



CLINICAL GUIDELINES

CMM-201: Facet Joint Injections/Medial Branch Blocks

Effective: August 04, 2026

VERSION 1.0.2026

EviCore

By ~~EVERNORTH~~

EviCore healthcare Clinical Decision Support Tool Diagnostic Strategies: This tool addresses common symptoms and symptom complexes. Imaging requests for individuals with atypical symptoms or clinical presentations that are not specifically addressed will require physician review. Consultation with the referring physician, specialist, and/or individual's Primary Care Physician (PCP) may provide additional insight.

EviCore's Clinical Review Criteria ("CRC") and related content is made available for the limited uses of: reference; and individual use, only limited to facilitating the determination of medically necessary and appropriate clinical treatment by clinicians for specific delegated patients under their care. The CRC and related content is proprietary information of EviCore, and copyrighted to the full extent of the law. Except as expressly permitted, you may not modify, copy, reproduce, republish, upload, post, transmit, hyperlink to or from, or distribute in any way the CRC, nor may you sell, transfer, distribute, assign, lease, reproduce, or otherwise use the CRC in commerce, in a manner that competes with us or infringes upon our rights, or for any public or commercial endeavor without our prior and express written consent.

CPT® (Current Procedural Terminology) is a registered trademark of the American Medical Association (AMA). CPT® five-digit codes, nomenclature and other data are copyright 2026 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.

Table of Contents

Guideline	Page
Definitions.....	3
General Guidelines.....	6
Indications.....	9
Non-Indications.....	14
Codes (CMM-201).....	16
References (CMM-201).....	19

Definitions

Guideline	Page
Definitions.....	4

Definitions

CMM.PN.DF.201

v1.0.2026

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 (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 Joint Injection/ Medial Branch Nerve Block (MBB)	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 nerve block) from C2-C3 to L5-S1. Even though either procedure can be used to diagnose facet joint pain, an MBB is generally considered more appropriate. • Note: The facet joint injection/medial branch nerve block applies directly to the facet joint(s) blocked and not to the number of nerves blocked that innervate the facet joint(s).
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 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 on the left side of the spine.
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 nerve 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 injections must be documented.
Session	a time period, which includes all procedures (i.e., epidural steroid injection, selective nerve root block, facet joint injection, medial branch nerve block [MBB], and facet joint radiofrequency ablation [RFA]) performed on a single date of service.

General Guidelines

Guideline	Page
General Guidelines.....	7

General Guidelines

CMM.PN.GG.201

v1.0.2026

Application of Guideline

- The guideline criteria are only applicable to facet joint injections/medial branch nerve blocks performed for facet-mediated pain.
- For requests related to L5 medial nerve branch and sacral lateral nerve branch blocks and ablations/neurotomies used for the diagnosis or treatment of sacroiliac joint mediated pain, see **CMM-203: Sacroiliac Joint Procedures**.
- The determination of medical necessity for the performance of of facet joint injections/medial branch nerve blocks is always made on a case-by-case basis.

Injectates

- When criteria have been met, facet joint injections/medial branch nerve blocks are considered **medically necessary** when performed with an anesthetic, corticosteroid, and/or contrast agent.

Image Guidance

- When criteria have been met, facet joint injections/medial branch nerve blocks are considered **medically necessary** when performed with CT- or fluoroscopic-guidance.

Frequency & Number of Injections/Procedures

- If the initial diagnostic facet joint injection/medial branch nerve block resulted in a positive response (i.e., at least 80% pain relief), a second diagnostic facet joint injection/medial branch nerve block must be performed to confirm the validity of the positive response.
 - **Note:** The second diagnostic injection/block should ONLY be performed with the intent that, if successful, a facet joint radiofrequency denervation/ablation (facet neurotomy, facet rhizotomy) would be considered as an option at the diagnosed level(s).
- When criteria have been met, only two (2) diagnostic facet joint injections/medial branch nerve blocks at the same level(s) are considered **medically necessary**.
 - **Note:** More than two (2) facet joint injections/medial branch nerve 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 nerve blocks as noted in the **Indications** section.
- When criteria have been met, only one invasive modality or procedure performed on the same date of service is considered **medically necessary**.

- **Criteria exception:** An exception is allowed for a facet joint injection being performed together with a transforaminal epidural steroid injection (TFESI) when the facet joint injection is performed for a synovial cyst aspiration on the same date of service.
- Requests for subsequent (beyond initial) facet joint injections/medial branch nerve blocks will be evaluated based on the response to the prior facet joint injection/medial branch nerve block.

Levels

- When criteria have been met, facet joint injections/medial branch nerve blocks are considered **medically necessary** only from levels C2-3 to L5-S1
 - **Note:** The facet joint injection/medial branch nerve block applies directly to the facet joint(s) blocked and not to the number of nerves blocked that innervate the facet joint(s).
- When criteria have been met, facet joint injections/medial branch nerve blocks are considered **medically necessary** on no more than three (3) facet joint levels (whether unilateral or bilateral) during the same session/procedure.
- When criteria have been met, a diagnostic facet joint injection/medial branch nerve block is considered **medically necessary** following a spinal fusion when performed at an unfused spinal level contiguous with the fused spinal motion segment, if a prior injection/block was negative at the requested level.
- When criteria have been met, facet joint injections/medial branch nerve blocks are considered **medically necessary** on no more than three (3) contiguous levels.
 - **Criteria exception:** An exception is allowed if the facet joint injection/medial branch nerve block is performed at spinal level contiguous with the posteriorly fused spinal motion segment.

Health Equity Considerations

Health equity is the highest level of health for all individuals; health inequity is the avoidable difference in health status or distribution of health resources due to the social conditions in which individuals are born, grow, live, work, and age. Social determinants of health are the conditions in the environment that affect a wide range of health, functioning, and quality of life outcomes and risks. Examples include the following: safe housing, transportation, and neighborhoods; racism, discrimination, and violence; education, job opportunities, and income; access to nutritious foods and physical activity opportunities; access to clean air and water; and language and literacy skills.

Indications

Guideline	Page
Initial Diagnostic Facet Joint Injection/Medial Branch Nerve Block.....	10
Second Diagnostic Facet Joint Injection/Medial Branch Nerve Block.....	11
Therapeutic Facet Joint Injection/Medial Branch Nerve Block.....	12
Facet Joint Injection Performed with Synovial Cyst Aspiration.....	13

Initial Diagnostic Facet Joint Injection/ Medial Branch Nerve Block

CMM.PN.IN.201

v1.0.2026

- An initial diagnostic facet joint injection/medial branch nerve block is considered **medically necessary** when ALL of the following criteria have been met:
 - Performed to determine whether chronic cervical, thoracic, or lumbar pain is of facet joint origin
 - 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 **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 the 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; pain related to spinal instrumentation).
 - The spinal motion segment(s) is(are) not posteriorly fused at the requested level(s).
 - A facet joint radiofrequency denervation/ablation is being considered.

Second Diagnostic Facet Joint Injection/ Medial Branch Nerve Block

CMM.PN.IN.201

v1.0.2026

- A second diagnostic facet joint injection/medial branch nerve block is considered **medically necessary** when ALL of the following criteria have been met:
 - Performed to confirm the validity of the clinical response to the initial facet joint injection.
 - Administered at the same level(s) as the initial diagnostic block
 - The initial diagnostic facet joint injection/medial branch nerve block resulted in 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 used).
 - A facet joint radiofrequency denervation/ablation is being considered.

Therapeutic Facet Joint Injection/Medial Branch Nerve Block

CMM.PN.IN.201

v1.0.2026

Alternative Treatment when Radiofrequency Ablation/Neurotomy is Contraindicated

- The individual is **not a candidate** for a facet joint radiofrequency denervation/ablation 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 nerve blocks performed as an alternative treatment to a radiofrequency ablation/neurotomy 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 nerve 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 nerve 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 a minimum of six (6) months following the prior therapeutic facet joint injection/medial branch nerve block at the same level(s)
 - documented pain relief of at least 50% for at least 12 weeks following the previous facet joint injection/medial branch nerve block

Facet Joint Injection Performed with Synovial Cyst Aspiration

CMM.PN.IN.201

v1.0.2026

- An initial 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
- A repeat facet joint injection with synovial cyst aspiration is considered **medically necessary** when the following criteria has been met:
 - documented pain relief of at least 50% for at least 12 weeks following the previous facet joint injection/medial branch nerve block

Non-Indications

Guideline	Page
Non-Indications.....	15

Non-Indications

CMM.PN.NI.201

v1.0.2026

Not Medically Necessary

- A facet joint injection/medial branch nerve block performed without meeting the criteria in the **Definitions**, the **General Guidelines**, and the **Indications** sections is considered **not medically necessary**.
- A facet joint injection with synovial cyst aspiration performed without meeting the criteria in the **Definitions**, the **General Guidelines**, and the **Indications** sections is considered **not medically necessary**.
- Facet joint injections/medial branch nerve blocks performed subsequent to the initial two (2) diagnostic injections (i.e., therapeutic injections) are considered **not medically necessary**.
 - **Criteria exception:** An exception is allowed if the facet joint injection/medial branch nerve block is performed as an alternative treatment when radiofrequency ablation/neurotomy is contraindicated as noted in the **Indications** section.
- Facet joint injections/medial branch nerve blocks performed using injectates other than anesthetic, corticosteroid, and/or contrast agent, administered alone or in combination, are considered **not medically necessary**.
- Facet joint injections/medial branch nerve blocks of the L5-S1 facet joint, when used for the diagnosis or treatment of sacroiliac (SI) joint mediated pain, are considered **not medically necessary**.
- Additional diagnostic facet joint injections/medial branch nerve blocks are considered **not medically necessary** when there has been a prior successful radiofrequency denervation/ablation at the requested level(s).
- Facet joint injections/medial branch nerve blocks at the same level(s) scheduled as part of a "series" are considered **not medically necessary** in one request without evaluation of response to the prior injection.

Experimental, Investigational, or Unproven (EIU)

- Facet joint injections/medial branch nerve blocks performed with ultrasound-guidance are considered **experimental, investigational, or unproven**.

Codes (CMM-201)

Guideline	Page
Codes (CMM-201).....	17

Codes (CMM-201)

CMM.PN.PC.201

v1.0.2026

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.

Code	Code Description/Definition
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)
+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)

Code	Code Description/Definition
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)

References (CMM-201)

Guideline	Page
References (CMM-201).....	20

References (CMM-201)

CMM.PN.RF.201

v1.0.2026

1. Airaksinen O, Brox J, 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. *Current Procedural Terminology*. 2025 AMA CPT® Professional Edition. ©2025 American Medical Association: Chicago, IL.
4. Bland J. Anatomy and biomechanics. In: *Disorders of the Cervical Spine*. Philadelphia. WB Saunders. 1987;9–63.
5. Bogduk N. A narrative review of intra-articular corticosteroid injections for low back pain. *Pain Med*. 2005;6(4):287-296.
6. 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.
7. 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.
8. 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.
9. 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.
10. 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.
11. Busse JW, Genevay S, Agarwal A, et al. Commonly used interventional procedures for non-cancer chronic spine pain: a clinical practice guideline. *BMJ*. 2025;388:e079970. Published 2025 Feb 19. doi:10.1136/bmj-2024-079970.
12. Crette 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, Bhaskar A, Bhatia A, et al. Consensus practice guidelines on interventions for lumbar facet joint pain from a multispecialty, international working group. *Reg Anesth Pain Med*. 2020;45(6):424-467. doi:10.1136/rapm-2019-101243.
17. 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.
18. Cohen S, Raja S. Pathogenesis, diagnosis, and treatment of lumbar zygapophysial (facet) joint pain. *Anesthesiology*. 2007;106:591-614.
19. 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.
20. Fogarty AE, Buttner JA, Duszynski B, et al. The effectiveness of fluoroscopically guided lumbar facet steroid joint injections: a systematic review. *Interv Pain Med*. 2025;4(2):100587. doi: 10.1016/j.inpm.2025.100587.
21. Friedly J, Chan L, Deyo R. Increases in lumbosacral injections in the Medicare population: 1994 to 2001. *Spine*. 2007;32(16):1754-1760.
22. Friedrich K, Nemec 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.

23. 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.
24. 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.
25. 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.
26. Geilhorn A, Katz J, Suri P. Osteoarthritis of the spine; the facet joints. *Nat Rev Rheum*. 2013;9(4):216-224.
27. Hall H, McIntosh G. Low back pain (chronic). *BMJ Clin Evid*. 2008;2008:1116. Published 2008 Oct 1.
28. 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.
29. 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.
30. Kirpalani D, Mitra R. Cervical facet joint dysfunction: a review. *Arch Phys Med Rehabil*. 2008;89(4):770-774.
31. 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.
32. Laslett M, McDonald B, Aprill C, et al. Clinical predictors of screening lumbar zygapophyseal joint blocks: development of clinical prediction rules. *Spine J*. 2006;6(4):370-379.
33. 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;5:43-34.
34. Lennard T. In: Dreyfus P, Kaplan M, Dreyer S, eds. *Zygapophyseal Joint Injection Techniques in the Spinal Axis. Procedures in Clinical Practice*. 2nd ed. Hanley and Belfus Inc. Philadelphia, PA. 2000:276.
35. Lennard T, Vivian D, Walkowski S, Singla A. *Pain Procedures in Clinical Practice*. London. Elsevier Health Sciences. 2011.
36. 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.
37. Lord SM, Barnsley L, Bogduk N. Percutaneous radiofrequency neurotomy in the treatment of cervical zygapophysial joint pain: a caution. *Neurosurgery*. 1995;36:732-739.
38. Liu M, Shaparin N, Nair S, Kim RS, Hascalovici JR. Chronic low back pain: the therapeutic benefits of diagnostic medial branch nerve blocks. *Pain Physician*. 2021;24(4):E521-E528.
39. 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.
40. 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.
41. 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.
42. 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. *Surg Neurol Int*. 2015;6(5):S194-S235. doi:10.4103/2152-7806.156598.
43. 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.
44. 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.
45. Manchikanti L, Kaye AD, Soin 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.
46. Manchikanti L, Knezevic E, Knezevic NN, et al. Effectiveness of facet joint nerve blocks in managing chronic axial spinal pain of facet joint origin: a systematic review and meta-analysis. *Pain Physician*. 2024;27(2):E169-E206.
47. 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.

48. 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.
49. 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.
50. 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.
51. 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.
52. 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.
53. 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.
54. 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.
55. 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.
56. 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>.
57. Oliveira C, Maher C, Ferreira M et al. *Cochrane Database Syst Rev*. 2020; 4(CD013577):1-149. doi:10.1002/14651858.CD013577.
58. 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.
59. 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.
60. Patel J, Schneider B, Smith C on behalf of SIS Patient Safety Committee. Intraarticular corticosteroid injections and hyperglycemia. 10/4/17.
61. 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. doi:10.3171/spi.2005.2.6.0707.
62. 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.
63. Schneider G, Jull G, Smith A, et al. Derivation of a clinical decision guide in the diagnosis of cervical facet joint pain. *Arch Phys Med Rehabil*. 2014;95(9): 1695-1701.
64. Schuster N, Clements N, Suri P, Stojanovic M. Is this spine pain facetogenic? Addressing diagnostic myths. *Pain Med*. 2021;22(S1):S31-S35.
65. 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.
66. 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.
67. 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.
68. 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.
69. Wang X, Martin G, Sadeghirad B, et al. Common interventional procedures for chronic non-cancer spine pain: a systematic review and network meta-analysis of randomised trials. *BMJ*. 2025;388:e079971. Published 2025 Feb 19. doi:10.1136/bmj-2024-079971.

70. 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.
71. 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.