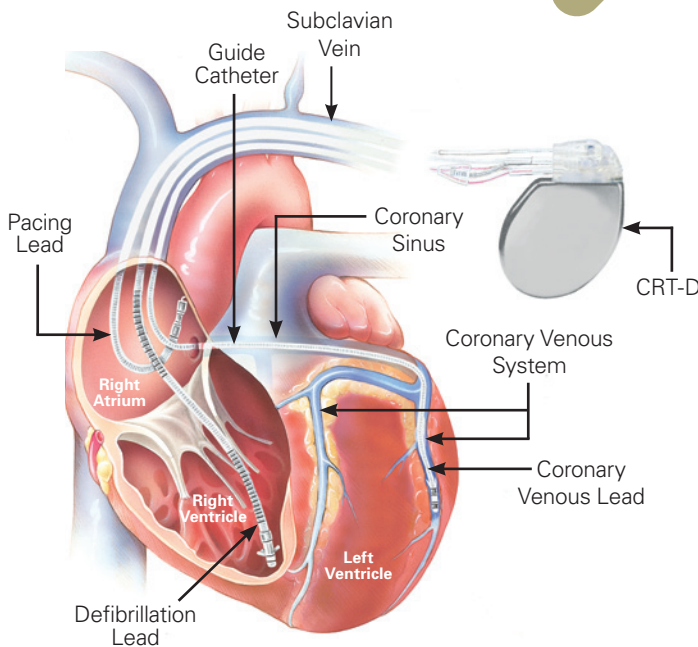


# Cardiac Resynchronization Therapy Defibrillator (CRT-D) Coding Overview

## GuidePoint

Simplifying Reimbursement

## Cardiac Rhythm Management and Electrophysiology



Updated January 2010

### 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 inserted into the subclavian vein 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 into the coronary venous system of the left ventricle 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 in order 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

# 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 2010* for specific guidelines.)

## Initial CRT-D system implant, with coronary sinus venogram, fluoroscopy, with defibrillator threshold testing at the time of implant

Hospital Inpatient ICD-9-CM Codes <sup>1</sup>	Hospital Outpatient* CPT® Codes <sup>2</sup>	Physician CPT® Codes <sup>2</sup>
<p><b>00.51 Implantation of cardiac resynchronization defibrillator, total system [CRT-D]</b></p> <p><i>Note: Device testing during procedure —omit code</i></p> <ul style="list-style-type: none"> <li>• BiV defibrillator</li> <li>• Biventricular defibrillator</li> <li>• Biventricular pacing with internal cardiac defibrillator</li> <li>• BiV ICD</li> <li>• BiV pacemaker with defibrillator</li> <li>• BiV pacing with defibrillator</li> <li>• 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</li> <li>• That with CRT-D generator and one or more leads</li> </ul> <p><b>Excludes:</b></p> <ul style="list-style-type: none"> <li>• Implantation of cardiac resynchronization pacemaker, total system [CRT-P] (00.50)</li> <li>• Implantation or replacement of automatic cardioverter- defibrillator, total system [AICD] (37.94)</li> <li>• Replacement of cardiac resynchronization defibrillator, pulse generator only [CRT-D] (00.54)</li> </ul> <p><b>88.63 Phlebography of other intrathoracic veins using contrast material</b></p>	<ul style="list-style-type: none"> <li>• <b>33249</b> Insertion or repositioning of electrode lead(s) for single or dual chamber pacing cardioverter defibrillator and insertion of pulse generator</li> <li>• <b>+33225</b> 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)</li> <li>• <b>93641</b> 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</li> <li><b>71090</b> Insertion pacemaker, fluoroscopy and radiography, radiological supervision and interpretation</li> </ul>	<ul style="list-style-type: none"> <li>• <b>33249</b> Insertion or repositioning of electrode lead(s) for single or dual chamber pacing cardioverter defibrillator and insertion of pulse generator</li> <li>• <b>+33225</b> 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)</li> <li>• <b>93641–26/51**</b> 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</li> <li><b>71090–26**</b> Insertion pacemaker, fluoroscopy and radiography, radiological supervision and interpretation</li> </ul>

## Initial CRT-D implant with atrial and ventricular lead insertion, inability to place LV lead

<b>Hospital Inpatient</b> ICD-9-CM Codes <sup>1</sup>	<b>Hospital Outpatient*</b> CPT® Codes <sup>2</sup>	<b>Physician</b> CPT® Codes <sup>2</sup>
<p><b>00.51 Implantation of cardiac resynchronization defibrillator, total system [CRT-D]</b></p> <p><i>Note: Device testing during procedure —omit code</i></p> <ul style="list-style-type: none"> <li>• BiV defibrillator</li> <li>• Biventricular defibrillator</li> <li>• Biventricular pacing with internal cardiac defibrillator</li> <li>• BiV ICD</li> <li>• BiV pacemaker with defibrillator</li> <li>• BiV pacing with defibrillator</li> <li>• 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</li> <li>• That with CRT-D generator and one or more leads</li> </ul> <p><b>Excludes:</b></p> <ul style="list-style-type: none"> <li>• Implantation of cardiac resynchronization pacemaker, total system [CRT-P] (00.50)</li> <li>• Implantation or replacement of automatic cardioverter- defibrillator, total system [AICD] (37.94)</li> <li>• Replacement of cardiac resynchronization defibrillator, pulse generator only [CRT-D] (00.54)</li> </ul> <p><b>88.63 Phlebography of other intrathoracic veins using contrast material</b></p>	<ul style="list-style-type: none"> <li>• <b>33249</b> Insertion or repositioning of electrode lead(s) for single or dual chamber pacing cardioverter defibrillator and insertion of pulse generator</li> <li><b>+33225–74</b> 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)</li> </ul> <p>(List separately in addition to code for primary procedure)</p> <ul style="list-style-type: none"> <li>• <b>93641</b> 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</li> <li><b>71090</b> Insertion pacemaker, fluoroscopy and radiography, radiological supervision and interpretation</li> </ul>	<ul style="list-style-type: none"> <li>• <b>33249</b> Insertion or repositioning of electrode lead(s) for single or dual chamber pacing cardioverter defibrillator and insertion of pulse generator</li> <li><b>+33225–53</b> 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)</li> </ul> <p>(List separately in addition to code for primary procedure)</p> <ul style="list-style-type: none"> <li>• <b>93641–26/51**</b> 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</li> <li><b>71090–26**</b> Insertion pacemaker, fluoroscopy and radiography, radiological supervision and interpretation</li> </ul>

+ Add-on code      • Moderate sedation

## Replacement of CRT-D pulse generator visualized under fluoroscopy with defibrillator threshold testing at the time of implant

Hospital Inpatient ICD-9-CM Codes <sup>1</sup>	Hospital Outpatient* CPT® Codes <sup>2</sup>	Physician* CPT® Codes <sup>2</sup>
<p><b>00.54 Implantation or replacement of cardiac resynchronization defibrillator, pulse generator device only [CRT-D]</b></p> <p><i>Note: Device testing during procedure — omit code</i></p> <ul style="list-style-type: none"> <li>• Implantation of CRT-D device with removal of any existing CRT-D, CRT-P, pacemaker, or defibrillator device</li> </ul> <p><b>Excludes:</b></p> <ul style="list-style-type: none"> <li>• Implantation of automatic cardioverter defibrillator, pulse generator only (37.96)</li> <li>• Implantation of cardiac resynchronization defibrillator, total system [CRT-D] (00.51)</li> <li>• Implantation or replacement of cardiac resynchronization pacemaker, pulse generator only [CRT-P] (00.53)</li> </ul>	<ul style="list-style-type: none"> <li>• <b>33240</b> Insertion of single or dual chamber pacing cardioverter defibrillator pulse generator</li> <li>• <b>33241</b> Subcutaneous removal of single or dual chamber pacing cardioverter defibrillator pulse generator</li> <li>• <b>93641</b> 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</li> <li><b>71090</b> Insertion pacemaker, fluoroscopy and radiography, radiological supervision and interpretation</li> </ul>	<ul style="list-style-type: none"> <li>• <b>33240</b> Insertion of single or dual chamber pacing cardioverter defibrillator pulse generator</li> <li>• <b>33241–51**</b> Subcutaneous removal of single or dual chamber pacing cardioverter defibrillator pulse generator</li> <li>• <b>93641–26/51**</b> 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</li> <li><b>71090–26**</b> Insertion pacemaker, fluoroscopy and radiography, radiological supervision and interpretation</li> </ul>

- Moderate sedation

**Dual chamber ICD upgrade to CRT-D (left ventricular insertion and pulse generator upgrade only), with coronary sinus venogram, with fluoroscopy and defibrillator threshold testing**

<b>Hospital Inpatient</b> ICD-9-CM Codes <sup>1</sup>	<b>Hospital Outpatient*</b> CPT® Codes <sup>2</sup>	<b>Physician</b> CPT® Codes <sup>2</sup>
<p><b>00.51 Implantation of cardiac resynchronization defibrillator, total system [CRT-D]</b></p> <p><i>Note: Device testing during procedure — omit code</i></p> <ul style="list-style-type: none"> <li>• BiV defibrillator</li> <li>• Biventricular defibrillator</li> <li>• Biventricular pacing with internal cardiac defibrillator</li> <li>• BiV ICD</li> <li>• BiV pacemaker with defibrillator</li> <li>• BiV pacing with defibrillator</li> <li>• 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</li> <li>• That with CRT-D generator and one or more leads</li> </ul> <p><b>Excludes:</b></p> <ul style="list-style-type: none"> <li>• Implantation of cardiac resynchronization pacemaker, total system [CRT-P] (00.50)</li> <li>• Implantation or replacement of automatic cardioverter defibrillator, total system [AICD] (37.94)</li> <li>• Replacement of cardiac resynchronization defibrillator, pulse generator only [CRT-D] (00.54)</li> </ul> <p><b>88.63 Phlebography of other intrathoracic veins using contrast material</b></p>	<ul style="list-style-type: none"> <li>• <b>33240</b> Insertion of single or dual chamber pacing cardioverter defibrillator pulse generator</li> <li><b>+33225</b> 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)</li> <li>• <b>33241</b> Subcutaneous removal of single or dual chamber pacing cardioverter defibrillator pulse generator</li> <li>• <b>93641</b> 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</li> <li><b>71090</b> Insertion pacemaker, fluoroscopy and radiography, radiological supervision and interpretation</li> </ul>	<ul style="list-style-type: none"> <li>• <b>33240</b> Insertion of single or dual chamber pacing cardioverter defibrillator pulse generator</li> <li><b>+33225</b> 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)</li> <li>• <b>33241-51**</b> Subcutaneous removal of single or dual chamber pacing cardioverter defibrillator pulse generator</li> <li>• <b>93641-26/51**</b> 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</li> <li><b>71090-26**</b> Insertion pacemaker, fluoroscopy and radiography, radiological supervision and interpretation</li> </ul>

+ 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 coronary sinus venogram visualized under fluoroscopy with defibrillator threshold testing at the time of implant)**

<b>Hospital Inpatient</b> ICD-9-CM Codes <sup>1</sup>	<b>Hospital Outpatient*</b> CPT® Codes <sup>2</sup>	<b>Physician</b> CPT® Codes <sup>2</sup>
<p><b>00.51 Implantation of cardiac resynchronization defibrillator, total system [CRT-D]</b></p> <p><i>Note: Device testing during procedure —omit code</i></p> <ul style="list-style-type: none"> <li>• BiV defibrillator</li> <li>• Biventricular defibrillator</li> <li>• Biventricular pacing with internal cardiac defibrillator</li> <li>• BiV ICD</li> <li>• BiV pacemaker with defibrillator</li> <li>• BiV pacing with defibrillator</li> <li>• 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</li> <li>• That with CRT-D generator and one or more leads</li> </ul> <p><b>Excludes:</b></p> <ul style="list-style-type: none"> <li>• Implantation of cardiac resynchronization pacemaker, total system [CRT-P] (00.50)</li> <li>• Implantation or replacement of automatic cardioverter defibrillator, total system [AICD] (37.94)</li> <li>• Replacement of cardiac resynchronization defibrillator, pulse generator only [CRT-D] (00.54)</li> </ul> <p><b>88.63 Phlebography of other intrathoracic veins using contrast material</b></p>	<ul style="list-style-type: none"> <li>• <b>33249</b> Insertion or repositioning of electrode lead(s) for single or dual chamber pacing cardioverter defibrillator and insertion of pulse generator</li> <li><b>+33225</b> 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)</li> <li>• <b>33241</b> Subcutaneous removal of single or dual chamber pacing cardioverter defibrillator pulse generator</li> <li>• <b>93641</b> 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</li> <li><b>71090</b> Insertion pacemaker, fluoroscopy and radiography, radiological supervision and interpretation</li> </ul>	<ul style="list-style-type: none"> <li>• <b>33249</b> Insertion or repositioning of electrode lead(s) for single or dual chamber pacing cardioverter defibrillator and insertion of pulse generator</li> <li><b>+33225</b> 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)</li> <li>• <b>33241–51**</b> Subcutaneous removal of single or dual chamber pacing cardioverter defibrillator pulse generator</li> <li>• <b>93641–26/51**</b> 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</li> <li><b>71090–26**</b> Insertion pacemaker, fluoroscopy and radiography, radiological supervision and interpretation</li> </ul>

+ Add-on code      • Moderate sedation

**Insertion of left ventricular transvenous pacing lead only, with coronary sinus venogram and fluoroscopy, LV lead inserted into previously placed CRT-D device**

<b>Hospital Inpatient</b> ICD-9-CM Codes <sup>1</sup>	<b>Hospital Outpatient*</b> CPT® Codes <sup>2</sup>	<b>Physician</b> CPT® Codes <sup>2</sup>
<p><b>00.52 Implantation or replacement of transvenous lead [electrode] into left ventricular coronary venous system</b></p> <p><b>Excludes:</b></p> <ul style="list-style-type: none"> <li>• Implantation of cardiac resynchronization:                             <ul style="list-style-type: none"> <li>– defibrillator, total system [CRT-D] (00.51)</li> <li>– pacemaker, total system [CRT-P] (00.50)</li> </ul> </li> <li>• Initial insertion of transvenous lead [electrode] (37.70–37.72)</li> <li>• Replacement of transvenous atrial and/or ventricular lead(s) [electrodes] (37.76)</li> </ul> <p><b>88.63 Phlebography of other intrathoracic veins using contrast material</b></p>	<p>• <b>33224</b>                      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><b>71090</b>                      Insertion pacemaker, fluoroscopy and radiography, radiological supervision and interpretation</p>	<p>• <b>33224</b>                      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><b>71090–26**</b>                      Insertion pacemaker, fluoroscopy and radiography, radiological supervision and interpretation</p>

• Moderate sedation

## LV lead extraction visualized under fluoroscopic guidance

<b>Hospital Inpatient</b> ICD-9-CM Codes <sup>1</sup>	<b>Hospital Outpatient*</b> CPT® Codes <sup>2</sup>	<b>Physician</b> CPT® Codes <sup>2</sup>
<p><b>37.77 Removal of lead(s) [electrode] without replacement</b></p> <p><b>Removal:</b></p> <ul style="list-style-type: none"> <li>• Epicardial lead (transthoracic approach)</li> <li>• Transvenous lead(s)</li> </ul> <p><b>Excludes:</b></p> <ul style="list-style-type: none"> <li>• Removal of temporary transvenous pacemaker system —omit code</li> <li>• That with replacement of:                             <ul style="list-style-type: none"> <li>– atrial and/or ventricular lead(s) [electrode] (37.76)</li> <li>– epicardial lead [electrode] (37.74)</li> </ul> </li> </ul>	<p>• <b>33234</b> Removal of transvenous pacemaker electrode(s); single lead system, atrial or ventricular</p> <p><b>71090</b> Insertion pacemaker, fluoroscopy and radiography, radiological supervision and interpretation</p>	<p>• <b>33234</b> Removal of transvenous pacemaker electrode(s); single lead system, atrial or ventricular</p> <p><b>71090–26**</b> Insertion pacemaker, fluoroscopy and radiography, radiological supervision and interpretation</p>

• Moderate sedation

## CRT-D follow-up (in person)

Hospital Inpatient ICD-9-CM Codes <sup>1</sup>	Hospital Outpatient* CPT® Codes <sup>2</sup>	Physician CPT® Codes <sup>2</sup>
<p><b>89.49 Automatic implantable cardioverter defibrillator (AICD) check</b></p> <ul style="list-style-type: none"> <li>• Bedside check of an AICD or cardiac resynchronization defibrillator [CRT-D]</li> <li>• Checking pacing thresholds of device</li> <li>• Interrogation only without arrhythmia induction</li> </ul> <p><b>Excludes:</b></p> <ul style="list-style-type: none"> <li>• Catheter based invasive electrophysiologic testing (37.26)</li> <li>• Non-invasive programmed electrical stimulation [NIPS] (arrhythmia induction) (37.20)</li> </ul>	<p><b>93289</b> 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><b>OR</b></p> <p><b>93284</b> 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; multiple lead implantable cardioverter defibrillator system</p>	<p><b>93289</b> 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><b>OR</b></p> <p><b>93284</b> 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; multiple lead implantable cardioverter defibrillator system</p>

## CRT-D follow-up (remote)

Hospital Inpatient ICD-9-CM Codes <sup>1</sup>	Hospital Outpatient* CPT® Codes <sup>2</sup>	Physician CPT® Codes <sup>2</sup>
<p><b>Not Applicable; inappropriate site of service for this scenario.</b></p>	<p><b>93295 (if applicable)</b> 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)</p> <p><b>AND (if applicable)</b></p> <p><b>93296</b> 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><b>93295</b> 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)</p> <p><b>AND (if applicable)</b></p> <p><b>93296</b> 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 AV Optimization using Echocardiography (use codes as appropriate)

Hospital Inpatient ICD-9-CM Codes <sup>1</sup>	Hospital Outpatient* CPT® Codes <sup>2</sup>	Physician CPT® Codes <sup>2</sup>
<p><b>88.72 Diagnostic ultrasound of the heart</b></p> <ul style="list-style-type: none"> <li>• Echocardiography</li> <li>• Transesophageal echocardiography</li> </ul> <p><b>Excludes:</b></p> <ul style="list-style-type: none"> <li>• Echocardiography of heart chambers (37.28)</li> <li>• Intracardiac echocardiography (ICE) (37.28)</li> <li>• Intravascular (IVUS) imaging of coronary vessels (00.24)</li> </ul> <p><b>89.45 Artificial pacemaker rate check</b></p> <ul style="list-style-type: none"> <li>• Artificial pacemaker function check NOS</li> <li>• Bedside device check of pacemaker or cardiac resynchronization pacemaker [CRT-P]</li> <li>• Interrogation only without arrhythmia induction</li> </ul> <p><b>Excludes:</b></p> <ul style="list-style-type: none"> <li>• Catheter based invasive electrophysiologic testing (37.26)</li> <li>• Non-invasive programmed electrical stimulation [NIPS] (arrhythmia induction) (37.20)</li> </ul>	<p><b>93306</b> 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><b>OR</b> <b>93307</b> Echocardiography, transthoracic, real-time with image documentation (2D) includes M-mode recording, when performed, complete, without spectral or color Doppler echocardiography</p> <p><b>OR</b> <b>93308</b> Echocardiography, transthoracic, real-time with image documentation (2D) includes M-mode recording, when performed, follow-up or limited study</p> <p><b>AND</b> <b>+93321</b> Doppler echocardiography, pulsed wave and/or continuous wave with spectral display, follow-up or limited study  (List separately in addition to codes for echocardiography imaging)</p> <p><b>OR</b> <b>+93325</b> Doppler echocardiography color flow velocity mapping  (List separately in addition to codes for echocardiography)</p> <p><b>AND</b> <b>93284</b> 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; multiple lead implantable cardioverter defibrillator system</p>	<p><b>93306</b> 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><b>OR</b> <b>93307-26**</b> Echocardiography, transthoracic, real-time with image documentation (2D) includes M-mode recording, when performed, complete, without spectral or color Doppler echocardiography</p> <p><b>OR</b> <b>93308-26**</b> Echocardiography, transthoracic, real-time with image documentation (2D) includes M-mode recording, when performed, follow-up or limited study</p> <p><b>AND</b> <b>+93321-26**</b> Doppler echocardiography, pulsed wave and/or continuous wave with spectral display, follow-up or limited study  (List separately in addition to codes for echocardiography imaging)</p> <p><b>OR</b> <b>+93325-26**</b> Doppler echocardiography color flow velocity mapping  (List separately in addition to codes for echocardiography)</p> <p><b>AND</b> <b>93284-26**</b> 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; multiple lead implantable cardioverter defibrillator system</p>

+ Add-on code

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

Hospital Inpatient ICD-9-CM Codes <sup>1</sup>	Hospital Outpatient* CPT® Codes <sup>2</sup>	Physician CPT® Codes <sup>2</sup>
<p><b><i>Not Applicable; inappropriate site of service for this scenario.</i></b></p>	<p><b>93295 (if applicable)</b> 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)</p> <p><b>AND (if applicable)</b> <b>93296</b> 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><b>AND (if applicable)</b> <b>93297</b> 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><b>93295</b> 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)</p> <p><b>AND (if applicable)</b> <b>93296</b> 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><b>AND</b> <b>93297</b> 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>

- <sup>1</sup> American Medical Association. 2010 ICD-9-CM For Hospitals, Volumes 1, 2 and 3. Professional Edition. Chicago, IL: 2009.
- <sup>2</sup> American 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.
- \* 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/HospitalOutpatientPPS/Downloads/DeviceCats\\_OPSPUpdate.pdf](http://www.cms.hhs.gov/HospitalOutpatientPPS/Downloads/DeviceCats_OPSPUpdate.pdf).
- \*\* Modifiers 26 (professional component) and 51 (multiple procedures) are for physician billing only. See the *AMA Current Procedural Terminology 2010* for complete descriptions. Always verify appropriate usage with payers.

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