

TABLE E-1 Patient Characteristics

Baseline Characteristics		Total		Total Ankle Arthroplasty		Ankle Arthrodesis			
	t	N	Mean (Range)	t	N	Mean (Range)	t	N	Mean (Range)
All patients									
Age (years)	48	1786	52.63 (18.00-64.00)	10	629	58.16 (46.00-64.00)	38	1157	49.62 (18.00 -63.00)
Body weight (kg)	5	354	75.22 (66.00-86.00)	5	354	75.22 (66.00-86.00)	—	—	—
BMI (kg/m ²)	2	133	27.10 (27.00 -27.75)	—	—	—	2	133	27.10 (27.00 -27.75)
	t	n/N	%	t	n/N	%	t	n/N	%
Gender									
Males	44	776/1600	48.5%	8	261/616	42.4%	36	515/984	52.3%
Females	44	819/1600	51.2%	8	363/616	58.9%	36	456/984	46.3%
Prior ankle surgery	6	50/314	15.9%	1	13/200	6.5%	5	37/114	32.5%
Disease indication (ankles)									
Osteoarthritis	56	479/2207	21.7%	12	287/894	32.1%	44	192/1313	14.6%
Rheumatoid arthritis	56	518/2207	23.5%	12	348/894	38.9%	44	170/1313	12.9%
Posttraumatic	56	988/2207	44.8%	12	242/894	27.1%	44	746/1313	56.8%
Osteonecrosis	56	21/2207	1.0%	12	0/894	0.0%	44	21/1313	1.6%
Other*	56	201/2207	9.1%	12	17/894	1.9%	44	184/1313	14.0%

t = number of treatment groups; n = number of patients reporting characteristic; N = total number of patients reporting characteristic; Range = range of the means; % = % of patients; *Other includes infection, poliomyelitis, revisions, hemophilic arthritis, etc; BMI = body mass index.

TABLE E-2 Efficacy Outcomes – Total Ankle Arthroplasty and Arthrodesis

	t	n/N	%	M-A Mean [95% confidence interval]
Total Ankle Arthroplasty				
Implant survival				
5-year survival	4	28/1351	80.1%	78.30 [69.02, 87.57]**
10-year survival	4	145/190	76.3%	77.04 [63.28, 90.80]**
Revisions				
Total	11	53/804	6.6%	7.20 [3.52, 10.87]**
Tibial component	7	16/542	3.0%	-----
Talar component	5	12/458	2.6%	-----
Reason for revision				
Dislocation/migration	9	5/46	10.9%	-----
Loosening/subsidence	9	13/46	28.3%	-----
Mechanical bearing subluxation	9	3/46	6.5%	-----
Implant fracture				
Tibial plate	9	2/46	4.3%	-----
Meniscal bearing insert	9	3/46	6.5%	-----
Tibial ankle joint fracture	9	2/46	4.3%	-----
Osteolysis	9	0/46	0.0%	-----
Wear	9	7/46	15.2%	-----
Infection	9	1/46	2.2%	-----
Conversions to arthrodesis (total)	8	29/572	5.1%	4.91 [2.03, 7.79]**
Reason for conversion				
Pain	4	3/8	37.5%	-----
Loosening/subsidence	4	4/8	50.0%	-----
Infection	4	1/8	12.5%	-----
Below-the-knee amputations (total)	1	1/126	0.8%	-----
Ankle Arthrodesis				
Nonunion (total)	30	99/952	10.4%	9.8 [7.4, 12.1]*
Revisions (total)	34	100/1068	9.4%	8.6 [5.5, 11.6]**
Reason for revision				
Tibial ankle joint fracture	25	0/66	0.0%	-----
Nonunion	25	43/66	65.2%	-----
Infection	25	17/66	25.8%	-----
Other	25	6/66	9.1%	-----
Below-the-knee amputations (total)	9	12/242	5.0%	-----

t = number of treatment groups; n = number of ankles with this outcome; N = total number of ankles evaluated for this outcome; % = % of ankles; * = significant heterogeneity, p < 0.10; ** = significant heterogeneity, p < 0.01; M-A = meta-analysis

TABLE E-3 List of Primary Studies Included in this Systematic Review

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