

# CASEREVIEW

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Notice of Independent Review Decision

**[Date notice sent to all parties]:** February 17, 2015

**IRO CASE #:**

**DESCRIPTION OF THE SERVICE OR SERVICES IN DISPUTE:**

Lumbar Discogram

**A DESCRIPTION OF THE QUALIFICATIONS FOR EACH PHYSICIAN OR OTHER HEALTH CARE PROVIDER WHO REVIEWED THE DECISION:**

This physician is a Board Certified Orthopedic Surgeon with over 13 years of experience.

**REVIEW OUTCOME:**

Upon independent review, the reviewer finds that the previous adverse determination/adverse determinations should be:

Upheld (Agree)

Provide a description of the review outcome that clearly states whether medical necessity exists for each of the health care services in dispute.

**PATIENT CLINICAL HISTORY [SUMMARY]:**

The claimant is a male who was injured on xx/xx/xx while trying to restrain. He lost his balance and fell to his right side injuring his right shoulder, wrist and back. His low back symptoms were initially treated with physical therapy ordered. PT did not change his symptoms.

On August 8, 2014, MRI Lumbar Spine, Impression: L1-2: Normal disc. No disc herniation, canal or foraminal stenosis. L2-3: Normal disc. No disc herniation, canal or foraminal stenosis. L3-4: Normal disc. No disc herniation, canal or foraminal stenosis. Mild facet arthropathy. L4-5: Normal disc. No disc herniation, canal or foraminal stenosis. Mild facet arthropathy. L5-S1: Broad based central disc protrusion 14 mm in length and approximately 5 mm in depth. No canal or foraminal stenosis. Mild facet arthropathy.

On August 19, 2014, the claimant presented with complaints of constant lumbar pain rated 5/10. Aggravating conditions included standing from a chair or a bed,

prolonged sitting, rotation or bending forward. Alleviating conditions included heat, medications or the use of a TENS unit. He also reported left gluteal and right buttocks, posterior thigh, popliteal fossa, posterior lower leg and heel shooting pain along with numbness and tingling. Medications included ibuprofen, Celebrex and Tylenol. On examination there was bilateral paravertebral muscular tenderness on palpation. He could bend forward to the mid-lower leg level. There was negative Patrick test, Gaenslen's sign and Pelvic tilt test. Muscle strength was 5/5 in bilateral lower extremities. Deep tendon reflexes were equal bilaterally. Sensory exam was normal in bilateral lower extremities. Straight Leg Raise was negative bilaterally. Pelvis and Lumbar x-rays performed in the office were both normal. Assessment: Lumbar herniated disc. Lumbosacral joint sprain/strain. Plan: Home exercise program and right transforaminal L5-S1 epidural with selective nerve root block.

On September 15, 2014, Procedure Note, Post Procedure Diagnosis: 1. Lumbar radiculopathy. Procedure Performed: 1. Right L5-S1 transforaminal epidural injection with epidurogram. 2. Right S1 selective nerve root injection.

On October 10, 2014, the claimant presented who reported 80% improvement of the right leg radicular symptoms but only for 2 days. Plan: Because he had an 80% improvement of symptoms on the right leg after the ESI, will proceed with a lumbar facet block to help with his facetogenic pain.

On November 13, 2014, Procedure Note, Post Procedure Diagnosis: 1. Lumbar spondylosis. 2. Lumbago. Procedure Performed: 1. Bilateral L5-S1 facet injection.

On December 5, 2014, the claimant presented who reported worsening back pain and leg pain. He wanted to consider spinal surgery. He has failed to improve with exercise, modification of activities, pain medication, anti-inflammatory medication, lumbar facet block and epidural injection. None of the modalities gave him long-term relief. No change in physical exam findings. Plan: Lumbar discogram to identify if he would be a good surgical candidate.

On December 22, 2014, UR. Rationale for Denial: Medical treatment guidelines do not recommend discography. The treating physician states the patient would be a good surgical candidate. Previously, discography had been used as part of the preoperative evaluation of patients that are considering surgical intervention for low back pain. I was unable to identify any objective clinical findings or documentation to justify the use of discography when medical treatment guidelines do not recommend the use of this study. Therefore, this request is deemed not medically necessary and is not authorized.

On January 22, 2015, UR. Rationale for Denial: As outlined in the Official Disability Guidelines, discography is specifically "not recommended". While noting it has been used in the past, there were no high-quality studies supporting the efficacy of such intervention. Furthermore, if there is a distillation identified on

MRI, the pathology has been established. Therefore, this is not clinically indicated.

**ANALYSIS AND EXPLANATION OF THE DECISION INCLUDE CLINICAL BASIS, FINDINGS, AND CONCLUSIONS USED TO SUPPORT THE DECISION:**

The previous adverse determinations are upheld. The patient does not require a lumbar discogram. The Official Disability Guidelines (ODG) does not support discography. Discography has been used in the past for surgical decision-making. The patient's pathology at L5-S1 is clearly defined on MRI as the only source of pain in the lumbar spine. He had significant pain relief from an epidural injection at this level. He does not require additional diagnostic testing prior to surgery. Therefore, the request for lumbar discogram is denied.

PER ODG:

Discography	Not recommended. In the past, discography has been used as part of the pre-operative evaluation of patients for consideration of surgical intervention for lower back pain. However, the conclusions of recent, high quality studies on discography have significantly questioned the use of discography results as a preoperative indication for either IDET or spinal fusion. These studies have suggested that reproduction of the patient's specific back complaints on injection of one or more discs (concordance of symptoms) is of limited diagnostic value. (Pain production was found to be common in non-back pain patients, pain reproduction was found to be inaccurate in many patients with chronic back pain and abnormal psychosocial testing, and in this latter patient type, the test itself was sometimes found to produce significant symptoms in non-back pain controls more than a year after testing.) Also, the findings of discography have not been shown to consistently correlate well with the finding of a High Intensity Zone (HIZ) on MRI. Discography may be justified if the decision has already been made to do a spinal fusion, and a negative discogram could rule out the need for fusion on that disc (but a positive discogram in itself would not allow fusion). ( <a href="#">Carragee-Spine, 2000</a> ) ( <a href="#">Carragee2-Spine, 2000</a> ) ( <a href="#">Carragee3-Spine, 2000</a> ) ( <a href="#">Carragee4-Spine, 2000</a> ) ( <a href="#">Bigos, 1999</a> ) ( <a href="#">ACR, 2000</a> ) ( <a href="#">Resnick, 2002</a> ) ( <a href="#">Madan, 2002</a> ) ( <a href="#">Carragee-Spine, 2004</a> ) ( <a href="#">Carragee2, 2004</a> ) ( <a href="#">Maghout-Juratli, 2006</a> ) ( <a href="#">Pneumaticos, 2006</a> ) ( <a href="#">Airaksinen, 2006</a> ) ( <a href="#">Manchikanti, 2009</a> ) Discography may help distinguish asymptomatic discs among morphologically abnormal discs in patients without psychosocial issues. Precise prospective categorization of discographic diagnoses may predict outcomes from treatment, surgical or otherwise. ( <a href="#">Derby, 2005</a> ) ( <a href="#">Derby2, 2005</a> ) ( <a href="#">Derby, 1999</a> ) Positive discography was not highly predictive in identifying outcomes from spinal fusion. A recent study found only a 27% success from spinal fusion in patients with low back pain and a positive single-level low-pressure provocative discogram, versus a 72% success in patients having a well-accepted single-level lumbar pathology of unstable spondylolisthesis. ( <a href="#">Carragee, 2006</a> ) The prevalence of positive discogram may be increased in subjects with chronic low back pain who have had prior surgery at the level tested for lumbar disc
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herniation. ([Heggeness, 1997](#)) Invasive diagnostics such as provocative discography have not been proven to be accurate for diagnosing various spinal conditions, and their ability to effectively guide therapeutic choices and improve ultimate patient outcomes is uncertain. ([Chou, 2008](#)) Although discography, especially combined with CT scanning, may be more accurate than other radiologic studies in detecting degenerative disc disease, its ability to improve surgical outcomes has yet to be proven. It is routinely used before IDET, yet only occasionally used before spinal fusion. ([Cohen, 2005](#)) Provocative discography is not recommended because its diagnostic accuracy remains uncertain, false-positives can occur in persons without low back pain, and its use has not been shown to improve clinical outcomes. ([Chou2, 2009](#)) This recent RCT concluded that, compared with discography, injection of a small amount of bupivacaine into the painful disc was a better tool for the diagnosis of discogenic LBP. ([Ohtori, 2009](#)) Discography may cause disc degeneration. Even modern discography techniques using small gauge needle and limited pressurization resulted in accelerated disc degeneration (35% in the discography group compared to 14% in the control group), disc herniation, loss of disc height and signal and the development of reactive endplate changes compared to match-controls. These findings are of concern for several reasons. Discography as a diagnostic test is controversial and in view of these findings the utility of this test should be reviewed. Furthermore, discography in current practice will often include injecting discs with a low probability of being symptomatic in an effort to validate other disc injections, a so-called control disc. Although this strategy has never been confirmed to increase test validity or utility, injecting normal discs even with small gauge needles appears to increase the rate of degeneration in these discs over time. The phenomenon of accelerated adjacent segment degeneration adjacent to fusion levels may be, in part, explained by previous disc puncture if discography was used in segments adjacent to the fusion. Similarly, intradiscal therapeutic strategies (injecting steroids, sclerosing agents, growth factors, etc.) have been proposed as a method to treat, arrest or prevent symptomatic disc disease. This study suggests that the injection procedure itself is not completely innocuous and a recalculation of these demonstrated risks versus hypothetical benefits should be considered. ([Carragee, 2009](#)) More in vitro evidence that discography may cause disc degeneration. ([Gruber, 2012](#)) Discography involves the injection of a water-soluble imaging material directly into the nucleus pulposus of the disc. Information is then recorded about the pressure in the disc at the initiation and completion of injection, about the amount of dye accepted, about the configuration and distribution of the dye in the disc, about the quality and intensity of the patient's pain experience and about the pressure at which that pain experience is produced. Both routine x-ray imaging during the injection and post-injection CT examination of the injected discs are usually performed as part of the study. There are two diagnostic objectives: (1) to evaluate radiographically the extent of disc damage on discogram and (2) to characterize the pain response (if any) on disc injection to see if it compares with the typical pain symptoms the patient has been experiencing. Criteria exist to grade the degree of disc degeneration from none (normal disc) to severe. A

symptomatic degenerative disc is considered one that disperses injected contrast in an abnormal, degenerative pattern, extending to the outer margins of the annulus and at the same time reproduces the patient's lower back complaints (concordance) at a low injection pressure. Discography is not a sensitive test for radiculopathy and has no role in its confirmation. It is, rather, a confirmatory test in the workup of axial back pain and its validity is intimately tied to its indications and performance. As stated, it is the end of a diagnostic workup in a patient who has failed all reasonable conservative care and remains highly symptomatic. Its validity is enhanced (and only achieves potential meaningfulness) in the context of an MRI showing both dark discs and bright, normal discs -- both of which need testing as an internal validity measure. And the discogram needs to be performed according to contemporary diagnostic criteria -- namely, a positive response should be low pressure, concordant at equal to or greater than a VAS of 7/10 and demonstrate degenerative changes (dark disc) on MRI and the discogram with negative findings of at least one normal disc on MRI and discogram. See also [Functional anesthetic discography](#) (FAD).

**Discography is Not Recommended in ODG.**

**Patient selection criteria for Discography if provider & payor agree to perform anyway:**

- o Back pain of at least 3 months duration
- o Failure of recommended conservative treatment including active physical therapy
- o An MRI demonstrating one or more degenerated discs as well as one or more normal appearing discs to allow for an internal control injection (injection of a normal disc to validate the procedure by a lack of a pain response to that injection)
- o Satisfactory results from detailed psychosocial assessment (discography in subjects with emotional and chronic pain problems has been linked to reports of significant back pain for prolonged periods after injection, and therefore should be avoided)
- o Intended as screening tool to assist surgical decision making, i.e., the surgeon feels that lumbar spine fusion is appropriate but is looking for this to determine if it is not indicated (although discography is not highly predictive) ([Carragee, 2006](#)) NOTE: In a situation where the selection criteria and other surgical indications for fusion are conditionally met, discography can be considered in preparation for the surgical procedure. However, all of the qualifying conditions must be met prior to proceeding to discography as discography should be viewed as a non-diagnostic but confirmatory study for selecting operative levels for the proposed surgical procedure. Discography should not be ordered for a patient who does not meet surgical criteria.
- o Briefed on potential risks and benefits from discography and surgery
- o Single level testing (with control) ([Colorado, 2001](#))
- o Due to high rates of positive discogram after surgery for lumbar disc herniation, this should be potential reason for non-certification

**A DESCRIPTION AND THE SOURCE OF THE SCREENING CRITERIA OR OTHER CLINICAL BASIS USED TO MAKE THE DECISION:**

- ACOEM- AMERICAN COLLEGE OF OCCUPATIONAL & ENVIRONMENTAL MEDICINE UM KNOWLEDGEBASE**
- AHCPR- AGENCY FOR HEALTHCARE RESEARCH & QUALITY GUIDELINES**
- DWC- DIVISION OF WORKERS COMPENSATION POLICIES OR GUIDELINES**
- EUROPEAN GUIDELINES FOR MANAGEMENT OF CHRONIC LOW BACK PAIN**
- INTERQUAL CRITERIA**
- MEDICAL JUDGEMENT, CLINICAL EXPERIENCE, AND EXPERTISE IN ACCORDANCE WITH ACCEPTED MEDICAL STANDARDS**
- MERCY CENTER CONSENSUS CONFERENCE GUIDELINES**
- MILLIMAN CARE GUIDELINES**
- ODG- OFFICIAL DISABILITY GUIDELINES & TREATMENT GUIDELINES**
- PRESSLEY REED, THE MEDICAL DISABILITY ADVISOR**
- TEXAS GUIDELINES FOR CHIROPRACTIC QUALITY ASSURANCE & PRACTICE PARAMETERS**
- TEXAS TACADA GUIDELINES**
- TMF SCREENING CRITERIA MANUAL**
- PEER REVIEWED NATIONALLY ACCEPTED MEDICAL LITERATURE (PROVIDE A DESCRIPTION)**
- OTHER EVIDENCE BASED, SCIENTIFICALLY VALID, OUTCOME FOCUSED GUIDELINES (PROVIDE A DESCRIPTION)**