



Medical Review Institute of America, Inc.
America's External Review Network

DATE OF REVIEW: June 16, 2010

IRO Case #:

Description of the services in dispute: Lumbar Myelogram/CT

A description of the qualifications for each physician or other health care provider who reviewed the decision

This physician reviewer is board certified by the American Board of Neurological Surgery in Neurological Surgery. This reviewer is a member of the American Medical Association, Congress of Neurological Surgeons, American Association of Neurological Surgeons and AANS/CNS Joint Section on Disorders of the Spine and Peripheral Nerves.

Review Outcome

Upon independent review the reviewer finds that the previous adverse determination/adverse determinations should be upheld. The requested lumbar myelogram/CT is not medically necessary.

Information provided to the IRO for review

Received from the State 06/04/10:

- Confirmation of Receipt of a Request for a Review by an Independent Review Organization, 06/02/10, 5 pages.
- Request for a Review by an Independent Review Organization, 05/28/10, 3 pages.
- Letter from, DO, 05/25/10, 3 pages.
- Letter from DO, 05/18/10, 3 pages.

Received from the Carrier 06/04/10:

- Notice of Assignment of Independent Review Organization, 06/03/10, 2 pages.
- Clinical Notes, DO, 04/27/10, 2 pages.
- Nurse Case Manager Consultation, DO, 1 page.
- Patient Profile, 1 page.
- Pre-authorization Request Spine Institute, 03/26/10, 1 page.
- Physical Medicine and Rehabilitation Consultation, MD, 03/26/10, 3 pages.
- MRI Lumbar Spine Report, 03/04/10, 1 page.
- Pre-authorization Request, DO, 02/22/10, 1 page.
- Patient Access Form Health System, 1 page.
- Pre-authorization Request, DO, 02/03/10, 1 page.
- Clinical Notes DO, 02/01/10, 1 page.

- Clinical Notes, DO, 12/21/09, 1 page.
- Clinical Notes, DO, 09/25/09, 1 page.
- New Patient Evaluation, DO, 08/25/09, 2 pages.
- Clinical Notes, DO, 12/02/08, 2 pages.
- MRI Lumbar Spine Report, 11/19/08, 1 page.
- Medical Imaging Information Forms, 2 pages.

Patient clinical history [summary]

The patient is a male who sustained an injury on xx/xx/xx. The patient was working as and stepped out of the cab of his truck and noticed burning pain in his left hip. He was reported to have an L3-4 disc herniation, and he suffered a heart attack. In 1993, the patient had lumbar surgery. On 11/19/08, an MRI of the lumbar spine revealed a large left posterolateral disc protrusion with marked stenosis of the left lateral recess at L3-4. There was severe degenerative disease at L4-5. On 12/02/08, the patient saw a neurosurgeon with leg pain. There was weakness in the left anterior tibialis quadriceps and hip flexors on the left. The recommendation was for an epidural steroid injection; however, this was delayed due to the patient being on Plavix for his coronary disease. The injection was finally cleared by the cardiologist in 02/10. An MRI on 03/04/10 revealed mild disc space narrowing at L2-3 and L3-4 and moderate to severe narrowing at L4-5. At L4-5, there was a prior hemilaminectomy with hypertrophic degenerative changes within the facets and a posterolateral disc bulge osteophyte complex causing moderate left foraminal stenosis. At L3-4, there was mild facet and ligamentous hypertrophy with a small broad-based disc osteophyte complex slightly effacing the thecal sac anteriorly with moderate to severe bilateral neural foraminal narrowing with moderate central stenosis. At L5-S1, there were hypertrophic degenerative changes within the facets with a left posterolateral disc bulge and osteophyte complex resulting in moderate narrowing of the left neural foramen. The clinic note on 04/14/10 indicated the insurance carriers denied all injections. On 04/27/10, in follow up with the neurosurgeon, the patient had physical therapy but no injections. The exam revealed slight weakness in the left extensor hallucis longus and left anterior tibialis. There was dysesthesia in the left L4 dermatome with a positive left straight-leg raise test. The neurosurgeon indicated the recommendation for a lumbar myelogram was to further assess nerve root compression. The prior review on 05/24/10 denied this based on the recent MRI studies failing to demonstrate pathology consistent with the patient's signs and symptoms.

Analysis and explanation of the decision include clinical basis, findings and conclusions used to support the decision.

The guidelines would support the use of CT myelography if MRI is unavailable, contraindicated or inconclusive. In review of the records submitted, agreement is made with the prior reviews. The patient has degenerative neurocompression most significantly at the L4-5 and L5-S1 levels with moderate canal stenosis at L3-4. The patient has weakness in the lower extremities with dysesthesia in the L4 dermatome. The requested lumbar myelogram/CT will not significantly add to the information already gleaned from the MRI scan. The guidelines would indicate that supplemental visualization with CT myelography is supported for surgical planning or other specific

problem solving. There is no submitted rationale for the specific problem in this patient's case. The treating neurosurgeon did opine that the patient had a left L4 versus a left L5 radiculopathy. It is unclear how the lumbar myelogram would help in that determination.

A description and the source of the screening criteria or other clinical basis used to make the decision:

Official Disability Guidelines, online version, Low Back Chapter

Not recommended except for indications below for CT. CT Myelography OK if MRI unavailable, contraindicated (e.g. metallic foreign body), or inconclusive. (Slebus, 1988) (Bigos, 1999) (ACR, 2000) (Airaksinen, 2006) (Chou, 2007) 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. (Seidenwurm, 2000) 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. (Shekelle, 2008) 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. (Chou-Lancet, 2009) Primary care physicians are making a significant amount of inappropriate referrals for CT and MRI, according to new research published in the Journal of the American College of Radiology. There were high rates of inappropriate examinations for spinal CTs (53%), and for spinal MRIs (35%), including lumbar spine MRI for acute back pain without conservative therapy. (Lehnert, 2010)

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 (Laasonen, 1989)