

Appendix

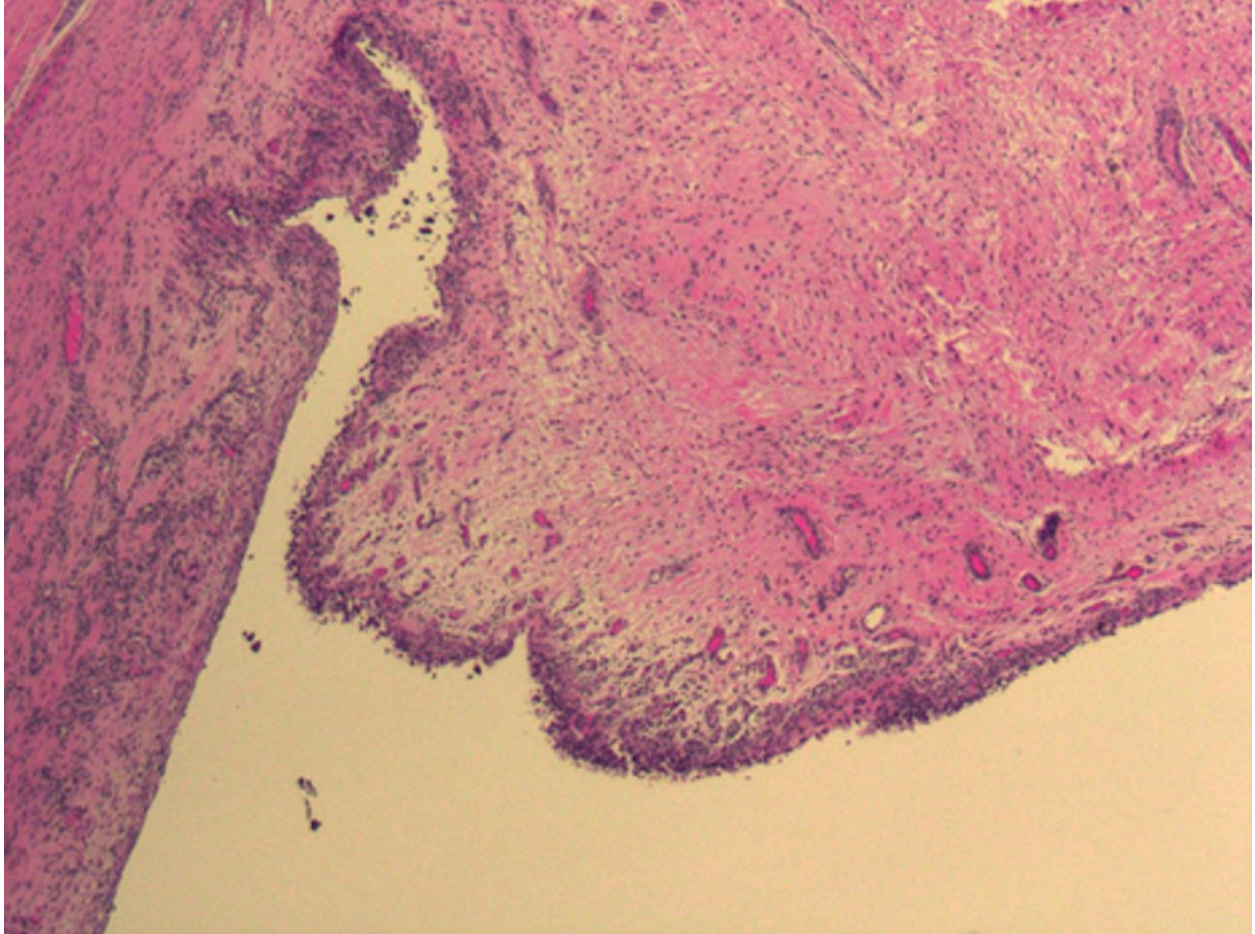


Fig. E-1

Low-power photomicrograph demonstrating unremarkable synovial surface without fibrinous exudates (hematoxylin and eosin). Representative of a low average ALVAL score (3 of 10).

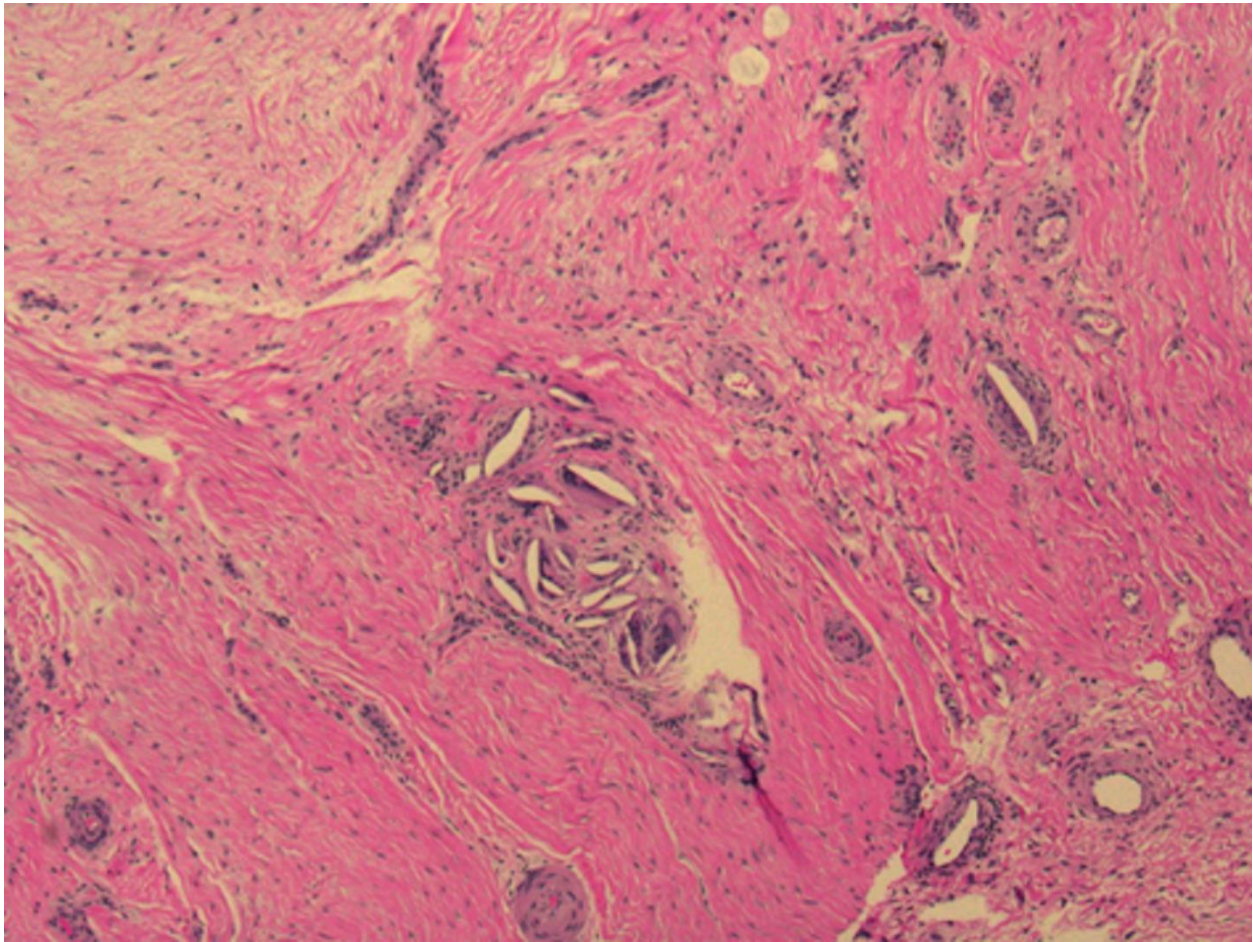


Fig. E-2

Low-power photomicrograph demonstrating a foreign-body reaction with polyethylene particles (ALVAL score 3 of 10) (hematoxylin and eosin).

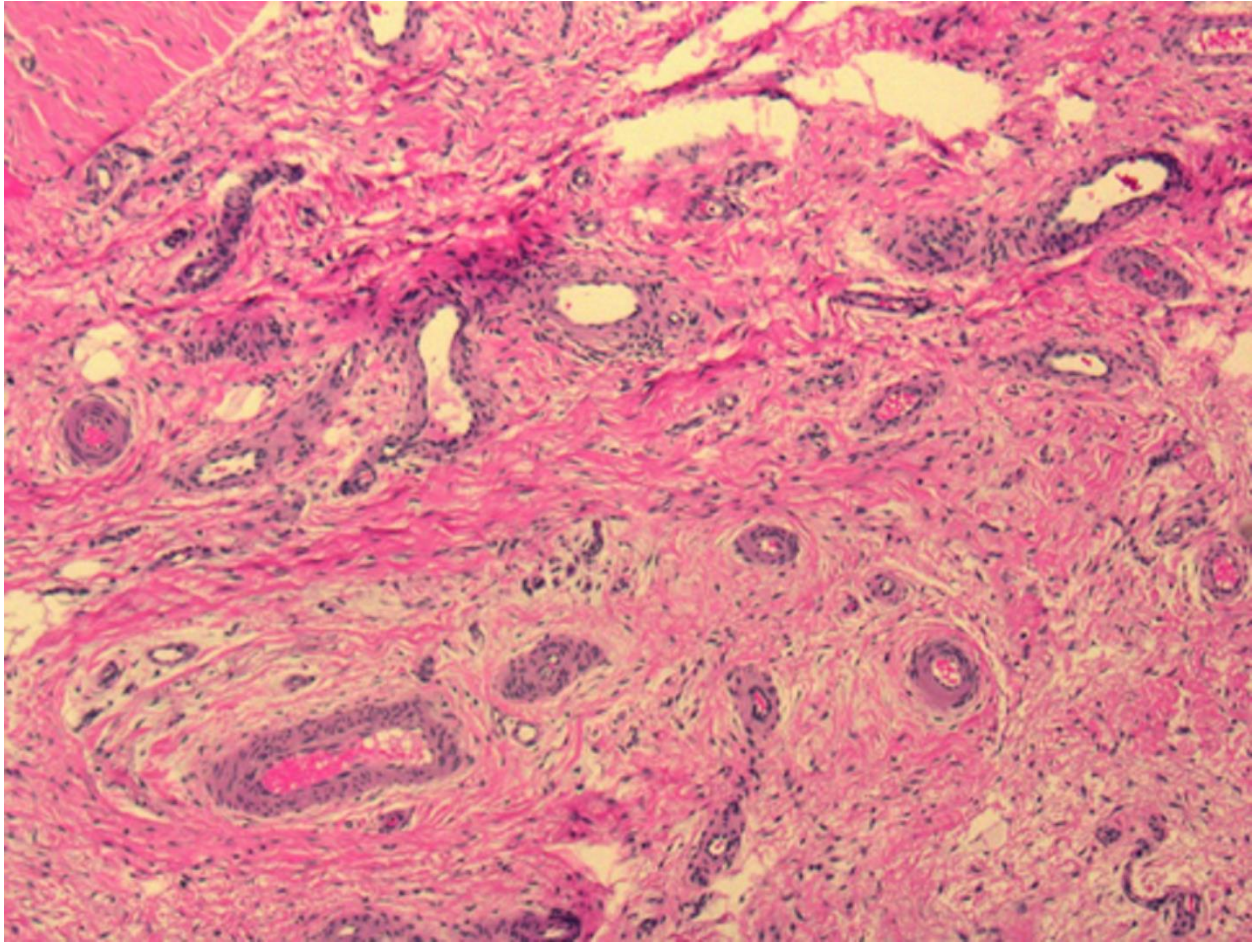


Fig. E-3

Low-power photomicrograph demonstrating unremarkable blood vessels, with no perivascular inflammation (ALVAL score 3 of 10) (hematoxylin and eosin).

TABLE E-1 Cohort Demographics, LTT Results, and ALVAL Scores*

Patient Information					LTT Results		ALVAL Score			
Age (yr)	Sex	BMI (kg/m ²)	Knee	Time to Revision (mo)	LTT (Ni)	LTT Stimulation Index	Synovial Lining	Inflammatory Infiltrate	Tissue Organization	Total
53	F	28	R	19	Mildly reactive	2.6	0	1	0	1
36	F	34	R	6	Mildly reactive	2.6	1	1	0	2
50	M	27	L	20	Mildly reactive	2.6	1	0	1	2
64	F	40	R	64	Mildly reactive	2.7	2	3	1	6
67	F	31	L	32	Mildly reactive	3.8	1	1	1	3
71	M	29	L	11	Moderately reactive	4.2	1	3	1	5
76	F	22	R	54	Moderately reactive	4.3	2	1	1	4
76	M	24	R	18	Moderately reactive	4.6	1	1	1	3
57	M	27	L	20	Moderately reactive	5.2	2	1	1	4
55	F	34	L	66	Moderately reactive	6.1	2	2	1	5
70	F	31	L	106	Moderately reactive	7.6	0	1	0	1
70	F	32	L	14	Highly reactive	12.3	0	1	1	2
51	F	37	L	64	Highly reactive	12.8	2	3	1	6
63	F	21	R	21	Highly reactive	12.8	1	0	0	1
80	F	21	R	74	Highly reactive	13.1	0	1	0	1
67	F	32	R	13	Highly reactive	14.6	3	4	1	8
87	F	22	R	38	Highly reactive	14.8	2	2	1	5
81	F	25	R	32	Highly reactive	16	2	1	1	4
53	F	26	R	37	Highly reactive	35.7	0	2	1	3
55	M	26	L	8	Mildly reactive	2.5	1	0	0	1
56	M	40	R	95	Mildly reactive	3.1	2	1	1	4
53	F	37	R	43	Mildly reactive	3.5	1	0	1	2
75	F	40	L	31	Moderately reactive	5.5	0	2	0	2
75	F	28	R	41	Moderately reactive	6.4	2	1	1	4
62	F	28	R	37	Highly reactive	8.9	1	0	0	1
71	F	41	L	198	Highly reactive	14.8	3	1	0	4
54	F	41	R	16	Highly reactive	31	0	1	0	1

*BMI = body mass index.

TABLE E-2 Cohort Demographics and Outcomes*

Patient Information				Pre-Revision Function			Post-Revision Function			Improvement Post-Revision			Bilateral TKA			
Age (yr)	Sex	BMI (kg/m ²)	Knee	Time to Revision (mo)	KSS - Clinical	KSS - Functional	Range of Motion (deg)	KSS - Clinical	KSS - Functional	Range of Motion (deg)	KSS - Clinical	KSS - Functional	Range of Motion (deg)	Bilat.?	Other Knee Clinical Status	
53	F	28	R	19	38	45	65	58	60	115	20	15	50	No		
36	F	34	R	6	23	50	30	48	50	42	25	0	12	No		
50	M	27	L	20	44	45	97	81	70	132	37	25	35	No		
64	F	40	R	64	71	50	128	100	70	125	29	20	-3	No		
67	F	31	L	32	68	50	115	82	70	135	14	20	20	No		
71	M	29	L	11	60	70	98	73	70	100	13	0	2	No		
76	F	22	R	54	27	20	83	66	50	113	39	30	30	No		
76	M	24	R	18	81	70	130	98	80	138	17	10	8	No		
57	M	27	L	20	44	55	93	70	80	125	26	25	32	No		
55	F	34	L	66	57	20	83	61	30	90	4	10	7	No		
70	F	31	L	106	36	50	80	96	50	130	60	0	50	No		
70	F	32	L	14	65	70	108	70	50	125	5	-20	17	No		
51	F	37	L	64	68	60	115	80	60	124	12	0	9	No		
63	F	21	R	21	53	50	115	71	70	130	18	20	15	No		
80	F	21	R	74	50	20	101	69	30	120	19	10	19	No		
67	F	32	R	13	34	45	70	94	70	120	60	25	50	No		
87	F	22	R	38	68	80	124	83	80	138	15	0	14	No		
81	F	25	R	32	60	30	98	94	45	122	34	15	24	No		
53	F	26	R	37	55	45	125	70	45	125	15	0	0	No		
55	M	26	L	8	28	45	38	Deceased	Deceased	Deceased	Deceased	Deceased	Deceased	Deceased	Yes	Deceased
56	M	40	R	95	51	50	90	55	50	100	4	0	10	Yes	Not revised - no symptoms	
53	F	37	R	43	20	10	52	59	30	118	39	20	66	Yes	Revised to hypoallergenic implant	
75	F	40	L	31	41	30	90	Lost to f/u	Lost to f/u	Lost to f/u	Lost to f/u	Lost to f/u	Lost to f/u	Yes	Not revised - clinically painful	
75	F	28	R	41	52	30	108	Not recorded	Not recorded	99	Not recorded	Not recorded	-9	Yes	Not revised - no symptoms	
62	F	28	R	37	44	45	97	69	65	122	25	20	25	Yes	Not revised - clinically painful	

71	F	41	L	198	60	45	85	92	45	110	32	0	25	Yes	Revised to standard implants after periprosthetic fracture - doing well
54	F	41	R	16	48	30	99	Lost to f/u	Lost to f/u	Lost to f/u	Lost to f/u	Lost to f/u	Lost to f/u	Yes	Not revised - clinically painful

*KSS = Knee Society Score, Bilat. = bilateral, BMI = body mass index, and f/u = follow-up.