

# Total Knee Replacement By Single Surgeon And Single Implant Design

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## INTRODUCTION

**Purpose:** Analyze outcomes of TKA patients done by a single surgeon with a single implant design using a single technique & post-op protocol.

**Hypothesis:** These patients would have as equal or better outcomes than most current studies in the literature with higher self-administered satisfaction scores, PROM, & radiographic analysis.

Many reports have shown dissatisfied patients in up to 20% of the patients studied.

## METHODS

- 1) A phone survey using an Excel Spreadsheet was developed to query 400 patients with at least 5 year post-op follow-up
- 2) EMR systems were reviewed for all patients who had a Consensus ‘Cruciate Retaining’ Knee Replacement, Eldorado Hills, CA (Design & Materials unchanged since 2005 with no recalls) between 2009 & 2017
- 3) A single surgeon, who practiced in same Florida city for thirty years was selected
- 4) 100 patients were examined and X-rayed in the clinical office for validation of phone survey
- 5) Metrics used were:

**Self-Administered Patient Satisfaction Scale (SAPS)**

**Knee Injury and Osteoarthritis Outcome Scores (KOOS)**

**Knee Society Scores (KSS)**

**Survivorship Analysis (ODEP)**

**Radiographic Analysis for: Placement Accuracy & Radiolucent Lines (Meneghini, et al JOA 2015)**

## RESULTS

<b>Demographics:</b>	<b>N=442</b>
<b>Age</b> (at surgery)	69 yr. (62-75)
<b>Sex:</b>	
Female	246 (57%)
Male	189 (43%)
<b>Side</b>	
Left	227 (51%)
Right	215 (49%)
<b>Bilateral</b>	
Simultaneous	10 (2.3%)
Staged	114 (26%)
Unilateral	318 (72%)
Staged Time (Months)	13mo. (4-28)
<b>Osteoarthritis</b>	N=372 84%
<b>Follow-up</b> (Years)	N=272 8.5 yr. (7.2-10.4)

**Self-Administered Patient Satisfaction (SAPS)= 89% Overall Satisfied n=442**

**97.6% Survivorship (implants not revised)n=442**

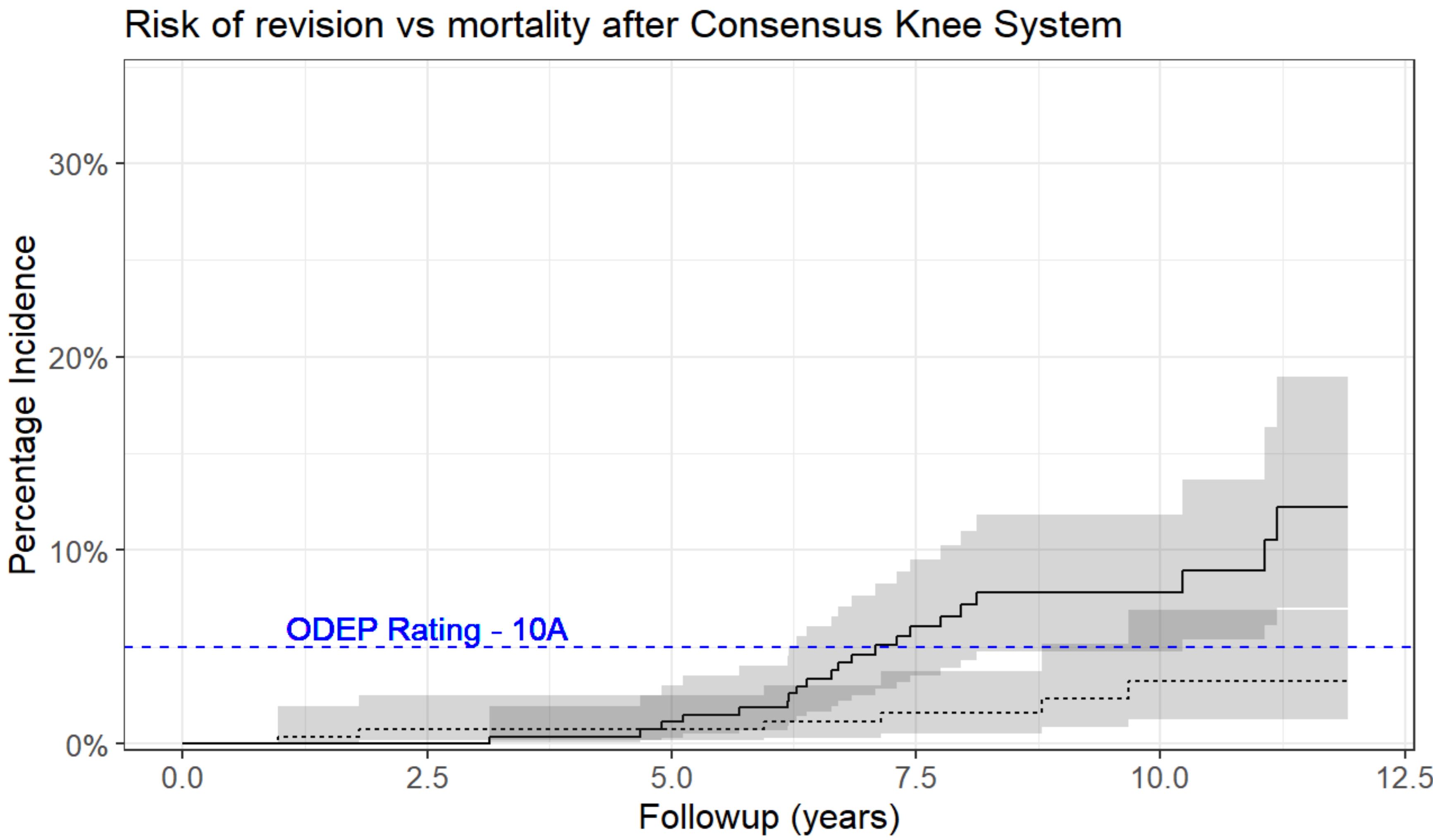
**KSS Pain=84% & Function=80% n=100**

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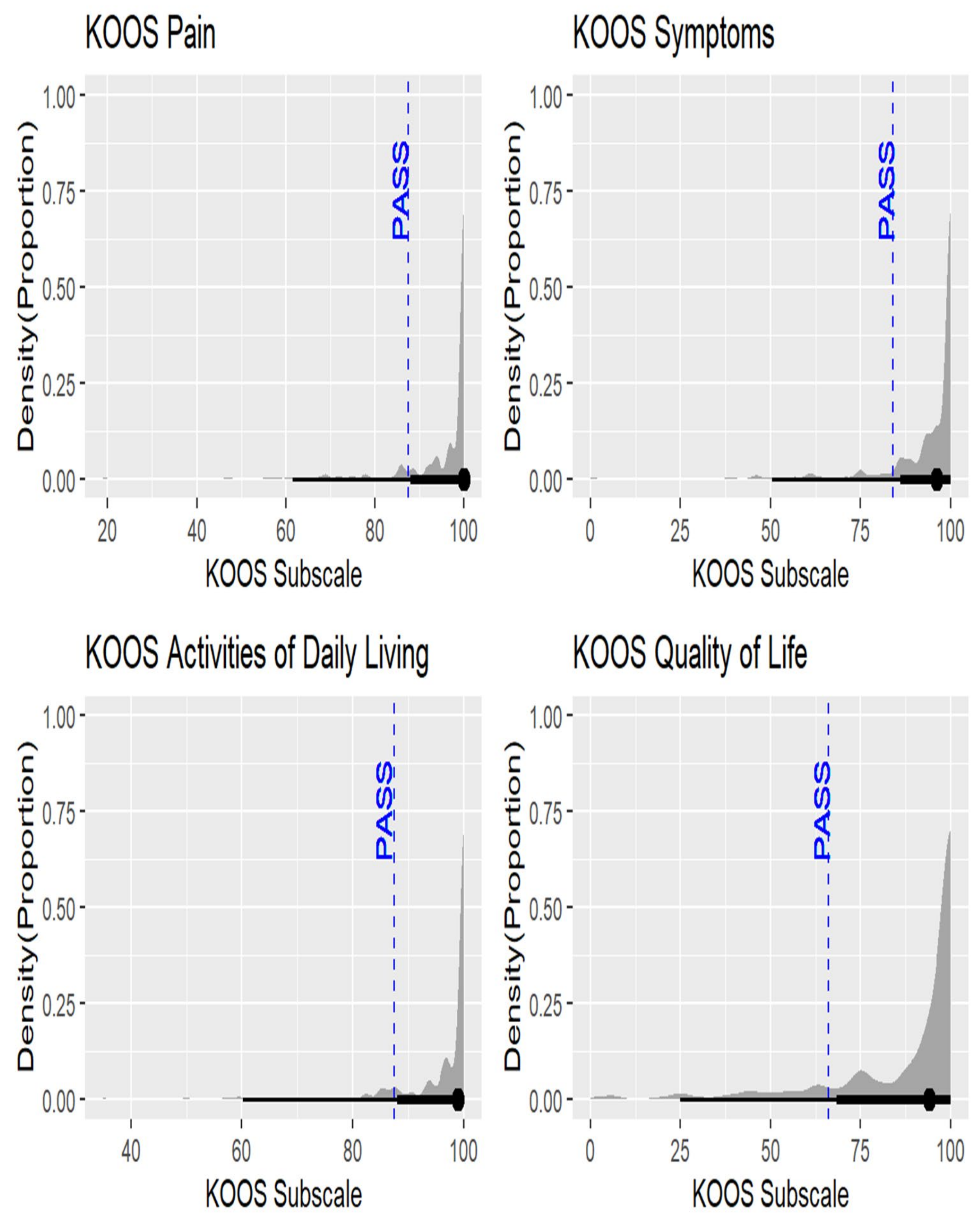
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**RESULTS CONTINUED**



	0.0	2.5	5.0	7.5	10.0	12.5
At Risk	442	269	266	184	83	35
Events	0	2	5	19	24	27

Surgeon



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### Radiographic Analysis

#### Implant Placement Accuracy (n=100):

##### 1) Femoral component

a. 98% were in 5 degrees valgus (+or- 3) b. 95% were in 0-5 degrees of flexion

##### 2) Tibial component

a. 86% were in 0 degrees (+or- 3) of varus b. 65% had 5 degrees (+or-3) of posterior slope

##### 3) Patellar tilt

26% (between 5-10 degrees)

#### Radiolucent Lines (n=100) (all components cemented & no RLL> 1mm)

1) Femoral component=17% with no lines being progressive

2) Tibial component=4.9% with no lines being progressive

3) Patella component=39% with no lines being progressive

### CONCLUSIONS

1) This study design eliminated the surgical variability of:

a. Surgeons

b. Implant Design

c. Surgical Technique

d. Pre- and Post-Op Management Protocols

2) With elimination of Surgical Variability, better Patient Reported Outcome Measures (PROM) were obtained compared to historic controls at an intermediate follow-up of 8.5 years (7-14 yr range)

### DISCLOSURES

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1) Reviewer: Journal of Arthroplasty

2) Consultant: Shalby Advanced Technologies/Consensus Orthopedic, Inc

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## THANK YOU

