

<b>Subject: Radiofrequency Ablation (RFA) for chronic back pain associated with the facet joint</b> <i>NOTE: RFA is also called percutaneous radiofrequency facet denervation, percutaneous facet coagulation, percutaneous radiofrequency neurotomy, radiofrequency facet rhizotomy, and radiofrequency articular rhizolysis.</i>		<b>Original Effective Date:</b> 7/5/07
<b>Policy Number:</b> MCR-085	<b>Revision Date(s):</b> 12/08, 9/10, 6/13, 12/11/13, 6/12/14, 7/25/17 <i>This MCR is no longer scheduled for revisions.</i>	
<b>Review Date:</b> 6/25/14, 12/16/15, 6/15/16, 3/8/18, 6/19/19		
<b>MCPC Approval Date:</b> 7/25/17, 3/8/18, 6/19/19		

**DISCLAIMER**

*This Molina Clinical Review (MCR) is intended to facilitate the Utilization Management process. It expresses Molina's determination as to whether certain services or supplies are medically necessary, experimental, investigational, or cosmetic for purposes of determining appropriateness of payment. The conclusion that a particular service or supply is medically necessary does not constitute a representation or warranty that this service or supply is covered (i.e., will be paid for by Molina) for a particular member. The member's benefit plan determines coverage. Each benefit plan defines which services are covered, which are excluded, and which are subject to dollar caps or other limits. Members and their providers will need to consult the member's benefit plan to determine if there are any exclusion(s) or other benefit limitations applicable to this service or supply. If there is a discrepancy between this policy and a member's plan of benefits, the benefits plan will govern. In addition, coverage may be mandated by applicable legal requirements of a State, the Federal government or CMS for Medicare and Medicaid members. CMS's Coverage Database can be found on the CMS website. The coverage directive(s) and criteria from an existing National Coverage Determination (NCD) or Local Coverage Determination (LCD) will supersede the contents of this Molina Clinical Review (MCR) document and provide the directive for all Medicare members.<sup>1</sup>*

**DESCRIPTION OF PROCEDURE/SERVICE/PHARMACEUTICAL <sup>45</sup>**

Radiofrequency ablation (RFA)

Radiofrequency ablation (RFA) is a percutaneous treatment for chronic spinal pain using radiowave-induced heat to create a lesion in a spinal sensory nerve. RFA is also called percutaneous radiofrequency facet denervation, percutaneous facet coagulation, percutaneous radiofrequency neurotomy, radiofrequency facet rhizotomy, and radiofrequency articular rhizolysis. The RF probe is inserted, and the target nerves are generally targeted unilaterally or bilaterally for 40 to 90 seconds using an electrode temperature of 60°C to 90°C. The goal of RFA is to relieve pain by interrupting the transmission of pain signals from the sensory nerve to the brain.

Pulsed Radiofrequency Denervation (PRFD)

Pulsed RFA (PRFA) has been introduced as a nonablative alternative to RFA. PRFA delivers short bursts of radiofrequency (RF) current, instead of the continuous flow of RF current produced by continuous RF generators. This allows the tissue to cool between bursts, resulting in considerably lower maximum temperatures as compared with the continuous mode, and reduces the risk of neighboring tissue destruction. It does not destroy targeted nerves and surrounding tissue and therefore requires less precise electrodes placement. During PRFA, intermittent low temperature electric currents of 2 Hz at temperatures not exceeding 42°C are transmitted to the nerve.

Both RFA and PFRA are performed in the outpatient setting.

**RECOMMENDATION**<sup>46</sup>

- Radiofrequency ablation may be considered medically necessary for chronic cervical or lumbar neck or back pain in adults who are age 18 years or older as part of a comprehensive pain management treatment program when all of the following criteria are met: [ALL]
  - Diagnosis of chronic severe somatic, **nonradicular** back pain (cervical, or lumbar) defined as persisting beyond 3 months and affecting activity of daily living functional ability: > 6 on the NRS Pain Rating Scale\*
  - Has tried and failed conservative therapy that includes: [ALL]
    - Physical therapy (PT) a minimum of 10-12 sessions over 8 weeks; or
    - There must be documentation submitted that explains why physical therapy is contraindicated: *\*Note:* PT may be contraindicated if any of the following are present:
      - pain worsened with PT;
      - PT tried but was not able to be tolerated
- AND
- Activity modification a minimum of 6 weeks; and
  - Drug therapy (i.e. NSAIDS, muscle relaxants, corticosteroids, antidepressants, anticonvulsants, or opiates); and

**\*The Numeric Rating Scale (NRS-11): Rating Pain Level**

- 0: No Pain
- 1 – 3: Mild Pain (nagging, annoying, interfering little with ADLs)
- 4 – 6: Moderate Pain (interferes significantly with ADLs)
- 7 – 10: Severe Pain (disabling; unable to perform ADLs)

- Documentation of a successful diagnostic facet injection trial as evidenced by significant functional pain relief of 50% measured by a decrease in pain medications and increase in physical function for the duration of the anesthetic administered; and
- No more than two joint levels unilateral or bilateral (3 nerves to denervate 2 levels and 6 nerves to denervate 2 levels bilaterally are to be performed at one time

**CONTINUATION OF THERAPY**<sup>46</sup>

Repeat radiofrequency ablation therapy is considered medically necessary when the following criteria is met: [ALL]

- At least six months have elapsed since the previous radiofrequency ablation treatment (maximum of 2 procedures per region annually; **and**
- No more than two joint levels unilateral or bilateral (3 nerves to denervate 2 levels and 6 nerves to denervate 2 levels bilaterally are to be performed at one time; **and**
- Significant functional pain relief of 50% measured by a decrease in pain medications and increase in physical function for at least twelve weeks following the previous treatment

Definitions:

- A zygapophyseal (facet) joint level is defined as the zygapophyseal joint or the two medial branch (MB) nerves that innervate that zygapophyseal joint.
- A session is defined as all injections/blocks procedures performed on one day and includes medial branch blocks (MBB), and intraarticular injections (IA)
- A region is defined as all injections performed in cervical/thoracic or all injections performed in lumbar (not sacral) spinal areas.

#### COVERAGE EXCLUSIONS <sup>45 46 50 51</sup>

- All other requests that do not meet the criteria above are considered **experimental/investigational or unproven**
- Lateral branch nerve radiofrequency ablation of the sacroiliac joint is considered an **experimental/investigational procedure** as there is insufficient evidence from clinical trials to support its safety and effectiveness.
- Pulsed radiofrequency ablation is considered an experimental/investigational procedure as there is insufficient evidence from clinical trials to support its safety and effectiveness.
- Relative or absolute contraindications to RFA include:
  - Neurologic abnormalities
  - Definitive clinical and/or imaging findings
  - Proven specific causes of low back pain, including disc herniation, spondylolisthesis, spondylosis ankylopoietica, spinal stenosis, discogenic or stenotic compression, malignancy, infection, and trauma
  - Allergy to radiopaque contrast or local anesthetic
  - Presence of more than one pain syndrome
  - Lack of response to diagnostic nerve blocks
  - Unstable medical conditions or psychiatric illness

#### SUMMARY OF MEDICAL EVIDENCE <sup>3-39</sup>

The published literature includes moderate quality evidence that percutaneous RFA of spinal nerve branches is safe and may have some efficacy for patients with pain and symptoms originating in the cervical and lumbar spine. Evidence from uncontrolled and a few controlled studies that show RFA may provide short-term pain relief in selected patients with chronic low back pain (LBP), however the majority of patients did not experience complete pain relief, the durability of effect remains unclear and the results are conflicting. Most complications reported in the reviewed studies were transient, and consisted primarily of pain or discomfort during or subsequent to treatment. There is a less substantial and smaller body of evidence of low quality that pulsed RFA is safe and has some benefits for adult patients with chronic LBP, but additional studies are needed before any definitive conclusions can be reached. Patients included in the studies were adults presenting with chronic LBP without a definitive cause that did not respond adequately to conservative therapies. All studies required that patients undergo diagnostic medial nerve branch blocks prior to RFA treatment, and to be candidates for RFA, to have a positive response to at least 1 diagnostic block. Generally, the mean age of the populations was > 40 years old. The primary outcomes, as well as the tools used to measure those outcomes, varied across the literature. Commonly reported secondary outcome measures included pain intensity, duration of relief, physical function, use of analgesics, quality of life (QOL), patient satisfaction, complications, and treatment-related costs. Patients were treated with nonpulsed or pulsed RFA of the medial branch nerves innervating the lumbar or lumbosacral facet joints (zygapophyseal joints) at the spinal level deemed to be associated with pain as determined by the diagnostic nerve branch blocks. Generally, treatments were performed as outpatient procedures and application of RFA was consistent within studies, with most populations treated within a single center by the same treating physician. Across studies, however, there were wide variations in treatment parameters, with temperatures ranging from 67°C to 90°C and RF energy application times ranging from 60 to 120 seconds in the nonpulsed RFA groups; and in the pulsed

RFA group, temperatures of up to 42°C were applied for highly variable intervals and durations. Overall, evidence from randomized, double-blind, sham-controlled trials demonstrated a significant placebo effect, and conflicting results were obtained from RCTs investigating conventional nonpulsed RFA for treating chronic LBP associated with lumbar and lumbosacral facet joint syndrome.

Evidence regarding the efficacy of pulsed RFA as the primary intervention was limited to 3 studies with several different comparator groups. As a result, the data regarding pulsed RFA are insufficient to support conclusions about treatment effect. There is insufficient published evidence to reassess the safety and/or impact on health outcomes or patient management of RFA for the treatment of thoracic back pain.

A summary of the more recent systematic reviews are outlined below.

A 2014 systematic review sought to determine the efficacy of RFA for chronic LBP associated with lumbar facet joints, sacroiliac joints, discogenic LBP, and the coccyx. Searches of several databases identified 11 studies for inclusion, 6 of which were conducted in populations with lumbar facet joint pain diagnosed via medial branch nerve blocks. Conventional nonpulsed RFA was utilized in 5 of the studies, while the remaining study employed a combination treatment of pulsed and nonpulsed RFA. Pain reduction was the primary outcome of interest; however, meta-analysis of the data could not be performed due to inconsistent and poor reporting of mean differences and SDs. In any case, the evidence was supportive of the effectiveness of RFA for LBP associated with the lumbar facet joints (Leggett et al., 2014).<sup>22</sup>

Poetscher and colleagues (2014) evaluated the treatment effects of RF denervation for patients with facet joint-related chronic LBP and the investigators identified 9 publications from several sources meeting inclusion criteria. The investigators suggest that there is low- to moderate-quality evidence to support the effectiveness of RF denervation over sham treatment for treatment of LBP associated with lumbar facet joints. There was insufficient evidence to draw conclusions relating to cost-effectiveness and complications (Poetscher et al., 2014).<sup>30</sup>

A Cochrane review by Maas et al. (2015) had the primary aim of assessing the effectiveness of RF denervation for the treatment of patients with chronic LBP. A total of 23 RCTs were identified via searches of several databases through to May 2014, and by manual searching. Overall, the investigators rated the quality of evidence as low to moderate, with just over half of the included studies (56%) determined to have a low risk of bias. The investigators concluded that while there was low- to moderate-quality evidence to suggest that RF denervation provides pain relief for patients with chronic LBP, the same could not be said for improving function. The authors recognized selective reporting and the avoidance or similarity of cointerventions as the primary issues contributing to bias across the body of evidence. In addition, the authors cite the need for high-quality studies with standardized outcomes, long-term follow-up, and including large samples of carefully selected patients.<sup>25</sup>

Another systematic review (2015) sought to evaluate the clinical utility of facet joint interventions in the treatment of chronic spinal pain. A comprehensive search identified 26 publications for inclusion, with the majority (n=17) specifically evaluating interventions in the lumbar spine. Meta-analysis was not possible due to heterogeneity; however, the investigators found level I and II evidence, respectively, for short- and long-term effectiveness of RF neurotomy in the lumbar spine.<sup>24</sup>

*Professional Society Guidelines*<sup>40-44</sup>

*American Society of Interventional Pain Physicians (ASIPP)*: An updated 2013 practice guideline states that the suggested therapeutic frequency for medial branch neurotomy should remain at intervals of at least 6 months or longer per each region (maximum of 2 times per year) between each procedure, provided that 50% or greater relief is obtained for 10 to 12 weeks. It is further suggested that all regions be treated at the same time, provided all procedures are performed safely. <sup>40</sup>

*American Pain Society (APS)*: The APS guidelines in 2009 determined that there was poor-quality evidence to support the efficacy of RF denervation of the medial branch nerves in patients with presumed facet joint pain. Interpretation of the evidence was deemed to be difficult and controversial due to the uncontrolled facet joint blocks for patient selection and suboptimal RFA techniques in certain studies. Generally, the guideline recognized a reasonable safety profile, with no reporting of serious adverse events (AEs), but generally highlights poor reporting of AEs throughout the literature. <sup>41</sup>

*Institute for Clinical Systems Improvement (ICSI)*: According to an ICSI chronic pain assessment and management guideline released in 2016, percutaneous RFA is a safe procedure for patients who are correctly diagnosed with facet joint pain. This assessment recommends that RFA may be an effective alternative for patients with cervical facet joint pain who have failed conservative treatment, including therapeutic exercise, activity modification, medical therapy, joint injections, and nerve blocks. Properly selected candidates for this procedure should experience complete or nearly complete relief of their pain following fluoroscopically guided, low-volume local anesthetic blocks of the medial or lateral branch nerves that innervate the targeted joints. <sup>44</sup>

**CODING INFORMATION:** THE CODES LISTED IN THIS POLICY ARE FOR REFERENCE PURPOSES ONLY. LISTING OF A SERVICE OR DEVICE CODE IN THIS POLICY DOES NOT IMPLY THAT THE SERVICE DESCRIBED BY THIS CODE IS A COVERED OR NON-COVERED. COVERAGE IS DETERMINED BY THE BENEFIT DOCUMENT. THIS LIST OF CODES MAY NOT BE ALL INCLUSIVE.

CPT	Description
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)
64999	Unlisted procedure, nervous system [when specified as pulsed radiofrequency]

**RESOURCE REFERENCES**

**Government Agency**

- Centers for Medicare & Medicaid Services (CMS) Medicare Coverage Database Homepage. Accessed at: <http://www.cms.hhs.gov/mcd/search.asp>
- Food and Drug Administration (FDA) [website]. Center for Devices and Radiological Health (CDRH). Search 510(k) database. Accessed at: <http://www.fda.gov/MedicalDevices/default.htm>

**Peer Reviewed Publications**

- Bogduk, N. Lumbar Radiofrequency Neurotomy. Clin J Pain 2006; 22:409.

4. Boswell MV, Colson JD, Sehgal N et al. A Systematic Review of Therapeutic Facet Joint Interventions in Chronic Spinal Pain. *Pain Physician* 2007; 10:229-253 • ISSN 1533-3159
5. Carragee EJ, Hurwitz EL, Cheng I et al. 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 Feb 15;33(4 Suppl):S153-69.
6. Cetas JS, Saedi T, Burchiel KJ. Destructive procedures for the treatment of nonmalignant pain: a structured literature review. *Journal of Neurosurgery*. September 2008;109:389-404.
7. Chou R; Atlas SJ; Stanos SP; Rosenquist RW. Nonsurgical interventional therapies for low back pain: a review of the evidence for an american pain society clinical practice guideline. *Spine (Phila Pa 1976)*. 2009 May 1;34(10):1078-93.
8. Chua NH, Vissers KC, Sluijter ME. Pulsed radiofrequency treatment in interventional pain management: mechanisms and potential indications-a review. *Acta Neurochir (Wien)*. 2011 Apr;153(4):763-71. Epub 2010 Nov 30.
9. 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(2):200-6.
10. Cohen SP, Huang JH, Brummett C. Facet joint pain--advances in patient selection and treatment. *Nat Rev Rheumatol*. 2013 Feb;9(2):101-16. doi: 10.1038/nrrheum.2012.198. Epub 2012 Nov 20.
11. Cohen SP, Hurley RW, buckenmaier CC 3rd, Kurihara C, Morlando B, Dragovich A. Randomized placebo-controlled study evaluating lateral branch radiofrequency denervation for sacroiliac joint pain. *Anesthesiology*. 2008 Aug;109(2):279-88.
12. Cohen SP, Hurley RW, Buckenmaier CC III et al. Randomized Placebo-Controlled Study Evaluating Lateral Branch Radiofrequency Denervation for Sacroiliac Joint Pain. *Anesthesiology* 2008 Aug;109(2):279.
13. Cohen SP, Strassels SA, Kurihara C, Crooks MT, Forsythe A, Marcuson M. Outcome predictors for sacroiliac joint (lateral branch) radiofrequency denervation. *Reg Anesth Pain Med*. 2009 May-Jun;34(3):206-14.
14. Cohen SP, Strassels SA, Kurihara C, Lesnick IK et al. Does sensory stimulation threshold affect lumbar facet radiofrequency denervation outcomes? A prospective clinical correlational study. *Anesth. Analg.* - Nov 2011; 113(5); 1233-41
15. Cohen SP, Williams KA, Kurihara C, et al. Multicenter, randomized, comparative cost-effectiveness study comparing 0, 1, and 2 diagnostic medial branch (facet joint nerve) block treatment paradigms before lumbar facet radiofrequency denervation. *Anesthesiology*. 2010 Aug;113(2):395-405
16. Falco FJ, Manchikanti L, Datta S, et al. Systematic review of the therapeutic effectiveness of cervical facet joint interventions: an update. *Pain Physician*. 2012 Nov;15(6):E839-68.
17. Gofeld, M. Radiofrequency facet denervation: a randomized control placebo versus sham procedure. *Clin J Pain* 2006; 22:410.
18. Halim W, van der Weegen W, Lim T, Wullems JA, Vissers KC. Percutaneous cervical nucleoplasty versus pulsed radio frequency of the dorsal root ganglion in patients with contained cervical disc herniation; a prospective, randomized controlled trial. *Pain Pract*. 2016. Epub ahead of print. September 9, 2016
19. Jena BR, Paswan A, Singh Y, Loha S, Singh AP, Rastogi V. A comparative study of continuous versus pulsed radiofrequency discectomy for management of low backache: prospective randomized, double-blind study. *Anesth Essays Res*. 2016;10(3):602-606
20. Kvarstein G, Mawe L, Indahl et al. A randomized double-blind controlled trial of intra-annular radiofrequency thermal disc therapy – A 12-month follow-up. *Journal of the International Association for the Study of Pain*. October 2009;145(3):279-286.
21. Lee DG, Ahn SH, Lee J. Comparative effectiveness of pulsed radiofrequency and transforaminal steroid injection for radicular pain due to disc herniation: a prospective randomized trial. *J Korean Med Sci*. 2016;31(8):1324-1330.
22. Leggett LE, Soril LJ, Lorenzetti DL, et al. Radiofrequency ablation for chronic low back pain: a systematic review of randomized controlled trials. *Pain Res Manag*. 2014;19(5):e146-e153.
23. Manchikanti L, Hirsch JA, Falco FJ, Boswell MV. Management of lumbar zygapophysial (facet) joint pain. *World J Orthop*. 2016;7(5):315-337.

24. 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(4):E535-E582.
25. Maas ET, Ostelo RW, Niemisto L, et al. Radiofrequency denervation for chronic low back pain. *Cochrane Database Syst Rev*. 2015;(10):CD008572.
26. Martin DC, Willis ML, Mullinax A, Clarke NL, Homburger JA, Berger IH. Pulsed radiofrequency application in the treatment of chronic pain. *Pain Pract*. 2007 Mar;7(1):31-5.
27. Moussa WM, Khedr W. Percutaneous radiofrequency facet capsule denervation as an alternative target in lumbar facet syndrome. *Clin Neurol Neurosurg*. 2016;150:96-104.
28. Nath S, Nath CA, Peterson 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):1291-1297.
29. Niemisto L, Kalso EA, Malmivaara A, Seitsalo S, Hurri H. Radiofrequency denervation for neck and back pain. *Cochrane Database of Systematic Reviews* 2003, Issue 1. Art. No.: CD004058. DOI: 10.1002/14651858.CD004058. Updated 2010, Issue 3.
30. Poetscher AW, Gentil AF, Lenza M, Ferretti M. Radiofrequency denervation for facet joint low back pain: a systematic review. *Spine*. 2014;39(14):E842-E849.
31. Rambaransingh B, Stanford G, Burnham R. The effect of repeated zygapophysial joint radiofrequency neurotomy on pain, disability, and improvement duration. *Pain Med*. 2010 Sep;11(9):1343-7. doi: 10.1111/j.1526-4637.2010.00923.x. Epub 2010 Jul 27
32. Sehgal ZN, Dunbar E, Shah R. Systematic Review of Diagnostic Utility of Facet (Zygapophysial) Joint Injections in Chronic Spinal Pain: An Update. *Pain Physician* 2007; 10:213-228 • ISSN 1533-3159
33. Speldewinde GC. Outcomes of percutaneous zygapophysial and sacroiliac joint neurotomy in a community setting. *Pain Med*. 2011 Feb;12(2):209-18. doi: 10.1111/j.1526-4637.2010.01022.x. Epub 2010 Dec 10.
34. Tekin I, Mirzai H, K G et al. A comparison of conventional and pulsed radiofrequency denervation in the treatment of chronic facet joint pain. *Clinical Journal of pain*, 2007;23:524-529.
35. Vallejo R, Benyamin RM, Kramer J, Stanton G, Joseph NJ. Pulsed radiofrequency denervation for the treatment of sacroiliac joint syndrome. *Pain Med*. 2006 Sep-Oct;7(5):429-34.
36. Van Boxem, van Eerd, Brinkhuise T et al. Radiofrequency and pulsed radiofrequency treatment of chronic pain syndromes: the available evidence. *Pain Practice* 2008; 8(5):385-393.
37. Van Zundert J, Patijn 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(1-2):173-182.
38. Wang F, Zhou Q, Xiao L, et al. A randomized comparative study of pulsed radiofrequency treatment with or without selective nerve root block for chronic cervical radicular pain. *Pain Pract*. 2016. Pub ahead of print. October 14, 2016.
39. Zhou Q, Zhou F, Wang L, Liu K. An investigation on the effect of improved x-rays-guided radiofrequency thermocoagulation denervation on lumbar facet joint syndrome. *Clin Neurol Neurosurg*. 2016;148:115-120.

### Professional Society Guidelines

40. *American Society of Interventional Pain Physicians (ASIPP):*
  - Manchikanti L, Abdi S, Atluri S, et al. An update of comprehensive evidence-based guidelines for interventional techniques in chronic spinal pain. Part II: guidance and recommendations. *Pain Physician*. 2013a;16(2 Suppl):S49-S283. Accessed at: <http://www.painphysicianjournal.com/2013/april/2013;16;S49-S283.pdf>
  - Manchikanti L, Falco FJ, Singh V, et al. An update of comprehensive evidence-based guidelines for interventional techniques in chronic spinal pain. Part I: introduction and general considerations. *Pain Physician*. 2013b;16(2 Suppl):S1-S48. Accessed at: <http://www.painphysicianjournal.com/2013/april/2013;16;S1-S48.pdf>

- Manchikanti L, Boswell MV, Singh V. et al. Comprehensive Evidence-Based Guidelines for Interventional Techniques in the Management of Chronic Spinal Pain. *Pain Physician* 2009; 12:699-802 • ISSN 1533-3159
41. *American Pain Society*:
- Chou Roger, Loeser JD, Owens DK et al. Interventional Therapies, Surgery, and Interdisciplinary Rehabilitation for low back pain. An evidence-based clinical practice guideline from the American Pain Society. *Spine*. 2009;34(10):1066-1077.
  - Chou R, Huffman LH. Guideline for the Evaluation and Management of Low Back Pain: Evidence Review. Glenview, IL: American Pain Society; 2009. Available at: <http://americanpainsociety.org/uploads/education/guidelines/evaluation-management-lowback-pain.pdf>.
42. Boswell, MV, Shah, RV, Everett, et al. Interventional techniques in the management of chronic spinal pain: evidence-based practice guidelines. *Pain Physician*. 2005;8(1):1
43. National Collaborating Center for Primary Care. Low back pain. Early management of persistent non-specific low back pain. London (UK): National Institute for Health and Clinical Excellence (NICE): May 2009. 25p. (Clinical guideline; no.88). Accessed at: <http://www.nice.org.uk/nicemedia/pdf/CG88NICEGuideline.pdf>
44. *Institute for Clinical Systems Improvement*. Hooten M, Thorson D, Bianco J, Bonte B, Clavel Jr A, Hora J, Johnson C, Kirksson E, Noonan MP, Reznikoff C, Schweim K, Wainio J, Walker N. Institute for Clinical Systems Improvement. Pain: Assessment, Non-Opioid Treatment Approaches and Opioid Management. Updated for Public Comment. July 2016. Accessed at: [https://www.icsi.org/\\_asset/3chf18/PainPC0716.pdf](https://www.icsi.org/_asset/3chf18/PainPC0716.pdf)

#### Other Resources

45. Hayes, Inc. Medical Technology Directory. Lansdale, PA: Hayes, Inc.:
- Radiofrequency Ablation for Facet Joint Denervation for Chronic Low Back Pain. Dec 1, 2016. Updated Nov, 2018.
  - Percutaneous Radiofrequency Ablation for Cervical and Thoracic Spinal Indications. Nov 3, 2016. Updated Oct, 2018.
  - Radiofrequency Ablation of the Dorsal Root Ganglion for Treatment of Back Pain. (Search & Summary). Jan, 2019.
46. Official Disability Guidelines. Facet joint radiofrequency neurotomy. Updated 2017.
47. UpToDate. [website]. Waltham, MA: Walters Kluwer Health; 2019:
- Smith H. Evaluation of Chronic Pain in Adults. Literature review current through: 2019.
  - Chou R. Subacute and chronic low back pain: Nonsurgical interventional treatment. Literature review current through: 2019.
  - Anderson B, Isaac. Treatment of Neck Pain. Literature review current through: 2019.
48. McKesson InterQual Procedures. Neuroablation, Percutaneous. 2018.
49. Dynamed [Internet]. Ipswich (MA): EBSCO Publishing 1995-2019.
- Facet Joint Syndrome.
  - Chronic low back pain.
  - Neck pain.
50. Advanced Medical Review: Policy reviewed by MD board certified in Physical Med & Rehab, Pain Medicine. May 22, 2013 and April 9, 2017.
51. AIM's Clinical Appropriateness Guideline. Musculoskeletal Program. Interventional Pain Management. 2019. Accessed at: [http://www.aimspecialtyhealth.com/PDF/Guidelines/2019/Jan01/AIM\\_Guidelines\\_MSK\\_Interventional-Pain-Management.pdf](http://www.aimspecialtyhealth.com/PDF/Guidelines/2019/Jan01/AIM_Guidelines_MSK_Interventional-Pain-Management.pdf)

#### Revision/Review History

7/17: Reduced PT requirement from 20 sessions to 10-12 sessions over 8 weeks, changed improvement scales from significant functional improvement of 80% to significant functional pain relief of 50% measured by a decrease in pain

*medication and increase in functional ability, moved and added additional relative or absolute contraindications to RFA to exclusions section, removed the neuroimaging requirement and added that thoracic region RFA are considered experimental, investigational and unproven. . Changes are based on 2017 ODG Guidelines per AMR review. 3/8/18 & 6/19/19: Policy reviewed, no changes to criteria.*