

Cementless POLARSTEM[®] femoral system: excellent survival at 10 years

The first long-term results with this triple taper, hydroxyapatite-coated femoral stem also show it to have excellent functional outcomes approximately 12 years after total hip replacement (THR)



Study design

- Between 2002 and 2005, three centres performed 502 THRs (502 patients; mean age, 68.7 years) with the cementless POLARSTEM femoral component and POLARCUP[®] acetabular component
- Records for all patients were reviewed for revisions, complications, and baseline Merle d'Aubigne (MDA) scores
- Those still living and not revised were invited for follow-up visit a minimum of 10 years after THR (mean, 11.9 years); 244 agreed to return, with the remaining 258 having chart follow up at 10 years



Key results

- Cumulative 10-year survivorship was considered excellent (Figure)
 - There were four revisions of stem (all for fracture) and 15 of cup (13 for aseptic loosening, one secondary to femur fracture)
- At follow up, the mean WOMAC total, pain, stiffness, and function scores were 13.9 (range, 0-75), 2.3 (range, 0-14), 1.1 (range, 0-6), and 10.7 (range, 0-56), respectively
- Mean MDA scores improved from 9.9 (range, 6-15) at baseline to 17.0 (range, 10-18) at final follow up
- Radiographic analysis revealed no cases of stem subsidence or hypertrophy, one case of stem atrophy, and three cases of osteolysis around the stem

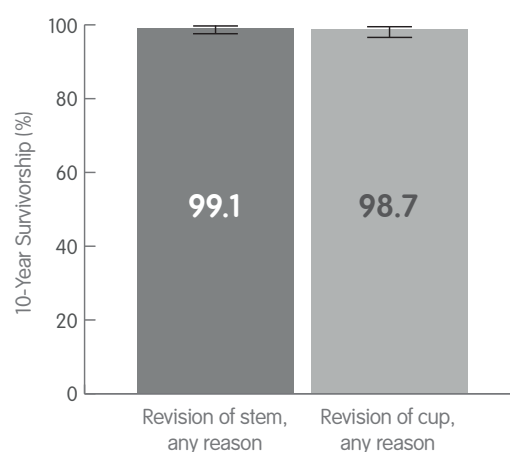


Figure. Survivorship at 10 years



Conclusion

This study, the first to report long-term results with the cementless POLARSTEM, confirms that it is associated with excellent long-term component survival and functional outcomes.



Study citation

*Cypres A, Fiquet A, Girardin P, et al. Excellent long-term outcomes of a triple taper femoral stem for cementless total hip replacement. Poster presented at: *2nd World Arthroplasty Congress*; April 19-21, 2018; Rome, Italy.

Abbreviations: WOMAC = Western Ontario and McMaster Universities Osteoarthritis Index