


# ICD-10-PCS

AHIMA
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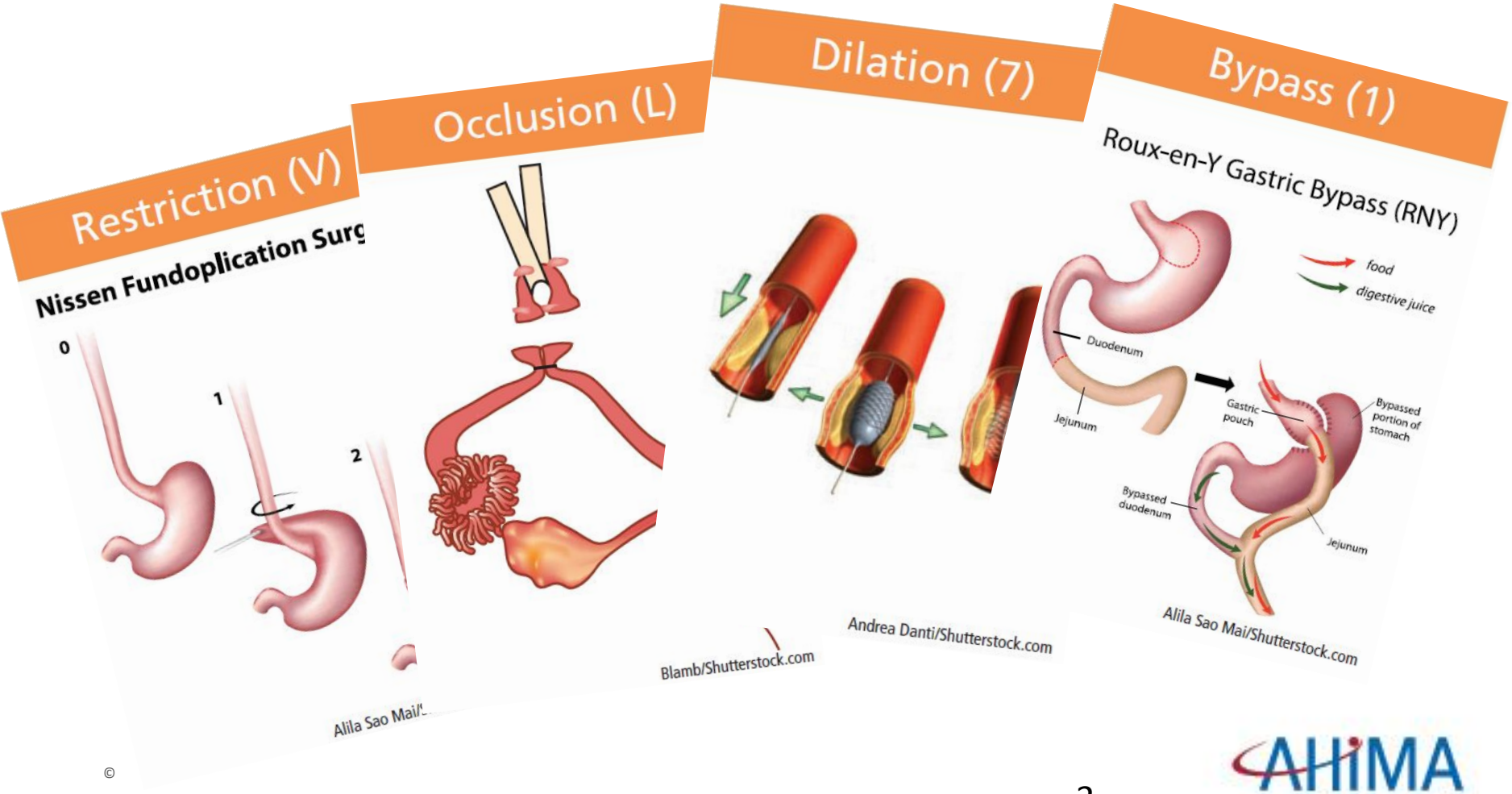
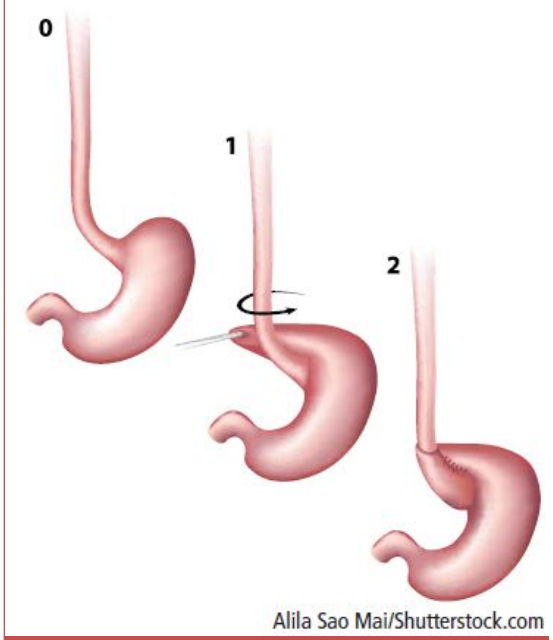
# Root Operations Group - 5

# Root Operations That Alter the Diameter/Route of a Tubular Body Part



# Restriction (V)

| Restriction (V) | | |
|---|---|---|
|  | **Definition** | **Partially closing an orifice or the lumen of a tubular body part** |
| | Explanation | The orifice can be a natural orifice or an artificially created orifice |
| | Examples | Esophagogastric fundoplication, cervical cerclage |

**Coding Note:** Since intraluminal or extraluminal clips are frequently used to accomplish the objectives of **Restriction** and **Occlusion** procedures, careful review of the operative report is required. Research on the procedure technique may also be helpful.

**Tip: When studying this root operation, it is helpful to review procedure methodology. The two examples given above may require some research.**

In the esophagogastric fundoplication, the gastric fundus of the stomach is wrapped (or plicated) around the lower end of the esophagus, which reinforces the esophageal sphincter closing function. The surgery actually strengthens the valve between the esophagus and the stomach and it is used to treat gastric reflux disease. A common technique used in fundoplication is the Nissen.

The cervical cerclage is done for an incompetent cervix. The cerclage is used to prevent early changes in a woman's cervix, thus preventing premature labor. During the procedure, a band of strong thread is stitched around the cervix.

# Case To Code

The procedure performed is an embolization of the anterior cerebral artery aneurysm. The surgeon made a very small nick in the skin and using image-guidance, the catheter is inserted through the skin and advanced to the anterior cerebral artery. Next the detachable coated platinum coils are inserted through the catheter and placed within the aneurysm for embolization.

# Case Answer

| | |
|---|---|
| 03VG3DZ | Root Operation: Restriction |
| | Restriction, Artery, Intracranial |

# Case Table

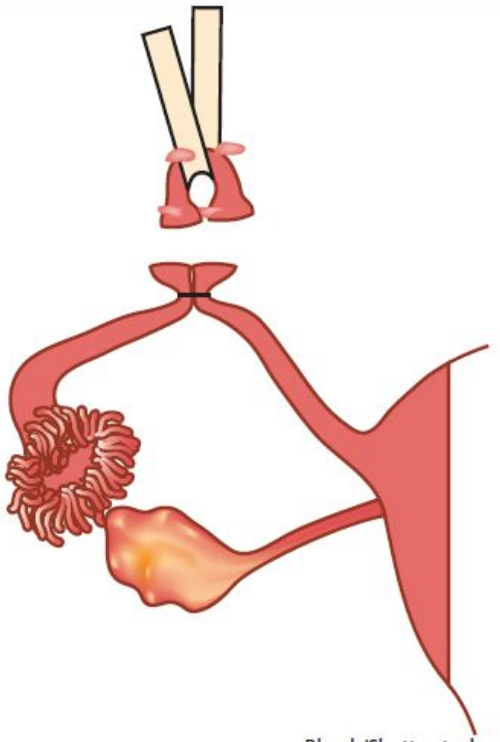
| Section | Medical and Surgical | 0 |
|---|---|---|
| Body System | Upper Arteries | 3 |
| Root | **Restriction** | V |
| Body Part | Intracranial Artery | G |
| Approach | Percutaneous | 3 |
| Device | Intraluminal Device | D |
| Qualifier | No Qualifier | Z |

# Rationale

The anterior cerebral artery does not have its own body part value in ICD-10-PCS. Utilizing the Alphabetic Index in the code book, the anterior cerebral artery maps to the intracranial artery body part in ICD-10-PCS. A cerebral aneurysm is also known as an intracranial or intracerebral aneurysm and is a weak area on a blood vessel in the brain that balloons out and fills with blood. The device value for the coated platinum coils is D, Intraluminal Device. Utilizing the Device Key or the Alphabetic Index the term Embolization coils maps to an Intraluminal Device.

**Tip: A related procedure that can also be done for this type of condition is an Occlusion, in which the surgeon clamps off (occludes) the entire artery that leads to the aneurysm. This procedure is often performed when the aneurysm has damaged the artery.**

# Occlusion (L)

| Occlusion (L) | | |
|---|---|---|
|  Blamb/Shutterstock.com | **Definition** | **Completely closing an orifice or the lumen of a tubular body part** |
| | Explanation | The orifice can be a natural orifice or an artificially created orifice |
| | Examples | Fallopian tube ligation, ligation of inferior vena cava |

# Occlusion

- The root operation **Occlusion** is coded when the objective of the procedure is to close off a tubular body part or orifice.
- **Occlusion** includes both *intraluminal and extraluminal methods* of closing off the body part.
- Division of the tubular body part prior to closing it is an integral part of the **Occlusion** procedure.

# Guideline B3.12: Occlusion vs. Restriction

- Completely closed off = **Occlusion**
- Narrow the lumen = **Restriction**
- Examples:
  - Tumor embolization = **Occlusion**
    - Cuts off blood supply to the vessel
  - Embolization of aneurysm = **Restriction**
    - Narrows the lumen of the vessel where it is abnormally wide

# Tips for Coding Embolizations

- Research on embolizations may be required to gain additional information about how the procedure is performed
- The purpose is to prevent blood flow to an area of the body
- Used during hemorrhage (i.e. arteriovenous (AV) malformation, cerebral aneurysms, GI bleeding, epistaxis, post-partum hemorrhage)
- Procedure has other uses, such as in the treatment of tumors and disorders of the portal vein
- An artificial embolus is introduced (coils, particles, foam, plugs)
- Common agents used to do this are sclerosing agents, ethanol, or Gelfoam
- In order to code occlusions and restrictions correctly, one must know if it is complete or partial, and physician documentation or additional physician query is essential

- **Tip: It is helpful to research the surgical procedure to assist with the understanding of this root operation. A fallopian tube ligation involves severing and sealing the tubes to prevent pregnancy. There are several different ways to accomplish this—with sutures, clips, rings. If the procedure is performed with electrocoagulation or cauterization, it is coded to *Destruction, not Occlusion*. Research on the way the rings and clips are applied will assist with information about the types of devices.**

# Case To Code

The patient underwent an exploratory laparotomy after presentation with severe urinary hemorrhage. During the procedure, an extensive adenocarcinoma of the left kidney with metastasis to the left lower lobe of the lung, great vessels, and lateral diaphragm was discovered. The tumor could not be removed therefore the left ureter was surgically ligated to prevent further urinary hemorrhage.

# Case Answer

0TL70ZZ Root Operation: Occlusion

Occlusion, Ureter, Left (0TL7)

Ligation *see* Occlusion

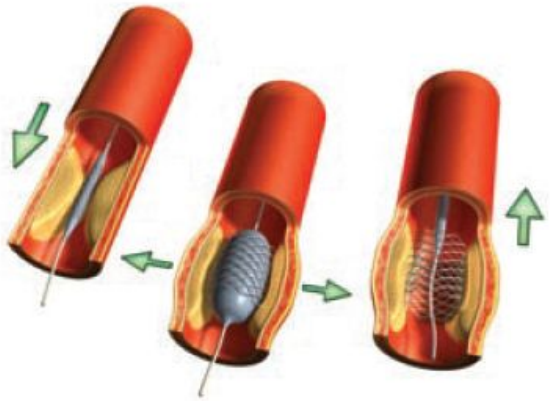
# Case Table

| Section | Medical and Surgical | 0 |
|---|---|---|
| Body System | Urinary System | T |
| Root | **Occlusion** | L |
| Body Part | Ureter, Left | 7 |
| Approach | Open | 0 |
| Device | No Device | Z |
| Qualifier | No Qualifier | Z |

# Rationale

**Index:** Ligation *see* Occlusion

# Dilation (7)

| Dilation (7) | |
|---|---|
|  Andrea Danti/Shutterstock.com | |
| **Definition** | **Expanding an orifice or the lumen of a tubular body part** |
| Explanation | The orifice can be a natural orifice or an artificially created orifice. Accomplished by stretching a tubular body part using intraluminal pressure or by cutting part of the orifice or wall of the tubular body part |
| Examples | Percutaneous transluminal angioplasty, percutaneous transluminal coronary angioplasty (PTCA), laryngeal stenosis dilation, dilation common bile duct. |

# Dilation

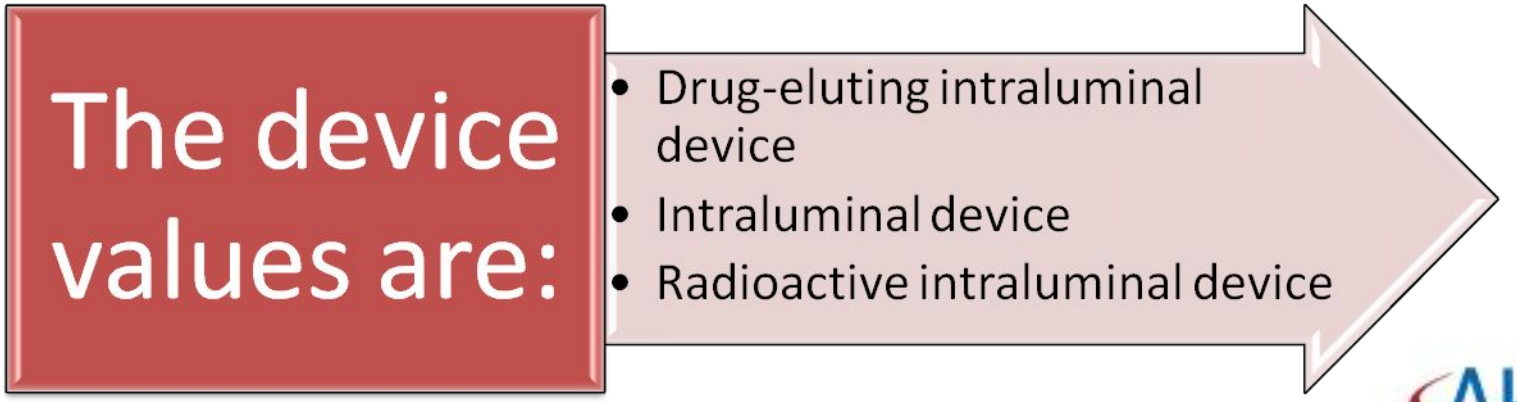
- The root operation **Dilation** is coded when the objective of the procedure is to enlarge the diameter of a tubular body part or orifice.
- **Dilation** includes both intraluminal and extraluminal methods of enlarging the diameter.
- A device placed to maintain the new diameter is an integral part of the **Dilation** procedure, and is coded to a sixth-character device value in the **Dilation** procedure code.

**Coding Note:** In ICD-10-PCS, the classification of the coronary arteries is as a single body part. It doesn't matter what the number of arteries treated is (i.e., right coronary artery, left anterior descending, or left circumflex, or the branches). The distinguishing factor is the **number of sites** treated.

# Dilation Artery

**Where? Body Part**

**Device? Stent**



During PTAs and PTCAs, the narrowed or obstructed blood vessel is mechanically widened. Typically, a collapsed balloon on a guide wire (balloon catheter) is passed into the narrowed locations and then inflated. The balloon crushes the fatty deposits, and then the balloon is collapsed and withdrawn. When a device is placed, it is identified by the sixth character.

# Case To Code

An osteotomy was performed to enlarge the right lacrimal fossa. The stenotic puncta was dilated with increasingly larger lacrimal probes in both superior and inferior canaliculi. A silicone tube was passed through the superior and inferior canaliculi through the osteotomy into the nose and secured.

# Case Answer

| | |
|---|---|
| 087X0DZ | Root Operation: Dilation |
| | Dilation, Duct, Lacrimal, Right |
| | (087X) |

# Case Table

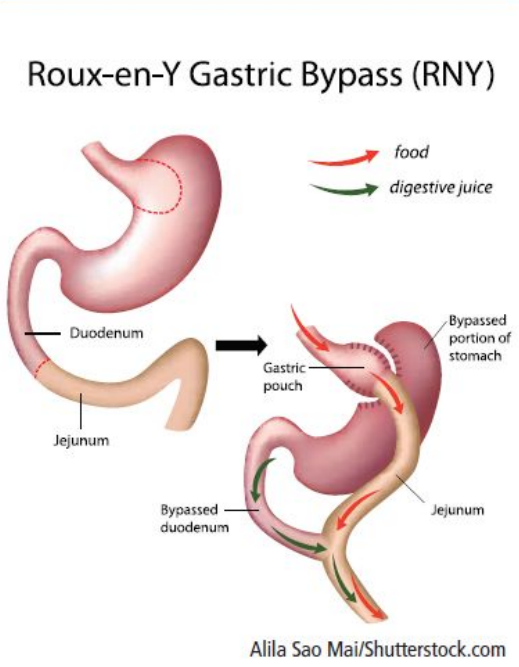
| Section | Medical and Surgical | 0 |
|---|---|---|
| Body System | Eye | 8 |
| Root | **Dilation** | 7 |
| Body Part | Lacrimal Duct, Right | X |
| Approach | Open | 0 |
| Device | Intraluminal Device | D |
| Qualifier | No Qualifier | Z |

# Rationale

**Index:** Dilation

This procedure is coded to the root operation Dilation since the right lacrimal duct was dilated. The osteotomy is the approach which is open. The sixth character for the device (silicone tube) is D, Intraluminal device.

# Bypass (1)

| Bypass (1) | Definition | Altering the route of passage of the contents of a tubular body part |
|---|---|---|
|  | Explanation | Rerouting content of a body part to a downstream area in the normal route, to a similar route and body part, or to an abnormal route and another dissimilar body part. Includes one or more anastomoses with or without the use of a device |
| | Examples | Coronary artery bypass graft (CABG), colostomy formation |

# Bypass

**Bypass** is coded when the objective of the procedure is to reroute the contents of a tubular body part. The range of **Bypass** procedures includes normal routes such as those made in coronary artery bypass procedures, and abnormal routes such as those made in colostomy formation procedures.

The choices for device are autologous, synthetic substitute, or nonautologous tissue substitute. The definitions for each are listed below:

| **Type of Tissue** | **Device Character** | **Definition** |
|---|---|---|
| Autologous (vein or artery) | 9 or A | Referring to a graft in which the donor and recipient areas are in the same individual |
| Synthetic Substitute | J | Any type of synthetic substitute |
| Nonautologous Tissue Substitute | K | Nonautologous allogeneic donor tissue implanted from one human to another |

# Coding Guidelines

## B3.6a

### Non-Coronary

| Body Part | Qualifier |
|---|---|
| FROM | TO |

***Downstream route***

## B3.6b

### Coronary Artery

| Body Part | Qualifier |
|---|---|
| NUMBER OF SITES | FROM |

# Tips

**Coding Note:** When assigning the **device value**, the key to remember is that to be considered a device, this needs to be material used as a graft (**separated**) and not moved over.

**Reminder:** Separate procedure coded for each coronary artery site that uses a different device and/or qualifier. (Guideline B3.6c)

**Examples:**
Internal mammary loosened from one side and moved over = **No Device**
Saphenous vein graft placed from aorta to coronary artery = **Device**

**Coding Note: Autograft**
An autograft is tissue or organ transferred into a new position in the body of the same individual. Synonyms are: autotransplant, autogeneic graft, autologous graft, autoplastic graft (*Stedman's* 2010).

**Reminder:** The excision of the autograft is coded as a separate procedure. (Guideline B3.9)

# Bypass Devices

| Type of Tissue | Device Character | Definition |
|---|---|---|
| **Autologous (vein or artery)** | 9 or A | Referring to a graft in which the donor recipient areas are in the same individual |
| **Synthetic Substitute** | J | Any type of synthetic substitute |
| **Nonautologous Tissue Substitute** | K | Nonautologous allogeneic donor tissue implanted from one human to another |

# Case To Code

The patient has respiratory failure and multiple attempts to wean from the ventilator have been unsuccessful; therefore, the decision to perform a tracheostomy was made. A 3-cm incision was made approximately two fingerbreadths above the sternal notch. Subcutaneous fat was dissected and removed. The strap muscles were identified and divided and an incision was made between the second and third tracheal ring with an inferior based tracheal flap being created. The inferior tracheal flap was sewn to the inferior skin edge, creating a skin flap with 3-0 Vicryl in order to secure the stoma. The ET tube was slowly withdrawn to just above the tracheostomy site. An 8.0 XLT Shiley trach was inserted with no difficulties.

# Case Answer

| | |
|---|---|
| 0B110F4 | Root Operation: Bypass<br>Bypass, Trachea (0B11)<br>Tracheostomy, *see,* Bypass, Respiratory System (0B1) |

# Case Table

| Section | Medical and Surgical | 0 |
|---|---|---|
| Body System | Respiratory System | B |
| Root | **Bypass** | 1 |
| Body Part | Trachea | 1 |
| Approach | Open | 0 |
| Device | Tracheostomy Device | F |
| Qualifier | Cutaneous | 4 |

# Rationale

This procedure is coded to the root operation Bypass. A tracheostomy is a bypass between the trachea and skin. The body part value 1, Trachea, is the source of the bypass (or where the bypass is coming from) and the skin (Cutaneous, 4) is the body part bypassed to. A Shiley trach was left at the operative site; therefore, the device value of F, Tracheostomy, is assigned for the sixth character.

# Case To Code

CABG x 3, the diagonal and obtuse marginal arteries are bypassed from the aorta utilizing graft material from the patient's left greater saphenous vein and the left descending artery was bypassed using the left internal mammary artery. The left internal mammary artery was dissected as a pedicle using electrocautery and small hemoclips at the same time that the greater saphenous vein was harvested endoscopically from the left lower extremity. Cardiopulmonary bypass was then instituted. (Do not code the cardiopulmonary bypass portion of the procedure).

# Case Answer

021109W Root Operation: Bypass

Bypass, Artery, Coronary, Two Sites (0211)

02100Z9 Root Operation: Bypass

Bypass, Artery, Coronary, One Site (0210)

06BQ4ZZ Root Operation: Excision

Excision, Vein, Greater Saphenous, Left 06BQ)

# Case Table

| Section | Medical and Surgical | 0 |
|---|---|---|
| Body System | Heart and Great Vessels | 2 |
| Root | **Bypass** | 1 |
| Body Part | Coronary Arteries, Two Sites | 1 |
| Approach | Open | 0 |
| Device | Autologous Venous Tissue | 9 |
| Qualifier | Aorta | W |

# Case Table

| Section | Medical and Surgical | 0 |
|---|---|---|
| Body System | Heart and Great Vessels | 2 |
| Root | **Bypass** | 1 |
| Body Part | Coronary Arteries, One Site | 0 |
| Approach | Open | 0 |
| Device | No Device | Z |
| Qualifier | Internal Mammary, Left | 0 |

# Case Table

| Section | Medical and Surgical | 0 |
|---|---|---|
| Body System | Lower Veins | 6 |
| Root | **Excision** | B |
| Body Part | Greater Saphenous Vein, Left | Q |
| Approach | Percutaneous Endoscopic | 4 |
| Device | No Device | Z |
| Qualifier | No Qualifier | Z |

# Rationale

The diagonal and obtuse margin arteries were bypassed using the aortocoronary bypass grafting technique. This technique involves graft material, which for this case was autologous venous tissue. The graft material came from the patient's own left greater saphenous vein. The coronary artery bypass graft of the left anterior descending artery was done using the left internal mammary artery. Review Coding Guideline B3.6b for coronary arteries. The body part value identifies the number of coronary artery sites bypassed to and the qualifier identifies the vessel bypassed from.

# Rationale Cont….

The sixth character, No Device, was selected because internal mammary coronary artery bypass procedures do not involve the use of free graft material, but rather a pedicle graft. The internal mammary is loosened from one side and brought around to the occluded coronary artery, restoring blood flow (AHA 1991).

If cardiopulmonary bypass was performed with the CABG, an additional code would be assigned from the procedures in the Medical and Surgical-related sections (Extracorporeal Assistance and Performance – Section 5). This section will be studied later in the training.

# Rationale Cont….

A third code is assigned for this procedure for the endoscopic harvesting of the graft material from the patient's own left greater saphenous vein. The root operation is Excision because only a portion of the vein was removed. Coding Guideline B3.9 states that a separate code should be assigned if an autograft is obtained from a different body part.

# Questions on Group 5?