

## JOURNEY<sup>◇</sup> II XR<sup>◇</sup> can restore normal laxity and thus has the potential to offer more normal knee function

### + Plus points



JOURNEY II XR demonstrates similar varus/valgus and internal/external laxity to the normal knee



JOURNEY II XR knee laxity is most similar to the normal knee, when compared to CR and BCS implants



Restoring soft-tissue tension may positively impact joint stability and range of motion

### Overview

Cadaveric study investigating passive knee laxity before and after implantation of different total knee arthroplasty (TKA) designs with and without external loads during three repeated cycles of flexion-extension

- 14 cadaveric knees (mean age, 73 years) were tested to determine the stability of the normal knee
  - All left knees were tested with JOURNEY II XR (n=7)
  - All right knees were tested with JOURNEY II CR (n=7)
  - JOURNEY II BCS was tested in all knees post-XR or CR TKA (n=14)

### Results

- Internal/external (IE) rotational laxity
  - XR implant demonstrated similar average IE laxity to the normal knee (24.7 and 23.4°, respectively)
  - CR and BCS implants displayed significantly less average IE laxity compared to the normal knee (16.1 and 16.1 vs 23.4°; p=0.0001)
  - IE laxity width increased with flexion for all tested implants and normal knee
- Varus/valgus (VV) rotational laxity
  - XR implant demonstrated similar average VV laxity to the normal knee (9.4 and 10.2°, respectively)
  - CR and BCS implants displayed significantly less average VV laxity compared to the normal knee (7.1 and 7.5 vs 10.2°; p=0.0001)
  - VV laxity width increased with flexion for all tested implants and normal knee (Figure)
- Anterior/posterior (AP) laxity
  - XR and CR implants demonstrated similar global AP laxity to the native knee (4.0 and 4.7 vs 5.1°)
  - BCS implant displayed significantly more global AP laxity than the normal knee (7.6 vs 5.1°; p=0.0008)

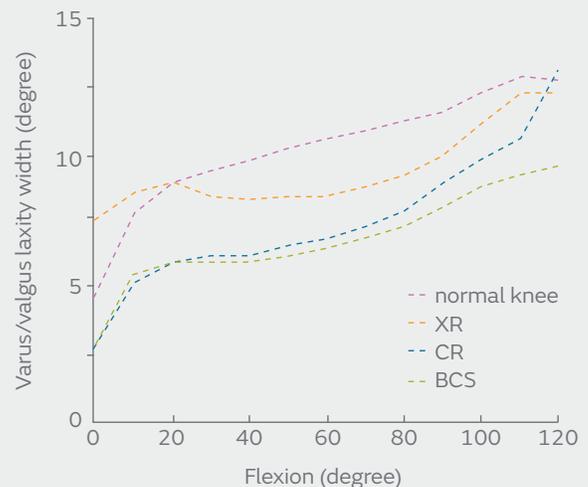


Figure. Varus/valgus laxity width during flexion

### Conclusions

The laxity pattern of JOURNEY II XR is similar to that of the normal knee, demonstrating that JOURNEY II XR is able to restore normal-like knee joint laxity in the cadaveric knee. By restoring normal-like stability, JOURNEY II XR may offer more normal knee function compared to other TKA implant designs.

### Citation

\*Arnout N, Victor J, Vermue H, Pringels L, Bellemans J, Verstraete MA. Knee joint laxity is restored in a bi-cruciate retaining TKA-design. *Knee Surg Sports Traumatol Arthrosc*. 2019 Aug 3. [Epub ahead of print]. Available at: [Knee Surgery, Sports Traumatology, Arthroscopy](https://doi.org/10.1007/s00132-019-0388-8)