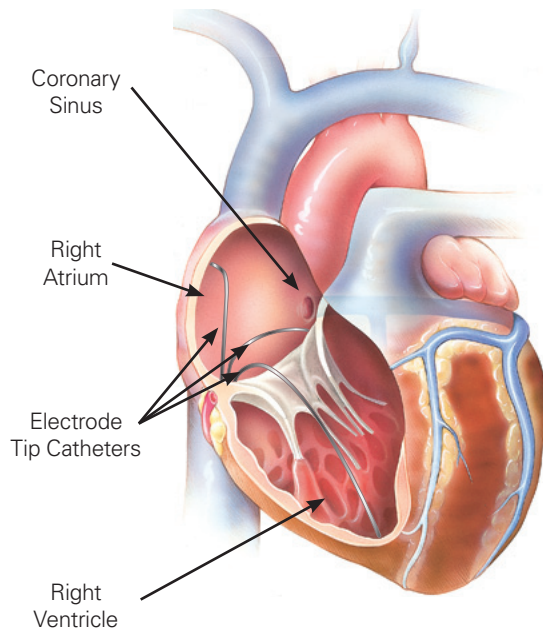


GuidePoint

Simplifying Reimbursement

Cardiac Rhythm Management and Electrophysiology



Updated January 2010

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 two or more electrode catheters."⁴

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 93600–93652 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 recording device 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 Once all pacing and recording is completed, the catheters are withdrawn and the introducer sheaths are removed.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 along with results of the study and recommendations for treatment.

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

Commonly Billed Intracardiac Electrophysiology Study Procedures

Key

+ Add-on code.

- Moderate sedation. (For these procedures, moderate [conscious] sedation is included and cannot be billed separately when provided by the same physician. See the AMA's Current Procedural Terminology 2010 for specific guidelines.)

Comprehensive EP Study with induction or attempted induction of arrhythmia

Hospital Inpatient ICD-9-CM Codes ¹	Hospital Outpatient* CPT® Codes ²	Physician CPT® Codes ²
<p>37.26 Catheter based invasive electrophysiologic testing</p> <ul style="list-style-type: none"> • Electrophysiologic studies [EPS] • Code also any concomitant procedure <p>Excludes:</p> <ul style="list-style-type: none"> • Device interrogation only without arrhythmia induction (bedside check) (89.45–89.49) • His bundle recording (37.29) • Non-invasive programmed electrical stimulation (NIPS) (37.20) • That as part of intraoperative testing —omit code <p>37.29 Other diagnostic procedures on heart and pericardium</p> <p>Excludes:</p> <ul style="list-style-type: none"> • Angiocardiology (88.50–88.58) • Cardiac function tests (89.41–89.69) • Cardiovascular radioisotopic scan and function study (92.05) • Coronary arteriography (88.55–88.57) • Diagnostic pericardiocentesis (37.0) • Diagnostic ultrasound of heart (88.72) • X-ray of heart (87.49) 	<p>• 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</p>	<p>• 93620-26** 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</p>

Comprehensive EP study with induction or attempted induction of arrhythmia and dual chamber ICD implant

Hospital Inpatient ICD-9-CM Codes ¹	Hospital Outpatient* CPT® Codes ²	Physician CPT® Codes ²
<p>37.94 Implantation or replacement of automatic cardioverter defibrillator, total system [AICD]</p> <p><i>Note: Device testing during procedure —omit code</i></p> <ul style="list-style-type: none"> • Implantation of defibrillator with leads (epicardial patches), formation of pocket (abdominal fascia) (subcutaneous), any transvenous leads, intraoperative procedures for evaluation of lead signals, and obtaining defibrillator threshold measurements • Techniques: lateral thoracotomy, medial sternotomy, subxiphoid procedure <p>Code also extracorporeal circulation, if performed (39.61)</p> <p>Code also any concomitant procedure [e.g., coronary bypass (36.10–36.19) or CCM, total system (17.51)]</p> <p>Excludes:</p> <ul style="list-style-type: none"> • Implantation of cardiac resynchronization defibrillator, total system [CRT-D] (00.51) <p>37.26 Catheter based invasive electrophysiologic testing</p> <ul style="list-style-type: none"> • Electrophysiologic studies [EPS] • Code also any concomitant procedure <p>Excludes:</p> <ul style="list-style-type: none"> • That as part of intraoperative testing —omit code • Device interrogation only without arrhythmia induction (bedside check) (89.45–89.49) • His bundle recording (37.29) • Non-invasive programmed electrical stimulation (NIPS)(37.20) 	<ul style="list-style-type: none"> • 33249 Insertion or repositioning of electrode lead(s) for single or dual chamber pacing cardioverter defibrillator and insertion of pulse generator • 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 <p>71090 Insertion pacemaker, fluoroscopy and radiography, radiological supervision and interpretation</p>	<ul style="list-style-type: none"> • 33249 Insertion or repositioning of electrode lead(s) for single or dual chamber pacing cardioverter defibrillator and insertion of pulse generator • 93641-26/51** Electrophysiologic evaluation of single or dual chamber pacing cardioverter defibrillator leads including defibrillation threshold evaluation (induction of arrhythmia, evaluation of sensing and pacing for arrhythmia termination) at time of initial implantation or replacement; with testing of single or dual chamber pacing cardioverter defibrillator pulse generator • 93620-51** 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 • 71090-26** Insertion pacemaker, fluoroscopy and radiography, radiological supervision and interpretation

• Moderate sedation

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

Hospital Inpatient ICD-9-CM Codes ¹	Hospital Outpatient* CPT® Codes ²	Physician CPT® Codes ²
<p>37.26 Catheter based invasive electrophysiologic testing</p> <ul style="list-style-type: none"> • Electrophysiologic studies [EPS] • Code also any concomitant procedure <p>Excludes:</p> <ul style="list-style-type: none"> • Device interrogation only without arrhythmia induction (bedside check) (89.45–89.49) • His bundle recording (37.29) • Non-invasive programmed electrical stimulation (NIPS) (37.20) • That as part of intraoperative testing —omit code <p>37.29 Other diagnostic procedures on heart and pericardium</p> <p>Excludes:</p> <ul style="list-style-type: none"> • Angiocardiology (88.50–88.58) • Cardiac function tests (89.41–89.69) • Cardiovascular radioisotopic scan and function study (92.05) • Coronary arteriography (88.55–88.57) • Diagnostic pericardiocentesis (37.0) • Diagnostic ultrasound of heart (88.72) • X-ray of heart (87.49) 	<ul style="list-style-type: none"> • 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 (List separately in addition to code for primary procedure) 	<ul style="list-style-type: none"> • 93620-26** 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** 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)

+ Add-on code • Moderate sedation

Partial (Limited) EP Study – Pacing and recording in the RA and His bundle

Hospital Inpatient ICD-9-CM Codes ¹	Hospital Outpatient* CPT® Codes ²	Physician CPT® Codes ²
<p>37.26 Catheter based invasive electrophysiologic testing</p> <ul style="list-style-type: none"> • Electrophysiologic studies [EPS] • Code also any concomitant procedure <p>Excludes:</p> <ul style="list-style-type: none"> • Device interrogation only without arrhythmia induction (bedside check) (89.45–89.49) • His bundle recording (37.29) • Non-invasive programmed electrical stimulation (NIPS) (37.20) • That as part of intraoperative testing — omit code <p>37.29 Other diagnostic procedures on heart and pericardium</p> <p>Excludes:</p> <ul style="list-style-type: none"> • Angiocardiology (88.50–88.58) • Cardiac function tests (89.41–89.69) • Cardiovascular radioisotopic scan and function study (92.05) • Coronary arteriography (88.55–88.57) • Diagnostic pericardiocentesis (37.0) • Diagnostic ultrasound of heart (88.72) • X-ray of heart (87.49) 	<p>93600 Bundle of His Recording</p> <p>93602 Intra-Atrial Recording</p> <p>93610 Intra-Atrial Pacing</p>	<p>93600-26** Bundle of His Recording</p> <p>93602-26** Intra-Atrial Recording</p> <p>93610-26** Intra-Atrial Pacing</p>

Follow-up EP study to assess the efficacy of medication for suppression of arrhythmia

Hospital Inpatient ICD-9-CM Codes ¹	Hospital Outpatient* CPT® Codes ²	Physician CPT® Codes ²
<p>37.26 Catheter based invasive electrophysiologic testing</p> <ul style="list-style-type: none"> • Electrophysiologic studies [EPS] • Code also any concomitant procedure <p>Excludes:</p> <ul style="list-style-type: none"> • Device interrogation only without arrhythmia induction (bedside check) (89.45–89.49) • His bundle recording (37.29) • Non-invasive programmed electrical stimulation (NIPS) (37.20) • That as part of intraoperative testing —omit code 	<ul style="list-style-type: none"> • 93624 Electrophysiologic follow-up study with pacing and recording to test effectiveness of therapy, including induction or attempted induction of arrhythmia 	<ul style="list-style-type: none"> • 93624-26** Electrophysiologic follow-up study with pacing and recording to test effectiveness of therapy, including induction or attempted induction of arrhythmia

• Moderate sedation

- ¹ American Medical Association. 2010 ICD-9-CM For Hospitals, Volumes 1, 2 and 3. Professional Edition. Chicago, IL: 2009.
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- * As of January 1, 2005, the Centers for Medicare and Medicaid Services (CMS) requires hospitals to report all device category codes (C-codes) on Medicare outpatient claims when medical devices are used in conjunction with procedure(s) billed. If C-codes are not identified on submitted Medicare outpatient claims, the claim(s) will be returned to the hospital for correction. Find C-codes for CRM devices at <http://www.bostonscientific.com/crm/reimbursement>. Also find C-codes for CRM devices and related accessories (e.g., introducers, catheters, sheaths) at http://www.cms.hhs.gov/HospitalOutpatientPPS/Downloads/DeviceCats_OPSSUpdate.pdf.
- ** Modifiers 26 (professional component) and 51 (multiple procedures) are for physician billing only. See the *AMA Current Procedural Terminology 2010* for complete descriptions. Always verify appropriate usage with payers.

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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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Cardiac Rhythm Management

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