CIGNA MEDICAL COVERAGE POLICIES - MUSCULOSKELETAL

CMM-605: Cervical Microdiscectomy

Effective Date: August 04, 2026

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.

These guidelines include procedures EviCore does not review for Cigna. Please refer to the **Cigna CPT code list** for the current list of high-tech imaging procedures that EviCore reviews for Cigna.

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CMM-605.1: General Guidelines

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General Guidelines

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Application of Guideline

- The determination of medical necessity for the performance of cervical microdiscectomy is always made on a case-by-case basis.
- For additional timing and documentation requirements, see **CMM-600.1: Prior Authorization Requirements**.

Urgent/Emergent Conditions/Indications

- The presence of urgent/emergent indications/conditions warrants definitive surgical treatment. **Imaging findings noted in the applicable procedure section(s) are required.**
  - The following criteria are NOT required for confirmed urgent/emergent conditions:
    - provider-directed non-surgical management
    - absence of unmanaged significant mental and/or behavioral health disorders (e.g., major depressive disorder, chronic pain syndrome, secondary gain, opioid and alcohol use disorders)
    - time frame for repeat procedure
- Urgent/emergent conditions for cervical microdiscectomy include ANY of the following:
  - central cord syndrome
  - myelopathy or cord signal changes on MRI due to cord compression
  - progressive neurological deficit documented on two separate physical exams
  - neurocompressive pathology with ANY of the following:
    - motor weakness of grade 3/5 or less of specified muscle(s)
    - rapidly progressive symptoms of motor loss
    - bowel incontinence
    - bladder incontinence/retention
  - a condition otherwise meeting criteria listed in the applicable procedure section(s) with documentation of severe debilitating pain and/or dysfunction to the point of being incapacitated

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.

CMM-605.2: Initial Primary Cervical Microdiscectomy

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CMM-605.2: Initial Primary Cervical Microdiscectomy

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Initial primary cervical microdiscectomy is considered **medically necessary** when performed for EITHER of the following conditions when ALL of the associated criteria have been met:

Radiculopathy

- Symptoms include BOTH of the following:
  - significant level of pain on a daily basis defined as clinically significant functional impairment (e.g., inability to perform household chores, prolonged standing, etc.)
  - unremitting radicular pain to shoulder girdle and/or upper extremity resulting in disability
- Physical exam findings include ANY of the following:
  - dermatomal sensory deficit
  - motor deficit (e.g., biceps, triceps weakness)
  - reflex changes
  - shoulder abduction relief sign
  - nerve root tension sign (e.g., Spurling's maneuver)
  - unremitting radicular pain to shoulder girdle and/or upper extremity without concordant objective physical exam findings
- Less than clinically meaningful improvement with at least TWO of the following (unless contraindicated):
  - prescription strength analgesics, steroids, gabapentinoids, and/or nonsteroidal anti-inflammatory drugs (NSAIDs) for six (6) weeks
  - provider-directed exercise program (prescribed by a physical therapist, chiropractic provider, osteopathic or allopathic physician) for six (6) weeks
  - epidural steroid injection(s) or selective nerve root block(s) performed at the same level(s) as the requested surgery
- MRI/CT shows neural structure compression at the requested level(s) that is concordant with the individual's symptoms and physical exam findings and that is caused by ANY of the following:
  - herniated disc(s) (retained disc material or a recurrent disc herniation)
  - synovial cyst or arachnoid cyst
  - central/lateral/foraminal stenosis
  - osteophytes

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- Absence of unmanaged significant mental and/or behavioral health disorders (e.g., major depressive disorder, chronic pain syndrome, secondary gain, opioid and alcohol use disorders)

Myelopathy

- Symptoms include ANY of the following:
  - upper/lower extremity weakness, numbness, or pain
  - fine motor dysfunction (buttoning, handwriting, clumsiness of hands)
  - gait disturbance
  - new-onset bowel or bladder dysfunction
  - frequent falls
- Physical exam findings include ANY of the following:
  - grip and release test
  - ataxic gait
  - hyperreflexia
  - Hoffmann sign
  - Babinski sign
  - tandem walking test demonstrating ataxia
  - inverted brachial radial reflex
  - increased muscle tone or spasticity
  - clonus
  - myelopathic hand
- MRI/CT shows findings that are concordant with the individual's symptoms and physical exam findings and that are caused by EITHER of the following:
  - cervical spinal cord compression
  - cervical spinal stenosis

CMM-605.3: Repeat Cervical Microdiscectomy at the Same Level

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CMM-605.3: Repeat Cervical Microdiscectomy at the Same Level

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Repeat cervical microdiscectomy at the same level is considered **medically necessary** when performed for EITHER of the following conditions when ALL of the associated criteria have been met:

Radiculopathy

- Greater than 12 weeks since the prior cervical microdiscectomy
- Symptoms include BOTH of the following:
  - significant level of pain on a daily basis defined as clinically significant functional impairment (e.g., inability to perform household chores, prolonged standing, etc.)
  - unremitting radicular pain to shoulder girdle and/or upper extremity resulting in disability
- Physical exam findings include ANY of the following:
  - dermatomal sensory deficit
  - motor deficit (e.g., biceps, triceps weakness)
  - reflex changes
  - shoulder abduction relief sign
  - nerve root tension sign (e.g., Spurling's maneuver)
  - unremitting radicular pain to shoulder girdle and/or upper extremity without concordant objective physical exam findings
- Less than clinically meaningful improvement with at least TWO of the following (unless contraindicated):
  - prescription strength analgesics, steroids, gabapentinoids, and/or nonsteroidal anti-inflammatory drugs (NSAIDs) for six (6) weeks
  - provider-directed exercise program (prescribed by a physical therapist, chiropractic provider, osteopathic or allopathic physician) for six (6) weeks
  - epidural steroid injection(s) or selective nerve root block(s) performed at the same level(s) as the requested surgery
- Post-operative MRI/CT shows neural structure compression at the requested level(s) that is concordant with the individual's symptoms and physical exam findings and that is caused by ANY of the following:
  - herniated disc(s) (retained disc material or a recurrent disc herniation)
  - synovial cyst or arachnoid cyst
  - central/lateral/foraminal stenosis

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  - osteophytes
- Absence of unmanaged significant mental and/or behavioral health disorders (e.g., major depressive disorder, chronic pain syndrome, secondary gain, opioid and alcohol use disorders)

Myelopathy

- Symptoms include ANY of the following:
  - upper/lower extremity weakness, numbness, or pain
  - fine motor dysfunction (buttoning, handwriting, clumsiness of hands)
  - gait disturbance
  - new-onset bowel or bladder dysfunction
  - frequent falls
- Physical exam findings include ANY of the following:
  - grip and release test
  - ataxic gait
  - hyperreflexia
  - Hoffmann sign
  - Babinski sign
  - tandem walking test demonstrating ataxia
  - inverted brachial radial reflex
  - increased muscle tone or spasticity
  - clonus
  - myelopathic hand
- Post-operative MRI/CT shows findings that are concordant with the individual's symptoms and physical exam findings and that are caused by EITHER of the following:
  - cervical spinal cord compression
  - cervical spinal stenosis

CMM-605.4: Non-Indications

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Non-Indications

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Not Medically Necessary

- Cervical microdiscectomy performed without meeting the criteria in the **General Guidelines** (when applicable for urgent/emergent conditions) and the criteria in the applicable procedure-specific section **(initial microdiscectomy** or **repeat microdiscectomy**) is considered **not medically necessary**.
- Cervical microdiscectomy is considered **not medically necessary** when performed for ANY of the following sole indications:
  - annular tears
  - concordant discography
  - MR Spectroscopy results
  - degenerative disc disease

Experimental, Investigational, or Unproven (EIU)

- Percutaneous cervical discectomy (i.e., performed with indirect visualization of the spine) is considered **experimental, investigational, or unproven**.
- Endoscopic cervical discectomy is considered **experimental, investigational, or unproven**.

Codes (CMM-605)

Codes (CMM-605)

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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
63020	Laminotomy (hemilaminectomy), with decompression of nerve root(s), including partial facetectomy, foraminotomy and/or excision of herniated intervertebral disc; 1 interspace, cervical
+63035	Laminotomy (hemilaminectomy), with decompression of nerve root(s), including partial facetectomy, foraminotomy and/or excision of herniated intervertebral disc; each additional interspace, cervical or lumbar (List separately in addition to code for primary procedure)
63040	Laminotomy (hemilaminectomy), with decompression of nerve root(s), including partial facetectomy, foraminotomy and/or excision of herniated intervertebral disc, reexploration, single interspace; cervical
+63043	Laminotomy (hemilaminectomy), with decompression of nerve root(s), including partial facetectomy, foraminotomy and/or excision of herniated intervertebral disc, reexploration, single interspace; each additional cervical interspace (List separately in addition to code for primary procedure)

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Evidence Discussion (CMM-605)

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Evidence Discussion (CMM-605)

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Cervical Microdiscectomy

Risks of posterior cervical microdiscectomy surgery include, but are not limited to, the following: infection; hematoma; persistent or incomplete relief of symptoms; post-operative instability or kyphosis; disk degeneration; possible need for additional surgery including fusion; dural tear, stroke; bleeding; vertebral artery injury; nerve root injury; spinal cord injury; paralysis; and death.[2,47] Some of these complications can be devastating and lead to poor outcome. Indications for surgery include individuals with radiculopathy or myelopathy. Given the potential possibility for significant complications, proper surgical candidacy selection is critical to minimize the risk benefit ratio.

As recommended by the North American Spine Society (NASS) *Coverage Policy Recommendations: Cervical Laminectomy and Laminoplasty*, history, symptoms, physical exam findings, and imaging findings should support cervical microdiscectomy.[37] Subjective symptoms and examination findings need to be concordant with imaging as is not uncommon for asymptomatic individuals to have abnormalities on MRI.[7,31,38]

Multiple studies have shown that the vast majority of individuals with cervical radiculopathy will improve with a 4-6 week course of non-operative treatment.[12,30,49] Initial non-operative management is also noted as a recommendation in the North American Spine Society (NASS) *Coverage Policy Recommendations: Cervical Laminectomy and Laminoplasty*.[37] However, for individuals with myelopathy or other urgent/emergent conditions (e.g., progressive neurologic deficit), a trial of non-operative treatment would not be necessary.

Contraindications to cervical microdiscectomy, as noted in the North American Spine Society (NASS) *Coverage Policy Recommendations: Cervical Laminectomy and Laminoplasty*, include treatment of discogenic axial neck pain without neurological symptoms and asymptomatic spinal stenosis without MRI evidence of intrinsic spinal cord signal change.[37]

Jackson et al. (2020) noted higher rates of postoperative complications and worse functional outcomes in individuals with psychological disorders undergoing spinal surgery.[24] It was concluded that proper identification and treatment of these conditions prior to surgery may significantly improve many outcome measures in this population.

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1. American Association of Neuroscience Nurses (AANN). *AANN Clinical Practice Guideline Series Cervical Spine Surgery: A guide to preoperative and postoperative patient care*. 2007. [Internet]. Chicago, IL. ©American Association of Neuroscience Nurses (AANN). Available at: https://www.aann.org.
2. Badiee RK, Mayer R, Pennicooke B, Chou D, Mummaneni PV, Tan LA. Complications following posterior cervical decompression and fusion: a review of incidence, risk factors, and prevention strategies. *J Spine Surg*. 2020;6(1):323-333. doi:10.21037/jss.2019.11.01.
3. Barton C, Kalakoti P, Bedard NA, Hendrickson NR, Saifi C, Pugely AJ. What are the costs of cervical radiculopathy prior to surgical treatment? *Spine*. 2019;44(13):937-942. doi:10.1097/brs.0000000000002983.
4. Bond M, McIntosh G, Fisher C, et al. Treatment of mild cervical myelopathy. *Spine* (*Phila Pa 1976*). 2019;44(22):1606-1612. doi:10.1097/brs.0000000000003124.
5. Bono CM, Chiselli G, Gilbert TJ, et al. An evidence-based clinical guideline for the diagnosis and treatment of cervical radiculopathy from degenerative disorders. *Spine J*. 2011;11(1):64-72. doi:10.1016/j.spinee.2010.10.023.
6. Boonstra AM, Schiphorst Preuper HR, Balk GA, Stewart RE. Cut-off points for mild, moderate, and severe pain on the visual analogue scale for pain in patients with chronic musculoskeletal pain. *Pain*. 2014;155(12):2545-2550. doi:10.1016/j.pain.2014.09.014.
7. Brinjikji W, Luetmer PH, Comstock B, et al. Systematic literature review of imaging features of spinal degeneration in asymptomatic populations. *AJNR Am J Neuroradiol*. 2015;36(4):811-816. doi:10.3174/ajnr.A4173.
8. Broekema AEH, Simões de Souza NF, Soer R, et al. Noninferiority of posterior cervical foraminotomy vs anterior cervical discectomy with fusion for procedural success and reduction in arm pain among patients with cervical radiculopathy at 1 Year. *JAMA Neurol*. 2023;80(1):40-40. doi:10.1001/jamaneurol.2022.4208.
9. Celestre PC, Pazmiño PR, Mikhail MM, et al. Minimally invasive approaches to the cervical spine. *Orthop Clin North Am*. 2012;43(1):137-147. doi:10.1016/j.ocl.2011.08.007.
10. Changoor S, Farshchian J, Patel N, et al. Comparing outcomes between anterior cervical disc replacement (ACDR) and minimally invasive posterior cervical foraminotomy (MI-PCF) in the treatment of cervical radiculopathy. *Spine J*. 2024;24(5):800-806. doi:10.1016/j.spinee.2023.12.010.
11. Chatley A, Kumar R, Jain V, Behari S, Sahu R. Effect of spinal cord signal intensity changes on clinical outcome after surgery for cervical spondylotic myelopathy. *J Neurosurg Spine*. 2009;11(5):562-567. doi:10.3171/2009.6.spine091.
12. Childress MA, Becker BA. Nonoperative management of cervical radiculopathy. *Am Fam Physician*. 2016;93(9):746-754.
13. Cohen SP, Hanling S, Bicket MC, et al. Epidural steroid injections compared with gabapentin for lumbosacral radicular pain: multicenter randomized double blind comparative efficacy study. *BMJ*. 2015;350:h1748. doi:10.1136/bmj.h1748.
14. Cunningham MR, Hershman S, Bendo J. Systematic review of cohort studies comparing surgical treatments for cervical spondylotic myelopathy. *Spine*. 2010;35(5):537-543.
15. Decker RC. Surgical treatment and outcomes of cervical radiculopathy. *Phys Med Rehabil Clin N Am*. 2011;22(1):179-191. doi:10.1016/j.pmr.2010.12.001.
16. de Rooij J, Harhangi B, Aukes H, Groeneweg G, Stronks D, Huygen F. The effect of percutaneous nucleoplasty vs anterior discectomy in patients with cervical radicular pain due to a single-level contained soft-disc herniation: a randomized controlled trial. *Pain Physician*. 2020;23(6):553-564.
17. Emami A, Coban D, Changoor S, et al. Comparing mid-term outcomes between ACDF and minimally invasive posterior cervical foraminotomy in the treatment of cervical radiculopathy. *Spine (Phila Pa 1976)*. 2021; Publish Ahead of Print. doi:10.1097/brs.0000000000004140.
18. Farshad M, Burgstaller JM, Held U, et al. Do preoperative corticosteroid injections increase the risk for infections or wound healing problems after spine surgery? *Spine*. 2018;43(15):1089-1094.

19. Fejer R, Jordan A, Hartvigsen J. Categorising the severity of neck pain: Establishment of cut-points for use in clinical and epidemiological research. *Pain*. 2005;119(1-3):176-182. doi:10.1016/j.pain.2005.09.033.
20. Grabowski G, Cornett CA, Kang JD. Esophageal and vertebral artery injuries during complex cervical spine surgery--avoidance and management. *Orthop Clin North Am*. 2012;43(1):63-74, viii.
21. Heary RF, Ryken TC, Matz PG, et al. Cervical laminoforaminotomy for the treatment of cervical degenerative radiculopathy. *J Neurosurg Spine*. 2009;11(2):198-202. doi:10.3171/2009.2.SPINE08722.
22. Hilton B, Tempest-Mitchell J, Davies B, Kotter M. Assessment of degenerative cervical myelopathy differs between specialists and may influence time to diagnosis and clinical outcomes. *PLoS ONE*. 2018;13(12). doi:10.1371/journal.pone.0207709.
23. Hsu WK. Advanced techniques in cervical spine surgery. *JBJS Am*. 2011;93(8):780-788.
24. Jackson KL, Rumley J, Griffith M, Agochukwu U, DeVine J. Correlating psychological comorbidities and outcomes after spine surgery. *Global Spine J*. 2020;10(7):929-939. doi:10.1177/2192568219886595.
25. Jagannathan J, Sherman JH, Szabo T, Shaffrey CI, Jane JA. The posterior cervical foraminotomy in the treatment of cervical disc/osteophyte disease: a single-surgeon experience with a minimum of 5 years' clinical and radiographic follow-up. *J Neurosurg Spine*. 2009;10(4):347-356.
26. Jayaram RH, Joo P, Gouzoulis MJ, Ratnasamy PP, Caruana D, Moore HE. Single-level anterior cervical discectomy and fusion has lower five-year revisions than posterior cervical foraminotomy in a large national cohort. *Spine (Phila Pa 1976)*. 2023;48(18):1266-1271. doi:10.1097/BRS.0000000000004754.
27. Kushchayev SV, Glushko T, Jarraya M, et al. ABCs of the degenerative spine. *Insights Imaging*. 2018;9(2):253-274. doi:10.1007/s13244-017-0584-z.
28. Lee BS, Nault R, Grabowski M, et al. Utility of repeat magnetic resonance imaging in surgical patients with lumbar stenosis without disc herniation. *Spine J*. 2019;19(2):191-198. doi:10.1016/j.spinee.2018.06.357.
29. Lutz S, Berk L, Chang E, et al. Palliative radiotherapy for bone metastases: an ASTRO evidence-based guideline. *Int J Radiat Oncol Biol Phys*. 2011;79(4):965-976. doi:10.1016/j.ijrobp.2010.11.026.
30. Luyao H, Xiaoxiao Y, Tianxiao F, Yuandong L, Ping Wang. Management of cervical spondylotic radiculopathy: a systematic review. *Global Spine J*. 2022;12(8):1912-1924. doi:10.1177/21925682221075290.
31. Matsumoto M, Fujimura Y, Suzuki N, et al. MRI of cervical intervertebral discs in asymptomatic subjects. *J Bone Joint Surg Br*. 1998;80(1):19-24. doi:10.1302/0301-620x.80b1.7929.
32. Miller J, Gross A, D'Sylva J, et al. Manual therapy and exercise for neck pain: a systematic review. *Man Ther*. 2010;15(4):334-354. doi:10.1016/j.math.2010.02.007.
33. Molina CA, Gokaslan ZL, Sciubba DM. Diagnosis and management of metastatic cervical spine tumors. *Orthop Clin North Am*. 2012;43(1):75-87, viii-ix.
34. Mummaneni PV, Kaiser MG, Matz PG, et al. Cervical surgical techniques for the treatment of cervical spondylotic myelopathy. *J Neurosurg Spine*. 2009;11(2):130-141. doi:10.3171/2009.3.SPINE08728.
35. Mummaneni PV, Kaiser MG, Matz PG, et al. Preoperative patient selection with magnetic resonance imaging, computed tomography, and electroencephalography: does the test predict outcome after cervical surgery? *J Neurosurg Spine*. 2009;11(2):119-129. doi:10.3171/2009.3.SPINE08717.
36. Nikolaidis I, Fouyas IP, Sandercock PA, Statham PF. Surgery for cervical radiculopathy or myelopathy. *Cochrane Database Syst Rev*. 2010;2010(1):CD001466. Published 2010 Jan 20. doi:10.1002/14651858.CD001466.pub3.
37. North American Spine Society (NASS). *Coverage Policy Recommendations: Cervical Laminectomy and Laminoplasty*. Sept 2023. Burr Ridge, IL. North American Spine Society (NASS). Available at: https://www.spine.org.
38. North American Spine Society (NASS). *Evidence-Based Clinical Guidelines for Multidisciplinary Spine Care: Diagnosis and Treatment of Cervical Radiculopathy from Degenerative Disorders*. 2010. Burr Ridge, IL. © North American Spine Society (NASS). Available at: https://www.spine.org.
39. Panagopoulos J, Hush J, Steffens D, Hancock MJ. Do MRI findings change over a period of up to 1 year in patients with low back pain and/or sciatica? *Spine*. 2017;42(7):504-512. doi:10.1097/brs.0000000000001790.
40. Rao RD, Currier BL, Albert TJ, et al. Degenerative cervical spondylosis: clinical syndromes, pathogenesis, and management. *JBJS Am*. 2007;89(6):1360-1378. doi:10.2106/00004623-200706000-00026.
41. Ries ZG, Glassman SD, Vasilyev I, Metcalfe L, Carreon LY. Updated imaging does not affect revision rates in adults undergoing spine surgery for lumbar degenerative disease. *J Neurosurg Spine*. Published online Nov 2018. 2019;30(2):228-223. doi:10.3171/2018.8.spine18586.

42. Rueth N, Shaw D, Groth S, et al. Management of cervical esophageal injury after spinal surgery. *Ann Thoracic Surg*. 2010;90(4):1128-1133. doi:10.1016/j.athoracsur.2010.06.045.
43. Sahai N, Changoor S, Dunn C, et al. Minimally invasive posterior cervical foraminotomy as an alternative to anterior cervical discectomy and fusion for unilateral cervical radiculopathy. *Spine (Phila Pa 1976)*. 2019;44(24):1731-1739. doi:10.1097/brs.0000000000003156.
44. Shafshak TS, Elnemr R. The visual analogue scale versus numerical rating scale in measuring pain severity and predicting disability in low back pain. *J Clin Rheumatol*. 2020;27(7):1. doi:10.1097/rhu.0000000000001320.
45. Shousha M, Boehm H. Surgical treatment of cervical spondylodiscitis: a review of 30 consecutive patients. *Spine*. 2012;37(1):E30-E36. doi:10.1097/BRS.0b013e31821bfdb2.
46. Simões de Souza NF, Broekema AEH, Reneman MF, et al. Posterior cervical foraminotomy compared with anterior cervical discectomy with fusion for cervical radiculopathy: two-year results of the FACET randomized noninferiority study. *J Bone Joint Surg Am*. 2024;106(18):1653-1663. doi:10.2106/JBJS.23.00775.
47. Skovrlj B, Gologorsky Y, Haque R, Fessler RG, Qureshi SA. Complications, outcomes, and need for fusion after minimally invasive posterior cervical foraminotomy and microdiscectomy. *Spine J*. 2014;14(10):2405-2411. doi:10.1016/j.spinee.2014.01.048.
48. Smeltzer SC, Bare BG, Hinkle JL, Cheever KH. Management of patients with oncologic or degenerative neurologic disorders. In: Smeltzer SC, Bare BG, Hinkle JL, Cheever KH, eds. *Brunner & Suddarth's Textbook of Medical-Surgical Nursing*. 12th ed. Philadelphia, PA. Lippincott Williams & Wilkins; 2010:1975-2005. ISBN-13: 978-0-7817-8592-1.
49. Swezey RL. Conservative treatment of cervical radiculopathy. *J Clin Rheumatol*. 1999;5(2):65-73. doi:10.1097/00124743-199904000-00006.
50. Tomaras CR, Blacklock JB, Parker WD, Harper RL. Outpatient surgical treatment of cervical radiculopathy. *J Neurosurg*. 1997;87(1):41-43.
51. Tracy JA, Bartleson JD. Cervical spondylotic myelopathy. *Neurologist*. 2010;16(3):176-187.
52. Yaksi A, Özgönenel L, Özgönenel B. The efficiency of gabapentin therapy in patients with lumbar spinal stenosis. *Spine*. 2007;32(9):939-942. doi:10.1097/01.brs.0000261029.29170.e6.
53. Yin L, Zhang J, Wu Y, Li J, Yang Q. Increased signal intensity of spinal cord on T2W magnetic resonance imaging for cervical spondylotic myelopathy patients. *Medicine (Baltimore)*. 2020;99(49):e23098. doi:10.1097/md.0000000000023098.