



Specialty Independent Review Organization

**DATE OF REVIEW:** 6/29/2009

**IRO CASE #:**

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

The items in dispute are the prospective medical necessity of a lumbar discogram at L3/4, L4/5, L5/S1 and a lumbar CT.

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

The reviewer is a Medical Doctor who is board certified in Orthopedic Surgery and has been practicing for greater than 15 years.

**REVIEW OUTCOME**

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

- Upheld (Agree)  
 Overturned (Disagree)  
 Partially Overturned (Agree in part/Disagree in part)

The reviewer agrees with the previous adverse determination regarding the prospective medical necessity of a lumbar discogram at L3/4, L4/5, L5/S1 and a lumbar CT.

**INFORMATION PROVIDED TO THE IRO FOR REVIEW**

Records were received and reviewed from the following parties:

HealthCare  
MD

These records consist of the following (duplicate records are only listed from one source): Records reviewed from, MD: Hospital Radiology Report – 1/8/08; Orthopaedic Center notes – 1/16/08-12/11/08, Operative Report – 4/29/08, & Imaging Report – 6/18/08 & 12/23/08; Hospital PT Initial Evaluation-Spine – 1/21/08, PT/OT Summary Report/Prescription – 2/22/08, & PT/OT Discharge Report – 3/31/08; Lumbar Myelography report – 8/13/08; Surgical Specialty Hospital Operative Report – 9/2/08; Select Physical Therapy Re-Evaluation – 12/18/08.

Records reviewed from HealthCare: Utilization Review Referral – 4/14/09 & 4/24/09; Orthopaedic Center notes – 1/14/09-4/16/09 & ; Patient Profile – 3/16/09; Denial Letter – 4/20/09.

A copy of the ODG was not provided by the Carrier or URA for this review.

**PATIENT CLINICAL HISTORY [SUMMARY]:**

The patient is a female who injured her back at work. The patient didn't improve with conservative care. An MRI revealed L5/S1 HNP compatible with back and leg pain. A Myelogram CT revealed bulges at L4/5 and L5/S1 bilaterally. A laminectomy discectomy on 9/2/2008 provided "persistent symptoms without improvement since surgery" according to her surgeon (12/03/2008 office note). The persistent pain led to an MRI on 12/16/2008. No HNP was noted on left, mild to moderate disc desiccation noted L1/2 through L5/S1.

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

The patient has multilevel disc desiccation (including levels above those requested for discogram). She had no benefit from initial surgery and has persistent leg pain.

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 (but a positive discogram in itself would not allow fusion). Discography may be supported 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 justify fusion). 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. 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. 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 herniation. 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. 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. 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. 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.

**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 a screen for surgery, 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) 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)
- o Due to high rates of positive discogram after surgery for lumbar disc herniation, this should be potential reason for non-certification

The ODG indicates that CT is not recommended except for indications below for CT. CT Myelography OK if MRI unavailable, contraindicated (e.g. metallic foreign body), or inconclusive. Magnetic resonance imaging has largely replaced computed tomography scanning in the noninvasive evaluation of patients with painful myelopathy because of superior soft tissue resolution and multiplanar capability. Invasive evaluation by means of myelography and computed tomography myelography may be supplemental when visualization of neural structures is required for surgical planning or other specific problem solving. The new ACP/APS guideline as compared to the old AHCPR guideline is more forceful about the need to avoid specialized diagnostic imaging such as computed tomography (CT) without a clear rationale for doing so. A new meta-analysis of randomized trials finds no benefit to routine lumbar imaging (radiography, MRI, or CT) for low back pain without indications of serious underlying conditions, and recommends that clinicians should refrain from routine, immediate lumbar imaging in these patients.

ODG indications for imaging -- Computed tomography:

- Thoracic spine trauma: equivocal or positive plain films, no neurological deficit
- Thoracic spine trauma: with neurological deficit
- Lumbar spine trauma: trauma, neurological deficit

- Lumbar spine trauma: seat belt (chance) fracture
- Myelopathy (neurological deficit related to the spinal cord), traumatic
- Myelopathy, infectious disease patient
- Evaluate pars defect not identified on plain x-rays
- Evaluate successful fusion if plain x-rays do not confirm fusion

This patient had a post surgical MRI which revealed minor issues. Therefore, this patient does not meet the requirements for CT scanning. This procedure is also not medically necessary at this time.

**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)**