MEDICAL POLICY



| MEDICAL POLICY DETAILS | |
|-------------------------------|--|
| Medical Policy Title | Intervertebral Disc Decompression: Laser (Laser Discectomy) and Radiofrequency |
| | Coblation (Disc Nucleoplasty) Techniques |
| Policy Number | 7.01.62 |
| Category | Technology Assessment |
| Original Effective Date | 02/19/04 |
| Committee Approval | 10/20/04, 09/15/05, 07/20/06, 05/17/07, 04/17/08, 03/19/09, 01/21/10, 01/20/11, 01/19/12, |
| Date | 01/17/13, 01/16/14, 12/18/14, 12/17/15, 12/15/16, 12/21/17, 06/21/18, 07/18/19, 12/19/19, |
| | 12/17/20, 12/16/21, 12/22/22, 11/16/23 |
| Current Effective Date | 11/16/23 |
| Archived Date | N/A |
| Archive Review Date | N/A |
| Product Disclaimer | • If a product excludes coverage for a service, it is not covered, and medical policy criteria do not apply. |
| | • If a commercial product (including an Essential Plan or Child Health Plus product), medical policy criteria apply to the benefit. |
| | • If a Medicaid product covers a specific service, and there are no New York State Medicaid guidelines (eMedNY) criteria, medical policy criteria apply to the benefit. |
| | • If a Medicare product (including Medicare HMO-Dual Special Needs Program(DSNP) product) covers a specific service, and there is no national or local Medicare coverage decision for the service, medical policy criteria apply to the benefit. |
| | • If a Medicare HMO-Dual Special Needs Program (DSNP) product DOES NOT cover a specific service, please refer to the Medicaid Product coverage line. |

POLICY STATEMENT

Based upon our criteria and assessment of the peer-reviewed literature, decompression of the intervertebral disc using percutaneous laser (laser discectomy) or radiofrequency energy (Disc Nucleoplasty) has not been medically proven to be effective and, therefore, is considered **investigational.**

Refer to Corporate Medical Policy #7.01.16 Automated Percutaneous Discectomy and Image-Guided, Minimally Invasive Decompression

Refer to Corporate Medical Policy #7.01.17 Percutaneous Intradiscal Electrothermal Annuloplasty (IDET/IDTA, PIRFT, biacuplasty) and Intradiscal Injections

Refer to Corporate Medical Policy #11.01.03 Experimental and Investigational Services

POLICY GUIDELINES

This policy does not address annuloplasty therapies, which utilize radiofrequency energy to thermally treat discogenic low back pain.

DESCRIPTION

A variety of techniques have been developed to treat low back pain related to disc disease. Decompression of the intervertebral disc is accomplished by removing or ablating herniated disc material. A number of procedures have been developed as alternatives to open and microsurgical techniques.

Laser discectomy and radiofrequency ablation are newer percutaneous techniques for disc decompression. Laser discectomy delivers laser energy to the nucleus under fluoroscopic guidance, to ablate tissue. Radiofrequency ablation or disc nucleoplasty uses bipolar radiofrequency energy in a process called coblation technology, in which small, multiple

Medical Policy: INTERVERTEBRAL DISC DECOMPRESSION: LASER (LASER DISCECTOMY) AND RADIOFREQUENCY COBLATION (DISC NUCLEOPLASTY) TECHNIQUES

Policy Number: 7.01.62

Page: 2 of 4

electrodes ablate tissue with a low-temperature plasma field of ionized particles. The particles break organic molecular bonds within the tissue, creating small channels in the disc.

RATIONALE

Indications approved by the U.S. Food and Drug Administration (FDA) for the Homium YAG laser include discectomy. The FDA granted Section 510(k) premarket approval for the use of Arthrocare's Perc-D SpineWand with the ArthroCare System 2000 for ablation, coagulation, and decompression of disk material.

In 2016, the National Institute for Health and Care Excellence (NICE) updated its guidance on laser lumbar discectomy for the treatment of sciatica. The guidance stated that current evidence "is inadequate in quantity and quality." NICE also updated its guidance on percutaneous disc decompression using coblation for lower back pain and sciatica in 2016. NICE stated, "Current evidence on percutaneous coblation of the intervertebral disc for low back pain and sciatica raises no major safety concerns. The evidence on efficacy is adequate and includes large numbers of patients with appropriate follow-up periods." The guidance also noted that patients should be informed of the range of treatment options available.

While numerous case series and uncontrolled studies have reported improvements in pain levels and functioning following laser discectomy, the lack of well-designed and well-conducted controlled trials limits interpretation of reported data. The evidence is insufficient to determine the effect of the technology on health outcomes.

For nucleoplasty, there are two randomized, controlled trials (RCT), in addition to several uncontrolled studies. These RCTs are limited by the lack of blinding, an inadequate control condition in one, and inadequate data reporting in the second. The available evidence is insufficient to permit conclusions concerning the effect of these procedures on health outcomes, due to multiple confounding factors that may bias results. High-quality, randomized trials with adequate follow-up (at least one year), that control for selection bias, the placebo effect, and variability in the natural history of low back pain, are needed. The evidence is insufficient to determine the effect of the technology on health outcomes.

CODES

- Eligibility for reimbursement is based upon the benefits set forth in the member's subscriber contract.
- CODES MAY NOT BE COVERED UNDER ALL CIRCUMSTANCES. PLEASE READ THE POLICY AND GUIDELINES STATEMENTS CAREFULLY.
- Codes may not be all inclusive as the AMA and CMS code updates may occur more frequently than policy updates.
- Code Key: Experimental/Investigational = (E/I), Not medically necessary/appropriate = (NMN).

CPT Codes

| Code | Description |
|-------------|---|
| 62287 (E/I) | Decompression procedure, percutaneous, of nucleus pulposus of intervertebral disc, any method, utilizing needle based technique to remove disc material under fluoroscopic imaging or other form of indirect visualization, with discography and/or epidural injection(s) at the treated levels(s), when performed, single or multiple levels, lumbar |

Copyright © 2023 American Medical Association, Chicago, IL

HCPCS Codes

| Code | Description |
|-------------|--|
| S2348 (E/I) | Decompression procedure, percutaneous, of nucleus pulposus of intervertebral disc, |
| | using radiofrequency energy, single or multiple levels, lumbar |

ICD10 Codes

| Code | Description |
|--------|---|
| M51.06 | Intervertebral disc disorders with myelopathy, lumbar |

Medical Policy: INTERVERTEBRAL DISC DECOMPRESSION: LASER (LASER DISCECTOMY) AND RADIOFREQUENCY COBLATION (DISC NUCLEOPLASTY) TECHNIQUES

Policy Number: 7.01.62

Page: 3 of 4

| Code | Description |
|--------|--|
| M51.16 | Intervertebral disc disorders with radiculopathy, lumbar |
| M51.17 | Intervertebral disc disorders with radiculopathy, lumbosacral region |
| M51.26 | Other intervertebral disc displacement, lumbar region |
| M51.27 | Other intervertebral disc displacement, lumbosacral region |
| M51.36 | Other intervertebral disc degeneration, lumbar region |
| M51.37 | Other intervertebral disc degeneration, lumbosacral region |

REFERENCES

*Al-Zain F, et al. Minimally invasive spinal surgery using nucleoplasty: a 1-year follow-up study. <u>Acta Neurochir</u> 2008 Dec;150(12):1257-62.

*Cesaroni A, et al. Plasma disc decompression for contained cervical disc herniation: a randomized, controlled trial. <u>Eur</u> Spine J 2010 Mar;19(3):477-86.

Chen, CH, et al. Analysis of the clinical and radiological outcomes of percutaneous cervical nucleoplasty: A case-control study. <u>PLoS One</u> 2022;17(12).

Cheng L, et al. Modified full-endoscopic interlaminar discectomy via an inferior endplate approach for lumbar disc herniation: retrospective 3-year results from 321 patients. World Neurosurg 2020 Sep;141:e537-e544.

de Rooij J, et al. 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. <u>Pain Physician</u> 2020 Nov;23(6):553-564.

*Gerszten PC, et al. Plasma disc decompression compared with fluoroscopy-guided transforaminal epidural steroid injections for symptomatic contained lumbar disc herniation: a prospective, randomized, controlled trial. <u>J Neurosurg</u> Spine 2010 Apr;12(4):357-71.

Grasso G, et al. Prevention of lumbar reherniation by the intraoperative use of a radiofrequency bipolar device: a case-control study. J Craniovertebr Junction Spine 2019 Apr-Jun;10(2):94-99.

Lewandrowski K, et al. Outcomes with transforaminal endoscopic versus percutaneous laser decompression for contained lumbar herniated disc: a survival analysis of treatment benefit. <u>J Spine Surg</u> 2020 Jan;6(Suppl 1):S84-S99.

Li C, et al. Long-term clinical outcomes of percutaneous cervical nucleoplasty for cervical degenerative diseases with neck pain and cervical vertigo. World Neurosurg 2020 Jan;133:e205-e210.

Li S, et al. Therapeutic effects and safety of percutaneous disc decompression with coblation nucleoplasty in cervical vertigo: a retrospective outcome study with 74 consecutive patients and minimum 1-year follow-up. <u>Pain Physician</u> 2019 May;22(3):E205-E214.

Li Y, et al. Effects of Ho: YAG laser ablation on postoperative low back pain and functional status after transforaminal endoscopic lumbar discectomy: minimum of 2-year follow-up. World Neurosurg 2019 Jul;127:e793-e798.

*National Institute for Health and Clinical Excellence. Percutaneous coblation of the interveretebral disc for low back pain and sciatica. IPG 543. 27 Jan 2016. [https://www.nice.org.uk/guidance/ipg543] accessed 10/12/23.

*National Institute for Health and Clinical Excellence. Epiduroscopic lumbar discectomy through the sacral hiatus for sciatica. IPG 570. 14 Dec 2016 [https://www.nice.org.uk/guidance/ipg570] accessed 10/12/23.

*North American Spine Society. Clinical guidelines for diagnosis and treatment of lumbar disc herniation with radiculopathy. 2012.

https://www.spine.org/Portals/0/Assets/Downloads/ResearchClinicalCare/Guidelines/LumbarDiscHerniation.pdf accessed 10/12/23.

Medical Policy: INTERVERTEBRAL DISC DECOMPRESSION: LASER (LASER DISCECTOMY) AND RADIOFREQUENCY COBLATION (DISC NUCLEOPLASTY) TECHNIQUES

Policy Number: 7.01.62

Page: 4 of 4

Momenzadeh S, et al. The effect of percutaneous laser disc decompression on reducing pain and disability in patients with lumbar disc herniation. J Lasers Med Sci 2019 Winter;10(1):29-32.

Radcliff K, et al. Lasers in spine surgery. J Am Acad Orthop Surg 2019 Sep 1;27(17):621-632.

Son S, et al. Clinical outcomes of trans-sacral epiduroscopic laser decompression (SELD) in patients with lumbar disc herniation. Pain Res Manag 2020 Jun 1;2020:1537875.

*Tassi GP. Comparison of results of 500 microdiscectomies and 500 percutaneous laser disc decompression procedures for lumbar disc herniation. <u>Phonomed Laser Surg</u> 2006;24(6):694-7.

Wei, Fei-Long, et al. Eight surgical interventions for lumbar disc herniation: a network meta-analysis on complications. <u>Front Surg</u> 2021 Jul 20;8:679142.

Yin H, et al. Efficacy of single level versus double levels surgery of percutaneous disc nucleoplasty (PDN) approach in treating lumbar disc herniation. Med Sci Monit 2021 Jul 29;27:e930000.

*Zhu H, et al. The efficacy of coblation nucleoplasty for protrusion of lumbar intervertebral disc at a two-year follow-up. Int Orthop 2011 Nov;35(11):1677-82.

*Key Article

KEY WORDS

Radiofrequency coblation, laser discectomy, disc nucleoplasty, decompression nucleoplasty, plasma disc decompression, radiofrequency thermocoagulation nucleoplasty (RFTC), percutaneous laser discectomy /decompression, laser-assisted disc decompression (LADD), targeted percutaneous laser disc decompression (targeted PLDD), coblation percutaneous disc decompression

CMS COVERAGE FOR MEDICARE PRODUCT MEMBERS

There is currently a National Coverage Determination (NCD) for thermal intradiscal procedures (150.11) and a NCD for laser procedures (140.5). Please refer to the following NCD websites for Medicare Members:

http://www.cms.gov/medicare-coverage-database/details/ncd-

<u>details.aspx?NCDId=324&ncdver=1&CoverageSelection=Both&ArticleType=All&PolicyType=Final&s=New+York++Upstate&CptHcpcsCode=365jjf14&bc=gAAAABAAAAA&</u> accessed 10/12/23.

http://www.cms.gov/medicare-coverage-database/details/ncd-