# Facet Joint and Medial Branch Block Injections for Spinal Pain (for Louisiana Only)

**Policy Number:** ~~CS039LA~~**CS178LA**.~~O~~**P**
**Effective Date:** **TBD**~~October 1, 2020~~

➲ Instructions for Use

**Table of Contents** **Page**



## Application

This Medical Policy only applies to the state of Louisiana.

## Coverage Rationale

**The following are proven and medically necessary:**

- **An initial diagnostic Facet Joint Injection/Medial Branch Block to determine facet joint origin when all of the following criteria are met:**
  - **Pain is exacerbated by facet loading maneuvers on physical examination (e.g., hyperextension, rotation); and**
  - **Clinically significant improvement has not occurred (the pain remains at a 3 or more on a 1-10 pain scale) after a minimum of four weeks of conservative care (including but not limited to pharmacotherapy, exercise, or physical therapy)**
  - **Clinical findings and imaging studies suggest no other cause of the pain (e.g., spinal stenosis with neurogenic claudication, disc herniation with radicular pain, infection, tumor, fracture, pain related to prior surgery); and**
  - **The spinal motion segment is not fused; and**
  - **A radiofrequency joint denervation/ablation procedure is being considered**
- **A second Facet Joint Injection/Medial Branch Block performed to confirm the validity of the clinical response to the initial Facet Joint Injection, when all of the following criteria are met:**
  - **Administered at the same level and side as the initial block**
  - **The initial diagnostic Facet Joint Injection produced a positive response as demonstrated when all the following criteria are met:**

- For at least the expected minimum duration of the effect of the local anesthetic; and
- Functional improvement that is specific to the individual with demonstrable improvement in the physical functions previously limited by the facetogenic pain; and
- A radiofrequency joint denervation/ablation procedure is being considered

Facet joint injections/Medial Branch Blocks are ~~Note: The policy does not address injections for obstetrical or surgical anesthetic. The policy addresses Facet Joint Injections of multiple sites and is not limited to Facet Joint Injections of the lumbar spine.~~

~~Diagnostic Facet Joint Injection (FJI) and/or Facet Nerve Block (i.e., Medical Branch Block) are proven and medically necessary to localize the level of facet joint pain in persons with pain suspected to originate from a facet joint as based on clinical exam.~~

~~The following are~~ unproven and not medically necessary due to insufficient evidence of efficacy:

- If radiofrequency ablation procedure not considered as treatment option at the requested level(s)
- For treating spinal pain, after diagnostic injections have been completed
- After two Facet Injections/Medial Branch Blocks at the same level and same side (this is considered therapeutic rather than diagnostic)
- ~~The use of ultrasound guidance for FJIs~~
- Therapeutic Facet Joint Injections~~FJI~~ and/or Facet Nerve Block (i.e., Medial Branch Block) for treating chronic spinal pain
- For a second Facet Joint Injection/Medial Branch Block if the initial injection did not confirm the joint as the source of pain
- In the presence of untreated Radiculopathy at the same level as the intended diagnostic injection (with the exception of Radiculopathy caused by a facet joint synovial cyst)
- If injection of volume of local anesthetics exceeds 0.5ml for Medial Branch Blocks
- When performed under ultrasound guidance

Therapeutic Facet Joint/Medial Branch Block Injections at the cervical, thoracic, and lumbar levels of the spine are unproven and not medically necessary due to insufficient evidence of efficacy and safety.

## Definitions

Acute Low Back Pain: Low back pain present for up to six weeks. The early acute phase is defined as less than two weeks and the late acute phase is defined as two to six weeks, secondary to the potential for delayed-recovery or risk phases for the development of chronic low back pain. Low back pain can occur on a recurring basis. If there has been complete recovery between episodes, it is considered acute recurrent. (Goertz et al. 2012)

Conservative Therapy: Consists of an appropriate combination of medication (for example, NSAIDs, analgesics, etc.) in addition to physical therapy, spinal manipulation therapy, cognitive behavioral therapy (CBT) or other interventions based on the individual's specific presentation, physical findings and imaging results. (AHRQ 2013; Qassem 2017; Summers 2013)

**Facet Joint Injections (FJIs~~FJI~~)**: The injection of a local anesthetic and/or corticosteroid into the facet joint **capsule.** The~~. A facet joint~~ injection/**block applies directly to the facet joint(s) blocked and not to the number of nerves blocked that innervate**~~may be diagnostic (to determine whether~~ the facet joint**(s). Even though facet joint injections can be used to diagnose facet joint pain, a medial branch block is generally considered more appropriate. A diagnostic facet joint injection/medial branch block is considered positive when there is at least 50% relief of pain for at least the expected minimum duration of the effect of the local anesthetic used.** ~~is the source of pain) and/or therapeutic (to relieve pain).~~

**Facet Joint Syndrome: A condition that leads to chronic spinal pain due to unclear etiology. The classic findings of facet joint syndrome are pain in the cervical or thoracic spine or low back radiating to the buttock and posterior thigh, pain due to hyperextension, pain on palpation of joint, and absence of both radiculopathy below the knee and neurologic deficits.**

**Facet Nerve Block**: The injection of a local anesthetic and/or corticosteroid along the nerves supplying the facet joints. **A diagnostic medial branch block is considered positive when there is at least 50% relief of pain for at least the expected minimum duration of the effect of the local anesthetic used.**~~A facet nerve block may be diagnostic (to determine whether the facet joint is the source of pain) and/or therapeutic (to relieve pain).~~

**Medial Branch Block**: See Facet Nerve Block.

**Non-Radicular Back Pain: Pain which does not radiate along a dermatome (sensory distribution of a single root). Appropriate imaging does not reveal signs of spinal nerve root compression and there is no evidence of spinal nerve root compression seen on clinical exam. (Lenahan, 2018)**

**Radicular Back Pain: Pain which radiates from the spine into the extremity along the course of the spinal nerve root. The pain should follow the pattern of a dermatome associated with the irritated nerve root identified. (Lenahan, 2018)**

**Radiculopathy: Radiculopathy is characterized by pain which radiates from the spine to extend outward to cause symptoms away from the source of the spinal nerve root irritation. (Lenahan, 2018)**

**Sub-Acute Low Back Pain: Low back pain with duration of greater than six weeks after injury but no longer than 12 weeks after onset of symptoms. (Goertz et al. 2012)**

## Applicable Codes

The following list(s) of procedure and/or diagnosis codes is provided for reference purposes only and may not be all inclusive. Listing of a code in this policy does not imply that the service described by the code is a covered or non-covered health service. Benefit coverage for health services is determined by federal, state, or contractual requirements and applicable laws that may require coverage for a specific service. The inclusion of a code does not imply any right to reimbursement or guarantee claim payment. Other Policies and Guidelines may apply.

| CPT Code | Description |
|---|---|
| ***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)** |
| 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) |



**Codes labeled with an asterisk (*) are not on the Louisiana Medicaid Fee Schedule and therefore may not be covered by the state of Louisiana Medicaid Program.**

| Diagnosis Code | Description |
|---|---|
| ~~M12.88~~ | ~~Other specific arthropathies, not elsewhere classified, other specified site~~ |
| ~~M41.112~~ | ~~Juvenile idiopathic scoliosis, cervical region~~ |
| ~~M41.113~~ | ~~Juvenile idiopathic scoliosis, cervicothoracic region~~ |
| ~~M41.114~~ | ~~Juvenile idiopathic scoliosis, thoracic region~~ |
| ~~M41.115~~ | ~~Juvenile idiopathic scoliosis, thoracolumbar region~~ |
| ~~M41.116~~ | ~~Juvenile idiopathic scoliosis, lumbar region~~ |
| ~~M41.117~~ | ~~Juvenile idiopathic scoliosis, lumbosacral region~~ |
| ~~M41.119~~ | ~~Juvenile idiopathic scoliosis, site unspecified~~ |
| ~~M41.122~~ | ~~Adolescent idiopathic scoliosis, cervical region~~ |
| ~~M41.123~~ | ~~Adolescent idiopathic scoliosis, cervicothoracic region~~ |
| ~~M41.124~~ | ~~Adolescent idiopathic scoliosis, thoracic region~~ |
| ~~M41.125~~ | ~~Adolescent idiopathic scoliosis, thoracolumbar region~~ |
| ~~M41.126~~ | ~~Adolescent idiopathic scoliosis, lumbar region~~ |
| ~~M41.127~~ | ~~Adolescent idiopathic scoliosis, lumbosacral region~~ |
| ~~M41.129~~ | ~~Adolescent idiopathic scoliosis, site unspecified~~ |
| ~~M41.20~~ | ~~Other idiopathic scoliosis, site unspecified~~ |
| ~~M41.22~~ | ~~Other idiopathic scoliosis, cervical region~~ |
| ~~M41.23~~ | ~~Other idiopathic scoliosis, cervicothoracic region~~ |
| ~~M41.24~~ | ~~Other idiopathic scoliosis, thoracic region~~ |
| ~~M41.25~~ | ~~Other idiopathic scoliosis, thoracolumbar region~~ |
| ~~M41.26~~ | ~~Other idiopathic scoliosis, lumbar region~~ |
| ~~M41.27~~ | ~~Other idiopathic scoliosis, lumbosacral region~~ |
| ~~M43.00~~ | ~~Spondylolysis, site unspecified~~ |
| ~~M43.01~~ | ~~Spondylolysis, occipito-atlanto-axial region~~ |
| ~~M43.02~~ | ~~Spondylolysis, cervical region~~ |
| ~~M43.03~~ | ~~Spondylolysis, cervicothoracic region~~ |
| ~~M43.04~~ | ~~Spondylolysis, thoracic region~~ |
| ~~M43.05~~ | ~~Spondylolysis, thoracolumbar region~~ |
| ~~M43.06~~ | ~~Spondylolysis, lumbar region~~ |
| ~~M43.07~~ | ~~Spondylolysis, lumbosacral region~~ |
| ~~M43.08~~ | ~~Spondylolysis, sacral and sacrococcygeal region~~ |
| ~~M43.09~~ | ~~Spondylolysis, multiple sites in spine~~ |
| ~~M43.10~~ | ~~Spondylolisthesis, site unspecified~~ |
| ~~M43.11~~ | ~~Spondylolisthesis, occipito-atlanto-axial region~~ |
| ~~M43.12~~ | ~~Spondylolisthesis, cervical region~~ |
| ~~M43.13~~ | ~~Spondylolisthesis, cervicothoracic region~~ |
| ~~M43.14~~ | ~~Spondylolisthesis, thoracic region~~ |
| ~~M43.15~~ | ~~Spondylolisthesis, thoracolumbar region~~ |

| Diagnosis Code | Description |
|---|---|
| ~~M43.16~~ | ~~Spondylolisthesis, lumbar region~~ |
| ~~M43.17~~ | ~~Spondylolisthesis, lumbosacral region~~ |
| ~~M43.18~~ | ~~Spondylolisthesis, sacral and sacrococcygeal region~~ |
| ~~M43.19~~ | ~~Spondylolisthesis, multiple sites in spine~~ |
| ~~M46.90~~ | ~~Unspecified inflammatory spondylopathy, site unspecified~~ |
| ~~M46.91~~ | ~~Unspecified inflammatory spondylopathy, occipito-atlanto-axial region~~ |
| ~~M46.92~~ | ~~Unspecified inflammatory spondylopathy, cervical region~~ |
| ~~M46.93~~ | ~~Unspecified inflammatory spondylopathy, cervicothoracic region~~ |
| ~~M46.94~~ | ~~Unspecified inflammatory spondylopathy, thoracic region~~ |
| ~~M46.95~~ | ~~Unspecified inflammatory spondylopathy, thoracolumbar region~~ |
| ~~M46.96~~ | ~~Unspecified inflammatory spondylopathy, lumbar region~~ |
| ~~M46.97~~ | ~~Unspecified inflammatory spondylopathy, lumbosacral region~~ |
| ~~M46.98~~ | ~~Unspecified inflammatory spondylopathy, sacral and sacrococcygeal region~~ |
| ~~M46.99~~ | ~~Unspecified inflammatory spondylopathy, multiple sites in spine~~ |
| ~~M47.011~~ | ~~Anterior spinal artery compression syndromes, occipito-atlanto-axial region~~ |
| ~~M47.012~~ | ~~Anterior spinal artery compression syndromes, cervical region~~ |
| ~~M47.013~~ | ~~Anterior spinal artery compression syndromes, cervicothoracic region~~ |
| ~~M47.014~~ | ~~Anterior spinal artery compression syndromes, thoracic region~~ |
| ~~M47.015~~ | ~~Anterior spinal artery compression syndromes, thoracolumbar region~~ |
| ~~M47.016~~ | ~~Anterior spinal artery compression syndromes, lumbar region~~ |
| ~~M47.019~~ | ~~Anterior spinal artery compression syndromes, site unspecified~~ |
| ~~M47.021~~ | ~~Vertebral artery compression syndromes, occipito-atlanto-axial region~~ |
| ~~M47.022~~ | ~~Vertebral artery compression syndromes, cervical region~~ |
| ~~M47.029~~ | ~~Vertebral artery compression syndromes, site unspecified~~ |
| ~~M47.11~~ | ~~Other spondylosis with myelopathy, occipito-atlanto-axial region~~ |
| ~~M47.12~~ | ~~Other spondylosis with myelopathy, cervical region~~ |
| ~~M47.13~~ | ~~Other spondylosis with myelopathy, cervicothoracic region~~ |
| ~~M47.14~~ | ~~Other spondylosis with myelopathy, thoracic region~~ |
| ~~M47.15~~ | ~~Other spondylosis with myelopathy, thoracolumbar region~~ |
| ~~M47.16~~ | ~~Other spondylosis with myelopathy, lumbar region~~ |
| ~~M47.20~~ | ~~Other spondylosis with radiculopathy, site unspecified~~ |
| ~~M47.21~~ | ~~Other spondylosis with radiculopathy, occipito-atlanto-axial region~~ |
| ~~M47.22~~ | ~~Other spondylosis with radiculopathy, cervical region~~ |
| ~~M47.23~~ | ~~Other spondylosis with radiculopathy, cervicothoracic region~~ |
| ~~M47.24~~ | ~~Other spondylosis with radiculopathy, thoracic region~~ |
| ~~M47.25~~ | ~~Other spondylosis with radiculopathy, thoracolumbar region~~ |
| ~~M47.26~~ | ~~Other spondylosis with radiculopathy, lumbar region~~ |
| ~~M47.27~~ | ~~Other spondylosis with radiculopathy, lumbosacral region~~ |

| Diagnosis Code | Description |
|---|---|
| ~~M47.28~~ | ~~Other spondylosis with radiculopathy, sacral and sacrococcygeal region~~ |
| ~~M47.811~~ | ~~Spondylosis without myelopathy or radiculopathy, occipito-atlanto-axial region~~ |
| M47.812 | Spondylosis without myelopathy or radiculopathy, cervical region |
| M47.813 | Spondylosis without myelopathy or radiculopathy, cervicothoracic region |
| M47.814 | Spondylosis without myelopathy or radiculopathy, thoracic region |
| M47.815 | Spondylosis without myelopathy or radiculopathy, thoracolumbar region |
| M47.816 | Spondylosis without myelopathy or radiculopathy, lumbar region |
| M47.817 | Spondylosis without myelopathy or radiculopathy, lumbosacral region |
| ~~M47.818~~ | ~~Spondylosis without myelopathy or radiculopathy, sacral and sacrococcygeal region~~ |
| M47.819 | Spondylosis without myelopathy or radiculopathy, site unspecified |
| ~~M47.891~~ | ~~Other spondylosis, occipito-atlanto-axial region~~ |
| M47.892 | Other spondylosis, cervical region |
| M47.893 | Other spondylosis, cervicothoracic region |
| M47.894 | Other spondylosis, thoracic region |
| M47.895 | Other spondylosis, thoracolumbar region |
| M47.896 | Other spondylosis, lumbar region |
| M47.897 | Other spondylosis, lumbosacral region |
| ~~M47.898~~ | ~~Other spondylosis, sacral and sacrococcygeal region~~ |
| M47.899 | Other spondylosis, site unspecified |
| M47.9 | Spondylosis, unspecified |
| ~~M48.50XA~~ | ~~Collapsed vertebra, not elsewhere classified, site unspecified, initial encounter for fracture~~ |
| ~~M48.51XA~~ | ~~Collapsed vertebra, not elsewhere classified, occipito-atlanto-axial region, initial encounter for fracture~~ |
| ~~M48.52XA~~ | ~~Collapsed vertebra, not elsewhere classified, cervical region, initial encounter for fracture~~ |
| ~~M48.53XA~~ | ~~Collapsed vertebra, not elsewhere classified, cervicothoracic region, initial encounter for fracture~~ |
| ~~M48.54XA~~ | ~~Collapsed vertebra, not elsewhere classified, thoracic region, initial encounter for fracture~~ |
| ~~M48.55XA~~ | ~~Collapsed vertebra, not elsewhere classified, thoracolumbar region, initial encounter for fracture~~ |
| ~~M48.56XA~~ | ~~Collapsed vertebra, not elsewhere classified, lumbar region, initial encounter for fracture~~ |
| ~~M48.57XA~~ | ~~Collapsed vertebra, not elsewhere classified, lumbosacral region, initial encounter for fracture~~ |
| ~~M48.58XA~~ | ~~Collapsed vertebra, not elsewhere classified, sacral and sacrococcygeal region, initial encounter for fracture~~ |
| ~~M51.26~~ | ~~Other intervertebral disc displacement, lumbar region~~ |
| ~~M51.27~~ | ~~Other intervertebral disc displacement, lumbosacral region~~ |

| Diagnosis Code | Description |
|---|---|
| ~~M80.08XA~~ | ~~Age-related osteoporosis with current pathological fracture, vertebra(e), initial encounter for fracture~~ |
| ~~M80.88XA~~ | ~~Other osteoporosis with current pathological fracture, vertebra(e), initial encounter for fracture~~ |
| ~~M84.48XA~~ | ~~Pathological fracture, other site, initial encounter for fracture~~ |
| ~~M84.58XA~~ | ~~Pathological fracture in neoplastic disease, other specified site, initial encounter for fracture~~ |
| ~~M84.68XA~~ | ~~Pathological fracture in other disease, other site, initial encounter for fracture~~ |
| ~~M96.1~~ | ~~Postlaminectomy syndrome, not elsewhere classified~~ |
| ~~S12.000A~~ | ~~Unspecified displaced fracture of first cervical vertebra, initial encounter for closed fracture~~ |
| ~~S12.001A~~ | ~~Unspecified nondisplaced fracture of first cervical vertebra, initial encounter for closed fracture~~ |
| ~~S12.01XA~~ | ~~Stable burst fracture of first cervical vertebra, initial encounter for closed fracture~~ |
| ~~S12.02XA~~ | ~~Unstable burst fracture of first cervical vertebra, initial encounter for closed fracture~~ |
| ~~S12.030A~~ | ~~Displaced posterior arch fracture of first cervical vertebra, initial encounter for closed fracture~~ |
| ~~S12.031A~~ | ~~Nondisplaced posterior arch fracture of first cervical vertebra, initial encounter for closed fracture~~ |
| ~~S12.040A~~ | ~~Displaced lateral mass fracture of first cervical vertebra, initial encounter for closed fracture~~ |
| ~~S12.041A~~ | ~~Nondisplaced lateral mass fracture of first cervical vertebra, initial encounter for closed fracture~~ |
| ~~S12.090A~~ | ~~Other displaced fracture of first cervical vertebra, initial encounter for closed fracture~~ |
| ~~S12.091A~~ | ~~Other nondisplaced fracture of first cervical vertebra, initial encounter for closed fracture~~ |
| ~~S12.100A~~ | ~~Unspecified displaced fracture of second cervical vertebra, initial encounter for closed fracture~~ |
| ~~S12.101A~~ | ~~Unspecified nondisplaced fracture of second cervical vertebra, initial encounter for closed fracture~~ |
| ~~S12.110A~~ | ~~Anterior displaced Type II dens fracture, initial encounter for closed fracture~~ |
| ~~S12.111A~~ | ~~Posterior displaced Type II dens fracture, initial encounter for closed fracture~~ |
| ~~S12.112A~~ | ~~Nondisplaced Type II dens fracture, initial encounter for closed fracture~~ |
| ~~S12.120A~~ | ~~Other displaced dens fracture, initial encounter for closed fracture~~ |
| ~~S12.121A~~ | ~~Other nondisplaced dens fracture, initial encounter for closed fracture~~ |
| ~~S12.130A~~ | ~~Unspecified traumatic displaced spondylolisthesis of second cervical vertebra, initial encounter for closed fracture~~ |

| Diagnosis Code | Description |
|---|---|
| ~~S12.131A~~ | ~~Unspecified traumatic nondisplaced spondylolisthesis of second cervical vertebra, initial encounter for closed fracture~~ |
| ~~S12.14XA~~ | ~~Type III traumatic spondylolisthesis of second cervical vertebra, initial encounter for closed fracture~~ |
| ~~S12.150A~~ | ~~Other traumatic displaced spondylolisthesis of second cervical vertebra, initial encounter for closed fracture~~ |
| ~~S12.151A~~ | ~~Other traumatic nondisplaced spondylolisthesis of second cervical vertebra, initial encounter for closed fracture~~ |
| ~~S12.190A~~ | ~~Other displaced fracture of second cervical vertebra, initial encounter for closed fracture~~ |
| ~~S12.191A~~ | ~~Other nondisplaced fracture of second cervical vertebra, initial encounter for closed fracture~~ |
| ~~S12.200A~~ | ~~Unspecified displaced fracture of third cervical vertebra, initial encounter for closed fracture~~ |
| ~~S12.201A~~ | ~~Unspecified nondisplaced fracture of third cervical vertebra, initial encounter for closed fracture~~ |
| ~~S12.230A~~ | ~~Unspecified traumatic displaced spondylolisthesis of third cervical vertebra, initial encounter for closed fracture~~ |
| ~~S12.231A~~ | ~~Unspecified traumatic nondisplaced spondylolisthesis of third cervical vertebra, initial encounter for closed fracture~~ |
| ~~S12.24XA~~ | ~~Type III traumatic spondylolisthesis of third cervical vertebra, initial encounter for closed fracture~~ |
| ~~S12.250A~~ | ~~Other traumatic displaced spondylolisthesis of third cervical vertebra, initial encounter for closed fracture~~ |
| ~~S12.251A~~ | ~~Other traumatic nondisplaced spondylolisthesis of third cervical vertebra, initial encounter for closed fracture~~ |
| ~~S12.290A~~ | ~~Other displaced fracture of third cervical vertebra, initial encounter for closed fracture~~ |
| ~~S12.291A~~ | ~~Other nondisplaced fracture of third cervical vertebra, initial encounter for closed fracture~~ |
| ~~S12.300A~~ | ~~Unspecified displaced fracture of fourth cervical vertebra, initial encounter for closed fracture~~ |
| ~~S12.301A~~ | ~~Unspecified nondisplaced fracture of fourth cervical vertebra, initial encounter for closed fracture~~ |
| ~~S12.330A~~ | ~~Unspecified traumatic displaced spondylolisthesis of fourth cervical vertebra, initial encounter for closed fracture~~ |
| ~~S12.331A~~ | ~~Unspecified traumatic nondisplaced spondylolisthesis of fourth cervical vertebra, initial encounter for closed fracture~~ |
| ~~S12.34XA~~ | ~~Type III traumatic spondylolisthesis of fourth cervical vertebra, initial encounter for closed fracture~~ |
| ~~S12.350A~~ | ~~Other traumatic displaced spondylolisthesis of fourth cervical vertebra, initial encounter for closed fracture~~ |
| ~~S12.351A~~ | ~~Other traumatic nondisplaced spondylolisthesis of fourth cervical vertebra, initial encounter for closed fracture~~ |

| Diagnosis Code | Description |
|---|---|
| ~~S12.390A~~ | ~~Other displaced fracture of fourth cervical vertebra, initial encounter for closed fracture~~ |
| ~~S12.391A~~ | ~~Other nondisplaced fracture of fourth cervical vertebra, initial encounter for closed fracture~~ |
| ~~S12.400A~~ | ~~Unspecified displaced fracture of fifth cervical vertebra, initial encounter for closed fracture~~ |
| ~~S12.401A~~ | ~~Unspecified nondisplaced fracture of fifth cervical vertebra, initial encounter for closed fracture~~ |
| ~~S12.430A~~ | ~~Unspecified traumatic displaced spondylolisthesis of fifth cervical vertebra, initial encounter for closed fracture~~ |
| ~~S12.431A~~ | ~~Unspecified traumatic nondisplaced spondylolisthesis of fifth cervical vertebra, initial encounter for closed fracture~~ |
| ~~S12.44XA~~ | ~~Type III traumatic spondylolisthesis of fifth cervical vertebra, initial encounter for closed fracture~~ |
| ~~S12.450A~~ | ~~Other traumatic displaced spondylolisthesis of fifth cervical vertebra, initial encounter for closed fracture~~ |
| ~~S12.451A~~ | ~~Other traumatic nondisplaced spondylolisthesis of fifth cervical vertebra, initial encounter for closed fracture~~ |
| ~~S12.490A~~ | ~~Other displaced fracture of fifth cervical vertebra, initial encounter for closed fracture~~ |
| ~~S12.491A~~ | ~~Other nondisplaced fracture of fifth cervical vertebra, initial encounter for closed fracture~~ |
| ~~S12.500A~~ | ~~Unspecified displaced fracture of sixth cervical vertebra, initial encounter for closed fracture~~ |
| ~~S12.501A~~ | ~~Unspecified nondisplaced fracture of sixth cervical vertebra, initial encounter for closed fracture~~ |
| ~~S12.530A~~ | ~~Unspecified traumatic displaced spondylolisthesis of sixth cervical vertebra, initial encounter for closed fracture~~ |
| ~~S12.531A~~ | ~~Unspecified traumatic nondisplaced spondylolisthesis of sixth cervical vertebra, initial encounter for closed fracture~~ |
| ~~S12.54XA~~ | ~~Type III traumatic spondylolisthesis of sixth cervical vertebra, initial encounter for closed fracture~~ |
| ~~S12.550A~~ | ~~Other traumatic displaced spondylolisthesis of sixth cervical vertebra, initial encounter for closed fracture~~ |
| ~~S12.551A~~ | ~~Other traumatic nondisplaced spondylolisthesis of sixth cervical vertebra, initial encounter for closed fracture~~ |
| ~~S12.590A~~ | ~~Other displaced fracture of sixth cervical vertebra, initial encounter for closed fracture~~ |
| ~~S12.591A~~ | ~~Other nondisplaced fracture of sixth cervical vertebra, initial encounter for closed fracture~~ |
| ~~S12.600A~~ | ~~Unspecified displaced fracture of seventh cervical vertebra, initial encounter for closed fracture~~ |
| ~~S12.601A~~ | ~~Unspecified nondisplaced fracture of seventh cervical vertebra, initial encounter for closed fracture~~ |

| Diagnosis Code | Description |
|---|---|
| ~~S12.630A~~ | ~~Unspecified traumatic displaced spondylolisthesis of seventh cervical vertebra, initial encounter for closed fracture~~ |
| ~~S12.631A~~ | ~~Unspecified traumatic nondisplaced spondylolisthesis of seventh cervical vertebra, initial encounter for closed fracture~~ |
| ~~S12.64XA~~ | ~~Type III traumatic spondylolisthesis of seventh cervical vertebra, initial encounter for closed fracture~~ |
| ~~S12.650A~~ | ~~Other traumatic displaced spondylolisthesis of seventh cervical vertebra, initial encounter for closed fracture~~ |
| ~~S12.651A~~ | ~~Other traumatic nondisplaced spondylolisthesis of seventh cervical vertebra, initial encounter for closed fracture~~ |
| ~~S12.690A~~ | ~~Other displaced fracture of seventh cervical vertebra, initial encounter for closed fracture~~ |
| ~~S12.691A~~ | ~~Other nondisplaced fracture of seventh cervical vertebra, initial encounter for closed fracture~~ |
| ~~S12.9XXA~~ | ~~Fracture of neck, unspecified, initial encounter~~ |
| ~~S22.000A~~ | ~~Wedge compression fracture of unspecified thoracic vertebra, initial encounter for closed fracture~~ |
| ~~S22.001A~~ | ~~Stable burst fracture of unspecified thoracic vertebra, initial encounter for closed fracture~~ |
| ~~S22.002A~~ | ~~Unstable burst fracture of unspecified thoracic vertebra, initial encounter for closed fracture~~ |
| ~~S22.008A~~ | ~~Other fracture of unspecified thoracic vertebra, initial encounter for closed fracture~~ |
| ~~S22.009A~~ | ~~Unspecified fracture of unspecified thoracic vertebra, initial encounter for closed fracture~~ |
| ~~S22.010A~~ | ~~Wedge compression fracture of first thoracic vertebra, initial encounter for closed fracture~~ |
| ~~S22.011A~~ | ~~Stable burst fracture of first thoracic vertebra, initial encounter for closed fracture~~ |
| ~~S22.012A~~ | ~~Unstable burst fracture of first thoracic vertebra, initial encounter for closed fracture~~ |
| ~~S22.018A~~ | ~~Other fracture of first thoracic vertebra, initial encounter for closed fracture~~ |
| ~~S22.019A~~ | ~~Unspecified fracture of first thoracic vertebra, initial encounter for closed fracture~~ |
| ~~S22.020A~~ | ~~Wedge compression fracture of second thoracic vertebra, initial encounter for closed fracture~~ |
| ~~S22.021A~~ | ~~Stable burst fracture of second thoracic vertebra, initial encounter for closed fracture~~ |
| ~~S22.022A~~ | ~~Unstable burst fracture of second thoracic vertebra, initial encounter for closed fracture~~ |
| ~~S22.028A~~ | ~~Other fracture of second thoracic vertebra, initial encounter for closed fracture~~ |

| Diagnosis Code | Description |
|---|---|
| ~~S22.029A~~ | ~~Unspecified fracture of second thoracic vertebra, initial encounter for closed fracture~~ |
| ~~S22.030A~~ | ~~Wedge compression fracture of third thoracic vertebra, initial encounter for closed fracture~~ |
| ~~S22.031A~~ | ~~Stable burst fracture of third thoracic vertebra, initial encounter for closed fracture~~ |
| ~~S22.032A~~ | ~~Unstable burst fracture of third thoracic vertebra, initial encounter for closed fracture~~ |
| ~~S22.038A~~ | ~~Other fracture of third thoracic vertebra, initial encounter for closed fracture~~ |
| ~~S22.039A~~ | ~~Unspecified fracture of third thoracic vertebra, initial encounter for closed fracture~~ |
| ~~S22.040A~~ | ~~Wedge compression fracture of fourth thoracic vertebra, initial encounter for closed fracture~~ |
| ~~S22.041A~~ | ~~Stable burst fracture of fourth thoracic vertebra, initial encounter for closed fracture~~ |
| ~~S22.042A~~ | ~~Unstable burst fracture of fourth thoracic vertebra, initial encounter for closed fracture~~ |
| ~~S22.048A~~ | ~~Other fracture of fourth thoracic vertebra, initial encounter for closed fracture~~ |
| ~~S22.049A~~ | ~~Unspecified fracture of fourth thoracic vertebra, initial encounter for closed fracture~~ |
| ~~S22.050A~~ | ~~Wedge compression fracture of T5-T6 vertebra, initial encounter for closed fracture~~ |
| ~~S22.051A~~ | ~~Stable burst fracture of T5-T6 vertebra, initial encounter for closed fracture~~ |
| ~~S22.052A~~ | ~~Unstable burst fracture of T5-T6 vertebra, initial encounter for closed fracture~~ |
| ~~S22.058A~~ | ~~Other fracture of T5-T6 vertebra, initial encounter for closed fracture~~ |
| ~~S22.059A~~ | ~~Unspecified fracture of T5-T6 vertebra, initial encounter for closed fracture~~ |
| ~~S22.060A~~ | ~~Wedge compression fracture of T7-T8 vertebra, initial encounter for closed fracture~~ |
| ~~S22.061A~~ | ~~Stable burst fracture of T7-T8 vertebra, initial encounter for closed fracture~~ |
| ~~S22.062A~~ | ~~Unstable burst fracture of T7-T8 vertebra, initial encounter for closed fracture~~ |
| ~~S22.068A~~ | ~~Other fracture of T7-T8 thoracic vertebra, initial encounter for closed fracture~~ |
| ~~S22.069A~~ | ~~Unspecified fracture of T7-T8 vertebra, initial encounter for closed fracture~~ |
| ~~S22.070A~~ | ~~Wedge compression fracture of T9-T10 vertebra, initial encounter for closed fracture~~ |

| Diagnosis Code | Description |
|---|---|
| ~~S22.071A~~ | ~~Stable burst fracture of T9-T10 vertebra, initial encounter for closed fracture~~ |
| ~~S22.072A~~ | ~~Unstable burst fracture of T9-T10 vertebra, initial encounter for closed fracture~~ |
| ~~S22.078A~~ | ~~Other fracture of T9-T10 vertebra, initial encounter for closed fracture~~ |
| ~~S22.079A~~ | ~~Unspecified fracture of T9-T10 vertebra, initial encounter for closed fracture~~ |
| ~~S22.080A~~ | ~~Wedge compression fracture of T11-T12 vertebra, initial encounter for closed fracture~~ |
| ~~S22.081A~~ | ~~Stable burst fracture of T11-T12 vertebra, initial encounter for closed fracture~~ |
| ~~S22.082A~~ | ~~Unstable burst fracture of T11-T12 vertebra, initial encounter for closed fracture~~ |
| ~~S22.088A~~ | ~~Other fracture of T11-T12 vertebra, initial encounter for closed fracture~~ |
| ~~S22.089A~~ | ~~Unspecified fracture of T11-T12 vertebra, initial encounter for closed fracture~~ |
| ~~S32.000A~~ | ~~Wedge compression fracture of unspecified lumbar vertebra, initial encounter for closed fracture~~ |
| ~~S32.001A~~ | ~~Stable burst fracture of unspecified lumbar vertebra, initial encounter for closed fracture~~ |
| ~~S32.002A~~ | ~~Unstable burst fracture of unspecified lumbar vertebra, initial encounter for closed fracture~~ |
| ~~S32.008A~~ | ~~Other fracture of unspecified lumbar vertebra, initial encounter for closed fracture~~ |
| ~~S32.009A~~ | ~~Unspecified fracture of unspecified lumbar vertebra, initial encounter for closed fracture~~ |
| ~~S32.010A~~ | ~~Wedge compression fracture of first lumbar vertebra, initial encounter for closed fracture~~ |
| ~~S32.011A~~ | ~~Stable burst fracture of first lumbar vertebra, initial encounter for closed fracture~~ |
| ~~S32.012A~~ | ~~Unstable burst fracture of first lumbar vertebra, initial encounter for closed fracture~~ |
| ~~S32.018A~~ | ~~Other fracture of first lumbar vertebra, initial encounter for closed fracture~~ |
| ~~S32.019A~~ | ~~Unspecified fracture of first lumbar vertebra, initial encounter for closed fracture~~ |
| ~~S32.020A~~ | ~~Wedge compression fracture of second lumbar vertebra, initial encounter for closed fracture~~ |
| ~~S32.021A~~ | ~~Stable burst fracture of second lumbar vertebra, initial encounter for closed fracture~~ |
| ~~S32.022A~~ | ~~Unstable burst fracture of second lumbar vertebra, initial encounter for closed fracture~~ |
| ~~S32.028A~~ | ~~Other fracture of second lumbar vertebra, initial encounter for closed fracture~~ |

| Diagnosis Code | Description |
|---|---|
| ~~S32.029A~~ | ~~Unspecified fracture of second lumbar vertebra, initial encounter for closed fracture~~ |
| ~~S32.030A~~ | ~~Wedge compression fracture of third lumbar vertebra, initial encounter for closed fracture~~ |
| ~~S32.031A~~ | ~~Stable burst fracture of third lumbar vertebra, initial encounter for closed fracture~~ |
| ~~S32.032A~~ | ~~Unstable burst fracture of third lumbar vertebra, initial encounter for closed fracture~~ |
| ~~S32.038A~~ | ~~Other fracture of third lumbar vertebra, initial encounter for closed fracture~~ |
| ~~S32.039A~~ | ~~Unspecified fracture of third lumbar vertebra, initial encounter for closed fracture~~ |
| ~~S32.040A~~ | ~~Wedge compression fracture of fourth lumbar vertebra, initial encounter for closed fracture~~ |
| ~~S32.041A~~ | ~~Stable burst fracture of fourth lumbar vertebra, initial encounter for closed fracture~~ |
| ~~S32.042A~~ | ~~Unstable burst fracture of fourth lumbar vertebra, initial encounter for closed fracture~~ |
| ~~S32.048A~~ | ~~Other fracture of fourth lumbar vertebra, initial encounter for closed fracture~~ |
| ~~S32.049A~~ | ~~Unspecified fracture of fourth lumbar vertebra, initial encounter for closed fracture~~ |
| ~~S32.050A~~ | ~~Wedge compression fracture of fifth lumbar vertebra, initial encounter for closed fracture~~ |
| ~~S32.051A~~ | ~~Stable burst fracture of fifth lumbar vertebra, initial encounter for closed fracture~~ |
| ~~S32.052A~~ | ~~Unstable burst fracture of fifth lumbar vertebra, initial encounter for closed fracture~~ |
| ~~S32.058A~~ | ~~Other fracture of fifth lumbar vertebra, initial encounter for closed fracture~~ |
| ~~S32.059A~~ | ~~Unspecified fracture of fifth lumbar vertebra, initial encounter for closed fracture~~ |
| ~~S32.10XA~~ | ~~Unspecified fracture of sacrum, initial encounter for closed fracture~~ |
| ~~S32.110A~~ | ~~Nondisplaced Zone I fracture of sacrum, initial encounter for closed fracture~~ |
| ~~S32.111A~~ | ~~Minimally displaced Zone I fracture of sacrum, initial encounter for closed fracture~~ |
| ~~S32.112A~~ | ~~Severely displaced Zone I fracture of sacrum, initial encounter for closed fracture~~ |
| ~~S32.119A~~ | ~~Unspecified Zone I fracture of sacrum, initial encounter for closed fracture~~ |
| ~~S32.120A~~ | ~~Nondisplaced Zone II fracture of sacrum, initial encounter for closed fracture~~ |

| Diagnosis Code | Description |
|---|---|
| ~~S32.121A~~ | ~~Minimally displaced Zone II fracture of sacrum, initial encounter for closed fracture~~ |
| ~~S32.122A~~ | ~~Severely displaced Zone II fracture of sacrum, initial encounter for closed fracture~~ |
| ~~S32.129A~~ | ~~Unspecified Zone II fracture of sacrum, initial encounter for closed fracture~~ |
| ~~S32.130A~~ | ~~Nondisplaced Zone III fracture of sacrum, initial encounter for closed fracture~~ |
| ~~S32.131A~~ | ~~Minimally displaced Zone III fracture of sacrum, initial encounter for closed fracture~~ |
| ~~S32.132A~~ | ~~Severely displaced Zone III fracture of sacrum, initial encounter for closed fracture~~ |
| ~~S32.139A~~ | ~~Unspecified Zone III fracture of sacrum, initial encounter for closed fracture~~ |
| ~~S32.14XA~~ | ~~Type 1 fracture of sacrum, initial encounter for closed fracture~~ |
| ~~S32.15XA~~ | ~~Type 2 fracture of sacrum, initial encounter for closed fracture~~ |
| ~~S32.16XA~~ | ~~Type 3 fracture of sacrum, initial encounter for closed fracture~~ |
| ~~S32.17XA~~ | ~~Type 4 fracture of sacrum, initial encounter for closed fracture~~ |
| ~~S32.19XA~~ | ~~Other fracture of sacrum, initial encounter for closed fracture~~ |
| ~~S32.2XXA~~ | ~~Fracture of coccyx, initial encounter for closed fracture~~ |

## Description of Services

**Facet Joint Injections and Medial Nerve Branch Blocks have been used to diagnose and treat pain that arises from facet joints. Imaging guidance, and local anesthetic of the skin over the injection site are used and the physician injects local anesthetic with or without corticosteroid into the facet joint that is identified as the probable source of pain. A medial nerve branch block (MBNB) utilizes the same techniques of imaging guidance and local anesthetic, to target the injection to the medial branch of the peripheral nerve dorsal ramus, which innervate the facet joints of the spine. (Funicello 2019)**

**These injections generally require local anesthetic only. However, for some patients, Moderate/Conscious Sedation, non-intravenous sedation, and Monitored Anesthesia Care (MAC) may be necessary. These sedation procedures are generally safe when administered by trained, certified providers with appropriate monitoring, but are not without risk. Examples of procedures that typically do not require moderate sedation or an anesthesia care team include but are not limited to epidural steroid injections; epidural blood patch; trigger point injections; shoulder, hip, sacroiliac, facet, and knee joint injections; medial branch nerve blocks; and peripheral nerve blocks (American Society of Anesthesiologists, 2021).**

~~Pain in the lower back is a common concern, affecting up to 90% of Americans at some point in their lifetime. The vast majority of episodes are mild and self-limited. (Chronic nonmalignant back pain is defined as pain lasting 3-6 months or more that is not due to cancer). Up to 50% of affected persons will have more than one episode. Low back pain is not a specific disease; rather it is a symptom that may occur from a variety of different processes, including but not limited to spinal stenosis, disc herniation or~~

~~degenerative changes in the vertebrae. Management of back pain that is persistent and disabling despite the use of recommended conservative treatment is challenging. Facet joint injections and blocks are among the treatments that have been employed in the treatment of back pain as an alternative to more invasive interventions. (Hayes, 2018)~~

~~Facet blocks can be considered a diagnostic or therapeutic procedure. Facet blocks using short-acting local anesthetics can be used to diagnose facet (zygapophyseal) joint syndrome as the cause of chronic back pain. Facet blocks utilizing long acting local anesthetics, anti-inflammatory agents such as corticosteroids, or nerve ablating techniques such as radiofrequency lesioning have been investigated for treatment of chronic back pain attributed to facet joint syndrome.~~
~~(Hayes, 2018)~~

# Clinical Evidence

## Ultrasound Guidance

There is no evidence in the peer-reviewed literature **demonstrating** ~~regarding~~ the overall health benefit of the use of ultrasonic guidance during spinal injections over the use of fluoroscopy or CT-guidance. **Furthermore, clinical guidelines do not recommend the use of ultrasound-guided facet joint injections. Well-designed randomized controlled trials (RCTs) that compare ultrasound guidance to fluoroscopy or computed tomography guided facet joint injections are needed to demonstrate improved net health outcomes with ultrasound guided injections.**

**Ultrasound-guided spine injection therapy is a comparatively new technique in the management of axial and radicular pain from degenerative lumbar spinal conditions and may be a reasonable alternative to conventional methods of injection guidance. In 2020, Tay et al. completed a retrospective clinical audit of 42 patients who underwent ultrasound-guided lumbar spinal injection at a single institution for chronic axial and radicular pain in an acute public hospital sports medicine center between June 1, 2018 and June 1, 2019. 27 patients (64.3%) receiving facet joint injections and 18 patients (42.9%) receiving nerve root injections. The majority (90.5%) of patients experienced an improvement of >30% in pain intensity at 3 months post-injection, using the Numerical Rating Scale pain score (p <0.001); with 40 patients (95.2%) reporting a reduction in Oswestry Disability Index score (p <0.001). No complications were reported. It was concluded that the experience of this institution confirms the safety, feasibility, and effectiveness of ultrasound-guided lumbar spinal injection for the treatment of axial and radicular pain. The authors also note that ultrasound-guided spinal injection remains technically challenging and requires a steep learning phase, as well as careful patient selection, and that the study was not designed to directly compare outcomes for ultrasound-guided injection against the conventional standard of care. A larger dataset is required to confirm the efficacy of ultrasound-guided spine injection and the rate of adverse events, and a prospective study would be useful to determine clinical factors predicting success. This study is also limited by lack of comparison group and a small number of participants standard of care. A larger dataset is required to confirm the efficacy of ultrasound-guided spine injection and the rate of adverse events, and a prospective study would be useful to determine clinical factors predicting success. This study is also limited by lack of comparison group and a small number of participants.**

Wu et al (2016) conducted a meta-analysis of controlled trials—(randomized and non-randomized) to assess the comparative effectiveness of ultrasound-guided (USG) versus computed tomography (CT**)/fluoroscopy-guided lumbar facet joint injections in adults.**~~)~~ ~~c/fluoroscopy-guided lumbar facet joint injections in adults. Databases were searched for~~

~~controlled trials comparing the clinical effectiveness between USG and CT/fluoroscopy-guided injection techniques in patients with facet syndrome were included. Two reviewers independently screened abstracts and full texts. The results of the mean procedure duration, decreased pain score, and Modified Oswestry Disability score after treatment were extracted and presented in the form of mean.~~ Of 103 records screened, 3 studies were included, with a total of 202 adults with facet joint pain. **The overall quality of these studies** ~~There~~ was **not rated, though** ~~no statistically significant difference between~~ the **authors noted that the lack of blinding may have resulted in bias. The outcomes assessed included change in** ~~2 groups in~~ pain **scores (visual analog scale [VAS]), change in** ~~score and~~ Modified Oswestry Disability **scores, and** ~~score after injection. There was also no statistically significant difference in the~~ mean ~~procedure~~ duration **of** ~~between~~ the **procedure. No statistically significant differences between groups were found for these outcomes** ~~2 groups~~. The authors concluded that while USG injection is feasible and minimizes exposure of radiation to patients and practitioners in the lumbar facet joint injection process. This review suggested no significant differences in pain and functional improvement were noted between the USG and CT-/fluoroscopy-guided techniques in facet joint injection. **This meta-analysis was limited by the relatively small sample size and the small number of studies included.**

## Facet Joint/Medial Branch Block Injections

### *Diagnostic Facet Joint/Medial Branch Block Injections for the Thoracic Spine*

There is **limited published high-quality** ~~insufficient~~ evidence **regarding the efficacy and safety of Facet Joint / Medial Branch Block injections of the thoracic spine.**

**Cohen et al (2018) conducted a multi-center randomized controlled trial** to **evaluate the effectiveness of diagnostic lumbar** ~~demonstrate that therapeutic~~ facet joint **or nerve blocks and their predictive value before radiofrequency denervation. A total of 229 participants were randomized** ~~injections are effective~~ in **a 2:2:1 ratio to receive intraarticular facet injections with bupivacaine and steroid, medial branch blocks, or saline. Then, participants who had a positive facet joint injection test (a positive test was defined as 50% or more pain relief sustained for at least three hours, to control for concomitant pain generators) and remained symptomatic went on to receive a therapeutic radiofrequency denervation, while all participants in the saline group who remained symptomatic received therapeutic radiofrequency denervation. This complex study design allowed the authors to test the usefulness of facet joint injection as a guide to decide the indication to a therapeutic radiofrequency denervation. Inclusion criteria were 18 yrs. of age or older, predominantly axial low back pain for 3 months or more, average back pain score more than 3 out of 10 over the last week on a numerical rating scale, failure to respond to more conservative therapy (e.g., physical therapy, integrative therapy, and pharmacotherapy) and paraspinal tenderness. Excluded from participation were patients with a known, specific etiology for low back pain (e.g., significant spinal stenosis or grade II or III spondylolisthesis), focal neurologic signs or symptoms, a positive response to previous spine interventions such as epidural steroids or sacroiliac joint blocks for the current pain episode, previous facet interventions, lumbar spine fusion, untreated coagulopathy, and concomitant medical condition likely to undermine the diagnostic work-up or** ~~the~~ **treatment response. The proportions of positive blocks were higher in the intraarticular (54%) and medial branch (55%) groups than in the placebo group (30%), suggesting that the response to the test injection went above and beyond a placebo effect. At one month, results showed a mean reduction in average numerical rating scale pain score of 0.7 ± 1.6 in the intraarticular group, 0.7 ± 1.8 in the medial branch block group, and 0.7 ± 1.5 in the placebo group, suggesting a lack of therapeutic benefit for facet injections at one month, results showed a mean reduction in average numerical**

**rating scale pain score at 1 month was 0.7 ± 1.6 in the intraarticular group, 0.7 ± 1.8 in the medial branch block group, and 0.7 ± 1.5 in the placebo group, suggesting a lack of therapeutic benefit for facet injections at one month. Radiofrequency ablation was performed on 135 patients (45, 48, and 42 patients from the intraarticular, medial branch, and saline groups, respectively). At 3 months, the proportions of positive responders in the intraarticular, medial branch block, and placebo groups were 51%, 56%, and 24%, respectively. This finding suggests that the use of diagnostic facet joint injection improves patient's outcomes when used to direct the selection of patients who should receive radiofrequency ablation. Limitations included fact that study was designed primarily as a comparative-effectiveness study and therefore utilized liberal selection criteria to enhance generalization, unlike studies designed to show efficacy, which ideally employ rigorous criteria. The authors concluded that the study establishes that facet joint or nerve blocks are not therapeutic and that the higher responder rates in the two facet injection groups suggest that diagnostic facet blocks might provide prognostic value before radiofrequency ablation.**

**Boswell et al. (2015) conducted a systematic review of the diagnostic accuracy of spinal facet joint nerve blocks in chronic spinal pain. The** ~~of back pain,~~ evidence **for** ~~of~~ the **diagnostic accuracy of thoracic** ~~safety and efficacy of therapeutic~~ facet joint **nerve blocks** ~~injections for low back pain~~ is **based on three high quality studies (2 prospective, and one retrospective) with ≥ 80% pain relief as the standard and showed a prevalence ranging from 34% to 48%, and false-positive rates ranging from 42% to 48%. There were no randomized studies, and no studies evaluated single blocks. The authors concluded that there is a paucity of evidence related to these diagnostic injections and the thoracic spine, and more high-quality research is needed** ~~lacking and of low quality. Evidence for the use of facet injection for diagnostic purpose presented in this section and support the proven coverage rationale~~.

## *Therapeutic Facet Joint/Medial Branch Block Injections*

A **2018** Hayes technology **assessment, updated in 2021** ~~report (2018)~~ stated that low-quality body of evidence from RCTs of lumbar facet joint injections (FJIs) shows that this technique may provide a significant degree of pain relief and improve function/disability (ODI) compared with baseline levels in patients with chronic nonresponsive spinal pain in that region. However, the duration of pain relief is variable, with follow-up of 3 to 6 months. The lack of appropriate placebo control groups in the RCTs precluded an accurate assessment of the treatment effect of the intervention; thus, there is considerable uncertainty regarding the magnitude and durability of benefit. **The use of FJIs in the lumbar spine region appears to be generally safe, with relatively few minor side effects. Evidence is insufficient to assess the efficacy and safety of FJIs in treating chronic, nonresponsive spinal pain of facet joint origin in the thoracic or cervical spine.** Additional studies are needed to evaluate the long-term efficacy and safety of ~~therapeutic~~ FJIs versus placebo for treatment of chronic lumbar**, thoracic, or cervical** spinal pain, and to assess the comparative effectiveness of this treatment versus definitive alternatives **such as RFD and PRF**.

Manchikanti et al (2016) conducted a systematic evidence-based assessment methodology of controlled trials of diagnostic validity and randomized controlled trials to investigate the diagnostic validity and therapeutic value of lumbar facet joint interventions in managing chronic low back pain. The literature search was extensive utilizing various types of electronic search media, and inclusion criteria encompassed all facet joint interventions performed in a controlled fashion. Across all databases, 16 high quality diagnostic accuracy studies were identified, and multiple studies assessed the influence of multiple factors on diagnostic validity. In contrast to diagnostic validity studies,

therapeutic efficacy trials were limited to a total of 14 randomized controlled trials, assessing the efficacy of intraarticular injections, facet or zygapophysial joint nerve blocks, and radiofrequency neurotomy of the innervation of the facet joints. The pain relief of greater than 50% was the outcome measure for diagnostic accuracy assessment of the controlled studies with ability to perform previously painful movements, whereas, for randomized controlled therapeutic efficacy studies, the primary outcome was significant pain relief, and the secondary outcome was a positive change in functional status. For the inclusion of the diagnostic controlled studies, all studies must have utilized either placebo-controlled facet joint blocks or comparative local anesthetic blocks. In assessing therapeutic interventions, short-term and long-term **relief was** ~~reliefs were~~ defined as either up to 6 **months** ~~mo~~ or greater than 6 **months** ~~mo~~ of relief. The evidence for the diagnostic validity of lumbar facet joint nerve blocks with at least 75% pain relief with ability to perform previously painful movements was level I, based on a range of level I to V derived from a best evidence synthesis. For therapeutic interventions, the evidence was variable from level II to III, with level II evidence for lumbar facet joint nerve blocks and radiofrequency neurotomy for long-term improvement (greater than 6 mo.),~~)~~, and level III evidence for lumbosacral zygapophysial joint injections for short-term improvement only. The authors concluded that this review provides significant evidence for the diagnostic validity of facet joint nerve blocks, and moderate evidence for therapeutic radiofrequency neurotomy and therapeutic facet joint nerve blocks in managing chronic low back pain.

Vekaria et al (2016). ~~Evidence supporting the use of therapeutic intra-articular facet joint injections for patients with suspected facet joint pain is sparse.~~ The authors conducted a systematic review, including a narrative synthesis to determine if intra-articular facet joint injections with active drug are more effective in reducing back pain and back pain-related disability than a sham procedure or a placebo/inactive injection. The authors also evaluated if intra-articular facet joint injections with active drug or placebo/inactive injection are more effective in reducing back pain and back pain-related disability than conservative treatment. Electronic databases were searched through April 2015. Data were screened and single extraction with independent verification and risk of bias assessment was performed. A total of 391 records were screened, and six trials were included. The trials included were small (range 18-109 participants) and overall, in terms of pain and disability outcomes most were inconclusive. Only two of the trials report any significant between-group differences in pain or disability outcomes. The authors addressed limitations and flaws in these trials that were clinically diverse and precluded any meta-analysis. A number of methodological issues were identified. The positive results are interpreted with caution and suggest that there is a need for further high-quality work in this area. Further randomized controlled trials of higher methodological standard comparing facet joint injection with a sham/placebo control or conservative treatment are needed from which to base any conclusion on the effectiveness of facet joints in improving pain and disability outcomes. ~~facet joints in improving pain and disability outcomes.~~

**Manchikanti**~~Manchicanti~~ et al. (2010a) conducted a double-blind randomized controlled trial of facet joint nerve blocks to manage chronic low back pain. ~~—~~One hundred twenty patients were equally randomized to receive either a local anesthetic only (group I) or a local anesthetic mixed with a steroid (group II). Outcomes were measured at baseline, 3, 6-,~~-~~ 12-,~~-~~ 18-, and 24-~~—~~months post-treatment with the Numeric Rating Scale (NRS), the Oswestry Disability Index 2.0 (ODI), work status, and opioid intake. Significant pain relief (≥ 50%) and functional improvement of ≥ 40% were observed in 85% in Group 1, and 90% in Group II, at 2-year follow-up. The authors found that both groups had **similar relief with or without the addition of steroids to the treatment, and experienced**

**significant pain relief for 82 to 84 weeks of 104 weeks. Treatment required approximately 5 to 6 injections, with an average relief of 19 weeks per episode of treatment. The authors concluded that therapeutic lumbar facet joint nerve blocks, with or without steroids, may provide a management option for chronic function-limiting low back pain of facet joint origin, and additional research is needed**~~equal relief with or without the addition of steroids to the treatment~~.

In a prospective, randomized, double-blind trial by Manchikanti et al. (2007), data from a total of 60 patients were included, with 15 patients in each of 4 groups. Thirty patients were in a non-steroid group consisting of Groups I (control, with lumbar facet joint nerve blocks using bupivacaine) and II (with lumbar facet joint nerve blocks using bupivacaine and Sarapin); another 30 patients were in a steroid group consisting of Groups III (with lumbar facet joint nerve blocks using bupivacaine and steroids) and IV (with lumbar facet joint nerve blocks using bupivacaine, Sarapin, and steroids). Significant improvement in pain and functional status were observed at 3 months, 6 months, and 12 months, compared to baseline measurements. The average number of treatments for 1 year was 3.7 with no significant differences among the groups. Duration of average pain relief with each procedure was 14.8 +/- 7.9 weeks in the non-steroid group and 12.5 +/- 3.3 weeks in the steroid group, with no significant differences among the groups. **The authors concluded that the therapeutic** ~~Therapeutic~~ lumbar facet joint nerve blocks with local anesthetic, with or without Sarapin or steroids, may be effective in the treatment of chronic low back pain of facet joint origin. **The findings are limited by lack of placebo comparison group.**

## *Clinical Practice Guidelines*

### ~~*Professional Societies*~~

#### American Association of Neurological Surgeons (AANS)

~~Guidelines addressing spinal injections~~ and Congress~~other therapeutic technologies used in the management~~ of **Neurological Surgeons (CNS)**

**In 2014, the AANS and CNS published updated guidelines on the treatment of degenerative disease of the lumbar spine. AANS/CNS** ~~chronic low-back pain, state that facet injections are not~~ recommended **to use a double-injection technique with an improvement threshold of 80% or greater to establish a diagnosis of lumbar facet-mediated pain and noted that there is** ~~as long-term treatment for chronic low-back pain. The author's further state that~~ no evidence ~~exists~~ to support the **use** ~~effectiveness~~ of **diagnostic** facet **blocks as a predictor of lumbar fusion outcome in** ~~injections in the treatment of~~ patients with chronic low-back pain **from degenerative lumbar disease.**~~. (Resnick et al. 2005).~~

#### American College of Occupational and Environmental Medicine (ACOEM)

**In the 2021** ~~Evidence-based clinical practice~~ guidelines **for invasive treatments for** ~~published in 2008 by the ACOEM considered interventions and practices used in the treatment of~~ low back disorders, **the ACOEM states the following for** ~~including various injection therapies and techniques. The guidelines state that~~ therapeutic facet joint injections**:**

- **Not Recommended (I), Moderate Confidence for treatment of** ~~for~~ acute, **subacute** ~~sub-acute, chronic~~ low back pain **(LBP)** or **for any** radicular pain syndrome**.**
- **Not Recommended (I), Moderate Confidence for treatment of acute, subacute LBP or for any radicular pain syndrome.**
- **Moderately Not Recommended (B), Moderate Confidence for routine treatment of chronic non-specific axial pain**

- **Repeat use of intra-articular therapeutic facet joint injections** are **Moderately Not Recommended (B), Moderate Confidence for patients who have failed to achieve lasting functional improvements with a prior injection** ~~not recommended~~.

American Society of Interventional Pain Physicians (ASIPP)

**In 2020, the American Society of Interventional Pain Physicians** ~~The ASIPP published~~ updated **the** evidence-based guidelines **on use of facet joint interventions for** ~~regarding interventional techniques in the~~ management of chronic spinal pain**, and made the following recommendations:**

- **The use of facet joint nerve blocks for the diagnosis of facet joint pain is recommended for:**
  - **Lumbar spine (moderate to strong)- Based on the results of ten relevant diagnostic accuracy studies with 4 of 10 studies utilizing controlled comparative local anesthetics with concordant pain relief.** ~~in 2013.~~ **The prevalence rates ranged from 27% to 40% with false-positive rates of 27% to 47%, with ≥ 80% pain relief.**
  - **Cervical spine (moderate)- Based on the results of ten relevant diagnostic accuracy studies, 9 of the 10 studies with either controlled comparative local anesthetic blocks or placebo controls with concordant pain relief with a criterion standard of ≥ 80% were included. The prevalence and false-positive rates ranged from 29% to 60% and of 27% to 63%, with high variability.**
  - **Thoracic spine (moderate)- Based on the results of three relevant diagnostic accuracy studies, with controlled comparative local anesthetic blocks, with concordant pain relief, with a criterion standard of ≥ 80% were included. The prevalence varied from 34% to 48%, whereas false-positive rates varied from 42% to 58%.**
- **The use of facet joint nerve blocks for the treatment of facet joint pain is recommended for:**
  - **Lumbar spine (moderate)- Based on the results of 3 relevant randomized controlled trials with long-term improvement**
  - **Cervical spine (moderate)- Based on the results of one relevant randomized controlled trial and 3 observational studies with long-term improvement**
  - **Thoracic spine**
    - **Therapeutic facet joint nerve blocks (Moderate)- Based on the results of 2 randomized controlled trials and 2 observational studies with long-term improvement**
    - **Therapeutic intraarticular** ~~authors concluded that based upon the available evidence, therapeutic intra-articular~~ facet joint injections **(weak)- Based on one randomized controlled trial with 6-month follow-up and emerging evidence**

## American Society of Regional Anesthesia and Pain Medicine

**Consensus practice guidelines on interventions for lumbar facet joint pain from a multispecialty, international working group (Cohen** ~~were not recommended. (Manchikanti~~ et al **., 2020) makes the following recommendations and observations:** ~~.).~~

- **A 3-month trial of different conservative treatments before facet joint interventions. Conservative therapies may include medications (e.g., non-steroidal anti-inflammatory drugs, antidepressants), physical treatments (exercise, heat or cold therapy, massage), integrative treatments (acupuncture, spinal manipulation if indicated) and others (nutrition, weight loss, sleep hygiene).**
- **Lumbar [median branch blocks (MBBs)] should be performed with < 0.5 mL (total volume) to reduce spread to adjacent structures.**
- **Lumbar [interarticular (IA)] facet joint injections should be performed with a volume of < 1.5 mL to prevent capsular rupture and reduce spread to adjacent structures.**

- Recommend against the routine use of therapeutic facet injections, but acknowledge that in patients who may be at risk of adverse consequences from [radiofrequency ablation (RFA)] (e.g., young athletes, older individuals on anticoagulation therapy or with implantable cardiac devices) or in whom there is a strong likelihood of success (e.g., individuals who obtained prolonged relief from previous diagnostic injections with or without steroids), it may reasonable to add steroids to a block in the hope of deriving intermediate-term relief.
- A > 50% reduction in pain be considered a positive block but recognize that studies should be performed to determine whether lower cut-offs may prove to be optimal.
- A single block is recommended. There is moderate evidence that dual blocks result in a higher subsequent success rate for medial branch [radiofrequency (RF)], but that the use of a zero-block paradigm results in the highest overall number of patients with a positive response to the RFA.
- Facet joint injections meet criteria for diagnostic interventions for facet-mediated pain but are less predictive than medical branch blocks.
- As diagnostic tools, medical branch blocks suffer from limitations related to aberrant lumbar facet joint innervation.
- Compared with saline controls, both facet and medial branch injections with local anesthetic provide better predictive information for medial branch radiofrequency ablation.

Consensus practice guidelines on interventions for cervical spine facet joint pain from a multispecialty, international working group (Hurley et al., 2021) makes the following recommendations and observations:

- History and physical examination cannot reliably identify painful atlanto-occipital (C0-C1) (AO) or atlanto-axial (C1-C2) (AA) joints but can guide injection decisions which could confirm the joints as pain generators
- When selecting targets for blocks, levels should be determined based on clinical presentation (tenderness on palpation (preferably performed under fluoroscopy), pain referral patterns)
- Conservative management before prognostic blocks in patients with at least 3 months of neck pain
  - At least a 6-week trial of conservative therapy, which may vary based on a personalized medicine paradigm
  - Concomitant use of conservative measures to accompany prognostic blocks
- Pre-procedural advanced imaging of the cervical spine with either CT or MRI should be obtained prior to performing AO and AA joint injections to ascertain pathology and help guide needle trajectory
- ≥ 50% reduction in pain should be considered a positive prognostic block.
  - Non-pain measures such as activity level should not be used as the sole criterion to determine the success or failure of a prognostic block, but may be used in conjunction with pain assessment
- Fluoroscopy or US should be used for cervical MBB
- For cervical MBB volumes be ≤ 0.3mL (slightly higher volumes may be considered if contrast spread fails to capture the most frequent patterns of medial branch innervation)
- For cervical IA facet joint injection, a total volume not to exceed 1mL including contrast injection (to prevent capsular rupture and/or aberrant injectate spread and enhance the specificity of the block)
- Recommend against the routine use of IA injections, while acknowledging that for patients at risk of adverse events such as young athletes, individuals on

**anticoagulants, or who have an implantable cardiac device, and/or those with limited access to cervical medial branch RFA it may be reasonable to consider these injections with non-particulate steroid at C2-3**

- **The routine use of steroids with cervical MBB should be avoided**

North American Spine Society (NASS)

**A 2016** ~~In 2020,~~ NASS ~~published~~ coverage policy **makes the following** recommendations for ~~therapeutic~~ facet joint interventions**:**

***Diagnostic Medial Branch Blocks***

- **Dual blocks, performed in the same location(s) on two separate occasions, are necessary to confirm the diagnosis due to the unacceptably high false positive rate of single diagnostic anesthetic injections in the spine**
- **A second confirmatory injection is indicated only if the first injection produces ≥ 80% relief of the primary (index) pain and the onset and minimum duration of relief is consistent with the agent employed. This confirmatory block confirms the tested joint as the source if the index pain is reduced by > 80%**
- **A second injection may also be performed at a different or additional level if the pain is believed to be arising from a different joint (and the pain relief from the initial block was < 80%)**

***Therapeutic Medial Branch Blocks***

**Therapeutic MBBs are performed in the same manner as diagnostic MBBs and are intended to achieve long term pain management. Current evidence does not support their use as a therapeutic intervention.**

**The NASS also states** ~~. They concluded~~ that **there is no published literature addressing the use of intra-articular injections for thoracic pain and the studies regarding medial** ~~therapeutic facet joint (medical~~ branch blocks **are limited to retrospective studies and case series. They recommend clinicians weigh the risks and benefits of these interventions compared to other palliative care for patients with thoracic spine pain who appear to have limited remaining** ~~) are not recommended in the~~ treatment **outcomes.**

**In the 2020 Evidence-Based Clinical Guidelines for Multidisciplinary Spine Care: Diagnosis & Treatment of Low Back Pain, the NASS states there is there is insufficient evidence to make a recommendation for or against the use of the following for facet joint and medial branch block injections:**

- **Patient-reported reproduction of pain during a zygapophyseal joint injection as a predictor of response to dual diagnostic blocks. Grade of Recommendation: I**
- **In patients selected for facet joint procedures using diagnostic criteria of physical exam and a response to a single diagnostic intra-articular injection with 50% relief, it is suggested that intra-articular injection of steroids provides no clinically meaningful improvement at 6 months. Grade of Recommendation: B**
- **In patients selected for facet joint procedures using diagnostic criteria of physical exam and a response to a single diagnostic intra-articular injection with 50% relief, there is insufficient evidence to make a recommendation for or against the use of radiofrequency neurotomy or periarticular phenol injections. Grade of Recommendation: I**
- **The use of steroid injections into the zygapophyseal joint in patients with chronic** ~~of~~ back pain **and a physical exam suggestive of facet-mediated pain. Grade of Recommendation: I**~~.~~

- **The use of uncontrolled medial branch blocks vs. pericapsular blocks for the diagnosis of zygapophyseal joint pain based on the outcomes of medial branch nerves cryoablation. Grade of Recommendation: I**
- **The use of a 50% reduction in pain following medial branch blockade for the diagnosis of zygapophyseal joint pain. Grade of Recommendation: I**

### World Federation of Neurosurgical Societies (WFNS)

**In 2020, the WFNS published the Spine Committee Recommendations on Conservative Treatment and Percutaneous Pain Relief in Patients with Lumbar Spinal Stenosis (Fornari et al. 2020). They state that facet joint injections provide a useful diagnostic tool for low back pain.**

## U.S. Food and Drug Administration (FDA)

This section is to be used for informational purposes only. FDA approval alone is not a basis for coverage.

**Facet joint and medial branch block injections are procedures and therefore not subject to FDA regulation. However devices, drugs, and tests used as part of this procedure may be regulated. Additional information may be obtained from the U.S. Food and Drug Administration - Center for Drug Evaluation and Research (CDER) at: https://www.fda.gov/about-fda/fda-organization/center-drug-evaluation-and-research-cder. (Accessed February 10, 2022)**
~~Nerve block injections are not regulated by the US Food and Drug Administration (FDA).~~

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## Policy History/Revision Information

| Date | Summary of Changes |
|---|---|
| **TBD** | • |

## Instructions for Use

This Medical Policy provides assistance in interpreting UnitedHealthcare standard benefit plans. When deciding coverage, the federal, state, or contractual requirements for benefit plan coverage must be referenced as the terms of the federal, state, or contractual requirements for benefit plan coverage may differ from the standard benefit plan. In the event of a conflict, the federal, state, or contractual requirements for benefit plan coverage govern. Before using this policy, please check the federal, state, or contractual requirements for benefit plan coverage. UnitedHealthcare reserves the right to modify its Policies and Guidelines as necessary. This Medical Policy is provided for informational purposes. It does not constitute medical advice.

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