

Improved Physical Therapy and Short-Term Clinical Outcomes

PURPOSE

The use of sensorized technology in TKA may help to mitigate early soft-tissue complications and thereby improve functional outcomes over manual techniques. In order to evaluate the clinical efficacy of sensor-assisted TKA at an early follow-up interval, 114 patients were evaluated using patient reported outcomes scores and clinical range of motion (ROM) measurements.

METHODS

VERASENSE VS. MANUAL TKA BALANCING

- 57 consecutive sensor-assisted vs. 57 consecutive manual
- All cases were performed by the same surgeon with the same implant system.
- There were no significant cohort demographic or co-morbidity differences.

RESULTS

VERASENSE: HIGHLY STATISTICALLY-SIGNIFICANT IMPROVEMENT ACROSS ALL OUTCOME MEASUREMENTS

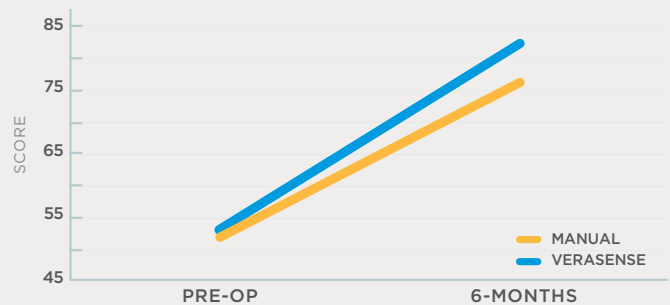
- Faster improvement in PROMS (KSS, Oxford)
- Significantly higher Clinic ROM and improvement in Clinic ROM from Pre-op (P=0.002 AND P<0.001, RESPECTIVELY)
- More patients achieved active deep flexion (>115 DEG.) during physical therapy
 - 52% VERASENSE vs. 42% MANUAL

CONCLUSIONS

VERASENSE HAS SHOWN STATISTICALLY SIGNIFICANT IMPROVEMENT OF PROMS & PHYSICAL THERAPY PERFORMANCE.

AN INCREASE IN PHYSICAL THERAPY PERFORMANCE AND SHORT-TERM OUTCOMES DURING RECOVERY AND REHAB SHOULD TRANSLATE TO SHORTER TREATMENTS AND LOWER OVERALL COSTS IN THE COMPLETE TKA EPISODE OF CARE.

KSS FUNCTION



IMPROVEMENTS PRE-OP TO 6 MONTHS

	MANUAL	VERASENSE	P-VALUE
Δ KSS Pain	29	36	0.001
Δ KSS Function	23	27	<0.001
Δ KSS Total	52	63	<0.001
Δ Oxford	13	17	0.025
Δ Clinic ROM	9°	20°	<0.001

Breslauer L, Chow J. The use of intraoperative sensors significantly increases the patient-reported rate of improvement in primary total knee arthroplasty. *Orthopedics*. 2017 Jul 1;40(4):e648-e651.