



MEDICAL POLICY STATEMENT

Michigan Health Link

Policy Name & Number	Date Effective
Intraosseous Basivertebral Nerve Ablation-MI Health Link-MM-1571	06/01/2024
Policy Type	
MEDICAL	

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A. Subject

Intraosseous Basivertebral Nerve Ablation

B. Background

Interventional procedures for the management of acute and chronic pain are part of a comprehensive pain management care plan that incorporates conservative treatment in a multimodality approach. Multidisciplinary treatments include promoting patient self-management and aim to reduce the impact of pain on a patient's daily life, even if the pain cannot be relieved completely. Interventional procedures for the management of pain unresponsive to conservative treatment should be provided only by physicians qualified to deliver these health services.

Chronic low back pain (CLBP) is a common disabling condition, estimated to afflict 80% of adults at some point. Degenerative disc disease (DDD) is an important cause of CLBP. While discs are avascular with limited nerve distribution, vertebral endplates have the potential to trigger a cascade of degenerative events if there is a loss of integrity. Vertebral endplates are a thin interface between bone marrow and discs and contain neural elements. Breakdown of the endplate is believed to cause vertebrogenic chronic low back pain, a type of chronic low back pain. Endplate degeneration can be observed on MRI through Modic changes (MC).

Histologically in MC type I (MC I) lesions, the endplate is disrupted as fibrous tissue replaces bone marrow, causing the disc-bone interface to be filled with vascularized granulation tissue. MC I represents bone marrow edema and inflammation. In MC type II (MC II) lesions, there is demonstration of fatty marrow replacement in addition to MC type I findings. MC II represents conversion of hematopoietic marrow into fatty, yellow bone marrow. MC type III (MC III) lesions are related to subchondral bone sclerosis. Analysis of Modic lesions shows that MC I is characterized by high bone turnover, MC II is characterized by decreased bone turnover, and MC III are stable.

Radiofrequency ablation is a minimally invasive, percutaneous treatment which uses heat to ablate the nerve pathway that conducts the pain signal. The goal of RFA is to interrupt the pain pathway without causing excessive sensory loss, motor dysfunction, or other complications. Intracept is an RFA system designed to ablate the basivertebral nerve of the vertebral endplate.

C. Definitions

- **Chronic Low Back Pain** – Persistent pain in the lumbar region lasting more than 12 weeks.
- **Conservative Therapy** – A multimodality plan of care including both active and inactive conservative therapies.
 - **Active Conservative Therapies** – Actions or activities that strengthen muscle groups and target key spinal structures, including physical therapy, occupational

therapy, physician supervised home exercise program (HEP), and/or chiropractic care.

- **HEP** – A 6-week program requiring an exercise prescription and/or plan and a follow-up documented in the medical record after completion, or documentation of the inability to complete the HEP due to a stated physical reason (ie, increased pain, inability to physically perform exercises). Patient inconvenience or noncompliance without explanation does not constitute an inability to complete.
- **Inactive Conservative Therapies** – Passive activities by the patient that aid in treating symptoms associated with pain, including rest, ice, heat, medical devices, TENS use, and/or pharmacotherapy (prescription or over the counter [eg, non-steroidal anti-inflammatory drugs, acetaminophen]).
 - **Transcutaneous Electrical Nerve Stimulator (TENS)** – A device that utilizes electrical current delivered through electrodes placed on the surface of the skin to decrease the patient’s perception of pain by inhibiting the transmission of afferent pain nerve impulses and/or stimulating the release of endorphins. Its use, frequency, duration, and start dates must be documented in the medical record to be considered part of conservative therapy during the period of prior authorization request.
- **Modic Changes** – Vertebral bone marrow signal intensity changes that are observable on MRI and are commonly associated with degenerative disc disease.
 - **Modic Change Type I** – Characterized by hypo- and hyper-intense signal intensities on T1- and T2-weighted spin-echo (T1W1 and T2W1), respectively.
 - **Modic Change Type II** – Characterized by hyper-intense signal intensities on both T1W1 and T2W1.
 - **Modic Change Type III** – Characterized by hypo-intense signal intensities on both T1W1 and T2W1.
- **Radiofrequency Ablation (RFA)** – Minimally invasive treatment modality that percutaneously introduces an electrode under fluoroscopic guidance to thermocoagulate medial or lateral branches of the dorsal spinal nerves.

D. Policy

- I. CareSource considers intraosseous basivertebral nerve ablation medically necessary when **ALL** the following clinical criteria are met:
 - A. member has a diagnosis and documentation of chronic low back pain of at least 6 months duration.
 - B. failure of conservative therapy, as evidenced by **ALL** the following:
 1. documentation in the medical record of at least 6 weeks of active conservative therapy (see definition above) within the past 6 months OR inability to complete active conservative therapy due to contraindication, increased pain, or intolerance
 2. documentation in the medical record of at least 6 weeks of inactive conservative therapy (see definition above) within the past 6 months
 - C. MRI demonstrates Type 1 or Type 2 Modic changes at one or more vertebral endplates from level L3 to S1, as demonstrated by

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1. hypointense T1-weighted signal and hyperintense T2-weighted signal (ie, bone marrow edema and inflammation), or
 2. hyperintense T1-weighted signal and hyperintense T2-weighted signal (ie, bone marrow ischemia)
- D. device is FDA-approved (eg, Intracept System)
- E. member does not have any of the following contraindications:
1. severe cardiac or pulmonary compromise
 2. targeted ablation zone less than 10mm from a sensitive structure not intended to be ablated (including vertebral foramen)
 3. active systemic infection or localized infection in the area to be treated
 4. current pregnancy
 5. skeletal immaturity
 6. implantable pulse generator (eg, pacemaker, defibrillator) or other electronic implant
 7. scoliosis
 8. spinal instability

II. Repeat or additional intraosseous basivertebral nerve ablation is not considered medically necessary, as it has not been adequately studied in peer-reviewed medical literature.

III. Monitored anesthesia and conscious sedation during intraosseous basivertebral nerve ablation are considered not medically necessary and will, therefore, not be reimbursed.

IV. Coverage is limited to the above criteria. Intraosseous basivertebral nerve ablation is considered not medically necessary for all other indications.

E. Conditions of Coverage
 NA

F. Related Policies/Rules
 NA

G. Review/Revision History

DATE		ACTION
Date Issued	12/13/2023	New policy. Approved at Committee.
Date Revised	01/31/2024	Annual review, updated references. Approved at Committee.
Date Effective	06/01/2024	
Date Archived		

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Independent medical review – March 2022

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