

2019 Billing and Coding Guide

Rhythm Management

Rhythm Management

Links to sections are clickable. To return to the place last viewed: alt+left arrow or right click mouse and select previous view.

Introduction

Letter to the User i
Disclaimer ii
Reimbursement Resources at a Glance Intro-1 Medicare
Payment Overview Intro-2
Medicare National Coverage Determination Policies Intro-4
Moderate (Conscious) Sedation (NEW)

1 Pacemakers

Pacemaker Coding Overview 1-1
Commonly Billed Pacemaker Scenarios 1-2

2 Transvenous Implantable Cardioverter-Defibrillators (ICDs)

Implantable Cardioverter-Defibrillator (ICD) Coding
Overview 2-1
Commonly Billed Implantable Cardioverter-
Defibrillator (ICD) Scenarios 2-2

3 Subcutaneous Implantable Defibrillator (S-ICD®)

Subcutaneous Implantable-Defibrillator (S-ICD) Coding
Overview 3-1
Commonly Billed Subcutaneous Implantable-Defibrillator
(S-ICD) Scenarios 3-2

4 Cardiac Resynchronization Therapy (CRT-P)

Cardiac Resynchronization Therapy Pacemaker
(CRT-P) Coding Overview 4-1
Commonly Billed Cardiac Resynchronization
Therapy Pacemaker (CRT-P) Scenarios 4-2

5 Cardiac Resynchronization Therapy Defibrillators (CRT-Ds)

Cardiac Resynchronization Therapy Defibrillator (CRT-D)
Coding Overview 5-1
Commonly Billed Cardiac Resynchronization Therapy
Defibrillator (CRT-D) Procedures 5-2

6 Intracardiac Electrophysiology and Related Procedures

Intracardiac Electrophysiology Study Coding Overview 6-1
Commonly Billed Intracardiac Electrophysiology Study
Scenarios 6-2
Intracardiac Catheter Ablation Coding Overview 6-7
Commonly Billed Intracardiac Catheter Ablation Scenarios 6-8

7 Cardiac Device Monitoring

Commonly Billed Cardiac Device Monitoring Scenarios 7-1

8 C-Codes

Appendix

CPT® Modifiers A-1

The Boston Scientific Health Economics and Reimbursement team is pleased to bring you the 2019 reimbursement materials.

Reimbursement Customer Support Line — Get your reimbursement questions answered Email CRM.Reimbursement@bsci.com Call 1. 800.CARDIAC (227.3422) Ext 24114 or ask for the Reimbursement Customer Support Line. Please leave a voicemail and your call or email will be returned within 2 business days.

Billing and Coding Guide—Quickly find coding and billing information, including common scenarios relevant to your medical practice.

Procedural Payment Guide — Locate facility and physician payment information for cardiology, rhythm, and intervention procedures in conveniently organized summaries.

Webcasts — Hear from nationally acclaimed experts addressing basic and advanced CRM and EP reimbursement topics.

Physician Website—Keep current with the latest reimbursement news and find other reimbursement education resources.

C-Code Finder – Visit our website at www.bostonscientific.com/reimbursement to find the C-code for Boston Scientifics products.

For over 37 years, Boston Scientific Rhythm Management has been committed to making more possible through innovation, clinical science, and collaboration. We're dedicated to providing physicians and allied health professionals with world class programs and services to help advance the standard of patient care.

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Boston Scientific
Health Economics & Market Access

The information in this guide is current as of January 1, 2019. The Centers for Medicare and Medicaid Services (CMS) may initiate changes to coverage, coding, or payment guidelines at any time. Check the CMS website (<http://www.cms.gov>) for current information.

A Word to Our Customers

Boston Scientific is pleased you have chosen to partner with us to help you save and improve patients' lives. We are committed to working directly with you to ensure timely patient access to innovative medical solutions. As part of this commitment, we also work with the Centers for Medicare and Medicaid Services (CMS), private insurers, and other industry stakeholders to ensure appropriate reimbursement for physicians and hospitals.

Explanation of Contents

This document contains commonly used billing codes for physicians and hospitals related to Boston Scientific devices and procedures.

Disclaimer

Please note: this coding information may include codes for procedures for which Boston Scientific currently offers no cleared or approved products. In those instances, such codes have been included solely in the interest of providing users with comprehensive coding information and are not intended to promote the use of any Boston Scientific products for which they are not cleared or approved.

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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.

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Introduction

Reimbursement Resources at a Glance

REIMBURSEMENT CUSTOMER SUPPORT LINE

Certified reimbursement professionals answer reimbursement questions related to Boston Scientific products and procedures.

- » Email to CRM.Reimbursement@bsci.com or call 1.800.CARDIAC (227.3422) Ext 24114 or ask to be connected with the Reimbursement Customer Support Line available Monday through Friday, 9 am to 4 pm Central. Please leave a message and your call or email will be returned within 2 business days.

BILLING AND CODING GUIDE

The 2019 Billing and Coding Guide is a useful tool for hospital and physician billers and coders. The guide includes practical coverage and coding reference materials for Boston Scientific products and procedures.

PROCEDURAL PAYMENT GUIDE

The 2019 Procedural Payment Guide provides facility and physician payment information for cardiology, rhythm, and intervention procedures in convenient summaries.

WEBCAST PROGRAMS

Attend a live webcast or view on-demand topics related to coverage, coding, and payment. Webcast registration will open approximately three weeks before the live event. The webcasts are approximately one hour in length and will be available on the website for future viewing. On-demand courses are made available for you to access at your viewing convenience.

Our webcast programs are intended for hospitals, physicians, clinicians, and reimbursement professionals seeking a better understanding of reimbursement for Boston Scientific products and procedures.

- » To learn more about available reimbursement webcast offerings, register for an upcoming webcast, or to view on-demand, access our website at http://www.bostonscientific.com/en-US/reimbursement/reim_webinars.html

PHYSICIAN WEBSITE

Dedicated to topics associated with reimbursement, the website provides resources for those seeking a better understanding of reimbursement for Boston Scientific products and procedures.

- » Make the website your first stop for all your Boston Scientific reimbursement needs; access <http://www.bostonscientific.com/reimbursement>

Medicare Payment Overview

OVERVIEW OF MEDICARE PAYMENT SYSTEMS

Medicare is a federally-funded, national health insurance program providing coverage to Americans who are 65 years of age or older, certain younger people with disabilities, and individuals with end-stage renal disease (ESRD). Payment by Medicare is predicated on Medical Necessity.

Note: Medical Necessity is defined by CMS as services or supplies that are: proper and needed for the diagnosis or treatment of the patient's medical condition; are provided for the diagnosis, direct care, and treatment of the patient's medical condition; meet the standards of good medical practice in the local area; and are not mainly for the convenience of the patient's doctor. CMS's definition of Medical Necessity can be found at: <https://www.cms.gov/apps/glossary/default.asp?Letter=M&Language=English>

There are several payment systems within the Medicare program, including payment for inpatient hospital services, outpatient hospital services, ambulatory surgery centers, home health, physicians, and skilled nursing. In this guide, you will find information specific to facility and physician payment systems.

Hospital Inpatient Payment

The hospital inpatient payment system is a prospective payment system (PPS) that classifies patients according to diagnosis, type of treatment, age, and other relevant criteria using the ICD-10-PCS coding system. Under this system, hospitals typically receive a predefined payment for treating patients within a particular category or Medicare Severity Diagnosis Related Group (MS-DRG).

Note: Medicare's hospital inpatient payment information in this document is effective for Fiscal Year (FY) 2018 (October 1, 2018 – September 30, 2019).

Note: Maryland hospitals are paid under a program waiver (section 1814(b)(3) of the Social Security Act) in which the state establishes hospital inpatient and outpatient payment rates for Medicare, Medicaid, and private payers.^{1,2}

Hospital Outpatient Payment

The hospital outpatient payment system, OPSS, is also a prospective payment system. In this system, hospitals receive a fixed payment, called an Ambulatory Payment Classification (APC), for a specific procedure. Each procedure described by a CPT® (Current Procedural Terminology) code is assigned directly to an APC. Unlike the inpatient (MS-DRG) payment system, if multiple procedures are performed, the hospital may be eligible to receive more than one APC payment per outpatient admission.

Note: Medicare's hospital outpatient payment information in this document is effective for Calendar Year (CY) 2018 (January 1, 2019 – December 31, 2019).

Ambulatory Surgery Center (ASC) Payment

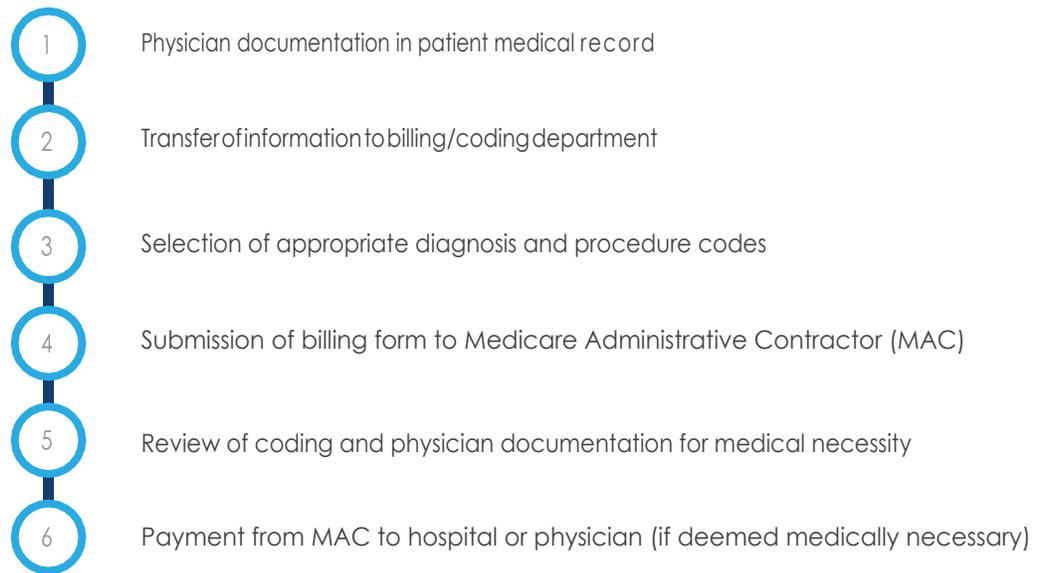
The Medicare ASC payment system, effective January 1, 2019, is a prospective payment system. The new ASC payment rates for most surgical procedures are set at ~ 65% of the APC payment rate for OPSS. Device intensive procedures (such as pacemakers and defibrillators) will be paid at a higher rate (~ 86–96%) of the OPSS rate. ASCs should bill Medicare using a CMS-1500 claim form and use CPT® codes to describe procedures performed.

Physician Payment

Physicians receive payment for each CPT® procedure code based on a fee schedule called the Medicare Physician Fee Schedule effective January 1, 2019. The Physician Fee Schedule is based on a scale of national uniform values for all physician services, commonly referred to as the Resource-Based Relative Value Scale (RBRVS).

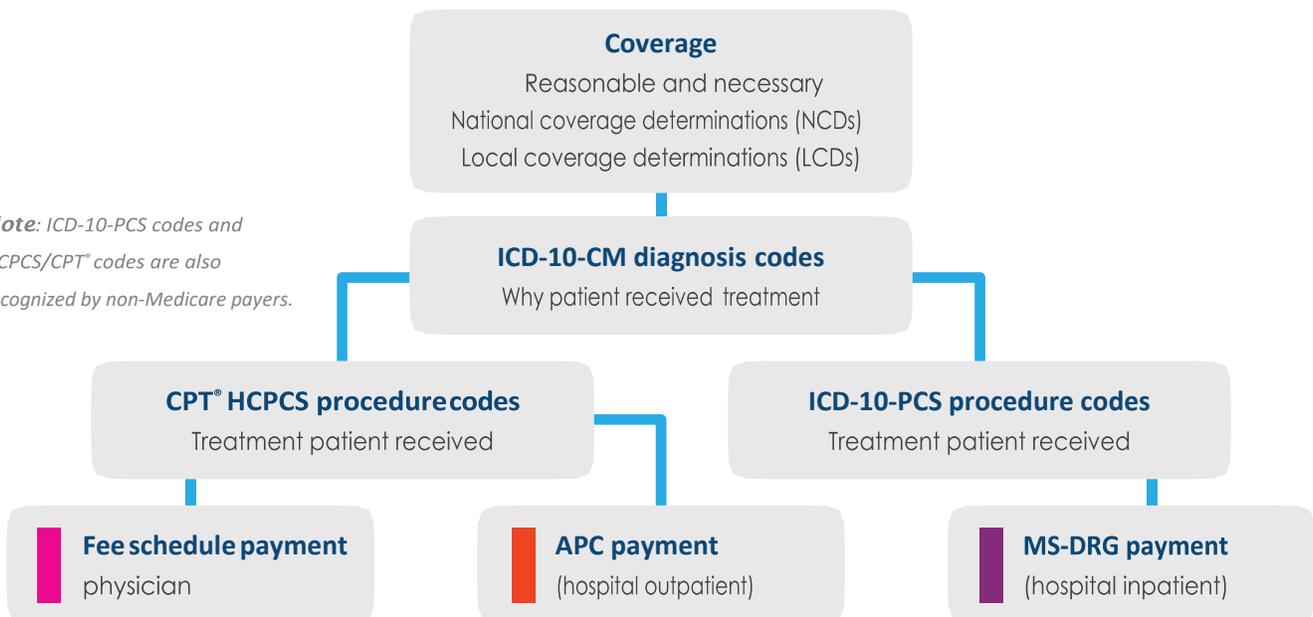
OVERVIEW OF MEDICARE PAYMENT PROCESS

All Medicare payment processes include these common steps:



Payer Coverage + Correct Coding + Compliance = Payment

Note: ICD-10-PCS codes and HCPCS/CPT® codes are also recognized by non-Medicare payers.



Medicare National Coverage Determination (NCD) Policies

MEDICARE NCD FOR CARDIAC PACEMAKERS: Single Chamber and Dual Chamber Permanent Cardiac Pacemakers³

Effective date of this version: August 13, 2013

Benefit Category

- » Inpatient Hospital Services
- » Physicians' Services
- » Prosthetic Devices

Note: This may not be an exhaustive list of all applicable Medicare benefit categories for this item or service.

Item/Service Description

A. General

Permanent cardiac pacemakers refer to a group of self-contained, battery operated, implanted devices that send electrical stimulation to the heart through one or more implanted leads. They are often classified by the number of chambers of the heart that the devices stimulate (pulse or depolarize). Single chamber pacemakers typically target either the right atrium or right ventricle. Dual chamber pacemakers stimulate both the right atrium and the right ventricle.

The implantation procedure is typically performed under local anesthesia and requires only a brief hospitalization. A catheter is inserted into the chest and the pacemaker's leads are threaded through the catheter to the appropriate chamber(s) of the heart. The surgeon then makes a small "pocket" in the pad of the flesh under the skin on the upper portion of the chest wall to hold the power source. The pocket is then closed with stitches.

The Centers for Medicare & Medicaid Services (CMS) has determined that the evidence is sufficient to conclude that implanted permanent cardiac pacemakers, single chamber or dual chamber, are reasonable and necessary for the treatment of non-reversible symptomatic bradycardia due to sinus node dysfunction and second and/or third degree atrioventricular block. Symptoms of bradycardia are symptoms that can be directly attributable to a heart rate less than 60 beats per minute (for example: syncope, seizures, congestive heart failure, dizziness, or confusion).

Indications and Limitations of Coverage

B. Nationally Covered Indications

The following indications are covered for implanted permanent single chamber or dual chamber cardiac pacemakers:

1. Documented non-reversible symptomatic bradycardia due to sinus node dysfunction, and
2. Documented non-reversible symptomatic bradycardia due to second degree and/or third degree atrioventricular block.

C. Nationally Non-Covered Indications

The following indications are non-covered for implanted permanent single chamber or dual chamber cardiac pacemakers:

1. Reversible causes of bradycardia such as electrolyte abnormalities, medications or drugs, and hypothermia,
2. Asymptomatic first degree atrioventricular block,
3. Asymptomatic sinus bradycardia,
4. Asymptomatic sino-atrial block or asymptomatic sinus arrest,

5. Ineffective atrial contractions (e.g., chronic atrial fibrillation or flutter, or giant left atrium) without symptomatic bradycardia,
6. Asymptomatic second degree atrioventricular block of Mobitz Type I unless the QRS complexes are prolonged or electrophysiological studies have demonstrated that the block is at or beyond the level of the His Bundle (a component of the electrical conduction system of the heart),
7. Syncope of undetermined cause,
8. Bradycardia during sleep,
9. Right bundle branch block with left axis deviation (and other forms of fascicular or bundle branch block) without syncope or other symptoms of intermittent atrioventricular block,
10. Asymptomatic bradycardia in post-myocardial infarction patients about to initiate long-term beta-blocker drug therapy,
11. Frequent or persistent supraventricular tachycardias, except where the pacemaker is specifically for the control of tachycardia, and
12. A clinical condition in which pacing takes place only intermittently and briefly, and which is not associated with a reasonable likelihood that pacing needs will become prolonged.

D. Other

Medicare Administrative Contractors will determine coverage under section 1862(a)(1)(A) of the Social Security Act for any other indications for the implantation and use of single chamber or dual chamber cardiac pacemakers that are not specifically addressed in this national coverage determination.

(This NCD last reviewed August 2013.)

MEDICARE NCD FOR CARDIAC PACEMAKER EVALUATION SERVICES⁴

Effective date of this version: October 1, 1984

Benefit Category

- » Diagnostic Services in Outpatient Hospital
- » Diagnostic Tests (other)

Note: This may not be an exhaustive list of all applicable Medicare benefit categories for this item or service.

Item/Service Description

Medicare covers a variety of services for the post-implant follow-up and evaluation of implanted cardiac pacemakers. The following guidelines are designed to assist Medicare Administrative Contractors (MACs) in identifying and processing claims for such services.

Indications and Limitations of Coverage

Note: These new guidelines are limited to lithium battery-powered pacemakers, because mercury-zinc battery-powered pacemakers are no longer being manufactured and virtually all have been replaced by lithium units. Contractors still receiving claims for monitoring such units should continue to apply the guidelines published in 1980 to those units until they are replaced.

There are two general types of pacemakers in current use - single-chamber pacemakers which sense and pace the ventricles of the heart, and dual-chamber pacemakers which sense and pace both the atria and the ventricles. These differences require different monitoring patterns over the expected life of the units involved. One fact of which MACs should be aware is that many dual-chamber units may be programmed to pace only the ventricles; this may be done either at the time the pacemaker is implanted or at some time afterward. In such cases, a dual-chamber unit, when programmed or reprogrammed for ventricular pacing, should be treated as a single-chamber pacemaker in applying screening guidelines.

The decision as to how often any patient's pacemaker should be monitored is the responsibility of the patient's physician, who is best able to take into account the condition and circumstances of the individual patient. These may vary over time, requiring modifications of the frequency with which the patient should be monitored. In cases where monitoring is done by some entity other than the patient's physician, such as a commercial monitoring service or hospital outpatient department, the physician's prescription for monitoring is required and should be periodically renewed (at least annually) to assure that the frequency of monitoring is proper for the patient.

Where a patient is monitored both during clinic visits and transtelephonically, the contractor should be sure to include frequency data on both types of monitoring in evaluating the reasonableness of the frequency of monitoring services received by the patient.

Since there are more than 200 pacemaker models in service at any given point, and a variety of patient conditions that give rise to the need for pacemakers, the question of the appropriate frequency of monitoring is a complex one. Nevertheless, it is possible to develop guidelines within which the vast majority of pacemaker monitoring will fall, and contractors should do this, using their own data and experience, as well as the frequency guidelines that follow, in order to limit extensive claims development to those cases requiring special attention.

PACEMAKER – TRANSTELEPHONIC MONITORING⁵

Effective date of this Version October 3, 2003

Benefit Category

- » Outpatient Hospital Services Incident to a Physician's Service

Note: This may not be an exhaustive list of all applicable Medicare benefit categories for this item or service.

A. General

Transtelephonic monitoring of pacemakers is furnished by commercial suppliers, hospital outpatient departments, and physicians' offices.

Telephone monitoring of cardiac pacemakers as described below is medically efficacious in identifying early signs of possible pacemaker failure, thus reducing the number of sudden pacemaker failures requiring emergency replacement. All systems that monitor the pacemaker rate (bpm) in both the free-running and/or magnetic mode are effective in detecting subclinical pacemaker failure due to battery depletion. More sophisticated systems are also capable of detecting internal electronic problems within the pulse generator itself and other potential problems. In the case of dual-chamber pacemakers in particular, such monitoring may detect failure of synchronization of the atria and ventricles, and the need for adjustment and reprogramming of the device.

Note: The transmitting device furnished to the patient is simply one component of the diagnostic system, and is not covered as durable medical equipment. Those engaged in transtelephonic pacemaker monitoring should reflect the costs of the transmitters in setting their charges for monitoring.

Indications and Limitations of Coverage

B. Definition of Transtelephonic Monitoring

In order for transtelephonic monitoring services to be covered, the services must consist of the following elements:

- » A minimum 30-second readable strip of the pacemaker in the free-running mode
- » Unless contraindicated, a minimum 30-second readable strip of the pacemaker in the magnetic mode
- » A minimum 30 seconds of readable ECG strip

C. Frequency Guidelines for Transtelephonic Monitoring

The guidelines below constitute a system that contractors should use, in conjunction with their knowledge of local medical practices, to screen claims for transtelephonic monitoring prior to payment. It is important to note that they are not recommendations with respect

to a minimum frequency for such monitorings, but rather a maximum frequency (within which payment may be made without further claims development). As with previous guidelines, more frequent monitorings may be covered in cases where contractors are satisfied that such monitorings are medically necessary; e.g., based on the condition of the patient, or with respect to pacemakers exhibiting unexpected defects or premature failure. Contractors should seek written justification for more frequent monitorings from the patient's physician and/or any monitoring service involved.

These guidelines are divided into two broad categories—Guideline I, which will apply to the majority of pacemakers now in use, and Guideline II, which will apply only to pacemaker systems (pacemaker and leads) for which sufficient long-term clinical information exists to assure that they meet the standards of the Inter-Society Commission for Heart Disease Resources (ICHD) for longevity and end-of-life decay. (The ICHD standards are: (1) 90% cumulative survival at five years following implant; and (2) an end-of-life decay of less than a 50% drop of output voltage and less than 20% deviation of magnet rate, or a drop of five beats per minute or less, over a period of three months or more). Contractors should consult with their medical advisers and other appropriate individuals and organizations (such as the North American Society of Pacing and Electrophysiology, which publishes product reliability information) should questions arise over whether a pacemaker system meets the ICHD standards.

The two groups of guidelines are then further broken down into two general categories—single-chamber and dual-chamber pacemakers. Contractors should be aware that the frequency with which a patient is monitored may be changed from time to time for a number of reasons, such as a change in the patient's overall condition, a reprogramming of the patient's pacemaker, the development of better information on the pacemaker's longevity or failure mode, etc. Consequently, changes in the proper set of guidelines may be required. Contractors should inform physicians and monitoring services to alert contractors to any changes in the patient's monitoring prescription that might necessitate changes in the screening guidelines applied to that patient. (Of particular importance is the reprogramming of a dual-chamber pacemaker to a single-chamber mode of operation. Such reprogramming would shift the patient from the appropriate dual-chamber guideline to the appropriate single chamber guideline).

MEDICARE'S FREQUENCY GUIDELINES FOR TRANSTELEPHONIC MONITORING OF CARDIAC PACEMAKERS

Guideline I

Single-chamber pacemakers:

- » 1st month: every 2 weeks
- » 2nd through 36th month: every 8 weeks
- » 37th month to failure: every 4 weeks

Dual-chamber pacemakers: 1st month: every 2 weeks

- » 2nd through 6th month: every 4 weeks
- » 7th through 36th month: every 8 weeks
- » 37th month to failure: every 4 weeks

Guideline II

Single-chamber pacemakers:

- » 1st month: every 2 weeks
- » 2nd through 48th month: every 12 weeks
- » 49th through 72nd month: every 8 weeks
- » Thereafter: every 4 weeks

Dual-chamber pacemakers:

- » 1st month: every 2 weeks
- » 2nd through 30th month: every 12 weeks
- » 31st through 48th month: every 8 weeks
- » Thereafter: every 4 weeks

D. Pacemaker Clinic Services**General**

Pacemaker monitoring is also covered when done by pacemaker clinics. Clinic visits may be done in conjunction with transtelephonic monitoring or as a separate service; however, the services rendered by a pacemaker clinic are more extensive than those currently possible by telephone. They include, for example, physical examination of patients and reprogramming of pacemakers. Thus, the use of one of these types of monitoring does not preclude concurrent use of the other.

Frequency Guidelines

As with transtelephonic pacemaker monitoring, the frequency of clinic visits is the decision of the patient's physician taking into account, among other things, the medical condition of the patient. However, contractors can develop monitoring guidelines that will prove useful in screening claims. The following are recommendations for monitoring guidelines on lithium-battery pacemakers:

MEDICARE'S FREQUENCY GUIDELINES FOR PACEMAKER CLINIC SERVICES

- » For single-chamber pacemakers: twice in the first 6 months following implant, then once every 12 months
- » For dual-chamber pacemakers: twice in the first 6 months, then once every 6 months

Note: Search the Medicare Coverage Database on the CMS website (<http://www.cms.hhs.gov/mcd/search.asp>) for coverage descriptions and updates.

MEDICARE NCD FOR IMPLANTABLE CARDIOVERTER-DEFIBRILLATORS⁶ (ICDS)

- » Effective date of this version: February 15, 2018
- » Implementation date: February 26, 2019

Benefit Category

- » Prosthetic Devices

Note: This may not be an exhaustive list of all applicable Medicare benefit categories for this item or service.

Item/Service Description**A. General**

The implantable automatic defibrillator is an electronic device designed to detect and treat life-threatening tachyarrhythmias. The device consists of a pulse generator and electrodes for sensing and defibrillating.

Indications and Limitations of Coverage**B. Covered Indications:**

1. Patients with a personal history of sustained ventricular tachyarrhythmia or cardiac arrest due to ventricular fibrillation. Patients must have demonstrated:
 - An episode of sustained ventricular tachyarrhythmia, either spontaneous or induced by an electrophysiology (EP) study, not associated with an acute myocardial infarction and not due to a transient or reversible cause; or
 - An episode of cardiac arrest due to ventricular fibrillation, not due to a transient or reversible cause.
2. Patients with a prior myocardial infarction and a measured left ventricular ejection fraction (LVEF) ≤ 0.30 . Patients must not have:
 - New York Heart Association (NYHA) classification IV heart failure;
 - Had a coronary artery bypass graft (CABG), or percutaneous coronary intervention (PCI) with angioplasty and/or stenting, within the past 3 months; or
 - Had a myocardial infarction within the past 40 days; or
 - Clinical symptoms and findings that would make them a candidate for coronary revascularization.

For these patients identified in B2, a formal shared decision making encounter must occur between the patient and a physician (as defined in Section 1861(r)(1)) or qualified non-physician practitioner (meaning a physician assistant, nurse practitioner, or clinical nurse specialist as defined in §1861(aa)(5)) using an evidence-based decision tool on ICDs prior to initial ICD implantation.

The shared decision-making encounter may occur at a separate visit.

3. Patients who have severe ischemic dilated cardiomyopathy but no personal history of sustained ventricular tachyarrhythmia or cardiac arrest due to ventricular fibrillation, and have New York Heart Association (NYHA) Class II or III heart failure, left ventricular ejection fraction (LVEF) $\leq 35\%$. Additionally, patients must not have:
 - Had a coronary artery bypass graft (CABG), or percutaneous coronary intervention (PCI) with angioplasty and/or stenting, within the past 3 months; or
 - Had a myocardial infarction within the past 40 days; or
 - Clinical symptoms and findings that would make them a candidate for coronary revascularization.

For these patients identified in B3, a formal shared decision-making encounter must occur between the patient and a physician (as defined in Section 1861(r)(1)) or qualified non-physician practitioner (meaning a physician assistant, nurse practitioner, or clinical nurse specialist as defined in §1861(aa) (5)) using an evidence-based decision tool on ICDs prior to initial ICD implantation.

The shared decision-making encounter may occur at a separate visit.

4. Patients who have severe non-ischemic dilated cardiomyopathy but no personal history of sustained ventricular tachyarrhythmia or cardiac arrest due to ventricular fibrillation, and have New York Heart Association (NYHA) Class II or III heart failure, left ventricular ejection fraction (LVEF) $\leq 35\%$, been on optimal medical therapy (OMT) for at least 3 months. Additionally, patients must not have:

- Had a coronary artery bypass graft (CABG), or percutaneous coronary intervention (PCI) with angioplasty and/or stenting, within the past 3 months; or
- Had a myocardial infarction within the past 40 days; or
- Clinical symptoms and findings that would make them a candidate for coronary revascularization.

For these patients identified in B4, a formal shared decision-making encounter must occur between the patient and a physician (as defined in Section 1861(r)(1)) or qualified non-physician practitioner (meaning a physician assistant, nurse practitioner, or clinical nurse specialist as defined in §1861(aa)(5)) using an evidence-based decision tool on ICDs prior to initial ICD implantation.

The shared decision-making encounter may occur at a separate visit.

5. Patients with documented familial, or genetic disorders with a high risk of life-threatening tachyarrhythmias (sustained ventricular tachycardia or ventricular fibrillation), to include, but not limited to, long QT syndrome or hypertrophic cardiomyopathy.

For these patients identified in B5, a formal shared decision-making encounter must occur between the patient and a physician (as defined in Section 1861(r)(1)) or qualified non-physician practitioner (meaning a physician assistant, nurse practitioner, or clinical nurse specialist as defined in §1861(aa) (5)) using an evidence-based decision tool on ICDs prior to initial ICD implantation.

The shared decision-making encounter may occur at a separate visit.

6. Patients with an existing ICD may receive an ICD replacement if it is required due to the end of battery life, elective replacement indicator (ERI) or device/lead malfunction.

For each of these groups listed above, the following additional criteria must also be met:

1. Patients must be clinically stable (e.g., not in shock, from any etiology);
 2. Left ventricular ejection fraction (LVEF) must be measured by echocardiography, radionuclide (nuclear medicine) imaging, cardiac magnetic resonance imaging (MRI), or catheter angiography;
 3. Patients must not have:
 - Significant, irreversible brain damage; or
 - Any disease, other than cardiac disease (e.g., cancer, renal failure, liver failure) associated with a likelihood of survival less than 1 year; or
 - Supraventricular tachycardia such as atrial fibrillation with a poorly controlled ventricular rate.
- c. Exceptions to waiting periods for patients that have had a coronary artery bypass graft (CABG), or percutaneous coronary intervention (PCI) with angioplasty and/or stenting, within the past 3 months, or had a myocardial infarction within the past 40 days:

Cardiac Pacemakers: Patients who meet all CMS coverage requirements for cardiac pacemakers and who meet the criteria in this national coverage determination for an ICD may receive the combined device in one procedure at the time the pacemaker is clinically indicated;

Replacement of ICDs: Patients with an existing ICD may receive a ICD replacement if it is required due to the end of battery life, elective replacement indicator (ERI) or device/lead malfunction.

d. Other Indications:

For patients who are candidates for heart transplantation on the United Network for Organ Sharing (UNOS) transplant list awaiting a donor heart, coverage of ICDs, as with cardiac resynchronization therapy, as a bridge to transplant to prolong survival until a donor becomes available is determined by the local Medicare Administrative Contractors (MACs).

All other indications for ICDs not currently covered in accordance with this decision may be covered under Category B IDE trials (42 CFR 405.201).

See Appendix B for the NCD manual language.

MEDICARE NCD FOR CARDIAC RESYNCHRONIZATION THERAPY PACEMAKERS (CRT-PS)

A cardiac resynchronization therapy pacemaker (CRT-P) utilizes biventricular pacing to coordinate the contraction of the ventricles with the intent of improving the hemodynamic status of the patient. This technology utilizes both conventional pacing technology as well as the addition of a third electrode that provides sensing and pacing capabilities in the left ventricle.

At this time there is no specific NCD for CRT-Ps. However, some MACs have developed Local Coverage Determinations (LCDs) for CRT-P that apply to certain regions. It is important for medical providers to check with their local MAC for non-Medicare payer(s) to determine patient coverage and coding/billing guidelines.

MEDICARE NCD FOR CARDIAC RESYNCHRONIZATION THERAPY DEFIBRILLATORS (CRT-DS)

A cardiac resynchronization therapy defibrillator (CRT-D) utilizes biventricular pacing to coordinate the contraction of the ventricles and ICD capabilities to prevent ventricular tachyarrhythmias and ultimately the prevention of sudden cardiac death.

At this time there is no specific NCD for CRT-Ds. However, some MACs have developed Local Coverage Determinations (LCDs) for CRT-D that apply to certain regions. It is important for medical providers to check with their local MAC or non-Medicare payer(s) to determine patient coverage and coding/billing guidelines.

MEDICARE NCD FOR INTRACARDIAC ELECTROPHYSIOLOGY AND RELATED PROCEDURES

Some cardiovascular procedures, such as pacemakers and cardioverter-defibrillators, contain very clear national coverage criteria as defined by CMS. Other procedures, such as electrophysiology studies (EPS), do not have clearly defined coverage criteria at the national level. Some MACs have developed Local Coverage Determinations (LCDs) for EPS that apply to certain regions. It is important for providers to check with their local MAC or non-Medicare payer(s) to determine patient coverage and coding/billing guidelines.

Note: Search the Medicare Coverage Database on the CMS website (<http://www.cms.hhs.gov/mcd/search.asp>) for coverage descriptions and updates.

- Centers for Medicare and Medicaid Services: Clarification of payments and billing procedures for hospitals subject to the Maryland waiver, Transmittal R156CP (change request 3200, issued April 30, 2004, effective October 1, 2004), Internet-only Medicare Claims Processing Manual (CMS Pub. 100-04). Available at: <http://www.cms.hhs.gov/transmittals/Downloads/R156CP.pdf>. Accessed December 9, 2015.
- Health Services Cost Review Commission: About HSCRC available at: <http://www.hscrc.state.md.us/aboutUs.cfm>. Accessed December 9, 2015.
- Centers for Medicare and Medicaid Services. National Coverage Determination for Cardiac Pacemakers: single Chamber and Dual Chamber Permanent Cardiac Pacemakers (20.8.3). In: Medicare Coverage Database. Effective August 13, 2013. Available at: <https://www.cms.gov/medicare-coverage-database/details/ncd-details.aspx?NCDId=357&ncdver=2&CoverageSelection=Both&ArticleType=All&PolicyType=Final&s=All&Keyword=pacemakers&KeywordLookup=Title&KeywordSearchType=And&bc=gAAAABAAAAAAAA%3d%3d&> Accessed December 9, 2015..
- Centers for Medicare and Medicaid Services. National Coverage Determination for Cardiac Pacemaker Evaluation Services (20.8.1). In: Medicare Coverage Database. Effective October 1, 1984. Available at: <https://www.cms.gov/medicare-coverage-database/details/ncd-details.aspx?NCDId=160&ncdver=1&SearchType=Advanced&CoverageSelection=National&NCSelection=NCD&kq=true&bc=IAAA ABAAAA&>. Accessed December 9, 2015.
- Centers for Medicare and Medicaid Services. Coverage determinations: Transtelephonic monitoring of cardiac pacemakers. In: Medicare National Coverage Determinations Manual. CMS Pub. 100-3; Chapter 1, Part 1, Section 20.8.1.1. October 3, 2003. Available at: <https://www.cms.gov/medicare-coverage-database/details/ncd-details.aspx?NCDId=345&ncdver=1&CoverageSelection=Both&ArticleType=All&PolicyType=Final&s=All&Keyword=pacemakers&KeywordLookup=Title&KeywordSearchType=And&bc=gAAAABAAAAAAAA%3d%3d&> Accessed December 9, 2015.
- Centers for Medicare and Medicaid Services. National Coverage Determination for Implantable Automatic Defibrillators (20.4). In: Medicare Coverage Database. Effective January 27, 2005. Available at: <http://www.cms.gov/medicare-coverage-database/details/ncd-details.aspx?NCDId=110&ncdver=3&NCAid=148&ver=16&NcaName=Implantable+Defibrillators+%28;3rd+Recon&x29;&bc=BEAA>
- Alpert and Thygesen et al., 2000. Criteria for acute, evolving or recent MI. Either one of the following criteria satisfies the diagnosis for an acute, evolving or recent MI:
 - Typical rise and gradual fall (troponin) or more rapid rise and fall (CK-MB) of biochemical markers of myocardial necrosis with at least one of the following:
 - ischemic symptoms;
 - development of pathologic Q waves on the ECG;
 - ECG changes indicative of ischemia (ST segment elevation or depression); or
 - coronary artery intervention (e.g., coronary angioplasty).
 - Pathologic findings of an acute MI.

Criteria for established MI. Any one of the following criteria satisfies the diagnosis for established MI:

 - Development of new pathologic Q waves on serial ECGs. The patient may or may not remember previous symptoms. Biochemical markers of myocardial necrosis may have normalized, depending on the length of time that has passed since the infarct developed.
 - Pathologic findings of a healed or healing MI.

MODERATE (CONSCIOUS) SEDATION

The summary of CPT codes that include moderate (conscious) sedation (formerly Appendix G) has been removed from the 2019 CPT code set. The codes that were previously included in former Appendix G have been revised with the removal of the moderate (conscious) sedation symbol. This reflects the removal of moderate sedation from the services.

Refer to the 2019 CPT Manual for complete definitions of Preservice, Intraservice and Postservice work necessary for reporting of the moderate sedation codes (99151, 99152, 99153, 99155, 99156, 99157).

For purposes of reporting, the intraservice time is used to select the appropriate code. Intraservice work begins with the administration of the sedating agent(s) and ends when the procedure is completed, the patient is stable for recovery status, and the physician or other qualified health care professional providing the sedation ends personal continuous face-to-face time with the patient.

If the physician or other qualified health care professional who provides the sedation services also performs the procedure supported by sedation (99151, 99152, 99153), the physician or other qualified health care professional will supervise and direct an independent trained observer who will assist in monitoring the patient's level of consciousness and physiological status throughout the procedure. An independent trained observer is an individual who is qualified to monitor the patient during the procedure, who has no other duties (e.g., assisting at surgery) during the procedure.

- 99151 Moderate sedation services provided by the same physician or other qualified health care professional performing the diagnostic or therapeutic service that the sedation supports, requiring the presence of an independent trained observer to assist in the monitoring of the patient's level of consciousness and physiological status; initial 15 minutes of intraservice time, patient younger than 5 years of age
 - 99152 initial 15 minutes of intraservice time, patient age 5 years or older
 - 99153 each additional 15 minutes intraservice time (List separately in addition to code for primary service)
- 99155 Moderate sedation services provided by a physician or other qualified health care professional other than the physician or other qualified health care professional performing the diagnostic or therapeutic service that the sedation supports: initial 15 minutes of intraservice time, patient younger than 5 years of age
 - 99156 Initial 15 minutes of intraservice time, patient age 5 years or older
 - 99157 Each additional 15 minutes intraservice time (List separately in addition to code for primary service)

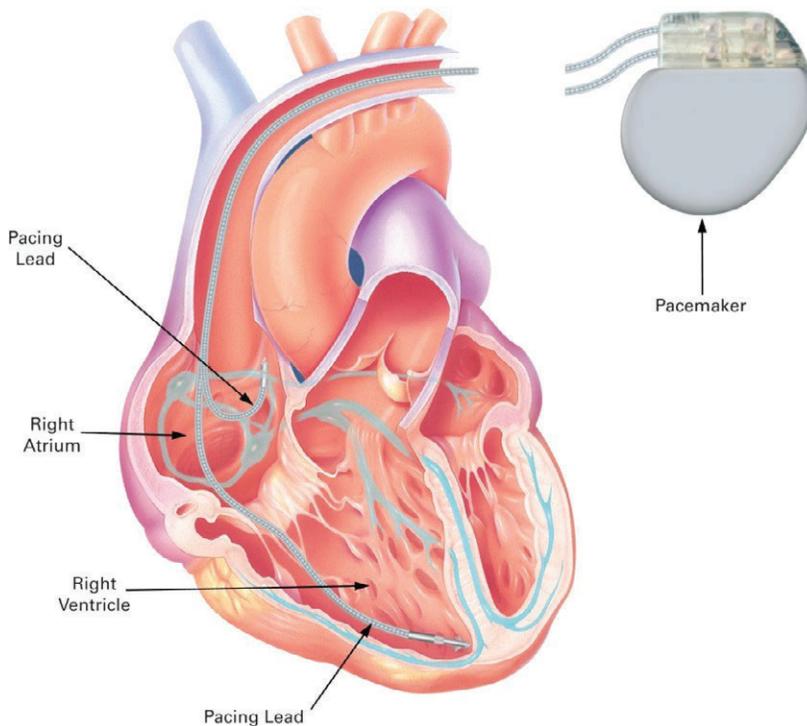


Pacemakers

Pacemaker Coding Overview 1-1

Commonly Billed Pacemaker Scenarios 1-2

Pacemaker Coding Overview



Pacemaker Implant Procedure

The implant of a permanent pacemaker system requires the use of a pacemaker pulse generator and one electrode or lead for a single chamber system, or two electrodes or leads for a dual chamber system. The leads monitor and deliver electrical stimulation to the right atrium or right ventricle for a single chamber system, or both the right atrium and right ventricle for a dual chamber system. The lead(s) are inserted through the subclavian vein and are positioned in the right atrium and/or right ventricle. In some cases, the cephalic or internal jugular vein may be used as an alternative to the subclavian vein.

A STEP-BY-STEP DESCRIPTION OF A TYPICAL INITIAL PACEMAKER SYSTEM IMPLANT PROCEDURE

1. The subclavian vein is accessed.
2. Under fluoroscopy, the pacing lead(s) are inserted into the right atrium (33206) or right ventricle (33207) for a single chamber system, or into the right atrium and right ventricle for a dual chamber system (33208).
3. Lead measurement tests, including pacing and sensing thresholds and lead impedances, are performed.
4. The pacemaker pulse generator (included in 33206, 33207, and 33208) is connected to the lead(s) that are in place and a pulse generator pocket is formed.
5. Additional testing of the lead(s) is completed.
6. The lead(s) and device are secured, and the pulse generator pocket is closed.

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

Scenarios included within this document do not encompass all possible procedures.

Commonly Billed Pacemaker Scenarios

KEY

+ Add-on code

■ Physician CPT® Codes¹■ Hospital Outpatient CPT® Codes²■ Possible Hospital Inpatient ICD-10-PCS® Codes³

1.1 Initial single chamber rate-responsive pacemaker system implant with right atrial lead

Scenario 1.1: Physician CPT® Codes¹

33206 Insertion of new or replacement of permanent pacemaker with transvenous electrode(s); atrial
Add conscious sedation codes as appropriate (see page 17)

Scenario 1.1: Hospital Outpatient CPT® Codes²

33206 Insertion of new or replacement of permanent pacemaker with transvenous electrode(s); atrial
Add conscious sedation codes as appropriate (see page 17)

Scenario 1.1: Possible Hospital Inpatient ICD-10-PCS Codes³

02H64JZ Insertion of Pacemaker Lead into Right Atrium, Percutaneous Endoscopic Approach

02H63JZ Insertion of Pacemaker Lead into Right Atrium, Percutaneous Approach

0JH605Z Insertion of Pacemaker, Single Chamber Rate Responsive into Chest Subcutaneous Tissue and Fascia, Open Approach

0JH635Z Insertion of Pacemaker, Single Chamber Rate Responsive into Chest Subcutaneous Tissue and Fascia, Percutaneous Approach

0JH805Z Insertion of Pacemaker, Single Chamber Rate Responsive into Abdomen Subcutaneous Tissue and Fascia, Open Approach

0JH835Z Insertion of Pacemaker, Single Chamber Rate Responsive into Abdomen Subcutaneous Tissue and Fascia, Percutaneous Approach

B5060ZZ Plain Radiography of Right Subclavian Vein using High Osmolar Contrast

B5061ZZ Plain Radiography of Right Subclavian Vein using Low Osmolar Contrast

B506YZZ Plain Radiography of Right Subclavian Vein using Other Contrast

B5070ZZ Plain Radiography of Left Subclavian Vein using High Osmolar Contrast

B5071ZZ Plain Radiography of Left Subclavian Vein using Low Osmolar Contrast

B507YZZ Plain Radiography of Left Subclavian Vein using Other Contrast

B5160ZZ Fluoroscopy of Right Subclavian Vein using High Osmolar Contrast

B5161ZZ Fluoroscopy of Right Subclavian Vein using Low Osmolar Contrast

B516YZZ Fluoroscopy of Right Subclavian Vein using Other Contrast

B516ZZZ Fluoroscopy of Right Subclavian Vein

B5170ZZ Fluoroscopy of Left Subclavian Vein using High Osmolar Contrast

B5171ZZ Fluoroscopy of Left Subclavian Vein using Low Osmolar Contrast

B517YZZ Fluoroscopy of Left Subclavian Vein using Other Contrast

B517ZZZ Fluoroscopy of Left Subclavian Vein

12 Initial single chamber rate-responsive pacemaker system implant with right ventricular lead

Scenario 1.2: Physician CPT® Codes¹

33207 Insertion of new or replacement of permanent pacemaker with transvenous electrode(s); ventricular
Add conscious sedation codes as appropriate (see page 17)

Scenario 1.2: Hospital Outpatient CPT® Codes²

33207 Insertion of new or replacement of permanent pacemaker with transvenous electrode(s); ventricular
Add conscious sedation codes as appropriate (see page 17)

Scenario 1.2: Possible Hospital Inpatient ICD-10-PCS Codes³

02HK3JZ Insertion of Pacemaker Lead into Right Ventricle, Percutaneous Approach

02HK4JZ Insertion of Pacemaker Lead into Right Ventricle, Percutaneous Endoscopic Approach

0JH605Z Insertion of Pacemaker, Single Chamber Rate Responsive into Chest Subcutaneous Tissue and Fascia, Open Approach

0JH635Z Insertion of Pacemaker, Single Chamber Rate Responsive into Chest Subcutaneous Tissue and Fascia, Percutaneous Approach

0JH805Z Insertion of Pacemaker, Single Chamber Rate Responsive into Abdomen Subcutaneous Tissue and Fascia, Open Approach

0JH835Z Insertion of Pacemaker, Single Chamber Rate Responsive into Abdomen Subcutaneous Tissue and Fascia, Percutaneous Approach

B5060ZZ Plain Radiography of Right Subclavian Vein using High Osmolar Contrast

B5061ZZ Plain Radiography of Right Subclavian Vein using Low Osmolar Contrast

B506YZZ Plain Radiography of Right Subclavian Vein using Other Contrast

B5070ZZ Plain Radiography of Left Subclavian Vein using High Osmolar Contrast

B5071ZZ Plain Radiography of Left Subclavian Vein using Low Osmolar Contrast

B507YZZ Plain Radiography of Left Subclavian Vein using Other Contrast

B5160ZZ Fluoroscopy of Right Subclavian Vein using High Osmolar Contrast

B5161ZZ Fluoroscopy of Right Subclavian Vein using Low Osmolar Contrast

B516YZZ Fluoroscopy of Right Subclavian Vein using Other Contrast

B516ZZZ Fluoroscopy of Right Subclavian Vein

B5170ZZ Fluoroscopy of Left Subclavian Vein using High Osmolar Contrast

B5171ZZ Fluoroscopy of Left Subclavian Vein using Low Osmolar Contrast

B517YZZ Fluoroscopy of Left Subclavian Vein using Other Contrast

B517ZZZ Fluoroscopy of Left Subclavian Vein

1.3 Initial dual chamber pacemaker system implantation

Scenario 1.3: Physician CPT® Codes¹

33208 Insertion of new or replacement of permanent pacemaker with transvenous electrode(s); atrial and ventricular
Add conscious sedation codes as appropriate (see page 17)

Scenario 1.3: Hospital Outpatient CPT® Codes²

33208 Insertion of new or replacement of permanent pacemaker with transvenous electrode(s); atrial and ventricular
Add conscious sedation codes as appropriate (see page 17)

Scenario 1.3: Possible Hospital Inpatient ICD-10-PCS Codes³

02H64JZ Insertion of Pacemaker Lead into Right Atrium, Percutaneous Endoscopic Approach

02H63JZ Insertion of Pacemaker Lead into Right Atrium, Percutaneous Approach

02HK4JZ Insertion of Pacemaker Lead into Right Ventricle, Percutaneous Endoscopic Approach

02HK3JZ Insertion of Pacemaker Lead into Right Ventricle, Percutaneous Approach

0JH606Z Insertion of Pacemaker, Dual Chamber into Chest Subcutaneous Tissue and Fascia, Open Approach

0JH636Z Insertion of Pacemaker, Dual Chamber into Chest Subcutaneous Tissue and Fascia, Percutaneous Approach

0JH806Z Insertion of Pacemaker, Dual Chamber into Abdomen Subcutaneous Tissue and Fascia, Open Approach

0JH836Z Insertion of Pacemaker, Dual Chamber into Abdomen Subcutaneous Tissue and Fascia, Percutaneous Approach

B5060ZZ Plain Radiography of Right Subclavian Vein using High Osmolar Contrast

B5061ZZ Plain Radiography of Right Subclavian Vein using Low Osmolar Contrast

B506YZZ Plain Radiography of Right Subclavian Vein using Other Contrast

B5070ZZ Plain Radiography of Left Subclavian Vein using High Osmolar Contrast

B5071ZZ Plain Radiography of Left Subclavian Vein using Low Osmolar Contrast

B507YZZ Plain Radiography of Left Subclavian Vein using Other Contrast

B5160ZZ Fluoroscopy of Right Subclavian Vein using High Osmolar Contrast

B5161ZZ Fluoroscopy of Right Subclavian Vein using Low Osmolar Contrast

B516YZZ Fluoroscopy of Right Subclavian Vein using Other Contrast

B516ZZZ Fluoroscopy of Right Subclavian Vein

B5170ZZ Fluoroscopy of Left Subclavian Vein using High Osmolar Contrast

B5171ZZ Fluoroscopy of Left Subclavian Vein using Low Osmolar Contrast

B517YZZ Fluoroscopy of Left Subclavian Vein using Other Contrast

B517ZZZ Fluoroscopy of Left Subclavian Vein

14 Initial dual chamber pacemaker insertion with external cardioversion performed prior to device implant session for treatment of patient in atrial fibrillation

Scenario 1.4: Physician CPT® Codes¹

33208	Insertion of new or replacement of permanent pacemaker with transvenous electrode(s); atrial and ventricular
92960-59, 51 ⁴	Cardioversion, elective, electrical conversion of arrhythmia; external

Add conscious sedation codes as appropriate (see page 17)

Scenario 1.4: Hospital Outpatient CPT® Codes²

33208	Insertion of new or replacement of permanent pacemaker with transvenous electrode(s); ventricular
92960-59	Cardioversion, elective, electrical conversion of arrhythmia; external

Add conscious sedation codes as appropriate (see page 17)

Scenario 1.4: Possible Hospital Inpatient ICD-10-PCS Codes³

0JH606Z	Insertion of Pacemaker, Dual Chamber into Chest Subcutaneous Tissue and Fascia, Open Approach
0JH636Z	Insertion of Pacemaker, Dual Chamber into Chest Subcutaneous Tissue and Fascia, Percutaneous Approach
0JH806Z	Insertion of Pacemaker, Dual Chamber into Abdomen Subcutaneous Tissue and Fascia, Open Approach
0JH836Z	Insertion of Pacemaker, Dual Chamber into Abdomen Subcutaneous Tissue and Fascia, Percutaneous Approach
02H64JZ	Insertion of Pacemaker Lead into Right Atrium, Percutaneous Endoscopic Approach
02H63JZ	Insertion of Pacemaker Lead into Right Atrium, Percutaneous Approach
02HK4JZ	Insertion of Pacemaker Lead into Right Ventricle, Percutaneous Endoscopic Approach
02HK3JZ	Insertion of Pacemaker Lead into Right Ventricle, Percutaneous Approach
5A2204Z	Restoration of Cardiac Rhythm
B5060ZZ	Plain Radiography of Right Subclavian Vein using High Osmolar Contrast
B5061ZZ	Plain Radiography of Right Subclavian Vein using Low Osmolar Contrast
B506YZZ	Plain Radiography of Right Subclavian Vein using Other Contrast
B5070ZZ	Plain Radiography of Left Subclavian Vein using High Osmolar Contrast
B5071ZZ	Plain Radiography of Left Subclavian Vein using Low Osmolar Contrast
B507YZZ	Plain Radiography of Left Subclavian Vein using Other Contrast
B5160ZZ	Fluoroscopy of Right Subclavian Vein using High Osmolar Contrast
B5161ZZ	Fluoroscopy of Right Subclavian Vein using Low Osmolar Contrast
B516YZZ	Fluoroscopy of Right Subclavian Vein using Other Contrast
B516ZZZ	Fluoroscopy of Right Subclavian Vein
B5170ZZ	Fluoroscopy of Left Subclavian Vein using High Osmolar Contrast
B5171ZZ	Fluoroscopy of Left Subclavian Vein using Low Osmolar Contrast
B517YZZ	Fluoroscopy of Left Subclavian Vein using Other Contrast
B517ZZZ	Fluoroscopy of Left Subclavian Vein

1.5 Replacement of single chamber *rate-responsive pulse generator*

Scenario 1.5: Physician CPT® Codes¹

33227 Removal of permanent pacemaker pulse generator with replacement of pacemaker pulse generator; single lead system
Add conscious sedation codes as appropriate (see page 17)

Scenario 1.5: Hospital Outpatient CPT® Codes²

33227 Removal of permanent pacemaker pulse generator with replacement of pacemaker pulse generator; single lead system
Add conscious sedation codes as appropriate (see page 17)

Scenario 1.5: Possible Hospital Inpatient ICD-10-PCS Codes³

0JH605Z Insertion of Pacemaker, Single Chamber Rate Responsive into Chest Subcutaneous Tissue and Fascia, Open Approach

0JH635Z Insertion of Pacemaker, Single Chamber Rate Responsive into Chest Subcutaneous Tissue and Fascia, Percutaneous Approach

0JH805Z Insertion of Pacemaker, Single Chamber Rate Responsive into Abdomen Subcutaneous Tissue and Fascia, Open Approach

0JH835Z Insertion of Pacemaker, Single Chamber Rate Responsive into Abdomen Subcutaneous Tissue and Fascia, Percutaneous Approach

0JPT0PZ Removal of Cardiac Rhythm Related Device from Trunk Subcutaneous Tissue and Fascia, Open Approach

0JPT3PZ Removal of Cardiac Rhythm Related Device from Trunk Subcutaneous Tissue and Fascia, Percutaneous Approach

1.6 Replacement of dual chamber pacemaker, insertion of new atrial lead, capping of existing atrial lead

Scenario 1.6: Physician CPT® Codes¹

33206 Insertion of new or replacement of permanent pacemaker with transvenous electrode(s); atrial

33233-51⁴ Removal of permanent pacemaker pulse generator only

Add conscious sedation codes as appropriate (see page 17)

Scenario 1.6: Hospital Outpatient CPT® Codes²

33206 Insertion of new or replacement of permanent pacemaker with transvenous electrode(s); atrial

33233 Removal of permanent pacemaker pulse generator only

Add conscious sedation codes as appropriate (see page 17)

Scenario 1.6: Possible Hospital Inpatient ICD-10-PCS Codes³

02H63JZ Insertion of Pacemaker Lead into Right Atrium, Percutaneous Approach

02H64JZ Insertion of Pacemaker Lead into Right Atrium, Percutaneous Endoscopic Approach

0JH606Z Insertion of Pacemaker, Dual Chamber into Chest Subcutaneous Tissue and Fascia, Open Approach

0JH636Z Insertion of Pacemaker, Dual Chamber into Chest Subcutaneous Tissue and Fascia, Percutaneous Approach

0JH806Z Insertion of Pacemaker, Dual Chamber into Abdomen Subcutaneous Tissue and Fascia, Open Approach

0JH836Z Insertion of Pacemaker, Dual Chamber into Abdomen Subcutaneous Tissue and Fascia, Percutaneous Approach

0JPT0PZ Removal of Cardiac Rhythm Related Device from Trunk Subcutaneous Tissue and Fascia, Open Approach

0JPT3PZ Removal of Cardiac Rhythm Related Device from Trunk Subcutaneous Tissue and Fascia, Percutaneous Approach

B5060ZZ Plain Radiography of Right Subclavian Vein using High Osmolar Contrast

B5061ZZ Plain Radiography of Right Subclavian Vein using Low Osmolar Contrast

B506YZZ Plain Radiography of Right Subclavian Vein using Other Contrast

B5070ZZ Plain Radiography of Left Subclavian Vein using High Osmolar Contrast

B5071ZZ Plain Radiography of Left Subclavian Vein using Low Osmolar Contrast

B507YZZ Plain Radiography of Left Subclavian Vein using Other Contrast

B5160ZZ Fluoroscopy of Right Subclavian Vein using High Osmolar Contrast

B5161ZZ Fluoroscopy of Right Subclavian Vein using Low Osmolar Contrast

B516YZZ Fluoroscopy of Right Subclavian Vein using Other Contrast

B516ZZZ Fluoroscopy of Right Subclavian Vein

B5170ZZ Fluoroscopy of Left Subclavian Vein using High Osmolar Contrast

B5171ZZ Fluoroscopy of Left Subclavian Vein using Low Osmolar Contrast

B517YZZ Fluoroscopy of Left Subclavian Vein using Other Contrast

B517ZZZ Fluoroscopy of Left Subclavian Vein

1.7 Replacement of dual chamber pacemaker, insertion of new ventricular lead, capping of existing ventricular lead

Scenario 1.7: Physician CPT® Codes¹

33207 Insertion of new or replacement of permanent pacemaker with transvenous electrode(s); ventricular

33233-51⁴ Removal of permanent pacemaker pulse generator only

Add conscious sedation codes as appropriate (see page 17)

Scenario 1.7: Hospital Outpatient CPT® Codes²

33207 Insertion of new or replacement of permanent pacemaker with transvenous electrode(s); ventricular

33233 Removal of permanent pacemaker pulse generator only

Add conscious sedation codes as appropriate (see page 17)

Scenario 1.7: Possible Hospital Inpatient ICD-10-PCS Codes³

0JH606Z Insertion of Pacemaker, Dual Chamber into Chest Subcutaneous Tissue and Fascia, Open Approach

0JH636Z Insertion of Pacemaker, Dual Chamber into Chest Subcutaneous Tissue and Fascia, Percutaneous Approach

0JH806Z Insertion of Pacemaker, Dual Chamber into Abdomen Subcutaneous Tissue and Fascia, Open Approach

0JH836Z Insertion of Pacemaker, Dual Chamber into Abdomen Subcutaneous Tissue and Fascia, Percutaneous Approach

0JPT0PZ Removal of Cardiac Rhythm Related Device from Trunk Subcutaneous Tissue and Fascia, Open Approach

0JPT3PZ Removal of Cardiac Rhythm Related Device from Trunk Subcutaneous Tissue and Fascia, Percutaneous Approach

02H63JZ Insertion of Pacemaker Lead into Right Atrium, Percutaneous Approach

02H64JZ Insertion of Pacemaker Lead into Right Atrium, Percutaneous Endoscopic Approach

02HK3JZ Insertion of Pacemaker Lead into Right Ventricle, Percutaneous Approach

02HK4JZ Insertion of Pacemaker Lead into Right Ventricle, Percutaneous Endoscopic Approach

B5060ZZ Plain Radiography of Right Subclavian Vein using High Osmolar Contrast

B5061ZZ Plain Radiography of Right Subclavian Vein using Low Osmolar Contrast

B506YZZ Plain Radiography of Right Subclavian Vein using Other Contrast

B5070ZZ Plain Radiography of Left Subclavian Vein using High Osmolar Contrast

B5071ZZ Plain Radiography of Left Subclavian Vein using Low Osmolar Contrast

B507YZZ Plain Radiography of Left Subclavian Vein using Other Contrast

B5160ZZ Fluoroscopy of Right Subclavian Vein using High Osmolar Contrast

B5161ZZ Fluoroscopy of Right Subclavian Vein using Low Osmolar Contrast

B516YZZ Fluoroscopy of Right Subclavian Vein using Other Contrast

B516ZZZ Fluoroscopy of Right Subclavian Vein

B5170ZZ Fluoroscopy of Left Subclavian Vein using High Osmolar Contrast

B5171ZZ Fluoroscopy of Left Subclavian Vein using Low Osmolar Contrast

B517YZZ Fluoroscopy of Left Subclavian Vein using Other Contrast

B517ZZZ Fluoroscopy of Left Subclavian Vein

1.8 Replacement of dual chamber pacemaker on a pacemaker-dependent patient with temporary pacemaker insertion

Scenario 1.8: Physician CPT® Codes¹

- 33228** Removal of permanent pacemaker pulse generator with replacement of pacemaker pulse generator; dual lead system
- Effective 2013 the National Correct Coding Initiative Edits (NCCI) no longer allow temporary pacing codes 33210-33211 to be reported with open or percutaneous cardiac procedures performed at the same patient encounter.

Add conscious sedation codes as appropriate (see page 17)

Scenario 1.8: Hospital Outpatient CPT® Codes²

- 33228** Removal of permanent pacemaker pulse generator with replacement of pacemaker pulse generator; dual lead system
- Effective 2013 the National Correct Coding Initiative Edits (NCCI) no longer allow temporary pacing codes 33210-33211 to be reported with open or percutaneous cardiac procedures performed at the same patient encounter.
- Exceptions to NCCI edits for Hospital Services Only: Since the hospital incurs the cost for the temporary pacemaker device, for hospital billing (not physician) the NCCI edits allow a -59-modifier based on medical necessity.
- Inserted in an emergency setting and the patient is monitored until a decision is made for an appropriate definitive surgery. The insertion of the temporary pacemaker is at a separate session and requires routine care involving regular cardiovascular assessment, level of consciousness, heart rhythm, pacer activity and hemodynamic response. Following this period of monitoring, a subsequent procedure or surgery may be performed at a separate session from the temporary pacemaker insertion

Add conscious sedation codes as appropriate (see page 17)

Scenario 1.8: Possible Hospital Inpatient ICD-10-PCS Codes³

- | | |
|----------------|---|
| 5A1213Z | Performance of Cardiac Pacing, Intermittent |
| 5A1223Z | Performance of Cardiac Pacing, Continuous |
| 0JH606Z | Insertion of Pacemaker, Dual Chamber into Chest Subcutaneous Tissue and Fascia, Open Approach |
| 0JH636Z | Insertion of Pacemaker, Dual Chamber into Chest Subcutaneous Tissue and Fascia, Percutaneous Approach |
| 0JH806Z | Insertion of Pacemaker, Dual Chamber into Abdomen Subcutaneous Tissue and Fascia, Open Approach |
| 0JH836Z | Insertion of Pacemaker, Dual Chamber into Abdomen Subcutaneous Tissue and Fascia, Percutaneous Approach |
| 0JPT0PZ | Removal of Cardiac Rhythm Related Device from Trunk Subcutaneous Tissue and Fascia, Open Approach |
| 0JPT3PZ | Removal of Cardiac Rhythm Related Device from Trunk Subcutaneous Tissue and Fascia, Percutaneous Approach |
| B5060ZZ | Plain Radiography of Right Subclavian Vein using High Osmolar Contrast |
| B5061ZZ | Plain Radiography of Right Subclavian Vein using Low Osmolar Contrast |
| B506YZZ | Plain Radiography of Right Subclavian Vein using Other Contrast |
| B5070ZZ | Plain Radiography of Left Subclavian Vein using High Osmolar Contrast |
| B5071ZZ | Plain Radiography of Left Subclavian Vein using Low Osmolar Contrast |
| B507YZZ | Plain Radiography of Left Subclavian Vein using Other Contrast |
| B5160ZZ | Fluoroscopy of Right Subclavian Vein using High Osmolar Contrast |
| B5161ZZ | Fluoroscopy of Right Subclavian Vein using Low Osmolar Contrast |
| B516YZZ | Fluoroscopy of Right Subclavian Vein using Other Contrast |
| B516ZZZ | Fluoroscopy of Right Subclavian Vein |
| B5170ZZ | Fluoroscopy of Left Subclavian Vein using High Osmolar Contrast |
| B5171ZZ | Fluoroscopy of Left Subclavian Vein using Low Osmolar Contrast |
| B517YZZ | Fluoroscopy of Left Subclavian Vein using Other Contrast |
| B517ZZZ | Fluoroscopy of Left Subclavian Vein |

1.9 Replacement of dual chamber pulse generator

Scenario 1.9: Physician CPT® Codes¹

33228 Removal of permanent pacemaker pulse generator with replacement of pacemaker pulse generator; dual lead system
Add conscious sedation codes as appropriate (see page 17)

Scenario 1.9: Hospital Outpatient CPT® Codes²

33228 Removal of permanent pacemaker pulse generator with replacement of pacemaker pulse generator; dual lead system
Add conscious sedation codes as appropriate (see page 17)

Scenario 1.9: Possible Hospital Inpatient ICD-10-PCS Codes³

0JH606Z Insertion of Pacemaker, Dual Chamber into Chest Subcutaneous Tissue and Fascia, Open Approach

0JH636Z Insertion of Pacemaker, Dual Chamber into Chest Subcutaneous Tissue and Fascia, Percutaneous Approach

0JH806Z Insertion of Pacemaker, Dual Chamber into Abdomen Subcutaneous Tissue and Fascia, Open Approach

0JH836Z Insertion of Pacemaker, Dual Chamber into Abdomen Subcutaneous Tissue and Fascia, Percutaneous Approach

0JPT0PZ Removal of Cardiac Rhythm Related Device from Trunk Subcutaneous Tissue and Fascia, Open Approach

0JPT3PZ Removal of Cardiac Rhythm Related Device from Trunk Subcutaneous Tissue and Fascia, Percutaneous Approach

1.10 Upgrade from single chamber pacemaker with a ventricular lead to a dual chamber pacemaker with the addition of the right atrial lead

Scenario 1.10: Physician CPT® Codes¹

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)

Add conscious sedation codes as appropriate (see page 17)

Scenario 1.10: Hospital Outpatient CPT® Codes²

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)

Add conscious sedation codes as appropriate (see page 17)

Scenario 1.10: Possible Hospital Inpatient ICD-10-PCS Codes³

0JH606Z Insertion of Pacemaker, Dual Chamber into Chest Subcutaneous Tissue and Fascia, Open Approach

0JH636Z Insertion of Pacemaker, Dual Chamber into Chest Subcutaneous Tissue and Fascia, Percutaneous Approach

0JH806Z Insertion of Pacemaker, Dual Chamber into Abdomen Subcutaneous Tissue and Fascia, Open Approach

0JH836Z Insertion of Pacemaker, Dual Chamber into Abdomen Subcutaneous Tissue and Fascia, Percutaneous Approach

0JPT0PZ Removal of Cardiac Rhythm Related Device from Trunk Subcutaneous Tissue and Fascia, Open Approach

0JPT3PZ Removal of Cardiac Rhythm Related Device from Trunk Subcutaneous Tissue and Fascia, Percutaneous Approach

02H64JZ Insertion of Pacemaker Lead into Right Atrium, Percutaneous Endoscopic Approach

02H63JZ Insertion of Pacemaker Lead into Right Atrium, Percutaneous Approach

B5060ZZ Plain Radiography of Right Subclavian Vein using High Osmolar Contrast

B5061ZZ Plain Radiography of Right Subclavian Vein using Low Osmolar Contrast

B506YZZ Plain Radiography of Right Subclavian Vein using Other Contrast

B5070ZZ Plain Radiography of Left Subclavian Vein using High Osmolar Contrast

B5071ZZ Plain Radiography of Left Subclavian Vein using Low Osmolar Contrast

B507YZZ Plain Radiography of Left Subclavian Vein using Other Contrast

B5160ZZ Fluoroscopy of Right Subclavian Vein using High Osmolar Contrast

B5161ZZ Fluoroscopy of Right Subclavian Vein using Low Osmolar Contrast

B516YZZ Fluoroscopy of Right Subclavian Vein using Other Contrast

B516ZZZ Fluoroscopy of Right Subclavian Vein

B5170ZZ Fluoroscopy of Left Subclavian Vein using High Osmolar Contrast

B5171ZZ Fluoroscopy of Left Subclavian Vein using Low Osmolar Contrast

B517YZZ Fluoroscopy of Left Subclavian Vein using Other Contrast

B517ZZZ Fluoroscopy of Left Subclavian Vein

1.11 Insertion of one permanent *transvenous pacing electrode*

Scenario 1.11: Physician CPT® Codes¹

33216 Insertion of a single transvenous electrode, permanent pacemaker or implantable defibrillator
Add conscious sedation codes as appropriate (see page 17)

Scenario 1.11: Hospital Outpatient CPT® Codes²

33216 Insertion of a single transvenous electrode, permanent pacemaker or implantable defibrillator
Add conscious sedation codes as appropriate (see page 17)

Scenario 1.11: Possible Hospital Inpatient ICD-10-PCS Codes³

02H64JZ Insertion of Pacemaker Lead into Right Atrium, Percutaneous Endoscopic Approach

02H63JZ Insertion of Pacemaker Lead into Right Atrium, Percutaneous Approach

02HK3JZ Insertion of Pacemaker Lead into Right Ventricle, Percutaneous Approach

02HK4JZ Insertion of Pacemaker Lead into Right Ventricle, Percutaneous Endoscopic Approach

B5060ZZ Plain Radiography of Right Subclavian Vein using High Osmolar Contrast

B5061ZZ Plain Radiography of Right Subclavian Vein using Low Osmolar Contrast

B506YZZ Plain Radiography of Right Subclavian Vein using Other Contrast

B5070ZZ Plain Radiography of Left Subclavian Vein using High Osmolar Contrast

B5071ZZ Plain Radiography of Left Subclavian Vein using Low Osmolar Contrast

B507YZZ Plain Radiography of Left Subclavian Vein using Other Contrast

B5160ZZ Fluoroscopy of Right Subclavian Vein using High Osmolar Contrast

B5161ZZ Fluoroscopy of Right Subclavian Vein using Low Osmolar Contrast

B516YZZ Fluoroscopy of Right Subclavian Vein using Other Contrast

B516ZZZ Fluoroscopy of Right Subclavian Vein

B5170ZZ Fluoroscopy of Left Subclavian Vein using High Osmolar Contrast

B5171ZZ Fluoroscopy of Left Subclavian Vein using Low Osmolar Contrast

B517YZZ Fluoroscopy of Left Subclavian Vein using Other Contrast

B517ZZZ Fluoroscopy of Left Subclavian Vein

1.12 Insertion of two permanent *transvenous pacing electrode*

Scenario 1.12: Physician CPT® Codes¹

33217 Insertion of two transvenous electrodes, permanent pacemaker or implantable defibrillator
Add conscious sedation codes as appropriate (see page 17)

Scenario 1.12: Hospital Outpatient CPT® Codes²

33217 Insertion of two transvenous electrodes, permanent pacemaker or implantable defibrillator
Add conscious sedation codes as appropriate (see page 17)

Scenario 1.12: Possible Hospital Inpatient ICD-10-PCS Codes³

02H64JZ Insertion of Pacemaker Lead into Right Atrium, Percutaneous Endoscopic Approach

02H63JZ Insertion of Pacemaker Lead into Right Atrium, Percutaneous Approach

02HK4JZ Insertion of Pacemaker Lead into Right Ventricle, Percutaneous Endoscopic Approach

02HK3JZ Insertion of Pacemaker Lead into Right Ventricle, Percutaneous Approach

B5060ZZ Plain Radiography of Right Subclavian Vein using High Osmolar Contrast

B5061ZZ Plain Radiography of Right Subclavian Vein using Low Osmolar Contrast

B506YZZ Plain Radiography of Right Subclavian Vein using Other Contrast

B5070ZZ Plain Radiography of Left Subclavian Vein using High Osmolar Contrast

B5071ZZ Plain Radiography of Left Subclavian Vein using Low Osmolar Contrast

B507YZZ Plain Radiography of Left Subclavian Vein using Other Contrast

B5160ZZ Fluoroscopy of Right Subclavian Vein using High Osmolar Contrast

B5161ZZ Fluoroscopy of Right Subclavian Vein using Low Osmolar Contrast

B516YZZ Fluoroscopy of Right Subclavian Vein using Other Contrast

B516ZZZ Fluoroscopy of Right Subclavian Vein

B5170ZZ Fluoroscopy of Left Subclavian Vein using High Osmolar Contrast

B5171ZZ Fluoroscopy of Left Subclavian Vein using Low Osmolar Contrast

B517YZZ Fluoroscopy of Left Subclavian Vein using Other Contrast

B517ZZZ Fluoroscopy of Left Subclavian Vein

1.13 Single lead extraction from a single lead system *pacemaker electrode*

Scenario 1.13: Physician CPT® Codes¹

33234 Removal of transvenous pacemaker electrode(s); single lead system, atrial or ventricular
Add conscious sedation codes as appropriate (see page 17)

Scenario 1.13: Hospital Outpatient CPT® Codes²

33234 Removal of transvenous pacemaker electrode(s); single lead system, atrial or ventricular
Add conscious sedation codes as appropriate (see page 17)

Scenario 1.13: Possible Hospital Inpatient ICD-10-PCS Codes³

02PA0MZ Removal of Cardiac Lead from Heart, Open Approach

02PA3MZ Removal of Cardiac Lead from Heart, Percutaneous Approach

02PA4MZ Removal of Cardiac Lead from Heart, Percutaneous Endoscopic Approach

02PAXMZ Removal of Cardiac Lead from Heart, External Approach

B5060ZZ Plain Radiography of Right Subclavian Vein using High Osmolar Contrast

B5061ZZ Plain Radiography of Right Subclavian Vein using Low Osmolar Contrast

B506YZZ Plain Radiography of Right Subclavian Vein using Other Contrast

B5070ZZ Plain Radiography of Left Subclavian Vein using High Osmolar Contrast

B5071ZZ Plain Radiography of Left Subclavian Vein using Low Osmolar Contrast

B507YZZ Plain Radiography of Left Subclavian Vein using Other Contrast

B5160ZZ Fluoroscopy of Right Subclavian Vein using High Osmolar Contrast

B5161ZZ Fluoroscopy of Right Subclavian Vein using Low Osmolar Contrast

B516YZZ Fluoroscopy of Right Subclavian Vein using Other Contrast

B516ZZZ Fluoroscopy of Right Subclavian Vein

B5170ZZ Fluoroscopy of Left Subclavian Vein using High Osmolar Contrast

B5171ZZ Fluoroscopy of Left Subclavian Vein using Low Osmolar Contrast

B517YZZ Fluoroscopy of Left Subclavian Vein using Other Contrast

B517ZZZ Fluoroscopy of Left Subclavian Vein

1.14 Repositioning of right atrial or right ventricular electrode within 90 days of implant performed by the implanting physician

Scenario 1.14: Physician CPT® Codes¹

33215-78 Repositioning of previously implanted transvenous pacemaker or implantable defibrillator (right atrial or right ventricular) electrode
Add conscious sedation codes as appropriate (see page 17)

Scenario 1.14: Hospital Outpatient CPT® Codes²

33215-78* Repositioning of previously implanted transvenous pacemaker or implantable defibrillator (right atrial or right ventricular) electrode
**78 Modifier for Hospitals only applies to the same day of the original procedure.*

Add conscious sedation codes as appropriate (see page 17)

Scenario 1.14: Possible Hospital Inpatient ICD-10-PCS Codes³

02WA0MZ Revision of Cardiac Lead in Heart, Open Approach

02WA3MZ Revision of Cardiac Lead in Heart, Percutaneous Approach

02WA4MZ Revision of Cardiac Lead in Heart, Percutaneous Endoscopic Approach

0JW0PZ Revision of Cardiac Rhythm Related Device in Trunk Subcutaneous Tissue and Fascia, Open Approach

1.15 Single chamber pacemaker follow-up (in person)

Scenario 1.15: Physician CPT[®] Codes¹

- | | | |
|----|--------------|--|
| | 93288 | Interrogation device evaluation (in person) with analysis, review and report by a physician or other qualified health care professional, includes connection, recording and disconnection per patient encounter; single, dual, or multiple lead or leadless pacemaker system |
| or | 93279 | Programming device evaluation (in person) with iterative adjustments of the implantable device to test the function of the device and select optimal permanent programmed values with analysis, review and report by a physician or other qualified health care professional; single lead or leadless pacemaker system |

Scenario 1.15: Hospital Outpatient CPT[®] Codes²

- | | | |
|----|--------------|--|
| | 93288 | Interrogation device evaluation (in person) with analysis, review and report by a physician or other qualified health care professional, includes connection, recording and disconnection per patient encounter; single, dual, or multiple lead or leadless pacemaker system |
| or | 93279 | Programming device evaluation (in person) with iterative adjustments of the implantable device to test the function of the device and select optimal permanent programmed values with analysis, review and report by a physician or other qualified health care professional; single lead or leadless pacemaker system |

Scenario 1.15: Possible Hospital Inpatient ICD-10-PCS Codes³

- | | |
|----------------|---|
| 4B02XSZ | Measurement of Cardiac Pacemaker, External Approach |
|----------------|---|

1.16 Dual chamber pacemaker follow-up (in person)

Scenario 1.16: Physician CPT[®] Codes¹

- | | | |
|----|--------------|--|
| | 93288 | Interrogation device evaluation (in person) with analysis, review and report by a physician or other qualified health care professional, includes connection, recording and disconnection per patient encounter; single, dual, or multiple lead or leadless pacemaker system |
| or | 93280 | Programming device evaluation (in person) with iterative adjustments of the implantable device to test the function of the device and select optimal permanent programmed values with analysis, review and report by a physician or other qualified health care professional; dual lead or leadless pacemaker system |

Scenario 1.16: Hospital Outpatient CPT[®] Codes²

- | | | |
|----|--------------|--|
| | 93288 | Interrogation device evaluation (in person) with analysis, review and report by a physician or other qualified health care professional, includes connection, recording and disconnection per patient encounter; single, dual, or multiple lead or leadless pacemaker system |
| or | 93280 | Programming device evaluation (in person) with iterative adjustments of the implantable device to test the function of the device and select optimal permanent programmed values with analysis, review and report by a physician or other qualified health care professional; dual lead or leadless pacemaker system |

Scenario 1.16: Possible Hospital Inpatient ICD-10-PCS Codes³

- | | |
|----------------|---|
| 4B02XSZ | Measurement of Cardiac Pacemaker, External Approach |
|----------------|---|

1.17 Device programming evaluation dual chamber *with wound check performed by implanting physician 14 days post-op in clinic*

Scenario 1.17: Physician CPT[®] Codes¹

93280 Programming device evaluation (in person) with iterative adjustments of the implantable device to test the function of the device and select optimal permanent programmed values with analysis, review and report by a physician or other qualified health care professional; dual lead or leadless pacemakersystem
**Wound checks are included in the 90-day global surgical package and not separately billable*

Scenario 1.17: Hospital Outpatient CPT[®] Codes²

93280 Programming device evaluation (in person) with iterative adjustments of the implantable device to test the function of the device and select optimal permanent programmed values with analysis, review and report by a physician or other qualified health care professional; dual lead or leadless pacemakersystem
**Wound checks are included in the 90-day global surgical package and not separately billable*

Scenario 1.17: Possible Hospital Inpatient ICD-10-PCS Codes³

N/A

1.16 Dual chamber device follow-up – device permanently programmed VVIR due to damaged atrial lead.. At same office visit, patient seen by physician for medication adjustment

Scenario 1.18: Physician CPT[®] Codes¹

93288 Interrogation device evaluation (in person) with analysis, review and report by a physician or other qualified health care professional, includes connection, recording and disconnection per patient encounter; single, dual, or multiple lead or leadless pacemakersystem

or **93279** Programming device evaluation (in person) with iterative adjustments of the implantable device to test the function of the device and select optimal permanent programmed values with analysis, review and report by a physician or other qualified health care professional; single lead or leadless pacemaker system

99211-99215-25 Office or other outpatient visit for the evaluation and management of an established patient (The correct level of service will depend on the documented elements; please refer to the AMA's 2018 Current Procedural Terminology manual). Definition of -25 Modifier: Significant, Separately Identifiable Evaluation and Management Service by the Same Physician or Other Qualified Health Care Professional on the Same Day of the Procedure or Other Service.

Scenario 1.18: Hospital Outpatient CPT[®] Codes²

93288 Interrogation device evaluation (in person) with analysis, review and report by a physician or other qualified health care professional, includes connection, recording and disconnection per patient encounter; single, dual, or multiple lead or leadless pacemakersystem

or **93279** Programming device evaluation (in person) with iterative adjustments of the implantable device to test the function of the device and select optimal permanent programmed values with analysis, review and report by a physician or other qualified health care professional; single lead or leadless pacemaker system

Scenario 1.18: Possible Hospital Inpatient ICD-10-PCS Codes³

N/A

1.19 Single, dual or multi chamber pacemaker follow-up (remote)

Scenario 1.19: Physician CPT[®] Codes¹

93294	Interrogation device evaluation(s) (remote), up to 90 days; single, dual, or multiple lead or leadless pacemaker system with interim analysis, review(s) and report(s) by a physician or other qualified health care professional
93296	Interrogation device evaluation(s) (remote), up to 90 days single, dual, or multiple lead or leadless pacemaker system or implantable defibrillator system, remote data acquisition(s), receipt of transmissions and technician review, technical support and distribution of results

Scenario 1.19: Hospital Outpatient CPT[®] Codes²

93294	Interrogation device evaluation(s) (remote), up to 90 days; single, dual, or multiple lead or leadless pacemaker system with interim analysis, review(s) and report(s) by a physician or other qualified health care professional
93296	Interrogation device evaluation(s) (remote), up to 90 days single, dual, or multiple lead or leadless pacemaker system or implantable defibrillator system, remote data acquisition(s), receipt of transmissions and technician review, technical support and distribution of results

Scenario 1.19: Possible Hospital Inpatient ICD-10-PCS Codes³

N/A

1.20 Single, dual, or multi chamber pacemaker follow-up (remote) with analysis of Implantable Cardiovascular Physiologic Monitor (ICM)

Scenario 1.20: Physician CPT[®] Codes¹

93294	Interrogation device evaluation(s) (remote), up to 90 days; single, dual, or multiple lead or leadless pacemaker system with interim analysis, review(s) and report(s) by a physician or other qualified health care professional
93296	Interrogation device evaluation(s) (remote), up to 90 days single, dual, or multiple lead or leadless pacemaker system or implantable defibrillator system, remote data acquisition(s), receipt of transmissions and technician review, technical support and distribution of results
and 93297	Interrogation device evaluation(s), (remote) up to 30 days; implantable cardiovascular physiologic monitor system, including analysis of 1 or more recorded physiologic cardiovascular data elements from all internal and external sensors, analysis, review(s) and report(s) by a physician or other qualified health care professional

Scenario 1.20: Hospital Outpatient CPT[®] Codes²

93294	Interrogation device evaluation(s) (remote), up to 90 days; single, dual, or multiple lead or leadless pacemaker system with interim analysis, review(s) and report(s) by a physician or other qualified health care professional
93296	Interrogation device evaluation(s) (remote), up to 90 days single, dual, or multiple lead or leadless pacemaker system or implantable defibrillator system, remote data acquisition(s), receipt of transmissions and technician review, technical support and distribution of results
and 93297	Interrogation device evaluation(s), (remote) up to 30 days; implantable cardiovascular physiologic monitor system, including analysis of 1 or more recorded physiologic cardiovascular data elements from all internal and external sensors, analysis, review(s) and report(s) by a physician or other qualified health care professional

Scenario 1.20: Possible Hospital Inpatient ICD-10-PCS Codes³

N/A

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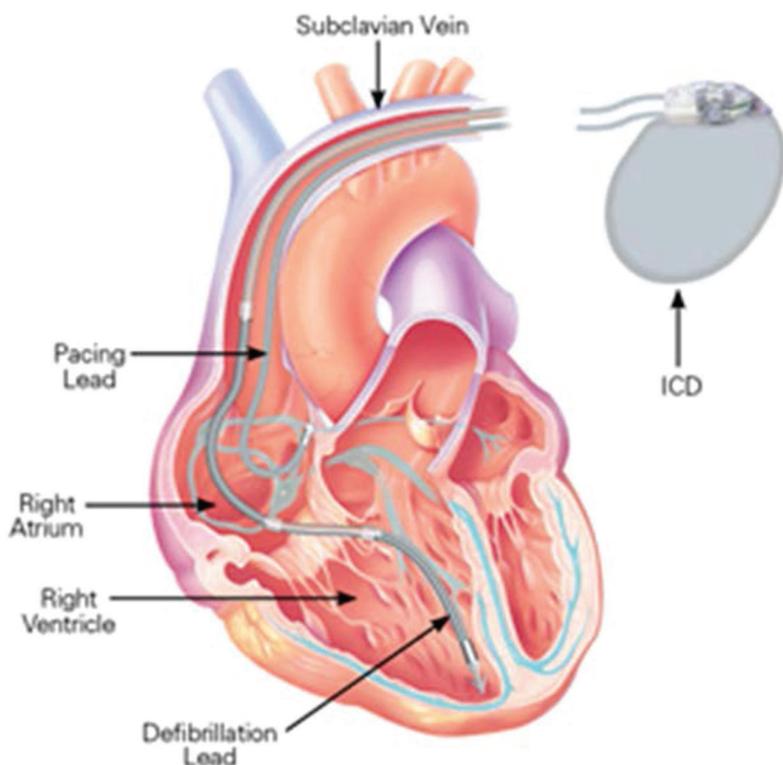
Transvenous Implantable Cardioverter- Defibrillators (ICDs)

Implantable Cardioverter- Defibrillator (ICD)

Coding Overview 2-1

Commonly Billed Cardioverter- Defibrillator
(ICD) Scenarios 2-2

Implantable Cardioverter-Defibrillator (ICD) Coding Overview



ICD Implant Procedure

The implant of an ICD system requires the use of an ICD pulse generator and a defibrillation electrode, or lead, placed in the right ventricle for a single chamber system. If a dual chamber ICD system is required, a defibrillation lead is placed in the right ventricle and a pacing electrode or lead is placed in the right atrium. The defibrillation lead delivers electrical shock therapy if a lethal arrhythmia is detected. In addition, the lead system monitors and delivers electrical pacing stimulation if required. The leads are inserted through the subclavian vein. In some cases, the cephalic or internal jugular vein may be used as an alternative to the subclavian vein.

A STEP-BY-STEP DESCRIPTION OF A TYPICAL INITIAL ICD SYSTEM IMPLANT PROCEDURE

1. The subclavian vein is accessed.
2. Using fluoroscopy, a defibrillation lead is inserted into the right ventricle.
3. If implanting a dual chamber system, a pacing lead is also inserted into the right atrium under fluoroscopy.
4. Lead measurement tests, including pacing and sensing thresholds and lead impedances, are performed.
5. The ICD pulse generator (33249 includes the generator and one or two leads) is connected to the lead(s) and a pulse generator pocket is formed.
6. Testing of defibrillation thresholds (93641), including arrhythmia induction, is performed.
7. Additional testing of the lead(s) is completed.
8. The lead(s) and device are secured, and the pulse generator pocket is closed.

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

Scenarios included within this document do not encompass all possible procedures.

Commonly Billed Transvenous Implantable Cardioverter-Defibrillators (ICDs) Scenarios

KEY

+ Add-on code

■ Physician CPT® Codes¹■ Hospital Outpatient CPT® Codes²■ Possible Hospital Inpatient ICD-10-PCS® Codes³

2.1 Initial single or dual chamber ICD system implant, with defibrillator threshold testing at time of implant

Scenario 2.1: Physician CPT® Codes¹

33249	Insertion of new or replacement of permanent Implantable defibrillator system; with transvenous lead(s), single or dual chamber
93641– 26/51 ⁴	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

Add conscious sedation codes as appropriate (see page 17)

Scenario 2.1: Hospital Outpatient CPT® Codes²

33249	Insertion of new or replacement of permanent Implantable defibrillator system; with transvenous lead(s); single or dual chamber
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

Add conscious sedation codes as appropriate (see page 17)

Scenario 2.1: Possible Hospital Inpatient ICD-10-PCS Codes³

02H63KZ	Insertion of Defibrillator Lead into Right Atrium, Percutaneous Approach
02H64KZ	Insertion of Defibrillator Lead into Right Atrium, Percutaneous Endoscopic Approach
02HK3KZ	Insertion of Defibrillator Lead into Right Ventricle, Percutaneous Approach
02HK4KZ	Insertion of Defibrillator Lead into Right Ventricle, Percutaneous Endoscopic Approach
0JH608Z	Insertion of Defibrillator Generator into Chest Subcutaneous Tissue and Fascia, Open Approach
0JH638Z	Insertion of Defibrillator Generator into Chest Subcutaneous Tissue and Fascia, Percutaneous Approach
0JH808Z	Insertion of Defibrillator Generator into Abdomen Subcutaneous Tissue and Fascia, Open Approach
0JH838Z	Insertion of Defibrillator Generator into Abdomen Subcutaneous Tissue and Fascia, Percutaneous Approach
B5060ZZ	Plain Radiography of Right Subclavian Vein using High Osmolar Contrast
B5061ZZ	Plain Radiography of Right Subclavian Vein using Low Osmolar Contrast
B506YZZ	Plain Radiography of Right Subclavian Vein using Other Contrast
B5070ZZ	Plain Radiography of Left Subclavian Vein using High Osmolar Contrast
B5071ZZ	Plain Radiography of Left Subclavian Vein using Low Osmolar Contrast
B507YZZ	Plain Radiography of Left Subclavian Vein using Other Contrast
B5160ZZ	Fluoroscopy of Right Subclavian Vein using High Osmolar Contrast
B5161ZZ	Fluoroscopy of Right Subclavian Vein using Low Osmolar Contrast
B516YZZ	Fluoroscopy of Right Subclavian Vein using Other Contrast
B516ZZZ	Fluoroscopy of Right Subclavian Vein
B5170ZZ	Fluoroscopy of Left Subclavian Vein using High Osmolar Contrast
B5171ZZ	Fluoroscopy of Left Subclavian Vein using Low Osmolar Contrast
B517YZZ	Fluoroscopy of Left Subclavian Vein using Other Contrast
B517ZZZ	Fluoroscopy of Left Subclavian Vein

2.2 Replacement of single chamber ICD pulse generator with defibrillator threshold testing at time of replacement

Scenario 2.2: Physician CPT® Codes¹

33262	Removal of implantable defibrillator pulse generator with replacement of implantable defibrillator pulse generator; single lead system
93641– 26/51 ⁴	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

Add conscious sedation codes as appropriate (see page 17)

Scenario 2.2: Hospital Outpatient CPT® Codes²

33262	Removal of implantable defibrillator pulse generator with replacement of implantable defibrillator pulse generator; single lead system
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

Add conscious sedation codes as appropriate (see page 17)

Scenario 2.2: Possible Hospital Inpatient ICD-10-PCS Codes³

0JH608Z	Insertion of Defibrillator Generator into Chest Subcutaneous Tissue and Fascia, Open Approach
0JH638Z	Insertion of Defibrillator Generator into Chest Subcutaneous Tissue and Fascia, Percutaneous Approach
0JH808Z	Insertion of Defibrillator Generator into Abdomen Subcutaneous Tissue and Fascia, Open Approach
0JH838Z	Insertion of Defibrillator Generator into Abdomen Subcutaneous Tissue and Fascia, Percutaneous Approach
0JPT0PZ	Removal of Cardiac Rhythm Related Device from Trunk Subcutaneous Tissue and Fascia, Open Approach
0JPT3PZ	Removal of Cardiac Rhythm Related Device from Trunk Subcutaneous Tissue and Fascia, Percutaneous Approach
0JH608Z	Insertion of Defibrillator Generator into Chest Subcutaneous Tissue and Fascia, Open Approach

2.3 Single chamber transvenous ICD upgrade to dual chamber ICD *with retention of right ventricular ICD lead and insertion of new right atrial pacing lead, and defibrillator threshold testing at the time of replacement*

Scenario 2.3: Physician CPT® Codes¹

33249	Insertion or replacement of permanent implantable defibrillator system with transvenous lead(s), single or dual chamber
33241-51 ⁴	Removal of implantable defibrillator pulse generator
93641-26/51 ⁴	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

Add conscious sedation codes as appropriate (see page 17)

Scenario 2.3: Hospital Outpatient CPT® Codes²

33249	Insertion or replacement of permanent implantable defibrillator system with transvenous lead(s), single or dual chamber
33241	Removal of implantable 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

Add conscious sedation codes as appropriate (see page 17)

Scenario 2.3: Possible Hospital Inpatient ICD-10-PCS Codes³

0JH608Z	Insertion of Defibrillator Generator into Chest Subcutaneous Tissue and Fascia, Open Approach
0JH638Z	Insertion of Defibrillator Generator into Chest Subcutaneous Tissue and Fascia, Percutaneous Approach
0JH808Z	Insertion of Defibrillator Generator into Abdomen Subcutaneous Tissue and Fascia, Open Approach
0JH838Z	Insertion of Defibrillator Generator into Abdomen Subcutaneous Tissue and Fascia, Percutaneous Approach
0JPT0PZ	Removal of Cardiac Rhythm Related Device from Trunk Subcutaneous Tissue and Fascia, Open Approach
0JPT3PZ	Removal of Cardiac Rhythm Related Device from Trunk Subcutaneous Tissue and Fascia, Percutaneous Approach
0JH60PZ	Insertion of Cardiac Rhythm Related Device into Chest Subcutaneous Tissue and Fascia, Open Approach
02H63KZ	Insertion of Defibrillator Lead into Right Atrium, Percutaneous Approach
02H64KZ	Insertion of Defibrillator Lead into Right Atrium, Percutaneous Endoscopic Approach
B5060ZZ	Plain Radiography of Right Subclavian Vein using High Osmolar Contrast
B5061ZZ	Plain Radiography of Right Subclavian Vein using Low Osmolar Contrast
B506YZZ	Plain Radiography of Right Subclavian Vein using Other Contrast
B5070ZZ	Plain Radiography of Left Subclavian Vein using High Osmolar Contrast
B5071ZZ	Plain Radiography of Left Subclavian Vein using Low Osmolar Contrast
B507YZZ	Plain Radiography of Left Subclavian Vein using Other Contrast
B5160ZZ	Fluoroscopy of Right Subclavian Vein using High Osmolar Contrast
B5161ZZ	Fluoroscopy of Right Subclavian Vein using Low Osmolar Contrast
B516YZZ	Fluoroscopy of Right Subclavian Vein using Other Contrast
B516ZZZ	Fluoroscopy of Right Subclavian Vein
B5170ZZ	Fluoroscopy of Left Subclavian Vein using High Osmolar Contrast
B5171ZZ	Fluoroscopy of Left Subclavian Vein using Low Osmolar Contrast
B517YZZ	Fluoroscopy of Left Subclavian Vein using Other Contrast
B517ZZZ	Fluoroscopy of Left Subclavian Vein

2.4 Dual chamber pacemaker upgrade to dual chamber ICD with capping of pacemaker leads and insertion of new right atrial and right ventricular ICD leads, with defibrillator threshold testing at the time of implant

Scenario 2.4: Physician CPT® Codes¹

33249	Insertion or replacement of permanent implantable defibrillator system with transvenous lead(s), single or dual chamber
33233–51 ⁴	Removal of permanent pacemaker pulse generator only
93641– 26/51 ⁴	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

Add conscious sedation codes as appropriate (see page 17)

Scenario 2.4: Hospital Outpatient CPT® Codes²

33249	Insertion or replacement of permanent implantable defibrillator system with transvenous lead(s), single or dual chamber
33233	Removal of permanent pacemaker pulse generator only
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

Add conscious sedation codes as appropriate (see page 17)

Scenario 2.4: Possible Hospital Inpatient ICD-10-PCS Codes³

0JH608Z	Insertion of Defibrillator Generator into Chest Subcutaneous Tissue and Fascia, Open Approach
0JH638Z	Insertion of Defibrillator Generator into Chest Subcutaneous Tissue and Fascia, Percutaneous Approach
0JH808Z	Insertion of Defibrillator Generator into Abdomen Subcutaneous Tissue and Fascia, Open Approach
0JH838Z	Insertion of Defibrillator Generator into Abdomen Subcutaneous Tissue and Fascia, Percutaneous Approach
0JPT0PZ	Removal of Cardiac Rhythm Related Device from Trunk Subcutaneous Tissue and Fascia, Open Approach
0JPT3PZ	Removal of Cardiac Rhythm Related Device from Trunk Subcutaneous Tissue and Fascia, Percutaneous Approach
0JH60PZ	Insertion of Cardiac Rhythm Related Device into Chest Subcutaneous Tissue and Fascia, Open Approach
02H63KZ	Insertion of Defibrillator Lead into Right Atrium, Percutaneous Approach
02H64KZ	Insertion of Defibrillator Lead into Right Atrium, Percutaneous Endoscopic Approach
02HK3KZ	Insertion of Defibrillator Lead into Right Ventricle, Percutaneous Approach
02HK4KZ	Insertion of Defibrillator Lead into Right Ventricle, Percutaneous Endoscopic Approach
B5060ZZ	Plain Radiography of Right Subclavian Vein using High Osmolar Contrast
B5061ZZ	Plain Radiography of Right Subclavian Vein using Low Osmolar Contrast
B506YZZ	Plain Radiography of Right Subclavian Vein using Other Contrast
B5070ZZ	Plain Radiography of Left Subclavian Vein using High Osmolar Contrast
B5071ZZ	Plain Radiography of Left Subclavian Vein using Low Osmolar Contrast
B507YZZ	Plain Radiography of Left Subclavian Vein using Other Contrast
B5160ZZ	Fluoroscopy of Right Subclavian Vein using High Osmolar Contrast
B5161ZZ	Fluoroscopy of Right Subclavian Vein using Low Osmolar Contrast
B516YZZ	Fluoroscopy of Right Subclavian Vein using Other Contrast
B516ZZZ	Fluoroscopy of Right Subclavian Vein
B5170ZZ	Fluoroscopy of Left Subclavian Vein using High Osmolar Contrast
B5171ZZ	Fluoroscopy of Left Subclavian Vein using Low Osmolar Contrast
B517YZZ	Fluoroscopy of Left Subclavian Vein using Other Contrast
B517ZZZ	Fluoroscopy of Left Subclavian Vein

2.5 Replacement of single chamber cardioverter-defibrillator lead, extraction of existing lead(s), with defibrillator threshold testing of ICD system

Scenario 2.5: Physician CPT® Codes¹

33216	Insertion of a single transvenous electrode, permanent pacemaker or implantable defibrillator
33244-51 ³	Removal of single or dual chamber implantable defibrillator electrode(s); by transvenous extraction
93641-26/51 ⁴	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

Add conscious sedation codes as appropriate (see page 17)

Scenario 2.5: Hospital Outpatient CPT® Codes²

33216	Insertion of a single transvenous electrode, permanent pacemaker or implantable defibrillator
33244	Removal of single or dual chamber implantable defibrillator electrode(s); by transvenous extraction
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

Add conscious sedation codes as appropriate (see page 17)

Scenario 2.5: Possible Hospital Inpatient ICD-10-PCS Codes³

02HK3KZ	Insertion of Defibrillator Lead into Right Ventricle, Percutaneous Approach
02HK4KZ	Insertion of Defibrillator Lead into Right Ventricle, Percutaneous Endoscopic Approach
02PA0MZ	Removal of Cardiac Lead from Heart, Open Approach
02PA3MZ	Removal of Cardiac Lead from Heart, Percutaneous Approach
02PA4MZ	Removal of Cardiac Lead from Heart, Percutaneous Endoscopic Approach
0JH60PZ	Insertion of Cardiac Rhythm Related Device into Chest Subcutaneous Tissue and Fascia, Open Approach
0JTOPZ	Removal of Cardiac Rhythm Related Device from Trunk Subcutaneous Tissue and Fascia, Open Approach
B5060ZZ	Plain Radiography of Right Subclavian Vein using High Osmolar Contrast
B5061ZZ	Plain Radiography of Right Subclavian Vein using Low Osmolar Contrast
B506YZZ	Plain Radiography of Right Subclavian Vein using Other Contrast
B5070ZZ	Plain Radiography of Left Subclavian Vein using High Osmolar Contrast
B5071ZZ	Plain Radiography of Left Subclavian Vein using Low Osmolar Contrast
B507YZZ	Plain Radiography of Left Subclavian Vein using Other Contrast
B5160ZZ	Fluoroscopy of Right Subclavian Vein using High Osmolar Contrast
B5161ZZ	Fluoroscopy of Right Subclavian Vein using Low Osmolar Contrast
B516YZZ	Fluoroscopy of Right Subclavian Vein using Other Contrast
B516ZZZ	Fluoroscopy of Right Subclavian Vein
B5170ZZ	Fluoroscopy of Left Subclavian Vein using High Osmolar Contrast
B5171ZZ	Fluoroscopy of Left Subclavian Vein using Low Osmolar Contrast
B517YZZ	Fluoroscopy of Left Subclavian Vein using Other Contrast
B517ZZZ	Fluoroscopy of Left Subclavian Vein

2.6 Removal of right atrial and right ventricular leads, insertion of new right atrial and ventricular leads with defibrillator threshold testing of ICD system

Scenario 2.6: Physician CPT® Codes¹

33217	Insertion of 2 transvenous electrodes, permanent pacemaker or implantable defibrillator
33244-51 ⁴	Removal of single or dual chamber pacing cardioverter-defibrillator electrode(s); by transvenous extraction
93641-26/51 ⁴	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

Add conscious sedation codes as appropriate (see page 17)

Scenario 2.6: Hospital Outpatient CPT® Codes²

33217	Insertion of 2 transvenous electrodes, permanent pacemaker or implantable defibrillator
33244	Removal of single or dual chamber pacing cardioverter-defibrillator electrode(s); by transvenous extraction
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

Add conscious sedation codes as appropriate (see page 17)

Scenario 2.6: Possible Hospital Inpatient ICD-10-PCS Codes³

02H63KZ	Insertion of Defibrillator Lead into Right Atrium, Percutaneous Approach
02H64KZ	Insertion of Defibrillator Lead into Right Atrium, Percutaneous Endoscopic Approach
02HK3KZ	Insertion of Defibrillator Lead into Right Ventricle, Percutaneous Approach
02HK4KZ	Insertion of Defibrillator Lead into Right Ventricle, Percutaneous Endoscopic Approach
02PA0MZ	Removal of Cardiac Lead from Heart, Open Approach
02PA3MZ	Removal of Cardiac Lead from Heart, Percutaneous Approach
02PA4MZ	Removal of Cardiac Lead from Heart, Percutaneous Endoscopic Approach
B5060ZZ	Plain Radiography of Right Subclavian Vein using High Osmolar Contrast
B5061ZZ	Plain Radiography of Right Subclavian Vein using Low Osmolar Contrast
B506YZZ	Plain Radiography of Right Subclavian Vein using Other Contrast
B5070ZZ	Plain Radiography of Left Subclavian Vein using High Osmolar Contrast
B5071ZZ	Plain Radiography of Left Subclavian Vein using Low Osmolar Contrast
B507YZZ	Plain Radiography of Left Subclavian Vein using Other Contrast
B5160ZZ	Fluoroscopy of Right Subclavian Vein using High Osmolar Contrast
B5161ZZ	Fluoroscopy of Right Subclavian Vein using Low Osmolar Contrast
B516YZZ	Fluoroscopy of Right Subclavian Vein using Other Contrast
B516ZZZ	Fluoroscopy of Right Subclavian Vein
B5170ZZ	Fluoroscopy of Left Subclavian Vein using High Osmolar Contrast
B5171ZZ	Fluoroscopy of Left Subclavian Vein using Low Osmolar Contrast
B517YZZ	Fluoroscopy of Left Subclavian Vein using Other Contrast
B517ZZZ	Fluoroscopy of Left Subclavian Vein

2.7 Insertion of Sub-Q Array with defibrillator threshold testing of ICD system

Scenario 2.7: Physician CPT® Codes¹

	33999	Unlisted procedure, cardiac surgery
or	33216	Insertion of a single transvenous electrode, permanent pacemaker or implantable defibrillator The HRS Coding Guide indicates many carriers/payers will accept existing codes for Sub-Q Array; however some carriers/payers may request use of the unlisted code. HRS recommends confirming payers requirements prior to claim submission.⁵
	93641– 26/51 ⁴	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

Add conscious sedation codes as appropriate (see page 17)

Scenario 2.7: Hospital Outpatient CPT® Codes²

	33999	Unlisted procedure, cardiac surgery
or	33216	Insertion of a single transvenous electrode, permanent pacemaker or implantable defibrillator The HRS Coding Guide indicates many carriers/payers will accept existing codes for Sub-Q Array; however some carriers/payers may request use of the unlisted code. HRS recommends confirming payers requirements prior to claim submission.⁵
	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

Add conscious sedation codes as appropriate (see page 17)

Scenario 2.7: Possible Hospital Inpatient ICD-10-PCS Codes³

	02HK3JZ	Insertion of Pacemaker Lead into Right Ventricle, Percutaneous Approach
	02HK3MZ	Insertion of Cardiac Lead into Right Ventricle, Percutaneous Approach
	02HK4JZ	Insertion of Pacemaker Lead into Right Ventricle, Percutaneous Endoscopic Approach
	02HK4MZ	Insertion of Cardiac Lead into Right Ventricle, Percutaneous Endoscopic Approach
	02HL3JZ	Insertion of Pacemaker Lead into Left Ventricle, Percutaneous Approach
	02HL3MZ	Insertion of Cardiac Lead into Left Ventricle, Percutaneous Approach
	02HL4JZ	Insertion of Pacemaker Lead into Left Ventricle, Percutaneous Endoscopic Approach

2.8 Single chamber ICD *follow-up (in person) in clinic*

Scenario 2.8: Physician CPT® Codes¹

	93289	Interrogation device evaluation (in person) with analysis, review and report by a physician or other qualified health care professional, includes connection, recording and disconnection per patient encounter; single, dual, or multiple lead transvenous implantable defibrillator system, including analysis of heart rhythm derived data elements
or	93282	Programming device evaluation (in person) with iterative adjustments of the implantable device to test the function of the device and select optimal permanent programmed values with analysis, review and report by a physician or other qualified health care professional; single lead transvenous implantable defibrillator system

Scenario 2.8: Hospital Outpatient CPT® Codes²

	93289	Interrogation device evaluation (in person) with analysis, review and report by a physician or other qualified health care professional, includes connection, recording and disconnection per patient encounter; single, dual, or multiple lead transvenous implantable defibrillator system, including analysis of heart rhythm derived data elements
or	93282	Programming device evaluation (in person) with iterative adjustments of the implantable device to test the function of the device and select optimal permanent programmed values with analysis, review and report by a physician or other qualified health care professional; single lead transvenous implantable defibrillator system

Scenario 2.8: Possible Hospital Inpatient ICD-10-PCS Codes³

N/A

2.9 Dual chamber ICD *follow-up (in person) in clinic*

Scenario 2.9: Physician CPT® Codes¹

	93289	Interrogation device evaluation (in person) with analysis, review and report by a physician or other qualified health care professional, includes connection, recording and disconnection per patient encounter; single, dual, or multiple lead transvenous implantable defibrillator system, including analysis of heart rhythm derived data elements
or	93283	Programming device evaluation (in person) with iterative adjustments of the implantable device to test the function of the device and select optimal permanent programmed values with analysis, review and report by a physician or other qualified health care professional; dual lead transvenous implantable defibrillator system

Scenario 2.9: Hospital Outpatient CPT® Codes²

	93289	Interrogation device evaluation (in person) with analysis, review and report by a physician or other qualified health care professional, includes connection, recording and disconnection per patient encounter; single, dual, or multiple lead transvenous implantable defibrillator system, including analysis of heart rhythm derived data elements
or	93283	Programming device evaluation (in person) with iterative adjustments of the implantable device to test the function of the device and select optimal permanent programmed values with analysis, review and report by a physician or other qualified health care professional; dual lead transvenous implantable defibrillator system

Scenario 2.9: Possible Hospital Inpatient ICD-10-PCS Codes³

N/A

2.10 Single, dual or multi chamber ICD follow-up (remote)

Scenario 2.10: Physician CPT[®] Codes¹

93295	Interrogation device evaluation(s) (remote), up to 90 days single, dual, or multiple lead implantable defibrillator system with interim analysis, review(s) and report(s) by a physician or other qualified health care professional
93296	Interrogation device evaluation(s) (remote), up to 90 days; single, dual, or multiple lead pacemaker system or implantable defibrillator system, remote data acquisition(s), receipt of transmissions and technician review, technical support and distribution of results

Scenario 2.10: Hospital Outpatient CPT[®] Codes²

93295	Interrogation device evaluation(s) (remote), up to 90 days single, dual, or multiple lead implantable defibrillator system with interim analysis, review(s) and report(s) by a physician or other qualified health care professional
93296	Interrogation device evaluation(s) (remote), up to 90 days; single, dual, or multiple lead pacemaker system or implantable defibrillator system, remote data acquisition(s), receipt of transmissions and technician review, technical support and distribution of results

Scenario 2.10: Possible Hospital Inpatient ICD-10-PCS Codes³

N/A

2.11 Single, dual or multi chamber ICD follow-up (remote) with analysis of Implantable Cardiovascular Monitor (ICM)

Scenario 2.11: Physician CPT[®] Codes¹

93295	Interrogation device evaluation(s) (remote), up to 90 days single, dual, or multiple lead implantable defibrillator system with interim analysis, review(s) and report(s) by a physician or other qualified health care professional
93296	Interrogation device evaluation(s) (remote), up to 90 days; single, dual, or multiple lead pacemaker system or implantable defibrillator system, remote data acquisition(s), receipt of transmissions and technician review, technical support and distribution of results
and 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, analysis, review(s) and report(s) by a physician or other qualified health care professional

Scenario 2.11: Hospital Outpatient CPT[®] Codes²

93295	Interrogation device evaluation(s) (remote), up to 90 days single, dual, or multiple lead implantable defibrillator system with interim analysis, review(s) and report(s) by a physician or other qualified health care professional
93296	Interrogation device evaluation(s) (remote), up to 90 days; single, dual, or multiple lead pacemaker system or implantable defibrillator system, remote data acquisition(s), receipt of transmissions and technician review, technical support and distribution of results
and 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, analysis, review(s) and report(s) by a physician or other qualified health care professional

Scenario 2.11: Possible Hospital Inpatient ICD-10-PCS Codes³

N/A

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2. As of January 1, 2005, the Centers for Medicare and Medicaid Services (CMS) require hospitals to report all device category codes (C- codes) on Medicare outpatient claims when medical devices are used in conjunction with procedure(s) billed. Find C-codes for CRM devices at <http://www.bostonscientific.com/en-US/reimbursement/ccode-finder.html>. Also find C-codes for CRM devices and related accessories (e.g., introducers, catheters, sheaths) at <https://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/HospitalOutpatientPPS/Downloads/Complete-list-DeviceCats-OPPS.pdf>.
3. The Complete Official Codebook ICD-10-PCS Copyright 2017 Optum360, LLC.
4. Modifiers 26 (professional component) and 51 (multiple procedures) are for physician billing only. See the *AMA's 2018 Current Procedural Terminology* for complete descriptions. Always verify appropriate usage with payers.
5. Heart Rhythm Society 2013 Coding Guide for Heart Rhythm Procedures and Services, Washington, DC.

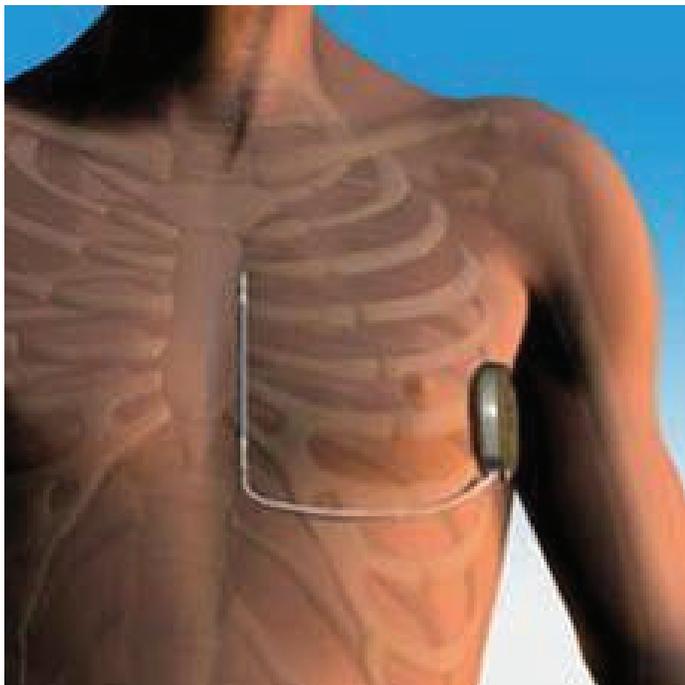


Subcutaneous Implantable Defibrillator (S-ICD®)

Subcutaneous Implantable Defibrillator
(S-ICD) Coding Overview 3-1

Commonly Billed Subcutaneous
Implantable Defibrillator (S-ICD)
Scenarios 3-2

Subcutaneous Implantable Defibrillator (S-ICD) Coding Overview



S-ICD Implant Procedure

The S-ICD System is designed to be positioned using anatomical landmarks. The device and electrode are typically implanted subcutaneously in the left thoracic region. Specifically, the S-ICD System is implanted in the vicinity of the left 5th and 6th intercostal spaces at the mid-axillary line with an electrode capable of sensing or delivering defibrillation energy running to the xiphoid and then vertically along the lateral sternal margin.

A STEP-BY-STEP DESCRIPTION OF A TYPICAL INITIAL S-ICD SYSTEM IMPLANT PROCEDURE

1. Determine the ideal location for the implanted PG by placing a demo device on the patient's skin between the 5th and 6th intercostal space in the mid-axillary line.
2. Make the device pocket incision in accordance with the ideal device location identified in step 1.
3. Locate the tip of the xiphoid process and make a 2–3-centimeter horizontal incision beginning at the xiphoid midline extending horizontally to the left, toward the device pocket.
4. Using an electrode insertion tool, tunnel the lead electrode from the xiphoid incision to the pocket.
5. Complete the distal electrode insertion by making a two-centimeter insertion in the sternum and tunnel the distal tip electrode up from the xiphoid to the superior incision.
6. Connect the electrode to the device header and place the device in the pocket (33270).
7. Automatic Setup of the device is performed, and the device is prepared for defibrillation testing.
8. Testing of defibrillation thresholds including arrhythmia induction, is performed.
9. The lead(s) and device are secured, and the pulse generator pocket is closed.

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

Scenarios included within this document do not encompass all possible procedures.

Commonly Billed Subcutaneous Implantable Defibrillator (S-ICD) Scenarios

KEY

+ Add-on code

■ Physician CPT® Codes¹■ Hospital Outpatient CPT® Codes²■ Possible Hospital Inpatient ICD-10-PCS® Codes³

3.1 Initial S-ICD system implant, with defibrillator threshold testing at time of implant

Scenario 3.1: Physician CPT® Codes¹

33270⁺ Insertion or replacement of subcutaneous implantable defibrillator system with subcutaneous electrode, including defibrillation threshold evaluation, induction of arrhythmia, evaluation of sensing of arrhythmia termination, and programming or reprogramming of sensing or therapeutic parameters, when performed

Add conscious sedation codes as appropriate (see page 17)

Scenario 3.1: Hospital Outpatient CPT® Codes²

33270 Insertion or replacement of subcutaneous implantable defibrillator system with subcutaneous electrode, including defibrillation threshold evaluation, induction of arrhythmia, evaluation of sensing of arrhythmia termination, and programming or reprogramming of sensing or therapeutic parameters, when performed

Add conscious sedation codes as appropriate (see page 17)

Scenario 3.1: Possible Hospital Inpatient ICD-10-PCS Codes³

0JH608Z Insertion of defibrillator generator into chest subcutaneous tissue and fascia, open approach

0JH60PZ Insertion of cardiac rhythm related device into chest subcutaneous tissue and fascia, open approach

3.2 Replacement of S-ICD pulse generator using existing lead with defibrillator threshold testing

Scenario 3.2: Physician CPT® Codes¹

33262 Removal of implantable defibrillator pulse generator with replacement of implantable defibrillator pulse generator only; single lead system

93644 Electrophysiologic evaluation of subcutaneous implantable defibrillator (includes defibrillation threshold evaluation, induction of arrhythmia, evaluation of sensing for arrhythmia termination, and programming or reprogramming of sensing or therapeutic parameters)

Add conscious sedation codes as appropriate (see page 17)

Scenario 3.2: Hospital Outpatient CPT® Codes²

33262 Removal of implantable defibrillator pulse generator with replacement of implantable defibrillator pulse generator only; single lead system

93644 Electrophysiologic evaluation of subcutaneous implantable defibrillator (includes defibrillation threshold evaluation, induction of arrhythmia, evaluation of sensing for arrhythmia termination, and programming or reprogramming of sensing or therapeutic parameters)

Add conscious sedation codes as appropriate (see page 17)

Scenario 3.2: Possible Hospital Inpatient ICD-10-PCS Codes³

0JPT0PZ Removal of cardiac rhythm related device from trunk subcutaneous tissue and fascia, open approach

0JH608Z Insertion of defibrillator generator into chest subcutaneous tissue and fascia, open approach

3.3 S-ICD Follow-up (in person)

Scenario 3.3: Physician CPT® Codes¹

	93261	Interrogation device evaluation (in person) with analysis, review and report by a physician or other qualified health care professional includes connection, recording and disconnection per patient encounter; implantable subcutaneous lead defibrillator system
or	93260	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 analysis, review and report by a physician or other qualified health care professional; implantable subcutaneous lead defibrillator system

Scenario 3.3: Hospital Outpatient CPT® Codes²

	93261	Interrogation device evaluation (in person) with analysis, review and report by a physician or other qualified health care professional includes connection, recording and disconnection per patient encounter; implantable subcutaneous lead defibrillator system
or	93260	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 analysis, review and report by a physician or other qualified health care professional; implantable subcutaneous lead defibrillator system

Scenario 3.3: Possible Hospital Inpatient ICD-10-PCS Codes³

4B02XTZ	Measurement of Cardiac Defibrillator, External Approach
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3.4 S-ICD Follow-up (remote)

Scenario 3.4: Physician CPT® Codes¹

	93295	Interrogation device evaluation(s) (remote), up to 90 days single, dual, or multiple lead implantable defibrillator system with interim analysis, review(s) and report(s) by a physician or other qualified health care professional
or	93296	Interrogation device evaluation(s) (remote), up to 90 days; single, dual, or multiple lead pacemaker system or implantable defibrillator system, remote data acquisition(s), receipt of transmissions and technician review, technical support and distribution of results

Scenario 3.4: Hospital Outpatient CPT® Codes²

	93295	Interrogation device evaluation(s) (remote), up to 90 days single, dual, or multiple lead implantable defibrillator system with interim analysis, review(s) and report(s) by a physician or other qualified health care professional
or	93296	Interrogation device evaluation(s) (remote), up to 90 days; single, dual, or multiple lead pacemaker system or implantable defibrillator system, remote data acquisition(s), receipt of transmissions and technician review, technical support and distribution of results

Scenario 3.4: Possible Hospital Inpatient ICD-10-PCS Codes³

N/A

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2. As of January 1, 2005, the Centers for Medicare and Medicaid Services (CMS) require hospitals to report all device category codes (C-codes) on Medicare outpatient claims when medical devices are used in conjunction with procedure(s) billed. Find C-codes for CRM devices at <http://www.bostonscientific.com/en-US/reimbursement/ccode-finder.html> Also find C-codes for CRM devices and related accessories (e.g., introducers, catheters, sheaths) at <https://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/HospitalOutpatientPPS/Downloads/Complete-list-DeviceCats-OPPS.pdf>.
3. The Complete Official Codebook ICD-10-PCS Copyright 2017 Optum360, LLC., IL
4. 2012 AHA Coding Clinic Fourth Quarter p.104 Copyright American Medical Association (AHA) Chicago, IL

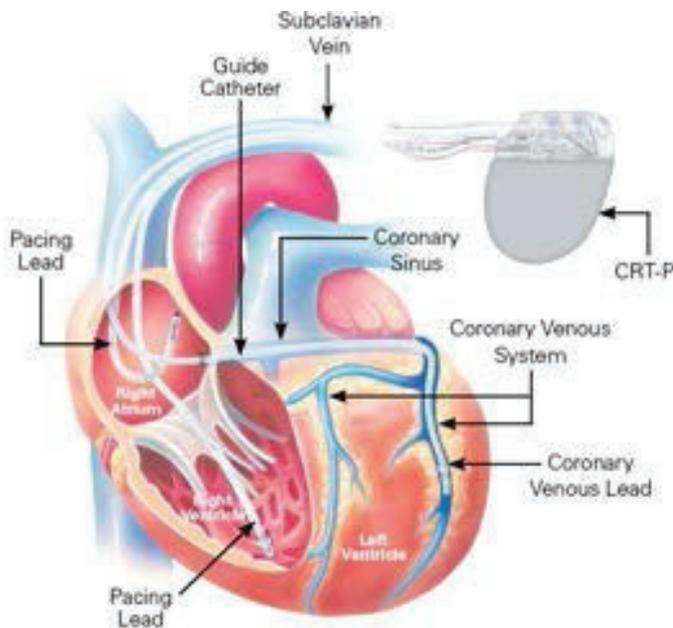


Cardiac Resynchronization Therapy Pacemakers (CRT-Ps)

Cardiac Resynchronization Therapy
Pacemaker (CRT-P) Coding Overview 4-1

Commonly Billed Cardiac
Resynchronization Therapy Pacemaker
(CRT-P) Scenarios 4-2

Cardiac Resynchronization Therapy Pacemakers (CRT-P) Coding Overview



CRT-P Implant Procedure

The implant of a CRT-P 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 pacemaker procedures, the leads are inserted through the subclavian vein and positioned in the right atrium and right ventricle. In some cases, the cephalic or internal jugular vein may be used as an alternative to the subclavian vein. In addition, a CRT-P system requires the implantation of a third lead into the coronary venous system to pace the left ventricle in order to coordinate, or resynchronize, ventricular contractions. This left ventricular lead is inserted into the subclavian vein, introduced into 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-P SYSTEM IMPLANT PROCEDURE

1. The subclavian vein is accessed.
2. Pacing leads are inserted into the right ventricle and right atrium, under fluoroscopy.
3. A guiding 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 coronary venous lead is inserted (+33225) over the guide wire and advanced 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 while maintaining LV lead position.
11. The finishing wire is removed, and the left ventricular coronary venous lead is secured.
12. A CRT-P pulse generator (33208) is connected to the three leads that are in place and a device pocket is formed.
13. Additional testing of all lead combinations is completed.
14. The leads and device are secured, and the pulse generator pocket is closed.

Note: This document is for reference purposes only and does not replace physicians' medical documentation. Scenarios included within this document do not encompass all possible procedures.

Commonly Billed Cardiac Resynchronization Therapy Pacemaker (CRT-P) Scenarios

KEY

+ Add-on code

■ Physician CPT® Codes¹■ Hospital Outpatient CPT® Codes²■ Possible Hospital Inpatient ICD-10-PCS® Codes³

4.1 Initial CRT-P system implant with venogram of the coronary sinus

Scenario 4.1: Physician CPT® Codes¹

+	33208	Insertion of new or replacement of permanent pacemaker with transvenous electrodes; atrial and ventricular
+	33225	Insertion of pacing electrode, cardiac venous system, for left ventricular pacing at time of insertion of implantable defibrillator or pacemaker pulse generator (eg, for upgrade to dual chamber system) <i>(List separately in addition to code for primary procedure)</i>

Add conscious sedation codes as appropriate (see page 17)

Scenario 4.1: Hospital Outpatient CPT® Codes²

+	33208	Insertion of new or replacement of permanent pacemaker with transvenous electrodes; atrial and ventricular
+	33225	Insertion of pacing electrode, cardiac venous system, for left ventricular pacing at time of insertion of implantable defibrillator or pacemaker pulse generator (eg, for upgrade to dual chamber system) <i>(List separately in addition to code for primary procedure)</i>

Add conscious sedation codes as appropriate (see page 17)

Scenario 4.1: Possible Hospital Inpatient ICD-10-PCS Codes³

+	0JH607Z	Insertion of Cardiac Resynchronization Pacemaker Pulse Generator into Chest Subcutaneous Tissue and Fascia, Open Approach
+	0JH637Z	Insertion of Cardiac Resynchronization Pacemaker Pulse Generator into Chest Subcutaneous Tissue and Fascia, Percutaneous Approach
+	0JH807Z	Insertion of Cardiac Resynchronization Pacemaker Pulse Generator into Abdomen Subcutaneous Tissue and Fascia, Open Approach
+	0JH837Z	Insertion of Cardiac Resynchronization Pacemaker Pulse Generator into Abdomen Subcutaneous Tissue and Fascia, Percutaneous Approach
+	02HK3JZ	Insertion of Pacemaker Lead into Right Ventricle, Percutaneous Approach
+	02HK4JZ	Insertion of Pacemaker Lead into Right Ventricle, Percutaneous Endoscopic Approach
+	02HL3JZ	Insertion of Pacemaker Lead into Left Ventricle, Percutaneous Approach
+	02HL4JZ	Insertion of Pacemaker Lead into Left Ventricle, Percutaneous Endoscopic Approach
+	02H43JZ	Insertion of Pacemaker Lead into Coronary Vein, Percutaneous Approach
+	02H44JZ	Insertion of Pacemaker Lead into Coronary Vein, Percutaneous Endoscopic Approach
+	02H63JZ	Insertion of Pacemaker Lead into Right Atrium, Percutaneous Approach
+	02H64JZ	Insertion of Pacemaker Lead into Right Atrium, Percutaneous Endoscopic Approach
+	B5060ZZ	Plain Radiography of Right Subclavian Vein using High Osmolar Contrast
+	B5061ZZ	Plain Radiography of Right Subclavian Vein using Low Osmolar Contrast
+	B506YZZ	Plain Radiography of Right Subclavian Vein using Other Contrast
+	B5070ZZ	Plain Radiography of Left Subclavian Vein using High Osmolar Contrast
+	B5071ZZ	Plain Radiography of Left Subclavian Vein using Low Osmolar Contrast
+	B507YZZ	Plain Radiography of Left Subclavian Vein using Other Contrast
+	B5160ZZ	Fluoroscopy of Right Subclavian Vein using High Osmolar Contrast
+	B5161ZZ	Fluoroscopy of Right Subclavian Vein using Low Osmolar Contrast
+	B516YZZ	Fluoroscopy of Right Subclavian Vein using Other Contrast
+	B516ZZZ	Fluoroscopy of Right Subclavian Vein
+	B5170ZZ	Fluoroscopy of Left Subclavian Vein using High Osmolar Contrast
+	B5171ZZ	Fluoroscopy of Left Subclavian Vein using Low Osmolar Contrast
+	B517YZZ	Fluoroscopy of Left Subclavian Vein using Other Contrast
+	B517ZZZ	Fluoroscopy of Left Subclavian Vein
+	B51V0ZZ	Fluoroscopy of Veins, other, using High Osmolar Contrast
+	B51V1ZZ	Fluoroscopy of Veins, other, using Low Osmolar Contrast

4.2 Upgrade of dual chamber pacemaker to CRT-P system (using existing RA and RV leads), insertion of LV lead with venogram of the coronary sinus

Scenario 4.2: Physician CPT® Codes¹

33229 Removal of permanent pacemaker pulse generator with replacement of pacemaker pulse generator; multiple lead system

+ 33225 Insertion of pacing electrode, cardiac venous system, for left ventricular pacing at time of insertion of implantable defibrillator or pacemaker pulse generator (eg, for upgrade to dual chamber system)
(List separately in addition to code for primary procedure)

Add conscious sedation codes as appropriate (see page 17)

Scenario 4.2: Hospital Outpatient CPT® Codes²

33229 Removal of permanent pacemaker pulse generator with replacement of pacemaker pulse generator; multiple lead system

+ 33225 Insertion of pacing electrode, cardiac venous system, for left ventricular pacing at time of insertion of implantable defibrillator or pacemaker pulse generator (eg, for upgrade to dual chamber system)
(List separately in addition to code for primary procedure)

Add conscious sedation codes as appropriate (see page 17)

Scenario 4.2: Possible Hospital Inpatient ICD-10-PCS Codes³

0JH607Z Insertion of Cardiac Resynchronization Pacemaker Pulse Generator into Chest Subcutaneous Tissue and Fascia, Open Approach

0JH637Z Insertion of Cardiac Resynchronization Pacemaker Pulse Generator into Chest Subcutaneous Tissue and Fascia, Percutaneous Approach

0JPT0PZ Removal of Cardiac Rhythm Related Device from Trunk Subcutaneous Tissue and Fascia, Open Approach

0JPT3PZ Removal of Cardiac Rhythm Related Device from Trunk Subcutaneous Tissue and Fascia, Percutaneous Approach

0JH807Z Insertion of Cardiac Resynchronization Pacemaker Pulse Generator into Abdomen Subcutaneous Tissue and Fascia, Open Approach

0JH837Z Insertion of Cardiac Resynchronization Pacemaker Pulse Generator into Abdomen Subcutaneous Tissue and Fascia, Percutaneous Approach

02H43JZ Insertion of Pacemaker Lead into Coronary Vein, Percutaneous Approach

02PA4MZ Removal of Cardiac Lead from Heart, Percutaneous Endoscopic Approach

02PA0MZ Removal of Cardiac Lead from Heart, Open Approach

02PA3MZ Removal of Cardiac Lead from Heart, Percutaneous Approach

B5060ZZ Plain Radiography of Right Subclavian Vein using High Osmolar Contrast

B5061ZZ Plain Radiography of Right Subclavian Vein using Low Osmolar Contrast

B506YZZ Plain Radiography of Right Subclavian Vein using Other Contrast

B5070ZZ Plain Radiography of Left Subclavian Vein using High Osmolar Contrast

B5071ZZ Plain Radiography of Left Subclavian Vein using Low Osmolar Contrast

B507YZZ Plain Radiography of Left Subclavian Vein using Other Contrast

B5160ZZ Fluoroscopy of Right Subclavian Vein using High Osmolar Contrast

B5161ZZ Fluoroscopy of Right Subclavian Vein using Low Osmolar Contrast

B516YZZ Fluoroscopy of Right Subclavian Vein using Other Contrast

B516ZZZ Fluoroscopy of Right Subclavian Vein

B5170ZZ Fluoroscopy of Left Subclavian Vein using High Osmolar Contrast

B5171ZZ Fluoroscopy of Left Subclavian Vein using Low Osmolar Contrast

B517YZZ Fluoroscopy of Left Subclavian Vein using Other Contrast

B517ZZZ Fluoroscopy of Left Subclavian Vein

B51V0ZZ Fluoroscopy of Veins, other, using High Osmolar Contrast

B51V1ZZ Fluoroscopy of Veins, other, using Low Osmolar Contrast

4.3 Replacement of CRT-P pulse generator only utilizing existing right atrial lead, right ventricular lead and left ventricular lead

Scenario 4.3: Physician CPT® Codes¹

33229 Removal of permanent pacemaker pulse generator with replacement of pacemaker pulse generator; multiple lead system
Add conscious sedation codes as appropriate (see page 17)

Scenario 4.3: Hospital Outpatient CPT® Codes²

33229 Removal of permanent pacemaker pulse generator with replacement of pacemaker pulse generator; multiple lead system
Add conscious sedation codes as appropriate (see page 17)

Scenario 4.3: Possible Hospital Inpatient ICD-10-PCS Codes³

0JH607Z Insertion of Cardiac Resynchronization Pacemaker Pulse Generator into Chest Subcutaneous Tissue and Fascia, Open Approach

0JH637Z Insertion of Cardiac Resynchronization Pacemaker Pulse Generator into Chest Subcutaneous Tissue and Fascia, Percutaneous Approach

0JPT0PZ Removal of Cardiac Rhythm Related Device from Trunk Subcutaneous Tissue and Fascia, Open Approach

0JPT3PZ Removal of Cardiac Rhythm Related Device from Trunk Subcutaneous Tissue and Fascia, Percutaneous Approach

0JH807Z Insertion of Cardiac Resynchronization Pacemaker Pulse Generator into Abdomen Subcutaneous Tissue and Fascia, Open Approach

0JH837Z Insertion of Cardiac Resynchronization Pacemaker Pulse Generator into Abdomen Subcutaneous Tissue and Fascia, Percutaneous Approach

4.4 Single chamber pacemaker upgrade to CRT-P, with insertion of right atrial lead, and insertion of left ventricular lead with coronary sinus venogram

Scenario 4.4: Physician CPT® Codes¹

- +** **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)
- 33225** Insertion of pacing electrode, cardiac venous system, for left ventricular pacing at time of insertion of implantable defibrillator or pacemaker pulse generator (eg, for upgrade to dual chamber system)
(List separately in addition to code for primary procedure)

Add conscious sedation codes as appropriate (see page 17)

Scenario 4.4: Hospital Outpatient CPT® Codes²

- 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)
- +** **33225** Insertion of pacing electrode, cardiac venous system, for left ventricular pacing at time of insertion of implantable defibrillator or pacemaker pulse generator (eg, for upgrade to dual chamber system)
(List separately in addition to code for primary procedure)

Add conscious sedation codes as appropriate (see page 17)

Scenario 4.4: Possible Hospital Inpatient ICD-10-PCS Codes³

- 0JH607Z** Insertion of Cardiac Resynchronization Pacemaker Pulse Generator into Chest Subcutaneous Tissue and Fascia, Open Approach
- 0JH637Z** Insertion of Cardiac Resynchronization Pacemaker Pulse Generator into Chest Subcutaneous Tissue and Fascia, Percutaneous Approach
- 0JH807Z** Insertion of Cardiac Resynchronization Pacemaker Pulse Generator into Abdomen Subcutaneous Tissue and Fascia, Open Approach
- 0JH837Z** Insertion of Cardiac Resynchronization Pacemaker Pulse Generator into Abdomen Subcutaneous Tissue and Fascia, Percutaneous Approach
- 02HL3JZ** Insertion of Pacemaker Lead into Left Ventricle, Percutaneous Approach
- 02HL4JZ** Insertion of Pacemaker Lead into Left Ventricle, Percutaneous Endoscopic Approach
- 02H43JZ** Insertion of Pacemaker Lead into Coronary Vein, Percutaneous Approach
- 02H44JZ** Insertion of Pacemaker Lead into Coronary Vein, Percutaneous Endoscopic Approach
- 02H63JZ** Insertion of Pacemaker Lead into Right Atrium, Percutaneous Approach
- 02H64JZ** Insertion of Pacemaker Lead into Right Atrium, Percutaneous Endoscopic Approach
- 0JPT0PZ** Removal of Cardiac Rhythm Related Device from Trunk Subcutaneous Tissue and Fascia, Open Approach
- 0JPT3PZ** Removal of Cardiac Rhythm Related Device from Trunk Subcutaneous Tissue and Fascia, Percutaneous Approach
- B5060ZZ** Plain Radiography of Right Subclavian Vein using High Osmolar Contrast
- B5061ZZ** Plain Radiography of Right Subclavian Vein using Low Osmolar Contrast
- B506YZZ** Plain Radiography of Right Subclavian Vein using Other Contrast
- B5070ZZ** Plain Radiography of Left Subclavian Vein using High Osmolar Contrast
- B5071ZZ** Plain Radiography of Left Subclavian Vein using Low Osmolar Contrast
- B507YZZ** Plain Radiography of Left Subclavian Vein using Other Contrast
- B5160ZZ** Fluoroscopy of Right Subclavian Vein using High Osmolar Contrast
- B5161ZZ** Fluoroscopy of Right Subclavian Vein using Low Osmolar Contrast
- B516YZZ** Fluoroscopy of Right Subclavian Vein using Other Contrast
- B516ZZZ** Fluoroscopy of Right Subclavian Vein
- B5170ZZ** Fluoroscopy of Left Subclavian Vein using High Osmolar Contrast
- B5171ZZ** Fluoroscopy of Left Subclavian Vein using Low Osmolar Contrast
- B517YZZ** Fluoroscopy of Left Subclavian Vein using Other Contrast
- B517ZZZ** Fluoroscopy of Left Subclavian Vein
- B51V0ZZ** Fluoroscopy of Veins, other, using High Osmolar Contrast
- B51V1ZZ** Fluoroscopy of Veins, other, using Low Osmolar Contrast

4.5 CRT-P follow-up (in person) in clinic

Scenario 4.5: Physician CPT® Codes¹

	93288	Interrogation device evaluation (in person) with analysis, review and report by a physician or other qualified health care professional, includes connection, recording and disconnection per patient encounter; single, dual, or multiple lead pacemaker system
or	93281	Programming device evaluation (in person) with iterative adjustments of the implantable device to test the function of the device and select optimal permanent programmed values with analysis, review and report by a physician or other qualified health care professional; multiple lead pacemaker system

Scenario 4.5: Hospital Outpatient CPT® Codes²

	93288	Interrogation device evaluation (in person) with analysis, review and report by a physician or other qualified health care professional, includes connection, recording and disconnection per patient encounter; single, dual, or multiple lead pacemaker system
or	93281	Programming device evaluation (in person) with iterative adjustments of the implantable device to test the function of the device and select optimal permanent programmed values with analysis, review and report by a physician or other qualified health care professional; multiple lead pacemaker system

Scenario 4.5: Possible Hospital Inpatient ICD-10-PCS Codes³

N/A

4.6 CRT-P follow-up (remote)

Scenario 4.6: Physician CPT® Codes¹

	93294	Interrogation device evaluation(s) (remote), up to 90 days; single, dual, or multiple lead pacemaker system with interim analysis, review(s) and report(s) by a physician or other qualified health care professional
and	93296	Interrogation device evaluation(s) (remote), up to 90 days; single, dual, or multiple lead pacemaker system or implantable defibrillator system, remote data acquisition(s), receipt of transmissions and technician review, technical support and distribution of results

Scenario 4.6: Hospital Outpatient CPT® Codes²

	93294	Interrogation device evaluation(s) (remote), up to 90 days; single, dual, or multiple lead pacemaker system with interim analysis, review(s) and report(s) by a physician or other qualified health care professional
and	93296	Interrogation device evaluation(s) (remote), up to 90 days; single, dual, or multiple lead pacemaker system or implantable defibrillator system, remote data acquisition(s), receipt of transmissions and technician review, technical support and distribution of results

Scenario 4.6: Possible Hospital Inpatient ICD-10-PCS Codes³

N/A

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

Scenario 4.7: Physician CPT® Codes¹

	93294	Interrogation device evaluation(s) (remote), up to 90 days; single, dual, or multiple lead pacemaker system with interim analysis, review(s) and report(s) by a physician or other qualified health care professional
	93296	Interrogation device evaluation(s) (remote), up to 90 days; single, dual, or multiple lead pacemaker system or implantable defibrillator system, remote data acquisition(s), receipt of transmissions and technician review, technical support and distribution of results
and	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, analysis, review(s) and report(s) by a physician or other qualified health care professional

Scenario 4.7: Hospital Outpatient CPT® Codes²

	93294	Interrogation device evaluation(s) (remote), up to 90 days; single, dual, or multiple lead pacemaker system with interim analysis, review(s) and report(s) by a physician or other qualified health care professional
	93296	Interrogation device evaluation(s) (remote), up to 90 days; single, dual, or multiple lead pacemaker system or implantable defibrillator system, remote data acquisition(s), receipt of transmissions and technician review, technical support and distribution of results
and	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, analysis, review(s) and report(s) by a physician or other qualified health care professional

Scenario 4.7: Possible Hospital Inpatient ICD-10-PCS Codes³

N/A

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- As of January 1, 2005, the Centers for Medicare and Medicaid Services (CMS) require hospitals to report all device category codes (C-codes) on Medicare outpatient claims when medical devices are used in conjunction with procedure(s) billed. Find C-codes for CRM devices at <http://www.bostonscientific.com/en-US/reimbursement/ccode-finder.html> Also find C-codes for CRM devices and related accessories (e.g., introducers, catheters, sheaths) at <https://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/HospitalOutpatientPPS/Downloads/Complelist-DeviceCats-OPPS.pdf>.
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- Modifiers 26 (professional component) and 51 (multiple procedures) are for physician billing only. See the *AMA's 2018 Current Procedural Terminology* for complete descriptions. Always verify appropriate usage with payers.

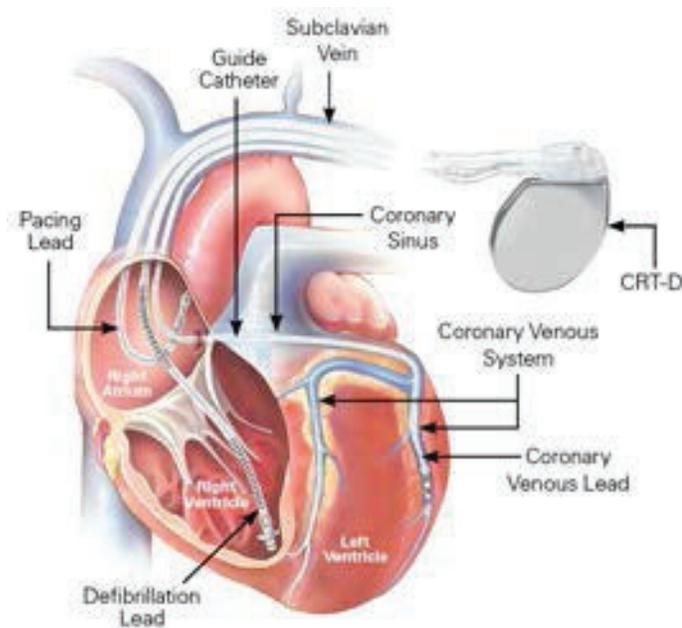


Cardiac Resynchronization Therapy Defibrillators (CRT-Ds)

Cardiac Resynchronization Therapy
Defibrillator (CRT-D) Coding Overview 5-1

Commonly Billed Cardiac
Resynchronization Therapy Defibrillator
(CRT-D) Scenarios 5-2

Cardiac Resynchronization Therapy Defibrillators (CRT-Ds) Coding Overview



CRT-D Implant Procedure

The implant 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 left ventricular lead is inserted into the subclavian vein, introduced into 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 IMPLANT PROCEDURE

1. The subclavian vein is accessed.
2. A pacing lead is inserted into the right atrium, and the defibrillation lead is inserted into the right ventricle, under fluoroscopy.
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 LV 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 and a pulse generator pocket is formed.
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.

Note: This document is for reference purposes only and does not replace physicians' medical documentation. Scenarios included within this document do not encompass all possible procedures.

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

KEY

+ Add-on code

■ Physician CPT® Codes¹■ Hospital Outpatient CPT® Codes²■ Possible Hospital Inpatient ICD-10-PCS® Codes³

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

Scenario 5.1: Physician CPT® Codes¹

	33249	Insertion or replacement of permanent implantable defibrillator system with transvenous lead(s), single or dual chamber
+	33225	Insertion of pacing electrode, cardiac venous system, for left ventricular pacing, at time of insertion of implantable defibrillator or pacemaker pulse generator (eg, for upgrade to dual chamber system) (List separately in addition to code for primary procedure)
	93641-26/51 ⁴	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

Add conscious sedation codes as appropriate (see page 17)

Scenario 5.1: Hospital Outpatient CPT® Codes²

+	33249	Insertion or replacement of permanent implantable defibrillator system with transvenous lead(s), single or dual chamber
	33225	Insertion of pacing electrode, cardiac venous system, for left ventricular pacing, at time of insertion of implantable defibrillator or pacemaker pulse generator (eg, for 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

Add conscious sedation codes as appropriate (see page 17)

Scenario 5.1: Possible Hospital Inpatient ICD-10-PCS Codes³

	0JH609Z	Insertion of Cardiac Resynchronization Defibrillator Pulse Generator into Chest Subcutaneous Tissue and Fascia, Open Approach
	0JH639Z	Insertion of Cardiac Resynchronization Defibrillator Pulse Generator into Chest Subcutaneous Tissue and Fascia, Percutaneous Approach
	0JH809Z	Insertion of Cardiac Resynchronization Defibrillator Pulse Generator into Abdomen Subcutaneous Tissue and Fascia, Open Approach
	0JH839Z	Insertion of Cardiac Resynchronization Defibrillator Pulse Generator into Abdomen Subcutaneous Tissue and Fascia, Percutaneous Approach
	02HK3KZ	Insertion of Defibrillator Lead into Right Ventricle, Percutaneous Approach
	02HK4KZ	Insertion of Defibrillator Lead into Right Ventricle, Percutaneous Endoscopic Approach
	02HL3KZ	Insertion of Defibrillator Lead into Left Ventricle, Percutaneous Approach
	02HL4KZ	Insertion of Defibrillator Lead into Left Ventricle, Percutaneous Endoscopic Approach
	B5060ZZ	Plain Radiography of Right Subclavian Vein using High Osmolar Contrast
	B5061ZZ	Plain Radiography of Right Subclavian Vein using Low Osmolar Contrast
	B506YZZ	Plain Radiography of Right Subclavian Vein using Other Contrast
	B5070ZZ	Plain Radiography of Left Subclavian Vein using High Osmolar Contrast
	B5071ZZ	Plain Radiography of Left Subclavian Vein using Low Osmolar Contrast
	B507YZZ	Plain Radiography of Left Subclavian Vein using Other Contrast
	B5160ZZ	Fluoroscopy of Right Subclavian Vein using High Osmolar Contrast
	B5161ZZ	Fluoroscopy of Right Subclavian Vein using Low Osmolar Contrast
	B516YZZ	Fluoroscopy of Right Subclavian Vein using Other Contrast
	B516ZZZ	Fluoroscopy of Right Subclavian Vein
	B5170ZZ	Fluoroscopy of Left Subclavian Vein using High Osmolar Contrast
	B5171ZZ	Fluoroscopy of Left Subclavian Vein using Low Osmolar Contrast
	B517YZZ	Fluoroscopy of Left Subclavian Vein using Other Contrast
	B517ZZZ	Fluoroscopy of Left Subclavian Vein
	B51V0ZZ	Fluoroscopy of Veins, other, using High Osmolar Contrast
	B51V1ZZ	Fluoroscopy of Veins, other, using Low Osmolar Contrast

5.2 Initial CRT-D implant with atrial and ventricular lead insertion, inability to place LV lead, with defibrillator threshold testing at the time of implant

Scenario 5.2: Physician CPT® Codes¹

- | | | |
|---|--------------------------------|---|
| + | 33249
33225-53 ⁴ | Insertion or replacement of permanent implantable defibrillator system with transvenous lead(s), single or dual chamber
Insertion of pacing electrode, cardiac venous system, for left ventricular pacing, at time of insertion of implantable defibrillator or pacemaker pulse generator (eg, for upgrade to dual chamber system)
<i>(List separately in addition to code for primary procedure)</i> |
| | 93641-26/51 ⁴ | 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 |

Add conscious sedation codes as appropriate (see page 17)

Scenario 5.2: Hospital Outpatient CPT® Codes²

- | | | |
|---|--------------------------------|---|
| + | 33249
33225-53 ⁴ | Insertion or replacement of permanent implantable defibrillator system with transvenous lead(s), single or dual chamber
Insertion of pacing electrode, cardiac venous system, for left ventricular pacing, at time of insertion of implantable defibrillator or pacemaker pulse generator (eg, for upgrade to dual chamber system)
<i>(List separately in addition to code for primary procedure)</i> |
| | 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 |

Add conscious sedation codes as appropriate (see page 17)

Scenario 5.2: Possible Hospital Inpatient ICD-10-PCS Codes³

- | | |
|---------|---|
| B5060ZZ | Plain Radiography of Right Subclavian Vein using High Osmolar Contrast |
| B5061ZZ | Plain Radiography of Right Subclavian Vein using Low Osmolar Contrast |
| B506YZZ | Plain Radiography of Right Subclavian Vein using Other Contrast |
| B5070ZZ | Plain Radiography of Left Subclavian Vein using High Osmolar Contrast |
| B5071ZZ | Plain Radiography of Left Subclavian Vein using Low Osmolar Contrast |
| B507YZZ | Plain Radiography of Left Subclavian Vein using Other Contrast |
| B5160ZZ | Fluoroscopy of Right Subclavian Vein using High Osmolar Contrast |
| B5161ZZ | Fluoroscopy of Right Subclavian Vein using Low Osmolar Contrast |
| B516YZZ | Fluoroscopy of Right Subclavian Vein using Other Contrast |
| B516ZZZ | Fluoroscopy of Right Subclavian Vein |
| B5170ZZ | Fluoroscopy of Left Subclavian Vein using High Osmolar Contrast |
| B5171ZZ | Fluoroscopy of Left Subclavian Vein using Low Osmolar Contrast |
| B517YZZ | Fluoroscopy of Left Subclavian Vein using Other Contrast |
| B517ZZZ | Fluoroscopy of Left Subclavian Vein |
| OJH609Z | Insertion of Cardiac Resynchronization Defibrillator Pulse Generator into Chest Subcutaneous Tissue and Fascia, Open Approach |
| OJH639Z | Insertion of Cardiac Resynchronization Defibrillator Pulse Generator into Chest Subcutaneous Tissue and Fascia, Percutaneous Approach |
| OJH809Z | Insertion of Cardiac Resynchronization Defibrillator Pulse Generator into Abdomen Subcutaneous Tissue and Fascia, Open Approach |
| OJH839Z | Insertion of Cardiac Resynchronization Defibrillator Pulse Generator into Abdomen Subcutaneous Tissue and Fascia, Percutaneous Approach |
| O2HK3KZ | Insertion of Defibrillator Lead into Right Ventricle, Percutaneous Approach |
| O2HK4KZ | Insertion of Defibrillator Lead into Right Ventricle, Percutaneous Endoscopic Approach |
| O2HL3KZ | Insertion of Defibrillator Lead into Left Ventricle, Percutaneous Approach |
| O2HL4KZ | Insertion of Defibrillator Lead into Left Ventricle, Percutaneous Endoscopic Approach |

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

Scenario 5.3: Physician CPT® Codes¹

33263	Removal of implantable defibrillator pulse generator with replacement of implantable defibrillator pulse generator; dual lead system
93641-26/51 ⁴	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

Add conscious sedation codes as appropriate (see page 17)

Scenario 5.3: Hospital Outpatient CPT® Codes²

33263	Removal of implantable defibrillator pulse generator with replacement of implantable defibrillator pulse generator; dual lead system
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

Add conscious sedation codes as appropriate (see page 17)

Scenario 5.3: Possible Hospital Inpatient ICD-10-PCS Codes³

0JH609Z	Insertion of Cardiac Resynchronization Defibrillator Pulse Generator into Chest Subcutaneous Tissue and Fascia, Open Approach
0JH639Z	Insertion of Cardiac Resynchronization Defibrillator Pulse Generator into Chest Subcutaneous Tissue and Fascia, Percutaneous Approach
0JPT0PZ	Removal of Cardiac Rhythm Related Device from Trunk Subcutaneous Tissue and Fascia, Open Approach
0JPT3PZ	Removal of Cardiac Rhythm Related Device from Trunk Subcutaneous Tissue and Fascia, Percutaneous Approach
0JH809Z	Insertion of Cardiac Resynchronization Defibrillator Pulse Generator into Abdomen Subcutaneous Tissue and Fascia, Open Approach
0JH839Z	Insertion of Cardiac Resynchronization Defibrillator Pulse Generator into Abdomen Subcutaneous Tissue and Fascia, Percutaneous Approach

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

Scenario 5.4: Physician CPT® Codes¹

33249	Insertion or replacement of permanent implantable defibrillator system with transvenous lead(s), single or dual chamber
+ 33225	Insertion of pacing electrode, cardiac venous system, for left ventricular pacing, at time of insertion of implantable defibrillator or pacemaker pulse generator (eg, for upgrade to dual chamber system) <i>(List separately in addition to code for primary procedure)</i>
33241-51 ⁴	Removal of implantable defibrillator pulse generator only
93641-26/51 ⁴	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

Add conscious sedation codes as appropriate (see page 17)

Scenario 5.4: Hospital Outpatient CPT® Codes²

33249	Insertion or replacement of permanent implantable defibrillator system with transvenous lead(s), single or dual chamber
+ 33225	Insertion of pacing electrode, cardiac venous system, for left ventricular pacing, at time of insertion of implantable defibrillator or pacemaker pulse generator (eg, for upgrade to dual chamber system) <i>(List separately in addition to code for primary procedure)</i>
33241	Removal of implantable defibrillator pulse generator only
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

Add conscious sedation codes as appropriate (see page 17)

Scenario 5.4: Possible Hospital Inpatient ICD-10-PCS Codes³

0JH609Z	Insertion of Cardiac Resynchronization Defibrillator Pulse Generator into Chest Subcutaneous Tissue and Fascia, Open Approach
0JH639Z	Insertion of Cardiac Resynchronization Defibrillator Pulse Generator into Chest Subcutaneous Tissue and Fascia, Percutaneous Approach
0JH809Z	Insertion of Cardiac Resynchronization Defibrillator Pulse Generator into Abdomen Subcutaneous Tissue and Fascia, Open Approach
0JH839Z	Insertion of Cardiac Resynchronization Defibrillator Pulse Generator into Abdomen Subcutaneous Tissue and Fascia, Percutaneous Approach
02HK3KZ	Insertion of Defibrillator Lead into Right Ventricle, Percutaneous Approach
02HK4KZ	Insertion of Defibrillator Lead into Right Ventricle, Percutaneous Endoscopic Approach
02HL3KZ	Insertion of Defibrillator Lead into Left Ventricle, Percutaneous Approach
0JPT0PZ	Removal of Cardiac Rhythm Related Device from Trunk Subcutaneous Tissue and Fascia, Open Approach
0JPT3PZ	Removal of Cardiac Rhythm Related Device from Trunk Subcutaneous Tissue and Fascia, Percutaneous Approach
B5060ZZ	Plain Radiography of Right Subclavian Vein using High Osmolar Contrast
B5061ZZ	Plain Radiography of Right Subclavian Vein using Low Osmolar Contrast
B506YZZ	Plain Radiography of Right Subclavian Vein using Other Contrast
B5070ZZ	Plain Radiography of Left Subclavian Vein using High Osmolar Contrast
B5071ZZ	Plain Radiography of Left Subclavian Vein using Low Osmolar Contrast
B507YZZ	Plain Radiography of Left Subclavian Vein using Other Contrast
B5160ZZ	Fluoroscopy of Right Subclavian Vein using High Osmolar Contrast
B5161ZZ	Fluoroscopy of Right Subclavian Vein using Low Osmolar Contrast
B516YZZ	Fluoroscopy of Right Subclavian Vein using Other Contrast
B516ZZZ	Fluoroscopy of Right Subclavian Vein
B5170ZZ	Fluoroscopy of Left Subclavian Vein using High Osmolar Contrast
B5171ZZ	Fluoroscopy of Left Subclavian Vein using Low Osmolar Contrast
B517YZZ	Fluoroscopy of Left Subclavian Vein using Other Contrast
B517ZZZ	Fluoroscopy of Left Subclavian Vein
B51V0ZZ	Fluoroscopy of Veins, other, using High Osmolar Contrast
B51V1ZZ	Fluoroscopy of Veins, other, using Low Osmolar Contrast

5.5 Dual chamber ICD upgrade to CRT-D (using existing RA and RV leads) with left ventricular lead insertion, coronary sinus venogram with defibrillator threshold testing at the time of implant

Scenario 5.5: Physician CPT® Codes¹

+	33264	Removal of implantable defibrillator pulse generator with replacement of implantable defibrillator pulse generator; multiple lead system
	33225	Insertion of pacing electrode, cardiac venous system, for left ventricular pacing, at time of insertion of implantable defibrillator or pacemaker pulse generator (eg, for upgrade to dual chamber system) <i>(List separately in addition to code for primary procedure)</i>
	93641-26/51 ⁴	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

Add conscious sedation codes as appropriate (see page 17)

Scenario 5.5: Hospital Outpatient CPT® Codes²

+	33264	Removal of implantable defibrillator pulse generator with replacement of implantable defibrillator pulse generator; multiple lead system
	33225	Insertion of pacing electrode, cardiac venous system, for left ventricular pacing, at time of insertion of implantable defibrillator or pacemaker pulse generator (eg, for upgrade to dual chamber system) <i>(List separately in addition to code for primary procedure)</i>
	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

Add conscious sedation codes as appropriate (see page 17)

Scenario 5.5: Possible Hospital Inpatient ICD-10-PCS Codes³

0JPT0PZ	Removal of Cardiac Rhythm Related Device from Trunk Subcutaneous Tissue and Fascia, Open Approach
0JPT3PZ	Removal of Cardiac Rhythm Related Device from Trunk Subcutaneous Tissue and Fascia, Percutaneous Approach
0JH609Z	Insertion of Cardiac Resynchronization Defibrillator Pulse Generator into Chest Subcutaneous Tissue and Fascia, Open Approach
0JH639Z	Insertion of Cardiac Resynchronization Defibrillator Pulse Generator into Chest Subcutaneous Tissue and Fascia, Percutaneous Approach
0JH809Z	Insertion of Cardiac Resynchronization Defibrillator Pulse Generator into Abdomen Subcutaneous Tissue and Fascia, Open Approach
0JH839Z	Insertion of Cardiac Resynchronization Defibrillator Pulse Generator into Abdomen Subcutaneous Tissue and Fascia, Percutaneous Approach
02HK3KZ	Insertion of Defibrillator Lead into Right Ventricle, Percutaneous Approach
02HK4KZ	Insertion of Defibrillator Lead into Right Ventricle, Percutaneous Endoscopic Approach
02HL3KZ	Insertion of Defibrillator Lead into Left Ventricle, Percutaneous Approach
02HL4KZ	Insertion of Defibrillator Lead into Left Ventricle, Percutaneous Endoscopic Approach
B5060ZZ	Plain Radiography of Right Subclavian Vein using High Osmolar Contrast
B5061ZZ	Plain Radiography of Right Subclavian Vein using Low Osmolar Contrast
B506YZZ	Plain Radiography of Right Subclavian Vein using Other Contrast
B5070ZZ	Plain Radiography of Left Subclavian Vein using High Osmolar Contrast
B5071ZZ	Plain Radiography of Left Subclavian Vein using Low Osmolar Contrast
B507YZZ	Plain Radiography of Left Subclavian Vein using Other Contrast
B5160ZZ	Fluoroscopy of Right Subclavian Vein using High Osmolar Contrast
B5161ZZ	Fluoroscopy of Right Subclavian Vein using Low Osmolar Contrast
B516YZZ	Fluoroscopy of Right Subclavian Vein using Other Contrast
B516ZZZ	Fluoroscopy of Right Subclavian Vein
B5170ZZ	Fluoroscopy of Left Subclavian Vein using High Osmolar Contrast
B5171ZZ	Fluoroscopy of Left Subclavian Vein using Low Osmolar Contrast
B517YZZ	Fluoroscopy of Left Subclavian Vein using Other Contrast
B517ZZZ	Fluoroscopy of Left Subclavian Vein
B51V0ZZ	Fluoroscopy of Veins, other, using High Osmolar Contrast
B51V1ZZ	Fluoroscopy of Veins, other, using Low Osmolar Contrast

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

Scenario 5.6: Physician CPT® Codes¹

33224 Insertion of pacing electrode, cardiac venous system, for left ventricular pacing, with attachment to previously placed pacemaker or implantable defibrillator pulse generator (including revision of pocket, removal, insertion, and/or replacement of existing generator)
Add conscious sedation codes as appropriate (see page 17)

Scenario 5.6: Hospital Outpatient CPT® Codes²

33224 Insertion of pacing electrode, cardiac venous system, for left ventricular pacing, with attachment to previously placed pacemaker or implantable defibrillator pulse generator (including revision of pocket, removal, insertion, and/or replacement of existing generator)
Add conscious sedation codes as appropriate (see page 17)

Scenario 5.6: Possible Hospital Inpatient ICD-10-PCS Codes³

02H43JZ Insertion of Pacemaker Lead into Coronary Vein, Percutaneous Approach

02PA4MZ Removal of Cardiac Lead from Heart, Percutaneous Endoscopic Approach

02PA0MZ Removal of Cardiac Lead from Heart, Open Approach

02PA3MZ Removal of Cardiac Lead from Heart, Percutaneous Approach

B5060ZZ Plain Radiography of Right Subclavian Vein using High Osmolar Contrast

B5061ZZ Plain Radiography of Right Subclavian Vein using Low Osmolar Contrast

B506YZZ Plain Radiography of Right Subclavian Vein using Other Contrast

B5070ZZ Plain Radiography of Left Subclavian Vein using High Osmolar Contrast

B5071ZZ Plain Radiography of Left Subclavian Vein using Low Osmolar Contrast

B507YZZ Plain Radiography of Left Subclavian Vein using Other Contrast

B5160ZZ Fluoroscopy of Right Subclavian Vein using High Osmolar Contrast

B5161ZZ Fluoroscopy of Right Subclavian Vein using Low Osmolar Contrast

B516YZZ Fluoroscopy of Right Subclavian Vein using Other Contrast

B516ZZZ Fluoroscopy of Right Subclavian Vein

B5170ZZ Fluoroscopy of Left Subclavian Vein using High Osmolar Contrast

B5171ZZ Fluoroscopy of Left Subclavian Vein using Low Osmolar Contrast

B517YZZ Fluoroscopy of Left Subclavian Vein using Other Contrast

B517ZZZ Fluoroscopy of Left Subclavian Vein

B51V0ZZ Fluoroscopy of Veins, other, using High Osmolar Contrast

B51V1ZZ Fluoroscopy of Veins, other, using Low Osmolar Contrast

5.7 CRT-D (3-leads) follow-up (in person)

Scenario 5.7: Physician CPT® Codes¹

	93289	Interrogation device evaluation (in person) with analysis, review and report by a physician or other qualified health care professional, includes connection, recording and disconnection per patient encounter; single, dual, or multiple lead transvenous implantable defibrillator system, including analysis of heart rhythm derived data elements
or	93284	Programming device evaluation (in person) with iterative adjustments of the implantable device to test the function of the device and select optimal permanent programmed values with analysis, review and report by a physician or other qualified health care professional; multiple lead transvenous implantable defibrillator system

Scenario 5.7: Hospital Outpatient CPT® Codes²

	93289	Interrogation device evaluation (in person) with analysis, review and report by a physician or other qualified health care professional, includes connection, recording and disconnection per patient encounter; single, dual, or multiple lead transvenous implantable defibrillator system, including analysis of heart rhythm derived data elements
or	93284	Programming device evaluation (in person) with iterative adjustments of the implantable device to test the function of the device and select optimal permanent programmed values with analysis, review and report by a physician or other qualified health care professional; multiple lead transvenous implantable defibrillator system

Scenario 5.7: Possible Hospital Inpatient ICD-10-PCS Codes³

4B02XTZ	Measurement of Cardiac Defibrillator, External Approach
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5.8 CRT-D follow-up (remote)

Scenario 5.8: Physician CPT® Codes¹

	93295	Interrogation device evaluation(s) (remote), up to 90 days; single, dual, or multiple lead implantable defibrillator system with interim analysis, review(s) and report(s) by a physician or other qualified health care professional
	93296	Interrogation device evaluation(s) (remote), up to 90 days; single, dual, or multiple lead pacemaker system or implantable defibrillator system, remote data acquisition(s), receipt of transmissions and technician review, technical support and distribution of results

Scenario 5.8: Hospital Outpatient CPT® Codes²

	93295	Interrogation device evaluation(s) (remote), up to 90 days; single, dual, or multiple lead implantable defibrillator system with interim analysis, review(s) and report(s) by a physician or other qualified health care professional
	93296	Interrogation device evaluation(s) (remote); up to 90 days; single, dual, or multiple lead pacemaker system or implantable defibrillator system, remote data acquisition(s), receipt of transmissions and technician review, technical support and distribution of results

Scenario 5.8: Possible Hospital Inpatient ICD-10-PCS Codes³

N/A

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

Scenario 5.9: Physician CPT® Codes¹

	93295	Interrogation device evaluation(s) (remote), up to 90 days; single, dual, or multiple lead implantable defibrillator system with interim analysis, review(s) and report(s) by a physician or other qualified health care professional
	93296	Interrogation device evaluation(s) (remote), up to 90 days; single, dual, or multiple lead pacemaker system or implantable defibrillator system, remote data acquisition(s), receipt of transmissions and technician review, technical support and distribution of results
and	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, analysis, review(s) and report(s) by a physician or other qualified health care professional

Scenario 5.9: Hospital Outpatient CPT® Codes²

	93295	Interrogation device evaluation(s) (remote), up to 90 days; single, dual, or multiple lead implantable defibrillator system with interim analysis, review(s) and report(s) by a physician or other qualified health care professional
	93296	Interrogation device evaluation(s) (remote), up to 90 days; single, dual, or multiple lead pacemaker system or implantable defibrillator system, remote data acquisition(s), receipt of transmissions and technician review, technical support and distribution of results
and	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, analysis, review(s) and report(s) by a physician or other qualified health care professional

Scenario 5.9: Possible Hospital Inpatient ICD-10-PCS Codes³

N/A

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- As of January 1, 2005, the Centers for Medicare and Medicaid Services (CMS) require hospitals to report all device category codes (C-codes) on Medicare outpatient claims when medical devices are used in conjunction with procedure(s) billed. Find C-codes for CRM devices at <http://www.bostonscientific.com/en-US/reimbursement/ccode-finder.html>. Also find C-codes for CRM devices and related accessories (e.g., introducers, catheters, sheaths) at <https://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/HospitalOutpatientPPS/Downloads/Comple-list-DeviceCats-OPPS.pdf>.
- The Complete Official Codebook ICD-10-PCS Copyright 2017 Optum360, LLC.
- Modifiers -26 (professional component), -51 (multiple procedures) and -53 (discontinued procedure) are for physician billing only. See the AMA's *2019 Current Procedural Terminology* for complete descriptions. Always verify appropriate usage with payers.



Intracardiac Electrophysiology and Related Scenarios

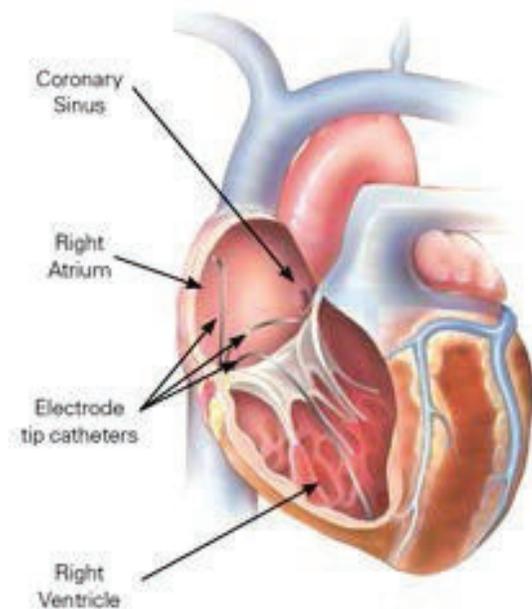
Intracardiac Electrophysiology Study
Coding Overview 6-1

Commonly Billed Intracardiac
Electrophysiology Study Scenarios 6-2

Intracardiac Catheter Ablation Coding
Overview 6-7

Commonly Billed Intracardiac Catheter
Ablation Scenarios 6-8

Intracardiac Electrophysiology Study Coding Overview



Electrophysiology (EP) Studies

Electrophysiology (EP) studies are done to assess a patient's cardiac arrhythmias. These studies are invasive diagnostic medical procedures requiring the insertion of several electrode catheters. EP studies are done to determine if an arrhythmia is the cause of the patient's clinical symptoms and to assess the mechanism of the cardiac arrhythmia.

EP studies "include the insertion and repositioning of electrode catheters, recording of electrograms before and during pacing or programmed stimulation of multiple locations in the heart, analysis of recorded information, and report of the procedure. Electrophysiology studies are most often performed with three or more electrode catheters."¹

The studies are performed using ECG, blood pressure, and pulse oximetry monitoring. Signal processing and amplification equipment to display and assess the intracardiac electrical recordings are used.

Intracardiac electrophysiology studies are coded using a variety of CPT® codes in the 93600-93662 CPT® code range.

A STEP-BY-STEP DESCRIPTION OF A TYPICAL COMPREHENSIVE INTRACARDIAC ELECTROPHYSIOLOGY STUDY

1. Introducer sheaths are inserted in the femoral vein.
2. Multiple electrode catheters are inserted into the sheaths and, under fluoroscopic guidance, are advanced into the right atrium, His bundle region, and right ventricle.
3. Once in position, the electrode catheters are attached to a monitor allowing display of the intracardiac electrograms obtained from the catheter.
4. Right atrial pacing and recording, His bundle recording, and right ventricular pacing and recording are performed. The catheters may be repositioned numerous times and pacing and recording are done at various areas within the heart.
5. If an arrhythmia is induced, it may be terminated by rapidly pacing the heart or by defibrillation or cardioversion.
6. Once all pacing and recording is completed, the catheters are withdrawn, and the introducer sheaths are removed.
7. The physician documents the procedure and results of the study along with any recommendations for treatment.

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

Scenarios included within this document do not encompass all possible procedures.

Commonly Billed Intracardiac Electrophysiology Study Scenarios

KEY

+ Add-on code

■ Physician CPT® Codes¹■ Hospital Outpatient CPT® Codes²■ Possible Hospital Inpatient ICD-10-PCS® Codes³

6.1 Comprehensive EP Study *with induction or attempted induction of arrhythmia*

Scenario 6.1: Physician CPT® Codes¹

93620-26⁴ 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

Add conscious sedation codes as appropriate (see page 17)

Scenario 6.1: Hospital Outpatient CPT® Codes²

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

Add conscious sedation codes as appropriate (see page 17)

Scenario 6.1: Possible Hospital Inpatient ICD-10-PCS Codes³

02K80ZZ Map Conduction Mechanism, Open Approach

02K83ZZ Map Conduction Mechanism, Percutaneous Approach

02K84ZZ Map Conduction Mechanism, Percutaneous Endoscopic Approach

4A023FZ Measurement and monitoring, cardiac, percutaneous, electrical

activity

6.2 Comprehensive EP Study with induction or attempted induction of arrhythmia and dual chamber ICD implant with defibrillation threshold testing at implant

Scenario 6.2: Physician CPT® Codes¹

33249	Insertion or replacement of permanent implantable defibrillator system with transvenous lead(s), single or dual chamber
93641-26/51 ⁴	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
93620-51 ⁴	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

Add conscious sedation codes as appropriate (see page 17)

Scenario 6.2: Hospital Outpatient CPT® Codes²

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

Add conscious sedation codes as appropriate (see page 17)

Scenario 6.2: Possible Hospital Inpatient ICD-10-PCS Codes³

02H63KZ	Insertion of Defibrillator Lead into Right Atrium, Percutaneous Approach
02H64KZ	Insertion of Defibrillator Lead into Right Atrium, Percutaneous Endoscopic Approach
02HK3KZ	Insertion of Defibrillator Lead into Right Ventricle, Percutaneous Approach
02HK4KZ	Insertion of Defibrillator Lead into Right Ventricle, Percutaneous Endoscopic Approach
0JH608Z	Insertion of Defibrillator Generator into Chest Subcutaneous Tissue and Fascia, Open Approach
0JH638Z	Insertion of Defibrillator Generator into Chest Subcutaneous Tissue and Fascia, Percutaneous Approach
0JH808Z	Insertion of Defibrillator Generator into Abdomen Subcutaneous Tissue and Fascia, Open Approach
0JH838Z	Insertion of Defibrillator Generator into Abdomen Subcutaneous Tissue and Fascia, Percutaneous Approach
02K80ZZ	Map Conduction Mechanism, Open Approach
02K83ZZ	Map Conduction Mechanism, Percutaneous Approach
02K84ZZ	Map Conduction Mechanism, Percutaneous Endoscopic Approach
4A023FZ	Measurement and monitoring, cardiac, percutaneous, electrical activity
B5060ZZ	Plain Radiography of Right Subclavian Vein using High Osmolar Contrast
B5061ZZ	Plain Radiography of Right Subclavian Vein using Low Osmolar Contrast
B506YZZ	Plain Radiography of Right Subclavian Vein using Other Contrast
B5070ZZ	Plain Radiography of Left Subclavian Vein using High Osmolar Contrast
B5071ZZ	Plain Radiography of Left Subclavian Vein using Low Osmolar Contrast
B507YZZ	Plain Radiography of Left Subclavian Vein using Other Contrast
B5160ZZ	Fluoroscopy of Right Subclavian Vein using High Osmolar Contrast
B5161ZZ	Fluoroscopy of Right Subclavian Vein using Low Osmolar Contrast
B516YZZ	Fluoroscopy of Right Subclavian Vein using Other Contrast
B516ZZZ	Fluoroscopy of Right Subclavian Vein
B5170ZZ	Fluoroscopy of Left Subclavian Vein using High Osmolar Contrast
B5171ZZ	Fluoroscopy of Left Subclavian Vein using Low Osmolar Contrast
B517YZZ	Fluoroscopy of Left Subclavian Vein using Other Contrast
B517ZZZ	Fluoroscopy of Left Subclavian Vein

6.3 Comprehensive EP Study with pacing and recording of multiple sites in the right atrium, right ventricle, His bundle and left atrium with induction of arrhythmia

Scenario 6.3: Physician CPT® Codes¹

	93620-26 ⁴	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
+	93621-26 ⁴	Comprehensive electrophysiologic evaluation including insertion and repositioning of multiple electrode catheters with induction or attempted induction of arrhythmia; with left atrial pacing and recording from coronary sinus or left atrium <i>(List separately in addition to code for primary procedure)</i>

Add conscious sedation codes as appropriate (see page 17)

Scenario 6.3: Hospital Outpatient CPT® Codes²

	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
+	93621	Comprehensive electrophysiologic evaluation including insertion and repositioning of multiple electrode catheters with induction or attempted induction of arrhythmia; with left atrial pacing and recording from coronary sinus or left atrium <i>(List separately in addition to code for primary procedure)</i>

Add conscious sedation codes as appropriate (see page 17)

Scenario 6.3: Possible Hospital Inpatient ICD-10-PCS Codes³

02K80ZZ	Map Conduction Mechanism, Open Approach
02K83ZZ	Map Conduction Mechanism, Percutaneous Approach
02K84ZZ	Map Conduction Mechanism, Percutaneous Endoscopic Approach
4A023FZ	Measurement and monitoring, cardiac, percutaneous, electrical activity

6.4 Partial (limited) EP Study *pacing and recording in the RA and Hisbundle*

Scenario 6.4: Physician CPT® Codes¹

93600-26 ⁴	Bundle of His recording
93602-26 ⁴	Intra-atrial recording
93610-26 ⁴	Intra-atrial pacing

Add conscious sedation codes as appropriate (see page 17)

Scenario 6.4: Hospital Outpatient CPT® Codes²

93600	Bundle of His recording
93602	Intra-atrial recording
93610	Intra-atrial pacing

Add conscious sedation codes as appropriate (see page 17)

Scenario 6.4: Possible Hospital Inpatient ICD-10-PCS Codes³

4A023FZ	Measurement of Cardiac Rhythm, Percutaneous Approach
02K80ZZ	Map Conduction Mechanism, Open Approach
02K83ZZ	Map Conduction Mechanism, Percutaneous Approach
02K84ZZ	Map Conduction Mechanism, Percutaneous Endoscopic Approach

6.5 Follow-up EP Study with attempted induction of arrhythmia to assess the efficacy of medication for suppression of arrhythmia

Scenario 6.5: Physician CPT® Codes¹

93624-26⁴ Electrophysiologic follow-up study with pacing and recording to test effectiveness of therapy, including induction or attempted induction of arrhythmia

Add conscious sedation codes as appropriate (see page 17)

Scenario 6.5: Hospital Outpatient CPT® Codes²

93624 Electrophysiologic follow-up study with pacing and recording to test effectiveness of therapy, including induction or attempted induction of arrhythmia

Add conscious sedation codes as appropriate (see page 17)

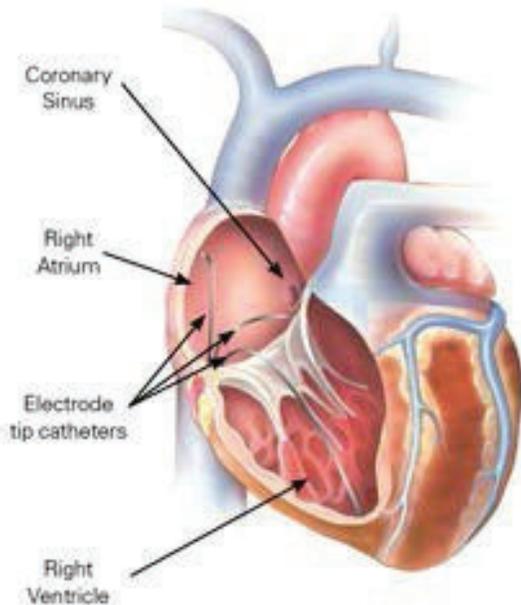
Scenario 6.5: Possible Hospital Inpatient ICD-10-PCS Codes³

4A023FZ Measurement of Cardiac Rhythm, Percutaneous Approach

Note: Some of the codes presented above may be used to code for a variety of procedures (diagnostic and therapeutic) employed in the field of electrophysiology, including atrial fibrillation, atrial flutter, AV Node, SVT and VT ablations. Please note that no Boston Scientific products are approved for sale in the US for atrial fibrillation ablations.

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2. As of January 1, 2005, the Centers for Medicare and Medicaid Services (CMS) require hospitals to report all device category codes (C-codes) on Medicare outpatient claims when medical devices are used in conjunction with procedure(s) billed.
Find C-codes for CRM devices at <http://www.bostonscientific.com/en-US/reimbursement/ccode-finder.html>. Also find C-codes for CRM devices and related accessories (e.g., introducers, catheters, sheaths) at <https://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/HospitalOutpatientPPS/Downloads/Complelist-DeviceCats-OPPS.pdf>.
3. The Complete Official Codebook ICD-10-PCS Copyright 2017 Optum360, LLC.
4. Modifiers 26 (professional component) and 51 (multiple procedures) are for physician billing only. See the AMA's *2018 Current Procedural Terminology* for complete descriptions. Always verify appropriate usage with payers.

Intracardiac Catheter Ablation Coding Overview



Intracardiac Catheter Ablation

Intracardiac catheter ablation is a procedure in which electrode tip catheters are placed in the heart and energy is delivered through the catheter to destroy cardiac tissue that is either causing an arrhythmia or allowing an arrhythmia to perpetuate.

The ablation catheter is placed adjacent to the cardiac tissue responsible for the arrhythmia, and the tissue is destroyed using radiofrequency electrical energy, microwave, or extreme cold temperatures (cryoablation). The ablation creates a block through which the electrical impulses can no longer cross and is intended to restore the normal electrical pathways of the heart, allowing it to beat normally again. Arrhythmias arising in the:

- » Right atrium or right ventricle are ablated with catheters placed transvenously in the appropriate cardiac chamber
- » Left atrium can be ablated using a catheter placed via a retrograde aortic approach (through the aorta, across the aortic valve, and through the mitral valve) or, more commonly, via a transseptal approach¹ (across the intra-atrial septum).

A STEP-BY-STEP DESCRIPTION OF A TYPICAL CATHETER ABLATION

1. Introducer sheaths are placed in the femoral vein.
2. Under fluoroscopic guidance, multiple electrode catheters are advanced through the sheaths into the heart.
3. The catheters are attached to a recording device allowing display of the intracardiac electrograms obtained from the catheter tip.
4. An arrhythmia is induced (or attempted), and the origin of the tachycardia is confirmed and localized.
5. The ablation catheter tip is moved to the arrhythmogenic focus or pathway guided by the electrical recordings and fluoroscopy.
6. Radiofrequency electrical energy, microwave energy, or cryoablation is applied to the cardiac tissue, ablating the focus or pathway.
7. Post-ablation testing is performed to verify that the tachycardia cannot be induced.
8. The catheters and sheaths are withdrawn.

Note: This document is for reference purposes only and does not replace physicians' medical documentation. Scenarios included within this document do not encompass all possible procedures.

Commonly Billed Intracardiac Catheter Ablation Scenarios

KEY

+ Add-on code

■ Physician CPT® Codes¹■ Hospital Outpatient CPT® Codes²■ Possible Hospital Inpatient ICD-10-PCS® Codes³

6.6 Comprehensive EP Study with induction of arrhythmia, mapping, AV node ablation and insertion of dual chamber pacemaker

Scenario 6.6: Physician CPT® Codes¹

93620-26⁴ 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

+ 93609-26⁴ 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)

93650 Intracardiac catheter ablation of atrioventricular node function, atrioventricular conduction for creation of complete heart block, with or without temporary pacemaker placement

33208-51⁴ Insertion of new or replacement of permanent pacemaker with transvenous electrodes; atrial and ventricular

Add conscious sedation codes as appropriate (see page 17)

Scenario 6.6: Hospital Outpatient CPT® Codes²

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

+ 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)

93650 Intracardiac catheter ablation of atrioventricular node function, atrioventricular conduction for creation of complete heart block, with or without temporary pacemaker placement

33208 Insertion of new or replacement of permanent pacemaker with transvenous electrodes; atrial and ventricular

Add conscious sedation codes as appropriate (see page 17)

6.6 Partial (limited) EP Study *pacing and recording in the RA and Hisbundle*

Scenario 6.6: Possible Hospital Inpatient ICD-10-PCS Codes³

4A023FZ	Measurement of Cardiac Rhythm, Percutaneous Approach
02K80ZZ	Map Conduction Mechanism, Open Approach
02K83ZZ	Map Conduction Mechanism, Percutaneous Approach
02K84ZZ	Map Conduction Mechanism, Percutaneous Endoscopic Approach
02H64JZ	Insertion of Pacemaker Lead into Right Atrium, Percutaneous Endoscopic Approach
02HK4JZ	Insertion of Pacemaker Lead into Right Ventricle, Percutaneous Endoscopic Approach
02HK3JZ	Insertion of Pacemaker Lead into Right Ventricle, Percutaneous Approach
02HK4JZ	Insertion of Pacemaker Lead into Right Ventricle, Percutaneous Endoscopic Approach
0JH606Z	Insertion of Pacemaker, Dual Chamber into Chest Subcutaneous Tissue and Fascia, Open Approach
0JH636Z	Insertion of Pacemaker, Dual Chamber into Chest Subcutaneous Tissue and Fascia, Percutaneous Approach
0JH806Z	Insertion of Pacemaker, Dual Chamber into Abdomen Subcutaneous Tissue and Fascia, Open Approach
0JH836Z	Insertion of Pacemaker, Dual Chamber into Abdomen Subcutaneous Tissue and Fascia, Percutaneous Approach

6.7 AV node ablation with CRT-D implant and DFT testing

Scenario 6.7: Physician CPT® Codes¹

33249	Insertion or replacement of permanent implantable defibrillator system with transvenous lead(s), single or dual chamber
+ 33225	Insertion of pacing electrode, cardiac venous system, for left ventricular pacing, at time of insertion of implantable defibrillator or pacemaker pulse generator (eg, for upgrade to dual chamber system) <i>(List separately in addition to code for primary procedure)</i>
93641-26/51 ⁴	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
93650	Intracardiac catheter ablation of atrioventricular node function, atrioventricular conduction for creation of complete heart block, with or without temporary pacemaker placement

Add conscious sedation codes as appropriate (see page 17)

Scenario 6.7: Hospital Outpatient CPT® Codes²

33249	Insertion or replacement of permanent implantable defibrillator system with transvenous lead(s), single or dual chamber
33225	Insertion of pacing electrode, cardiac venous system, for left ventricular pacing, at time of insertion of implantable defibrillator or pacemaker pulse generator (eg, for upgrade to dual chamber system) <i>(List separately in addition to code for primary procedure)</i>
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
93650	Intracardiac catheter ablation of atrioventricular node function, atrioventricular conduction for creation of complete heart block, with or without temporary pacemaker placement

Add conscious sedation codes as appropriate (see page 17)

Scenario 6.7: Possible Hospital Inpatient ICD-10-PCS Codes³

0JH609Z	Insertion of Cardiac Resynchronization Defibrillator Pulse Generator into Chest Subcutaneous Tissue and Fascia, Open Approach
0JH639Z	Insertion of Cardiac Resynchronization Defibrillator Pulse Generator into Chest Subcutaneous Tissue and Fascia, Percutaneous Approach
0JH809Z	Insertion of Cardiac Resynchronization Defibrillator Pulse Generator into Abdomen Subcutaneous Tissue and Fascia, Open Approach
0JH839Z	Insertion of Cardiac Resynchronization Defibrillator Pulse Generator into Abdomen Subcutaneous Tissue and Fascia, Percutaneous Approach
02HK3KZ	Insertion of Defibrillator Lead into Right Ventricle, Percutaneous Approach
02HK4KZ	Insertion of Defibrillator Lead into Right Ventricle, Percutaneous Endoscopic Approach
02HL3KZ	Insertion of Defibrillator Lead into Left Ventricle, Percutaneous Approach
02HL4KZ	Insertion of Defibrillator Lead into Left Ventricle, Percutaneous Endoscopic Approach
B5060ZZ	Plain Radiography of Right Subclavian Vein using High Osmolar Contrast
B5061ZZ	Plain Radiography of Right Subclavian Vein using Low Osmolar Contrast
B506YZZ	Plain Radiography of Right Subclavian Vein using Other Contrast
B5070ZZ	Plain Radiography of Left Subclavian Vein using High Osmolar Contrast
B5071ZZ	Plain Radiography of Left Subclavian Vein using Low Osmolar Contrast
B507YZZ	Plain Radiography of Left Subclavian Vein using Other Contrast
B5160ZZ	Fluoroscopy of Right Subclavian Vein using High Osmolar Contrast
B5161ZZ	Fluoroscopy of Right Subclavian Vein using Low Osmolar Contrast
B516YZZ	Fluoroscopy of Right Subclavian Vein using Other Contrast
B516ZZZ	Fluoroscopy of Right Subclavian Vein
B5170ZZ	Fluoroscopy of Left Subclavian Vein using High Osmolar Contrast
B5171ZZ	Fluoroscopy of Left Subclavian Vein using Low Osmolar Contrast
B517YZZ	Fluoroscopy of Left Subclavian Vein using Other Contrast
B517ZZZ	Fluoroscopy of Left Subclavian Vein
02583ZZ	Destruction of conduction mechanism, percutaneous approach

6.8 Comprehensive Electrophysiology Study with Ablation for AVNRT (SVT Ablation) and mapping

Scenario 6.8: Physician CPT® Codes¹

93653 Comprehensive electrophysiologic evaluation including insertion and repositioning of multiple electrode catheters with induction or attempted induction of an arrhythmia with right atrial pacing and recording, right ventricular pacing and recording (when necessary), and HIS bundle recording (when necessary) with intracardiac catheter ablation of arrhythmogenic focus; with treatment of supraventricular tachycardia by ablation of fast or slow atrioventricular pathway, accessory atrioventricular connection, cavo-tricuspid isthmus or other single atrial focus or source of atrial re- entry

+ 93609-26⁴ 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)

Add conscious sedation codes as appropriate (see page 17)

Scenario 6.8: Hospital Outpatient CPT® Codes²

93653 Comprehensive electrophysiologic evaluation including insertion and repositioning of multiple electrode catheters with induction or attempted induction of an arrhythmia with right atrial pacing and recording, right ventricular pacing and recording (when necessary), and HIS bundle recording (when necessary) with intracardiac catheter ablation of arrhythmogenic focus; with treatment of supraventricular tachycardia by ablation of fast or slow atrioventricular pathway, accessory atrioventricular connection, cavo-tricuspid isthmus or other single atrial focus or source of atrial re- entry

+ 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)

Add conscious sedation codes as appropriate (see page 17)

Scenario 6.8: Possible Hospital Inpatient ICD-10-PCS Codes³

4A023FZ Measurement of Cardiac Rhythm, Percutaneous Approach

02583ZZ Destruction of Conduction Mechanism, Percutaneous Approach

02K80ZZ Map Conduction Mechanism, Open Approach

02K83ZZ Map Conduction Mechanism, Percutaneous Approach

02K84ZZ Map Conduction Mechanism, Percutaneous Endoscopic Approach

6.9 Comprehensive EP study and ablation of single accessory pathway *with mapping*

Scenario 6.9: Physician CPT® Codes¹

- | | |
|-------------------------|--|
| 93653 | Comprehensive electrophysiologic evaluation including insertion and repositioning of multiple electrode catheters with induction or attempted induction of an arrhythmia with right atrial pacing and recording, right ventricular pacing and recording (when necessary), and HIS bundle recording (when necessary) with intracardiac catheter ablation of arrhythmogenic focus; with treatment of supraventricular tachycardia by ablation of fast or slow atrioventricular pathway, accessory atrioventricular connection, cavo-tricuspid isthmus or other single atrial focus or source of atrial re- entry |
| + 93609-26 ⁴ | 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) |

Add conscious sedation codes as appropriate (see page 17)

Scenario 6.9: Hospital Outpatient CPT® Codes²

- | | |
|---------|--|
| 93653 | Comprehensive electrophysiologic evaluation including insertion and repositioning of multiple electrode catheters with induction or attempted induction of an arrhythmia with right atrial pacing and recording, right ventricular pacing and recording (when necessary), and HIS bundle recording (when necessary) with intracardiac catheter ablation of arrhythmogenic focus; with treatment of supraventricular tachycardia by ablation of fast or slow atrioventricular pathway, accessory atrioventricular connection, cavo-tricuspid isthmus or other single atrial focus or source of atrial re- entry |
| + 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) |

Add conscious sedation codes as appropriate (see page 17)

Scenario 6.9: Possible Hospital Inpatient ICD-10-PCS Codes³

- | | |
|---------|--|
| 4A023FZ | Measurement of Cardiac Rhythm, Percutaneous Approach |
| 02583ZZ | Destruction of conduction mechanism, percutaneous approach |
| 02K80ZZ | Map Conduction Mechanism, Open Approach |
| 02K83ZZ | Map Conduction Mechanism, Percutaneous Approach |
| 02K84ZZ | Map Conduction Mechanism, Percutaneous Endoscopic Approach |

6.10 SVT ablation with comprehensive EP study, mapping and intracardiac echocardiography (ICE)

Scenario 6.10: Physician CPT® Codes¹

93653	Comprehensive electrophysiologic evaluation including insertion and repositioning of multiple electrode catheters with induction or attempted induction of an arrhythmia with right atrial pacing and recording, right ventricular pacing and recording (when necessary), and HIS bundle recording (when necessary) with intracardiac catheter ablation of arrhythmogenic focus; with treatment of supraventricular tachycardia by ablation of fast or slow atrioventricular pathway, accessory atrioventricular connection, cavo-tricuspid isthmus or other single atrial focus or source of atrial re- entry
+ 93609-26 ⁴	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)
+ 93662-26 ⁴	Intracardiac echocardiography during therapeutic/diagnostic intervention, including imaging supervision and interpretation (List separately in addition to code for primary procedure)

Add conscious sedation codes as appropriate (see page 17)

Scenario 6.10: Hospital Outpatient CPT® Codes²

93653	Comprehensive electrophysiologic evaluation including insertion and repositioning of multiple electrode catheters with induction or attempted induction of an arrhythmia with right atrial pacing and recording, right ventricular pacing and recording (when necessary), and HIS bundle recording (when necessary) with intracardiac catheter ablation of arrhythmogenic focus; with treatment of supraventricular tachycardia by ablation of fast or slow atrioventricular pathway, accessory atrioventricular connection, cavo-tricuspid isthmus or other single atrial focus or source of atrial re- entry
+ 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)
+ 93662	Intracardiac echocardiography during therapeutic/diagnostic intervention, including imaging supervision and interpretation (List separately in addition to code for primary procedure)

Add conscious sedation codes as appropriate (see page 17)

Scenario 6.10: Possible Hospital Inpatient ICD-10-PCS Codes³

4A023FZ	Measurement of Cardiac Rhythm, Percutaneous Approach
02K80ZZ	Map Conduction Mechanism, Open Approach
02K83ZZ	Map Conduction Mechanism, Percutaneous Approach
02K84ZZ	Map Conduction Mechanism, Percutaneous Endoscopic Approach
B244YZZ	Ultrasonography of Right Heart using Other Contrast
B244ZZZ	Ultrasonography of Right Heart
B245YZZ	Ultrasonography of Left Heart using Other Contrast
B245ZZZ	Ultrasonography of Left Heart
B246YZZ	Ultrasonography of Right and Left Heart using Other Contrast
B246ZZZ	Ultrasonography of Right and Left Heart
02583ZZ	Destruction of conduction mechanism, percutaneous approach

6.11 VT ablation with 3D mapping and intracardiac echocardiography (ICE)

Scenario 6.11: Physician CPT® Codes¹

93654 Comprehensive electrophysiologic evaluation including insertion and repositioning of multiple electrode catheters with induction or attempted induction of an arrhythmia with right atrial pacing and recording, right ventricular pacing and recording, HIS recording with intracardiac catheter ablation of arrhythmogenic focus; with treatment of ventricular tachycardia or focus of ventricular ectopy including intracardiac electrophysiologic 3D mapping, when performed, and left ventricular pacing and recording, when performed

+ 93662-26⁴ Intracardiac echocardiography during therapeutic/diagnostic intervention, including imaging supervision and interpretation (*List separately in addition to code for primary procedure*)

Add conscious sedation codes as appropriate (see page 17)

Scenario 6.11: Hospital Outpatient CPT® Codes²

93654 Comprehensive electrophysiologic evaluation including insertion and repositioning of multiple electrode catheters with induction or attempted induction of an arrhythmia with right atrial pacing and recording, right ventricular pacing and recording, HIS recording with intracardiac catheter ablation of arrhythmogenic focus; with treatment of ventricular tachycardia or focus of ventricular ectopy including intracardiac electrophysiologic 3D mapping, when performed, and left ventricular pacing and recording, when performed

+ 93662 Intracardiac echocardiography during therapeutic/diagnostic intervention, including imaging supervision and interpretation (*List separately in addition to code for primary procedure*)

Add conscious sedation codes as appropriate (see page 17)

Scenario 6.11: Possible Hospital Inpatient ICD-10-PCS Codes³

4A023FZ Measurement of Cardiac Rhythm, Percutaneous Approach

02K80ZZ Map Conduction Mechanism, Open Approach

02K83ZZ Map Conduction Mechanism, Percutaneous Approach

02K84ZZ Map Conduction Mechanism, Percutaneous Endoscopic Approach

B244YZZ Ultrasonography of Right Heart using Other Contrast

B244ZZZ Ultrasonography of Right Heart

B245YZZ Ultrasonography of Left Heart using Other Contrast

B245ZZZ Ultrasonography of Left Heart

B246YZZ Ultrasonography of Right and Left Heart using Other Contrast

B246ZZZ Ultrasonography of Right and Left Heart

02583ZZ Destruction of conduction mechanism, percutaneous approach

Note: For transseptal puncture, use code 93462 Left heart catheterization by transseptal puncture through intact septum or by transapical puncture. List separately in addition to code for primary procedure. Use 93462 in conjunction with 33477, 93452, 93453, 93458-93461, 93582, 93653, 93654. Use 93462 in conjunction with 93590, 93591 for transapical puncture performed for left heart catheterization and percutaneous transcatheter closure of paravalvular leak. Do NOT report 93462 in conjunction with 93590 for transeptal puncture through intact septum performed for left heart catheterization and percutaneous transcatheter closure of paravalvular leak. Do NOT report 93462 in conjunction with 0345T unless transapical puncture is performed. Do NOT report 93462 in conjunction with 93656.

Note: Some of the codes presented above may be used to code for a variety of procedures (diagnostic and therapeutic) employed in the field of electrophysiology, including atrial fibrillation, atrial flutter, AV Node, SVT and VT ablations. Please note that no Boston Scientific products are approved for sale in the US for atrial fibrillation ablations.

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2. As of January 1, 2005, the Centers for Medicare and Medicaid Services (CMS) require hospitals to report all device category codes (C-codes) on Medicare outpatient claims when medical devices are used in conjunction with procedure(s) billed. Find C-codes for CRM devices at <http://www.bostonscientific.com/en-US/reimbursement/ccode-finder.html>. Also find C-codes for CRM devices and related accessories (e.g., introducers, catheters, sheaths) at <https://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/HospitalOutpatientPPS/Downloads/Complete-list-DeviceCats-OPPS.pdf>.
3. The Complete Official Codebook ICD-10-PCS Copyright 2017 Optum360, LLC.
4. Modifiers 26 (professional component) and 51 (multiple procedures) are for physician billing only. See the AMA's *2018 Current Procedural Terminology* for complete descriptions. Always verify appropriate usage with payers.



Cardiac Device Monitoring

Commonly Billed Cardiac Device
Monitoring Scenarios 7-1

Commonly Billed Cardiac Device Monitoring Scenarios

KEY

+ Add-on code

■ Physician CPT® Codes¹■ Hospital Outpatient CPT® Codes²■ Possible Hospital Inpatient ICD-10-PCS® Codes³

7.1 Dual chamber pacemaker follow-up (in person)

Scenario 7.1: Physician CPT® Codes¹

93288 Interrogation device evaluation (in person) with analysis, review and report by a physician or other qualified health care professional, includes connection, recording and disconnection per patient encounter; single, dual, or multiple lead or leadless pacemaker system

or **93280** Programming device evaluation (in person) with iterative adjustment of the implantable device to test the function of the device and select optimal permanent values with analysis, review and report by a physician or other qualified health care professional; dual lead or leadless pacemaker system

Scenario 7.1: Hospital Outpatient CPT® Codes²

93288 Interrogation device evaluation (in person) with analysis, review and report by a physician or other qualified health care professional, includes connection, recording and disconnection per patient encounter; single, dual, or multiple lead or leadless pacemaker system

or **93280** Programming device evaluation (in person) with iterative adjustment of the implantable device to test the function of the device and select optimal permanent values with analysis, review and report by a physician or other qualified health care professional; dual lead or leadless pacemaker system

Scenario 7.1: Possible Hospital Inpatient ICD-10-PCS Codes³

4B02XSZ Measurement of Cardiac Pacemaker, External Approach

7.2 Dual chamber pacemaker follow-up (remote)

Scenario 7.2: Physician CPT® Codes¹

93294 Interrogation device evaluation(s) (remote), up to 90 days; single, dual, or multiple lead or leadless pacemaker system with interim analysis, review(s) and report(s) by a physician or other qualified health care professional

and **93296** Interrogation device evaluation(s) (remote), up to 90 days; single, dual, or multiple lead or leadless pacemaker system or implantable defibrillator system, remote data acquisition(s), receipt of transmissions and technician review, technical support and distribution of results

Scenario 7.2: Hospital Outpatient CPT® Codes²

93294 Interrogation device evaluation(s) (remote), up to 90 days; single, dual, or multiple lead or leadless pacemaker system with interim analysis, review(s) and report(s) by a physician or other qualified health care professional

and **93296** Interrogation device evaluation(s) (remote), up to 90 days; single, dual, or multiple lead or leadless pacemaker system or implantable defibrillator system, remote data acquisition(s), receipt of transmissions and technician review, technical support and distribution of results

Scenario 7.2: Possible Hospital Inpatient ICD-10-PCS Codes³

N/A

73 Single chamber ICD follow-up (in person)**Scenario 7.3: Physician CPT® Codes¹**

	93289	Interrogation device evaluation (in person) with analysis, review and report by a physician or other qualified health care professional, includes connection, recording and disconnection per patient encounter; single, dual, or multiple lead transvenous implantable defibrillator system, including analysis of heart rhythm derived data elements
or	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 analysis, review and report by a physician or other qualified health care professional; single lead transvenous implantable defibrillator system

Scenario 7.3: Hospital Outpatient CPT® Codes²

	93289	Interrogation device evaluation (in person) with analysis, review and report by a physician or other qualified health care professional, includes connection, recording and disconnection per patient encounter; single, dual, or multiple lead transvenous implantable defibrillator system, including analysis of heart rhythm derived data elements
or	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 analysis, review and report by a physician or other qualified health care professional; single lead transvenous implantable defibrillator system

Scenario 7.3: Possible Hospital Inpatient ICD-10-PCS Codes³

4B02XTZ	Measurement of Cardiac Defibrillator, External Approach
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74 Dual chamber ICD follow-up (in person)**Scenario 7.4: Physician CPT® Codes¹**

	93289	Interrogation device evaluation (in person) with analysis, review and report by a physician or other qualified health care professional, includes connection, recording and disconnection per patient encounter; single, dual, or multiple lead transvenous implantable defibrillator system, including analysis of heart rhythm derived data elements
and	93283	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 analysis, review and report by a physician or other qualified health care professional; dual lead transvenous implantable defibrillator system

Scenario 7.4: Hospital Outpatient CPT® Codes²

	93289	Interrogation device evaluation (in person) with analysis, review and report by a physician or other qualified health care professional, includes connection, recording and disconnection per patient encounter; single, dual, or multiple lead transvenous implantable defibrillator system, including analysis of heart rhythm derived data elements
and	93283	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 analysis, review and report by a physician or other qualified health care professional; dual lead transvenous implantable defibrillator system

Scenario 7.4: Possible Hospital Inpatient ICD-10-PCS Codes³

4B02XTZ	Measurement of Cardiac Defibrillator, External Approach
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75 ICD follow-up (remote)

Scenario 7.5: Physician CPT® Codes¹

93295 Interrogation device evaluation(s) (remote), up to 90 days; single, dual, or multiple lead implantable defibrillator system with interim analysis, review(s) and report(s) by a physician or other qualified health care professional

and 93296 Interrogation device evaluation(s) (remote), up to 90 days; single, dual, or multiple lead pacemaker system or implantable defibrillator system, remote data acquisition(s), receipt of transmissions and technician review, technical support and distribution of results

Scenario 7.5: Hospital Outpatient CPT® Codes²

93295 Interrogation device evaluation(s) (remote), up to 90 days; single, dual, or multiple lead implantable defibrillator system with interim analysis, review(s) and report(s) by a physician or other qualified health care professional

and 93296 Interrogation device evaluation(s) (remote), up to 90 days; single, dual, or multiple lead pacemaker system or implantable defibrillator system, remote data acquisition(s), receipt of transmissions and technician review, technical support and distribution of results

Scenario 7.5: Possible Hospital Inpatient ICD-10-PCS Codes³

N/A

76 ICD follow-up (remote) with analysis of Implantable Cardiovascular Monitor (ICM)

Scenario 7.6: Physician CPT® Codes¹

93295 Interrogation device evaluation(s) (remote), up to 90 days; single, dual, or multiple lead implantable defibrillator system with interim analysis, review(s) and report(s) by a physician or other qualified health care professional

93296 Interrogation device evaluation(s) (remote), up to 90 days; single, dual, or multiple lead pacemaker system or implantable defibrillator system, remote data acquisition(s), receipt of transmissions and technician review, technical support and distribution of results

and 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, analysis, review(s) and report(s) by a physician or other qualified health care professional

Scenario 7.6: Hospital Outpatient CPT® Codes²

93295 Interrogation device evaluation(s) (remote), up to 90 days; single, dual, or multiple lead implantable defibrillator system with interim analysis, review(s) and report(s) by a physician or other qualified health care professional

93296 Interrogation device evaluation(s) (remote), up to 90 days; single, dual, or multiple lead pacemaker system or implantable defibrillator system, remote data acquisition(s), receipt of transmissions and technician review, technical support and distribution of results

and 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, analysis, review(s) and report(s) by a physician or other qualified health care professional

Scenario 7.6: Possible Hospital Inpatient ICD-10-PCS Codes³

N/A

77 CRT-P (3 leads) follow-up (in person)**Scenario 7.7: Physician CPT® Codes¹**

93288 Interrogation device evaluation (in person) with analysis, review and report by a physician or other qualified health care professional, includes connection, recording and disconnection per patient encounter; single, dual, or multiple lead pacemaker system

or **93281** 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 analysis, review and report by a physician or other qualified health care professional; multiple lead pacemaker system

Scenario 7.7: Hospital Outpatient CPT® Codes²

93288 Interrogation device evaluation (in person) with analysis, review and report by a physician or other qualified health care professional, includes connection, recording and disconnection per patient encounter; single, dual, or multiple lead pacemaker system

or **93281** 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 analysis, review and report by a physician or other qualified health care professional; multiple lead pacemaker system

Scenario 7.7: Possible Hospital Inpatient ICD-10-PCS Codes³

4B02XSZ Measurement of Cardiac Pacemaker, External Approach

78 CRT-P follow-up (remote)**Scenario 7.8: Physician CPT® Codes¹**

93294 Interrogation device evaluation(s) (remote), up to 90 days; single, dual, or multiple lead pacemaker system with interim analysis, review(s) and report(s) by a physician or other qualified health care professional

and **93296** Interrogation device evaluation(s) (remote), up to 90 days; single, dual, or multiple lead pacemaker system or implantable defibrillator system, remote data acquisition(s), receipt of transmissions and technician review, technical support and distribution of results

Scenario 7.8: Hospital Outpatient CPT® Codes²

93294 Interrogation device evaluation(s) (remote), up to 90 days; single, dual, or multiple lead pacemaker system with interim analysis, review(s) and report(s) by a physician or other qualified health care professional

and **93296** Interrogation device evaluation(s) (remote), up to 90 days; single, dual, or multiple lead pacemaker system or implantable defibrillator system, remote data acquisition(s), receipt of transmissions and technician review, technical support and distribution of results

Scenario 7.8: Possible Hospital Inpatient ICD-10-PCS Codes³

N/A

7.9 CRT-P follow-up (remote) with analysis of Implantable Cardiovascular Monitor (ICM) data**Scenario 7.9: Physician CPT® Codes¹**

	93294	Interrogation device evaluation (in person) with analysis, review and report by a physician or other qualified health care professional, includes connection, recording and disconnection per patient encounter; single, dual, or multiple lead pacemaker system
	93296	Programming device evaluation (in person) with iterative adjustment of the implantable device to test the function of the device and select optimal permanent values with analysis, review and report by a physician or other qualified health care professional; dual lead pacemaker system
and	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, analysis, review(s) and report(s) by a physician or other qualified health care professional

Scenario 7.9: Hospital Outpatient CPT® Codes²

	93294	Interrogation device evaluation (in person) with analysis, review and report by a physician or other qualified health care professional, includes connection, recording and disconnection per patient encounter; single, dual, or multiple lead pacemaker system
	93296	Programming device evaluation (in person) with iterative adjustment of the implantable device to test the function of the device and select optimal permanent values with analysis, review and report by a physician or other qualified health care professional; dual lead pacemaker system
and	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, analysis, review(s) and report(s) by a physician or other qualified health care professional

Scenario 7.9: Possible Hospital Inpatient ICD-10-PCS Codes³

N/A

7.10 CRT-D (3 leads) follow-up (in person)**Scenario 7.10: Physician CPT® Codes¹**

	93289	Interrogation device evaluation (in person) with analysis, review and report by a physician or other qualified health care professional, includes connection, recording and disconnection per patient encounter; single, dual, or multiple lead transvenous implantable defibrillator system, including analysis of heart rhythm derived data elements
or	93284	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 analysis, review and report by a physician or other qualified health care professional; multiple lead transvenous implantable defibrillator system

Scenario 7.10: Hospital Outpatient CPT® Codes²

	93289	Interrogation device evaluation (in person) with analysis, review and report by a physician or other qualified health care professional, includes connection, recording and disconnection per patient encounter; single, dual, or multiple lead transvenous implantable defibrillator system, including analysis of heart rhythm derived data elements
or	93284	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 analysis, review and report by a physician or other qualified health care professional; multiple lead transvenous implantable defibrillator system

Scenario 7.10: Possible Hospital Inpatient ICD-10-PCS Codes³**4B02XSZ** Measurement of Cardiac Pacemaker, External Approach

7.11 CRT-D follow-up (remote)

Scenario 7.11: Physician CPT® Codes¹

93295 Interrogation device evaluation(s) (remote), up to 90 days; single, dual, or multiple lead implantable defibrillator system with interim analysis, review(s) and report(s) by a physician or other qualified health care professional

and 93296 Interrogation device evaluation(s) (remote), up to 90 days; single, dual, or multiple lead pacemaker system or implantable defibrillator system, remote data acquisition(s), receipt of transmissions and technician review, technical support and distribution of results

Scenario 7.11: Hospital Outpatient CPT® Codes²

93295 Interrogation device evaluation(s) (remote), up to 90 days; single, dual, or multiple lead implantable defibrillator system with interim analysis, review(s) and report(s) by a physician or other qualified health care professional

and 93296 Interrogation device evaluation(s) (remote), up to 90 days; single, dual, or multiple lead pacemaker system or implantable defibrillator system, remote data acquisition(s), receipt of transmissions and technician review, technical support and distribution of results

Scenario 7.11: Possible Hospital Inpatient ICD-10-PCS Codes³

N/A

7.12 CRT-D follow-up (remote) with analysis of implantable cardiovascular monitor (ICM)

Scenario 7.12: Physician CPT® Codes¹

93295 Interrogation device evaluation(s) (remote), up to 90 days; single, dual, or multiple lead implantable defibrillator system with interim analysis, review(s) and report(s) by a physician or other qualified health care professional

93296 Interrogation device evaluation(s) (remote), up to 90 days; single, dual, or multiple lead pacemaker system or implantable defibrillator system, remote data acquisition(s), receipt of transmissions and technician review, technical support and distribution of results

and 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, analysis, review(s) and report(s) by a physician or other qualified health care professional

Scenario 7.12: Hospital Outpatient CPT® Codes²

93295 Interrogation device evaluation(s) (remote), up to 90 days; single, dual, or multiple lead implantable defibrillator system with interim analysis, review(s) and report(s) by a physician or other qualified health care professional

93296 Interrogation device evaluation(s) (remote), up to 90 days; single, dual, or multiple lead pacemaker system or implantable defibrillator system, remote data acquisition(s), receipt of transmissions and technician review, technical support and distribution of results

and 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, analysis, review(s) and report(s) by a physician or other qualified health care professional

Scenario 7.12: Possible Hospital Inpatient ICD-10-PCS Codes³

N/A

7.13 Remote analysis of Implantable Cardiovascular Physiologic Monitor (ICM)

Scenario 7.13: Physician CPT® Codes¹

	99453	Remote monitoring of physiologic parameter(s) (e.g. weight, blood pressure, pulse oximetry, respiratory flow rate) initial; set-up and patient education on use of the equipment
	93297	Interrogation device evaluation(s), (remote) up to 30 days; implantable cardiovascular physiologic monitor system, including analysis of 1 or more recorded physiologic cardiovascular data elements from all internal and external sensors, analysis, review(s) and report(s) by a physician or other qualified health care professional
and	93299	Interrogation device evaluation(s), (remote) up to 30 days; implantable cardiovascular physiologic monitor system or implantable loop recorder system, remote data acquisition(s), receipt of transmissions and technician review, technical support and distribution of results

Scenario 7.13: Hospital Outpatient CPT® Codes²

	93297	Interrogation device evaluation(s), (remote) up to 30 days; implantable cardiovascular physiologic monitor system, including analysis of 1 or more recorded physiologic cardiovascular data elements from all internal and external sensors, analysis, review(s) and report(s) by a physician or other qualified health care professional
and	93299	Interrogation device evaluation(s), (remote) up to 30 days; implantable cardiovascular physiologic monitor system or implantable loop recorder system, remote data acquisition(s), receipt of transmissions and technician review, technical support and distribution of results

Scenario 7.13: Possible Hospital Inpatient ICD-10-PCS Codes³

N/A

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- As of January 1, 2005, the Centers for Medicare and Medicaid Services (CMS) require hospitals to report all device category codes (C-codes) on Medicare outpatient claims when medical devices are used in conjunction with procedure(s) billed. Find C codes for Boston Scientific RM devices at <http://www.bostonscientific.com/en-US/reimbursement/ccode-finder.html>. Find C codes for Boston Scientific RM devices at <http://www.bostonscientific.com/en-US/reimbursement/ccode-finder.html>. Also find C-codes for CRM devices and related accessories (e.g., introducers, catheters, sheaths) at <https://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/HospitalOutpatientPPS/Downloads/Complelist-DeviceCats-OPPS.pdf>.
- The Complete Official Codebook ICD-10-PCS Copyright 2017 Optum360, LLC.
- Modifiers 26 (professional component) and 51 (multiple procedures) are for physician billing only. See the AMA's *2018 Current Procedural Terminology* for complete descriptions. Always verify appropriate usage with payers.



C-Codes

C-Codes

To obtain C codes, please access the Boston Scientific website C- Code Finder at <http://www.bostonscientific.com/en-US/reimbursement/ccode-finder.html>

Pulse Generators:

- C1721**-Cardioverter-defibrillator, dual chamber (implantable)
- C1722**-Cardioverter-defibrillator, single chamber (implantable)
- C1722**-Cardioverter-defibrillator, single chamber SICD)
- C1785**-Pacemaker, Dual chamber, (implantable)
- C1786**-Pacemaker, Single chamber (implantable)
- C1882**-Cardioverter-defibrillator, other than single or dual (CRT-D)
- C2621**-Pacemaker, other than single or dual (CRT-P)

LEADS:

- C1777**-Lead, cardioverter-defibrillator endocardial single coil
- C1895**-Lead cardioverter-defibrillator endocardial dual coil
- C1896**-Lead cardioverter-defibrillator (SICD)
- C1898**-Lead, Pacemaker VDD Single
- C1900**-Lead Left Ventricular (LV)

Catheters:

- C1730**-EP diagnostic other than 3-D mapping, 19 or fewer electrodes
- C1731**-EP diagnostic other than 3-D mapping, 20 or more electrodes
- C1732**-EP diagnostic, 3-D mapping, 19 or fewer electrodes
- C1733**-EP diagnostic/ablation other than 3-D, other than cool tip
- C1887**-Catheter Guiding
- C2630**-EP catheter diagnostic/ablation other than 3-D, cool tip

Other:

- C1769**-Guidewire
- C1894**-Introducer/sheath other than guiding, intracardiac EP non-laser

Appendix

CPT® Modifiers

CPT® Modifiers

The list below provides modifiers applicable to CPT® 2019 codes. See the AMA's *2018 Current Procedural Terminology Professional Edition Appendix A* for full definitions.¹

- 22 Increased Procedural Services
- 23 Unusual Anesthesia
- 24 Unrelated Evaluation and Management Service by the Same Physician or Other Qualified Health Care Professional During a Postoperative Period
- 25 Significant, Separately Identifiable Evaluation and Management Service by the Same Physician or Other Qualified Health Care Professional on the Same Day of the Procedure or Other Service
- 26 Professional Component
- 32 Mandated Services
- 33 Preventive Services
- 47 Anesthesia by Surgeon
- 50 Bilateral Procedure
- 51 Multiple Procedures
- 52 Reduced Services
- 53 Discontinued Procedure
- 54 Surgical Care Only
- 55 Postoperative Management Only
- 56 Preoperative Management Only
- 57 Decision for Surgery
- 58 Staged or Related Procedure or Service by the Same Physician or Other Qualified Health Care Professional During the Postoperative Period
- 59 Distinct Procedural Service
- 62 Two Surgeons
- 63 Procedure Performed on Infants less than 4 kg
- 66 Surgical Team
- 76 Repeat Procedure or Service by Same Physician or Other Qualified Health Care Professional
- 77 Repeat Procedure by Another Physician or Other Qualified Health Care Professional
- 78 Unplanned Return to the Operating/Procedure Room by the Same Physician or Other Qualified Health Care Professional Following Initial Procedure for a Related Procedure During the Postoperative Period
- 79 Unrelated Procedure or Service by the Same Physician or Other Qualified Health Care Professional During the Postoperative Period
- 80 Assistant Surgeon
- 81 Minimum Assistant Surgeon
- 82 Assistant Surgeon (when qualified resident surgeon not available)
- 90 Reference (Outside) Laboratory
- 91 Repeat Clinical Diagnostic Laboratory Test
- 92 Alternative Laboratory Platform Testing
- 95 Synchronous Telemedicine Service Rendered Via a Real-time Interactive Audio and Video Telecommunications System
- 99 Multiple Modifiers

CPT® Modifiers for Ambulatory Surgery Center (ASC) Hospital Outpatient Use

- 25 Significant, Separately Identifiable Evaluation, and Management Service by the Same Physician or Other Qualified Health Care Professional on the Same Day of the Procedure or Other Service
- 27 Multiple Outpatient Hospital E/M Encounters on the Same Date
- 33 Preventive Services
- 50 Bilateral Procedure
- 52 Reduced Service
- 58 Staged or Related Procedure or Service by the Same Physician or Other Qualified Health Care Professional During the Postoperative Period
- 59 Distinct Procedural Service
- 73 Discontinued Out Hospital/Ambulatory Surgery Center (ASC) Procedure Prior to the Administration of Anesthesia
- 74 Discontinued Out Patient Hospital/Ambulatory Surgery Center (ASC) Procedure After Administration of Anesthesia
- 76 Repeat Procedure or Service by Same Physician or Other Qualified Health Care Professional
- 77 Repeat Procedure by Another Physician or Other Qualified Health Care Professional
- 78 Unplanned Return to the Operating/Procedure Room by the Same Physician or Other Qualified Health Care Professional Following Initial Procedure for a Related Procedure During the Postoperative Period
- 79 Unrelated Procedure or Service by the Same Physician or Other Qualified Health Care Professional During the Postoperative Period
- 91 Repeat Clinical Diagnostic Laboratory Test

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