Case Number:	CM14-0125946		
Date Assigned:	08/13/2014	**Date of Injury:**	01/26/2012
Decision Date:	10/16/2014	**UR Denial Date:**	07/16/2014
Priority:	Standard	**Application Received:**	08/08/2014

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. The expert reviewer is Board Certified in Family Medicine, and is licensed to practice in California. 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/services. He/she is familiar with governing laws and regulations, including the strength of evidence hierarchy that applies to Independent Medical Review determinations.

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 patient is a 49 year-old male who was injured at work on 1/26/2012. The injury was primarily to his left wrist, hand and fingers. He is requesting review of denial for a DNA Test to allow for fine-tuning of drug dosage. Medical records corroborate ongoing treatment for his injuries. He has undergone and EMG and NCV on 2/24/2014, which were normal. His chronic diagnoses include: Status Post Left Wrist Arthroscopic Surgery; Status Post Left Wrist and Hand Carpal Tunnel Release; Status Post Trigger Finger Release; Status Post Excision of Ganglion Cyst. Further treatment recommendations included Physical Therapy and "medications for pain, inflammation and muscle spasm." There are no listed chronic medications in the available medical records.

IMR ISSUES, DECISIONS AND RATIONALES

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

Deoxyribonucleic Acid (DNA) Test to allow for fine-tuning of drug dosage: Upheld

Claims Administrator guideline: The Claims Administrator did not base their decision on the MTUS. Decision based on Non-MTUS Citation Official Disability Guidelines, Pain, Genetic testing for potential opioid abusehttp://ncbi.nlm.nih.gov/pmc.articles/PMC3181785/ The future of genetic testing for drug response

MAXIMUS guideline: The Expert Reviewer did not base their decision on the MTUS. Decision based on Non-MTUS Citation Official Disability Guidelines (ODG), Pain, Cytokine DNA Testing, Genetic Testing for Potential Opioid Abuse.

Decision rationale: The Official Disability Guidelines comment on the use of DNA testing for patients with chronic pain. Two areas are discussed in these guidelines; Cytokine DNA Testing and Genetic Testing for Potential Opioid Abuse. The Official Disability Guidelines do not recommend this testing. Regarding Cytokine DNA Testing: There is no current evidence to support the use of cytokine DNA testing for the diagnosis of pain, including chronic pain. Scientific research on cytokines is rapidly evolving. There is vast and growing scientific evidence base concerning the biochemistry of inflammation and it is commonly understood that inflammation plays a key role in injuries and chronic pain. Cellular mechanisms are ultimately involved in the inflammatory process and healing, and the molecular machinery involves cellular signaling proteins or agents called cytokines. Given rapid developments in cytokine research, novel applications have emerged and one application is cytokine DNA signature testing which has been used as a specific test for certain pain diagnoses such as fibromyalgia or complex regional pain syndrome. The specific test for cytokine DNA testing is performed by the Cytokine Institute. (www.cytokineinstitute.com) Two articles were found on the website. However, these articles did not meet the minimum standards for inclusion for evidence-based review. (Gavin, 2007) (Gillis, 2007) In a research setting, plasma levels of various cytokines may give information on the presence, or even predictive value of inflammatory processes involved in autoimmune diseases such as rheumatoid arthritis. (Kokkonen, 2010) Regarding Genetic Testing for Potential Opioid Abuse:While there appears to be a strong genetic component to addictive behavior, current research is experimental in terms of testing for this. Studies are inconsistent, with inadequate statistics and large phenotype range. Different studies use different criteria for definition of controls. More work is needed to verify the role of variants suggested to be associated with addiction and for clearer understanding of their role in different populations. (Levran, 2012) Translating pharmacogenetics to clinical practice has been particularly challenging in the context of pain, due to the complexity of this multifaceted phenotype and the overall subjective nature of pain perception and response to analgesia. Overall, numerous genes involved with the pharmacokinetics and dynamics of opioids response are candidate genes in the context of opioid analgesia. Overall, the level of evidence linking genetic variability to opioid response is strong; however, there has been no randomized clinical trial on the benefits of genetic testing prior to oxycodone therapy. On the other hand, predicting the analgesic response to morphine based on pharmacogenetic testing is more complex; though there was hope that simple genetic testing would allow tailoring morphine doses to provide optimal analgesia, this is unlikely to occur. A variety of polymorphisms clearly influence pain perception and behavior in response to pain. However, the response to analgesics also differs depending on the pain modality and the potential for repeated noxious stimuli, the opioid prescribed, and even its route of administration. (Vuilleumier, 2012) In summary, the Official Disability Guidelines do not recommend DNA testing. The DNA testing is not considered as medically necessary.