

TABLE E-1

Follow-up periods by physical examination, radiography, and history*

Outcome	Age at Osteotomy	No. of Knees	Years F/U by PE and radiograph	Additional F/U years by history only	Total years of F/U
Death	70 (47-81)	38	7.9 (0.1-19.0)	4.1 (0.0-16.8)	11.7 (0.1-20.5)
TKA	67 (48-80)	29	6.8 (0.8-15.5)	0.5 (0.0-7.1)	7.9 (0.8-15.5)
Surviving	67 (57-72)	6	10.9 (2.0-22.0)	8.3 (0.0-18.5)	19.2 (15.0-22.0)
Lost to F/U	69 (68-70)	3	14.0 (9.3-16.8)	0 (0.0-0.0)	14.0 (9.3-16.8)
Summary	69 (47-81)	76	8.0 (0.1-22.0)	2.9 (0.0-18.5)	10.8 (0.1-22.0)

*The values are given as the mean with the range in parentheses. F/U = follow-up, PE = physical examination, and TKA = total knee arthroplasty.

TABLE E-2 Results based on radiographic position, HSS knee scores, and historical information*

Outcome	8° - 16° 1 year post HTO (no. of knees)	<8° or >16° 1 year post HTO (no. of knees)	Mean HSS score 1 year post HTO	No. of knees with HSS score of ≥70 at 1 year post HTO	8° - 16° at last PE (no. of knees)	<8° or >16° at last PE (no. of knees)	Mean HSS score (range) at last PE	No. of knees with HSS score of ≥70 at last PE	No. of years (range) until HSS score of ≥70	No. of knees described as satisfactory at last information	No. of years (range) knees described as satisfactory
Death	23	12	90 (62-99)	33	22	14	82 (62-97)	33	7.4 (0.0-20.5)	31	10.9 (0.0-20.9)
TKA	11	15	84 (49-96)	22	7	20	67 (49-88)	3	6.1 (0.0-15.5)	0	6.4 (0.0-15.5)
Surviving	4	1	88 (69-95)	5	4	2	79 (66-93)	4	10.6 (0.0-22.0)	4	13.9 (0.0-22.0)
Lost to F/U	3	0	91 (87-94)	3	3	0	77 (76-80)	3	14.0 (9.3-16.8)	3	14.0 (9.3-16.8)
Summary	41	28	86 (49-99)	63	36	36	76 (49-97)	43	7.4 (0.0-22.0)	38	9.5 (0.0-22.0)

*The one-year alignment data were not available for seven of the seventy-six knees because of death, nonunion, and missed one-year follow-up examination. A final alignment was available for seventy-two knees. F/U = follow-up, PE = physical examination, HTO = high (proximal) tibial osteotomy, TKA = total knee arthroplasty, and HSS = Hospital for Special Surgery.

TABLE E-3 Univariate Cox Regression Results

	End Point*					
	Conversion to Total Knee Arthroplasty		Hospital for Special Surgery Score of <70		Patient Dissatisfaction	
Factor	Risk Ratio (95% CI)	P value	Risk Ratio (95% CI)	P value	Risk Ratio (95% CI)	P value
Gender	0.457 (0.221 - 0.945)	0.0347	0.507 (0.243 - 1.055)	0.0693	0.602 (0.318 - 1.139)	0.1186
Age-Group (<65, 65+)	0.890 (0.420 - 1.884)	0.7605	0.906 (0.420 - 1.953)	0.8015	0.656 (0.337 - 1.277)	0.2150
Stabilization Type (T or L-buttress plate, 4-hole or 5-hole narrow plate)	1.359 (1.023 - 1.806)	0.0345	1.062 (0.811 - 1.391)	0.6617	1.160 (0.915 - 1.470)	0.2194
Overweight (yes, no)	1.000 (0.980 - 1.019)	0.9619	1.005 (0.984 - 1.026)	0.6352	1.006 (0.989 - 1.024)	0.4786
One-Year Alignment Group (<8° or >16°, 8°-16°)	3.021 (1.431 - 6.369)	0.0038	4.000 (1.634 - 9.804)	0.0024	2.114 (1.095 - 4.082)	0.0256
Adverse Event† (yes, no)	3.123 (1.525 - 6.396)	0.0019	2.180 (1.022 - 4.650)	0.0437	2.444 (1.258 - 4.747)	0.0083
Other Factors‡ (yes, no)	1.766 (0.534 - 5.838)	0.3512	3.224 (0.950 - 10.941)	0.0604	2.946 (1.032 - 8.407)	0.0435
Ahlbäck radiographic grade (1,2,3)	1.097 (0.589 - 2.046)	0.7704	1.437 (0.760 - 2.718)	0.2650	0.983 (0.562 - 1.718)	0.9519

*CI = confidence interval. †Includes nonunion, peroneal palsy, thrombophlebitis, and infection.

‡Includes Workers' Compensation and public liability.

TABLE E-4 Multivariate Cox Regression Model with Use of Significant Risk Factors Identified by Univariate Analyses*

End Point	Significant Factors	Risk Ratio (95% CI)	P Value
Total knee arthroplasty	One-Year Alignment Group (<8° or >16°, 8°-16°)	4.515 (2.039 - 9.998)	0.0002
	Adverse Events (yes, no)	3.125 (1.382 - 7.068)	0.0062
	Stabilization Type (T or L-buttress plate, 4 or 5-hole narrow plate)	2.606 (1.125 - 6.035)	0.0254
Hospital for Special Surgery Score of <70	One-Year Alignment Group (<8° or >16°, 8°-16°)	3.997 (1.635 - 9.770)	0.0024
Patient dissatisfaction	One-Year Alignment Group (<8° or >16°, 8°-16°)	2.472 (1.250 - 4.891)	0.0093
	Adverse Events (yes, no)	2.405 (1.132 - 5.110)	0.0224

*Significant ($p < 0.05$) factors retained in the final model fit in stepwise procedure.

TABLE E-5 Complications and their treatment*

Diagnosis	No. of knees	Treatment	No. of knees	Outcome	No. of knees
Deep vein thrombosis	2	Intravenous heparin	2	Recovered	2
Partial peroneal palsy	4	Observation	4	Complete recovery	2
(motor and sensory)				Partial recovery	2
Partial peroneal palsy	3	Observation	3	Complete recovery	1
(sensory)				Partial recovery	2
Compartment syndrome	1	Observation	1	Partial recovery	1
Wound infection (<i>Staphylococcus aureus</i>)	2	Débridement and wound irrigation	2	Successful for 13 and 15 years before TKA	2
Nonunion	4	Bone graft and restabilization	3	Union	2
				One failed and had TKA	1
		TKA	1	TKA successful	1
Total	16		16		16

*TKA = total knee arthroplasty