Medical Policy
Radiofrequency Ablation of the Renal Sympathetic Nerves as a Treatment for Resistant Hypertension

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Policy Number: 919
BCBSA Reference Number: 7.01.136
NCD/LCD: NA

Related Policies
- Baroreflex Stimulation Devices, #595

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

Radiofrequency ablation of the renal sympathetic nerves for the treatment of resistant hypertension is considered INVESTIGATIONAL.

Prior Authorization Information
Pre-service approval is required for all inpatient services for all products. See below for situations where prior authorization may be required or may not be required for outpatient services.
Yes indicates that prior authorization is required.
No indicates that prior authorization is not required.
N/A indicates that this service is primarily performed in an inpatient setting.

<table>
<thead>
<tr>
<th>Outpatient</th>
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<tbody>
<tr>
<td>Commercial Managed Care (HMO and POS)</td>
<td>This is not a covered service.</td>
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<tr>
<td>Commercial PPO and Indemnity</td>
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<td>Medicare HMO BlueSM</td>
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<td>Medicare PPO BlueSM</td>
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CPT Codes / HCPCS Codes / ICD Codes
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.

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

CPT Codes
There is no specific CPT code for this service.

Diagnosis Codes
Investigational for the diagnoses described in the medical policy statement.

ICD-9 Procedure Codes
There is no specific ICD-9 procedure code for this service.

Description
Radiofrequency ablation (RFA) of the renal sympathetic nerves is a non-pharmacologic treatment for hypertension. This treatment is intended to reduce sympathetic nerve activity in the renal system, thus leading to lower blood pressure. Patients with hypertension that is resistant to treatment with standard medications may derive benefit from this approach.

Hypertension is a widely prevalent condition, which is estimated to affect approximately 30% of the population in the United States. It accounts for a high burden of morbidity related to strokes, ischemic heart disease, kidney disease, and peripheral arterial disease. Resistant hypertension is defined as elevated blood pressure (BP) despite treatment with at least 3 antihypertensive agents at optimal doses. Treatment for resistant hypertension is mainly intensified drug therapy, sometimes with the use of non-traditional antihypertensive medications such as spironolactone and/or minoxidil. However, control of resistant hypertension with additional medications is often challenging and can lead to high costs and frequent adverse effects of treatment. As a result, there is a large unmet need for additional treatments that can control resistant hypertension.

Increased sympathetic nervous system activity has been linked to essential hypertension. Surgical sympathectomy has been shown to be effective in reducing blood pressure but is limited by the side effects of surgery and was largely abandoned after effective medications for hypertension became available. Radiofrequency ablation is thought to decrease both the afferent sympathetic signals from the kidney to the brain and the efferent signals from the brain to the kidney. This decreases sympathetic activation, decreases vasoconstriction, and decreases activation of the renin-angiotensin system.

The procedure is performed percutaneously with access at the femoral artery. A flexible catheter is threaded into the renal artery and controlled, low-power RF energy is delivered to the arterial walls where the renal sympathetic nerves are located. Once adequate RF energy has been delivered to ablate the sympathetic nerves, the catheter is removed.

Summary
There are currently no devices that have FDA-approval for radiofrequency ablation (RFA) of the renal sympathetic nerves. This is an active area of research, with numerous ongoing RCTs, including at least 2 double-blind, sham-controlled RCTs.

The published evidence consists of one small, short-term RCT that reports efficacy in reducing blood pressure over a 6-month time period. Other small studies with overlapping populations also report improvements in related physiologic parameters, such as echocardiographic measures of LVH. One
case series suggests that improvements may be durable up to 24-months' follow-up. There is no evidence that reports improvements in health outcomes as a result of treatment with RFA of the renal sympathetic nerves. Potential complications of this procedure include vascular access problems, perforation of the renal artery, and renal artery stenosis, but rates of complications have not been well-established. This evidence is insufficient to determine whether health outcomes are improved, and therefore radiofrequency ablation of the renal sympathetic nerves is considered investigational.

Policy History

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<th>Date</th>
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<tr>
<td>10/2016</td>
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<td>11/2015</td>
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<tr>
<td>12/2013</td>
<td>New references from BCBSA National medical policy.</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


