



Coding of Procedures in Interventional Nephrology 2012
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Produced in collaboration with:



Introduction

Proper coding of interventional procedures is a difficult and daunting, but essential task. Each procedure that is done is made up of a number of parts, each of which has its own code. This requires that a list of component codes be created for each procedure based upon selections made from a long list of alternatives. It is important that this be done correctly. However, many of the potential codes are not specific, many have exclusions and some are bundled. Add to this complexity the fact that changes in coding are being made on a constant and continuing basis. There is no question; the process can be confusing and even baffling.

The Renal Physician's Association and The American Society of Diagnostic and Interventional Nephrology established a joint committee to develop an educational document to outline the most appropriate coding practices for dialysis access related interventional procedures and published a Coding Manual in 2005. The manual was updated in 2006. Since then multiple changes have altered the landscape of interventional coding. Recognizing the importance of unanimity in coding practices, an ASDIN task force was created in 2007 with the mandate to review relevant billing practices of other societies. This committee enter into discussions and whenever possible made suggestions to the coding committee to resolve them. It is our belief that major differences in coding practices no longer exist between specialties performing the procedures outlined in this manual.

The ASDIN-RPA coding manual has become the standard of practice for coding dialysis access related procedures. We strongly encourage readers to adhere to this and other guidelines in their procedural coding to ensure both consistency and accuracy of coding.

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Notice

This document is informational only and should serve as a guideline for appropriate coding. CPT codes and their descriptors are copyrighted by the American Medical Association. Codes should be strictly applied in a manner consistent with coverage and payment policies including National and Local Coverage Determination Policy for specific rules in your area.

This manual is designed to provide accurate and authoritative information regarding coding principles and reasonable efforts have been made to assure the accuracy of the information within the pages. However, the ultimate responsibility for correct coding /documentation remains with the provider of service. ASDIN makes no representation, warranty, or guarantee that this compilation of information is error-free, nor that the use of this guide will prevent differences of opinion or disputes with the Medicare carrier as to the codes that are accepted or the amounts that will be paid to providers of service, and will bear no responsibility or liability for the results or consequences of this guidance.

Grouping of Codes

CPT codes are created by the Medicare program as a means for the physician, healthcare practitioner or facility to appropriately document and subsequently bill for service provided to Medicare beneficiaries. Each CPT code is created based on the inherent relative value units of the specific service being performed. Given the variety of interventional procedures performed today, there are a large number of CPT codes. Prior to coding for interventional procedures it is the recommendation of this committee that the appropriate sections of the CPT manual be reviewed.

Given the diversity of interventional procedures performed, and the design of the CPT system, component coding is often utilized. Component coding, as the name implies, is the process of coding for unique services provided during a patient encounter. For example, when a patient undergoes a percutaneous “declotting” of a graft or fistula, there are different components of that procedure, when performed, which would each be described by a unique CPT code. Gaining access to the graft or fistula would be described by one code, the declotting of the access by another, and the angioplasty by yet another. As such, more than one code would be billed for this “declotting” procedure.

In order to appropriately bill for services rendered, the components of an individual procedure must be understood as they relate to the CPT system. Some interventional coding is composed of two related codes, a 3xxxx code for the performance of the procedure and a 7xxxx code for the supervision and interpretation of the imaging performed. In addition, modifiers can be used to further describe a specific CPT code that may represent a second, incomplete or more complex procedure. These modifiers are also detailed in the AMA's CPT coding manual. Each component of a procedure performed should be appropriately documented, coded, and reviewed with current CCI edits allowing for accurate coding and appropriate reimbursement.

Note:

CCI Edits - The Centers for Medicare and Medicaid Services (CMS) developed the National Correct Coding Initiative (NCCI) to promote national correct coding methodologies and to control improper coding that leads to inappropriate payment in Part B claims. The coding policies developed are based on coding conventions defined in the American Medical Association's CPT manual, national and local policies and edits, coding guidelines developed by national societies, analysis of standard medical and surgical practice and review of current coding practice. CCI edits are editorial comments that are issued to clarify coding issues. If there is a special restriction or requirement for the use of a specific CPT code, it will be published as a CCI Edit. CCI Edits are updated quarterly; updates should be ordered and reviewed quarterly.

National Correct Coding Initiative

CMS expanded the reach of the National Correct Coding Initiative (NCCI), effective Jan. 1, 2009. The NCCI edits, built into the Medicare contractors' claims processing systems, control improper payment of Part B claims by disallowing certain combinations of CPT codes to be billed together, or by limiting the payable number of units for some services. The NCCI contains two types of edits: the Column 1/Column 2 edits, and the Medically Unlikely Edits (MUEs).

Column 1/ Column 2 - Column 1/Column 2 code edits get their name from the table in which they appear. The CPT codes appearing in Column 1 are the payable service. The codes in Column 2 are the non-payable codes unless they qualify for an appropriate modifier). The column 1/column 2 correct coding edit table contains two types of code pair edits. In effect, the edit bundles the Column 2 service into the Column 1 service when either:

- Column 2 (component) is an integral part of Column 1 (comprehensive), or when
- Column 1 and Column 2 could not reasonably based on medical necessity be provided to the same patient on the same day by the same physician

The National Technical Information Service (NTIS) provides the printed versions of column 1/column 2 correct coding edits and CMS provides the electronic version. The column 1/column 2 edits table is divided into 6 columns:

- Column 1 is the payable code in the edit pair
- Column 2 is the non-payable code in the edit pair
- Column 3 shows whether an edit pair was established before 1996
- Column 4 shows the first effective date of the edit
- Column 5 shows the deletion date of the edit.
- Column 6 shows whether exceptions are allowed for billing the code pair

When reported with the column 1 code, the column 2 code generally represents the code with the lower work RVU of the two codes. Some column 1/2 codes are mutually exclusive. In this instance column 6 of the table will list a "0." This means that if both procedures are reported, only the column 1 code will be paid. In other words, the column 2 code is dropped in favor of the higher level column 1 code.

Other column 1/column 2 code pairs allow for the use of a modifier. In this instance column 6 of the table will list a "1." This means that the two procedures can be coded together and both procedures will be paid, but a modifier will need to be attached to the column 2 code. There are several modifiers available for use, but the one used most often is modifier 59 (see discussion of modifiers para 11.4 for discussion of when this modifier is appropriate). It should be noted that the same code can be a column 1 code when paired with one code and a column 2 code when paired with a different code.

Medically Unlikely Edits - An MUE for a CPT code sets the maximum number of units that a physician would report under most circumstances for a single beneficiary on a single date of service. The MUE is based on the natural anatomic limits, the HCPCS and CPT code descriptors, CPT coding instructions, CMS policies, the nature of service/procedure, the nature of equipment, and the physician's clinical judgment. Accordingly, if the MUE is "2," the physician cannot be paid for more than 2 units of that code for a single

patient on a single date of service. It should be noted that not all HCPCS/CPT codes have MUEs associated with them.

Add on Codes

Add-on codes enable physicians to separately identify a service that is performed in certain situations as an additional service or commonly performed supplemental service to the primary service/procedure performed. For example if an access is cannulated, the basic code is 36147. However, at times it is necessary to cannulate a second time. This warrants a second code + 36148. In this situation the second cannulation (+ 36148) is considered an add-on code. Add-on codes are reimbursable services when reported in addition to the appropriate primary service or procedure. Add-on codes cannot be used as stand-alone codes. By themselves they are not reimbursable. A CPT code is designated as an add-on code in the AMA CPT manual by the designation (+) placed next to the code. In addition, the code descriptors for all add-on codes contain a variation of the phrase "List separately in addition to code for primary procedure." Some MAC's require the -59 modifier code added. However, while this designates the code as "multiple distinct procedure" add-on codes are exempt from the multiple procedure discount. This means that as discussed in the section on modifiers they are exempt to the depreciated value that occurs when multiple procedures are otherwise performed. Add-on codes have a discounted value built in at the time the relative value units (RVU) are assigned.

The following is a list of add on codes which you might encounter:

+36148 - Additional access (second cannulation) for therapeutic intervention (List separately in addition to code for primary procedure)

+37186 – (embolectomy code) Secondary percutaneous transluminal thrombectomy (eg, nonprimary mechanical, snare basket, suction technique), noncoronary, arterial or arterial bypass graft, including fluoroscopic guidance and intraprocedural pharmacological thrombolytic injections, provided in conjunction with another percutaneous intervention other than primary mechanical thrombectomy (List separately in addition to code for primary procedure)

+37206 – Transcatheter placement of an intravascular stent(s) (except coronary, carotid, vertebral, iliac, and lower extremity arteries), percutaneous; each additional vessel (List separately in addition to code for primary procedure)

+37222 – Revascularization, endovascular, open or percutaneous, iliac artery, each additional ipsilateral iliac vessel; with transluminal angioplasty (List separately in addition to code for primary procedure)

+37223 – Revascularization, endovascular, open or percutaneous, iliac artery, each additional ipsilateral iliac vessel; with transluminal stent placement(s), includes angioplasty within the same vessel, when performed (List separately in addition to code for primary procedure)

+37232 – Revascularization, endovascular, open or percutaneous, tibial/peroneal artery, unilateral, each additional vessel; with transluminal angioplasty (List separately in addition to code for primary procedure)

+37233 – Revascularization, endovascular, open or percutaneous, tibial/peroneal artery, unilateral, each additional vessel; with atherectomy, includes angioplasty within the same vessel, when performed (List separately in addition to code for primary procedure)

+37234 – Revascularization, endovascular, open or percutaneous, tibial/peroneal artery, unilateral, each additional vessel; with transluminal stent placement(s), includes angioplasty within the same vessel, when performed (List separately in addition to code for primary procedure)

+37235 – Revascularization, endovascular, open or percutaneous, tibial/peroneal artery, unilateral, each additional vessel; with transluminal stent placement(s) and atherectomy, includes angioplasty within the same vessel, when performed (List separately in addition to code for primary procedure)

+49435 - Insertion of subcutaneous extension to intraperitoneal cannula or catheter with remote chest exit site (List separately in addition to code for primary procedure)

+75964 – (S&I code) Transluminal balloon angioplasty, each additional peripheral artery other than cervical carotid, renal or other visceral artery, iliac and lower extremity, radiological supervision and interpretation (List separately in addition to code for primary procedure)

+76937 - Ultrasound guidance for vascular access requiring ultrasound evaluation of potential access sites, documentation of selected vessel patency, concurrent realtime ultrasound visualization of vascular needle entry, with permanent recording and reporting (List separately in addition to code for primary procedure)

+77001 - Fluoroscopic guidance for central venous access device placement, replacement (catheter only or complete), or removal (includes fluoroscopic guidance for vascular access and catheter manipulation, any necessary contrast injections through access site or catheter with related venography radiologic supervision and interpretation, and radiographic documentation of final catheter position) (List separately in addition to code for primary procedure)

Diagnostic RS&I code used in association with a therapeutic RS&I code

Any vascular diagnostic or therapeutic procedure may be coded with one or more surgical codes (30000 series codes) and with one or more imaging codes (commonly referred to as radiological supervision and interpretation [RS&I], 70000 series codes). Some surgical codes are all-inclusive for use when the procedure has been valued to include all of its surgical and imaging aspects. An example of this is 36147 which bundles the imaging codes for the access.

Vascular diagnostic and therapeutic procedures often are performed at the same encounter. For example, diagnostic angiography is performed to locate and characterize stenotic lesions within specific vessels. When such a condition is diagnosed during the angiographic study, the interventionalist generally proceeds to provide therapeutic treatment. Interventions of this nature include angioplasty, thrombectomy and stent placements for example. When a diagnostic RS&I code is used in association with a therapeutic RS&I code, a -59 modifier should be attached to the former. For example – if one places an embolization coil and then does a post-coil angiogram via catheter. Then the coding would be the codes for the coil placement, 37204 and 75894 (therapeutic RS&I), and the code for the angiogram, 75898-59 (diagnostic S&I).

Although there are a number of instances where this combination of codes might occur, only a very few actually are likely to arise in an interventional nephrology practice. These are 75710, 75898 and 77001.

Separate Billing for Technical and Professional Services (Modifier 26)

In general, CMS makes a single payment for all covered services, which includes ancillary services that are furnished in connection with a covered procedure such as radiology. They do, however, designate certain radiological services (7xxx series codes) that are eligible for separate payment of the technical and the professional component. This is possible only if the services are performed in a facility in which the physician does not own the equipment or employ the technical staff. These eligible services are billed by attaching a modifier to the basic code, TC for the technical and 26 for the professional component. If the code for the procedure is used unmodified, it indicates a complete or global service.

If the physician owns the equipment and employs the technical staff or if the physician is employed directly by the facility to provide professional services for which the facility does the billing, the global designation (no modifier) is used.

This principle, i.e., the ability to use a 26 and TC modifier applies only for procedures performed in the hospital. None of the radiological codes (7xxx series codes) used in this manual have been designated as eligible for separate payment under this mechanism in an ambulatory surgical center. It also does not apply in the extension of doctor's office model. The 3xxx series and the 9xxx series codes are not affected by this policy.

Facility and Non-Facility Billing

In the extension of doctor's office model, payment is made under the Medicare Physician Professional Fee Schedule (PPFS). The PPFS lists a "facility" and "non-facility" payment. The non-facility payment is to be utilized for payment of physicians who are performing procedures in their own office facility. This higher reimbursement is intended to reimburse both the physician's professional work and the facility costs related to the procedure. The facility payment includes only the physician's direct professional service reimbursement assuming the procedure is being performed in a facility that he/she does not own.

Individual Codes Used For Vascular Access Procedures

It is perhaps easiest to organize a review of individual codes by looking at the procedure being performed. The manual is organized around procedural types and groupings with likely coding combinations discussed. In addition, CPT codes are organized in a structure of complexity. In many situations, "higher" level codes necessitate the elimination of "lower" level codes and this will be discussed in detail by examples.

1. ANGIOPLASTY AND RELATED PROCEDURES

1.1 PRIMARY CODES

Angioplasty may be venous or arterial; these have different codes and special rules that relate to each. Additionally, the coding of an arterial angioplasty in the lower extremity is not the same as one in the upper extremity (see paras 1.1.1.2.1.2, 1.1.4.2). First to be considered are the primary codes that are generally used with a venous angioplasty (Table1). The coding of an arterial angioplasty will follow this discussion because of the special relationships that exists between the two. In addition, there are several secondary codes that may occasionally be used. Secondary codes will be discussed after the primary codes. If a procedure-related complication occurs, this might also generate additional codes, a discussion of these will follow.

There are two definitions of the dialysis access that are important for coding purposes. These affect the coding of diagnostic and therapeutic procedures that are performed within the access and therefore should be listed before the procedures are described. In both of these definitions the access, as defined is considered to be a separate vessel and in both the access is considered to have arterial and venous components (see para 1.2.1 for more detail).

Definition of access for diagnostic purposes: For diagnostic studies such as an angiogram, the dialysis access is defined as beginning with the arterial anastomosis and extending to the right atrium. This is true for both upper and lower extremity accesses (both synthetic grafts and arteriovenous fistulas).

Definition of access for therapeutic purposes: For therapeutic procedures such as an angioplasty, the access, whether fistula (vein used to creat a fistula) or graft, should be considered to be from the arterial anastomosis up to the beginning of the central veins, i.e., the subclavian (see discussion under 1.1.4.1 for more detail). This should be thought of as a single conduit. The arterial anastomosis with the adjacent approximately 2 cm of artery is defined as the arterial portion of the access and the entire remainder of the access is defined as the venous portion for coding purposes.

1.1.1 Cannulation (Catheterization) Code

Cannulation or catheterization (in this context, the terms are used to mean the same) may be either selective or non-selective. These codes are mutually exclusive. This principle involves both arterial and venous vessels. In order to code properly, this concept must be mastered.

1.1.1.1 Non-selective cannulation

The most frequently performed cannulation is non-selective. The target vessel is entered directly and the device used for the cannulation (usually just a needle) is not manipulated further. The target vessel has been accessed and the procedure is over. For coding purposes, two types of non-selective cannulation are defined:

1.1.1.1.1 Non-selective cannulation with angiogram of the access

The code 36147 is used to designate this procedure combination. It bundles an angiogram of the access with a non-selective cannulation. This code is always used for the first cannulation of the access that requires an independent code (cannulation in the lower extremity may be bundled - see para 1.1.1.1.3) regardless of whether an angiogram is also performed and it is specific for the dialysis access (either fistula or graft). The descriptor for 36147 is – introduction of needle and/or catheter into an

arteriovenous shunt created for dialysis (graft/fistula) with complete radiological evaluation of dialysis access, including fluoroscopy, image documentation and report (includes access of shunt, injection(s) of contrast, and all necessary imaging including the adjacent arterial inflow, arterial anastomosis through entire venous outflow including the inferior or superior vena cava). This code also describes all needle and catheter manipulation within the access circuit to perform the diagnostic radiological study to evaluate the access. Advancement of a catheter through the arterial anastomosis to visualize the anastomosis (anastomosis and adjacent approximately 2 cm of feeding artery) is also considered integral to the work of 36147 and is not coded additionally. However, if a more proximal inflow problem separate from the peri-anastomotic segment is suspected and additional catheter work and imaging must be done for adequate evaluation, this work is not included in code 36147.

Table 1 - Codes Used for Angioplasty

Primary -

- 36147 – Cannulation and access angiogram (first cannulation of access)
- 35476 – Venous angioplasty
- 75978 – Supervision and interpretation of 35476
- 35475 – Arterial angioplasty upper extremity
- 75962 – Supervision and interpretation of 35475
- +75964 – Supervision and interpretation of each addition 35475
- 37224 – Arterial angioplasty of lower extremity

Secondary (occasional) -

- +36148 – Cannulation for therapeutic purposes (second and subsequent cannulations)
- 75791 – Angiogram of access without cannulation*
- 75710-59 - Arteriogram of extremity
- 36215 - Selective catheterization first order branch, artery (upper extremity)
- 36216 - Selective catheterization second order branch, artery (upper extremity)
- 36245 – Selective catheterization of first order branch, artery (lower extremity)
- 36120 - Cannulation of brachial artery via direct puncture
- +76937 – Ultrasound guided cannulation*
- 77002 – Fluoroscopic guided needle placement (cannulation of device)*

*If any of the 7XXXX imaging codes are used they will need a 59 modifier

Note: Arterial angioplasty in lower extremity is coded differently – see 1.1.1.1.3 below

In addition to the bundling of non-selective cannulation of the access and the angiogram of the access and its drainage, the 36147 code use policy has a list of codes that cannot be used with this code (in other words they are considered to be bundled). This list is shown in Table 2.

Table 2 – Codes That Cannot Be Used With 36147

- 76000 - Fluoroscopy (separate procedure) up to one hour physician time#
- 75820 - Venography, extremity, unilateral#
- 75825 - Venography, caval, inferior, with serialography #
- 75827 - Venography, caval, superior, with serialography#
- 36140 – Cannulation of extremity artery (excludes brachial)
- 36010 – Selective catheterization of superior or inferior vena cava

If a more proximal arterial inflow problem separate from the peri-anastomotic segment (anastomosis, and approximately 2 cm of adjacent artery) is suspected and additional catheter work and imaging must be done for adequate evaluation, this work is not included in code 36147.

It should be noted that because the 36147 code is specific for the cannulation of the access, if an angiogram of the access is performed by cannulating another vessel, then the bundling requirements listed for 36147 would not apply (see para 1.1.2.2. for more details).

1.1.1.1.2 Non-selective cannulation for a therapeutic intervention

If a second non-selective cannulation of the access is performed for the purpose of performing a therapeutic intervention, the code +36148 should be used. The descriptor for this code is - introduction of needle or catheter; arteriovenous shunt created for dialysis (graft/fistula) as an additional access for therapeutic intervention. As discussed in the introductory paragraphs of this manual code (p 4 - 5) +36148 is an add-on code. Therefore, even though it is a 3XXXX level code, when paired with 36147 the multiple procedures reduction in RVU should not be applied whether or not the -59 modifier is added. This code cannot be used in the absence of the 36147 code.

If a single cannulation of an access is performed, it should be coded 36147 even if it is not done for the purposes of an angiogram. As described below (para 1.1.2.2), there are instances in which the angiogram may be performed by some means other than direct cannulation of the dialysis access. In these cases, if the access is then cannulated for some reason, it should be coded 36147. The code +36148 can never be used without a 36147. In addition to it being used for the second cannulation, the +36148 code should also be used for all subsequent cannulations of the access that might be required.

Coding tip: The cannulation (catheterization) code whether non-selective or selective as discussed below includes: "necessary local anesthesia, introduction of needles or catheter, injection of contrast media with or without automatic power injection, and/or necessary pre- and post-injection care specifically related to the injection procedure".

1.1.1.1.3 Exception for the lower extremity

The lower extremity requires that an exception to the use of non-selective cannulation codes be applied. When performing an arterial angioplasty in the artery proximal to the access as defined, the Lower Extremity Revascularization coding system is used. In this system the codes are all inclusive. Specifically, the basic cannulation is bundled with the basic procedure code. Therefore when only an arterial angioplasty is performed in the lower extremity, the code 36147 should not be used. The code 75791 for the angiogram should be used alone. If it is necessary to do a second cannulation then this should be coded 36147 (since this would be the first cannulation requiring an independent code) with a -59 modifier to indicate that this is a separate procedure. When this second cannulation code is used, then 75791 would need to be dropped since it is bundled with 36147. This is discussed in more detail below (paragraphs 1.2.2.2.1 and 1.3.1.1).

Table 3 - Requirements for Selective Catheterization
Medical necessity
For procedure
For selective catheterization
Use of a guiding (diagnostic) catheter
Documentation of guidewire manipulation (work effort)

1.1.1.2 Selective catheterization

To qualify as selective catheterization, the device being used must require manipulation in some manner in order to advance from the first vascular structure entered to the target vessel, either an artery or a vein. Several necessary conditions must be met in order to utilize the selective catheterization codes (Table 3). The first is medical necessity for both the procedure to be performed and the use of selective catheterization, the second is the use of a guiding or diagnostic catheter placed independent of a balloon catheter, and the third is the documentation of the work effort required for manipulation of the guidewire to gain access to the vessel.

The key element here is manipulation or in other words, the actual work performed to gain access to the target vessel. If the device enters the target vessel passively, then the procedure should not be considered as a selective catheterization.

Example 1 – A radial-cephalic AVF is cannulated in a retrograde direction. The guidewire is inserted and passes through the distal segment of the access and enters the radial artery. It is followed by a vascular catheter which is used to perform a medically indicated angiogram of the proximal artery. This would not qualify as a selective catheterization.

Example 2 – A radial-cephalic AVF is cannulated in a retrograde direction. An angiogram of the proximal artery is medically indicated. Manipulation of the guidewire using a vascular catheter is required to cross the arterial anastomosis. The guidewire is inserted into the radial artery. It is followed by a vascular catheter which is used to perform the angiogram. This would qualify as a selective catheterization.

It should be recognized that crossing a lesion only for the purpose of performing an angioplasty does not qualify under this heading. Such a maneuver should be regarded as a reasonable part of that basic procedure. There are other situations in which selective catheterization is also not appropriate (Table 4).

Table 4 – Selective Catheterization Disqualifications

- If done for angioplasty balloon positioning
- If done to visualize access (as defined for diagnostic procedures)
- If done for superior or inferior vena cava
- If done to visualize arterial anastomosis
- If done for the purposes of performing a post-angioplasty angiogram

Coding Tip: To document that catheterization of the vessel qualifies as a selective catheterization, the record should reflect that "the vessel was catheterized by manipulating the guidewire using a ___vascular catheter" or simply "the vessel was selectively catheterized using a ___vascular catheter."

These selective codes were originally developed for use based upon cannulation of a central vessel from which one progressed peripherally. In dealing with dialysis access dysfunction; however, the process is generally reversed; the progression is from a peripheral cannulation to a more central location. One is generally (although not always) accessing a peripheral vessel and progressing centrally.

Actually, the performance of a selective catheterization requires a double indication. Firstly, there is a requirement for a medical indication for the procedure that is to be performed (such as an angiogram or the placement of a coil). Secondly, there is an absolute need for a medical indication for the selective

catheterization. When this is followed by the work of guidewire manipulation with a vascular catheter, only then is the code for selective catheterization warranted.

Notice that these codes are not attached to an anatomically named vessel. The same vessel could be a first or second order branch depending on the vessel which was the primary site of access. If the brachial artery is selectively cannulated from a radial-cephalic fistula, it would be a second order branch. If the same vessel was catheterized from a brachial-cephalic graft, it would be a first order branch (it is the first artery that you come to from that site). Likewise, the radial artery would be a second order branch if reached by first passing through the brachial, but would be a first order branch if it is the artery attached to the access as is the case with a radial cephalic fistula. The code used in each instance must indicate the order of the branch rather than being specific for an anatomical name.

1.1.1.2.1. – Selective Catheterization – Artery

There are distinct differences between coding for selective catheterization of the artery in the upper and lower extremities. In the lower extremity, the Lower Extremity Revascularization codes are to be used for the artery, excluding the arterial portion of the access. These lower extremity endovascular revascularization codes are all inclusive (except for diagnostic angiography) (see para 1.2.2 and 1.3.1 for more details).

1.1.1.2.1.1 – Selective Catheterization – Upper Extremity Artery

The most common scenario in which selective catheterization is warranted is when unique pathology presented by an individual case requires that an artery be selectively catheterized to facilitate the performance of an arteriogram and the appropriate treatment of the case. In this instance either the code 36215 or 36216 would be warranted depending upon the specific sequence of the target artery entered (Figure 1). The descriptor for 36215 is – selective catheter placement, arterial system, each first order thoracic or brachiocephalic branch, within a vascular family. For the code 36216, the descriptor is - selective catheter placement, arterial system; initial second order thoracic or brachiocephalic branch, within a vascular family (Figure 1).

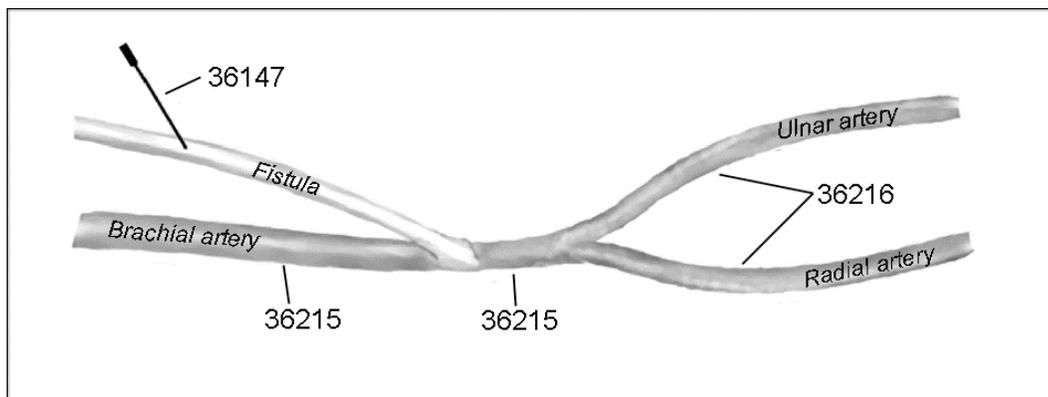


Figure 1 – Catheterization sequence for arterial catheterizations. Only the highest order code is used, the preceding codes are dropped. The code 36147 is a bundled code which includes the non-selective cannulation code. When this cannulation code needs to be omitted in favor of a higher order code, this code is changed to the angiography (only) code 75791.

It is important to note that the advancement of the catheter tip through the arterial anastomosis to adequately visualize the anastomosis is considered integral to the work of 36147 and should not be coded additionally. Therefore, if one is to code a selective catheterization procedure based upon the

catheterization of the feeding artery, one has to visualize (have an indication to do so) more than just the anastomosis.

In some instances, a procedure performed on a dialysis access is initiated by first cannulating the feeding artery. This may be done antegrade via the brachial artery or retrograde via the radial (there are other possibilities). In order to cross the arterial anastomosis and enter the access, selective catheterization of the access may be required. In this instance the access would be the first order vessel and warrant a 36215 code.

Example 1: A fistula was cannulated retrograde - Because of diminished pulse pressure (the medical indication) the artery was cannulated retrograde. To accomplish this selective catheterization was performed by manipulating a vascular catheter into the anastomosis in order to facilitate passing a guidewire followed by a diagnostic catheter into the radial artery (the work component) and an angiogram of the feeding artery was performed. The radial artery would be classified as a first order artery and the selective catheterization code 36215 would be used. The basic cannulation code is bundled with the angiogram of the access within the code 36147. Since this basic cannulation needs to be dropped with the usage of the selective catheterization code, the performance of the angiogram should be designated using the code 75791. This is the code for an access angiogram performed without cannulation (see Paragraph 1.1.1.2.3 for more detail).

Example 2: A second access site was used for the selective catheterization – In the course of performing a thrombectomy, difficulty was encountered in cannulating the artery via the arterial anastomosis from the second cannulation site. In order to accomplish this, the guidewire was manipulated using a vascular catheter in order to facilitate passage into the radial artery (the work component) and an angiogram was performed. The radial artery would be classified as a first order artery and the selective catheterization code 36215 would be used. The second cannulation code performed for therapeutic purposes, +36148, should be dropped with the usage of the selective code.

Example 3: The brachial artery was cannulated. In order to enter the fistula, the guidewire was passed down the radial artery and a guiding catheter was used to selectively catheterize the arterial anastomosis. Once the catheter was passed into the access an angiogram was performed to visualize the access and its drainage. The radial artery would be classified as the second order artery and the code 36216 would be used (second order because one had to pass through the radial artery first, then the fistula). The direct cannulation of the brachial artery would be coded as 36120, but this code would be dropped in favor of the selective code. If the fistula was then cannulated directly for some indication during the conduct of the case, the code 36147 would be used.

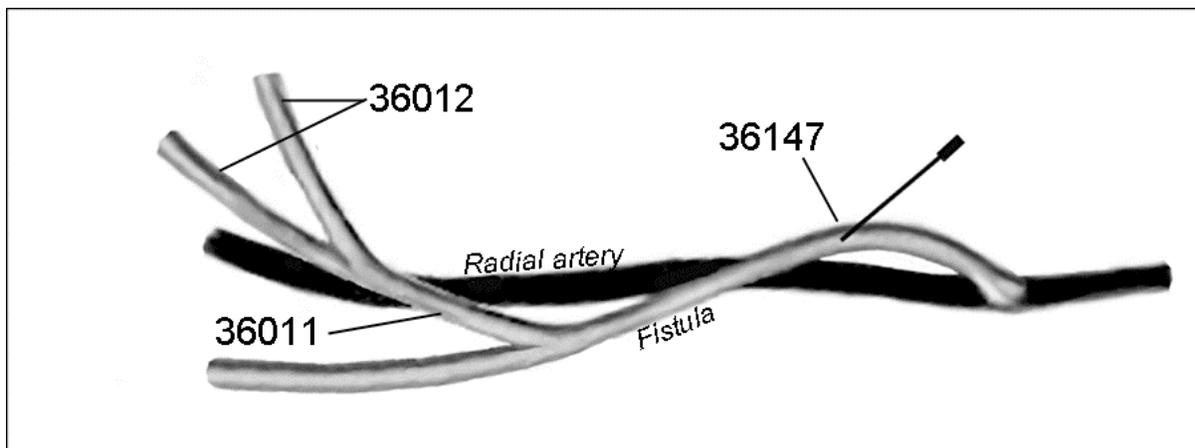


Figure 2 – Catheterization sequence for venous catheterizations. Only the highest order code is used, the preceding codes are dropped. The code 36147 is a bundled code which includes the non-selective cannulation code. When this cannulation code needs to be omitted in favor of a higher, this code is changed to the angiogram (only) code 75791.

1.1.1.2.1.2 – Selective Catheterization – Lower Extremity Artery

If dealing with a thigh graft anastomosed to the femoral artery, the Lower Extremity Revascularization codes come into play. These codes are all inclusive; therefore, selective catheterization would be bundled with the basic procedure code (see para 1.2.2 and 1.3.1 for more details).

1.1.1.2.2. – Selective Catheterization - Vein

The rules that deal with selective catheterization within the venous system are the same whether it is within the upper or lower extremity. The situations in which selective catheterization of veins is possible are very limited because the code 36147 includes all needle and catheter manipulation within the access circuit as well as all visualization of the graft or fistula and central vessels. Selective catheterization of veins (such as an accessory vein) for the purposes of placing a coil or a ligation, or a vein for stent placement (should such an occasion arise) would be exceptions. The code for catheterization of a 1st order venous branch is 36011. The descriptor for this code is – introduction of needle or intracatheter, vein; first order branch. The code for catheterization of a 2nd order venous branch is 36012. The descriptor for this code is – introduction of needle or intracatheter, vein; second order, or more selective, branch (Figure 2).

1.1.1.2.3 Dropping nonselective code when selective code is used

The selective catheterization (cannulation) code cannot be used with a nonselective code for the same site. It is useful to think in terms of the nonselective cannulation being converted to a selective one. This warrants a higher level code. It is not considered as a new procedure, but rather a modification of a procedure completed earlier. If then a second order vessel is selectively catheterized, the procedure has been converted further to an even higher level code. Only the highest level code is applied, all others are dropped. In some instances, a second nonselective cannulation may be performed; this would be listed unless a second selective catheterization is also accomplished at this site. The basic principle is - each time a selective catheterization is performed, a non-selective code is dropped in favor of the selective one (Table 5) only the highest level codes should be applied. In an instance in which multiple cannulations have been performed, it is always the lowest level non-selective cannulation code that is dropped regardless of the site from which the selective cannulation procedure was accomplished. In other words, if both a 36147 and a 36148 are performed and then a selective catheterization was performed from the 36147 site, the 36148 code would be dropped since it is the lower level code (Table 5).

Situation	Code as
36147 + Access angiogram + Selective	75791 + Selective code
36147, 36148 + Access angiogram + Selective	36147, + Selective code
36120 + Access angiogram + Selective	75791 + Selective code
36120 + 36147 + Access angiogram + Selective	36147 + Selective code
36120 + 36147 + 36148 + access angiogram + Selective	36147 + 36148 + Selective code

Since the basic cannulation of the access is bundled with the angiogram of the access as code 36147, the question arises as to how the cannulation code in this pair can be dropped. This should be done by listing the angiogram as a separate study using the code 75791. If a second cannulation for therapeutic purpose, code +36148, has been the site of the selective catheterization, it would simply be dropped in favor of the selective code. It is important to note that 75791 cannot be used with either 36147 or +36148.

1.1.1.2.3.1 When mixed cannulation types are involved

There are times when it is necessary to cannulate the artery to gain access to a fistula. This creates several possible scenarios for dealing with the proper coding of selective catheterization (Table 5).

- If the only cannulation site is arterial, 36120 or 36140, and a selective catheterization is performed, then the arterial cannulation code would be dropped in favor of the selective code to reflect the fact that the site has been converted from nonelective to selective. The angiogram would be coded as 75791.
- If the initial cannulation site is arterial and a selective catheterization is performed from that site, but the access is also cannulated directly at some point during the procedure. Then the arterial cannulation code would be dropped in favor of the selective catheterization code and the 36147 code would be retained.
- If in the second scenario above, a second cannulation of the access is made at some point in the procedure, then one should drop the arterial code in favor of the selective catheterization code, the non-selective cannulation code 36147 and the second cannulation code +36148 would be retained.

All of this is guided by two principles – (1) when a selective catheterization code is added, a non-selective code is dropped and (2) 75791 cannot be used with either 36147 or +36148.

1.1.1.2.3.2 Where selective catheterization code cannot be used

There are several instances in which, although the work was performed, selective catheterization cannot be coded.

- If done for angioplasty balloon positioning - anything done as part of the actual angioplasty procedure is considered to be included in the basic angioplasty code.
- If done to visualize access or its drainage – anything done only as part of the procedure to visualize the access is considered to be part of the basic angiography code.
- If done to visualize only the arterial anastomosis and not the inflow arterial system- this is not allowed for the same reason as above.
- If done for superior or inferior vena cava – this is prohibited by CMS policy unless performed from a venous access site separate from the access being studied.
- If done to accomplish a post-angioplasty angiogram - this procedure as well as anything done to accomplish this procedure is considered to be part of the angioplasty procedure which is coded.

Example 1 – Following the angioplasty of a juxta-anastomotic stenosis involving a fistula, a vascular catheter is passed across the arterial anastomosis in order to perform a post PTA angiogram. In order to accomplish this task it was necessary to manipulate the guidewire in order to place it prior to the passage of the catheter. A catheter based angiogram was thought to be medically indicated in order to avoid exposing the treated area of the fistula to the pressure that would be involved by manually occluding the access and injecting radiocontrast retrograde. Even though this procedure meets the definition of a selective catheterization, it should not be coded because the post PTA angiogram and all that is involved in obtaining it is bundled with the lower basic PTA code.

1.1.1.3 Aids for difficult cannulation

In some instances the cannulation of the dialysis access is very difficult to accomplish. This is particularly true in the case of new or failing AVF. Some type of aid is required in order to accomplish the necessary task and complete the required treatment. Two aids that have been used effectively are ultrasound guidance and the use of an angioplasty balloon passed from another site to use as a target (balloon-guidewire entrapment). Both of these are codable events.

Ultrasound guidance for the cannulation procedure is not included in 36147. The appropriate code for this ultrasound guided access cannulation procedure is +76937. The descriptor for this code is – ultrasound guidance for vascular access requiring ultrasound evaluation of potential access sites, documentation of selected vessel patency, concurrent realtime ultrasound visualization of vascular needle entry, with permanent recording and reporting (List separately in addition to code for primary procedure). This should be listed in addition to the cannulation code 36147 (or +36148). As the descriptor indicates, this requires image documentation for the medical record. (Also see Paragraph 3.2.)

In some cases it is possible to insert a device such as an angioplasty balloon at another site and pass it to the site deemed optimum for cannulation and use it as a target. This cannulation is generally done with fluoroscopic guidance for the cannulation needle placement. The code for this procedure is 77002. The descriptor for this code is - Fluoroscopic guidance for needle placement (e.g., biopsy, aspiration, injection, localization device). This code is a column 2 code to 36147. It can be used with that code but does require a modifier. In the instance described here, a -59 modifier would be appropriate. The code +77001 cannot be used in conjunction with 77002.

1.1.2 Angiogram

As stated earlier, for diagnostic studies such as the angiogram, the dialysis access is defined as beginning with the arterial anastomosis and extending to the right atrium. This is true for both upper and lower extremity accesses (both synthetic grafts and arteriovenous fistulas). The coding of the angiogram performed to evaluate the access and its draining veins may be performed in two different ways depending upon the circumstance:

1.1.2.1 Angiogram performed with cannulation of access

When a routine angiogram of an access (graft/fistula) is performed following a nonselective cannulation which was performed for that purpose, the code 36147 is used as described in section 1.1.1.1.1 above. In this setting, these two tasks, the cannulation and the angiogram which follows, are bundled. This code includes visualization of the entire access from the arterial anastomosis to the venous anastomosis as well as all peripheral and central veins that receive drainage from the access. It does not matter how the angiogram is accomplished, it is bundled. This is the case even if it is accomplished via selective catheterization. It also includes the artery immediately adjacent to the anastomosis (within approximately 2 cm).

1.1.2.2 Angiogram performed without cannulation of access

Occasionally the patient presents to the angiography suite with a needle or catheter already in place. In this instance, the access does not require cannulation in order to perform the angiogram. Additionally, in some cases, a separate site, a site not part of the dialysis access as defined, is used to perform an angiogram of the access. A commonly occurring example of this situation would be the cannulation of the artery, either the brachial (36120) or the radial (36140) which is then used to perform an angiogram of the access. When radiological evaluation of the dialysis access is performed through an already existing cannulation into the access or from a cannulation site that is not a direct puncture of the dialysis access,

the code 75791 should still be used. There are actually several scenarios that might occur in these situations. These are detailed in paragraph 1.1.1.2.3.1 above.

1.1.2.3 Repeat angiograms

It is important to note that although an angiogram may be repeated several times during the course of the angioplasty procedure, it should be coded **only once**. Additionally, one should note that angiograms performed in follow-up for procedures such as angioplasty or stent placement are considered to be bundled with the basic procedure itself. The only exception to this is a follow-up angiogram following coil placement which is code 75898. The descriptor for this code is - Angiography through existing catheter for follow-up study for transcatheter therapy, embolization or infusion (requires a -59 modifier).

***Coding Tip:** Clearly document in your procedure note all of the vessels that were studied and the findings of the study. In other words, state that the access was examined and that the draining veins were examined. Give the findings of both studies individually. It is also important to document both the medical necessity for doing a separate procedure (cannulation from a separate site) and the medical necessity for visualizing the draining vein.*

1.1.3 Venous Angioplasty

The code for a venous angioplasty, whether in the upper or lower extremity, is 35476. The descriptor for the angioplasty code is – transluminal balloon angioplasty, venous. This code should be used for a venous angioplasty performed anywhere within the entire venous system – venous portion of access and central veins (see definitions under 1.1.4.1 below). This code has been designated as a column 2 code when paired with 35475 (arterial angioplasty of the upper extremity). This means that the two can be used together, under specific conditions, but with a modifier attached to 35476. The code 35476 should be used **only once** in any case within the access, as defined for therapeutic procedures, and cannot be used with the code for angioplasty of the artery (35475) except in the instance in which a central vessel is treated in addition to the artery. If both an arterial and a venous angioplasty are performed within the access as defined, only the arterial procedure should be coded. This reflects the fact that 35476 is a column 2 code and 35475 is a column 1 code. These restrictions apply and are independent of the number of balloon inflations or number of balloon catheters or sizes required.

Venous stenosis may be focal or diffuse, involving a long segment or, in some instances, the entire vessel. In most cases, stenosis can be defined and diagnosed by a comparison with the adjacent normal vessel or graft. However, there are instances in which no adjacent normal vessel or graft is available for comparison. In these cases, stenosis should be diagnosed based upon a consideration of the patient's body habitus and the size of other vessels of a like-type/function within the circulation.

Although it may not be possible, without the use of special techniques not usually applied, to state an exact percentage, the degree of stenosis should always be documented (at least in relative terms) in the procedure report. A stenosis of 50% or greater as well as a clinical indication (poor flow, abnormal exam, prolonged bleeding, etc.) should be required prior to performing an angioplasty. The venous angioplasty code should be coupled with 75978, the code for radiological supervision and interpretation. The descriptor for this code is - transluminal balloon angioplasty, venous, radiological supervision and interpretation.

***Coding Tip:** Where the exact percentage of stenosis cannot be stated with certainty, a statement such as "greater than 50%" or "near complete obstruction" should be made to provide adequate documentation of a degree of stenosis to warrant the angioplasty procedure.*

Table 6 – Arterial Angioplasty Locations

Considered arterial angioplasty
 Arterial anastomosis
 Juxta-anastomotic artery
 Feeding artery at any point up through central veins
 Not considered arterial angioplasty (depending upon balloon location*)
 Juxta-anastomotic access (vein or graft)

*If it is necessary to cross the arterial anastomosis to treat the lesion, an arterial angioplasty code is warranted

1.1.4 Arterial angioplasty

The coding for arterial angioplasty in the upper and lower extremities is somewhat different.

1.1.4.1 Arterial Angioplasty in the Upper Extremity

When coding an arterial angioplasty in the upper extremity the location of the arterial lesion has an important implication as to how the code should be used with the venous angioplasty code 35476, if such a treatment is performed concurrently. Two situations exist in this regard – (1) arterial angioplasty within the access as defined and (2) an arterial angioplasty performed in the artery proximal to the dialysis access as defined for therapeutic procedures in a case in which a venous angioplasty also takes place.

The arterial anastomosis is defined as the surgically created junction of the access (graft/fistula) and the artery. This, along with the adjacent approximately 2 cm of feeding artery, is defined as the arterial portion of the access. Treatment of a lesion in this region should be coded as an arterial angioplasty. Sometimes, when treating a juxta-anastomotic lesion, it is difficult to define radiographically exactly where the anastomosis is located. The guiding principle is - when the balloon must be in the artery in order to perform the angioplasty, it should be coded as an arterial angioplasty. If this positioning is not necessary, then the juxta-anastomotic lesion should be coded as venous. Treatment of this site is typically performed utilizing retrograde cannulation of the arteriovenous access, but the principle also applies in situations where direct cannulation of the feeding artery is required.

Coding Tip: Documentation should include the radiographic involvement of the artery and/or balloon location along with comment that the stenosis involves the "arterial anastomosis and arterial inflow tract" or the lesion involves the "artery proximal to the access," stating the approximate distance (should be more than 2 cm) would also help the documentation.

Lesions within the arterial circulation that are more than approximately 2 cm from the arterial anastomosis are not considered to be part of the dialysis access. Stenotic lesions that are treated in this vessel are coded as an arterial angioplasty and each lesion that is treated is coded separately. This would be in addition to any codes that are assigned to lesions within the dialysis access and its complete venous drainage which is restricted as has been described above. If an arterial lesion is continuous with an anastomotic lesion, it should be considered as part of the anastomosis and covered by the same code used for that structure no matter how extensive it may be.

The code for an arterial angioplasty in the upper extremity is 35475. The descriptor for the angioplasty code is – transluminal balloon angioplasty, brachiocephalic trunk or branches, each vessel. This code has been designated as a column 1 code when paired with 35476 as when both types of lesions are present within the access and would be used alone since only a single code within the access is permitted. This code should be used for an arterial angioplasty performed anywhere within the entire arterial system of the upper extremity (Table 6) - the arterial anastomosis and the feeding arteries within the restrictions described above. The supervision and interpretation code 75962 would be paired with the first arterial angioplasty code used and any second usage should have a +75964 attached.

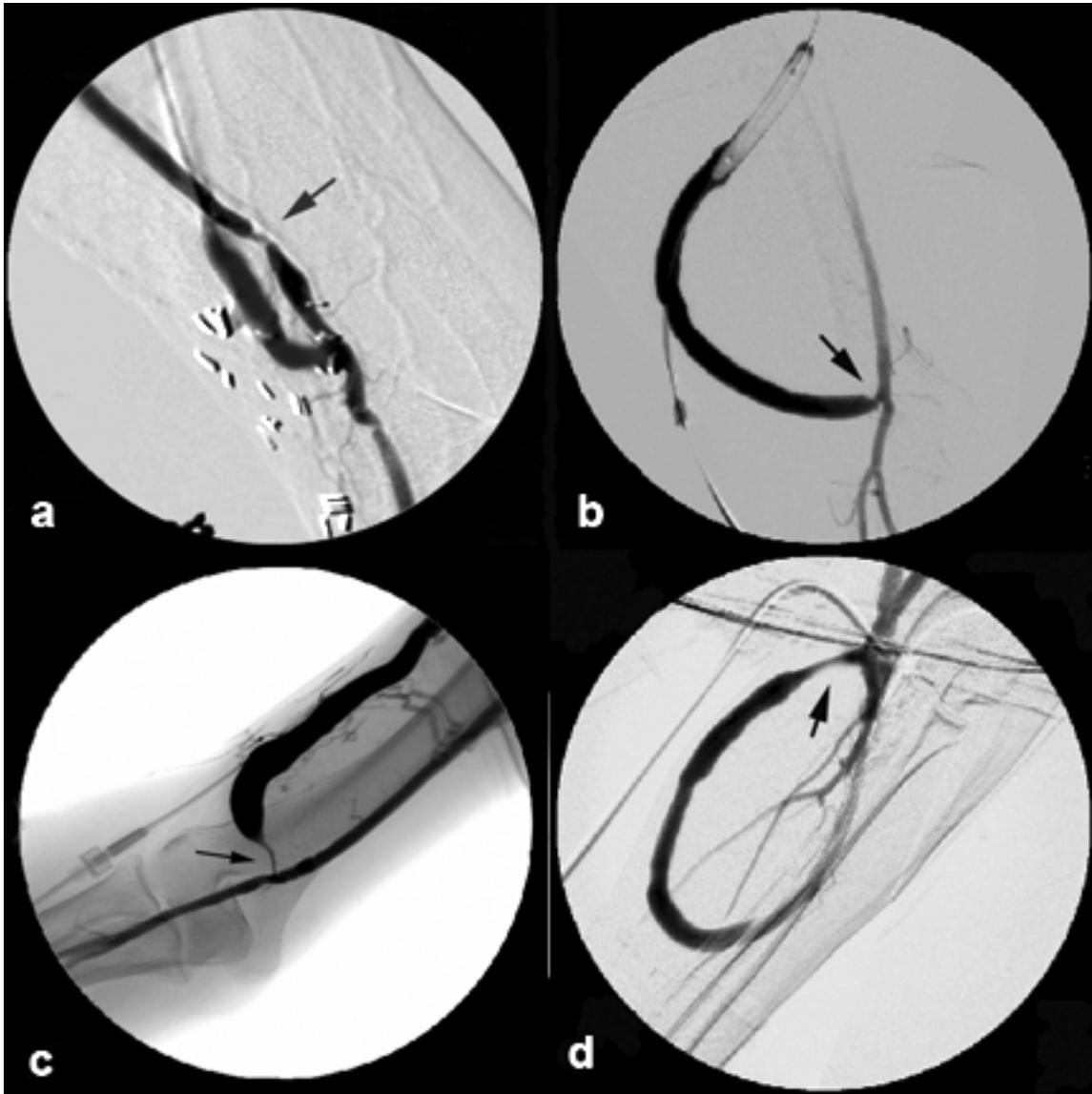


Figure 4 – a. Arterial lesion (arterial angioplasty), b. Anastomotic lesion (arterial angioplasty), c. Juxta-anastomotic and anastomotic lesions (arterial angioplasty), d. Juxta-anastomotic lesion (venous angioplasty).

1.1.4.2 Arterial Angioplasty in the Lower Extremity

Coding for a lesion at the arterial anastomosis is unique for the lower extremity. If the lesion is only at the arterial anastomosis, since this is the femoral artery (in most cases), the code 37224 should be used. The

descriptor for this code is - revascularization, endovascular, open or percutaneous, femoral/popliteal artery(s), unilateral; with transluminal angioplasty. This code is from the Lower Extremity Revascularization coding system. In this system the codes are all inclusive. Specifically, the basic cannulation is bundled with the basic procedure code. Therefore in this situation, the code 36147 should not be used (unless a second cannulation is performed). The code 75791 for the angiogram should be used alone. If it is necessary to do a second cannulation then this should be coded 36147 (since this would be the first cannulation requiring an independent code) with a -59 modifier to indicate that this is a separate procedure. When this second cannulation code is used, then 75791 would need to be dropped since it is bundled with 36147. If a third cannulation is required then the 36148 code would be warranted.

If both an angioplasty and a stent are placed, a single code would be used for both. This code would be 37226. Its descriptor is revascularization, endovascular, open or percutaneous, femoral/popliteal artery(s), unilateral; with transluminal stent placement(s), includes angioplasty within the same vessel, when performed. Supervision and interpretation codes should not be used with these codes.

Note: The Lower Extremity Revascularization coding system includes angioplasty, atherectomy and stent placement. These codes describe revascularization therapies (i.e., transluminal angioplasty, atherectomy, and stent placement) provided in three arterial vascular territories: (1) iliac, (2) femoral/popliteal, and (3) tibial/peroneal. Most of this system does not impact upon dialysis vascular access. However, these vessels are involved with an access located in the thigh. In particular, these cases may develop problems in the iliac and femoral/popliteal territories; it does affect the way these will need to be coded. The series of codes 37220 - +37235 are to be used to describe lower extremity endovascular revascularization services performed for occlusive disease for all vessels of the lower extremity including the arterial portion of the access (anastomosis). These lower extremity codes are built on progressive hierarchies with more intensive services (stenting, atherectomy) inclusive of lesser intensive services (angioplasty). In other words, all of the codes include angioplasty. The code inclusive of all of the services provided for that vessel should be reported (i.e., use the code inclusive of the most intensive services provided). For example if both an angioplasty and a stent placement is performed, then 37221 (stent plus angioplasty) would be reported and 37220 (angioplasty) would not be used.

Diagnostic angiography (arteriogram) is not bundled with the Lower Extremity revascularization codes and can be coded separately unless previously done for the interventional procedure in question.

1.1.4.2.1 – Arterial and venous combined

If both arterial and venous lesions are present within the access, the same rules as described for the upper extremity would hold. The only difference would be that in this instance the code 37224 would be used rather than 35475 for the arterial treatment.

1.1.4.2.2 – Proximal artery

If lesions are present within the arterial circulation that are more than approximately 2 cm from the arterial anastomosis are treated they are coded as 37220. The descriptor for this code is - revascularization, endovascular, open or percutaneous, iliac artery, unilateral, initial vessel; with transluminal angioplasty. There are three vessels included in this territory – common iliac, internal iliac and external iliac, Lesions in each of these vessels can be coded separately for a maximum of three. This would be in addition to any codes that are assigned to lesions within the dialysis access and its complete venous drainage as has been described. If an arterial lesion is continuous with an anastomotic lesion, it should be considered as part of the anastomosis and covered by the same code used for that structure no matter how extensive it may be. If both an angioplasty and a stent are placed, a single code would be used for both. This code would be 37221. Its descriptor is revascularization, endovascular, open or percutaneous, iliac artery, unilateral; with transluminal stent placement(s), includes angioplasty within the same vessel, when performed. If a second lesion is treated with angioplasty within a separate artery of this territory, the code

+37222 should be used in addition to 37220 or 37221. If a stent is placed within a second separate artery of this territory, the code +37223 should be used in addition to 37220 or 37221. Supervision and interpretation codes should not be used with any of these codes.

1.1.5 Multiple Venous Angioplasties

Before discussing the basic principles that govern the coding of multiple angioplasties, there are several principles that will need to be established.

1.1.5.1 Central veins versus peripheral veins (definitions)

The terms central and peripheral veins, although commonly used, are not clearly defined in standard anatomical reference sources. For our purposes, central veins will be defined as those **within the bony thorax** – subclavian, brachiocephalic and superior vena cava. In connection with the lower extremity, central veins will be defined as those **within the bony pelvis and abdomen** – external iliac, common iliac and inferior vena cava. All veins peripheral to these two central groups will be defined as peripheral veins.

1.1.5.2 Access definition

The vascular access or conduit should be considered to be a separate vessel by definition. As stated above, when coding a therapeutic procedure, the access, whether fistula (or vein used to creat a fistula) or graft, should be considered to be from the arterial anastomosis through to the beginning of the central veins, i.e., the subclavian. This should be thought of as a single conduit. The arterial anastomosis with the adjacent approximately 2 cm of artery is defined as the arterial portion of the access and the entire remainder of the access is defined as the venous portion for coding purposes. As stated above, **only one angioplasty may be coded within the access as defined**. This is independent of the number of stenosis present that were treated, the number of balloon inflations or number of balloon catheters or sizes required. If the arterial portion (anastomosis) is treated, the procedure should be coded as an arterial angioplasty 35475 in preference to the use of 35476. This coding pattern is independent of whether the procedure involves the upper or lower extremity.

1.1.5.3 Arterial circulation proximal to access

Lesions within the arterial circulation of the **upper extremity** that are more than approximately 2 cm from the anastomosis are not considered to be part of the dialysis access. Stenotic lesions that are treated in this vessel (the feeding artery and above) are coded as an arterial angioplasty. The code used is dependent upon whether the procedure involves the upper or lower extremity and the rules related to the arterial anastomosis do not apply (see 1.2 below).

1.1.5.4 Multiple angioplasties

Situations in which multiple angioplasties may be coded are very limited. Although multiple stenotic lesions may be present within the contiguous venous drainage of the access up to the beginning of the central veins (the definition of the venous portion of the access), their treatment only warrants a **single 35476 code**

The central veins (as defined for either the upper or lower extremity) are considered an additional, separate venous vessel segment for purposes of coding for venous angioplasty. If one or more central venous stenoses are treated, this is reported with a single venous angioplasty code (35476), regardless of the number of discrete lesions treated within this segment, and also independent of the number of balloon inflations or number of balloon catheters or sizes required. This can be coded in addition to either an arterial angioplasty (35475) or a venous angioplasty (35476) within the access as

defined. This would allow a potential of no more than two angioplasties within the access and its complete drainage. In the instance in which 35476 for a central lesion is used in conjunction with an angioplasty within the access (either venous or arterial) a -59 modifier should be attached to indicate that this is a separate distinct procedure.

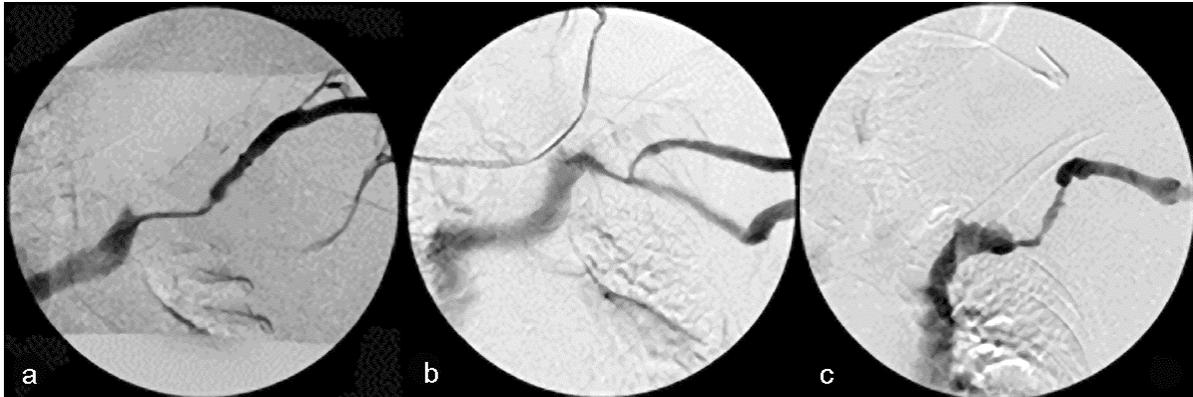


Figure 3 – Lesion extends from cephalic arch into subclavian vein. a - The lesion is primarily in the subclavian and should be classified as a subclavian lesion. b - The lesion is about equally distributed between the cephalic and subclavian; it should be classified as the higher order vessel – the subclavian. c - The lesion is primarily in the cephalic and should be classified as a cephalic lesion.

If a single lesion extends across two adjacent separate vessels, treatment warrants only a single angioplasty code. In instances in which the exact anatomical identity of the vessel is critical for coding purposes, e.g., is it central or peripheral (Figure 3), a lesion that bridges across two vessels should be defined by the vessel in which it lies predominantly. Two codes are warranted only in instances in which separate distinct lesions are present in separate vessels, provided that the two vessels qualify for separate coding based upon the access versus central veins rule as described.

1.1.5.5 Coding of multiple angioplasties

When multiple angioplasties have been performed there are certain rules that must be applied in coding:

- The arterial anastomosis should be considered part of the feeding artery and coded as an arterial angioplasty within the access using 35475 (upper extremity) or 37224 (lower extremity).
- All venous angioplasty procedures within the access vessel (as defined) should be coded using a single 35476 code.
- 35475 (or 37224) and 35476 cannot be used together for lesions within the access, since the arterial code is a column 1 code, it should be applied alone if both a venous and an arterial lesion (arterial anastomosis) are treated within the access vessel.
- All venous angioplasty procedures within the central veins should be coded using a single 35476.
- If a lesion within the access (arterial or venous) and a central lesion are both treated, then the code for the central lesion can be added as a second code with a -59 modifier.

- The supervision and interpretation code 75978 should be paired with each venous angioplasty code and the second usage should have a -59 modifier attached.
- The supervision and interpretation code 75962 should be paired with the first arterial angioplasty performed and +75964 should be paired to each additional arterial treatment performed in the **upper extremity**. Angioplasties of the proximal (feeding) artery within the **lower extremity** should not have a supervision and interpretation code attached (see paras 1.2.2 and 1.3.1 for more detail).

1.1.5.6 Multiple Angioplasties Not Warranted

There are definite instances when two codes should not be used.

- Performing multiple angioplasties from separate access sites does not warrant multiple codes.
- If there is **double drainage** and both have lesions that are treated, it should be coded as a single angioplasty
- If the case involves a **bidirectional fistula** and both limbs have lesions that are treated, it should be coded as a single angioplasty
- The use of **multiple balloon inflations** or **multiple balloon catheters** is not enough to warrant multiple angioplasty codes.

1.2 SECONDARY CODES

These codes may be used in an occasional case where the need is dictated.

1.2.1 Second Cannulation

If a procedure being performed in the **upper extremity** requires a second cannulation for the purpose of performing a therapeutic intervention, the code +36148 should be used. The descriptor for this code is - introduction of needle or catheter; arteriovenous shunt created for dialysis (graft/fistula) as an **additional access for therapeutic intervention**. An additional +36148 code would be warranted for each additional cannulation as long as they were medically indicated for therapeutic intervention, each additional usage would need a -59 modifier attached. The code +36148 is an add-on code and always requires the presence of the 36147 code. Therefore the first cannulation is always coded as 36147 regardless of its purpose. Both of these codes are restricted in their use to the dialysis access.

When using the **lower extremity revascularization codes**, 37220-37235, the basic cannulation is bundled as stated above. Therefore when only an arterial angioplasty is performed in the lower extremity, the code 36147 should not be used. The code 75791 for the angiogram should be used alone. If it is necessary to do a second cannulation then this should be coded 36147 with a -59 modifier to indicate that this is a separate procedure. When this second cannulation code is used, then 75791 would need to be dropped since it is bundled with 36147. It is only if a third cannulation is required that the 36148 code would be warranted.

Example 1 – A patient with a thigh graft is evaluated for poor flow. An angiogram shows only a stenotic lesion in the femoral artery proximal to the arterial anastomosis. This lesion was treated with angioplasty. The case should be coded as 37224, 75791.

Example 2 - A patient with a thigh graft is evaluated for poor flow. An angiogram shows a stenotic lesion in the femoral artery proximal to the arterial anastomosis and stenosis of the venous anastomosis. Both lesions were treated with angioplasty. This required that two cannulations of the access. The case should be coded as 35476/75978, 37224, 36147-59.

Coding Tip: Document the site of introduction and if more than one site is involved, clearly document each site. List the medical indication for each separate procedure.

1.2.2 Arteriogram

In most instances, the coding guidelines for an arteriogram in the upper and lower extremity are the same. An exception to this rule for the lower extremity is described below in para 1.2.2.1.

1.2.2.1 – Basic coding for arteriogram

The code for an arteriogram is 75710. The descriptor for this code is – angiogram, extremity, unilateral, radiological supervision and interpretation. There should also be a clear medical indication for the study. An examination of the artery adjacent to the arterial anastomosis is included in the 36147 code. This should be interpreted as being within approximately 2 cm of the anastomosis. Use of the 75710 code would be warranted only if you examined a larger segment of the artery. Examination of the entire artery is not required, however. The general rule should be – examine that portion of the artery that is necessary to make a diagnostic evaluation related to your medical indication.

It should be recognized that there are two basic indications for the performance of an arteriogram – evaluation of inflow in cases in which it is deemed to be inadequate for access function or where steal is suspected, and the evaluation of the distal arterial run-off in cases suspected of having an arterial embolus. Therefore, the extent of the arterial evaluation should be dictated by the medical indication for the performance of the study. If it is done to evaluate arterial flow, lesions within the vessel up to the aortic arch (upper) or the aorta (lower) could be at fault and should be evaluated to fulfil the requirements of this indication. If the indication is suspicion of an arterial embolus, then the vessel distal to the anastomosis should be examined to a level at least beyond the bifurcation of the brachial artery (upper) or origin of the anterior and posterior tibial arteries (lower) in order to meet the demands of this medical indication.

This arteriogram may be performed by selective catheterization of the artery or by occluding the access downstream and refluxing radiocontrast into the artery. The technique used to perform the arteriogram does not affect the use of the code. However, the extent of the segment of artery examined is important regardless of the technique used.

It should be remembered that if 75710 is applied in conjunction with a therapeutic RS&I code, it should have a -59 modifier attached (see comments on p. 6 - Diagnostic RS&I code used in association with a therapeutic RS&I code)

1.2.2.2 – Arteriogram performed with arterial angioplasty

Although performing an arterial angioplasty in a thigh access brings the Lower Extremity Revascularization codes into play, coding of the arteriogram is warranted since diagnostic angiography is not bundled with the basic code. The exception to this rule is when the intervention is based upon an angiogram that has been previously performed. In this case, any repeat study should not be coded. This prohibition also includes any follow-up angiograms performed after an interventional procedure (angioplasty, atherectomy, stent placement, thrombectomy) since this would be bundled with the basic procedure code.

Coding Tip: If an arteriogram code is used, the procedure note should clearly define the medical indication for the study. If a selective catheterization is coded, the medical indication for the catheterization should also be detailed. The number of times the non-selective cannulation code is used should be decreased by one if selective catheterization is performed. This should be accomplished using the principles described under Section 1.1.1.2 above.

1.2.3 Cannulation of Brachial or Radial Artery

Occasionally, it is necessary to cannulate either the brachial or the radial artery in order to accomplish the required task. The code for cannulation of the brachial artery is 36120. The descriptor for this code is - introduction of needle or intracatheter; retrograde brachial artery. The code for cannulation of the radial artery is 36140. The descriptor for this code is - introduction of needle or intracatheter; retrograde extremity artery.

When the artery is cannulated directly and then an angiogram of the access is performed, the angiogram should be coded with 75791. This is the code for an angiogram of the access without access cannulation (see section 1.1.2.2 above).

1.2.4 EKG Monitoring

Although there is a code for EKG interpretation, 93040, that could be used for the monitoring performed during an interventional procedure. EKG interpretation is bundled with the basic procedure for which monitoring is being performed.

1.3 COMPLICATION MANAGEMENT CODES

If a complication of the angioplasty treatment occurs, its management may also generate additional codes. The major complication of an angioplasty is vein rupture. In some instances this needs to be stented.

1.3.1 Stent Placement

The codes for stents placed in association with a dialysis access are generic for intravascular work and not specific for arterial or venous anatomy except in the lower extremity as discussed above under arterial angioplasty of the lower extremity (para 1.2.2). The basic angioplasty coding principles relating to the coding of different vessels that make up the dialysis access circuit also apply for the placement of stents. The code for stent placement is 37205. The descriptor for this code is – transcatheter placement of an intravascular stent(s), (non-coronary vessel), percutaneous; initial vessel. If multiple stents are placed (there are coding restrictions), this code is for the first stent. The code 75960 is used to report the radiological supervision and interpretation for this procedure. The descriptor for this code is - transcatheter placement of an intravascular stent, (non-coronary vessel), percutaneous and/or open, radiological supervision and interpretation, each vessel.

If a second stent is placed, its code is + 37206. This same code is used for all subsequent stent placements performed during that session. This is an add-on code and therefore cannot be used without the use of 37205 preceding it. As is the case with angioplasty, only a single stent code can be used for stent placement within the dialysis access as has been defined (para 1.1.4.2) irregardless of the number of lesions so treated. The same is true for stent placement within the central veins.

If a stent is placed both within the access and within a central vessel, the first would receive the 37205 code and a separate code, +37206, would be required for the second. The descriptor for this code is - transcatheter placement of an intravascular stent(s), each additional vessel. The code +37206 is an add-on code and therefore can only be used if the use of the code 37205 has preceded it. The radiological

supervision and interpretation code 75960 should be used twice, once with each placement code. The second usage should be accompanied by the -59 modifier to indicate that it was a separate procedure. A maximum of two stents can be coded in association with the dialysis vascular access as defined and its complete venous drainage up through the superior vena cava.

1.3.1.1 Differences in stenting in upper and lower extremity

The code for stenting in the upper extremity, venous or arterial, does not bundle any associated angioplasty procedures. These procedures would be coded separately and independently from the stenting procedure(s). The same holds true for venous stenting in the lower extremity. However, this is not the case for arterial stenting. This is done according to the hierarchical coding system described under paragraphs 1.2.2, 1.2.2.1, 1.2.2.2 above. Diagnostic angiography is not bundled with these codes, however.

Coding Tip: The medical indication for the stenting should be clearly documented in the record. The rules for determining separate vessels for stenting are the same as for venous angioplasty discussed above.

2. THROMBECTOMY

2.1 PRIMARY CODES

In the upper extremity, all of the codes used in reporting an angioplasty would be appropriate for use in a thrombectomy because of the commonality of the procedures (Table 7). There is actually only one unique code that would need to be added to the primary list. This is also true for the lower extremity as long as no arterial angioplasty is performed. However, if an arterial angioplasty is performed, then the coding is affected by the Lower Extremity Revascularization coding schema.

2.1.1 Basic Thrombectomy

The code for thrombectomy is 36870. The descriptor for this code is – thrombectomy, percutaneous, fistula, autogenous or non-autogenous graft (includes mechanical thrombus extraction and intra-graft thrombolysis). There are many ways to percutaneously remove a thrombus from a dialysis access, and new variations on the existing methods continue to evolve. The 36870 code is designed to cover any of these methods or combinations of these methods. This code includes all the work required to remove the thrombus from the access, declot the graft and restore flow to the regardless of the method used. It includes both mechanical and pharmacological techniques and any pharmacological agents that might be used. It does not include the other codes that are grouped under the overall combined procedure that is performed to declot a dialysis access, these should be reported separately. It is important to note that treatment of occlusion without demonstrated thrombus is not considered to be a thrombectomy and should not be coded as such.

It should be emphasized that it is never appropriate to code removal of the arterial plug during a thrombectomy procedure as an arterial or venous angioplasty. Removal of the arterial plug is included in the work of 36870, even if a balloon catheter is used to mechanically dislodge the resistant thrombus.

2.1.1.1 Thrombus removal from access that is not thrombosed

In an occasional case, the angiographic evaluation of an access that is not thrombosed reveals the presence of significant thrombus. If removal of this thrombus is deemed to be medically indicated, it should not be coded as a thrombectomy since the access was not thrombosed. The code 37187 should be used instead. The descriptor for this code is percutaneous transluminal mechanical thrombectomy, vein(s),

including intra-procedural pharmacological thrombolytic injections and fluoroscopic guidance. This is the code for an *in situ* venous thrombectomy (see para 2.2.2 for more detail)

2.1.2 Arteriogram

The code for arteriogram is 75710. This code has already been described above in association with angioplasty codes. However, it may be more commonly indicated in connection with a thrombectomy. The fact that the graft is clotted may be considered as a reasonable indication for study of the artery based upon the concern over access inflow or, in appropriate cases, concern for arterial emboli (see para 1.2.2 above). Since residual thrombi may be present even after the access has been opened and flow has been restored, selective catheterization (requires guidewire manipulation with a vascular catheter) of the artery to accomplish the arteriogram may be necessary. This would warrant the use of the code 36215 (for a first order branch) or 36216 (for a second order branch). If one of these codes is used, then one non-selective cannulation code should be dropped using the principles described above under Section 1.1.1.2.

Table 7 - Codes Used for Thrombectomy

Primary -

- 36147 – Cannulation and access angiogram
- +36148 – Second cannulation
- 75710-59 - Arteriogram
- 36870 - Thrombectomy
- 35476 – Venous angioplasty of the access
- 75978 – Supervision and interpretation of 35476
- 35475 - Angioplasty of artery (upper)
- 75962 – Supervision and interpretation of 35475
- +75964 – Supervision and interpretation of each addition 35475
- 37224 – Angioplasty of artery (lower)

Secondary (occasional) -

- 75791 – Angiogram of access without cannulation
- 36215 - Selective catheterization 1st order branch (arterial - upper extremity)
- 36216 - Selective catheterization 2nd order branch (arterial - upper extremity)
- 36245 – Selective catheterization of 1st order branch (arterial - lower extremity)
- 36120 - Cannulation of brachial artery

It should be remembered that if 75710 is applied in conjunction with a therapeutic RS&I code, it should have a -59 modifier attached (see comments on p. 6 - Diagnostic RS&I code used in association with a therapeutic RS&I code).

Coding Tip: If this procedure is coded, the procedure note should document the fact and report the findings individually .In addition, the medical indication for selective catheterization of the artery should be clearly stated.

2.1.3. Thrombectomy in lower extremity combined with arterial angioplasty

If an arterial angioplasty is part of the overall thrombectomy procedure, the coding is affected by the Lower Extremity Revascularization coding schema. In this instance 37224 would be used for the arterial anastomosis (other codes would be used for the proximal artery). These codes are all inclusive (on the

arterial side), they would bundle the cannulation and any selective catheterization. Diagnostic imaging is not bundled, neither the imaging of the artery nor of the access. Coding of 37224 would not affect the usage of 36870.

It is easier to understand the coding progression if one takes it step-wise. In this situation, the first code 36147 would not be used because it is bundled with 37224. The code 75791 for the angiogram would be retained (for now). Since, in most instances two cannulations are used for a thrombectomy, the second cannulation should be coded 36147 (since this would be the first cannulation allowing an independent code) with a -59 modifier to indicate that this is a separate procedure. When this second cannulation code is used, then 75791 would need to be dropped since it is bundled with 36147. (See para 1.1.4.2)

2.2 *IN SITU* THROMBOSIS OUTSIDE OF ACCESS

Although not a common occurrence, there are instances in which *in situ* thrombosis of the artery feeding an access or a vein in the drainage of the access is encountered. Thrombectomy of these structures that lie outside of the defined dialysis vascular access is necessary and warrants a separate code.

2.2.1 *In situ* arterial thrombectomy

The appropriate code for a thrombectomy of an *in situ* thrombosis of the feeding artery is 37184. The descriptor for this code is - primary percutaneous transluminal mechanical thrombectomy, noncoronary, arterial or arterial bypass graft including fluoroscopic guidance and intraprocedural pharmacological thrombolytic injection(s); initial vessel. This code should not be used for the treatment of an embolectomy done following a thrombectomy. However, if an embolus is delayed, for example is detected the day following a thrombectomy, this code would be appropriate to use. This difference is due to the fact that in this case the clot removal is not associated (in the same setting) with the thrombectomy. It should be noted that the embolectomy code +37186 (discussed below) is an add-on code and cannot be used without the thrombectomy code 36870. In this instance since the thrombectomy was done on a previous day, the add-on code could not be used.

The code 37184 is a column 1 code to 36870 and although mutually exclusive, it does allow use with a modifier. This modifier should be attached to the 36870 code. The use of a -59 would indicate that this is a separate procedure. This would permit their use together on the same case. The fact that the arterial thrombus being treated is separate from and unrelated to the dialysis access thrombus should be clearly documented in the patient record and in the recorded images.

2.2.2 *In situ* venous thrombectomy

The appropriate code to use for thrombectomy of an *in situ* thrombosis of a vein draining the dialysis vascular access is 37187. The descriptor for this code is percutaneous transluminal mechanical thrombectomy, vein(s), including intraprocedural pharmacological thrombolytic injections and fluoroscopic guidance. If the thrombus that is the vein is merely an extension of the access thrombosis, this code should not be used. Likewise, if the condition being treated is actually an embolus or thrombus from the access, this code should not be used.

As is the case for arterial thrombectomy (37184), the code 37187 is a column 1 code to 36870 and although mutually exclusive, it does allow use with a modifier. This modifier should be attached to the 36870 code. The use of a -59 would indicate that this is a separate procedure. This would permit their use together on the same case. The fact that the venous thrombus being treated is separate from and unrelated

to the dialysis access thrombus should be clearly documented in the patient record and in the recorded images.

As stated above (para 2.1.1.1) if a thrombus is removed from an access that is not thrombosed, this *in situ* code would be appropriate to use for the procedure.

Coding Tip: If either of the *in situ* thrombectomy codes is used, one should be sure that the thrombus that is evident is not just a short segment of clot or embolus that is being encountered in association with a thrombosed access. The thrombus in question must be clearly *in situ*.

2.3 COMPLICATION MANAGEMENT- PERIPHERAL ARTERIAL EMBOLLECTOMY

If a complication of the thrombectomy treatment occurs, its management may also generate additional codes. In addition to the complications associated with angioplasty, the major complication of thrombectomy is peripheral arterial embolization. This may require an embolectomy. The situation as it relates to the upper and lower extremities is slightly different.

2.3.1 Peripheral arterial embolectomy – upper extremity

In most instances, the upper extremity will be involved since most dialysis accesses are located here. Embolization symptoms are generally immediate. Treatment of this complication is necessary; this generally generates a series of codes (Table 8).

The procedure will necessarily require an arteriogram (75710) to confirm that an embolus to the artery has occurred and to define its exact location. Since this code is a diagnostic RS&I code which, in this instance will be used in association with a therapeutic RS&I code, it should have a -59 modifier attached.

The first step in the procedure for embolus removal generally involves selective catheterization of the artery. If this is a first order branch, the code for this in the upper extremity is 36215. The descriptor for this code is – selective catheter placement, arterial system; each first order thoracic or brachiocephalic branch, within a vascular family. The brachial artery would be classified as a first order branch if that is the first artery entered. In the case of an access fed directly from the radial artery, then this vessel would be the first order branch. (See detailed discussion of 1st and 2nd order vessels earlier in this document - paragraph 1.1.1.2).

Table 8 - Codes for Embolectomy

+37186-59 - Embolectomy during declotting procedure (regardless of treatment modality)
75710-59 – Arteriogram (upper or lower extremity)
36215 - Selective catheterization first order branch (arterial - upper extremity)
36216 - Selective catheterization second order branch (arterial - upper extremity)
36245 – Selective catheterization of first order branch (arterial - lower extremity)
36246 - Selective catheterization of second order branch (arterial - lower extremity)

If the procedure requires passing a catheter more distally into the arterial tree, then this might necessitate a different code. The code for a second order artery in the upper extremity is 36216. The descriptor for this code is - selective catheter placement, arterial system; initial second order thoracic or brachiocephalic

branch, within a vascular family. Both the radial and ulnar arteries would be considered second order branches if one is dealing with a brachial artery based access.

The code most appropriate for use for embolectomy of an artery associated with the thrombectomy of a dialysis access is + 37186. The descriptor for this code is - secondary percutaneous transluminal thrombectomy, arterial or arterial bypass graft, including fluoroscopic guidance and intraprocedural pharmacological thrombolytic injections, provided in conjunction with a percutaneous intervention other than primary mechanical thrombectomy. The +37186 code is designed to cover any method or combination of methods. This code includes all the work required to remove the embolus regardless of the method used. It includes both mechanical and pharmacological techniques and any pharmacological agents that might be used.

The code + 37186 is an add-on code and therefore cannot stand alone. It must be used in conjunction with another basic code, in this case the code for thrombectomy 36870. Additionally, it is a column 2 code to 36870 and is mutually exclusive; however, it does allow for the use of a modifier to justify its use. In this instance the modifier -59 is the one most appropriate for use. Therefore, when used in the context in which we are applying it, the code would be represented as + 37186-59. The fact that the embolus being treated is not merely an extension of the dialysis access thrombus and is a separate procedure distinct from the thrombectomy should be clearly documented in the patient record and in the recorded images.

When an embolus occurs as a complication of a mechanical thrombectomy in the upper extremity, it generally lodges in the brachial artery, just above the bifurcation. However, at times, it may pass into the radial or ulnar arteries. For the purpose of coding, the exact location of the embolus is not important. The + 37186-59 should be used regardless of the site of the embolus.

2.3.2 Peripheral artery embolectomy – lower extremity

As stated above treatment of a peripheral artery embolus following a thrombectomy as it relates to the upper and lower extremities is slightly different, but only slightly. The arteriogram code 75710, and the embolectomy code + 37186 that should be used are the same regardless of whether the procedure involves the upper or lower extremity. However, codes that should be used for selective catheterizations, if these are required are different.

Selective catheterization of a first order artery in the lower extremity is 36245. The descriptor for this code is - selective catheter placement, arterial system; each first order abdominal, pelvic, or lower extremity artery branch, within a vascular family. If it becomes necessary to selectively catheterize a second order artery, the appropriate code would be 36246. The descriptor for this code is - selective catheter placement, arterial system; initial second order abdominal, pelvic, or lower extremity artery branch, within a vascular family.

2.3.2.1 – Embolectomy in lower extremity combined with arterial angioplasty

It should be noted that if an arterial angioplasty has been performed, the Lower Extremity Revascularization coding schema comes into play. In this instance, any selective catheterization that is performed would be bundled with the basic procedure code. However, the diagnostic angiogram would not be bundled and could be coded separately.

2.3.3 Special situations relating to embolectomy

In most cases when a thrombectomy procedure is complicated by the occurrence of an embolus, there is a single embolus. However, in some cases multiple emboli may be present or the attempts at removal of the initial embolus results in a fragment breaking off and moving further down the artery to represent a second embolus. The procedure to remove these clots should be coded as a single embolectomy procedure using a single +37186.

The embolectomy code + 37186 is an add-on code and therefore cannot stand alone. It must be used in conjunction with another basic code, in this case the code for thrombectomy 36870. There are instances in which an embolus becomes evident at a time removed from the basic thrombectomy procedure, the next day for example. In this instance, the embolectomy code cannot be used due to the requirements of an add-on code. The appropriate code to use would be the code for in situ thrombectomy, 37184 (see para 2.2.1 for more details).

3. ULTRASOUND OF ACCESS

3.1 – ULTRASOUND EVALUATION OF THE ACCESS

There are instances in which the evaluation of the vascular access using duplex ultrasound is medically indicated. The code for this study is 93990. The descriptor for this code is – duplex scan of hemodialysis access (including arterial inflow, body of access and venous outflow). It is important to note that this must include all components necessary to do a complete evaluation of the access. This should include B-mode, spectral Doppler and color Doppler as appropriate to produce a complete exam for the individual access studied. When appropriate this should include evaluation of the artery, arterial inflow and venous outflow. All diagnostic ultrasound examinations require permanently recorded images with measurements, when such measurements are clinically indicated.

Coding note: In doing an ultrasound evaluation of a dialysis vascular access and applying the code 93990, be aware of ultrasound definitions.

***Duplex Doppler ultrasound** - A form of image display in which both spectral and color flow images are seen simultaneously. This facilitates accurate anatomical location of the blood flow under investigation.*

***Spectral Doppler ultrasound** - A form of ultrasound image display in which the spectrum of flow velocities is represented graphically on the Y-axis and time on the X-axis; both pulse wave and continuous wave Doppler are displayed in this way.*

***Color flow Doppler ultrasound** - A form of pulse wave Doppler in which the energy of the returning echoes is displayed as an assigned color; by convention echoes representing flow towards the transducer are seen as shades of red, and those representing flow away from the transducer are seen as shades of blue. The color display is usually superimposed on the B-mode image, thus allowing simultaneous visualization of anatomy and flow dynamics.*

3.1.1 Imaging by more than one modality

Imaging of the same vascular structure by more than one modality on the same day should not be coded under ordinary circumstances. However, if a Doppler flow study demonstrates reduced flow (blood flow rate less than 800cc/min or a decreased flow of 25% or greater from previous study) and the physician requires an arteriogram to further define the nature and extent of the problem, coding for both is warranted. It is very important in this situation that the patient's medical record provide adequate documentation supporting the need for more than one imaging study. (See paragraph 4.2.1.1 below)

3.2 Use of ultrasound to assist dialysis access cannulation

In some instances the cannulation of the dialysis access is very difficult to accomplish. This is particularly true in the case of new or failing AVF. Ultrasound guidance for the cannulation procedure may be required.

This is not included in 36147. The appropriate code for this ultrasound guided access cannulation procedure is +76937. The descriptor for this code is – ultrasound guidance for vascular access requiring ultrasound evaluation of potential access sites, documentation of selected vessel patency, concurrent realtime ultrasound visualization of vascular needle entry, with permanent recording and reporting (List separately in addition to code for primary procedure). This should be listed in addition to the cannulation code 36147 (or +36148). As the descriptor indicates this requires image documentation for the medical record.

The code +76937 is an add-on code and must be used in conjunction with another basic code, in this case 36147. When the two codes are both used, 36147 is a column 1 code and +76937 is a column 2 code. The two can be used together but require a modifier. In the instances being discussed here the use of a -59 modifier would be appropriate. It is important that the requirement for ultrasound guidance be clearly documented in the patient record and in the recorded images. Ultrasound guidance procedures require permanently recorded images of the site to be localized, as well as a documented description of the localization process within the report of the procedure for which the guidance is utilized.

4. VASCULAR MAPPING

4.1 VASCULAR MAPPING

Vascular mapping should be considered in the evaluation of a patient for the placement of a dialysis vascular access. The goal here is to identify vascular anatomy that would be conducive to the creation of the best possible access for that patient; generally this means an arteriovenous fistula. How this procedure is coded depends upon the patient’s situation related to previous access placement (Table 9).

Table 9 - Vascular Mapping	
No prior arteriovenous access	
	G0365 – includes all studies by any modality
	36005 - Cannulation of vein and injection of contrast
Prior arteriovenous access	
Ultrasound codes	
	93930 – Ultrasound of artery, bilateral
	93931 – Ultrasound of artery, unilateral
	93970 – Ultrasound of vein, bilateral
	93971 – Ultrasound of vein, unilateral
Angiographic codes	
	36005 - Cannulation of vein and injection of contrast
	36005-59- Cannulation/injection of second arm
	75820 - Venogram of single arm
	75822 - Venogram of both arms
	75827 - Venogram of SVC

If the patient has not had a previous fistula or graft, the temporary code G0365 should be used. The descriptor for this code is - mapping of vessel for hemodialysis access (services for preoperative vessel mapping prior to creation of hemodialysis access using an autogenous hemodialysis conduit, including

arterial inflow and venous outflow). In order to qualify for this code, imaging can be done using any technique or combination of techniques. It should be noted that the descriptor for this code specifies that both the venous and arterial anatomy must be evaluated. If only the veins are imaged, a - 52 modifier should be attached to the code to indicate a reduced level of service. The G0365 code is for one extremity only, if both upper extremities are examined the code should be listed a second time with a - 59 modifier to indicate a separate distinct service. It is important to note that the use of this code is restricted to a patient that has not had a prior dialysis access graft or fistula. Additionally, it can only be used two times a year.

Vascular mapping may be done using ultrasound, angiography or a combination of both. The code G0365 covers all of these techniques. However, this is a radiological code; it does not preclude the use of surgical codes that might be warranted based upon the type of procedure performed. If, for example, the vein mapping portion of the study was performed by angiography, the code 36005 (cannulation of vein and injection of contrast) may be applied.

In the case of a patient who has had a prior arteriovenous dialysis access (graft or fistula), coding for vascular mapping involves the use of a group of codes. If done radiographically, this procedure would involve the use of codes for cannulation of a vein, the injection of contrast and the performance of a venogram. If done by ultrasound, the codes would be those for ultrasound of the artery and vein of the extremity. If a combination of both is utilized for the evaluation then an appropriate combination of codes would be warranted. The codes that should be used are as follows:

4.2 ANGIOGRAPHIC STUDY

4.2.1 Cannulation and Injection of Contrast

The code for this procedure is 36005. The descriptor for this code is - injection procedure for contrast venography (including introduction of needle or intracatheter). If the study is bilateral, then the code would be used a second time with the -59 modifier. This code should not be used at any time when a fistula or graft is cannulated. Its use is restricted only to non-access vein cannulation as with the performance of a venogram.

Coding Tip: Document the fact that more than one site is involved, clearly document each site. Modifier 59 will need to be attached to indicate that this is a separate site.

4.2.2 Venogram

There are two possible codes that could be used. The choice depends upon whether the venous mapping involves only one or both arms. The code for a single arm is 75820. The descriptor for this is – venography, extremity, unilateral, radiological supervision and interpretation. This code includes all of the veins up to but not including the superior vena cava. If the study is bilateral then the code 75822 should be used. The descriptor for this code is - venography, extremity, bilateral, radiological supervision and interpretation

4.2.3 Superior Vena Cava Angiogram

The code for study of the superior vena cava is 75827. The descriptor for this is - venography caval, superior, with serialography, radiological supervision and interpretation. It should be noted that according to the descriptor, the 75827 code is for the superior vena cava and not for central veins in general. If the 75827 code is used, the medical indication for the procedure should be clearly stated.

Coding Tip: If a superior vena cava angiogram is coded, one should be sure that that vascular structure was clearly demonstrated in detail. It should be a complete study. Additionally, the medical indication for a complete study should be clearly documented.

4.3 ULTRASOUND STUDY

4.3.1 Ultrasound Study of Artery

The codes for performing ultrasound studies on the artery are 93930 and 93931. The choice of appropriate code depends on whether it is a unilateral or bilateral study. The code 93930 is for the bilateral study. Its descriptor states – duplex scan of the upper extremity arteries or arterial bypass grafts; complete bilateral study. The code for a unilateral study is – 93931. The descriptor for this code is – duplex scan of the upper extremity arteries or arterial bypass grafts; unilateral or limited study. These codes would include all ultrasound evaluation performed on the artery or arteries during the course of the study.

4.3.1.1 Multiple imaging modalities on the same day

Unless documentation is provided supporting the necessity of more than one study, one may only code either a Doppler flow study or an arteriogram, but not both. An example of when both studies may be clinically necessary is when a Doppler flow study is performed and demonstrates reduced flow (blood flow rate less than 800cc/min or a decreased flow of 25% or greater from previous study) and the physician requires an arteriogram to further define the extent of the problem. In this instance it is very important that the patient's medical record provide documentation supporting the need for more than one imaging study. (See paragraph 3.1 above).

4.3.2 Ultrasound Study of Vein

The codes for performing ultrasound studies on the vein are 93970 and 93971. The choice of appropriate code depends on whether it is a unilateral or bilateral study. The code 93970 is for the bilateral study. Its descriptor states – duplex scan of the upper extremity veins including compression and other maneuvers; complete bilateral study. The code for a unilateral study is 93971. The descriptor for this code is – duplex scan of the upper extremity veins including compression and other maneuvers; unilateral or limited study. These codes would include all ultrasound evaluation performed on the veins during the course of the study.

It is important to note that imaging of a vessel by only one modality can be coded at a single session. If both an ultrasound study and an angiogram are performed, only one can be coded. Since the angiographic study is the higher order study of the two, it should be the one generally chosen for assigning a code.

5. ARTERIOVENOUS FISTULA - TREATMENT OF ACCESSORY VEIN

5.1 PRIMARY CODES

A number of the basic codes already discussed would be used here (Table 10). These include - bundled cannulation and angiogram, 36147. The actual technique used to obliterate the vein would be unique to the procedure used to treat the accessory vein.

5.1.1 Cannulation

Treatment of an accessory vein generally involves the selective catheterization of the target side branch. For coding of this procedure see Section 1.1.2.1 above. Basically, one would use either a 36011 or 36012 code depending upon whether the final catheterized involved a first or second order vein. This would

supersede the nonselective cannulation part of the bundled code 36147 (cannulation and access angiogram). The angiogram should then be coded with a 75791 (code for angiogram alone without cannulation). If a second cannulation (+36148 – cannulation for therapeutic purposes) was performed during the procedure, one should simply drop this code in favor of the selective code. Remember that +36148 can never be used alone since it is an add-on code.

5.1.2 Vein Ligation

The code used for this procedure is 37607. The descriptor for this code is – ligation or banding of angioaccess arteriovenous fistula. This code should only be used once, regardless of the number of vessels ligated or the method of ligation.

5.1.3 Insertion of embolization coil

Several codes are generated by this procedure. Firstly, the accessory vein must be selectively catheterized. The code for selective catheterization of a 1st order venous branch is 36011. The descriptor for this code is – introduction of needle or intracatheter, vein; first order branch. The code for catheterization of a 2nd order venous branch is 36012. The descriptor for this code is – introduction of needle or intracatheter, vein; second order, or more selective, branch. The non-selective cannulation code should be dropped each time a selective code is applied (See Section 1.1.2 above).

Table 10 - Accessory Vein Obliteration

Common codes –
36147 – Cannulation and angiogram of access (bundled)
75791 – Angiogram only
+36148 – Second cannulation for therapeutic purposes
Ligation technique –
37607 –Ligation
Coil insertion –
36011 – Selective cannulation of 1 st order vein
36012 - Selective cannulation of 2 nd order vein
37204 – Placement of embolization coil
75894 – Supervision and interpretation of 37204
75898-59 – Post coil angiogram via catheter

Secondly, the code for the insertion of an embolization coil is 37204. The descriptor for this code is - transcatheter occlusion or embolization, percutaneous, any method, non-central nervous system, non-head or neck. The supervision and interpretation code that goes with this code is 75894. The descriptor for this code is - transcatheter therapy, embolization, any method, radiological supervision and interpretation.

There are instances in which, for one reason or another, branches of a vessel that comes off of the fistula are coiled to accomplish the desired goal. This should be viewed as a field of veins attached to a single trunk vessel (Figure 5) that comes off of the fistula. Only one code should be used for each field of

veins. In other words, regardless of the number of branches coiled, the determining factor is the number of single vessel trunks attached to the fistula. Coiling branches may, however, result in the need to selectively catheterize 2nd order branches.

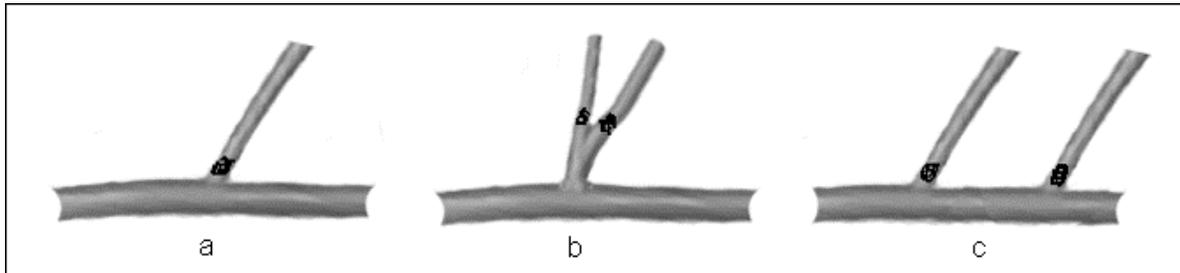


Figure 5 – Placement of coils. a – Single vein – one code, b – Single field – one code, c – Two veins – two codes.

Lastly, it is possible to code for a follow-up angiogram following the placement of an embolization coil. The code for this is 75898. The descriptor for this code is angiography through existing catheter for follow-up study for transcatheter therapy, embolization or infusion. As the descriptor indicates this angiogram is one where doing it through the catheter that is in place (for insertion of the coil) is required. It should be remembered that if 75898 is applied in conjunction with a therapeutic RS&I code (see comments on p. 6), it should have a -59 modifier attached.

Coding tip - Clearly document the fact that a vein was selectively catheterized to justify the use of the selective catheterization code for this procedure. Also If you use the post coil angiogram code, document clearly that it was performed through the catheter that was in place.

5.1.4 Management of complications – use of snare

Working with embolization coils, there are times when the placement is not as planned and the coil needs to be removed. In order to accomplish this, a snare may be used. The code for this procedure is 37203. The descriptor for this code is - transcatheter retrieval, percutaneous, of intravascular foreign body. The radiological supervision and interpretation code for this procedure is 75961. The descriptor for this code is - transcatheter retrieval, percutaneous, of intravascular foreign body, radiological supervision and interpretation.

6. TREATMENT OF HAND ISCHEMIA

6.1 HAND ISCHEMIA

Hand ischemia related to dialysis associated steal syndrome (DASS) is a particularly serious problem associated with dialysis vascular access. This complication can occur with either a graft or an AVF; however, it is more commonly seen with the latter. Some of these cases are amendable to treatment by interventional means. Much of the coding of the case uses codes that have already been discussed (Table 11). There are two types DASS that may be treated, that associated with a high flow brachial artery based access and that associated with a radial artery based access. In the former, balloon assisted banding (MILLER procedure) of the access has been used (Figure 6), in the latter distal radial artery embolization (a variant of DRAL or distal radial artery ligation) has been advocated (Figure 6).

6.1.2 Balloon assisted banding

Ultrasound of the access may be medically indicated to assist in making the diagnosis. Additionally, the procedure requires an evaluation of access flow to determine if this procedure is appropriate for the case.

The code for this study is 93990. The descriptor for this code is – duplex scan of hemodialysis access (including arterial inflow, body of access and venous outflow). However, in most cases, the code would not be used because the overall procedure would also require imaging of the access by angiography and one cannot code for both modalities.

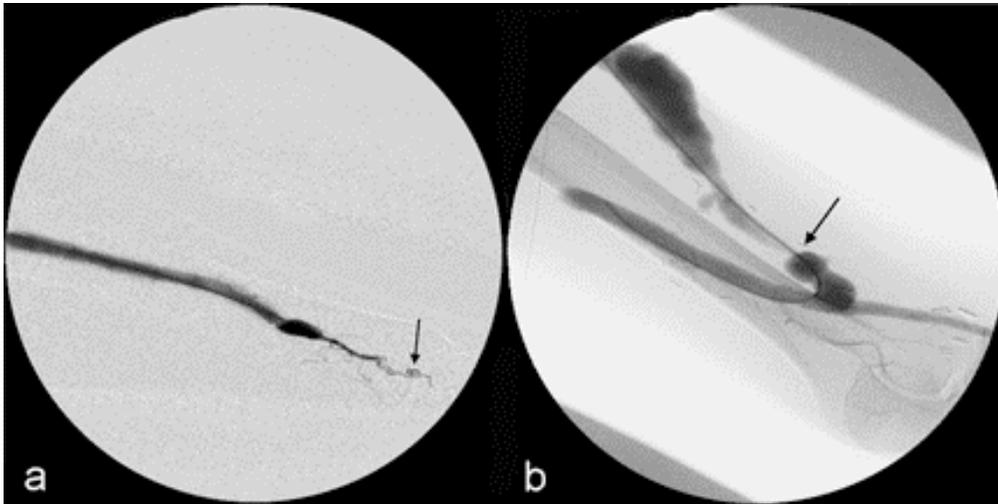


Figure 6 – Treatment of DASS – a. distal radial artery embolization (arrow – coil), b. balloon assisted banding (arrow – point of banding)

In addition to the basic cannulation and angiogram code, 36147, an arteriogram will generally be required, this will entail the 75710 code to confirm that stenosis of the proximal artery is not present and to evaluate the distal flow before and after the banding. The banding procedure itself should be coded with the code 37607. The descriptor for this code is – ligation or banding of angioaccess arteriovenous fistula.

Table 11 – Treatment of Hand Ischemia

Balloon assisted banding	
93990	– duplex scan of access (dropped)
36147	– cannulation and angiogram of access
75710	– arteriogram of extremity
37607	– banding of access
Distal radial artery embolization	
93990	– duplex scan of access (dropped)
75791	– angiogram of access
75710-59	- arteriogram of extremity
36215	– selective catheterization of 1 st order artery
37204	– embolization of vessel
75894	– RS&I for 37204

6.1.3 Distal radial artery embolization

As with balloon assisted banding, ultrasound of the access may be used to assist with the diagnosis. Although this raises the possibility of using the 93990 code for duplex scan of the access, its use would be obviated by the fact that an angiogram of the access would also be required during the procedure.

The basic cannulation and angiogram of the access code 36147 would be applied. An arteriogram performed to rule out stenosis of the proximal artery and to assure that the palmar arch is intact would create the need for the 75710 arteriogram of the extremity code. However, in this instance it should have a -59 modifier attached because this code is a diagnostic RS&I code which, in this instance will be used in association with a therapeutic RS&I code for coil placement.

Although not a certainty in all cases, selective cannulation of a first order artery (the radial artery) may be required. In this instance the code 36215 would be warranted. The descriptor for 36215 is – selective catheter placement, arterial system, each first order thoracic or brachiocephalic branch, within a vascular family. The use of this code would require dropping the cannulation portion of 36147 while retaining the angiogram component, 75791.

The code for the insertion of an embolization coil is 37204. The descriptor for this code is - transcatheter occlusion or embolization, percutaneous, any method, non-central nervous system, non-head or neck. The supervision and interpretation code that goes with this code is 75894. The descriptor for this code is - transcatheter therapy, embolization, any method, radiological supervision and interpretation.

7. TUNNELED CATHETER PROCEDURES

7.1 PRIMARY CODES

7.1.1 Insertion of Tunneled Catheter

As with the other procedures already discussed, the insertion of a tunneled dialysis catheter generates a group of codes (Table 12). There are several primary codes that are used in every case. Additionally, there are secondary codes that may occasionally be used, if the need arises.

Table 12 – Insertion of Tunneled Dialysis Catheter

Primary codes –

+76937 - Ultrasound guidance

+77001- Fluoroscopy guidance

36558 – Catheter insertion

36565 - Dual catheter insertion via separate sites

Secondary codes –

35476 – Venous angioplasty

75978 – Supervision and interpretation for 35476*

*If this is used then the imaging codes will need a 59 modifier

7.1.2 Ultrasound Guidance

The code for ultrasound guided cannulation when inserting a tunneled catheter is +76937. The descriptor for this code is - ultrasound guidance for vascular access requiring ultrasound evaluation of potential access sites, documentation of selected vessel patency, concurrent realtime ultrasound visualization of

vascular needle entry, with permanent recording and reporting. As indicated in the descriptor, use of this code requires that an image be made and made part of the permanent record. Additionally, the record should include a documented description of the localization process for which the guidance is utilized. This code should not be used in cases where the vein is only examined by ultrasound and the cannulation is not actually ultrasound guided (real-time). As the descriptor states this requires concurrent realtime ultrasound visualization of vascular needle entry. This is an add-on code and requires that the primary procedure also be listed, in this case that would be 36558 as described below.

Coding tip: In order to use this code, a permanent record of the image must be generated.

7.1.3 Fluoroscopic Guidance

The code for fluoroscopic guidance used in connection with the placement of a central venous device is +77001. The descriptor for this code is - fluoroscopic guidance for central venous access device placement, replacement (catheter only or complete), or removal (includes fluoroscopic guidance for vascular access and catheter manipulation, any necessary contrast injections through access site or catheter with related venography radiologic supervision and interpretation, and radiologic documentation of final catheter position). This code also includes any angiographic study that might be performed in conjunction with the catheter placement. It is possible to have an angiographic study qualify as a separate procedure if it is done by selective catheterization or if it is done from a separate access site. In such an instance, a -59 modifier should be attached to the code to indicate that it is a separate procedure. The code +77001 is an add-on code and requires that the primary procedure also be listed, which would be 36558 as described below. The code +77001 cannot be used with 77002.

It should be remembered that if 77001 is applied in conjunction with a therapeutic RS&I code (see comments on p. 6), it should have a -59 modifier attached.

Coding tip: This code includes the injection of radiocontrast, therefore, codes for angiography of the central veins or superior vena cava should not be used with it unless they qualify as a separate procedure. If this is the case, then the code should be used with a -59 modifier. This applies to all catheter related procedures where fluoroscopic guidance is used.

7.1.3.1 – Fluoroscopic guidance for needle placement

In some instances the internal jugular vein cannot be cannulated directly. In some of these cases, it is possible to insert a device such as an angioplasty balloon or a snare at another site and pass it to the site deemed optimum for catheter insertion and use it as a target for cannulation. This cannulation is generally done with fluoroscopic guidance for the cannulation needle placement. The code for this procedure is 77002. The descriptor for this code is - Fluoroscopic guidance for needle placement (e.g., biopsy, aspiration, injection, localization device). This code also should also be considered to include any necessary contrast injections through access site or catheter with related venography radiologic supervision and interpretation, and radiographic documentation of final catheter position.

The code 77002 is not an add-on code. It is however, a column 2 code to 36558 (catheter insertion). It can be used with that code but does require a modifier. In the instance described here, a -59 modifier would be appropriate. It is a column 1 code to +77001 and the two are mutually exclusive (can't be used together).

7.1.4 Catheter Insertion

The code used for the actual catheter insertion is 36558. The descriptor for this code is – insertion of tunneled centrally inserted central venous catheter, without subcutaneous port or pump. Over 5 years of

age. This code is for the instance in which a single tunneled catheter is inserted. If two structurally separate catheters are inserted into two separate venous sites, the appropriate code would be 36565. The descriptor for this code is - insertion of tunneled centrally inserted central venous access device, requiring two catheters via two separate venous access sites, without subcutaneous port or pump. The descriptor indicates that if this later code is to be used, the two catheters must be inserted via separate access sites. A dual catheter inserted through a single venous access site would not qualify.

Coding tip - Clearly document the fact that two catheters were inserted at separate venous access sites. This refers to dual catheters such as the Tesio catheter. If the wrong size catheter was inserted, removed and replaced with the correct size, it should still be coded as a single catheter.

7.2 SECONDARY CODES

There are times when the central veins are stenotic and require angioplasty before the tunneled catheter can be inserted. These additional secondary procedures generate additional codes. These are the same codes that were discussed above. They will be listed again here in order to point out unique aspects.

7.2.1 Venous Angioplasty

At times when a tunneled catheter is being placed, significant venous stenosis is encountered and complicates the insertion. If a significant stenosis is present, then it should be dilated. In this instance the appropriate codes would need to be applied. The code for venous angioplasty is 35476. The descriptor for this code is – transluminal balloon angioplasty, venous. Code 75978 describes the radiological supervision and interpretation. The descriptor for this latter code is transluminal balloon angioplasty, venous, radiological supervision and interpretation. If a venous angioplasty is performed, then the use of +77001 will require a -59 modifier since this would combine the use of a diagnostic and a therapeutic RS&I code (see page 6 for details).

Coding tip - If a venous angioplasty is performed, clearly document the vessel involved and the degree of stenosis as you would any other time this code is applied.

7.2.2 Aborted cannulation site

In an occasional instance, after cannulation of the vein for the placement of a tunneled catheter, difficulty is encountered in passing the guidewire. If, after examining the vein angiographically, it is decided to abandon that site and move to the opposite side, additional codes may be warranted to account for the work that was done. The use of the code ± 77001 (may require a -59 modifier, see p.6) should be used for the site that is actually used to insert the catheter. This code also includes (bundles) any angiographic studies that are done in connection with the placement of the catheter. However, the original attempt represents a separate venous access site and therefore meets the definition of a separate procedure. Unfortunately, there is no code specifically for this contingency. The code 36410 is the best choice for use in this situation. The descriptor for this code is - venipuncture, age 3 years or older, necessitating physician's skill (separate procedure), for diagnostic or therapeutic purposes (not to be used for routine venipuncture).

In this instance, the vein most often involved is the internal jugular vein. If this is the case and an angiogram of that vein is performed, then the code 75860 would be warranted. The descriptor for this code is - venography, venous sinus (e.g., petrosal and inferior sagittal) or jugular, catheter, radiological supervision and interpretation. If additional vessels were visualized, then additional codes might be warranted. When the code 75860 is used with 36410, it is a column 1 code and 36410 is a column 2.

In this instance, while the two can be used together, the column 2 code, 36410, would require a modifier. In this instance, a -59 modifier would be appropriate. The medical necessity for these procedures should be clearly documented in the patient record and in the recorded images.

7.3 EVALUATION OF EXISTING TUNNELED CATHETER

There are instances in which the evaluation of an existing tunneled catheter using fluoroscopy with radiocontrast injection is medically indicated. The code for this is 36598. The descriptor for this code is -- contrast injection(s) for radiologic evaluation of existing central venous access device, including fluoroscopy, image documentation and report. It is important to note that this requires image documentation. The code 36598 is a column 2 code to several codes that might be used in conjunction with dialysis catheter management procedures. It is mutually exclusive with each of them. This means that they cannot be used together. This list includes:

- +77001 - Fluoroscopic guidance for catheter placement, replacement, or removal
- 75825 - Venography, caval, inferior
- 75827 - Venography, caval, superior
- 75902 - Mechanical removal of intraluminal (intracatheter) obstructive material

7.4 TUNNELED CATHETER REPAIR

Some catheters are made with a replaceable hub. When it becomes damaged, repair of the hub may allow for the salvage of the catheter. The code for catheter repair is 36575. The descriptor for the code is - repair of tunneled or non-tunneled central venous access catheter, without subcutaneous port or pump.

7.5 TUNNELED CATHETER REMOVAL

With most catheters this is a rather simple procedure providing the catheter was properly placed. Catheter removal is performed under two circumstances. Firstly, the catheter is no longer needed; it is being removed, not to be immediately replaced. Secondly, its need is continuing, but it must be exchanged with a new catheter. The coding for the simple removal would be as follows.

7.5.1 Catheter Removal

The code for catheter removal is 36589. The descriptor for this code is – removal of tunneled central venous catheter, without subcutaneous port or pump. If the catheter is to be replaced then the use of this removal code would depend on whether it is to be replaced at the same venous entry site or a new one as described below.

7.5.2 Tunneled Catheter Exchange (Replacement)

The key factor in coding of a catheter replacement is the venous entry site. If the old entry site is also used for the new catheter, it is classified and coded as an exchange. This is true even if a new tunnel and exit site were created. If a new venous entry site is used for the new catheter, abandoning the old site, it is classified as a removal and new catheter insertion. This is true even if it is on the same side.

7.5.2.1 Same Venous Entry Site (Table 13)

If the old catheter is removed and replaced at the same site such as replacement over a guidewire, it should be coded as a catheter exchange. The code for this is 36581. The descriptor for this code is - replacement, complete, of a tunneled centrally inserted central venous catheter, without subcutaneous port or pump through the same venous access.

Table 13 - Catheter Exchange - Same Venous Access Site

Primary codes –

- +77001 – Fluoroscopy
- 36581 – Catheter exchange

Secondary codes –

- 35476 – Venous angioplasty for fibrin sheath removal
- 75978 – Supervision and interpretation for 35476*

*(if this is used, then +77001 would require a -59 modifier)

7.5.2.1.1 - At non-tunneled catheter site

There are times when a patient is referred for the purposes of converting a non-tunneled catheter to a tunneled catheter. If the cannulation site is clean and it is in an optimum position, this can be done by exchanging the catheter over a guidewire and creating a tunnel an exit site for the new catheter. This should be coded as a catheter exchange. The code for this is 36581.

7.5.2.2 New Venous Access Site

If the new catheter is placed at a new venous access site after the old one has been removed, the case would not be classified as an exchange. In this instance, two codes should be used. The catheter removal code, 36589, should be used for the removal and the catheter insertion code, 36558, should be used for the new catheter placement.

Coding tip - If the two codes are used for a catheter replacement, it is important to document the fact that the new catheter was placed with a new venous access site and not through the old site over a guidewire.

7.5.2.3 Venous Angioplasty with Catheter Exchange

As with placement, there are times with a tunneled catheter exchanged when significant venous stenosis is encountered and complicates the insertion of the new catheter. In such an instance, the stenosis should (may have to be) treated if it is deemed to be medically indicated. The appropriate codes would need to be applied. The code for venous angioplasty is 35476. The descriptor for this code is – transluminal balloon angioplasty, venous. Code 75978 describes the radiological supervision and interpretation. The descriptor for this latter code is transluminal balloon angioplasty, venous, radiological supervision and interpretation. As with all angioplasty procedures, the degree of stenosis present should be documented. While precise measurements may not be possible, the comparison should be expressed in relative terms, i.e., “a comparison of the diameter of the normal brachiocephalic vein with the area of stenosis reveals that it is less than 50%.”

If a venous angioplasty is performed, then the use of +77001 will require a -59 modifier since this would combine the use of a diagnostic and a therapeutic RS&I code (see page 6 for details).

7.5.3 Fibrin Sheath Removal

The fibrin sheath is the most common thrombus that forms in association with the chronic dialysis catheter. It is therefore the most common cause of catheter dysfunction. All central venous catheters likely become encased in a layer of fibrin within a few days of insertion. This is actually a sleeve that eventually surrounds the entire intra-venous portion of the catheter. The term “fibrin” sheath is actually a misnomer when referring to the sheath that causes catheter dysfunction and requires treatment. Very soon afterwards its initiation as fibrin it begins to be transformed into a sheath of connective tissue covered by endothelium. Studies have shown that this sheath has a number of adhesions with the wall of the superior vena cava (or other vein if so inserted). This fibro-epithelial tissue represents an intraluminal obstruction in the same manner as venous stenosis created by neointimal hyperplasia. It should be addressed when a dialysis catheter is being exchanged at the same site in order to avoid the risk of it interfering with the function of the newly placed catheter. Additionally, there is concern that this process can lead to central venous stenosis which is such a common complication of catheter use.

The code for this procedure is 36595. The descriptor for this code is – mechanical removal of pericatheter obstructive material (e.g. fibrin sheath) from central venous device, via separate venous access. As the descriptor indicates this code is designated as being performed from a separate site. If it is performed from the same site, as is usual, a - 52 modifier should be attached to the code when it is submitted. The radiological S&I code that should accompany this code is 75901 (mechanical removal of pericatheter obstructive material (e.g., fibrin sheath) from central venous device via separate venous access, radiologic supervision and interpretation).

Coding Note: When a – 52 modifier is attached to a code, it is generally necessary to attach an explanatory statement to the submission. It is suggested that a statement such as this be attached – “The code that most closely describes the procedure that is being performed is 36595. However, this code specifies that the procedure be performed from a separate site. In this instance it was performed from the same site as the procedure coded as 36581. The 52 modifier is attached to document reduced service for fibrin sheath removal. The work being performed is 50% of that described for 36595. This coding is in accordance with recommendations from our specialty society.”

7.5.3.1 – Venous angioplasty performed in presence of a fibrin sheath

If venous stenosis is present and treatment is deemed to be medically indicated, its treatment will also obliterate the fibrin sheath. In this instance the later procedure, fibrin sheath removal, should not be coded.

Example 1 – The patient was referred for catheter dysfunction. Angiographic evaluation showed the presence of a fibrin sheath. An angioplasty balloon was inserted, expanded and pulled back toward the venous entry site. A stenosis was demonstrated by compression of the balloon. This stenosis was judged to be greater than 50% compared to the diameter of the normal vein. The lesion was dilated. A new catheter was inserted. Radiocontrast injection showed that the fibrin sheath had been removed. The procedure was coded as 35476/75978.

Example 2 - The patient was referred for catheter dysfunction. Angiographic evaluation showed the presence of a fibrin sheath. An angioplasty balloon was inserted, expanded and pulled back toward the venous entry site. No stenosis was observed. The area was dilated. A new catheter was inserted. Radiocontrast injection showed that the fibrin sheath had been removed. The procedure was coded as 36595-52.

7.5.4 Intraluminal Removal of Catheter Thrombus

If a thrombosed catheter is treated mechanically with an endoluminal brush or guidewire to remove a thrombus and restore its function the use of the code 36596 is warranted. The descriptor for this code is - mechanical removal of intraluminal (intracatheter) obstructive material from a central venous device through device lumen. If this is done under fluoroscopic guidance, there is a supervision and interpretation code to accompany it. This code is 75902. The descriptor for this code is - mechanical removal of

intraluminal (intracatheter) obstructive material from a central venous device through device lumen, radiologic supervision and interpretation.

7.5.5 Intraluminal lytic enzyme

The instillation of intraluminal lytic enzyme has been extremely useful to the nephrologist in managing catheter dysfunction within the dialysis facility. With changes in dialysis reimbursement, much of this is now being sent to the interventionalist at the access center. The code for this procedure is 36593. The descriptor for this code is - declotting by thrombolytic agent of implanted vascular access device or catheter. This is a column 2 code to 36596 (mechanical removal of intraluminal obstructive material from central venous device through device lumen). The two codes can be used together with a modifier on the column 2 code. A -59 modifier would be appropriate for this situation.

8. NON-TUNNELED CATHETER PROCEDURES

8.1 NON-TUNNELED CATHETER PROCEDURES

There are unique codes, separate from those that are used for tunneled catheters that are designated for use with non-tunneled devices. It is of some importance to note that these codes are not reserved for use with dialysis catheters. They can, in fact, be used for any type of catheter that is to be used for any purpose. These codes are as follows:

For non-tunneled catheter insertion the code is 36556. The descriptor for this code is- insertion of non-tunneled centrally inserted central venous catheter. Over 5 years of age.

For non-tunneled catheter repair the code is 36575. The descriptor for this code is - repair of tunneled or non-tunneled central venous access catheter, without subcutaneous port or pump.

For non-tunneled catheter exchange the code is 36580. The descriptor for this code is - replacement, complete, of a non-tunneled centrally inserted central venous catheter, without subcutaneous port or pump through the same venous access

For non-tunneled catheter removal there is no code available. The CPT Coding Manual clearly states that the codes for removal of tunneled catheters should not be used.

In addition to these specific codes for procedures involving non-tunneled catheters, other ancillary codes such as those for ultrasound (+76937) and fluoroscopic guidance (+77001) as well as monitoring may be appropriately used.

It should be remembered that if 77001 is applied in conjunction with a therapeutic RS&I code (see comments on p. 6), it should have a -59 modifier attached.

9. SUBCUTANEOUS PORT PROCEDURES

9.1 SUBCUTANEOUS PORT PROCEDURES

There are unique codes, separate from those that are used for tunneled catheters that are designated for use with subcutaneous ports. These are as follows:

For the insertion of a port the code is 36561. The descriptor for this code is - insertion of tunneled centrally inserted central venous access device, with subcutaneous port, over 5 years of age.

For the insertion of two ports the code is 36566. The descriptor for this code is - Insertion of tunneled centrally inserted central venous access device, requiring two catheters via two separate venous access sites, with subcutaneous port(s).

For the replacement of a catheter associated with a port the code is 36578. The descriptor for this code is - replacement, catheter only, of central venous access device, with subcutaneous port or pump, through same venous access

For the replacement of the complete port the code is 36582. The descriptor for this code is - replacement, complete, of a centrally inserted central venous access device, with subcutaneous port.

For the removal of a port the code is 36590. The descriptor for this code is - Removal of tunneled central venous catheter, with subcutaneous port or pump.

As with non-tunneled catheters, in addition to these specific codes, other ancillary codes such as those for ultrasound and fluoroscopic guidance during vein cannulation as well as monitoring may be appropriately used.

10. PERITONEAL CATHETER PROCEDURES

10.1 PRIMARY CODES

There are several CPT codes that are warranted when a peritoneal catheter is inserted (Table 14).

10.1.1 Insertion of peritoneal dialysis catheter by open surgery

The code for open or surgical insertion of the peritoneal dialysis catheter without the use of laparoscopy is 49421. The descriptor for this code is – insertion of tunneled intraperitoneal catheter for dialysis, open.

10.1.2 Insertion of peritoneal dialysis catheter by laparoscopy or peritoneoscopy

The code for insertion of the peritoneal dialysis catheter with the use of laparoscopy or peritoneoscopy is 49324. The descriptor for this code is – laparoscopy, surgical with insertion of intraperitoneal cannula or catheter; permanent. This code should be also used for peritoneoscopy with catheter insertion. Injection of air into the peritoneal cavity 49400 is bundled with this code and therefore not separately billable.

10.1.3 Insertion of Peritoneal Dialysis Catheter, Percutaneous

The code for percutaneous insertion of the peritoneal dialysis catheter performed with imaging guidance is 49418. The descriptor for this code is – Insertion of tunneled intraperitoneal catheter, complete procedure, including imaging guidance, catheter placement, contrast injection when performed, and radiological supervision and interpretation, percutaneous. Injection of air or contrast into the peritoneal cavity 49400 is bundled with this code and therefore not separately billable. This code may be used for any percutaneous placement technique when imaging guidance with ultrasound and /or fluoroscopy is used. It should be noted that imaging guidance cannot be interpreted to mean a post procedure x-ray. It must be imaging guidance used during the procedure and, as with all such imaging; it should be

documented in both the procedure note and with a permanent image. If no imaging guidance is used, then this code is not warranted.

Table 14 – Peritoneal Catheter Insertion

49421 - Insertion of peritoneal catheter, surgical
49324 – Insertion of peritoneal dialysis catheter, peritoneoscopic
49418 – Insertion of peritoneal dialysis catheter, percutaneous
76998 – Ultrasound guidance, intraoperative
+49435 - Presternal subcutaneous extension
49436 - Delayed creation of exit site from embedded subcutaneous segment

10.1.4 Insertion of a subcutaneous extension to remote chest site

The code for the insertion of a subcutaneous extension to the peritoneal dialysis catheter to extend the catheter exit site to a remote chest site is +49435. The descriptor for this code is – Insertion of subcutaneous extension to intraperitoneal cannula or catheter with remote chest exit site. This code is an add-on code so is not subject to a -59 modifier.

10.1.5– Injection of air/contrast

If air/contrast is injected to obtain a peritoneogram separate from placing a peritoneal catheter, this would warrant use of the 49400 code. The descriptor for this code is - Injection of air or contrast into peritoneal cavity (separate procedure). Additionally, the radiological supervision and interpretation code 74190 for the peritoneogram would also be appropriate. The descriptor for this code is - Peritoneogram (e.g., after injection of air or contrast), radiological supervision and interpretation. The use of 49400/74190 codes would be warranted when injecting air or contrast to study an existing catheter.

10.1.6 Ultrasound Evaluation Prior to Trocar Insertion

Some interventionalists have found that it is very beneficial to evaluate the abdomen using ultrasound prior to insertion of the trocar in order to avoid damage to the epigastric artery and as an aid in avoiding areas of adhesions. There is no specific code for this examination. The code 76998 is the most appropriate to use. The descriptor for this code is – ultrasound guidance, intraoperative. As the descriptor indicates, this code is reserved for intraoperative use and not just for scanning the abdomen prior to prepping the abdomen.

Coding tip: If the abdomen is scanned after the abdomen is prepped, it should be considered intraoperative.

10.2 PERITONEAL DIALYSIS CATHETER REMOVAL

The code for removal of the peritoneal dialysis catheter is 49422. The descriptor for this code is – removal of permanent intraperitoneal cannula or catheter.

10.3 REPAIR OF VENTRAL HERNIA

At times when a peritoneal dialysis catheter is removed, an incisional or ventral hernia is apparent. If this is repaired, then it is appropriate to code for the procedure. The code for repair of a ventral hernia is 49560. The descriptor for this code is – repair initial incisional or ventral hernia; reducible.

Note: although not a coding issue, there may be a privileging issue in the medical facility in which this hernia repair procedure is being performed.

10.4 PERITONEAL DIALYSIS CATHETER REVISION

There are times when a peritoneal dialysis catheter is dysfunctional. Evaluation reveals that it can be salvaged by repositioning. This procedure will generate several codes depending upon the specifics of what is actually done. Unfortunately, there is no specific code for repositioning a peritoneal catheter. This being the case, the code 49999 is warranted. The descriptor for this code is – unlisted procedure, abdomen, peritoneum and omentum. In using this code, it is important to document and describe the details of what was actually done. Additional codes such as the code for injection of air or contrast – 49400 may also be appropriate. If imaging is performed (peritoneogram), then the S&I code 74190 is warranted.

10.5 DELAYED CREATION OF EXIT SITE FROM EMBEDDED SUBCUTANEOUS SEGMENT

Burying the external segment of a peritoneal catheter until the site is healed and it is time to begin dialysis has been used by some interventionalist. The code for the delayed creation of an exit site for this embedded segment is 49436. The descriptor for this code is - delayed creation of exit site from embedded subcutaneous segment of intraperitoneal cannula or catheter.

11. FISTULA CREATION

11.1 TYPES OF FISTULA

Fistula types can be classified into three different categories: simple direct, vein transposition and vein translocation.

11.1.1 Simple Direct Fistula

With this type of fistula, the vein and the artery are used in their normal positions. The distal end of the vein is freed and connected to an adjacent artery.

11.1.2 Vein Transposition Fistula

With this category of fistula, the vein is moved or transposed to a position that is better suited for the construction of a fistula. The downstream or proximal end of the vein is left intact. The distal portion of the vein is transposed to a position that will facilitate ease of cannulation when the fistula is used for hemodialysis. This requires the construction of a tunnel or pocket to serve as a bed for the newly position vein.

11.1.3 Vein Translocation Fistula

With a translocation fistula a vein is removed from one anatomical location and moved to a new one. It involves moving the entire vein and requires the creation of both a venous and an arterial anastomosis. The construction of the access is very much like the placement of a graft. The only difference is that this is the patient's native vein that is being used. This requires the creation of a tunnel for the vein to be positioned in its new location.

11.2 FISTULA CREATION (Table 15)

11.2.1 Creation of Simple Direct Fistula

The creation of a simple direct fistula involves an incision in the skin to allow isolation of the desired artery and vein and the creation of a single arteriovenous anastomosis. The radial-cephalic and brachial-cephalic fistulas are examples of this type. This should be documented with the code 36821. The descriptor for this code is – Arteriovenous anastomosis, open; direct, any site (e.g., Cimino type). In doing this procedure, first makes an incision to expose the desire artery and vein segment. Then clamps are placed on the artery proximally and distally to allow an opening (arteriotomy) to be made. A vein is mobilized to allow the vessel to be in the proximity of the artery. This vein is sutured to the arteriotomy opening to allow blood to flow from the artery into the vein. This attachment may be accomplished with a side-to-side approach or with an end-to-side approach, usually ligating and sectioning the vein distally. The operator may ligate any obvious accessory veins to achieve optimal blood flow in the newly created fistula. In the final step, the skin is closed in layers.

11.2.2 Creation of Vein Transposition Fistula

The three most common vein transposition fistulas are – brachial basilic, brachial-cephalic (also a simple direct fistula, depending upon its depth) and radial-basilic. The first two of these are created in the upper arm, the later in the forearm. A transposition fistula may be created by either of two techniques – primary transposition or secondary transposition. In primary transposition, the vein is moved at the time the fistula is created. Secondary transposition involves movement after the fistula has matured. Each of these two techniques has its proponents. .

Table 15 – Fistula Creation Codes

<p>36821 - Creation of AV Fistula 36818 - Transposition of Cephalic Vein Upper Arm 36819 - Transposition of Basilic Vein Upper Arm 36820 - Transposition of Forearm Vein</p>

11.2.2.1 Brachial-Basilic Fistula

The code for a brachial-basilic fistula creation is 36819. The descriptor for this code is – Arteriovenous anastomosis, open: by upper arm basilic vein transposition. Transposition of the basilic vein of the upper arm involves either one long or two short incisions in the upper arm to dissect out the basilic vein. It is then superficialized and transposed to the anterior surface of the upper arm so as to be accessible for cannulation in the dialysis facility. This is done by either placing it through a subcutaneous tunnel or by creating a subcutaneous pouch. The distal free end is anastomosed to an arterial inflow. The procedure is concluded by closure of the skin incision.

11.2.2.2 Brachial-Cephalic Transposed Fistula

Generally a brachial-cephalic fistula is a simple direct type of access. However, in some instances, the cephalic vein lies too deep to be accessible for cannulation at the dialysis facility once it has been converted into a fistula. In these instances, it can be transposed to a more superficial position to make it a usable access. The code for a brachial-cephalic transposition fistula creation is 36818. The descriptor for this code is - Arteriovenous anastomosis, open: by upper arm cephalic vein transposition.

11.2.2.3 Forearm Vein Transposition

The forearm basilic vein is not readily seen when the arm is superficially examined. For this reason is often spared, even in patients in whom veins have been obliterated by multiple cannulations and intravenous

lines. This vein can be utilized to create a very acceptable fistula in the forearm, but it generally needs to be transposed to the volar surface so as to be easily accessible for cannulation once it has become mature. The code for the creation of a forearm transposition fistula is 36820. The descriptor for this code is - Arteriovenous anastomosis, open: by forearm vein transposition. The surgery involved to transpose a forearm vein is considerable. The entire length of the vein must be exposed in order to mobilize it. Then multiple incisions are required to tunnel it onto the volar surface of the forearm and expose the artery for the anastomosis.

11.2.3 Creation of Vein Translocation Fistula

Although possible, vein translocation fistulas are seldom created. Other biologic and synthetic materials are readily available that serve as well, obviating the need for this category of fistula creation in most instances. The code for a vein translocation fistula is 36825. The descriptor for this code is – Creation of arteriovenous fistula by other than direct anastomosis (separate procedure); autogenous graft.

11.3 SECONDARY PROCEDURES

Beyond fistula creation, there are surgical needs for access maintenance. These procedures create the need for additional codes (Table 16).

11.3.1 Revision of AVF / AVG

It is an unfortunate fact that not all fistulas that are created mature adequately for use as a dialysis access. Additionally, there are problems that can develop over time that render a previously adequate access unusable. Surgical revision can serve as a salvage procedure. The code for surgical revision is 36832. The descriptor for this code is - Revision, open, arteriovenous fistula; without thrombectomy, autogenous or nonautogenous graft. This scope and details of this procedure varies. It may involve the creation of an entirely new anastomosis or the placement of a segment of synthetic graft.

Table 16 – Codes for Secondary Procedures

36832 - Revision of AVF / AVG (including repair of aneurysm)
36833 - Revision of AVF / AVG with thrombectomy
37607 - Ligation / Banding of AVF
37618 - Ligation AVG / AVF for rupture or trauma
35206 – Direct Repair of Vessel Upper Extremity
35266 - Repair of Vessel Upper Extremity with Prosthetic Graft
35236 – Repair of Vessel Upper Extremity with Vein Graft

11.3.2 Revision of AVF / AVG with Thrombectomy

Frequently the need for a surgical revision is indicated by thrombosis of the fistula. In this instance, the process of revision is the same as above, but there is also the need to perform a thrombectomy. This makes this overall procedure a higher order of magnitude than just a revision. The code for surgical revision with thrombectomy is 36833. The descriptor for this code is - Revision, open, arteriovenous fistula; with thrombectomy, autogenous or nonautogenous graft.

11.3.3 Revision of AVF / AVG Involving Repair of Aneurysm

When there is a severe venous stenosis affecting a fistula, the increased pressure within the access can produce an aneurysm, especially in areas when the wall has been weakened by multiple cannulations. In these instances a repair of the aneurysm is required as well as a revision to correct the basic problem. This

repair generally involves excising a portion of the vessel wall at the site of the aneurysm followed by suturing the edges back together. The code for aneurysm repair is 36832. Previously the code 36834 had been utilized for this procedure. However, this code has been deleted in 2010. The 36832 code is also utilized when non-anastomotic areas of the fistula are repaired. This includes repair of a rent or ulceration in the fistula/graft

11.3.4 Ligation / Banding of AVF

There are instances in which there is a need to either ligate or band a fistula. In instances in which the fistula is no longer needed, ligation can be used to eliminate it completely. In other instances such as distal ischemia related to the presence of a fistula, banding of the fistula may be attempted as a therapeutic maneuver. Banding increases the resistance to blood flow in the fistula and promotes blood flow to the higher resistance distal extremity. The code for either ligation or banding is 37607. The descriptor for this code is - Ligation or Banding of angioaccess arteriovenous fistula.

11.3.5 Ligation Artery of Extremity

On rare occasion, an arteriovenous fistula may develop refractory extravasation or may actually rupture resulting in severe bleeding that demands definitive emergent treatment. In such an instance it may be necessary to ligate the feeding artery. The code for this is 37618. The descriptor for this code is – Ligation, major artery extremity.

11.3.6 Direct Repair of Vessel

Occasionally, a vessel is damaged and requires repair after a fistula has been created or surgically manipulated in some manner. This may require that the vessel be repaired. In doing this, the physician makes an incision over the site of an injured blood vessel. The vessel is dissected free of the surrounding structures. Vessel clamps are placed. The edges of the injured vessel may be trimmed to allow repair. The vessel defect is repaired with suture. The clamps are removed. And the skin is closed in layers. The code for this procedure is 35206. The descriptor for this code is - Repair blood vessel, direct; upper extremity.

11.3.7 Repair of Vessel with Prosthetic Graft

There are times when the repair of a vessel that has been damaged requires that a short segment of synthetic graft be interposed in the vessel to accomplish the repair. The code for this procedure is 35266. The descriptor for this code is – Repair of blood vessel with graft other than vein; upper extremity.

11.3.8 Repair of Vessel with Vein Graft

Rather than using prosthetic material to repair an injured or diseased blood vessel a short length of vein may be removed and used either as a patch graft to restore the correct lumen size or inserted as an interposition graft. The code for this procedure is 35236. The descriptor for this code is - Repair of blood vessel with vein graft; upper extremity.

12. MODIFIERS

12.1 MODIFIERS

There are several modifiers that can and at times should be used in coding of the procedures performed by interventional nephrologists (Table 16). It is important to become familiar with this and use them properly. One should also keep in mind that when a modifier is used, extra documentation is generally advisable.

***Coding note:** In many instances, the accepted coding choice appears to vary with the local carrier. It is suggested that your choice of modifier be based upon a discussion with your local carrier and that their definitions be used. It is important that your coding practice be standardized and that the required documentation be provided.*

12.2 FAILED PROCEDURE

What if you attempt a procedure and cannot do it? How should it be properly coded? These are important questions. Basically, you should always code for what was actually accomplished. Beyond this, you have three choices.

12.2.1 Code Only the Procedure Completed

One could choose to code only what was completed and omit any codes for what was attempted and not accomplished. For example if one started out to do an angioplasty, but could not pass a guidewire and decided to stop after the initial angiogram, you could simply code it as a cannulation and a venogram using the 36147 code. This would be a reasonable choice since that is all that was actually accomplished.

12.2.2 Modifier for Reduced Level of Service

One could use a modifier to indicate that the basic service was altered. The modifier, -52, could be used to signify that the basic coded service has been reduced. This is designed to be used in circumstances where a service or procedure is partially reduced or eliminated. The use of this modifier allows one to report reduced services without disturbing the identification of the basic service. For example, if angioplasty was attempted, but after multiple tries with several types of guiding catheters and different guidewires, you could not get the guidewire across the lesion. In this instance the treatment could not be completed. A reasonable choice would be to code the procedure as 35476-52 and 75978-52 to indicate a reduced level of service. The other codes for procedures or services that were completed would be coded normally. Your report would be individually reviewed by the intermediary to determine a payment level. This would be a percentage of the basic fee. For this reason, documentation becomes very important to form a basis for this determination.

12.2.3 Modifier for Discontinued Procedure

One could use a different modifier to indicate that the procedure was discontinued. This modifier is -53. The use of this designation indicates that the procedure was started but discontinued. It could be used as an alternative to the -52 designation in the example quoted above.

Coding tip - If you attempt an angioplasty, cannot complete it and choose to use either the -52 or -53 modifier, it is important that you provide extra documentation to describe what you actually did do. This should be stated in terms of time and supplies. This will enable the reviewer to determine a reimbursement level appropriately.

12.3 COMPLEX OR COMPLICATED PROCEDURE

There are times when one is required to perform substantial additional work to accomplish a procedure. This warrants attachment of the modifier -22 to the basic code to indicate this increased level. When doing this the reason for the additional work (i.e., increased intensity, increased time, increased technical difficulty, or a higher than usual level of severity of the patient's condition) must be documented. Payment will be increased only under very unusual circumstances based upon a review of the medical record and other documentation. Claims under this coding are priced by individual consideration. It is important to note that submission of a claim using a code with this modifier attached does not in itself insure any additional payment.

Coding tip - If you choose to use the -22 modifier, it is important that you provide extra documentation in the procedure note to describe what you did that was unusual and more than is customarily required. The reason for this requirement should also be detailed. This will enable the reviewer to determine a reimbursement level appropriately.

12.4 SEPARATE PROFESSIONAL SERVICE

CMS designates certain radiological services (7xxxx series codes) that are eligible for separate payment of the technical and the professional component. This is possible only if the services are performed in a facility in which the physician does not own the equipment or employ the technical staff. These eligible services are billed by attaching a modifier to the basic code, TC for the technical and 26 for the professional component. If the code for the procedure is used unmodified, it indicates a complete or global service. None of the radiological codes (7xxxx series codes) used in this manual have been designated as eligible for separate payment under this mechanism except in the hospital setting. (See discussion on page 7)

Table 17 - Modifiers

- 22 - Unusual Procedural Services - When the service(s) provided is greater than that usually required for the listed procedure
- 26 - Professional Component - CMS has designated the service as eligible for separate payment of the technical and professional components of a 7xxxx series code (see page 3 of this manual for a discussion of restrictions)
- 26 - Separate profession component (see discussion on page 4)
- 51 - Multiple procedures were performed at the same session by the same provider. This modifier is used on the second and subsequent operative procedures when the procedures are ranked in RVU order. It indicates that the multiple procedure discount should be applied to the reimbursement for the code. Modifier 51 is not needed for CMS; however, some carriers do use it. It can easily be confused with modifier 59. Modifier -59 is an important NCCI-associated modifier. Basically, they prescribe how it should be used. NCCI edits define when two procedure codes may not be reported together except with the appropriate modifier which is often 59. It is useful to think of modifier 51 as being used to indicate the order of billing for the multiple procedure discount and modifier 59 being used to indicate that a separate distinct procedure has been performed in accordance with NCCI policy.
- 52 - Reduced Services - A service or procedure is partially reduced or eliminated
- 53 - Discontinued Procedure - A surgical or diagnostic procedure is terminated, it was started but discontinued
- 59 - Distinct or independent from other services performed on the same day. This modifier is used to identify procedures or services that are not normally reported together, but are appropriate under the circumstances. This may represent a different session or patient encounter, different procedure or surgery, different site or organ system, separate incision or excision, separate lesion, or separate injury not ordinarily encountered or performed on the same day by the same physician. NCCI edits define when two procedure codes may not be reported together except under special circumstances. If an edit allows use of NCCI-associated modifiers, the two procedure codes may be reported together if there is documentation in the medical record that satisfies the criteria required by the NCCI-associated modifier used.
- 76 - Repeat Procedure by Same Physician - A procedure or service needed to be repeated subsequent to the original procedure or service during the global period
- 77 - Repeat Procedure by Another Physician - A procedure or service performed by another physician needed to be repeated during the global period
- 78 - Related Procedure - A related procedure was performed during the global period that required the use of the procedure (operating) room
- 79 - Unrelated Procedure by Same Physician - A procedure or service performed during the global period that is unrelated to the original procedure by the same physician

12.5 SEPARATE PROCEDURAL SERVICE

Under certain circumstances you may need to indicate that a procedure or service was **distinct or independent from other services performed on the same day**. Modifier 59 is used to indicate that a provider performed a distinct procedure or service for a beneficiary on the same day as another procedure or service. It may represent a different session, different procedure or surgery, different anatomical site or organ system, separate incision or excision, separate lesion, or separate injury (or area of injury in extensive injuries). For example, if it is necessary to perform a second venous angioplasty (coding restrictions permitting), this modifier should be attached to the cannulation code, e.g., 35476-59. There are other examples of the use of the -59 modifier listed in the discussion of specific procedure codes above.

If a patient must be returned to the procedure room after initial discharge to the recovery room and the access re-cannulated, the -59 modifier would be attached to each element of the second procedure.

Coding tip – The use of the -59 modifier is frequently abused. When this is applied to a case, one should be very careful to clearly document the fact that this is a separate and distinct procedure in addition to the medical necessity for doing the procedure.

Table 18 - Procedures with a Global Period

Code	Descriptor	Global Period (Days)
36870	Thrombectomy	90
37607	Ligation of accessory vein	90
34101	Embolectomy - brachial artery	90
34111	Embolectomy - radial or ulnar artery	90
36558	Tunneled catheter placement (single)	10
36565	Tunneled catheter placement (double)	10
36581	Tunneled catheter exchange	10
36589	Tunneled catheter removal	10
36561	Insertion of subcutaneous port	10
36578	Replacement of catheter on port	10
36582	Replacement of complete port	10
36590	Removal of port	10
49320	Peritoneoscopy	10
49421	Insertion of peritoneal catheter	90
49422	Removal of peritoneal catheter	10
49560	Repair of ventral hernia	90

12.6 Subsequent Procedure Performed During Global Period

A number of the procedures that are performed have global periods (Table 18). This means that if a repeat procedure is performed during that period, it is not covered. However, there are times when it becomes necessary to perform an identical or similar procedure on a patient subsequent to a procedure with a global period that has not yet expired. There are several modifiers that have been used to report and code this situation so that coverage will be available. The terminology attached to these modifiers appears to be surgical. When dealing with surgical cases, the appropriate choice of a modifier may be obvious. However, in the case of endovascular procedures it becomes somewhat confusing. There are patients who

experience a thrombosed graft within a relatively short period after a previous thrombectomy. In one instance this may be due to recurrent hypotension and totally unrelated to the previous procedure; however, it is not totally clear from the descriptors whether this would be classified as a repeat procedure or an unrelated procedure.

The choices of modifier to attach to the basic identifying code when a subsequent procedure is performed during the global period include 76, 77, 78 and 79. The modifier - 76 is used to indicate a repeat procedure by the same physician and modifier - 77 is use to indicate a repeat procedure performed by another physician. The terminology used in the descriptions for these codes suggest that they would be the best choice if it was apparent that the subsequent procedure was totally unrelated to the previous one. The modifier - 78 has a descriptor that suggests its use when the subsequent procedure was related to the previous one. Based upon its description, use of the modifier - 79 seems to be warranted in cases where the subsequent procedure is completely different from the previous one, neither repeated nor related.

13. DOCUMENTATION

13.1 Documentation

There is an old adage – “If it’s not documented, it didn’t happen!” This should definitely be considered true when coding procedures that were performed in the interventional lab. If you are going to code for the procedure, be sure that it is documented adequately. There are several types of documentation. Firstly, your procedure note is very important. If something was done that justifies a code, then it should be mentioned and/or discussed in the procedure note. This is what is reviewed for appropriateness of coding. Secondly, there is radiographic documentation. This is important, it is visual and objective; anyone can see it.. Thirdly, the nurse’s note, while not a detailed record of the step-by-step aspects of the procedure, should reflect what was actually done. Accurate coding is very important, but don’t neglect the documentation. If you need to defend your coding at a later date, this is the only defensive evidence that you will have.

Illustrative Coding Cases

Note: Only selected images are shown with each of the following illustrative cases. These images have been included to enhance understanding of the procedures that were performed. Due to space restrictions, not all images derived from the individual cases have been included. Failure to observe an image that adequately documents each procedure or a critical aspect of a procedure should not lead to the assumption that the work was not performed. Emphasis should be placed upon the narrative description of what was done and how it was coded.

Catheter Case 1 – Basic Tunneled Catheter Insertion

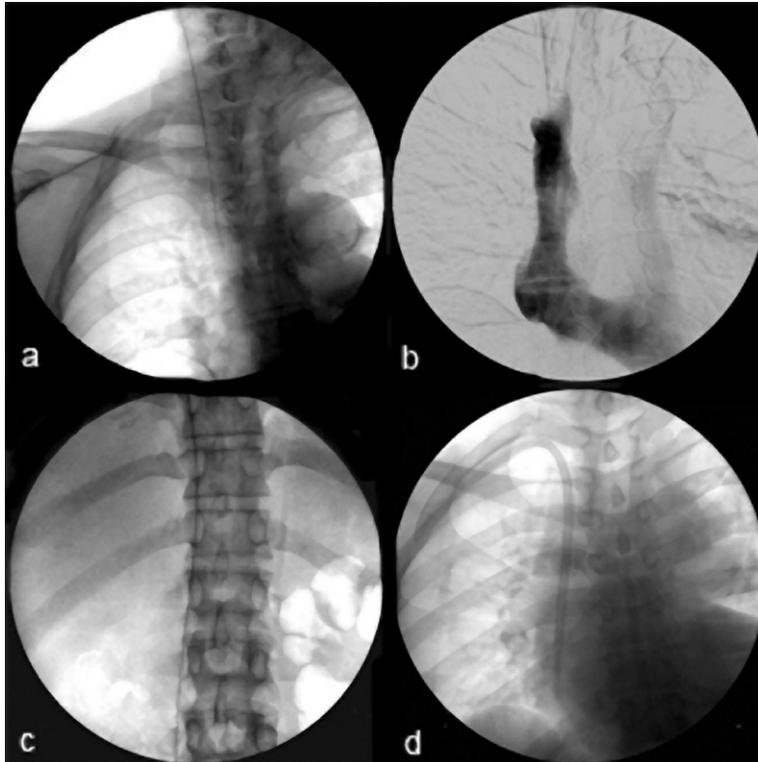
Referral: Need to start dialysis, no access available

History:

- 56 year old female
- Declining renal function for past year
- Needs immediate dialysis
- No arteriovenous access present

Physical Examination:

- Neck and thorax normal
- No surgical scars
- No previous central venous catheters
- No evidence of venous hypertension



Procedure: The right IJ was cannulated using ultrasound and fluoroscopic guidance ((Figure a). Difficulty was encountered in passing the guidewire so an angiogram was performed (Figure b). No abnormality was seen. The guidewire was passed and positioned in the inferior vena cava (Figure c). A 28 cm dialysis catheter was then placed without difficulty (Figure d).

Analysis: This was an uncomplicated right IJ tunneled dialysis catheter placement.

Codes: Ultrasound guidance – 76937 (requires image documentation), Fluoroscopic guidance – 77001, Catheter insertion – 36558

Discussion: This was just a straight forward placement of a right internal jugular tunneled dialysis catheter. Difficulty was encountered in passing the wire resulting in the performance of an angiogram. This does not warrant a code because all angiographic studies are bundled with the basic fluoroscopic code. 77001 does not need a 59 modifier since there is no therapeutic 7XXXX code being used.

Catheter Case 2 – Tunneled Catheter Exchange with Fibrin Sheath

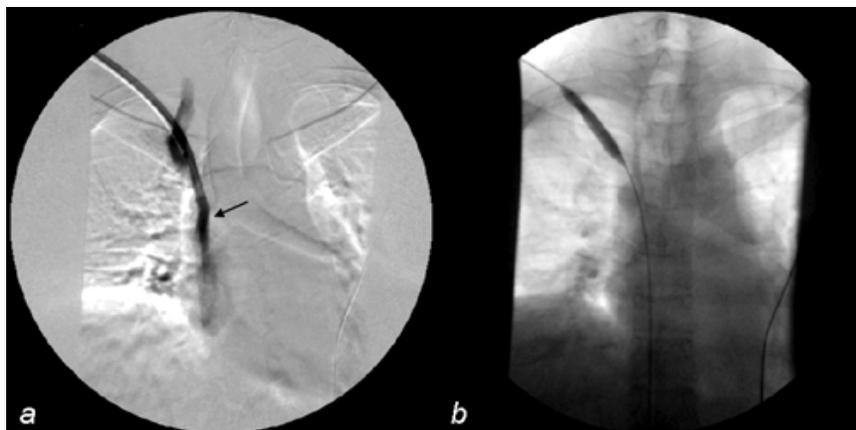
Referral: Catheter with poor flow

History:

- 76 year old male
- Catheter dependent dialysis for 3 months
- Poor flow from catheter
- No history of chills or fever

Physical Examination:

- Catheter in right IJ
- Exit site looks clean
- No redness
- No drainage



Procedure: The cuff of the right IJ catheter was freed using blunt dissection. The catheter was pulled back so that the tip was just below the clavicle and contrast was injected. A fibrin sheath was seen (Figure a). This was disrupted using an 8 X 4 angioplasty balloon (Figure b). No venous stenosis was observed.

Analysis: This was an uncomplicated right IJ tunneled dialysis catheter placement associated with a fibrin sheath which was disrupted using an angioplasty balloon.

Codes: Fluoroscopic guidance – 77001, Catheter exchange – 36581, Fibrin sheath disruption – 36595-52

Discussion: This was a straight forward exchange of a right internal jugular tunneled dialysis catheter with a fibrin sheath. The performance of an angiogram does not warrant a code because all angiographic studies are bundled with the basic fluoroscopic code. The codes 354763/75978 are not indicated. Although a balloon was utilized to disrupt the sheath, no stenosis was present. A -52 modifier should be applied to the code for fibrin sheath disruption because it was not done from a separate site. 77001 does not need a 59 modifier since there is no therapeutic 7XXXX code being used.

Catheter Case 3 – Tunneled Catheter Exchange with Venous Stenosis and a Fibrin Sheath

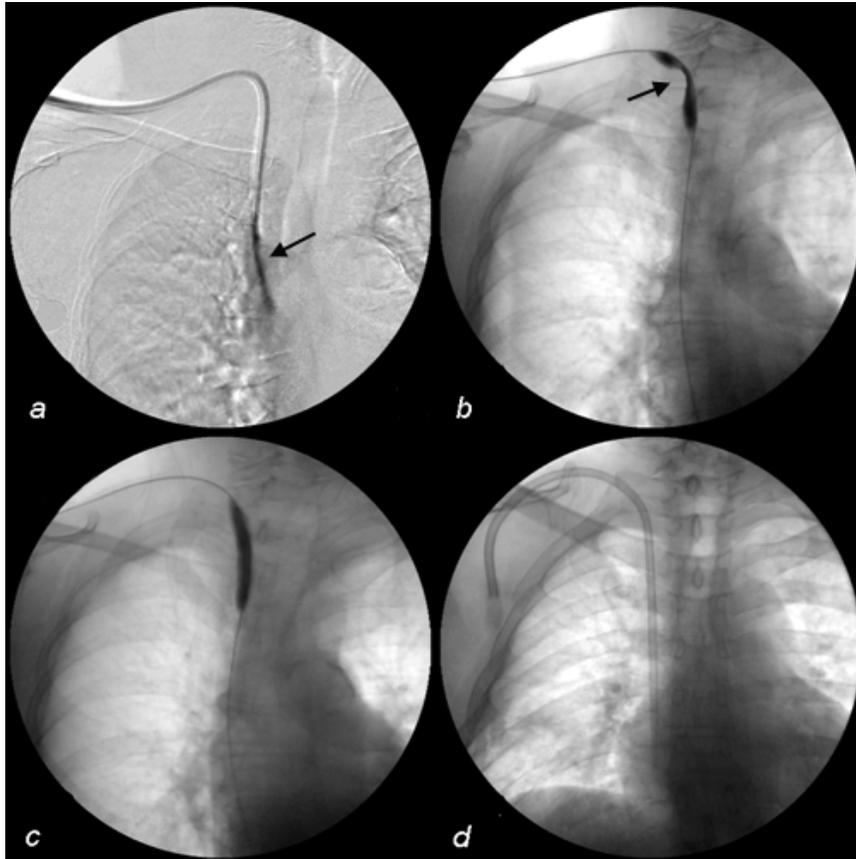
Referral: Catheter with poor flow

History:

- 48 year old female
- Catheter for 7 months
- Catheter dysfunction

Physical Examination:

- Catheter in right IJ
- Exit site looks clean
- No redness



Procedure: The cuff of the right IJ catheter was freed using blunt dissection. The catheter was pulled back so that the tip was just below the clavicle and contrast was injected. A fibrin sheath was seen (Figure a). An 8 X 4 angioplasty balloon was inserted. With inflation of the balloon a greater than 50% stenosis was observed in the entry vein (Figure b). This was dilated with full effacement of the balloon (Figure c). The new catheter was then placed without difficulty (Figure d).

Analysis: This was a right IJ tunneled dialysis catheter placement associated with a venous stenosis and a fibrin sheath both of which were treated by angioplasty.

Codes: Fluoroscopic guidance – 77001-59, Catheter exchange – 36581, Venous angioplasty – 35476-52, 75978-52
Discussion: This was an exchange of a right internal jugular tunneled dialysis catheter complicated by both a venous stenosis and a fibrin sheath. The performance of an angiogram does not warrant a code because all angiographic studies are bundled with the basic fluoroscopic code. The venous stenosis was treated by angioplasty and was coded as such. The fibrin sheath disruption was incidental to the basic procedure and was not coded.

Catheter Case 4 – Tunneled Catheter Exchange (Complicated by Central Vein Stenosis)

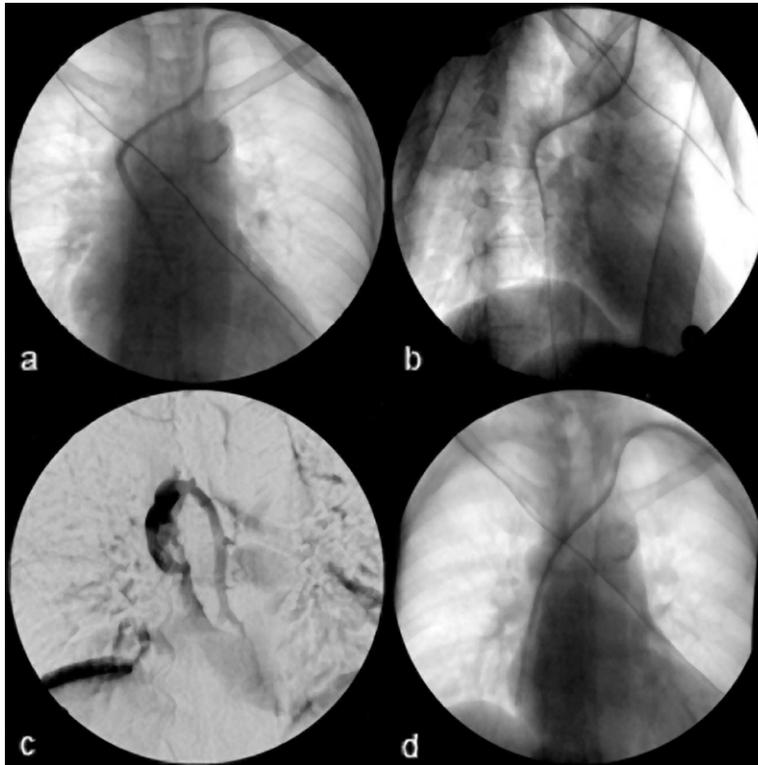
Referral: Catheter with poor flow

History:

- 46 year old male
- On dialysis for 4 years
- Multiple central venous catheters
- Catheter placed blindly 5 days earlier

Physical Examination:

- Catheter in left IJ
- Exit site looks clean
- No redness
- No drainage



Procedure: The initial course of the dysfunctional catheter (diagonal) suggested that it was in the azygous vein (Figure a). A lateral view confirms that this was the case (Figure b). It was not clear as to whether the SVC was patent or not. Using a Kumpe vascular catheter the guidewire was manipulated into the superior vena cava and an angiogram was performed that showed that it was patent (Figure c). The new catheter was then passed over the guidewire into the SVC (Figure d).

Analysis: This was a complicated left IJ tunneled dialysis catheter exchange. It was necessary to demonstrate that the SVC was patent which required selective catheterization of that structure.

Codes: Fluoroscopic guidance – 77001, Catheter exchange – 36581, Selective catheterization of the superior vena cava – 36010, Angiogram of superior vena cava – 75827-59

Discussion: This was a case that was complicated by stenosis of the central veins causing dilatation of the azygous vein and partial obstruction of the entry into the superior vena cava. Selective catheterization was necessary in order to gain access to the SVC. This warrants the appropriate code for that procedure. The angiogram of the SVC is normally bundled in the fluoroscopy code. However, since it was accomplished via selective catheterization, it warrants coding as a separate procedure with a -59 modifier. 77001 does not need a 59 modifier since there is no therapeutic 7XXXX code being used.

Catheter Case 5 – Tunneled Catheter Placement (With Cannulation of an Obstructed Right IJ)

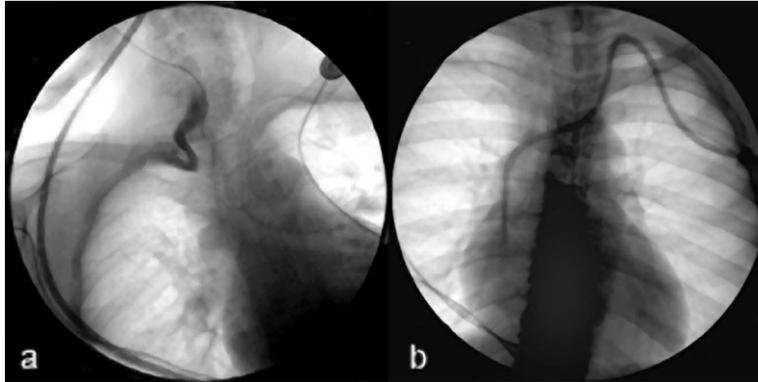
Referral: Need for dialysis catheter

History:

- 50 year old female
- On dialysis for 5 years
- Multiple central venous catheters
- No arteriovenous access

Physical Examination:

- Multiple central venous catheter scars
- No evidence of venous hypertension
- Old graft sites on both arms



Procedure: The patient had a large right IJ on ultrasound. It was cannulated but the guidewire would not pass. After several failed attempts, an angiogram was performed which showed that the right IJ was totally obstructed (Figure a). The left IJ was cannulated and a tunneled catheter was placed without further difficulty (Figure b).

Analysis: In this case the right IJ was examined angiographically first and was found to be obstructed.

Codes: Cannulation of vein – 36410, Angiogram of internal jugular vein – 75860-59, Ultrasound guidance – 76937, Fluoroscopic guidance – 77001, Catheter placement – 36558.

Discussion: In this case, an attempt was made to place a catheter in the right internal jugular vein. However, the vein, after evaluation, was found to be obstructed. This evaluation warrants coding. The angiogram performed here was designated as a separate procedure by the attachment of a 59 modifier. The fact that it was done from a separate access site made it a separate procedure. The cannulation of the vein for the placement of a catheter is bundled with the basic catheter placement code. However, the cannulation on the right side was not associated with a catheter placement, it warrants a separate code and 36410 is the appropriate code for this purpose. 77001 does not need a 59 modifier since there is no therapeutic 7XXXX code being used.

Catheter Case 6 – Tunneled Catheter Exchange (With Stenosis of Lower IJ)

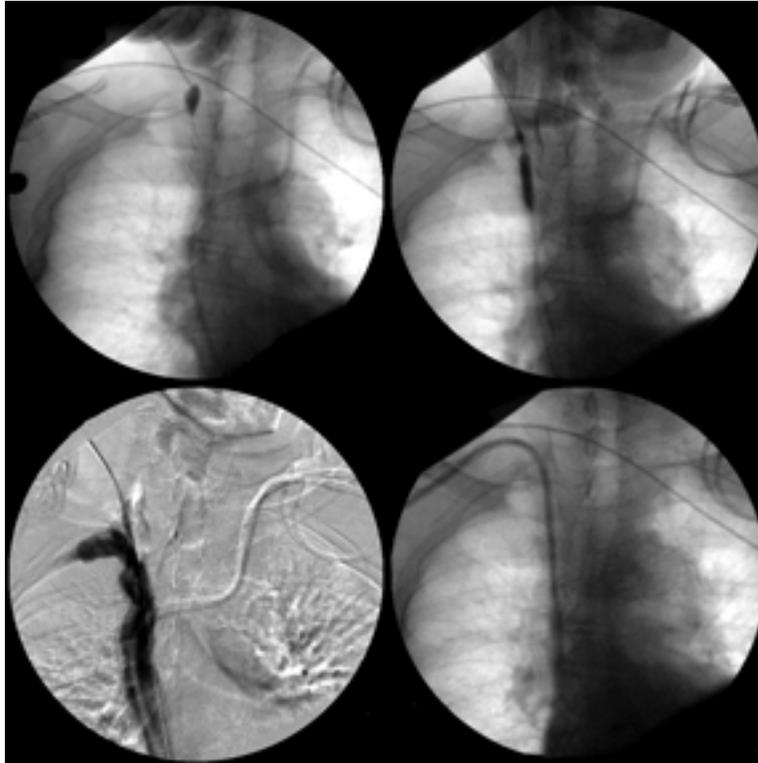
Referral: Catheter with poor flow

History:

- 52 year old female
- On dialysis for 2 years
- Left I J catheter with poor flow
- Has had multiple central venous catheters

Physical Examination:

- Catheter in left IJ
- Prior catheter sites bilateral
- No evidence of venous hypertension
- No evidence of infection



Procedure: The right IJ was visualized with US and looked good. It was cannulated. The guidewire would not pass. An angiogram was done (Figure a). With multiple attempts, the guidewire was passed down to the atrium. An angioplasty was performed with an 8 X 4 balloon (Figure b). After the angioplasty, the superior vena cava was visualized and looked good (Figure c). The catheter was then inserted on the right (Figure d) and the left catheter was removed.

Analysis: This was a complicated right IJ tunneled dialysis catheter placement. It was necessary to perform a venous angioplasty to treat the IJ stenosis before the catheter could be placed. Although a catheter exchange was performed, the old and the new catheter were on opposite sides, this affects the coding.

Codes: Ultrasound guidance – 76937, Fluoroscopic guidance – 77001-59, Catheter removal – 36589, Catheter insertion – 36558, Venous angioplasty – 35476, 75978.

Discussion: This was a case that was complicated by stenosis of the internal jugular vein. It was opened by angioplasty. This should be coded as a regular venous angioplasty. Since the new catheter was placed in a new site, the procedure should be coded as a removal and a placement rather than an exchange. The determining factor is the venous entry site. If the same site is used for the new catheter, then the exchange code should be applied. If a different entry site is used, then it should be coded as here. 77001 needs a 59 modifier since there is also a therapeutic 7XXXX code being used.

Catheter Case 7 – Tunneled Catheter Exchange with Venous Stenosis and a Fibrin Sheath

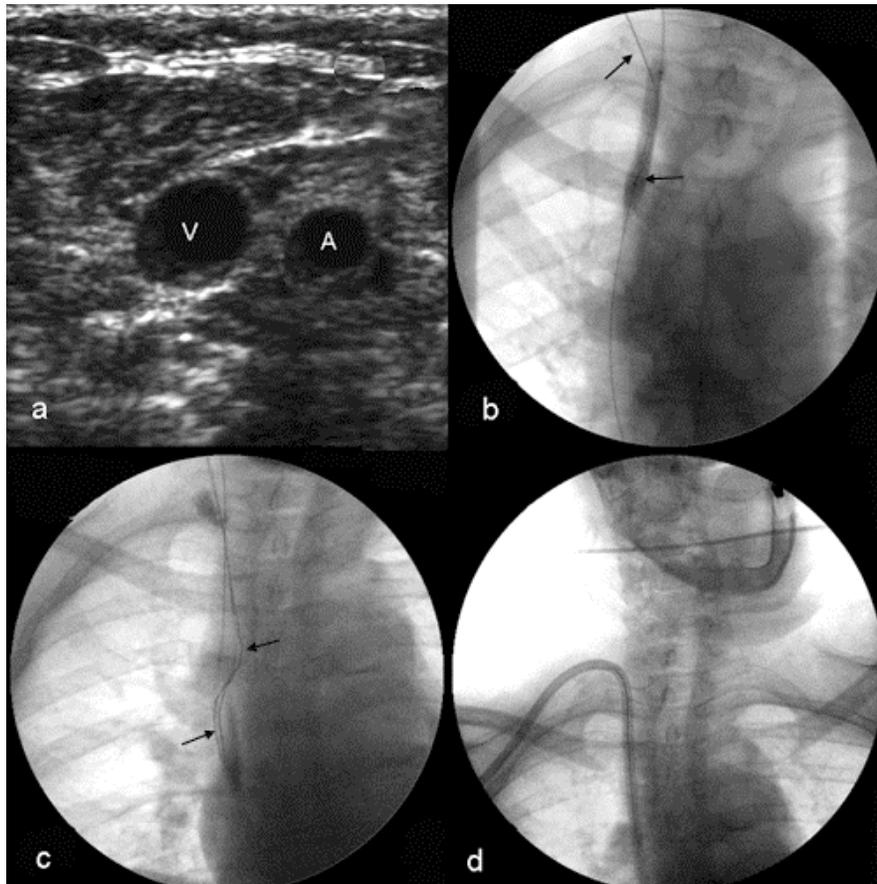
Referral: Catheter with poor flow

History:

- 52 year old female
- AV graft infection, clotted
- Multiple catheters in past

Physical Examination:

- Graft thrombosed
- Multiple catheter scars



Procedure: The patient's neck was examined on the right with ultrasound; no internal jugular vein was seen in the area which was judged to be optimum for catheter insertion. It was examined at higher level and a good vein was seen (Figure a). This was cannulated from the optimum site and an 8 X 4 angioplasty balloon was inserted. The lower jugular vein was dilated and the balloon was cannulated under fluoroscopy using a micropuncture needle (Figure b). The guidewire was inserted into the balloon and the balloon was advanced down into the superior vena cava (Figure c). The guidewire was then extracted from the balloon. The remainder of the insertion procedure was uneventful (Figure d).

Analysis: This was a right IJ tunneled dialysis catheter placement in which an angioplasty balloon was used as a cannulation target.

Codes: Ultrasound guidance – 76937 (requires image documentation), Fluoroscopic guidance for needle placement – 77002-59, Catheter insertion – 36558

Discussion: The code for the cannulation procedure used here is 77002. This code is a column 2 code to 36558. It can be used with that code but does require a modifier. In the instance described here, a -59 modifier would be appropriate. The code +77001 cannot be used in conjunction with 77002.

Fistula Case 1 – Juxta-Anastomotic Stenosis

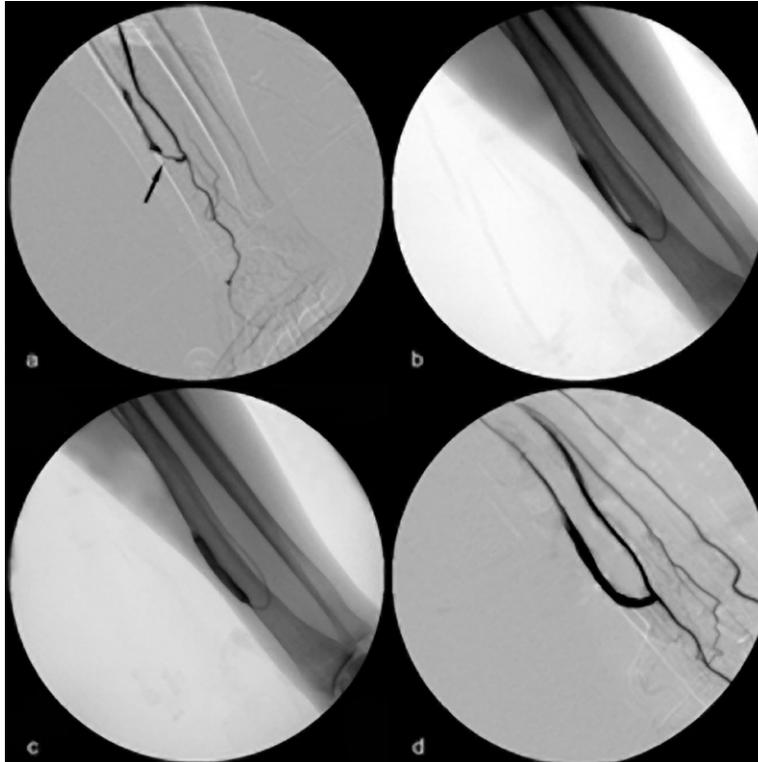
Referral: Failure of fistula to develop and poor flow.

History:

- 28 year old female
- Radial-cephalic fistula 6 months old
- Never used
- Dialysis with catheter

Physical Examination:

- Right radial-cephalic fistula
- Hyper-pulsatile at anastomosis
- Weak thrill distally
- Fistula poorly palpable above anastomosis



Lesion: Juxta-anastomotic stenosis in radial-cephalic fistula. Anastomosis is not involved (Figure a).

Procedure: Angioplasty with a 6 X 4 angioplasty balloon (Figures b, c). Treatment was successful (Figure d). An arteriogram was performed as a baseline.

Analysis: The lesion involves only the fistula; there is no involvement of the anastomosis. It should be coded only as a venous angioplasty.

Codes: Cannulation and angiogram of fistula - 36147, Venous angioplasty – 35476, 75978.

Discussion: This is just a straight forward angioplasty of a juxta-anastomotic lesion. The anastomosis was not involved. The treatment was successful. The cannulation and angiogram are both bundled in the 36147 code. Since the anastomosis was not involved and the angioplasty balloon did not have to cross into the artery to successfully treat the lesion, the arterial angioplasty code, 35475, was not appropriate to use. Although done the arteriogram was not coded. Even though there was poor flow in the fistula there was no clinical evidence to suggest an arterial problem, in fact, the fistula was hyperpulsatile at the anastomosis. This suggested good inflow.

Fistula Case 2 – Anastomotic Stenosis

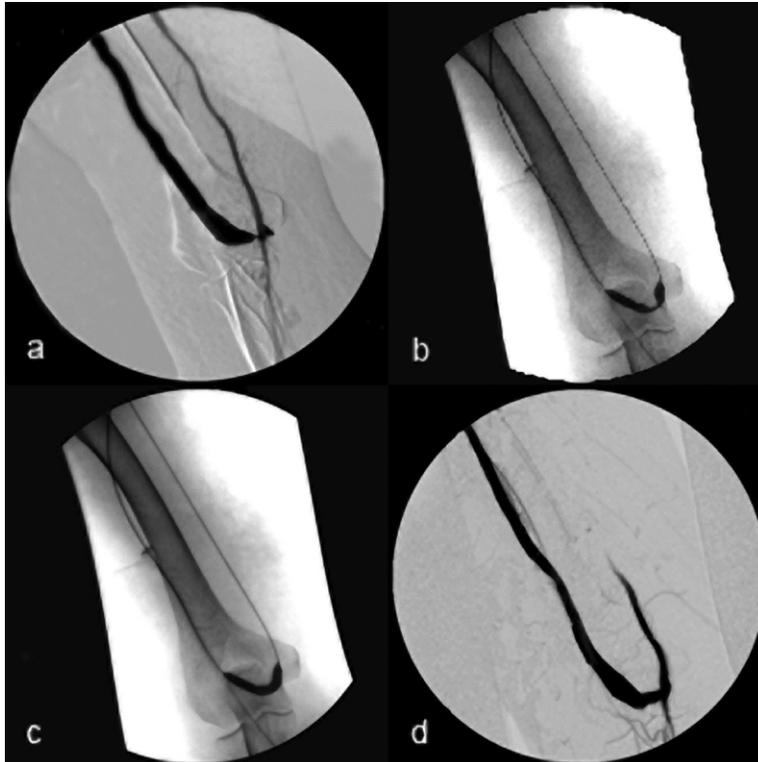
Referral: Failure for fistula to develop and poor flow

History:

- 68 year old male
- Brachial-cephalic fistula 3 months old
- Never used
- Dialysis with catheter

Physical Examination:

- Brachial-cephalic fistula
- Poor pulse augmentation
- Weak thrill
- Fistula poorly palpable above anastomosis



Lesion: Anastomotic stenosis in brachial-cephalic fistula. Fistula is not involved (Figure a).

Procedure: Successful angioplasty with a 6 X 4 angioplasty balloon (Figures b, c, d). Treatment was successful (Figure d). An arteriogram was performed that visualized the feeding artery up to the level of the subclavian. This was performed using a catheter which passed into the artery passively without any need for manipulation.

Analysis: The lesion involves only the anastomosis; there is no involvement of the fistula. It should be coded only as an arterial angioplasty.

Codes: Cannulation and angiogram of fistula - 36147, Arteriogram of extremity – 75710-59, Arterial angioplasty – 35475, 75962.

Discussion: This is just a straight forward angioplasty of an anastomotic lesion. The fistula was not involved. The treatment was successful. The arterial code, 35475, was used because the lesion was within the anastomosis of the access. The arteriogram code was warranted. The medical indication for the study was poor flow in the fistula. The 59 modifier is required because of simultaneous use of both a diagnostic and a therapeutic 7XXXX code. A selective catheterization code 36215 was not used here because there is no documentation it was necessary to utilize catheter/guidewire manipulation.

Coding Tip: Documentation should include the radiographic involvement of the artery and/or balloon location along with comment that the stenosis involves the "arterial anastomosis and arterial inflow tract".

Fistula Case 3 – Juxta-Anastomotic and Anastomotic Stenosis

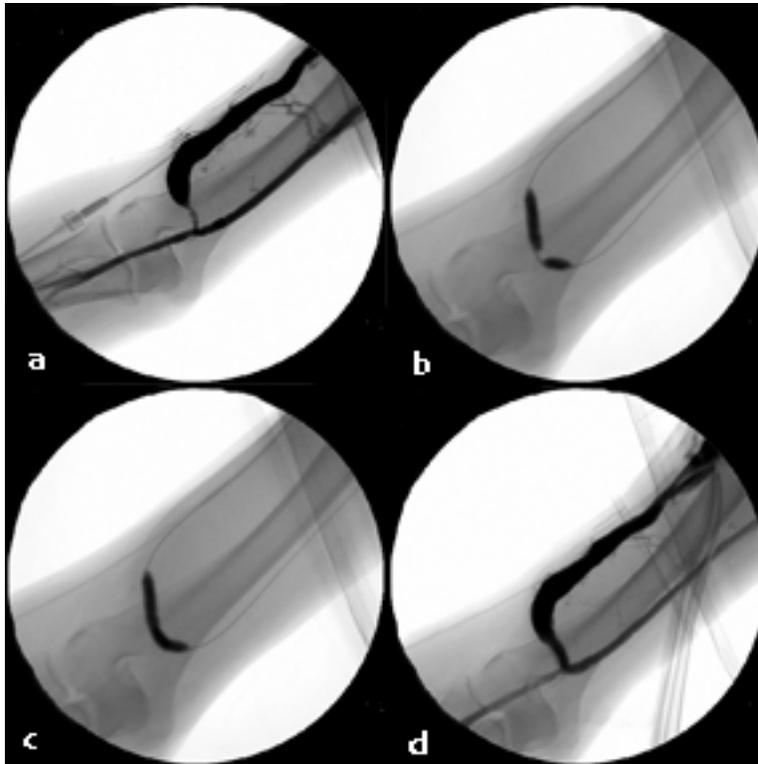
Referral: Failure for fistula to develop and poor flow

History:

- 54 year old male
- Brachial-cephalic fistula 4 months old
- One year old
- Poor flow

Physical Examination:

- Brachial-cephalic fistula
- Poor pulse augmentation
- Weak thrill
- Fistula collapsed with arm elevation



Lesion: Stenoses in brachial-cephalic fistula involving the anastomosis and the juxta-anastomotic fistula (Figure a).

Procedure: Angioplasty with a 6 X 4 angioplasty balloon (Figure b) to treat both anastomosis and adjacent fistula lesion (Figure c). Treatment was successful (Figure d). It was necessary to manipulate the guidewire with a vascular catheter to catheterize the brachial artery. This was necessary to accomplish the arteriogram which was performed because of the poor flow (not shown). The feeding artery up to the level of the subclavian was visualized.

Analysis: The lesion involves both the anastomosis and the fistula and is continuous.

Codes: Angiogram of fistula – 75791-59, Arteriogram of extremity – 75710-59, Arterial angioplasty – 35475, 75962, Selective catheterization of 1st order artery - 36215

Discussion: In this case both the anastomosis and the juxta-anastomotic fistula were involved and both were treated successfully; however, only the arterial lesion can be coded. Since the arterial angioplasty is the higher level code it is the one that should be used. The use of the arteriogram code is warranted. The medical indication for the study was poor flow in the fistula associated with poor augmentation. The code for cannulation of the access was dropped in favor of the selective catheterization. This required the use of the code for an angiogram without cannulation. This code is 75791. The 59 modifier is required because of simultaneous use of both a diagnostic and a therapeutic 7XXXX code.

Fistula Case 4 – Anastomotic, Juxta-Anastomotic and Venous Stenosis

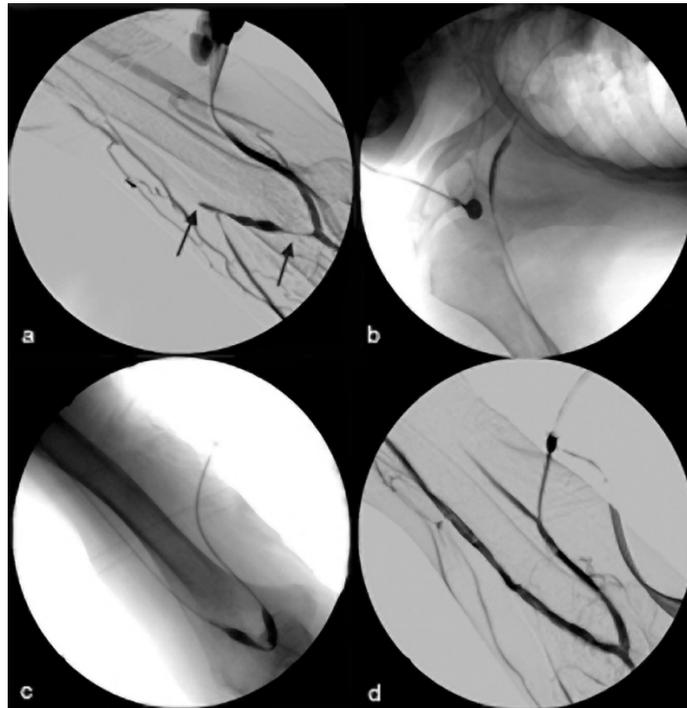
Referral: Failure for fistula to develop, unable to cannulate

History:

- 38year old male
- Brachial-cephalic fistula 4 months old
- Never used
- Dialysis with catheter

Physical Examination:

- Brachial-cephalic fistula
- Hyper-pulsatile over short lower segment
- No thrill, no bruit with Doppler
- Upper fistula not palpable



Lesion: Stenosis from anastomosis through the entire fistula, up through the cephalic arch. Apparent obstruction is apparent in the lower fistula (Figure a).

Procedure: The fistula was cannulated first and an angiogram was performed. However, it was evident that the pathology present could not be accessed from the venous side so a direct arterial puncture and sheath insertion was performed. It was necessary to manipulate the guidewire with a vascular catheter to catheterize the fistula. Angioplasty of entire cephalic was performed with a 6 X 4 balloon (Figure b), multiple dilatations. Treatment of anastomosis lesion with 6 X 4 balloon (Figure c). Treatment was successful (Figure d). An arteriogram was performed to visualize the feeding artery up to the level of the subclavian artery.

Analysis: In order to treat these lesions, it was necessary to cannulate the brachial artery. The entire cephalic vein, which included the fistula, was dilated. The arterial anastomosis was also treated.

Codes: Cannulation of brachial artery – 36120, Arteriogram of extremity – 75710-59, Arterial angioplasty – 35475, 75962.

Discussion: The fistula is considered to extend all the way to the subclavian and only one code can be used in this access vessel. In this instance, because it is a column 1 code when paired with the venous angioplasty code, 35475 should be used. The medical indication for the arteriogram was a lack of flow in the fistula. Additionally, cannulation of the brachial artery and the need to visualize the artery to determine the location of the anastomosis and cannulate it warrants a code for the arteriogram. Selective catheterization was not coded since this was done in order to visualize the access and arterial anastomosis and this is bundled with the angiogram code (which is bundled with 36147).

Fistula Case 5 – Fistula and Proximal Venous Stenosis

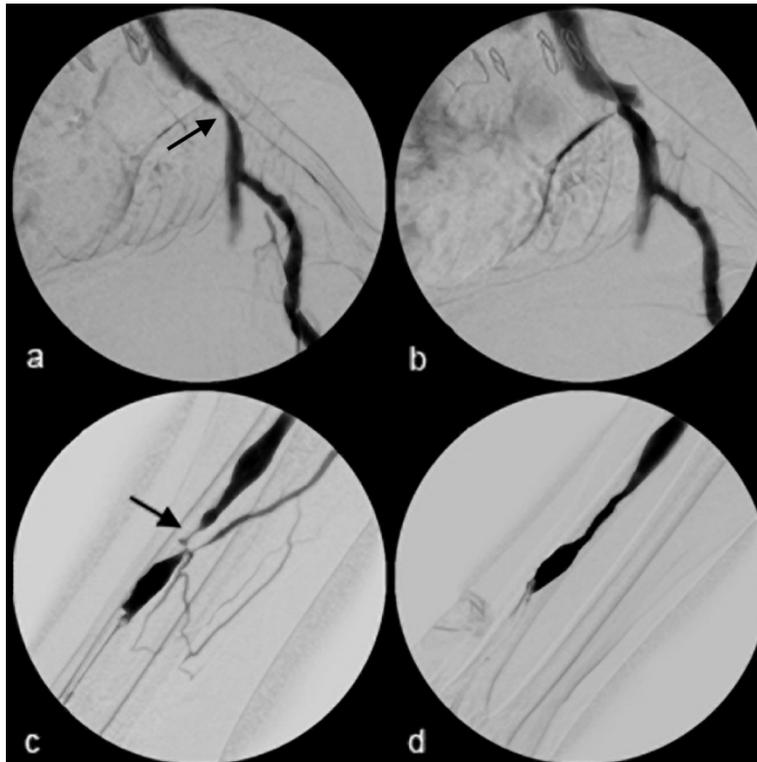
Referral: Poor flow

History:

- 52 year old male
- Radial-cephalic fistula 5 years old
- No difficulty with cannulation
- Poor flow by Transonic

Physical Examination:

- Radial-cephalic fistula
- Hyper-pulsatile over lower segment
- Diastolic thrill only
- Thrill below left clavicle



Lesion: Stenotic lesions in both the peripheral (access) and central vessels were seen. A lesion is seen in the subclavian (Figure a) and another lesion at mid-fistula proper within the forearm (Figure c).

Procedure: Angioplasty of the peripheral lesion was accomplished with an 8 X 4 balloon. The subclavian lesion was treated with a 10 X 4 balloon. Treatments were successful (Figures b and d).

Analysis: Both lesions were significant and warranted treatment. No significant residual was seen, the treatments were successful.

Codes: Cannulation and angiogram of fistula – 36147, 1st venous angioplasty– 35476, 75978, 2nd venous angioplasty (of a central vessel) – 35476-59, 75978-59.

Discussion: In this case there were two lesions – one was within the access vessel, the other was in a central vein. In this instance both can be coded. The 35476 code should be used for both. In this case careful, detailed documentation should be provided to support the fact that one lesion was within the access, but the other was in the central veins.

Fistula Case 6 – Accessory Vein Treated with a Coil

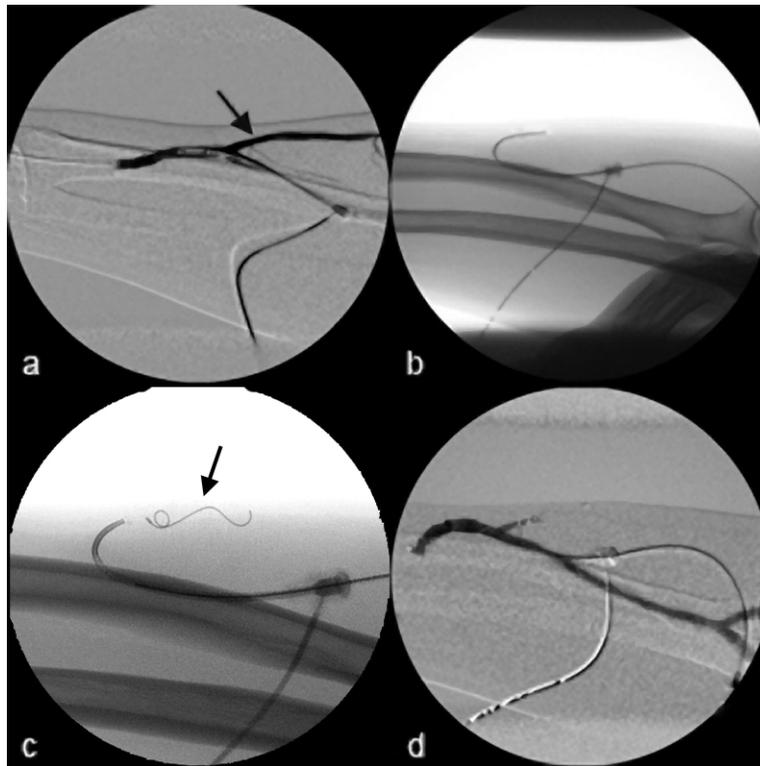
Referral: Difficulty with cannulation in upper fistula

History:

- 47 year old female
- Radial-cephalic fistula 6 months old
- Difficulty with cannulation in upper fistula
- Poor flow by Transonic

Physical Examination:

- Radial-cephalic fistula
- Good augmentation
- Continuous thrill
- Physical signs of accessory vein



Lesion: A large accessory vein was found (Figure a).

Procedure: The accessory vein was selectively catheterized with a vascular catheter (Figure b). Two coils were placed in the vein (Figure c). A follow-up angiogram performed through the catheter showed no flow beyond the coil (Figure d).

Analysis: The accessory vein appeared to be significant and consistent with the patient's clinical picture. Manipulation with a vascular catheter was required to catheterize the vessel for coil placement. Coil placement was successful.

Codes: Selective catheterization of 1st order vein – 36011, Angiogram of fistula – 75791-59, Placement of embolization coil – 37204, 75894, Follow-up angiogram following the placement of an embolization coil – 75898-59.

Discussion: The non-selective cannulation code in this case should be dropped in favor of the selective code for catheterization of a 1st order vein – 36011. Since it is bundled with the angiogram of the access, the code for a separate angiogram, 75791, should be used. Even though two coils were placed in the vein, only a single code is warranted because only a single vein was coiled. The code 75894 is the supervision and interpretation code that goes with the technical procedure code. It is appropriate to code for the follow-up angiogram, the only instance in which a follow-up angiogram can be coded. The 59 modifier is required because of simultaneous use of both a diagnostic and a therapeutic 7XXXX code.

Fistula Case 7 – Accessory Vein Treated with a Coil (Short Vein with Branches)

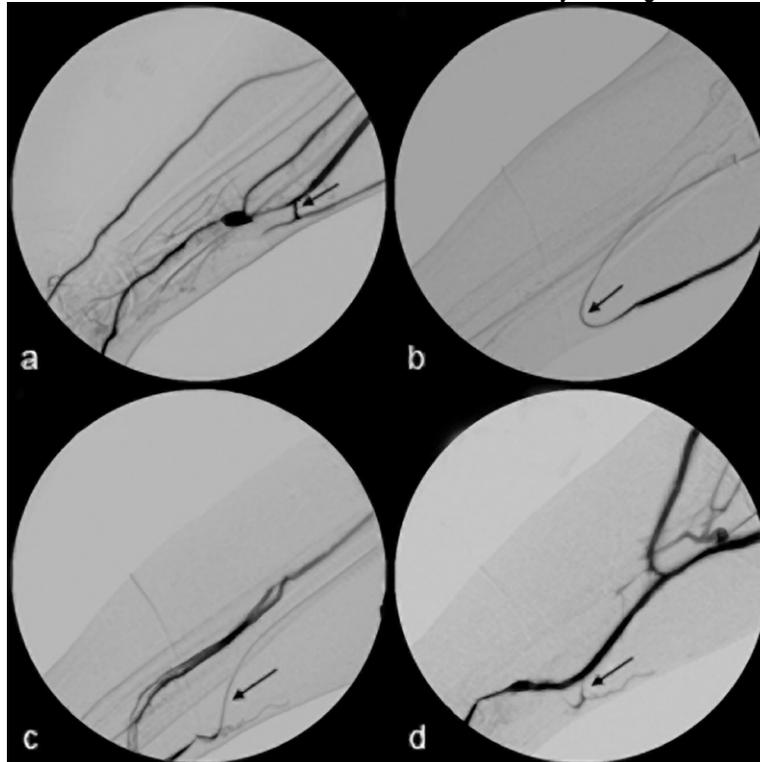
Referral: Difficulty with cannulation in upper fistula

History:

- 63 year old female
- Radial-cephalic fistula 6 months old
- Difficulty with cannulation in upper fistula
- Poor flow by Transonic

Physical Examination:

- Radial-cephalic fistula
- Good augmentation
- Continuous thrill
- Physical signs of accessory vein



Lesion: A large accessory vein was found (Figure a). It was short and branched early into two main branches.

Procedure: The main accessory vein (arrow in each image) was very short and branched early. Each of the two major branches was selectively catheterized with a vascular catheter and a selective angiogram of each was performed (Figures b and c). Two coils were placed in each of the vein branches. A follow-up angiogram performed through the catheter shows no flow beyond the coils (Figure d).

Analysis: The main accessory vein appeared to be too short to safely place a coil so each major branch was coiled. Manipulation with a vascular catheter was required to catheterize these vessels for coil placement. Since the vessels that were selectively catheterized were branches of the main vein, these were second order branches. Coil placement was successful.

Codes: Selective catheterization of first 2nd order vein – 36012, Selective catheterization of second 2nd order vein – 36012-59, Angiogram of fistula – 75791-59, Placement of embolization coil – 37204, 75894, Follow-up angiogram following the placement of an embolization coil – 75898-59.

Discussion: The non-selective cannulation code is dropped in favor of the selective code for catheterization of a 1st order vein. This code is then dropped in favor of the 2nd order catheterization that was done twice. Since the cannulation code is bundled with the angiogram of the access, the code for a separate angiogram, 75791, should be used. Even though two veins were coiled, only a single code is warranted because this represents a single field, i.e., branches of a single vein off of the fistula. It is appropriate to code for the follow-up angiogram.

Fistula Case 8 – Multiple Venous Lesions

Referral: Poor flow

History:

- 68 year old female
- Brachial-cephalic fistula 6 months old
- Poor flow by Transonic

Physical Examination:

- Brachial-cephalic fistula
- Good augmentation
- Hyperpulsatile
- Multiple thrills over fistula



Lesion: Multiple stenotic lesions in fistula (Figure a).

Procedure: Multiple angioplasties were performed through the fistula up to the axillary vein (Figure c). The axillary vein (Figure b) and central veins were normal. An arteriogram was performed and was also normal.

Analysis: Multiple lesions were present and were treated; however, they were all in the same vessel – the fistula.

Codes: Cannulation and angiogram of fistula – 36147, Venous angioplasty – 35476, 75978.

Discussion: Although multiple lesions were present and were treated, they were all within the same vessel, i.e., the fistula. Therefore only a single angioplasty code was warranted. An arteriogram was performed but there was no medical indication. Therefore, the study was not coded.

Fistula Case 9 – Thrombosed Fistula with Venous Stenosis

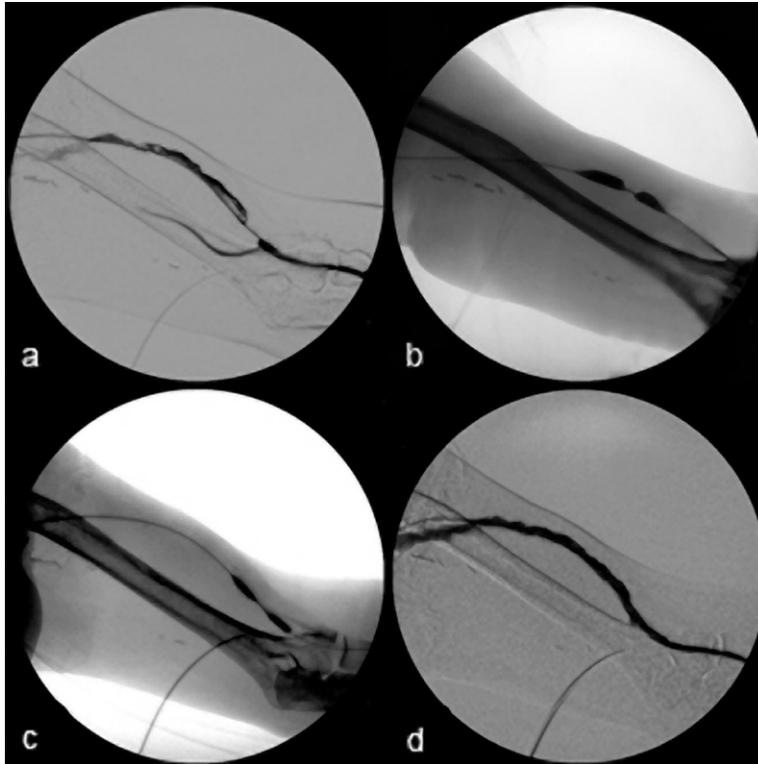
Referral: Thrombosed fistula

History:

- 47 year old female
- Brachial-cephalic fistula 6 months old
- No flow

Physical Examination:

- Brachial-cephalic fistula
- No thrill
- No pulse
- Slightly tender



Lesion: Thrombosed fistula (Figure a) with two areas of venous stenosis within the fistula.

Procedure: The fistula was declotted using tPA and thromboaspiration. A juxta-anastomotic lesion was treated with an 8 X 4 balloon going in a retrograde direction (Figure c). A stenosis in the mid fistula was treated with an 8 X 4 balloon going in an antegrade direction (Figure b). The procedure was successful (Figure d). An arteriogram was performed to visualize the distal brachial artery down to a level below the bifurcation and was normal. Guidewire manipulation with a vascular catheter was required to access the brachial artery.

Analysis: The thrombosed fistula was treated with both enzyme and mechanical modalities. The two lesions that were present could not be accessed from the same cannulation site. This necessitated doing the second from a separate access site. Because of the risk of creating an arterial embolus, the arteriogram performed after the thrombectomy was performed with a catheter introduced into the artery by guidewire manipulation.

Codes: Cannulation and angiogram of fistula – 36147, Selective catheterization of 1st order artery - 36215, Venous angioplasty – 35476, 75978, Thrombectomy – 36870, Arteriogram – 75710-59,

Discussion: Two different modalities were used to perform the thrombectomy, but they are both covered under the same code. Although two lesions were present and were treated from separate access sites, they were all within the same vessel, i.e., the fistula. Therefore only a single angioplasty code is warranted. Selective catheterization of the brachial artery was necessary. This warrants a selective code which takes precedence over the code for the second cannulation. An arteriogram was performed. The medical indication for this study was a thrombosed fistula.

Fistula Case 10 – Fistula and Anastomotic Stenosis

Referral: Failure for fistula to develop and poor flow

History:

- 44 year old female
- Brachial-cephalic fistula
- Two year old
- Poor flow

Physical Examination:

- Brachial-cephalic fistula
- Poor pulse augmentation
- Weak thrill
- Fistula collapsed with arm elevation



Lesion: Stenoses in fistula involving the anastomosis and the fistula 4 cm from anastomosis (Figure a).

Procedure: Angioplasty with a 6 X 4 angioplasty balloon (Figure b) to treat the anastomosis and with an 8 X 4 balloon to treat the adjacent fistula lesion (Figure c). Treatment was successful (Figure d). It was necessary to manipulate the guidewire with a vascular catheter to catheterize the brachial artery in order to pass the angioplasty balloon. After these two angioplasties, pulse augmentation was found to be excellent, however, an arteriogram was done anyway.

Analysis: There are two separate distinct lesions. One involves the anastomosis and the second involves the fistula several cm above the anastomosis.

Codes: Cannulation and angiogram of fistula – 36147, Arterial angioplasty – 35475, 75962.

Discussion: In this case both the anastomosis and the fistula were involved and both were treated successfully. Although the two lesions were separate, they are both within the access vessel. Therefore only one code can be used. When the 35475 and 35476 code pair is used, the arterial code is a column 1 code and the venous is column 2. This means that the arterial code should be listed as the only code. The arteriogram was not coded because physical examination of the access after the stenotic lesions present within the access were treated indicated good arterial inflow with excellent pulse augmentation so there was no medical indication. Selective catheterization of a 1st order artery was not coded since this was done in order to accomplish the angioplasty procedure only and this is bundled with that code.

Graft Case 1 – Simple Angioplasty of Graft

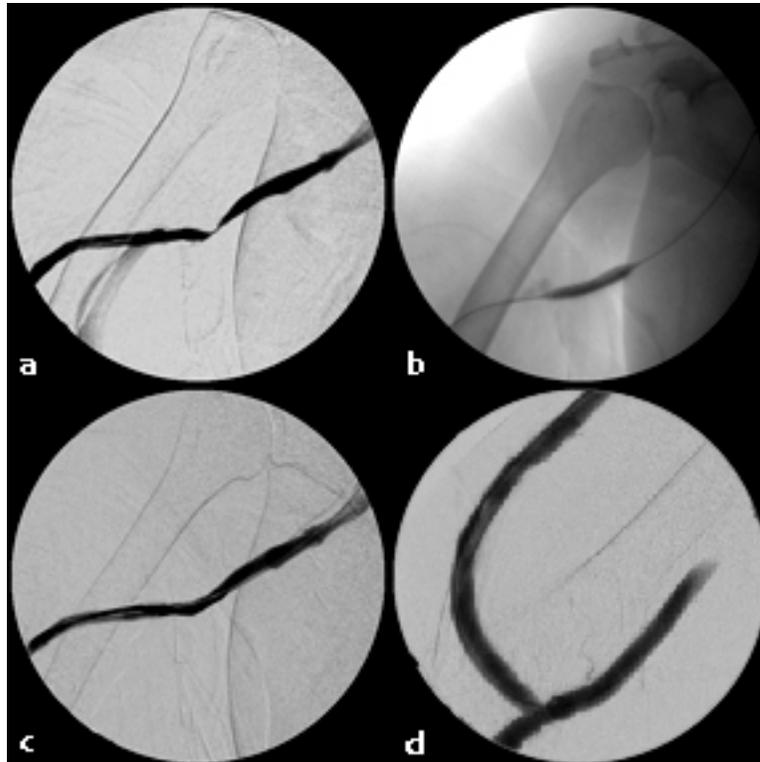
Referral: Poor flow.

History:

- 58 year old female
- Upper arm straight graft
- 2 years old
- Decreasing flow over past 3 months

Physical Examination:

- Upper arm straight graft
- Hyper-pulsatile
- Strong thrill at venous anastomosis



Lesion: Stenosis at venous anastomosis (Figure a).

Procedure: Angioplasty with an 8X 4 angioplasty balloon. Treatment was successful (Figure c). An angiogram was done to view arterial anastomosis with adjacent artery (Figure d). An arteriogram was performed.

Analysis: The graft had a simple lesion. There is stenosis of the anastomosis.

Codes: Cannulation and angiogram of graft – 36147, Venous angioplasty – 35476, 75978.

Discussion: This was just a straight forward angioplasty of a venous anastomosis lesion in a straight upper arm graft. A second code for an angioplasty would not be generated until one reached the central veins. Although the venous drainage up through the central veins was examined angiographically, it is all bundled under the basic code for the angiogram of the access. An arteriogram was performed, but there was no medical indication for it. Therefore it was not coded.

Graft Case 2 – Angioplasty of Graft (Multiple Arterial Angioplasties)

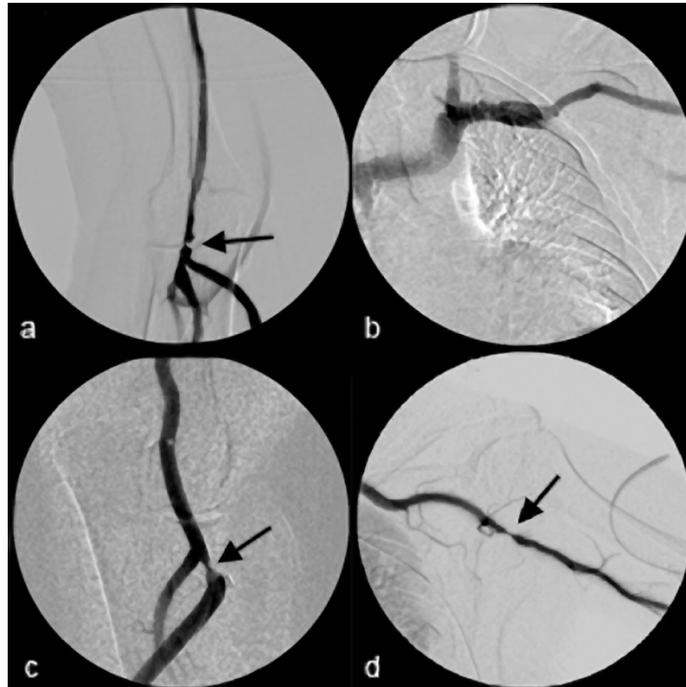
Referral: Poor flow.

History:

- 48 year old female
- Forearm loop graft
- 3 years old
- Decreasing flow over past 3 months

Physical Examination:

- Forearm loop graft
- Decreased pulse
- Strong thrill at venous anastomosis
- Poor augmentation



Lesion: Stenosis was present at the venous anastomosis (Figure a), at the arterial anastomosis (Figure c), and in the axillary artery (Figure d)

Procedure: Two cannulations were performed. An arteriogram was performed to visualize the feeding artery up through the subclavian artery. Angioplasty of venous anastomosis with an 8 X 4 angioplasty balloon. Selective catheterization of the brachial artery. An angioplasty of the arterial anastomosis and axillary artery was performed with a 6 X 4 balloon. Treatments were successful. An angiogram was done to view the central veins (Figure b).

Analysis: The graft had three stenotic lesions. Two affect the graft itself – the venous and the arterial anastomoses. One was distant to the graft – the axillary artery.

Codes: Cannulation and angiogram of graft – 36147, Arteriogram – 75710-59, 1st Arterial angioplasty – 35475, 75962, 2nd Arterial angioplasty – 35475-59, 75964, Selective catheterization of 1st order artery - 36215.

Discussion: In this case both the arterial and venous anastomoses were stenotic and were treated. Only one angioplasty code can be used, hence the 35475. Since 35475 is a column 1 code, when this code is paired with 35476, it should be the one that is used. Selective catheterization of the brachial artery was done and should be coded as 36215 because it was done in order to visualize the arterial anatomy. One cannulation code (36148) was dropped in favor of the selective code. The lesion in the axillary artery should be coded using the 35475 code since this is not part of the access. It should have a 59 modifier attached.

Graft Case 3 – Angioplasty with Multiple Lesions (Single Angioplasty)

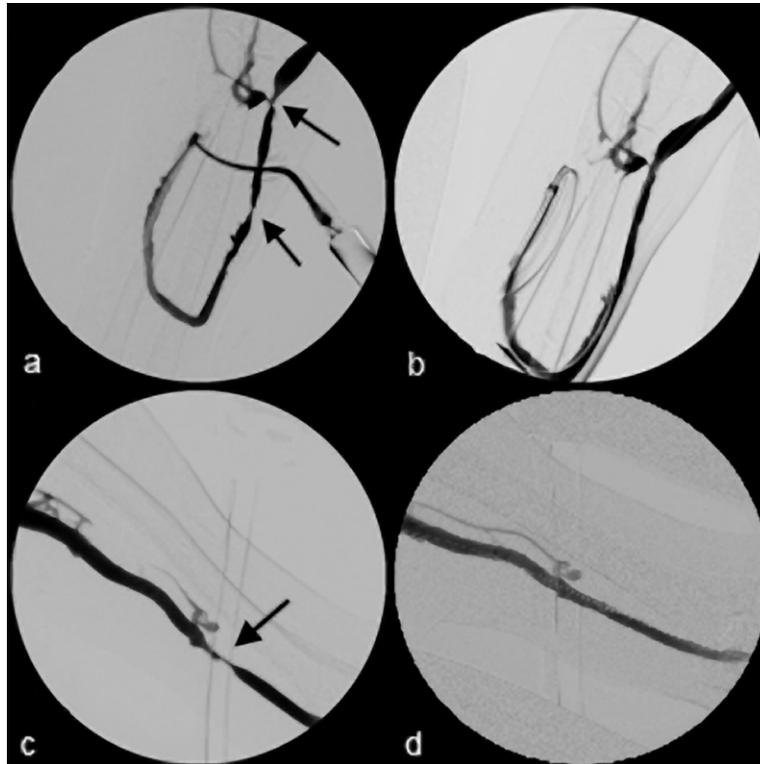
Referral: Poor flow.

History:

- 44 year old male
- Forearm loop graft
- 5 years old
- Frequent clotting

Physical Examination:

- Forearm loop graft
- Hyper-pulsatile
- Strong thrill at venous anastomosis
- Very scarred



Lesion: Stenosis in graft and at the venous anastomosis (Figure a), Stenosis in mid basilic vein (Figure c)

Procedure: Angioplasty of graft, venous anastomosis and mid basilic lesions (Figures b and d)

Analysis: This case had three stenotic lesions. Two were associated with the graft, the other the mid portion of the basilic vein.

Codes: Cannulation and angiogram of graft – 36147, Venous angioplasty – 35476, 75978,

Discussion: In this case there were actually three lesions present; however, they should all be bundled together since they were either within the graft (the mid-graft lesion and the venous anastomosis) or the peripheral draining vein. A second lesion is coded only when there is a lesion within the central veins and this would warrant a 35476/75978.

Graft Case 4 – Angioplasty with Multiple Lesions (Multiple Angioplasty Codes)

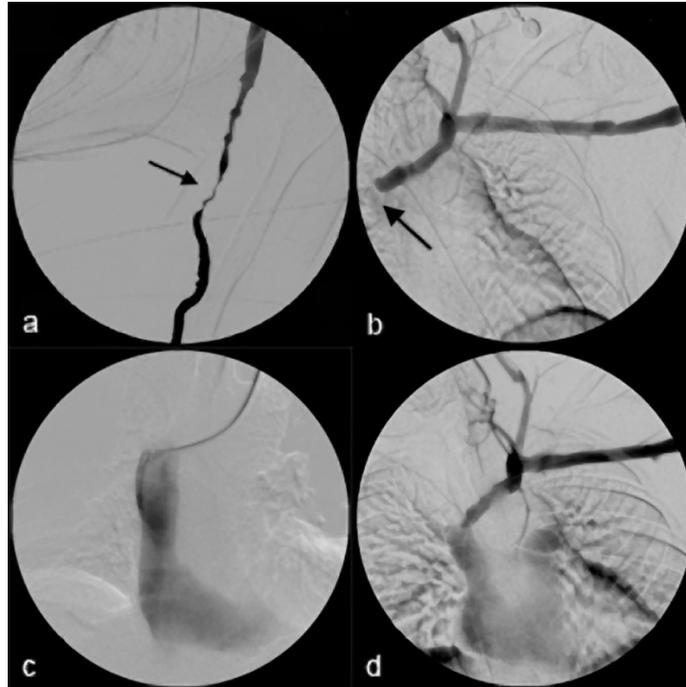
Referral: Poor flow.

History:

- 64 year old female
- Forearm loop graft
- 4 years old
- Swelling of arm

Physical Examination:

- Forearm loop graft
- Hyper-pulsatile
- Strong thrill at venous anastomosis
- Swollen arm



Lesion: Stenosis in basilic vein (Figure a), Apparent obstruction of junction between left brachiocephalic vein and superior vena cava (Figure b)

Procedure: Angioplasty of basilic vein with an 8 X 4 angioplasty balloon. Manipulation of guidewire to selectively catheterize the superior vena cava (Figure c), Angiogram of superior vena cava (Figure c), Angioplasty of brachiocephalic lesion (Figure d)

Analysis: This case had 2 stenotic lesions. One affects the basilic vein, the other the brachiocephalic vein.

Codes: Cannulation and angiogram of graft – 36147, 1st venous angioplasty – 35476, 75978, 2nd venous angioplasty – 35476-59, 75978-59

Discussion: In this case there appeared to be a complete obstruction of the brachiocephalic vein making it impossible to visualize the SVC. With a history of central venous catheters it was medically important to know how extensive the stenosis was. Selective catheterization of the SVC was done. Nevertheless, it is bundled with 36147 and should not be coded separately. The first angioplasty should be considered to be within the graft which by definition extends to the central veins. Since the second angioplasty was in a central vein, coding it as a separate procedure with a 59 modifier is warranted. This should be carefully documented to demonstrate to review that the second lesion was outside of the access.

Graft Case 5 – Simple Thrombectomy (Two cannulations)

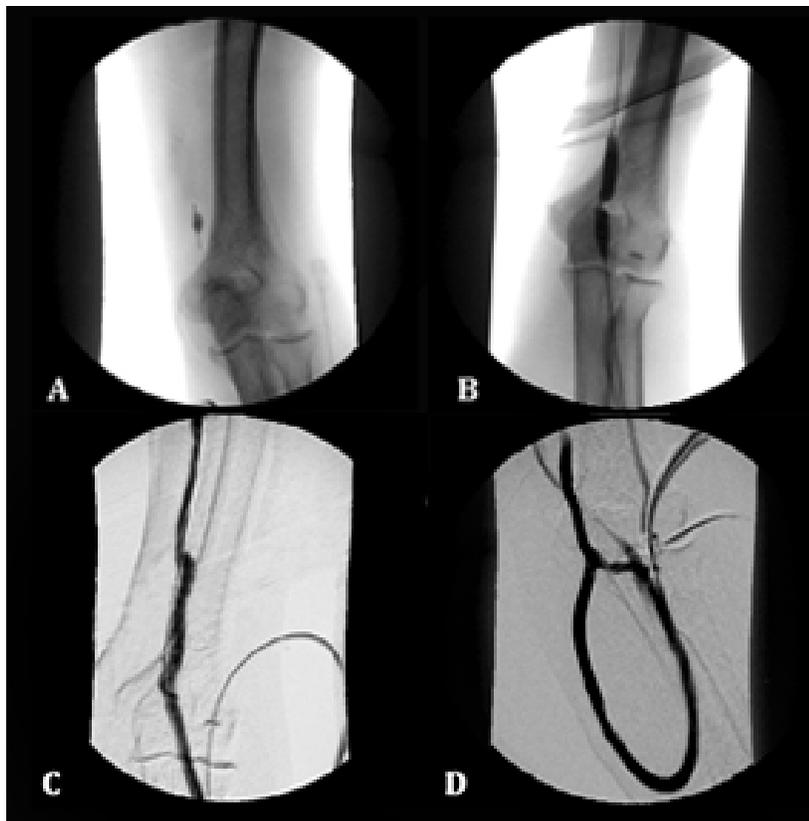
Referral: Thrombosed graft

History:

- 48 year old male
- Forearm loop graft
- 3 years old
- 2nd clotting episode

Physical Examination:

- Forearm loop graft
- No pulse
- No thrill
- No evidence of infection



Lesion: Stenosis in graft at venous anastomosis (Figure b and c)

Procedure: Thrombectomy performed by thromboaspiration using a Fogarty catheter (figure a). The procedure required an approach from two different access sites. The arterial anastomosis was open (Figure d). The thrombectomy was not complicated. An arteriogram was performed to visualize the feeding artery up through the subclavian.

Analysis: This was a simple thrombectomy which required two cannulations.

Codes: Cannulation and angiogram of graft – 36147. Second cannulation (for therapeutic purposes) – 36148. Arteriogram – 75710-59, Thrombectomy – 36870, Venous angioplasty – 35476, 75978.

Discussion: The graft was cannulated twice; one of these codes was bundled with the angiogram of the access. This was coded with the 36147 code. The second cannulation was coded with the code used for a cannulation performed for therapeutic purposes – 36148. The stenosis at the venous anastomosis was given the usual venous angioplasty code. The arteriogram was warranted because of the thrombosed graft as an indication of poor flow.

**Graft Case 6 –Thrombectomy
(With Multiple Angioplasties and Arterial Embolus)**

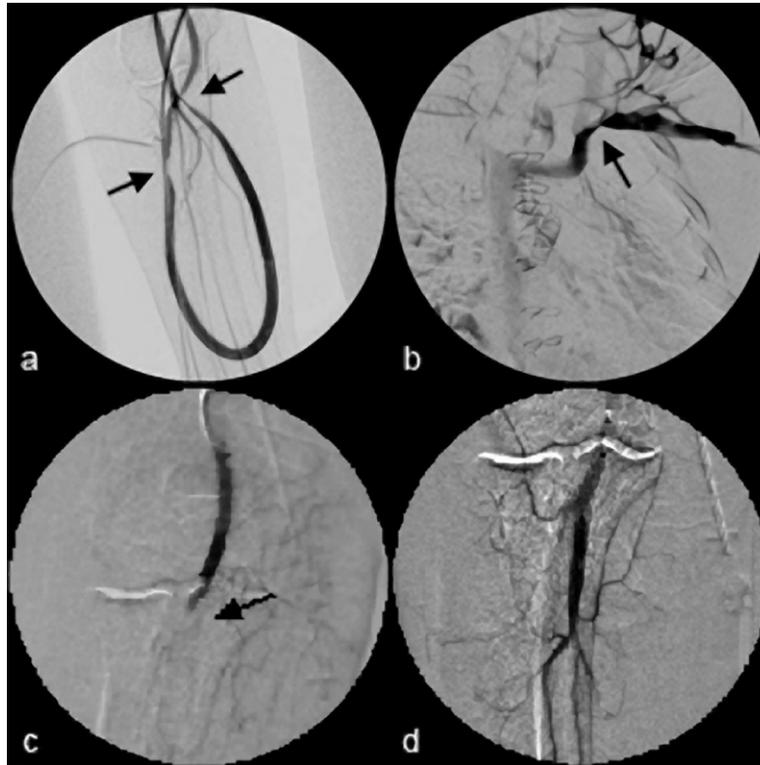
Referral: Thrombosed graft

History:

- 52 year old male
- Forearm loop graft
- 4 years old
- Frequent clotting

Physical Examination:

- Forearm loop graft
- No pulse
- No thrill
- Very scarred



Lesion: Stenosis in graft on arterial side and at anastomosis (Figure a), Stenosis in subclavian vein (Figure b)

Procedure: Thrombectomy performed. The two angioplasties in the graft, required an approach from two different access sites (Figure a). Angioplasty of the subclavian lesion (Figure b). At end of procedure patient had symptoms of arterial occlusion. Embolus found in brachial artery (Figure c) which was removed (Figure d).

Analysis: The graft had two stenotic lesions. There was a separate lesion in subclavian. An embolus occurred as a complication which required treatment.

Codes: Cannulation and angiogram of graft – 36147, Selective catheterization of 1st order artery – 36215, Arteriogram – 75710-59, Thrombectomy – 36870, 1st venous angioplasty – 35476, 75978, 2nd venous angioplasty – 35476-59, 75978-59, Embolectomy – 37186-59

Discussion: The graft was cannulated twice; one of these codes was dropped when the selective catheterization code 36215 was used as it was in connection with the embolectomy. The two stenoses within the graft warrant only a single code even though they were done via separate access sites. The brachiocephalic lesion warrants a separate code since it is within the central vein area. It has a 59 modifier attached to indicate that it is a separate procedure. Treatment of the embolectomy warrants a code. The code 37186 needs to have a 59 modifier attached when used in this manner to indicate that it is a separate procedure.

Graft Case 7 – Delayed Embolectomy (Day after thrombectomy)

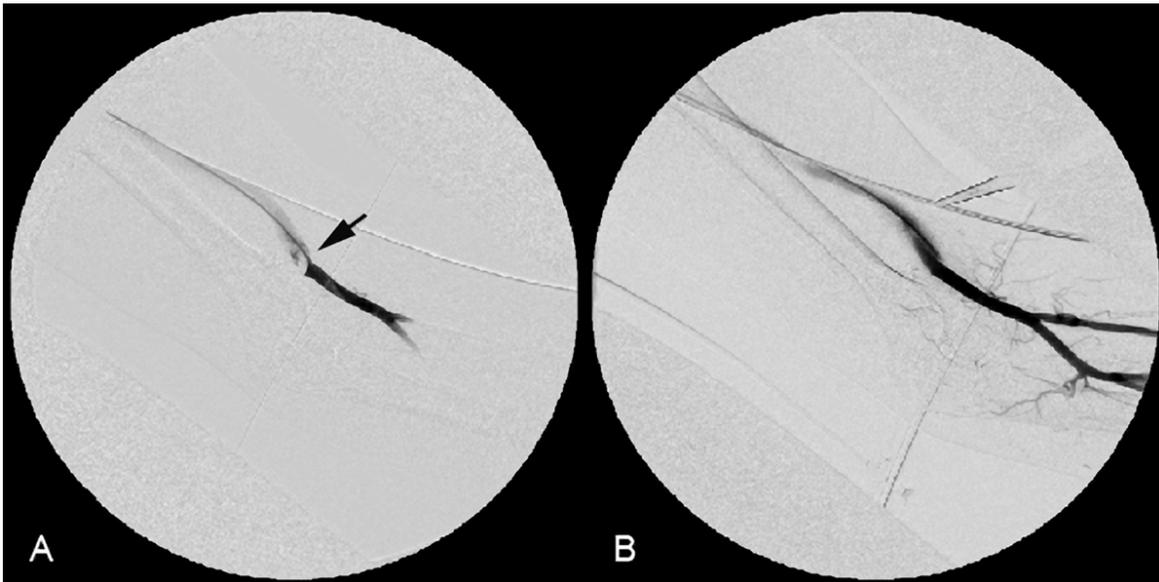
Referral: Left hand pain noted at dialysis the day following a graft thrombectomy

History:

- 47 year old male
- Upper arm graft
- 3 years old
- Clotted and had successful thrombectomy
- Next day hand pain

Physical Examination:

- Forearm loop graft, functioning
- No radial pulse
- Hand cold, cyanotic, mottled
- Opposite hand warm, good radial pulse



Lesion: Embolus in the brachial artery (Figure A), Appearance after embolus removed (Figure B)

Procedure: The graft was cannulated in a retrograde direction and an angiogram was performed to identify the various structures present. The guidewire would not pass down into the distal brachial artery so it had to be manipulated using a vascular catheter. An arteriogram was performed which showed a thrombus in the brachial artery. A 6 X 2 angioplasty balloon was passed over the guidewire to a level beyond the embolus. The balloon was inflated and pulled back to remove the clot. A post procedure angiogram was performed which showed that the brachial artery was clear and that there was distal flow.

Analysis: The patient had a delayed symptomatic embolus to the brachial artery following a successful thrombectomy the day before.

Codes: Angiogram of graft – 75791, Selective catheterization of 1st order artery – 36215, Arteriogram – 75710-59, *In situ* thrombectomy 37184

Discussion: In this case the usual embolectomy code cannot be used because it is an add-on code and cannot be used without the use of a primary code, in this case the thrombectomy code. In this instance the appropriate code to use in the code for the removal of an *in situ* thrombus.

Graft Case 8 – Thigh Graft with Venous and Arterial Stenoses

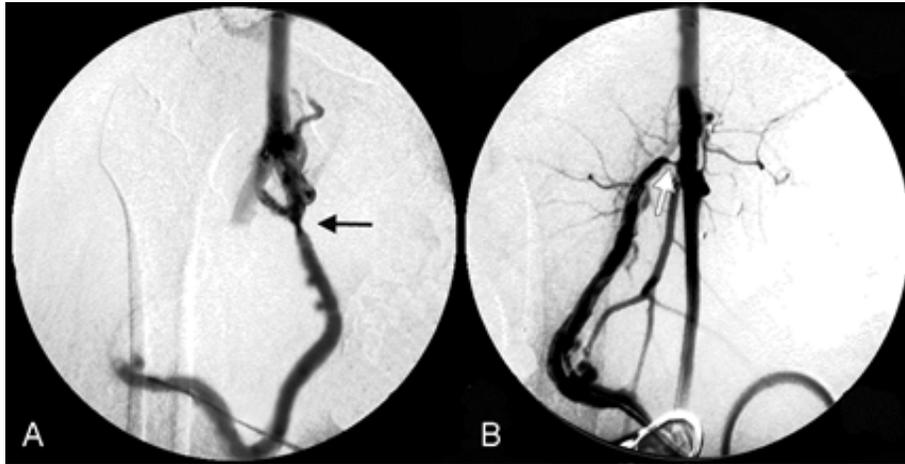
Referral: Thigh graft with poor flow

History:

- 58 year old male
- Loop graft in right thigh, 3 yr. old
- Progressively falling flow rate

Physical Examination:

- Thigh loop graft, functioning
- Multiple small pseudoaneurysms



Lesion: Two stenotic lesions were detected. Figure A (arrow) venous anastomosis stenosis, Figure B (white arrow) arterial anastomosis stenosis (anastomosis with femoral artery)

Procedure: The graft was cannulated in an antegrade direction. An angiogram was performed to evaluate the venous anastomosis, the access and the draining veins. A venous angioplasty was performed to treat the lesion at the venous anastomosis. The graft was then cannulated a second time in a retrograde direction. A catheter was passed up to the level of the aorta and an arteriogram was performed to evaluate the feeding arteries. The lesion at the arterial anastomosis was dilated with an angioplasty balloon. A post PTA angiogram was then performed via a catheter placed in the iliac artery.

Analysis: There are two stenotic lesions present. One was arterial, at the anastomosis, and one is venous, at the venous anastomosis.

Codes: Arterial angioplasty in femoral/popliteal territory - 37224, arteriogram of extremity - 75710, cannulation and access angiogram - 36147

Discussion: The coding of this case involves rules that relate to both angioplasty of the dialysis access and to lower extremity revascularization (LER). Proper application of codes will require a blending of the two. The arterial anastomosis would be coded as for a lesion in the femoral/popliteal (37224) territory. Both an arterial and a venous angioplasty were performed within the access; however, 35476 is a column 2 code to the LER code and should not be used. The first cannulation is bundled with the LER code (37224). Since the second cannulation is the first one not bundled, it would be coded as 36147 which also includes the access angiogram. The arteriogram should be coded separately as 75710 since diagnostic angiograms are not bundled with the LER codes.

Stent Case 1 –Angioplasty with Vein Rupture (Stent Placement)

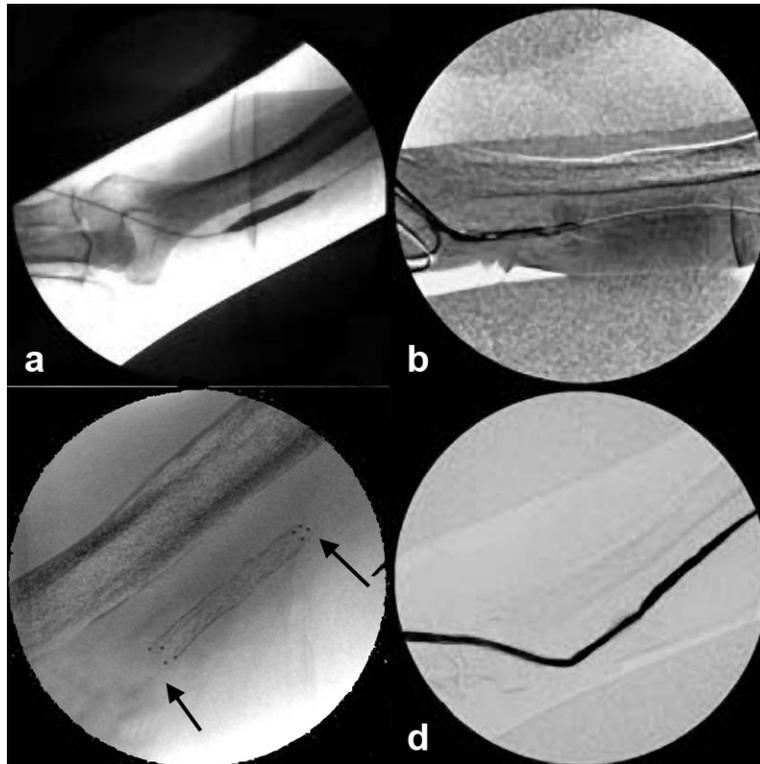
Referral: Poor flow

History:

- 47 year old male
- Forearm loop graft
- 4 years old
- Several prior angioplasties

Physical Examination:

- Forearm loop graft
- Hyper-pulsatile
- Thrill just above elbow



Lesion: Stenosis in basilic vein (Figure a)

Procedure: Angioplasty performed with an 8 X 4 balloon, stent placement to treat vein rupture.

Analysis: The angioplasty resulted in a complication – vein rupture (Fig b). This did not respond to the conservative technique of balloon tamponade and a stent was placed (Figure c). This gave a good result (Figure d).

Codes: Cannulation and angiogram of graft – 36147, Venous angioplasty – 35476, 75978, Stent placement – 37205, 75960

Discussion: A straight forward angioplasty was performed, but resulted in a complication – vein rupture. This required the placement of a stent. Coding for this complication is warranted. The stent code – 37205 has a companion code for radiological supervision and interpretation – 75960.

Stent Case 2: Two Stents in the Same Vessel

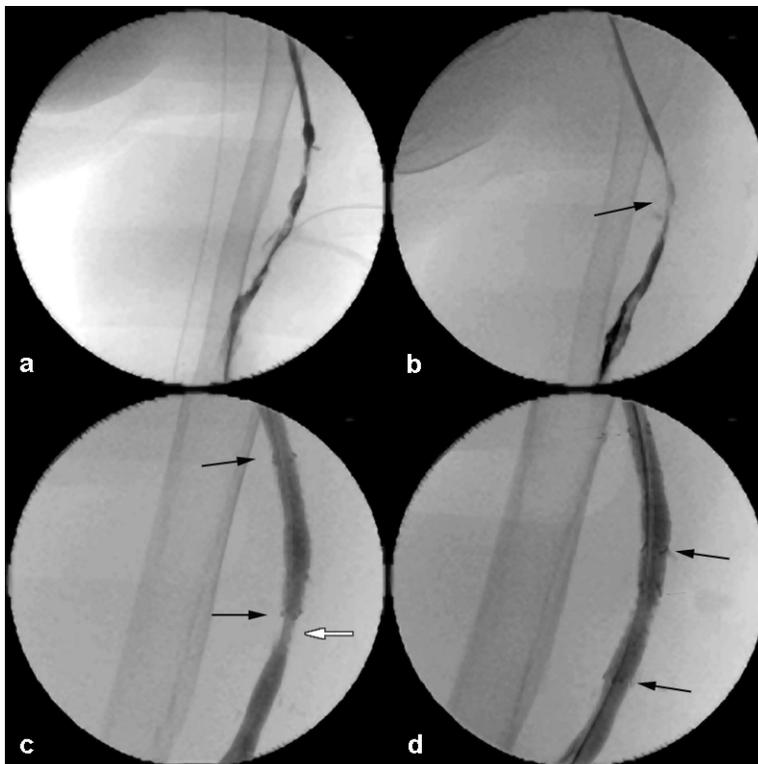
Referral: Thrombosed AVF

History:

- 65 year old female
- ESRD for 6yrs
- Brachiocephalic AVF
- Multiple prior angioplasties

Physical Examination:

- Left upper brachiocephalic AVF
- No flow - thrombosed
- No aneurysms
- Brachial artery palpable



Procedure: Thrombectomy of the left upper arm brachiocephalic fistula was performed (Figure a). After angioplasty, a tight lesion in the upper fistula was noted to have elastic recoil (Figure b - arrow). A self expanding stent was placed (Figure c - arrows). The stent did not cover the entire lesion (Figure c - white arrow). Another self expanding stent was positioned and deployed (Figure d - arrows).

Analysis: The first stent did not cover the entire lesion so a second stent was placed for full correction of the lesion.

Codes: Cannulation and angiogram of fistula – 36147, Thrombectomy – 36870, Venous angioplasty – 35475, 75978, Stent placement – 37205, 75960

Discussion: This was a case of a fistula thrombectomy associated with a stenotic lesion that required stenting because of elastic recoil. The stent code was used only once because only a single vessel, the access, was stented.

Stent Case 3: Peripheral Vein with Stent

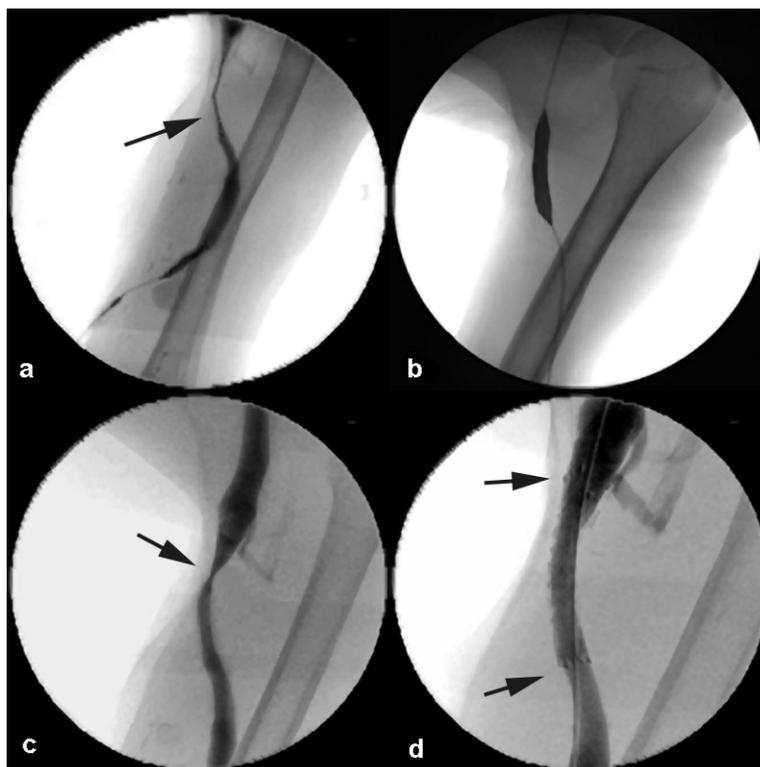
Referral: Patient was referred for low flow and high venous pressures

History:

- 57 year old male
- ESRD for 5 yrs
- Low flow
- High venous pressure

Physical Examination:

- Left brachial-basilic fistula
- Hyperpulsatile
- Thrill over upper fistula



Procedure: 90% outflow stenosis in upper fistula at swing point (Figure a – arrow). Angioplasty done with an 8 mm balloon, full effacement obtained (Figure b). Recoil was noted with a 70% recurrence (Figure c - arrow). A self expanding 10 mm stent was positioned and deployed successfully across the lesion (Figure d - arrows)

Analysis: The stenotic lesion was treated with standard angioplasty, but there was a marked degree of elastic recoil. A stent was placed for the recoil

Codes: Cannulation and angiogram of fistula – 36147, Venous angioplasty – 35476, 75978, Stent placement – 37205, 75960

Discussion: This was a simple straight forward case in which a stent was used to treat severe elastic recoil.

Stent Case 4: Central Venous Stenosis Treated with a Stent

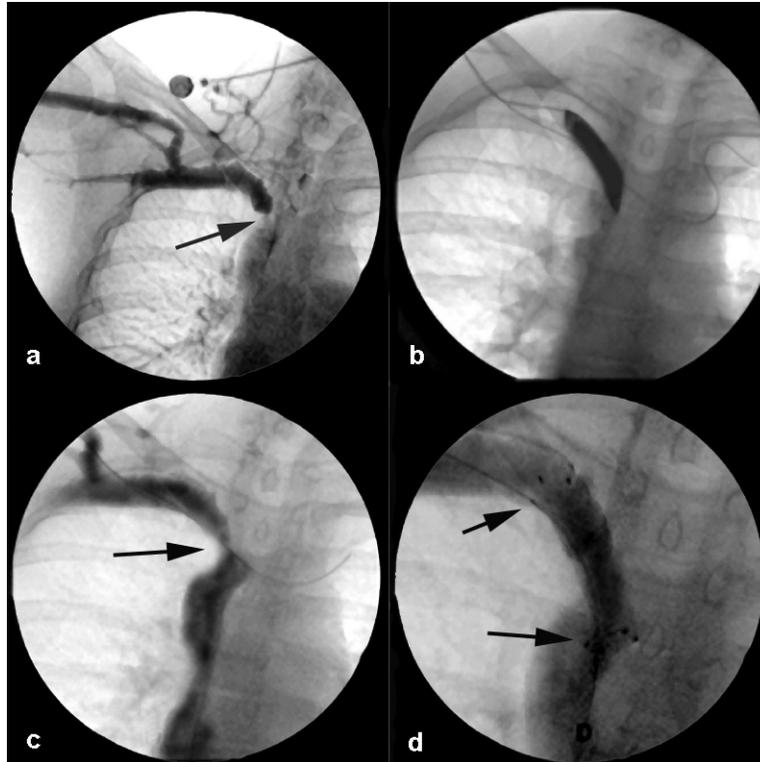
Referral: Patient referred for suspicion of central vein stenosis

History:

- 46 year female
- Right IJ catheter for 4 months
- Arm swelling
- Prolonged bleeding and hyper-pulsatility

Physical Examination:

- Brachial-cephalic AVF right upper arm
- Hyperpulsatile
- Dilated veins over right shoulder and chest



Procedure: >90% stenosis of the right brachiocephalic vein (Figure a - arrow). Angioplasty with a 12 mm balloon (Figure b), complete effacement was obtained. Follow-up angiogram showed recoil and residual stenosis of 50% (Figure c - arrow). A 12 mm self expanding stent was placed (Figure d - arrows). The left brachiocephalic vein was selectively catheterized and a second guidewire was passed into the left subclavian and left in place to mark the location of the beginning of the SVC.

Analysis: A routine angioplasty was performed for right brachiocephalic stenosis. Followup angiogram demonstrated recoil of 50%. A self-expanding stent was deployed.

Codes: Angiogram of fistula – 75791-59, Venous angioplasty – 35476, 75978, Stent placement – 37205, 75960, Selective catheterization of 1st order vein – 36011.

Discussion: This was a case with severe stenosis of the brachiocephalic vein secondary to previous central venous catheters. Standard angioplasty was inadequate, necessitating a stent placement. The operator felt that marking the location of the beginning of the SVC was medically indicated. Because of the selective catheterization of the left brachiocephalic vein the code for selected catheterization of a 1st order was warranted. In this situation the selective catheterization code 36011 is justified since the vessel selectively catheterized was not part of the access system. Because of the use of the higher order cannulation code 36011, the cannulation of the access is dropped and the angiogram of the access coded with 75791-59. The 59 modifier is required because of simultaneous use of both a diagnostic and a therapeutic 7XXXX code.

Vascular Mapping Case 1 – Bimodal Mapping

Referral: Vascular mapping



Coding: The coding of this case is dependent upon the patient's history of prior accesses. If there has never been an arteriovenous access, then a G code would be used. If the Patient has had a previous arteriovenous access, then component codes would be used. If the mapping is done only by ultrasound, then ultrasound of both the artery and vein would be coded. If only angiographic mapping was done, then obviously there would be no ultrasound codes. Where both modalities are used, the basic principle that governs which codes to use is the fact that you can code for imaging by two modalities. A code for cannulation and injection of contrast – 36005, can be used when angiographic studies are done regardless of whether the G code is used or not.

Bimodal study – No prior A-V access - Cannulation and injection – 36005, Vascular mapping - G0365
Prior A-V access - Cannulation and injection – 36005, Venogram of single arm – 75820, Angiogram of SVC – 75827, Ultrasound of artery - 93931

PD Case 1 – Insertion Using Interventional Techniques

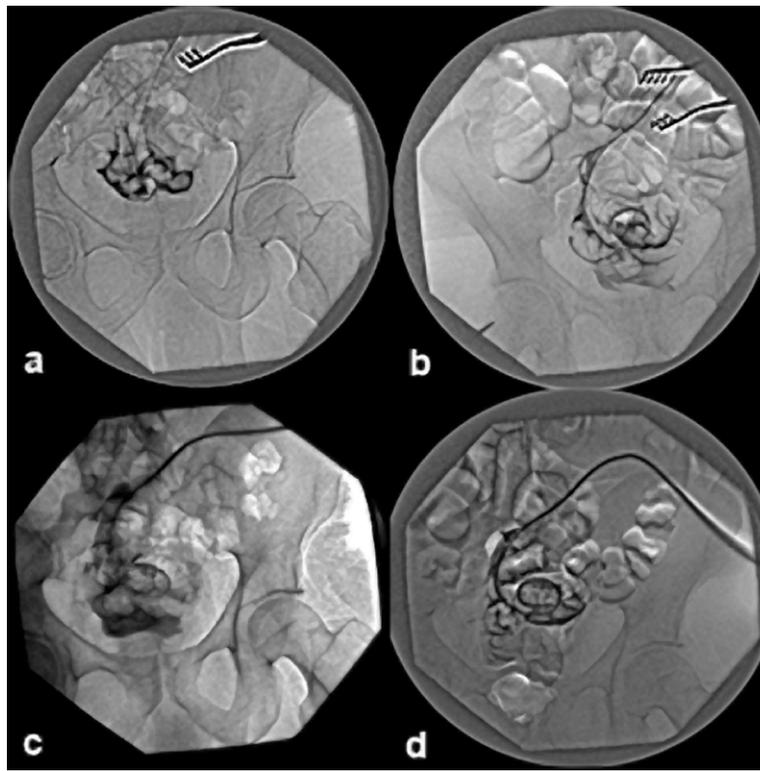
Referral: Need to start peritoneal dialysis

History:

- 60 year old male
- Declining renal function over 2 years
- Needs to start dialysis, prefers PD
- No access

Physical Examination:

- No surgical scars
- No hernias



Procedure: Ultrasound was utilized to determine the thickness of the panniculus, the absence of underlying bowel and the position of the inferior epigastric artery during the procedure. After incising and dissecting to the peritoneum, the abdomen was entered with a micropuncture needle and a 5 Fr catheter was threaded into the peritoneum. Contrast injection confirmed the position of the catheter (Fig a). Using a stiff wire, dilators and tunneling tools a PD catheter was inserted and its position confirms by contrast injection (Figs b and c). Contrast injection confirmed the absence of kinks in the catheter tunnel (Fig d).

Analysis: this was an uncomplicated insertion of a PD catheter using standard Seldinger interventional/radiologic technique.

Codes: U/S guidance (intra-operative) – 76998, insertion of PD catheter including contrast injection – 49418, injection air/contrast into the peritoneal cavity – 74190

Discussion: this case represented a straight forward uncomplicated example of a PD catheter inserted into the abdomen using the Seldinger interventional/radiologic technique.

Note: Be sure to document imaging in note and with a saved image.

PD Case 2: Catheter Insertion by Peritoneoscopy

Referral: Needs to begin dialysis. Patient chooses to have peritoneal dialysis

History:

- 49 year old male
- Has had education in dialysis options
- Has not yet begun dialysis
- No prior abdominal operations

Physical Examination:

- Neck and thorax normal
- Abdomen flat with no surgical scars or hernias
- Palpation shows no abdominal masses and no hepatic or splenic enlargement.

Procedure: Under local anesthesia the abdomen was insufflated with air; a peritoneoscope was introduced; and peritoneoscopic exploration of the abdomen performed. No abnormalities were seen. The tract was then dilated and a swan neck peritoneal dialysis catheter placed without difficulty.

Analysis: This was an uncomplicated peritoneal dialysis catheter placement.

Codes: Laparoscopic placement of peritoneal dialysis catheter – 49324

Discussion: This case is coded with 49324 because no imaging was performed. The procedure for injection of air or contrast may be bundled with either the laparoscopic or radiologic method of PD catheter insertion.

PD Case 3: Catheter Insertion by Laparoscopy with Ultrasound

Referral: Patient chooses to have peritoneal dialysis. Is presently receiving hemodialysis via a tunneled HD catheter

History:

- 60 year old female
- Past history of an appendectomy, abdominal hysterectomy and two cesarean sections

Physical Examination:

- Catheter in right IJ
- Thorax is normal
- Well healed lower midline surgical scarring
- Abdomen nontender with no masses

Procedure: After prepping and draping B-mode ultrasound scanning was performed and free movement of the viscera was seen in the region of the planned trocar insertion. The abdomen was insufflated with a CO2 and explored laparoscopically. Adhesions were seen in the right lower quadrant. The catheter was placed in the left side of the pelvis and functioned well.

Analysis: This was an uncomplicated laparoscopic peritoneal dialysis catheter placement aided by intraoperative ultrasound.

Codes: Intraoperative Ultrasound – 76998. Laparoscopic peritoneal dialysis catheter placement – 49418

Discussion: Indications for intraoperative ultrasound include identification of the epigastric vessel to avoid injury and avoiding areas of peritoneal adhesions this should be documented. Otherwise, this is a straight forward PD insertion. . The procedure for injection of air or contrast is bundled with either the laparoscopic or radiologic method of PD catheter insertion.

Note: Be sure to document imaging in note and with a saved image.

PD Case 4: Injection and Manipulation of Peritoneal Dialysis Catheter

Referral: Dysfunctional peritoneal dialysis catheter

History:

- 50 year old male
- Had peritoneal dialysis catheter placed 6 months ago by peritoneoscopy
- No other prior abdominal operations
- Had recent attack of treated peritonitis and has begun having sluggish drainage of the CAPD catheter.

Physical Examination:

- Neck and thorax were normal
- Well healed scar from peritoneoscopic PD catheter placement
- Peritoneal dialysis catheter exited in the left lower quadrant.
- Abdomen had mild diffuse tenderness with *no masses*.

Procedure: Radio contrast was injected into the peritoneal dialysis catheter under fluoroscopy and seen to spill only out of the proximal side hole of the catheter. A hydrophilic guidewire was placed through the catheter to clear intraluminal obstruction. The guidewire was advanced and manipulated to disrupt pericatheter adhesions. Follow up radio contrast injection demonstrated free spill into the peritoneal cavity.

Analysis: This was an injection and manipulation of the PD catheter under fluoroscopy.

Codes: Injection of peritoneal dialysis catheter – 49400, supervision and interpretation code 74190.

Discussion: If the catheter is manipulated under fluoroscopy but not injected with radio contrast then the general fluoroscopy code 76000 should be used. If the guidewire is also used to manipulate the position of the catheter, this would be coded as an unspecified peritoneal procedure - 49999.

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