



### Clinical outcome using a ligament referencing technique in CAS versus conventional technique.

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### ABSTRACT

**Methods:** We performed a prospective cohort study comparing clinical outcome of navigated TKA (43 patients) with that of conventional TKA (122 patients). Patients were assessed preoperatively, and 2 and 12 months postoperatively by an independent study nurse using validated patient-reported outcome tools as well as clinical examination.

**Results:** At 2 months, there was no difference between the two groups. However, after 12 months, CAS was associated with significantly less pain and stiffness, both at rest and during activities of daily living, as well as greater overall patient satisfaction.

**Conclusion:** The present study demonstrated that computer-navigated TKA significantly improves patient outcome scores such as WOMAC score (P = 0.002) and Knee Society score (P = 0.040) 1 year after surgery in using a ligament referencing technique. Furthermore, 91% were extremely or very satisfied in the CAS TKA group versus 70% after conventional TKA (P = 0.007)

### SUMMARY

A prospective cohort study was done including 43 navigated (Brainlab navigation used) and 122 conventional TKA surgeries. Surgical technique in all cases was strict ligament balancing in flexion and extension. Compared was the clinical outcome which has been assessed preoperatively, after 2 months and after 12 months. The outcome was measured by two different scores (WOMAC, KSS) which account for functional parameters like mobility and patient satisfaction.

### CONCLUSION

**Using a navigated ligament balanced technique, patient outcome after TKA improves significantly.**

“[...] computer-navigated TKA significantly improves patient outcome scores such as WOMAC score (P = 0.002) and Knee Society score (P = 0.040) 1 year after surgery in using a ligament referencing technique”

**Patients undergoing navigated surgery are more satisfied after 12 months postoperatively.**

“Twelve months postoperatively, patients in the navigated group were more satisfied with their knee replacement compared to patients in the non-navigated group”