Facet Joint Interventions and Spinal Ablation Procedures

Spine, Pain, and Joint (SPJ) Utilization Management Policy

Effective Date: 06/13/2024

Table of Contents

Policy Statement

Facet joint/medial branch block injections would be considered medically necessary when the following criteria are met:

- At least 3 months of moderate to severe neck and/or back pain with functional impairment which is inadequately responsive to conservative care such as NSAIDS, acetaminophen, physical/chiropractic therapy, or activity modification. (Cohen, 2020; Manchikanti, 2020)
- Clinical assessment, including provocative testing, suggests the facet joint is the source of pain (e.g., no radiculopathy or neurological symptoms, pain increased with spine extension, rotation or lateral bending) (Manchikanti, 2020)
- Radiological imaging has ruled out other pathology for pain (e.g., malignancy, infection, fracture) (Manchikanti, 2020)
- Absence of non-facet pathology that could explain the source of the patient's pain such as myofascial pain, sacroiliac joint pain, somatoform disorders, fracture, tumor, infection, or significant deformity.

Diagnostic facet joint block injections:

- Initial facet joint injection(s) may include up to two non-fused levels and may be either unilateral or bilateral
- If the initial facet joint injection(s) provided ≥80% pain relief for the expected duration of the anesthetic agent, a second diagnostic facet joint injection may be performed to confirm the positive response when administered at the same level at a minimum two weeks after the initial injection. (ACOEM, 2021; Manchikanti, 2020)
- Two diagnostic facet joint or associated MBB injections are allowed per region irrespective of the joints injected with maximum of two spinal levels (unilateral or bilateral joints) per session.
- Patient response to controlled local or placebo blocks were appropriate (and small volume injections, 0.5 cc or less, were used to assure improved ability to identify patient response)
- Imaging guidance with fluoroscopy or CT is utilized (Ashmore, 2022)
- Intraarticular facet block will not be reimbursed as a diagnostic test unless medial branch blocks cannot be performed due to anatomic restrictions.

Therapeutic facet joint block injections:

- The patient is not a candidate for radiofrequency denervation. (Cohen, 2020; Kreiner, 2020)
- Two diagnostic facet joint block injections have provided at least 80% relief of the primary axial pain, with the ability to perform previously painful movements consistent with the expected physiologic effects of the agents that were utilized. (Manchikanti, 2020)
- A repeat facet joint block to the same joints of the same spinal regions is medically necessary if the patient has experienced at least 50% pain relief in ADLs for at least 3 months. (Manchikanti, 2020)
- No more than four therapeutic facet joint injection sessions are allowed per 12-month period.

Therapeutic facet joint denervation/non-pulsed radiofrequency ablation (RFA):

- Two diagnostic facet joint block injections have provided at least 80% relief of the primary axial pain, with the ability to perform previously painful movements consistent with the expected physiologic effects of the agents that were utilized. (Manchikanti, 2020)
- A repeat denervation procedure to the same joints of the same spinal regions is medically necessary if the patient has experienced at least 50% pain relief in ADLs for at least 6 months. (Manchikanti, 2020)
- Diagnostic facet joint block injections to the same joints of the same spinal region do not need to be repeated prior to additional denervation procedures. (Cohen, 2020)

Non-thermal RF modalities for medial branch denervation including chemical, low grade thermal energy (<80 degrees Celsius), as well as pulsed RF are not covered.

The use of thermal RFA to destroy any spinal structure other than medial branch nerve (e.g., the Intracept procedure to the basivertebral nerve) is considered investigational and hence not covered.

Scope

All in and out of network programs where utilization review determinations are rendered. This policy also serves as a resource for peer-to-peer interactions in describing the position of Optum on the reporting of facet joint/medial branch block injection services.

Background

Facet joint blocks are used in the diagnosis of back and neck pain in a controlled fashion, typically with the use of anesthetics with different, predictable durations of action. Alternatively, the diagnostic testing can be done using true placebos (inactive substances) as well as the active agent in a double-blind manner. The underlying premise for these injections is that the facet joints have been shown to be the source of neck and back pain using reliable methods. The pain is mediated through the medial branches of the dorsal rami of the lumbar and cervical exiting nerve roots.

The goal of these injections is to identify the selected facet complex(es) as the source of the symptoms under evaluation. Once this identification is established, some patients may experience pain relief that lasts for weeks even though the diagnostic test was performed with local anesthetic. If the pain returns, for the patients who experienced relief following a concordant double diagnostic block without sedation, non-pulsed radiofrequency (RF) denervation (greater than 80 degrees Celsius) of the medial branch nerves is recommended to provide substantial relief for an extended period. Other denervation techniques are used but have not been demonstrated as effective in the recognized peer-reviewed medical literature. Neurolytic agents such as alcohol have been used in the past but are now not considered appropriate.

Findings of cervical facet arthropathy may include neck pain, upper arm pain, scapula pain, shoulder pain, suprascapular pain or headache. On exam there is decreased ROM of neck, pain on dorsiflexion, improvement with forward flexion and tenderness over affected joint(s).

Lumbar facet arthropathy is identified by low back pain associated with groin /hip/buttock pain, cramping leg pain above knee, early morning low back stiffness and pain with prolonged sitting or standing. On exam there is well localized paraspinal tenderness, pain with hyperextension, rotation and lateral bending as well as significant corresponding radiographic changes and hip /buttock or back pain with the SLR test.

Controversy exists on the number of blocks and the pain relief percentage required in order to consider a block as efficacious. Pain relief from a diagnostic facet joint block is temporary but may predict a successful RFA outcome. A large number of studies used a pain relief threshold of 75-80% as consideration for a positive facet joint block. ASIPP and NASS guidelines use studies that demonstrate dual blocks with ≥ 80% are predictive for a positive RFA response.

The use of therapeutic facet blocks is also a controversial issue. A systematic review and societal guidelines from the ASA and ASRA support the use of therapeutic injections but the majority of other guidelines and clinical evidence do not support their use. The efficacy of a therapeutic injection The clinical evidence does support several particular circumstances where therapeutic injections may be appropriate when RFA cannot be performed.

Clinical Evidence

A multi-center randomized controlled trial by Cohen et al (2018) evaluated facet joint or nerve block injections to the lumbar spine prior to radiofrequency ablation (n=229). The patients were randomized to medial branch blocks, intraarticular facet injections with bupivacaine and steroid, or saline injections. A positive diagnostic facet joint injection test was defined as ≥50% pain relief for at least three hours. Patients who remains symptomatic and had a positive response to the diagnostic facet injection met the criteria for therapeutic radiofrequency denervation. There were 54% positive blocks in the intraarticular cohort, 55% in the medial branch cohort, and 30% in the placebo group. At one month follow-up, the therapeutic benefit of facet joint injections was not demonstrated as the average numerical rating pain score scale was 0.7±1.5 in the placebo group, 0.7±1.6 in the intraarticular cohort and 0.7±1.8 in the medial branch block group. However, radiofrequency ablation was performed in 135 patients (n=45 in intraarticular group, n=48 in medial branch block group, and n=42 in saline group) and at three months the percentage of positive responders were 51%, 56%, and 24% respectively. The findings of the study demonstrated that diagnostic facet joint injections may be used in identifying the appropriate patients for radiofrequency ablation but therapeutic injections are not effective for facet joint pain relief.

Boswell et al (2015) performed a systematic review on the diagnostic accuracy of facet joint nerve blocks. The clinical evidence is noted as stronger for lumbar facet nerve blocks (Level I) compared to the use of cervical and thoracic facet joint nerve blocks (Level II). Thirteen high quality studies of the lumbar spine, three high quality studies of the thoracic spine, and two RTCs of the cervical spine were included in this review. The validity of diagnostic facet joint nerve blocks by intraarticular injection of local anesthetic or anesthetizing the medial branches of the dorsal rami has been well established. The joint may be considered as the source of pain if the pain is relieved by joint blockade.

A Hayes Health Technology Assessment (2018) on medial branch block injections for spinal pain of facet joint origin provides a Hayes rating of C (potential but unproven benefit) based on an overall low-quality body of evidence. There are outstanding questions in regard to treatment durability, patient selection criteria, and comparative efficacy with standard and alternative therapies. There are also individual study limitations and potential concerns about the precision of the data for thoracic and cervical spine indications. This review included eight RCTs, two prospective single-arm, pretest/posttest studies, and one retrospective pretest/posttest cohort study. Additional studies are necessary to determine the long-term efficacy and safety of medial branch blocks for chronic spine pain.

An additional Hayes Health Technology Assessment (2018) evaluated intra-articular facet joint injections for treatment of nonmalignant spinal pain with facet joint etiology. A Hayes rating of C (potential but unproven benefit) for the lumbar region and D^2 (insufficient evidence) for the thoracic and cervical regions was assigned after review of 12 RTCs of the lumbar region, one RTC of the thoracic region, and one RTC of the cervical region. The quality of evidence overall was low for injections to the lumbar spine and very low quality for the thoracic and cervical spine. For the lumbar spine, only one RCT included a placebo control group and several studies did not choose patients based on diagnostic blocks. This review indicates it is unclear what role facet joint injections will play in the future of pain management. Major controversies exist regarding these injections for treatment of chronic, unresponsive spine pain of facet joint origin.

Radiofrequency ablation for facet joint denervation was the topic of a 2016 Health Technology Assessment by Hayes. There is a moderate-quality evidence that percutaneous nonpulsed RFA is safe and increases functional outcomes and decreases pain in patients with chronic low back pain due to facet joint syndrome although the results are conflicting. There is a less substantive and smaller body of low-quality evidence that pulsed RFA is beneficial for chronic low back pain but more trials are necessary before definitive conclusions can be made. Nonpulsed RFA for chronic LBP suspected to be of facet joint origin was assigned a Hayes rating of C (potential but unproven benefit) and pulsed RFA was assigned a Hayes rating of D^2 (insufficient evidence).

Guidance on assessment and management of low back pain in patients > 16 years of age was published by NICE (2016). Radiofrequency denervation is included as an intervention for patients who have failed conservative treatment for moderate to severe low back pain, the source of their low back pain is the medial branch nerve, and they have had a positive response to a diagnostic medial branch block. They do not recommend spinal injections the management of low back pain.

A systematic review by Vekaria et al (2016) indicates the clinical evidence supporting the treatment of suspected facet joint pain with therapeutic intra-articular facet joint injections is sparse. Six small trials met the authors' inclusion criteria. These trials are noted as inconclusive regarding disability outcomes and pain. Only two of these trials reported some significance difference in pain or disability between the treatment and placebo cohorts. Several methodological issues were identified by the researchers. Additional high-quality research on this topic is recommended.

A systematic review and meta-analysis by Ashmore et al (2022) evaluated the use of ultrasound (US) guidance for lumbar facet joint injections and medial branch blocks. The certainty of the clinical evidence for this assessment is noted as low to very low due to risk of bias, inconsistency, and imprecision. There is a significant risk for incorrect needle placement in medial branch blocks and intraarticular injections with ultrasound guidance as confirmed when the needle position is assessed using CT or fluoroscopy.

A Cochrane review by Maas et al (2015) evaluated patients who had undergone a positive diagnostic block and then subsequently underwent radiofrequency ablation of the facet joints. This review included 23 randomized controlled trials (n=1,309) that demonstrated moderate evidence on the short term efficacy of RFA compared to placebo for facet joint pain management. For short term functional improvement, there was low-quality evidence that RFA of the facet joints was more effective than placebo. High-quality evidence was lacking to support RFA for pain relief in low back pain.

Guidelines from the American College of Occupational and Environmental Medicine (ACOEM, 2021) make recommendations on the treatment of degenerative disease of the lumbar spine. For the diagnosis of lumbar facet-mediated pain, a double-injection technique is recommended with pain improvement of ≥80% as the threshold for efficacy. Evidence is lacking on the use of diagnostic facet blocks as predictors of a positive response from lumbar fusion.

The American Society of Interventional Pain Physicians (ASIPP) (Manchikanti, 2020) published evidence-based guidelines for facet joint interventions. The authors indicate the validity of lumbar facet joint nerve blocks as a gold standard for diagnosing lumbar facet joint pain continues to be questioned. The level of evidence is noted as II

(moderate quality) for diagnostic facet joint nerve blocks after three months of failed conservative management. The evidence for therapeutic lumbar facet joint nerve blocks is noted as Level II (moderate quality) for short- and long-term improvement with a moderate strength of recommendation when patients have had an 80% positive response from a local anesthetic block. Evidence for therapeutic cervical facet joint nerve blocks is also Level II (moderate quality) for short- and long-term improvement with a moderate strength recommendation after diagnosis with >80% positive response from local anesthetic block(s). These guidelines indicate therapeutic lumbar facet joint nerve blocks have been shown not only to be effective but also well accepted by patients because side effects associated with radiofrequency neurotomy can be avoided. Radiofrequency ablation to the cervical and lumbar spine received a moderate strength recommendation based on Level II evidence and the thoracic spine was noted as a weak to moderate strength recommendation based on Level III evidence.

The American Society of Regional Anesthesia and Pain Medicine (Cohen, 2020) was part of 13 different pain societies that published international consensus practice guidelines on lumbar facet joint interventions for pain. A Grade C, low level of certainty recommendation indicates a 3-month trial of conservative treatments should be performed prior to facet joint interventions. A Grade B, low level of certainty recommendation also indicates intraarticular facet injections have a higher technical failure rate and poorer predictive value before RFA than medial branch blocks. A Grade C recommendation, moderate level of certainty, notes medial branch blocks should be the prognostic injection of choice before RFA. A Grade D recommendation, moderate level of certainty, advises against the routine use of therapeutic medial branch blocks and intraarticular injections unless there are contraindications to RFA or the patient has had prolonged relieve from prognostic blocks. A single prognostic block is recommended over multiple blocks.

Recommendations from the North American Spine Society (NASS, 2016) address diagnostic and therapeutic medial branch blocks. For diagnostic purposes, two positive blocks at the same level on two separate occasions are noted as necessary to substantiate facet joint etiology. The second injection would be administered if the first one provided ≥80% pain relief and would be considered confirmatory if the index pain was again reduced by >80%. Medical evidence does not support the use of therapeutic medial branch blocks for pain management or the use of intra-articular injections to the thoracic region of the spine.

NASS recommendations (Kreiner, 2020) on the diagnosis and treatment of low back pain indicate there is insufficient evidence to make a recommendation for or against facet joint and medial branch block injections for low back pain. The evidence suggests intra-articular facet injections of steroids produces no clinically meaningful improvement in symptoms at six months. The routine use of therapeutic facet injections is not recommended, however, in certain patients who may be at risk for complications from radiofrequency ablation it may be reasonable to add steroids to the block for potential intermediate-term relief. Facet joint injections are less predictive than medial branch blocks for diagnosing facet-mediated pain. A positive block results in >50% pain reduction and a single block is recommended. Moderate evidence supports dual medial branch blocks.

The World Federation of Neurosurgical Societies (WFNS) (Fornari, 2020) published recommendations on conservative treatment for patients with lumbar spinal stenosis. These recommendations indicate diagnostic facet joint injections may be considered a useful tool for diagnosing low back pain.

A statement on anesthesia care during interventional pain procedures published by the American Society of Anesthesiologists (2021) indicates interventional pain procedures usually require only local anesthesia. In certain situations, minimal (anxiolysis) sedation/analgesia or moderate (conscious) sedation may be required. Facet joint injections and medial branch nerve blocks are listed as examples of procedures that usually do not require moderate sedation or an anesthesia care team.

The peer-reviewed effectiveness literature does not support the use of additional facet joint injections (with anesthetic and/or steroids) for the treatment of chronic back and neck pain. The interventional pain professional community (ASIPP and IPM), however, believes that there is ample evidence to support both diagnostic and therapeutic use of facet blocks (Manchikanti, 2020). They also are supportive of the use of facet joint denervation.

Coding Information

Code	Description
64490	Injection(s), diagnostic or therapeutic agent, paravertebral facet (zygapophyseal) joint (or nerves innervating that joint) with image guidance (fluoroscopy or CT), cervical or thoracic; single level
64491	Injection(s), diagnostic or therapeutic agent, paravertebral facet (zygapophyseal) joint (or nerves innervating that joint) with image guidance (fluoroscopy or CT), cervical or thoracic; second level (List separately in addition to code for primary procedure)
64492	Injection(s), diagnostic or therapeutic agent, paravertebral facet (zygapophyseal) joint (or nerves innervating that joint) with image guidance (fluoroscopy or CT), cervical or thoracic; third and any additional level(s) (List separately in addition to code for primary procedure)
64493	Injection(s), diagnostic or therapeutic agent, paravertebral facet (zygapophyseal) joint (or nerves innervating that joint) with image guidance (fluoroscopy or CT), lumbar or sacral; single level
64494	Injection(s), diagnostic or therapeutic agent, paravertebral facet (zygapophyseal) joint (or nerves innervating that joint) with image guidance (fluoroscopy or CT), lumbar or sacral; second level (List separately in addition to code for primary procedure)
64495	Injection(s), diagnostic or therapeutic agent, paravertebral facet (zygapophyseal) joint (or nerves innervating that joint) with image guidance (fluoroscopy or CT), lumbar or sacral; third and any additional level(s) (List separately in addition to code for primary procedure)
0213T	Injection(s), diagnostic or therapeutic agent, paravertebral facet (zygapophyseal) joint (or nerves innervating that joint) with ultrasound guidance, cervical or thoracic; single level
0214T	Injection(s), diagnostic or therapeutic agent, paravertebral facet (zygapophyseal) joint (or nerves innervating that joint) with ultrasound guidance, cervical or thoracic; second level (List separately in addition to code for primary procedure)
0215T	Injection(s), diagnostic or therapeutic agent, paravertebral facet (zygapophyseal) joint (or nerves innervating that joint) with ultrasound guidance, cervical or thoracic; third and any additional level(s) (List separately in addition to code for primary procedure)
0216T	Injection(s), diagnostic or therapeutic agent, paravertebral facet (zygapophyseal) joint (or nerves innervating that joint) with ultrasound guidance, lumbar or sacral; single level
0217T	Injection(s), diagnostic or therapeutic agent, paravertebral facet (zygapophyseal) joint (or nerves innervating that joint) with ultrasound guidance, lumbar or sacral; second level (List separately in addition to code for primary procedure)
0218T	Injection(s), diagnostic or therapeutic agent, paravertebral facet (zygapophyseal) joint (or nerves innervating that joint) with ultrasound guidance, lumbar or sacral; third and any additional level(s) (List separately in addition to code for primary procedure)
64633	Destruction by neurolytic agent, paravertebral facet joint nerve(s) with imaging guidance (fluoroscopy or CT); cervical or thoracic, single facet joint
64634	Destruction by neurolytic agent, paravertebral facet joint nerve(s) with imaging guidance (fluoroscopy or CT); cervical or thoracic, each additional facet joint
64635	Destruction by neurolytic agent, paravertebral facet joint nerve(s) with imaging guidance (fluoroscopy or CT); lumbar or sacral, single facet joint

64636	Destruction by neurolytic agent, paravertebral facet joint nerve(s) with imaging guidance (fluoroscopy or CT); lumbar or sacral, each additional facet joint

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Review and Approval History

Date	Description
4/27/2023	Quality Improvement Committee approved activation of the policy
6/12/2024	Annual review. Document content transitioned to new policy template. Approved by Optum Clinical Guideline Advisory Committee.
6/13/2024	Approved by OrthoNet Quality Improvement Committee (QIC).