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DATE OF REVIEW: 08/12/08

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 case was reviewed by a Texas licensed MD, specializing in Orthopedic Surgery. The physician advisor has the following additional qualifications, if applicable:

ABMS Orthopaedic Surgery

REVIEW OUTCOME:

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

Upheld

Health Care Service(s) in Dispute	CPT Codes	Date of Service(s)	Outcome of Independent Review
Lumbar Discogram	62290	-	Upheld

PATIENT CLINICAL HISTORY [SUMMARY]:

The request is for a lumbar discogram. The requestor is Dr. an orthopedist.

The patient is xxxx, a xx year old lady who injured her low back on xx/xx. The patient presents with normal reflexes, sensation and motor function. The only positive findings on physical examination are bilateral positive SLRs, bilateral positive Patrick tests and equally diminished bilateral ankle reflexes. The patient has failed facet injections, ESIs and physical medicine. Her symptoms are constant lumbar pain9/10, which keeps her from doing ADLs. Pain is also present in both lower extremities, right greater than left, running down posterior buttocks but the progress notes do not indicate how far down the legs it radiates. The pain, curiously enough, also radiates into the groin areas. The MRI revealed multi-level mild anular bulges with "possible" L5S1 superimposed right foraminal protrusion. There is only limited right foraminal narrowing. There were no herniations or significant stenosis. An EMG with NCV was ordered but was not included in the medical records.

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

Discography has been and remains quite controversial. What is clear after 40 plus years of discography research is that not everyone who reports pain when a disc is injected has the same clinical problem. The best indicator that all of these patients do not have the same illness is that each successive approach to the treatment of patients with a "positive discogram" has failed to give consistently good results (Carragee, Spine, 1999). Additionally, patients with chronic pain with depression and psychosocial issues have an abnormal high rate of false positive discograms (ODG update, 2007) and (ACOEM, Chapter 12, 2004).

For this reason, psychosocial testing to include MMPI-2 is needed prior to discography. Further, discography is no longer considered a diagnostic test, but rather a confirmatory test (ODG, updated, 2007). This means the patient

needs to be a candidate for spinal fusion before discography may be considered as a confirmatory test. Moreover, there has been no documentation of objective signs of radiculopathy, nerve root compression or segmental instability. Flexion/extension views have not been done and she only demonstrates positive bilateral SLRs, a test which is largely subjective, especially in view of no documentation of Braggard tests. Patrick test have no relation to the lumbar spine (a test for subjective SI joint dysfunction) and, thus, are clinically irrelevant to the index injury. The patient complains of inguinal pain which dermatome is far removed from the L5 or S1 nerve roots. Dr. stated the patient has lumbar radiculopathy and lumbar disc herniation but his examinations do not support these diagnoses. The MRI records only "possible" L5S1 protrusion. The report does not state that the presence of a protrusion is even probable. Moreover, it needs to be pointed out that bulges, protrusions, and annular tears are seen in 10-80% of asymptomatic subjects undergoing investigational imaging studies (JBJS, Vol A, Supplement 2, pgs 2-24, April 2006). It is evident from review of the available medical records that the examinee is being treated only for subjective pain complaints. Indications for surgery are not present here.

Therefore, based upon the above rationale, peer-reviewed guidelines and peer-reviewed spine literature, the request for lumbar discography is not certified.

ODG On-line, updated 07/14/08, Treatment, Low Back, Discography states:

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). ([Carragee-Spine, 2000](#)) ([Carragee2-Spine, 2000](#)) ([Carragee3-Spine, 2000](#)) ([Carragee4-Spine, 2000](#)) ([Bigos, 1999](#)) ([ACR, 2000](#)) ([Resnick, 2002](#)) ([Madan, 2002](#)) ([Carragee-Spine, 2004](#)) ([Carragee2, 2004](#)) ([Maghout-Juratli, 2006](#)) ([Pneumaticos, 2006](#)) ([Airaksinen, 2006](#)) 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. ([Derby, 2005](#)) ([Derby2, 2005](#)) ([Derby, 1999](#)) 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. ([Carragee, 2006](#)) 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. ([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](#)) 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).

While not recommended above, if a decision is made to use discography anyway, the following criteria should apply:

- 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) ([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:

ODG:

ODG On-line, updated 07/14/08, Treatment, Low Back, Discography