

MEDICAL POLICY

Medical Policy Title	Intraosseous Basivertebral Nerve Ablation for Child Health Plus (CHP), and Essential Plan (EP) Members
Policy Number	7.01.124
Current Effective Date	January 1, 2027
Next Review Date	September 2027

Our medical policies are guides to evaluate technologies or services for medical necessity. Criteria are established through the assessment of evidence based, peer-reviewed scientific literature, and national professional guidelines. Federal and state law(s), regulatory mandates and the member's subscriber contract language are considered first in the determination of a covered service.

(Link to [Product Disclaimer](#))

POLICY STATEMENT(S)

- I. Thermal ablation of the intraosseous basivertebral nerve (BVN) is considered **medically appropriate** when documentation meets **ALL** the following:
 - A. Individual is 18 years of age or older;
 - B. Chronic low back pain for a minimum of 6 months;
 - C. Pain failed to adequately improve, or was not tolerated, despite a minimum of 6 months of conservative treatment that includes **BOTH** of the following:
 1. Non-pharmacologic management includes **ANY** of the following:
 - a. Acupuncture;
 - b. Chiropractic treatment;
 - c. Cognitive behavioral therapy; **or**
 - d. Supervised physical therapy (PT); **and**
 2. Pharmacologic management includes **ANY** of the following:
 - a. Interventional pain management with epidural steroid injections (ESI) or facet-based interventions;
 - b. Nonsteroidal anti-inflammatory drugs (NSAIDs); **or**
 - c. Oral analgesic therapy;
 - D. Clinical presentation is consistent with vertebrogenic pain (e.g., persistent low back pain, deep midline pain, pain aggravated by bending, prolonged standing, or sitting);
 - E. Modic Type 1 and/or Type II endplate changes at least one (1) vertebral level from L3 to S1 documented on magnetic resonance imaging (MRI) within the previous 12 months;
 - F. Pain presentation includes **BOTH** of the following:
 1. Axial low back pain as the primary symptom; **and**

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- 2. Pain causes functional impairment (e.g., reduced mobility, impaired activities of daily living);
- G. The procedure will be performed using fluoroscopic or computed tomography (CT) guidance.
- II. Thermal ablation of the intraosseous basivertebral nerve (BVN) is contraindicated and **not medically necessary** for **ANY** of the following:
 - A. Active infection, local or systemic;
 - B. Bleeding or clotting disorder;
 - C. Compromised bone integrity with **any** of the following diagnoses:
 - 1. osteoporosis (T-score $\leq$ -2.5);
 - 2. spinal malignancy;
 - 3. trauma/compression fracture involving the intended treatment level; **or**
 - 4. vertebral fragility fracture;
 - D. History of basivertebral nerve ablation at the requested vertebral level;
 - E. History of spinal surgery at the requested vertebral level;
 - F. Imaging evidence (MRI, CT, X-ray) identifies an alternative cause of low back pain symptoms (e.g., degenerative scoliosis, disc herniation, lumbar stenosis, spondylolisthesis);
 - G. Implanted electronic devices (e.g., pacemaker, defibrillator, neurostimulator);
 - H. Modic Type 3 (sclerotic) endplate changes;
 - I. Pain localized to the anterior column/midline, with other pain generators (discogenic, facet, radicular, sacroiliac) reasonably ruled out;
 - J. Pregnancy;
 - K. Primary presenting symptoms include **any** of the following:
 - 1. lumbar radiculopathy;
 - 2. nerve compression/impingement (e.g., stenosis);
 - 3. neurogenic claudication; **or**
 - 4. radicular pain;
 - L. Severe cardiac or pulmonary impairment;
 - M. Skeletal immaturity (younger than 18 years of age).

RELATED POLICIES

Corporate Medical Policy

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7.01.122 Interventional Pain Management for Safety Net Members

POLICY GUIDELINE(S)

Not Applicable

DESCRIPTION

Intraosseous basivertebral nerve ablation (BVNA) is a minimally invasive, image-guided procedure used to treat chronic vertebrogenic low back pain. Vertebrogenic pain is thought to originate from damaged vertebral endplates and is transmitted to the central nervous system through the basivertebral nerve (BVN), an intraosseous nerve that courses within the vertebral body. Endplate damage is commonly associated with Modic Type 1 and/or Type 2 changes seen on MRI.

During the procedure, a bipolar radiofrequency probe is advanced percutaneously through a transpedicular approach into the vertebral body under fluoroscopic guidance. Radiofrequency energy is then applied to the basivertebral nerve within the inner, spongy (cancellous) bone of the vertebral body, thermally ablating the nerve to interrupt the transmission of pain signals from the affected endplates. The vertebral body itself and its structural integrity are preserved.

BVNA is generally considered for skeletally mature patients with chronic axial low back pain of at least six months' duration who have not adequately improved with conservative (nonsurgical) management and who demonstrate Modic Type 1 and/or Type 2 endplate changes at one or more levels from L3 through S1 on MRI. The goal of treatment is durable reduction in pain and improvement in function.

Supporting definitions:

- Activities of daily living (ADLs) refer to basic self-care tasks that individuals perform to maintain their well-being and live independently. These tasks include bathing or showering; dressing; eating; toileting; transferring (getting in and out of bed or chair).
- Computed tomography (CT) is an imaging test that uses X-rays to computer analysis to generate cross sectional images of the internal structures of the body that can be displayed in multiple planes.
- Conservative management is an approach to treating back pain, neck pain and related spinal conditions utilizing non-surgical treatment options, such as physical therapy, medication and injections.
- Fluoroscopy is a study of moving body structures, similar to an X-ray "movie." A continuous X-ray beam is passed through the body part being examined and is transmitted to a TV-like monitor so that the body part and its motion can be seen in detail. Fluoroscopy, as an imaging tool, enables physicians to look at many body systems, including the skeletal, digestive, urinary, respiratory, and reproductive systems.

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- Magnetic resonance imaging (MRI) uses a strong magnetic field and radiofrequency pulses to energize hydrogen protons in body tissues, then constructs images from the different signals emitted as those protons return toward equilibrium.
- Modic changes are magnetic resonance imaging (MRI) signal changes related to spinal degeneration in the vertebral endplate and adjacent bone marrow, also described as reactive vertebral body changes within the cancellous bone adjacent to the vertebral end plates.
 - o Type I: Reflects marrow edema and inflammation
 - o Type II: Fatty replacement of bone marrow
 - o Type III: Subchondral or bony sclerosis
- Neurogenic claudication is the symptom pattern typically associated with lumbar spinal stenosis in which lower-extremity, buttock, or back pain, numbness, weakness, or paresthesias are brought on by standing or walking and relieved by sitting or spinal flexion, often termed pseudoclaudication.
- Osteoporosis is a skeletal disorder characterized by compromised bone strength, often described as low bone mass with microarchitectural deterioration, that increases bone fragility and fracture risk. Defined as a T-score of -2.5 or lower compared with a young adult reference mean in postmenopausal women and in men aged 50 years or older.
- Vertebrogenic pain refers to chronic low back pain arising from damaged vertebral endplates and transmitted through the basivertebral nerve. MRI evidence of Modic Type 1 or Type 2 changes is commonly present.

SUPPORTIVE LITERATURE

The published evidence supports intraosseous basivertebral nerve ablation (BVNA) as an effective, durable treatment for vertebrogenic chronic low back pain in appropriately selected patients with Modic type 1 or 2 endplate changes at L3–S1.

PROFESSIONAL GUIDELINE(S)

In 2022, the International Society for the Advancement of Spine Surgery (ISASS) (Lorio 2022) recognized intraosseous BVN ablation as a safe, predictable, and durable treatment for chronic axial vertebrogenic low back pain identified by established clinical criteria and Modic type 1 and/or type 2 changes on MRI. The recommendation rests on Level I evidence with a systematic review and two randomized controlled trials showing statistically significant reductions in pain and improvements in function, with benefit maintained beyond 5 years after a single treatment.

In 2022, the American Society of Pain and Neuroscience (ASPN) published best practice guidelines for the diagnosis and treatment of vertebrogenic pain with BVN ablation (Sayed 2022). A multidisciplinary concluded that moderate-to-high quality evidence supports BVNA for improving pain, function, and quality of life, reducing opioid use, and achieving high patient satisfaction, with

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clinically meaningful and statistically significant superiority over standard care in carefully selected patients.

The 2023 North American Spine Society (NASS) Basivertebral Nerve (BVN) Ablation Coverage Recommendations supports percutaneous interosseous radiofrequency ablation of the BVN for individuals who are:

- Skeletally mature with chronic low back pain for at least 6 months;
- Inadequately improved despite nonsurgical management;
- Have Type 1 or Type 2 Modic changes at endplates between L3 and S1.

NASS notes a growing evidence base that damage to innervated vertebral endplates produces vertebrogenic back pain transmitted via the BVN, with percutaneous intraosseous radiofrequency ablation emerging as an interventional option. NASS does not support transforaminal epiduroscopic BVN laser ablation, citing only a single promising case series and the need for further study.

REGULATORY STATUS

The U.S. Food and Drug Administration (FDA) regulates radiofrequency generators as medical devices. All radiofrequency generators including related components require FDA approval before marketing and use in the United States to ensure they are safe and effective for human use. Refer to the FDA Medical Device website. Available from: <https://www.fda.gov/medical-devices> [accessed 2026 Sep 12]

The FDA lists the most serious type of medical device recalls as well as early alert communications about corrective actions being taken by companies that the FDA believes are likely to be the most serious type of recalls. Available from: <https://www.fda.gov/medical-devices/medical-device-safety/medical-device-recalls-and-early-alerts> [accessed 2026 Sep 12]

CODE(S)

- Codes may not be covered under all circumstances.
- Code list may not be all inclusive (AMA and CMS code updates may occur more frequently than policy updates).
- (E/I)=Experimental/Investigational
- (NMN)=Not medically necessary/appropriate

CPT Codes

Code	Description
64628	Thermal destruction of intraosseous basivertebral nerve, including all imaging guidance; first 2 vertebral bodies, lumbar or sacral

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Code	Description
64629	Thermal destruction of intraosseous basivertebral nerve, including all imaging guidance; each additional vertebral body, lumbar or sacral (List separately in addition to code for primary procedure)

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HCPSC Codes

Code	Description
Not Applicable	

ICD10 Codes

Code	Description
M42.16	Adult osteochondrosis of spine, lumbar region
M42.17	Adult osteochondrosis of spine, lumbosacral region
M51.36	Other intervertebral disc degeneration, lumbar region
M51.360	Other intervertebral disc degeneration, lumbar region, unspecified pain status
M51.37	Other intervertebral disc degeneration, lumbosacral region
M51.370	Other intervertebral disc degeneration, lumbosacral region, unspecified pain status
M54.50	Low back pain, unspecified
M54.51	Vertebrogenic low back pain
M54.59	Other low back pain

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SEARCH TERMS

Not Applicable

CENTERS FOR MEDICARE AND MEDICAID SERVICES (CMS)

[Thermal Destruction of the Intraosseous Basivertebral Nerve \(BVN\) for Vertebrogenic Lower Back Pain \(LCD L40302\)](#) [accessed 2026 Sep 12]

PRODUCT DISCLAIMER

- Services are contract dependent; if a product does not cover a service, medical policy criteria do not apply.
- If a commercial product (including an Essential Plan or Child Health Plus product) covers a specific service, medical policy criteria apply to the benefit.
- If a Medicaid product covers a specific service, and there are no New York State Medicaid guidelines (eMedNY) criteria, medical policy criteria apply to the benefit.
- If a Medicare product (including Medicare HMO-Dual Special Needs Program (DSNP) product) covers a specific service, and there is no national or local Medicare coverage decision for the service, medical policy criteria apply to the benefit.
- If a Medicare HMO-Dual Special Needs Program (DSNP) product DOES NOT cover a specific service, please refer to the Medicaid Product coverage line.

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POLICY HISTORY/REVISION	
Committee Approval Dates	
09/17/26	
Date	Summary of Changes
01/01/26	Original effective date
09/17/26	New Policy