Background
Right ventricular (RV) pacing has been the standard practice for patients requiring permanent ventricular pacing. However, long-term RV apical pacing creates a non-physiologic activation pattern and may lead to worsened systolic and diastolic function in a subset of patients.\(^1\)

His-bundle pacing may preserve synchronous ventricular depolarization, which could mitigate ventricular dysfunction relative to RV pacing. The lead that would be intended for ventricular pacing, which would normally be placed in the right ventricle, can be placed on the lower septal part of the right atrium or in the upper septal part of the right ventricle to pace the bundle of His. The lead placement decision is based on the clinician’s intent to pace. This document focuses on the special considerations for coding when the lead intended to pace the ventricle is placed at the bundle of His.

The Medtronic C315-HIS and the C304-HIS delivery catheters are designed for placement of the SelectSecure™ MRI SureScan™ 3830 lead at the bundle of His.

Currently, the FDA-approved indications for the Model 3830 lead state the following:
“Model 3830 lead is intended for pacing and sensing in the atrium or right ventricle. It is also intended for pacing and sensing at the bundle of His as an alternative to right ventricular pacing in a single or dual chamber pacing system.”\(^2\)

Other indications are either considered not within the current labeling or off-label use.
Possible Coding Solutions for Pacing at the Bundle of His — Initial Implant

His bundle pacing can be used to treat bradycardia (e.g., AV block, sinus node disease). In these scenarios the RV lead is placed at the bundle of His rather than at the RV apex. The final placement at the bundle of His may be anatomically in either the atrium (floor of atrium near tricuspid valve) or ventricle (at the roof of the ventricle near the tricuspid valve). Therefore, both scenarios are provided below.

Possible CPT®3 Coding Solutions for Physicians and Hospital Outpatient Setting:

Pacemaker Scenario Bundle of His Approach: Atrial Anatomical Placement

<table>
<thead>
<tr>
<th>Pacemaker Scenario</th>
<th>Bundle of His Approach: Atrial Anatomical Placement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single Chamber (SC)</td>
<td>33206 Insertion of new or replacement of permanent pacemaker with transvenous electrode(s); atrial</td>
</tr>
<tr>
<td>Dual Chamber (DC)</td>
<td>33208 Insertion of new or replacement of permanent pacemaker with transvenous electrode(s); atrial and ventricular</td>
</tr>
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Pacemaker Scenario Bundle of His Approach: Ventricular Anatomical Placement

<table>
<thead>
<tr>
<th>Pacemaker Scenario</th>
<th>Bundle of His Approach: Ventricular Anatomical Placement</th>
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</thead>
<tbody>
<tr>
<td>Single Chamber (SC)</td>
<td>33207 Insertion of new or replacement of permanent pacemaker with transvenous electrode(s); ventricular</td>
</tr>
<tr>
<td>Dual Chamber (DC)</td>
<td>33208 Insertion of new or replacement of permanent pacemaker with transvenous electrode(s); atrial and ventricular</td>
</tr>
</tbody>
</table>

Possible Use of Modifier -22:
The use of Modifier -22 (Increased procedural service) may be appropriate. The use of the Modifier -22 is generally considered appropriate when the work and time required to perform the service is more extensive than is typically required for a non-His bundle pacing implant of a single or dual chamber pacemaker. Medicare and/or payers may require additional documentation and justification for billing one of these codes with the Modifier -22.

Possible Coding Solutions for Pacing at the Bundle of His — Lead Replacement

In certain situations, a patient may have a pre-existing single or dual chamber pacemaker. Due to either failure of the existing RV pacing lead or suboptimal clinical response (e.g., pacemaker syndrome), the physician determines that a replacement 3830 transvenous pacing lead should be placed at the His bundle instead of in the RV apex. The existing RV pacing lead is either capped and abandoned, or is removed.

The final location of the 3830 lead to pace the His bundle is in the atrium. However, the intent of the lead placement is to pace the ventricle. The lead at the His bundle is the only functioning ventricular pacing lead after the replacement procedure.

<table>
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<tr>
<th>Pacemaker Scenario</th>
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<tbody>
<tr>
<td>His bundle lead is the only functioning ventricular pacing lead after the replacement procedure</td>
<td>33216 Insertion of a single transvenous electrode, permanent pacemaker or implantable defibrillator</td>
</tr>
<tr>
<td></td>
<td>If removal of the existing lead is performed: 33234 Removal of transvenous pacemaker electrode(s); single lead system, atrial or ventricular</td>
</tr>
</tbody>
</table>
Possible ICD-10-PCS Coding Solutions for Hospital Inpatient Setting

The ICD-10-PCS procedure coding would include both a generator insertion code and the appropriate number of codes for insertion of lead(s). For example, a single chamber ventricular system with His bundle placement should report the generator placement (e.g., 0JH604Z) and the atrial lead placement (02H63JZ). A dual chamber system with His bundle placement for the ventricle should report the generator code and the atrial lead code twice, once for the atrium and once for the lead at the bundle of His (assuming an atrial anatomical placement). Note that some coders would view reporting the atrial lead twice as optional and instead would report it only once, particularly since the payment impact is the same.

ICD-10-PCS

<table>
<thead>
<tr>
<th>Procedure Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Pacemaker Generator Insertion</strong></td>
<td></td>
</tr>
<tr>
<td>0JH606Z</td>
<td>Insertion of pacemaker, dual chamber into chest subcutaneous tissue and fascia, open approach</td>
</tr>
<tr>
<td>0JH605Z</td>
<td>Insertion of pacemaker, single chamber rate responsive into chest subcutaneous tissue and fascia, open approach</td>
</tr>
<tr>
<td>0JH604Z</td>
<td>Insertion of pacemaker, single chamber into chest subcutaneous tissue and fascia, open approach</td>
</tr>
<tr>
<td><strong>Pacemaker Lead Insertion</strong></td>
<td></td>
</tr>
<tr>
<td>02H63JZ</td>
<td>Insertion of pacemaker lead into right atrium, percutaneous* approach</td>
</tr>
</tbody>
</table>

*C percutaneous approach is the equivalent of transvenous.

Coding for His Bundle Recording/Mapping

Placing a lead appropriately at the His bundle often requires mapping the intracardiac tissue to identify the precise location of the conduction mechanism. It might be reasonably questioned whether two electrophysiology CPT codes for bundle of His recording (CPT code 93600) and intra-atrial pacing (CPT code 93610) might be assigned for this maneuver in conjunction with the code for the lead implant.

While arguments can be made, we do not believe reporting either of these codes separately for mapping prior to placing a lead at the bundle of His — whether using an external EP catheter or using the lead itself — would withstand scrutiny by external reviewers.

By coding convention, identifying the location for leads is included in the lead placement procedure and not separately reported. Further, the introductory language in the CPT manual specifies use of 93600 and other recording/mapping codes as reportable when trying to identify tachyarrhythmias for ablation based on the mapped tachycardias combined with diagnostic information. This indicates that these electrophysiology codes are not used when trying to locate the precise position in which to place a lead, whether in the atrium, apex of the ventricle, or at the bundle of His.

Disclaimer

Medtronic provides this information for your convenience only. It does not constitute legal advice or a recommendation regarding clinical practice. Information provided is gathered from third-party sources and is subject to change without notice due to frequently changing laws, rules, and regulations. The provider has the responsibility to determine medical necessity and to submit appropriate codes and charges for care provided. Medtronic makes no guarantee that the use of this information will prevent differences of opinion or disputes with Medicare or other payers as to the correct form of billing or the amount that will be paid to providers of service. Please contact your Medicare contractor, other payers, reimbursement specialists, and/or legal counsel for interpretation of coding, coverage, and payment policies. This document provides assistance for FDA approved or cleared indications. Where reimbursement is sought for use of a product that may be inconsistent with, or not expressly specified in, the FDA cleared or approved labeling (e.g., instructions for use, operator’s manual, or package insert), consult with your billing advisors or payers on handling such billing issues. Some payers may have policies that make it inappropriate to submit claims for such items or related service.
Brief Statement
SelectSecure™ and SelectSecure MRI SureScan™ Pacing and Sensing Lead

Indications
Medtronic SelectSecure family of leads has application where implantable atrial or ventricular, single chamber, or dual chamber pacing systems are indicated. The Model 3830 lead is intended for pacing and sensing in the atrium or ventricle.

Medtronic SelectSecure MRI family of leads is intended for pacing and sensing in the atrium or right ventricle. It is also intended for pacing and sensing at the bundle of His as an alternative to right ventricular pacing in a single or dual chamber pacing system.

SelectSecure MRI SureScan leads (specified lengths of Model 3830 including 59, 69, and 74 cm) are MR conditional and indicated for pacing and sensing at the bundle of His as an alternative to right ventricular pacing in a single or dual chamber pacing system. The Model 3830 lead is part of the Medtronic SureScan system. The SureScan system includes a Medtronic SureScan device connected to Medtronic SureScan leads.

Contraindications
SelectSecure lead family is contraindicated for the following:
- Ventricular use in patients with tricuspid valvular disease or a tricuspid mechanical heart valve
- Patients for whom a single dose of beclomethasone dipropionate may be contraindicated; see manual for specific dosage

The SelectSecure Model 3830 lead is also contraindicated for the following: Patients with obstructed or inadequate vasculature for intravenous catheterization.

Warnings and Precautions
People with metal implants such as pacemakers, implantable cardioverter defibrillators (ICDs), and accompanying leads should not receive certain forms of diathermy treatment. Diathermy treatments may result in serious injury or damage to an implanted device and lead system. Some lead models allow the use of therapeutic ultrasound; consult individual lead model technical manuals for more detail.

For Model 3830, total patient exposure to beclomethasone 17,21-dipropionate should be considered when implanting multiple leads. No drug interactions with inhaled beclomethasone 17,21-dipropionate have been described. Drug interactions of beclomethasone 17,21-dipropionate with the Model 3830 lead have not been studied.

Do not use magnetic resonance imaging (MRI) on patients who have non-MR conditional versions/lengths of these leads implanted as part of a complete SureScan system. MRI can induce currents on implanted leads, potentially causing tissue damage and the induction of tachyarrhythmias.

MRI SureScan Leads only: A complete SureScan pacing or defibrillation system is required for use in the MR environment. Before performing an MRI scan, refer to the MRI Technical Manual for MRI-specific warnings and precautions. Patients and their implanted systems must be screened to meet the following requirements for MRI: no implanted lead extenders, lead adaptors, or abandoned leads; no broken leads or leads with intermittent electrical contact as confirmed by lead impedance history; a SureScan defibrillation system implanted in the left or right pectoral region; pacing capture thresholds of ≤ 2.0 V at a pulse width of 0.4 ms; no diaphragmatic stimulation at a pacing output of 5.0 V and at a pulse width of 1.0 ms in patients whose device will be programmed to an asynchronous pacing mode when MRI SureScan is programmed to On. Patients may be scanned using a horizontal field, cylindrical bore, clinical 1.5T or 3T MRI system for hydrogen proton imaging.

Potential Complications
Potential patient-related complications related to the use of transvenous leads include, but are not limited to, valve damage, fibrillation and other arrhythmias, thrombotic and air embolism, cardiac perforation, heart wall rupture, cardiac tamponade, muscle or nerve stimulation, pericarditis, pericardial rub, infection, myocardial irritability, thrombosis, and pneumothorax. Other potential lead-related complications may include exit block, lead dislodgement, lead fracture, insulation failure, and threshold elevation.

Potential MRI complications include, but are not limited to, lead electrode heating and tissue damage resulting in loss of sensing or capture or both, or induced currents on leads resulting in continuous capture, VT/VF, and/or hemodynamic collapse.

See the appropriate Device MRI SureScan Technical Manual before performing an MRI Scan and Lead Technical Manual for detailed information regarding the implant procedure, indications, contraindications, warnings, precautions, and potential complications/adverse events. For further information, please call Medtronic at 1-800-328-2518 and/or consult the Medtronic website at medtronic.com or mrisurescan.com.

Caution: Federal law (USA) restricts this device to sale by or on the order of a physician.