

# Vanguard MedReview, Inc.

4604 Timken Trail  
Fort Worth, TX 76137  
P 817-751-1632  
F 817-632-2619

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## IRO CASE #:

## DESCRIPTION OF THE SERVICE OR SERVICES IN DISPUTE:

Repeat CT Myelogram scan of cervical spine

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

This case was reviewed by a Board Certified Orthopedic Surgeon with over 18 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 when he was at his job at XX. He was carrying a piece of XX when he felt pain in the shoulder girdle musculature on the right side. Several days later he began to have cervical symptoms as well.

XX/XX/XX: MRI Lumbar spine w/o contrast. **Impression:** 1. Transitional and partially sacralized L5 segment. 2. Stable pattern of minor annular bulging between L2 and L5. No selective nerve root involvement. 3. No new disk herniation or other adverse change since XX/XX/XX.

XX/XX/XX: Nerve Conduction Studies and Electromyography. **Interpretation and Conclusion:** The study demonstrates evidence of a possible right cervical radiculopathy. There were recurrent runs of positive sharp waves in the right cervical paraspinal muscles. A mild median neuropathy at or distal to the wrist was apparent on the right and left by mixed motor and median sensory nerve conduction studies. It was mild in severity. There was no evidence of secondary axonal loss of the median nerve at or distal to the wrist. Electromyography of the left upper extremity was deferred, since he has no symptoms in that limb. Conduction studies were performed along the right median and ulnar nerves. F-wave studies were performed along the right median and ulnar nerves. A side to side comparative study with the left median mid palm, ulnar mid palm and left median sensory potential was included. Skin temperature was maintained at 32° C throughout the study by the use of a hydroculator pack. Abnormal findings include the following: 1. The right median palm to wrist peak latency was increased, with an increased interlatency difference between the median and ulnar responses of 0.5 ml. 2. The right median sensory latency was prolonged at the wrist. There was slowing of the conduction velocity across the

wrist. 3. The left median palm-to-wrist peak latency was increased, but there is no significant increased interlatency difference between the median and ulnar responses. 4. The left median sensory latency was prolonged at the wrist. There was slowing of the conduction velocity across the wrist. Fine disposable concentric needle electrode examination of the muscles of the right upper extremity and cervical paraspinal muscles demonstrated recurrent runs of positive sharp waves in the right low cervical paraspinal muscles.

XX/XX/XX: MRI Cervical Spine w/o contrast. **Impression:** 1. No traumatic morphology or traumatic malalignment. No evidence of cord injury or compression. 2. Mild multilevel degenerative changes as detailed above. Mild to moderate degenerative central stenosis at C5-C6 is present. The foramina are fairly well preserved throughout.

XX/XX/XX: Clinical Assessment. **HPI:** The patient was treated at XX. Initially, it was thought that this was a shoulder injury. He had an MRI of the shoulder which, by report, showed rotator cuff strain in the supra and infraspinatus muscles. He had a trigger point injection in the low right cervical area, which relieved this pain for several days. Unfortunately, repeat trigger point injections did not offer the same relief. Gradually, he started feeling tingling in the right hand and the fingers 2, 3, and 4. He initially had PT for his shoulder. He regained good ROM but he retained pain in his right low cervical area radiating into the right shoulder girdle with associated tingling in the right hand. **Complaints:** Dominant axial and right low cervical pain radiating into the right shoulder girdle. The pain is a constant aching. Turning the head to the right provokes sharp stabbing pain in the right low cervical area and top of the right shoulder girdle. There are no alleviating factors. Secondary: intermittent tingling in the right hand, digits 2, 3, and 4. This is mostly present at night and sometimes it wakes him up from sleep. It is not present throughout the day. **Physical Exam:** Overweight adult male. Gait: reciprocal, sitting posture: slumped, with head forward of the shoulders. Movement: Flexion: limited, painful right low cervical area, extension: limited, painful right low cervical area. Extension/rotation: limited by relatively painful on the right with pooling in the right low cervical area on the left-sided rotation. Palpation right, mid trapezius: tender. Neurological: Dhermitte's: Negative. Hoffman's: right-negative; left negative. Spurling's: right-negative; left -negative. DTRs: Biceps: ¼, ¼. Brachioradialis: ¼, ¼. Triceps: ¼, ¼. Sensory: normal. Supine Exam: Articular Processes: Right: Middle cervical-tender, lower cervical- tender, scalene muscles-tender. Impingement Test: Empty can test: positive, Hawkins test: positive. Strength test: Supraspinatus test (resisted abduction/arm drop test): weak. Palpation of bicipital groove (with arm flexion): painful. **Follow up:** right C5-6 transforaminal epidural injection. **Impression/Plan:** Diagnosis: 1. Cervical radiculitis 2. Neck pain 3. Other surgical syndromes. 4. Cervicobrachial syndrome. 5. Shoulder pain. 6. Impingement shoulder.

XX/XX/XX: Procedure Note. **Procedure:** Right C5-6 Transforaminal Epidural Steroid Injection

XX/XX/XX: Procedure Note. **Procedure:** Medial branch blocks for the right C4-5, C5-6, C6-7 facet joints.

XX/XX/XX: Procedure Note. **Procedure:** Radiofrequency treatment of the medial branches for the right C4-5, C5-6, C6-7 facet joints.

XX/XX/XX: Procedure Note. **Procedure:** Right C5-6 Transforaminal Epidural steroid injection.

XX/XX/XX: Follow up note, **HPI:** Patient returns for FU after injection. The long term pain journal reports the pain was 95% better on day 1 post procedure, 90% better on day 2, 80% better on day 3, 75% better on day 4, and 65% better on day 5. Today he is 95% better.

XX/XX/XX: Office Visit. **Medications:** anastrozole 1 mg tab, atorvastatin 40 mg tab, baclofen 10 mg tab, Lyrica 75 mg capsule, methylprednisone 4 mg tab in a dose pack, prednisone 20 mg tab. **Discussion notes:** Exacerbation of his right neck pain 3 months ago at work. 7 months post AC DF C3 4. Operation has done very well. He returned to work full-time and off narcotic meds until this recurrence of pain. **Examination:** Spurling maneuver to the right causing right-sided neck pain but no right arm symptoms, full strength, symmetric reflexes, negative Hoffmann's, full ROM of his shoulder. **Assessment:** Recurrent symptoms right side of his neck. **Plan:** CT myelogram of cervical spine to see if he has any new nerve root compression and to evaluate the fusion status at C3 4. He has taken anti-inflammatory for 3 months without helping. Trigger point injections are not helping. He has been doing

McKenzie therapy at home without helping.

XX/XX/XX: Operative Report. **Procedure:** Right C5 and C6 Transforaminal Epidural Steroid Injection

XX/XX/XX: UR. Treatment Requested: Outpatient cervical CT myelogram. **Rationale for Denial:** Physical examination is normal. Symptomology is not well defined in terms of dermatomes.

XX/XX/XX: Cervical Myelogram with CT Myelography of the Cervical Spine. **Impression:** Broad-based central disc protrusion at C6-C7 with a mild chronic cord deformity but no active cord compression. Central and left paramedian and lateral disc protrusion at C5-C6 without discrete neural element compression. Asymmetric posterior osteophytic spurring toward the right at C3-C4 with asymmetric facet degenerative change at this right C3-C4 facet joint. The significance of these findings are undetermined.

XX/XX/XX: Operative Report. **Procedure:** Right C3 and C4 Medial Branch Block Fluoroscopic Needle Guidance.

XX/XX/XX: Page 1 Office Visit. **HPI:** XX follow up for his right sided neck pain. He has undergone one set of right C3, C4 medial branch nerve blocks two weeks ago. This was at the request of XX. He has met again with XX who has now recommended a right C4 selective nerve root block. He did not have any significant pain relief even the first 24 hours with recent medial branch nerve block. He has changed gabapentin taking 1200 mg every evening. He denies any side effects despite this increase. He also continues to take hydrocodone 10/325 mg 3x daily with benefit. He is denying any significant radiating past his right shoulder. No numbness, tingling, dysesthesias, or weakness in his bilateral upper extremities.

XX/XX/XX: Operative Report. **Procedure:** Right C4 Transforaminal Epidural Steroid Injection Fluoroscopic needle guidance

XX/XX/XX: Procedure Report. **Procedure:** Single level anterior cervical discectomy and fusion at C3-4.

XX/XX/XX: XR Spine Cervical 2V. **Impression:** Anterior fusion plate is seen spanning C3-C4. Intervertebral spacer is in place. Anatomic alignment is demonstrated.

XX/XX/XX: Office Visit. **HPI:** XX presents for a slightly earlier office visit to discuss possible injection therapy for continued right shoulder pain. His pain originally secondary to a WC injury which occurred on XX/XX/XX. He underwent a cervical fusion in XX/XXXX and was doing well working full duty at his regular job. Approximately four weeks ago he was XX while at work and has experienced increased pain across the top of his right shoulder that has only slightly improved since his last visit. He has been taking baclofen 10mg 3x daily which he has found to improve his sleep. He denies any side effects from this medication or hydrocodone. He is taking hydrocodone 10/325 mg tablets twice daily. Since this increased pain occurred he has also had a Medrol dose pack which he started at the beginning of XXXXXX and offered minimal improvement. Lowest pain: 2, worst pain: 7, present pain: 5. **Physical Exam:** He has no increase in pain in his neck with cervical extension, flexion, or right and left rotation. He has no tenderness to palpation over his cervical facet joint at any level. There is tenderness to palpation over his right upper trapezius muscle with taut bands noted. He has no pain with abduction of his bilateral upper extremities. He also has full ROM of his bilateral upper extremities. **Impression/Plan:** Increased flare in right shoulder pain for the past four weeks that appears to be mostly myofascial in nature. Recommend a trial of trigger point injections into his right shoulder region. Continue meds, home exercises. Recommend he utilize a TENS unit at home for additional pain relief. Ice as needed. Follow up in one month.

XX/XX/XX: Operative Report. **Procedure:** Triggerpoint injection, Initial

XX/XX/XX: Office Visit. **HPI:** Complaint is primarily in the lower levels of his cervical spine on the right side with radiation into the top of his right shoulder and right scapular region. He has had one set of trigger point injections with XX. He notes that this has alleviated 75% of the pain that he was previously experiencing. He now feels though that it is more centrally located. The pain is quite constant. He finds that his medications are helpful and

allow him to better get through his workday. He has exercises at home that he performs in addition to using ice for additional pain. **Physical Exam:** He has increased pain with cervical extension as well as right sided axial loading maneuvers. He has a negative Spurling's maneuver bilaterally. He has tenderness to palpation on his right C4 through C7 facet joints; non-tender on the left. He has no trigger points noted in his right upper trapezius muscle on exam today. 5/5 muscle strength throughout his bilateral upper extremities. **Impression/Plan:** His neck pain today is most consistent with facet arthropathy. Recommend diagnostic and potentially therapeutic right C4, C5, C6 and C7 medial branch nerve blocks x1. If these offer significant, but only limited therapeutic pain relief, he may be a candidate for radiofrequency nerve ablation. Continue current meds and home exercise. Follow up in one month.

XX/XX/XX: UR. **Rationale for Denial:** The history and documentation do not objectively support the request for a repeat CT myelogram of the cervical spine at this time. There is no evidence of a trial and failure of reasonable course of conservative care, including exercise program, local modalities, and the judicious use of medications for the claimant's recurrent symptoms. There are no new or progressive focal neurologic deficits for which this type of imaging study would be indicated. There is no evidence that urgent or emergent surgery is under consideration. The medical necessity of this request has not been clearly demonstrated and a clarification was not obtained.

XX/XX/XX: Office Visit. **HPI:** Right sided neck pain going down to right sided medial acapular, can go down to the triceps area, dorsal forearm with some tingling and numbness toward the right index finger. Status post an ACDF at C3-C4 on XX/XX/XX.

XX/XX/XX: UR. **Rationale for Denial:** The claimant is seven months post cervical discectomy and fusion. His preoperative symptoms included neck pain with radiation of pain into the trapezius muscle without neurological deficit or clear demonstration of radiculopathy. He had a cervical discectomy and fusion at C3/C4 with immediate relief of symptoms but recurrence of neck pain at four months. Neurological examination remains normal. There is no clinical evidence of nerve compression. ODG states the following regarding myelography and CT/Myelography: "Not recommended except for selected indications below, when MR imaging cannot be performed, or in addition to MRI." There is no documentation MR imaging cannot be performed at the previously operated level or at any other level. A CT/myelogram is not necessary to evaluate the status of a cervical fusion since ODG notes the following recommendation for plain x-rays of the cervical spine: Post-surgery: evaluate status of fusion." That is, plain x-rays of the spine are the first imaging study of choice to evaluate a previous fusion. For these reasons, the request service is not certified as medically necessary and appropriate.

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

The request for CT myelogram is denied. This patient is currently dealing with right-sided neck pain, with radiation to the right shoulder and right scapular region. He has completed a C3-4 ACDF in XX/XXXX. He has failed medications and a recent set of trigger point injections. The Official Disability Guidelines (ODG) supports CT myelography for surgical planning in patients who are unable to complete a MRI. CT myelography is particularly helpful for imaging nerve roots that are in close proximity to surgical hardware. Based on the records reviewed, it is unclear whether this patient's current complaints are related to a problem at C3-4, where he has had prior surgery. An EMG-NC study is recommended first to determine the source of the right shoulder complaints. If the patient has positive electrodiagnostic findings at C3-4, a repeat CT-myelogram can be considered. If he has findings at other nerve root levels, he can complete a MRI of the cervical spine. This patient has no documentation of a potential C3-4 pseudarthrosis on plainfilm. A standard cervical spine CT, without a myelogram, is the preferred non-invasive test to diagnose a pseudarthrosis. The CT myelogram is not medically necessary at this point in time.

Per ODG:

**ODG Criteria for Myelography and CT Myelography:**

1. Demonstration of the site of a cerebrospinal fluid leak (postlumbar puncture headache, postspinal surgery headache, rhinorrhea, or otorrhea).
2. Surgical planning, especially in regard to the nerve roots; a myelogram can show whether surgical treatment is promising in a given case and, if it is, can help in planning surgery.
3. Radiation therapy planning, for tumors involving the bony spine, meninges, nerve roots or spinal cord.
4. Diagnostic evaluation of spinal or basal cisternal disease, and infection involving the bony spine, intervertebral discs, meninges and surrounding soft tissues, or inflammation of the arachnoid membrane that covers the spinal cord.
5. Poor correlation of physical findings with MRI studies.
6. Use of MRI precluded because of:
  - a. Claustrophobia
  - b. Technical issues, e.g., patient size
  - c. Safety reasons, e.g., pacemaker
  - d. Surgical hardware

**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)