

## **Oxford Phase III Medial Unicompartmental Knee Arthroplasty (UKA): Results of 467 Knees with a Mean 5-year follow-up and Analysis of Predictors of Failure**

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**Introduction:** Previous studies from Oxford have reported a revision rate of 3%. Other independent centers and registries have demonstrated inferior results (3-15% revision rates). Our purpose is to report revision, bearing dislocation, and assess independent predictors of failure from a single large independent center.

**Methods:** A retrospective clinical and radiographic review of 467 consecutive UKA for isolated medial OA was performed. Oxford Knee Score, KSCRS, WOMAC, SF-12 and analysis of multiple independent predictors of revision (gender, BMI, age, number of previous surgeries, implant sizes, polyethylene thickness, surgeon experience, cement type & technique, MIS vs standard incision) using univariate odds ratio was performed. Radiographic analysis included long-leg alignment films. No industry bias or implant company funding was received for this study. The mean follow-up was 5.2 years (range, 2-10yrs).

**Results:** Thirty-four knees (7.3%) were revised or pending revision to TKA (at a mean 47mos) most commonly for lateral compartment OA. Six knees (19%) required revision augments (5 tibial, 1 femoral). Seven short cemented tibial stems were utilized. Twelve CR(39%) knees, 14 PS(45%), 4 cruciate substituting/dished(13%), and 1(3%) constrained polyethylene were used. The dislocation rate was 0.86% (4 knees). Over correction into valgus on immediate postoperative radiographs was a predictor of revision. Surgeon experience and volume, non-MIS exposure, Simplex cement, and separate cement mixing for tibia and femur trended towards more favorable outcomes.

**Conclusions:** This is a large independent review with revision results not as favorable as from Oxford. Lateral compartment OA was the most common reason for revision. Trends for surgeon experience and surgical technique were clinically significant. A valgus alignment on immediate postoperative radiograph was predictive of failure. Revisions were not 'simple', and failure rates may be higher as time progresses to 10 years and this is of concern considering the lower revision rates associated with TKA surgery.

