

Coding reference guide

Cardiac rhythm management and
cardiac catheter ablation procedures

Medtronic

Engineering the extraordinary



To healthcare providers

This Coding Resource includes the MS-DRGs and commonly billed procedure codes for common cardiac procedures. This is not a comprehensive list of all available codes, and it is possible that there is a more appropriate code for any given procedure.

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A few notes about coding systems and Medicare payment methodologies

ICD-10 procedure coding

ICD-10-PCS codes for inpatient procedure coding became effective October 1, 2015. This change does not impact CPT coding for physician and hospital outpatient procedure services. Physician and outpatient procedures will continue to use CPT coding to report procedures and all diagnosis coding will be reported using ICD-10-CM. Hospitals will report ICD-10-PCS codes for procedures that are performed on an inpatient basis. For more information, please visit the Medicare ICD-10 website at: <https://www.cms.gov/medicare/coding-billing/icd-10-codes>

ICD-10 diagnosis coding

Diagnosis codes are used by both physicians and hospitals to document the indication for the procedure. This will also include any additional diagnoses of other clinical conditions applicable to a healthcare visit. ICD-10-CM is used to classify all diagnoses associated with healthcare visits in all healthcare settings in the United States.

Hospital inpatient ICD-10 coding and reimbursement

Hospitals assign ICD-10 codes for both diagnoses and procedures for inpatient admissions. For Medicare, inpatient hospital reimbursement is under the Medicare Severity Diagnosis Related Groups (MS-DRG) system. For each admission, the ICD-10 diagnosis and procedure codes are grouped into one of 766 MS-DRGs. Regardless of the number of codes or procedures, only one MS-DRG is assigned to the inpatient hospital admission.

Hospital outpatient CPT® coding and reimbursement

Hospitals use CPT codes for outpatient services. Under Medicare's Ambulatory Payment Classification (APC) methodology for hospital outpatient payment, each CPT code is assigned to one of 985 ambulatory payment classes. Each APC has a relative weight that is then converted to a flat payment amount. Multiple APCs can sometimes be assigned for each encounter, depending on the number of procedures coded and whether any of the procedure codes map to a Comprehensive APC.

For 2024, there are 71 APCs which are designated as Comprehensive APCs (C-APCs). Each CPT procedure code assigned to one of these C-APCs is considered a primary service, and all other procedures and services coded on the bill are considered adjunctive to delivery of the primary service. This results in a single APC payment and a single beneficiary copayment for the entire outpatient encounter, based solely on the primary service.

Separate payment is not made for any of the other adjunctive services. Instead, the payment level for the C-APC is calculated to include the costs of the other adjunctive services, which are packaged into the payment for the primary service.

When more than one primary service is coded for the same outpatient encounter, the codes are ranked according to a fixed hierarchy. The C-APC is then assigned according to the highest ranked code. In some special circumstances, the combination of two primary services leads to a "complexity adjustment" in which the entire encounter is remapped to another higher-level APC.

The payment for many cardiac device and catheter ablation procedures is subject to C-APC rules.

Physician CPT® coding and reimbursement

Physicians use ICD-10-CM codes for diagnoses and CPT codes for procedures, regardless of whether the setting is inpatient, outpatient or the office. Under Medicare's Resource-Based Relative Value Scale (RBRVS) methodology for physician payment, each CPT code is assigned a point value, known as the relative value unit (RVU), which is part of the formula to determine the payment amount.

HCPCS codes

HCPCS codes are used to report supplies, drugs, and implants. HCPCS codes are reported by the physician, hospital or DME provider that purchased the item, device, or supply. For implantable devices, it is generally the facility that reports these devices. Different payers have different payment methods they use for these items. If the device or supply is reimbursed under the Durable Medical Equipment, Prosthetic, Orthotic or Supply (DMEPOS) Fee schedule, Medicare may reimburse based on a ceiling and floor amount, average wholesale price or other methodologies.

Device C codes

C codes are a subset of HCPCS codes and apply to many cardiac devices. Medicare provides C codes for hospital use in billing Medicare for medical devices in the outpatient setting and are required for device-intensive procedures. Non-Medicare payers may also require C-codes to be reported for devices. Check with individual payers for their requirements. You can access the C code finder on our website at: www.medtronic.com/c-code

Medicare severity diagnosis related groups (MS-DRGs)

Conceptual framework

There are 766 diagnosis-related groups based on the ICD-10-CM codes assigned to the diagnoses and ICD-10-PCS codes assigned to the procedures. Each MS-DRG has a relative weight that is then converted to a single payment amount. Only one MS-DRG is assigned for each inpatient stay, regardless of the number of procedures performed. The MS-DRGs shown are those typically assigned to the following scenarios. The MS-DRG assignments are case specific and other MS-DRGs may apply for different cases.

MS-DRGs are a significant modification to the prior DRG system, but not a radical one. They retain many of the refinements suggested by users over the years while updating other features. The purpose of the MS-DRGs is to "better recognize severity of illness and resource use based on case complexity."

The MS-DRG system became effective on October 1, 2007.

Severity classification

The "severity" designation of the MS-DRG system is a modification from the previous DRG system. In some cases, the presence of other diagnoses reflecting complications or comorbidities will indicate that a specific inpatient stay had a higher severity, resulting in an increase in the severity level of a DRG. As designed, the MS-DRG severity and weight increase with each tier. The severity is assigned dependent on each case's secondary diagnosis codes. Regardless of how many secondary diagnoses are present, only one major complication and comorbidity (MCC) or complication and comorbidity (CC) code is needed for the entire case to be assigned to a particular DRG of a higher severity. CMS maintains the list of all ICD-10-CM codes designated as MCC/CC which is updated annually on their website.

Medicare severity diagnosis related group (MS-DRG) descriptions

The MS-DRG codes shown are those typically assigned to the listed procedures. This is not an all-inclusive list. Other codes may apply based on specific documentation; the presence of other procedures or diagnosis codes during the inpatient stay may result in a different DRG assignment.

MS-DRG	MS-DRG description
Pacemaker procedures	
242	Permanent cardiac pacemaker implant w MCC
243	Permanent cardiac pacemaker implant w CC
244	Permanent cardiac pacemaker implant w/o CC/MCC
258	Cardiac pacemaker device replacement w MCC
259	Cardiac pacemaker device replacement w/o MCC
260	Cardiac pacemaker revision except device replacement w MCC
261	Cardiac pacemaker revision except device replacement w CC
262	Cardiac pacemaker revision except device replacement w/o CC/MCC
Leadless pacemaker procedures	
228	Other cardiothoracic procedures w MCC
229	Other cardiothoracic procedures w/o MCC
Implantable cardioverter defibrillator (ICD) procedures	
245	AICD generator procedures
265	AICD lead procedures
275	Cardiac defibrillator implant with cardiac catheterization and MCC
276	Cardiac defibrillator implant with MCC
277	Cardiac defibrillator implant without MCC
Implantable loop recorder (ILR) procedures	
040	Peripheral/cranial nerve & other nervous system procedures w MCC
041	Peripheral/cranial nerve & other nervous system procedures w CC or peripheral neurostimulation
042	Peripheral/cranial nerve & other nervous system procedures w/o CC/MCC
260	Cardiac pacemaker revision except device replacement w MCC
261	Cardiac pacemaker revision except device replacement w CC
262	Cardiac pacemaker revision except device replacement w/o CC/MCC
Ventricular assist device procedures	
001	Heart transplant or implant of heart assist system w MCC
002	Heart transplant or implant of heart assist system w/o MCC
215	Other heart assist system implant
268	Aortic and heart assist procedures except pulsation balloon w MCC
269	Aortic and heart assist procedures except pulsation balloon w/o MCC
Cardiac catheter ablation procedures	
273	Percutaneous and other intracardiac procedures w MCC
274	Percutaneous and other intracardiac procedures w/o MCC

Medicare severity diagnosis related group (MS-DRG) descriptions (cont'd)

MS-DRG	MS-DRG description
Heart failure	
291	Heart failure & shock w MCC or peripheral extracorporeal membrane oxygenation (ECMO)
292	Heart failure & shock w CC
293	Heart failure & shock w/o CC/MCC

ICD-10-PCS

ICD-10-PCS codes are reported by hospitals for procedures and other services provided on an inpatient basis. These codes are only reported by the facility. Physicians reported the services they performed with CPT codes. This is not an all-inclusive list. Other codes may apply based on specific documentation.

Pacemakers and CRT-P procedures

ICD-10-PCS code	Description
Insertion transvenous pacemaker generator	
0JH606Z	Insertion of pacemaker, dual chamber into chest subcutaneous tissue and fascia, open approach
0JH806Z	Insertion of pacemaker, dual chamber into abdomen subcutaneous tissue and fascia, open approach
0JH605Z	Insertion of pacemaker, single chamber rate responsive into chest subcutaneous tissue and fascia, open approach
0JH604Z	Insertion of pacemaker, single chamber into chest subcutaneous tissue and fascia, open approach
0JH804Z	Insertion of pacemaker, single chamber into abdomen subcutaneous tissue and fascia, open approach
0JH805Z	Insertion of pacemaker, single chamber rate responsive into abdomen subcutaneous tissue and fascia, open approach
Leadless pacemaker	
02HK3NZ 	Insertion of intracardiac pacemaker into right ventricle, percutaneous approach
Insertion of CRT-P generator	
0JH607Z	Insertion of cardiac resynchronization pacemaker pulse generator into chest subcutaneous tissue and fascia, open approach
0JH807Z	Insertion of cardiac resynchronization pacemaker pulse generator into abdomen subcutaneous tissue and fascia, open approach
Insertion of pacemaker or CRT-P leads	
02HK3JZ	Insertion of pacemaker lead into right ventricle, percutaneous approach
02H63JZ	Insertion of pacemaker lead into right atrium, percutaneous approach
02HN0JZ	Insertion of pacemaker lead into pericardium, open approach
02H43JZ	Insertion of pacemaker lead into coronary vein, percutaneous approach

 Medicare policy requires specific additional information on claims. See instructions [here](#).

Pacemakers and CRT-P procedures (cont'd)

ICD-10-PCS code	Description
Revision (or repair) of lead	
02WA0MZ	Revision of cardiac lead in heart, open approach
02WA3MZ	Revision of cardiac lead in heart, percutaneous approach
Revision of generator	
0JWT0PZ	Revision of cardiac rhythm-related device in trunk subcutaneous tissue and fascia, open approach
Removal of generator	
0JPT0PZ	Removal of cardiac rhythm-related device from trunk subcutaneous tissue and fascia, open approach
Removal of intracardiac (leadless) pacemaker	
02PA3NZ	Removal of intracardiac pacemaker from heart, percutaneous approach
Removal of lead(s)	
02PA0MZ	Removal of cardiac lead from heart, open approach
02PA3MZ	Removal of cardiac lead from heart, percutaneous approach
Cardiac pacing	
5A1213Z	Performance of cardiac pacing, intermittent
5A1223Z	Performance of cardiac pacing, continuous
Insertion of anti-infective envelope	
3E0102A	Introduction of anti-infective envelope into subcutaneous tissue, open approach

Defibrillator and CRT-D procedures

ICD-10-PCS code	Description
Insertion of defibrillator generator	
0JH608Z	Insertion of defibrillator generator into chest subcutaneous tissue and fascia, open approach
0JH808Z	Insertion of defibrillator generator into abdomen subcutaneous tissue and fascia, open approach
Insertion of CRT-D generator	
0JH609Z	Insertion of cardiac resynchronization defibrillator pulse generator into chest subcutaneous tissue and fascia, open approach
0JH809Z	Insertion of cardiac resynchronization defibrillator pulse generator into abdomen subcutaneous tissue and fascia, open approach
Insertion of defibrillator or CRT-D lead(s)	
02H63KZ	Insertion of defibrillator lead into right atrium, percutaneous approach
02HK3KZ	Insertion of defibrillator lead into right ventricle, percutaneous approach
02HN0KZ	Insertion of defibrillator lead into pericardium, open approach
02H43KZ	Insertion of defibrillator lead into coronary vein, percutaneous approach
Revision (or repair) of lead	
02WA0MZ	Revision of cardiac lead in heart, open approach
02WA3MZ	Revision of cardiac lead in heart, percutaneous approach
Revision of generator	
0JQT0PZ	Revision of cardiac rhythm-related device in trunk subcutaneous tissue and fascia, open approach

Defibrillator and CRT-D procedures (cont'd)

ICD-10-PCS code	Description
Removal of generator	
0JPT0PZ	Removal of cardiac rhythm-related device from trunk subcutaneous tissue and fascia, open approach
Removal of lead(s)	
02PA0MZ	Removal of cardiac lead from heart, open approach
02PA3MZ	Removal of cardiac lead from heart, percutaneous approach
Insertion of anti-infective envelope	
3E0102A	Introduction of anti-infective envelope into subcutaneous tissue, open approach
Insert EV ICD lead	
0WHC3GZ	Insertion of defibrillator lead into mediastinum, percutaneous approach
Revise or relocate pocket	
0JWT0PZ	Revision of cardiac rhythm-related device in trunk subcutaneous tissue and fascia, open approach

Diagnostic procedures (subcutaneous cardiac rhythm monitor)

ICD-10-PCS code	Description
Insertion of implantable loop recorder	
0JH63ZZ	Insertion of monitoring device into chest subcutaneous tissue and fascia, percutaneous approach
Removal of implantable loop recorder	
0JPT3ZZ	Removal of monitoring device from trunk subcutaneous tissue and fascia, percutaneous approach
Mobile cardiac telemetry (including Holter)	
4A12X45	Monitoring of cardiac electrical activity, ambulatory, external approach

Ventricular assist device procedures

ICD-10-PCS code	Description
Insertion of ventricular assist device	
02HA0QZ	Insertion of implantable heart assist system into heart, open approach
Revision of ventricular assist device	
02WA0QZ	Revision of implantable heart assist system in heart, open approach
Removal of ventricular assist device	
02PA0QZ	Removal of implantable heart assist system from heart, open approach

Cardiac catheter ablation procedures

ICD-10-PCS code	Description
Cardiac catheter ablation	
02583ZZ	Destruction of conduction mechanism, percutaneous approach
4A0234Z	Measurement of cardiac electrical activity, percutaneous approach

Device evaluations/monitoring

ICD-10-PCS code	Description
Pacemaker evaluations	
4B02XSZ	Measurement of cardiac pacemaker, external approach
Defibrillator evaluations	
4B02XTZ	Measurement of cardiac defibrillator, external approach
Implantable cardiovascular physiologic monitor (OptiVol™) evaluations	
4A02X9Z	Measurement of cardiac output, external approach
Subcutaneous cardiac rhythm monitor system evaluation	
4A02XFZ	Measurement of cardiac rhythm, external approach

Electrophysiology (EP) procedures

ICD-10-PCS code	Description
Transthoracic echocardiography (TTE) (includes doppler echocardiography)	
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
Transesophageal echocardiography (TEE) (includes doppler echocardiography)	
B244ZZ4	Ultrasonography of right heart, transesophageal
B245ZZ4	Ultrasonography of left heart, transesophageal
B246ZZ4	Ultrasonography of right and left heart, transesophageal
B24BZZ4	Ultrasonography of heart with aorta, transesophageal
B24CZZ4	Ultrasonography of pericardium, transesophageal
B24DZZ4	Ultrasonography of pediatric heart, transesophageal
Left heart catheterization by transeptal puncture	
4A023N7	Measurement of cardiac sampling and pressure, left heart, percutaneous approach
Recording	
4A0234Z	Measurement of cardiac electrical activity, percutaneous approach
4A02X4Z	Measurement of cardiac electrical activity, external approach
Mapping	
02K83ZZ	Map conduction mechanism, percutaneous approach
02K80ZZ	Map conduction mechanism, open approach
Pacing	
4A0234Z	Measurement of cardiac electrical activity, percutaneous approach

Electrophysiology (EP) procedures (cont'd)

ICD-10-PCS code	Description
Programmed stimulation	
3E033GC	Introduction of other therapeutic substance into peripheral vein, percutaneous approach
3E043GC	Introduction of other therapeutic substance into central vein, percutaneous approach
Electrophysiology evaluation of defibrillator	
4B02XTZ	Measurement of cardiac defibrillator, external approach
Tilt table testing	
3E033KZ	Introduction of other diagnostic substance into peripheral vein, percutaneous approach
3E043KZ	Introduction of other diagnostic substance into central vein, percutaneous approach
4A12X9Z	Monitoring of cardiac output, external approach

CPT® codes physician/outpatient

CPT®¹ codes are reported by physicians for the services they perform. These codes are also used by outpatient hospitals and Ambulatory Surgical Centers (ASCs) to report procedures performed in those sites of service. This is not an all-inclusive list. Appropriate codes are determined by documentation. Codes that are listed that begin with + are add-on codes and must be reported with another procedure. They cannot be reported independent of a primary procedure. For CRT-P procedures performed in the ASC setting, please see our [ASC Reimbursement Overview](#) for the specific coding in that setting.

Pacemaker and CRT-P procedures

CPT® code	Description
Insertion permanent transvenous pacemaker system	
33206	Insertion of new or replacement of permanent pacemaker with transvenous electrode(s); atrial
33207	Insertion of new or replacement of permanent pacemaker with transvenous electrode(s); ventricular
33208	Insertion of new or replacement of permanent pacemaker with transvenous electrode(s); atrial and ventricular
Insertion temporary pacemaker	
33210	Insertion or replacement of temporary transvenous single chamber cardiac electrode or pacemaker catheter (separate procedure)
33211	Insertion or replacement of temporary transvenous dual chamber pacing electrodes (separate procedure)
Insertion of pacemaker generator only	
33212	Insertion of pacemaker pulse generator only; with existing single lead
33213	Insertion of pacemaker pulse generator only; with existing dual leads
33221	Insertion of pacemaker pulse generator only; with existing multiple leads
Upgrade a single pacemaker to a dual pacemaker	
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)
Leadless permanent pacemaker procedures	
33274 	Transcatheter insertion or replacement of permanent leadless pacemaker, right ventricular, including imaging guidance (e.g., fluoroscopy, venous ultrasound, ventriculography, femoral venography) and device evaluation (e.g., interrogation or programming), when performed
33275	Transcatheter removal of permanent leadless pacemaker, right ventricular
Pacemaker generator changeouts	
33227	Removal of permanent pacemaker pulse generator with replacement of pacemaker pulse generator; single lead system
33228	Removal of permanent pacemaker pulse generator with replacement of pacemaker pulse generator; dual lead system
33229	Removal of permanent pacemaker pulse generator with replacement of pacemaker pulse generator; multiple lead system
Removal of permanent pacemaker generator only	
33233	Removal of permanent pacemaker pulse generator only

Pacemaker and CRT-P procedures (cont'd)

CPT® code	Description
Lead procedures	
33215	Repositioning of previously implanted transvenous pacemaker or implantable defibrillator (right atrial or right ventricular) electrode
33216	Insertion of a single transvenous electrode, permanent pacemaker or implantable defibrillator
33217	Insertion of 2 transvenous electrodes, permanent pacemaker or implantable defibrillator
33218	Repair of single transvenous electrode, permanent pacemaker or implantable defibrillator
33220	Repair of 2 transvenous electrodes for permanent pacemaker or implantable defibrillator
33234	Removal of transvenous pacemaker electrode(s); single lead system, atrial or ventricular
33235	Removal of transvenous pacemaker electrode(s); dual lead system
33238	Removal of permanent transvenous electrode(s) by thoracotomy
Epicardial lead procedures	
33202	Insertion of epicardial electrode(s); open incision (e.g., thoracotomy, median sternotomy, subxiphoid approach)
33203	Insertion of epicardial electrode(s); endoscopic approach (e.g., thoracoscopy, pericardioscopy)
33236	Removal of permanent epicardial pacemaker and electrodes by thoracotomy; single lead system, atrial or ventricular
33237	Removal of permanent epicardial pacemaker and electrodes by thoracotomy; dual lead system
Left ventricle lead procedures	
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)
+33225	Insertion of pacing electrode, cardiac venous system, for left ventricular pacing, at time of insertion of implantable defibrillator or pacemaker pulse generator (e.g., for upgrade to dual chamber system) (List separately in addition to code for primary procedure)
33226	Repositioning of previously implanted cardiac venous system (left ventricular) electrode (including removal, insertion and/or replacement of existing generator)
Pacemaker pocket procedures	
33222	Relocation of skin pocket for pacemaker

Defibrillator and CRT-D procedures

CPT® code	Description
Insertion of permanent transvenous defibrillator system	
33249	Insertion or replacement of permanent implantable defibrillator system, with transvenous lead(s), single or dual chamber
Insertion defibrillator generator only	
33230	Insertion of implantable defibrillator pulse generator only; with existing dual leads
33231	Insertion of implantable defibrillator pulse generator only; with existing multiple leads
33240	Insertion of implantable defibrillator pulse generator only; with existing single lead

Defibrillator and CRT-D procedures (cont'd)

CPT® code	Description
Defibrillator generator changeouts	
33262	Removal of implantable defibrillator pulse generator with replacement of implantable defibrillator pulse generator; single lead system
33263	Removal of implantable defibrillator pulse generator with replacement of implantable defibrillator pulse generator; dual lead system
33264	Removal of implantable defibrillator pulse generator with replacement of implantable defibrillator pulse generator; multiple lead system
Removal defibrillator generator only	
33241	Removal of implantable defibrillator pulse generator only
Transvenous lead procedures	
33215	Repositioning of previously implanted transvenous pacemaker or implantable defibrillator (right atrial or right ventricular) electrode
33216	Insertion of a single transvenous electrode, permanent pacemaker or implantable defibrillator
33217	Insertion of 2 transvenous electrodes, permanent pacemaker or implantable defibrillator
33218	Repair of single transvenous electrode, permanent pacemaker or implantable defibrillator
33220	Repair of 2 transvenous electrodes for permanent pacemaker or implantable defibrillator
33243	Removal of single or dual chamber implantable defibrillator electrode(s); by thoracotomy
33244	Removal of single or dual chamber implantable defibrillator electrode(s); by transvenous extraction
33238	Removal of permanent transvenous electrode(s) by thoracotomy
Substernal lead procedures	
0572T	Insertion of substernal implantable defibrillator electrode
0573T	Removal of substernal implantable defibrillator electrode
0574T	Repositioning of previously implanted substernal implantable defibrillator-pacing electrode
Epicardial lead procedures	
33202	Insertion of epicardial electrode(s); open incision (e.g., thoracotomy, median sternotomy, subxiphoid approach)
33203	Insertion of epicardial electrode(s); endoscopic approach (e.g., thoracoscopy, pericardioscopy)
33236	Removal of permanent epicardial pacemaker and electrodes by thoracotomy; single lead system, atrial or ventricular
33237	Removal of permanent epicardial pacemaker and electrodes by thoracotomy; dual lead system
Left ventricle lead procedures	
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)
+33225	Insertion of pacing electrode, cardiac venous system, for left ventricular pacing, at time of insertion of implantable defibrillator or pacemaker pulse generator (e.g., for upgrade to dual chamber system) (List separately in addition to code for primary procedure)
33226	Repositioning of previously implanted cardiac venous system (left ventricular) electrode (including removal, insertion and/or replacement of existing generator)
Relocation of defibrillator pocket	
33223	Relocation of skin pocket for implantable defibrillator

Defibrillator and CRT-D procedures (cont'd)

CPT® code	Description
Permanent subcutaneous defibrillator procedures	
33270	Insertion or replacement of permanent subcutaneous implantable defibrillator system, with subcutaneous electrode, including defibrillation threshold evaluation, induction of arrhythmia, evaluation of sensing for arrhythmia termination, and programming or reprogramming of sensing or therapeutic parameters, when performed
33271	Insertion of subcutaneous implantable defibrillator electrode
33272	Removal of subcutaneous implantable defibrillator electrode
Permanent extravascular (substernal) defibrillator procedures	
Insertion or replacement of permanent extravascular (substernal) defibrillator system	
0571T	Insertion or replacement of implantable cardioverter-defibrillator system with substernal electrode(s), including all imaging guidance and electrophysiological evaluation (includes defibrillation threshold evaluation, induction of arrhythmia, evaluation of sensing for arrhythmia termination, and programming or reprogramming of sensing or therapeutic parameters), when performed
Defibrillator generator removal only	
0580T	Removal of substernal implantable defibrillator pulse generator only
Defibrillator generator changeouts	
0614T	Removal and replacement of substernal implantable defibrillator pulse generator

Diagnostic procedures

CPT® code	Description
Subcutaneous cardiac rhythm monitor procedures (includes loop recorders)	
33285	Insertion, subcutaneous cardiac rhythm monitor, including programming
33286	Removal, subcutaneous cardiac rhythm monitor
Mobile cardiac telemetry procedures	
93228	External mobile cardiovascular telemetry with electrocardiographic recording, concurrent computerized real time data analysis and greater than 24 hours of accessible ECG data storage (retrievable with query) with ECG triggered and patient selected events transmitted to a remote attended surveillance center for up to 30 days; review and interpretation with report by a physician or other qualified health care professional
93229	External mobile cardiovascular telemetry with electrocardiographic recording, concurrent computerized real time data analysis and greater than 24 hours of accessible ECG data storage (retrievable with query) with ECG triggered and patient selected events transmitted to a remote attended surveillance center for up to 30 days; technical support for connection and patient instructions for use, attended surveillance, analysis and transmission of daily and emergent data reports as prescribed by a physician or other qualified health care professional

Diagnostic procedures (cont'd)

CPT® code	Description
Holter monitor procedures	
93224	External electrocardiographic recording up to 48 hours by continuous rhythm recording and storage; includes recording, scanning analysis with report, review and interpretation by a physician or other qualified health care professional
93225	External electrocardiographic recording up to 48 hours by continuous rhythm recording and storage; recording (includes connection, recording, and disconnection)
93226	External electrocardiographic recording up to 48 hours by continuous rhythm recording and storage; scanning analysis with report
93227	External electrocardiographic recording up to 48 hours by continuous rhythm recording and storage; review and interpretation by a physician or other qualified health care professional

Ventricular assist device procedures

CPT® code	Description
Ventricular assist device procedures	
33979	Insertion of ventricular assist device, implantable intracorporeal, single ventricle
33980	Removal of ventricular assist device, implantable intracorporeal, single ventricle
33982	Replacement of ventricular assist device pump(s); implantable intracorporeal, single ventricle, without cardiopulmonary bypass
33983	Replacement of ventricular assist device pump(s); implantable intracorporeal, single ventricle, with cardiopulmonary bypass

Electrophysiology (EP) procedures

CPT® code	Description
Transthoracic echocardiography (TTE)	
93303	Transthoracic echocardiography for congenital cardiac anomalies; complete
Permanent subcutaneous defibrillator procedures	
93304	Transthoracic echocardiography for congenital cardiac anomalies; follow-up or limited study
93306	Echocardiography, transthoracic, real-time with image documentation (2D), includes M-mode recording, when performed, complete, with spectral Doppler echocardiography, and with color flow Doppler echocardiography
93307	Echocardiography, transthoracic, real-time with image documentation (2D), includes M-mode recording, when performed, complete, without spectral or color Doppler echocardiography
93308	Echocardiography, transthoracic, real-time with image documentation (2D), includes M-mode recording, when performed, follow-up or limited study
Transesophageal echocardiography (TEE)	
93312	Echocardiography, transesophageal, real-time with image documentation (2D) (with or without M-mode recording); including probe placement, image acquisition, interpretation and report
93313	Echocardiography, transesophageal, real-time with image documentation (2D) (with or without M-mode recording); placement of transesophageal probe only

Electrophysiology (EP) procedures (cont'd)

CPT® code	Description
93314	Echocardiography, transesophageal, real-time with image documentation (2D) (with or without M-mode recording); image acquisition, interpretation and report only
93315	Transesophageal echocardiography for congenital cardiac anomalies; including probe placement, image acquisition, interpretation and report
93316	Transesophageal echocardiography for congenital cardiac anomalies; placement of transesophageal probe only
93317	Transesophageal echocardiography for congenital cardiac anomalies; image acquisition, interpretation and report only
93318	Echocardiography, transesophageal (TEE) for monitoring purposes, including probe placement, real time 2-dimensional image acquisition and interpretation leading to ongoing (continuous) assessment of (dynamically changing) cardiac pumping function and to therapeutic measures on an immediate time basis
93355	Echocardiography, transesophageal (TEE) for guidance of a transcatheter intracardiac or great vessel(s) structural intervention(s) (e.g., TAVR, transcatheter pulmonary valve replacement, mitral valve repair, paravalvular regurgitation repair, left atrial appendage occlusion/closure, ventricular septal defect closure) (peri- and intra-procedural), real-time image acquisition and documentation, guidance with quantitative measurements, probe manipulation, interpretation, and report, including diagnostic transesophageal echocardiography and, when performed, administration of ultrasound contrast, Doppler, color flow, and 3D
Echocardiography during intervention	
+93662	Intracardiac echocardiography during therapeutic/diagnostic intervention, including imaging supervision and interpretation (List separately in addition to code for primary procedure)
Doppler echocardiography	
+93320	Doppler echocardiography, pulsed wave and/or continuous wave with spectral display (List separately in addition to codes for echocardiographic imaging); complete
+93321	Doppler echocardiography, pulsed wave and/or continuous wave with spectral display (List separately in addition to codes for echocardiographic imaging); follow-up or limited study (List separately in addition to codes for echocardiographic imaging)
+93325	Doppler echocardiography color flow velocity mapping (List separately in addition to codes for echocardiography)
Left heart catheterization by transseptal puncture	
+93462	Left heart catheterization by transseptal puncture through intact septum or by transapical puncture (List separately in addition to code for primary procedure)
Recording	
93600	Bundle of His recording
93602	Intra-atrial recording
93603	Right ventricular recording
93615	Esophageal recording of atrial electrogram with or without ventricular electrogram(s)
93616	Esophageal recording of atrial electrogram with or without ventricular electrogram(s); with pacing

Electrophysiology (EP) procedures (cont'd)

CPT® code	Description
Mapping	
+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)
+93613	Intracardiac electrophysiologic 3-dimensional mapping (List separately in addition to code for primary procedure)
Pacing	
93610	Intra-atrial pacing
93612	Intraventricular pacing
93618	Induction of arrhythmia by electrical pacing
Comprehensive EP evaluation	
93619	Comprehensive electrophysiologic evaluation with right atrial pacing and recording, right ventricular pacing and recording, His bundle recording, including insertion and repositioning of multiple electrode catheters, without induction or attempted induction of arrhythmia
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 catheter with induction or attempted induction of arrhythmia; with left atrial pacing and recording from coronary sinus or left atrium (list separately in addition to code for primary procedure)
+93622	Comprehensive electrophysiologic evaluation including insertion and repositioning of multiple electrode catheters with induction or attempted induction of arrhythmia; with left ventricular pacing and recording (list separately in addition to code for primary procedure)
Programmed stimulation	
+93623	Programmed stimulation and pacing after intravenous drug infusion (List separately in addition to code for primary procedure)
Pacing and recording	
93624	Electrophysiologic follow-up study with pacing and recording to test effectiveness of therapy, including induction or attempted induction of arrhythmia
Pacing and mapping	
93631	Intra-operative epicardial and endocardial pacing and mapping to localize the site of tachycardia or zone of slow conduction for surgical correction

Electrophysiology (EP) procedures (cont'd)

CPT® code	Description
EP evaluation of defibrillator	
93640	Electrophysiologic evaluation of single or dual chamber pacing cardioverter-defibrillator leads including defibrillation threshold evaluation (induction of arrhythmia, evaluation of sensing and pacing for arrhythmia termination) at time of initial implantation or replacement;
93641	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
93642	Electrophysiologic evaluation of single or dual chamber transvenous pacing cardioverter-defibrillator (includes defibrillation threshold evaluation, induction of arrhythmia, evaluation of sensing and pacing for arrhythmia termination, and programming or reprogramming of sensing or therapeutic parameters)
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)
Non-invasive programmed stimulation (NIPS) pacemaker	
93724	Electronic analysis of antitachycardia pacemaker system (includes electrocardiographic recording, programming of device, induction and termination of tachycardia via implanted pacemaker, and interpretation of recordings)
Tilt table	
93660	Evaluation of cardiovascular function with tilt table evaluation, with continuous ECG monitoring and intermittent blood pressure monitoring, with or without pharmacological intervention

Device evaluations/monitoring

CPT® code	Description
Pacemaker device programming - in person	
93279	Programming device evaluation (in person) with iterative adjustment of the implantable device to test the function of the device and select optimal permanent programmed values with analysis, review and report by a physician or other qualified health care professional; single lead pacemaker system or leadless pacemaker system in one cardiac chamber
93280	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 pacemaker system
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

Device evaluations/monitoring (cont'd)

CPT® code	Description
Pacemaker device interrogation - in person	
93288	Interrogation device evaluation (in person) with analysis, review, and report by a physician or other qualified healthcare professional, includes connection, recording, and disconnection per patient encounter; single, dual, or multiple lead pacemaker system or leadless pacemaker system
Pacemaker device evaluation - remote	
93294	Interrogation device evaluation(s) (remote), up to 90 days; single, dual, or multiple lead pacemaker system, 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 pacemaker system, leadless pacemaker system, or implantable defibrillator system, remote data acquisition(s), receipt of transmissions and technician review, technical support and distribution of results
Transtelephonic pacemaker evaluation	
93293	Transtelephonic rhythm strip pacemaker evaluation(s) single, dual, or multiple lead pacemaker system, includes recording with and without magnet application with analysis, review and report(s) by a physician or other qualified health care professional, up to 90 days
Transvenous defibrillator programming - in person	
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
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
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
Transvenous defibrillator interrogation - in person	
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
Transvenous defibrillator device interrogation - remote	
93295	Interrogation device evaluation(s) (remote), up to 90 days; single, dual, or multiple lead pacemaker system, 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 pacemaker system, leadless pacemaker system, or implantable defibrillator system, remote data acquisition(s), receipt of transmissions and technician review, technical support and distribution of results

Device evaluations/monitoring (cont'd)

CPT® code	Description
Subcutaneous defibrillator device evaluations - in person	
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
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
Peri-procedural device programming	
93286	Peri-procedural device evaluation (in person) and programming of device system parameters before or after a surgery, procedure, or test with analysis, review and report by a physician or other qualified health care professional; single, dual, or multiple lead pacemaker system, or leadless pacemaker system
93287	Peri-procedural device evaluation (in person) and programming of device system parameters before or after a surgery, procedure, or test with analysis, review and report by a physician or other qualified health care professional; single, dual, or multiple lead implantable defibrillator system
Implantable cardiovascular physiologic monitor interrogation (OptiVol) - in person	
93290	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 cardiovascular physiologic monitor system, including analysis of 1 or more recorded physiologic cardiovascular data elements from all internal and external sensors
Implantable cardiovascular physiologic monitor interrogation (OptiVol) - remote	
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
Subcutaneous cardiac rhythm monitor interrogation - in person	
93291	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; subcutaneous cardiac rhythm monitor system, including heart rhythm derived data analysis
Subcutaneous cardiac rhythm monitor programming - in person	
93285	Programming device evaluation (in person) with iterative adjustment of the implantable device to test the function of the device and select optimal permanent programmed values with analysis, review and report by a physician or other qualified health care professional; subcutaneous cardiac rhythm monitor system
Subcutaneous cardiac rhythm monitor interrogation - remote	
93298	Interrogation device evaluation(s), (remote) up to 30 days; subcutaneous cardiac rhythm monitor system, including analysis of recorded heart rhythm data, analysis, review(s) and report(s) by a physician or other qualified health care professional

Device evaluations/monitoring (cont'd)

CPT® code	Description
Subcutaneous cardiac rhythm monitor programming - remote	
0650T	Programming device evaluation (remote) of subcutaneous cardiac rhythm monitor system, with iterative adjustment of the implantable device to test the function of the device and select optimal permanently programmed values with analysis, review and report by a physician or other qualified health care professional
Extravascular defibrillator programming	
0575T	Programming device evaluation (in person) of implantable cardioverter-defibrillator system with substernal electrode, 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
Extravascular defibrillator Interrogation	
0576T	Interrogation device evaluation (in person) of implantable cardioverter-defibrillator system with substernal electrode, with analysis, review and report by a physician or other qualified health care professional, includes connection, recording and disconnection per patient encounter
Defibrillator threshold testing	
0577T	Electrophysiologic evaluation of implantable cardioverter-defibrillator system with substernal electrode (includes defibrillation threshold evaluation, induction of arrhythmia, evaluation of sensing for arrhythmia termination, and programming or reprogramming of sensing or therapeutic parameters)
Extravascular defibrillator device interrogation - remote	
0578T	Interrogation device evaluation(s) (remote), up to 90 days, substernal lead implantable cardioverter-defibrillator system with interim analysis, review(s) and report(s) by a physician or other qualified health care professional
Extravascular defibrillator device interrogation - remote	
0579T	Interrogation device evaluation(s) (remote), up to 90 days, substernal lead implantable cardioverter-defibrillator system, remote data acquisition(s), receipt of transmissions and technician review, technical support and distribution of results
Wearable defibrillator system interrogation - in person	
93292	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; wearable defibrillator system
Wearable defibrillator system setup and programming	
93745	Initial setup and programming by a physician or other qualified health care professional of wearable cardioverter-defibrillator includes initial programming of system, establishing baseline electronic ECG, transmission of data to data repository, patient instruction in wearing system and patient reporting of problems or events
Ventricular assist device interrogation	
93750	Interrogation of ventricular assist device (VAD), in person, with physician or other qualified health care professional analysis of device parameters (e.g., drivelines, alarms, power surges), review of device function (e.g., flow and volume status, septum status, recovery), with programming, if performed, and report

Cardiac catheter ablation procedures

CPT® code	Description
Cardiac catheter ablation procedures	
93650	Intracardiac catheter ablation of atrioventricular node function, atrioventricular conduction for creation of complete heart block, with or without temporary pacemaker placement
93653	Comprehensive electrophysiologic evaluation with insertion and repositioning of multiple electrode catheters, induction or attempted induction of an arrhythmia with right atrial pacing and recording and catheter ablation of arrhythmogenic focus, including intracardiac electrophysiologic 3-dimensional mapping, right ventricular pacing and recording, left atrial pacing and recording from coronary sinus or left atrium, and His bundle recording, when performed; 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
93654	Comprehensive electrophysiologic evaluation with insertion and repositioning of multiple electrode catheters, induction or attempted induction of an arrhythmia with right atrial pacing and recording and catheter ablation of arrhythmogenic focus, including intracardiac electrophysiologic 3-dimensional mapping, right ventricular pacing and recording, left atrial pacing and recording from coronary sinus or left atrium, and His bundle recording, when performed; with treatment of ventricular tachycardia or focus of ventricular ectopy including left ventricular pacing and recording, when performed
Cardiac catheter ablation procedures	
+93655	Intracardiac catheter ablation of a discrete mechanism of arrhythmia which is distinct from the primary ablated mechanism, including repeat diagnostic maneuvers, to treat a spontaneous or induced arrhythmia (List separately in addition to code for primary procedure)
93656	Comprehensive electrophysiologic evaluation including transeptal catheterizations, insertion and repositioning of multiple electrode catheters with intracardiac catheter ablation of atrial fibrillation by pulmonary vein isolation, including intracardiac electrophysiologic 3-dimensional mapping, intracardiac echocardiography including imaging supervision and interpretation, induction or attempted induction of an arrhythmia including left or right atrial pacing/recording, right ventricular pacing/recording, and His bundle recording, when performed
+93657	Additional linear or focal intracardiac catheter ablation of the left or right atrium for treatment of atrial fibrillation remaining after completion of pulmonary vein isolation (List separately in addition to code for primary procedure)

Ablation-related add-on EP procedures

CPT® code	Description
Left heart catheterization by transeptal puncture	
+93462	Left heart catheterization by transeptal puncture through intact septum or by transapical puncture (Use 93462 in conjunction with 33477, 33741, 33745, 93452, 93453, 93458-93461, 93582, 93595, 93596, 93597, 93653, and 93654. Do not report 93462 in conjunction with 93656)

Ablation-related add-on EP procedures (cont'd)

CPT® code	Description
Comprehensive EP with left atrial pacing and 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 (list separately in addition to code for primary procedure) (Use 93621 in conjunction with 93620. Do not report 93621 in conjunction with 93656)
Comprehensive EP with left ventricle pacing and recording	
+93622	Comprehensive electrophysiologic evaluation including insertion and repositioning of multiple electrode catheters with induction or attempted induction of arrhythmia; with left ventricular pacing and recording (list separately in addition to code for primary procedure) (Use 93622 in conjunction with 93620, 93653, or 93656. Do not report 93622 in conjunction with 93654)
Comprehensive EP with left atrial pacing and recording	
+93623	Programmed stimulation and pacing after intravenous drug infusion (List separately in addition to code for primary procedure) (Use 93623 in conjunction with 93610, 93612, 93619, 93620, 93653, 93654, or 93656)
+93662	Intracardiac echocardiography during therapeutic/diagnostic intervention, including imaging supervision and interpretation (list separately in addition to code for primary procedure) (report 93662 in conjunction with 33274, 33275, 33340, 33361-33366, 33418, 33477, 33741, 33745, 92986, 92987, 92990, 92997, 93451-93461, 93505, 93580-93583, 93590, 93591, 93593-93597, 93620, 93653, 93654, 93656, 0345T, 0483T, 03484T, 0543T, 0544T, 0545T as appropriate)
Mapping	
+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) (Report 93609 in conjunction with 93620, 93653, or 93656.) (Do not report 93609 with 93613 or 93654)

HCPCS codes

HCPCS codes are used to identify drugs, supplies, and implants. These codes are utilized by the entity that purchased and supplied the medical device, DME, drug, or supply to the patient. For implantable devices, that is generally the facility. Implantable devices are reported with C-codes in the hospital outpatient department under Medicare payment system. Additional detail on Medtronic C-codes can be found at www.Medtronic.com/crhcodes.

Ventricular assist device supplies

HCPCS code	Description
Ventricular assist device supplies	
Q0477	Power module patient cable for use with electric or electric/pneumatic ventricular assist device, replacement only
Q0478	Power adapter for use with electric or electric/pneumatic ventricular assist device, vehicle type
Q0479	Power module for use with electric or electric/pneumatic ventricular assist device, replacement only
Q0480	Driver for use with pneumatic ventricular assist device, replacement only
Q0481	Microprocessor control unit for use with electric ventricular assist device, replacement only
Q0482	Microprocessor control unit for use with electric/pneumatic combination ventricular assist device, replacement only
Q0483	Monitor/display module for use with electric ventricular assist device, replacement only
Q0484	Monitor/display module for use with electric or electric/pneumatic ventricular assist device, replacement only
Q0485	Monitor control cable for use with electric ventricular assist device, replacement only
Q0486	Monitor control cable for use with electric/pneumatic ventricular assist device, replacement only
Q0487	Leads (pneumatic/electrical) for use with any type electric/pneumatic ventricular assist device, replacement only
Q0489	Power pack base for use with electric/pneumatic ventricular assist device, replacement only
Q0490	Emergency power source for use with electric ventricular assist device, replacement only
Q0491	Emergency power source for use with electric/pneumatic ventricular assist device, replacement only
Q0492	Emergency power supply cable for use with electric ventricular assist device, replacement only
Q0493	Emergency power supply cable for use with electric/pneumatic ventricular assist device, replacement only
Q0494	Emergency hand pump for use with electric or electric/pneumatic ventricular assist device, replacement only
Q0495	Battery/power pack charger for use with electric or electric/pneumatic ventricular assist device, replacement only
Q0496	Battery, other than lithium-ion, for use with electric or electric/pneumatic ventricular assist device, replacement only
Q0497	Battery clips for use with electric or electric/pneumatic ventricular assist device, replacement only
Q0498	Holster for use with electric or electric/pneumatic ventricular assist device, replacement only
Q0499	Belt/vest/bag for use to carry external peripheral components of any type ventricular assist device, replacement only

Ventricular assist device supplies (cont'd.)

HCPSC code	Description
Ventricular assist device supplies	
Q0500	Filters for use with electric or electric/pneumatic ventricular assist device, replacement only
Q0501	Shower cover for use with electric or electric/pneumatic ventricular assist device, replacement only
Q0502	Mobility cart for pneumatic ventricular assist device, replacement only
Q0503	Battery for pneumatic ventricular assist device, replacement only, each
Q0504	Power adapter for pneumatic ventricular assist device, replacement only, vehicle type
Q0506	Battery, lithium-ion, for use with electric or electric/pneumatic ventricular assist device, replacement only
Q0508	Miscellaneous supply or accessory for use with an implanted ventricular assist device

Modifiers¹

Modifiers are used with CPT codes to identify specific circumstances or to identify specific components of a reported CPT code. Modifiers are not always required to be reported with a service.

Modifier	Description
Modifiers	
KX	Requirements specified in the medical policy have been met
Q0	Investigational clinical service provided in a clinical research study that is in an approved clinical research study
Q1	Routine clinical service provided in an approved clinical research study
SC	Medically necessary service or supply
22	Increased procedural services (work required to provide a service is substantially greater than typically required)
26	Professional component (certain procedures are a combination of a physician or other qualified health care professional component and a technical component. When the physician or other qualified health care professional component is reported separately, the service may be identified by adding modifier -26 to the usual procedure number).
51	Multiple procedures, other than E/M, performed at the same session by the same individual, the primary procedure or service may be reported as listed. The additional procedure(s) or service(s) may be identified by appending modifier -51 to the additional procedure or service code(s).
52	Reduced services
53	Discontinued procedure (physician elects to terminate a surgical or diagnostic procedure)
58	Staged or related procedure or service by the same physician or other qualified health care professional during the postoperative period
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 OR/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 during the postoperative period

Additional coding information

It is important to refer to the CPT®¹ code descriptions to ensure that a billed code meets the specific requirements defined for each individual code. The local Medicare contractor/payer should be contacted for interpretation of applicable policies. In addition, the National Correct Coding Initiative (NCCI) edits should be checked.

Cardiac device evaluation CPT codes include both in person and remote monitoring services. Remote monitoring codes represent either a 30- or 90-day monitoring period and there are separate codes for the professional component (PC) and the technical component (TC).

Physician billing for device monitoring

Remote monitoring services can be billed for both the professional component and the technical component. The codes billed and applied modifiers will depend on the billing provider(s) and the type of monitoring services rendered.

For pacemakers and implantable, insertable, and wearable cardiac devices, when both the professional and technical component are rendered by the same provider, two CPT® codes are required to represent the professional and technical components. These code pairs are CPT® 93294 and 93296 for pacemakers; 93295 and 93296 for implantable, insertable, and wearable cardiac devices.

For implantable physiologic cardiovascular monitoring systems and subcutaneous cardiac rhythm monitors, when both the professional and technical component are rendered by the same provider, only one global CPT® code is required. These codes are 93297 for implantable physiologic cardiovascular monitoring systems, and 93298 for subcutaneous cardiac rhythm monitors. In this instance, modifiers are not required. If the professional and technical component are rendered by different providers, modifiers may be required to identify the professional component (-26) and the technical component (TC) of CPT® 93297 and 93298.

Note: The -26 modifier is not applicable for remote monitoring services for pacemakers and implantable, insertable, and wearable cardiac devices since there is a separate PC code, CPT® 93294 and 93295. The professional component reflects physician time and intensity in furnishing the service, including activities before and after direct patient contact.³

Additional resources outlining updates to reimbursement for remote monitoring that occurred in CY2024 can be found [here](#).

The **in-person monitoring services** are configured as a global code. When the in-person device evaluation or interrogation is performed in a facility (hospital) setting, modifier -26 should be appended to the applicable in-person code when billing the professional component (PC).

Hospital Inpatient or Outpatient Billing: The service is “split-billed” with the professional component (PC) billed on a 1500 (professional claim form), and the technical component (TC, facility fee) billed by the hospital on a UB-04 claim form.

Physician supervision

Cardiac device monitoring services are defined by Medicare as diagnostic services.³ As such, Medicare regulations require specific supervision for diagnostic tests. These are applicable to the technical component of the electronic analysis of implanted cardiac devices. These supervision requirements are in addition to any other Medicare coverage requirements. The Medicare supervision requirements for individual CPT codes are available on the Physician Fee Schedule (PFS) lookup function on the Medicare website or under "PFS Relative Value Files" for 2021.⁴

As of January 1, 2021, Medicare allows certain NPPs to supervise diagnostic tests. Only NPPs in states where this is allowed by scope of practice and state law can supervise diagnostic tests.

Medicare requirements

General supervision of the technical component for all remote interrogation services and transtelephonic pacemaker monitoring (codes 93296 and 93293).

Direct supervision of the technical component for all in person cardiac device evaluations when performed with an office POS.

General supervision

General supervision⁵ means the procedure is furnished under the physician's overall direction and control but the physician's presence is not required during the performance of the procedure. Under general supervision, the training of the non-physician personnel who actually performs the diagnostic procedure and the maintenance of the necessary equipment and supplies are the continuing responsibility of the physician.

Direct requirements

Direct supervision⁶ in a hospital (facility) setting means that the physician must be immediately available to furnish assistance and direction throughout the performance of the procedure. The physician is not required to be present in the room where the procedure is being performed in this hospital (facility) setting or within any other physical boundary as long as he or she is immediately available.

Medicare diagnostic testing rules state that the supervisor must be a Physician. A Non-Physician Practitioner (NPP) such as a nurse practitioner or a physician assistant cannot supervise staff.³

These coding suggestions do not replace seeking coding advice from the payer and/or your own coding staff. The ultimate responsibility for correct coding lies with the provider of services. Please contact your local payer for interpretation of the appropriate codes to use for specific procedures. Medtronic makes no guarantee that the use of this information will prevent differences of opinion or disputes with Medicare or other third-party payers as to the correct form of billing or the amount that will be paid to providers of service.

References

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² Medicare Place of Service (POS) information is located in Chapter 26 of the Medicare Claims Processing Manual at: <https://www.cms.gov/Regulations-and-Guidance/Guidance/Manuals/Downloads/clm104c26.pdf>. New and Revised Place of Service Codes (POS) for Outpatient Hospital effective January 1, 2016: <https://www.cms.gov/regulations-and-guidance/guidance/transmittals/downloads/r3315cp.pdf>

³ Publication #100-04 Medicare Claims Processing Manual Chapter 13 is located <https://www.cms.gov/regulations-and-guidance/guidance/manuals/downloads/clm104c13.pdf>.

⁴ The Medicare supervision requirements are available by accessing the "PFS Relative Value Files" or "Medicare Physician Schedule Look-Up" located at: <https://www.cms.gov/apps/physician-fee-schedule/search/search-criteria.aspx>.

⁵ Publication #100-02 Medicare Benefit Policy Manual Chapter 15 is available at: <https://www.cms.gov/medicare/prevention/prevntiongeninfo/downloads/bp102c15.pdf>.

⁶ Publication #100-02 Medicare Benefit Policy Manual Chapter 6 is available at: <https://www.cms.gov/regulations-and-guidance/guidance/manuals/downloads/bp102c06.pdf>.

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