

Corporate Medical Policy

Facet Joint Denervation

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Description of Procedure or Service

Facet joint denervation is performed under local anesthetic and with fluoroscopic guidance. A needle or probe is directed to the median branch of the dorsal ganglion innervating the facet joint, where multiple thermal lesions are produced, typically by a radiofrequency generator. A variety of terms may be used to describe radiofrequency (RF) denervation (e.g., rhizotomy, rhizolysis). In addition, the structures to which the RF energy is directed may be referred to as facet joint, facet nerves, medial nerve or branch, median nerve or branch, or dorsal root ganglion.

Background

Percutaneous radiofrequency (RF) facet denervation is used to treat neck or back pain originating in facet joints with degenerative changes. Diagnosis of facet joint pain is confirmed by response to nerve blocks. Patients generally are sedated for the RF procedure. The goal of facet denervation is long-term pain relief. However, the nerves regenerate, and repeat procedures may be required.

Alternative methods of denervation include pulsed RF, laser, chemodenervation and cryoablation. Pulsed RF consists of short bursts of electrical current of high voltage in the RF range but without heating the tissue enough to cause coagulation. It is suggested as a possibly safer alternative to thermal RF facet denervation. Temperatures do not exceed 42°C at the probe tip versus temperatures in the 60°C range reached in thermal RF denervation, and tissues may cool between pulses. It is postulated that transmission across small unmyelinated nerve fibers is disrupted but not permanently damaged, while large myelinated fibers are not affected. With chemical denervation, injections with a diluted phenol solution, a chemical ablating agent, are injected into the facet joint nerve.

Regulatory Status

A number of radiofrequency generators and probes have been cleared for marketing through the U.S. Food and Drug Administration's (FDA) 510(k) process. One device, the SInergy® by Kimberly Clark/Baylis, is a water-cooled single-use probe that received FDA clearance in 2005, listing the Baylis Pain Management Probe as a predicate device. The intended use is in conjunction with a radiofrequency generator to create radiofrequency lesions in nervous tissue.

Related Policies

Total Facet Arthroplasty
Diagnosis and Treatment of Sacroiliac Joint Pain

*****Note: This Medical Policy is complex and technical. For questions concerning the technical language and/or specific clinical indications for its use, please consult your physician.**

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Policy

BCBSNC may provide coverage for Facet Joint Denervation when it is determined to be medically necessary because the medical criteria and guidelines shown below are met.

Benefits Application

This medical policy relates only to the services or supplies described herein. Please refer to the Member's Benefit Booklet for availability of benefits. Member's benefits may vary according to benefit design; therefore member benefit language should be reviewed before applying the terms of this medical policy.

When Facet Joint Denervation is covered

Non-pulsed radiofrequency denervation of cervical facet joints (C3-4 and below) and lumbar facet joints may be considered medically necessary when the criteria in the Policy Guidelines section below are met.

When Facet Joint Denervation is not covered

Radiofrequency denervation is considered investigational for the treatment of chronic spinal/back pain for all uses that do not meet the criteria listed in the Policy Guidelines section, including but not limited to treatment of thoracic facet or sacroiliac (SI) joint pain.

All other techniques of facet joint denervation for the treatment of chronic back pain are considered investigational including, but not limited to:

- Pulsed radiofrequency denervation;
- Laser;
- Cryodenervation;
- Chemical denervation (e.g., alcohol, phenol, or high-concentration local anesthetics).
- Cooled radiofrequency ablation (e.g., COOLIEF)

More than two facet injections/medial branch blocks at the same level are considered investigational.

If there has been a prior successful radiofrequency denervation, additional diagnostic medial branch blocks for the same level of the spine are not medically necessary.

Policy Guidelines

Candidates for radiofrequency facet (RF) denervation should meet **all** of the following criteria:

1. No prior spinal fusion surgery in the vertebral level being treated;
2. Disabling non-radicular low back (lumbosacral) or neck (cervical) pain, suggestive of facet joint origin as documented in the medical record based upon all of the following:
 - a) history, consisting of mainly axial or non-radicular pain, AND
 - b) physical examination, with positive provocative signs of facet disease, AND
 - c) radiographic imaging that excludes other causes of cervical or lumbar pain prior to treatment with spinal injections and that documents the presence of facet disease;
3. Pain has failed to respond to three (3) months of conservative management which must consist of therapies that include:
 - a) oral analgesics (e.g., nonsteroidal anti-inflammatory medications, acetaminophen), AND
 - b) manipulation or physical therapy, AND

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- c) a home exercise program;
4. A trial of one controlled medial branch block or facet injection with either a local anesthetic or combined local anesthetic and steroid under live fluoroscopic guidance that has resulted in at least a 50% reduction in pain for the duration of the expected injection (hours with local anesthetic versus days to months with combined local anesthetic/steroid combination) during the conservative trial period. The medial branch block or facet injection should involve the levels being considered for radiofrequency treatment and should not be conducted under intravenous sedation unless specifically indicated (e.g., the patient is unable to cooperate with the procedure). Single-level blocks lead to more precise diagnostic information, but multiple single-level blocks require several visits and additional exposure to radiation.
5. If there has been a prior successful radiofrequency (RF) denervation, then a minimum time of six (6) months has elapsed since prior RF denervation treatment (per side, per anatomical level of the spine). Prior success is defined as 50% or more pain relief documented in medical record. A repeat block is not necessary after 6 months or more have elapsed since prior RF denervation treatment, if symptoms and treatment are at the same location(s) or spinal level(s), and presentation is similar to that of initial or prior treatment.
6. If no prior diagnostic medial branch block has ever been done, even if the patient responded well to prior RF denervations, those denervations are NOT a substitute for an initial nerve block trial, and, therefore, a medial branch nerve block would be necessary before a repeat RF denervation is done.

Summary of Evidence

For individuals who have suspected facet joint pain who receive diagnostic medial branch blocks, the evidence includes systematic reviews, a small randomized trial, and observational studies. Relevant outcomes are test accuracy, other test performance measures, symptoms, and functional outcomes. There is considerable controversy about the role of these blocks, the number of positive blocks required, and the extent of pain relief obtained. Studies have reported the use of single or double blocks and at least 50% or at least 80% improvement in pain and function. This evidence has suggested that there are relatively few patients who exhibit pain relief following 2 nerve blocks, but that these select patients may have pain relief for several months following RF denervation. Other large series have reported prevalence and false-positive rates following controlled diagnostic blocks, although there are issues with the reference standards used in these studies because there is no criterion standard for diagnosis of facet joint pain. There is level I evidence for the use of medial blocks for diagnosing chronic lumbar facet joint pain and level II evidence for diagnosing cervical and thoracic facet joint pain. The evidence available supports a threshold of at least 75% to 80% pain relief to reduce the false-positive rate. The evidence is sufficient to determine that the technology results in a meaningful improvement in the net health outcome.

For individuals who have facet joint pain who receive radiofrequency ablation, the evidence includes systematic reviews and randomized controlled trials. Relevant outcomes are symptoms, functional outcomes, quality of life, and medication use. While evidence is limited to randomized controlled trials with small sample sizes, RF facet denervation appears to provide at least 50% pain relief in carefully selected patients. Diagnosis of facet joint pain is difficult. However, response to controlled medial branch blocks and the presence of tenderness over the facet joint appears to be reliable predictors of success. When RF facet denervation is successful, repeat treatments appear to have similar success rates and durations of pain relief. Thus, the data indicate that, in carefully selected individuals with lumbar or cervical facet joint pain, RF treatments can result in improved outcomes. The evidence is sufficient to determine that the technology results in a meaningful improvement in the net health outcome.

For individuals who have facet joint pain who receive therapeutic medial nerve branch blocks or alternative methods of facet joint denervation the evidence includes a systematic review, randomized trials without a sham control, and uncontrolled case series. Relevant outcomes are symptoms, functional outcomes, quality of life, and medication use. Pulsed RF does not appear to be as effective

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as conventional RF denervation, and there is insufficient evidence to evaluate the efficacy of other methods of denervation (e.g., alcohol, laser, cryodenervation) for facet joint pain or the effect of therapeutic medial branch blocks on facet joint pain. The evidence is insufficient to determine the effects of the technology on health outcomes.

Billing/Coding/Physician Documentation Information

This policy may apply to the following codes. Inclusion of a code in this section does not guarantee that it will be reimbursed. For further information on reimbursement guidelines, please see Administrative Policies on the Blue Cross Blue Shield of North Carolina web site at www.bcbsnc.com. They are listed in the Category Search on the Medical Policy search page.

Applicable codes: 64625, 64633, 64634, 64635, 64636

*****Note: The American Medical Association's CPT Editorial Panel decided in June 2005 that the unlisted CPT code 64999 should be used for pulsed RF treatment as opposed to other specific codes.**

BCBSNC may request medical records for determination of medical necessity. When medical records are requested, letters of support and/or explanation are often useful, but are not sufficient documentation unless all specific information needed to make a medical necessity determination is included.

Scientific Background and Reference Sources

BCBSA Medical Policy Reference Manual [Electronic Version]. 7.01.116, 3/12/2009

Senior Medical Director - 5/2009

BCBSA Medical Policy Reference Manual [Electronic Version]. 7.01.116, 6/10/2010

Specialty Matched Consultant Advisory Panel - 11/2010

Binder DS, et al. The provocative lumbar facet joint. *Curr Rev Musculoskelet Med* (2009) 2:15-24. Retrieved June 22, 2011 from <http://web.ebscohost.com/ehost/detail?sid=5e550a78-8723-46c6-92f0-2d3cac53b6e4%40sessionmgr10&vid=5&hid=11>

Institute for Clinical Systems Improvement. Health Care Guideline: Adult low back pain. Fourteenth Edition, November 2010. Retrieved from http://www.icsi.org/low_back_pain/adult_low_back_pain__8.html June 22, 2011

Medical Director - 7/2011

BCBSA Medical Policy Reference Manual [Electronic Version]. 7.01.116, 10/1/2011

American Society of Anesthesiologists (ASA). Practice guidelines for chronic pain management. An updated report by the American Society of Anesthesiologists Task Force on chronic pain management and the American Society of Regional Anesthesia and Pain Medicine. *Anesthesiology* 2010; 112:810-33.

Specialty Matched Consultant Advisory Panel - 11/2011

Specialty Matched Consultant Advisory Panel - 10/2012

BCBSA Medical Policy Reference Manual [Electronic Version]. 7.01.116, 10/11/2012

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BCBSA Medical Policy Reference Manual[Electronic Version]. 6.01.23, 10/2013

Specialty Matched Consultant Advisory Panel– 10/16/13

Specialty Matched Consultant Advisory Panel– 10/2014

BCBSA Medical Policy Reference Manual[Electronic Version]. 7.01.116, 10/9/2014

Specialty Matched Consultant Advisory Panel– 10/2015

BCBSA Medical Policy Reference Manual[Electronic Version]. 7.01.116, 10/15/2015

Specialty Matched Consultant Advisory Panel– 10/2016

BCBSA Medical Policy Reference Manual[Electronic Version]. 7.01.116, 11/9/2017

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BCBSA Medical Policy Reference Manual[Electronic Version]. 7.01.116, 11/14/19

Cohen SP, Bhaskar A, Bhatia A, *et al.* Consensus practice guidelines on interventions for lumbar facet joint pain from a multispecialty, international working group. *Regional Anesthesia & Pain Medicine* Published Online First: 03 April 2020. [DOI: 10.1136/rapm-2019-101243](https://doi.org/10.1136/rapm-2019-101243)

BCBSA Medical Policy Reference Manual[Electronic Version]. 7.01.116, 11/12/20

Specialty Matched Consultant Advisory Panel04/2021

Medical Director review 4/2021

Policy Implementation/Update Information

6/8/09 New policy adopted from the BCBS Association. Reviewed with Senior Medical Director 5/7/09. "BCBSNC may provide coverage for Radiofrequency Facet Joint Denervation when it is determined to be medically necessary because the medical criteria and guidelines shown below are met." Under the "When Covered" section; "Radiofrequency denervation of cervical facet joints (C3-4 and below) and lumbar facet joints may be considered medically necessary when all the criteria listed below are met: 1.) No prior spinal fusion surgery in the vertebral level being treated; 2.) Low back (lumbosacral) or neck (cervical) pain, suggestive of facet joint origin as evidenced by the absence of nerve root compression documented in the medical record on history, physical, and radiographic evaluations; and the pain is not radicular; 3.) Pain has failed to respond to three months of conservative management which may consist of therapies such as nonsteroidal anti-inflammatory medications, acetaminophen, manipulation, physical therapy, and a home exercise program; 4.) A trial of controlled diagnostic medial branch blocks (3 separate positive blocks or placebo controlled series of blocks) under fluoroscopic guidance has resulted in at least a 50% reduction in pain; and 5.) If there has been a prior successful radiofrequency (RF) denervation, a minimum time of six months has elapsed since prior RF treatment (per side, per anatomical level of the spine)." The following indications are noted under the "When Not Covered" section; "1.) Radiofrequency denervation is considered investigational for the treatment of chronic spinal/back pain for all uses that do not meet the criteria listed above, including but not limited to treatment of thoracic facet or

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- sacroiliac (SI) joint pain. 2.) Pulsed radiofrequency denervation is considered investigational for the treatment of chronic spinal/back pain." Notice given 6/8/09. Policy effective 9/14/09. (btw)
- 2/2/10 Added specific CPT codes; 64622, 64623, 64626, 64627, 77003 to "Billing/Coding" section. Notice given 2/2/10. Policy effective date 5/11/2010. (btw)
- 6/22/10 Policy Number(s) removed (amw)
- 12/21/10 "Description" section revised. Policy reformatted. Criteria moved from the "When Covered" section to "Policy Guidelines". "Policy Guidelines" updated to indicate 2 (rather than 3) positive blocks are required and information about single versus multiple level diagnostic blocks also added. References added. Specialty Matched Consultant Advisory Panel review 11/29/2010. (btw)
- 8/30/11 "Description" section updated. Added the following statement to the "When Not Covered" section; "All other techniques of facet joint denervation for the treatment of chronic back pain are considered investigational including, but not limited to: Laser; Cryodenervation." Reworded #2 under "Policy Guidelines" to indicate; "Non-radicular low back (lumbosacral) or neck (cervical) pain, suggestive of facet joint origin as documented in the medical record on history, physical **and** radiographic evaluations. Radiographic evidence is necessary to exclude other causes of cervical or lumbar pain prior to treatment with spinal injections and to document the presence of facet disease;" #3 "Pain has failed to respond to three (3) months of conservative management which must consist of therapies, including oral analgesics (e.g., nonsteroidal anti-inflammatory medications, acetaminophen), and manipulation or physical therapy, and a home exercise program;" and Added the following to #5 "Repeat blocks are not necessary after 6 months since prior RF treatment, if symptoms and treatment are at the same location(s) or spinal level(s), and presentation is similar to that of initial or prior treatment." #6 "If no prior diagnostic medial branch blocks have ever been done, even if the patient responded well to prior RF ablations, those ablations are NOT a substitute for an initial trial of nerve blocks, and, therefore, medial branch nerve blocks would be necessary before repeat RF ablation is done." Medical Director review 7/18/2011. Notification given 8/30/2011. Policy effective 12/6/2011. References added. (btw)
- 1/1/12 Specialty Matched Consultant Advisory Panel review 11/30/2011. "Description" section revised. "Chemical denervation" added to the "When Not Covered" section. "All other techniques of facet joint denervation for the treatment of chronic back pain are considered investigational including, but not limited to: Pulsed radiofrequency denervation; Laser; Cryodenervation; and Chemical denervation." "Therapeutic (as opposed to diagnostic) medial branch blocks are considered investigational." "Policy Guidelines" updated. Added the following new 2012 CPT codes to the "Billing/Coding" section: 64633, 64634, 64635, and 64636. Deleted CPT codes: 64622, 64623, 64626, and 64627. Notification given 1/1/2012. Policy effective date 4/1/2012. (btw)
- 1/24/12 Added new 2012 CPT codes, 64633, 64634, 64635, and 64636 to Billing/Coding section. Removed the following deleted codes, 64622, 64623, 64626, and 64627. Also removed 77003 since this service is now reported as part of the new procedure codes. (btw)
- 11/13/12 Specialty Matched Consultant Advisory Panel review 10/17/2012. No change to policy intent. (btw)

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- 12/11/12 Description section revised. Added “Non-pulsed” to When Covered section. Senior Medical Director review 11/27/12. (btw)
- 11/26/13 Specialty Matched Consultant Advisory Panel review 10/16/2013. Added “(e.g., alcohol, phenol, or high-concentration local anesthetics)” as examples of chemical denervation. Policy Guidelines updated. No change to policy intent. (btw)
- 11/11/14 Reference added. Specialty Matched Consultant Advisory Panel review 10/28/2014. Medical Director review. No change to policy intent. (sk)
- 2/24/15 Added “facet joint injections” to 4. under Policy Guidelines. (sk)
- 11/24/15 Specialty Matched Consultant Advisory Panel review 10/28/2015. (sk)
- 12/30/15 Reference added. (sk)
- 11/22/16 Specialty Matched Consultant Advisory Panel review 10/26/2016. (sk)
- 6/30/17 Specialty Matched Consultant Advisory Panel review 4/26/2017. No change to policy statement. (an)
- 6/8/18 Updated Policy Guidelines section. Reference added. Specialty Matched Consultant Advisory Panel review 5/23/2018. No change to policy statement. (an)
- 4/30/19 If there has been a prior successful radiofrequency denervation, additional diagnostic medial branch blocks for the same level of the spine are not medically necessary. Added the following statements to Item 4 under Policy Guidelines: A successful trial of controlled diagnostic medial branch blocks consists of 2 separate positive blocks on different days with local anesthetic only (no steroids or other drugs), or a placebo-controlled series of blocks, under fluoroscopic guidance, that has resulted in at least a 50% reduction in pain for the duration of the local anesthetic used (e.g., 3 hours longer with bupivacaine than lidocaine). No therapeutic intra-articular injections (ie, steroids, saline, or other substances) should be administered for a period of at least 4 weeks prior to the diagnostic medial branch block. The diagnostic blocks should involve the levels being considered for radiofrequency treatment and should not be conducted under intravenous sedation unless specifically indicated (e.g., the patient is unable to cooperate with the procedure). These diagnostic blocks should be targeted to the likely pain generator. Single-level blocks lead to more precise diagnostic information, but multiple single-level blocks require several visits and additional exposure to radiation. Specialty Matched Consultant Advisory Panel review 4/17/2019. (an)
- 12/31/19 Updated Policy Guidelines item #4. Removed “only (no steroids or other drugs).” (eel)
- 3/24/20 Updated Policy Guidelines item #4. Removed “(ie, steroids, saline, or other substances).” Corrected misspelling in policy guidelines. (eel)
- 4/28/20 References added. Specialty Matched Consultant Advisory Panel review 4/15/2020. No change to policy statement. (eel)
- 9/22/20 Updated policy guidelines #4, #5 and #6 easing requirement to a single medial branch block / facet injection. When not covered section updated with “More than two facet injections/medial branch blocks at the same level are considered investigational.” **Notification 9/22/20 for effective date 11/24/20.** (eel)

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- 3/31/21 When not covered section updated to include “cooled radiofrequency ablation (e.g., COOLIEF)”. Medical Director review. **Notification 3/31/2021 for effective date 6/1/2021.**(bb)
- 6/1/21 Policy Guidelines item 5 updated with “Prior success is defined as 50% or more pain relief documented in medical record”. References added. Code 64625 added to Billing/Coding section. Specialty Matched Consultant Advisory Panel review 4/2021. Medical Director review 4/2021. **Notification 6/1/2021 for effective date 8/10/2021.** (bb)

Medical policy is not an authorization, certification, explanation of benefits or a contract. Benefits and eligibility are determined before medical guidelines and payment guidelines are applied. Benefits are determined by the group contract and subscriber certificate that is in effect at the time services are rendered. This document is solely provided for informational purposes only and is based on research of current medical literature and review of common medical practices in the treatment and diagnosis of disease. Medical practices and knowledge are constantly changing and BCBSNC reserves the right to review and revise its medical policies periodically.