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TABLE E-1 Canadian Orthopaedic Foot and Ankle Society (COFAS) Ankle Arthritis Research Group Complication Classification System for Total Ankle Replacement and Ankle Arthrodesis*

Code	Procedure	Complication
0	Total ankle replacement and ankle arthrodesis	No complications or surgery for reasons defined below
1	Total ankle replacement only	Exchange of polyethylene liner for polyethylene liner failure or wear
2	Total ankle replacement or ankle arthrodesis	Deep infection requiring reoperation (no exchange of metal components in total ankle replacement)
3	Total ankle replacement only	Implant failure leading to revision for aseptic loosening, component fracture, or malposition (no infection)
4	Ankle arthrodesis only	Revision for malunion or nonunion
5	Total ankle replacement only	Revision of metal components with infection
6	Total ankle replacement or ankle arthrodesis	Amputation above the level of the ankle

*Reproduced, with modification, from: Pedersen E, Pinsker E, Younger AS, Penner MJ, Wing KJ, Dryden PJ, Glazebrook M, Daniels TR. Outcome of total ankle arthroplasty in patients with rheumatoid arthritis and noninflammatory arthritis. A multicenter cohort study comparing clinical outcome and safety. J Bone Joint Surg Am. 2014 Nov 5;96(21):1768-75. Reproduced with permission.

TABLE E-2 Complications and Revisions

	Cohort†		
COFAS Complication Code*	Obese (N = 39)	Non-Obese (N = 48)	Total (N = 87)
0: No complications	32 (82.1%)	43 (89.6%)	75 (86.2%)
1: Exchange of polyethylene liner	3 (7.7%)	3 (6.3%)	6 (6.9%)
2: Deep infection requiring reoperation	0 (0%)	1 (2.1%)	1 (1.2%)
3: Implant failure and revision	4 (10.3%)	1 (2.1%)	5 (5.7%)
4: Arthrodesis malunion or nonunion	NA	NA	NA
5: Metal component revision with infection	0 (0%)	0 (0%)	0 (0%)
6: Amputation above the level of the ankle	0 (0%)	0 (0%)	0 (0%)

*Canadian Orthopaedic Foot and Ankle Society Ankle Arthritis Research Group complications grading system (see Table E-1). †The values are given as the number of complications, with the percentage in parentheses. NA = not applicable.

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TABLE E-3 Description of Complications Following Total Ankle Replacement

Case	Cohort	Sex	Age*	BMI†	Implant	Complication	Months from Surgery	Management of Implant
1	Obese	F	70	32.5 (73.9)	Mobility	Metal component revision	15	Metal component revised during surgery for aseptic loosening and stiffness
2	Obese	M	65	37.9 (116.1)	Mobility	Metal component revision	18	Revision of a Mobility implant to a HINTEGRA implant due to aseptic loosening
3	Obese	F	44	40.6 (103.9)	STAR	Metal component revision	97	Fractured mobile-bearing implant replaced
4	Obese	F	63	44.3 (105.2)	HINTEGRA	Metal component revision	70	Fractured mobile-bearing implant replaced
5	Obese	F	76	41.8 (117.9)	HINTEGRA	Polyethylene liner replacement	15	Replacement of liner
6	Obese	M	64	32.2 (93.0)	HINTEGRA	Polyethylene liner replacement	42	Liner not fractured; replaced because of infected draining sinus
7	Obese	M	65	38.6 (105.2)	HINTEGRA	Polyethylene liner replacement	33	Liner not fractured; replaced because of expanding cyst
8	Non-obese	F	66	24.1 (68.9)	Mobility	Metal component revision	21	Revision of a Mobility implant to a HINTEGRA implant because of aseptic loosening
9	Non-obese	F	62	21.9 (61.2)	HINTEGRA	Metal component revision due to deep infection	7	Periprosthetic infection by a blood-borne pathogen at six months at the site of the total ankle replacement; metal component failure and revision at seven months
10	Non-obese	F	53	20.5 (62.1)	HINTEGRA	Polyethylene liner replacement	19	Replacement of liner; no fracture
11	Non-obese	M	73	28.1 (88.9)	HINTEGRA	Polyethylene liner replacement	23	Liner not fractured; replaced because of valgus deformity
12	Non-obese	M	78	28.3 (94.8)	HINTEGRA	Polyethylene liner replacement	29	Liner not fractured; replaced because of valgus deformity

*The values are given as the age in years at the time of the original total ankle replacement. †The values are given as the BMI in kg/m^2, with the weight in kilograms in parentheses, at the time of the original total ankle replacement.