

## CONGRUENT PATELLOFEMORAL RESURFACING



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Isolated patellofemoral (PF) pain due to arthrosis is frequently encountered in orthopaedic practice and affects approximately 9% of patients over 40 years of age. Complex joint biomechanics and surface geometry form a challenging environment to recreate a congruent and stable resurfacing construct in particular for active patients who failed conservative measures or biological treatment options and may need to undergo conventional arthroplasty in future. Joint preservation and restoration of normal joint biomechanics play an important role in the management of patients suffering from isolated patellofemoral arthrosis.

Etiological factor of the disease process can be attributed to trauma, degeneration, malalignment, or idiopathic conditions. Early disease stages are typically managed with conservative measures, including rest, taping, bracing, activity modification, medication, and physical therapy including stretching, strengthening exercises and gait training. Many patients with advanced degeneration will continue to be disabled and require surgical intervention to address their pathology. Treatment options cover a wide spectrum and depend on the underlying etiology, disease stage, patient age and functional expectations.

Procedure to correct patello-femoral pathomechanics include transposition or elevation of the tibial tubercle to shift contact stress and unload the patellofemoral joint and lateral retinacular release to re-balance patellar tracking and unload lateral capsular structures. Skeletal malalignment, in particular when rotation, has been described as a major cause of patellofemoral instability, arthritis and pain and should be treated with derotational osteotomies. Chondral procedures include debridement for low grade focal defects, bone marrow stimulating techniques such as microfracture autologous chondrocyte implantation, osteochondral grafting and allograft transplantation.

Historical reports on treatment of advanced PF arthrosis describe isolated prosthetic resurfacing of the patella and patellectomy. Both have been widely replaced with more recent designs of patellofemoral arthroplasty and total knee replacement.

The purpose of this study was to describe the early experience with a novel patellofemoral resurfacing implant based on objective surgeon assessment of clinical parameters and surgical procedure. The second part of this ongoing investigation will incorporate subjective patient outcomes with focus on joint specific, general health, and activity related instruments.