


R3[®] Acetabular System: 10 year follow-up of primary and revision total hip arthroplasty (THA) patients


Yeroushalmi D, Singh V, Maher N, Gabor JA, Zuckerman JD, Schwarzkopf R. Excellent mid-term outcomes with a hemispheric titanium porous-coated acetabular component for total hip arthroplasty: 7–10 year follow-up. *HIP International*. 2021 Aug 19. [Epub ahead of print].

Available at: [Hip International](#) 


Key points



99.1% survival rate (all cause revision)



Zero incidence of acetabular cup **loosening or migration**



Low incidence of **postoperative complications**

Overview

- A single centre, multi-surgeon, retrospective observational study on patients who underwent primary or revision THA with the uncemented R3 Acetabular System between January 2009 and December 2012 with a minimum of 7 years follow-up
- Of 118 cases, 114 (96.6%) were primary THAs and 4 (3.4%) were revision THAs; all were performed using a posterior approach
- The majority of cases utilised acetabular screw fixation (66.1%)
- Stems were uncemented (99.2%); ANTHOLOGY[®] (48.3%), SYNERGY[®] stem (44.1%), other Smith+Nephew stem (7.6%)
- Primary outcome was survivorship; secondary outcomes included cup migration and osteolysis, assessed radiographically
 - Implant survival was analysed using the Kaplan-Meier method

Results

- The cohort was predominately female (70.0%); mean age, 61 years; mean follow-up, 8.16 years (range: 7.02–10.28 years)
- Survival rate for all-cause revision at 7 and 10 years was 99.1%
- A 10-years survival rate of 100% was seen for aseptic acetabular revision
- No loosening or migration of the acetabular component was seen at the latest follow-up (Table)
- Postoperative complications were experienced by three patients. 2 resulted in revision surgery:
 - Abductor mechanism disruption repair
 - 2-stage revision for infection

Table. Incidence of complications

Complication	Incidence (%)
All cause revision	2 (1.7)
Osteolysis	0 (0)
Cup migration	0 (0)
Post-operative complications	3 (2.5)
Abductor mechanism disruption	1 (0.9)
Surgical site infection	1 (0.9)
Periprosthetic fracture of the greater trochanter	1 (0.9)
Mortality	0 (0)

Conclusions

R3 was shown to deliver excellent survivorship at 7–10 year follow up, with no radiologic and minimal clinical complications identified.

Considerations

All procedures were performed by fellowship-trained, high volume arthroplasty surgeons.