Addison's disease, and growth hormone deficiency.

5.1 Coding Principles

- The **administration** of the provocative agent is coded separately from the **laboratory measurement**.
- Multiple blood draws taken at timed intervals are included in the panel code — do not code each blood draw separately.
- Common tests include: ACTH stimulation test, dexamethasone suppression test (DST), insulin tolerance test, arginine stimulation test.

Test Name	CPT Code	Use
ACTH Stimulation Panel (cortisol)	**80400**	Diagnose adrenal insufficiency (Addison's disease)
Dexamethasone Suppression Panel (cortisol)	**80420**	Diagnose Cushing's syndrome
Glucagon Tolerance Panel (C-peptide)	**80422**	Evaluate insulin secretion
Insulin Tolerance Panel (cortisol/growth hormone)	**80434-80435**	Diagnose growth hormone deficiency

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Coding Scenario 5-A: ACTH Stimulation Test

Clinical Situation: A patient suspected of having adrenal insufficiency has a cosyntropin (synthetic ACTH) injection administered. Serum cortisol levels are drawn at baseline, 30 minutes, and 60 minutes post-injection.

Step 1: Code the panel test for ACTH stimulation with cortisol measurement.

Step 2: Separately code the injection of cosyntropin (drug administration).

Correct Codes: **80400** (ACTH stimulation panel, cortisol) + injection code for cosyntropin administration

Note: The three cortisol draws are included in 80400 — do not code them separately.

6. Urinalysis (81000–81099)

Urinalysis (UA) is one of the most commonly ordered laboratory tests. CPT distinguishes between UA methods: automated versus manual, and with versus without microscopy.

6.1 Urinalysis Code Selection

CPT Code	Description	Method	Microscopy?
81000	Urinalysis, by dip stick or tablet reagent	Manual	Yes (with microscopy)
81001	Urinalysis, by dip stick or tablet reagent	Automated	Yes (with microscopy)
81002	Urinalysis, by dip stick or tablet reagent	Manual	No (without microscopy)
81003	Urinalysis, by dip stick or tablet reagent	Automated	No (without microscopy)
81007	Urinalysis; bacteriuria screen (except by culture)	Non-culture method	N/A
81015	Urinalysis; microscopic only	Microscopic	Yes
81025	Urine pregnancy test, by visual color comparison	Visual/ immunoassay	N/A

💼 Coder's Corner

UA Code Tip: The two key decision points for urinalysis coding are (1) automated vs. manual and (2) with vs. without microscopy. Read the lab report carefully — if the report includes a microscopic examination section (WBC, RBC,

casts, bacteria), it includes microscopy. If the report only lists dipstick results (glucose, protein, nitrites, etc.), it is without microscopy. Code **81003** is the most commonly reported UA code in outpatient settings (automated, without microscopy).

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Coding Scenario 6-A: Urinalysis

Clinical Situation: A patient presents to the physician office with dysuria. The medical assistant performs a manual urine dipstick test. Results show positive leukocyte esterase and nitrites. No microscopic examination is performed.

Correct Code: **81002** – Urinalysis, by dip stick, manual, without microscopy

Common Mistake: Reporting 81000 (which requires microscopy) when the report only shows dipstick results.

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Coding Scenario 6-B: Urine Pregnancy Test

Clinical Situation: A 24-year-old woman presents to an urgent care clinic with

missed menses. The clinic performs a urine pregnancy test using a color comparison dipstick test. Result is positive.

Correct Code: `81025` – Urine pregnancy test, by visual color comparison

Note: This code is commonly CLIA-waived and may require modifier `-QW` in some payer settings.

7. Molecular Pathology (81105–81599)

Molecular pathology encompasses laboratory tests that analyze DNA, RNA, chromosomes, proteins, and metabolites to detect heritable or somatic genetic alterations. This is the fastest-growing area of laboratory medicine and laboratory coding.

❓ **Did You Know?**

Molecular pathology is the **fastest-growing subsection** in the entire Pathology and Laboratory section. Each year, new CPT codes are added as gene sequencing becomes more accessible and clinically relevant. The Human Genome Project and advances in next-generation sequencing (NGS) have dramatically expanded the use of these tests in oncology, hereditary disease, pharmacogenomics, and infectious disease.

7.1 Tier 1 Molecular Pathology (81105–81383)

Tier 1 codes are for specific, named molecular tests. Each code describes a particular gene and the type of variant analysis performed. These tests are individually described and carry their own specific code.

7.2 Tier 2 Molecular Pathology (81400–81408)

Tier 2 codes are for molecular tests that are not individually named in Tier 1 but are grouped by level of technical complexity. Levels 1–9 reflect increasing complexity, which generally correlates with the number of variants analyzed or the complexity of interpretation.

Code Level	CPT Code	Complexity
Level 1	**81400**	Lowest complexity; simple variant analysis
Level 2	**81401**	Low complexity
Level 3	**81402**	Moderate-low complexity
Level 4	**81403**	Moderate complexity
Level 5	**81404**	Moderate-high complexity
Level 6	**81405**	High complexity
Level 7	**81406**	High complexity; multiple exons
Level 8	**81407**	Very high complexity; full gene sequencing
Level 9	**81408**	Highest complexity; large gene full sequence

7.3 Genomic Sequencing (81410–81471)

Genomic sequencing panels use next-generation sequencing (NGS) technology to analyze multiple genes simultaneously. These panels are used for hereditary cancer syndromes, aortic dysfunction, cardiomyopathy, and other multigene conditions.

7.4 MAAA — Multianalyte Assays with Algorithmic Analyses (81490–81599)

MAAAs are proprietary laboratory tests that combine multiple measured analytes with a proprietary algorithm to generate a composite score or risk prediction. Examples include OncotypeDX® and Decipher® prostate cancer tests.

7.5 Common Molecular Pathology Codes

Gene/Test	CPT Code	Clinical Use
BRCA1/BRCA2 (full sequence + deletion/duplication)	**81162**	Hereditary breast and ovarian cancer risk
BRCA1 (full sequence analysis)	**81214**	Hereditary breast cancer risk
KRAS (targeted sequence analysis)	**81275**	Colorectal cancer — response to anti-EGFR therapy
Factor V Leiden (F5, targeted variant analysis)	**81241**	Thrombophilia risk assessment
EGFR (targeted gene sequence)	**81235**	Non-small cell lung cancer — targeted therapy eligibility
JAK2 (targeted variant)	**81270**	Myeloproliferative neoplasms (polycythemia vera)
BCR/ABL1 oncogene analysis (major bp)	**81206**	CML diagnosis and monitoring imatinib therapy

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Coding Scenario 7-A: BRCA1/BRCA2 Testing

Clinical Situation: A 38-year-old woman with a strong family history of breast and ovarian cancer undergoes full sequence analysis and deletion/duplication analysis of both BRCA1 and BRCA2 genes.

Correct Code: **81162** – BRCA1 and BRCA2 gene analysis, full sequence and full

duplication/deletion analysis

Note: This single code covers both genes when both are fully analyzed together. Do not code BRCA1 and BRCA2 separately if the combined analysis code applies.

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Coding Scenario 7-B: KRAS Mutation Testing

Clinical Situation: A patient with metastatic colorectal cancer has a tumor biopsy sent for KRAS gene mutation analysis to determine eligibility for anti-EGFR therapy (cetuximab).

Correct Code: **81275** – KRAS (Kirsten rat sarcoma viral proto-oncogene), targeted sequence analysis

Common Mistake: Coding this as a surgical pathology code — molecular tests are coded separately from the pathology exam of the tissue specimen.

8. Chemistry (82009–84999)

The **Chemistry** subsection is the largest in the Pathology and Laboratory section, containing hundreds of individual codes organized **alphabetically by the name of the analyte** (the substance being measured). Coders must know the clinical names for common tests and their CPT equivalents.

8.1 Quantitative vs. Qualitative Tests

- **Quantitative test:** Measures the exact amount of a substance (e.g., serum glucose = 142 mg/dL). These codes often use the word "quantitative" or just list a numeric result.
- **Qualitative test:** Identifies whether a substance is present or absent (positive/negative). Some chemistry codes specify "qualitative" or "any method" — the result is not a number but a yes/no.

8.2 High-Yield Chemistry Codes for CPC® Exam

Test Name	CPT Code	Clinical Significance
Albumin (serum)	**82040**	Liver function, nutritional status
Blood Glucose	**82947** (quantitative) **82948** (blood glucose, reagent strip) **82950** (post glucose dose)	Diabetes monitoring, hypoglycemia
Calcium (total)	**82310**	Parathyroid function, bone disease, malignancy
Cholesterol (total)	**82465**	Cardiovascular risk assessment
Creatinine (serum)	**82565**	Kidney function
Creatinine (urine)	**82570**	Kidney function, urine specimen integrity
Hemoglobin A1c (HbA1c)	**83036**	Long-term diabetes control (3-month average glucose)
Iron (serum)	**83540**	Anemia workup
PSA — Prostate Specific Antigen (total)	**84153**	Prostate cancer screening/monitoring
PSA (free)	**84154**	Prostate cancer risk stratification
TSH — Thyroid Stimulating Hormone	**84443**	Thyroid function screening
T3 (triiodothyronine,	**84480**	Hyperthyroidism

Test Name	CPT Code	Clinical Significance
total)		evaluation
T3 (free)	**84481**	Thyroid function (more sensitive)
T4 (thyroxine, total)	**84436**	Thyroid function
T4 (free)	**84439**	Thyroid function (more accurate in pregnancy)
Troponin I (quantitative)	**86002*** **84484**	Acute myocardial infarction diagnosis
BNP — B-type natriuretic peptide	**83880**	Heart failure diagnosis and monitoring
Magnesium	**83735**	Electrolyte imbalance, preeclampsia monitoring
Phosphorus (serum)	**84100**	Renal disease, parathyroid disorders
Potassium (serum)	**84132**	Electrolyte status, cardiac monitoring
Sodium (serum)	**84295**	Fluid/electrolyte balance
Uric Acid (serum)	**84550**	Gout, tumor lysis syndrome

*Verify current CPT edition for troponin code — codes may vary by edition year.

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Coding Scenario 8-A: Thyroid Function Testing

Clinical Situation: A patient with hypothyroidism on levothyroxine has TSH, free T4, and total T3 ordered for medication management.

Correct Codes: **84443** (TSH) + **84439** (T4, free) + **84480** (T3, total)

Note: Each analyte is coded separately unless a panel code exists for the exact combination ordered.

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Coding Scenario 8-B: Diabetes Monitoring

Clinical Situation: A diabetic patient has a fasting glucose and HbA1c drawn at the same visit for routine diabetes management.

Correct Codes: **82947** (glucose, quantitative) + **83036** (hemoglobin A1c)

Note: These are separate analytes — code each one individually.

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Coding Scenario 8-C: Cardiac Biomarkers

Clinical Situation: A patient presents to the ED with chest pain. The physician orders troponin I (quantitative) and BNP to evaluate for MI and heart failure.

Correct Codes: **84484** (troponin I, quantitative) + **83880** (BNP)

Common Mistake: Combining these into a non-existent panel code. Each

cardiac biomarker has its own code.

9. Hematology and Coagulation (85002–85999)

9.1 Complete Blood Count (CBC)

The **Complete Blood Count (CBC)** is one of the most frequently ordered laboratory tests. CPT distinguishes between CBC types based on whether a **differential** is included and whether it is automated or manual.

CPT Code	Description	Components Included
85025	CBC with automated differential WBC count	WBC, RBC, Hgb, Hct, MCV, MCH, MCHC, RDW, platelets, automated differential (neutrophils, lymphocytes, monocytes, eosinophils, basophils)
85027	CBC without differential	WBC, RBC, Hgb, Hct, MCV, MCH, MCHC, RDW, platelets
85007	Blood count; manual differential WBC count	Manual review and count of white blood cell types on peripheral smear
85004	Automated differential WBC count	Automated differential only (used as add-on to blood count)

💼 **Coder's Corner**

CBC Code Selection: **85025** is the most common CBC code ordered in practice — it includes an automated differential. If the question says "CBC with manual differential" or "morphology review by pathologist," add code **85007** or a blood

smear code. If the CBC is ordered "without differential," use **85027**.

9.2 Individual Hematology Tests

Test	CPT Code	Description
Hemoglobin	**85018**	Measures hemoglobin concentration in blood
Hematocrit	**85014**	Measures percentage of RBCs in blood volume
Platelet Count	**85049**	Automated platelet count
Blood Smear Review (pathologist)	**85060**	Peripheral blood smear interpretation by a physician
Sickle Cell Test	**85660**	Qualitative screen for sickle cell hemoglobin
ESR (Erythrocyte Sedimentation Rate) — Manual	**85651**	Inflammation marker; manual method
ESR — Automated	**85652**	Inflammation marker; automated method
Reticulocyte Count	**85044** (manual) **85045** (automated)	Evaluates bone marrow response to anemia

9.3 Coagulation Studies

Test	CPT Code	Clinical Use
Prothrombin Time (PT/INR)	**85610**	Monitor warfarin therapy; evaluate extrinsic clotting pathway
Activated Partial Thromboplastin Time (PTT/APTT)	**85730**	Monitor heparin therapy; evaluate intrinsic clotting pathway
Fibrinogen (activity)	**85384**	DIC, bleeding disorders, clot formation evaluation

Test	CPT Code	Clinical Use
D-Dimer	**85379**	DVT/PE screening; DIC
Thrombin Time	**85670**	Evaluate fibrinogen function

📋 Coding Scenario 9-A: CBC with Coagulation

Clinical Situation: A patient on warfarin for atrial fibrillation has a CBC with automated differential, PT/INR, and fibrinogen drawn for routine monitoring.

Correct Codes: **85025** (CBC with automated differential) + **85610** (PT/INR) + **85384** (fibrinogen)

📋 Coding Scenario 9-B: Anemia Workup

Clinical Situation: A patient presents with fatigue. The physician orders a CBC without differential, reticulocyte count (automated), ESR (automated), and a blood smear interpretation by the on-call pathologist.

Correct Codes: **85027** (CBC without differential) + **85045** (reticulocyte count,

automated) + **85652** (ESR, automated) + **85060** (blood smear, physician interpretation)

10. Immunology (86000–86849)

The **Immunology** subsection covers tests that measure the immune system's response to antigens, including antibodies, antigens, and complement proteins. This section is critical for diagnosing autoimmune diseases, infectious diseases, and blood type compatibility.

10.1 Common Immunology Tests

Test	CPT Code	Clinical Use
ANA (Antinuclear Antibody)	**86038–86039**	Systemic lupus erythematosus (SLE), autoimmune screening
Rheumatoid Factor (RF)	**86431**	Rheumatoid arthritis diagnosis
HIV-1 Antibody	**86701**	HIV-1 infection screening
HIV-2 Antibody	**86702**	HIV-2 infection screening
HIV-1/HIV-2 Antibody (both)	**86703**	Combined HIV-1 and HIV-2 antibody screen
HIV Antigen/Antibody Combination (4th gen)	**87389**	Early HIV detection (p24 antigen + Ab); now in microbiology
Hepatitis B Surface Antigen (HBsAg)	**87340**	Active Hepatitis B infection
Hepatitis B Surface Antibody (anti-HBs)	**86706**	Immunity to Hepatitis B (post-vaccination)
Hepatitis C Antibody	**86803**	Hepatitis C infection screening
ABO Blood Type	**86900**	Pre-transfusion blood typing

Test	CPT Code	Clinical Use
Rh (D) Blood Type	**86901**	Pre-transfusion Rh factor determination
Complement C3	**86160**	Autoimmune disease, complement pathway evaluation
Complement C4	**86161**	Autoimmune disease, lupus evaluation

📋

Coding Scenario 10-A: HIV and Hepatitis Screening

Clinical Situation: A new patient's initial lab workup includes: HIV-1/HIV-2 antibody combined test, Hepatitis B surface antigen, and Hepatitis C antibody.

Correct Codes: **86703** (HIV-1/HIV-2 Ab combined) + **87340** (HBsAg) + **86803** (HCV Ab)

Note: **87340** is in the Microbiology section, not Immunology — it's an antigen test, not an antibody test. The HCV antibody (86803) is in Immunology.

📋

Coding Scenario 10-B: Autoimmune Workup

Clinical Situation: A patient with joint pain, butterfly rash, and fatigue has ANA, rheumatoid factor, complement C3, and complement C4 ordered.

Correct Codes: **86039** (ANA, titer) + **86431** (RF) + **86160** (C3) + **86161** (C4)

11. Transfusion Medicine (86850–86999)

Transfusion medicine codes cover the laboratory procedures required to ensure safe blood transfusion compatibility between donor and recipient.

Test	CPT Code	Description
Antibody Screen (RBC)	**86850**	Screens patient serum for unexpected antibodies to red blood cells
Antibody Identification (RBC)	**86870**	Identifies specific antibody when screen is positive
Direct Antiglobulin Test (DAT/Coombs)	**86880**	Detects antibodies bound to patient's RBCs; diagnoses hemolytic anemia
Crossmatch (immediate spin)	**86920**	Basic compatibility test between donor blood and recipient serum
Crossmatch (antihuman globulin)	**86923**	Full compatibility test — more sensitive than immediate spin

📋

Coding Scenario 11-A: Pre-transfusion Testing

Clinical Situation: A patient admitted for elective hip replacement requires type and screen pre-operatively. ABO typing, Rh typing, and antibody screen are performed.

Correct Codes: **86900** (ABO) + **86901** (Rh) + **86850** (antibody screen)

Note: This is commonly called a "type and screen." If the screen is positive, 86870 (antibody identification) would be added.

12. Microbiology (87001–87999)

The **Microbiology** subsection covers cultures, sensitivity testing, rapid antigen tests, and molecular pathogen detection. This section is heavily tested on the CPC® exam because of the variety of test types and the separately reportable nature of sensitivity testing.

12.1 Cultures

Culture Type	CPT Code	Description
Blood Culture (aerobic/anaerobic)	**87040**	Detects bacteremia/septicemia; includes isolation and presumptive identification
Urine Culture (quantitative, aerobic)	**87086**	UTI workup; colony count reported
Urine Culture (presumptive, any	**87088**	Isolation of each organism

Culture Type	CPT Code	Description
source)		
Throat/Wound/Other Culture (aerobic)	**87070**	General aerobic culture — any source except urine
Culture, anaerobic organisms	**87075**	Abscess, wound anaerobic culture
Culture, fungi (mold/yeast)	**87102**	Fungal culture from any source
Culture, mycobacteria	**87116**	TB and other mycobacterial infections
Sensitivity Testing — Disk (per plate)	**87184**	Antibiotic susceptibility by disk diffusion (Kirby-Bauer)
Sensitivity Testing — MIC (per agent)	**87186**	Minimum inhibitory concentration for antibiotic selection

💼 Coder's Corner — Sensitivity Testing

Sensitivity Testing Is Separately Reportable: When a culture grows an organism and the laboratory then performs antibiotic sensitivity testing (susceptibility testing), the sensitivity testing is coded in addition to the culture code. For example, a urine culture (87086) that grows E. coli with disk sensitivity testing (87184) = two codes: **87086** + **87184**. This is commonly tested on the CPC® exam.

12.2 Rapid Antigen and Molecular Tests — High Yield

Test	CPT Code	Description
Rapid Strep (GAS antigen)	**87880**	Rapid group A Streptococcus antigen detection
Influenza A/B (rapid)	**87804**	Rapid influenza antigen

Test	CPT Code	Description
		detection
COVID-19 Ag (rapid)	**87811**	Rapid SARS-CoV-2 antigen detection
COVID-19 (NAAT/molecular)	**87635**	SARS-CoV-2 nucleic acid amplification test
Hepatitis B Surface Antigen (HBsAg)	**87340**	Active Hepatitis B infection (antigen detection)
Chlamydia (nucleic acid)	**87491**	Chlamydia trachomatis NAAT
Gonorrhea (nucleic acid)	**87591**	Neisseria gonorrhoeae NAAT
HPV (high risk types)	**87621**	High-risk HPV nucleic acid detection
HPV (types 16 and 18 only)	**87624**	HPV genotype 16 and 18 specific detection
RSV (respiratory syncytial virus)	**87420**	RSV antigen detection

📋

Coding Scenario 12-A: Urine Culture with Sensitivity

Clinical Situation: A patient presents with dysuria and cloudy urine. The physician orders a urine culture. The laboratory performs a quantitative aerobic urine culture (87086). The culture grows E. coli at >100,000 CFU/mL. The laboratory then performs disk diffusion sensitivity testing.

Correct Codes: **87086** (urine culture, quantitative, aerobic) + **87184** (sensitivity, disk, per plate)

Common Mistake: Reporting only the culture code and missing the separately reportable sensitivity testing.

📋 Coding Scenario 12-B: Rapid Testing Panel

Clinical Situation: A 7-year-old child presents with sore throat and fever. The pediatric office performs a rapid strep test (87880) and a rapid influenza A/B test (87804). Both are negative.

Correct Codes: **87880** (rapid strep antigen) + **87804** (rapid influenza A/B)

Note: Negative results are still reported and billed — the test was performed regardless of outcome.

📋 Coding Scenario 12-C: STI Testing

Clinical Situation: A 22-year-old woman presents for STI screening. The physician orders Chlamydia and Gonorrhea NAATs from a cervical swab.

Correct Codes: 87491 (Chlamydia NAAT) + 87591 (Gonorrhea NAAT)

Note: Even though they are often performed from the same swab, Chlamydia and GC NAATs are coded separately.

13. Anatomic Pathology and Cytopathology (88000–88199)

13.1 Postmortem Examination (Autopsy) — 88000–88099

Autopsy codes cover postmortem (after-death) examination of a body. Codes differ based on the extent of examination (gross only vs. gross and microscopic) and whether the examination is limited (head only, chest, etc.) or complete.

CPT Code	Description
88000	Necropsy (autopsy), gross examination only; without central nervous system
88005	Necropsy; gross and microscopic, without central nervous system
88007	Necropsy; gross and microscopic, with brain
88012	Necropsy; infant with brain
88025	Necropsy; forensic examination

13.2 Cytopathology

Cytopathology is the examination of individual cells (rather than tissue sections) to detect disease. The most common application is cervical/vaginal cytopathology (Pap smear). Cytopathology also includes fine needle aspiration (FNA) cytology and other body fluid cytology.

13.3 Pap Smear Coding

CPT Code	Description	Method
88141	Cervicovaginal cytopathology; manual screening under physician supervision	Manual, conventional smear, physician interpretation
88142	Cervicovaginal cytopathology; manual screening (ThinPrep or liquid-based)	Manual, liquid-based
88147	Cervicovaginal cytopathology; automated system with manual rescreening	Automated + manual rescreed (conventional smear)
88148	Cervicovaginal cytopathology; automated system without manual rescreening	Automated only (conventional smear)
88174	Cervicovaginal cytopathology; automated system without manual rescreening (liquid-based)	Automated, liquid-based (e.g., ThinPrep automated)
88175	Cervicovaginal cytopathology; automated system with manual rescreening (liquid-based)	Automated + manual rescreening, liquid-based
88155	Cervicovaginal cytopathology; definitive hormonal evaluation	Hormonal evaluation add-on

13.4 Fine Needle Aspiration (FNA) Cytology

Fine Needle Aspiration (FNA) cytology involves aspirating cells from a mass using a fine-gauge needle and examining those cells microscopically for malignancy.

- **88172** – Cytopathology, evaluation of FNA, immediate assessment including preparation of smears
- **88173** – Cytopathology, interpretation and report of FNA
- **88177** – Each additional evaluation during same encounter (add-on)

13.5 Other Cytopathology

- **88160** – Cytopathology, smears from any source other than cervical or vaginal; screening and interpretation
- **88162** – Extended study involving more than 5 slides; interpretation

14. Surgical Pathology (88300–88399)

Surgical pathology is the examination of tissue specimens removed during a surgical procedure. This is arguably the most important subsection for CPC® exam preparation — the six levels of surgical pathology are consistently tested, and the rules for coding them are specific and unforgiving.

14.1 The Six Levels of Surgical Pathology

Surgical pathology codes are assigned based on the **type of specimen** submitted, not on the diagnosis rendered. The CPT codebook lists specific specimen types under each level — coders must match the specimen to the correct level.

> ⚠️ **Stop! Think!**
>
> **Level is determined by SPECIMEN TYPE, not by diagnosis.** A benign breast biopsy and a malignant breast biopsy are both coded at Level IV (88305) because the specimen type is the same. The diagnosis (benign vs. malignant) does not change the surgical pathology level. Always look up the specimen type in the CPT codebook under the correct level descriptor.

Level	CPT Code	Exam Type	Examples of Specimens
Level I	**88300**	Gross examination ONLY — no tissue processing, no microscopy	Foreign body; calculus; products of conception (gross only); foreskin (newborn)
Level II	**88302**	Gross AND microscopic — simple, low-risk specimens	Appendix (incidental, no perforation); fallopian tube (ectopic pregnancy); hernia sac; testis (castration); vas deferens
Level III	**88304**	Gross AND microscopic — moderate complexity	Abortion (induced); cyst (pilonidal); skin (shave, punch biopsy — benign); polyp (small intestine); uterus (post-partum); tonsil/adenoid (routine)
Level IV	**88305**	Gross AND microscopic — most commonly reported level	Appendix (rupture/abscess); bone marrow (biopsy); breast (biopsy); colon (polyp, biopsy); endometrium (biopsy, curettage); gallbladder; kidney (biopsy); liver (biopsy); lung (transbronchial biopsy); lymph node (biopsy); nerve (biopsy); prostate (needle biopsy); skin (excision); stomach (biopsy)

Level	CPT Code	Exam Type	Examples of Specimens
Level V	**88307**	Gross AND microscopic — complex specimens; organ resections	Colon (segmental resection — no malignancy); kidney (partial/total nephrectomy); larynx (partial/total); lung (lobectomy/pneumonectomy); ovary (with or without tube — neoplasm); pancreas (biopsy); prostate (TUR chips); thyroid gland; uterus (fibroid); vertebral segment
Level VI	**88309**	Gross AND microscopic — most complex; total resections for malignancy	Bone resection for malignancy; colon (total resection for malignancy); esophagus; kidney (radical nephrectomy); prostate (radical prostatectomy); soft tissue tumor (extensive resection); uterus + cervix + ovaries (radical hysterectomy); Whipple procedure (pancreaticoduodenectomy)

💼 **Coder's Corner — Know Your Level IV Cold**

88305 is the most commonly tested surgical pathology code on the CPC® exam. Memorize the Level IV specimen list. The most commonly

appearing Level IV specimens in exam questions are: breast biopsy, colon polyp biopsy, prostate needle biopsy, endometrial biopsy, skin excision, bone marrow biopsy, and liver biopsy. When in doubt, Level IV is the most common level for biopsies of major organs.

14.2 Multiple Specimens at the Same Session

When multiple specimens are submitted at the same operative session, each specimen is coded and billed **separately** at its appropriate level. There is no bundling of specimens at surgical pathology — each tissue piece gets its own code.

Example: If a colonoscopy yields three separate polyp biopsies submitted as three separate specimens in three separate jars, each polyp is coded as **88305** × 3.

14.3 Separately Reportable Add-On Services

Service	CPT Code	Description
Special Stains — Group I	**88312**	Special stains other than routine (e.g., PAS, AFB, Gram, GMS, Mucicarmine) — per stain
Special Stains — Group II (connective tissue)	**88313**	Special stains for connective tissue components — per stain
Special Stains — Group III (immunofluorescence)	**88314**	Histochemical staining with frozen section — per stain
Immunohistochemistry (IHC) — first antibody	**88342**	First IHC stain performed on a single block
Immunohistochemistry (IHC) — each additional antibody (add-on)	**88341**	Each additional antibody stain after the first; add-on code, list separately
IHC, each additional single antibody stain procedure (multiplex)	**88344**	Each multiplex antibody stain procedure
Frozen Section	**88331**	Initial tissue block frozen

Service	CPT Code	Description
(intraoperative consultation)		and read during surgery — first specimen
Frozen Section — additional tissue block (add-on)	88332	Each additional tissue block frozen and read during same procedure

📋

Coding Scenario 14-A: Colonoscopy — Three Polyps (Three Specimens)

Clinical Situation: A 62-year-old male undergoes colonoscopy. Three separate polyps are removed via snare polypectomy and submitted in three separate specimen jars: Specimen A (sigmoid colon polyp), Specimen B (transverse colon polyp), and Specimen C (ascending colon polyp).

Step 1: Look up "colon, polyp, biopsy" in the surgical pathology level table → Level IV (88305).

Step 2: Each polyp is a separate specimen = code each separately.

Correct Codes: 88305 × 3 (three separate units)

Common Mistake: Reporting 88305 only once for all three polyps — each specimen submitted separately is billed separately.

📋

Coding Scenario 14-B: Level Determination — Surgical Pathology

Clinical Situation: An excisional biopsy of a breast mass is performed. The specimen is submitted for gross and microscopic examination. The final diagnosis is fibroadenoma (benign).

Step 1: Look up "breast, biopsy" — Level IV (88305).

Step 2: The diagnosis (benign) does NOT affect the level. The specimen type (breast biopsy) determines the level.

Correct Code: **88305** – Surgical pathology, gross and microscopic examination, Level IV

📋 Coding Scenario 14-C: Frozen Section During Surgery

Clinical Situation: During a partial mastectomy, the surgeon sends the excised breast tissue to pathology for intraoperative frozen section consultation to assess margins. The pathologist examines one tissue block.

Correct Code: **88331** (frozen section, first tissue block) + **88305** (permanent section, Level IV — reported after surgery is complete)

Note: The frozen section and the permanent (paraffin) section are both separately reportable. 88331 is for the intraoperative consultation; 88305 is for

the final pathology examination.

📋 Coding Scenario 14-D: Special Stains with Pathology

Clinical Situation: A liver biopsy (Level IV, 88305) is performed for suspected cirrhosis. In addition to routine H&E staining, the pathologist orders a PAS stain and a Masson's trichrome stain to evaluate fibrosis and glycogen content.

Correct Codes: **88305** (Level IV, liver biopsy) + **88312** × 2 (two special stains, one per stain)

Note: Special stains are coded per stain and are separately reportable from the base surgical pathology level code.

📋 Coding Scenario 14-E: Immunohistochemistry

Clinical Situation: A skin excision (Level IV) is submitted. The pathologist diagnoses malignant melanoma and orders three IHC stains: S-100, HMB-45,

and MelanA to confirm the diagnosis.

Correct Codes: **88305** (Level IV, skin excision) + **88342** (first IHC antibody, S-100) + **88341** × 2 (two additional antibodies: HMB-45 and MelanA)

Common Mistake: Reporting 88342 × 3 instead of 88342 × 1 and 88341 × 2. Code 88341 is the add-on code for additional antibodies after the first.

15. In Vivo Laboratory Procedures (88720–88749)

In vivo laboratory procedures are tests performed on the living patient without obtaining a specimen.

CPT Code	Test	Description
88720	Bilirubin, total, transcutaneous	Non-invasive bilirubin measurement; common in neonatal jaundice monitoring
88738	Hemoglobin, transcutaneous	Non-invasive hemoglobin estimation

💼 Coder's Corner

Pulse Oximetry Note: Pulse oximetry (SpO2) is NOT coded from the Pathology and Laboratory section. It is found in the Medicine section (**94760-94762**). Do not confuse transcutaneous bilirubin (88720) with pulse oximetry when coding from operative or nursing notes.

16. Reproductive Medicine (89049–89398)

The **Reproductive Medicine** subsection covers laboratory procedures performed in support of assisted reproductive technology (ART), including semen analysis, embryo culture, and oocyte identification.

CPT Code	Test	Description
89300	Semen analysis (complete)	Count, motility, and morphology
89310	Semen analysis (motility and count only)	Post-vasectomy check; fertility monitoring
89321	Semen analysis (presence and/or motility only)	Qualitative test
89250	Culture and fertilization of oocyte(s)	IVF — embryo culture after oocyte retrieval
89255	Preparation of embryo for transfer	IVF — embryo preparation for transfer

📋

Coding Scenario 16-A: Semen Analysis

Clinical Situation: A male patient presents to a fertility clinic. A complete semen analysis is ordered, including sperm count, motility, and morphology.

Correct Code: 89300 – Semen analysis; with count, motility, and morphology

Note: If only post-vasectomy check (motility and count only) were ordered, report 89310 instead.

17. Pathology and Laboratory Modifiers

Modifiers in pathology and laboratory coding allow coders to communicate special circumstances about how a test was performed, by whom, or the clinical context of the test. These modifiers are heavily tested on the CPC® exam.

Modifier	Name	When to Use	Example
–26	Professional Component	When the physician provides only the interpretation and report of a test (not the technical performance). Common in pathology, radiology.	A pathologist employed by a hospital reviews and interprets Pap smear slides; the hospital runs the technical component. Pathologist bills: 88142–26
–90	Reference (Outside) Laboratory	When the ordering physician's office collects the specimen but sends it to an outside (reference) laboratory for testing. The ordering office bills for the test using –90.	Physician's office collects blood and sends to Quest Diagnostics for CBC. Physician office bills 85025–90.
–91	Repeat Clinical Diagnostic Lab Test	When the same lab test must be repeated on the same day to obtain subsequent results. NOT used for lab errors — only for medically necessary repeats for serial monitoring.	A patient with DKA has serial glucose levels drawn every 2 hours. After the first glucose (82947), each repeat on the same day is coded 82947–91.
-QW	CLIA-Waived Test	Used for tests performed under	A physician's office performs a

Modifier	Name	When to Use	Example
		a CLIA waiver certificate. Required by some payers to identify tests performed at the lowest CLIA complexity level (e.g., urine dipstick, rapid strep, urine pregnancy test).	urine pregnancy test with a CLIA-waived certificate: 81025–QW
TC	Technical Component	Used when a facility or laboratory provides only the technical component (performing the test) without professional interpretation.	Hospital lab performs cytopathology slide preparation; pathologist employed elsewhere reads slides. Hospital bills: 88142–TC
–59	Distinct Procedural Service	Used to indicate that a procedure or service is distinct or independent from other services performed on the same day. In lab, used to bypass National Correct Coding Initiative (NCCI) edits when appropriate.	Two separate bacterial cultures (different sites) performed same day may require –59 to indicate they are distinct services.

⚠️ Stop! Think! — Modifier –91 vs. –59

Modifier –91 is used when the SAME test is repeated on the SAME day for clinical reasons (serial results needed — not due to equipment or sample failure). **Do NOT use –91** if the test is repeated because of a faulty specimen or lab error. **Modifier –59** is used to indicate a distinctly separate and different procedure or service on the same day — it does not mean "same test,

repeated." These are NOT interchangeable on the CPC® exam.

18. Real-World Coding Scenarios

📋

Real-World Scenario A: CMP with Additional Individual Tests

Lab Requisition: Physician orders Comprehensive Metabolic Panel, TSH, and HbA1c for a patient with diabetes and hypertension.

Laboratory Report: All 14 CMP components reported. TSH and HbA1c also resulted.

Step-by-Step Analysis:

1. CMP (80053): All 14 components performed → report 80053.
2. TSH (84443): Individually ordered and performed, not part of CMP → report 84443 separately.
3. HbA1c (83036): Individually ordered and performed → report 83036 separately.

Final Codes: **80053** + **84443** + **83036**

Common Mistake: Unbundling the CMP components AND also reporting individual codes for the same tests. Report the panel code plus only the separately ordered tests not included in the panel.

📋 Real-World Scenario B: Colonoscopy — Three Polyps

Pathology Report Excerpt: "Specimen A: Sigmoid colon polyp, tubular adenoma. Specimen B: Transverse colon polyp, hyperplastic. Specimen C: Cecal polyp, tubulovillous adenoma."

Step-by-Step Analysis:

1. Look up "colon, polyp, biopsy" in CPT surgical pathology table → Level IV (88305).
2. Three separate specimens = three separate Level IV codes.
3. The diagnoses (tubular adenoma, hyperplastic, tubulovillous adenoma) do NOT change the level — the specimen type determines the level.

Final Codes: **88305** × 3

Common Mistake: Reporting a higher level for the tubulovillous adenoma because it sounds more complex. Polyp type does not change the surgical pathology level.

📋 Real-World Scenario C: Urine Culture with Sensitivity

Lab Report: "Urine culture, quantitative aerobic: Greater than 100,000 CFU/mL Escherichia coli. Sensitivity testing performed by disk diffusion (Kirby-Bauer)."

Step-by-Step Analysis:

1. Urine culture, quantitative, aerobic = 87086.
2. Sensitivity testing by disk diffusion = 87184 (separately reportable — not bundled into the culture code).

Final Codes: **87086** + **87184**

Common Mistake: Reporting only 87086 and not adding 87184 for sensitivity testing. Sensitivity testing is ALWAYS separately reportable.

📋

Real-World Scenario D: Pap Smear (ThinPrep, Automated with Bethesda Reporting)

Lab Report: "Cervicovaginal cytopathology; liquid-based (ThinPrep) preparation; automated (imager-assisted) screening with manual physician review and Bethesda System report. Result: NILM (Negative for Intraepithelial Lesion or Malignancy)."

Step-by-Step Analysis:

1. Liquid-based (ThinPrep) + automated screening + manual physician rescreening = 88175.
2. No additional codes needed — 88175 includes automated + manual

rescreening for liquid-based specimens.

Final Code: **88175**

Common Mistake: Reporting 88174 (automated, liquid-based, without manual rescreening) when the report specifies BOTH automated AND manual rescreening — that combination is 88175.

📋

Real-World Scenario E: HIV + Hepatitis B + RPR Panel

Lab Requisition: Physician orders HIV-1/HIV-2 combined antibody, Hepatitis B surface antigen, and RPR (syphilis screen) for a new patient.

Step-by-Step Analysis:

1. HIV-1/HIV-2 combined antibody = 86703 (Immunology).
2. Hepatitis B surface antigen = 87340 (Microbiology — this is an antigen detection test, not an antibody test).
3. RPR (syphilis screen, qualitative) = 86592 (Immunology).
4. These three tests do not constitute a named panel; code each individually.

Final Codes: **86703** + **87340** + **86592**

Common Mistake: Looking for a "panel" code when none exists for this exact combination. Code individual tests when no CPT panel covers the combination ordered.

📋

Real-World Scenario F: Radical Prostatectomy + IHC × 3

Pathology Report Excerpt: "Specimen: Radical prostatectomy, total. Final Diagnosis: Prostatic adenocarcinoma, Gleason 4+4=8. Immunohistochemistry performed: PSA (positive), PSAP (positive), Ki-67 (30% proliferative index)."

Step-by-Step Analysis:

1. Specimen: Radical prostatectomy = Level VI (88309) — total resection for malignancy.
2. IHC: Three antibodies performed (PSA, PSAP, Ki-67).
3. First antibody (PSA) = 88342. Second antibody (PSAP) = 88341 (add-on). Third antibody (Ki-67) = 88341 (add-on).

Final Codes: **88309** + **88342** + **88341** × 2

Common Mistake: (1) Coding prostate needle biopsy (88305) instead of radical prostatectomy (88309) — the specimen type is the total gland resection, not a needle biopsy. (2) Reporting 88342 × 3 instead of 88342 × 1 and 88341 × 2.

19. Chapter Review — 20 Multiple Choice Questions

Select the best answer for each question. Answers and rationale are provided at the end of this section.

1. **A physician orders a Comprehensive Metabolic Panel (CMP). The laboratory performs all 14 required components. Which code is reported?**

   A. Each of the 14 individual test codes

   B. 80053

   C. 80048 and 80076

   D. 80053 plus individual codes for albumin and glucose

2. **A laboratory performs a urine drug screen using immunoassay technology and identifies possible presence of opioids, cocaine, and benzodiazepines on the same day. How is this reported?**

   A. Three separate codes, one per drug class

   B. One presumptive drug testing code for the day

   C. Three definitive drug testing codes

   D. One code with modifier –59 for each drug class

3. **A urine culture grows Staphylococcus aureus. The laboratory then performs disk diffusion antibiotic susceptibility testing. Which codes are reported?**

   A. 87086 only

   B. 87086 and 87184

   C. 87088 and 87190

   D. 87070 and 87184

4. **A pathologist employed by a hospital interprets a ThinPrep (liquid-based) Pap smear prepared by the laboratory using automated screening with manual physician rescreening. Which code and modifier are reported by the pathologist?**

   A. 88142

   B. 88175–26

   C. 88174–TC

   D. 88141–26

5. **A colonoscopy removes two polyps in separate jars. Pathology confirms tubular adenoma (sigmoid) and hyperplastic polyp**

(ascending colon). Which surgical pathology codes are reported?

A. 88305 and 88304

B. 88305 × 2

C. 88307 × 2

D. 88305 only — hyperplastic polyps do not require additional coding

6. **A CBC is ordered with a differential to be examined manually by a laboratory technician on a peripheral smear. Which code is reported?**

A. 85025

B. 85027

C. 85025 and 85007

D. 85007 only

7. **Which modifier is appended when a physician's office collects a specimen and sends it to an outside reference laboratory for testing, and the physician's office bills for the test?**

A. –26

B. –91

C. –90

D. –QW

8. **A radical prostatectomy specimen is submitted to surgical pathology. Which code level is correct?**

A. Level IV — 88305

B. Level V — 88307

C. Level VI — 88309

D. Level III — 88304

9. **A patient in the intensive care unit on warfarin requires serial PT/INR testing every 4 hours throughout the same day. After the initial test, how is each subsequent PT/INR coded?**

A. 85610 without modifier

B. 85610–59

C. 85610–91

D. 85610–QW

10. **Which of the following is a CLIA-waived test that requires modifier –QW when performed in a physician's office under a CLIA waiver?**

    A. BRCA1 full sequence analysis

    B. LC-MS/MS definitive drug testing

    C. Urine pregnancy test by visual color comparison

    D. Troponin I quantitative

11. **Definitive drug testing using LC-MS/MS confirms the presence of oxycodone, alprazolam, and THC metabolite. How many codes are reported?**

    A. One code for the day

    B. Two codes — opioids and benzodiazepines are combined

    C. Three codes — one per drug class confirmed

    D. One code with a × 3 unit modifier

12. **A surgical pathology specimen is described as "hernial sac." Which level is correct?**

    A. Level I — 88300

    B. Level II — 88302

    C. Level IV — 88305

    D. Level III — 88304

13. **A pathologist performs immunohistochemistry on a breast biopsy specimen using four antibodies: ER, PR, HER2, and Ki-67. Which codes are reported for the IHC?**

    A. 88342 × 4

    B. 88342 and 88341 × 3

    C. 88344 × 4

    D. 88342 and 88344 × 3

14. **A CBC is ordered. The report shows WBC, RBC, Hgb, Hct, MCV, MCH, MCHC, RDW, and platelets only — no differential is included. Which code is reported?**

    A. 85025

    B. 85027

C. 85007

D. 85004

15. **A patient has a rapid strep test and a rapid influenza A/B test performed on the same day. How are these coded?**

A. 87880 only

B. 87880 and 87804

C. 87880–91 and 87804

D. One code — they are bundled as a respiratory panel

16. **Which subsection contains the code for Hemoglobin A1c (HbA1c, 83036)?**

A. Hematology and Coagulation

B. Organ or Disease-Oriented Panels

C. Chemistry

D. Immunology

17. **A physician's office performs a basic urine dipstick without microscopy using an automated analyzer. Which code is reported?**

A. 81000

B. 81001

C. 81002

D. 81003

18. **During intraoperative consultation, a frozen section of breast tissue is evaluated by the pathologist using one tissue block. After surgery, a final permanent section is also prepared and reported. Which codes are reported?**

A. 88331 only

B. 88305 only

C. 88331 and 88305

D. 88332 and 88307

19. **BRCA1 and BRCA2 full sequence analysis with full deletion/duplication analysis is performed together. Which code is**

reported?

A. 81214 and 81215

B. 81162

C. 81214 × 2

D. 81406 and 81407

20. **A physician orders a Lipid Panel (80061). The laboratory performs all required components PLUS an additional HDL-C direct (82232) not required by the panel. What is reported?**

A. 80061 only — additional tests within a panel are bundled

B. 80061 and 82232

C. 82232 only — the additional test replaces the panel

D. The physician must choose between reporting the panel or the individual test

Chapter Review — Answer Key with Rationale

#	Answer	Rationale
1	**B. 80053**	When ALL components of a panel are performed, report the panel code. 80053 = CMP. Do NOT unbundle panel components or report both the panel and individual codes.
2	**B. One presumptive drug testing code**	Immunoassay = presumptive. Presumptive drug testing is reported per day, not per drug class. Three drug classes tested on same day = one presumptive code.
3	**B. 87086 and 87184**	87086 = quantitative

#	Answer	Rationale
		aerobic urine culture. Sensitivity (disk diffusion) = 87184. Sensitivity is SEPARATELY reportable — always code it in addition to the culture code.
4	**B. 88175–26**	88175 = liquid-based, automated + manual rescreening. The pathologist interprets only (professional component) = modifier –26. 88174 would be automated only without manual rescreening.
5	**B. 88305 × 2**	Both are colon polyps = Level IV (88305). Level is determined by specimen type, not diagnosis. Both adenoma and hyperplastic polyp are Level IV. Each separate specimen = separate code.
6	**C. 85025 and 85007**	85025 = CBC with automated differential. 85007 = manual differential WBC count. When a manual differential is performed in addition to an automated CBC, both are reported. 85027 = CBC without differential.
7	**C. –90**	Modifier –90 = reference (outside) laboratory. Used when the ordering physician's office bills for a test performed at an outside lab. –26 = professional component; –91 = repeat test; –QW = CLIA waived.
8	**C. Level VI — 88309**	Radical prostatectomy (total gland resection for

#	Answer	Rationale
		malignancy) = Level VI (88309). Prostate needle biopsy = Level IV (88305). TUR chips = Level V (88307). Know the difference!
9	**C. 85610–91**	Modifier –91 is used when the same test is repeated on the same day for serial clinical results. Each repeat PT/INR after the initial = 85610–91. Do not use –59 for same test, repeated same day.
10	**C. Urine pregnancy test (81025)**	81025 (urine pregnancy test by visual color comparison) is a classic CLIA-waived test. BRCA testing and LC-MS/MS are high-complexity, not waived. Troponin requires high-complexity CLIA certification.
11	**C. Three codes — one per drug class**	LC-MS/MS = definitive drug testing. Definitive testing is reported per drug class confirmed. Three drug classes confirmed = three separate codes from the definitive drug testing range (80305–80377).
12	**B. Level II — 88302**	Hernia sac = Level II (88302). This is a classic Level II specimen that students must memorize. Common Level II specimens: hernia sac, appendix (incidental, no perforation), vas deferens, fallopian tube (ectopic).
13	**B. 88342 and 88341 × 3**	88342 = first IHC antibody. 88341 = each ADDITIONAL antibody

#	Answer	Rationale
		(add-on code). 4 antibodies: 88342 × 1 + 88341 × 3. Never report 88342 for all antibodies — 88341 is the add-on for each after the first.
14	**B. 85027**	85027 = CBC without differential. No differential was performed or reported. 85025 includes automated differential. 85007 = manual differential only. 85004 = automated differential only (add-on).
15	**B. 87880 and 87804**	Rapid strep = 87880. Rapid influenza A/B = 87804. These are two distinct tests coded separately. No bundled "respiratory panel" code exists for this combination. Each test is separately reportable.
16	**C. Chemistry**	HbA1c (83036) is in the Chemistry subsection (82009–84999), which is organized alphabetically by analyte. Although it measures hemoglobin-related information, it is a chemical assay, not a hematology count.
17	**D. 81003**	81003 = automated, without microscopy. No microscopic exam was performed. Automated method eliminates 81002 (manual). Without microscopy eliminates 81001 (automated with microscopy). 81000 = manual with microscopy.
18	**C. 88331 and 88305**	88331 = intraoperative frozen section, first tissue block. 88305 =

#	Answer	Rationale
		Level IV final permanent section (breast biopsy). Both are separately reportable. The frozen section is the intraoperative consultation; 88305 is the final pathology report.
19	**B. 81162**	81162 = BRCA1 and BRCA2, full sequence AND full deletion/duplication analysis performed together (combined code). When both genes are fully analyzed together, use 81162. Do not code them separately (81214 + 81215) when this combined code applies.
20	**B. 80061 and 82232**	Report the panel code (80061) for the required components AND separately report the additional test (82232, HDL-C direct) that was ordered beyond the panel components. The panel code covers only its defined components; additional tests not in the panel are reported separately.

20. Chapter Summary

📝 **Key Concepts Summary**

- The Pathology and Laboratory section spans CPT codes **80047–89398** and

is organized by test type/discipline.

• The **performing laboratory** — not the ordering physician — reports laboratory codes.

• A **panel code** requires ALL listed tests to be performed; otherwise, individual codes are reported. Never report both the panel and its individual component tests.

• **Presumptive drug testing** (80300–80304) is billed per day; **definitive drug testing** (80305–80377) is billed per drug class confirmed.

• **Therapeutic drug assays** (80150–80299) monitor drug levels in patients on prescribed medications — not drug abuse screening.

• **Urinalysis** coding depends on method (manual vs. automated) and whether microscopy was performed.

• **Sensitivity testing** (87184, 87186) is always separately reportable from culture codes.

• **Surgical pathology levels I–VI** (88300–88309) are determined by specimen type, NOT diagnosis. Level IV (88305) is the most commonly reported and tested level.

• **Multiple specimens** at the same surgical session are each coded separately at their appropriate level.

• **Immunohistochemistry:** 88342 = first antibody; 88341 = each additional antibody (add-on).

• **Special stains** (88312–88314) are separately reportable from the base pathology code, reported per stain.

• **Frozen section** (88331) is separately reportable from the final permanent section code.

• **Pap smear coding** requires identifying the preparation method (conventional vs. liquid-based) and screening method (manual vs. automated

vs. automated + manual rescreening).

- Modifier **–26** = professional component; **–90** = reference lab; **–91** = repeat test same day (medically necessary); **–QW** = CLIA-waived test.
- **Molecular pathology:** Tier 1 = specific named gene tests; Tier 2 = complexity levels 1–9 for unnamed tests; BRCA combined = 81162.

Key Terms Glossary

Term	Definition
Analyte	The substance being measured in a laboratory test (e.g., glucose, potassium, troponin).
Autopsy (Necropsy)	Postmortem (after-death) examination of a body to determine cause of death or evaluate disease.
CLIA	Clinical Laboratory Improvement Amendments; federal law establishing quality standards for laboratory testing. Tests are categorized as waived, moderate-complexity, or high-complexity.
Culture	A laboratory procedure in which microorganisms are grown under controlled conditions to identify the causative organism of an infection.
Cytopathology	The microscopic examination of individual cells to detect disease, including cancer and infection. Includes Pap smears and FNA cytology.
Definitive Drug Testing	Confirmatory drug testing using high-complexity methods (e.g., LC-MS/MS, GC-MS) that identifies specific drugs or metabolites and quantifies the amount. Billed per drug class.
Fine Needle Aspiration (FNA)	A procedure using a thin needle to

Term	Definition
	aspirate cells from a mass or lesion for cytopathologic examination.
Frozen Section	An intraoperative tissue examination technique where tissue is rapidly frozen, sectioned, and stained for immediate microscopic evaluation during surgery.
Immunohistochemistry (IHC)	A laboratory technique using antibodies to identify specific proteins (antigens) in tissue sections, used to classify tumors and guide treatment decisions.
MAAA	Multianalyte Assay with Algorithmic Analysis; proprietary laboratory tests that combine multiple measured values with an algorithm to produce a clinically meaningful score (e.g., OncotypeDX®).
Modifier –91	Repeat clinical diagnostic laboratory test; appended when the same test is repeated on the same day for serial, medically necessary results — NOT due to lab error or faulty specimen.
Molecular Pathology	Laboratory analysis of DNA, RNA, chromosomes, and proteins to detect genetic alterations, heritable conditions, or somatic mutations. Fastest-growing lab coding area.
Panel	A predefined bundle of specific laboratory tests grouped together in CPT. ALL tests in the panel must be performed to report the panel code.
Presumptive Drug Testing	Screening-level drug testing using immunoassay or similar methods to detect possible presence of drug classes. Billed per day, not per drug class.
Professional Component (–26)	The portion of a diagnostic service that represents the physician's interpretation and written report. Modifier –26 is appended to indicate only the professional component is being billed.
Qualitative Test	A laboratory test that identifies the

Term	Definition
	presence or absence of a substance (positive/negative result) without measuring a specific amount.
Quantitative Test	A laboratory test that measures the exact amount of a substance (numeric result with units, e.g., glucose = 142 mg/dL).
Sensitivity Testing	Antibiotic susceptibility testing performed on a cultured organism to determine which antibiotics will inhibit its growth. Separately reportable from culture codes.
Surgical Pathology	The gross and microscopic examination of tissue removed during a surgical procedure. CPT levels I–VI determine code selection based on specimen type.
Therapeutic Drug Monitoring (TDM)	Measurement of drug concentrations in blood to ensure levels remain within the therapeutic range — effective but not toxic. Used for prescribed medications such as digoxin, phenytoin, lithium, and cyclosporine.

End of Chapter 20 — Pathology and Laboratory

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CHAPTER 21

Medicine Section

CPT codes: 90281-99607

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★ Chapter Objectives

After completing this chapter, the student will be able to:

1. Identify the organization and range of the **CPT Medicine section** (90281–99607) and explain its relationship to E/M and Surgery sections.
2. Correctly apply the **two-code rule** for immunization services by selecting both the appropriate administration code and the vaccine product code.
3. Differentiate between **counseling-based immunization administration codes** (90460–90461) and standard administration codes (90471–90474) based on patient age and provider counseling status.
4. Assign psychotherapy codes based on documented time and determine when add-on codes are required for same-day **E/M with psychotherapy**.
5. Distinguish between hemodialysis, peritoneal dialysis, and ESRD monthly capitation services and apply the appropriate code based on patient age and visit frequency.
6. Select the correct **ophthalmology E/M codes** (92002–92014) versus standard office visit codes and explain when each set applies.
7. Apply the **infusion hierarchy rules** to chemotherapy and non-chemotherapy drug administration scenarios, correctly identifying initial, sequential, and concurrent infusions.
8. Compute the correct number of **15-minute billing units** for physical medicine and rehabilitation time-based therapeutic procedure codes.
9. Code **cardiac catheterization**, ECG, echocardiography, and noninvasive vascular studies accurately, differentiating between complete and limited services.
10. Apply key Medicine section **modifiers** (-25, -51, -59, -76, -77) correctly

in clinical scenarios and identify codes that are exempt from modifier -51.

1. Introduction to the Medicine Section

The **CPT Medicine section** spans codes **90281 through 99607** and is one of the most expansive and diverse areas of the CPT codebook. Unlike Surgery or Radiology, the Medicine section does not belong to a single specialty. Instead, it serves as the reporting home for a broad spectrum of diagnostic, therapeutic, and preventive services rendered by physicians, mid-level providers, therapists, psychologists, audiologists, chiropractors, and other qualified healthcare professionals.

How the Medicine Section Is Organized

The Medicine section is divided into numerous subsections, each grouping related services by clinical specialty or service type:

Subsection	Code Range	Key Services
Immune Globulins	90281–90399	IVIG, RhoGAM, hepatitis immune globulin
Immunization Administration	90460–90474	Vaccine injection/infusion administration
Vaccines and Toxoids	90476–90749	Vaccine products (MMR, influenza, varicella)
Psychiatry	90785–90899	Psychotherapy, diagnostic evaluation, group therapy
Dialysis	90935–90999	Hemodialysis, peritoneal dialysis, ESRD capitation
Gastroenterology	91010–91299	Esophageal motility, gastric emptying, breath tests

Subsection	Code Range	Key Services
Ophthalmology	92002–92499	Eye exams, contact lens, visual field testing
Special Otorhinolaryngologic Services	92502–92700	Audiometry, tympanometry, vestibular testing
Cardiovascular	92920–93799	PCI, ECG, echocardiography, cardiac catheterization
Neurology & Neuromuscular	95700–96020	EEG, EMG, NCS, evoked potentials, sleep studies
Chemotherapy Administration	96401–96549	IV, IM, subcutaneous chemotherapy
Non-Chemotherapy Infusions	96360–96379	Hydration, therapeutic drug infusions
Physical Medicine & Rehabilitation	97010–97799	Modalities, therapeutic procedures, evaluations
Osteopathic/Chiropractic Manipulation	98925–98943	OMT and CMT by body/spinal regions
Special Services & Reports	99000–99091	After-hours, specimen handling, telephone services

Key Rules for the Medicine Section

- **Medicine codes CAN be reported in addition to E/M and Surgery codes** when the services are distinct and separately documented.
- Many Medicine section codes are **exempt from modifier -51** (multiple procedures). These codes are identified in the CPT codebook with a circle symbol (⊙) or listed in Appendix E.
- The **Medicine section is not limited** to internal medicine physicians — any qualified provider performing these services may report them.
- Always check the **CPT guidelines at the beginning of each subsection**, as many subsections have unique rules (e.g., psychiatry, dialysis, ophthalmology).

> 💡 **Did You Know?**
>
> The CPT Medicine section is sometimes called the "catch-all" chapter because it houses services from dozens of specialties that do not fit neatly into Surgery, Radiology, or Pathology. For the CPC exam, understanding the rules of each subsection — not just memorizing code numbers — is what separates a passing score from a failing one.

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2. Immune Globulins and Immunization Administration (90281–90749)

Immune Globulin Products (90281–90399)

Immune globulins are preparations derived from human plasma that contain concentrated antibodies used to provide passive immunity. They are reported separately from their administration. Common examples include:

- **Intravenous immune globulin (IVIG)**: Used for immune deficiencies and autoimmune conditions (e.g., 90283, 90284).
- **Hepatitis B immune globulin (HBIG)**: Post-exposure prophylaxis (90371).
- **RhoGAM (Rho[D] immune globulin)**: Prevents Rh incompatibility in pregnancy (90384–90386).

Immunization Administration (90460–90474)

Immunization administration codes report the act of administering the vaccine — not the vaccine product itself. Two separate codes are always required: one for administration and one for the product.

⚠️ **Stop! Think!**

Always report **TWO codes** for any immunization service: (1) an **administration code** from 90460–90474, AND (2) a **vaccine product code** from 90476–90749. Reporting only one of the two is incomplete coding — a very common exam trap!

Administration with Counseling (90460–90461) — Patients Through Age 18

Codes **90460** and **90461** apply when the physician or other qualified healthcare professional (QHP) performs **face-to-face counseling** during the immunization visit for patients **through 18 years of age**.

- **90460**: First or only vaccine/toxoid component administered (with counseling)
- **90461**: Each additional vaccine/toxoid component (add-on code, with counseling)

Important: "Component" refers to individual antigens within a combination vaccine. For example, the MMR vaccine contains THREE components (measles, mumps, rubella), so you would report 90460 × 1 + 90461 × 2.

Administration without Counseling (90471–90474) — Any Age

- **90471**: First injection vaccine administration (any age, without counseling)
- **90472**: Each additional injection vaccine (add-on)
- **90473**: First oral or intranasal vaccine administration
- **90474**: Each additional oral or intranasal vaccine (add-on)

Code	Age Restriction	Counseling Required?	Route	Position
90460	Through 18 years	Yes (face-to-face)	Any	First/only component
90461	Through 18 years	Yes	Any	Each additional

Code	Age Restriction	Counseling Required?	Route	Position
				component (add-on)
90471	Any age	No	Injection	First vaccine
90472	Any age	No	Injection	Each additional injection (add-on)
90473	Any age	No	Oral/ Intranasal	First vaccine
90474	Any age	No	Oral/ Intranasal	Each additional oral/intranasal (add-on)

Common Vaccine Product Codes (90476–90749)

Vaccine	Code(s)	Notes
Influenza virus vaccine (quadrivalent, IM)	90686–90689	Select by age group and dose
MMR (Measles, Mumps, Rubella)	90707	3 components — use 90460 + 90461 ×2 if counseling provided to patient ≤18
Varicella (Chickenpox)	90716	Live attenuated virus
Hepatitis B (pediatric/adolescent)	90743	Two-dose schedule
HPV vaccine (9-valent)	90651	9 components
COVID-19 vaccine	91300–91322	Varies by manufacturer and dose; check annual CPT updates
Pneumococcal conjugate (13-valent)	90670	PCV13; pediatric series
DTaP (Diphtheria, Tetanus, Pertussis)	90700	3 components

📋 Coding Scenario 2-A: Pediatric Influenza + Varicella (With Counseling)

Clinical Note: A 4-year-old established patient presents for a well-child visit. The pediatrician counsels the patient's mother about the influenza vaccine and the varicella vaccine. Both vaccines are administered by injection.

> **Step 1:** Patient is 4 years old — through age 18✓; physician counseling documented✓→ Use 90460/90461 series.
>
> **Step 2:** Two vaccines given — influenza (1 component) and varicella (1 component). Total components = 2.
>
> **Step 3:** Administration: 90460 (first component) + 90461 ×1 (second component, add-on).
>
> **Step 4:** Products: 90686 (influenza quadrivalent) + 90716 (varicella).

Final Codes: **90460, 90461, 90686, 90716**

Note: The well-child E/M (99391–99395) would also be reported with modifier -25 if a significant, separately identifiable E/M was performed.

📋 Coding Scenario 2-B: MMR Vaccine (With Counseling, Age 15)

Clinical Note: A 15-year-old receives the MMR vaccine today. The physician provides face-to-face counseling regarding the MMR vaccine to the patient.

Step 1: Patient is 15 — through age 18 ✓; counseling provided ✓ → 90460/90461.

Step 2: MMR has 3 antigen components (measles, mumps, rubella).

Step 3: Administration: 90460 (1st component) + 90461 (2nd component) + 90461 (3rd component).

Step 4: Product: 90707 (MMR vaccine).

Final Codes: **90460, 90461 ×2, 90707**

📋 Coding Scenario 2-C: Adult Influenza Vaccine (No Counseling)

Clinical Note: A 55-year-old patient receives an influenza vaccine injection at an urgent care walk-in clinic. No physician counseling was documented. One vaccine administered by injection.

Step 1: Patient is 55 years old (adult) → Use 90471/90472 series.

Step 2: One injection given → 90471 (first injection).

Step 3: Product: 90686 (influenza quadrivalent vaccine).

Final Codes: **90471, 90686**

3. Psychiatry (90785–90899)

The **psychiatry subsection** covers a range of mental health evaluation and treatment services. Codes are largely time-based. Understanding when to use standalone psychotherapy codes versus add-on codes in combination with E/M is essential for exam success.

Psychiatric Diagnostic Evaluation (90791–90792)

- 90791: **Psychiatric diagnostic evaluation** — without medical services (e.g., a psychologist's initial assessment)
- 90792: Psychiatric diagnostic evaluation **with medical services** — includes prescribing, ordering labs, or other medical decision-making (typically performed by a physician/psychiatrist)

Psychotherapy (90832–90838)

Psychotherapy codes are reported based on the total face-to-face time spent in therapy with the patient and/or family member. CPT time rules require that the stated midpoint must be exceeded.

Code	Duration	Type	When to Use
90832	30 minutes (16–37 min)	Standalone psychotherapy	Psychotherapy only, no E/M same day
90833	30 minutes	Add-on to E/M	Psychotherapy performed same day as E/M (≤37 min of therapy)
90834	45 minutes (38–52 min)	Standalone psychotherapy	Psychotherapy only, no E/M same day
90836	45 minutes	Add-on to E/M	Psychotherapy same day as E/M (38–52 min of therapy)
90837	60 minutes (53+	Standalone	Psychotherapy

Code	Duration	Type	When to Use
	min)	psychotherapy	only, no E/M same day
90838	60 minutes	Add-on to E/M	Psychotherapy same day as E/M (53+ min of therapy)

> 📚 **Coder's Corner: Psychotherapy + E/M on the Same Day**
>
> When a psychiatrist performs BOTH a medical E/M service (e.g., medication management) AND psychotherapy during the same encounter, do NOT report two standalone codes. Instead:
>
> 1. Report the appropriate **E/M code** (99202–99215) for the medical management portion.
> 2. Report the appropriate **psychotherapy add-on code** (90833, 90836, or 90838) for the therapy time.
>
> These add-on codes are exempt from modifier -51 and are appended to the E/M code. The documented time for each service must be distinct — do not overlap time between the E/M and the psychotherapy.

Other Psychiatric Services

- 90785: **Interactive complexity** — add-on code used when communication obstacles (e.g., language barriers, guardians involved, mandated reporting) significantly complicate the psychiatric service
- 90839: **Crisis psychotherapy** — first 60 minutes
- 90840: Crisis psychotherapy — each additional 30 minutes (add-on)
- 90846: **Family psychotherapy** — without patient present
- 90847: Family psychotherapy — with patient present
- 90853: **Group psychotherapy** — not family group

📋 Coding Scenario 3-A: Standalone Psychotherapy 60 Minutes

Clinical Note: A licensed clinical social worker sees a 32-year-old patient for cognitive behavioral therapy. Total face-to-face therapy time documented: 58 minutes. No E/M services rendered today.

> **Step 1:** No E/M performed → standalone psychotherapy code.
>
> **Step 2:** 58 minutes exceeds the 53-minute threshold → 90837 (60-minute psychotherapy).

Final Code: **90837**

📋 Coding Scenario 3-B: Psychotherapy + E/M Same Day

Clinical Note: A psychiatrist performs medication management for a patient with major depressive disorder, including a review of current medications, adjustment of dosage, and mental status exam (E/M = 99214). The psychiatrist also conducts 45 minutes of individual psychotherapy during the same session.

> **Step 1:** E/M performed → report E/M code: 99214.
>
> **Step 2:** Psychotherapy also performed same day → use add-on code.
>
> **Step 3:** 45 minutes of therapy (38–52 min range) → 90836 (add-on for 45-min psychotherapy with E/M).

Final Codes: **99214, 90836**

Note: Do NOT report 90834 (standalone 45-min) — use only the add-on code (90836) when E/M is also reported.

📋 **Coding Scenario 3-C: Family Psychotherapy with Interactive Complexity**

Clinical Note: A child psychiatrist meets with the parents of an autistic 9-year-old to discuss behavioral strategies. The patient is not present. Communication is complicated by a language barrier (interpreter needed). Time: 40 minutes.

> **Step 1:** Family therapy without patient → 90846.
>
> **Step 2:** Language barrier creates interactive complexity → add-on code 90785.

Final Codes: **90846, 90785**

4. Dialysis (90935–90999)

Hemodialysis (90935–90940)

Hemodialysis uses a machine to filter waste products from the blood when the kidneys cannot. Two key codes apply:

- **90935**: Hemodialysis procedure with **single physician evaluation**
- **90937**: Hemodialysis procedure requiring physician evaluation(s) — **multiple or repeated evaluations** during the dialysis session

Peritoneal Dialysis (90945–90947)

- **90945**: **Peritoneal dialysis** — single physician evaluation
- **90947**: Peritoneal dialysis — requiring multiple or repeated physician evaluations

End-Stage Renal Disease (ESRD) Monthly Capitation Codes (90951–90970)

ESRD monthly capitation codes are bundled, per-month codes that cover all physician services related to the management of end-stage renal disease for a calendar month. Code selection depends on two factors: **(1) patient age** and **(2) number of face-to-face visits per month**.

Code Range	Age Group	Face-to-Face Visits/Month
90951–90953	Under 2 years	4+, 2–3, 1 visit respectively
90954–90956	2–11 years	4+, 2–3, 1 visit respectively
90957–90959	12–19 years	4+, 2–3, 1 visit respectively
90960–90962	20 years and older	4+, 2–3, 1 visit respectively
90963–90965	Under 2 / 2–11 / 12–19 (home dialysis)	Home dialysis patient per month
90966	20 years and older (home dialysis)	Home dialysis patient per month

Code Range	Age Group	Face-to-Face Visits/Month
90967–90970	All ages	Less than a full month (per day)

💡 **Did You Know?**

ESRD monthly capitation codes are **not reported per visit** — they are reported **once per month** and bundle all related E/M services for the month. If a patient is in the ESRD program for less than a full calendar month, use the "less than full month" per-day codes (90967–90970).

📋 **Coding Scenario 4-A: Hemodialysis with Single Evaluation**

Clinical Note: A nephrologist evaluates a 62-year-old ESRD patient during a routine hemodialysis session at an outpatient dialysis center. One physician evaluation is documented during the session.

> **Step 1:** Service = hemodialysis with physician evaluation.
>
> **Step 2:** Single evaluation only → 90935.

Final Code: 90935

📋 **Coding Scenario 4-B: ESRD Monthly Capitation**

Clinical Note: A nephrologist manages a 45-year-old ESRD patient

throughout August. The physician has four documented face-to-face visits with the patient during the month.

> **Step 1:** ESRD monthly capitation → patient is 45 years (20+) → codes 90960–90962 range.
>
> **Step 2:** 4 face-to-face visits → 90960 (4 or more visits).

Final Code: 90960

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5. Gastroenterology (91010–91299)

The gastroenterology subsection covers diagnostic testing for gastrointestinal motility and function. These are typically performed by gastroenterologists in outpatient settings.

- 91010: **Esophageal motility study** — measures the muscular contractions of the esophagus
- 91013: Esophageal motility study with stimulation (acid, edrophonium, etc.)
- 91065: **Breath hydrogen test** — used to detect lactase deficiency or bacterial overgrowth
- 91200: Liver elastography (non-invasive assessment of liver fibrosis)

📋 **Coding Scenario 5-A: Esophageal Motility Study**

Clinical Note: A 47-year-old female with dysphagia undergoes esophageal motility testing to evaluate swallowing function. A standard manometry study is performed without stimulation.

> **Step 1:** Esophageal motility → 91010. No stimulation documented → not 91013.

Final Code: 91010

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6. Ophthalmology (92002–92499)

Ophthalmology Eye Examination Codes

Ophthalmologists use a **specialty-specific set of E/M codes** that differ from the standard office visit codes (99202–99215). These codes are classified by new vs. established patient status and by examination level (intermediate vs. comprehensive).

⚠️ **Stop! Think!**

Ophthalmology uses its **own E/M codes (92002–92014)**, NOT the standard office/outpatient E/M codes (99202–99215). When an ophthalmologist performs a general medical E/M service that goes beyond routine eye care, THEN the standard E/M codes may be used — but only for that distinct service. Know the difference for the CPC exam!

Code	Patient Status	Level	Key Components
92002	New Patient	Intermediate Exam	Comprehensive history; slit lamp or ophthalmoscopy; problem-oriented exam
92004	New Patient	Comprehensive Exam	Full H&P including initiation of management; complete exam of all ocular components
92012	Established Patient	Intermediate Exam	Interval history; problem-oriented exam of affected eye(s)
92014	Established Patient	Comprehensive Exam	Complete exam of all ocular components; general medical observation

Special Ophthalmological Services

- **92025**: Corneal topography (mapping of the corneal surface)
- **92081-92083**: **Visual field examination** — limited (92081), intermediate (92082), extended (92083)
- **92134**: Scanning computerized ophthalmic diagnostic imaging — posterior segment (e.g., OCT)
- **92225-92226**: Ophthalmoscopy, extended — new or established patient
- **92250**: Fundus photography with interpretation and report
- **92287**: Fluorescein angiography

Contact Lens and Spectacle Services

- **92310**: Prescription of optical and physical characteristics of and fitting of contact lens (one or both eyes)

- **92325**: Modification of contact lens prescription
- **92340**: Fitting of spectacle frames — monocular
- **92341**: Fitting of spectacle frames — bifocal

📋 Coding Scenario 6-A: New Patient Comprehensive Eye Exam + Visual Field

Clinical Note: A new 68-year-old patient is seen by an ophthalmologist for an annual eye examination. The physician performs a comprehensive examination including external ocular structures, anterior chamber, lens, vitreous, and fundus examination. A complete visual field examination is also performed (extended, both eyes).

> **Step 1:** New patient, comprehensive ophthalmologic exam → 92004.
>
> **Step 2:** Extended visual field examination → 92083.

Final Codes: **92004, 92083**

📋 Coding Scenario 6-B: Established Patient Intermediate Eye Exam

Clinical Note: An established 52-year-old patient returns to the ophthalmologist for follow-up of diabetic retinopathy. An interval history is taken and a problem-focused exam of the posterior segment is performed.

> **Step 1:** Established patient → codes 92012–92014.

> **Step 2:** Problem-focused/interval exam → intermediate level → 92012.

Final Code: 92012

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7. Special Otorhinolaryngologic Services (92502–92700)

The **otorhinolaryngology (ENT) subsection** includes audiologic function tests and vestibular testing. These are commonly performed by audiologists, ENT specialists, and neurologists.

Audiologic Function Tests

Code	Test	Description
92552	Pure Tone Audiometry — Air Only	Tests hearing at various frequencies via air conduction only
92553	Pure Tone Audiometry — Air and Bone	Air and bone conduction; distinguishes conductive from sensorineural loss
92555	Speech Audiometry — Threshold	Determines the softest level at which speech is understood
92556	Speech Audiometry — Complete	Threshold + word recognition testing
92557	Comprehensive	Includes pure tone

Code	Test	Description
	Audiometry	air/bone AND speech recognition; a bundled code
92567	Tympanometry	Measures middle ear function and eardrum mobility
92568	Acoustic Reflex Testing	Tests stapedial reflex; add-on to tympanometry

> 💡 **Did You Know?**
>
> Code **92557** (comprehensive audiometry) is a **bundled code** that includes both pure tone air/bone conduction testing AND speech recognition testing. Do not separately report 92553 and 92556 when 92557 is appropriate — that would be unbundling, an auditing red flag.

Vestibular Function Tests (92531–92548)

- **92531**: Spontaneous nystagmus test
- **92540**: Basic vestibular evaluation (includes 4 components)
- **92548**: Computerized dynamic posturography

> 📋 **Coding Scenario 7-A: Comprehensive Audiometry + Tympanometry**
>
> **Clinical Note:** A 7-year-old presents to audiology with suspected hearing loss. Comprehensive audiometric evaluation (air/bone conduction and speech recognition) is performed along with tympanometry.
>
> > **Step 1:** Comprehensive audiometry → 92557 (bundles pure tone

> air/bone + speech recognition).
>
> **Step 2:** Tympanometry also performed → 92567.

Final Codes: **92557, 92567**

📋 **Coding Scenario 7-B: Pure Tone Audiometry + Tympanometry + Acoustic Reflex**

Clinical Note: An audiologist performs air-only pure tone audiometry along with tympanometry and acoustic reflex testing on a 10-year-old for a school hearing screening follow-up.

> **Step 1:** Air only pure tone → 92552.
>
> **Step 2:** Tympanometry → 92567.
>
> **Step 3:** Acoustic reflex → 92568.

Final Codes: **92552, 92567, 92568**

8. Cardiovascular (92920–93799)

A. Therapeutic Services — Percutaneous Coronary Intervention (PCI)

Percutaneous coronary intervention (PCI) codes (92920–92944) describe catheter-based coronary artery treatments. Code selection depends on the type of intervention performed and the vessel(s) treated. The concept of a "major coronary artery" versus "additional branch" governs which add-on codes apply.

Code	Procedure	Vessel
92920	Balloon angioplasty (PTCA)	Single major coronary artery or branch
92921	Balloon angioplasty (PTCA)	Each additional branch (add-on)
92928	Percutaneous coronary stent placement	Single major coronary artery or branch
92929	Percutaneous coronary stent placement	Each additional branch (add-on)
92977	Intracoronary thrombolysis	Any vessel
92941	PCI during acute MI	Single vessel

B. Cardiography — ECG/EKG (93000–93010)

An **electrocardiogram (ECG/EKG)** records the electrical activity of the heart. CPT breaks the ECG into components:

Code	Component	Notes
93000	ECG with Interpretation & Report	Global code; includes both tracing and reading
93005	ECG — Tracing Only	Technical component; no reading
93010	ECG — Interpretation & Report Only	Professional component; reading only

> 📚 **Coder's Corner: ECG Component Coding — Like Radiology**
>
> ECG coding mirrors radiology's modifier -26 (professional) and -TC (technical) concept, but uses **separate CPT codes** instead of modifiers. When a physician performs the ECG in their own office on their own equipment, report **93000** (global). When a hospital performs the tracing and the physician reads it separately, report **93005** (hospital/technical) and **93010** (physician/professional) independently. Never report 93000 AND 93005 or 93010 together for the same encounter.

Holter Monitor and Event Monitors

- **93224-93227**: **Holter monitor** — extended ECG monitoring up to 48 hours (recording, scanning, interpretation)
- **93268-93272**: **Event monitor** — patient-activated monitoring for more than 48 hours; used to capture infrequent arrhythmias

C. Echocardiography

Echocardiography uses ultrasound to evaluate cardiac structures and function. Code selection depends on exam type, completeness, and Doppler use.

Code	Exam Type	Complete/ Limited	Doppler
93303	Transthoracic (TTE)	Complete — congenital cardiac anomaly	May include
93306	Transthoracic (TTE)	Complete — with spectral & color flow Doppler	Yes
93307	Transthoracic (TTE)	Complete — without Doppler	No
93308	Transthoracic (TTE)	Limited or follow-up	Optional
93312	Transesophageal (TEE)	Diagnostic — complete	May include

Code	Exam Type	Complete/ Limited	Doppler
93318	Transesophageal (TEE)	Intraoperative monitoring	May include
93350	Stress Echocardiography	Complete — with Doppler	Yes

D. Cardiac Catheterization (93451–93572)

Cardiac catheterization is an invasive procedure in which a catheter is threaded into the heart to measure pressures and visualize coronary arteries. Coding depends on which side of the heart is catheterized and what procedures are performed.

Code	Procedure	Side
93451	Right heart catheterization	Right only
93452	Left heart catheterization	Left only
93453	Combined right and left heart catheterization	Both
93460	Left heart cath + coronary angiography + right heart cath	Both (with angiography)
93461	Left heart cath + coronary angiography + right heart cath + bypass graft angiography	Both + bypass
93563	Injection for coronary angiography (add-on)	Coronary vessels
93565	Injection for left ventricular angiography (add-on)	Left ventricle
93568	Injection for pulmonary angiography (add-on)	Pulmonary

E. Noninvasive Vascular Diagnostic Studies (93880–93998)

- 93880: **Carotid duplex scan** — bilateral (complete)

- **93882**: Carotid duplex scan — unilateral or limited
- **93922**: Extremity arterial study — limited bilateral (e.g., ABI)
- **93923**: Extremity arterial study — complete bilateral
- **93970**: Extremity venous duplex scan — bilateral
- **93971**: Extremity venous duplex scan — unilateral or limited

F. Pulmonary (94002–94799)

Pulmonary function tests (PFTs) are a group of noninvasive tests that measure how well the lungs work.

- **94010**: **Spirometry** — measures airflow; used to diagnose COPD and asthma
- **94060**: Spirometry before and after bronchodilator — bronchospasm evaluation
- **94070**: Bronchospasm provocation evaluation (e.g., methacholine challenge)
- **94726**: Plethysmography for lung volumes — body box method
- **94727**: Gas dilution method for lung volumes
- **94729**: **Diffusion capacity** (DLCO) — measures gas exchange ability
- **94760**: Noninvasive ear or pulse oximetry — single determination
- **94761**: Oximetry — multiple determinations
- **94762**: Oximetry — nocturnal (overnight)

📋 **Coding Scenario 8-A: ECG + Office Visit Same Day**

Clinical Note: A 60-year-old established patient presents with palpitations. The cardiologist performs a separately documented, significant E/M service (99214) and also performs an ECG with interpretation and report (the cardiologist's office owns the equipment).

Step 1: E/M performed — 99214.

Step 2: ECG global code (physician owns equipment, performs tracing AND reads it) → 93000.

Step 3: Separate E/M on same day as procedure → modifier -25 on E/M code.

Final Codes: **99214-25, 93000**

📋 Coding Scenario 8-B: Coronary Stent Placement — Two Vessels

Clinical Note: A cardiologist places stents in the LAD (left anterior descending) and the left circumflex artery during the same cath lab session.

Step 1: Stent placement — LAD is first major coronary artery → 92928.

Step 2: Stent in left circumflex (second vessel/branch) → 92929 (add-on).

Final Codes: **92928, 92929**

📋 Coding Scenario 8-C: Pulmonary Function Tests

Clinical Note: A pulmonologist evaluates a 55-year-old smoker with suspected COPD. Spirometry with pre- and post-bronchodilator testing is performed, along with diffusion capacity measurement.

> **Step 1:** Spirometry with pre/post bronchodilator → 94060.
>
> **Step 2:** Diffusion capacity (DLCO) → 94729.

Final Codes: **94060, 94729**

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9. Neurology and Neuromuscular Procedures (95700–96020)

Electroencephalography (EEG) (95700–95726)

Electroencephalography (EEG) measures the brain's electrical activity and is used to diagnose seizure disorders, sleep disorders, and brain injuries.

- **95816**: Routine EEG — awake and drowsy
- **95819**: Routine EEG — awake and asleep
- **95822**: EEG — sleep only (used for suspected seizure activity during sleep)
- **95700-95726**: Long-term EEG monitoring — selected by duration and number of channels

Electromyography (EMG) (95860–95872)

Electromyography (EMG) measures the electrical activity of muscles and is used to evaluate neuromuscular disorders. EMG codes are selected by the number of extremities examined and number of muscles tested.

- **95860**: EMG — one extremity with or without related paraspinal areas
- **95861**: EMG — two extremities with or without related paraspinal areas
- **95863**: EMG — three extremities
- **95864**: EMG — four extremities
- **95867**: EMG — cranial nerve supplied muscles (unilateral)
- **95869**: EMG — thoracic paraspinal muscles

Nerve Conduction Studies (NCS) (95907–95913)

Nerve conduction studies (NCS) measure the speed and strength of electrical signals through nerves. Unlike EMG (which is by extremity), NCS codes are selected by the **number of studies** performed.

Code	Number of Studies
95907	1–2 studies
95908	3–4 studies
95909	5–6 studies
95910	7–8 studies
95911	9–10 studies
95912	11–12 studies
95913	13 or more studies

> ⚠️ **Stop! Think!**
>
> EMG and NCS are **two distinct tests** and must always be coded **separately**. EMG measures muscle electrical activity; NCS measures nerve signal speed.

When both are performed during the same encounter (which is common in neurology), report BOTH the appropriate EMG code AND the appropriate NCS code. This is correct coding — not unbundling.

Sleep Studies (95782–95811)

- 95800: **Home sleep apnea test (HSAT)** — unattended (type IV device)
- 95801: Home sleep apnea test — unattended (minimum channels)
- 95806: Home sleep apnea test — unattended (type III)
- 95808: **Polysomnography** — any age, with 1–3 additional parameters
- 95810: Polysomnography — age 6+, with 4 or more additional parameters, attended
- 95811: Polysomnography — age 6+, with CPAP titration

📋 **Coding Scenario 9-A: EMG + NCS**

Clinical Note: A neurologist evaluates a 48-year-old patient with carpal tunnel syndrome symptoms. EMG is performed on the right upper extremity. NCS is performed — 5 studies total (median motor, median sensory, ulnar motor, ulnar sensory, radial sensory).

> **Step 1:** EMG — one extremity (right upper) → 95860.
>
> **Step 2:** NCS — 5 studies → 95909.

Final Codes: 95860, 95909

📋 Coding Scenario 9-B: Polysomnography with CPAP Titration

Clinical Note: A 52-year-old male with suspected obstructive sleep apnea undergoes an attended full-night polysomnography with CPAP titration at a sleep center. Six additional parameters are monitored.

> **Step 1:** Attended polysomnography, age 6+, 6 additional parameters, CPAP titration → 95811.

Final Code: 95811

📋 Coding Scenario 9-C: Routine EEG

Clinical Note: A 23-year-old patient with newly diagnosed epilepsy undergoes a routine EEG. The recording captures the patient in both awake and asleep states per physician order.

> **Step 1:** Routine EEG, awake and asleep → 95819.

Final Code: 95819

10. Chemotherapy Administration (96401–96549)

Chemotherapy administration codes report the professional services involved in administering antineoplastic agents and other highly complex biologic medications. These codes sit at the **top of the infusion hierarchy** — when chemotherapy is given during the same encounter as other infusions, chemotherapy is always the "initial" service regardless of the order of administration.

> 💡 **Did You Know?**
>
> Chemotherapy codes are used not only for cancer drugs, but also for certain **highly complex biologics** such as monoclonal antibodies (e.g., rituximab for rheumatoid arthritis) that carry similar risk and clinical complexity. Always check the drug's CPT classification before coding — some biologics are coded as chemotherapy even when used for non-oncologic indications.

Routes of Administration

Code	Route	Description
96401	Subcutaneous/ Intramuscular	Non-hormonal chemotherapy — SQ or IM injection
96402	Subcutaneous/ Intramuscular	Hormonal antineoplastic therapy injection
96409	Intravenous Push	IV push chemo — first or only substance
96411	Intravenous Push	IV push chemo — each additional substance (add-on)
96413	IV Infusion	Initial infusion — first hour (up to 1 hour)
96415	IV Infusion	Each additional hour

Code	Route	Description
		beyond initial (add-on; requires >30 additional min)
96416	IV Infusion	Initiation of prolonged treatment requiring highly complex clinical judgment
96417	IV Infusion — Sequential	Each additional sequential drug infusion (add-on)
96423	IV Infusion — Concurrent	Each additional concurrent infusion (add-on)

Infusion Hierarchy Rule

When multiple drugs are infused during the same encounter, the following **hierarchy** determines which service is "initial" (and thus drives the primary code):

1. **Chemotherapy infusion** — always primary when given
2. **Therapeutic drug infusion** (non-chemotherapy) — primary if no chemotherapy
3. **Hydration** — never primary if any other infusion is given

Sequential infusion: A second drug infused after the first is completed (use add-on 96417 for chemo).

Concurrent infusion: A second drug running simultaneously through the same IV line (use add-on 96423).

> ⚠️ **Stop! Think!**
>
> **Hydration codes (96360–96361) CANNOT be the primary infusion service** when any other infusion or injection is provided during the same encounter. Hydration is only separately reportable as a standalone service when it is the only service provided, or when performed through a separate IV

site with its own documented medical necessity and start/stop times. This is a very common exam trap!

Non-Chemotherapy Drug Infusion (96360–96379)

- **96360**: **Hydration** infusion — initial (first 31 minutes to 1 hour)
- **96361**: Hydration — each additional hour (add-on)
- **96365**: Therapeutic drug infusion (non-chemotherapy) — initial, first hour
- **96366**: Therapeutic drug infusion — each additional hour (add-on)
- **96367**: Each additional sequential drug infusion (add-on)
- **96368**: Concurrent infusion (add-on)
- **96372**: Therapeutic, prophylactic, or diagnostic injection — subcutaneous or IM (non-chemo)
- **96374**: Therapeutic, prophylactic, or diagnostic injection — intravenous push, initial
- **96375**: IV push — each additional sequential substance/drug (add-on)

📋 Coding Scenario 10-A: Chemotherapy Infusion — Multi-Hour

Clinical Note: A patient with breast cancer receives IV chemotherapy (docetaxel) infused over 2 hours and 10 minutes. Following the chemotherapy, ondansetron (anti-nausea medication) is given as an IV push.

> **Step 1:** Chemotherapy IV infusion — initial hour → 96413.
>
> **Step 2:** Chemo infusion exceeded 1 hour by 70+ minutes; report each additional hour. Total time = 2 hr 10 min → 1 additional hour

(must exceed 30 min past initial) → 96415 ×1.

Step 3: Anti-nausea drug (ondansetron) is non-chemotherapy → IV push, sequential, different substance → 96375 (add-on for additional sequential IV push of non-chemo drug).

Step 4: Drug costs (docetaxel J-code, ondansetron J-code) reported separately.

Final Codes: **96413, 96415, 96375** + drug J-codes

📋 Coding Scenario 10-B: Non-Chemotherapy Antibiotic Infusion

Clinical Note: A patient receives IV vancomycin (antibiotic, non-chemotherapy) infused over 1 hour 45 minutes.

Step 1: Non-chemotherapy drug infusion → 96365 (initial, first hour).

Step 2: Additional 45 minutes (exceeds 30-minute threshold) → 96366 ×1 (each additional hour).

Final Codes: **96365, 96366** + drug J-code

📋 **Coding Scenario 10-C: Hydration Only Visit**

Clinical Note: A patient with severe dehydration receives IV normal saline hydration only for 2 hours in an outpatient infusion center. No other medications or infusions are given.

> **Step 1:** Hydration only — no other infusions → 96360 is reportable as primary.
>
> **Step 2:** 2 hours total; initial = 96360; second hour → 96361 ×1.

Final Codes: **96360, 96361**

Note: If any other infusion had been given, 96360 would NOT be reported separately.

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11. Physical Medicine and Rehabilitation (97010–97799)

The **physical medicine and rehabilitation (PM&R)** subsection includes services provided by physical therapists (PTs), occupational therapists (OTs), and physiatrists. Codes are divided into modalities and therapeutic procedures.

Modalities

A **modality** is a physical agent applied to a patient to produce a therapeutic change. Modalities are classified as **supervised** (no one-on-one direct contact required) or **constant attendance** (provider must be in direct contact with patient throughout).

Code	Modality	Type	Time-Based?
97010	Hot or cold packs	Supervised	No
97012	Traction, mechanical	Supervised	No
97014	Electrical stimulation (unattended)	Supervised	No
97018	Paraffin bath	Supervised	No
97022	Whirlpool	Supervised	No
97035	Ultrasound (therapeutic)	Supervised	No
97032	Electrical stimulation (attended/manual)	Constant Attendance	Yes (15-min units)
97033	Iontophoresis	Constant Attendance	Yes (15-min units)
97034	Contrast baths	Constant Attendance	Yes (15-min units)
97036	Hubbard tank	Constant Attendance	Yes (15-min units)

Therapeutic Procedures (Time-Based — 15-Minute Units)

Therapeutic procedures require **one-on-one direct contact** between the provider and patient and are time-based, reported in 15-minute increments.

Code	Procedure	Description	Unit
97110	Therapeutic Exercises	Strength, endurance, ROM, flexibility — with direct contact	15 min
97112	Neuromuscular Reeducation	Movement, balance, coordination, kinesthetic sense	15 min
97116	Gait Training	Includes stair climbing training	15 min
97140	Manual Therapy	Mobilization/	15 min

Code	Procedure	Description	Unit
		manipulation, manual lymphatic drainage, IASTM	
97150	Therapeutic Exercises — Group	Two or more patients simultaneously; not time-based per patient	Per encounter
97530	Therapeutic Activities	Dynamic functional activities using equipment, movements, devices	15 min
97535	Self-Care/Home Management Training	ADL training, compensatory techniques	15 min
97542	Wheelchair Management/Propulsion Training	Fitting, education, propulsion technique	15 min

> 📚 **Coder's Corner: Time-Based Codes — The 8-Minute Rule**
>
> For Medicare patients (and many other payers), physical therapy uses the **8-minute rule** for time-based codes. A provider must spend at least **8 minutes** on a timed procedure to bill one unit. For each additional 15-minute unit, at least 8 minutes of that unit must be performed. Always document the **start and stop time** and the **total treatment time** to support the number of units billed.
>
> - 8–22 minutes = 1 unit
> - 23–37 minutes = 2 units
> - 38–52 minutes = 3 units
> - 53–67 minutes = 4 units

Osteopathic Manipulative Treatment (OMT) (98925–98929)

Osteopathic manipulative treatment (OMT) is performed by DO physicians (Doctors of Osteopathic Medicine) using manual techniques to treat somatic dysfunction. Code selection is based on the **number of body regions** treated:

- **98925**: OMT — 1–2 body regions
- **98926**: OMT — 3–4 body regions
- **98927**: OMT — 5–6 body regions
- **98928**: OMT — 7–8 body regions
- **98929**: OMT — 9–10 body regions

The 10 body regions recognized for OMT coding are: head, cervical, thoracic, lumbar, sacral, pelvic, lower extremities, upper extremities, rib cage, and abdomen/viscera.

Chiropractic Manipulative Treatment (CMT) (98940–98943)

Chiropractic manipulative treatment (CMT) is performed by chiropractors and coded by the number of **spinal regions** treated:

- **98940**: CMT — 1–2 spinal regions
- **98941**: CMT — 3–4 spinal regions
- **98942**: CMT — 5 spinal regions
- **98943**: CMT — extraspinal regions

📋 **Coding Scenario 11-A: PT Visit — Hot Packs + Therapeutic Exercise + Manual Therapy**

Clinical Note: A patient with lower back pain is treated by a physical therapist. Hot packs are applied for 15 minutes (unattended). Therapeutic exercises (strengthening) are performed for 30 minutes (direct one-on-one). Manual therapy (mobilization) is performed for 15 minutes (direct one-on-

one).

> **Step 1:** Hot packs — supervised modality, not time-based → 97010 (1 unit, no multiplier).
>
> **Step 2:** Therapeutic exercise — time-based; 30 minutes ÷ 15 min = 2 units → 97110 ×2.
>
> **Step 3:** Manual therapy — time-based; 15 minutes = 1 unit → 97140 ×1.

Final Codes: **97010, 97110 ×2, 97140**

📋 Coding Scenario 11-B: OMT — 6 Body Regions

Clinical Note: A DO treats a 35-year-old patient with somatic dysfunction. Documentation reflects treatment of the cervical, thoracic, lumbar, sacral, rib cage, and left lower extremity — a total of 6 body regions.

> **Step 1:** OMT — 6 body regions → falls in the 5–6 range → 98927.

Final Code: **98927**

📋 Coding Scenario 11-C: Chiropractic — 3 Spinal Regions

Clinical Note: A chiropractor performs CMT on the cervical, thoracic, and lumbar spine of a patient with neck and back pain.

> **Step 1:** CMT — 3 spinal regions (cervical, thoracic, lumbar) → 98941 (3–4 regions).

Final Code: 98941

12. Medicine Section Modifiers

Modifiers are two-digit (or alphanumeric) codes appended to CPT codes to provide additional information without changing the core definition of the service. Several modifiers are especially important in the Medicine section.

Modifier	Name	When to Use (Medicine Context)	Example
-25	Significant, Separately Identifiable E/M	E/M performed same day as a Medicine procedure (e.g., ECG, injection); E/M must be documented separately	99213-25, 93000 — Office visit + ECG same day
-51	Multiple Procedures	Appended to secondary procedure when multiple	97140-51, 97110 — Two PT procedures same day (if not -51

Modifier	Name	When to Use (Medicine Context)	Example
		procedures are performed; many Medicine codes are -51 exempt	exempt)
-59	Distinct Procedural Service	Indicates two services that are normally bundled are distinct on this occasion	92552-59, 92553 — Audiometry codes performed as separate sessions
-76	Repeat Procedure — Same Physician	Same procedure repeated by the same provider on the same day	93000-76 — Second ECG same day, same physician
-77	Repeat Procedure — Different Physician	Same procedure repeated by a different provider on the same day	90935-77 — Hemodialysis evaluation by covering physician
-GY	Statutorily Excluded	Service is explicitly non-covered by Medicare/Medicaid; used to deny and then bill secondary	92310-GY — Contact lens fitting (usually non-covered by Medicare)
-GP	Services Under PT Plan of Care	Required by Medicare when physical therapist provides services under a PT plan of care	97110-GP — Therapeutic exercise by PT under Medicare
-GO	Services Under OT Plan of Care	Required by Medicare when occupational therapist provides services under an OT plan of care	97530-GO — Therapeutic activity by OT under Medicare

> 📚 **Coder's Corner: Modifier -51 Exempt Codes**
>
> Many Medicine section codes carry a **modifier -51 exempt** designation (indicated by the ⊙ symbol in the CPT codebook and listed in Appendix E).

> This means the code's reimbursement is NOT reduced for being a secondary procedure. Always check Appendix E before appending modifier -51 to any Medicine section code — many add-on codes are automatically -51 exempt.

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13. Special Services, Procedures and Reports (99000–99091)

Specimen Handling

- **99000**: Handling and/or conveyance of specimen to outside laboratory (from office)
- **99001**: Handling and conveyance of specimen from the patient to a laboratory when the patient is not at the office (e.g., the patient sends a specimen)

After-Hours Services

- **99050**: Service(s) provided in office at times other than regularly scheduled office hours
- **99051**: Service(s) provided in office during regularly scheduled evening, weekend, or holiday office hours
- **99060**: Service(s) provided on an emergency basis, out of the office

Telephone and Online Services

- **99441**: Telephone E/M — patient or guardian; 5–10 minutes
- **99442**: Telephone E/M — 11–20 minutes
- **99443**: Telephone E/M — 21–30 minutes
- **99421**: Online digital E/M (patient portal/email) — 5–10 minutes

- **99422**: Online digital E/M — 11–20 minutes
- **99423**: Online digital E/M — 21+ minutes

Remote Physiologic Monitoring (RPM) (99453–99458)

- **99453**: Initial setup and patient education for RPM device (one-time per episode)
- **99454**: Device supply with daily recording(s) and/or programmed alerts transmission — per 30 days
- **99457**: Remote physiologic monitoring treatment management — first 20 minutes per month
- **99458**: RPM treatment management — each additional 20 minutes (add-on)

> 💡 **Did You Know?**
>
> Remote Physiologic Monitoring (RPM) has become one of the fastest-growing areas of medical coding since 2020. Devices used include blood pressure cuffs, glucose monitors, pulse oximeters, and weight scales that automatically transmit readings to the clinical team. Documentation must confirm at least **16 days of data** were collected in a 30-day period for 99454 to apply.

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14. Real-World Coding Scenarios — Full Encounter Analysis

📋 **Full Scenario A: Influenza Vaccine Administration — Pediatric Patient, 2 Injections**

Clinical Note: An 8-year-old female presents for her annual well-child visit. The pediatrician counsels the mother on the influenza vaccine and the Hepatitis A vaccine, both administered by injection today. The patient is receiving her first dose of Hepatitis A (a single-component vaccine) and a quadrivalent influenza vaccine (a single-component product). The well-child preventive visit (99393) was also performed today.

Step 1 — Identify the services: (a) Preventive visit E/M; (b) Two vaccine administrations with counseling; (c) Two vaccine products.

Step 2 — Vaccines: Patient is 8 years old (through 18) + counseling provided → 90460/90461 series. Two vaccines, each with 1 component = 2 components total.

Step 3 — Administration codes: 90460 (first component) + 90461 (second component, add-on).

Step 4 — Products: Influenza quadrivalent = 90686; Hepatitis A pediatric = 90633.

Step 5 — Preventive visit: 99393 (established female 5–11 years). Because the immunizations are a separately defined service, modifier -25 is typically appended to the preventive E/M per payer guidelines (some payers bundle; others pay separately).

Final Codes: **99393, 90460, 90461, 90686, 90633**

Common Mistake: Reporting 90471/90472 for a child when physician counseling is documented — always use 90460/90461 in that scenario.

📋 Full Scenario B: 60-Minute Psychotherapy + E/M Visit

Clinical Note: A psychiatrist sees a 29-year-old patient with generalized anxiety disorder. The psychiatrist first performs a medical E/M service (medication review, dosage adjustment of SSRIs, and mental status exam — Level 4 E/M, 99214). The psychiatrist then performs 55 minutes of individual psychotherapy (CBT) during the same encounter. Total session time: 75 minutes.

> **Step 1:** E/M performed → 99214.
>
> **Step 2:** Psychotherapy also performed same day → do NOT use standalone 90837; use add-on codes.
>
> **Step 3:** 55 minutes of psychotherapy → exceeds 53-minute threshold → 90838 (60-minute psychotherapy add-on).
>
> **Step 4:** Add-on codes do not need modifier -51 and are automatically appended after the E/M code.

Final Codes: **99214, 90838**

Common Mistake: Reporting 90837 + 99214 (standalone + E/M). The standalone code cannot be used when an E/M is also reported on the same date — only the add-on (90838) is correct.

📋 Full Scenario C: ECG + Office Visit Same Day (Modifier -25)

Clinical Note: A 68-year-old established patient presents to her cardiologist with complaints of shortness of breath and chest tightness. The cardiologist performs a detailed medical history, examination, and complex medical

decision-making (E/M = 99214). During the same visit, a 12-lead ECG is performed. The cardiologist's office owns the ECG machine, and the physician personally reviews and documents interpretation.

> **Step 1:** Significant, separately documented E/M → 99214. Because an ECG (a procedure) is also being reported on the same day, append modifier -25 to the E/M.
>
> **Step 2:** ECG — global code (physician owns equipment + performs interpretation) → 93000.
>
> **Step 3:** Confirm documentation supports BOTH the E/M and the ECG reading as distinct services.

Final Codes: **99214-25, 93000**

Common Mistake: Omitting modifier -25, which may result in the E/M being denied as bundled with the ECG. Also: do NOT report 93005 + 93010 when the global 93000 applies.

📋 Full Scenario D: Chemotherapy Infusion (2 hrs + 1 additional hr + Anti-Nausea Push)

Clinical Note: A patient with non-Hodgkin's lymphoma receives rituximab (chemotherapy/biologic) infused IV over 2 hours 45 minutes. Following completion of rituximab, ondansetron (anti-emetic, non-chemotherapy) is administered as an IV push. No hydration is given.

Step 1: Chemotherapy IV infusion — rituximab, initial hour → 96413.

Step 2: Additional time: 2 hr 45 min total. After the first hour: 1 hour 45 min remaining. Each additional unit requires >30 minutes. 1 hr 45 min = 1 full additional unit (60 min) + 45 min remainder (exceeds 30 min threshold) = 2 additional units → 96415 ×2.

Step 3: Ondansetron — non-chemotherapy IV push, given after rituximab completed (sequential) → 96375 (each additional sequential IV push of non-chemo drug after initial chemo).

Step 4: Drug J-codes for rituximab and ondansetron reported separately.

Final Codes: **96413, 96415 ×2, 96375** + J-codes

Common Mistake: Using 96417 (sequential chemo add-on) for ondansetron — ondansetron is NOT chemotherapy. Use 96375 for non-chemo sequential IV push.

📋 Full Scenario E: Physical Therapy Visit — Hot Packs + Exercises + Manual Therapy

Clinical Note: A PT sees a patient for knee rehabilitation following ACL repair. Hot packs applied for 20 minutes (unattended). Therapeutic exercises (strengthening, ROM) performed one-on-one for 30 minutes. Manual therapy (joint mobilization) performed one-on-one for 20 minutes.

Step 1: Hot packs — supervised, not time-based → 97010 (flat rate, 1

unit).

Step 2: Therapeutic exercise — 30 minutes one-on-one; 30 ÷ 15 = 2 units → 97110 ×2.

Step 3: Manual therapy — 20 minutes one-on-one; 20 min: 8-minute rule → 1 full unit (8–22 min) + if using 8-min rule, 20 min = 1 unit (only 5 min remain for second unit, less than 8 min threshold) → 97140 ×1.

Final Codes: **97010, 97110 ×2, 97140**

Common Mistake: Billing manual therapy as 2 units for 20 minutes — only 1 full unit is supported under the 8-minute rule (would need 23+ minutes for 2 units).

📋 Full Scenario F: Hemodialysis with Single Physician Evaluation

Clinical Note: A 58-year-old patient with chronic kidney disease stage 5 (ESRD) undergoing regular hemodialysis is evaluated once by the nephrologist during today's dialysis session. The nephrologist documents one complete evaluation of the patient during the run.

Step 1: Hemodialysis + physician evaluation.

Step 2: Single evaluation during the session → 90935.

Step 3: If this is a monthly ESRD-managed patient, the nephrologist may be billing monthly capitation (90960–90962) instead of

> individual per-session codes — verify billing model.

Final Code: 90935

Common Mistake: Reporting both the monthly ESRD capitation code and the per-session hemodialysis code for the same encounter. These are mutually exclusive billing methods — use one or the other, not both.

15. Chapter Review — 20 Multiple Choice Questions

Select the best answer for each question. Answers and rationale appear in the Answer Key following Question 20.

1. A 6-year-old patient receives an MMR vaccine (3 antigen components). The physician provides face-to-face counseling to the parents. Which codes correctly report ONLY the administration of this vaccine?

A) 90471, 90472 ×2
B) 90460, 90461 ×2
C) 90460, 90461
D) 90460 ×3

2. A psychiatrist performs medication management (E/M = 99213) AND 30 minutes of individual psychotherapy during the same encounter. Which coding is correct?

A) 90832 only
B) 99213, 90832

C) 99213, 90833

D) 99213-25, 90832

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3. A 50-year-old ESRD patient has 3 face-to-face physician visits in November. Which code correctly reports the monthly ESRD management?

A) 90960

B) 90961

C) 90962

D) 90935 ×3

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4. A cardiologist performs an ECG tracing in the hospital, but a separate physician reads and documents interpretation. Which codes are correct?

A) 93000 (hospital), 93000 (physician)

B) 93005 (hospital), 93010 (physician)

C) 93000-TC (hospital), 93000-26 (physician)

D) 93010 only

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5. An ophthalmologist performs a comprehensive eye exam on a new patient including examination of all ocular components and initiation of a management plan. Which code applies?

A) 99204

B) 92002

C) 92004

D) 92014

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6. A patient receives IV chemotherapy for 1 hour 20 minutes. No other medications are given. Which codes are reported for the administration?

A) 96413 only

B) 96413, 96415

C) 96413, 96414

D) 96365, 96366

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7. Which infusion code is NEVER the primary (initial) service when another infusion or injection is also administered on the same day?

A) 96365

B) 96413

C) 96360

D) 96409

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8. A physical therapist applies hot packs (unattended) for 20 minutes and then performs therapeutic exercise one-on-one for 45 minutes. How should the therapeutic exercise be reported?

A) 97110 ×1

B) 97110 ×2

C) 97110 ×3

D) 97110 ×4

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9. A DO performs osteopathic manipulative treatment on the cervical, thoracic, lumbar, and sacral regions. Which code applies?

A) 98925

B) 98926

C) 98927

D) 98928

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10. A chiropractor treats 3 spinal regions (cervical, thoracic, lumbar). Which CMT code is reported?

A) 98940
B) 98941
C) 98942
D) 98943

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11. An audiologist performs comprehensive audiometry (pure tone air/bone + speech recognition). Which code is most appropriate?

A) 92553 and 92556
B) 92552 and 92555
C) 92557
D) 92550

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12. A neurologist performs EMG on the left upper and left lower extremities, and 7 nerve conduction studies. How should these be coded?

A) 95860, 95910
B) 95861, 95909
C) 95861, 95910
D) 95864, 95907

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13. Which modifier should be appended to the E/M code when an office visit AND an ECG are performed by the same physician on the same day?

A) -51
B) -59
C) -25
D) -76

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14. A cardiac catheterization is performed involving both the right and left heart with coronary angiography. Which is the most appropriate code?

A) 93451
B) 93452
C) 93453
D) 93460

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15. A patient receives chemotherapy (drug A) for 90 minutes, then drug B (non-chemotherapy) is given sequentially as an IV push. Which codes report the drug B administration?

A) 96409
B) 96411
C) 96375
D) 96417

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16. A psychiatrist conducts a psychiatric diagnostic evaluation, including prescribing a new antidepressant. Which code is correct?

A) 90791
B) 90792
C) 90837
D) 99213

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17. Which ophthalmology code is reported for an established patient receiving an intermediate eye examination?

A) 99212
B) 92002
C) 92012
D) 92014

18. A hemodialysis procedure requires the nephrologist to evaluate the patient three separate times during the same dialysis run. Which code applies?

A) 90935
B) 90935 ×3
C) 90937
D) 90951

19. Which of the following statements about modifier -51 in the Medicine section is TRUE?

A) All Medicine section codes require modifier -51 when billed with other procedures
B) Many Medicine section codes are exempt from modifier -51 and should not have it appended
C) Modifier -51 is used only for surgical procedures, never for Medicine codes
D) Modifier -51 replaces modifier -59 in the Medicine section

20. A 12-year-old receives an influenza vaccine (1 component) WITHOUT physician counseling. Nurse administers the injection. Which administration code applies?

A) 90460
B) 90461
C) 90471
D) 90473

Answer Key with Rationale

1. B) 90460, 90461 ×2

The patient is 6 years old (through 18) and physician counseling is provided. Use 90460 for the first component and 90461 as add-on for each additional component. MMR has 3 components → 90460 + 90461 + 90461.

2. C) 99213, 90833

When E/M and psychotherapy are performed same day, use the E/M code plus the psychotherapy add-on code. Code 90833 is the add-on for 30-minute psychotherapy with E/M (16–37 min). Never use standalone 90832 when E/M is also reported.

3. B) 90961

Patient is 50 years old (age 20+) → codes 90960–90962. November had 3 face-to-face visits → 90961 (2–3 visits per month). Code 90960 requires 4+ visits; 90962 requires only 1 visit.

4. B) 93005 (hospital), 93010 (physician)

When the ECG tracing is performed by one entity (hospital) and the interpretation by another (physician), use the component codes: 93005 for tracing only and 93010 for interpretation only. Never report 93000 (global) for split-component billing. ECG codes do not use -TC/-26 modifiers — they have separate codes.

5. C) 92004

New patient + comprehensive ophthalmologic exam = 92004. Code 99204 is a standard office visit code and should not be used for routine ophthalmologic examinations. Code 92002 is intermediate (new), and 92014 is comprehensive but established patient.

6. B) 96413, 96415

Initial chemotherapy IV infusion = 96413 (first hour). An additional 20 minutes beyond the first hour exceeds the 8-minute threshold for an additional unit → add-on 96415 ×1. Code 96414 does not exist; 96365/96366

are for non-chemotherapy infusions.

7. C) 96360

Hydration codes (96360–96361) cannot serve as the primary infusion service when any other infusion or injection is provided during the same encounter. Hydration is only billable as a standalone primary service when it is the sole infusion given.

8. C) 97110 ×3

Therapeutic exercise is a time-based code reported in 15-minute units. 45 minutes ÷ 15 minutes = exactly 3 units. Hot packs (97010) are not time-based and are reported separately as a flat rate.

9. B) 98926

OMT is coded by number of body regions treated: cervical, thoracic, lumbar, sacral = 4 regions → 98926 (3–4 body regions). Code 98925 = 1–2; 98927 = 5–6; 98928 = 7–8.

10. B) 98941

CMT is coded by spinal regions: cervical, thoracic, lumbar = 3 regions → 98941 (3–4 spinal regions). Code 98940 = 1–2 regions; 98942 = 5 spinal regions; 98943 = extraspinal.

11. C) 92557

Comprehensive audiometry (92557) bundles pure tone air and bone conduction testing with speech recognition. Reporting 92553 + 92556 separately would be unbundling when the comprehensive service was performed. Always use the most comprehensive code that accurately describes the service.

12. C) 95861, 95910

EMG on 2 extremities (left upper + left lower) = 95861. NCS — 7 studies = 95910 (7–8 studies). EMG and NCS are always reported separately — they are distinct tests.

13. C) -25

Modifier -25 (Significant, Separately Identifiable E/M Service) is appended to

the E/M code when a procedure (such as an ECG) is also performed on the same day by the same provider. The E/M must be separately documented and medically necessary beyond the procedure alone.

14. D) 93460

Left heart catheterization + right heart catheterization + coronary angiography = 93460. Code 93451 = right only; 93452 = left only; 93453 = combined without coronary angiography; 93460 includes both sides plus coronary injection and angiography.

15. C) 96375

Ondansetron is a non-chemotherapy drug given as an IV push sequentially after the initial chemotherapy infusion. Use add-on 96375 (each additional sequential IV push of therapeutic drug, different substance). Code 96411 is for additional chemo IV push (not non-chemo); 96417 is for sequential additional chemo infusion (not push); 96409 is the initial chemo IV push code.

16. B) 90792

Psychiatric diagnostic evaluation WITH medical services (including prescribing) = 90792. Code 90791 is the diagnostic evaluation WITHOUT medical services. Code 90837 is psychotherapy (60 min), not a diagnostic evaluation.

17. C) 92012

Established patient + intermediate ophthalmologic examination = 92012. Code 92002 is intermediate but for new patients; 92014 is comprehensive (established); 99212 is a standard office visit code not used for routine ophthalmologic exams.

18. C) 90937

Hemodialysis procedure with multiple physician evaluations required during the same session = 90937. Code 90935 is used when only a single evaluation is performed. Never report 90935 multiple times for the same session.

19. B) Many Medicine section codes are exempt from modifier -51 and should not have it appended

Numerous Medicine codes — particularly add-on codes and certain specialty services — are listed in CPT Appendix E as modifier -51 exempt. Appending -51 to these codes incorrectly reduces reimbursement. Always check Appendix E before adding modifier -51 to any Medicine code.

20. C) 90471

No physician counseling was documented → use 90471/90472 series regardless of age. Code 90460 requires face-to-face counseling by a physician or QHP. Code 90471 applies to the first injection vaccine without counseling, any age. Code 90473 is for oral/intranasal vaccines (not an injection).

16. Chapter Summary

Key Concepts at a Glance

- The **CPT Medicine section (90281–99607)** covers services across dozens of specialties and can be reported alongside E/M and Surgery codes when distinct and documented.
- **Immunization coding requires two codes**: one for administration (90460–90474) and one for the vaccine product (90476–90749). Use 90460/90461 for patients through age 18 when physician counseling is documented; use 90471–90474 for all other situations.
- **Psychotherapy codes are time-based**. When E/M is also performed on the same day, use add-on codes (90833, 90836, 90838) instead of standalone codes (90832, 90834, 90837).
- **ESRD monthly capitation codes** are selected by patient age and number of face-to-face visits per month; they bundle all ESRD-related E/M services for the calendar month.
- **Ophthalmology uses its own E/M codes** (92002–92014) — not standard office visit codes (99202–99215) — for routine eye examinations.
- **ECG has three component codes**: 93000 (global), 93005 (tracing only), 93010 (interpretation only). Never combine the global code with either component code.
- **The chemotherapy infusion hierarchy** places chemo at the top. When multiple infusions are given, chemotherapy is always the "initial" service, followed by therapeutic drugs, with hydration (96360) never serving as the primary code when other infusions are present.
- **Physical medicine therapeutic procedures are time-based** (15-minute units). Supervised modalities (hot packs, electrical stim) are flat-rate codes with no time calculation. Always document total treatment time and direct contact time.

- **EMG and NCS are always coded separately** — they are different tests. EMG codes are selected by number of extremities; NCS codes are selected by number of studies.
- **OMT codes (98925–98929)** are selected by body regions treated (1–10 regions); **CMT codes (98940–98942)** by spinal regions (1–5 spinal, or extraspinal).
- **Modifier -25** must be appended to E/M codes when a separately identifiable E/M service is performed on the same day as a procedure. The E/M must stand alone in the documentation.
- Many Medicine section codes are **modifier -51 exempt** — always check CPT Appendix E before appending -51.
- **Remote Physiologic Monitoring (RPM)** requires at least 16 days of data collection per 30-day period (99454) and separate coding for device setup (99453) and treatment management (99457–99458).

17. Key Terms Glossary

Term	Definition
Capitation	A payment model where a provider receives a fixed amount per patient per period (e.g., ESRD monthly capitation codes 90951–90970).
Chemotherapy	Antineoplastic agents used to treat cancer; also includes certain highly complex biologic agents. Governed by CPT codes 96401–96549.
Concurrent Infusion	A second drug infused simultaneously through the same IV line as the primary infusion.

Term	Definition
Constant Attendance Modality	A physical medicine treatment requiring one-on-one direct contact between the provider and patient throughout the procedure (e.g., iontophoresis 97033).
Diffusion Capacity (DLCO)	A pulmonary function test measuring the ability of the lungs to transfer gas (oxygen) from inhaled air to the bloodstream. Reported with code 94729.
Echocardiography	Ultrasound imaging of the heart used to assess structure and function; includes transthoracic (TTE), transesophageal (TEE), and stress echo.
Electroencephalography (EEG)	A diagnostic test that records the electrical activity of the brain using electrodes placed on the scalp.
Electromyography (EMG)	A diagnostic procedure that measures the electrical activity of muscles; coded by number of extremities examined (95860–95872).
End-Stage Renal Disease (ESRD)	Permanent kidney failure requiring dialysis or transplant; managed under monthly capitation codes in CPT.
Hemodialysis	A dialysis method using a machine to filter waste from the blood through an artificial kidney; reported with codes 90935–90940.
Immune Globulin	A plasma-derived antibody preparation used to provide passive immunity; reported separately from administration (90281–90399).
Interactive Complexity	An add-on code (90785) for psychiatric services complicated by communication barriers, mandated reporting, or guardian involvement.
Modifier -25	Appended to an E/M code to indicate a significant, separately identifiable E/M service was performed on the same day as a procedure or service.
Modifier -51	Indicates multiple procedures were performed during the same session; many Medicine codes are exempt from

Term	Definition
	this modifier.
Nerve Conduction Study (NCS)	A diagnostic test measuring the speed and strength of electrical impulses through a nerve; coded by number of studies (95907–95913).
Osteopathic Manipulative Treatment (OMT)	Manual treatment performed by a DO to diagnose and treat somatic dysfunction; coded by number of body regions treated (98925–98929).
Percutaneous Coronary Intervention (PCI)	A catheter-based procedure to open blocked coronary arteries; includes balloon angioplasty (92920) and stent placement (92928).
Polysomnography	An attended overnight sleep study monitoring multiple physiologic parameters; used to diagnose sleep disorders including apnea (95808–95811).
Psychiatric Diagnostic Evaluation	An initial psychiatric assessment; 90791 (without medical services) or 90792 (with medical services such as prescribing).
Remote Physiologic Monitoring (RPM)	Collection and interpretation of physiologic data (e.g., blood pressure, weight, glucose) transmitted from a patient's home device to the clinical team (99453–99458).
Sequential Infusion	A second drug infused after the first infusion is completed, through the same IV line.
Spirometry	A pulmonary function test measuring the volume and speed of air that can be inhaled and exhaled; reported with codes 94010–94060.
Supervised Modality	A physical medicine treatment that does not require constant one-on-one provider contact (e.g., hot packs 97010, electrical stimulation 97014).
Two-Code Rule	The requirement in immunization coding to always report both an administration code (90460–90474) AND a vaccine product code (90476–90749).

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