

## Restitution of joint-line height in unicompartmental knee arthroplasty (UKA) was significantly improved with NAVIO<sup>®</sup> Surgical System compared with control group ( $p < 0.05$ )

Results from the first study comparing joint-line restitution following robotic-assisted UKA or a conventional technique



### Study design

- Single-surgeon retrospective, case-controlled study comparing joint-line height following UKA using NAVIO robotic-assisted (40 patients; mean age, 69 years) or conventional technique (40 patients; mean age, 68 years)
- Weight-bearing radiographs were taken pre-UKA and 2 months post-UKA



### Key results

- The joint-line was distalised significantly more following UKA in the conventional group than in the NAVIO Surgical System group when assessed using two methods ( $p < 0.05$ ; Figure)
  - Method 1: angle between joint-line and lateral femoral cortex
  - Method 2: angle between joint-line and femoral intramedullary axis

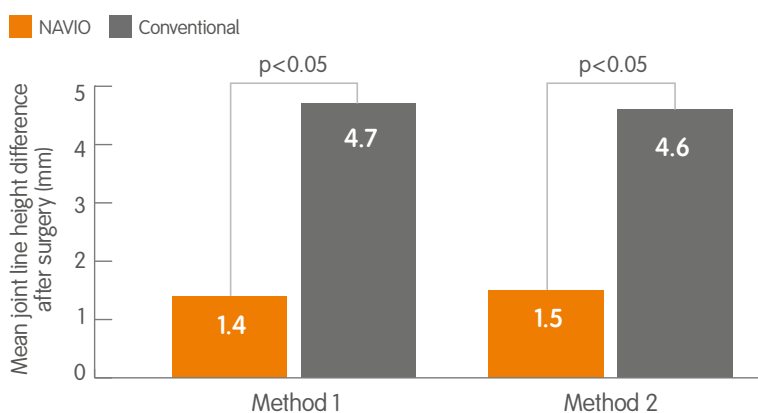


Figure. Mean joint-line height difference (mm) following UKA using robotics-assisted or conventional techniques, as analysed by two methods



### Conclusion

NAVIO robotics-assisted UKA allows for intraoperative planning of implant position and accurate bone resection, resulting in improved joint-line restitution when compared with a conventional technique. Furthermore, NAVIO Surgical System may avoid creating femoral superstructures, thereby reducing tibial resection and helping to prevent pain and other post-UKA complications. Further studies should be undertaken to assess long-term outcomes.



### Study citation

\*Herry Y, Batailler C, Lording T, Servien E, Neyret P, Lustig S. Improved joint-line restitution in unicompartmental knee arthroplasty using a robotic-assisted surgical technique. *Int Orthop*. 2017;41:2265–2271.