AAPC

COSC™

Certified Orthopaedic Surgery Coder

STUDY GUIDE

2026

2026

Specialty Study Guide: COSC™

ORTHOPEDIC

Contents

2026 Specialty Study Guide: COSC™ Introduction

The *Specialty Study Guide: COSC™* is designed to help orthopedic coders, billers, and other medical office professionals prepare for the COSC™ examination. This guide is by no means comprehensive. Your primary resource for the exam will be your years of hands-on experience in coding for orthopedics.

Healthcare in the 21st century is complex and requires expertise in proper coding to obtain payment for procedures, services, equipment, and supplies. Becoming a COSC™ shows your expertise in orthopedic coding. Membership in AAPC lends integrity to your credentials, provides a large network of coders for support, and allows you access to continuing education opportunities. In addition to helping someone prepare for the exam, the *Specialty Study Guide: COSC™* will provide an overall review of coding and compliance information for the more experienced coder.

We will review the importance of using the coding guidelines within ICD-10-CM and CPT® as well as emphasize the importance of correct evaluation and management (E/M) leveling. You will need 2026 versions of ICD-10-CM, CPT®, and HCPCS Level II code books. These are the code books you will need for the study guide and COSC™ exam.

ICD-10-CM Coding

Proper diagnostic coding not only reports the medical necessity of procedures performed, but also contributes to data that determines health policies for tomorrow. Because physicians have traditionally been paid by CPT® code values, coders have sometimes given little importance to correct ICD-10-CM coding. Regulatory trends show that diagnoses will play a larger role in future reimbursement. It is important to code correctly so you are prepared for that day.

We will discuss the major topics of diagnosis coding for orthopedics. The examinee must become familiar with the Official Coding Guidelines for ICD-10-CM, know how to select the appropriate ICD-10-CM codes, and be able to properly sequence diagnosis codes when more than one diagnosis code is required to report a patient's conditions. This year's guidelines can be found at https://www.cms.gov/files/document/fy-2026-icd-10-cm-coding-guidelines.pdf. The examinee must understand the conventions, general coding guidelines, and chapter specific guidelines in the ICD-10-CM code book.

Evaluation and Management Coding

Office visits consume a lion's share of the physician's time in most practices, and consequently represent the largest revenue source. Compliance is an increasing concern at practices, and the E/M material will focus on the E/M services for orthopedics, while underscoring the importance of modifier use. An understanding of the AMA E/M guidelines and subsection notes is an important foundation for accurate code selection that is provided in your CPT® code book.

An E/M calculator is provided for the online exam (https://www.aapc.com/codes/em-calculator) and your CPT® code book provides a Medical Decision Making (MDM) table to level an E/M service.

CPT® Coding

Surgical procedures specific to orthopedics will be discussed in this section. Special attention will be paid to the guidelines and parenthetical phrases associated with procedures. Understanding CPT® coding conventions will be helpful as well. The examinee must be able to select the appropriate CPT® codes and sequence the codes correctly when multiple procedures are performed. CPT® codes are sequenced based on the most complex or labor-intensive procedures. The codes with the highest RVUs (Relative Value Units) are sequenced first.

Top 10 Missed Coding Concepts

We will review the Top 10 Missed Coding Concepts for the COSC™ certification exam in this chapter. The list is not presented in any specific order. The information is determined after an evaluation by the AAPC exam department of the commonly missed questions on the exam.

Practice Exam

The practice exam and the exam itself were written by coders with extensive coding experience in orthopedics. It mimics the format and structure of the COSC™ certification exam.

AAPC has developed specialty credentials to enable coders to demonstrate superior levels of expertise in their respective specialty disciplines. Here is information on the COSC™ credential:

- COSC™ stands alone as a certification with no prerequisite that the examinee holds a core credential such as CPC® or COC® credential.
- Exams aptly measure preparedness for real world coding by being entirely operative/patient-note based. These operative (op) notes are redacted from real orthopedic practices.

The COSC™ examination tests your knowledge of coding concepts, anatomic principles, and coding guidelines only. When you sit for this exam, remember that individual payer rules are not a consideration when choosing the right answer. Unless it is specifically stated in the case note or exam question that the patient is covered by Medicare, you should follow the CPT® coding guidelines.

The exam tests competency. The candidate most qualified to pass the exam will be proficient in understanding:

- Medical terminology and anatomy
- Medical physiology
- Teaching physician guidelines
- Incident-to guidelines
- Split/Shared services
- HIPAA regulations
- Proper use of the ABN (Advanced Beneficiary Notice)
- ICD-10-CM coding
- E/M code selection using the AMA CPT® E/M guidelines
- CPT® coding for common procedures
    - 10000 Series
    - 20000 Series
    - 30000 Series
    - 60000 Series
    - Laboratory and Pathology
    - Radiology
    - Medicine
    - Category III codes
- CPT® and HCPCS Level II modifier usage
- HCPCS Level II coding

Familiarity with practical coding and the code books is essential, as time is an important element in successfully completing the exam. Approach the exam as you would approach your work—by demonstrating coding abilities essential to success. This is not a general aptitude test, and each question has a specific goal for measuring your competency. The practice exam within the *Specialty Study Guide: COSC™* course is highly representative of the subject matter and level of difficulty you will encounter in the full-length exam.

Test Answers and Rationales

The final chapter in the book contains the answers to the practice exam. Accompanying each answer is a rationale that explains the coding guidelines contributing to selecting the right answer. These rationales should help you understand what is needed to successfully approach and answer questions on the real exam, because they allow you a glimpse into the minds of the test's creators.

Examinees that pass the COSC™ certification examinations will receive recognition in AAPC's monthly magazine, *Healthcare Business Monthly* and receive a diploma.

About AAPC

AAPC was founded in 1988 in an effort to elevate the standards of medical coding by providing training, certification, ongoing education, networking, and recognition.

AAPC provides medical coding certification exams for coders in physician practices and the outpatient/facility environment. AAPC has expanded beyond outpatient coding to include training and credentials in documentation and coding audits, inpatient hospital/facility coding, regulatory compliance, and physician practice management. The purpose of AAPC coding certifications is to test an examinee's knowledge of coding principles and proficiency in coding accurately and efficiently. AAPC examinations measure a coder's skill of both coding accuracy and efficiency.

AAPC Member Code of Ethics

Members of AAPC shall be dedicated to providing the highest standard of professional service for the betterment of healthcare to employers, clients, vendors, and patients. Professional and personal behavior of AAPC members must be exemplary.

It shall be the responsibility of every AAPC member, as a condition of continued membership, to conduct themselves in all professional activities in a manner consistent with ALL of the following ethical principles of professional conduct:

- Integrity
- Respect
- Commitment
- Competence
- Fairness
- Responsibility

Adherence to these ethical standards assists in assuring public confidence in the integrity and professionalism of AAPC members. Failure to conform professional conduct to these ethical standards, as determined by AAPC's Ethics Committee, may result in the loss of membership with AAPC.

ICD-10-CM Coding Guidelines

In this chapter, we will cover the following issues as they pertain to orthopedic diagnosis coding:

- Introduction to ICD-10-CM guidelines
- General tips for using ICD-10-CM
- Specific guidelines for the musculoskeletal chapter
- Conditions and diseases
- Injuries
- Fractures
- Hardware complications
- Aftercare

ICD-10-CM code selection may vary depending on whether a condition, injury, etc., is acute or chronic. "Acute" means a sudden onset or short term, and usually refers to the current injury. "Chronic," by contrast, means of a long duration and perhaps recurring (such as arthritis). As a rule, if acute or chronic is not specified, the "default" diagnosis is chronic.

For example, an injury to the rotator cuff may be either acute or chronic. An acute rotator cuff tear, for instance, might occur suddenly while playing volleyball, whereas a chronic rotator cuff might be related to a repetitive motion, or a tearing of the rotator cuff over time.

Trauma is another important term, especially as it relates to fractures, which may be defined as either traumatic or nontraumatic. Sudden injury or accident causes a traumatic fracture, whereas a nontraumatic fracture occurs as a result of repetitive stress over time. Examples of nontraumatic fractures include pathologic and stress fractures.

Remember: Always check the Alphabetical Index of your ICD-10-CM codebook first when trying to locate a code. You will then want to reference the Tabular List for additional information. Do not code from the Alphabetic Index only. There are many important notes and code references in the Tabular List that are not listed in the Alphabetic Index, and these may influence your final code selection.

Introduction to ICD-10-CM Coding Guidelines

The National Center for Health Statistics (NCHS) developed ICD-10-CM (International Classification of Diseases, 10th Revision, Clinical Modification) in consultation with a technical advisory panel, physician groups, and clinical coders to assure clinical accuracy and utility. ICD-10-CM coding guidelines are developed by the Centers for Medicare & Medicaid Services (CMS) and the National Center for Health Statistics. Healthcare providers must begin using the most recent ICD-10-CM code revisions on Oct. 1 of each year, with no "grace period" to transition to the changes.

All versions of the ICD-10-CM code book typically include the ICD-10-CM Official Guidelines for Coding and Reporting. These guidelines are an invaluable source for diagnosis coding information and provide instruction supplemental to that found in the Tabular List for Numerical Codes and the Alphabetic Index of the ICD-10-CM code book.

ICD-10-CM codes are "utilized to facilitate payment of health services, to evaluate utilization patterns, and to study the appropriateness of healthcare costs," according to the Official Guidelines. Ongoing, case-by-case success in achieving these goals requires an open line of communication between the coder and the documenting physician.

The Official Guidelines note, "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." Each ICD-10-CM code assigned must be supported by documentation linked to that claim (individual dates of service must "stand alone"), and coders must be mindful not to assume or extrapolate information from the medical record (for example, coding a condition as acute when it isn't documented as such).

The Official Guidelines are divided into four sections:

- Section I lists ICD-10-CM Conventions, General Coding Guidelines, and Chapter Specific Guidelines.
- Section II explains the Selection of Principal Diagnosis. The Uniform Hospital Discharge Data Set (UHDDS) defines the principal diagnosis as "that condition established after study to be chiefly responsible for occasioning the admission of the patient to the hospital for care."
- Section III gives rules for Reporting Additional Diagnoses. Such as additional diagnoses that can be reported with the principal diagnosis that affect the patient's care.
- Section IV provides Diagnostic Coding and Reporting Guidelines for Outpatient Services. These include information about coding signs and symptoms, when to report chronic diagnoses, ambulatory surgery, routine outpatient prenatal visits, etc.

General Tips for Using ICD-10-CM

Use the Alphabetic Index and Tabular List of the ICD-10-CM code book together. When attempting to select an ICD-10-CM diagnosis code, begin by searching for the main term—such as "lesion," "burn," etc. —in the Alphabetic Index. Follow all cross-references and "see also" entries. When you have located the code you are seeking, turn to that code in the Tabular List. Be sure to pay close attention to disease definitions, footnotes, color-coded prompts, and other instruction. Read all supplemental information completely to be certain you are choosing the correct code. Always select a diagnosis to the highest level of specificity supported by the available documentation.

The first-listed diagnosis should describe the most significant reason for the procedure or visit. The first-listed diagnosis will be reflective of the patient's chief complaint. Relevant co-existing diseases and conditions, as well as related history or family history conditions, are reported as secondary diagnoses. When coding preexisting conditions, make sure the assigned diagnosis code identifies the current reason for medical management. Do not report conditions that no longer exist, or do not pertain to the visit.

Many patients will have numerous chronic complaints. Report a chronic complaint diagnosis only when that chronic condition is treated or becomes an active factor in the patient's care.

Always select ICD-10-CM codes to the highest level of specificity supported by documentation. For example, diagnosis coding for fractures of the wrist and hand requires a 5th code character (which specifies location), a 6th code character (which specifies the laterality and whether the fracture is displaced or nondisplaced), and a 7th code character (which specifies the episode of care). If this information is not documented, appropriate code selection is impossible. You should work with your provider to ensure that the information necessary for proper coding is always noted.

Selection of the full code, including laterality and any applicable 7th character can only be done in the Tabular List. A dash (-) at the end of an Alphabetic Index entry indicates that additional characters are required. Even if a dash is not included at the Alphabetic Index entry, it is necessary to refer to the Tabular List to verify that no additional character(s) is required.

General ICD-10-CM Guidelines

Signs/Symptoms and Confirmed/Unconfirmed Diagnoses

Use of codes that describe signs and symptoms are acceptable when the provider has not established a related, definitive diagnosis. Report only confirmed diagnoses. Uncertain diagnoses described as "probable," "possible," "suspected," "likely," "rule out," "consistent with", "compatible with," etc., are not coded. Code the highest level of certainty known, using codes that describe known signs, symptoms, abnormal test results, etc. For example, if a patient has a breast mass and the provider suspects breast cancer, you should not report breast cancer as the diagnosis. Instead, report the signs and symptoms, such as breast mass, that prompted the exam. If testing later confirms cancer, only then should you report the cancer diagnosis.

For outpatient encounters for diagnostic tests that have been interpreted by a physician, and the final report is available at the time of coding, report any confirmed or definitive diagnosis(es) documented in the interpretation. If a definitive diagnosis is known, do not code related signs and symptoms as additional diagnoses; that is, if the test is positive, you report the findings. For tests interpreted as "normal" code the condition, symptom, or sign that necessitated the diagnostic study.

In rare occurrences, a test is ordered without a clear indication of a reason, and the ordering physician is not available to inquire the needed information prior to treating the patient. In such a case, you will want to confirm the physician's reasoning by checking the order.

When you are provided with both pre-operative and post-operative diagnosis, always report the postoperative diagnosis codes if the pre and post-operative diagnoses differ.

Signs and symptoms attributable to a definitive diagnosis should not be reported separately. Cite additional signs and symptoms beyond the primary diagnosis only when those signs and symptoms are not integral to the disease. Report only those additional conditions that affect treatment, and that the provider documents for the current visit.

For example, a patient presents with shortness of breath. The next day, the physician determines the patient has pneumonia; but, he feels that the shortness of breath may be due to a cardiac condition. In such a case, you may still report the shortness of breath as a sign and symptom with pneumonia because the physician has documented a reason to believe that the conditions are unrelated.

Above all, do not extrapolate or assume information. Select codes only from what is apparent in the available documentation.

Acute vs. Chronic

The doctor makes the determination as to when a condition becomes chronic. Coders will select an appropriate code for acute or sub-acute (primary) versus chronic (secondary) conditions based on the available documentation. For example,

Evaluation and Management Coding for Orthopedic Surgery

This chapter examines the documentation requirements for the evaluation and management (E/M) codes used by physicians and non-physician practitioners (NPPs) to bill for their services.

The E/M documentation requirements chapter is designed to provide a detailed approach to the accurate identification of documentation elements as they are defined by the American Medical Association (AMA) Guidelines for E/M services. The goal of this material is to offer the necessary insight to develop proficiency and correct technique to accurately select levels of E/M services for the exam. This material is not meant to influence policy, rather to refer to as coding guidelines for the COSC™ exam.

This chapter should be reviewed with the CPT® guidelines for E/M services found in the current CPT® code book. This guide is a general summary that explains commonly accepted aspects of selecting E/M codes. The goal is that, after completing your training, you will be confident that you will not under or over code a visit.

An Introduction to the Documentation Requirements Associated with E/M Services

The E/M Documentation Guidelines (DGs) have perhaps inspired more discussion than any other non-clinical topic based in the industry. In an ever-increasing effort to ensure that correct payments are made for visits and consultations, Medicare and the AMA have been working together for well over a decade. In 1992, Medicare transitioned to the Resource-Based Relative Value Scale (RBRVS) physician payment system and the AMA introduced E/M codes in CPT® to report visits and consultations.

By 1994, in response to confusion and the inaccurate interpretation of the codes, the Office of Management and Budget mandated that Medicare adopt DGs to expand the definition that was, at that time, only provided by CPT®. Medicare and the AMA jointly developed this initial set of E/M DGs which were deployed in 1995 and became known as the 1995 Documentation Guidelines or DGs. As auditing showed a pattern of continued misuse of the E/M Codes, the 1995 DGs were criticized as unfair to specialists because they seem to account for extended single system examinations with as much weight as limited multiple system exams.

Within two years, the E/M DGs were revised to improve physician and provider understanding and payment accuracy by extending the definitions to include specialty specific guidance. This set of DGs was scheduled to replace the 1995 DGs and became known as the 1997 DGs. The only problem was that the physician community loudly objected to the 1997 DGs. They were criticized as burdensome with documentation requirements that were too detailed and very difficult to achieve. Medicare decided to not replace the 1995 DGs but to instead allow physicians and providers to choose between the 1995 and the 1997 DGs.

In 2021, in an attempt to simplify the guidelines, the AMA changed the descriptions of the Office or Other Outpatient E/M Services codes 99202-99215. In addition, guidelines for the use of these codes were printed in the CPT® code book. The guidelines added in the 2021 CPT® code book were specific to Office or Other Outpatient E/M Services. In 2023, the AMA expanded the use of the guidelines introduced in 2021 to other E/M categories, eliminating the need for the 1995 and 1997 DGs.

Documentation Guidelines

There are three general principles regarding documentation to ensure credit can be thoroughly verified. It is important to follow these rules of thumb:

1. Documentation should be legible to someone other than the documenting physician or provider and their staff.
2. The date of service, name of the patient, and the name of the provider of service should be easily demonstrated by the documentation.
3. The documentation should support the nature of the visit and the medical necessity of the services rendered.

For most E/M visits, the provider performs three main components: history, exam, and medical decision making (MDM). The history directs the provider to troubleshoot the chief complaint based on an interview with the patient. The exam portion is the provider's physical exam and evaluation of the patient. The MDM includes the provider's assessment and plan.

The guidelines for E/M Services, along with the code descriptors, indicate that a "medically appropriate history and/or physical examination, when performed" is included in the service. While the history and exam should be documented, they are not used in the determination of the level of the code.

The guidelines also include pertinent definitions for terms necessary to understand when determining the level of MDM. You should read through the definitions provided in your CPT®

code book and refer back to them as we go through the MDM components below.

The E/M guidelines provide instructions for selecting the appropriate level of service based on either of the following:

1. The level of the MDM as defined for each service; or
2. The total time for E/M services performed on the date of the encounter.

The provider can determine to support the E/M level of the visit based on MDM or time on a case-by-case basis. Regardless of which element is used to determine the level of visit, documentation should support the medical necessity of the visit. Payers may also have regulations on when MDM or total time is used.

Determining the Medical Decision Making (MDM)

The MDM most accurately reflects the amount of work a provider performs during an E/M service. Four levels of MDM are recognized: straightforward, low, moderate, and high. The level of MDM directly correlates to a level of service.

EXAMPLE: OFFICE VISIT MDM TO CODE CORRELATION

New Patient Code	Established Patient Code	Level of MDM
	99211	N/A 99211 is reported for services that typically do not require the presence of a provider. As such, the concept of MDM does not apply to code 99211.
99202	99212	Straightforward
99203	99213	Low
99204	99214	Moderate
99205	99215	High

To adequately determine the level of visit, the MDM is selected based on three components:

1. The number and complexity of problems addressed at the encounter;
2. The amount and complexity of data to be reviewed and analyzed; and
3. The risk of complications and/or morbidity or mortality of patient management.

To determine the levels of these components appropriately, the definitions provided in your CPT® code book must be understood. Using a grid method, we will discuss each component. Be sure to refer back to the definitions listed in the E/M Guidelines as needed.

Number and Complexity of Problems

The number and complexity of problems identifies the nature of the presenting problem and is based on the relative difficulty level in making a diagnosis. For the problem to be considered in the number of problems, the problem must be addressed within that encounter.

Per CPT®, symptoms may cluster around a specific diagnosis and each symptom is not necessarily a unique condition. Comorbidities/underlying diseases, in and of themselves, are not considered in selecting a level of E/M services unless they are addressed, and their presence increases the amount and/or complexity of data to be reviewed and analyzed or the risk of complications and/or morbidity or mortality of patient management. The final diagnosis for a condition does not, itself, determine the complexity or risk, as extensive evaluation may be required to reach the conclusion that the signs or symptoms do not represent a highly morbid condition. Multiple problems of lower severity may, in aggregate, create higher risk due to interaction.

The final diagnosis alone does not determine the complexity or risk to the patient. The documentation should be reviewed for comorbidities or underlying diseases that are addressed that increase the level of risk to the patient. Simply listing a chronic illness in the documentation is not sufficient. The documentation should indicate that the provider addressed the conditions during the encounter or that the condition contributed to the severity of the case.

When a patient sees multiple providers for different aspects of their care, you may see a physician document the condition is being managed by another provider. When the documentation only states that the patient has the condition and that it is being treated by another provider, it is not considered for the leveling of the visit. If there is additional documentation showing assessment or care coordination regarding that diagnosis, other than the statement of the condition being treated by another provider, it is then considered toward the level of service.

TESTING TECHNIQUE

Read through the entire note to get an understanding of the conditions that are addressed and analyzed during the visit. Simply relying on the chief complaint will not always give an accurate description of the number and complexity of problems for the encounter.

There are four levels identified under the number and complexity of problems addressed; minimal, low, moderate, and high. As demonstrated by the table below, the level of Number/Complexity of Problems Addressed increases as the difficulty of the patient's health increases.

In this chapter, we will cover procedures and CPT® coding guidelines common to orthopedic practice.

Terminology

Frequent Joint Procedures

Arthrocentesis—puncture into joint

Arthrodesis—fusion of joint

Arthroplasty—restoration/reconstruction of joint

Arthrotomy—incision into joint

Common Suffixes

-ectomy—excision, surgical removal

-lysis—detachment/reduction, separation, loosening, dissolving, destruction

-otomy—incision

-desis—fusion, binding

-plasty—reconstruction, plastic repair, plastic surgery

Conditions

Chondromalacia—abnormal softness of cartilage

Osteophytes—bony projections from joints

HCPCS Level II Procedures

In orthopedic practice, the reporting of HCPCS Level II codes is most common for the billing of drugs such as anti-inflammatories and steroids, as well as casting and splinting supplies.

Modifiers

E/M Modifiers

Modifiers specific to evaluation and management services are modifier 24, *Unrelated Evaluation and Management Service by the Same Physician or Other Qualified Health Care Professional During a Postoperative Period*; modifier 25, *Significant, Separately Identifiable Evaluation and Management Service by the Same Physician or Other Qualified Health Care Professional on the Same Day of the Procedure or Other Service*; and modifier 57, *Decision for Surgery.*

Apply modifier 24 if the provider sees the patient during the postoperative period for an unrelated problem. For example, a patient undergoes total hip replacement on Oct. 1, and on Nov. 1 the patient returns to the office, having fallen and fractured a wrist. Since the wrist fracture is unrelated to the hip replacement, and because the E/M service for the wrist fracture occurs during the global period of the hip replacement, you should append modifier 24 to the appropriate E/M service code.

For many private payers, you can report a separate service with modifier 24 if the provider tends to postoperative complications in the office. Medicare payers (and some private payers) will pay for treatment of complications during a global period only if the complication results in a return to the operating room (OR).

Modifier 25 describes a separate, significant E/M service on the same day as another service or procedure. Payers watch this modifier closely, and the Office of Inspector General (OIG) has identified improper application of modifier 25 as a major source of coding mistakes, fraud, and abuse.

All procedures, from simple injections and common diagnostic tests to the most complicated surgeries, include an "inherent" E/M component, according to CMS guidelines.

CMS Transmittal 954, issued May 19, 2006 (Medlearn Matters MM5025, Change Request 5025), specifies that you should apply modifier 25 only for "a significant, separately identifiable E/M service that is above and beyond the *usual* pre and post-operative work for the service" and that you must "appropriately and sufficiently" document medical necessity for both the E/M service and the other service or procedure. CMS stresses that you don't need to submit this documentation with the claim, but it must be available upon request.

Any E/M service you report separately must be "above and beyond" the minimal evaluation and management that normally accompanies such a procedure.

A possible application of modifier 25 in orthopedic practice occurs when a patient is receiving a series of Hyalgan injections into the knee. At the first visit, during which the need for injections is determined, you may report both the initial injection and an E/M service, with modifier 25 appended. On subsequent injection visits, you would not report an E/M service code unless there is a new or worsened condition that requires the physician to report a separate and significant E/M service.

Modifier 57 is appended to an E/M service that occurs on the day of or day before a major surgical procedure (that is, any procedure with a 90-day global period, as defined by the Medicare physician fee schedule), and results in the provider's decision to perform the surgery.

To append modifier 57 to the E/M service, the provider must meet four conditions:

1. The E/M service must occur on the same day of or the day before the surgical procedure.
2. The E/M service must directly lead to the surgeon's decision to perform surgery.
3. The surgical procedure following the E/M must have a 90-day global period (that is, it must be a "major surgical procedure"). For a separate and significantly identifiable E/M service that occurs on the same day as a minor procedure (any procedure with a zero or 10-day global period), you should append modifier 25 rather than modifier 57.
4. The same provider (or one with the same tax ID) provides the E/M service and the surgical procedure.

Always append modifier 57 to the E/M service code, not the surgical procedure code.

Modifier 26

If a provider conducts diagnostic tests or other services using equipment he/she does not own, you should append modifier 26 *Professional Component* to indicate that the provider performed only the professional component (the administration or interpretation) of the service.

In orthopedic practice, providers typically report a global service (both the professional and technical components) for X-rays provided in the office. For radiologic services provided in the facility setting, such as the hospital, you must be sure to append modifier 26. The facility will collect separately for the technical portion (equipment, staff time, etc.) of the procedure.

Modifier 22

Append modifier 22, *Increased Procedural Services* when the service(s) the provider performs is "greater than that usually required for the listed procedure," according to CPT's Appendix A ("Modifiers").

Situations that might call for modifier 22 include the following:

- Excessive blood loss for the procedure
- Presence of excessively large surgical specimen (especially in abdominal surgery)
- Trauma extensive enough to complicate the procedure and not billed as additional procedure codes
- Other pathologies, tumors, malformation (genetic, traumatic, or surgical) that directly interfere with the procedure but are not billed separately
- Services rendered that are significantly more complex than described for the CPT® code in question

Additional circumstances that could merit using modifier 22 include morbid obesity, low birth rate, conversion of a procedure from laparoscopic to open, and significant scarring or adhesions.

Modifier 50

You should append modifier 50 *Bilateral Procedure* to describe situations in which the provider performs a procedure bilaterally (that is, on both sides of the body) and the descriptor for the best available CPT® code does not already describe the procedure as bilateral. Take note of parenthetical notes that indicate not to append modifier 50 to certain add-on codes. Instead, report the add-on code twice to indicate the procedure was performed bilaterally.

Similarly, you should use modifiers LT *Left side* and RT *Right side* to paint a clearer picture for the payer when the provider performs a procedure on one side of paired organs (such as ears, eyes, and kidneys) or, as is more likely in orthopedic practice, paired extremities (for instance, arms and legs).

Modifier 51

Modifier 51 *Multiple Procedures* was designed to indicate to the payer that the provider performed more than one (non-E/M) surgical procedure during the same session. Many payers, including most Medicare carriers, now use software that automatically detects second and subsequent procedures and reimburses them accordingly, making modifier 51 unnecessary. You should check with your individual payer for its guidelines. As always, request the payer's instructions in writing because documentation is your best defense if your billing methods are questioned.

Modifiers 52 and 53

You should append modifier 52 *Reduced Services* to the appropriate CPT® code when the provider plans or expects a reduction in the service, or the provider electively cancels the procedure prior to completion. For example, the provider performs a one-view X-ray of a certain area of the body, but the

AAPC continuously evaluates and enhances our certification exams throughout the year. As AAPC continues to enhance the certification exams, we are beta testing the inclusion of a fill-in-the-blank item type on our certification exams. To prepare you for both item types (multiple choice and fill-in-the-blank), we have provided two versions of this practice exam. The same questions are on both versions of the Test Your Knowledge practice exam; however, the last three cases on this version of the practice exam are fill-in-the-blank. If you prefer to test using the multiple-choice item type for all the cases, use practice exam B.

The following questions will test your comprehension of the information covered in this study guide. The answer key is used for both versions of the test your knowledge practice exams.

Version A

CASE 1

Operative Report

Preoperative Diagnoses:

1. Right anterior cruciate ligament tear.
2. Bucket handle displaced medial meniscus tear.

Postoperative Diagnoses:

1. Right anterior cruciate ligament tear.
2. Bucket handle displaced medial meniscus tear plus grade 3 osteochondral defect of medial femoral condyle.

Procedures Performed:

1. Arthroscopic right ACL reconstruction with posterior tibialis allograft.
2. Medial meniscus repair.

Anesthesia: Laryngeal mask general with a right femoral nerve block.

Estimated Blood Loss: Minimal.

Complications: None.

Disposition: Stable.

Indications: The patient is a 36-year-old African-American female who sustained the above injury during a slip and fall on the wet floor. She presented with a locked knee that was swollen but have positive anterior drawer and Lachman's test. An MRI showed an ACL tear and displaced bucket-handle medial meniscus tear. Operative intervention was deemed necessary.

Description of Procedure: The patient was brought to the operating theater and placed in the supine position; a right femoral nerve block was then induced without difficulty. Laryngeal mask general anesthesia was then induced without difficulty. Ancef 1g IV was given perioperatively. A nonsterile tourniquet was applied to the right thigh and the knee was pre-injected with Marcaine and epinephrine. Exam under anesthesia did reveal 2+ anterior drawer and 2+ Lachman test. The right lower extremity was then prepped and draped in usual sterile fashion.

A #11 blade was used to create the lateral portal in the usual fashion. The scope was inserted into the patellofemoral joint. The undersurface of the patella and the femoral trochlear articular surfaces were pristine. The suprapatellar pouch had mild synovitis, but there was no evidence of loose bodies. Medial and lateral gutters were inspected and were devoid of loose bodies or synovitis.

A valgus stress was applied, and medial compartment inspected. Of immediate note was a large displaced fragment of meniscus, displaced anteriorly and into the notch of the femur. The medial portal was created in the usual fashion and a probe was used to reduce the meniscal tear. The tear was predominantly along the red-red junction near the periphery of the meniscus, which extended from the posterior horn to the middle of the body of the meniscus. A curved 4.5 shaver was used to debride the inner portions of the tear to stimulate vascular ingrowth. Once reduced, a metal skin was inserted through the medial portal and the meniscus was fixed with FasT-Fix all-inside suture repair device from Smith & Nephew. The posterior horn was first fixed by piercing the meniscal tissue and then piercing the capsule and deploying the first bioabsorbable tab. This was then pulled out in a mattress fashion. Another tab was made to the meniscus and tear, and the second tab was released posterior to the capsule. A knot was then cinched down reducing the meniscus to the capsule. The knot was then cut. Two more sutures were placed in exactly the same fashion extending up to the posterior horn body margin of the tear. These were placed in a horizontal fashion, and the scope had been placed in the medial portal with a better angle to the lateral portal for the suture placement. Probing of the repair revealed that it was exceptionally stable and the meniscus was reduced.

The femoral cartilage of the medial femoral condyle did have a small contained defect near the weight-bearing portion of approximately 4 x 5 mm. There was no exposed subchondral bone and no reason to perform micro fracture. Pictures were taken through the procedure. The compartment was debrided and attention directed to the notch. Of note, was the extremely narrow V-shaped notch of the femur. There was a complete rupture of the ACL upon probing. The PCL was intact. The remnant of the ACL was debrided using 4.5 shaver and the 90-degree ArthroCare wand. Again, this patient was set up for an ACL tear due to the extremely small stenotic ACL notch. A 5.5 acromionizer was used to perform a notchplasty in the usual fashion to create a V-shaped notch.

Attention was directed to the lateral compartment with a figure of four varus stress applied to the knee. The lateral meniscus was probed and found to be intact including the popliteal hiatus. The lateral femoral condyle and tibial plateau articular surfaces were pristine.

On the back table, a posterior tibialis tendon allograft had been soaked in normal saline antibiotic solution after being thawed. Using FiberLoop on each free strand of the graft, an interlocking suture was placed 40 mm up from the tip of the tendon. The graft was then sized at 9.0 mm. It was then placed on a soft tissue tension device at 12 pounds for 25 minutes with a wet sponge applied.

In the notch of the femur through the medial portal, the ACL guide for tibial drilling was placed and set at 55 degrees and the tunnel at 50 mm. A #15 blade was used to create a 2 cm long incision over the tibia down to periosteum, which was then elevated. The bullet was placed against on and the guide intraarticularly was placed on the posterior aspect of the ACL footprint and reference off the PCL and the posterior portion of the anterior horn of the lateral meniscus. The extraarticular portion was two fingerbreadths medial to the tibial tubercle and approximately 50-degree angle. This was drilled into the joint and extension of the knee with the guide revealed good placement of the pin with no impingement noted.

An 8.5 mm acorn reamer was then used to drill the tibial tunnel, and the excess bone was shaved and rasped. Through the tibial tunnel, a 6 mm over the top guide was placed in the 10 o'clock position making sure this was completely against the posterior wall. An 8.5 acorn reamer was hand delivered over the guidewire. This was over a Beath pin guidewire, for which measurements had been taken once I hit the second cortex of the femur. It was then drilled through the thigh and the acorn reamer was used to create a 35 mm depth tunnel with excellent back wall of 1 mm. Excess bony debris was debrided. A stab wound incision was made and the black Arthrex RetroButton depth gauge was used to measure that a 30 mm RetroButton would be necessary. RetroButton was then loaded on to the graft. This was then loaded on to Beath pin with its pulled suture. The Beath pin was then pulled through the knee with the RetroButton leading to the lateral aspect of the drilled tunnel, and the sutures exiting the thigh. The graft was then pulled into the tunnel and the RetroButton deployed with excellent pullout strength. The knee was ranged 15 times. The draft was showing to be in excellent position with no impingement on the lateral wall of the PCL or the notch.

After reviewing the answers and rationales, if you have further questions, please send them to: mct@aapc.com

CASE 1

Operative Report

Preoperative Diagnoses:

1. Right anterior cruciate ligament tear.
2. Bucket handle displaced medial meniscus tear.

Postoperative Diagnoses:

1. Right anterior cruciate ligament tear. [1]
2. Bucket handle displaced medial meniscus tear plus grade 3 osteochondral defect of medial femoral condyle. [1]

Procedures Performed:

1. Arthroscopic right ACL reconstruction with posterior tibialis allograft. [2]
2. Medial meniscus repair. [2]

Anesthesia: Laryngeal mask general with a right femoral nerve block.

Estimated Blood Loss: Minimal

Complications: None.

Disposition: Stable.

Indications: The patient is a 36-year-old African-American female who sustained the above injury during a slip and fall. She presented with a locked knee that was swollen but have positive anterior drawer and Lachman's test. An MRI showed an ACL tear and displaced bucket-handle medial meniscus tear. Operative intervention was deemed necessary.

Description of Procedure: The patient was brought to the operating theater and placed in the supine position; a right femoral nerve block was then induced without difficulty. Laryngeal mask general anesthesia was induced without difficulty. Ancef 1g IV was given perioperatively. A nonsterile tourniquet was applied to the right thigh, and the knee was pre-injected with Marcaine and epinephrine. Exam under anesthesia did reveal 2+ anterior drawer and 2+ Lachman test. The right lower extremity was then prepped and draped in usual sterile fashion.

A #11 blade was used to create the lateral portal in the usual fashion. The scope was inserted into the patellofemoral joint. [3] The undersurface of the patella and the femoral trochlear articular surfaces were pristine. The suprapatellar pouch had mild synovitis, but there was no evidence of loose bodies. Medial and lateral gutters were inspected and were devoid of loose bodies or synovitis.

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was then pulled out in a mattress fashion. Another tab was made to the meniscus and tear, and the second tab was released posterior to the capsule. A knot was then cinched down reducing the meniscus to the capsule. The knot was then cut. Two more sutures were placed in exactly the same fashion extending up to the posterior horn body margin of the tear. [4] These were placed in a horizontal fashion, and the scope had been placed in the medial portal with a better angle to the lateral portal for the suture placement. Probing of the repair revealed that it was exceptionally stable and the meniscus was reduced. [4]

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Attention was directed to the lateral compartment with a figure of four varus stress applied to the knee. The lateral meniscus was probed and found to be intact including the popliteal hiatus. The lateral femoral condyle and tibial plateau articular surfaces were pristine.

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An 8.5 mm acorn reamer was then used to drill the tibial tunnel, and the excess bone was shaved and rasped. Through the tibial tunnel, [6] a 6 mm over the top guide was placed in the 10 o'clock position, making sure this was completely against the posterior wall. An 8.5 acorn reamer was hand delivered over the guidewire. This was over a Beath pin guidewire, for which measurements had been taken once I hit the second cortex of the femur. It was then drilled through the thigh, and the acorn reamer was used to create a 35 mm depth tunnel with excellent back wall of 1 mm. [7] Excess bony debris was debrided. A stab wound incision was made and the black Arthrex RetroButton depth gauge was used to measure that a 30 mm RetroButton would be necessary. RetroButton was then loaded on to the graft. This was then loaded on to Beath pin with its pulled suture. The Beath pin was then pulled through the knee with the RetroButton leading to the lateral aspect of the drilled tunnel, and the sutures exiting the thigh. The graft was then pulled into the tunnel and the RetroButton deployed with excellent pullout strength. [8] The knee was ranged 15 times. The draft was showing to be in excellent position with no impingement on the lateral wall of the PCL or the notch.

The joint was debrided and drained and attention direct to the tibial fixation. A guidewire was placed anterior to the graft and with the knee in 30 degrees of flexion. A 40-Newton posterior drawer force was applied. A 10 x 35 mm Arthrex bioabsorbable delta tibial screw was then inserted with excellent squeaky purchase. This was allowed to remain one thread proud of the cortex. The tibial fixation was then backed up by drilling a unicortical drill hole with a 5:30 second inch drill bit and then placing a 4.5 mm Arthrex PushLock anchor noted with all four remaining strands of FiberWire suture. [9] These were tensioned and a PushLock anchor malleted into the hole secondarily fixing the graft. Ranging of the knee revealed full range of motion and complete ablation of the anterior drawer and Lachman's test. The tibial wound was copiously irrigated with normal saline. Fascia was closed with 0 Vicryl in interrupted fashion. The subcutaneous tissue was closed with 3-0 Vicryl in interrupted fashion, including the portals and the wound; the portals were closed with Dermabond. Knee was injected with Marcaine and Duramorph. A sterile dressing was plied with an over wrap of Ace bandage, and the knee was placed in a hinged brace locked in extension. The patient was extubated and taken to the Post-anesthesia Recovery Room in stable condition.

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