JOURNEY® II total knee arthroplasty (TKA) demonstrates high midterm survivorship rates and significant improvements in patient outcomes in data presented at EFORT 2019

Key results
- JOURNEY II BCS demonstrates a high survivorship rate, with few major revisions (all-component revisions, femoral and/or tibial component exchange; <1%)1,2
- Lower revision rate with JOURNEY II BCS than registry controls in younger patients (≤55 years)3
- Device risk is not elevated with JOURNEY II BCS in patients with high BMI (≥40 kg/m²)4
- Significant improvements in objective and subjective knee scores2

Data presented at EFORT 2019:

Midterm survivorship
New results from a retrospective, multicentre, international study of 2,059 TKAs, show that JOURNEY II BCS has a high survivorship rate at 5 years, comparable to a registry control of all cemented, posterior stabilised (PS) TKAs reported in the Australian Orthopaedic Association National Joint Replacement Registry (AOANJRR) 2017 (96.4 vs 95.9%; Figure 1).1,5 These results are supported by a second study presented at EFORT. This prospective, multicentre US study of 209 JOURNEY II BCS TKAs also reported a high 5-year survivorship rate of 97% (Figure 1).2

Revision TKA is a technically challenging procedure associated with a high risk of complications,6 and poses significant economic costs to the healthcare industry.7 In the US, the mean estimated cost for revision TKA is in excess of $75,000.7 In both Harris A, et al. studies presented at the meeting, less than 1% of patients receiving a JOURNEY II TKA required a major revision, (all-component revisions, femoral and/or tibial component exchange).1,2 Major revisions accounted for less than 30% of all reported revisions, which is lower than reported in the registry control (42%).1

Age-related revision risk
It is well recognised that younger patients (50-55 years old) are a challenging demographic for TKA and are at a significantly greater risk of revision than older patients.8 The retrospective study presented by Harris A, et al., reported results according to patient age.3 Of the 2,059 JOURNEY II TKAs reported in this study,1 254 were performed in patients aged ≤55 years.3 Comparing these patients to an age-matched registry control (AOANJRR), lower revision rates suggest JOURNEY II BCS may offer an implant benefit in this challenging demographic (Figure 2).

BMI-related revision risk
It is reported that TKA in morbidly obese patients (BMI ≥40kg/m²) is associated with an increased risk of complications and revision.9 Outcomes for obese patients following TKA with JOURNEY II BCS were reported at EFORT.
Evidence in focus (continued)

In the retrospective study presented by Harris A, et al., BMI data were available for 1,644 patients (2,003 TKAs), of which 13.4% had a BMI \( \geq 40 \text{kg/m}^2 \). Obese patients who had undergone TKA with JOURNEY™ II experienced a small difference in risk of revision compared to patients with BMI <40kg/m\(^2\) (p<0.0495); however, the authors concluded that device risk is not elevated with JOURNEY II BCS in obese patients.

Patient outcomes

Patients undergoing TKA often experience residual symptoms with more than half reporting some degree of limitation to their functional activities\(^1\) and up to one in five patients feeling unsatisfied with their procedure.\(^2\) Strategies to improve patient outcomes following TKA were another important topic at EFORT 2019.

Building on results reported at 2 years, Harris A, et al. presented patient outcome data associated with JOURNEY II BCS at 5 years.\(^3\) Significant improvements in Knee Society Scores (KSS [objective knee score, patient satisfaction and functional activities]) observed at 2 years post-TKA were maintained at 5 years (Figure 3).\(^2\)

Conclusion

New evidence presented at EFORT 2019, shows JOURNEY II BCS demonstrates a survivorship rate greater than 96%, comparable to that reported in the registry control.\(^4\) Current evidence suggests that JOURNEY II BCS may offer a favourable option for younger, more active patients who require a longer surviving implant\(^3\) and for those with a high BMI,\(^4\) who are at increased risk of revision with a standard PS TKA.

Whilst survivorship data are important to analyse device longevity and performance, they fail to account for improvements in function that can lead to improved patient satisfaction. JOURNEY II BCS demonstrates significant improvements in both objective and patient reported scores up to 2 years post-TKA, which remain consistent up to 5 years post TKA.\(^5\) With significant improvements in patient satisfaction, as well as high survivorship,\(^6\) these new results suggest that JOURNEY II BCS may offer an improved overall experience compared to standard PS TKA.

References


3. Harris A, O’Grady C, Sensiba PR, et al. Guided motion total knee arthroplasty system in younger patients has a lower revision rate than registry controls: results from the international multicenter study with up to 6 years follow-up. Abstract number 2706 presented as a poster at: EFORT; June 5-7, 2019; Lisbon, Portugal.

4. Harris A, Luo TD, Lang JE, et al. Guided motion total knee arthroplasty (TKA) system in younger patients has a lower revision rate than registry controls: results from the international multicenter study of 2,059 primary TKAs with up to 6 years follow-up. Abstract number 2706 presented as a poster at: EFORT; June 5-7, 2019; Lisbon, Portugal.


Figure 3. Mean KSS scores (objective knee score, patient satisfaction score and functional activities score) at 6 months, 1 year, 2 years and 5 years post-JOURNEY II BCS\(^2\)

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