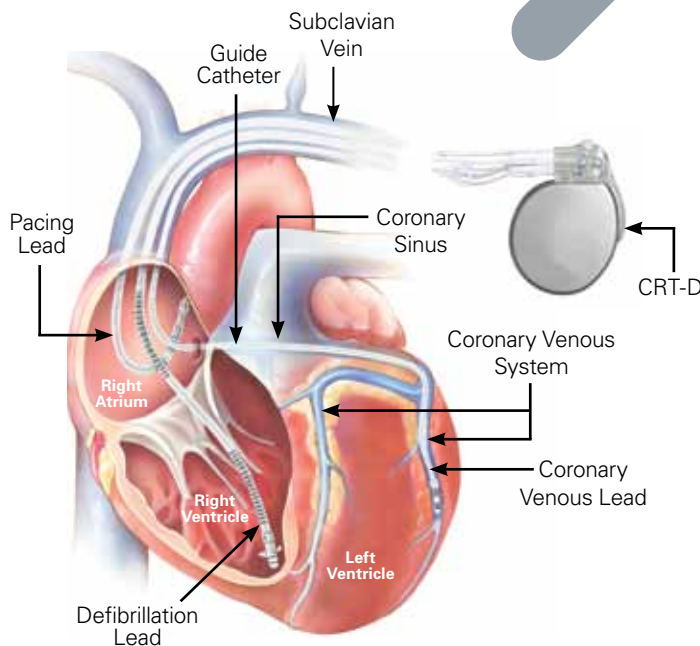


GuidePoint is simplifying reimbursement.



Updated: June 2009

Cardiac Resynchronization Therapy Defibrillator (CRT-D) Coding Overview

CRT-D implantation procedure

The implantation of a CRT-D system typically requires the use of a cardiac resynchronization therapy pulse generator and three electrodes, or leads. The three leads monitor and deliver electrical stimulation to the right atrium, right ventricle, and left ventricle. As in conventional implantable cardioverter defibrillator (ICD) procedures, a defibrillation lead is fed through the subclavian vein near the collarbone and positioned in the right ventricle. In some cases, the cephalic or internal jugular vein may be used as an alternative to the subclavian vein. In a similar manner, a pacing lead is positioned in the right atrium. In addition, a CRT-D system requires the implantation of a third lead within the coronary venous system of the left ventricle in order to coordinate, or resynchronize, ventricular contractions. This third transvenous lead is inserted into the subclavian vein, passed through the coronary sinus, and advanced into a coronary vein located on the exterior wall of the left ventricle.

A step-by-step description of a typical initial CRT-D system implantation procedure

1. The subclavian vein is accessed and a pulse generator pocket is formed.
2. A **pacing lead** is inserted into the right atrium, and the defibrillation lead is inserted into the right ventricle under **fluoroscopy (71090)**.
3. A **guide catheter** is inserted into the subclavian vein.
4. The coronary sinus (cs) is cannulated with the guide catheter via the coronary sinus ostium (opening).
5. In most cases, a **venogram** is required to visualize the coronary venous system prior to inserting the left ventricular lead.
6. A **guide wire** is inserted through the guide catheter into the coronary venous system to the desired branch vein.
7. Under **fluoroscopy**, the **left ventricular lead (+33225)** is positioned over the guide wire and into a branch of the coronary venous system.
8. **Lead measurement tests**, including pacing and sensing thresholds and lead impedances, are performed.
9. The guide wire is removed and replaced with a **finishing wire** to stabilize the lead upon removal of the guide catheter.
10. The guide catheter is removed, maintaining lead position.
11. The finishing wire is removed, and the left ventricular lead is secured.
12. A **CRT-D pulse generator (33249)** is connected to the three leads that are in place.
13. Testing of **defibrillation thresholds (93641)**, including **arrhythmia induction**, is conducted.
14. Additional **testing of all lead combinations** is completed.
15. The leads and device are secured, and the pulse generator pocket is closed.

+ Add-on code

Note: This document is for reference purposes only and does not replace physicians' medical documentation.

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See important notes on the uses and limitations of this information on page 13.

Commonly Billed Cardiac Resynchronization Therapy Defibrillator (CRT-D) Procedures

Key

- + Add-on code.
- Moderate sedation. (For these procedures, moderate [conscious] sedation is included and cannot be billed separately when provided by the same physician. See *AMA Current Procedural Terminology 2009* for specific guidelines.)

Initial CRT-D system implant, with fluoroscopy, and with defibrillator threshold testing at the time of implant

Hospital Inpatient ICD-9-CM Codes ¹	Hospital Outpatient* CPT® Codes ^{2,3}	Physician* CPT® Codes ^{2,3}
<p>00.51 Implantation of cardiac resynchronization defibrillator, total system [CRT-D]</p> <p><i>Note: Device testing during procedure —omit code</i></p> <ul style="list-style-type: none"> • 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, intraoperative procedures for evaluation of lead signals, and obtaining defibrillator threshold measurements • That with CRT-D generator and one or more leads 	<ul style="list-style-type: none"> • 33249 Insertion or repositioning of electrode lead(s) for single or dual-chamber pacing cardioverter defibrillator and insertion of pulse generator +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) • 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 	<ul style="list-style-type: none"> • 33249 Insertion or repositioning of electrode lead(s) for single or dual-chamber pacing cardioverter defibrillator and insertion of pulse generator +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) • 93641–26/51** 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

continued next page

Initial CRT-D system implant with fluoroscopy, and with defibrillator threshold testing at the time of implant (continued)

Hospital Inpatient ICD-9-CM Codes ¹	Hospital Outpatient* CPT® Codes ^{2,3}	Physician* CPT® Codes ^{2,3}
<p>00.51 Implantation of cardiac resynchronization defibrillator, total system [CRT-D] (cont)</p> <p>Excludes:</p> <ul style="list-style-type: none"> • 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) <p>87.49 Other chest X-ray</p> <p>X-ray of:</p> <ul style="list-style-type: none"> • Bronchus NOS • Diaphragm NOS • Heart NOS • Mediastinum NOS • Lung NOS • Trachea NOS 	<p>71090</p> <p>Insertion pacemaker, fluoroscopy and radiography, radiological supervision and interpretation</p>	<p>71090–26**</p> <p>Insertion pacemaker, fluoroscopy and radiography, radiological supervision and interpretation</p>

Dual-chamber ICD upgrade to CRT-D (left ventricular insertion and pulse generator upgrade only), with fluoroscopy and with defibrillator threshold testing at the time of implant

Hospital Inpatient ICD-9-CM Codes ¹	Hospital Outpatient* CPT® Codes ^{2,3}	Physician* CPT® Codes ^{2,3}
<p>00.51 Implantation of cardiac resynchronization defibrillator, total system [CRT-D]</p> <p><i>Note: Device testing during procedure —omit code</i></p> <ul style="list-style-type: none"> • 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, intraoperative procedures for evaluation of lead signals, and obtaining defibrillator threshold measurements • That with CRT-D generator and one or more leads <p>Excludes:</p> <ul style="list-style-type: none"> • 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) <p>87.49 Other chest X-ray</p> <p>X-ray of:</p> <ul style="list-style-type: none"> • Bronchus NOS • Mediastinum NOS • Diaphragm NOS • Lung NOS • Heart NOS • Trachea NOS 	<ul style="list-style-type: none"> • 33240 Insertion of single or dual-chamber pacing cardioverter defibrillator pulse generator • +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) • 33241 Subcutaneous removal of single or dual-chamber pacing cardioverter defibrillator 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 • 71090 Insertion pacemaker, fluoroscopy and radiography, radiological supervision and interpretation 	<ul style="list-style-type: none"> • 33240 Insertion of single or dual-chamber pacing cardioverter defibrillator pulse generator • +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) • 33241-51** Subcutaneous removal of single or dual-chamber pacing cardioverter defibrillator pulse generator • 93641-26/51** 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 • 71090-26** Insertion pacemaker, fluoroscopy and radiography, radiological supervision and interpretation

+ Add-on code • Moderate sedation

Single or dual-chamber ICD upgrade to CRT-D (capping previous RA/RV leads, placing a new RA and/or RV leads, left ventricular lead insertion, with fluoroscopy and with defibrillator threshold testing at the time of implant)

Hospital Inpatient ICD-9-CM Codes ¹	Hospital Outpatient* CPT® Codes ^{2,3}	Physician* CPT® Codes ^{2,3}
<p>00.51 Implantation of cardiac resynchronization defibrillator, total system [CRT-D]</p> <p><i>Note: Device testing during procedure —omit code</i></p> <ul style="list-style-type: none"> • 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, intraoperative procedures for evaluation of lead signals, and obtaining defibrillator threshold measurements • That with CRT-D generator and one or more leads <p>Excludes:</p> <ul style="list-style-type: none"> • 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) <p>87.49 Other chest X-ray</p> <p>X-ray of:</p> <ul style="list-style-type: none"> • Bronchus NOS • Mediastinum NOS • Diaphragm NOS • Lung NOS • Heart NOS • Trachea NOS 	<ul style="list-style-type: none"> • 33249 Insertion or repositioning of electrode lead(s) for single or dual-chamber pacing cardioverter defibrillator and insertion of pulse generator +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) • 33241 Subcutaneous removal of single or dual-chamber pacing cardioverter defibrillator 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 71090 Insertion pacemaker, fluoroscopy and radiography, radiological supervision and interpretation 	<ul style="list-style-type: none"> • 33249 Insertion or repositioning of electrode lead(s) for single or dual-chamber pacing cardioverter defibrillator and insertion of pulse generator +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) • 33241-51** Subcutaneous removal of single or dual-chamber pacing cardioverter defibrillator pulse generator • 93641-26/51** 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 71090-26** Insertion pacemaker, fluoroscopy and radiography, radiological supervision and interpretation

+ Add-on code • Moderate sedation

Replacement of CRT-D pulse generator with defibrillator threshold testing at the time of implant

Hospital Inpatient ICD-9-CM Codes ¹	Hospital Outpatient* CPT® Codes ^{2,3}	Physician* CPT® Codes ^{2,3}
<p>00.54 Implantation or replacement of cardiac resynchronization defibrillator, pulse generator only [CRT-D]</p> <p><i>Note: Device testing during procedure – omit code</i></p> <ul style="list-style-type: none"> • Implantation of CRT-D device with removal of any existing CRT-D, CRT-P, pacemaker, or defibrillator device <p>Excludes:</p> <ul style="list-style-type: none"> • 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) 	<ul style="list-style-type: none"> • 33240 Insertion of single or dual-chamber pacing cardioverter defibrillator pulse generator • 33241 Subcutaneous removal of single or dual-chamber pacing cardioverter defibrillator 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 	<ul style="list-style-type: none"> • 33240 Insertion of single or dual-chamber pacing cardioverter defibrillator pulse generator • 33241–51** Subcutaneous removal of single or dual-chamber pacing cardioverter defibrillator pulse generator • 93641–26/51** 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

• Moderate sedation

Insertion of left ventricular transvenous pacing lead only, with fluoroscopy

Hospital Inpatient ICD-9-CM Codes ¹	Hospital Outpatient* CPT® Codes ^{2,3}	Physician* CPT® Codes ^{2,3}
<p>00.52 Implantation or replacement of transvenous lead [electrode] into left ventricular coronary venous system</p> <p>Excludes:</p> <ul style="list-style-type: none"> • Implantation of cardiac resynchronization: <ul style="list-style-type: none"> – 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) <p>87.49 Other chest X-ray</p> <p>X-ray of:</p> <ul style="list-style-type: none"> <li style="width: 50%;">• Bronchus NOS <li style="width: 50%;">• Mediastinum NOS <li style="width: 50%;">• Diaphragm NOS <li style="width: 50%;">• Lung NOS <li style="width: 50%;">• Heart NOS <li style="width: 50%;">• Trachea NOS 	<p>33224</p> <p>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)</p> <p>71090</p> <p>Insertion pacemaker, fluoroscopy and radiography, radiological supervision and interpretation</p>	<p>33224</p> <p>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)</p> <p>71090–26**</p> <p>Insertion pacemaker, fluoroscopy and radiography, radiological supervision and interpretation</p>

LV Lead extraction

Hospital Inpatient ICD-9-CM Codes ¹	Hospital Outpatient* CPT® Codes ^{2,3}	Physician* CPT® Codes ^{2,3}
<p>37.77 Removal of lead(s) [electrode] without replacement</p> <p>Removal:</p> <ul style="list-style-type: none"> • Epicardial lead (transthoracic approach) transvenous lead(s) <p>Excludes:</p> <ul style="list-style-type: none"> • Removal of temporary transvenous pacemaker system – omit code • That with replacement of: <ul style="list-style-type: none"> – atrial and/or ventricular lead(s) [electrode] (37.76) – epicardial lead [electrode] (37.74) 	<p>33244</p> <p>Removal of single or dual-chamber pacing cardioverter defibrillator electrode(s); by transvenous extraction)</p>	<p>33244</p> <p>Removal of single or dual-chamber pacing cardioverter defibrillator electrode(s); by transvenous extraction)</p>

CRT-D follow-up (in person)		
Hospital Inpatient ICD-9-CM Codes ¹	Hospital Outpatient* CPT [®] Codes ^{2,3}	Physician* CPT [®] Codes ^{2,3}
<p>89.49 Automatic implantable cardioverter defibrillator (AICD) check</p> <ul style="list-style-type: none"> • Bedside check of an AICD or cardiac resynchronization defibrillator [CRT-D] • Checking pacing thresholds of device • Interrogation only without arrhythmia induction <p>Excludes:</p> <ul style="list-style-type: none"> • Catheter based invasive electrophysiologic testing (37.26) • Non-invasive programmed electrical stimulation [NIPS] (arrhythmia induction) (37.20) 	<p>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</p> <p>OR</p> <p>93284 Programming device evaluation 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; multiple lead implantable cardioverter defibrillator system</p>	<p>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</p> <p>OR</p> <p>93284 Programming device evaluation 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; multiple lead implantable cardioverter defibrillator system</p>

CRT-D interrogation (remote)		
Hospital Inpatient ICD-9-CM Codes ¹	Hospital Outpatient* CPT® Codes ^{2,3}	Physician* CPT® Codes ^{2,3}
<i>Not Applicable; inappropriate site of service for this scenario.</i>	<p>93295 Interrogation device evaluation (remote), up to 90 days; single, dual, or multiple lead implantable cardioverter defibrillator system with interim physician analysis, review(s), and report(s)</p> <p>AND (if applicable) 93296 Interrogation device evaluation(s) (remote), up to 90 days; 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</p>	<p>93295 Interrogation device evaluation (remote), up to 90 days; single, dual, or multiple lead implantable cardioverter defibrillator system with interim physician analysis, review(s), and report(s)</p> <p>AND (if applicable) 93296 Interrogation device evaluation(s) (remote), up to 90 days; 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</p>

CRT-D follow-up (remote) with analysis of Implantable Cardiovascular Monitor (ICM) data

Hospital Inpatient ICD-9-CM Codes ¹	Hospital Outpatient* CPT® Codes ^{2,3}	Physician* CPT® Codes ^{2,3}
<p><i>Not Applicable; inappropriate site of service for this scenario.</i></p>	<p>93295 Interrogation device evaluation (remote), up to 90 days; single, dual, or multiple lead implantable cardioverter defibrillator system with interim physician analysis, review(s), and report(s)</p> <p>AND (if applicable)</p> <p>93296 Interrogation device evaluation(s) (remote), up to 90 days; 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</p> <p>AND</p> <p>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)</p>	<p>93295 Interrogation device evaluation (remote), up to 90 days; single, dual, or multiple lead implantable cardioverter defibrillator system with interim physician analysis, review(s), and report(s)</p> <p>AND (if applicable)</p> <p>93296 Interrogation device evaluation(s) (remote), up to 90 days; 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</p> <p>AND</p> <p>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)</p>

CRT-D AV Optimization using Echocardiography (use codes as appropriate)

Hospital Inpatient ICD-9-CM Codes ¹	Hospital Outpatient* CPT [®] Codes ^{2,3}	Physician* CPT [®] Codes ^{2,3}
<p>88.72 Diagnostic ultrasound of the heart</p> <ul style="list-style-type: none"> Echocardiography Transesophageal echocardiography <p>Excludes:</p> <ul style="list-style-type: none"> Echocardiography of heart chambers (37.28) Intracardiac echocardiography (ICE) (37.28) Intravascular (IVUS) imaging of coronary vessels (00.24) <p>89.45 Artificial pacemaker rate check</p> <ul style="list-style-type: none"> Artificial pacemaker function check NOS Bedside device check of pacemaker or cardiac resynchronization pacemaker [CRT-P] Interrogation only without arrhythmia induction <p>Excludes:</p> <ul style="list-style-type: none"> Catheter based invasive electrophysiologic testing (37.26) Non-invasive programmed electrical stimulation [NIPS] (arrhythmia induction) (37.20) 	<p>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</p> <p>OR</p> <p>93307 Echocardiography, transthoracic, real-time with image documentation (2D) includes M-mode recording, when performed, complete, without spectral or color Doppler</p> <p>OR</p> <p>93308 Echocardiography, transthoracic, real-time with image documentation (2D) includes M-mode recording, when performed, follow-up or limited study</p> <p>AND</p> <p>+93321 Follow-up or limited study (List separately in addition to codes for echocardiography imaging)</p> <p>OR</p> <p>+93325 Doppler echocardiography color flow velocity mapping (List separately in addition to codes for echocardiography)</p>	<p>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</p> <p>OR</p> <p>93307-26** Echocardiography, transthoracic, real-time with image documentation (2D) includes M-mode recording, when performed, complete, without spectral or color Doppler</p> <p>OR</p> <p>93308-26** Echocardiography, transthoracic, real-time with image documentation (2D) includes M-mode recording, when performed, follow-up or limited study</p> <p>AND</p> <p>+93321-26** Follow-up or limited study (List separately in addition to codes for echocardiography imaging)</p> <p>OR</p> <p>+93325-26** Doppler echocardiography color flow velocity mapping (List separately in addition to codes for echocardiography)</p>

continued next page

+ Add-on code

CRT-D AV Optimization using Echocardiography (use codes as appropriate)
(continued)

Hospital Inpatient ICD-9-CM Codes ¹	Hospital Outpatient* CPT® Codes ^{2,3}	Physician* CPT® Codes ^{2,3}
	<p>AND 93284 Programming device evaluation 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; multiple lead implantable cardioverter defibrillator system</p>	<p>AND 93284-26** Programming device evaluation 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; multiple lead implantable cardioverter defibrillator system</p>

¹ Ingenix. Updatable 2009 ICD-9-CM Expert for Hospitals, Volumes 1, 2 and 3. 6th Revision. Salt Lake City, UT: 2008.

² Heart Rhythm Society. CPT Coding Guide for Heart Rhythm Procedures and Services, 2008. Washington D.C.: 2008.

³ American Medical Association. Current Procedural Terminology (CPT) 2009. Professional Edition. Chicago, IL: 2008. Current Procedural Terminology (CPT) is copyright 2008 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.

* As of January 1, 2005, the Centers for Medicare and Medicaid Services (CMS) requires hospitals to report all device category codes (C-codes) on Medicare outpatient claims when medical devices are used in conjunction with procedure(s) billed. If C-codes are not identified on submitted Medicare outpatient claims, the claim(s) will be returned to the hospital for correction. Find C-codes for CRM devices at <http://www.bostonscientific.com/crm/reimbursement>. Also find C-codes for CRM devices and related accessories (e.g., introducers, catheters, sheaths) at <http://www.cms.hhs.gov/transmittals/downloads/A03076.pdf> and http://www.cms.hhs.gov/HospitalOutpatientPPS/04_passthrough_payment.asp.

** Modifiers 26 (professional component) and 51 (multiple procedures) are for physician billing only. See the *AMA Current Procedural Terminology 2009* for complete descriptions. Historically, third-party payers have used –51 modifier in various ways that may affect payment. Always verify appropriate usage with payers.

Note: *The CPT coding scenarios in this document are from the Heart Rhythm Society's (HRS) CPT coding guide. The ICD-9-CM scenarios are not from the HRS coding guide. However, they were formulated using 2009 ICD-9-CM terminology and following Medicare coding guidelines.*

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If you are a medical provider participating in a clinical trial, we recommend you contact your payers, including Medicare/Medicaid and private insurers, to verify correct coverage and reimbursement policies for investigational devices. Note that clinical trial medical providers who anticipate filing Medicare claims must notify the Medicare contractor(s) before claims submissions. It is the responsibility of the medical provider participating in a clinical trial to furnish all necessary information concerning the device, the clinical trial, and participating Medicare beneficiaries that the contractor deems necessary for a coverage determination and claims processing. Medicare advises clinical trial medical providers to seek payment only for items or services that are typically provided absent of a clinical trial protocol (e.g., conventional care). Boston Scientific does not advise medical providers to bill third-party payers for items and services not considered medically necessary absent of the clinical study protocol.f

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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

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