

<b>Case Number:</b>	CM15-0123219		
<b>Date Assigned:</b>	07/07/2015	<b>Date of Injury:</b>	02/24/2015
<b>Decision Date:</b>	08/04/2015	<b>UR Denial Date:</b>	06/16/2015
<b>Priority:</b>	Standard	<b>Application Received:</b>	06/25/2015

### HOW THE IMR FINAL DETERMINATION WAS MADE

MAXIMUS Federal Services sent the complete case file to an expert reviewer. He/she has no affiliation with the employer, employee, providers or the claims administrator. He/she has been in active clinical practice for more than five years and is currently working at least 24 hours a week in active practice. The expert reviewer was selected based on his/her clinical experience, education, background, and expertise in the same or similar specialties that evaluate and/or treat the medical condition and disputed items/Service. He/she is familiar with governing laws and regulations, including the strength of evidence hierarchy that applies to Independent Medical Review determinations.

The Expert Reviewer has the following credentials:  
 State(s) of Licensure: New Jersey, Alabama, California  
 Certification(s)/Specialty: Neurology, Neuromuscular Medicine

### CLINICAL CASE SUMMARY

The expert reviewer developed the following clinical case summary based on a review of the case file, including all medical records:

The injured worker is a 33 year old male, who sustained an industrial injury on 2/24/2015. The mechanism of injury was a rock falling on his head. The injured worker was diagnosed as having cervical disc herniations without myelopathy, lumbar disc displacement without myelopathy, thoracic sprain/strain, and post-concussion syndrome and tension headaches. There is no record of a recent diagnostic study. Treatment to date has included therapy and medication management. In a progress note dated 6/1/2015, the injured worker complains of constant severe headache, neck pain, low back pain and thoracic pain. Physical examination showed decreased cervical range of motion, cervical muscle spasm and tenderness, thoracic and lumbar tenderness and decreased deep tendon reflexes. The treating physician is requesting 3D magnetic resonance imaging of the brain.

### IMR ISSUES, DECISIONS AND RATIONALES

The Final Determination was based on decisions for the disputed items/services set forth below:

**MRI 3D of the brain:** Upheld

**Claims Administrator guideline:** The Claims Administrator did not base their decision on the MTUS. Decision based on Non-MTUS Citation Official Disability Guidelines, Head, MRI.

**MAXIMUS guideline:** The Expert Reviewer did not base their decision on the MTUS. Decision based on Non-MTUS Citation MRI (magnetic resonance imaging). <http://www.odg-twc.com/index.html>.

**Decision rationale:** According to ODG guidelines, functional MRI "Not recommended. May be appropriate in a research setting. Functional neuroimaging is helping to identify the sensory and emotional components of pain and its autonomic responses, and may help in the design of more rational treatments for pain. However, this test is only useful in a research setting at this time and does not have a role in the evaluation or treatment of patients. There are no studies about the use of functional MRI in a clinical setting. (Borsook2, 2000) In this study functional magnetic resonance imaging (fMRI) combined with support vector machine (SVM) algorithms accurately predicted thermal pain 81% of the time in healthy subjects. (Brown, 2011) This study suggests that cLBP is characterized by a pattern of gray matter density identified on MRI scans. The study used advanced computer algorithms that predicted, with an accuracy of 76%, the presence of chronic low back pain. The algorithms are based on mind reading technology that has been used in cognitive neuroscience, but the technology is not yet ready for clinical application. Researchers are investigating whether this is an objective biomarker for chronic pain that could not only eventually help monitor pain therapies but also distinguish patients with real chronic pain. (Ung, 2012)" Furthermore and according to ODG guidelines, head MRI is indicated recommended as indicated below. Magnetic Resonance Imaging (MRI) is a well-established brain imaging study in which the individual is positioned in a magnetic field and a radio-frequency pulse is applied. Hydrogen proton energy emission is translated into visualized structures. Normal tissues give off one signal, while abnormal structures give off a different signal. Due to its high contrast resolution, MRI scans are superior to CT scans for the detection of some intracranial pathology, except for bone injuries such as fractures. MRI may reveal an increased amount of pathology as compared with CT. Specific MRI sequences and techniques are very sensitive for detecting traumatic cerebral injury; they may include, but are not limited to, diffusion-tensor, gradient echo, and Fluid Attenuated Inversion Recovery (FLAIR). Some of these techniques are not available on an emergency basis. MRI scans are useful to assess transient or permanent changes, to determine the etiology of subsequent clinical problems, and to plan treatment. MRI is more sensitive than CT for detecting traumatic cerebral injury. (Colorado, 2005) (Intracorp, 2005) (Takanashi, 2001) Neuroimaging is not recommended in patients who sustained a concussion/mild TBI beyond the emergency phase (72 hours post-injury) except if the condition deteriorates or red flags are noted. (Cifu, 2009) See also Diffusion tensor imaging (DTI). Indications for magnetic resonance imaging: To determine neurological deficits not explained by CT -To evaluate prolonged interval of disturbed consciousness; To define evidence of acute changes super-imposed on previous trauma or disease. According to the patient chart, there is no clear evidence that the patient developed new neurological focal signs or have abnormal mental status. Therefore, the request for MRI 3D of the brain is not medically necessary.