Cohere Medicare Advantage Policy - Intradiscal Biacuplasty, Percutaneous Intradiscal Radiofrequency Thermocoagulation (PIRFT), or Intradiscal Electrothermal Therapy (IDET)

Clinical Policy for Medical Necessity Review

Version: 3.1
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Important Notices

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Policy Information:

Specialty Area: Musculoskeletal Care
Policy Name: Medicare Advantage Policy - Intradiscal Biacuplasty, Percutaneous Intradiscal Radiofrequency Thermocoagulation (PIRFT), or Intradiscal Electrothermal Therapy (IDET)
Type: [**X**] Adult (18+ yo) | [**X**] Pediatric (0-17 yo)

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Medical Necessity Criteria

Service: Intradiscal Biacuplasty, Percutaneous Intradiscal Radiofrequency Thermocoagulation (PIRFT), or Intradiscal Electrothermal Therapy (IDET)

Related CMS Documents

Please refer to the CMS Medicare Coverage Database for the most current applicable CMS National Coverage.[1]

- National Coverage Determination (NCD). Thermal intradiscal procedures (TIPs) (150.11).[1]
  - National Coverage Analysis (NCA). Decision Memo: Thermal intradiscal procedures (CAG-00387N).[2]

Description

Intradiscal biacuplasty, percutaneous intradiscal radiofrequency thermocoagulation (PIRFT), or intradiscal electrothermal therapy (IDET) are all procedures that involve the application of heat to intervertebral discs to stabilize joints and relieve pain. Intradiscal biacuplasty and PIRFT use radiofrequency energy to generate heat using either two probes applied to opposite sides of the disc or a single probe applied to the center of the disc, respectively, while IDET uses a thermal catheter to apply heat directly.[2-4]

Medical Necessity Criteria

Indications

Intradiscal biacuplasty, percutaneous intradiscal radiofrequency thermocoagulation (PIRFT), or intradiscal electrothermal therapy (IDET) is considered appropriate if **ANY** of the following is **TRUE**:

- This procedure is clinically unproven and not medically necessary. There is inconclusive evidence of its effectiveness.

Non-Indications

Intradiscal biacuplasty, percutaneous intradiscal radiofrequency thermocoagulation (PIRFT), or intradiscal electrothermal therapy (IDET) is not considered appropriate if **ANY** of the following is **TRUE**:

- This is not applicable as there are no indications.

Level of Care Criteria

Outpatient

Procedure Codes (CPT/HCPCS)

CPT/HCPCS Code	Code Description
22526	Bilateral percutaneous intradiscal electrothermal annuloplasty of a single level of spine using fluoroscopic guidance; Unilateral percutaneous intradiscal electrothermal annuloplasty of a single level of spine using fluoroscopic guidance
22527	Bilateral percutaneous intradiscal electrothermal annuloplasty of a single additional level using fluoroscopic guidance; Bilateral percutaneous intradiscal electrothermal annuloplasty of multiple additional levels using fluoroscopic guidance; Unilateral percutaneous intradiscal electrothermal annuloplasty of multiple additional levels using fluoroscopic guidance; Unilateral percutaneous intradiscal electrothermal annuloplasty of single additional level using fluoroscopic guidance.
62287	Decompression procedure, percutaneous, of nucleus pulposus of intervertebral disc, any method, single or multiple levels, lumbar (e.g., manual or

	automated percutaneous discectomy, percutaneous laser discectomy).
S2348	Decompression procedure, percutaneous, of nucleus pulposus of intervertebral disc, using radiofrequency energy, single or multiple levels, lumbar

Disclaimer: S Codes are non-covered per CMS guidelines due to their experimental or investigational nature.

Evaluation of Clinical Harms and Benefits

Refer to the Medical Evidence section for various citations and references to studies conducted to date that are inconsistent, inadequately powered, or otherwise do not allow for solid scientific conclusions. Potential harms and benefits of applying an "unproven and not medically necessary" designation to this procedure might include, but are not limited to, the following:

Potential Harms of applying the clinical criteria in this policy include, but are not limited to, denying opportunities to improve health outcomes for individuals and populations suffering from chronic refractory discogenic pain. For example, restricting access to this procedure may increase patient and population dependence on excessive pain medication, including opioids, reduced functionality leading to additional medical problems, and a decrease in economic opportunity.

Potential Benefits include safeguarding patients and populations from unproven technologies, procedures, and medical treatments until the proposed treatments' safety, efficacy, and anticipated results are thoroughly validated via peer-reviewed scientific literature. This safeguards patients from potential surgical complications such as adjacent nerve injury, progressive disc degeneration, infection, scar tissue formation, altered spine biomechanics, and the possible need for additional invasive procedures.

Medical Evidence

Helm et al. (2017) conducted a systematic review of 49 studies to evaluate the effectiveness of thermal annular procedures (TAPs) in treating chronic refractory discogenic pain. The primary outcome measures were at least 40% pain relief and functional improvement. Two randomized control trials (RCTs) with positive results indicated strong evidence (Level I) supporting the efficacy of biacuplasty for treating chronic, refractory discogenic pain. For intradiscal electrothermal therapy (IDET), one high-quality RCT demonstrating efficacy and one moderate-quality RCT suggesting no benefit provided moderate evidence (Level III) for its use. Evidence supporting the use of discTRODE was limited, categorized as Level V.[4]

Lu et al. (2014) performed a systematic review of current non-surgical management of discogenic low back pain. Eleven RCTs focused on injections, ablative techniques, and traction therapy were included in the review. Six clinical studies reported no significant differences between active and sham/placebo treatments. Five studies that included intradiscal biacuplasty demonstrated significant differences in clinical outcomes favoring intervention over sham treatment. There were no apparent advantages of PIRFT over sham control. Assessing the selection criteria for studies on intradiscal biacuplasty, along with a stratified analysis of results from RCTs on intradiscal electrothermal therapy (IDET), the authors raised doubts as to whether conclusions from these RCTs can be applied to the broader population of patients with discogenic pain. The authors concluded that additional research is needed to establish the efficacy of these treatments.[5]

In 2009, the Centers for Medicare and Medicaid Services (CMS) issued a National Coverage Determination announcing noncoverage of all percutaneous intradiscal procedures that use radiofrequency or electrothermal energy to treat pain.[1] The list of specific noncovered procedures was extensive and included biacuplasty, PIRFT, and IDET. The accompanying decision memo cites a lack of clinical evidence supporting the use of these thermal intradiscal procedures for pain relief. Notably, clinical

trials have been inconsistent and have not shown any efficacy in critical patient groups, including those over the age of 60 years.[2]

Several professional medical societies have issued evidence-based guidance documents noting the lack of well-controlled, appropriately powered clinical trial studies supporting thermal intradiscal procedures. In 2009, the American Pain Society issued two guidelines on interventional therapies for low back pain. In both of these, the level of evidence for intradiscal electrothermal therapy and PIRFT were both classified as poor. The authors concluded that there was no clear evidence of benefit to support procedures involving application of energy to degenerated discs, primarily because of conflicting trial results, sparse data, lack of placebo-controlled trials, methodological shortcomings, and clinical heterogeneity.[6,7] In 2015, Hooten and Cohen published a clinically focused Mayo Clinic review on the evaluation and treatment of low back pain, which also noted that evidence for intradiscal thermal procedures, including IDET and biacuplasty, is limited at best.[8] In their 2020 evidence-based clinical guideline for the diagnosis and treatment of low back pain, the North American Spine Society (NASS) gave biacuplasty a grade of C (poor quality evidence) and PIRFT a grade of I (insufficient evidence for a recommendation).[9] In 2013, the American Society of Interventional Pain Physicians updated their comprehensive evidence-based guidelines for interventional techniques in chronic spinal pain, noting that the evidence for IDET and biacuplasty was limited-to-fair, with few studies supporting their use and even fewer being of high quality.[10] Two 2016 National Institute of Health and Care Excellence (NICE) interventional procedure guidances similarly noted that evidence for the efficacy of such procedures is inconsistent and of poor quality or limited in quantity and quality.[11,12]

References

1. Centers for Medicare & Medicaid Services (CMS). National Coverage Determination (NCD): Thermal intradiscal procedures (TIPs)(150.11). Effective September 29, 2008. https://www.cms.gov/medicare-coverage-database/view/ncd.aspx?NCDId=324

2. Centers for Medicare & Medicaid Services (CMS). National Coverage Analysis (NCA): Thermal intradiscal procedures (CAG-00387N). Effective Date September 29, 2008. https://www.cms.gov/medicare-coverage-database/view/ncacal-decision-memo.aspx?proposed=N&NCAId=215

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8. Hooten WM, Cohen SP. Evaluation and treatment of low back pain: a clinically focused review for primary care specialists. *Mayo Clin Proc*. 2015;90(12):1699-1711. doi:10.1016/j.mayocp.2015.10.009

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10. 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*. 2013;16(2 Suppl):S49-S283. doi:10.36076/ppj.2013/16/s49

11. National Institute for Health and Care Excellence. Percutaneous electrothermal treatment of the intervertebral disc annulus for low back pain and sciatica: Interventional procedures guidance. Published online 2016. www.nice.org.uk/guidance/ipg544

12. National Institute for Health and Care Excellence. Percutaneous intradiscal radiofrequency treatment of the intervertebral disc nucleus for low back pain: Interventional procedures guidance. Published online 2016. www.nice.org.uk/guidance/ipg545

Clinical Guideline Revision History/Information

Original Date: MAY 24, 2024		
Review History		
Version 2	6/10/2024	422.101 Disclaimer Added
Version 3	05/22/2025	Annual review. Added in CPT code 62287. No changes to medical necessity criteria. Medical Evidence updated.
Version 3.1	07/01/2025	Harms and Benefits section added.