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3.5.2.5 Revisions after primary knee replacement surgery by main brands for TKR and UKR

Tables 3.29 and 3.30 show the Kaplan-Meier estimates of the cumulative percentage probability of first revision, for any reason, of a primary TKR (Table 3.29) and primary UKR (Table 3.30) by implant brand. We have only included those brands that have been used in a primary knee procedure in 1,000 or more operations. Figures in *blue italics* indicate those time points where fewer than 250 primary knee joint replacements remain at risk. No attempt has been made to adjust for other factors that may influence

the chance of revision so the figures are unadjusted probabilities. In addition, simple indicators of the age profile and proportion of male patients who typically receive that implant brand are shown.

Table 3.31 shows Kaplan-Meier estimates of the cumulative percentage probability of first revision of a primary TKR or primary UKR by implant brand and bearing/constraint type for those brands/bearing types which were implanted on at least 1,000 occasions. Again, patient summaries of age and gender by brand are also given.

Table 3.29 Kaplan-Meier estimated cumulative percentage probability of first revision (95% CI) of a primary total knee replacement by main type of implant brand at the indicated number of years after primary operation¹.

Brand ²	Number of knee joints	Median (IQR) age at primary	Percentage (%) male	Cumulative percentage probability of first revision (95% CI) if time elapsed since primary operation is:					
				1 year	3 years	5 years	7 years	10 years	13 years
All total knee replacements	878,191	70 (63-76)	43%	0.40 (0.39-0.42)	1.52 (1.50-1.55)	2.17 (2.14-2.21)	2.68 (2.63-2.72)	3.39 (3.33-3.45)	4.24 (4.11-4.37)
ACS	1,996	68 (62-74)	47%	0.69 (0.40-1.18)	3.20 (2.44-4.18)	3.76 (2.92-4.84)	4.45 (3.48-5.69)	5.45 (4.13-7.15)	
Advance MP	7,941	70 (63-76)	47%	0.50 (0.36-0.69)	2.10 (1.79-2.47)	2.94 (2.55-3.39)	3.63 (3.17-4.16)	4.35 (3.72-5.10)	4.35 (3.72-5.10)
Advance MP Stature	1,317	69 (62-75)	15%	0.08 (0.01-0.57)	1.82 (1.18-2.81)	3.18 (2.19-4.61)	3.18 (2.19-4.61)		
Advance PS	1,122	72 (66-77)	45%	0.55 (0.25-1.23)	2.39 (1.59-3.58)	3.19 (2.22-4.58)	4.29 (3.06-6.00)	5.90 (4.10-8.47)	5.90 (4.10-8.47)
AGC	65,138	71 (64-77)	43%	0.30 (0.26-0.34)	1.50 (1.40-1.60)	2.11 (1.99-2.23)	2.66 (2.53-2.80)	3.57 (3.38-3.77)	4.91 (4.48-5.38)
Attune	9,878	68 (61-75)	44%	0.30 (0.20-0.46)	1.00 (0.66-1.52)				
Columbus	11,143	70 (64-76)	43%	0.46 (0.35-0.62)	1.84 (1.57-2.16)	2.63 (2.26-3.05)	2.89 (2.47-3.38)	3.58 (2.71-4.73)	
E-Motion Bicondylar Knee	3,111	67 (61-74)	44%	0.69 (0.45-1.06)	2.39 (1.88-3.04)	3.19 (2.56-3.97)	4.08 (3.30-5.05)	4.40 (3.52-5.48)	
Endo Rotating Hinge	1,164	76 (68-83)	28%	1.51 (0.93-2.45)	3.82 (2.76-5.27)	5.35 (3.98-7.18)	6.08 (4.54-8.12)	8.82 (5.84-13.22)	
Genesis 2	58,549	71 (65-77)	42%	0.39 (0.34-0.45)	1.41 (1.30-1.52)	1.95 (1.82-2.10)	2.39 (2.23-2.57)	2.96 (2.71-3.22)	3.14 (2.82-3.50)
Genesis 2 Oxinium	8,254	59 (54-64)	41%	0.56 (0.42-0.75)	2.26 (1.93-2.64)	3.40 (2.97-3.90)	4.19 (3.67-4.78)	5.51 (4.74-6.40)	5.51 (4.74-6.40)
† Insall-Burstein 2	2,588	71 (65-77)	45%	0.27 (0.13-0.57)	1.64 (1.21-2.22)	2.90 (2.31-3.65)	3.76 (3.07-4.60)	5.36 (4.48-6.41)	6.52 (5.34-7.94)
† Kinemax	10,958	71 (64-77)	43%	0.25 (0.17-0.36)	1.76 (1.53-2.03)	2.68 (2.39-3.01)	3.51 (3.17-3.89)	4.68 (4.27-5.13)	5.79 (5.24-6.39)
† LCS	2,050	70 (63-76)	41%	0.64 (0.37-1.10)	1.79 (1.30-2.47)	2.37 (1.78-3.14)	2.65 (2.03-3.47)	3.09 (2.40-3.97)	3.40 (2.65-4.34)
LCS Complete	25,297	70 (63-76)	44%	0.46 (0.38-0.55)	1.69 (1.53-1.87)	2.59 (2.38-2.82)	3.15 (2.91-3.42)	3.72 (3.42-4.05)	
Maxim	2,191	70 (63-77)	42%	0.37 (0.18-0.74)	1.79 (1.31-2.46)	2.66 (2.05-3.46)	3.38 (2.66-4.29)	4.92 (3.93-6.14)	7.74 (4.47-13.22)
MRK	10,534	70 (64-77)	42%	0.28 (0.20-0.41)	1.19 (0.98-1.45)	1.62 (1.36-1.94)	2.26 (1.90-2.68)	2.88 (2.36-3.51)	2.88 (2.36-3.51)
Natural Knee II	2,840	70 (64-76)	42%	0.32 (0.17-0.61)	1.30 (0.94-1.80)	2.22 (1.72-2.87)	3.36 (2.69-4.19)	3.99 (3.20-4.97)	6.35 (4.27-9.39)
Nexgen	133,343	70 (63-76)	43%	0.38 (0.35-0.42)	1.42 (1.35-1.50)	2.15 (2.05-2.24)	2.80 (2.69-2.93)	3.63 (3.46-3.81)	4.50 (4.12-4.93)

† Denotes a brand that has been discontinued/withdrawn/not implanted in last three years.

Note: 1 Estimates in *blue italics* indicate that fewer than 250 cases remain at risk at the time shown. Blank cells indicate the number at risk is below ten and therefore estimates are omitted as they are unreliable. 2 Brands shown have been used in at least 1,000 primary total knee replacement operations. Excludes 7,202 primary operations where the knee brand was not recorded.

Table 3.29 (continued)

Brand ²	Number of knee joints	Median (IQR) age at primary	Percentage (%) male	Cumulative percentage probability of first revision (95% CI) if time elapsed since primary operation is:					
				1 year	3 years	5 years	7 years	10 years	13 years
NRG	12,843	70 (64-76)	43%	0.39 (0.30-0.52)	1.58 (1.37-1.82)	2.39 (2.12-2.70)	2.87 (2.55-3.24)	3.49 (3.03-4.01)	
Optetrak	2,447	69 (63-76)	43%	0.70 (0.44-1.12)	2.86 (2.26-3.61)	4.31 (3.55-5.23)	5.23 (4.35-6.27)	7.45 (6.02-9.20)	
PFC Sigma Bicondylar Knee	296,366	70 (64-76)	43%	0.38 (0.35-0.40)	1.37 (1.32-1.41)	1.88 (1.82-1.93)	2.20 (2.14-2.27)	2.65 (2.57-2.74)	3.07 (2.93-3.21)
Profix	3,983	73 (67-78)	44%	0.38 (0.23-0.63)	1.34 (1.02-1.75)	1.89 (1.51-2.38)	2.33 (1.89-2.87)	2.87 (2.35-3.51)	3.15 (2.45-4.04)
Profix Oxinium	1,003	61 (56-67)	43%	0.80 (0.40-1.59)	2.82 (1.95-4.06)	3.23 (2.30-4.54)	3.66 (2.66-5.04)	4.12 (3.02-5.61)	4.68 (3.40-6.43)
Rotaglide	1,472	71 (63-77)	39%	0.43 (0.19-0.96)	2.18 (1.51-3.15)	3.47 (2.56-4.70)	4.19 (3.12-5.60)	4.43 (3.30-5.95)	
†Rotaglide +	2,115	70 (63-76)	44%	0.62 (0.36-1.06)	3.01 (2.35-3.84)	3.93 (3.17-4.87)	4.73 (3.88-5.76)	6.35 (5.29-7.61)	7.90 (6.14-10.15)
Scorpio	25,288	71 (64-77)	42%	0.43 (0.35-0.52)	1.80 (1.64-1.97)	2.58 (2.39-2.79)	3.20 (2.98-3.43)	3.98 (3.71-4.26)	5.44 (4.74-6.25)
TC Plus	15,430	70 (64-76)	45%	0.67 (0.55-0.81)	1.75 (1.55-1.97)	2.37 (2.13-2.63)	2.78 (2.52-3.07)	3.42 (3.10-3.78)	4.12 (3.51-4.82)
Triathlon	78,098	70 (63-76)	43%	0.48 (0.43-0.53)	1.56 (1.46-1.67)	2.15 (2.02-2.29)	2.60 (2.43-2.79)	3.66 (3.15-4.24)	
Vanguard	52,768	70 (63-76)	42%	0.32 (0.28-0.38)	1.43 (1.31-1.55)	2.09 (1.92-2.27)	2.49 (2.26-2.73)	3.22 (2.50-4.14)	

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† Denotes a brand that has been discontinued/withdrawn/not implanted in last three years.
 Note: 1 Estimates in *blue italics* indicate that fewer than 250 cases remain at risk at the time shown. Blank cells indicate the number at risk is below ten and therefore estimates are omitted as they are unreliable. 2 Brands shown have been used in at least 1,000 primary total knee replacement operations. Excludes 7,202 primary operations where the knee brand was not recorded.

Table 3.30 Kaplan-Meier estimates of the cumulative percentage probability of first revision (95% CI) of a primary unicompartmental knee replacement by main type of implant brand at the indicated number of years after primary operation¹.

Brand ²	Number of knee joints	Median (IQR) age at primary	Percentage (%) males	Cumulative percentage probability of first revision (95% CI) if time elapsed since primary operation is:					
				1 year	3 years	5 years	7 years	10 years	13 years
All unicompartmental knee replacements	97,503	63 (56-70)	49%	1.09 (1.03-1.16)	4.34 (4.20-4.49)	6.64 (6.46-6.83)	8.78 (8.55-9.01)	12.25 (11.92-12.60)	16.99 (16.18-17.85)
Unicondylar									
AMC/Uniglide	2,848	64 (57-72)	50%	2.12 (1.65-2.73)	5.80 (4.97-6.76)	7.36 (6.41-8.44)	9.58 (8.42-10.88)	11.65 (10.20-13.28)	14.63 (11.84-18.02)
†MG Uni	2,381	62 (56-70)	54%	0.93 (0.61-1.40)	3.94 (3.22-4.80)	5.94 (5.05-6.97)	7.56 (6.55-8.71)	10.09 (8.84-11.50)	12.22 (10.16-14.67)
Oxford Partial Knee	55,447	64 (57-71)	52%	1.14 (1.05-1.24)	4.06 (3.88-4.24)	6.10 (5.87-6.33)	8.06 (7.78-8.34)	11.53 (11.11-11.96)	15.73 (14.76-16.77)
*Physica ZUK	10,246	63 (55-69)	55%	0.37 (0.26-0.51)	2.48 (2.13-2.88)	3.95 (3.45-4.52)	5.29 (4.60-6.07)	6.66 (5.54-8.01)	
†Preservation	1,515	62 (56-69)	55%	2.32 (1.67-3.21)	7.73 (6.49-9.20)	11.34 (9.83-13.06)	14.24 (12.55-16.13)	17.09 (15.19-19.19)	26.23 (22.38-30.59)
Sigma HP	7,587	62 (55-69)	57%	0.80 (0.61-1.04)	3.57 (3.10-4.10)	5.01 (4.38-5.74)	5.68 (4.88-6.61)		
Patellofemoral									
Avon	5,277	59 (50-68)	22%	0.77 (0.56-1.05)	4.24 (3.69-4.87)	7.47 (6.71-8.32)	10.08 (9.14-11.10)	14.43 (13.12-15.87)	20.22 (17.47-23.33)
FPV	1,587	59 (51-68)	23%	0.90 (0.53-1.51)	6.74 (5.56-8.15)	9.61 (8.15-11.31)	12.47 (10.65-14.57)		
Journey PFJ Oxinium	1,572	58 (50-67)	23%	2.08 (1.47-2.94)	7.39 (6.11-8.91)	12.63 (10.87-14.64)	17.84 (15.55-20.43)	22.37 (19.35-25.77)	
Sigma HP	1,164	58 (51-66)	22%	2.46 (1.69-3.57)	8.74 (7.09-10.75)	12.85 (10.64-15.48)	16.90 (13.60-20.90)		
Zimmer PFJ	1,774	57 (50-65)	22%	0.64 (0.35-1.19)	4.41 (3.39-5.75)	6.98 (5.43-8.95)	9.54 (7.09-12.78)		

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† Denotes a brand that has been discontinued/withdrawn/not implanted in last three years.
 * Denotes that this brand is now marketed by Lima
 Note: 1 Estimates in *blue italics* indicate that fewer than 250 cases remain at risk at the time shown. Blank cells indicate the number at risk is below ten and therefore estimates are omitted as they are unreliable. 2 Brands shown have been used in at least 1,000 primary total knee replacement operations. Excludes 141 primary operations where the knee brand was not recorded.