

+ Evidence in focus

Publication summary: Lin Y, et al.
Biomed Res Int (2020)*

Total knee arthroplasty (TKA) with patient-specific instrumentation (PSI) demonstrated significant advantages over conventional instrumentation, but VISIONAIRE[◇] was the only system which significantly reduced the risk of malalignment of the mechanical axis

Smith+Nephew

Study rationale



Aseptic loosening

Instability

Unexplained pain

Key findings

Compared to conventional TKA, PSI TKA demonstrated:

Only VISIONAIRE PSI TKA demonstrated significantly reduced malalignment of mechanical axis (p=0.003)



Significantly reduced operative time
(Overall effect of PSI vs CI; p=0.03)



Significantly reduced blood loss
(p=0.03)



Significantly increased Knee Society Score (KSS) scores at 3 months post-TKA (p=0.02)

Study design

Systematic literature review and meta-analysis comparing:

TKA with PSI



TKA with conventional instrumentation

21 studies were MRI-based
8 were CT-based

29 randomised controlled trials
(2,487 knees)

Key data extracted included:



Operative time



Blood loss



Mechanical axis alignment



Knee functional scores[†]

[†]Oxford Knee Score (OKS) and KSS

Study citation

*Lin Y, Cai W, Xu B, et al. Patient-specific or conventional instrumentations: a meta-analysis of randomized controlled trials. *Biomed Res Int.* 2020; 2164371. Smith & Nephew, Inc. 1450 Brooks Road Memphis, TN 38116 USA. 28521 V1 0221. Published February 2021. ©2021 Smith+Nephew. [◇]Trademark of Smith+Nephew. All Trademarks acknowledged.