# The Resurfaced Versus Unsurfaced Patella: A 7-year Retrospective Analysis

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INTRODUCTION:

Patella resurfacing is a controversial topic in total knee arthroplasty (TKA). Previous studies have compared biomechanics between resurfaced and unsurfaced patella's after TKA using a variety of TKA systems. The purpose of our study was to compare clinical and radiographic outcomes between resurfaced and unsurfaced patella's using a single TKA system.

METHODS:

A retrospective review of 569 patients who underwent primary TKA was performed (N=445 resurfaced, N=124 unsurfaced patella's). All surgeries were performed by two fellowship-trained surgeons between July 2014-January 2020 using the same TKA system. Chart review revealed demographics, operative data, and clinical outcomes including Knee Society Scores (KSS) and Feller Scores. Pre and postoperative radiographs were reviewed for patellar arthritis (Iwano Score), Insall-Salvati ratio, and patella lateral tilt.

RESULTS:

There was no difference in preoperative patellar arthritis (3.11 vs. 3.51, p=0.349) between cohorts. Postoperative ROM (120° vs. 116°, p=<0.001), KSS (97.2 vs. 84.1, p=0.002), and Feller Scores for anterior knee pain (14.2 vs. 12.4, p=0.68) were greater, indicating better pain control, in the resurfaced cohort. The change in the Insall-Salvati ratio pre vs postoperative was greater for the resurfaced group (0.10 vs. 0.04, p=0.002). There was no difference in patella lateral tilt (-1.74mm vs. -1.61mm, p=0.821) between cohorts. Further regression analyses revealed that lack of resurfacing had a statistically significant influence on postoperative ROM(p<.001) and a postoperative IS ratio (p=.0.02).

DISCUSSION AND CONCLUSION:

Our study found that although there was no difference in preoperative patellar arthritis scores, patients who underwent TKA with patella resurfacing had a statistically significant improvement in postoperative ROM and clinical outcome scores compared to those without resurfacing when using a single TKA system.