

# Ten-Year Survivorship and Outcomes with a Contemporary Cemented Posterior Stabilized Total Knee Arthroplasty System

Richard J Friedman<sup>1</sup>, Erik Thomas Monroy, Phillip John Lewandowski

<sup>1</sup>Medical University of South Carolina

**INTRODUCTION:** Total knee arthroplasty (TKA) designs are evolving, often without long-term clinical data or outcomes. The purpose of this study was to evaluate clinical outcomes and survivorship of a contemporary posterior stabilized (PS) TKA at 10-years survivorship using post-market clinical follow-up data.

## **METHODS:**

Data from 1,818 PS TKA patients in a prospective observational cohort study conducted at 16 sites were evaluated for surgical outcomes, patient-reported outcomes, and long-term survivorship. Forty-one surgeons enrolled patients (F=1085, M=705, Unknown=28) with mean age 68 years, mean BMI 31, and mean follow up of 3.8 years (range 0-10.5 years). Device revision was used to determine implant survivorship. Patient data and device survivorship using Kaplan-Meier analyses were summarized out to 10 years. Oxford Knee Score (OKS) was used to assess patient outcomes and device performance out to 10 years postoperative and compared to preoperative values.

## **RESULTS:**

Mean OKS score was 41 at 5 years and 10 years. Survivorship was 97.4% at 5 years and 91.0% at 10 years. Revision for any reason occurred in 48 of the 1,818 study. The main indications for revision included infection (0.77% of cases, 29.2% of all revisions), aseptic femoral loosening (0.39% of cases, 14.6% of all revisions), pain (0.39% of cases, 14.6% of all revisions), and aseptic tibial loosening (0.17% of cases, 6.3% of all revisions).

## **DISCUSSION AND CONCLUSION:**

This study demonstrates good clinical outcomes at 5 years that are maintained out to 10 years with a contemporary PS TKA. Aseptic loosening of either the femoral or tibial component remains low (0.56% combined) out to 10 years; the most common reason for revision surgery continues to be infection and not any implant related cause. Data from this long-term, prospective, observational cohort study of patients undergoing a PS TKA supports the long-term efficacy and safety out to 10 years.

