

# Cigna Medical Coverage Policies – Musculoskeletal Facet Joint Injections/Medial Branch Blocks

Effective July 1, 2025



---

## Instructions for use

The following coverage policy applies to health benefit plans administered by Cigna. Coverage policies are intended to provide guidance in interpreting certain standard Cigna benefit plans and are used by medical directors and other health care professionals in making medical necessity and other coverage determinations. Please note the terms of a customer's particular benefit plan document may differ significantly from the standard benefit plans upon which these coverage policies are based. For example, a customer's benefit plan document may contain a specific exclusion related to a topic addressed in a coverage policy.

In the event of a conflict, a customer's benefit plan document always supersedes the information in the coverage policy. In the absence of federal or state coverage mandates, benefits are ultimately determined by the terms of the applicable benefit plan document. Coverage determinations in each specific instance require consideration of:

1. The terms of the applicable benefit plan document in effect on the date of service
2. Any applicable laws and regulations
3. Any relevant collateral source materials including coverage policies
4. The specific facts of the particular situation

Coverage policies relate exclusively to the administration of health benefit plans. Coverage policies are not recommendations for treatment and should never be used as treatment guidelines.

This evidence-based medical coverage policy has been developed by eviCore, Inc. Some information in this coverage policy may not apply to all benefit plans administered by Cigna.

CPT® (Current Procedural Terminology) is a registered trademark of the American Medical Association (AMA). CPT® five digit codes, nomenclature and other data are copyright 2025 American Medical Association. All Rights Reserved. No fee schedules, basic units, relative values or related listings are included in the CPT® book. AMA does not directly or indirectly practice medicine or dispense medical services. AMA assumes no liability for the data contained herein or not contained herein.

©Copyright 2025 eviCore healthcare

## **CMM-201: Facet Joint Injections/Medial Branch Blocks**

<b>Definitions</b>
<b>General Guidelines</b>
<b>Indications</b>
<b>Non-Indications</b>
<b>Codes (CMM-201)</b>
<b>References (CMM-201)</b>

## Definitions

- **Axial:** Relating to or situated in the central part of the body, in the head and trunk as distinguished from the limbs (e.g., axial skeleton).
- **Cervical Facet Pain:** Pain located in the cervical spine, which may be characterized by chronic headaches, restricted motion, and axial neck pain, which may radiate sub-occipitally to the shoulders or mid-back.
- **Facet Joint Pain:** A set of concurrent signs or symptoms to describe the facet joint as the pain generator. The typical clinical signs or symptoms may include local paraspinal tenderness; pain that is brought about or increased on hyperextension, rotation, and lateral bending; low back stiffness; absence of neurologic deficit; absence of root tension signs (non-radiating below the knee, absence of paresthesia).
- **Facet (Zygapophyseal) Joints:** paired, diarthrodial synovial joints located between the superior and inferior articular pillars in the posterior spinal column, innervated by medial branch nerves, from C2–C3 to L5–S1.
  - ◆ **Note:** The articulations between occiput – atlas (C1) and the atlas (C1) and the axis (C2) and below L5–S1 (sacrum) are not facet joints.
- **Facet Level:** the zygapophyseal joint or the two medial branch (MB) nerves that innervate that zygapophyseal joint. Each level has a pair of facet joints: one on the right side and one of the left side of the spine.
- **Facet Joint Injections/Medial Branch Blocks:** the injection of local anesthetic and possibly a corticosteroid in the facet joint capsule (facet joint injection) or along the nerves supplying the facet joints (medial branch block) from C2-C3 to L5-S1. Even though either procedure can be used to diagnose facet joint pain, a medial branch block is generally considered more appropriate.
  - ◆ **Note:** The injection/block applies directly to the facet joint(s) blocked and not to the number of nerves blocked that innervate the facet joint(s).
- **Non-Radicular Back Pain:** radiating non-neuropathic pain that is not causally related to a spinal nerve root irritation and does not produce reproducible neuropathic symptoms in an objective dermatomal pattern.
- **Positive Response** (to a diagnostic facet joint injection/medial branch block): at least 80% relief of facet-mediated pain for at least the expected minimum duration of the effect of the local anesthetic used.
  - ◆ **Note:** A response to the first two injection(s) must be documented.
- **Session:** a time period, which includes all procedures (i.e., medial branch block (MBB), intra-articular facet joint injection, and radiofrequency ablation [RFA]) performed on a single date of service.

## **General Guidelines**

### **Application of Guideline**

- Facet joint injections/medial branch blocks should only be performed for **EITHER** of the following:
  - ◆ Cervical, thoracic, or lumbar axial pain in the absence of an untreated radicular pain/radiculopathy
  - ◆ Treatment of facet joint synovial cyst with concordant radicular pain/radiculopathy
- Facet joint injections/medial branch blocks must be performed for facet-mediated pain and not for other indications that are not in scope for management (i.e., third occipital nerve (TON) injection/nerve block for cervicogenic headaches).
- For requests related to L5 medial nerve branch and sacral lateral nerve branch blocks and/or ablations/neurotomies used for the purpose of diagnosis and/or treatment of sacroiliac joint mediated pain, see **CMM-203: Sacroiliac Joint Procedures**.
- Facet joint injections/medial branch blocks are not without risk and can expose individuals to potential complications that may be increased when an individual is sedated. As a result, when performing facet joint injections/medial branch blocks, the use of supplemental sedation in addition to local anesthesia is not required and not recommended.
- The determination of medical necessity for the performance of facet joint injections/medial branch blocks is always made on a case-by-case basis.

### **Injectates**

- This guideline only applies to injections of an anesthetic, corticosteroid, and/or contrast agent and does not apply to injections of biologics (e.g., platelet rich plasma, stem cells, amniotic fluid, etc.) and/or any other injectates that are not in scope of management.

### **Image Guidance**

- A facet joint injection/medial branch block should be performed with the use of fluoroscopic or CT guidance.

### **Frequency & Number of Injections/Procedures**

- A diagnostic facet joint injection/medial branch block may be performed to determine whether spinal pain originates in the facet joint or nerves innervating the facet joint.
  - ◆ A second diagnostic facet joint injection/medial branch block must be performed to confirm the validity of the positive response (i.e., at least 80% relief) of the initial injection/block.
    - **Note:** The second diagnostic injection/block should **ONLY** be performed with the intent that, if successful, a radiofrequency joint denervation/ablation procedure (facet neurotomy, facet rhizotomy) would be considered as an option at the diagnosed level(s).

- Only two (2) diagnostic facet joint injections/medial branch blocks are permitted at the same level(s).
  - ◆ **Note:** More than two (2) facet injections/medial branch blocks at the same level and same side are considered **therapeutic** rather than diagnostic and must meet the criteria for therapeutic facet joint injections/medial branch blocks as noted in the **Indications** section.
- Additional diagnostic facet joint injections/medial branch blocks are not permitted when there has been a prior successful radiofrequency denervation/ablation procedure at the requested level(s).
- Only one invasive modality or procedure will be performed on the same date of service.
  - ◆ **Criteria exception:** An exception is allowed for an intra-articular facet joint injection being performed together with a transforaminal epidural steroid injection (TFESI) when the intra-articular facet joint injections is performed for a synovial cyst aspiration on the same date of service.
- Requests for subsequent (beyond initial) facet joint injections/medial branch blocks will be evaluated based on the response to the prior facet injection/medial branch block. Therefore, a series of facet joint injections/medial branch blocks at the same level(s) is not permitted in one request.

### **Levels**

- When criteria have been met, facet joint injections/medial branch blocks are only permitted from levels C2–C3 to L5–S1.
  - ◆ **Note:** The facet joint injection/medial branch block applies directly to the facet joint(s) blocked/ablated and not to the number of nerves blocked/ablated that innervate the facet joint(s).
- It may be necessary to perform the facet joint injection/medial branch block at the same facet joint level(s) bilaterally. However, no more than three (3) facet joint levels should be injected during the same session/procedure.
- Following a spinal fusion, a diagnostic facet joint injection/medial branch block may be performed immediately above or below the fused level if a prior injection/block was negative at the requested level.
- Facet joint injections/medial branch blocks are permitted on no more than three (3) contiguous facet joint levels.
  - ◆ **Criteria exception:** An exception is allowed if the facet joint injection/medial branch block is performed above or below the posteriorly-fused spinal motion segment.

## Indications

### Initial Diagnostic Facet Joint Injection/Medial Branch Block

- An initial diagnostic facet joint injection/medial branch block to determine whether chronic cervical, thoracic, or lumbar pain is of facet joint origin is considered **medically necessary** when **ALL** of the following criteria have been met:
  - ◆ Presence of predominantly axial cervical, thoracic, or lumbar pain
    - **Note:** For criteria related to the treatment of a facet joint synovial cyst with concordant radicular pain/radiculopathy, see **Intra-Articular (IA) Facet Joint Injection Performed with Synovial Cyst Aspiration.**
  - ◆ Pain has persisted for at least three (3) months
  - ◆ In the past three (3) months, pain has persisted despite at least four (4) weeks of conservative treatment (e.g., exercise, physical therapy, chiropractic care, or medications to include nonsteroidal anti-inflammatory drugs [NSAIDs], or analgesics)
    - **Note:** If conservative treatment is contraindicated, the reason(s) for contraindication(s) is/are required to be documented in the medical record.
  - ◆ Clinical findings and imaging studies suggest no other obvious cause of the cervical, thoracic, or lumbar axial pain (e.g., central spinal stenosis with neurogenic claudication/myelopathy; foraminal stenosis or disc herniation with concordant radicular pain/radiculopathy that has been treated; infection; tumor; fracture; pseudoarthrosis; or, pain related to spinal instrumentation)
  - ◆ The spinal motion segment is not posteriorly-fused
  - ◆ A radiofrequency joint denervation/ablation procedure is being considered

### Second Diagnostic Facet Joint Injections/ Medial Branch Block

- A second diagnostic facet joint injection/medial branch block, performed to confirm the validity of the clinical response to the initial facet joint injection, is considered **medically necessary** when **ALL** of the following criteria have been met:
  - ◆ Administered at the same level(s) as the initial diagnostic block
  - ◆ The initial diagnostic facet joint injection produced a positive response (i.e., at least 80% relief of facet-mediated pain for at least the expected minimum duration of the effect of the local anesthetic)
  - ◆ A radiofrequency joint denervation/ablation procedure is being considered

## **Therapeutic Facet Joint Injection/Medial Branch Block** **Alternative Treatment when Radiofrequency Ablation/Neurotomy is Contraindicated**

- The individual is **not a candidate** for a facet joint radiofrequency denervation/ablation procedure due to **ONE** of the following documented contraindications:
  - ◆ Established spinal pseudoarthrosis at the spinal level intended for treatment
  - ◆ Implanted electrical device (i.e., cardiac pacemaker, cardiac defibrillator, dorsal column stimulator, dorsal root ganglion stimulator, peripheral neurostimulator, cranial neurostimulator, implantable programmable drug pump)
- The first facet joint injections/medial branch blocks performed as an alternative treatment to a radiofrequency ablation/neurotomy are considered **medically necessary** when the following criteria has been met:
  - ◆ There has been a documented positive response with two (2) sequential diagnostic facet joint injections/medial branch blocks at the same level(s)
    - Positive response is evidenced by at least 80% relief of facet-mediated pain for at least the expected minimum duration of the effect of the local anesthetic used
- **Subsequent** therapeutic facet joint injections/medial branch blocks performed as an alternative treatment to a radiofrequency ablation/neurotomy are considered **medically necessary** when **BOTH** of the following criteria have been met:
  - ◆ Performed at least six (6) months or more from when the prior therapeutic facet joint injection/medial branch block at the same level(s)
  - ◆ Previous facet joint injections/medial branch blocks resulted in at least 50% pain relief for at least 12 weeks following the facet joint injection/medial branch block

## **Intra-Articular (IA) Facet Joint Injection Performed with Synovial Cyst Aspiration**

- An initial intra-articular facet joint injection with synovial cyst aspiration is considered **medically necessary** when **ALL** of the following criteria have been met:
  - ◆ Advanced diagnostic imaging studies (e.g., MRI, CT, CT myelogram) confirm compression or displacement of the corresponding nerve root by a facet joint synovial cyst
  - ◆ Clinical correlation (based on history and physical exam) with the individual's signs and symptoms of radicular pain/radiculopathy.
- If a repeat IA facet joint injection with synovial cyst aspiration is needed the following is required:
  - ◆ The previous facet joint injections/medial branch blocks resulted in at least 50% pain relief for at least 12 weeks following the facet joint injection/medial branch block



## **Non-Indications**

### **Not Medically Necessary**

- **ALL** of the following are considered **not medically necessary**:
  - ◆ A facet joint injection/medial branch block performed without meeting the criteria listed in the **Definitions**, the **General Guidelines**, and the **Indications** sections
  - ◆ An intra-articular (IA) facet joint injection with a synovial cyst aspiration performed without meeting the criteria listed in the **Definitions**, the **General Guidelines**, and the **Indications** sections
  - ◆ Facet joint injections/medial branch blocks performed subsequent to the initial two (2) diagnostic injections (i.e., therapeutic injections)
    - **Criteria exception**: An exception is allowed if the facet joint injection/medial branch block is performed as an alternative treatment when radiofrequency ablation/neurotomy is contraindicated as noted in the **Indications** section.
  - ◆ Facet joint injection/medial branch block performed using injectates other than an anesthetic, corticosteroid, and/or contrast agent (e.g., biologics [platelet rich plasma, stem cells, amniotic fluid]), administered alone or in combination
  - ◆ Facet joint injections/medial branch blocks of the L5-S1 facet joint (when used for the diagnosis and/or treatment of sacroiliac (SI) joint mediated pain)

### **Experimental, Investigational, or Unproven (EIU)**

- Facet joint injections/medial branch blocks performed under ultrasound guidance are considered **experimental, investigational, or unproven (EIU)**.



## Codes (CMM-201)

The inclusion of any code in this table does not imply that the code is under management or requires prior authorization. Refer to the applicable health plan for management details. Prior authorization of a code listed in this table is not a guarantee of payment. The Certificate of Coverage or Evidence of Coverage policy outlines the terms and conditions of the member's health insurance policy.

CPT®	Code Description/Definition
<b>64490</b>	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
<b>+64491</b>	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)
<b>+64492</b>	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)
<b>64493</b>	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
<b>+64494</b>	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)
<b>+64495</b>	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)
<b>0213T</b>	Injection(s), diagnostic or therapeutic agent, paravertebral facet (zygapophyseal) joint (or nerves innervating that joint) with ultrasound guidance, cervical or thoracic; single level
<b>+0214T</b>	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)
<b>+0215T</b>	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)
<b>0216T</b>	Injection(s), diagnostic or therapeutic agent, paravertebral facet (zygapophyseal) joint (or nerves innervating that joint) with ultrasound guidance, lumbar or sacral; single level
<b>+0217T</b>	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)
<b>+0218T</b>	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)

## References (CMM-201)

1. Airaksinen O, Brox JI, Cedraschi C, et al. Chapter 4: European guidelines for the management of chronic nonspecific low back pain. *Eur Spine J*. 2006;15(Supplement 2):S192-S300. doi:10.1007/s00586-006-1072-1.
2. Allen TL, Tatli Y, Lutz, GE. Fluoroscopic percutaneous lumbar zygoapophyseal joint cysts rupture: a clinical outcome study. *Spine*. 2009;9(5):387-395.
3. American Medical Association. *2024 AMA CPT® Professional Edition*.
4. American College of Occupational and Environmental Medicine. *Occupational Medicine Practice Guideline*. 2<sup>nd</sup> ed. 2008.
5. Bland J. Anatomy and biomechanics. In: *Disorders of the Cervical Spine*. Philadelphia. WB Saunders, 1987;9–63.
6. Bogduk N. A narrative review of intra-articular corticosteroid injections for low back pain. *Pain Med*. 2005;6(4):287-296.
7. Boswell M, Colson J, Sehgal N, et al. A systematic review of therapeutic facet joint interventions in chronic spinal pain. *Pain Physician*. 2007;10:229-253.
8. Boswell M, Colson J, Spillane W. Therapeutic Facet Joint Interventions in Chronic Spinal Pain: A Systematic Review of Effectiveness and Complications. *Pain Physician*. 2005;8:101-114.
9. Boswell MV, Manchikanti L, Kaye AD, et al. A best-evidence systematic appraisal of the diagnostic accuracy and utility of facet (zygapophysial) joint injections in chronic spinal pain. *Pain Physician*. 2015;18:E497-E533.
10. Boswell M, Shah R, Everett C, et al. Interventional techniques in the management of chronic spinal pain: evidence-based practice guidelines. *Pain Physician*. 2005;8(1):1-47.
11. Boswell M, Trescot A, Datta S, et al. American Society of Interventional Pain Physicians. Interventional techniques: evidence-based practice guidelines in the management of chronic spinal pain. *Pain Physician*. 2007;10(1):7-111.
12. Carrette S, Marcoux S, Truchon R, et al. A Controlled Trial of Corticosteroid Injections into Facet Joints for Chronic Low Back Pain. *NEJM*. 1991;325(14):1002-1007. doi:10.1056/nejm199110033251405.
13. Chou R, Atlas SJ, Stanos SP, Rosenquist RW. Nonsurgical Interventional Therapies for Low Back Pain. *Spine*. 2009;34(10):1078-1093. doi:10.1097/brs.0b013e3181a103b1.
14. Chou R, Loeser JD, Owens DK, et al. Interventional Therapies, Surgery, and Interdisciplinary Rehabilitation for Low Back Pain. *Spine*. 2009;34(10):1066-1077. doi:10.1097/brs.0b013e3181a1390d.
15. Civelek E, Cansever T, Kabatas S, et al. Comparison of effectiveness of facet joint injection and radiofrequency denervation in chronic low back pain. *Turk Neurosurg*. 2012;22:200-206.
16. Cohen SP, Doshi TL, Constantinescu OC, et al. Effectiveness of Lumbar Facet Joint Blocks and Predictive Value before Radiofrequency Denervation. *Anesthesiology*. 2018;129(3):517-535. doi:10.1097/aln.0000000000002274.
17. Cohen S, Raja S. Pathogenesis, diagnosis, and treatment of lumbar zygapophysial (facet) joint pain. *Anesthesiology*. 2007;106:591-614.
18. Dreyfuss P, Dreyer S; NASS. Lumbar zygapophysial (facet) joint injections. *Spine J*. 2003;3(3 Suppl):50S-59S. doi:10.1016/s1529-9430(02)00450-3.
19. Friedly J, Chan L, Deyo R. Increases in lumbosacral injections in the Medicare population: 1994 to 2001. *Spine*. 2007;32(16):1754-1760.
20. Friedrich K, Nemeč S, Peloschek P, et al. The prevalence of lumbar facet joint edema in patients with low back pain. *Skeletal Radiol*. 2007;36(8):755-760.
21. Fritz J, Niemeyer T, Clasen S, et al. Management of chronic low back pain: rationales, principles, and targets of imaging-guided spinal injections. *Radiographics*. 2007;27(6):1751-1771.
22. Fuchs S, Erbe T, Fischer H, Tibesku C. Intraarticular hyaluronic acid versus glucocorticoid injections for nonradicular pain in the lumbar spine. *J Vasc Interv Radiol*. 2005;16:1493-1498.
23. Fuchs S, Erbe T, Fischer HL, Tibesku CO. Intraarticular hyaluronic acid versus glucocorticoid injections for nonradicular pain in the lumbar spine. *J Vasc Interv Radiol*. 2005;16:1493-1498.
24. Geilhorn A, Katz J, Suri P. Osteoarthritis of the spine; the facet joints. *Nat Rev Rheum*. 2013;9(4):216–224.
25. Hall H, McIntosh G. Low back pain (chronic). *BMJ Clin Evid*. 2008;2008:1116. Published 2008 Oct 1.
26. Hancock M, Maher C, Latimer J, et al. Systematic review of tests to identify the disc, SIJ or facet joint as the source of low back pain. *Eur Spine J*. 2007;16(10):1539-1550.
27. Kennedy DJ, Huynh L, Wong J, et al. Corticosteroid Injections into Lumbar Facet Joints. *Am J Phys Med Rehabil*. 2018;97(10):741-746. doi:10.1097/phm.0000000000000960.
28. Kirpalani D, Mitra R. Cervical facet joint dysfunction: a review. *Arch Phys Med Rehabil*. 2008;89(4):770-774.
29. Lakemeier S, Lind M, Schultz W, et al. A comparison of intraarticular lumbar facet joint steroid injections and lumbar facet joint radiofrequency denervation in the treatment of low back pain: A randomized, controlled, double-blind trial. *Anesth Analg*. 2013;117:228-235.
30. Laslett M, McDonald B, Aprill C, et al. Clinical predictors of screening lumbar zygapophysial joint blocks: development of clinical prediction rules. *Spine J*. 2006;6(4):370-379.
31. Laslett M, Oberg B, April C, McDonald B. Zygapophysial joint blocks in chronic low back pain: a test of Revel's model as a screening test. *BMC Musculoskelet Disord*. 2004;5:43.

32. Lennard T. In: Dreyfus P, Kaplan M, Dreyer S, eds. *Zygapophyseal Joint Injection Techniques in the Spinal Axis. Procedures in Clinical Practice*. 2<sup>nd</sup> ed. Hanley and Belfus Inc. Philadelphia, PA. 2000:276.
33. Lennard T, Vivian D, Walkowski S, Singla A. *Pain Procedures in Clinical Practice*. London. Elsevier Health Sciences. 2011.
34. Lilius G, Laasonen E, Myllynen P, Harilainen A, Gronlund G. Lumbar facet joint syndrome. A randomised clinical trial. *J Bone Joint Surg Br*. 1989;71(4):681-684. doi:10.1302/0301-620x.71b4.2527856.
35. Lord SM, Barnsley L, Bogduk N. Percutaneous radiofrequency neurotomy in the treatment of cervical zygapophysial joint pain: a caution. *Neurosurgery*. 1995;36:732-739.
36. Manchikanti L, Abdi S, Atluri S, et al. An update of comprehensive evidence-based guidelines for interventional techniques of chronic spinal pain: Part II: Guidance and recommendations. *Pain Physician*. 2013;16:S49-S283.
37. Manchikanti L, Cash K, Pampati V, Fellows B. Influence of psychological variables on the diagnosis of facet joint involvement in chronic spinal pain. *Pain Physician*. 2008;11(2):145-160.
38. Manchikanti L, Damron K, Cash K, et al. Therapeutic cervical medial branch blocks in managing chronic neck pain: a preliminary report of a randomized, double-blind, controlled trial. *Pain Physician*. 2006;9(4):333-346.
39. Manchikanti L, Gharibo C, Gilligan C, et al. Comparison of the efficacy of saline, local anesthetics, and steroids in epidural and facet joint injections for the management of spinal pain: A systematic review of randomized controlled trials. *SurgNeurol Int*. 2015;6(5):S194-S235. doi:10.4103/2152-7806.156598.
40. Manchikanti L, Kaye AD, Boswell MV, et al. A systematic review and best evidence synthesis of the effectiveness of therapeutic facet joint interventions in managing chronic spinal pain. *Pain Physician*. 2015;18:E535-E582.
41. Manchikanti L, Manchikanti K, Cash K, et al. Age-related prevalence of facet-joint involvement in chronic neck and low back pain. *Pain Physician*. 2008;11(1):67-75.
42. Manchikanti L, Kaye AD, Sooin A, et al. Comprehensive Evidence-Based Guidelines for Facet Joint Interventions in the Management of Chronic Spinal Pain: American Society of Interventional Pain Physicians (ASIPP) Guidelines Facet Joint Interventions 2020 Guidelines. *Pain Physician*. 2020;23:S1-S127.
43. Manchikanti L, Manchikanti K, Manchukonda R, et al. Evaluation of lumbar facet joint nerve blocks in the management of chronic low back pain: preliminary report of a randomized, double-blind controlled trial. *Pain Physician*. 2007;10(3):425-440.
44. Manchikanti L, Manchukonda R, Pampati V, et al. Prevalence of facet joint pain in chronic low back pain in postsurgical patients by controlled comparative local anesthetic blocks. *Arch Phys Med Rehabil*. 2007;88(4):449-55.
45. Manchikanti L, Singh V, Falco F, et al. Lumbar facet joint nerve blocks in managing chronic facet joint pain: one-year follow-up of a randomized, double-blind controlled trial. *Pain Physician*. 2008;11(2):121-132.
46. Manchikanti L, Singh V, Falco FJE, Cash KA, Pampati V. Evaluation of lumbar facet joint nerve blocks in managing chronic low back pain: A randomized, double-blind, controlled trial with a 2-year follow-up. *Int J Med Sci*. 2010;7:124-135.
47. Manchikanti L, Singh V, Falco FJE, Cash KA, Fellows B. Comparative outcomes of a 2-year follow-up of cervical medial branch blocks in management of chronic neck pain: A randomized, double-blind controlled trial. *Pain Physician*. 2010;13:437-450.
48. Manchikanti L, Pampati V, Bakhit C, et al. Effectiveness of lumbar facet joint nerve blocks in chronic low back pain: A randomized clinical trial. *Pain Physician*. 2001;4:101-117.
49. Manchikanti L, Singh V, Falco FJE, Cash KA, Pampati V, Fellows B. The role of thoracic medial branch locks in managing chronic mid and upper back pain: A randomized, double-blind, active control trial with a 2-year follow-up. *Anesthesiol Res Pract*. 2012;2012:585806.
50. Manchukonda R, Manchikanti K, Cash K, et al. Facet joint pain in chronic spinal pain: an evaluation of prevalence and false-positive rate of diagnostic blocks. *J Spinal Disord Tech*. 2007;20(7):539-545.
51. Nordin M, Carragee E, Hurwitz L, et al; Bone and Joint Decade 2000-2010 Task Force on Neck Pain and Its Associated Disorders. Treatment of neck pain: injections and surgical interventions: results of the Bone and Joint Decade 2000-2010 Task Force on Neck Pain and Its Associated Disorders. *Spine*. 2008;15;33(4 Suppl):S153-S169.
52. North American Spine Society (NASS). *Coverage Policy Recommendations: Facet Joint Interventions*. Oct 2016. Burr Ridge, IL. © North American Spine Society (NASS). Available at: <https://www.spine.org>.
53. Oliveira C, Maher C, Ferreira M, et al. *Cochrane Database Syst Rev*. 2020;4(CD013577):1-149. doi:10.1002/14651858.CD013577.
54. Park KD, Jee H, Nam HS, Cho SK, Kim HS, Park Y, Lim OK. Effect of medial branch block in chronic facet joint pain for osteoporotic compression fracture: one-year retrospective study. *Ann Rehabil Med*. 2013;37(2):191-201. doi:10.5535/arm.2013.37.2.191.
55. Park SC, Kim KH. Effect of adding cervical facet joint injections in a multimodal treatment program for long-standing cervical myofascial pain syndrome with referral pain patterns of cervical facet joint syndrome. *J Anesth*. 2012;26:738-745.
56. Patel J, Schneider B, Smith C on behalf of SIS Patient Safety Committee. Intraarticular Corticosteroid Injections and hyperglycemia. 10/4/17.

57. Resnick D, Choudhri T, Dailey A, et al. Guidelines for the performance of fusion procedures for degenerative disease of the lumbar spine. Part 13: injection therapies, low-back pain, and lumbar fusion. *J Neurosurg Spine*. 2005;2(6):707-715.
58. Ribeiro LH, Furtado RN, Konai MS, et al. Effect of facet joint injection versus systemic steroids in low back pain: A randomized controlled trial. *Spine (Phila Pa 1976)*. 2013;38:1995-2002.
59. Schneider G, Jull G, Smith A. Derivation of a clinical decision guide in the diagnosis of cervical facet joint pain. *Arch Phys Med Rehabil*. 2014;95(9):1695-1701.
60. Schuster N, Clements N, Suri P, Stojanovic M. Is this spine pain facetogenic? Addressing diagnostic myths. *Pain Med*. 2021;22(S1):S31–S35.
61. Sehgal N, Dunbar E, Shah R, Colson J. Systematic review of diagnostic utility of facet (zygapophysial) joint injections in chronic spinal pain: an update. *Pain Physician*. 2007;10(1):213-228.
62. Shah RD, Cappiello D, Suresh S. Interventional procedures for chronic pain in children and adolescents: a review of the current evidence. *World Institute of Pain*. 2016:359-369.
63. Staal JB, de Bie R, Vet HC, Hildebrandt J, Nelemans P. Injection therapy for subacute and chronic low-back pain. *Cochrane Database Syst Rev*. 2008 2008(3):CD001824. doi:10.1002/14651858.cd001824.pub3.
64. van Tulder M, Koes B, Seitsalo S, Malmivaara A. Outcome of invasive treatment modalities on back pain and sciatica: an evidence-based review. *Eur Spine J*. 2006;Suppl 1:S82-S92.
65. Yun DH, Kim HS, Yoo SD, et al. Efficacy of ultrasonography-guided injections in patients with facet syndrome of the low lumbar spine. *Ann Rehabil Med*. 2012;36:66-71.
66. Zakaria D, Skidmore B. *Facet joint injection as a diagnostic and therapeutic tool for spinal pain: a review of clinical and cost effectiveness*. [Technology Report number 77]. Ottawa: Canadian Agency for Drugs and Technologies in Health. 2007.