Medical Policy

Catheter Ablation as Treatment for Atrial Fibrillation

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Policy Number: 141

BCBSA Reference Number: 2.02.19

Related Policies

- Catheter Ablation of other Arrhythmogenic Foci #123
- Open and Thoracoscopic Approaches to Treat Atrial Fibrillation - Maze and Related Procedures, #356
- Left-Atrial Appendage Closure Devices for Stroke Prevention in Atrial Fibrillation, #334

Policy

Commercial Members: Managed Care (HMO and POS), PPO, and Indemnity Medicare HMO BlueSM and Medicare PPO BlueSM Members

Transcatheter radiofrequency ablation of the pulmonary veins may be MEDICALLY NECESSARY as a treatment for atrial fibrillation (AF) for patients who have failed to respond to adequate trials of antiarrhythmic medication for the following indications:

- Symptomatic paroxysmal or persistent atrial fibrillation, or
- As an alternative to atrioventricular nodal ablation and pacemaker insertion in patients with class II or III congestive heart failure and symptomatic atrial fibrillation.

Up to 2 repeat ablations may be MEDICALLY NECESSARY in patients with recurrence of atrial fibrillation and/or development of atrial flutter following the initial procedure.

Transcatheter ablation of the pulmonary veins is INVESTIGATIONAL for ALL other indications.

Transcatheter cryoablation of arrhythmogenic foci in the pulmonary veins as a treatment for atrial fibrillation is INVESTIGATIONAL.

Prior Authorization Information

See below for situations where prior authorization may be required or may not be required.

Yes indicates that prior authorization is required.
No indicates that prior authorization is not required.
CPT Codes / HCPCS Codes / ICD-9 Codes

The following codes are included below for informational purposes. Inclusion or exclusion of a code does not constitute or imply member coverage or provider reimbursement. Please refer to the member’s contract benefits in effect at the time of service to determine coverage or non-coverage as it applies to an individual member. A draft of future ICD-10 Coding related to this document, as it might look today, is included below for your reference.

Providers should report all services using the most up-to-date industry-standard procedure, revenue, and diagnosis codes, including modifiers where applicable.

CPT Codes

<table>
<thead>
<tr>
<th>CPT codes</th>
<th>Code Description</th>
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</thead>
<tbody>
<tr>
<td>93656</td>
<td>Comprehensive electrophysiologic evaluation including transseptal 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</td>
</tr>
<tr>
<td>93657</td>
<td>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)</td>
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ICD-9 Diagnosis Coding

<table>
<thead>
<tr>
<th>ICD-9-CM diagnosis codes</th>
<th>Code Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>427.31</td>
<td>Atrial fibrillation</td>
</tr>
<tr>
<td>427.32</td>
<td>Atrial flutter</td>
</tr>
<tr>
<td>428.0</td>
<td>Congestive heart failure, unspecified</td>
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</tbody>
</table>

ICD-10 Diagnosis Codes

<table>
<thead>
<tr>
<th>ICD-10-CM Diagnosis codes</th>
<th>Code Description</th>
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<tbody>
<tr>
<td>I48.0</td>
<td>Paroxysmal atrial fibrillation</td>
</tr>
<tr>
<td>I48.1</td>
<td>Persistent atrial fibrillation</td>
</tr>
<tr>
<td>I48.2</td>
<td>Chronic atrial fibrillation</td>
</tr>
<tr>
<td>I48.3</td>
<td>Typical atrial flutter</td>
</tr>
<tr>
<td>I48.4</td>
<td>Atypical atrial flutter</td>
</tr>
<tr>
<td>I48.91</td>
<td>Unspecified atrial fibrillation</td>
</tr>
<tr>
<td>I48.92</td>
<td>Unspecified atrial flutter</td>
</tr>
<tr>
<td>I50.20</td>
<td>Unspecified systolic (congestive) heart failure</td>
</tr>
<tr>
<td>I50.21</td>
<td>Acute systolic (congestive) heart failure</td>
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<tr>
<td>I50.22</td>
<td>Chronic systolic (congestive) heart failure</td>
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<tr>
<td>I50.23</td>
<td>Acute on chronic systolic (congestive) heart failure</td>
</tr>
<tr>
<td>I50.30</td>
<td>Unspecified diastolic (congestive) heart failure</td>
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</tbody>
</table>
### Description

Atrial fibrillation involves interplay between electrical triggering events and the myocardial energy supply and demand layer that permits propagation and maintenance of an aberrant electrical circuit in the heart's rhythmic beat. The most common focal trigger of atrial fibrillation appears to be located within the cardiac muscle that extends into the pulmonary veins.

Rhythm control has long been considered an important treatment goal for management of atrial fibrillation; although its primacy has recently been challenged by the results of several randomized trials that reported pharmacologically maintained rhythm control offered no improvement in mortality or cardiovascular morbidity compared to rate control.

Currently, the main indications for rhythm control are for patients with paroxysmal or persistent atrial fibrillation who have hemodynamic compromise or who have bothersome symptoms despite adequate rate control. A rhythm control strategy involves initial pharmacologic or electronic cardioversion or ablation of the AV node followed by ventricular pacing in an attempt to permanently control the atrial rhythm and the ventricular rate through pacing. Ablative approaches focus on interruption of the electrical pathways that contribute to atrial fibrillation through modifying arrhythmic triggers and/or the myocardial energy supply and demand layer that maintains the aberrant rhythm.

A variety of ablative procedures have been investigated as potentially curative approaches. Radiofrequency ablation using a percutaneous catheter-based approach is a widely used technique for a variety of supraventricular arrhythmias, in which there is usually one discrete arrhythmogenic focus that is the target of ablation. The situation is more complex for atrial fibrillation, since there is not a single arrhythmogenic focus but multiple foci.

It is now recognized that atrial fibrillation most frequently arises from an abnormal focus at or near the junction of the pulmonary veins and the left atrium, allowing more focused, percutaneous ablation techniques to occur within the pulmonary veins. The basic strategies that have emerged for focal ablation within the pulmonary veins, as identified by electrophysiologic mapping, are:

- Segmental ostial ablation guided by pulmonary vein potential (electrical approach), or
- Circumferential pulmonary vein ablation (anatomic approach and most commonly used).

Repeat procedures following an initial radiofrequency ablation are commonly performed if atrial fibrillation recurs or if atrial flutter develops post-procedure. The need for repeat procedures may in part depend on clinical characteristics of the patients (age, persistent vs. paroxysmal atrial fibrillation, atrial dilatation, etc.) and the type of initial ablation performed.

### Summary

Results of new randomized, controlled trials that compare radiofrequency ablation with antiarrhythmic medications corroborate the conclusions of previous research, reporting that freedom from atrial fibrillation is more likely following ablation compared with medications. Results of long-term follow-up of 5 to 6 years following ablation demonstrate that late recurrences continue to occur in patients who are free of atrial fibrillation at 1 year. However, the majority of patients who are atrial-fibrillation-free at 1 year remain atrial-fibrillation-free at 5 to 6 years. Rates of complications following ablation remain uncertain; evidence for this update supports a serious complication rate of less than 5% and a mortality rate of approximately 1 per 1,000. Therefore, radiofrequency ablation is medically necessary for the indications in the policy statement.
Case series of cryoablation report success rates in the range seen for radiofrequency ablation, and the preliminary results of one randomized, controlled trial report that cryoablation is more effective than medications. However, rates of success with cryoablation are on the lower end of results seen when using radiofrequency. It is not yet possible to determine whether outcomes of cryoablation are similar to that for radiofrequency ablation. Randomized, controlled trials comparing the two techniques are currently underway. Thus, this approach is considered investigational.

**Policy History**

<table>
<thead>
<tr>
<th>Date</th>
<th>Action</th>
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<tbody>
<tr>
<td>5/2014</td>
<td>Updated Coding section with ICD10 procedure and diagnosis codes, effective 10/2015.</td>
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<tr>
<td>5/2014</td>
<td>New references from BCBSA National medical policy; policy title changed.</td>
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<tr>
<td>5/2013</td>
<td>New references from BCBSA National medical policy.</td>
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<tr>
<td>12/2009</td>
<td>BCBS Association National Policy Review. Clarified repeat procedures; non-coverage language was clarified.</td>
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<tr>
<td>11/1/2009</td>
<td>Medical Policy 141 effective 11/1/2009. This treatment was previously addressed on medical policy #123, Catheter Ablation of Other Arrhythmogenic Foci.</td>
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**Information Pertaining to All Blue Cross Blue Shield Medical Policies**
Click on any of the following terms to access the relevant information:
- Medical Policy Terms of Use
- Managed Care Guidelines
- Indemnity/PPO Guidelines
- Clinical Exception Process
- Medical Technology Assessment Guidelines

**References**


8. Blue Cross and Blue Shield Association Technology Evaluation Center (TEC). Catheter ablation of the pulmonary veins as a treatment for atrial fibrillation. TEC Assessments 2008; Volume 23 Tab 11.


44. Liu A, Meroel M, Hoeren D et al. Rationale and design of the FreezeAF trial: a randomized controlled noninferiority trial comparing isolation of the pulmonary veins with the cryoballoon catheter versus open irrigated radiofrequency ablation in patients with paroxysmal atrial fibrillation. Am. Heart J. 2010; 159(4):555-60 e1.


55. Calkins H, Kuck KH, Cappato R et al. 2012 HRS/EHRA/ECAS expert consensus statement on catheter and surgical ablation of atrial fibrillation: recommendations for patient selection, procedural techniques, patient management and follow-up, definitions, endpoints, and research trial design: a report of the Heart Rhythm Society (HRS) Task Force on Catheter and Surgical Ablation of Atrial Fibrillation. Developed in partnership with the European Heart Rhythm Association (EHRA), a registered branch of the European Society of Cardiology (ESC) and the European Cardiac Arrhythmia Society (ECAS); and in collaboration with the American College of Cardiology (ACC), American Heart Association (AHA), the Asia Pacific Heart Rhythm Society (APHRS), and the Society of Thoracic Surgeons (STS). Endorsed by the governing bodies of the American College of Cardiology Foundation, the American Heart Association, the European Cardiac Arrhythmia Society, the European Heart Rhythm Association, the Society of Thoracic Surgeons, the Asia Pacific Heart Rhythm Society, and the Heart Rhythm Society. Heart Rhythm 2012; 9(4):e21.