

European Anterior Hip Meeting (EAHM)

**Minimum Ten-Year Implant Survivorship and Patient-Reported Outcomes
Following Minimally Invasive Direct Anterior Approach Total Hip Arthroplasty A
High-Volume Single-Surgeon Cohort Study from Sub-Saharan Africa**

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Introduction / Purpose

BACKGROUND

- The **DAA THA** offers well-documented early recovery advantages.
- **Decade-level survivorship** and validated PROMs data remain sparse, particularly from low- and middle-income country (LMIC) settings.
- No **minimum ten-year AMIS®** series has previously been reported from the African continent.
- **Establishing decade-level durability** is essential to support the growing global adoption of the DAA.

PURPOSE

- Report **minimum ten-year all-cause implant survivorship** following AMIS® DAA THA at a high-volume South African centre.
- Characterise **complication rates** and **revision indications**.
- Evaluate **long-term PROMs** — FJS-12, HOOS, HHS, VAS.
- Contextualise findings within the global DAA literature and assess reproducibility in a LMIC setting.



Method



STUDY DESIGN

- **Retrospective cohort**; prospective database.
- **507 consecutive patients** — primary elective AMIS® DAA THA, 2007–2012.
- **≥ 10-year follow-up** (mean 14.7 years); single, fellowship-trained surgeon.

SURGICAL TECHNIQUE

- **AMIS® DAA** with dedicated mobile leg positioner (Medacta).
- Uncemented acetabular shell + uncemented stem; ceramic-on-XLPE bearing.
- 36 mm head (preferably); capsulotomy formally repaired.

OUTCOMES MEASURED

- **Implant survivorship** — all-cause, femoral, acetabular.
- **Complications** — wound, PJI, periprosthetic fracture, dislocation, loosening.
- **PROMs** — FJS-12, HOOS, HHS, VAS, satisfaction.

STATISTICAL ANALYSIS

- **Stata® v18**; mean ± SD or median (IQR).
- **Kaplan–Meier** survivorship; reported at ten years.
- **Wilson score** method for 95 % CIs on proportions.



Results

97.8 %

10-YEAR ALL-CAUSE SURVIVAL

2.2 %

REVISION RATE

93.3 %

OVERALL SATISFACTION

89.0

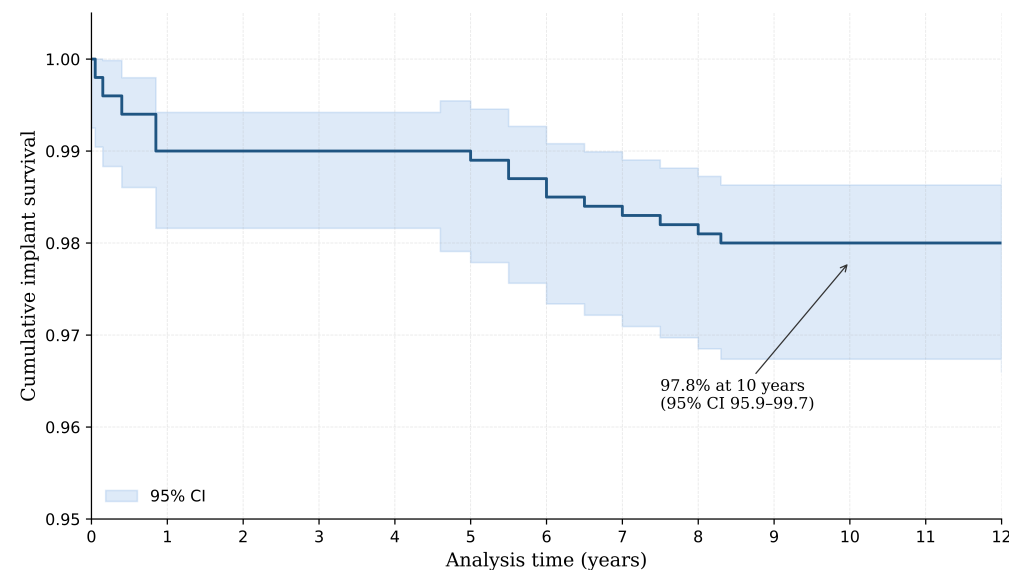
MEAN FJS-12

COHORT (n = 507)

- Mean age **60.8 yrs**; 57.2 % female
- **53.0 % obese** (BMI > 30); **43.5 % ASA III**
- **95.3 % uncemented femoral stems**; ceramic-on-PE in 76.2 %.
- **Complications 7.9 %**: wound 4.7 %, PJI 0.8 %, periprosthetic fracture 1.0 %.
- **Revisions 11 (2.2 %)** — mostly aseptic femoral loosening.

IMPLANT SURVIVORSHIP — KAPLAN-MEIER

Figure 2. Kaplan-Meier estimate of overall implant survival (n = 507)



Conclusion

DURABLE SURVIVORSHIP

- **97.8 %** implant survival at 10 years (95 % CI 95.9–99.7).
- **98.6 %** femoral/ **99.4 %** acetabular component survival.
- **Below the 5 %** NICE revision threshold
- No acceleration in revision after 5 years

PATIENT OUTCOMES

- Mean **FJS-12 89.0**; 60.0 % achieved maximum score of 100.
- Mean **HOOS 88.3**; **HHS 84.4**.
- **93.3 % satisfaction**; 90.7 % VAS ≤ 3
- 61.8 % maintained sports participation at ten years.

REPRODUCIBILITY

- **First decade-level AMIS® DAA** data from sub-Saharan Africa.
- Outcomes match international benchmarks.
- High obesity (**53 %**) and ASA III (**43.5 %**) burden — yet durable results.
- Supports **AMIS® DAA** as a durable, reproducible THA option.

AMIS® DAA THA delivers durable ten-year survivorship and excellent patient-reported outcomes in a high-volume South African cohort.



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