Oscar Clinical Guideline: Pain Management: Facet Joint Injections/Medial Branch Blocks and Radiofrequency Facet Denervation (CG047, Ver. 7)

Pain Management: Facet Joint Injections/Medial Branch Blocks and Radiofrequency Facet Denervation

Disclaimer

Clinical guidelines are developed and adopted to establish evidence-based clinical criteria for utilization management decisions. Clinical guidelines are applicable according to policy and plan type. The Plan may delegate utilization management decisions of certain services to third parties who may develop and adopt their own clinical criteria.

Coverage of services is subject to the terms, conditions, and limitations of a member's policy, as well as applicable state and federal law. Clinical guidelines are also subject to in-force criteria such as the Centers for Medicare & Medicaid Services (CMS) national coverage determination (NCD) or local coverage determination (LCD) for Medicare Advantage plans. Please refer to the member's policy documents (e.g., Certificate/Evidence of Coverage, Schedule of Benefits, Plan Formulary) or contact the Plan to confirm coverage.

Summary

The Plan members with chronic back and neck pain may qualify for diagnostic and therapeutic procedures to further characterize or treat their pain. When the back pain is non-radiating and not associated with any neurologic deficits, the facet joints may be implicated as the cause. Facet joints are small joints between the bones that make up the spine that allow for bending and twisting motions. Small nerves run through these joints and may cause pain when the joint is inflamed or irritated. To determine whether the facet joint is involved, small amounts of anesthetic can be injected directly into the joint or to the surrounding nerves. If the joint is the cause of the pain, the injection should result in relief. If the pain recurs after this initial injection, a special procedure to destroy the nerve causing the pain may be indicated.

For pain management with steroid injections and nerve blocks, please see CG048: Pain Management: Epidural Steroid Injections, Selective Nerve Root Blocks (SNRB), and Intradiscal Steroid Injections.

For pain management for sacroiliac intra-articular joint injections, please see CG056: Pain Management: Sacroiliac Intra-Articular Joint Injections.

Definitions

"Facet Joints" are where two bones of the vertebra in the spine interlock. They are thought to be a major cause of chronic back pain. Injections with steroids or anesthetics into the facet joint may help reduce pain and/or inflammation in this area, known as facet nerve block. Symptoms consistent with "facet joint syndrome" include:

- Absence of radiculopathy
- Predominantly axial low back pain
- Pain aggravated by extension, rotation, or lateral bending of the back or neck
- Tenderness to palpation in the paravertebral areas (over the facet region)
- An absence of neurologic deficits (in a dermatomal distribution)
- Physical exam findings and diagnostic imaging reveal no other obvious cause of the pain

"Facet Joint Injection" (i.e., intra-articular facet injection) is where medications to reduce swelling and/or pain are injected into the facet joint. Injections can be done for therapeutic purposes, where the medication is injected with goal of long-term pain alleviation, or diagnostic purposes, where the injection is done to confirm the facet joint as the cause of the patient's pain.

"Medial Branch Nerve Block" is very similar to a facet joint injection and often used for the same indications, except instead of injecting into the joint space, the anesthetic is injected into the space around the supplying nerve to the facet joint known as the "medial branch nerve".

"Straight Leg Raise Test" is a simple office test where the patient lies on his or her back, and one leg is raised upwards while held straight. The test is deemed positive when there is radiating pain down the leg as it is raised between 30 degrees and 70 degrees. This suggests a herniated disk or other radiculopathy, and is not typically observed in facet joint syndromes.

"Radicular Pain" (i.e., radiculopathy) refers to pain that radiates along the course of a spinal nerve root. Signs of radicular pain include positive straight leg test, dermatomal pattern of sensory loss, pain or numbness radiating below the level of the knee (lumbar), pain or numbness in the shoulder, arm, hand, or fingers (cervical), or diminished reflexes. Radicular pain is not characteristic of facet joint syndromes.

"Radiculitis" is radicular pain without objective neurological findings on physical examination.

"Non-Radicular Pain" is pain that does not radiate and is typically most intense local to the source, rather than spreading in a predictable distribution like radicular pain. Facet joint syndrome typically cause this type of pain.

"Denervation" (i.e., ablation) is a procedure where a nerve supply is destroyed or impaired, often to treat pain syndromes. Examples of denervation include but are not limited to:

- Thermal (non-pulsed) radiofrequency denervation

- Chemical neurolysis (e.g., alcohol, phenol, hypertonic saline)
- Cooled or pulsed radiofrequency denervation
- Cryosurgery
- Surgical facet denervation (i.e., facet neurotomy, facet rhizotomy)
- Laser ablation

"Radiofrequency Facet Denervation" (also known as radiofrequency ablation or neurolysis) is a procedure for facet-mediated pain where a small radiofrequency probe is inserted to a nerve branch of the facet joint using fluoroscopic imaging. The probe heats up the nerve to denervate the supply to the painful joint. The heat can be supplied continuously or pulsed intermittently. Pulsed methods typically do not "ablate" the nerve.

"Fluoroscopy" is an x-ray technique used to visualize internal structures.

"Activities of Daily Living (ADLs)" are defined as routine activities that most healthy persons perform daily without requiring assistance. These include, but are not limited to: bathing, communication, dressing, feeding, grooming, mobility, personal hygiene, self-maintenance, skin management, and toileting.

Clinical Indications

Diagnostic Facet Joint Injections/Medial Branch Blocks

The Plan considers an initial diagnostic facet joint injection/medial branch block medically necessary when ALL of the following criteria are met:

1. Presence of non-radicular lower back and/or neck pain that is suggestive of facet joint syndromes, as defined above (except for scenarios of facet joint referred pain that can be in lower extremities); *and*
2. Pain interferes with ADLs; *and*
3. Pain has not responded to at least 6 weeks of conservative therapy, as defined by the following:
    a. Trial of appropriate medications (e.g., NSAIDs, analgesics, etc.); *and*
    b. Physical therapy, spinal manipulation therapy, or other specific interventions tailored to the member's unique presentation.
4. There are no current medical problems that may increase the risk of side effects, including but not limited to the following:
    a. Local infection at the injection site; *or*
    b. Systemic infection; *or*
    c. Bleeding disorders (unless benefits deemed to outweigh risks); *or*
        i. Members are on anticoagulation/antiplatelet therapy with intermediate risk of serious bleeding as classified by American Society of Regional Anesthesia and Pain Medicine are determined to be clinically appropriate to proceed with or without anticoagulation/antiplatelet therapy before the procedure*; or*
    d. Any other unstable medical condition such as cauda equina or vertebral fracture; *and*

5. Alternative causes of the pain such as intraspinal tumor, other space occupying spinal lesion, or non-spinal etiologies of the pain have been ruled out and/or adequately addressed; *and*
6. There has been no vertebral fusion at the levels proposed for treatment; *and*
7. The injection meets ALL of the following criteria:
    a. Performed as a diagnostic test with temporary, local anesthetic to identify the source of the back pain; *and*
    b. The injection is to the cervical or lumbar spine; *and*
    c. Real time imaging guidance is used (CT scan or fluoroscopy) to ensure proper needle position; *and*
    d. No more than 3 levels are injected per side per session; *and*
    e. No other injections are performed the same day (e.g., epidural, trigger point injection).
8. Radiofrequency facet denervation is being considered should the diagnostic test be positive.

The Plan considers a second diagnostic facet joint injection/medial branch block to confirm the validity of the clinical response to an initial diagnostic facet joint injection/medial branch block medically necessary when ALL of the following criteria are met:

1. All of the criteria for the initial diagnostic facet joint injection/medial branch block continue to be met; *and*
2. It is administered at the same level and side as the initial diagnostic facet joint injection/medial branch block; *and*
3. The initial diagnostic facet joint injection/medial branch block produced a positive response, with at least 80% relief of facet-mediated pain for at least the expected minimum duration of the effect of the local anesthetic.

Facet Joint Synovial Cyst Aspiration with Intra-Articular Facet Joint Injection and/or Epidural Steroid Injection

The Plan considers facet joint synovial cyst aspiration medically necessary when ALL of the following criteria are met:

1. Meets all the criteria above for Facet Joint Injection; *and*
2. Use of advanced diagnostic imaging (e.g., MRI, CT, CT myelogram) to confirm facet joint synovial cyst is causing radicular pain by compression or displacement of the corresponding nerve root

Initial Non-Pulsed Radiofrequency Facet Denervation

The Plan considers the initial non-pulsed radiofrequency facet denervation of the cervical and/or lumbar spine (with fluoroscopy) medically necessary when ALL of the following criteria are met:

1. Member meets criteria 1-6 in the initial diagnostic facet joint injection section above; *and*
2. The pain has been severe and limited ADLs for at least 3 months duration; *and*
3. Imaging studies show no disk herniation or other source of the pain; *and*
4. There is no significant narrowing of the vertebral canal or spinal instability requiring surgery; and

5. There has been no vertebral fusion at the levels proposed for treatment; *and*
6. A diagnostic facet joint injection/medial branch block meeting the above criteria performed at the same level and side resulted in significant reduction in the pain, as defined by at least 80% reduction in pain and/or symptoms for the duration of effect of the anesthetic used; *and*
7. No more than 3 levels (unilateral or bilateral) of facet joints are denervated in a single session.

Subsequent Non-Pulsed Radiofrequency Facet Denervation

The Plan considers subsequent non-pulsed radiofrequency facet denervation of the cervical and/or lumbar spine (with fluoroscopy) medically necessary when ALL of the following criteria are met:

1. All of the criteria for the initial denervation continue to be met; *and*
2. The last successful denervation procedure was less than 1 year prior, where another diagnostic facet joint injection/medial branch block would be required when the last successful denervation procedure was greater than 1 year prior; *and*
3. The previous treatment resulted in at least 50% pain relief for a duration of at least 12 weeks; *and*
4. No more than 2 procedures are performed in a rolling 12-month period; *and*
5. If different regions require neural blockade, these should be performed at intervals of no sooner than one week, and preferably 2 weeks for most blocks.
6. Denervation procedures for different anatomic regions are performed at a frequency of no less than two week intervals.

Experimental or Investigational / Not Medically Necessary

Facet joint injections/medial branch blocks for any other indication are *not* considered medically necessary by the Plan, as they are considered experimental, investigational, or unproven. Non-covered indications include, but are not limited to, the following:

- Facet joint injections/medial branch blocks for therapeutic purposes
- Thoracic facet injections/medial branch blocks
- Ultrasound or MRI guidance
- Diagnostic injection when RFA is not being considered
- Cryoablation (i.e., cryoneurolysis, cryodenervation)
- Chemical ablation or percutaneous alcohol ablation
- Laser ablation
- Monitored anesthesia care (MAC)
- Epidurography

Radiofrequency denervation for any other indication is considered experimental, investigational, unproven, or not medically necessary. Non-covered indications include, but are not limited to, the following:

- Ablation without fluoroscopic guidance, as this is integral to identifying the proper location for injection

- Pulsed radiofrequency
- Endoscopic RFA or endoscopic dorsal ramus rhizotomy
- Ablation for SI joint pain
- Ablation for thoracic facet joints
- RFA for coccygodynia, dorsal root ganglia, terminal (peripheral) nerve endings
- Cooled RFA
- Ultrasound or MRI guidance

Evidence for Non-Coverage of Above Indications

Facet joint injections for therapeutic purposes: Facet joint injections are recommended as a diagnostic tool for patients meeting specific criteria. Injections for therapeutic or treatment purposes are not currently recommended given the existing literature. UpToDate clinical review states "Glucocorticoid injections into the facet joint have not been shown to be effective in the treatment of low back pain." Further, a systematic review and technology assessment (AHRQ, 2015) looked at injection therapies for lower back pain, including 13 trials for facet joint injections specifically. They found no differences between facet joint corticosteroid injections and placebo interventions in the treatment of back pain. Further well designed randomized trials published in the New England Journal of Medicine have found no difference in pain relief following saline (placebo) and glucocorticoids. Expert consensus guidelines from the American Association of Neurological Surgeons, the American Pain Society, and others, overwhelmingly recommend against therapeutic facet joint injection.[2,6,8-10,]

Thoracic facet injections: A 2005 systematic review by Sehgal et al concluded that the diagnostic accuracy of thoracic facet joint injections was rated as "moderate" compared to "strong" for lumbar due to a lack of evidence. Further studies by Manchikanti et al and Revel et al have found the false positive rate with single nerve blocks to be in the range of "17%- 47% in the lumbar spine, 27%-63% in the cervical spine, and 55%-58% in the thoracic spine", as summarized in a recent review. The consistently >50% false positive rate in the thoracic spine is of particular concern. At the present time, there is limited randomized, controlled data on the efficacy, and major consensus guidelines do not currently offer recommendations for thoracic facet joint injections.[57-61]

Ultrasound guidance: The data on ultrasound guidance for facet joint injections is limited. One study by Jee et al (2014) randomized patients to ultrasound guided vs. fluoroscopy guided SI joint injections and found greater accuracy in the fluoroscopy guided approach (98% vs. 87%). Further research is needed to identify any potential role for ultrasound.[24]

Diagnostic injections when RFA is not being considered: Diagnostic facet nerve injection without consideration for treatment should not be performed as the results are used to guide treatment decisions.

Injections for radicular back pain: Facet joint pain has been defined as a non-radicular pain distribution, whereas radicular joint pain is typically due to other etiologies. Tachihara et al (1976) looked at a rat model of facet joint inflammation and found that it could potentially result in an inflammatory spread to nearby nerves, resulting in radiculopathy. However, the evidence for radicular back pain in human subjects with facet joint syndromes is limited.[47]

Ablation without fluoroscopic guidance, as this is integral to identifying the proper location for injection.

Pulsed radiofrequency methods: Pulsed radiofrequency has been suggested as a non-ablative alternative to standard thermal radiofrequency ablation. The existing literature is limited to small or non-randomized studies. One study by Kroll et al (2008) randomized 50 patients to pulsed vs. continuous radiofrequency ablation for the treatment of lumbar back pain, but found no significant difference in outcomes between the two groups. Expert review highlights the lack of evidence for a mechanism of pain relief with pulse radiofrequency. The existing data is limited and insufficient to support the efficacy and duration of pulse radiofrequency for the treatment of chronic back pain.[1, 29, 51, 55]

Endoscopic RFA or endoscopic dorsal ramus rhizotomy: The current data is limited to abstracts and small, retrospective studies. Haufe et al (2010) looked at the efficacy of this technique in retrospective form, finding that 68-78% of patients had >50% improvement in their pain, but conclude that further randomized data is needed to determine the clinical benefit.[22]

Ablation for SI joint pain: The existing data is relatively limited to small patient populations. One study by Cohen et al (2008) looking at 28 patients found improved short-term response in patients treated with RFA for SI joint pain compared to local block alone, but the duration of efficacy was limited to only 14% showing continued pain relief at 1 year. Other studies have faced similar limitations and the existing evidence is insufficient to support the use of RFA for this indication.[3, 13, 21, 23, 26-27, 46]

Ablation for thoracic facet joints: Systematic reviews have showed only two studies looking specifically at thoracic RFA, concluding that the evidence is currently limited and further research is needed to define the clinical role[34]

RFA for coccygodynia, dorsal root ganglia, terminal (peripheral) nerve endings: There is a lack of published evidence supporting RF ablation for these indications

Cooled RFA: There is a lack of published evidence supporting cooled RF ablation in facet joint pain.[7]

Cryoablation (i.e., cryoneurolysis, cryodenervation): Several studies have looked at cryoablation for chronic back pain. One study by Birkenmaier et al (2007) looked at 50 patients with low back pain

treated with cryoablation, finding improvements in back pain at different time intervals. However, failure rate at 12 months was 43%.[5]

Chemical ablation or percutaneous alcohol ablation: There is a lack of published evidence looking at the effectiveness and safety of chemodenervation in facet joint pain. Where radiofrequency ablation is targeted and local, chemical ablation may not be as focused and may theoretically lead to more toxicity.[10]

Laser ablation: There is a lack of published evidence supporting laser ablation for denervation in facet joint pain.[56]

Monitored anesthesia care (MAC): MAC is not considered medically necessary for radiofrequency procedures or diagnostic facet nerve injections as these procedures can be managed with local anesthesia administered by an outpatient provider.

Applicable Billing Codes (HCPCS/CPT Codes)

Diagnostic Facet Joint Injections/Medial Branch Blocks	
CPT/HCPCS Codes considered medically necessary if criteria are met:	
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 [covered for cervical only]
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 [covered for lumbar only]

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)
77012	Computed tomography guidance for needle placement (eg, biopsy, aspiration, injection, localization device), radiological supervision and interpretation
77021	Magnetic resonance imaging guidance for needle placement (eg, for biopsy, needle aspiration, injection, or placement of localization device) radiological supervision and interpretation
ICD-10 codes considered medically necessary if criteria are met:	
Code	*Description*
M53.0 -M53.1	Cervicocranial - cervicobrachial syndrome
M53.81 - M53.83 M53.85 - M53.87	Other specified dorsopathies [cervical and lumbar regions]
M54.2	Cervicalgia
M54.30 - M54.42	Lumbago and sciatica
M54.50- M54.59	Low back pain
M53.86, M53.87	Other specified dorsopathies, lumbar, lumbosacral region
M71.30	Other bursal cyst
M71.38-M71.39	Other bursal cyst, other site
ICD-10 codes *not* considered medically necessary:	
Code	*Description*
M53.3	Sacrococcygeal disorders, not elsewhere classified [coccygodynia]
M54.10 - M54.18	Radiculopathy

Radiofrequency Facet Denervation	
CPT/HCPCS Codes considered medically necessary if criteria are met:	
Code	*Description*
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 (List separately in addition to code for primary procedure)
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 (List separately in addition to code for primary procedure)
ICD-10 codes considered medically necessary if criteria are met:	
Code	*Description*
M53.0 -M53.1	Cervicocranial - cervicobrachial syndrome
M53.81 - M53.83 M53.85 - M53.87	Other specified dorsopathies [cervical and lumbar regions]
M54.2	Cervicalgia
M54.5	Low back pain
ICD-10 codes *not* considered medically necessary:	
Code	*Description*
M53.3	Sacrococcygeal disorders, not elsewhere classified [coccygodynia]
M54.10 - M54.18	Radiculopathy

CPT/HCPCS codes *not* considered medically necessary for indications in this guideline:	
Code	*Description*
00600 - 00670	Anesthesia for procedures on the spine and spinal cord [includes monitored anesthesia care; when administered with facet joint injections and radiofrequency facet denervation]
27035	Denervation, hip joint, intrapelvic or extrapelvic intra-articular branches of sciatic, femoral, or obturator nerves
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)
64640	Destruction by neurolytic agent; other peripheral nerve or branch
64999	Unlisted procedure, nervous system [when used to bill for pulsed radiofrequency ablation]
72275	Epidurography, radiological supervision and interpretation

76942	Ultrasonic guidance for needle placement (eg, biopsy, aspiration, injection, localization device), imaging supervision and interpretation
99155	Moderate sedation services provided by a physician or other qualified health care professional other than the physician or other qualified health care professional performing the diagnostic or therapeutic service that the sedation supports; initial 15 minutes of intraservice time, patient younger than 5 years of age
99156	Moderate sedation services provided by a physician or other qualified health care professional other than the physician or other qualified health care professional performing the diagnostic or therapeutic service that the sedation supports; initial 15 minutes of intraservice time, patient age 5 years or older
99157	Moderate sedation services provided by a physician or other qualified health care professional other than the physician or other qualified health care professional performing the diagnostic or therapeutic service that the sedation supports; each additional 15 minutes intraservice time (List separately in addition to code for primary service)
G0260	Injection procedure for sacroiliac joint; provision of anesthetic, steroid and/or other therapeutic agent, with or without arthrography

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