# Patellar Resurfacing Does Not Improve Clinical Outcome In Patients With Symptomatic Tricompartmental Knee Osteoarthritis. An RCT Study Of 40 Patients Receiving Primary Cruciate Retaining Total Knee Arthroplasty.

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**Background**
There is some evidence that patellofemoral (PF) joint osteoarthritis (OA) causes anterior knee pain (AKP) after total knee arthroplasty (TKA). We hypothesized that patellar resurfacing in primary TKA for patients with symptomatic tricompartmental knee OA yields better clinical results after two years than non-resurfacing.

**Objectives**
The goal of our study was to create a homogeneous group of patients receiving posterior cruciate ligament retaining (CR) TKA for tricompartmental knee OA, and to assess clinical outcomes with a scoring system specifically designed to evaluate the PF joint.

**Study Design & Methods**
A single center randomized controlled clinical trial comparing 40 patients receiving 42 cruciate retaining (CR) TKAs with (n=21) or without patellar resurfacing (n=21) was conducted. Primary outcome was the specific PF joint score HSS Baldini, and secondary outcomes were the Knee Society Score (KSS), and the Knee Osteoarthritis Outcome Scales (KOOS).

**Results**
After two years no significant differences between both groups and between the groups in time for HSS Baldini, KSS, and KOOS were found. HSS Baldini score improved significantly after 6 weeks in both groups ($p < 0.001$) and did not improve in time afterwards. At final follow-up the HSS Baldini mean score improved from a pre-operative mean of 39 to 88 (difference of 49 points; $p < 0.001$)) for the without patella resurfacing group, and from a pre-operative mean of 37 to 81 for the patella resurfacing group (difference of 47 points; $p < 0.001$). One patient in the patella

resurfacing group underwent a soft tissue re-alignment procedure because of patellar subluxation. Two patients in the without patella resurfacing group received secondary patella button placement.

**Conclusions**

Patellar resurfacing in primary TKA for patients with symptomatic tricompartmental OA has no beneficial effect over non-resurfacing. A special PF joint outcome measurement tool (HSS Baldini) and common knee scores showed no better knee function or AKP outcomes for the with patellar resurfacing over the without patellar resurfacing group in time and after two years of follow-up.