



Fig. E-1
 Mean percentage change in bone mineral density in the seven Gruen zones three years postoperatively relative to preoperative levels. *The SR71 stem was associated with significantly greater improvement in bone mineral density in zones 1 and 7, and the Stability stem was associated with significantly greater improvement in bone mineral density in zones 3 and 5.

	Change in Bone Mineral Density (g/cm^2)						
	Zone 1	Zone 2	Zone 3	Zone 4	Zone 5	Zone 6	Zone 7
Stability*	0.05 ± 0.21	0.07 ± 0.31	0.03 ± 0.41	0.04 ± 0.36	0.12 ± 0.23	0.07 ± 0.24	0.02 ± 0.20
SR71*	0.41 ± 0.26	-0.02 ± 0.16	-0.16 ± 0.18	-0.05 ± 0.13	-0.08 ± 0.16	-0.02 ± 0.17	0.24 ± 0.27
P value	<0.0001†	0.210	0.033†	0.261	0.0009†	0.101	0.0013†

*The values are given as the mean and standard deviation. †Significant ($p < 0.05$).

TABLE E-2 Mean HHS and VAS Scores at Three and Ten Years Postoperatively				
	HHS			VAS Pain Score
	Total (points)	Pain (points)	Range of Motion (deg)	
3 yr postop.				
Stability*	96.7 ± 4.8	43.4 ± 1.5	242.7 ± 27.8	0.29 ± 0.4
SR71*	95.2 ± 8.5	42.7 ± 4.6	239.3 ± 38.7	0.32 ± 0.6
P value	0.962	0.966	0.636	0.090
10 yr postop.				
Stability*	84 ± 18.1	39 ± 10.0	232 ± 25.1	1.5 ± 3.08
SR71*	86 ± 18.9	39 ± 9.6	225 ± 41.3	1.2 ± 2.01
P value	0.68	0.95	0.49	0.70

*The values are given as the mean and standard deviation.

TABLE E-3 Mean Change in Three and Ten-Year HHS and VAS Scores Relative to Preoperative Scores				
	Change in HHS			Change in VAS Pain Score
	Total (points)	Pain (points)	Range of Motion (deg)	
3 yr postop.				
Stability*	61.2 ± 16.2	31.1 ± 7.6	119.6 ± 51.3	-8.2 ± 1.7
SR71*	60.0 ± 18.4	32.0 ± 7.7	102.8 ± 61.4	-7.8 ± 1.8
P value	0.808	0.579	0.282	0.330
10 yr postop.				
Stability*	46 ± 23.7	25 ± 13.2	102 ± 48.7	-7 ± 3.5
SR71*	50 ± 32.5	27 ± 14.9	91 ± 73.3	-6 ± 3.7
P value	0.6	0.73	0.57	0.74

*The values are given as the mean and standard deviation.

TABLE E-4 Postoperative Complications in Stability and SR71 Groups		
Complications	No. of Complications	
	Stability	SR71
Perioperative mortality	0	0
Deep infection	0	0
Superficial infection	0	0
Trochanteric bursitis	2	1
Deep vein thrombosis	0	1
Thigh pain	0	2
Heterotopic ossification (Brooker type II or III)	1	3
Radiolucency at tip of implant	1	0
Contralateral dislocation	1	0
Low back pain	1	0
Myocardial infarction	1	0
Painful knee	1	0
Paget disease	0	1
Hypotension	0	1
Paresthesia	0	1
Postoperative blood loss	0	1
Urinary tract infection	0	2
Upper respiratory tract infection	0	1
Total complications	8	14