

Peripheral Procedures in the Cardiac Cath Lab
National AAPC
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Presented by:

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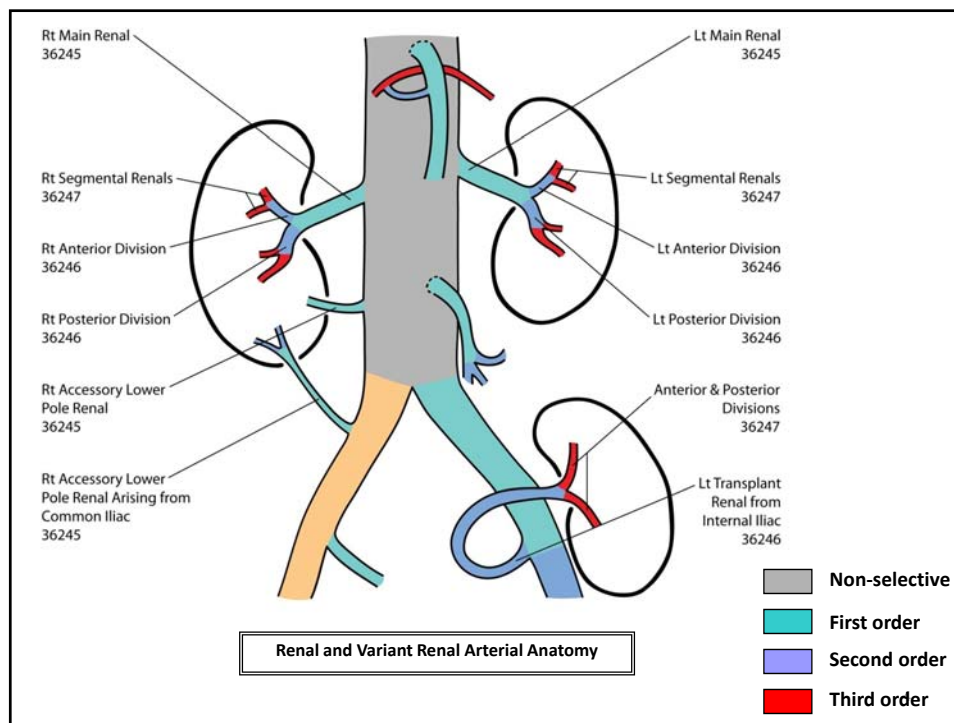
Agenda

- Peripheral Diagnostic Angiography: Renal, Visceral, Extremity, Carotid and Pulmonary Angiography
- IVC Filter Placement, Repositioning, Removal
- Peripheral Interventions: Angioplasty, Atherectomy and Stent Placement
- Thrombolysis, Thrombectomy, IVUS
- Combined Complex Cardiac and Peripheral Examples

Diagnostic Imaging of the Arterial System

Renal Angiography

3



2012: Diagnostic Renal Angiography

- 36251 – *Unilateral selective renal angiography*
- 36252 – *Bilateral selective renal angiography*
- 36253 – *Unilateral superselective renal angiography*
- 36254 – *Bilateral superselective renal angiography*
- These new codes include all catheter placements, all accessory renal artery selections, all contrast injections (including CO₂), imaging, post-processing of images (including 3D), abdominal aortography, pressure gradients, fluoroscopy, moderate sedation and closure device placement.
- (Superselective refers to second order or higher selection and all additional selections in that trunk.)

5

2012: Renal Codes

- Use 36251 or 36252 for horseshoe kidney (when half or all of the kidney is selected and imaged respectively).
- Use 36251-59 and 36253 when unilateral selective angiography is performed on one side and super-selective catheter placement and angiography is performed on the other side.
- Do NOT code 75774 for additional selective renal angiography of accessory renal arteries in 2012. (Code 75774 is still valid for other locations, e.g., external carotid branches, visceral branches.)
- Catheter placement codes 36245-36248 are bundled in 2012 with the renal diagnostic codes BUT can use them for renal intervention without diagnostic selective renal angiography.

6

Renal Angiography Case 1:

Non-selective bilateral renal arteriogram with pigtail catheter placement in aorta (without heart cath)

36200 – *Catheter placement in the aorta*

75625 – *Abdominal aortography, S&I*

7

Renal Angiography Case 2:

Non-selective bilateral renal arteriogram with pigtail catheter placement in aorta (with heart cath)

GO275

(No catheter placement code, as it is bundled into the heart cath.)

8

Renal Angiography Case 3:

Left heart catheterization with native coronary angiography, followed by selective bilateral renal angiography. The catheter is placed in each main renal artery for contrast renal angiography after non-selective CO2 abdominal aortography. Patient has history of uncontrolled malignant hypertension.

36252 – *Bilateral selective renal angiography*

93458 – *Left heart catheterization with native coronary angiography*

9

Renal Angiography Case 4:

Unilateral right renal arteriogram with catheter placement in the main renal artery, two accessory right renal arteries off the aorta and one accessory off the right common iliac.

36251 – *Unilateral selective renal angiography*

10

Renal Angiography Case 5:

Abdominal aortography with pigtail catheter shows bilateral 95% renal artery origin stenosis. 3mm balloons are used to predilate the lesions. This is followed by deployment of 6mm balloon deployable stents across the residual stenoses.

75625-59 – Abdominal aortography, S&I

36245-50 – Bilateral renal artery catheter placements

37205 – Right renal artery stent placement

37206 – Left renal artery stent placement

75960 – Right renal artery stent placement, S&I

75960-59 – Left renal artery stent placement, S&I

(Do NOT code angioplasty, as intent is stent placement.)

11

Renal Angiography Case 6:

History: 28 year old with malignant hypertension. Bilateral selective renal angiography is performed. On the left there appears to be intra-renal FMD stenosis. The catheter is advanced to the second order anterior division for further evaluation. A 90% stenosis due to an FMD web is seen. This is treated successfully with a 4mm balloon.

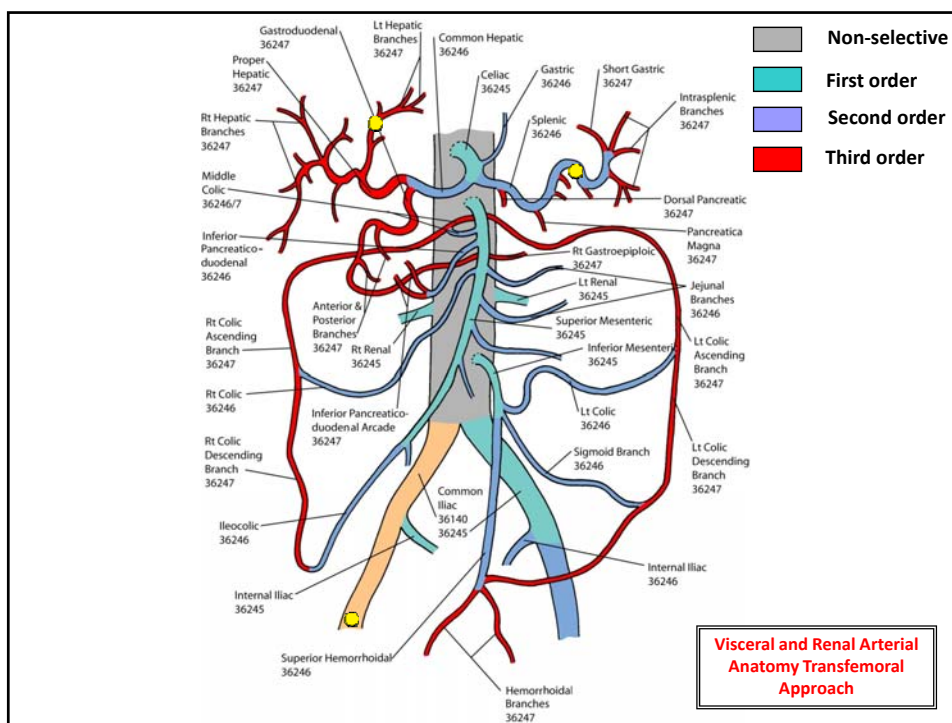
36251-59 – Selective unilateral right renal angiography

36253 – Superselective unilateral left renal angiography

35471 – Left renal angioplasty

75966 – Left renal angioplasty, S&I

12



Visceral Angiography Case 7:

Abdominal aortogram from a brachial approach shows a 95% proximal SMA stenosis. The celiac and inferior mesenteric arteries are occluded. Guiding sheath is placed into the SMA followed by 6mm angioplasty. Dissection with occlusion requires placement of a 6mm stent resulting in a widely patent vessel.

36245 – 1st order selective below the diaphragm

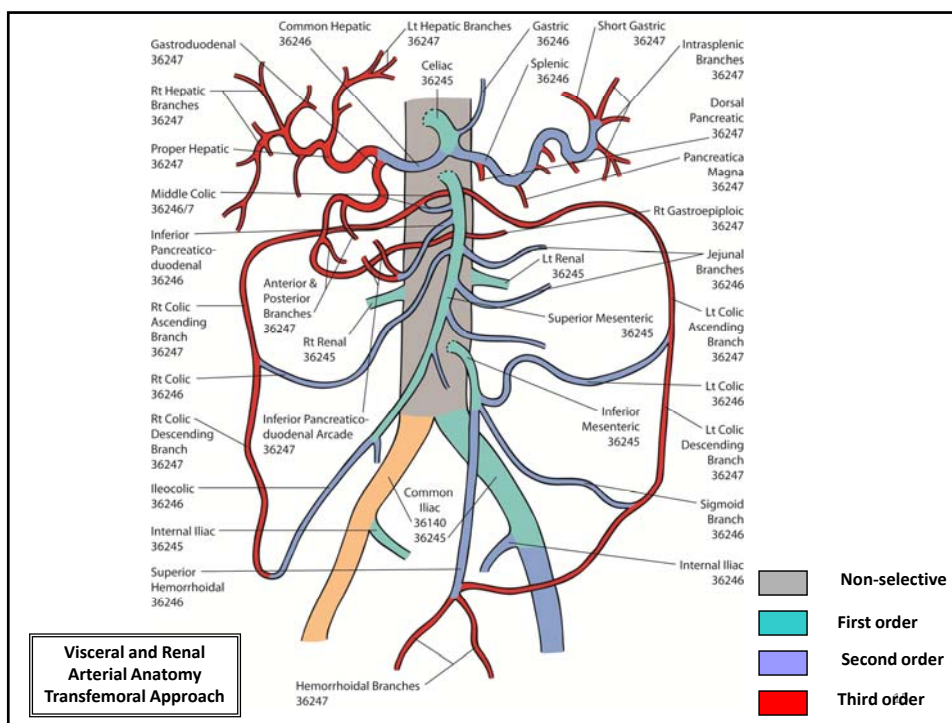
75625 – Abdominal aortography, S&I

35471 – Visceral angioplasty

75966 – Visceral angioplasty S&I

37205 – Stent placement

75960 – Stent placement, S&I



Visceral Angiography Case 8:

Aorto-ilio-femoral angiography (abdominal aorta and pelvic obliques) followed by selective catheter placements and imaging of the right and left renal, celiac, superior and inferior mesenteric arteries.

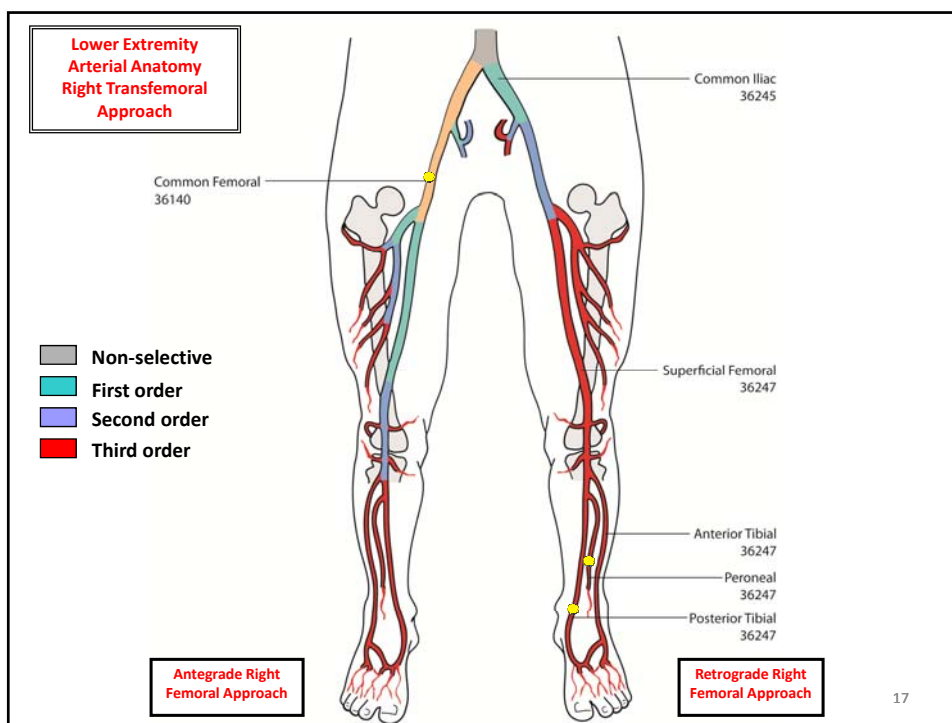
36245-59 x 3 – 1st order selective catheter placement

75726 – Selective visceral angiography w/wo aortography, S&I

75726 -59 x 2 – Selective visceral angiography w/wo aorta, S&I

36252– Selective bilateral renal angiography

75716 – Bilateral extremity angiography, S&I



Lower Extremities Case 9:

Abdominal aortography from high catheter position and oblique pelvic angiography from low aortic catheter position for **aortic aneurysm evaluation**.

36200 – Catheter placement aorta

75630 – Aorto-ilio-femoral angiography, S&I

(If during a cardiac catheterization, delete 36200 and add -59 to code 75630.)

Lower Extremities Case 10:

Abdominal aortography from high catheter position (to look at renals) and oblique pelvic angiography from low aortic catheter position, (to look at iliacs and proximal femorals) all done during a left heart cath.

GO275 – Nonselective renal angiography at the time of cardiac cath

GO278 – Nonselective ilio-femoral angiography at the time of cardiac cath

(Catheter placement in the aorta is bundled.)

19

Lower Extremities Case 11:

Abdominal aortography with run-offs from one catheter position (or they forgot to mention any catheter movement between exams!)

36200 – Catheter placement aorta

75630 – Aorto-ilio-femoral angiography, S&I

20

Lower Extremities Case 12:

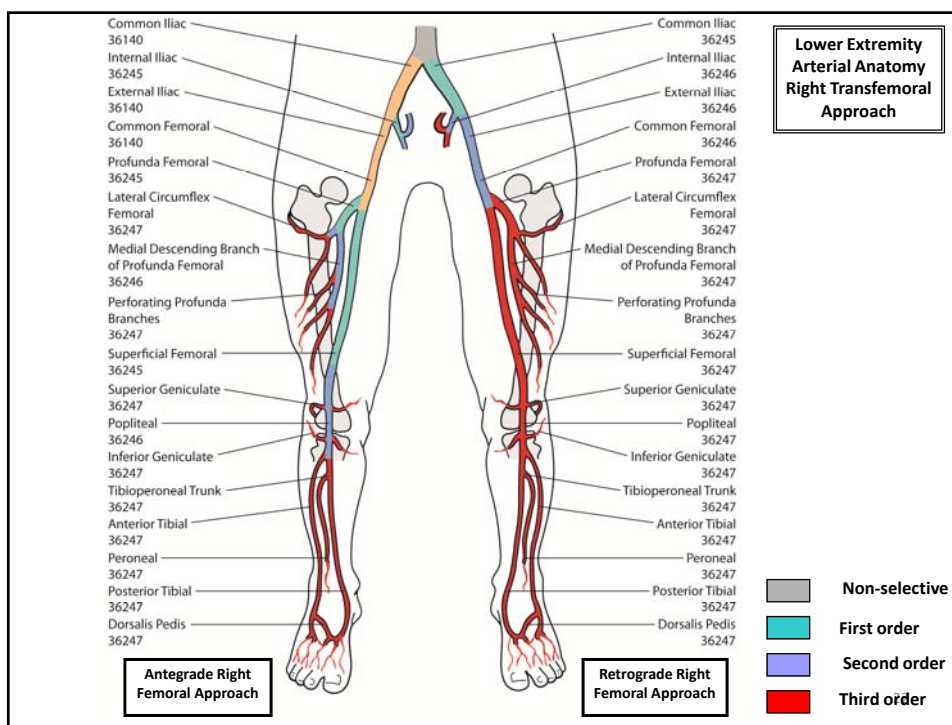
Catheter position to the abdominal aortic bifurcation with oblique pelvic angiography (abdominal aorta findings are limited or not mentioned while the iliac and femoral arteries are fully described)

36200 – Catheter placement aorta

75716 – Bilateral extremity angiography, S&I

(If during a heart cath, use G0278 only.)

21



Lower Extremities Case 13:

Abdominal aortography from high catheter position (at the level of the renals) and run-offs from low catheter position (aortic bifurcation).

36200 – Catheter placement aorta

75625 – Abdominal aortogram, S&I

75716 – Bilateral extremity angiography, S&I

(During heart cath, the medical necessity needs to be documented and the imaging of the legs should be to the popliteals or lower. Will need to delete 36200 and add modifier -59 to imaging codes.)

23

Lower Extremities Case 14:

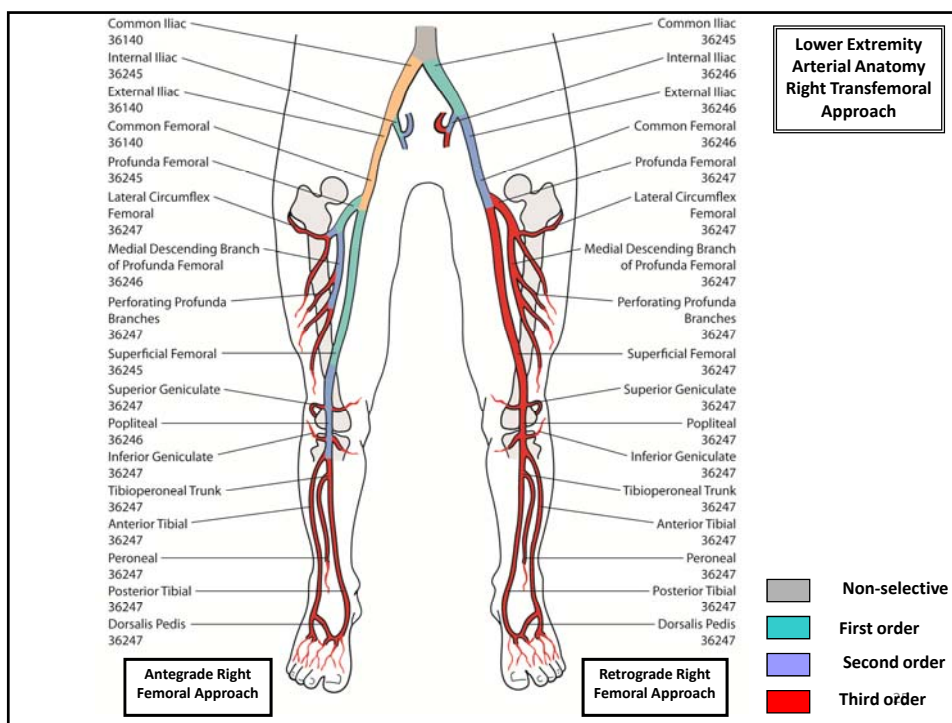
Abdominal aortography followed by catheter repositioning to the bifurcation, oblique views of the pelvis for iliofemoral angiography, selective catheter placement to each common femoral with selective unilateral run-offs to complete the study.

36246 – Selective contralateral common femoral catheter placement (2nd order)

75625 – Abdominal aortography, S&I

75716 – Bilateral lower extremity runoff, S&I

24



Lower Extremities Case 15:

Abdominal aortography high catheter placement.
Complete run-offs to the feet after catheter repositioning to the aortic bifurcation, followed by additional selective imaging after selection of contralateral common femoral and ipsilateral common femoral arteries.

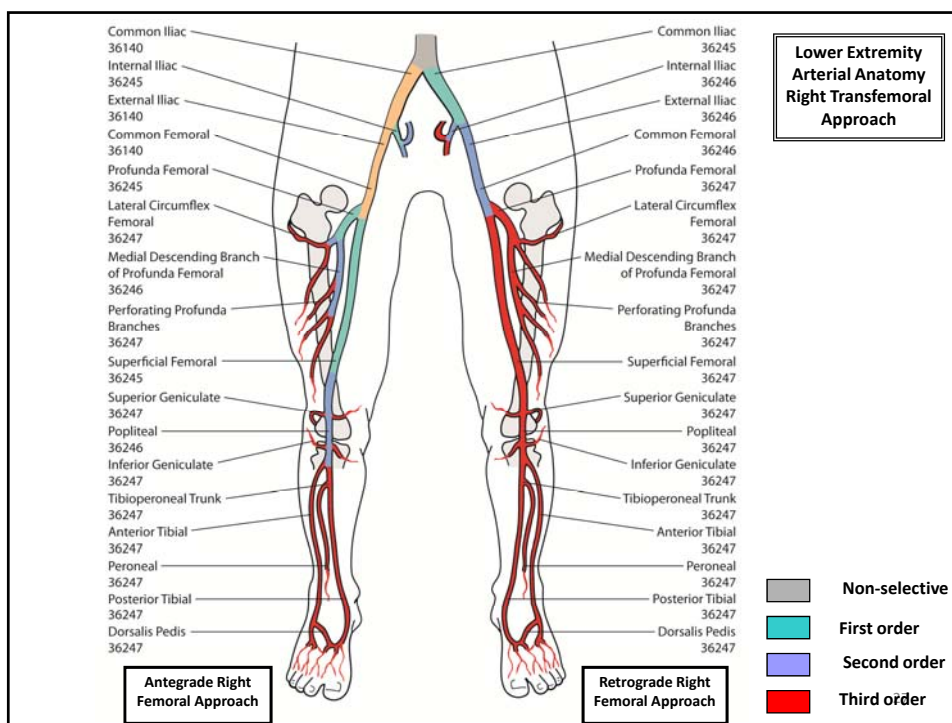
36246 – 2nd order selective below the diaphragm

75625 – Abdominal aortogram, S&I

75716 – Bilateral extremity angiography, S&I

75774 – Each additional selective vessel studied after basic exam, S&I

(Do not report code 36140-59 or 75774 for ipsilateral non-selective imaging.)



Lower Extremities Case 16:

Abdominal aortography high catheter placement.
Complete run-offs to the feet after catheter repositioning to the aortic bifurcation, followed by additional selective imaging after selection of left and right common femoral arteries from a left **brachial** approach.

36246 – 3rd order selective below the diaphragm

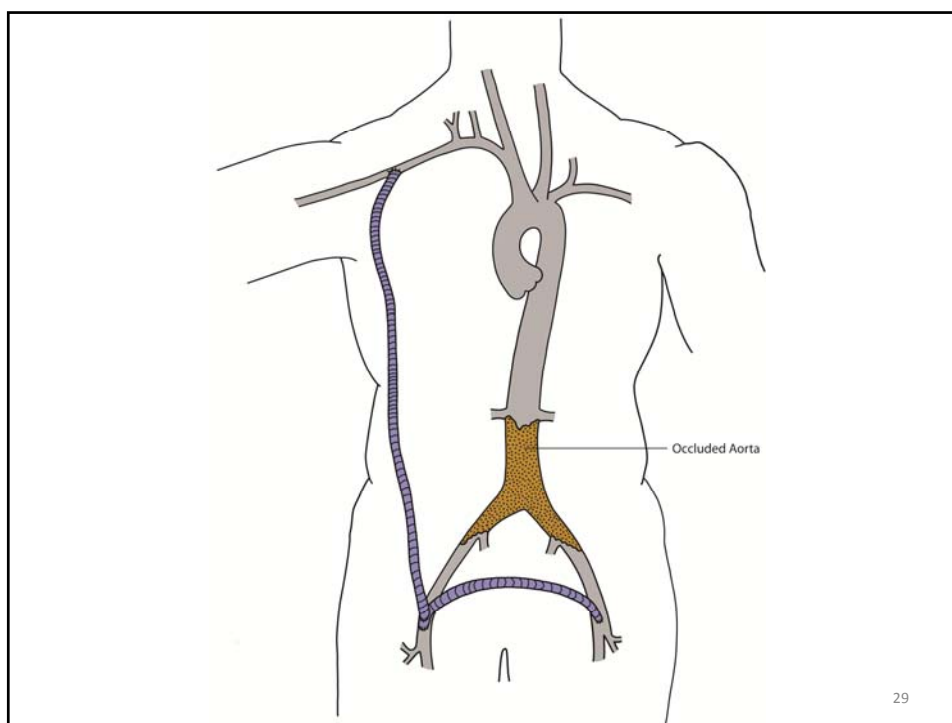
36246-59 – 2nd order selective below the diaphragm

75625 – Abdominal aortogram, S&I

75716 – Bilateral extremity angiography, S&I

75774 – Each additional selective vessel studied after basic exam, S&I

75774 – Each additional selective vessel studied after basic exam, S&I



Lower Extremities Case 17:

Patient with right ax-fem, fem-fem x-over bypass grafts. Via direct puncture of the ax-fem graft, a catheter was advanced into the subclavian artery, then the aorta for subclavian inflow angiography, followed by advancement to the renal level for abdominal angiography, then pulled back for imaging down the ax-fem graft and both lower extremities. Both anastomoses of the ax-fem graft are balloon dilated for stenoses.

36200 – *Catheter placement into the aorta*

75625-59 – *Abdominal aortography S&I*

75710-59 – *Subclavian angiography S&I*

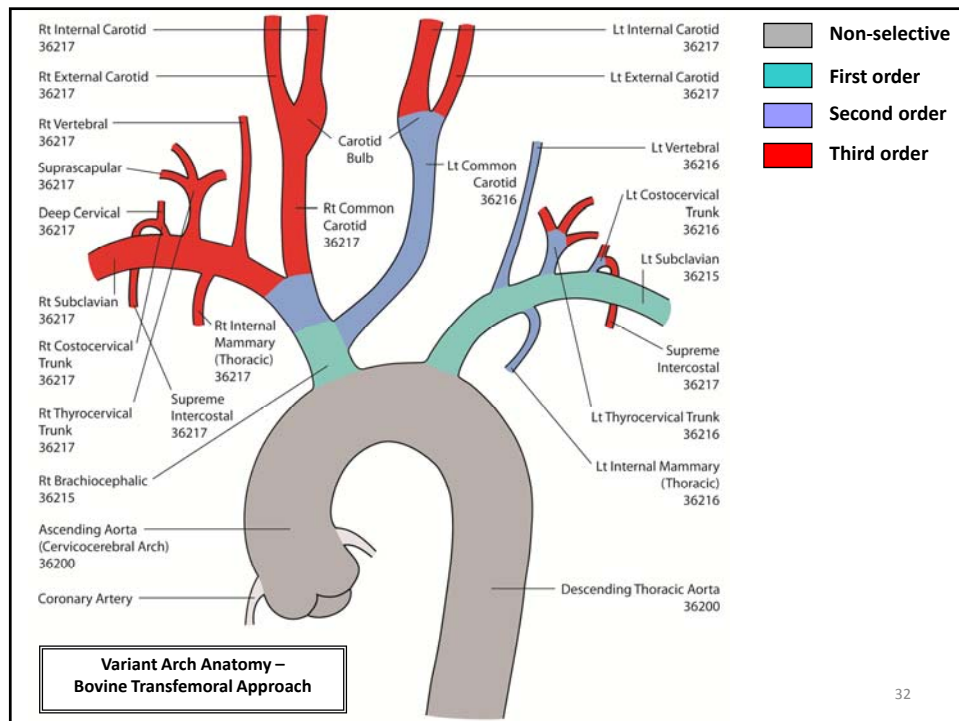
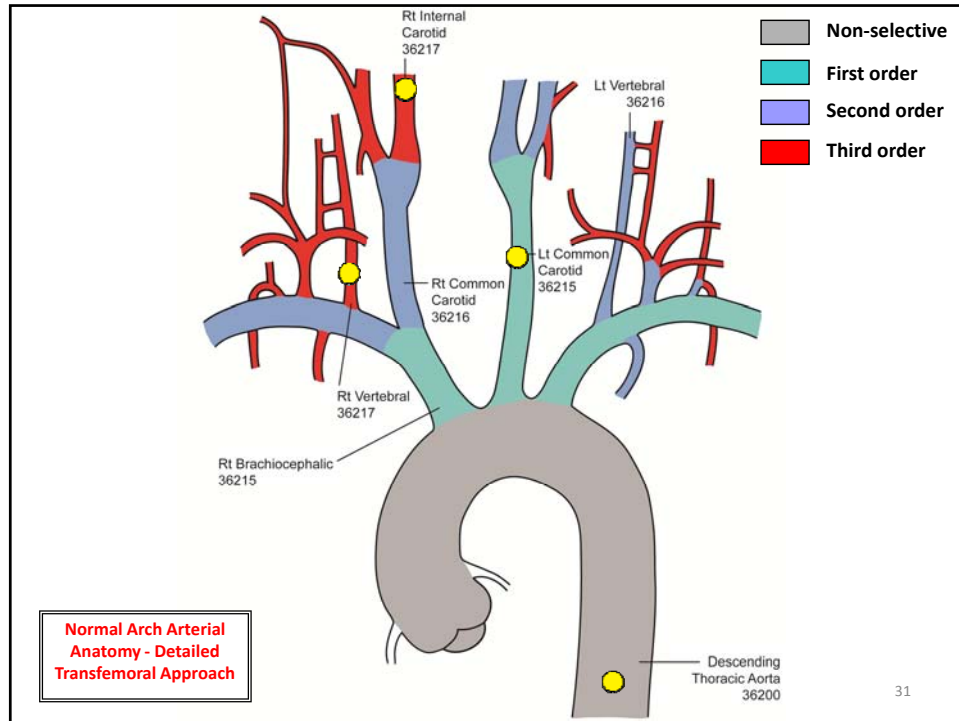
75716-59 – *Ax-fem and fem-fem grafts with runoff down the legs*

35475 – *Axillary anastomosis angioplasty*

75962 – *Angioplasty S&I*

(Only code for one angioplasty when both ends of a graft are dilated. The graft and both of its anastomoses are considered one vessel for coding purposes.)

30



Cervicocerebral Case 18:

Arch injection with cervicocerebral arch and bilateral carotid cervical imaging.

36200 – *Catheter placement aorta*

75650 – *Arch aortogram, S&I*

75680 – *Bilateral cervical carotids, S&I*

(Code 93567 describes ascending aortography during a heart catheterization. The indications include ascending aortic aneurysm, dissection and aortic valve evaluation. When this injection is performed, it is not unusual to incidentally see the arch vessels. If they are described, even if they are abnormal, do NOT code 75650 for this incidental imaging without medical necessity.)

33

Cervicocerebral Case 19:

Arch injection with cervicocerbral arch, bilateral carotid cervical, bilateral carotid cerebral and bilateral vertebral imaging.

36200 – *Catheter placement aorta*

75650 – *Arch aortogram S&I*

75671 – *Bilateral cerebral carotids, S&I*

75680 – *Bilateral cervical carotids S&I*

75685 – *Vertebral S&I*

75685-59 – *Vertebral S&I*

34

Cervicocerebral Case 20:

Selective bilateral carotid cervical and carotid cerebral imaging with selective left vertebral imaging. Normal anatomy. No arch.

36215-59 – *1st order selective above diaphragm*

36216-59 – *2nd order selective above diaphragm*

36216 – *2nd order selective above diaphragm*

75680 – *Bilateral cervical carotid angiogram, S&I*

75671 – *Bilateral cerebral carotid angiogram, S&I*

75685 – *Vertebral angiogram, S&I*

35

Cervicocerebral Case 21:

Cervicocerebral arch imaging followed by selective bilateral carotid cervical and carotid cerebral imaging on patient with a bovine arch, findings include normal arch, normal cerebrals and 70% bilateral external carotid artery stenoses.

75650 – *Arch aortogram, S&I*

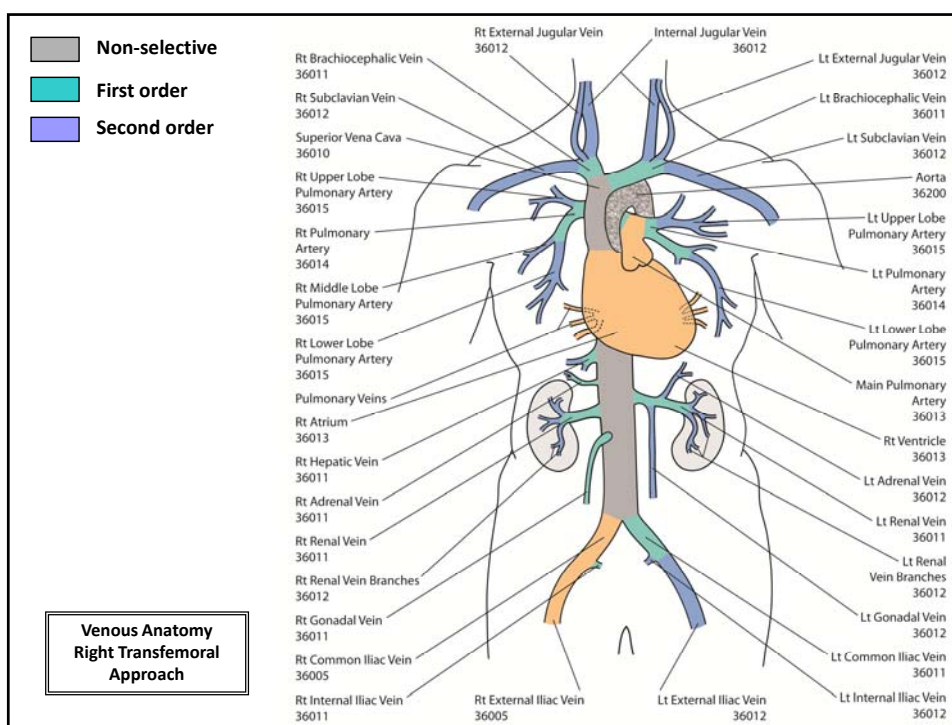
75671 – *Bilateral cerebral carotid angiogram, S&I*

75680 – *Bilateral cervical carotid angiogram, S&I*

36217 – *3rd order selective above diaphragm*

36218 – *Ea addtl selective above diaphragm*

36



Pulmonary Angiography

- Non-selective pulmonary angiography – 75746
- Selective pulmonary angiography, unilateral – 75741
- Selective pulmonary angiography, bilateral – 75743
- Catheter placement, non-selective RA or main PA – 36013
- Catheter placement 1st order pulmonary – 36014
- Catheter placement 2nd order or higher pulmonary – 36015
- Selective or non-selective pulmonary angiography, including selection of any or all of the pulmonary arterial and/or venous branches (if done) during a cardiac catheterization – 93568
- Codes 36014, 36015, 75741 & 75743 are ZERO edits with a RHC (this includes 93451/53/56/57/60/61 and 93530/1/2/3)

Vena Cava Filter Placement New Codes for 2012

- IVC filter placement (temporary or permanent) – 37191
- SVC filter placement – 37191
- Iliac filter placement – **37191 vs 37799**
- Repositioning temporary vena cava filter – 37192
- Removal temporary vena cava filter – 37193
- Codes 37191-37193 bundle catheter placement(s), venography before, during and after filter intervention, ultrasound and fluoroscopy during the procedure (includes ICU bedside US guided filter placement).

39

Vena Cava Filter Placement New Codes for 2012

- Code for both placement and removal (37191 and 37193) if a filter is placed for prophylaxis against pulmonary embolus from lower extremity venous clot therapy, and, after the thrombectomy/thrombolysis is successful and the patient no longer requires the filter, the filter is removed.
- Code for removal and placement (37193 and 37191) if a old temporary filter is removed and a new filter is placed.
- Do NOT code for removal of a newly placed filter due to initial poor placement. Just code the placement (or eventual replacement at the same session) with 37191.

40

Vena Cava Filter Placement New Codes for 2012

- Code for catheter placement and diagnostic imaging if thrombus is present in the filter, so the decision is made to cancel the filter retrieval or repositioning (36010, 75825).
- Code twice for duplicated vena cava systems (with -59 modifier) with two filter placements.
- Codes 37191-37193 bundle multiple accesses if they were necessary (e.g., renal and iliac veins)

41

Venous Thoraco-Abdominal Case 22:

Patient with pulmonary embolism needs filter. Inferior vena cavagraphy and selective bilateral renal venography, then an IVC filter is placed below the renal veins.

37191 – Placement of IVC filter

(Includes catheter placements, imaging, filter placement with guidance and confirmation, and US guidance if used)

42

Venous Thoraco-Abdominal Case 23:

Patient no longer needs filter. US guidance for right jugular vein access followed by sheath placement is performed. The sheath is advanced into the inferior vena cava. IVC-gram is performed showing patent filter with no evidence of filter leg perforation. The filter is snared, collapsed and retrieved in the sheath and removed without complication.

37193 – Retrieval of vena cava filter

(Includes catheter placements, imaging, filter retrieval, fluoroscopic guidance, including US guidance for vascular access)

43

Pulmonary Case 24:

Selective right and left pulmonary artery catheter placement and imaging followed by superselective left lower and right lower lobe pulmonary artery imaging, right pulmonary arterial thrombectomy, IVC-o-gram (shows no clot) and IVC filter placement. Non-Medicare patient (percutaneous pulmonary artery thrombectomy is considered a non-covered for Medicare per NCD).

44

Pulmonary Case 24:

36015-50 – *Catheter placement segmental pulmonary artery, bilateral*

75743 – *Pulmonary angiogram, selective, bilateral, S&I*

75774 x 2 – *Each additional vessel selected, S&I*

37184 – *Primary percutaneous arterial thrombectomy*

37191 – *IVC filter placement (includes imaging, catheter placement, etc)*

(37184 will need –GZ modifier if procedure done for Medicare. Use 93658 for all pulmonary catheter placements and images if performed during a cardiac catheterization along with the appropriate heart cath code. Codes 75741, 75743, 36014 & 36015 are zero edits with a RHC)

45

Angioplasty

- Percutaneous
 - 35471 – *Renal or visceral artery*
 - 35472 – *Aorta*
 - 35475 - *Brachiocephalic trunk or branches*
 - 35476 – *Venous angioplasty (venoplasty)*

46

Angioplasty

- Bill separately for...
 - Catheter placement (however NOT for lower extremities)
 - Diagnostic angiography (will require -59 modifier to let CMS know this was a true diagnostic study)
- Do not bill separately for angiography related to...
 - Guiding shots
 - Road mapping/Trace subtraction/
 - Positioning
 - Sizing
 - Localization
 - Completion

47

- Do not code “pre-dilation” angioplasty prior to stent placement.
- Do not code “post-stent deployment angioplasty to fully dilate or deploy the stent or for “residual stenosis” in the self-deploying stent.
- Do not code angioplasty when the intent was to stent the vessel from the start.
- Do not code angioplasty, when the angioplasty gives a great result, but we stented the vessel anyways.
- Do not code angioplasty when the original balloon is too small to give a good result to start with and stent is then “required”.
- Do not code multiple angioplasties in a single vessel.
- Do not code two angioplasties when treating a short bridging lesion across two adjacent vessels.
- Do not code angioplasty when macerating clot, this is part of a thrombectomy procedure.
- Do not code angioplasty when done with atherectomy or stent placement in the lower extremities.

48

Supra-Inguinal Atherectomy

- Percutaneous or Open, including S&I for procedure
 - Supra-Inguinal
 - 0234T – *Renal artery*
 - 0235T – *Visceral artery*
 - 0236T – *Aorta*
 - 0237T – *Brachiocephalic trunk or branches*
 - 0238T – *Iliac artery*
 - 37799 – *Venous*
 - Bill catheter placement, diagnostic angiography, closure device, and angioplasty or stent placement in the same vessel/site as indicated.

49

Stent Placement: Visceral, Renal and Brachiocephalic Arteries, Aorta, and Veins

- Percutaneous
 - 37205 – *stent placement initial vessel (not coronary, vertebral, carotid, cerebral or lower extremity artery)*
 - 37206 – *stent placement each additional vessel (not coronary, vertebral, carotid, cerebral or lower extremity artery)*
 - 75960 – *Transcatheter introduction of stent percutaneous or open, not coronary, vertebral, carotid, cerebral or lower extremity artery, S&I*

50

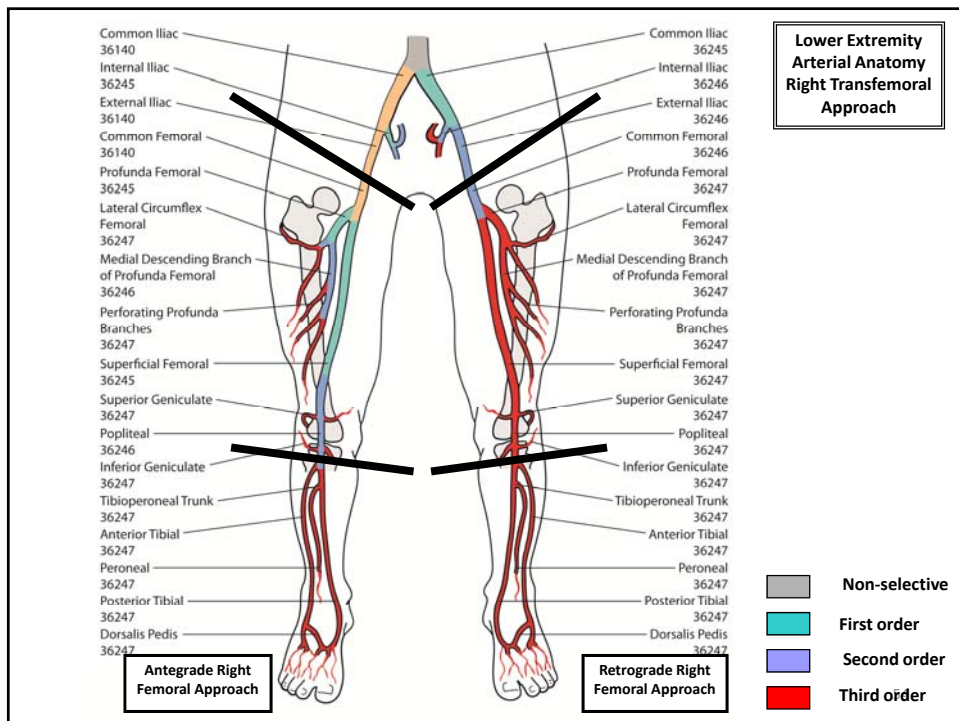
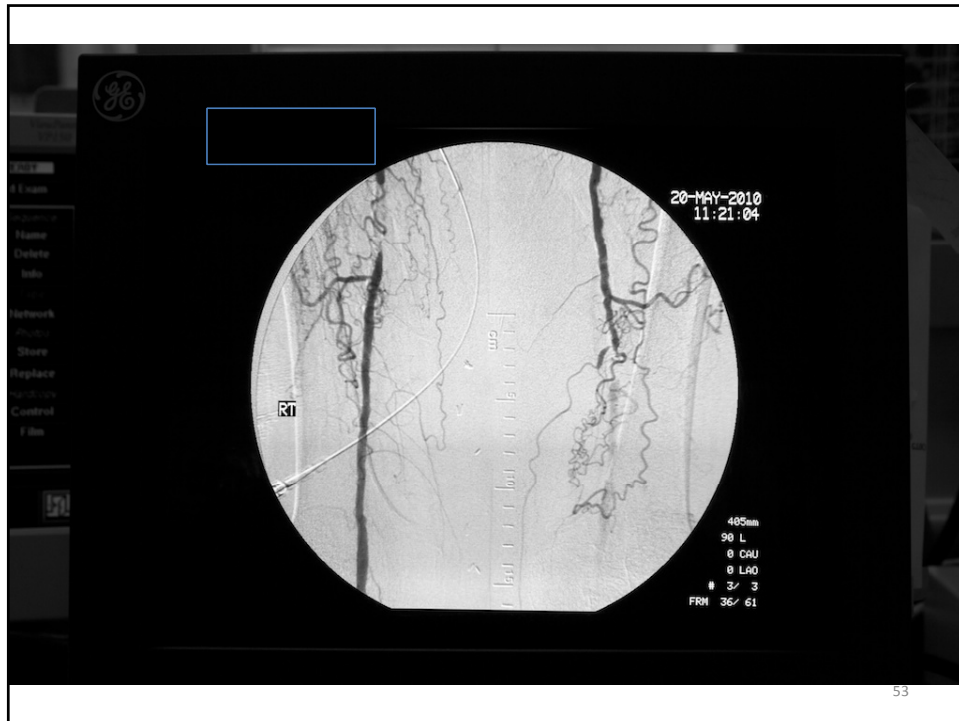
Carotid Stent Placement

- 37215 – Carotid cervical stent placement with embolic protection
- 37216 – Carotid cervical stent placement without embolic protection
 - 37215 & 37216 include:
 - Ipsilateral selective catheterization
 - Ipsilateral carotid cervical and cerebral artery S&I
 - All other related S&I during stent placement procedure
 - All road-mapping, guiding shots and follow-up images
 - All angioplasties within the region of stent deployment
 - 37215 remains an inpatient **C-status indicator** procedure in 2012
 - Code 75962 not appropriate as the carotid artery is not a peripheral artery

51

Lower Extremity Endovascular Revascularization Codes 37220-37235

52



2011 Guidelines for Lower Extremity Arterial Revascularization Procedures

- The following guidelines apply to codes 37220-37235, and refer to interventions described by angioplasty, atherectomy and stent placement for treatment of occlusive vascular disease.
- Angioplasty utilizes a balloon to dilate a hemodynamically significant vessel stenosis. The balloon may be a compliant or non-compliant balloon, a cryoplasty balloon, a cutting balloon, etc.
- Atherectomy is performed utilizing photoablation (Laser), rotational (Rotoblater, Diamondback Orbital), directional cutting (Silver Hawk, JetStream G3), or pulverization (Crosser) devices.
- Stent placement utilizes a bare metal, drug-eluting, balloon-expandable, self-expanding, or covered stent to effectively treat the lesion(s).
- Codes 37220-37235 all include an angioplasty if performed.

55

Guidelines for Lower Extremity Arterial Endovascular Revascularization Procedures

- These codes are specific for 3 distinct lower extremity vascular territories: the iliac, femoral/popliteal, and tibial/peroneal.
- There are 3 separately billable arteries in the iliac territory: the common, external and internal iliac arteries.
- There is only 1 separately billable code submitted for intervention within the femoral/popliteal system, regardless of the types and numbers of separate and distinct vascular interventions (angioplasty, atherectomy and/or stent placements) that are performed in the CFA, SFA, PFA and popliteal arteries.
- There are 3 separately billable arteries below the knee: the peroneal, anterior tibial and the posterior tibial. The tibial/peroneal trunk is considered part of any distal intervention (in the posterior tibial or peroneal. The anterior tibial is considered a separate vessel for intervention when tibial/peroneal trunk intervention is also performed.

56

Guidelines for Lower Extremity Arterial Endovascular Revascularization Procedures

- Codes 37220-37235 are applicable to both open or percutaneous approach and include closure of the open or percutaneous access site with stitches, pressure, or device placement.
- These codes include conscious sedation, vascular access, catheter placement, work involved with crossing the lesion (including use of specialty guidewires, subintimal recanalization, ultrasound vibration, etc.), imaging related to the entire procedure, use of an embolic protection device, angioplasty (if done), and closure device angiography.
- Atherectomy bundling for codes 37220-37235 only applies to infra-inguinal arteries. Use Category III code 0238T for supra-inguinal iliac atherectomy.
- Thrombolysis (37201, 75896), thrombectomy procedures (37184, 37185 and 37186), embolization (37204, 75894), and extensive repair or replacement of the artery (35226, 35286) can be additionally reported.

57

Guidelines for Lower Extremity Arterial Endovascular Revascularization Procedures

- Stent with atherectomy > atherectomy > stent placement > angioplasty (even though codes not listed in this order in CPT) This actually only affects coding for the tibial/peroneal arteries.
- The femoral/popliteal and tibial/peroneal territory codes incorporate atherectomy procedures. The iliac territory does not as the iliac territory codes only describe angioplasty and stent placement (+/- angioplasty). Iliac atherectomy is additionally coded with 0238T if performed and is coded per iliac vessel treated (up to three times).
- Code 76937 may be billed for each separate access made with ultrasound guidance for lower extremity revascularization procedures. Must be documented per CPT guidelines.

58

Guidelines for Lower Extremity Arterial Endovascular Revascularization Procedures

- Diagnostic angiography IS NOT separately coded at the time of these interventions if:
 - The angiography is included in the interventional procedural code description
 - Performed for vessel measurement and sizing, lesion localization, roadmapping, and consists of contrast injections and imaging relating to guidance necessary to perform the intervention
 - Follow-up after angioplasty, atherectomy, stent placement, thrombectomy, etc.
- Diagnostic angiography IS separately coded at the time of these interventions if:
 - There has not been a prior catheter based angiogram and a complete study is performed and the decision for intervention is based on this angiographic study
 - There is a prior study, but
 - There is change in clinical status since prior study
 - The prior study was inadequate for visualization of the area of concern
 - There is change in the clinical status during the intervention that requires imaging outside the area treated

59

2012 Guidelines Update for Lower Extremity Arterial Revascularization Procedures

- Catheter placement in leg for thrombolysis and diagnostic imaging day 1 with stent placed on day 2 is separately billable.
- Catheter placement in leg for thrombolysis and diagnostic day 1, stent day 1 is separately billable IF at separate sessions.
- Catheter placement in 2 tibial vessels for secondary thrombectomy after an iliac stent placement is bundled if via same access and in the same vascular family as iliac stent.
- Guiding IVUS for recanalization is bundled as used to “cross the lesion”.
- Diagnostic IVUS to determine if intervention is necessary or after stent deployment to determine if appropriately deployed or complication of procedure is separately billable.
- Stent-graft placement for popliteal aneurysm: Use 37226.
- Stent-graft placement for iliac aneurysm: Use 34900 or 0254T, 0255T.

60

2012 Guidelines Update for Lower Extremity Arterial Revascularization Procedures

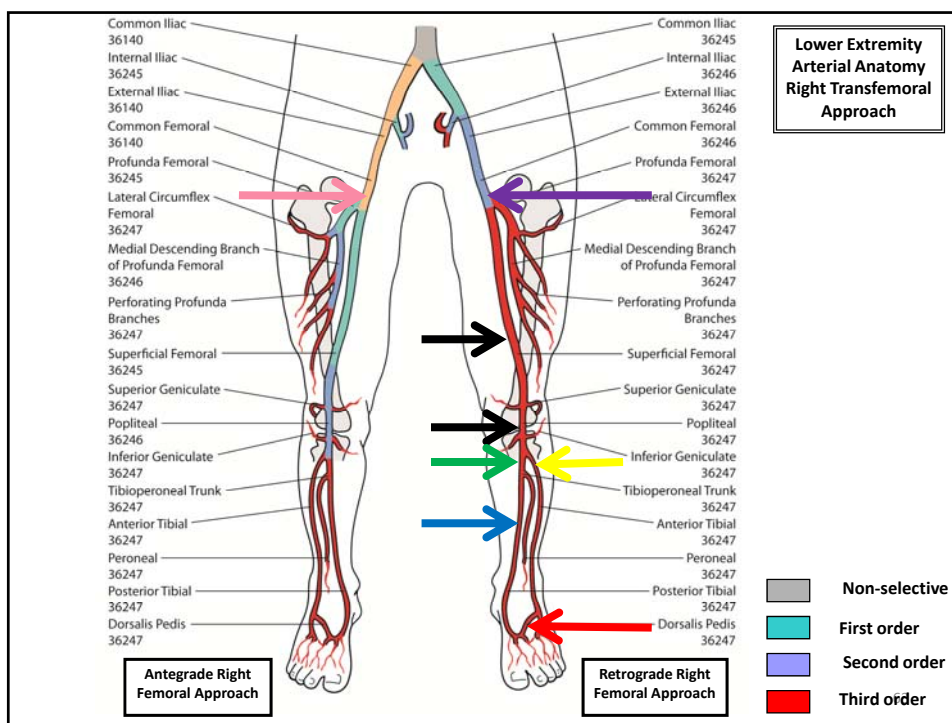
- Crosser CTO Catheter: FDA approved as an atherectomy device on July 28, 2011. Utilizes high frequency mechanical vibrations to cross total occlusions. Discuss physician documentation for coding.
- JETSTREAM G3: FDA approved as both an atherectomy and a thrombectomy device. If thrombectomy also performed in the same vessel as an atherectomy, only code for the atherectomy procedure. DO NOT code for thrombectomy for removal of some thrombus at the time of an atherectomy. (Blades up, blades down, in the same vessel is an atherectomy procedure only.)
- Extensive repair or replacement of an artery can be additionally reported (35286, 35226) at the time of a lower extremity endovascular revascularization.
- Codes 36200, 36245, 36246, 36247, 36248 and 37203 bundle conscious sedation in 2012, along with filter codes and renal angiography codes.

61

LE Endovascular Revascularization Case 25:

Via right femoral approach, diagnostic aortogram, cath reposition to bifurcation, bilateral run-off, additional selective catheter placement with images in contralateral SFA. New left antegrade CFA puncture with left SFA recanalization of occlusion mid-SFA to Hunter's canal. Angioplasty and covered stent placement in SFA. Laser is performed in the mid popliteal, throughout the tibial/peroneal-trunk, in the mid posterior tibial, mid and distal anterior tibial, and dorsalis pedis arteries. Adjunctive angioplasty is performed in all these tibial/peroneal vessels after the atherectomy. Stent placement is necessary in the tibial/peroneal trunk for flow-limiting dissection.

62



LE Endovascular Revascularization Case 25 Answers:

75625-59 – Abdominal aortography

75716-59 – Bilateral lower extremity angiography

75774-59 – Add'l selective angiography, left SFA

36247-59 – 3rd order selective catheter placement via separate access

37227 – Femoral/popliteal stent placement with atherectomy

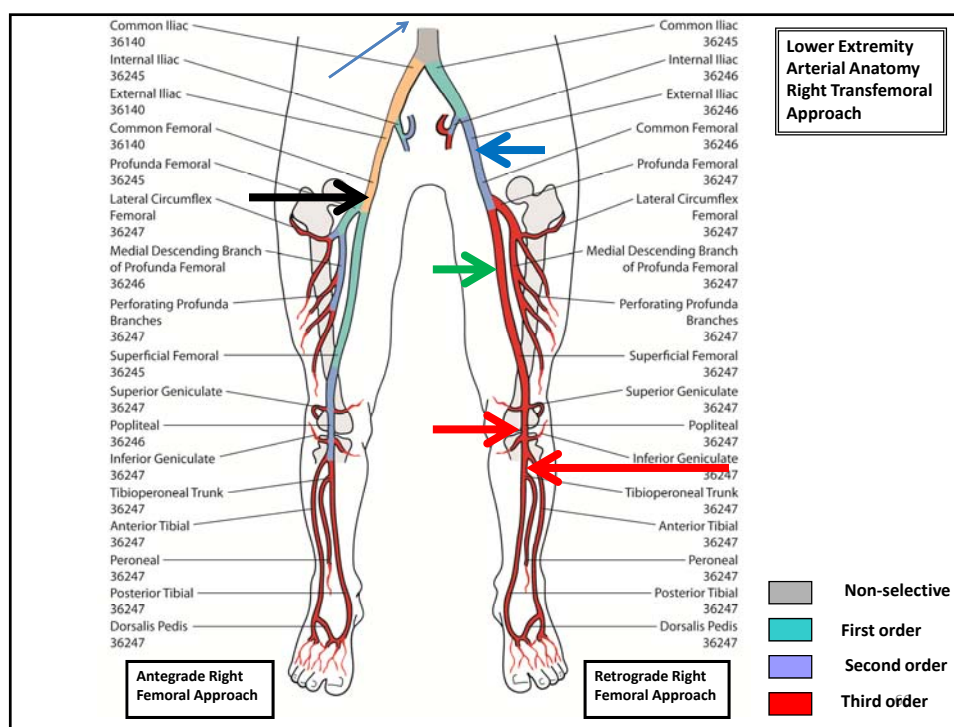
37231 – Tibial/peroneal trunk stent with atherectomy including posterior tibial atherectomy and adjunctive angioplasty

37233 – Anterior tibial/dorsalis pedis atherectomy, including adjunctive angioplasty

LE Endovascular Revascularization Case 26:

Patient with left leg pain. Via right femoral approach, aortogram from high cath position, followed by selective (1st order) bilateral renal angiography. The catheter is pulled down for complete bilateral lower extremity run-off from left common iliac artery and right femoral sheath injections. Sheath is advanced to contralateral SFA and IVUS is performed throughout the entire SFA and popliteal. Angiographic 90% stenoses of the left external iliac with 70-80% diffuse disease throughout the entire SFA and popliteal with dissection of the popliteal documented (with IVUS). The tibial/peroneal vessels are patent. Angioplasty is performed in the external iliac, SFA and popliteal arteries with stent required in the popliteal for dissection. Suction thrombectomy of an embolus in the tibial/peroneal trunk is necessary at the end of the procedure.

65



LE Endovascular Revascularization Case 26 Answers:

36252 – Bilateral selective renal angiography
 75716-59 – Bilateral lower extremity angiography
 75774-59 – Add'l selective angiography, left popliteal
 37250/75945 – Initial IVUS in the SFA
 37251/75946 – Additional IVUS in the popliteal
 37220 – External iliac angioplasty
 37226 – Femoral/popliteal stent placement, includes
 angioplasty (in the SFA and popliteal territory)
 37186 – Secondary arterial thrombectomy

67

Percutaneous Thrombectomy **(non-coronary, non-AV-shunt)**

- 37184 – Primary **arterial** mechanical thrombectomy. Includes intraprocedural thrombolytics and guidance
- 37185 – Second and all subsequent vessels in the same vascular family (add-on code)
- 37186 – Secondary **arterial** thrombectomy, at time of another intervention (small emboli or short segment of clot either before or after another percutaneous intervention, such as angioplasty or stent)
- These interventions do not include catheter placement, diagnostic imaging, angioplasty/stent or other interventions, thrombolysis before or after the thrombectomy.
- If intent is to perform thrombectomy and an underlying stenosis is found and treated, BOTH the thrombectomy and stenosis treatment are billable and the thrombectomy IS considered a PRIMARY thrombectomy.

68

Percutaneous Thrombectomy (non-coronary, non-AV-shunt)

- 37187 – *Venous thrombectomy includes intraprocedural thrombolytics*
- 37188 – *Venous thrombectomy, repeat treatment on subsequent day during course of thrombolytic therapy.*
 - Venous interventions do not include catheter placement, diagnostic imaging, angioplasty/stent or other interventions, thrombolysis before or after the thrombectomy.
 - Mechanical thrombectomy means removal of thrombus by use of a device, these devices include MERCI retrieval device (commonly used for intracranial thrombectomy), Treortola or Angiojet catheters (and others), Rheolytic devices, suction removal of clot with a sheath and balloon maceration of the thrombus with removal or displacement with a Fogarty catheter.
- 36870 – *Percutaneous dialysis graft thrombectomy*
- 92973 – *Percutaneous coronary artery thrombectomy*

69

Interventional Cardiology

- Thrombectomy (e.g., currently Expedior AngioJet Catheter only. Not for aspiration catheters like Pronto, Export, Fetch, Diver CE. Per 2011 ACC coding manual and recent guidance from the AMA, August 2011. Based on RUC survey for initial code creation in 2002) Use of an aspiration catheter is considered part of the coronary intervention (angioplasty, atherectomy, stent placement). If done as stand-alone, use code 93799.
 - Each vessel – +92973 (add-on code, some payers do not allow with atherectomy or angioplasty “NGS”) (Use of a distal embolic protection device is considered part of the intervention. It is not a thrombectomy.)

70

Non-Coronary Thrombolysis

- 37201, 75896
- Code for selective catheter placement .
- Code for diagnostic imaging performed.
- Per surgical site (i.e., right leg, left leg, both legs, right lung, left lung, both lungs)
- Code for each follow up angiography – 75898.
- Code for additional interventions (angioplasty, stent placement).
- Different guidelines than coronary thrombolysis

71

Non-Coronary Thrombolysis

- Exchange of Intravascular Infusion Catheter During Thrombolysis
 - 37209, 75900
 - Includes contrast monitoring
 - Follow up angiography – 75898 (-59 for each additional)
 - Appropriate for use in both the arterial and venous system
- New codes anticipated for 2013, as physicians currently performing RUC survey for thrombolysis procedures

72

Peripheral IVUS

- 37250, 75945 – *IVUS, non-coronary, initial vessel*
- 37251, 75946 – *IVUS, non-coronary, each additional vessel*
- Different codes for coronary IVUS

73

Thrombolysis Case 27:

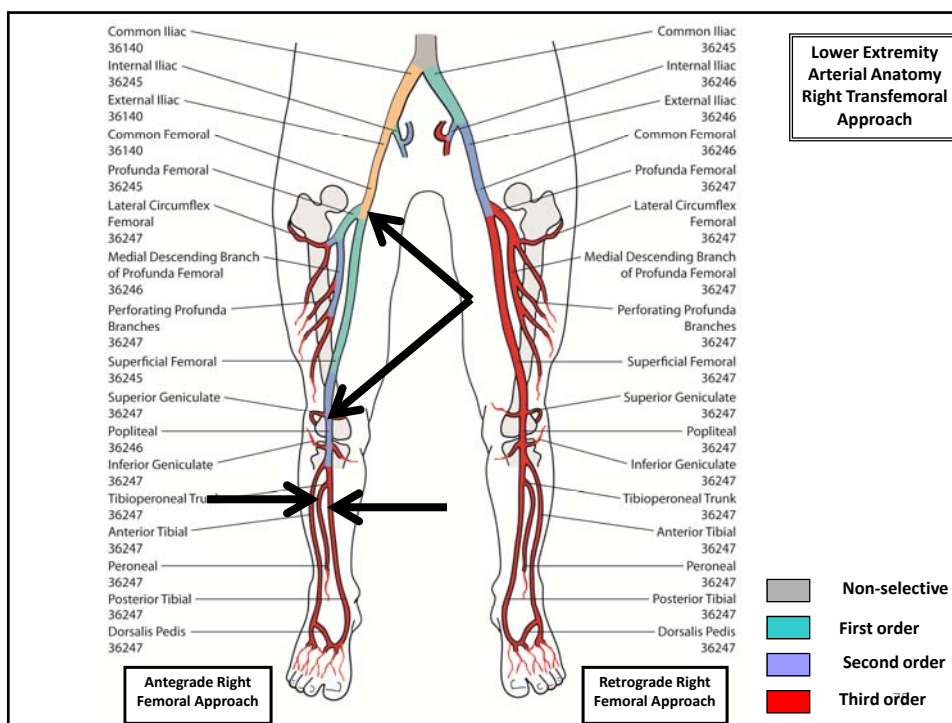
72 year old patient with cold right leg presents at 8am.

A left sided femoral puncture is performed. A catheter is placed into the right common iliac artery followed with angiography of the right lower extremity, followed by catheter placement into a thrombosed femoral-below knee popliteal vein graft. Trifurcation vessels show severe stenoses in the peroneal and posterior tibial arteries. TPA infusion is started.

The patient is brought back at 1pm due to increasing pain and the catheter checked. Distal embolization is seen. Suction thrombectomy with an Export catheter is performed. The catheter is exchanged over a guide wire for a longer infusion length. The old catheter is discarded. TPA is continued.

At 6pm the catheter is rechecked showing severe anastomotic stenoses both proximally and distally. A Viabahn covered stent graft is placed at the proximal anastomosis and Orbital atherectomy with a 4mm device is performed at the distal anastomosis. Orbital atherectomy (3mm) is used to treat stenoses of the posterior tibial and peroneal arteries. Bounding distal pulses are present so the sheath is removed and the patient discharged home (as an outpatient).

74



Thrombolysis Case 27 Answers:

36247-59	37186	75898-59
75710-59	75900*	37227
37201-59	37209	37229
75896-59	75898-59	37233

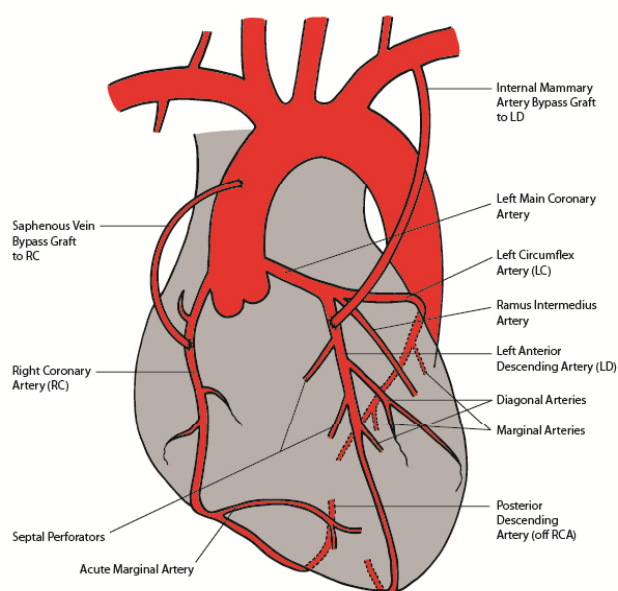
**75900 is an inpatient only status indicator C procedure. This must be performed as an inpatient for Medicare patients.*

Diagnostic Catheterization Case 28:

HISTORY: 67yo with prior CABG, now with recurrent angina.

PROCEDURE and FINDINGS: A 7 Fr sheath is placed in the right femoral artery. Selective native coronary angiography is performed with #4 Judkins left and right catheters. Selective left internal mammary angiography along with selection of 2 vein bypass grafts is also performed. A fistula is identified off the left IMA supplying the left upper lobe bronchial vasculature resulting in steal phenomena from the LD. FFR with WaveWire across this region confirms dramatic drop in flow beyond the fistula. The LC vein bypass graft is patent. The RC vein bypass graft is stenosed 90% proximally. An embolization with two 3mm coils is performed in the IMA branch fistula followed by repeat FFR showing normal velocities distally. Follow-up angiography of the IMA shows complete occlusion of the IMA branch fistula with good coronary perfusion to the LD distribution. Next, the RC saphenous vein bypass graft is selected and a distal embolic protection device is placed. A Promus DES is then deployed and the EPD removed. Follow-up angiography on the right shows complete occlusion of the native RC just beyond the distal SVBPG anastomosis consistent with development of an embolus or thrombus after placement of the SVBPG stent. An Export catheter is advanced to native RC and extensive thrombus is removed. There is questionable haziness at the native RC site post thrombectomy so IVUS is performed showing a severe dissection with 80% luminal loss. Three overlapping bare metal stents are placed across the site of dissection. Follow-up IVUS shows resolution of the dissection while follow-up angiography shows excellent flow and distal perfusion. The abdominal aorta and iliofemoral arteries were evaluated via a single injection as an AAA is noted.

77



78

Diagnostic Catheterization Case 28 Answers:

93455 – *Coronary angiography, with grafts*

G0290-RC – *Drug eluting right coronary artery stent placement (in 2011, DO NOT use 93799 for placement of EPD during coronary stent placement for most payers)*

92978-RC – *IVUS right coronary artery*

93571-LD – *Intravascular Doppler left internal mammary artery (LIMA)*

37204 – *Embolization branch of LIMA at time of cardiac cath*

75894 – *Embolization S&I*

75898 – *Follow-up angiography post LIMA embolization*

75630-59 – *Aortoiliofemoral angiography (for AAA evaluation)*

Note: Code 92973 not billable with aspiration catheters such as Export, Pronto, Diver, Fetch, etc.

79

Embolization

- Peripheral
 - 37204, 75894
 - Per surgical site
 - Add selective catheter placement codes
 - Add diagnostic imaging performed
 - Follow up angiography – 75898 (Use 75898 only once per surgical site for completion study.)

80

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