Case Number:	CM14-0217064		
Date Assigned:	01/06/2015	**Date of Injury:**	04/21/2010
Decision Date:	02/28/2015	**UR Denial Date:**	12/01/2014
Priority:	Standard	**Application Received:**	12/29/2014

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. 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: Ohio, North Carolina, Virginia
Certification(s)/Specialty: Family Practice

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 fifty-two year old female who sustained a work-related injury on April 21, 2010. A request for right knee platelet-rich plasma (PRP) injection was non-certified by Utilization Review (UR) on November 26, 2014. The UR physician utilized the Official Disability Guidelines (ODG) in the determination. The ODG indicates that treatment with PCP is under study. A small study found a statistical improvement with chronic refractory patellar tendinopathy and a further improvement was noted at six months after physical therapy was added. However, the UR physician noted that the documentation reviewed did not indicate that the injured worker had patellar tendinopathy, but rather had degenerative joint disease and osteoarthritis. A request for Independent Medical Review (IMR) was initiated on December 29, 2014. An MRI of the knee on May 21, 2014 revealed bone marrow edema and so-called bone marrow lesions involving the medial femoral condyle and medial tibial plateau. In addition there was fraying and maceration of the medial meniscal rim with thinning in the articular surface most significant medially. The evaluating physician noted that if bone marrow lesions are ignored, patients go on to develop disabling arthritic changes and may require artificial joint replacement. The injured worker was undergoing viscosupplentation therapy. Previous treatment included a right knee arthroscopic partial medial menisectomy with osteochondral shave and physical therapy. On November 3, 2014, the evaluating physician noted that the injured worker had a 3 mm joint space in the left knee on x-ray and noted likely pre-existing degenerative joint disease which was accelerated as a result of the chronic overuse and strain from the right knee injury and need for surgery. She was given cortisone injections to both knees. The evaluating

physician requested bilateral knee platelet-rich plasma injections and noted that the injured worker had failed previous viscosupplentation injections, bracing, weight loss, activity modifications and arthroscopy. Her work status was defined as restricted.

IMR ISSUES, DECISIONS AND RATIONALES

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

Right knee platelet rich plasma (PRP) injection: Upheld

Claims Administrator guideline: The Claims Administrator did not base their decision on the MTUS. Decision based on Non-MTUS Citation Official Disability Guidelines (ODG), Knee Chapter

MAXIMUS guideline: The Expert Reviewer did not base their decision on the MTUS. Decision based on Non-MTUS Citation Knee and Leg

Decision rationale: Platelet rich plasma is under study. This small study found a statistically significant improvement in all scores at the end of multiple platelet-rich plasma (PRP) injections in patients with chronic refractory patellar tendinopathy and a further improvement was noted at six months, after physical therapy was added. The clinical results were encouraging, indicating that PRP injections have the potential to promote the achievement of a satisfactory clinical outcome, even in difficult cases with chronic refractory tendinopathy after previous classical treatments have failed. (Filardo, 2009) Platelets are known to release various growth factors that are associated with tissue regeneration/healing and angiogenesis, as well as a variety of chemicals (adenosine, serotonin, histamine, and calcium) that may be important in inhibiting inflammation and promoting angiogenesis. The exact mechanism of action in the context of PRP is still being investigated. The healing process in both muscle and tendon injuries starts with an inflammatory/destruction phase, followed by a repair/proliferation phase and then by a remodeling phase. This process is affected by various factors, such as growth factors, immune cells, and numerous chemomodulators, many of which are found in PRP. Findings of in vitro studies and animal studies have suggested that PRP can potentially decrease the inflammatory response and promote the repair and remodeling phases of healing in both muscle and tendon. PRP represents a novel noninvasive treatment method for patients with acute or chronic soft-tissue musculoskeletal injuries. The popularity of PRP has increased in the medical community, and it has received increased media attention in recent years, particularly because professional athletes have undergone this procedure. There is a need for further basic-science investigation, as well as randomized, controlled trials to identify the benefits, side effects, and adverse effects that may be associated with the use of PRP for muscular and tendinous injuries. Further clarification of indications and time frame is also needed. See also the Elbow Chapter. PRP looks promising, but it is not yet ready for prime time. PRP has become popular among professional athletes because it promises to enhance performance, but there is no science behind it yet. A study of PRP injections in patients with early arthritis compared the effectiveness of PRP with that of low-molecular-weight hyaluronic acid and high-molecular-weight hyaluronic acid injections, and concluded that PRP is promising for less severe, very early arthritis, in younger people under 50 years of age, but it is not promising for very severe osteoarthritis in older patients. (AAOS, 2010) PRP appears to improve the healing of patellar tendon graft sites after anterior cruciate ligament

(ACL) reconstruction, but the intervention didn't have any clinical impact. The authors concluded that PRP is a promising therapy for sports injuries, but more studies are needed to clarify the specific indications. (de Almeida, 2012) Platelet-rich plasma injections can benefit patients with cartilage degeneration and early osteoarthritis (OA) of the knee, according this RCT. In patients with minimal OA, platelet-rich plasma (PRP) works better than hyaluronic acid. The evidence shows that young patients in the PRP group continued to improve a little between follow-ups and that the patients receiving hyaluronic acid get a little worse. So far, however, no medical studies support using PRP for prevention in sports medicine. (Kon, 2012) After 2 decades of clinical use, results of PRP therapy are promising but still inconsistent. (Cohen, 2012) This pilot study suggests that platelet-rich plasma may play a role in improving clinical outcomes in patients with early onset osteoarthritis at both 6 months and 1 year, and PRP seemed to result in no change by MRI per knee compartment in at least 73% of cases at 1 year, in contrast to an expectation that OA would worsen. (Halpern, 2013). In this instance, the literature may be supportive for platelet rich plasma injection but that seems limited to patients less than 50 years of age with mild arthritis. This injured worker has mild to moderate tricompartmental osteoarthritis and her age exceeds 50. The available guidelines and its referenced literature, therefore, do not support the medical necessity for a right knee platelet rich plasma (PRP) injection.