

## NAVIO<sup>®</sup> Surgical System enables significantly faster return to sport (RTS) after unicompartmental knee arthroplasty (UKA) than conventional surgery



All patients returned to sport, with the majority (91%) returning to their pre-symptomatic intensity level



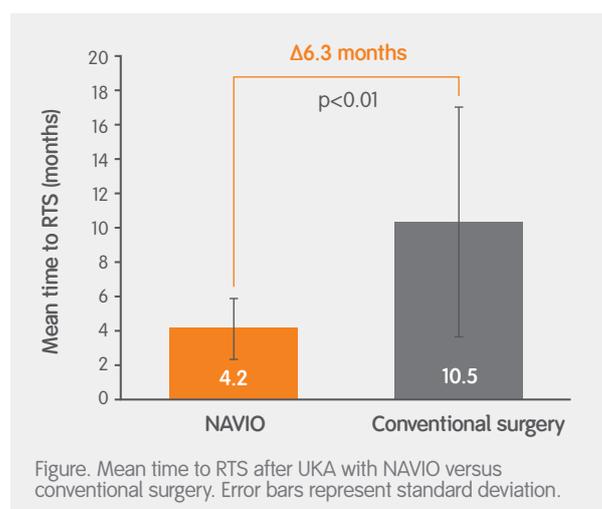
### Study overview

- A retrospective analysis of lateral UKAs in patients with isolated osteoarthritis, performed by a single surgeon between April 2012 and December 2016 with either NAVIO handheld robotics technology or conventional techniques
  - NAVIO: 11 UKAs (mean age, 66.5 years)
  - Conventional surgery: 17 UKAs (mean age, 59.5 years)
  - Mean follow-up of 37.2 months
- RTS and knee function outcomes were compared



### Key results

- NAVIO reduced mean time to RTS by 6.3 months compared to conventional surgery (4.2 vs 10.5 months;  $p < 0.01$ ; Figure)
- With NAVIO, by end of follow-up all patients returned to sport (100%) and the majority returned to their pre-symptomatic intensity level (91%); respective outcomes were 94% and 82% for conventional surgery
- NAVIO achieved favourable knee function outcomes compared to conventional surgery, as measured by the International Knee Society Score-Objective (IKSS-O):
  - Significantly better postoperative IKSS-O (97.2 vs 91.2;  $p < 0.05$ )
  - Significantly greater IKSS-O improvement after surgery compared to preoperative scores (+30.9 vs +22.8;  $p < 0.05$ )
- Results of the International Knee Society Score-Functional, Lysholm Knee Scale and Forgotten Joint Scale were similar with both procedures



### Conclusion

Compared to conventional surgery, NAVIO robotics-assisted lateral UKA reduced time to RTS at pre-symptomatic levels. This could be attributed to the less invasive approach with NAVIO, limiting soft tissue damage and enabling faster muscle recovery, or better implant positioning. These results may help surgeons to inform patients in planning their anticipated level of postoperative activity following lateral UKA, especially young, active patients with high expectations.



### Study citation

\*Canetti R, Batailler C, Bankhead C, Neyret P, Servien E, Lustig S. Faster return to sport after robotic-assisted lateral unicompartmental knee arthroplasty: a comparative study. *Arch Orthop Trauma Surg*. 2018;138(12):1765-1771.

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