



CLINICAL GUIDELINES

CMM-208 ~ Radiofrequency Joint Ablation Denervation

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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.

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CMM-208~Radiofrequency Joint Ablations/Denervations

CMM-208.1 Definitions

Radiofrequency joint denervation/ablation (i.e., facet neurotomy, facet rhizotomy) refers to the insertion of a radiofrequency probe towards the median branch of the posterior primary rami, which supplies the innervation to the facet joints under fluoroscopic guidance. The radiofrequency electrode is then utilized to create a “continuous” heat lesion by coagulating the nerve supplying the joint with the intention of providing pain relief by denervating the painful facet joint.

CMM-208.2 General Guidelines

Radiofrequency joint denervations/ablations should be performed using fluoroscopy. Performance of radiofrequency joint denervation/ablations without the use of fluoroscopic guidance **is considered not medically necessary**.

CMM-208.3 Indications and Non-Indications

- ✓ A radiofrequency joint denervation/ablation **is considered medically necessary** for facet mediated pain resulting from disease, injury or surgery and confirmed by provocative testing when BOTH of the following criteria are met:
 - Failure of at least three (3) months of conservative care (e.g., exercise, physical methods including physical therapy, chiropractic care, NSAID’s and/or analgesics)
 - Two positive diagnostic medial branch block or facet joint injections using either a local anesthetic or a local anesthetic combined with corticosteroid as evidenced by EITHER of the following:
 - A beneficial clinical response to an intra-articular facet injection or medial branch block performed with a local anesthetic with greater than 80% pain relief reported for the duration of the effect of the local anesthetic when no corticosteroids are added to the injectate
 - A beneficial clinical response to an intra-articular facet joint injection or medial branch block performed with a local anesthetic and a corticosteroid with at least a 50% reduction in pain for at least one week.
- ✓ In the absence of two sequential positive diagnostic facet joint injections/medial branch blocks a radiofrequency joint denervation/ablation is considered **not medically necessary**.

- ✓ A radiofrequency joint denervation/ablation should only be performed for neck pain or low back pain in the absence of an untreated radiculopathy. The performance of a radiofrequency joint denervation/ablation in an individual with an untreated radiculopathy **is considered not medically necessary**.
- ✓ A repeat radiofrequency joint denervation/ablation **is considered medically necessary** when there is documented pain relief of at least 50% which has lasted for a minimum of 12 weeks. While repeat radiofrequency joint denervations/ablations may be required, they should not occur at an interval of less than six (6) months from the first procedure. No more than two (2) procedures at the same level(s) should be performed in a 12 month period.
- ✓ When performing radiofrequency joint denervations/ablations, no more than three (3) levels should be performed during the same session/procedure. It **is considered medically necessary** to perform the procedure at the same level or levels bilaterally during the same session/procedure. The performance of the procedures on more than three (3) levels **is considered not medically necessary**.
- ✓ A radiofrequency joint denervation/ablation **is considered medically necessary** when performed on an individual with previous spinal fusion only when performed at levels above or below the fusion.
- ✓ Based on the lack of published peer-reviewed scientific literature on the efficacy of these methods of ablation, the following procedures are considered **experimental, investigational, or unproven**:
 - Pulsed radiofrequency ablation for chronic pain syndromes
 - Endoscopic radiofrequency denervation/endoscopic dorsal ramus rhizotomy
 - Cryoablation/cryoneurolysis/cryodenervation
 - Chemical ablation (e.g., alcohol, phenol, glycerol)
 - Laser ablation
 - Ablation by any method for sacroiliac (SI) joint pain
 - Cooled radiofrequency ablation

CMM-208.4 Procedure (CPT®) Codes

This guideline relates to the CPT® code set below. Codes are displayed for informational purposes only. Any given code's inclusion on this list does not necessarily indicate prior authorization is required.	
CPT®	Code Description/Definition
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)
This list may not be all inclusive and is not intended to be used for coding/billing purposes. The final determination of reimbursement for services is the decision of the health plan and is based on the individual's policy or benefit entitlement structure as well as claims processing rules.	

CMM-208.5 References

1. American College of Occupational and Environmental Medicine. Occupational Medicine Practice Guideline, 2nd Ed. 2008.
2. American Medical Association. *Current Procedural Terminology* – Professional Edition.
3. Abejon D, Garcia-del-Valle S, Fuentes M, et al. Pulsed radiofrequency in lumbar radicular pain: clinical effects in various etiological groups. *Pain Pract.* 2007 7(1):21-26.
4. Barnsley L. Percutaneous radiofrequency neurotomy for chronic neck pain: outcomes in a series of consecutive patients. *Pain Med.* 2005;6(4):282-286.
5. 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.
6. 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.
7. 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.
8. Buijs E, van Wijk R, Geurts J, Weeseman et al. Radiofrequency lumbar facet denervation: A comparative study of the reproducibility of lesion size after 2 current radiofrequency techniques. *Reg Anesth Pain Med.* 2004;29(5):400-407.
9. Cahana A, Van Zundert J, Macrea L, et al. Pulsed radiofrequency: current clinical and biological literature available. *Pain Med.* 2006 t;7(5):411-423.
10. 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.

11. Cohen S, Hurley R, Christo P, Winkley et al. Clinical predictors of success and failure for lumbar facet radiofrequency denervation. *Clin J Pain*. 2007;23:45-52.
12. Cohen S, Raja S. Pathogenesis, diagnosis, and treatment of lumbar zygapophysial (facet) joint pain. *Anesthesiology* 2007;106:591-614.
13. Cohen SP, Williams KA, Kurihara C, et al. Multicenter, randomized, comparative costeffectiveness study comparing 0, 1, and 2 diagnostic medial branch (facet joint nerve) block treatment paradigms before lumbar facet radiofrequency denervation. *Anesthesiology*. 2010; 113:395-405.
14. Conlin A, Bhogal S, Sequeira K, Teasell R. Treatment of whiplash-associated disorders -part II: Medical and surgical interventions. *Pain Res Manag*. 2005 10(1):33-40.
15. Dobrogowski J, Wrzosek A, Wordliczek J. Radiofrequency denervation with or without addition of pentoxifylline or methylprednisolone for chronic lumbar zygapophysial joint pain. *Pharmacol Rep*. 2005;57:475-480.
16. Dreyfuss P, Halbrook B, Pauza K, et al. Efficacy and validity of radiofrequency neurotomy for chronic lumbar zygapophysial joint pain, *Spine*. 2000;25(10):1270-1277.
17. Geurts J, van Wijk R, Stolker R, Groen G. Efficacy of radiofrequency procedures for the treatment of spinal pain: a systematic review of randomized clinical trials. *Reg Anesth Pain Med*. 2001; 26(5):394-400.
18. Gofeld M, Jitendra J, Faclier G. Radiofrequency denervation of the lumbar zygapophysial joints: 10-year prospective clinical audit. *Pain Physician*. 2007;10:291-300.
19. Haldeman S, Carroll L, Cassidy JD, et al. Bone and Joint Decade 2000-2010 Task Force on Neck Pain and Its Associated Disorders. The Bone and Joint Decade 2000-2010 Task Force on Neck Pain and Its Associated Disorders: executive summary. *Spine*. 2008 33(4 Suppl):S5-A7.
20. 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.
21. Hooten W, Martin D, Huntoon M. Radiofrequency neurotomy for low back pain: evidence-based procedural guidelines. *Pain Med*. 2005;6(2):129-138.
22. King W, Ahmed SU, Baisden J, Patel N, Kennedy DJ, MacVicar J, Duszynski B. Diagnosis and treatment of posterior sacroiliac complex pain: a systematic review with comprehensive analysis of the published data. *Pain Med* 2015 Feb; 16(2): 257.
23. Koizuka S, Saito S, Kawauchi C, et al. Percutaneous radiofrequency lumbar facet rhizotomy guided by computed tomography fluoroscopy. *J Anesth*.2005;19(2):167-169.
24. Joo YC, Park JY, Kim KH. Comparison of alcohol ablation with repeated thermal radiofrequency ablation in medial branch neurotomy for the treatment of recurrent thoracolumbar facet joint pain. *J Anesth*. 2013; 27:390-395.
25. 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.
26. 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.
27. Laslett M, Oberg B, Aprill 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.
28. Leclaire R, Fortin L, Lambert R, et al. Radiofrequency facet joint denervation in the treatment of low back pain: a placebo-controlled clinical trial to assess efficacy, *Spine*. 2001;26(13):1411-1416.
29. Lord S, Barnsley L, Wallis B, McDonald G, Bogduk N. Percutaneous radio-frequency neurotomy for chronic cervical zygapophysial-joint pain. *N Engl J Med*. 1996; 335:1721-1726.

30. MacVicar J, Borowczyk JM, MacVicar AM, Loughnan BM, Bogduk N. Cervical medial branch radiofrequency neurotomy in New Zealand. *Pain Med.* 2012;13:647-654.
31. 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.
32. 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.
33. 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.
34. 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):449-455.
35. Manchikanti L, Staats P, Singh V, et al. Evidence-based practice guidelines for interventional techniques in the management of chronic spinal pain. *Pain Phys.* 2003;6:3-81.
36. 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.
37. McDonald G, Lord S, Bogduk N. Long-term follow-up of patients treated with cervical radiofrequency neurotomy for chronic neck pain. *Neurosurgery* 1999 ;45(1):61-68.
38. Mikeladze G, Espinal R, Finnegan R, et al. Pulsed radiofrequency application in treatment of chronic zygapophyseal joint pain. *Spine J.* 2003;3(5):360-362.
39. Moon JY, Lee PB, Kim YC, Choi SP, Sim WS. An alternative distal approach for the lumbar medial branch radiofrequency denervation: A prospective randomized comparative study. *Anesth Analg.* 2013;116:1133-1140.
40. Nath S, Nath C, Pettersson K. Percutaneous lumbar zygapophysial (Facet) joint neurotomy using radiofrequency current, in the management of chronic low back pain: a randomized double-blind trial. *Spine.* 2008;33(12):1291-1298.
41. Niemisto L, Kalso E, Malmivaara A, et al. Radiofrequency denervation for neck and back pain. *The Cochrane Database of Systematic Reviews.* 2006; Issue 3.
42. Oh W, Shim J. A randomized controlled trial of radiofrequency denervation of the ramus communicans nerve for chronic discogenic low back pain. *Clin J Pain* 2004;20(1):55-60.
43. Sanders M, Zuurmond W. Percutaneous intra-articular lumbar facet joint denervation in the treatment of low back pain: a comparison with percutaneous extra-articular lumbar facet denervation. *Pain Clinic.* 1999;11(4):329-335.
44. Sapir DA, Gorup JM. Radiofrequency medial branch neurotomy in litigant and non-litigant patients with cervical whiplash. *Spine (Phila Pa 1976).* 2001;26:E268-E273.
45. Schofferman J, Kine G. Effectiveness of repeated radiofrequency neurotomy for lumbar facet pain. *Spine.* 2004;29(21):2471-2473.
46. Slipman C, Bhat A, Gilchrist R, et al. A critical review of the evidence for the use of zygapophysial injections and radiofrequency denervation in the treatment of low back pain, *Spine J.* 2003;3(4):310-316.
47. Speldewinde GC. Outcomes of percutaneous zygapophysial and sacroiliac joint neurotomy in a community setting. *Pain Med.* 2011;12:209-218.

48. Tekin I, Mirzai H, Ok G, Erbuyun et al. A comparison of conventional and pulsed radiofrequency denervation in the treatment of chronic facet joint pain. *Clin J Pain*. 2007;23(6):524-529.
49. Tzaan W, Tasker R. Percutaneous radiofrequency facet rhizotomy--experience with 118 procedures and reappraisal of its value. *Canadian Journal of Neurological Sciences*. 2000;27(2):125-130.
50. Vallejo R, Benyamin R, Kramer J, et al. Pulsed radiofrequency denervation for the treatment of sacroiliac joint syndrome. *Pain Med*. 2006;7(5):429-434.
51. van Kleef M, Barendse G, Kessels A, et al. Randomized trial of radiofrequency lumbar facet denervation for chronic low back pain. *Spine*. 1999;24(18):1937-1942.
52. van Wijk R, Geurts J, Wynne H, et al. Radiofrequency denervation of lumbar facet joints in the treatment of chronic low back pain: a randomized, double-blind, sham lesion-controlled trial. *Clin J Pain*. 2005; 21(4):335-344.
53. Van Zundert J, Patihh J, Kessels A, et al. Pulsed radiofrequency adjacent to the cervical dorsal root ganglion in chronic cervical radicular pain: a double-blind sham controlled randomized clinical trial. *Pain*. 2007;127:173-182
54. Washington State Department of Labor and Industries. Guideline on diagnostic facet medial nerve branch blocks and facet neurotomy. *Provider Bull*. 2005;(PB 05-11):1-6.
55. Workloss Data Institute. Official Disability Guidelines 2008.