ISASS Recommendations and Coverage Criteria for Bone-Anchored Annular Defect Closure Following Lumbar Discectomy: Coverage Indications, Limitations, and/or Medical Necessity––An ISASS 2025 Policy Update on the Use of Bone-Anchored Annular Closure to Prevent Reherniation in High-Risk Lumbar Discectomy Patients

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ISASS Recommendations and Coverage Criteria for Bone-Anchored Annular Defect Closure Following Lumbar Discectomy: Coverage Indications, Limitations, and/or Medical Necessity—An ISASS 2025 Policy Update on the Use of Bone-Anchored Annular Closure to Prevent Reherniation in High-Risk Lumbar Discectomy Patients

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ABSTRACT

Patients with symptomatic lumbar disc herniation with radiculopathy where there is a large residual annular defect following discectomy are at greater risk of reherniation with symptom recurrence and revision surgery. These patients may benefit from primary annular repair. In 2019, the International Society for the Advancement of Spine Surgery published clinical guidelines supporting the use of bone-anchored annular closure in patients with large annular defects who are at greater risk for recurrent disc herniation. This 2025 update is provided to (1) summarize the current, increased clinical evidence for bone-anchored annular closure with greater follow-up durations and (2) update guidance for coding in light of new diagnostic and upcoming current procedural terminology codes. Based on accumulating clinical evidence, the International Society for the Advancement of Spine Surgery reiterates its position that in patients with symptomatic lumbar disc herniation with radiculopathy undergoing primary discectomy with large (≥6 mm wide) annular defects, bone-anchored annular closure may be used to sustain the treatment benefits of discectomy.

Testing & Regulatory Affairs

Keywords: discectomy, recurrent disc herniation, annular defect, bone-anchored annular closure, lumbar

INTRODUCTION

Objective

The primary objective of this policy update is to provide an addendum to the previously developed policy guideline entitled "Surgical Treatment of Lumbar Disc Herniation With Radiculopathy" developed by the International Society for the Advancement of Spine Surgery (ISASS) Coverage Task Force in 2019 and published in 2020.[1] This policy update focuses specifically on the subsection evaluating bone-anchored annular closure to prevent reherniation following lumbar discectomy.[2] This update is being undertaken to address new clinical findings as well as the issuance of current procedural terminology (CPT) treatment codes and International Classification of Diseases, 10th Revision, Clinical Modification (ICD-10-CM) diagnostic codes specific to bone-anchored annular closure published in the intervening period and to inform treatment and coverage recommendations for primary annular repair in indicated patients with lumbar disc herniation (LDH) and radiculopathy.

Clinical Relevance

One manifestation of degeneration of the lumbar spine is loss of structural competence of the annulus fibrosus of the intervertebral disc, which increases the risk of extrusion of the central nucleus pulposus.[3] The resultant LDH exposes the disc material to noxious stimuli, promotes an inflammatory reaction of the adjacent nerve roots, and directly compresses the lumbosacral nerves by extruded disc material.[4] This

multifactorial mechanism of pain generation involves components of low back pain coupled with the cardinal feature of lower limb radiculopathy.[5] When symptoms become chronic, severe, and resistant to conservative measures, surgical discectomy remains a viable treatment option.[1] LDH with radiculopathy remains the most common indication for performing spinal surgery.[6]

While discectomy can effectively ameliorate symptoms associated with disc herniation, the resultant surgical defect substantially diminishes the structural integrity of the annulus, placing the disc at risk for reherniation. This postdiscectomy complication is not uncommon, and recurrent disc herniation is the primary cause of surgical failure and morbidity in patients treated with lumbar discectomy.[7–10] Patients who have a recurrent disc herniation can experience re-emergence of pain and functional deficits of greater severity than the index herniation, are less likely to return to work, and spend more days in the hospital than patients without reherniation.[10] The diagnosis and management of this subset of patients place a significant burden on the health care system, with aggregate costs that are many times higher than those for unaffected patients.[11]

Revision surgery to correct the reherniation is decidedly more complex and less successful than the primary discectomy procedure.[10] Altered anatomy from the previous surgery and epidural scarring create an unfavorable surgical environment, increasing the risk of dural tears and hemorrhage. A wide dissection and extensive bone removal with aggressive facetectomy are often required for visualization and to provide satisfactory decompression of the neural foramen. If extensive decompression is involved, then instrumented spinal fusion may be warranted to provide necessary stability to the motion segment, adding additional costs and resource use to the treatment plan.[8] It has been estimated that 53% of reoperations involve a fusion procedure.[12]

A major determinant of recurrent disc herniation is the size of the residual defect following the initial discectomy procedure,[13,14] with defects ≥6 mm in width showing the greatest susceptibility to reherniation.[15] Recognizing the clinical importance of preventing recurrent disc herniation and the associated revision surgery, a bone-anchored annular closure device (Barricaid, Intrinsic Therapeutics, Woburn, MA, USA) was developed to specifically address patients with large annular defects at the highest risk for reherniation and poor outcomes, reoperations, and often multiple repeat surgeries.[2]

BARRICAID: TECHNICAL DESCRIPTION

A bone-anchored annular closure device serves as an adjunct to the discectomy procedure and is surgically implanted into the residual annular defect at the conclusion of the operation. The implant is permanent and has 2 major subcomponents: (1) a flexible woven polymer fabric component that is intended to occlude the annular defect and (2) a titanium bone anchor that affixes the flexible polymer component in place. The titanium component is anchored to the healthy bone of an adjacent vertebral body. The implant is designed to withstand 330 psi of pressure in the spinal disc, roughly 10 times the pressure in a standard car tire.[16] It also allows for normal kinematics and physiologic movements of the affected spinal motion segment following surgery.

The device is available in 2 implant widths, 8 mm and 10 mm, to accommodate variations in annular defect size. The implant is preloaded onto disposable delivery tools.

SUMMARY OF CLINICAL EVIDENCE

Prevention of Recurrent LDH

The initial 2019 policy guideline summarized the literature describing the safety and effectiveness of bone-anchored annular closure, including findings from several randomized controlled trials (RCTs), cohort studies, and observational registry data.[1] At that writing, studies consistently showed that bone-anchored annular closure reduces the risk of symptomatic recurrent LDH and reoperation compared with discectomy alone. Table 1 provides an update of the clinical studies supporting the safety and effectiveness of bone-anchored annular closure published in the original 2019 ISASS policy guideline and those published subsequently.[17–30]

As of this update, the findings at 5 years of follow-up from a large, multicenter RCT in patients with large (≥6 mm wide) annular defects show statistically significant reductions in symptomatic recurrent LDH (18.8% vs 31.6%; $P < 0.001$), all-cause reoperations (16.0% vs 22.6%; $P = 0.03$), and device- or surgery-related serious adverse events (12.0% vs 20.0%, $P = 0.008$) for annular closure vs discectomy alone.[28] These long-term results extend and corroborate the previously published findings at 2, 3, and 4 years postoperatively[23,27,31,32] and underscore the durability of this surgical approach to the management of residual annular defects following discectomy.

There has been the observation that bone-anchored annular closure is associated with the radiological occurrence of endplate lesions. As noted in the 2019

Table 1. Summaries of studies' clinical findings related to bone-anchored annular closure.

Study Citation	Patient Population	Study Design	Sample Size	Follow-Up	Results
Klassen et al 2017[20a]	Radiculopathy + imaging confirmed LDH + failed ≥6 wk of NS care; large annular defect (≥6 mm); mean ages were 43 (22–71) y (AC) and 44 (23–74) y (D)	RCT	D: 278 AC: 272	90 d	Significantly lower rate of all-cause SAEs (9.7% vs 16.3 %; P = 0.056) and device- or surgery-related SAEs (4.5% vs 10.2%; P = 0.02) with AC compared with D; reoperation rate at 90 d was 5.4% with D and 1.9% with AC (P = 0.03); device dislocation occurred in 0.7% of AC patients.
Van den Brink et al 2019[29a]	Same study populations and parameters as Klassen et al			1 y	Significantly lower rates of symptomatic index-level rLDH (8.4% AC vs 17.3% D, P = 0.002); reoperation (6.7% AC vs 12.9% D, P = 0.015); and device- or surgery-related SAEs (7.1% AC vs 13.9% D, P = 0.009).
Thome et al 2018[27a]	Same study populations and parameters as Klassen et al			2 y	Frequency of symptomatic index-level rLDH (12% vs 25%; P < 0.001), composite success index (27% vs 18%; P = 0.02), and device or procedure-related SAEs (7% vs 17%; P = 0.001) significantly improved with AC compared with D; reoperation rate was 13% in D and 5% in the AC groups (P = 0.001); device migration and mesh migration occurred in 1.1% and 1.5% of AC patients, respectively.
Kienzler et al 2019[19a]	Same study populations and parameters as Klassen et al			3 y	Symptomatic index-level rLDH rate (14.8% vs 29.5%; P < 0.001), reoperation rate (11% vs 19.3%; P = 0.007), leg pain (21 vs 30; P < 0.01), back pain (23 vs 30; P = 0.01), ODI (18 vs 23; P = 0.02), physical health component (47 vs 44; P < 0.01), and mental health component (52 vs 49; P < 0.01) scores were significantly improved with AC compared with D; reoperation rate was 19.3% with D and 11% with AC (P = 0.007); all-cause SAE rate was reduced in the AC group (10.7% vs 18.7%; P = 0.008); device-related deficiencies and fracture occurred in 4% and 0.4% of AC patients, respectively.
Nanda et al 2019[23a]	Same study populations and parameters as Klassen et al			4 y	Over 4 years, reoperation rate was significantly lower in AC group (14.4% vs 21.1%; P = 0.03); partial or complete device removal in 23 reoperations; no reoperations were related to endplate changes; magnitude of improvement was greater in AC patients for leg pain (P = 0.04), ODI (P = 0.04), and mental health component scores (P = 0.02).
Thome et al 2021[28a]	Same study populations and parameters as Klassen et al			5 y	AC exhibited statistically significant reductions in symptomatic index-level rLDH (18.8% vs 31.6%; P < 0.001), reoperation (16.0% vs 22.6%; P = 0.03), and device- or surgery-related SAEs (12.0% vs 20.0%, P = 0.008) compared with D; clinically significant improvements in leg pain severity, ODI, and health-related QOL were observed over 5 years with no clinically relevant differences between AC and D; reoperation for device failure was 5.2%; Vertebral endplate changes were more common in AC with no association with clinical outcomes (leg pain, ODI, and health-related QOL).
Cho et al 2019[18]	Radiculopathy + radiographically confirmed LDH; mean ages 41 ± 11 y (AC) and 43 ± 12 y (D)	RCT	D: 30 and AC: 30	2 y	Significantly greater disc height maintenance (86.3% vs 79.2%; P = 0.04) in AC vs D group; rate of rLDH was 20% in D and 3.3% in AC groups (P = 0.04); no instances of device migration, loosening, or fracture occurred in AC group.
Nunley et al 2023[24]	Radiculopathy + radiographically confirmed LDH; failed ≥6 wk NS care; large annular defect (≥6 mm); mean age 41 ± 13 y (AC)	Prospective cohort	AC: 55	1 y	rLDH and reoperation rates were 3.7% and 5.5%, respectively; no device-related SAEs or device integrity failures observed; 4 SAEs observed (hematoma, reherniation, infection, and neurological function decline); 97.1% of patients returned to work by 1 y (median 2.5 wk).
Ardeshiri et al 2019[17]	Symptomatic, MRI-confirmed LDH at single level; disc height ≥5 mm; annular defect ≥6 mm; mean age 45 (23–82) y	Prospective cohort	AC: 75	2 y	rLDH rate was 1.4% (1/75); 3 reoperations (4%) required: rLDH, epidural infection, and device dislocation;1 intraoperative implant-associated dural tear occured but did not result in postoperative complications; improper implantation of 1 device in 1 patient, but no associated AEs noted.
Sanginov et al 2018[26]	Symptomatic LDH confirmed by CT or MRI + failed 6 wk of NS care; mean age of 38 (17–63) y	Prospective cohort	AC: 120	5 y	1 ipsilateral (0.8%) and 1 contralateral (0.8%) rLDH (both reoperated); other reoperations included 3 fusions for segmental instability and treatment of 1 epidural hematoma; Modic endplate changes in 20 patients (16.7%) at baseline and 42 (35%) within 5 y of follow-up; no significant differences in pain or function scores between patients with or without endplate changes
Kursumovic et al 2017[21]	Radiculopathy + radiographically confirmed LDH; 90% with annular defect ≥6 mm; mean age 46 (18–75) y	Real-world registry analysis	AC: 171	15 mo	Mean follow-up of 15 (1–72) mo; 74% had 12 mo or later follow-up. Six (3.5%) reherniations, 4 of which required reoperation; 22 reoperations were performed across 12 patients (7%), which included 5 fusions, 5 re-discectomies, 4 wound revisions, 3 decompressions, 2 spinal cord stimulators, and 3 unknown; device-related complications in 15 patients (8.8%), 2 of whom required revision surgery.

Table 1. Continued.

Study Citation	Patient Population	Study Design	Sample Size	Follow-Up	Results
Vukas et al 2013[30]	Radiculopathy + failed ≥6 wk of NS care + preoperative MRI; mean ages 38 y (AC) and 41 y (D) (18–70 for all)	Prospective comparative cohorts	D: 72 and AC: 30	2 y	Improved leg pain (8.9 vs 21.2; $P = 0.005$), back pain (10.5 vs 19.1; $P = 0.27$), and disability (11.6 vs 19.8; $P = 0.08$) with AC compared to D at 2-y follow-up; symptomatic reherniation rate was 6.9% in D and 0% in AC groups; patients were enrolled nonconcurrently; no instances of device-related AEs
Sanginov et al 2024[25]	Radiculopathy + LDH confirmed by MRI + large annular defect (≥6 mm); median age 38 y (AC)	Consecutive case series	AC: 133	8 y	rLDH rate was 1.5%, and reoperation rate was 3.0% at 1 y; after 1 y, symptomatic and asymptomatic rLDH were 2.8% and 1.9%; bone resorption was observed in 64% of patients, primarily around the polymer barrier. By 8 years, all resorption stabilized and/or decreased as evidenced by sclerotic rims; maximum resorbed bone volume was 12%. Presence and size of bone resorption had no clinical impact.
Lequin et al 2012[22]	Sciatica with MRI-confirmed LDH + failed ≥6 wk of NS care; Mean age 42 ± 11 y; mean defect width 7.8 mm	Prospective cohort	AC: 45	1 y	Of 41 patients, symptomatic rLDH in 1 (2.4%), who also required a reoperation; 3 total reoperations (6.7%): ipsilateral rLDH, contralateral rLDH, and scar tissue management; no evidence of heterotopic ossification or spontaneous fusion and no device complications observed.

Abbreviations: AC, annular closure; AE, adverse events;CT, computed tomography; D, discectomy group; LDH, lumbar disc herniation; MRI, magnetic resonance imaging; NS, nonsurgical;ODI, Oswestry Disability Index; QOL, quality of life; RCT, randomized controlled trial; rLDH, recurrent lumbar disc herniation; SAE, serious adverse events.

[a]These studies report 90-d, 1-y, 2-y, 3-y, 4-y, and 5-y follow-up time points and outcomes of the same RCT.

policy guideline, the ISASS task force concluded that "no negative clinical outcomes were associated with the endplate lesions, based on patient-reported outcomes, reoperations, or serious adverse events." The analyses to support these conclusions from the RCT have been published for multiple follow-up time points, and the results are consistent with recent publications from other studies that have reported no clinical impact of the presence or size of endplate lesions in patients treated with bone-anchored annular closure. A case series of 107 annular closure patients reported stabilization—or, in some cases, a decrease in size—of all bone resorption by the 8-year time point based on the presence of a clear sclerotic rim around the endplate lesions.[25] There were no statistically significant associations of endplate lesions with clinical outcomes, and using computed tomography–based volume measurements, the maximum lesion size was estimated to be 12% of the vertebral body. Taken together, current evidence suggests that the endplate lesions do not impact device function or clinical outcomes through 8 years of follow-up.

The randomized trial also provided a rich dataset for post-hoc subpopulation analyses, which demonstrated that bone-anchored annular closure was safe and effective in the older (60+ years) population and could be effectively implanted through a tubular minimally invasive approach.[33,34] Annular closure results were not associated with patient blinding,[35] and should a revision be necessary, revision options were not restricted, and the risk for complications during revision was not increased.[36]

Results from a postmarket, prospective clinical study conducted in the United States provide further confirmation of the RCT results that had been enrolled nearly 10 years earlier.[24] The 1-year composite rate of symptomatic reherniation or reoperation was 7.3%, compared with 18.8% in the discectomy-only group ($P < 0.05$). No device integrity failures were observed through 1 year, and 97.1% of participants had returned to work by 1 year at a median return to work time of 2.5 weeks.

The current evidence for bone-anchored annular closure is derived from 9 unique studies and 1,311 patients (annular closure device: $n = 931$; control: $n = 380$). A total of 8 meta-analyses or systematic reviews have been published, all concluding that bone-anchored annular closure reduces the risk for recurrent LDH and reoperation.[15,37–43] One meta-analysis included multiple strategies for annular repair, including suture techniques, biomaterials, and bone-anchored annular closure.[42] The conclusion of that meta-analysis was that only bone-anchored annular closure delivered statistically significant reductions in symptomatic reherniation and reoperation.

Collectively, this evidence indicates a positive benefit-risk ratio for lumbar discectomy patients with large annular defects, based on significant reductions in symptomatic recurrent LDH and revision surgery in an at-risk population.

Cost-Effectiveness

Among at-risk patients with large annular defects, it has been estimated that >25,000 reoperations are

undertaken over any 2-year period in the United States. This frequency is associated with a substantial economic and societal impact.[2] Annular repair has reduced the recurrent LDH-related reoperation rate by more than 60% in a 2-year period,[27] which may reduce the direct health care costs, allow more patients to return to work and stay at work, and avoid the significant morbidity associated with reoperation.[44] It was estimated that if a recurrence occurred and was treated with a revision procedure involving interbody fusion, the total cost of that procedure would be over $53,000 in a commercial payer setting.[45,46] Based on randomized controlled trial data, a bone-anchored annular closure device was found to be cost-effective at $6,030 per quality-adjusted life-year over 2 years of follow-up, which is well below the standard range of willingness-to-pay thresholds of $50,000 to $100,000 per quality-adjusted life-year.[45] When the societal costs of missed work and lower productivity were also considered, the incremental cost-effectiveness ratio of the bone-anchored annular device became negative, which indicates "economic dominance"—improved outcomes at a lower cost—compared with discectomy alone.[45]

ISASS POLICY STATEMENT AND COVERAGE RATIONALE: LUMBAR DISCECTOMY WITH BONE-ANCHORED ANNULAR CLOSURE

Based on the accumulating clinical evidence, ISASS reiterates its position that in patients with symptomatic LDH with radiculopathy undergoing primary discectomy with large (≥6 mm wide) annular defects, bone-anchored annular closure may be used to sustain the treatment benefits of discectomy by reducing the risk of recurring LDH and the need for reoperation. Barricaid is the only US Food and Drug Administration (FDA)–approved bone-anchored annular closure device commercially available in the United States indicated for the prevention of recurrent LDH.

Procedural Consideration for Annular Closure Device Implantation

ISASS recognizes that bone-anchored annular closure may be considered as an adjunct to lumbar discectomy in patients who present with the following clinical criteria:

- Symptomatic LDH with radiculopathy, confirmed by clinical history, physical examination, and imaging.
- Single-level disc herniation L4 to L5 or L5 to S1.
- Moderately preserved disc height: ≥5 mm posterior disc height.
- Large annular defect (between 4 and 6 mm tall and between 6 and 10 mm wide) visualized intraoperatively after discectomy.

This patient population represents a high-risk group for symptomatic recurrence and reoperation due to the mechanical vulnerability of the residual annular defect.

Who May Consider This Procedure?

The implantation of a bone-anchored annular closure device may be considered by specialty-trained neurosurgeons or orthopedic spine surgeons who meet the following qualifications:

- Demonstrated experience in lumbar discectomy, with familiarity in intraoperative defect measurement.
- Proficiency in using minimally invasive or open surgical approaches to the lumbar spine.
- Training in the proper sizing, positioning, and anchoring of the annular closure device.

Surgeons should also be familiar with device-specific instrumentation and the potential complications, including rare occurrences of endplate lesions, which current evidence shows do not correlate with adverse clinical outcomes.

Important Note on Device Neutrality

ISASS does not endorse or promote any specific commercial product. However, ISASS acknowledges that Barricaid (Intrinsic Therapeutics, Woburn, MA, USA) is currently the only FDA-approved bone-anchored annular closure device with Premarket Approval (PMA #P160050) for use in the United States in appropriately selected patients following lumbar discectomy.

Rationale

This recommendation is based on level I clinical evidence, including multiple RCTs and meta-analyses, demonstrating that the use of bone-anchored annular closure significantly reduces:

- symptomatic re-herniation
- all-cause reoperation rates.
- associated health care utilization and cost burden

ISASS supports the appropriate use of this technology in carefully selected patients as part of an

evidence-based strategy to optimize long-term outcomes following lumbar discectomy.

INDICATIONS/LIMITATIONS OF COVERAGE

The date of the FDA Notice of Approval for the Barricaid device was 8 February 2019 (P160050). The device is indicated for reducing the incidence of reherniation and reoperation in skeletally mature patients with radiculopathy (with or without back pain) attributed to a posterior or posterolateral herniation and confirmed by history, physical examination, and magnetic resonance imaging that demonstrate neural compression. The device is used to treat large annular defects (between 4 and 6 mm tall and between 6 and 10 mm wide) following a primary discectomy procedure (excision of the herniated intervertebral disc) at a single level between L4 and S1.

CPT CODING

Effective Date: January 2026

The American Medical Association CPT Editorial Panel accepted the addition of a category 1 CPT code for bone-anchored annular closure. Category 1 CPT code is an add-on code specific to bone-anchored annular closure reported along with the primary code.

6xx13: Repair of an annular defect of the vertebral body via implantation of a bone-anchored annular closure device.

DIAGNOSTIC (ICD-10-CM) CODING

Effective Date: October 2022

A set of diagnosis codes for intervertebral annular fibrous disc defects, including codes that specify size (M51.A0–M51.A5), were created. These codes include M51.A, which is the broader category for other lumbar and lumbosacral annulus fibrosus disc defects, and then further categorized by size and location. Table 2 provides ICD-10-CM codes specific to bone-anchored annular closure.

Table 2. Updated ICD-10-CM codes specific to bone-anchored annular closure.

Diagnosis Code	Code Descriptor
M51	Thoracic, thoracolumbar, and lumbosacral intervertebral disc disorders
M51.0	With myelopathy
M51.1	With radiculopathy
M51.2	Other thoracic, thoracolumbar, and lumbosacral intervertebral disc displacement
M51.3	Other thoracic, thoracolumbar, and lumbosacral intervertebral disc degeneration
M51.8	Other thoracic, thoracolumbar, and lumbosacral intervertebral disc disorders
M51.9	Unspecified thoracic, thoracolumbar, and lumbosacral intervertebral disc disorder
M51.A0	Intervertebral annulus fibrosus defect, unspecified size, and lumbar region
M51.A1	Intervertebral annulus fibrosus defect, small, and lumbar region
M51.A2	Intervertebral annulus fibrosus defect, large, and lumbar region
M51.A3	Intervertebral annulus fibrosus defect, unspecified size, and lumbosacral region
M51.A4	Intervertebral annulus fibrosus defect, small, and lumbosacral region
M51.A5	Intervertebral annulus fibrosus defect, large, and lumbosacral region
M48.00	Spinal stenosis and site unspecified
M48.05	Spinal stenosis and thoracolumbar region
M48.06	Spinal stenosis and lumbar region
M48.07	Spinal stenosis and lumbosacral region
M48.08	Spinal stenosis, sacral, and sacrococcygeal region
M47.1	Other spondylosis with myelopathy
M47.2	Other spondylosis with radiculopathy

Abbreviations: CPT, current procedural terminology; ICD-10-CM, International Classification of Diseases, 10th Revision, Clinical Modification.

HEALTH CARE COMMON PROCEDURE CODING

Effective Date: January 2020

For Hospital Outpatient/Ambulatory Surgical Center coding, Medicare created a Health Care Common Procedure Coding System code that specifically includes a bone-anchored annular closure device that hospital outpatient departments and ambulatory surgical centers should report for the procedure.

C9757: Laminotomy (hemilaminectomy) with decompression of nerve root(s), including partial facetectomy, foraminotomy, and excision of the herniated intervertebral disc, and repair of annular defect with implantation of bone-anchored annular closure device, including annular defect measurement, alignment and sizing assessment, and image guidance; 1 interspace, lumbar.

CONCLUSION

Patients who are indicated for discectomy and have a large annular defect are exposed to a greater risk of reherniation with symptom recurrence and revision surgery and may benefit from annular repair. Level I evidence demonstrates that, in appropriately selected patient populations, implantation of a bone-anchored annular closure device reduces the risk of symptom recurrence and revision surgery compared with discectomy alone. This ISASS policy update addresses only the safety and effectiveness of bone-anchored annular

closure in preventing reherniation following discectomy. CPT and ICD-10-CM codes have now been established to properly characterize this condition and its appropriate treatment.

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