As the demand for total hip arthroplasty (THA) continues to grow due to an aging population, longer and more active lives and a propensity to treat younger patients, so too does the incidence of THA revisions.2,3

Patients who undergo revision THA often have increased intra-operative technical difficulties, post-operative complications and poorer outcomes requiring higher resource utilisation than primary THA.4-6 Strategies to reduce the clinical and economic burden of revision THA could include the use of primary implants with lower cumulative revision rates.3,4

**POLARSTEM in combination with R3 has demonstrated the highest survivorship at 7 years regardless of fixation method**

- For any cup-stem combination regardless of fixation method (n=8,543)
  - Highest survivorship
  - 7 years
  - 99.03%

**At 8 years, compared to class average (all bearing types), POLARSTEM demonstrated:**

- **49%** reduction in femoral revisions – all reasons (p<0.001)7
- **70%** reduction in stem aseptic loosening (p<0.001)8
- **35%** reduction in dislocation/subluxation (p=0.021)8
- **57%** reduction in revisions caused by pain (p<0.001)8

A reduction in pain has been shown to correlate with increased patient satisfaction9

After exclusion of Metal-on-Metal, POLARSTEM still showed a significant 41% reduction in femoral revision rates when compared with the class average for cementless THA (p<0.001)8

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At 8 years, compared to class average (all bearing types), R3 demonstrated:

- 31% reduction in acetalubar revisions - all reasons (p < 0.001)
- 77% reduction in aseptic loosening – socket (p < 0.001)
- 40% reduction in socket malignment (p = 0.026)
- 68% reduction in revisions caused by pain (p < 0.001)

After exclusion of Metal-on-Metal, R3 still showed a significant 21% reduction in acetalubar revision rates when compared with the class average for cementless THA (p < 0.001)

Results from recent studies support the stand-out survivorship trends seen in the NJREW

Assaf et al, 2018 99.2% implant survivorship at 7 years (n=114)
Cypres et al, 2018 99.1% stem survivorship at 10 years (n=502)
Teoh et al, 2018 98.89% cup survivorship at 5 years (n=293)

Polarstem™ and R3 uncemented THA has demonstrated safety comparable to hybrid THA in an elderly patient cohort 14

**POLAR3**: Different by design

The unique design features of POLARSTEM, R3 and VERILAST® may translate into the clinical benefits reported in the registry

**POLARSTEM Cementless Stem System**
- 15 years of clinical heritage
- >250,000 implantations

**R3 Acetabular System**
- 12 years of clinical heritage
- >300,000 implantations

**STIKITE™ stability**
When compared with more traditional porous coatings, STIKITE coating has greater porosity providing a higher friction for an immediate ‘scratch-fit’ feel and the potential for better initial implant fixation 21, 22

Initial improved fixation limits micromotion potentially enhancing bony ingrowth 22

**VERILAST Technology for Hips**
- 14 years of clinical heritage
- >1 million OXINUM® component implantations

Excellent wear performance
The exclusive combination of OXINUM oxidized zirconium alloy and highly cross-linked polyethylene has excellent wear performance in laboratory and clinical studies 22-23

Low levels of taper corrosion
OXINUM implants have been shown to under substantial lower levels of taper corrosion compared to metal femoral heads 27, 28

Biocompatibility
OXINUM contains very low levels of the metals nickel, cobalt and chromium compared to cobalt chromium molybdenum implants 29, 30