NASS COVERAGE POLICY RECOMMENDATIONS

Endoscopic Decompression

DEFINING APPROPRIATE COVERAGE POSITIONS

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NASS Coverage Policy Recommendations

NASS Coverage Committee

North American Spine Society
Coverage Policy Recommendations
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Introduction
North American Spine Society (NASS) coverage policy recommendations are intended to assist payers and members by proactively defining appropriate coverage positions. Historically, NASS has provided comment on payer coverage policy upon request. However, in considering coverage policies received by the organization, NASS believes proactively examining medical evidence and recommending credible and reasonable positions may be to the benefit of both payers and members in helping achieve consensus on coverage before it becomes a matter of controversy. This coverage recommendation reflects the best available data as of 12/01/17; information and data available after 12/01/17 is thus not reflected in this recommendation and may warrant deviations from this recommendation, if appropriate.

Methodology
The coverage policies put forth by NASS use an evidence-based approach to spinal care when possible. In the absence of strict evidence-based criteria, policies reflect the multidisciplinary and non-conflicted experience and expertise of the authors in order to reflect reasonable standard practice indications in the United States.

NASS Coverage Policy Methodology

Scope and Clinical Indications
This policy covers the diagnosis of lumbar disc herniation and lumbar stenosis unresponsive to appropriate nonoperative treatment. The indications are the same as those for other open or minimally invasive methods of lumbar decompression. The procedures discussed in this policy are endoscopic visualization and removal of lumbar disc herniation via transforaminal or interlaminar approach and endoscopic decompression of lumbar stenosis. This is distinguished from open or other forms of minimally invasive decompression in that the operative field is not visualized with the naked eye but rather through an endoscope projected onto a monitor.

It is important to note that this policy does NOT address percutaneous disc decompression, intradiscal endoscopic decompression, thermal annuloplasty, intradiscal electrothermal annuloplasty (IDET) or biaccuplasty.

Coverage Recommendations
Endoscopic discectomy should be covered for:

- **Lumbar disc herniation with radiculopathy**
  a. Pattern of radiculopathy explained by imaging
  b. 6 weeks of nonoperative treatment
  c. The following can mitigate the need for initial nonoperative trial:
    i. Severity of symptoms cause forced bed rest
    ii. Severity of symptoms prevent the patient from working
    iii. Herniation results in functionally limiting motor weakness (eg, foot drop, bladder/bowel dysfunction)

- **Recurrent lumbar disc herniation with radiculopathy**
  a. Pattern of radiculopathy explained by imaging
  b. 6 weeks of nonoperative treatment
  c. The following can mitigate the need for initial nonoperative trial:
    i. Severity of symptoms cause forced bed rest
    ii. Severity of symptoms prevent the patient from working
    iii. Herniation results in functionally limiting motor weakness (eg, foot drop, bladder/bowel dysfunction)
Endoscopic decompression of spinal stenosis should be covered for:

- Signs and symptoms of neurogenic claudication or radiculopathy correlated with imaging
- At least 6 weeks of nonoperative treatment
- The following can mitigate the need for initial nonoperative trial:
  a. Severity of symptoms causes forced bed rest
  b. Stenosis results in functionally limiting motor weakness (e.g., foot drop, bladder/bowel dysfunction)
  c. Progressive neurological deficit

Rationale

Surgical treatment of lumbar disc herniation and lumbar stenosis in the appropriate patients is a well-accepted treatment option. The supporting literature regarding surgical indications will not be reviewed in this document as it is detailed extensively in other coverage recommendations. More specifically, the published history of endoscopic decompression dates back to the 1980’s. Multiple case series, retrospective series and some prospective studies reporting results similar to open procedures have been published.

In 2010 Nellensteijn et al performed a systematic review of the endoscopic discectomy. They found one randomized controlled trial, seven non-randomized controlled trials and 31 observational studies. In the eight controlled trials, they found equivalent results between endoscopic and open decompression regarding leg pain reduction, improvement, complications and reoperation rate.¹

In 2016 Cong et al published a meta-analysis of studies comparing open versus endoscopic discectomy. Nine RCTs that included 1092 patients were analyzed. They found that endoscopic discectomy showed greater patient satisfaction, less blood loss and shorter hospital stay. Slightly better clinical outcomes by Macnab criteria were also noted but were felt to be clinically insignificant. Their conclusion was that endoscopic discectomy could be viewed as a sufficient and safe alternative to standard open discectomy.²

There is a smaller body of literature regarding endoscopic decompression for spinal stenosis. Ruetten et al published results of a randomized, non-blinded study of endoscopic versus open decompression for lateral recess stenosis. The complication rate was somewhat lower in the endoscopic group with all other outcome measures being equivalent.³

Soliman reported on 104 consecutive patients with symptomatic spinal stenosis. Six patients had dural tears that did not require further surgery. Sixty three percent reported excellent results and 24% noted good results.⁴

There have been reports of potential complications unique to these procedures and the learning curve involved with its adoption. One large series noted a 1% incidence of pseudocyst formation.⁵ Of note, the authors felt this was more likely in the patients undergoing interlaminar endoscopic decompression compared to those who underwent transfaminal decompression. Sairyo et al compared complication rates in early versus later in the learning curve and discectomy vs stenosis decompression. They found the highest rate in the early learning curve stenosis patients (16.7%) with a combined incidence of 8.6%.⁶ Wang et al noted 20 percent of their initial ten cases required conversion to an open procedure. This group highlighted the need to have experience in standard surgical technique prior to attempting endoscopic discectomy. This is prudent advice to a surgeon looking to adopt these as new surgical techniques, much as one would adopt other new spine surgical techniques.⁷

References

Additional Resources


NASS coverage recommendations should not be construed as including all proper methods of care or excluding other acceptable methods of care reasonably directed to obtaining the same results. The ultimate judgment regarding any specific procedure or treatment is to be made by the physician and patient in light of all circumstances presented by the patient and the needs and resources particular to the locality or institution. The coverage recommendations do not represent a “standard of care,” nor are they intended as a fixed treatment protocol. It is anticipated that there will be patients who will require less or more treatment than the average. It is also acknowledged that in atypical cases, treatment falling outside these criteria will sometimes be necessary. This document should not be seen as prescribing the type, frequency or duration of intervention. Treatment and accompanying payment should be based on this information in addition to an individual patient’s needs as well as the doctor’s professional judgment and experience. This document is designed to function as a guide and should not be used as the sole reason for denial of treatment and services. It is not intended to supersede applicable ethical standards or provisions of law. This is not a legal document.
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Hourly consulting fees, Paid directly to institution/employer); Relationships Outside the One-Year Requirement: AOI Medical (A), Stryker Interventional Spine (B), St. Jude Medical (03/2010, Consulting), Kyphon/Medtronic (B), Stryker Biotech (A), ATRM (A). Dietze, Donald: Consulting: Medtronic (None), Osseus Fixation Devices (None) Joimax Spine (None), Precision Spine (B), NeXXT Spine (None).


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Comments regarding the coverage recommendations may be submitted to coverage@spine.org and will be considered in development of future revisions of the work.