

Revision for Aseptic Loosening

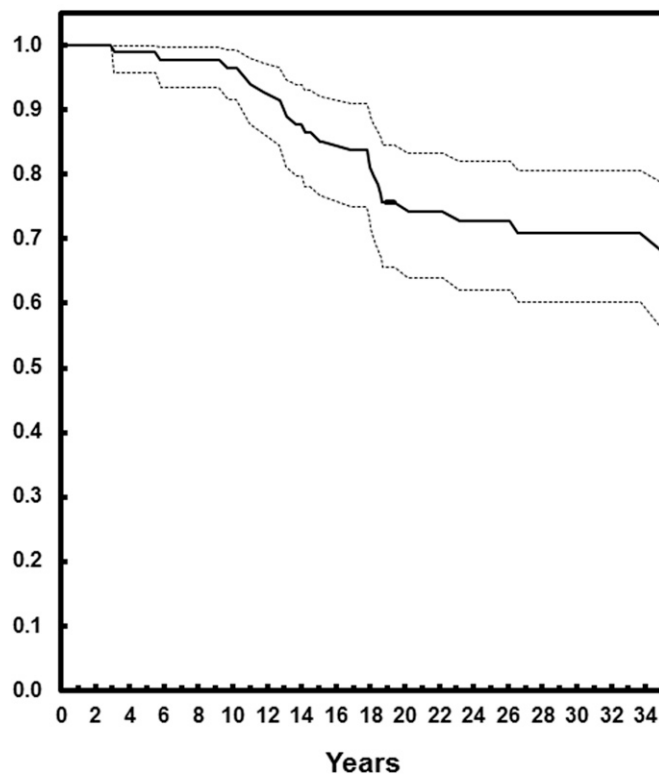


Fig. E-1

Revision for Aseptic Acetabular Loosening

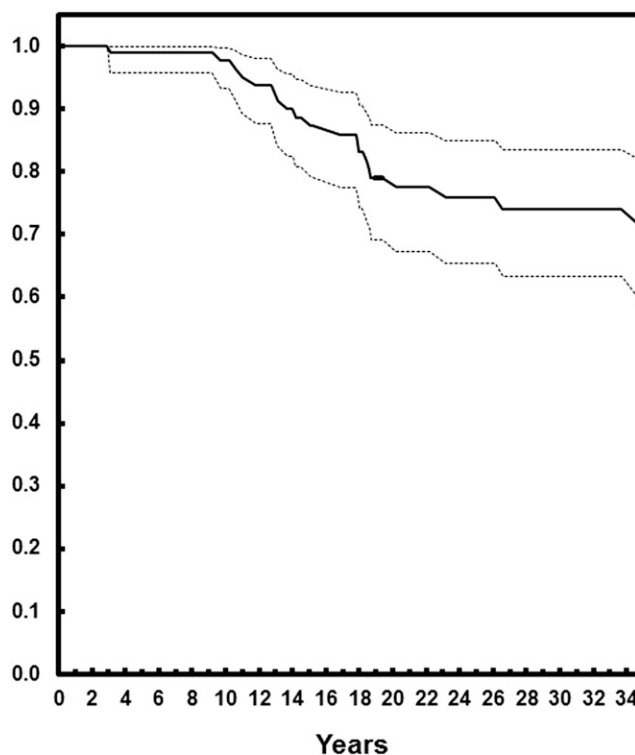


Fig. E-2

Fig. E-1 Kaplan-Meier survivorship curve, with revision for aseptic loosening as the end point, with associated 95% confidence intervals. **Fig. E-2** Kaplan-Meier survivorship curve, with revision for aseptic loosening of the acetabular component as the end point, with associated 95% confidence intervals.

Revision for Aseptic Femoral Loosening

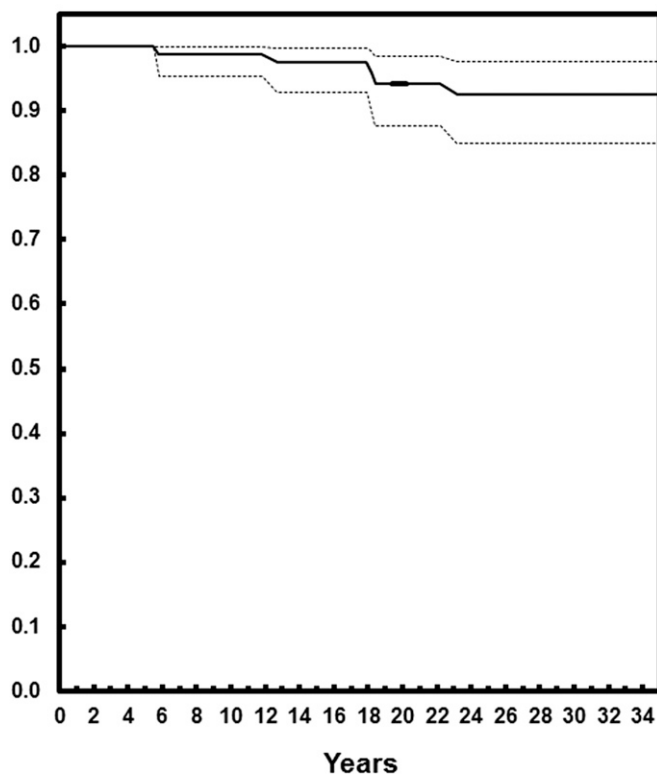


Fig. E-3

Radiographic Acetabular Loosening

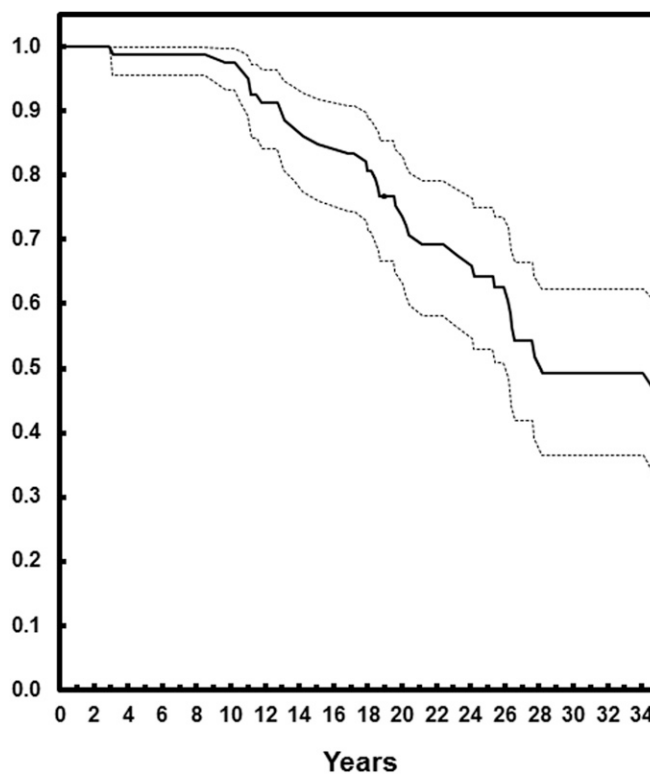


Fig. E-4

Fig. E-3 Kaplan-Meier survivorship curve, with revision for aseptic loosening of the femoral component as the end point, with associated 95% confidence intervals. **Fig. E-4** Kaplan-Meier survivorship curve, with radiographic loosening of the acetabular component as the end point, with associated 95% confidence intervals.

Radiographic Femoral Loosening

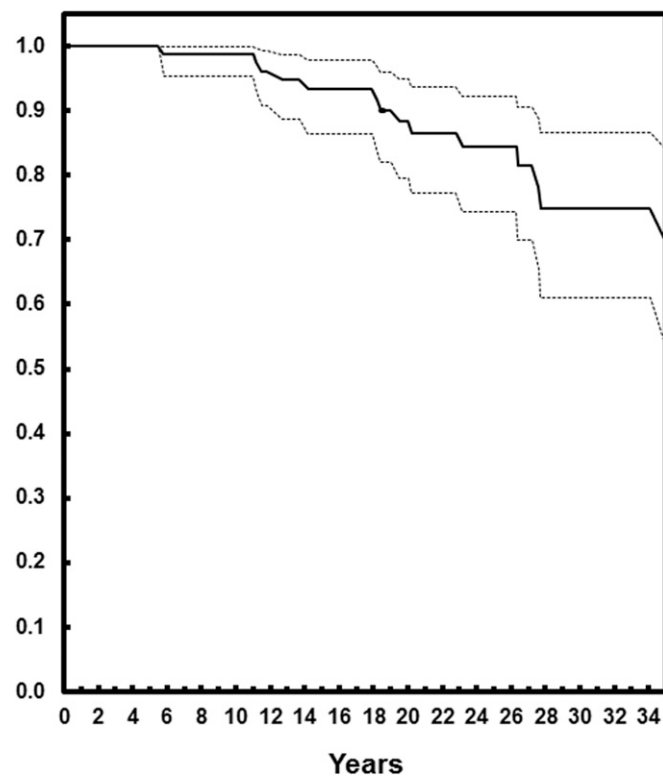


Fig. E-5

Kaplan-Meier survivorship curve, with radiographic loosening of the femoral component as the end point, with associated 95% confidence intervals.

TABLE E-1 Comparison of Radiographic and Survivorship Data at a Minimum Follow-up of Twenty-five Years and Thirty-five Years *

	25-Yr Follow-up	35-Yr Follow-up
No. of living patients (no. of hips)	45 (60)	32 (41)
No. of patients who died (no. of hips)	24 (33)	37 (52)
No. of hips that had revision or resection		
Total for all patients	29	34
Total for living patients	22	22
No. of patients with radiographic follow-up (excluding resections)	42 of 43	22 of 30
Results in patients alive at time of follow-up (<i>no. of hips</i>)		
Revision surgery	22	22
Revision because of aseptic loosening of acetabular component	13	13
Revision because of aseptic loosening of femoral component	4	4
Radiographic loosening or revision for loosening of acetabular component	32	20
Radiographic loosening or revision for loosening of femoral component	9	10

*Since the time of the twenty-five-year follow-up, eight additional operations had been performed. Three of these were rerevisions. One rerevision was performed for acetabular loosening; one, for femoral loosening; and one, for loosening of both components. Two revisions (explant followed by reimplantation) were performed for deep infection.

TABLE E-2 Comparison of Functional Data at Twenty-five-Year and Thirty-five-Year Follow-up

Outcome*	Score	P Value
SF-36 physical component		
25 yr	43.3	
35 yr	33.9	0.0035
SF-36 mental component		
25 yr	53.09	
35 yr	53.64	0.85
WOMAC function		
25 yr	13.55	
35 yr	22.7	0.03
WOMAC pain		
25 yr	2.85	
35 yr	2.3	0.62
WOMAC stiffness		
25 yr	2.1	
35 yr	1.55	0.17
Harris hip score		
25 yr	86.9	
35 yr	61.9	<0.001
*SF-36 = Short Form-36, and WOMAC = Western Ontario and McMaster Universities Osteoarthritis Index.		

TABLE E-3 Functional Comparison According to the Results of the Six-Minute Walk

	Min. Follow-up	Distance Walked According to No. of Patient Comorbidities (<i>m</i>)		
		All	0*	≥2
Keener et al. ¹⁴ (2003) (n = 37)	25 yr	395†	440	304
Current study (n = 20)	35 yr	171†	242	112
*This category was defined as zero comorbidities in Keener et al. and as zero to one comorbidity in the current study. †The difference was significant (p < 0.001).				

TABLE E-4 Patient and Implant Survivorship Comparison After Charnley Total Hip Arthroplasty at a Minimum Thirty-five-Year Follow-up

	Initial	35-Yr Follow-up
Data from Callaghan et al. ²¹		
No. of hips	330	15
Mean age at time of surgery (yr)	65	51
No. of hips in patients alive at 35-yr follow-up		15 (4.5%)
No. of hips in patients alive at 35-yr follow-up with original implants		8 (53.3%)
Implant survival at time of death or final follow-up		290 (88%)
Current study		
No. of hips	93	41
Mean age at time of surgery (yr)	41	41
No. of hips in patients alive at 35-yr follow-up		41 (44.1%)
No. of hips in patients alive at 35-yr follow-up with original implants		19 (46.3%)
Implant survival at time of death or final follow-up		59 (63.4%)