

## Clinical Policy: Injections and Radiofrequency Neurotomy for Pain Management

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[Coding Implications](#)

[Revision Log](#)

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### Description

Invasive pain management procedures considered in this policy include epidural steroid injections/selective nerve root blocks, facet joint diagnostic and therapeutic blocks and radiofrequency ablation, sacroiliac joint injections and radiofrequency ablation, intradiscal steroid injections, trigger point injections, occipital nerve blocks, peripheral nerve blocks and sympathetic blocks.

### Policy/Criteria

It is the policy of health plans affiliated with Centene Corporation® that invasive pain management procedures performed by a physician are medically necessary when *the relevant criteria are met and the patient receives only one procedure per visit, with or without radiographic guidance.*

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### I. Caudal or Interlaminar Epidural Steroid Injections

- A. One caudal or interlaminar epidural steroid injections (ESI's) in the cervical, thoracic or lumbar region given at one level for chronic pain is considered medically necessary to confirm beneficial response when all of the following are met:
  1. Persistent radicular pain caused by spinal stenosis, disc herniation or degenerative changes in the vertebrae, confirmed by physical exam and imaging, that interferes with ADLs, that has lasted for at least 3 months;
  2. The member has failed to respond to conservative therapy including all of the following:
    - a. ≥ 6 weeks chiropractic, physical therapy or prescribed home exercise program;
    - b. NSAID ≥ 3 weeks or NSAID contraindicated or not tolerated;

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- c.  $\geq 6$  weeks activity modification.
  - 3. The member is not currently being treated with full anticoagulation therapy. For patients on warfarin, INR (international normalized ratio) should be  $\leq 1.4$  prior to the procedure. Discontinuing anti-platelet therapy is a clinical decision balancing risks and benefits of the procedure on therapy, versus the underlying medical condition if not treated appropriately;
  - 4. Absence of systemic infection or local infection at the site of a planned injection.
- B. If there is no favorable response to the initial injection, an additional caudal or interlaminar epidural steroid injection in the cervical, thoracic, or lumbar region may be repeated at one level, provided the injections are given at least 2 weeks apart.
- C. If no improvement is seen after the first two injections, *subsequent caudal or interlaminar ESIs* are considered **not medically necessary** because effectiveness has not been established.
- D. If recurrence of symptoms occurs after a favorable response to the initial injection(s), additional *caudal or interlaminar ESI's* are considered **medically necessary** when all of the following are met:
- 1. There is  $\geq 50\%$  relief for at least 2 months associated with functional improvement from the initial injection(s);
  - 2. *Caudal or interlaminar ESI* is given at intervals of no more frequently than every 3 months.
  - 3. A maximum of 4 injections may be given at the same site within 12 months.
- E. *Continuation of injections* beyond 12 months or more than 4 therapeutic injections is considered **not medically necessary** because effectiveness and safety has not been established. When more definitive therapies cannot be tolerated or provided, consideration will be made on a case by case basis.
- F. *Caudal or interlaminar ESI for acute pain management* (pain lasting  $< 3$  months) is considered **medically necessary** when all of the following are met:
- 1. There is severe radicular pain that interferes substantially with ADLs;
  - 2. Severe pain persists after treatment with NSAID and/or opiate (both  $\geq 3$  days or contraindicated/not tolerated);
  - 3. The member cannot tolerate chiropractic or physical therapy and the injection is intended as a bridge to therapy.
- G. *Caudal or interlaminar ESI for any other indication or location* is considered **not medically necessary** because effectiveness has not been established.

**II. Selective Nerve Root Blocks**

- A. *One selective nerve root block (SNRB)* performed with a local anesthetic at a single nerve root is considered **medically necessary** to establish a diagnosis and confirm beneficial response when all the following criteria are met:

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1. Persistent radicular pain in a defined nerve root level, that interferes with ADLs and has lasted for at least 3 months, and the diagnosis remains uncertain after standard evaluation (neurologic examination, radiological studies and electrodiagnostic studies);
  2. The member has failed to respond to conservative therapy including all of the following:
    - a.  $\geq 6$  weeks chiropractic, physical therapy or prescribed home exercise program;
    - b. NSAID  $\geq 3$  weeks or NSAID contraindicated or not tolerated;
    - c.  $\geq 6$  weeks activity modification;
  3. The member is not currently being treated with full anticoagulation therapy. For patients on warfarin, international normalized ratio (INR) should be  $\leq 1.4$  prior to the procedure.  
Discontinuing anti-platelet therapy is a clinical decision balancing risks and benefits of the procedure on therapy, versus the underlying medical condition if not treated appropriately;
  4. Absence of systemic infection or local infection at the site of a planned injection
- B. A second *SNRB* is considered **medically necessary** when multilevel pathology is suspected and it has been at least two weeks since the prior injection.
- C. Additional *SNRB*'s are considered **not medically necessary** for any other indication because effectiveness has not been established.

**III. Transforaminal Epidural Steroid Injections**

- A. One *transforaminal epidural steroid injection* (TFESI) in the lumbar region given at a single level bilaterally or two levels unilaterally for chronic pain is considered **medically necessary** when all of the following are met:
1. Persistent radicular pain caused by disc herniation in a defined nerve root level or spinal stenosis, confirmed by physical exam and imaging, that interferes with ADLs, that has lasted for at least 3 months;
  2. The member has failed to respond to conservative therapy including all of the following:
    - a.  $\geq 6$  weeks chiropractic, physical therapy or prescribed home exercise program;
    - b. NSAID  $\geq 3$  weeks or NSAID contraindicated or not tolerated;
    - c.  $\geq 6$  weeks activity modification.
  3. The member is not currently being treated with full anticoagulation therapy. For patients on warfarin, INR (international normalized ratio) should be  $\leq 1.4$  prior to the procedure. Discontinuing anti-platelet therapy is a clinical decision balancing risks and benefits of the procedure on therapy, versus the underlying medical condition if not treated appropriately;
  4. Absence of systemic infection or local infection at the site of a planned injection.
- B. A second TFESI in the lumbar region is considered **medically necessary** at single level bilaterally or two levels unilaterally if there is no favorable response to the initial injection, provided the injections are given at least 2 weeks apart.

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- C. Subsequent TFESI's are considered **not medically necessary** if no improvement is seen after the first two injections, because effectiveness has not been established.
- D. If recurrence of symptoms occurs after a favorable response to the diagnostic SNRB(s) or initial TFESI(s), additional *TFESIs* performed at a single level bilaterally or two levels unilaterally are considered **medically necessary** when all of the following are met:
  1. There is  $\geq 50\%$  relief for at least 2 months associated with functional improvement from the initial injection(s);
  2. TFESI is given at intervals of no more frequently than every 3 months;
  3. A maximum of 4 injections may be given at the same site within 12 months.
  4. The member is not currently being treated with full anticoagulation therapy. For patients on warfarin, international normalized ratio (INR) should be  $\leq 1.4$  prior to the procedure.  
Discontinuing anti-platelet therapy is a clinical decision balancing risks and benefits of the procedure on therapy, versus the underlying medical condition if not treated appropriately;
  5. Absence of systemic infection or local infection at the site of a planned injection
- E. Continuation of injections beyond 12 months or more than 4 therapeutic injections is considered **not medically necessary** because effectiveness and safety has not been established. When more definitive therapies cannot be tolerated or provided, consideration will be made on a case by case basis.
- F. *TFESI* for any other indication or location is considered **not medically necessary** because effectiveness has not been established.

#### IV. SNRB/TFESI for Acute Pain Management

- A. One SNRB/TFESI for acute pain management is considered **medically necessary** when all of the following are met:
  1. Pain has lasted for  $< 3$  months;
  2. There is severe radicular pain in a specific nerve root distribution that interferes substantially with ADLs;
  3. Severe pain persists after treatment with NSAID and/or opiate (both  $\geq 3$  days or contraindicated/not tolerated);
  4. The member cannot tolerate chiropractic or physical therapy and the injection is intended as a bridge to therapy.

#### V. Facet Joint Interventions

- A. Up to two\* *controlled medial branch blocks/facet joint injections in the lumbar and cervical regions* given at least 2 weeks apart are considered **medically necessary** when all the following criteria are met:
  1. Intermittent or continuous back or neck pain that interferes with ADLs has lasted for  $\geq 3$  months;
  2. The member has failed to respond to conservative therapy including all of the following:

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- a.  $\geq 6$  weeks chiropractic, physical therapy or prescribed home exercise program;
- b. NSAID  $\geq 3$  weeks or NSAID contraindicated or not tolerated;
- c.  $\geq 6$  weeks activity modification;
- 3. Clinical findings suggest facet joint syndrome and imaging studies suggest no other obvious cause of the pain (e.g., disc herniation, radiculitis, discogenic or sacroiliac pain). Physical findings of spinal facet joint syndrome can include low back pain exacerbated on extension and rotation; positive response to facet loading maneuvers or pain worse at night;
- 4. No more than three spinal levels, or two levels bilaterally, are to be treated at the same session.

\*Note: If the first *controlled medial branch block/facet joint injection* has  $< 75\%$  pain relief, a second block is ***not medically necessary***

- B. *Facet joint medial branch conventional radiofrequency neurotomy in the lumbar and cervical regions* is considered **medically necessary** in the treatment of chronic back or neck pain when all of the following criteria are met:
  - 1. Two positive diagnostic controlled facet joint injections/medial branch block(s) (at each region to be treated) as indicated by  $\geq 75\%$  pain relief with the ability to perform prior painful movements without significant pain;
  - 2. No more than three spinal levels, or two levels bilaterally, are to be treated at the same session.
- C. *Repeat facet joint medial branch conventional radiofrequency neurotomy of the lumbar and cervical regions* is considered **medically necessary** in the management of chronic back or neck pain when the following criteria are met:
  - 1. At least 6 months have elapsed since the previous treatment;
  - 2.  $\geq 50\%$  relief was obtained for at least 4 months with associated functional improvement following the previous treatment;
  - 3. No more than three spinal levels, or two levels bilaterally, are to be treated at the same session.
- D. *Conventional radiofrequency neurotomy of the facet joints of the thoracic region* is considered **not medically necessary** because effectiveness has not been established. There is a need for further well-designed, randomized controlled trials to evaluate effectiveness.
- E. *Pulsed radiofrequency neurotomy of the facet joints* is considered **not medically necessary**. The available evidence on the effectiveness of pulsed radiofrequency in the treatment of patients with various chronic pain syndromes is largely based on retrospective, case series studies. Its clinical value needs to be examined in well-designed, randomized controlled trials with large sample size and long-term follow-up. Studies on pulsed radiofrequency ablation continue to be done.
- F. *Therapeutic facet joint injections* are considered **not medically necessary** because effectiveness has not been established.

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#### VI. Sacroiliac Joint Interventions

- A. One *diagnostic sacroiliac joint (SIJ) injection for the diagnosis of SIJ pain* is considered **medically necessary** when all of the following criteria are met:
1. Somatic or nonradicular low back and lower extremity pain below the level of L5 vertebra that interferes with ADLs for at least 3 months;
  2. Tenderness by palpation present over SIJ;
  3. There is a positive response to at least three SIJ pain provocation tests (distraction, compression, thigh thrust, Gaenslen's, and sacral thrust);
  4. The member has failed to respond to conservative therapy including all of the following:
    - a.  $\geq 6$  weeks chiropractic, physical therapy or prescribed home exercise program;
    - b. NSAID  $\geq 3$  weeks or NSAID contraindicated or not tolerated;
    - c.  $\geq 6$  weeks activity modification;
  5. Clinical findings and imaging studies, when available, lack obvious evidence for disc-related or facet joint pain;
  6. No other possible diagnosis is more likely.
- B. If there is no favorable response to the initial injection, an additional *sacroiliac joint injection* is considered **medically necessary**, provided the injections are given at least 2 weeks apart.
- C. If no improvement is seen after the first two injections, subsequent *sacroiliac joint injections* are **not medically necessary** because effectiveness has not been established.
- D. If recurrence of symptoms occurs after a favorable response to diagnostic injections, *therapeutic SIJ injections* are considered **medically necessary** when all of the following are met:
1. There is  $\geq 50\%$  relief for at least 2 months associated with functional improvement from the initial injection(s);
  2. Administered for temporary relief of lower back pain in conjunction with other noninvasive treatment methods (e.g., to participate in physical therapy), and not as a stand-alone therapy;
  3. SIJ injection is given at intervals of no more frequently than every 2 months;
  4. A maximum of 4 therapeutic injections may be given at the same site within 12 months.
- E. *Continuation of injections* beyond 12 months is considered **not medically necessary** because effectiveness and safety has not been established. When more definitive therapies cannot be tolerated or provided, consideration will be made on a case by case basis.
- F. *Radiofrequency neurotomy (conventional, cooled, and pulsed)* of the SIJ is considered **not medically necessary** because effectiveness has not been established. High-quality studies are lacking for conventional and pulsed radiofrequency neurotomy of the SIJ. For cooled radiofrequency neurotomy, additional well-designed studies are needed to evaluate effectiveness.

### VII. Intradiscal Steroid Injection

*Intradiscal steroid injections* are considered **not medically necessary** because effectiveness has not been established. The published literature suggests both positive and negative results. Further research is being done to determine the safety and efficacy of injecting steroids directly into the disc.

### VIII. Trigger Point Injections

- A. Trigger point injections of corticosteroids and/or local anesthetics, are considered **medically necessary** for *diagnosis/stabilization* when all of the following are met:
1. The member has local pain symptoms in the neck, shoulder and/or back that have persisted for more than 3 months causing tenderness and/or weakness, restricting motion and/or causing referred pain when compressed;
  2. The member has failed  $\geq 3$  weeks of conventional multidisciplinary medical therapy including all of the following:
    - a. Chiropractic, physical therapy, or prescribed home exercise program or the member is unable to tolerate such therapy and the injection is intended as a bridge to therapy;
    - b. NSAID unless contraindicated or not tolerated;
    - c. Activity modification;
  3. Trigger points have been identified by palpation;
  4. Trigger points are located in a *few* discrete areas, and are not associated with widespread areas of muscle tenderness (as with fibromyalgia);
  5. Injections are not used as sole method of treatment, rather are intended for pain relief to facilitate mobilization to allow non-invasive modalities, e.g., physical therapy and other alternate therapies that address muscle strengthening, flexibility, and functional restoration.

*Up to 2 sets of injections* at least 7 days apart may be given for diagnosis and stabilization for the same trigger point. When a given body region is injected, it will be considered as one injection service no matter how many injections are given.

- B. *Additional trigger point injections* are considered **medically necessary** when all of the following are met:
1. Prior injections resulted in  $\geq 50\%$  improvement for  $\geq 6$  weeks;
  2. There was a return of pain and/or deterioration following 6 weeks of improvement;
  3. Injections are given in the neck, shoulder, and/or back;
  4. Injections are given no more frequently than every 2 months for up to 12 months (maximum of 6 sessions);
  5. Injections are not used as sole method of treatment, rather are intended for pain relief to facilitate mobilization to allow non-invasive modalities, e.g., physical therapy and other alternate therapies that address muscle strengthening, flexibility, and functional restoration.

When a given body region is injected, it will be considered as one injection service no matter how many injections are given.

- C. The following types of *trigger point therapies* are considered **not medically necessary**, because although there are ongoing studies, there is little scientifically based data that their use results in improved patient outcomes in the medical literature:
1. Dry needle stimulation of trigger points;
  2. Trigger point injection with saline or glucose;
  3. The use of Botox during trigger point injections.

### **IX. Occipital Nerve Block**

- A. One injection of a local anesthetic for the diagnosis of suspected occipital neuralgia is considered **medically necessary** when all of the following are met:
1. Patient has unilateral or bilateral pain located in the distribution of the greater, lesser and/or third occipital nerves;
  2. Pain has two of the following three characteristics:
    - a. Recurring in paroxysmal attacks lasting from a few seconds to minutes;
    - b. Severe intensity;
    - c. Shooting, stabbing, or sharp in quality;
  3. Pain is associated with both of the following:
    - a. Dysesthesia and/or allodynia apparent during innocuous stimulation of the scalp and/or hair;
    - b. Tenderness over the affected nerve branches.
- B. *Therapeutic occipital nerve blocks* are **considered medically necessary** when all of the following are met:
1. There was temporary relief from the diagnostic injection;
  2. The member has failed 3 months of conservative treatment including all of the following:
    - a. Heat, rest and/or physical therapy, including massage;
    - b. NSAID, unless contraindicated or not tolerated;
    - c. Oral anticonvulsant medications (e.g., carbamazepine, gabapentin, pregabalin) or tricyclic antidepressants;
    - d. Activity modification to address triggers
  3. No more than 4 injections are to be given within 12 months (includes diagnostic injection).
- C. *Occipital nerve block* for the diagnosis or treatment of other types of headaches, including migraine and cervicogenic headaches, are considered **not medically necessary**.

### **X. Genicular Nerve Blocks and Genicular Nerve Radiofrequency Neurotomy**

*Genicular nerve blocks* and *radiofrequency neurotomy of the articular nerve* are considered **not medically necessary** because effectiveness has not been established. There is a paucity of published studies to determine safety and effectiveness.

### **XI. Peripheral/Ganglion Nerve Blocks for the Treatment of Chronic Nonmalignant Pain**

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*Peripheral/ganglion nerve blocks* for any condition not indicated elsewhere in this policy are considered **not medically necessary** as there is ongoing research but insufficient evidence to establish efficacy.

#### XII. Sympathetic Nerve Blocks

- A. *Sympathetic nerve blocks* have **limited evidence** to prove effectiveness of treatment and consideration will be made on a case by case basis. The criteria in 1 through 3 below provide a basis for documenting patient-specific clinical information to help guide clinical decision making.
1. Diagnosis of *complex regional pain syndrome* (CRPS) (also called reflex sympathetic dystrophy) and all of the following:
    - a. Pain is being managed by a pain management specialist with experience treating CRPS;
    - b. The member is in an active rehabilitation regimen;
    - c. Failed  $\geq 3$  weeks of conservative therapies such as activity modification, exercises, topical capsaicin cream, and oral medical management such as nonsteroidal anti-inflammatories, antidepressants, anticonvulsants and glucocorticoids;
    - d.  $\geq 2$  of the following findings of the involved digit/extremity:
      - i. Allodynia (pain sensation in response to a typically non-painful stimulus);
      - ii. Swelling/tenderness;
      - iii. Cyanotic/red/pale digit/extremity;
      - iv. Increased sweating;
      - v. Alteration of temperature;
      - vi. Persistent loss of motion;
  2. Diagnosis of *ischemic limb pain* and all of the following:
    - a. Intractable pain at rest or non-healing ulcer;
    - b. Severe peripheral artery disease by angiogram or Doppler;
    - c. Patient not a candidate for revascularization (lesion(s) not amenable to reconstruction, lesion(s) not amenable to angioplasty, patient with comorbid condition or previous failed revascularization);
  3. Diagnosis of *pancreatic cancer* with severe abdominal/back pain.
- B. Celiac nerve block for *acute or chronic pancreatitis* is considered **not medically necessary** as effectiveness has not been established.

#### XIII. Intercostal Nerve Block, Neurolysis

- A. *Intercostal nerve block/neurolysis* is considered **medically necessary** for chronic neuralgic pain secondary to an injured intercostal nerve as a result of a rib fracture, a thoracotomy incision or chronic pain due to post herpetic neuralgia, or other neuropathic process when all of the following are met:
1. Suspected organic problem;
  2. Non-responsiveness to conservative modalities of treatment;
  3. Pain and disability of moderate to severe degree;
  4. No evidence of contraindications such as infection or pain of predominately psychogenic origin.

**XIV.** All other procedures not specifically addressed in this policy will be considered on a case by case basis.

**Background**

Pain adversely affects the function and wellbeing of an individual. Chronic pain can be persistent or episodic in duration or intensity. Invasive pain management procedures considered in this policy include facet joint diagnostic and therapeutic blocks and radiofrequency ablation, sacroiliac joint injections, epidural steroid injections/selective nerve root blocks, percutaneous adhesiolysis, trigger point injections, trochanteric bursa injections, sympathetic blocks, lumbar discography and spinal cord stimulation.

*Epidural steroid injections/selective nerve root blocks*

The debate continues on the efficacy and medical necessity of multiple interventions provided in managing spinal pain. Epidural glucocorticoid injections have been used for pain control in patients with radiculopathy, spinal stenosis, and nonspecific low back pain despite inconsistent results as well as heterogeneous populations and interventions in randomized trials. Epidural injections are performed utilizing 3 approaches in the lumbar spine: caudal, interlaminar, and transforaminal. Generally, candidates for epidural steroid injection are individuals who have acute radicular symptoms or neurogenic claudication unresponsive to traditional analgesics and rest, with significant impairment in activities of daily living. Epidural steroid injections have been used in the treatment of spinal stenosis for many years, and no validated long-term outcomes have been reported to substantiate their use. However, significant improvement in pain scores, have been reported at 3 months. A selective nerve root block (SNRB), is primarily used to diagnose the specific source of nerve root pain. In a SBRB, a local anesthetic is used. When used for therapeutic indications, a steroid is added and it is usually referred to as a selective transforaminal epidural steroid injection.

Zhai et al (2015) conducted a meta-analysis to assess the effects of various surgical and nonsurgical modalities, including epidural injections, used to treat lumbar disc herniation (LDH) or radiculitis. A systematic literature search was conducted to identify RCTs which compared the effect of local anesthetic with or without steroids. The outcomes included pain relief, functional improvement, opioid intake, and therapeutic procedural characteristics. The reviewers concluded the meta-analysis confirms that epidural injections of local anesthetic with or without steroids have beneficial but similar effects in the treatment of patients with chronic low back and lower extremity pain.

Results of a 2 year follow-up of 3 randomized, double-blind, controlled trials, with a total of 360 patients with chronic persistent pain of disc herniation receiving either caudal, lumbar interlaminar or transforaminal epidural injections, showed similar efficacy of the 3 techniques with local anesthetic alone or local anesthetic with steroid. Caudal and interlaminar trials used in the assessment showed some superiority of steroids over local anesthetic, at 3 and 6 month follow-up. Interlaminar with steroids were superior to transforaminal at 12-months.<sup>53</sup>

*Facet Joint Interventions*

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Chronic low back pain is frequently attributed to disorders of the facet joint. Neck pain related to whiplash injury is also thought to be related to the cervical zygapophyseal facet joint. However, the diagnosis of facet joint pain is difficult and often is based on pain relief following a diagnostic pain block of the medial branch of the posterior rami of the spinal nerve supplying the facet joint.

Patients referred for facet injections most often have degenerative disease of the facet joints. However, even if the facet joint appears radiologically normal, facet injections still may be of use as radiologically occult synovitis can cause facet pain, particularly in younger patients. Post laminectomy syndrome, or nonradicular pain occurring after laminectomy, is also an acceptable reason to perform facet injections.

Based on the outcome of a facet joint nerve block, if the patient gets sufficient relief of pain but the pain recurs, one of the options is to denervate the facet joint. Radiofrequency neurotomy, also known as radiofrequency ablation, has been shown to temporarily reduce cervical and lumbar pain. Radiofrequency neurotomy involves delivering radio waves to targeted nerves via needles inserted through the skin. The heat created by the radio waves interferes with the nerves' ability to transmit pain signals.

#### *Sacroiliac Joint Injections*

Treatment for sacroiliac joint dysfunction is usually conservative (non-surgical) and focuses on trying to restore normal motion in the joint. In patients who have failed 4 to 6 weeks of a comprehensive exercise program, local icing, mobilization/manipulation and NSAIDs, a SIJ injection can be helpful for both diagnostic and therapeutic purposes. SIJ injections into the synovial sac of the SIJ may provide immediate and significant pain relief. At least 50% resolution of the patient's pain over the ipsilateral SIJ is considered diagnostic of pain emanating from the SIJ. Adding a steroid to the solution injected may help to reduce any inflammation that may exist within the joint(s) and result in a prolonged period of freedom from pain.

Visser et al (2013) assessed which treatment is successful for SIJ-related back and leg pain. Using a single-blinded randomized trial, the authors assessed the short-term therapeutic efficacy of physiotherapy, manual therapy, and intra-articular injection with local corticosteroids in the SIJ in 51 patients with SIJ-related leg pain. The effect of the treatment was evaluated after 6 and 12 weeks. Manual therapy had a significantly better success rate than physiotherapy ( $p = 0.003$ ). The authors concluded in the small single-blinded prospective study, manual therapy appeared to be the choice of treatment for patients with SIJ-related leg pain. A second choice of treatment to be considered is an intra-articular injection.

#### *Intradiscal Steroid Injections*

There is no convincing evidence that intradiscal glucocorticoids are effective for low back pain.<sup>6</sup> In patients with MRI evidence of degenerative disc disease and a positive response to discography, two trials found no difference between intradiscal steroid and control injection (saline or local anesthetic).<sup>6</sup> A third trial found that in patients with degenerative disc disease who failed an epidural steroid injection, intradiscal steroid injection was superior to discography alone only in the subgroup of patients with inflammatory endplate changes on MRI. However, outcomes were not well defined in this trial and levels of statistical significance were poorly

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reported. Based on these trials, the American Pain Society guideline recommends against intradiscal glucocorticoid injection for chronic low back pain.<sup>9</sup>

The use of intradiscal steroid injections is also debated because intradiscal steroid may cause discitis, progression of disc degeneration, and calcification of the intervertebral disc.

#### *Trigger Point Injections*

A trigger point is a discrete, hyperirritative focus found in a palpable taut band occurring in any skeletal muscle and/or muscle fascia on the body that is particularly sensitive to touch and, when compressed, gives rise to characteristic referral pain patterns, tenderness and autonomic phenomena. These trigger points are thought to result from repetitive strain produced by acute or chronic overload or a degenerative and/or inflammatory problem, such as arthritis.

Gerwin et al. (2012) completed a review of literature relevant to the treatment of myofascial pain syndrome by botulinum injections. All identifiable series were reviewed, including open label, single-blinded and double-blinded studies, randomized and controlled, or not. The studies were evaluated according to their design and the selection of outcome measurements, and the interpretation of results. Problems that were common to the studies were robust placebo responders, incomplete treatment of a regional myofascial pain syndrome, inappropriate or confounding control populations or treatments, and inappropriate time periods for assessment of outcomes, or misinterpretation of the time-frame of action of botulinum toxin. The studies of the effect of botulinum toxin treatment of myofascial trigger points have had mixed results. However, few studies have been designed to avoid many of the pitfalls associated with a trial of botulinum toxin treatment of trigger points. Better-designed studies may give results that can be used to guide practice based on reliable evidence. At the present time, the available evidence is insufficient to guide clinical practice.

#### *Local Injections for Cervicogenic and Occipital Neuralgia*

Greater occipital nerve blocks have been advocated as a diagnostic test for cervicogenic headache and occipital neuralgia. The effectiveness of greater occipital nerve block in patients with primary headache syndromes is controversial. The International Headache Society (IHS) defines occipital neuralgia as unilateral or bilateral paroxysmal, shooting or stabbing pain in the posterior part of the scalp, in the distribution of the greater, lesser or third occipital nerves, sometimes accompanied by diminished sensation or dysaesthesia in the affected area and commonly associated with tenderness over the involved nerve(s).<sup>54</sup> The IHS includes relief of pain following a local anesthetic block of the affected nerve as part of their diagnostic criteria for occipital neuralgia. Thus, the principal indication for occipital block is diagnosis. Another indication is the treatment of chronic occipital neuralgia, often with a series of therapeutic blocks combining local anesthetic and corticosteroid. Pain relief is typically prompt and may last several weeks or even months. At that time the injection may be repeated.

#### *Genicular Nerve Blocks and Radiofrequency Neurotomy*

Genicular nerve blocks and radiofrequency neurotomy are emerging interventions for knee pain. A few small studies suggest that genicular radiofrequency neurotomy based on results of genicular nerve blocks may be effective for relief of pain. However, further research, including RCTs, are needed to establish safety and effectiveness.

### *Sympathetic Nerve Blocks*

Nerve blocks are the temporary interruption of conduction of impulses in peripheral nerves or nerve trunks created by the injection of local anesthetic solutions. Sympathetic nerves may be injected for several reasons:

- Diagnostic - to determine the source of pain, e.g., to identify or pinpoint a nerve that acts as a pathway for pain; to determine the type of nerve that conducts the pain; to distinguish between pain that is central (within the spinal cord) or peripheral (outside the spinal cord) in origin; or to determine whether a neurolytic block or surgical lysis of the nerve should be performed;
- Therapeutic - to treat painful conditions that respond to nerve blocks (e.g., celiac block for pain of pancreatic cancer); and
- Prognostic - to predict the outcome of long-lasting interventions (e.g., lumbar sympathectomy).

The response to sympathetic blockade is the best diagnostic test for CRPS. If the patient has had a technically successful sympathetic block and does not obtain significant relief, then the patient probably does not have CRPS. Over two thirds of patients will obtain significant relief with minimal effect on motor and sensory function because the sympathetic fibers are the least myelinated (as compared to motor and sensory nerve fibers) these fibers are the first to be affected by the local anesthetic.

### *Intercostal Nerve Blocks*

Intermittent intercostal nerve blocks can be used to control pain in the chest and upper abdomen, such as pain associated with rib fractures or chronic pain due to post herpetic neuralgia. Intercostal nerve blocks can be performed using anatomic landmarks or with ultrasound guidance, which can be used to minimize the chance of intravascular injection and pneumothorax and to increase reliable dermatomal coverage.<sup>41 45</sup>

For isolated injuries, such as single rib fracture, nonsteroidal anti-inflammatory drugs with or without opioids would be the initial treatment. For more severe injuries, particularly if ventilation is compromised, intercostal nerve blocks may be needed. For patients with multiple rib fractures, there is a need to perform the procedure at multiple intercostal levels. Repeated blockade may be needed for prolonged relief upon return of pain and/or deterioration in functional status. For repeat blocks or other interventions, patient must have been responsive to prior interventions with improvement in physical and functional status.<sup>42 45</sup>

Regional anesthesia plays an important role in thoracic surgery, particularly with regard to post-operative pain control. The first choice of regional anesthesia for thoracic surgery is epidural analgesia or thoracic paravertebral block. In general, the analgesic efficiencies of both these types of anesthesia are equivalent; however, thoracic paravertebral block has some advantages over epidural analgesia, including fewer complications. When these two blocks are contraindicated, intercostal nerve block or interpleural block should be considered.<sup>43 44</sup>

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### Coding Implications

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CPT®* Codes	Description
20552	Injection(s); single or multiple trigger point(s), 1 or 2 muscle(s)
20553	Injection(s); single or multiple trigger point(s), 3 or more muscle(s)
27096	Injection procedure for sacroiliac joint, anesthetic/steroid, with image guidance (fluoroscopy or CT) including arthrography when performed
62321	Injection(s), of diagnostic or therapeutic substance(s) (eg, anesthetic, antispasmodic, opioid, steroid, other solution), not including neurolytic substances, including needle or catheter placement, interlaminar epidural or subarachnoid, cervical or thoracic; with imaging guidance (ie, fluoroscopy or CT)
62323	Injection(s), of diagnostic or therapeutic substance(s) (eg, anesthetic, antispasmodic, opioid, steroid, other solution), not including neurolytic substances, including needle or catheter placement, interlaminar epidural or subarachnoid, lumbar or sacral (caudal); with imaging guidance (ie, fluoroscopy or CT)
64405	Injection, anesthetic agent, greater occipital nerve
64420	Injection, anesthetic agent, intercostal nerve, single
64421	Injection, anesthetic agent, intercostal nerves, multiple, regional block
64450	Injection, anesthetic agent, other peripheral nerve or branch
64479	Injection(s), anesthetic agent and/or steroid, transforaminal epidural, with imaging guidance (fluoroscopy or CT); cervical or thoracic, single level
64480	Injection(s), anesthetic agent and/or steroid, transforaminal epidural, with imaging guidance (fluoroscopy or CT); cervical or thoracic, each additional level (List separately in addition to code for primary procedure)
64483	Injection(s), anesthetic agent and/or steroid, transforaminal epidural, with imaging guidance (fluoroscopy or CT); lumbar or sacral, single level
64484	Injection(s), anesthetic agent and/or steroid, transforaminal epidural, with imaging guidance (fluoroscopy or CT); lumbar or sacral, each additional level (List separately in addition to code for primary procedure)

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<b>CPT®*</b> <b>Codes</b>	<b>Description</b>
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)
64505	Sympathetic nerve block: sphenopalatine ganglion
64508	Sympathetic nerve block, carotid sinus
64510	Sympathetic nerve block, stellate ganglion (cervical sympathetic)
64517	Sympathetic nerve block, superior hypogastric plexus
64520	Sympathetic nerve block, lumbar or thoracic (paravertebral sympathetic)
64530	Sympathetic nerve block, celiac plexus
64620	Destruction by neurolytic agent, intercostal nerve
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)
64640	Destruction by neurolytic agent; other peripheral nerve or branch
77003	Fluoroscopic guidance and localization of needle or catheter tip for spine or paraspinous diagnostic or therapeutic injection procedures (epidural, subarachnoid, or sacroiliac joint), including neurolytic agent destruction

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#### ICD-10-CM Diagnosis Codes that Support Coverage Criteria

ICD-10-CM Code	Description
B02.23	Postherpetic polyneuropathy
B02.29	Other Postherpetic nervous system involvement
C25.0-C25.9	Malignant neoplasm of pancreas
C56.42	Causalgia of upper limb
D49.9	Neoplasm of unspecified behavior of unspecified site
G56.40	Causalgia of unspecified upper limb
G54-G54.9	Nerve root and plexus disorders
G54.0	Brachial plexus disorders
G60.9	Hereditary and idiopathic neuropathy
G89.21	Chronic pain due to trauma
G89.22	Chronic post thoracotomy pain
G89.28	Other chronic post procedural pain
G89.29	Other chronic pain
G89.4	Chronic pain syndrome
G90.5-G90.59	Complex regional pain syndrome
M25.579	Pain in joint
M43.00	Spondylolysis, site unspecified
M43.10-M43.19	Spondylolisthesis, site unspecified
M46.00-M46.99	Other inflammatory spondylopathies
M46.1	Sacroiliitis, not elsewhere classified
M47	Spondylosis
M47.1	Other Spondylosis with myelopathy
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
M47.17	Other Spondylosis with myelopathy, lumbosacral 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
M47.819	Spondylosis without myelopathy or radiculopathy, site unspecified

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ICD-10-CM Code	Description
M48.00 - M48.9	Other Spondylopathies
M49.8 - M49.89	Spondylopathy in diseases classified elsewhere
M50.00 - M50.03	Cervical disc disorder with myelopathy
M50.1 - M54.9	Other Dorsopathies
M75.0	Adhesive capsulitis of shoulder
M76.9	Entesopathies, lower limb, excluding foot
M77.00-M77.9	Other entesopathies
M79.0-M79.9	Other and unspecified soft tissue disorders, not elsewhere classified
M96.1	Postlaminectomy syndrome, not elsewhere classified
Q76.2	Congenital spondylolisthesis
S22.41	Multiple fractures of ribs, right side
S22.42	Multiple fractures of ribs, left side
S22.43	Multiple fractures of ribs, bilateral
S33.6	Sprain of sacroiliac joint
S33.8	Sprain of other parts of lumbar spine and pelvis
S33.9	Sprain of unspecified parts of lumbar spine and pelvis

Reviews, Revisions, and Approvals	Date	Approval Date
<p>Developed as new policy, split from CP.MP.63 Pain Management Procedures.</p> <p>Changed “experimental/investigational” to “investigational for the following indications: Continued ESI/SNRB after no improvement with diagnostic injection; ESI/SNRB beyond 12 months; therapeutic facet joint injections and SIJ injections beyond 12 months; thoracic radiofrequency neurotomy; occipital nerve block; SIJ radiofrequency neurotomy; intradiscal steroid injection; celiac nerve block; peripheral nerve blocks not otherwise listed in policy.</p> <p>Facet Joint interventions: Added pulsed radiofrequency neurotomy of facet joints indication as investigational; changed diagnostic facet joint blocks to “controlled medial branch blocks;” requirement removed to wait one week after successful diagnostic injection to administer facet joint medial branch conventional radiofrequency.</p> <p>SIJ interventions: Added types of radiofrequency neurotomy, added rationale for investigational status. Therapeutic SIJ: added requirement that injections be administered with other noninvasive treatment. Added requirement for positive response to at least three SIJ pain provocation tests (distraction, compression, thigh thrust, Gaenslen’s and sacral thrust). Added rationale for intradiscal steroid injection investigational status.</p> <p>Trigger point Injections: Added criteria for pain duration, location and quality; added that it should not be used as sole method of treatment; changed number of diagnostic injections allowed from 4 to 2; added types of trigger point therapies that are investigational: dry needling, saline/glucose, and botox.</p>	08/16	08/16

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Reviews, Revisions, and Approvals	Date	Approval Date
<p>Added genicular nerve block/radiofrequency ablation as investigational procedures. Added description of interventions and supporting evidence to background.</p>		
<p>Added intercostal nerve blocks as medically necessary with specific criteria. Added intercostal nerve block information to background. Moved therapeutic facet joint injections to II.F. from II.B. Modified Facet Joint intervention background to contain more information on radiofrequency neurotomy vs. facet joint injections.</p>	12/16	12/16
<p>CPT codes updated per 2017 changes</p>	01/17	
<p>Added transforaminal epidural steroid injection performed at more than two levels during the same session/procedure as not medically necessary. Added interlaminar or caudal epidural steroid injection performed at more than a single level during the same session/procedure as not medically necessary Code table updated with retired and added codes</p>	07/17	
<p>Removed criteria addressing SNRB from section I. Renamed section I, “. Cervical/Thoracic/Lumbar/Caudal, Interlaminar ESI” Added section II, “Selective Nerve Root Blocks/Transforaminal Epidural Steroid Injections” that includes criteria for SNRB/TFESI. All subsequent sections have been renumbered accordingly. Under section IIIB, removed #2 and #3, as the criteria are already addressed in section III C</p>	8/17	
<p>Moved number of ESI sessions &amp; levels to be treated per session to sections IA and IIB. Added recommendations regarding anticoagulation therapy to sections on interlaminar and transforaminal ESI. Under section III facet joint injections added criteria that if first controlled medial branch block/facet joint injection is negative, a second block is not medically necessary. Revised IIIB Facet joint medial branch conventional radiofrequency neurotomy to require 2 positive facet joint injections prior to RFA. Changed positive response from 80% to 75% pain relief as per ASIPP recommendations. Revised section VII to consider occipital nerve block as medically necessary when criteria is met. Modified Local Injections for Cervicogenic and Occipital Neuralgia intervention background to contain more information on occipital neuralgia. Code updates. Specialist reviewed.</p>	09/17	09/17
<p>Removed the following text from Selective Nerve Root Block Criteria as it is strictly informational, and not to be used as criteria “The effectiveness of <i>selective nerve root blocks/transforaminal epidural steroid injections (SNRB/TFESI)</i> versus <i>ILESI</i> has not been established.”</p>	10/17	
<p>Caudal or Interlaminar ESI: Revised Section I.A. to approve one injection initially.</p>	04/18	04/18

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Reviews, Revisions, and Approvals	Date	Approval Date
<p>Added 1.B. to allow for repeat injection when favorable response is not obtained, as long as repeat injection is at least two weeks from first injection.</p> <p>Added “confirmed by physical exam and imaging” to I.A.1.</p> <p>Added caudal approach, when ILESI is referenced in sections: I.B, I.C. I.E. and I.F. for clarity.</p> <p>Added criteria: “Absence of systemic infection or local infection at the site of a planned injection.” to I.A.4., II.A.4. and III.A.5.</p> <p>SNRB/TFESI: Divided section II into separate sections. Section II includes criteria for SNRB and section III. criteria for TFESI.</p> <p>Revised verbiage in section II.A.1. clarifying that SNRB should be performed with a local anesthetic and replaced “caused by disc herniation or foraminal stenosis at the specific level of the spine, as confirmed by imaging “ with “the diagnosis remains uncertain after standard evaluation (neurologic examination, radiological studies and electrodiagnostic studies.”</p> <p>Added criteria regarding anticoagulation therapy to II.A.3.</p> <p>Facet Joint Injections: V.A. Added that injections are indicated in cervical and lumbar region.</p> <p>Added neck pain to V.A.I.</p> <p>Added V.A.4: “No more than three spinal levels, or two levels bilaterally, are to be treated at the same session.”</p> <p>Replaced V.B.2 with “No more than three spinal levels, or two levels bilaterally, are to be treated at the same session.”</p> <p>Sacroiliac Joint Injections: Revised Section VI.A to approve one injection initially.</p> <p>Added VI.B to allow for repeat injection when favorable response is not obtained, as long as repeat injection is at least two weeks from first injection.</p> <p>Added VI.C. If no improvement is seen after the first two injections, subsequent sacroiliac joint injections are not medically necessary.</p> <p>Trigger Point Injections: Revised VIII.B for clarity, replacing “therapeutic” with “additional.” Removed “diagnosis or therapeutic” from VIII.B.1.</p> <p>Occipital Nerve Block: IX. Revised section to include separate criteria for diagnostic injection and therapeutic injections. Added ONB for other headaches, including migraine are not medically necessary to IX.C.</p>		
<p>Added medically necessary criteria to section III, Transforaminal Epidural Steroid Injections, regarding initial injections.</p>	05/18	05/18
<p>Removed “to confirm beneficial response” from initial statement regarding TFESI.</p>	06/18	

**Important Reminder**

This clinical policy has been developed by appropriately experienced and licensed health care professionals based on a review and consideration of currently available generally accepted standards of medical practice; peer-reviewed medical literature; government agency/program

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approval status; evidence-based guidelines and positions of leading national health professional organizations; views of physicians practicing in relevant clinical areas affected by this clinical policy; and other available clinical information. The Health Plan makes no representations and accepts no liability with respect to the content of any external information used or relied upon in developing this clinical policy. This clinical policy is consistent with standards of medical practice current at the time that this clinical policy was approved. “Health Plan” means a health plan that has adopted this clinical policy and that is operated or administered, in whole or in part, by Centene Management Company, LLC, or any of such health plan’s affiliates, as applicable.

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This clinical policy is effective as of the date determined by the Health Plan. The date of posting may not be the effective date of this clinical policy. This clinical policy may be subject to applicable legal and regulatory requirements relating to provider notification. If there is a discrepancy between the effective date of this clinical policy and any applicable legal or regulatory requirement, the requirements of law and regulation shall govern. The Health Plan retains the right to change, amend or withdraw this clinical policy, and additional clinical policies may be developed and adopted as needed, at any time.

This clinical policy does not constitute medical advice, medical treatment or medical care. It is not intended to dictate to providers how to practice medicine. Providers are expected to exercise professional medical judgment in providing the most appropriate care, and are solely responsible for the medical advice and treatment of members. This clinical policy is not intended to recommend treatment for members. Members should consult with their treating physician in connection with diagnosis and treatment decisions.

Providers referred to in this clinical policy are independent contractors who exercise independent judgment and over whom the Health Plan has no control or right of control. Providers are not agents or employees of the Health Plan.

This clinical policy is the property of the Health Plan. Unauthorized copying, use, and distribution of this clinical policy or any information contained herein are strictly prohibited. Providers, members and their representatives are bound to the terms and conditions expressed herein through the terms of their contracts. Where no such contract exists, providers, members and their representatives agree to be bound by such terms and conditions by providing services to members and/or submitting claims for payment for such services.

**Note: For Medicaid members**, when state Medicaid coverage provisions conflict with the coverage provisions in this clinical policy, state Medicaid coverage provisions take precedence.

## CLINICAL POLICY

### Injections for Pain Management

Please refer to the state Medicaid manual for any coverage provisions pertaining to this clinical policy.

**Note: For Medicare members,** to ensure consistency with the Medicare National Coverage Determinations (NCD) and Local Coverage Determinations (LCD), all applicable NCDs, LCDs, and Medicare Coverage Articles should be reviewed prior to applying the criteria set forth in this clinical policy. Refer to the CMS website at <http://www.cms.gov> for additional information.

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