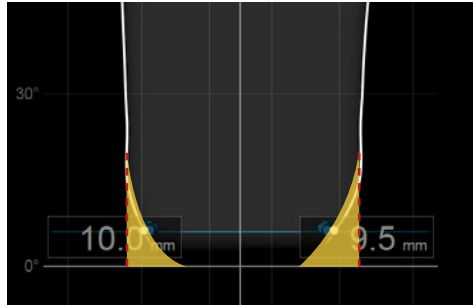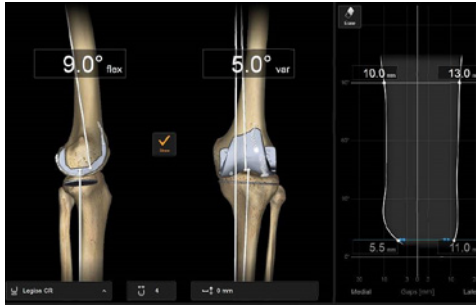# Take control. Get better.

Smith+Nephew

RI.KNEE NAVIGATION
Total Knee Arthroplasty

+ Real Intelligence

Take control

20% of all patients are unhappy with their total knee reconstruction.[1]
Real Intelligence (RI) KNEE NAVIGATION will help you to take control of
gap balancing and soft tissue management.

Characterize

the knee disease state and take
appropriate treatment decisions for
the patient.

Predict

knee stability through the full range
of motion based on joint mobility,
cutting block position and
implant geometry.

Verify

resections, alignment, and knee
balance to control the
surgical result.

Get better

As shown in the Australian Orthopaedic Association National Joint
Replacement Registry (AOANJRR), navigation helps provide better patient
outcomes in Total Knee Arthroplasty (see Figure KT38).[5]

Get better patient outcomes with navigation

- Better alignment and fewer outliers[2]
- 20% lower revision rate[3]
- Improved patient reported outcomes[4]

Figure KT38 **Cumulative Percent Revision for Loosening of Primary Total Knee Replacement by Computer Navigation and Age (Primary Diagnosis OA)**
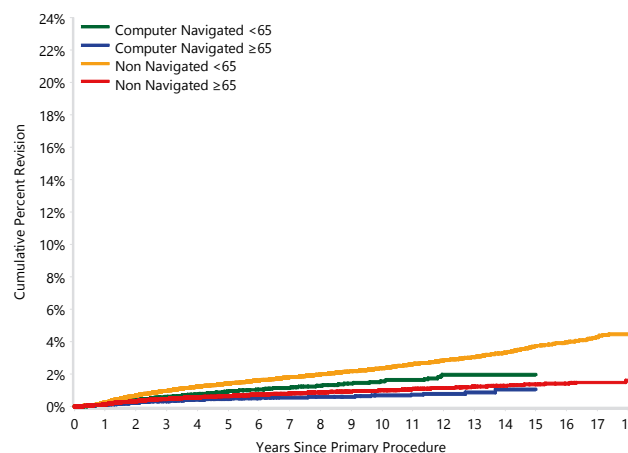
Computer Navigated <65 vs Computer
Navigated ≥65

0 - 6Mth: HR=1.08 (0.68, 1.73),p=0.743
6Mth - 9Mth: HR=1.66 (1.04, 2.64),p=0.033
9Mth - 1.5Yr: HR=1.80 (1.39, 2.33),p<0.001
1.5Yr - 2.5Yr: HR=1.81 (1.38, 2.37),p<0.001
2.5Yr+: HR=2.46 (2.03, 2.98),p<0.001

Computer Navigated <65 vs Non Navigated
<65

Entire Period: HR=0.63 (0.57, 0.71),p<0.001

Computer Navigated ≥65 vs Non
Navigated≥65

Entire Period: HR=0.71 (0.63, 0.80),p<0.001

Non Navigated <65 vs Non Navigated ≥65

0 - 6Mth: HR=1.35 (1.09, 1.67),p=0.005
6Mth - 9Mth: HR=1.70 (1.35, 2.15),p<0.001
9Mth - 1.5Yr: HR=2.23 (1.98, 2.52),p<0.001
1.5Yr - 3.5Yr: HR=2.20 (2.00, 2.42),p<0.001
3.5Yr - 4Yr: HR=3.07 (2.38, 3.94),p<0.001
4Yr - 8.5Yr: HR=2.56 (2.30, 2.85),p<0.001
8.5Yr+: HR=3.33 (2.89, 3.84),p<0.001
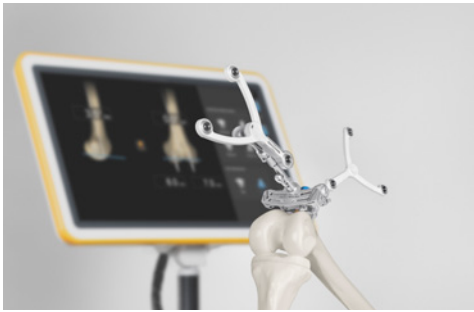
Get better technology in the OR

- Quantify and make soft tissue and balance management visible
- Advanced user interface virtually eliminates screen interaction
- Supports total, partial and revision knee replacement
- Minimal impact on surgical procedure and time[6]
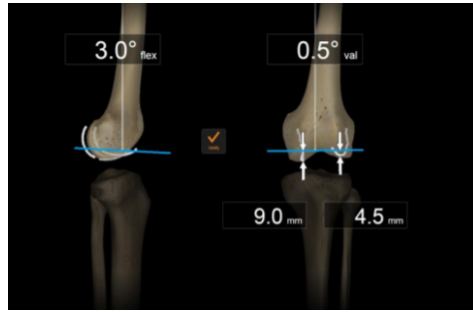
## Get better support for different surgical techniques and philosophies

- RI.KNEE NAVIGATION Universal can be used with almost any implant manufacturer
- RI.KNEE NAVIGATION pinless verification workflow does not require array fixation
- Supports measured resection, gap balancing, kinematic and anatomic techniques
- RI.KNEE NAVIGATION offers multiple workflows to serve different surgeons needs and philosophies
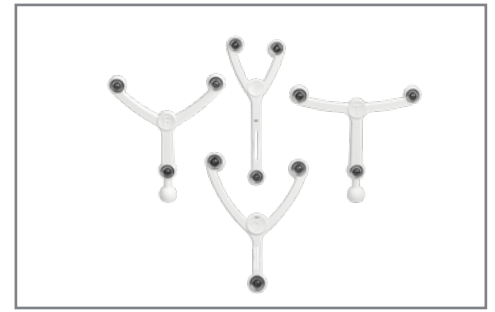
Get better visibility with ClearLens tracking technology

- Occlusion tolerant markers help to maintain marker visibility[7]
- Faster setup and simplified tray management compared to sphere configuration[6*]
- Disposable tracking arrays with preinstalled markers are ready-to-use from the peel pack
- Delivered as a sterile packaged set for one knee replacement procedure

*Compared to setup time using NDI marker spheres with KNEE2.6 and KNEE3
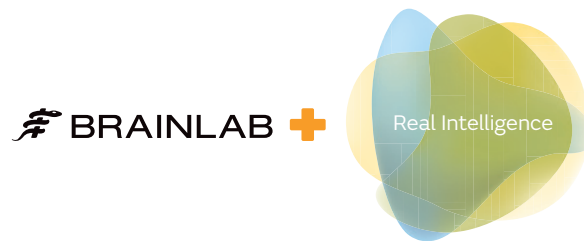
References
1. Scott CEH, Howie CR, MacDonald D, Biant LC. Predicting dissatisfaction following total knee replacement. J Bone Joint Surg Am. 2010;92-B(9):1253-1258. **2.** Mason JB, Fehring TK, Estok R, Banel D, Fahrbach K. Meta-Analysis of Alignment Outcomes in Computer-Assisted Total Knee Arthroplasty Surgery. J Arthroplasty. 2007;22(8):1097-1116. **3.** De Steiger RN, Liu YL, Graves SE. Computer Navigation for Total Knee Arthroplasty Reduces Revision Rate for Patients Less Than Sixty-five Years of Age. J Bone Joint Surg Am. 2015;97(8):635-642. **4.** Petursson G, Fenstad AM, Gothesen O, Furnes O, et al. Computer-Assisted Compared with Conventional Total Knee Replacement: A Multicenter Parallel-Group Randomized Controlled Trial. J Bone Joint Surg Am. 2018;100(15):1265-1274. **5.** Australian Orthopaedic Association National Joint Replacement Registry (AOANJRR). Hip, Knee & Shoulder Arthroplasty: 2019 Annual Report. Adelaide: AOA, 2019. **6.** Data on file with Smith+Nephew. Data from one surgeon experience comparing to KNEE2.6. **7.** Data on file with Smith+Nephew. Maximum Virtual Shift of Marker Position Due to Occlusion. Form 04-143: Revision 06, Released March 30, 2011.