



**Title**

**ROTATIONAL LANDMARKS AND SIZING OF THE DISTAL FEMUR  
IN TOTAL KNEE ARTHROPLASTY**

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**Purpose/Premise**

This article reports on a study of the angles between the tangent line of the posterior condylar surface, the anteroposterior axis as described by Whiteside, the transepicondylar line, and the trochlear line in knees undergoing TKA.

**Material and Methods**

In a series of 100 knees, these angles were measured intraoperatively, along with the sulcus angle, transepicondylar width, height of the condyles, and thickness of the various cuts. Also, radiological measurements were made of the mechanical angle, the hip center-femoral shaft angle, the transcondylar angle, and the tibial plateau-tibial shaft angle. After determining the mean values of these measurements, the Student's T-test was used to compare the values according to gender and the mechanical axis. Correlations between the various measurements were then calculated.

**Outcomes**

A significant difference was found between males and females in the ratio between the transepicondylar width and the mean height of the condyles. Differences were also found in the anterior condyle thickness between genders. The average lateral anterior condyle thickness in males was 13.74mm compared to 12.26mm in females. On the medial condyle, the average male resected thickness was 10.63mm while the average female thickness was 8.96mm.

**Conclusion/Recommendation**

The authors concluded that females typically have narrower femurs than males and that some femurs may require narrower femoral components to avoid M/L overhang of the femoral component.

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