

Basivertebral Nerve Ablation

Policy Number: 076

	Commercial and Qualified Health Plans	MassHealth	Medicare Advantage
Authorization Required	X		X
No Prior Authorization			
Not covered		X	

Overview

This document describes the guidelines Mass General Brigham Health Plan utilizes to determine medical necessity for intraosseous basivertebral nerve ablation (BVNA) for chronic lower back pain.

Coverage Guidelines

Mass General Brigham Health Plan considers BVNA at levels L3 to S1 **medically necessary** for the treatment of chronic lower back pain of vertebrogenic origin when ALL of the following criteria are met:

- Member is 25 years of age or older;
- Chronic lower back pain has persisted for at least six months;
- Pain has failed to adequately improve despite six months of non-operative management, including:
 - At least 4 weeks of physical therapy, and
 - At least 4 weeks of acetaminophen and/or NSAIDs, and
 - Activity and/or lifestyle modification.
- MRI evidence of Modic Type 1 or Type 2 changes involving the endplates between L3 and S1.
- If disc extrusion or protrusion >5mm is present in the lumbar spine, epidural steroid injection has been performed within the past 2 years and resulted in <50% symptom improvement
- If facet arthrosis/effusion is present, and pain increases with facet loading maneuvers, then 2 diagnostic facet joint injections or medial nerve blocks have been performed within the past 2 years and resulted in <50% symptom improvement

Exclusions

Mass General Brigham Health Plan considers BVNA **experimental and investigational** when any of the following conditions is present:

- Radicular pain,
- Previous lumbar spine surgery,
- Symptomatic spinal stenosis,
- Spine infection or other active systemic infection,
- Osteoporosis, metabolic bone disease, or history of spine fragility fracture
- Vertebral fracture within the past year,
- Malignancy of the spine,
- Spondylolisthesis >2 mm,
- Spondylolysis at any level,
- Severe cardiac or pulmonary disease,
- BMI >40,
- Poorly controlled major psychiatric disease that is suspected to be a major contributor to back pain,
- Bedbound or a neurologic condition that prevents early mobility,

- Pregnancy
- Treatment of vertebrae above L3 or below S1
- Repeat BVNA on a vertebra that has previously been treated with BVNA

Additionally, BVNA is considered **experimental and investigational** when performed concurrently with other procedures, including steroid injections, nerve blocks, ablation of other nerves, and surgeries.

Medicare Variation

Mass General Brigham Health Plan uses guidance from the Centers for Medicare and Medicaid Services (CMS) for coverage determinations for its Medicare Advantage plan members. National Coverage Determinations (NCDs), Local Coverage Determinations (LCDs), Local Coverage Articles (LCAs) and documentation included in the Medicare manuals are the basis for coverage determinations. When there is no guidance from CMS for the requested service, Mass General Brigham Health Plan’s medical policies are used for coverage determinations.

At the time of Mass General Brigham Health Plan’s most recent policy review, CMS includes the following coverage guidelines:

- [LCD: Intraosseous Basivertebral Nerve Ablation \(L39642\)](#)
- [LCD: Intraosseous Basivertebral Nerve Ablation \(L39644\)](#)
- [LCD: Thermal Destruction of the Intraosseous Basivertebral Nerve \(BVN\) for Vertebrogenic Lower Back Pain \(L39420\)](#)

Codes

The following codes are included below for informational purposes only; inclusion of a code does not constitute or imply coverage.

Authorized CPT/HCPCS Codes	Code Description
64628	Thermal destruction of intraosseous basivertebral nerve, including all imaging guidance; first two vertebral bodies, lumbar or sacral.
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).

Effective

July 2024: Effective Date.

References

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Khalil JG, Smuck M, Koreckij T, et al. A prospective, randomized, multicenter study of intraosseous basivertebral nerve ablation for the treatment of chronic lower back pain. *Spine J.* 2019 Oct;19(10):1620-1632. <https://doi.org/10.1016/j.spinee.2019.05.598>.

Koreckij T, Kreiner S, Khalil JG, et al. Prospective, randomized, multicenter study of intraosseous basivertebral nerve ablation for the treatment of chronic low back pain: 24-month treatment arm results. *N Am Spine Soc J.* 2021 Oct 26;8:100089. <https://doi.org/10.1016/j.xnsj.2021.100089>.



Marcus JL, Westerhaus BD, Chernicki B, et al. Basivertebral nerve ablation with concurrent lumbar laminotomy. *BMJ Case Reports CP*.2024;17:e259695.

Sayed D, Naidu RK, Patel KV, et al. Best practice guidelines on the diagnosis and treatment of vertebrogenic pain with basivertebral nerve ablation from the American Society of Pain and Neuroscience. *Journal of Pain Research*. 2022;15:2801–2819 <https://doi.org/10.2147/JPR.S378544>.

Sayed D, Grinder J, Strand N, et al. The American Society of Pain and Neuroscience (ASPN) evidence-based clinical guideline of interventional treatments for low back pain. *Journal of Pain Research*. 2022;15:3729-3832. DOI: 10.2147/JPR.S386879.

