

# Interventional Radiology Coding Case Studies

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**Week of December 31, 2018**

## **Carotid Angiogram & Carotid Angioplasty/Stent**

**DESCRIPTION OF EXAM:** Left carotid angiogram with angioplasty and stent placement.

**INDICATION:** This is a 77-year-old male who is status post prior bilateral carotid endarterectomies, the most recent of which was on the left in August 2018. The patient has since developed a significant greater than 80% origin stenosis of the left internal carotid artery. The patient admits to mild intermittent visual disturbances, although he does not describe blindness.

### **PROCEDURAL STEPS**

1. Percutaneous access of right common femoral artery.
2. Selective catheterization of the left common carotid artery.
3. Common carotid arteriogram.
4. Subselective catheterization of the left internal carotid artery.
5. Percutaneous transluminal angioplasty of the left internal carotid artery.
6. Post-angioplasty left common carotid arteriogram.
7. Percutaneous transluminal stenting of the left internal carotid artery.
8. Follow-up left common carotid arteriogram.

**PROCEDURE:** After informed consent was obtained, the patient was placed supine on the angiography table. The right groin is sterilely prepped and draped. Skin and underlying soft tissues were locally anesthetized with buffered 1% Lidocaine. A small skin nick was then made. Using a micropuncture needle set and under ultrasound guidance, the right common femoral artery was percutaneously accessed followed by passage of a 0.018 inch guidewire centrally. Over this, tracts were serially dilated followed by placement of a 6 French Cook Shuttle sheath. This was passed to the level of the descending thoracic aorta. The inner dilator was removed followed by placement of a 6 French JB1 catheter over the wire. This was then used to engage the origin of the left common carotid artery and a 0.035 inch guidewire was passed distally into the common carotid artery. The catheter was then advanced and the guidewire removed. Subsequent injection of the catheter was then carried out to confirm positioning within the left common carotid artery. Subsequent common

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carotid arteriograms were obtained both at the bifurcation and at the left hemispheric arterial vasculature.

Using a digital roadmap technique, a 0.035 inch STORQ wire was passed into the external carotid artery. The JB1 catheter and Shuttle sheath were then advanced to the level of the distal left common carotid artery. The guidewire and JB1 catheter were then removed. Via the Shuttle sheath, a Cordis filter wire was passed across the ICA stenosis into the distal internal carotid artery. The filter wire was deployed and the catheter removed. Over the wire a 4 mm angioplasty balloon catheter was passed and inflated across the **origin of the left internal carotid artery**. The balloon catheter was then removed. Subsequently hand injection of contrast was carried out confirming positioning of the sheath. Over the wire, an 8 x 40 mm Precise stent was passed and deployed across the origin of the internal carotid artery into the carotid bulb. The deploying mechanism was then removed. Over the wire the capturing filter catheter was passed. The catheter was then captured under fluoroscopic guidance and was pulled out of the internal carotid artery and out the sheath. Follow-up common carotid arteriogram was obtained in multiple projections showing no significant residual stenosis of the internal carotid artery. The catheter was then withdrawn and was exchanged for a short 6 French sheath. The patient was then returned to the floor for further care where serial ACTs could be drawn until adequate anticoagulation levels would allow for sheath removal. The patient otherwise tolerated the procedure well with no immediate complications. Inspection of the filter wire following the procedure revealed no underlying embolic material.

#### **FINDINGS:**

The left common carotid artery is widely patent throughout. The carotid bulb is unremarkable. The external carotid artery shows minimal disease proximally, but is without significant stenosis. External carotid arterial branches are unremarkable. The internal carotid artery shows a fairly concentric 1 cm length short segment origin stenosis of at least 80% using post NASCET criteria. The distal internal carotid artery is otherwise patent and smoothly contoured throughout.

Post angioplasty stent placement images of the left internal carotid artery show interval stenting across the origin of the left internal carotid artery with only minimal residual stenosis. Brisk flow is demonstrated throughout.

**CONCLUSION:** Recurrent greater than 80% **origin stenosis of the left internal carotid artery**. Status post percutaneous transluminal angioplasty with stenting, without significant residual stenosis demonstrated.

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# Interventional Radiology Coding Case Studies CPT Codes

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## Carotid Angiogram & Carotid Angioplasty/Stent

### Procedure Codes:

- 37215 (LT) Carotid Angioplasty/Stent

### Diagnosis Codes:

- I65.22 Stenosis left internal carotid artery

### Comments:

- Code 37215 is assigned for angioplasty and stenting of the internal carotid. The stent was placed at the extracranial portion of the internal carotid, not the intracranial portion, therefore it would be incorrect to assign code 61635.
- All ipsilateral catheterizations and imaging is bundled with the code for the stent placement, therefore the only code to assign for this case is 37215.

### Applicable Coding Rules:

**Extracranial vessels** are those that arise outside of the skull and supply the brain. The extracranial vessels include the common carotids, external carotids, and the vertebral and internal carotid portions before they enter the skull. **Intracranial vessels** arise from within the skull and supply the brain. The **cervical carotid artery** refers to the extracranial portion of the carotid artery near the carotid bifurcation in the neck.

### Cervical Carotid Stent Placement

#### Catheterization Codes

- All ipsilateral catheterizations are bundled into the codes for intracranial and extracranial stent placement (cervical and cerebral).
- Catheterization codes are only assigned for catheterizations on the side of the head/neck opposite of the side of the stent placement or in separate vascular beds outside of the head/neck vessels.

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## Applicable Coding Rules (continued):

### Diagnostic Angiography

- Ipsilateral diagnostic angiography is bundled into the codes for intracranial and extracranial stent placement. Initial diagnostic angiography may only be reported for imaging performed of the head/neck vessels opposite of the side of stent placement.

### Cervical Carotid Stent Placement (37215 – 37216)

Cervical carotid stent placement is reported with codes 37215 and 37216. The **cervical carotid artery** refers to the extracranial portion of the carotid artery near the carotid bifurcation in the neck.

- Code 37215 describes a cervical carotid stent placement using a distal embolic protection device (DEP) and code 37216 describes cervical carotid stent placement without a DEP.
  - ❖ A DEP is a filter, screen or basket that is designed to capture any embolic debris that may break loose during the procedure. It is important to note that the DEP will be placed in a vessel beyond the one being treated. Placement of the DEP does not determine whether the procedure is extracranial vs. intracranial. The location of the stent determines the correct code selection.
- Cervical carotid stent placement as described by these codes typically is performed at or near the carotid bifurcation. A small portion of the internal carotid artery beyond the carotid bifurcation is located in the neck, prior to entering the skull. This portion of the internal carotid artery may be referred to as the proximal internal carotid artery. A stent placed in the “distal internal carotid” may indicate that an intracranial stent was placed (e.g., cervical segment of the internal carotid artery versus the intracranial portion). Be sure to pay close attention to the exact location to ensure correct code assignment.
  - ❖ For stent placement in the intracranial portion of the carotid artery, see code 61635.
  - ❖ For stent placement in the intrathoracic portion of the carotid artery, see codes 37217-37218.

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## Applicable Coding Rules (continued):

- Stent codes 37215-37216 include angioplasty when performed in the same vessel. Angioplasty is not coded in addition to these stent codes unless an angioplasty is performed in a separate and distinct vessel from the stent placement.
- **Single vs. Multiple Vessels.** Stent placement codes are assigned one time per vessel (lesion) treated.
- **Multiple Stents.** When there are multiple stents placed in the same vessel, only one stent placement is reported.
- **Multiple Lesions.** When there are multiple lesions treated within the same vessel, only one stent placement code is reported for that vessel.
- Administration of Heparin, Nitroglycerin, etc during the procedure is not coded separately.

## RS&I Codes

- **Bundled Components.** All RS&I work is bundled into the surgical code for stent placement. This work includes the following services: contrast injections, angiography, roadmapping, and fluoroscopic guidance for the intervention, vessel measurement, and completion angiography.

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