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Supplemental Table 1: Kaplan-Meier survival estimates and hazard ratios for development of any aseptic patellar complication.

	KM estimates (95% CI)						Hazard ratios (95% CI)	p-value
	5 years	10 years	15 years	20 years	25 years	30 years		
Age								
Age ≥ 65 (n=18721)	97.4 (97.1,97.6)	96.3 (96.0,96.6)	95.2 (94.7,95.7)	94.4 (93.6,95.1)	92.1 (89.4,94.6)	92.1 (81.3,94.6)	1.0 (ref)	
Age < 65 (n=8472)	96.7 (96.2,97.1)	95.7 (95.2,96.2)	93.4 (92.7,94.2)	91.8 (90.7,92.9)	89.7 (87.7,91.5)	87.4 (83.5,90.7)	1.3 (1.1, 1.5)	<0.001
Sex								
Female (n=15385)	97.5 (97.3,97.8)	96.7 (96.4,97.0)	95.5 (95.0,96.0)	94.5 (93.7,95.2)	92.1 (90.1,93.9)	90.7 (86.2,93.4)	1.0 (ref)	
Male (n=11808)	96.7 (96.3,97.0)	95.3 (94.8,95.8)	93.2 (92.5,94.0)	91.7 (90.6,92.8)	89.8 (87.5,92.0)	86.5 (78.6,93.5)	1.4 (1.3, 1.7)	<0.001
Underlying diagnosis								
OA (n=22432)	97.1 (96.8,97.3)	96.0 (95.7,96.3)	94.6 (94.1,95.0)	93.2 (92.5,93.9)	91.0 (89.2,92.6)	88.2 (82.7,92.8)	1.0 (ref)	
Inflammatory/RA (n=1251)	98.0 (97.2,98.8)	96.8 (95.6,98.0)	95.2 (93.5,96.9)	93.4 (90.6,95.9)	92.2 (88.0,95.6)	89.9 (82.7,95.6)	0.89 (0.6, 1.2)	0.31
Post-traumatic (n=786)	96.9 (95.6,98.2)	95.5 (93.7,97.4)	93.6 (90.8,96.5)	93.6 (89.3,96.5)	93.6 (83.0,96.5)	93.6 (77.9,96.5)	1.1 (0.8, 1.6)	0.67
Osteotomy (n=250)	97.0 (94.8,99.2)	94.9 (91.8,97.9)	90.3 (85.7,95.0)	90.3 (83.9,95.0)	90.3 (80.0,95.0)	90.3 (62.1,95.0)	1.4 (0.8, 2.3)	0.23
Other (n=2474)	97.4 (96.9,98.2)	96.7 (95.8,97.6)	95.6 (94.3,97.0)	95.2 (92.7,96.8)	88.1 (78.3,98.6)	88.1 (70.0,98.6)	0.83 (0.6, 1.1)	0.17
BMI								
< 30 kg/m ² (n=11495)	97.3 (97.0,97.6)	96.5 (96.1,96.9)	94.9 (94.2,95.5)	93.8 (92.9,94.8)	92.8 (90.7,94.5)	91.3 (84.0,94.7)	1.0 (ref)	
≥ 30 kg/m ² (n=14220)	96.9 (96.6,97.2)	95.7 (95.3,96.1)	94.2 (93.6,94.8)	92.8 (91.8,93.8)	89.3 (86.3,92.2)	88.0 (76.3,91.8)	1.2 (1.0, 1.4)	0.01
Implant design								
CR (n=7531)	97.8 (97.5,98.1)	96.1 (95.6,96.6)	94.0 (93.3,94.7)	92.6 (91.6,93.5)	90.6 (88.9,92.2)	88.5 (84.9,91.5)	1.0 (ref)	
PS (n=18869)	96.9 (96.6,97.1)	96.3 (96.0,96.6)	95.2 (94.7,95.7)	94.2 (93.1,95.1)	81.1 (56.6,100)	N/A	0.97 (0.9, 1.1)	0.71
Other (n=553)	96.5 (94.8,98.2)	94.7 (92.2,97.1)	93.0 (89.4,96.3)	93.0 (88.1,96.3)	93.0 (84.4,96.3)	93.0 (79.8,96.3)	1.2 (0.8, 1.8)	0.48
Surgical year								
< 2000 (n=10320)	97.3 (97.0,97.6)	95.8 (95.4,96.2)	94.0 (93.4,94.5)	92.7 (91.9,93.4)	90.5 (89.0,92.0)	88.6 (85.2,91.4)	1.0 (ref)	
≥ 2000 (n=16873)	97.1 (96.8,97.4)	96.5 (96.1,96.8)	95.7 (95.1,96.2)	N/A	N/A	N/A	0.88 (0.8, 1.0)	0.05

Supplemental Table 2: Kaplan-Meier survival estimates and hazard ratios of reoperation for any aseptic patellar complication.

	KM estimates (95% CI)						Hazard ratios (95% CI)	p-value
	5 years	10 years	15 years	20 years	25 years	30 years		
Age								
Age ≥ 65 (n=18721)	99.4 (99.3,99.6)	99.0 (98.8,99.2)	98.2 (97.8,98.5)	97.8 (97.2,98.3)	95.1 (92.2,97.7)	95.1 (83.7,97.7)	1.0 (ref)	
Age < 65 (n=8472)	99.3 (99.2,99.5)	98.8 (98.5,99.1)	97.5 (97.0,98.1)	96.6 (95.8,97.4)	95.0 (93.2,96.5)	91.8 (87.4,95.9)	1.2 (1.0, 1.6)	0.09
Sex								
Female (n=15385)	99.6 (99.5,99.7)	99.3 (99.2,99.5)	98.7 (98.4,99.0)	98.3 (97.8,98.8)	96.3 (94.4,97.9)	93.7 (89.1,98.0)	1.0 (ref)	
Male (n=11808)	99.1 (98.9,99.3)	98.3 (98.0,98.6)	96.9 (96.3,97.4)	95.8 (94.9,96.7)	93.9 (91.6,96.0)	90.5 (82.7,97.6)	2.4 (1.9, 3.1)	<0.001
Underlying diagnosis								
OA (n=22432)	99.4 (99.3,99.5)	98.9 (98.7,99.0)	98.0 (97.6,98.3)	97.2 (96.7,97.7)	95.5 (93.9,96.9)	91.1 (84.2,97.4)	1.0 (ref)	
Inflammatory/RA (n=1251)	99.5 (99.0,99.9)	99.3 (98.7,99.8)	99.0 (98.2,99.8)	98.5 (97.0,99.8)	97.2 (93.9,100)	94.8 (87.8,100)	0.6 (0.3, 1.2)	0.15
Post-traumatic (n=786)	99.7 (99.3,100)	99.4 (98.5,100)	97.5 (95.2,99.8)	95.9 (91.6,99.8)	95.9 (85.2,99.8)	95.9 (80.1,99.8)	0.89 (0.4, 1.9)	0.77
Osteotomy (n=250)	97.8 (95.9,99.7)	97.8 (95.7,99.7)	94.4 (90.7,98.3)	94.4 (89.2,98.3)	90.9 (82.3,98.9)	90.9 (66.8,98.9)	2.1 (1.1, 4.0)	0.02
Other (n=2474)	99.5 (99.1,99.8)	99.1 (98.6,99.6)	98.0 (96.8,99.2)	98.0 (95.8,99.2)	90.7 (80.6,100)	90.7 (72.1,100)	0.9 (0.5, 1.4)	0.56
BMI								
< 30 kg/m2 (n=11495)	99.5 (99.4,99.7)	99.1 (98.8,99.3)	98.0 (97.5,98.5)	97.7 (97.0,98.3)	95.9 (93.7,97.8)	91.1 (80.2,100)	1.0 (ref)	
≥ 30 kg/m2 (n=14220)	99.4 (99.2,99.5)	98.9 (98.6,99.1)	98.0 (97.6,98.4)	97.1 (96.3,97.8)	94.8 (92.2,97.2)	93.4 (82.0,97.1)	1.2 (0.9, 1.5)	0.19
Implant design								
CR (n=7531)	99.2 (98.9,99.4)	98.3 (98.0,98.6)	96.8 (96.3,97.4)	96.0 (95.2,96.7)	94.3 (92.7,95.6)	91.3 (87.0,95.2)	1.0 (ref)	
PS (n=18869)	99.5 (99.4,99.6)	99.3 (99.1,99.4)	98.8 (98.5,99.1)	98.4 (97.6,98.9)	86.1 (59.4,100)	N/A	0.4 (0.3, 0.6)	<0.001
Other (n=553)	98.5 (97.4,99.6)	98.5 (97.0,99.6)	97.7 (95.5,99.7)	97.7 (94.8,99.7)	93.2 (83.3,100)	93.2 (78.0,100)	1.0 (0.5, 2.1)	0.99
Surgical year								
< 2000 (n=10320)	99.0 (98.8,99.2)	98.2 (97.9,98.5)	97.0 (96.6,97.5)	96.3 (95.7,96.9)	94.4 (92.9,95.7)	91.6 (87.6,95.2)	1.0 (ref)	
≥ 2000 (n=16873)	99.7 (99.6,99.8)	99.5 (99.4,99.7)	99.2 (98.8,99.5)	N/A	N/A	N/A	0.3 (0.2, 0.4)	<0.001

Supplemental Table 3. Kaplan-Meier survival estimates and hazard ratios of revision for any aseptic patellar complication.

	KM estimates (95% CI)						Hazard ratios (95% CI)	p-value
	5 years	10 years	15 years	20 years	25 years	30 years		
Age								
Age ≥ 65 (n=18721)	99.6 (99.5,99.7)	99.1 (98.9,99.3)	98.3 (98.0,98.7)	97.9 (97.4,98.4)	95.2 (92.3,97.9)	95.2 (83.8,97.9)	1.0 (ref)	
Age < 65 (n=8472)	99.5 (99.4,99.7)	99.0 (98.7,99.2)	97.8 (97.2,98.3)	96.9 (96.0,97.6)	95.2 (93.5,96.7)	92.0 (87.6,96.2)	1.2 (1.0, 1.6)	0.12
Sex								
Female (n=15385)	99.8 (99.7,99.9)	99.5 (99.3,99.6)	98.9 (98.6,99.2)	98.5 (98.0,99.0)	96.5 (94.6,98.1)	93.9 (89.3,98.1)	1.0 (ref)	
Male (n=11808)	99.3 (99.1,99.5)	98.5 (98.2,98.8)	97.0 (96.5,97.6)	96.0 (95.0,96.8)	94.1 (91.8,96.2)	90.7 (82.8,97.7)	2.6 (2.0, 3.4)	<0.001
Underlying diagnosis								
OA (n=22432)	99.6 (99.5,99.7)	99.0 (98.9,99.2)	98.1 (97.8,98.4)	97.4 (96.8,97.9)	95.6 (94.1,97.1)	91.2 (84.4,97.6)	1.0 (ref)	
Inflammatory/RA (n=1251)	99.7 (99.4,100)	99.6 (99.1,100)	99.3 (98.5,100)	98.8 (97.3,100)	97.5 (94.2,100)	95.1 (88.1,100)	0.5 (0.3, 1.0)	0.06
Post-traumatic (n=786)	99.7 (99.2,100)	99.4 (98.5,100)	98.8 (97.1,100)	97.2 (93.4,100)	97.2 (87.6,100)	97.2 (83.0,100)	0.8 (0.3, 1.8)	0.53
Osteotomy (n=250)	97.8 (95.9,99.7)	97.8 (95.7,99.7)	94.4 (90.7,98.3)	94.4 (89.2,98.3)	90.9 (82.3,98.9)	90.9 (66.8,98.9)	2.3 (1.2, 4.4)	0.01
Other (n=2474)	99.5 (99.2,99.8)	99.2 (98.7,99.7)	98.1 (96.8,99.3)	98.1 (95.9,99.3)	90.7 (80.7,100)	90.7 (72.1,100)	0.99 (0.6, 1.6)	0.96
BMI								
< 30 kg/m ² (n=11495)	99.6 (99.5,99.7)	99.2 (98.9,99.4)	98.1 (97.6,98.6)	97.8 (97.1,98.4)	96.0 (93.8,97.9)	91.2 (80.4,100)	1.0 (ref)	
≥ 30 kg/m ² (n=14220)	99.6 (99.5,99.7)	99.1 (98.8,99.3)	98.2 (97.8,98.6)	97.3 (96.5,98.0)	95.0 (92.4,97.5)	93.6 (82.2,97.3)	1.1 (0.8, 1.4)	0.58
Implant design								
CR (n=7531)	99.3 (99.1,99.5)	98.4 (98.1,98.8)	97.0 (96.5,97.6)	96.2 (95.4,96.9)	94.4 (92.9,95.8)	91.5 (87.2,95.4)	1.0 (ref)	
PS (n=18869)	99.7 (99.6,99.8)	99.4 (99.2,99.5)	98.9 (98.6,99.2)	98.5 (97.7,99.0)	86.2 (59.5,100)	N/A	0.4 (0.3, 0.5)	<0.001
Other (n=553)	99.6 (99.0,100)	99.6 (98.7,100)	98.8 (96.9,100)	98.8 (96.2,100)	94.6 (85.3,100)	94.6 (79.8,100)	0.5 (0.2, 1.3)	0.15
Surgical year								
< 2000 (n=10320)	99.2 (90.0,99.4)	98.4 (98.1,98.7)	97.2 (96.8,97.6)	96.5 (95.9,97.1)	94.6 (93.1,95.9)	91.8 (87.8,95.4)	1.0 (ref)	
≥ 2000 (n=16873)	99.8 (99.8,99.9)	99.7 (99.5,99.8)	99.3 (99.0,99.6)	N/A	N/A	N/A	0.2 (0.2, 0.3)	<0.001