

# Coding for Lower Extremity Revascularization in 2011

An explanation of the recent updates in lower extremity CPT coding.

BY KATHARINE L. KROL, MD

**T**he codes describing endovascular procedures for lower extremity revascularization have been completely revised, effective January 1, 2011. This was done in response to requests to continue bundling services when possible and also to revise the codes to better describe current medical practice. The 16 new codes should also make coding for these procedures more uniform and simpler.

Development of these new codes also resulted in deletion of some of the codes that had been used to describe these procedures. All of the codes that were previously available for describing atherectomy procedures have been deleted in the Current Procedural Terminology (CPT) 2011 Manual.

The new CPT codes are 37220 to 37235. The deleted CPT codes are 35483, 35485, 35493, 35495, 35470, 35473, 35474, 35454, 35456, 35459, 75992, and 75993.

The new CPT codes for lower extremity revascularization describe endovascular procedures using balloon angioplasty, stent placement, and/or atherectomy in the iliac, femoral, popliteal, and tibial-peroneal vessels, including branches in the feet. The codes describe endovascular therapies that are performed with either a percutaneous or an open exposure approach, so there are no longer two sets of codes to distinguish percutaneous from open approaches. The codes are designed so that a single code is used to describe any and all of these three interventions (percutaneous transluminal angioplasty [PTA], stenting, and atherectomy) as applied to a single unilateral vessel. There are specific definitions for “vessels” that apply to this family of CPT

“The 16 new codes should also make coding for these procedures more uniform and simpler.”

codes that do not necessarily correspond to anatomic definitions for vessels, so one must review the updated CPT Manual and become familiar with the coding definitions (see *Lower Extremity Arterial Territories for Interventional Coding* sidebar).

## SERVICES INCLUDED IN EACH CODE

Each code is inclusive of all services performed to treat a single vessel. Services included in each of the 16 new codes are vessel access, selective catheterization of the target vessel, manipulation of the wire and catheter through the target lesion (including any method of recanalization of total occlusions/stenoses), all balloon angioplasty performed within the vessel, distal embolic protection if used, all the work of opening the lesion inclusive of all techniques used, all imaging and roadmapping to accomplish the intervention, pressure measurements if performed, vessel closure by any method (including open exposure if the exposure was performed solely to facilitate the endovascular intervention[s]), and moderate conscious sedation.

The new codes for balloon angioplasty are intended to describe any type of balloon angioplasty, including,

for example, plain old balloon angioplasty, low-profile balloons, cutting balloons, and cryoplasty. The new codes for stent placement are intended to describe any type of stent, including balloon-expandable, self-expanding, bare-metal, covered, and/or drug-eluting stents. The new codes for atherectomy are likewise intended to include all atherectomy technology, including directional, rotational, and laser atherectomy. Each of these 16 codes is used once per vessel treated rather than per number of lesions treated or number of devices used.

### SERVICES NOT INCLUDED IN THE CODES

There are a few services that are not included in the new codes. If thrombolysis or mechanical thrombectomy is used to clear thrombus from the vessel, these services would be coded separately. If embolization is required as part of a lower extremity therapy, that would also be coded separately and is not included in the work of the new lower extremity revascularization codes. In the case of performing lysis, embolization, or thrombectomy in conjunction with angioplasty/stent/atherectomy, the catheterization code is included in the code for angioplasty/stent/atherectomy and, in most cases, would not be separately reported.

True diagnostic angiography is also not included in the work of the new therapeutic codes. The 2011 CPT Manual includes specific directions on when it is appropriate to separately code diagnostic angiography. If previous angiography (including computed tomographic angiography or magnetic resonance angiography) was performed and defined the anatomy and disease, allowing planned intervention, diagnostic angiography is not separately reported in general. All of the imaging performed that confirms previously defined anatomy and pathology, measurement of the vessel(s), roadmapping, and imaging to monitor the intervention are included in the new codes and would not be additionally reported as diagnostic angiography. In some instances, diagnostic angiography may be separately coded if certain conditions are met, including (1) significant time since the previous diagnostic study; (2) interval change in clinical status suggesting the pathology may have changed or progressed; (3) change in vessel status during the procedure requiring formal diagnostic angiography to diagnose a complication; or (4) previous diagnostic study is not adequate to define pathology and additional information is required to make a clinical decision regarding the appropriate therapy.

If diagnostic angiography is performed at the same time the decision to treat is made and treatment is also performed, a catheterization code for the diagnostic

### LOWER EXTREMITY ARTERIAL TERRITORIES FOR INTERVENTIONAL CODING

1. Iliac territory (composed of three distinct vessels)
  - Common iliac artery
  - External iliac artery
  - Internal iliac artery
2. Femoral-popliteal territory (defined as a single vessel segment)
  - Common femoral, profunda femoral, superficial femoral, and entire popliteal artery (considered a single vessel regardless of the number of lesions or anatomically defined vessels)
3. Tibial-peroneal territory (composed of three distinct vessel segments)
  - Anterior tibial artery
  - Posterior tibial artery (includes common peroneal trunk if both treated)
  - Peroneal artery (includes common peroneal trunk if both treated)

angiogram may be additionally reported if the diagnostic study was performed from a puncture/vessel access separate from that used to perform the intervention. However, if diagnostic angiography was performed from the same vessel access as the intervention, the vessel access is included in the code(s) describing the intervention. In this case, the catheterization code would not be reported separately, but the radiological supervision and interpretation code(s) for the diagnostic study would be reported separately. When diagnostic angiography is performed at the same time as a lower extremity revascularization procedure, the modifier -59 should be added to the radiological supervision and interpretation codes and (if a separate access is used) to the catheterization code to denote that this work was performed and meets all of the coding requirements.

### VESSEL DEFINITIONS FOR USING THE NEW LOWER EXTREMITY REVASCULARIZATION CODES

For the purpose of coding common interventions (PTA, stenting, atherectomy) of the lower extremities,

**TABLE 1. ILIAC ARTERY REVASCULARIZATION**

Abbreviated Partial Description	CPT Code
<b>Angioplasty alone</b> Revascularization of iliac artery, unilateral, with transluminal angioplasty	37220
<b>Stent with angioplasty</b> Revascularization of iliac artery, unilateral, with transluminal stent placement(s), includes angioplasty	37221
<b>Angioplasty alone (additional vessel)</b> Revascularization of iliac artery, unilateral, each additional vessel, with transluminal angioplasty	37222
<b>Stent with angioplasty (additional vessel)</b> Revascularization of iliac artery, unilateral, each additional vessel, with transluminal stent placement(s), includes angioplasty	37223

the lower extremity arteries are divided into three territories: the iliac, femoral-popliteal, and tibial-peroneal territories (see *Lower Extremity Arterial Territories for Interventional Coding* sidebar). Each of these territories is composed of defined vessels that may be coded as separate vessels. The iliac territory includes three vessels: the common iliac artery, external iliac artery, and internal iliac artery. This means that for each leg, up to three codes may be reported if interventions are performed in each of these three-vessel segments. The femoral-popliteal territory is a single vessel, which includes the common femoral, profunda femoral, superficial femoral, and entire popliteal artery. In a single leg, only one code should be reported to include all interventions used to treat any and all disease in this defined vessel segment. The tibial-peroneal territory is divided into three vessels: the anterior tibial, posterior tibial, and peroneal artery. In a single leg, up to three codes may be reported for interventions provided in these three vessel segments. The common peroneal trunk is not considered a separate vessel unless it is treated but neither the posterior tibial and peroneal arteries are treated. If a common peroneal trunk lesion is treated during the same session as a lesion in the posterior tibial and/or peroneal artery, even if the lesions are separate and are treated with different techniques, a single code should be reported to describe opening the common peroneal trunk and the posterior tibial or peroneal artery.

### PROGRESSIVE HIERARCHIES OF CODES

The codes were developed on progressive hierarchies, with more intense codes describing more difficult work and/or multiple services provided to open a defined vessel. All 16 of the new codes for lower extremity revascularization include balloon angioplasty if it is performed. A single code should be reported for each vessel treated, and that code should include all therapies performed to open that vessel (ie, the most intense code appropriate). Note that the codes are used per vessel, not per lesion treated. If multiple lesions in a single vessel are treated with angioplasty, a single code describing angioplasty of that vessel should be reported. As another example, if a lesion in the common iliac artery is treated with balloon angioplasty, which creates a dissection and a stent is then placed, only the stent code is reported because it also includes all of the work of balloon angioplasty and stenting.

Most families of codes in CPT progress sequentially in intensity, with more intense work described with a higher CPT number. In the case of lower extremity revascularization codes, there is an anomaly. The codes for stent placement in the femoral-popliteal and tibial-peroneal territories have lower relative value units than the atherectomy codes, even though they have a higher CPT code number than the corresponding atherectomy codes for each vascular territory. This becomes important in the tibial-peroneal territory if a physician treats

**TABLE 2. FEMORAL/POPLITEAL ARTERY REVASCULARIZATION**

Abbreviated Partial Description	CPT Code
<b>Angioplasty alone</b> Revascularization of femoral/popliteal artery(s), unilateral, with transluminal angioplasty	37224
<b>Atherectomy with angioplasty</b> Revascularization of femoral/popliteal artery(s), unilateral, with atherectomy, includes angioplasty	37225
<b>Stent with angioplasty</b> Revascularization of femoral/popliteal artery(s), unilateral, with transluminal stent placement(s), includes angioplasty	37226
<b>Stent with atherectomy and angioplasty</b> Revascularization of femoral/popliteal artery(s), unilateral, with transluminal stent placement(s) and atherectomy, includes angioplasty	37227

more than one tibial-peroneal vessel at the same setting and uses different interventions for the vessels. The highest-intensity intervention should be coded as the primary code, and the add-on codes should be used to describe the work in the other one or two tibial-peroneal vessels. For example, if the right posterior tibial artery is opened with atherectomy and the right peroneal artery is opened with PTA and stenting, the atherectomy code is the most intense with respect to work relative value units and should be used as the primary code (37229), and the PTA/stenting performed for the peroneal artery should be reported with the add-on code +37234.

#### PRIMARY VERSUS ADD-ON CODES

The new family of codes describing lower extremity revascularizations is made up of both primary and add-on codes. One primary code would be reported for each vascular territory treated in each leg. In the iliac and tibial-peroneal territories, multiple defined vessel segments may be reported, but only one primary code should be reported for each vascular territory. Additional defined vessel segments treated within the iliac or tibial-peroneal vascular territories would be coded using add-on codes. Add-on codes must be reported with an appropriate primary code (listed in the 2011 CPT Manual under the individual codes). Add-on codes are not subject to the 50% reduction applied to multiple surgical codes because they were valued to not include parts of the procedure that are not duplicated when multiple interventions are per-

formed (eg, review of the chart, scrubbing, accessing the vessel). The primary code should be the code reflecting the highest intensity of work performed in that vascular territory. For example, if the right common iliac artery is treated with stent placement and the internal iliac is treated with PTA only, the operator should code the stenting procedure as the primary procedure (37221) because it is considered more intense than PTA alone, and the hypogastric PTA would be reported with the add-on iliac PTA code (+37222) instead of the primary iliac PTA code.

#### ONLY ONE CODE IS REPORTED FOR EACH VESSEL TREATED

When reporting procedures in the lower extremities, a single code should be reported for each defined vessel. In a single leg, up to three primary codes may be reported (one for each of the three vessel territories). If both legs are treated at the same time, up to six primary codes may be reported. In addition, in a single extremity, up to two additional add-on codes may be reported if interventions are performed in all three defined iliac segments, and up to two additional add-on codes may be reported if interventions are performed in all three defined tibial-peroneal segments in the same setting. Because the femoral-popliteal territory is defined as a single vessel segment that is inclusive of the common, deep, superficial femoral, and popliteal arteries, there is only one primary code that may be reported in each leg for this territory, with no add-on codes available. If both legs are treated at the same

**TABLE 3. TIBIAL/PERONEAL ARTERY REVASCULARIZATION**

Abbreviated Partial Description	CPT Code
<b>Angioplasty alone</b> Revascularization of tibial/peroneal artery, unilateral, with transluminal angioplasty within same vessel	37228
<b>Atherectomy with angioplasty</b> Revascularization of tibial/peroneal artery, unilateral, with atherectomy, includes angioplasty within same vessel	37229
<b>Stent with angioplasty</b> Revascularization of tibial/peroneal artery, unilateral, with transluminal stent placement(s), includes angioplasty within same vessel	37230
<b>Stent with atherectomy and angioplasty</b> Revascularization of tibial/peroneal artery, unilateral, with transluminal stent placement(s) and atherectomy, includes angioplasty within same vessel	37231
<b>Angioplasty alone (additional vessel)</b> Revascularization of tibial/peroneal artery with transluminal angioplasty	37232
<b>Atherectomy with angioplasty (additional vessel)</b> Revascularization of tibial/peroneal artery, unilateral each additional vessel, with atherectomy, includes angioplasty within same vessel	37233
<b>Stent with angioplasty (additional vessel)</b> Revascularization of tibial/peroneal artery, unilateral, each additional vessel, with transluminal stent placement(s), includes angioplasty within same vessel	37234
<b>Stent with atherectomy and angioplasty (additional vessel)</b> Revascularization of tibial/peroneal artery, unilateral, each additional vessel, with transluminal stent placement(s) and atherectomy, includes angioplasty within same vessel	37235

time, it would be theoretically possible to report six primary codes and eight add-on codes.

### ILIAC INTERVENTION CODES

For the iliac vascular territory (Table 1), two primary codes are available. The first code (37220) describes balloon angioplasty of a single iliac artery, and the second code (37221) describes stent placement in a single iliac artery. There are also two add-on codes for the iliac territory to be used when second and/or third ipsilateral iliac arteries are also treated. Code +37222 describes balloon angioplasty performed in an iliac artery and is used when another iliac artery on the

same side has been treated with either balloon angioplasty or stenting. Code +37223 is used for stent placement in an additional ipsilateral iliac artery. For the iliac arteries, stenting code 37221 describes the most intense work and should be used as the primary code if more than one ipsilateral iliac artery is treated. Because there are three iliac vessels on each side, up to three codes may be reported for unilateral iliac interventions: one primary code and up to two add-on codes. Iliac atherectomy is performed infrequently, and support from the literature for the efficacy of iliac atherectomy is insufficient for development of Category I CPT codes for iliac atherectomy, so iliac

atherectomy is described with Category III (used for emerging technologies) code 0238T.

### FEMORAL-POPLITEAL CODES

The femoral-popliteal territory includes all vessel segments in a unilateral femoral-popliteal distribution, so only primary codes are available for the femoral-popliteal distribution, with no add-on codes (Table 2). A single code is used to describe all work performed in this territory. Four codes are available to describe femoral-popliteal interventions: 37224 (angioplasty of unilateral femoral-popliteal artery[s]); 37225 (atherectomy of unilateral femoral-popliteal artery[s], including PTA if also used); 37226 (stent placement of unilateral femoral-popliteal artery[s], including PTA if also used); and 37227 (stent placement and atherectomy of unilateral femoral-popliteal artery[s], including PTA if also used). Because there is only one femoral-popliteal “vessel” in each leg, only a single primary femoral-popliteal code may be reported for each leg.

“... most procedures will be reported with fewer codes, and the coding of these procedures in general should become more straightforward.”

### TIBIAL-PERONEAL CODES

Interventions in the tibial-peroneal territory are described by eight codes; there are four primary codes and four add-on codes (Table 3). The primary codes describe the most intense work performed in a single unilateral tibial-peroneal artery. Up to two add-on codes would be used to describe work done in the other two ipsilateral tibial-peroneal arteries. The primary codes for tibial-peroneal interventions are 37228 (PTA of a single unilateral tibial-peroneal artery); 37229 (atherectomy of a single unilateral tibial-peroneal artery, including PTA if used); 37230 (stent placement in a single unilateral tibial-peroneal artery, including PTA if used); and 37231 (atherectomy and stent placement in a single unilateral tibial-peroneal artery, including PTA if performed). The four add-on codes are +37232 (PTA of each additional unilateral tibial-peroneal artery); +37233 (atherectomy [including PTA if also performed] of each additional unilateral tibial-peroneal artery); +37234 (stent placement [including PTA if also performed] of each additional unilateral tibial-peroneal artery); and +37235 (atherectomy and stent placement [including PTA if also performed] of each additional unilateral tibial-peroneal artery).

For the tibial-peroneal distribution, up to three codes may be reported for each leg. A primary code and up to two add-on codes may be used if all three trifurcation vessels are treated.

### BILATERAL INTERVENTIONS

The new codes describe interventions performed in a single lower extremity. If bilateral interventions are performed, each vessel treated in the second leg would also be coded separately with a single code. As in the first leg, a primary code is used for the first vessel treated in each of the three defined vascular territories, and additional vessels treated in the iliac and tibial-peroneal territories would be coded with add-on codes. Modifiers should be used to denote that bilateral interventions were performed. Modifier -59 would be appropriate to use for all interventions performed in the contralateral limb. Modifier -50 could be used if the same intervention is used on the same vessel in each leg. Modifiers -LT and -RT may also be used to denote that bilateral disease was treated. The use of modifiers should be tailored to the requests of each individual carrier.

### BIFURCATION LESIONS

If a single lesion crosses a vessel bifurcation and is treated with a single therapy (eg, a focal stenosis at the common iliac bifurcation is treated with a single stent crossing into both the common and external iliac arteries), the therapy should be coded as a single-vessel therapy rather than stenting of two separate vessels.

### CONCLUSION

This article has described the 16 codes for lower extremity revascularization introduced by CPT in 2011. Because of the bundled nature of these codes, most procedures will be reported with fewer codes, and the coding of these procedures in general should become more straightforward. However, because other procedures that may be performed at the same time as these procedures are reported using established component codes, confusion will occasionally arise because of the need to combine bundled codes with component codes. A later article with illustrative clinical examples will be published to help further clarify use of these endovascular codes. ■

*CPT codes are copyrighted by the AMA, so the exact descriptors are not included in this text. Please see the 2011 CPT Manual for full descriptors.*

*Katharine L. Krol, MD, is an interventional radiologist at Indiana University Health Arnett in Lafayette, Indiana.*