

# Cardiac Electrophysiological Studies and Cardiac Catheter Ablation



INDEPENDENT CARE HEALTH PLAN

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## Medicare Advantage Medical Coverage Policy

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#### Disclaimer

The Coverage Summaries are reviewed by the iCare Medicare Utilization Management Committee. Policies in this document may be modified by a member's coverage document. Clinical policy is not intended to preempt the judgment of the reviewing medical director or dictate to health care providers how to practice medicine. Health care providers are expected to exercise their medical judgment in rendering appropriate care. Identification of selected brand names of devices, tests and procedures in a medical coverage policy is for reference only and is not an endorsement of any one device, test, or procedure over another. Clinical technology is constantly evolving, and we reserve the right to review and update this policy periodically. References to CPT® codes or other sources are for definitional purposes only and do not imply any right to reimbursement or guarantee of claims payment. No part of this publication may be reproduced, stored in a retrieval system or transmitted, in any shape or form or by any means, electronic, mechanical, photocopying or otherwise, without permission from iCare.

## Related Medicare Advantage Medical/Pharmacy Coverage Policies

Cardiac Catheterization

Cardioverter Defibrillators/Cardiac Resynchronization Therapy

## Related Documents

Please refer to [CMS website](#) for the most current applicable CMS Online Manual System (IOMs)/National Coverage Determination (NCD)/ Local Coverage Determination (LCD)/Local Coverage Article (LCA)/ Transmittals.

Type	Title	ID Number	Jurisdiction Medicare Administrative	Applicable States/Territories
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			Contractors (MACs)	
NCD	Diagnostic Endocardial Electrical Stimulation (Pacing)	<a href="#">20.12</a>		
NCD	HIS Bundle Study	<a href="#">20.13</a>		

## Description

**Cardiac electrophysiological studies (EPS)** are tests that help determine an arrhythmia’s (abnormal rhythm) area of origin in the heart. Arrhythmias are caused by damage to the heart related to disease, genetics or injury which changes the electrical signals that control cardiac activity. This damage may result from myocardial infarction (heart attack), aging, high blood pressure or abnormal electrical pathways created by certain congenital defects.

EPS usually take place in an electrophysiology (EP) lab or a cardiac catheterization lab while the individual is mildly sedated. A catheter (thin tube) is inserted into a blood vessel leading to the heart. This catheter contains specialized electrodes enabling the physician to send programmed electrical stimulation to the heart and record its electrical activity. The physician may also attempt to induce an arrhythmia to determine the cause or origin. Pacing can be accomplished via these electrodes if arrhythmias arise. EPS are used to diagnose arrhythmias, evaluate the effectiveness of antiarrhythmic medication, assess the risk of cardiac arrest or determine the need for potential treatment (eg, implantation of a pacemaker or implantable cardioverter defibrillator [ICD]).

**Cardiac catheter ablation** is a procedure which may be performed in conjunction with EPS. Radiofrequency energy (heat) or cryoablation (cold) is used via catheter to restore the heart’s regular rhythm by destroying a small area of heart tissue that is causing an arrhythmia. During this procedure, three-dimensional (3D) mapping (eg, CARTO 3 System, EnSite Precision System) may be used to define the cardiac anatomy and provide guidance for ablation.

**Cardiac focal ablation using radiation therapy**, also known as **stereotactic arrhythmia radioablation (STAR)**, is proposed to treat ventricular arrhythmias (eg, ventricular tachycardia [VT]) when medication or catheter ablation are ineffective or contraindicated. This investigational therapy fuses noninvasive electrocardiogram (ECG) and imaging (eg, computed tomography, magnetic resonance, positron emission tomography) data to pinpoint the area in the heart that is triggering the arrhythmia. High dose stereotactic radiation therapy is used to render the targeted area electrically inactive to purportedly reduce VT episodes.

**Transcatheter pulmonary artery denervation (PADN)** is a catheter ablation technique proposed to treat pulmonary artery hypertension (PAH), a condition which may lead to right heart failure. Novel PAH treatments under investigation include thermal and ultrasound catheter ablation used to target sympathetic nerve fibers in the pulmonary artery and its bifurcation. **Thermal pulmonary artery denervation** uses radiofrequency ablation to apply thermal energy to destroy a small area of the targeted nerve tissue. **Ultrasound pulmonary artery denervation** uses high frequency nonfocused ultrasound energy

to ablate the targeted nerve bundles. These transcatheter procedures are purported to decrease sympathetic nervous system (SNS) activity and reduce pulmonary artery pressure.

### Coverage Determination

*iCare follows the CMS requirements that only allows coverage and payment for services that are reasonable and necessary for the diagnosis and treatment of illness or injury or to improve the functioning of a malformed body member except as specifically allowed by Medicare.*

Please refer to the above CMS guidance for **diagnostic endocardial electrical stimulation (pacing)** and **HIS bundle study**.

*In interpreting or supplementing the criteria above and in order to determine medical necessity consistently, iCare may consider the criteria contained in the following:*

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*The use of the criteria in this Medicare Advantage Medical Coverage Policy provides clinical benefits highly likely to outweigh any clinical harms. Services that do not meet the criteria above are not medically necessary and thus do not provide a clinical benefit. Medically unnecessary services carry risks of adverse outcomes and may interfere with the pursuit of other treatments which have demonstrated efficacy.*

### Coverage Limitations

[US Government Publishing Office. Electronic code of federal regulations: part 411 – 42 CFR § 411.15 - Particular services excluded from coverage](#)

### Coding Information

Any codes listed on this policy are for informational purposes only. Do not rely on the accuracy and inclusion of specific codes. Inclusion of a code does not guarantee coverage and/or reimbursement for a service or procedure.

CPT® Code(s)	Description	Comments
93600	Bundle of His recording	
93602	Intra-atrial recording	
93603	Right ventricular 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)	

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93610	Intra-atrial pacing	
93612	Intraventricular pacing	
93613	Intracardiac electrophysiologic 3-dimensional mapping (List separately in addition to code for primary procedure)	
93618	Induction of arrhythmia by electrical pacing	
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 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)	
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)	
93624	Electrophysiologic follow-up study with pacing and recording to test effectiveness of therapy, including induction or attempted induction of arrhythmia	
93631	Intra-operative epicardial and endocardial pacing and mapping to localize the site of tachycardia or zone of slow conduction for surgical correction	
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)	
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 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	
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 (when necessary), and His bundle recording (when necessary) 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	
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 induction or attempted induction of an arrhythmia including left or right atrial pacing/recording when necessary, right ventricular pacing/recording when necessary, and His bundle recording when necessary with intracardiac catheter ablation of atrial fibrillation by pulmonary vein isolation	
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)	
<b>CPT® Category III Code(s)</b>	<b>Description</b>	<b>Comments</b>
0632T	Percutaneous transcatheter ultrasound ablation of nerves innervating the pulmonary arteries, including right heart catheterization, pulmonary artery angiography, and all imaging guidance	
0745T	Cardiac focal ablation utilizing radiation therapy for arrhythmia; noninvasive arrhythmia localization and mapping of arrhythmia site (nidus), derived from anatomical image data (eg, CT, MRI, or myocardial perfusion scan) and electrical data (eg, 12-lead ECG data), and identification of areas of avoidance	
0746T	Cardiac focal ablation utilizing radiation therapy for arrhythmia; conversion of arrhythmia localization and mapping of arrhythmia site (nidus) into a multidimensional radiation treatment plan	
0747T	Cardiac focal ablation utilizing radiation therapy for arrhythmia; delivery of radiation therapy, arrhythmia	
0793T	Percutaneous transcatheter thermal ablation of nerves innervating the pulmonary arteries, including right heart catheterization, pulmonary artery angiography, and all imaging guidance	
<b>HCPCS Code(s)</b>	<b>Description</b>	<b>Comments</b>
No code(s) identified		

**References**

1. Centers for Medicare & Medicaid Services (CMS). National Coverage Determination (NCD). Diagnostic endocardial electrical stimulation (pacing) (20.12). <https://www.cms.gov>. Published December 3, 1984. Accessed November 7, 2023.
2. Centers for Medicare & Medicaid Services (CMS). National Coverage Determination (NCD). HIS bundle study (20.13). <https://www.cms.gov>. Published December 3, 1984. Accessed November 7, 2023.

## Change Summary

- 01/01/2024 New Policy.