

GuidePoint

Simplifying Reimbursement

Cardiac Rhythm Management and Electrophysiology

Updated February 2010

ICD-9-CM Diagnosis Codes¹

ICD-9-CM diagnosis coding varies based on the patient's medical condition. Physicians must document patient diagnoses and procedures thoroughly and accurately as it is ultimately the provider's responsibility to determine and submit appropriate codes. Proper coding of clinical procedures and diagnoses is dependent on the information documented in the patient's medical record without consideration of the adequacy of the reimbursement levels assigned by payers to specific codes. Coding conventions typically dictate that a patient's diagnosis and treatment be coded with the highest level of specificity possible based on the patient's medical record. Providers are encouraged to contact their Medicare contractors or third-party payers for specific questions pertaining to coding, coverage, and/or payment.

ICD-9-CM Procedure Codes¹ (Hospital Inpatient)

This section contains ICD-9-CM procedure codes for commonly billed cardiac pacemakers and cardiac resynchronization therapy pacemaker (CRT-P) procedures.

Device Insertion

37.81 Initial insertion of single chamber device, not specified as rate responsive

Excludes:

- Replacement of existing pacemaker device (37.85–37.87)

37.82 Initial insertion of single chamber device, rate responsive

Rate responsive to physiologic stimuli other than atrial rate

Excludes:

- Replacement of existing pacemaker device (37.85–37.87)

37.83 Initial insertion of dual chamber device

Atrial ventricular sequential device

Excludes:

- Replacement of existing pacemaker device (37.85–37.87)

Device Insertion/Replacement

- 37.80 Insertion of permanent pacemaker, initial or replacement, type of device not specified**

Device Insertion/Replacement/Revision/Removal

- 00.53 Implantation or replacement of cardiac resynchronization pacemaker, pulse generator only [CRT-P]**

Note: *Device testing during procedure — omit code.*

Implantation of CRT-P device with removal of any existing CRT-P or other pacemaker device

Excludes:

- Implantation of cardiac resynchronization pacemaker, total system [CRT-P] (00.50)
- Implantation or replacement of cardiac resynchronization defibrillator, pulse generator only [CRT-D] (00.54)
- Insertion or replacement of any type pacemaker device (37.80–37.87)

- 37.8 Insertion, replacement, removal, and revision of pacemaker device**

Note: *Device testing during procedure — omit code.*

Code also any lead insertion, lead replacement, lead removal, and/or lead revision (37.70–37.77)

Excludes:

- Implantation of cardiac resynchronization pacemaker, total system [CRT-P] (00.50)
- Implantation or replacement of cardiac resynchronization pacemaker pulse generator only [CRT-P] (00.53)

Device Replacement

- 37.85 Replacement of any type pacemaker device with single chamber device, not specified as rate responsive**

- 37.86 Replacement of any type pacemaker device with single chamber device, rate responsive**

Rate responsive to physiologic stimuli other than atrial rate

- 37.87 Replacement of any type pacemaker device with dual chamber device**

Atrial ventricular sequential device

Device Revision/Removal

- 37.89 Revision or removal of pacemaker device**

- Removal without replacement of cardiac resynchronization pacemaker device [CRT-P]
- Repair of pacemaker device

Excludes:

- Removal of temporary transvenous pacemaker system – omit code
- Replacement of existing pacemaker device (37.85–37.87)
- Replacement of existing pacemaker device with CRT-P pacemaker device (00.53)

Lead Insertion/Revision/Replacement/Removal

00.52 Implantation or replacement of transvenous lead [electrode] into left ventricular coronary venous system

Excludes:

- Implantation of cardiac resynchronization:
 - Defibrillator, total system [CRT-D] (00.51)
 - Pacemaker, total system [CRT-P] (00.50)
- Initial insertion of transvenous lead [electrode] (37.70–37.72)
- Replacement of transvenous atrial and/or ventricular lead(s) [electrodes] (37.76)

37.7 Insertion, revision, replacement, and removal of leads; insertion of temporary pacemaker system; or revision of cardiac device pocket

Code also any insertion and replacement of pacemaker device (37.80–37.87)

Excludes:

- Implantation or replacement of transvenous lead [electrode] into left ventricular cardiac venous system (00.52)

37.70 Initial insertion of lead [electrode], not otherwise specified

Excludes:

- Insertion of temporary transvenous pacemaker system (37.78)
- Replacement of atrial and/or ventricular lead(s) (37.76)

37.71 Initial insertion of transvenous lead [electrode] into ventricle

Excludes:

- Insertion of temporary transvenous pacemaker system (37.78)
- Replacement of atrial and/or ventricular lead(s) (37.76)

37.72 Initial insertion of transvenous leads [electrodes] into atrium and ventricle

Excludes:

- Insertion of temporary transvenous pacemaker system (37.78)
- Replacement of atrial and/or ventricular lead(s) (37.76)

37.73 Initial insertion of transvenous lead [electrode] into atrium

Excludes:

- Insertion of temporary transvenous pacemaker system (37.78)
- Replacement of atrial and/or ventricular lead(s) (37.76)

37.74 Insertion or replacement of epicardial lead [electrode] into epicardium

Insertion or replacement of epicardial lead by:

- Sternotomy
- Thoracotomy

Excludes:

- Replacement of atrial and/or ventricular lead(s) (37.76)

Lead Insertion/Revision/Replacement/Removal (*continued*)

37.75 Revision of lead [electrode]

- Repair of electrode [removal with re-insertion]
- Repositioning of lead(s) (AICD) (cardiac device) (CRT-D) (CRT-P) (defibrillator) (pacemaker) (pacing) (sensing) [electrode]
- Revision of lead NOS

Excludes:

- Repositioning of temporary transvenous pacemaker system – omit code

37.76 Replacement of transvenous atrial and/or ventricular lead(s) [electrode]

Removal or abandonment of existing transvenous or epicardial lead(s) with transvenous lead(s) replacement

Excludes:

- Replacement of epicardial lead [electrode] (37.74)

37.77 Removal of lead(s) [electrode] without replacement

Removal:

- Epicardial lead (transthoracic approach)
- Transvenous lead(s)

Excludes:

- Removal of temporary transvenous pacemaker system – omit code
- That with replacement of:
 - atrial and/or ventricular lead(s) [electrode] (37.76)
 - epicardial lead [electrode] (37.74)

Monitoring

89.4 Cardiac stress tests, pacemaker and defibrillator checks

89.45 Artificial pacemaker rate check

- Artificial pacemaker function check NOS
- Bedside device check of pacemaker or cardiac resynchronization pacemaker [CRT-P]
- Interrogation only without arrhythmia induction

Excludes:

- Catheter based invasive electrophysiologic testing (37.26)
- Non-invasive programmed electrical stimulation [NIPS] (arrhythmia induction) (37.20)

89.46 Artificial pacemaker artifact wave form check

89.47 Artificial pacemaker electrode impedance check

89.48 Artificial pacemaker voltage or amperage threshold check

Other Procedures

37.99 Other

Excludes:

- Cardiac retraining (93.36)
- Conversion of cardiac rhythm (99.60–99.69)
- Implantation of prosthetic cardiac support device (37.41)
- Insertion of left atrial appendage device (37.90)
- Maze procedure (Cox-maze), open (37.33)
- Maze procedure, endovascular approach (37.34)
- Repositioning of pulse generator (37.79)
- Revision of lead(s) (37.75)
- Revision or relocation of pacemaker, defibrillator, or other implanted cardiac device pocket (37.79)

Revision/Relocation of Pocket

37.79 Revision or relocation of cardiac device pocket

- Debridement and reforming pocket (skin and subcutaneous tissue)
- Insertion of loop recorder
- Relocation of pocket [creation of new pocket] pacemaker or CRT-P
- Removal of cardiac device/pulse generator without replacement
- Removal of the implantable hemodynamic pressure sensor [lead] and monitor device
- Removal without replacement of cardiac resynchronization defibrillator device
- Repositioning of implantable hemodynamic pressure sensor [lead] and monitor device
- Repositioning of pulse generator
- Revision of cardioverter defibrillator (automatic) pocket
- Revision of pocket for intracardiac hemodynamic monitoring
- Revision or relocation of CRT-D pocket
- Revision or relocation of pacemaker, defibrillator, or other implanted cardiac device pocket

Excludes:

- Removal of loop recorder (86.05)

System Insertion

00.50 Implantation of cardiac resynchronization pacemaker without mention of defibrillation, total system [CRT-P]

Note: Device testing during procedure — omit code.

- Biventricular pacemaker
- Biventricular pacing without internal cardiac defibrillator
- BiV pacemaker
- Implantation of cardiac resynchronization (biventricular) pulse generator pacing device, formation of pocket, transvenous leads including placement of lead into left ventricular coronary venous system, and intraoperative procedures for evaluation of lead signals
- That with CRT-P generator and one or more leads

Excludes:

- Implantation of cardiac resynchronization defibrillator, total system [CRT-D] (00.51)
- Insertion or replacement of any type pacemaker device (37.80–37.87)
- Replacement of cardiac resynchronization:
 - Defibrillator, pulse generator only [CRT-D] (00.54)
 - Pacemaker, pulse generator only [CRT-P] (00.53)

Temporary Pacemaker Insertion

37.78 Insertion of temporary transvenous pacemaker system

Excludes:

- Intraoperative cardiac pacemaker (39.64)

39.64 Intraoperative cardiac pacemaker

- Temporary pacemaker used during and immediately following cardiac surgery

This section contains ICD-9-CM procedure codes for commonly billed implantable cardioverter defibrillator (ICD) and cardiac resynchronization therapy defibrillator (CRT-D) procedures.

Device Insertion/Replacement

00.54 Implantation or replacement of cardiac resynchronization defibrillator, pulse generator only [CRT-D]

Note: Device testing during procedure — omit code.

- Implantation of CRT-D device with removal of any existing CRT-D, CRT-P, pacemaker, or defibrillator device

Excludes:

- Implantation of automatic cardioverter defibrillator, pulse generator only (37.96)
- Implantation of cardiac resynchronization defibrillator, total system [CRT-D] (00.51)
- Implantation or replacement of cardiac resynchronization pacemaker, pulse generator only [CRT-P] (00.53)

Device Insertion/Replacement *(continued)*

37.96 Implantation of automatic cardioverter defibrillator pulse generator only

Note: Device testing during procedure — omit code.

Excludes:

- Implantation or replacement of cardiac resynchronization defibrillator, pulse generator device only [CRT-D] (00.54)

37.98 Replacement of automatic cardioverter defibrillator pulse generator only

Note: Device testing during procedure — omit code.

Excludes:

- Replacement of cardiac resynchronization defibrillator, pulse generator device only [CRT-D] (00.54)

Lead Insertion/Replacement

00.52 Implantation or replacement of transvenous lead [electrode] into left ventricular coronary venous system

Excludes:

- Implantation of cardiac resynchronization:
 - defibrillator, total system [CRT-D] (00.51)
 - pacemaker, total system [CRT-P] (00.50)
- Initial insertion of transvenous lead [electrode] (37.70–37.72)
- Replacement of transvenous atrial and/or ventricular lead(s) [electrodes] (37.76)

37.95 Implantation of automatic cardioverter defibrillator lead(s) only

37.97 Replacement of automatic cardioverter defibrillator lead(s) only

Excludes:

- Replacement of epicardial lead [electrode] into epicardium (37.74)
- Replacement of transvenous lead [electrode] into left ventricular coronary venous system (00.52)

Monitoring

37.26 Catheter based invasive electrophysiologic testing

- Electrophysiologic studies [EPS]
- Code also any concomitant procedure

Excludes:

- Device interrogation only without arrhythmia induction (bedside check) (89.45–89.49)
- His bundle recording (37.29)
- Non-invasive programmed electrical stimulation (NIPS) (37.20)
- That as part of intraoperative testing — omit code

89.4 Cardiac stress tests, pacemaker, and defibrillator checks

Monitoring *(continued)*

89.49 Automatic implantable cardioverter defibrillator (AICD) check

- Bedside check of an AICD or cardiac resynchronization defibrillator [CRT-D]
- Checking pacing thresholds of device
- Interrogation only without arrhythmia induction

Excludes:

- Catheter based invasive electrophysiologic testing (37.26)
- Non-invasive programmed electrical stimulation [NIPS] (arrhythmia induction) (37.20)

Other Procedures

37.99 Other

Excludes:

- Cardiac retraining (93.36)
- Conversion of cardiac rhythm (99.60–99.69)
- Implantation of prosthetic cardiac support device (37.41)
- Insertion of left atrial appendage device (37.90)
- Maze procedure (Cox-maze), open (37.33)
- Maze procedure, endovascular approach (37.34)
- Repositioning of pulse generator (37.79)
- Revision of lead(s) (37.75)
- Revision or relocation of pacemaker, defibrillator, or other implanted cardiac device pocket (37.79)

System Implant

37.94 Implantation or replacement of automatic cardioverter defibrillator, total system [AICD]

Note: *Device testing during procedure — omit code.*

- Implantation of defibrillator with leads (epicardial patches), formation of pocket (abdominal fascia)(subcutaneous), any transvenous leads, intraoperative procedures for evaluation of lead signals, and obtaining defibrillator threshold measurements
- Techniques: lateral thoracotomy, medial sternotomy, subxiphoid procedure
Code also extracorporeal circulation, if performed (39.61)
Code also any concomitant procedure [e.g., coronary bypass (36.10–36.19) or CCM total system (17.51)]

Excludes:

- Implantation of cardiac resynchronization defibrillator, total system [CRT-D] (00.51)

System Insertion

00.51 Implantation of cardiac resynchronization defibrillator, total system [CRT-D]

Note: Device testing during procedure — omit code.

- BiV defibrillator
- Biventricular defibrillator
- Biventricular pacing with internal cardiac defibrillator
- BiV ICD
- BiV pacemaker with defibrillator
- BiV pacing with defibrillator
- Implantation of cardiac resynchronization (biventricular) pulse generator with defibrillator [AICD], formation of pocket, transvenous leads, including placement of lead into left ventricular coronary venous system, intra-operative procedures for evaluation of lead signals, and obtaining defibrillator threshold measurements
- That with CRT-D generator and one or more leads

Excludes:

- Implantation of cardiac resynchronization pacemaker, total system [CRT-P] (00.50)
- Implantation or replacement of automatic cardioverter defibrillator, total system [AICD] (37.94)
- Replacement of cardiac resynchronization defibrillator, pulse generator only [CRT-D] (00.54)

This section contains ICD-9-CM procedure codes for commonly billed electrophysiology (EP) procedures.

Electrophysiology Procedures

37.26 Catheter based invasive electrophysiologic testing

- Electrophysiologic studies [EPS]
- Code also any concomitant procedure

Excludes:

- Device interrogation only without arrhythmia induction (bedside check) (89.45–89.49)
- His bundle recording (37.29)
- Non-invasive programmed electrical stimulation (NIPS) (37.20)
- That as part of intraoperative testing — omit code

37.27 Cardiac mapping

Code also any concomitant procedure

Excludes:

- Electrocardiogram (89.52)
- His bundle recording (37.29)

37.28 Intracardiac echocardiography

- Echocardiography of heart chambers
- ICE

Code also any synchronous Doppler flow mapping (88.72)

Excludes:

- Intravascular imaging of coronary vessels (intravascular ultrasound) (IVUS) (00.24)

37.34 Excision or destruction of other lesion or tissue of heart, other approach

- Ablation of heart tissue (cryoablation) (electrocurrent) (laser) (microwave) (radiofrequency) (resection), via peripherally inserted catheter
- Modified maze procedure, endovascular approach

Electrophysiology Procedures (continued)

99.6 Conversion of cardiac rhythm

Excludes:

- Open chest cardiac:
 - Electric stimulation (37.91)
 - Massage (37.91)

99.62 Other electric countershock of heart

- Cardioversion:
 - NOS
 - external
- Conversion to sinus rhythm
- Defibrillation
 - External electrode stimulation

CPT Codes²

(Hospital Outpatient, Ambulatory Surgery Centers, and Physicians)

Note: In certain circumstances, one or more modifiers may be attached to the original CPT code if substantiated with medical documentation. Multiple procedures may require a modifier(s). See Appendix A for a list of modifiers. Also consult your 2010 AMA CPT book for a complete list of modifiers including descriptions and instructions.

Key: • Moderate sedation. For these procedures, moderate (conscious) sedation is included and cannot be billed separately.

+ Add-on code

◊ Modifier 51 exempt

This section contains CPT® codes for commonly billed cardiac pacemakers and cardiac resynchronization therapy pacemaker (CRT-P) procedures.

Device Implant

- **33212** Insertion or replacement of pacemaker pulse generator only; single chamber, atrial or ventricular
- **33213** dual chamber
(Use 33212, 33213, as appropriate, in conjunction with the epicardial lead placement codes 33202, 33203 to report the insertion of the generator when done by the same physician during the same session)

Device Removal

- **33233** Removal of permanent pacemaker pulse generator

Device Upgrade

- **33214** Upgrade of implanted pacemaker system, conversion of single chamber system to dual chamber system (includes removal of previously placed pulse generator, testing of existing lead, insertion of new lead, insertion of new pulse generator)
(When epicardial electrode placement is performed, report 33214 in conjunction with 33202, 33203)

Electrophysiologic Test

- **93624** Electrophysiologic follow-up study with pacing and recording to test effectiveness of therapy, including induction or attempted induction of arrhythmia
- 93724** Electronic analysis of antitachycardia pacemaker system (includes electrocardiographic recording, programming of device, induction and termination of tachycardia via implanted pacemaker and interpretation of recordings)

Fluoroscopy

- 71090** Insertion pacemaker, fluoroscopy and radiography, radiological supervision and interpretation

Implantable Cardiovascular Monitor (ICM) Evaluation

- 93290** Interrogation device evaluation (in person) with physician analysis, review and report, includes connection, recording and disconnection per patient encounter; implantable cardiovascular monitor system, including analysis of 1 or more recorded physiologic cardiovascular data elements from all internal and external sensors
(For heart rhythm derived data elements, use 93289)
(Do not report 93290 in conjunction with 93297, 93299)
- 93297** Interrogation device evaluation(s), (remote) up to 30 days; implantable cardiovascular monitor system, including analysis of 1 or more recorded physiologic cardiovascular data elements from all internal and external sensors, physician analysis, review(s) and report(s)
(For heart rhythm derived data elements, use 93295)
(Do not report 93297 in conjunction with 93290, 93298)
(Report 93297 only once per 30 days)
- 93299** implantable cardiovascular monitor system or implantable loop recorder system, remote data acquisition(s), receipt of transmissions and technician review, technical support and distribution of results
(Do not report 93299 in conjunction with 93290, 93291, 93296)
(Report 93299 only once per 30 days)

Lead Implant

- 33202** Insertion of epicardial electrode(s); open incision (e.g., thoracotomy, median sternotomy, subxiphoid approach)
- 33203** endoscopic approach (e.g., thoracoscopy, pericardioscopy)
(When epicardial lead placement is performed by the same physician at the same session as insertion of the generator, report 33202, 33203 in conjunction with 33212, 33213, as appropriate)
- **33216** Insertion of a single transvenous electrode, permanent pacemaker or cardioverter defibrillator
- **33217** Insertion of 2 transvenous electrodes, permanent pacemaker or cardioverter defibrillator
(Do not report code 33216–33217 in conjunction with 33214)

Lead Implant *(continued)*

- 33224** Insertion of pacing electrode, cardiac venous system, for left ventricular pacing, with attachment to previously placed pacemaker or pacing cardioverter defibrillator pulse generator (including revision of pocket, removal, insertion, and/or replacement of generator) (When epicardial electrode placement is performed, report 33224 in conjunction with 33202, 33203)
- + **33225** Insertion of pacing electrode, cardiac venous system, for left ventricular pacing, at time of insertion of pacing cardioverter defibrillator or pacemaker pulse generator (including upgrade to dual chamber system) (List separately in addition to code for primary procedure) (Use 33225 in conjunction with codes 33206, 33207, 33208, 33212, 33213, 33214, 33216, 33217, 33222, 33233, 33234, 33235, 33240, 33249)

Lead Removal

- **33234** Removal of transvenous pacemaker electrode(s); single lead system, atrial or ventricular
 - **33235** Removal of transvenous pacemaker electrode(s); dual lead system
- 33236** Removal of permanent epicardial pacemaker and electrodes by thoracotomy; single lead system, atrial or ventricular
- 33237** dual lead system
- 33238** Removal of permanent transvenous electrode(s) by thoracotomy

Lead Repair

- **33218** Repair of single transvenous electrode for a single chamber, permanent pacemaker or single chamber pacing cardioverter defibrillator (For atrial or ventricular single chamber repair of pacemaker electrode[s] with replacement of pulse generator, see 33212 or 33213, and 33218 or 33220)
- **33220** Repair of two transvenous electrodes for a dual chamber permanent pacemaker or dual chamber pacing cardioverter defibrillator

Lead Repositioning

- 33215** Repositioning of previously implanted transvenous pacemaker or pacing cardioverter defibrillator (right atrial or right ventricular) electrode
- 33226** Repositioning of a previously implanted cardiac venous system (left ventricular) electrode (including removal, insertion, and/or replacement of generator)

Monitoring

- 93279** Programming device evaluation (in person) with iterative adjustment of the implantable device to test the function of the device and select optimal permanent programmed values with physician analysis, review and report; single lead pacemaker system
(Do not report 93279 in conjunction with 93286, 93288)
- 93280** dual lead pacemaker system
(Do not report 93280 in conjunction with 93286, 93288)
- 93281** multiple lead pacemaker system
(Do not report 93281 in conjunction with 93286, 93288)
- 93286** Peri-procedural device evaluation (in person) and programming of device system parameters before or after a surgery, procedure, or test with physician analysis, review and report; single, dual, or multiple lead pacemaker system
(Report 93286 once before and once after surgery, procedure, or test, when device evaluation and programming is performed before and after surgery, procedure, or test)
(Do not report 93286 in conjunction with 93279–93281, 93288)
- 93288** Interrogation device evaluation (in person) with physician analysis, review and report, includes connection, recording and disconnection per patient encounter; single, dual, or multiple lead pacemaker system
(Do not report 93288 in conjunction with 93279–93281, 93286, 93294, 93296)
- 93293** Transtelephonic rhythm strip pacemaker evaluation(s) single, dual, or multiple lead pacemaker system, includes recording with and without magnet application with physician analysis, review and report(s), up to 90 days
(Do not report 93293 in conjunction with 93294)
(For in person evaluation, see 93040, 93041, 93042)
(Report 93293 only once per 90 days)
- 93294** Interrogation device evaluation(s) (remote) up to 90 days; single, dual, or multiple lead pacemaker system with interim physician analysis, review(s) and report(s)
(Do not report 93294 in conjunction with 93288, 93293)
(Report 93294 only once per 90 days)
- 93296** single, dual, or multiple lead pacemaker system or implantable cardioverter defibrillator system, remote data acquisition(s), receipt of transmissions and technician review, technical support and distribution of results.
(Do not report 93296 in conjunction with 93288, 93289, 93299)
(Report 93296 only once per 90 days)

Revision/Relocation of Pocket

- **33222** Revision or relocation of skin pocket for pacemaker

System Implant

- **33206** Insertion or replacement of permanent pacemaker with transvenous electrode(s); atrial
- **33207** ventricular
- **33208** atrial and ventricular
(Codes 33206–33208 include subcutaneous insertion of the pulse generator and transvenous placement of electrode[s])

Temporary Pacemaker

- **33210** Insertion or replacement of temporary transvenous single chamber cardiac electrode or pacemaker catheter (separate procedure)
- **33211** Insertion or replacement of temporary transvenous dual chamber pacing electrodes (separate procedure)

This section contains CPT codes for commonly billed implantable cardioverter defibrillator (ICD) and cardiac resynchronization therapy defibrillator (CRT-D) procedures.

ICD Specific Modifier Q0 (zero) Modifier³

The Q0 modifier is required as a condition for payment on claims for ICD services rendered in the **primary** prevention of cardiac arrest.

CMS will deny claims:

- If the data reporting requirement is absent and;
- If the Q0 modifier is not appended to physician and outpatient hospital claims

The Q0 modifier is used to identify patients who meet the coverage requirement for any indication that is for the primary prevention of sudden cardiac arrest (i.e., no history of induced or spontaneous arrhythmias). It is not required for ICD services rendered for the secondary prevention of cardiac arrest as documented by the following secondary prevention diagnosis codes:

- 427.1** Paroxysmal ventricular tachycardia
- 427.41** Ventricular fibrillation
- 427.42** Ventricular flutter
- 427.5** Cardiac arrest
- 427.9** Cardiac dysrhythmia, unspecified
- 996.04** Mechanical complication of cardiac device, implant, and graft; due to automatic implantable cardiac defibrillator
Note: *This diagnosis is used when the patient is having his/her ICD replaced due to a mechanical complication, as could occur due to ICD recall.*
- V53.32** Fitting and adjustment of other device; automatic implantable cardiac defibrillator
Note: *This diagnosis is used when there is a fitting or an adjustment and can include device removal or replacement; it would be used when the ICD reaches its natural end-of-battery life.*

Device Insertion

- **33240** Insertion of single or dual chamber pacing cardioverter defibrillator pulse generator
(Use 33240, as appropriate, in addition to the epicardial lead placement codes to report the insertion of the generator when done by the same physician during the same session)

Device Removal

- **33241** Subcutaneous removal of single or dual chamber pacing-cardioverter defibrillator pulse generator
(For removal of electrode(s) by thoracotomy, use 33243 in conjunction with 33241)
(For removal of electrode(s) by transvenous extraction, use 33244 in conjunction with 33241)
(For removal and reinsertion of a pacing cardioverter defibrillator system [pulse generator and electrodes], report 33241 and 33243, or 33244 and 33249)
(For repair of implantable cardioverter defibrillator pulse generator and/or leads, see 33218, 33220)

Echocardiography for AV Optimization

- 93306** Echocardiography, transthoracic, real-time with image documentation (2D), includes M-mode recording, when performed, complete, with spectral Doppler echocardiography, and with color flow Doppler echocardiography
(For transthoracic echocardiography without spectral and color Doppler, use 93307)
- 93307** Echocardiography, transthoracic, real-time with image documentation (2D) includes M-mode recording, when performed, complete, without spectral or color Doppler echocardiography
(Do not report 93307 in conjunction with 93320, 93321, 93325)
- 93308** Echocardiography, transthoracic, real-time with image documentation (2D) includes M-mode recording, when performed, follow-up or limited study
- + **93320** Doppler echocardiography, pulsed wave and/or continuous wave with spectral display (List separately in addition to codes for echocardiographic imaging); complete
(Use 93320 in conjunction with codes 93303, 93304, 93312, 93314, 93315, 93317, 93350, 93351)
- + **93321** Doppler echocardiography, pulsed wave and/or continuous wave with spectral display (List separately in addition to codes for echocardiographic imaging); follow-up or limited study
(Use 93320 in conjunction with codes 93303, 93304, 93308, 93312, 93314, 93315, 93317, 93350, 93351)
- + **93325** Doppler echocardiography color flow velocity mapping (List separately in addition to codes for echocardiography)
(Use 93325 in conjunction with codes 76825, 76826, 76827, 76828, 93303, 93304, 93308, 93312, 93314, 93315, 93317, 93350, 93351)

Electrophysiologic Test

- **93640** 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;
- **93641** with testing of single or dual chamber pacing cardioverter defibrillator pulse generator
(For subsequent or periodic electronic analysis and/or reprogramming of single or dual chamber pacing cardioverter defibrillators, see 93282, 93283, 93289, 93292, 93295, 93642)
- **93642** Electrophysiologic evaluation of single or dual chamber pacing cardioverter defibrillator (includes defibrillation threshold evaluation, induction of arrhythmia, evaluation of sensing and pacing for arrhythmia termination, and programming or reprogramming of sensing or therapeutic parameters)

Fluoroscopy

- 71090** Insertion pacemaker, fluoroscopy and radiography, radiological supervision and interpretation

Implantable Cardiovascular Monitor (ICM) Evaluation

- 93290** Interrogation device evaluation (in person) with physician analysis, review and report, includes connection, recording and disconnection per patient encounter; implantable cardiovascular monitor system, including analysis of 1 or more recorded physiologic cardiovascular data elements from all internal and external sensors
(For heart rhythm derived data elements, use 93289)
(Do not report 93290 in conjunction with 93297, 93299)
- 93297** Interrogation device evaluation(s), (remote) up to 30 days; implantable cardiovascular monitor system, including analysis of 1 or more recorded physiologic cardiovascular data elements from all internal and external sensors, physician analysis, review(s) and report(s)
(For heart rhythm derived data elements, use 93295)
(Do not report 93297 in conjunction with 93290, 93298)
(Report 93297 only once per 30 days)
- 93299** implantable cardiovascular monitor system or implantable loop recorder system, remote data acquisition(s), receipt of transmissions and technician review, technical support and distribution of results
(Do not report 93299 in conjunction with 93290, 93291, 93296)
(Report 93299 only once per 30 days)

Lead Implant

- 33202** Insertion of epicardial electrode(s); open incision (e.g., thoracotomy, median sternotomy, subxiphoid approach)
- 33203** endoscopic approach (e.g., thoracoscopy, pericardioscopy)
(When epicardial lead placement is performed by the same physician at the same session as insertion of the generator, report 33202, 33203 in conjunction with 33212, 33213, as appropriate)
- **33216** Insertion of a single transvenous electrode, permanent pacemaker or cardioverter defibrillator
- **33217** Insertion of 2 transvenous electrodes, permanent pacemaker or cardioverter defibrillator
(Do not report 33216–33217 in conjunction with 33214)

Lead Insertion

- 33224** Insertion of pacing electrode, cardiac venous system, for left ventricular pacing, with attachment to previously placed pacemaker or pacing cardioverter defibrillator pulse generator (including revision of pocket, removal, insertion, and/or replacement of generator)
(When epicardial electrode placement is performed, report 33224 in conjunction with 33202, 33203)
- + **33225** Insertion of pacing electrode, cardiac venous system, for left ventricular pacing, at time of insertion of pacing cardioverter defibrillator or pacemaker pulse generator (including upgrade to dual chamber system) (List separately in addition to code for primary procedure)
(Use 33225 in conjunction with 33206, 33207, 33208, 33212, 33213, 33214, 33216, 33217, 33222, 33233, 33234, 33235, 33240, 33249)

Lead Removal

- **33244** Removal of single or dual chamber pacing cardioverter defibrillator electrode(s); by transvenous extraction
(For subcutaneous removal of the pulse generator, use 33241 in conjunction with 33243 or 33244)

Lead Repair

- **33218** Repair of single transvenous electrode for a single chamber, permanent pacemaker or single chamber pacing cardioverter defibrillator
(For atrial or ventricular single chamber repair of pacemaker electrode[s] with replacement of pulse generator, see 33212 or 33213, and 33218 or 33220)
- **33220** Repair of two transvenous electrodes for a dual chamber permanent pacemaker or dual chamber pacing cardioverter defibrillator

Lead Repositioning

- 33216** Repositioning of previously implanted transvenous pacemaker or pacing cardioverter defibrillator (right atrial or right ventricular) electrode
- 33226** Repositioning of a previously implanted cardiac venous system (left ventricular) electrode (including removal, insertion, and/or replacement of generator)

Monitoring

- 93282** Programming device evaluation (in person) with iterative adjustment of the implantable device to test the function of the device and select optimal permanent programmed values with physician analysis, review and report; single lead implantable cardioverter defibrillator system
(Do not report 93282 in conjunction with 93287, 93289, 93745)
- 93283** dual lead implantable cardioverter defibrillator system
(Do not report 93283 in conjunction with 93287, 93289)
- 93284** multiple lead implantable cardioverter defibrillator system
(Do not report 93284 in conjunction with 93287, 93289)
- 93287** Peri-procedural device evaluation (in person) and programming of device system parameters before or after a surgery, procedure, or test with physician analysis, review and report; single, dual, or multiple lead implantable cardioverter defibrillator system
(Report 93287 once before and once after surgery, procedure, or test, when device evaluation and programming is performed before and after surgery, procedure, or test)
(Do not report 93287 in conjunction with 93282–93284, 93289)
- 93289** Interrogation device evaluation (in person) with physician analysis, review and report, includes connection, recording and disconnection per patient encounter; single, dual, or multiple lead implantable cardioverter defibrillator system, including analysis of heart rhythm derived data elements
(For monitoring physiologic cardiovascular data elements derived from an ICD, use 93290)
(Do not report 93289 in conjunction with 93282-93284, 93287, 93295, 93296)
- 93295** Interrogation device evaluation(s) (remote), up to 90 days; single, dual or multiple lead implantable cardioverter defibrillator system, with interim physician analysis, review(s) and report(s)
(For remote monitoring of physiologic cardiovascular data elements derived from an ICD, use 93297)
(Do not report 93295 in conjunction with 93289)
(Report 93295 only once per 90 days)
- 93296** single, dual or multiple lead pacemaker system or implantable cardioverter defibrillator system, remote data acquisitions(s), receipt of transmissions and technician review, technical support and distribution of results
(Do not report 93296 in conjunction with 93288, 93289, 93299)
(Report 93296 only once per 90 days)

Pocket Revision

- **33223** Revision of skin pocket for cardioverter defibrillator

System Implant

- **33249** Insertion or repositioning of electrode lead(s) for single or dual chamber pacing cardioverter defibrillator and insertion of pulse generator
(For removal and reinsertion of a pacing cardioverter defibrillator system (pulse generator and electrodes), report 33241 and 33243, or 33244 and 33249)
(For insertion of implantable cardioverter defibrillator lead(s), without thoracotomy, use 33216)

This section contains CPT codes for commonly billed electrophysiology (EP) procedures.

Note: EP procedures are not covered under the Medicare ASC payment system

Ablation

- **93650** Intracardiac catheter ablation of atrioventricular node function, atrioventricular conduction for creation of complete heart block, with or without temporary pacemaker placement
- **93651** Intracardiac catheter ablation of arrhythmogenic focus; for treatment of supraventricular tachycardia by ablation of fast or slow atrioventricular pathways, accessory atrioventricular connections or other atrial foci, singly or in combination
- **93652** for treatment of ventricular tachycardia

Cardioversion

- **92960** Cardioversion, elective, electrical conversion of arrhythmia; external
- **92961** internal (separate procedure)
(Do not report 92961 in conjunction with 93282–93284, 93287, 93289, 93295, 93296, 93618–93624, 93631, 93640–93642, 93650–93652, 93662)

Comprehensive Studies

- **93619** Comprehensive electrophysiologic evaluation with right atrial pacing and recording, right ventricular pacing and recording, His bundle recording, including insertion and repositioning of multiple electrode catheters, without induction or attempted induction of arrhythmia
(Do not report 93619 in conjunction with 93600, 93602, 93610, 93612, 93618, or 93620–93622)

Comprehensive Studies *(continued)*

- **93620** Comprehensive electrophysiologic evaluation including insertion and repositioning of multiple electrode catheters with induction or attempted induction of arrhythmia; with right atrial pacing and recording, right ventricular pacing and recording, His bundle recording
(Do not report 93620 in conjunction with 93600, 93602, 93610, 93612, 93618, or 93619)
- + **93621** with left atrial pacing and recording from coronary sinus or left atrium (List separately in addition to code for primary procedure)
(Use 93621 in conjunction with 93620)
- + **93622** with left ventricular pacing and recording (List separately in addition to code for primary procedure)
(Use 93622 in conjunction with 93620)
- + **93623** Programmed stimulation and pacing after intravenous drug infusion (List separately in addition to code for primary procedure)
(Use 93623 in conjunction with 93619, 93620)
- **93624** Electrophysiologic follow-up study with pacing and recording to test effectiveness of therapy, including induction or attempted induction of arrhythmia

Esophageal Pacing/Recording

- ∞ **93615** Esophageal recording of atrial electrogram with or without ventricular electrogram(s);
- ∞ **93616** with pacing

Intracardiac Echocardiography

- + **93662** Intracardiac echocardiography during therapeutic/diagnostic intervention, including imaging supervision and interpretation (List separately in addition to code for primary procedure)
(Use 93662 in conjunction with 92987, 93527, 93532, 93580, 93581, 93621, 93622, 93651, or 93652, as appropriate)
(Do not report 92961 in addition to 93662)

Pacing/Recording/Mapping

- ∞ **93600** Bundle of His recording
- ∞ **93602** Intra-atrial recording
- ∞ **93603** Right ventricular recording
- + **93609** Intraventricular and/or intra-atrial mapping of tachycardia site(s) with catheter manipulation to record from multiple sites to identify origin of tachycardia
(List separately in addition to code for primary procedure)
(Use 93609 in conjunction with codes 93620, 93651, 93652)
(Do not report 93609 in addition to 93613)

Pacing/Recording/Mapping *(continued)*

- ◊ **93610** Intra-atrial pacing
- ◊ **93612** Intraventricular pacing
(Do not report 93612 in conjunction with 93620–93622)
- ◊+ **93613** Intracardiac electrophysiologic 3-dimensional mapping (List separately in addition to code for primary procedure)
(Use 93613 in conjunction with 93620, 93651, 93652)
(Do not report 93613 in addition to 93609)
- 93631** Intra-operative epicardial and endocardial pacing and mapping to localize the site of tachycardia or zone of slow conduction for surgical correction
(For operative ablation of arrhythmogenic focus or pathway by a separate provider, see 33250–33261)

Tilt Table

- 93660** Evaluation of cardiovascular function with tilt table evaluation, with continuous ECG monitoring and intermittent blood pressure monitoring, with or without pharmacological intervention
(For testing of autonomic nervous system function, see 95921–95923)

This section contains CPT codes for other commonly billed procedures.

Implantable Loop Recorder (ILR) Evaluation

- 93285** Programming device evaluation (in person) with iterative adjustment of the implantable device to test the function of the device and select optimal permanent programmed values with physician analysis, review and report; implantable loop recorder system
(Do not report 93285 in conjunction with 33282, 93279–93284, 93291)
- 93291** Interrogation device evaluation (in person) with physician analysis, review and report, includes connection, recording and disconnection per patient encounter; implantable loop recorder system, including heart rhythm derived data analysis
(Do not report 93291 in conjunction with 33282, 93288–93290, 93298, 93299)
- 93298** Interrogation device evaluation(s), (remote) up to 30 days; implantable loop recorder system, including analysis of recorded heart rhythm data, physician analysis, review(s) and report(s)
(Do not report 93298 in conjunction with 33282, 93291, 93297)
(Report 93298 only once per 30 days)
- 93299** implantable cardiovascular monitor system or implantable loop recorder system, remote data acquisition(s), receipt of transmissions and technician review, technical support and distribution of results
(Do not report 93299 in conjunction with 93290, 93291, 93296)
(Report 93299 only once per 30 days)

Wearable Defibrillator

- 93292** Interrogation device evaluation (in person) with physician analysis, review and report, includes connection, recording and disconnection per patient encounter; wearable defibrillator system
(Do not report 93292 in conjunction with 93745)

Wearable Mobile Cardiovascular Telemetry

- 93228** Wearable mobile cardiovascular telemetry with electrocardiographic recording, concurrent computerized real time data analysis and greater than 24 hours of accessible ECG data storage (retrievable with query) with ECG triggered and patient selected events transmitted to a remote attended surveillance center for up to 30 days; physician review and interpretation with report
(Report 93228 only once per 30 days)
(Do not report 93228 in conjunction with 93014)
- 93229** Wearable mobile cardiovascular telemetry with electrocardiographic recording, concurrent computerized real time data analysis and greater than 24 hours of accessible ECG data storage (retrievable with query) with ECG triggered and patient selected events transmitted to a remote attended surveillance center for up to 30 days; technical support for connection and patient instructions for use, attended surveillance, analysis and physician prescribed transmission of daily and emergent data reports
(Report 93229 only once per 30 days)
(Do not report 93229 in conjunction with 93014)
(For wearable cardiovascular monitors that do not perform automatic ECG triggered transmissions to an attended surveillance center, see 93224–93227, 93230–93272)

Sources

¹American Medical Association. 2010 ICD-9-CM For Hospitals, Volumes 1, 2 and 3. Professional Edition. Chicago, IL: 2009.

²American Medical Association. Current Procedural Terminology (CPT) 2010. Professional Edition. Chicago, IL: 2009. Current Procedural Terminology (CPT) is copyright 2009 American Medical Association (AMA). All Rights Reserved. No fee schedules, basic units, relative values, or related listings are included in CPT. The AMA assumes no liability for the data contained herein. Applicable FARS/DFARS restrictions apply to government use. CPT is a registered trademark of the American Medical Association.

³Centers for Medicare and Medicaid Services. Medicare Claims Processing. Effective January 1, 2008. New HCPCS Modifiers when Billing for Patient Care in Clinical Research Studies. January 18, 2008. Available at: <http://www.cms.hhs.gov/transmittals/downloads/R1418cp.pdf>. Accessed December 7, 2009.

Disclaimer

Health economic and reimbursement information provided by Boston Scientific Corporation is gathered from third-party sources and is subject to change without notice as a result of complex and frequently changing laws, regulations, rules, and policies. This information is presented for illustrative purposes only and does not constitute reimbursement or legal advice. Boston Scientific encourages providers to submit accurate and appropriate claims for services. It is always the provider's responsibility to determine medical necessity, the proper site for delivery of any services, and to submit appropriate codes, charges, and modifiers for services that are rendered. Boston Scientific recommends that you consult with your payers, reimbursement specialists, and/or legal counsel regarding coding, coverage, and reimbursement matters. Boston Scientific does not promote the use of its products outside their FDA-approved label.

Payer policies will vary and should be verified prior to treatment for limitations on diagnosis, coding, or site of service requirements. The coding options listed within this guide are commonly used codes and are not intended to be an all-inclusive list. We recommend consulting your relevant manuals for appropriate coding options.

CPT® Disclaimer

CPT copyright 2009 American Medical Association. All rights reserved. CPT is a registered trademark of the American Medical Association. Applicable FARS/DFARS Restrictions Apply to Government Use. Fee schedules, relative value units, conversion factors, and/or related components are not assigned by the AMA, are not part of CPT®, and the AMA is not recommending their use. The AMA does not directly or indirectly practice medicine or dispense medical services. The AMA assumes no liability for data contained or not contained herein.

**Boston
Scientific**

Delivering what's next.™

Cardiac Rhythm Management

Boston Scientific Corporation
4100 Hamline Avenue North
St. Paul, MN 55112-5798 USA
Tel: 651.582.4000 Fax: 651.582.4166
Medical Professionals:
1.800.CARDIAC (227.3422)
Patients and Families:
1.866.484.3268
www.bostonscientific.com

Copyright © 2010 by
Boston Scientific Corporation
or its affiliates. All rights reserved.

CRM5-2074-0110