Cardiology: Pacemaker and Defibrillator Coding

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Moderate Sedation 2017

The physician should document the face-to-face time spent with the patient from the time the drug(s) for moderate sedation are administered until the time the procedure is completed and physician has left the room (end of face to face time)

Less than 10 minutes - no code
10-22 minutes initial code (based on age)
23-37 minutes - 1 initial, one additional
38-52 minutes - 1 initial, two additions
53-67 minutes - 1 initial, three additions
68-82 minutes - 1 initial, four additions

Need to document drugs and dosages administered.

Transvenous Pacemaker Procedures

Moderate Sedation 2017

- 99151: under age 5, initial 15 minutes by MD performing intervention
- 99152: age 5 or older, initial 15 minutes by MD performing intervention
- 99153: age 5 or older, add’l 15 minutes by MD performing intervention
  - 99153 is only billed by hospital, or by MD in NON-FACILITY SETTING
  - 99153 MUE is 9 for hospital billing (2.5 hours total)
  - Based on MD Face to Face time (minutes), patient age (<5 or 5 and older), and presence of “Trained Independent Observer”
- 99155: under age 5, initial 15 minutes by other MD
- 99156: age 5 or older, initial 15 minutes by other MD
- 99157: age 5 or older, add’l 15 minutes by other MD
-FD Modifier

- Report the amount of the credit on the UB-04 in the amount portion for value code “FD” (Credit Received from the Manufacturer for a Replace Medical Device) when the hospital receives a credit for a replaced device that is 50% or greater than the cost of the device. This includes leads, generators, and other high cost items.
- Use these guidelines to denote device provided with a manufacturer credit off the cost of a new device, usually a replacement.
- NOT used for routine volume rebates given for devices.

Pacemaker Procedures

- Definitions of Device Types:
  - Single Lead – Pacer or ICD with pacing and sensing function in one chamber of the heart
  - Dual Lead – Pacer or ICD with pacing and sensing function in two chambers of the heart
  - Multiple Lead – Pacer or ICD with pacing and sensing function in three or more chambers of the heart. Also, for LV and RV only (biventricular without RA lead)
- More than one lead may be necessary in a single chamber (based on number of chambers).
- Fluoroscopy is bundled with all pacer/ICD codes. (Code 76000 is billable if the only procedure performed is evaluation of leads...for defects. You cannot use during any procedure billed with codes 33206-33249, 33262-33264, 33270-33273.)

- Insertion of temporary pacemaker
  - 33210 – Single chamber (use for symptomatic bradycardia) bundled for use at time of AV node ablation, coronary artery and carotid artery interventions, and “separate procedure” designation with other pacer procedures: 33206-33249, 33262-33264, 33270-33273). Do not use with generator exchanges
  - 33211 – Dual chamber
Pacemaker Procedures

- Implantation of new pacemaker generator with lead(s), no prior devices
  - Insertion of new of permanent pacemaker and lead(s)
    - 33206 – Atrial (single generator and one lead in RA)
    - 33207 – Ventricular (single generator and one lead in RV)
    - 33208 – Atrial and ventricular (dual generator, 2 leads, one in RA, the other in RV)
    - +33225 – Biventricular (add-on code for LV lead inserted at same time as initial pacer insertion or replacement, includes pocket revision)

- Removal of old generator, removal of lead(s), implantation of new pacemaker generator requiring implantation of new lead(s)

  Code for the following components if performed:
  - 33233 – Removal of old pacemaker generator
  - Removal of old pacemaker lead(s):
    - Transvenous approach:
      - 33234 – Single lead system
      - 33235 – Dual lead system
    - Thoracotomy approach:
      - 33238 – Single or dual lead system

Pacemaker Procedures

- Implantation of pacemaker requires medical necessity of irreversible symptomatic bradycardia (for single or dual chamber)
  - Does not pertain to resynchronization therapy
  - Requires KX modifier for payment (to use this modifier, the physician must certify that the requirements in the NCD for placement of this pacemaker are met)

- Removal of old generator, removal of lead(s), implantation of new pacemaker generator requiring implantation of new lead(s)

Pacemaker Procedures

- Implantation of new pacemaker generator with new lead(s), in a patient with prior pacemaker, leads are not removed

  Code for the following components if done...
  - 33233 – Removal of old pacemaker generator
  - Do NOT code for capping of lead(s)
  - Implantation of new of permanent pacemaker and lead(s),
    - 33206 – Atrial (single generator and one lead in RA)
    - 33207 – Ventricular (single generator and one lead in RV)
    - 33208 – Atrial & Ventricular (dual generator, 2 leads, one in RA, one in RV)
  - 33214 – Upgrade from single to dual chamber pacemaker including removal of old generator, testing of existing lead, placement of new generator & lead
  - +33225 – Biventricular (add-on code for LV lead inserted at same time as pacemaker upgrade, includes pocket revision)
Pacemaker Procedures

- **Removal of old generator with implantation of new pacemaker generator only:**
  - Use a single code to describe the entire procedure:
    - **33227** – Single lead system
    - **33228** – Dual lead system
    - **33229** – Multiple lead system (also LV, RV per AMA Jan 2014)
  - Leads are not impacted in this scenario as they are not removed and are not replaced. These codes only apply to patients with pre-existing systems who only need a generator change (e.g., EOL battery exchange).

- **Insertion of new generator in patient with previously placed lead(s)**
  - Use a single code to describe the entire procedure
    - **33212** – Generator insertion with existing single lead
    - **33213** – Generator insertion with existing dual leads
    - **33221** – Generator insertion with existing multiple leads
  - Leads are not impacted in this scenario, as they were placed at a previous surgery.

- **Insertion of lead(s) ONLY, for pacemaker or defibrillator system**
  - Electrode only (code for the number of electrodes placed)
    - **33216** – Insert one electrode
    - **33217** – Insert two electrodes
    - **33224** – Addition of left ventricular lead to existing system
    - **33225** – Addition of left ventricular lead at time of pacemaker insertion of replacement
      ✓ Do **NOT** use code 75860 for coronary sinus venography.
      ✓ Do **NOT** code for venoplasty of the coronary sinus.
      ✓ Do **NOT** code pocket revision.
    - Consider 33217 vs. 33999 for subcutaneous array placed posteriorly along ribs. Discuss with your payer.
### Pacemaker Procedures

- **Removal of lead(s) only from pacemaker**
  - Based on single lead vs dual lead transvenous system
    - **33234** – Single lead system (use for removal of lead(s) based on single chamber/lead system)
    - **33235** – Dual lead system (use for removal of lead(s) from a dual chamber/lead system)
    - **33238** – Removal of transvenous leads by thoracotomy
  - Lead(s) AND epicardial pacemaker removal by thoracotomy
    - **33236** – Single lead system
    - **33237** – Dual lead system

- Do not code for capping of leads. If laser required, MD may consider -22 modifier. These codes are **NOT** appropriate with -62 modifier.

- **Removal of Left Ventricular Lead** – Bill the same codes as RV, RA lead removals.
  - **33234** – Removal of actively fixed RV “temporary” lead (for infected permanent system)

### Pacemaker Procedures

- Repair electrode for pacer or ICD (fix a fracture or insulation defect, terminal pin modification, etc.) (charge for the number of electrodes repaired):
  - **33218** – Repair one lead
  - **33220** – Repair two leads

- Repositioning of previously implanted electrode:
  - **33215** – Atrial or ventricular lead (bill twice if two leads repositioned)
  - **33226** – Left ventricular lead

### Pacemaker Procedures

- **33999** – Open pocket and tighten set screws (not a repair)
- **33222** – “Relocation” of pacemaker pocket.
  - If old device placed in subpectoral pocket w/o replacement
    - If old device removed and hematoma/infection treated, use I&D codes. Unlikely to move infected device to new pocket.
    - If device moved to a new pocket, the I&D of the old pocket is bundled with 33222. Do not code I&D separately here.

- “Including removal, insertion, and/or replacement of generator”
  - Refers to the opening pocket, placing the existing generator on the chest, doing your lead work, and placing the existing generator back into the pocket, **NOT** a completely new generator (referring to codes 33224 and 33226).

### Pacemaker/Loop Recorder Procedures

- **33282** – Implantable Loop Recorder Placement
- **33284** – Implantable Loop Recorder Removal

- **93286 x 2** – Turn off and turn on pacemaker with reprogramming for surgery/EP ablation (bundled with codes 93654 and 93656)
**PROCEDURE**

Elective DC cardioversion and implantation of dual-chamber pacemaker. Patient has previously placed epicardial leads from previous cardiac surgery. Patient has atrial flutter.

**DESCRIPTION OF PROCEDURE**

She is prepped and draped in the usual manner. Local infiltration with Lidocaine, left infraclavicular incision, and pocket formation. The dual lead pacer generator is attached to the pre-existing leads. The patient’s sensing and pacing thresholds are tested and are adequate. The pacemaker pocket closed. The patient is then cardioverted to a normal sinus rhythm. Fluoroscopy utilized.

**Pacemaker Case 8 Codes:**

- **33213** – Insert dual chamber pacemaker generator to existing leads
- **92960-59** – Elective external cardioversion

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**Pacemaker Case 9:**

**PROCEDURE:** Dual pacemaker pulse generator exchange.

**PREPROCEDURE DIAGNOSIS:** Complete heart block, pacemaker battery depletion.

**PROTOCOL:** Via a trans-femoral venous approach, a temporary pacer is placed with the lead tip in the RV. The left chest is prepped and draped in sterile fashion. An incision is made over the pulse generator and dissection carried out. The pseudocapsule is incised and the pulse generator and redundant leads are removed from the pocket. The leads are disconnected from the pulse generator and sensing and pacing thresholds are performed. Impedance is 563 ohms. A new dual generator is placed and attached to the RV and RA leads. The temporary pacer is removed.

**Pacemaker Case 9 Codes:**

- **33228** – Dual lead system generator exchange

Because temporary pacer is a separate procedure designation, recommendation is to NOT code for this device in this situation. This is a change due to guidelines and edits related to separate procedure rules.
DESCRIPTION OF PROCEDURE: Using 1% lidocaine local infiltration, two multipolar electrode catheters are passed into the right femoral vein, advanced into the high right atrium, region of bundle of His, right ventricle. Atrial recording, ventricular pacing, and then His bundle recording are performed. HV measures 50 milliseconds. Careful mapping of the AV node & His bundle region is done. Temporary pacemaker is then inserted. Radiofrequency energy is applied. A total of 6 RF energy is applied, and heart block is created, ten seconds after RF energy dose is delivered. A dual pacemaker from a left sided approach is placed. Fluoroscopy is utilized. After placement the pocket is closed in layers.

Pacemaker Case 10 Codes:
- 93650 – Ablation of AV node
- 33208 – Insert dual chamber pacemaker

Temporary pacer placement is included in the ablation and permanent pacer placement. Fluoroscopy is bundled.

Pacemaker Case 10:

Pacemaker Case 11:
A. Patient for dual pacer generator exchange for battery end-of-life. At exchange, the atrial lead is checked while two ventricular leads are removed, with placement of a new ventricular lead (using fluoroscopy) and new dual pacer generator.

Pacemaker Case 11-A Codes:
- 33233 – Removal of old pacer generator
- 33235 – Removal of two leads from the single chamber of a dual lead system
- 33207 – Single generator pacer placement
Pacemaker Case 11-B:
A. Patient for dual pacer generator exchange for battery end-of-life. At exchange, the atrial lead is checked while two ventricular leads are removed, with placement of a new ventricular lead (using fluoroscopy) and new dual pacer generator.
B. Same patient, but this time one ventricular lead is repaired at time of dual generator exchange, no leads are removed or placed, and fluoroscopy was not utilized.

Pacemaker Case 11-B Codes:
- 33228 – Dual generator replacement
- 33218 – Lead repair (based on number of electrodes repaired)

Pacemaker Case 11-C:
A. Patient for dual pacer generator exchange for battery end-of-life. At exchange, the atrial lead is checked while two ventricular leads are removed, with placement of a new ventricular lead (using fluoroscopy) and new dual pacer generator.
B. Same patient, but this time one ventricular lead is repaired at time of dual generator exchange, no leads are removed or placed, and fluoroscopy was not utilized.
C. Same patient, but now both leads repaired.

Pacemaker Case 11-C Codes:
- 33228 – Dual generator replacement
- 33220 – Lead repair (based on number of electrodes repaired)
Pacemaker Case 11-D:

A. Patient for dual pacer generator exchange for battery end-of-life. At exchange, the atrial lead is checked while two ventricular leads are removed, with placement of a new ventricular lead (using fluoroscopy) and new dual pacer generator.

B. Same patient, but this time one ventricular lead is repaired at time of dual generator exchange, no leads are removed or placed, and fluoroscopy was not utilized.

C. Same patient, but now both leads repaired.

D. Same patient, but the atrial and one ventricular lead are removed and one atrial lead is placed using fluoroscopy. Same generator is re-used.

Pacemaker Case 11-D Codes:

- **33235** – Removal of leads from two chambers
- **33216** – Placement of one lead (in the atrium)

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Pacemaker Case 11-E:

A. Patient for dual pacer generator exchange for battery end-of-life. At exchange, the atrial lead is checked while two ventricular leads are removed, with placement of a new ventricular lead (using fluoroscopy) and new dual pacer generator.

B. Same patient, but this time one ventricular lead is repaired at time of dual generator exchange, no leads are removed or placed, and fluoroscopy was not utilized.

C. Same patient, but now both leads repaired.

D. Same patient, but the atrial and one ventricular lead are removed and one atrial lead is placed using fluoroscopy. Same generator is re-used.

E. Patient with multi-lead pacemaker for generator exchange. During exchange, the LV lead was noted to be floating in the RV and required repositioning into the coronary sinus.

Pacemaker Case 11-E Codes:

- **33229** – Removal of old and replacement with new multiple lead permanent pacemaker generator
- **33226** – Repositioning of existing LV lead into the coronary sinus
Transvenous Defibrillator Procedures

-Q0 Modifier

- Used on initial defibrillator placement code
- To identify patients whose data is being submitted to a registry and to document meeting the coverage requirement for devices implanted for primary prevention of sudden cardiac arrest
ICD-10 Dx covered without -Q0 Modifier

- I47.0 Re-entry Ventricular Arrhythmia
- I47.2 Ventricular Tachycardia
- I49.3 Ventricular Premature depolarization
- I49.01 Ventricular Fibrillation
- I49.02 Ventricular Flutter
- I49.2 Cardiac arrest due to underlying cardiac condition
- I49.8 Cardiac arrest due to other underlying condition
- I49.9 Cardiac arrhythmia, unspecified

T82.110A Breakdown (mechanical) of cardiac electrode, initial encounter
T82.111A Breakdown (mechanical) of cardiac pulse generator (battery), initial encounter
T82.118A Breakdown (mechanical) of other cardiac electronic device, initial encounter
T82.119A Breakdown (mechanical) of unspecified cardiac electronic device, initial encounter
T82.120A Displacement of cardiac electrode, initial encounter
T82.121A Displacement of cardiac pulse generator (battery), initial encounter
T82.122A Displacement of other cardiac electronic device, initial encounter
T82.123A Displacement of unspecified cardiac electronic device, initial encounter
T82.125A Other mechanical complication of cardiac electrode, initial encounter
T82.126A Other mechanical complication of cardiac pulse generator (battery), initial encounter
T82.127A Other mechanical complication of other cardiac electronic device, initial encounter
T82.128A Other mechanical complication of unspecified cardiac electronic device, initial encounter
Z86.74 Personal history of sudden cardiac arrest
Z45.02 Encounter for adjustment and management of automatic implantable cardiac defibrillator

Medical Necessity

- Physicians must document reason for ICD placements. Possible exclusions include...
  - Ejection Fraction > 35%
  - Prior MI less than 40 days ago
  - CABG or Percutaneous intervention within last 3 months (currently down to 67 days in reviews for DOJ “Resolution Model”. NCD rules still apply for current cases)
  - Other causes
  - DOJ reviews based on data mining for dates of recent MI or coronary intervention and ICD placement

Defibrillator Procedures

- **33249** – Insertion or replacement of permanent implantable defibrillator system, with transvenous lead(s), single or dual chamber

Defibrillator Procedures

- Defibrillator generator placement only (when leads are already present; e.g., existing leads from a prior surgery)
  - **33240** – Insertion of ICD generator, existing single lead
  - **33230** – Insertion of ICD generator, existing dual leads
  - **33231** – Insertion of ICD generator, existing multiple leads (or LV, RV)
Defibrillator Procedures

- Removal of old ICD generator and placement of new ICD generator (no lead removal or placement)
  - 33262 – Removal and replacement of ICD generator, existing single lead system
  - 33263 – Removal and replacement of ICD generator, existing dual lead system
  - 33264 – Removal and replacement of ICD generator, existing multiple lead system (or LV and RV leads)

Defibrillator Procedures

- Replacement
  - Use new defibrillator insertion code 33249 for placement or replacement of a lead and generator. This is considered a new system.
  - Use code 33249 for upgrading from single to dual chamber defibrillator (if a new generator and a new lead are placed).

Defibrillator Procedures

- When old lead removal and new lead placement along with generator exchange is performed, charge for removal of defibrillator generator (33241), removal of lead(s) by thoracotomy (33243) or by transvenous extraction (33244) as appropriate, and placement of new generator with lead(s) w/ 33249.
- If old generator and one lead are removed of a dual chamber ICD and a new single chamber generator is placed (no new lead), use code for single chamber generator exchange (33262) and lead removal (33244).

Defibrillator Procedures

- 33225 – Left ventricular lead insertion at the time of defibrillator insertion or replacement
  - Do NOT use code 75860 for coronary sinus venography.
  - Do NOT code for venoplasty of the coronary sinus.
Defibrillator Procedures

- EP testing of the defibrillator (separately billable)
  - **93640** – Leads only (at time of implant, rarely done, performed when surgeon places leads via thoracotomy and cardiologist tests leads)
  - **93641** – Leads and generator (at time of implant, commonly performed) (do not use 93642 for this procedure)
  - **93642** – Defibrillator (existing system, leads, and generator, performed at a later date)

Defibrillator Procedures

- Repair electrode (fix a fracture or insulation defect, terminal pin modification etc), code for number of leads repaired
  - **33218** – 1 lead
  - **33220** – 2 leads
  - Can use repair codes with removal/replacement of generator codes 33262-33264 as appropriate

Defibrillator Procedures

- Repositioning of previously implanted electrode
  - **33215** – Atrial or ventricular lead (use twice if both leads repositioned)
  - **33226** – Left ventricular lead
- Relocation defibrillator pocket
  - **33223** – Revision removed from descriptor
- Turn off and on defibrillator w/reprogramming for surgery or EP ablation (NOT with 93654 or 93656)
  - **93287 x 2**

Defibrillator Case 12:

**PROCEDURE:** Implantation of multi-lead ICD. Coronary sinus venography. Coronary sinus venoplasty.

**CLINICAL HISTORY:** Symptomatic ventricular tachycardia.

**DESCRIPTION OF PROCEDURE:** Local anesthesia with lidocaine is followed by a left infraclavicular incision and pocket formation. Cannulation of the left subclavian vein is done with placement of three peel-away sheaths.

Subclavian venography is performed. The cephalic vein, subclavian vein, axillary vein, innominate vein, RA, and RV are visualized. There is tortuosity of the veins. As such, long sheaths are used to place two leads, one each into the RA and RV locations.
Defibrillator Case 12 (continued):
The coronary sinus is then successfully cannulated with a catheter. Coronary sinus venography documents a small coronary sinus so 4mm balloon venoplasty is performed to stretch the sinus to accept the sheath. The sheath is then advanced into the coronary sinus. The pacing lead is passed through the sheath into the lateral cardiac vein. Pacing and sensing thresholds are adequate. All leads are hooked up. System testing is undertaken. After adequate anesthesia, VF is induced twice. Defibrillation threshold is greater than 10 joules, less than 15 joules. The pocket is then closed in layers using 2-0 Vicryl. The subcutaneous tissue and skin are closed with staples. Fluoroscopy is used throughout the procedure.

Defibrillator Case 12 Codes:
- **33249** — Insertion or repositioning of electrode lead(s) for single or dual chamber pacing defibrillator and insertion of pulse generator
- **33225** — Insertion of pacing electrode, cardiac venous system, for left ventricular pacing, at time of insertion of pacing defibrillator or pacemaker pulse generator
- **93641** — Electrophysiologic evaluation of single or dual chamber pacing cardioverter-defibrillator leads including defibrillation threshold evaluation (induction of arrhythmia, evaluation of sensing and pacing for arrhythmia termination) at time of initial implantation or replacement; with testing of single or dual chamber pacing cardioverter defibrillator pulse generator

Defibrillator Case 13:
**PROCEDURE:** AV node ablation, dual chamber pacemaker generator removal, RV lead removal, multi-lead defibrillator implantation.
**INDICATIONS:** 83 year old male presents for an upgrade to a defibrillator with synchronization therapy. He also presents for AV node ablation.
**PROTOCOL:** 5 French and 8 French sheaths are placed in the right femoral vein. A quadripolar catheter is directed to the right ventricular apex to serve as a temporary pacing wire. The ablation catheter is advanced to the atrioventricular junction and radiofrequency energy is delivered. This results in complete heart block.

Defibrillator Case 13 (continued):
**DEFIBRILLATOR SESSION:** An incision is made over the pulse generator and dissection carried out. The pseudocapsule is incised and the dual chamber pulse generator and 2 leads are removed from the pocket. The right ventricular lead is disconnected from the pulse generator and removed with laser assistance. The right atrial lead is left in place. Under fluoroscopic guidance, the left subclavian vein is cannulated and a guidewire and sheath are placed. The new right ventricular defibrillator lead is introduced through the sheath. It is directed to the right ventricular apex.
Defibrillator Case 13 (continued):

The subclavian vein is again cannulated under fluoroscopic guidance. A steerable quadripolar catheter is used to direct the sheath into the coronary sinus. A balloon tip catheter is placed into the coronary sinus. Venograms are obtained. The left ventricular lead is inserted through the sheath. The lead is then advanced over the guidewire into appropriate position. The new right defibrillating and left ventricular leads and chronic right atrial lead are attached to the defibrillator.

The patient undergoes defibrillation threshold testing. The patient is induced into ventricular fibrillation. Initial cardioversion energy of 17 joules results in restoration of sinus rhythm.

Defibrillator Case 13 Codes:

- 93560 – Intracardiac catheter ablation of atrioventricular node function, atrioventricular conduction for creation of complete heart block, with or without temporary pacemaker placement
- 33249 – Insertion or repositioning of electrode lead(s) for single or dual chamber defibrillator and insertion of pulse generator
- 33225 – Insertion of pacing electrode, cardiac venous system, for left ventricular pacing, at time of insertion of defibrillator or pacemaker pulse generator
- 93641 – Electrophysiologic evaluation of single or dual chamber pacing cardioverter-defibrillator leads including defibrillation threshold evaluation (induction of arrhythmia, evaluation of sensing and pacing for arrhythmia termination) at time of initial implantation or replacement; with testing of single or dual chamber pacing cardioverter-defibrillator pulse generator
- 33233 – Removal of permanent pacemaker pulse generator
- 33235 – Removal of transvenous pacemaker electrode(s); dual lead system

Defibrillator Case 14:

PROCEDURE: Patient presents with a dual chamber ICD here for upgrade to a multi-lead system for resynchronization therapy. The RV lead was NOT removed or replaced. A new LV lead was placed into the coronary sinus. Defibrillation threshold testing was done at the end of procedure.

Defibrillator Case 14 Codes:

- 33264 – Removal of old dual chamber ICD generator with placement of a multi-lead ICD generator (includes removal and placement in a single code, no RA or RV lead placed)
- 33225 – Insertion of pacing electrode, cardiac venous system, for left ventricular pacing, at time of insertion of defibrillator or pacemaker pulse generator (including upgrade to dual chamber system) (List separately in addition to code for primary procedure)
- 93641 – Electrophysiologic evaluation of single or dual chamber pacing cardioverter-defibrillator leads including defibrillation threshold evaluation (induction of arrhythmia, evaluation of sensing and pacing for arrhythmia termination) at time of initial implantation or replacement; with testing of single or dual chamber pacing cardioverter-defibrillator pulse generator
HeartPOD
Used in patients with heart failure to optimize therapy by monitoring left atrial pressures.

Percutaneous Left Atrial Monitor Insertion
- **0293T** – Insertion of left atrial hemodynamic monitor; complete system. Includes the implanted communication module and pressure sensor lead into the left atrium, the transseptal access, any injection of contrast, imaging and radiological S&I including ICE if utilized
- **+0294T** – Insertion of left atrial hemodynamic monitor; pressure sensor lead at the same time as placement of an ICD generator. Includes injection of contrast, imaging and radiologic S&I (use with 33240, 33230, 33231, 33262-33264, 33240)
- HeartPOD Implantable Sensor Lead (ISL) is placed as part of the LAP (Left Atrial Pressure) Monitoring System.

AngelMed® Guardian System, Investigational Single lead is placed in RV apex used to detect cardiac ischemia (ST segment changes)

Intracardiac Ischemia Monitoring System (IMD)
- **0302T** – Insertion of a complete system, or removal and replacement of IMD, including both device and electrode, interrogation and programming
- **0303T** – Insertion of electrode only, or removal and replacement of electrode
- **0304T** – Insertion of device only, or removal and replacement of device
- **0305T** – Programming device evaluation (in person) of IMD, with iterative adjustment, analysis, review and report
- **0306T** – Interrogation device evaluation (in person) of IMD, with analysis, review, and report
- **0307T** – Removal WITHOUT replacement of IMD
Cardiac Contractility Modulation System (CCM)

Used in patients with moderate to severe chronic heart failure to improve cardiac contractility.

Consists of generator plus 1 atrial and 2 ventricular leads.

Cardiac Contractility Modulation System

- 0408T – Insertion or replacement of CCM system (generator and leads)
- Note: includes catheterizations, imaging guidance, left heart cath, and initial programming
- 0409T – Insertion of CCM generator only
- 0410T – Insertion of atrial lead only
- 0411T – Insertion of ventricular lead only (report twice if 2 leads inserted)
- 0412T – Removal of CCM generator only
- 0413T – Removal of CCM lead (report once for each lead removed)

Cardiac Contractility Modulation System

- 0414T – Remove and replace CCM generator only
- 0415T – Reposition of existing CCM lead
- 0416T – Relocation of CCM generator pocket (not for revision of pocket)
- 0417T – Programming with iterative adjustment of CCM system
- 0418T – Interrogation of CCM system

Subcutaneous Defibrillator
Subcutaneous Defibrillator (SICD)
- Subcutaneous defibrillators (SICDs) may be used for patients who do NOT need pacing capabilities
- **33270** Insertion or replacement of a permanent SICD system, including both device and electrode, defibrillation threshold testing, interrogation and programming, pocket revision and pocket repositioning if done
- If removal of SICD generator, removal of SICD lead, and placement of new system (generator and lead), use 33241, 33272 for removal and 33270 for placement of the new generator and lead. Removal is coded separately.
- Do NOT report DFT (93644) at time of initial implantation of SICD
- **Do NOT report DFT (93644) with replacement code 33270**

Subcutaneous Defibrillator (SICD)
- **93260** Programming device evaluation (in person) with iterative adjustment of SICD to test function of device and select optimal permanent programmed values with analysis
- **93261** Interrogation device evaluation (in person) with analysis, review and report, including connection, recording, and disconnection per patient encounter
- **93644** EP evaluation (includes defibrillation threshold evaluation, induction of arrhythmia, testing sensing, programming or reprogramming of parameters) **[NOT at time of placement (33270)]**

Leadless Pacemaker (“Nanostim”, Micra”)
- Micra by Medtronic is first FDA approved leadless pacemaker (4/6/2016)
- Nanostim by St. Jude’s Medical is currently an **Investigational device** which is inserted via a transcatheter approach into the RV apex for pacing the RV. There are no leads in this intracardiac device.
- Do not submit heart catheterization codes, right sided chamber injection codes or extremity venography related to the procedure
- **0387T** Insertion or replacement of permanent leadless pacemaker, ventricular
- **0388T** Removal of permanent leadless pacemaker, ventricular
Leadless Pacemaker (“Nanostim”)

- 0389T  Programming device evaluation (in person) with iterative adjustment, leadless pacemaker system
- 0390T  Peri-procedure device evaluation (in person) and programming of device parameters before or after a surgery, procedure or test, with analysis, review and report, leadless pacemaker system
- 0391T  Interrogation device evaluation (in person) with analysis, review and report, includes connection, recording and disconnection per patient encounter, leadless pacemaker system

Leadless Pacemaker (“Micra”)

Pulmonary Artery Wireless Pressure Sensor Implantation

- C9741  RHC with percutaneous implantation of a wireless pressure sensor in the pulmonary artery. This bundles associated angiography, pressure measurements, RHC and placement of the device. Effective 10/1/14. Hospital billing only. MD should bill RHC and unlisted (?). C2624 is the device code.