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Chapter 4: Vascular Interventions

Percutaneous Embolization—Peripheral and Visceral Vessels

Transcatheter embolization is performed with the intent to occlude the blood vessels supplying a previously determined abnormality such as a tumor or aneurysm. Once the blood supply to the abnormality is determined, selective or super-selective catheterization of the feeder vessels is performed and embolic material is injected or placed in each vessel. The most common embolic materials available are gelfoam, coils, glue, balloons, microspheres, and polyvinyl alcohol. Chemo drugs are also used for certain embolization situations. Follow-up angiography is performed to determine the success of the therapy and is coded separately.

37204 Transcatheter occlusion or embolization (eg, for tumor destruction, to achieve hemostasis, to occlude a vascular malformation), percutaneous, any method, non-central nervous system, non-head or neck

A needle is inserted through the skin and into a blood vessel, and a guidewire is threaded through the needle into the vessel. The needle is removed. A catheter is then threaded into the vessel, and the wire extracted. The catheter travels to the point of the malformation and beads or other device block the vessel. The catheter is then removed and pressure is applied over the puncture site to stop bleeding.

75894 Transcatheter therapy, embolization, any method, radiological supervision and interpretation

A blood vessel is blocked by inserting an occlusive agent under fluoroscopic monitoring to stop or restrict the blood flow. This is done to restrict blood supply to a tumor, treat vascular malformations, or control hemorrhaging. A local anesthetic is given at the puncture site and a needle is inserted into the selected vessel followed by a guidewire. The needle is removed. A catheter is then inserted over the guidewire and advanced to the vessel requiring treatment. A blocking agent is carefully injected or inserted and monitored for the occlusion or restriction desired. The effect may remain permanent or require another transcatheter embolization with time. This code reports the radiological supervision and interpretation only. Use a separately reportable code for the catheterization.

Percutaneous Embolization

![Diagram of vascular system showing various embolization sites such as subclavian, celiac trunk, renal arteries, external iliac, and common iliac.]
Chapter 12: Electrophysiology and Ablation

Electrophysiology, or EP, studies are minimally invasive diagnostic studies of the electrical pathways of the heart conduction system. They are commonly performed in the cardiac cath lab or a dedicated EP lab. EP testing assesses patients for cardiac arrhythmias to correlate with clinical symptoms. Special electrode catheters are used to record the electrical pathways. In most EP studies, arrhythmias are induced in order to identify the problem.

EP mapping of arrhythmias is considered to be a distinct procedure and is reported in addition to the diagnostic EP codes using CPT® code 93609 or 93613 for three-dimensional mapping. Special computer equipment is necessary for 3-D mapping.

Catheter ablation procedures are performed to “ablate” the arrhythmia identified in an EP study. Specially designed ablation catheters and special energy creating generators are used to interrupt the pathway identified as causing the arrhythmia.

It is common for a patient to be diagnosed and treated during the same encounter. The EP study is performed and arrhythmias are identified and then ablated during the same visit. Each study should be separately reported whether performed during the same encounter or on different dates.

Heart Conduction System

- Sinoatrial (SA) node
- Atrioventricular (AV) node
- His bundle
- Right bundle branch
- Left bundle branch
- Purkinje fibers
- RA (Right Atrium)
- RV (Right Ventricle)
- LA (Left Atrium)
- LV (Left Ventricle)
Bundle of His Recording

93600  **Bundle of His Recording**
The physician places a venous sheath, usually in a femoral vein, using standard techniques. The physician advances an electrical catheter through the venous sheath and into the right heart under fluoroscopic guidance. The physician attaches the catheter to an electrical recording device to allow depiction of the intracardiac electrograms obtained from electrodes on the catheter tip. The physician moves the catheter tip to the bundle of His, on the anteroseptal tricuspid annulus, and obtains recordings. Alternatively, the physician may obtain similar recordings by placing a catheter into the left ventricular outflow tract via the aorta.

**Coding Tips**
1. CPT code 93600 reports bundle of His recording only. For comprehensive electrophysiologic evaluation bundle of His recording, see 93619–93622.
2. Fluoroscopy is included in 93600 and is not reported separately.
3. Device edits apply to the code in this section.
4. Physician Reporting: This code has both a technical and professional component. To report only the professional component, append modifier 26. To report only the technical component, append modifier TC. To report the complete procedure (i.e., both the professional and technical components), submit without a modifier.

**Facility HCPCS Coding**
HCPCS Level II codes are used to report the supplies provided during the procedure. Hospitals should separately report supplies used during cardiac invasive procedures. Refer to chapter 1 for more information regarding appropriate billing of supplies. Refer to the list of current codes in appendix B.

- **C1730**: Catheter, electrophysiology, diagnostic, other than 3D mapping (19 or fewer electrodes)
- **C1731**: Catheter, electrophysiology, diagnostic, other than 3D mapping (20 or more electrodes)
- **C1732**: Catheter, electrophysiology, diagnostic/ablation, 3D or vector mapping
- **C1733**: Catheter, electrophysiology, diagnostic/ablation, other than 3D or vector mapping, other than cool-tip
- **C2630**: Catheter, electrophysiology, diagnostic/ablation, other than 3D or vector mapping, cool tip
- **C1766**: Introducer sheath, guiding, intracardiac electrophysiological, steerable, other than peel-away
- **C1892**: Introducer/sheath, guiding, intracardiac electrophysiological, fixed-curve, peel-away
- **C1893**: Introducer/sheath, guiding, intracardiac electrophysiological, fixed-curve, other than peel-away

**ICD-9-CM Codes**
426.0  Atroventricular block, complete
426.10  Unspecified atrioventricular block
426.11  First degree atrioventricular block
426.12  Mobitz (type) II atrioventricular block
426.13  Other second degree atrioventricular block
426.2  Left bundle branch hemiblock
426.3  Other left bundle branch block
426.4  Right bundle branch block
426.50  Unspecified bundle branch block
426.51  Right bundle branch block and left posterior fascicular block
426.52  Right bundle branch block and left anterior fascicular block
426.53  Other bilateral bundle branch block
426.54  Trifascicular block
426.6  Other heart block
426.7  Anomalous atrioventricular excitation
426.81  Lown-Ganong-Levine syndrome
426.89  Other specified conduction disorder
426.9  Unspecified conduction disorder
427.0  Paroxysmal supraventricular tachycardia
427.1  Paroxysmal ventricular tachycardia
427.2  Unspecified paroxysmal tachycardia
427.31  Atrial fibrillation
427.32  Atrial flutter
427.41  Ventricular fibrillation
427.42  Ventricular flutter
427.5  Cardiac arrest
427.60  Unspecified premature beats
427.61  Supraventricular premature beats
427.69  Other premature beats
427.81  Sinoatrial node dysfunction
427.89  Other specified cardiac dysrhythmias
427.9  Unspecified cardiac dysrhythmia
779.85  Cardiac arrest of newborn
780.2  Syncope and collapse
780.4  Dizziness and giddiness

**CCI Edits**

**Device Edits**
93600  C1730, C1731, C1732, C1766, C1892, C1893, C1894, C2629, C2630