Australian Orthopaedic Association National Joint Replacement Registry

2024 SUPPLEMENTARY REPORT

Comparative Prosthesis Performance

CELEBRATING 25TH Edition

AOA
AUSTRALIAN ORTHOPAEDIC ASSOCIATION

Australian Orthopaedic Association National Joint Replacement Registry

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Comparative Prosthesis Performance

2024 Supplementary Report

Clinical Director: Professor Paul Smith
E: admin@aoanjrr.org.au

Executive Manager: Ms Kathy Hill
E: khill@aoanjrr.org.au

AOANJRR
SAHMRI Building
North Terrace
ADELAIDE SA 5000
T: +61 8 8128 4280

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The Registry greatly appreciates the participation of all joint replacement patients throughout Australia. Their contribution allows ongoing improvements in arthroplasty outcomes to be achieved.

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Jeremy Durward

ICT
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Christian Boyd Vincent Talladira Jen Coleman

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Introduction

The purpose of this supplementary report is to ensure that the Registry provides updated 10, 15 and 20 year data on the comparative performance of all prostheses including those that are no longer used. This contrasts with the Annual Report Chapter "Ten, Fifteen, and Twenty Year Prosthesis Outcomes" which exclusively analyses modern prostheses only (i.e. prostheses that are still available and still used in 2023).

Surgeons at the Annual Report Workshop highlighted that there was ongoing interest in the comparative performance of all devices reported to the Registry and recommended its inclusion as a supplementary report. This supplementary report provides a historical perspective of prosthesis performance.

This report presents comparative performance information on hip and knee prostheses used for the treatment of osteoarthritis for the three different time periods irrespective of their use in 2023. Individual hip and knee prosthesis combinations with >350 procedures are reported. The Registry is also reporting 10 year outcomes for primary total shoulder replacements. Individual humeral and glenoid prosthesis combinations are reported. A combination is included if >50 procedures have been reported to the Registry and the follow-up is ≥10 years. Those prostheses not used in 2023 are identified with an asterisk in each of the tables.

Ten, Fifteen and Twenty Year Outcomes Comparative Performance

Ten Year Outcomes

HIP REPLACEMENT

There are 112 hip prosthesis combinations listed that have been used in >350 procedures and have data to at least 10 years. These listed combinations were used in 81.1% of all primary total conventional hip replacement procedures performed for osteoarthritis. The 10 year cumulative percent revision ranges from 2.4% to 46.4% (Table CP1).

KNEE REPLACEMENT

There are 84 knee prosthesis combinations that have been used in >350 procedures and have data to at least 10 years. The listed combinations were used in 91.5% of all primary total knee replacement procedures performed for osteoarthritis. The 10 year cumulative percent revision ranges from 2.7% to 13.3% (Table CP2).

SHOULDER REPLACEMENT

Total Stemmed Anatomic

There are 13 total stemmed anatomic shoulder prosthesis combinations that have been used in >50 procedures and have data to at least 10 years. The listed combinations were used in 75.7% of all primary total stemmed anatomic shoulder replacement procedures performed for osteoarthritis. The 10 year cumulative percent revision ranges from 3.9% to 39.1% (Table CP3).

Total Stemmed Reverse

There are 7 total reverse shoulder prosthesis combinations that have been used in >50 procedures and have data to at least 10 years. The listed combinations were used in 64.3% of all primary total reverse shoulder replacement procedures performed for any diagnosis. The 10 year cumulative percent revision ranges from 4.1% to 10.0% (Table CP4).

Table CP1 **Cumulative Percent Revision of Primary Total Conventional Hip Replacement Combinations with 10 Year Data (Primary Diagnosis OA)**

Femoral Component	Acetabular Component	N Revised	N Total	Type of Revision THR	Femoral	Acetabular	Other	2 Yrs	5 Yrs	10 Yrs
ABGII	ABGII (Shell/Insert)*	101	853	20	54	18	9	1.8 (1.1, 2.9)	2.7 (1.8, 4.1)	6.6 (5.1, 8.6)
ABGII	ABGII*	369	2772	61	181	86	41	2.5 (2.0, 3.1)	4.1 (3.4, 5.0)	6.9 (5.9, 7.9)
ABGII	Trident (Shell)*	295	2439	16	184	38	57	3.4 (2.8, 4.2)	4.9 (4.1, 5.9)	8.5 (7.4, 9.7)
AMIStem H	Versafitcup CC	118	4223	11	74	14	19	1.6 (1.3, 2.1)	2.8 (2.3, 3.4)	5.6 (3.7, 8.5)
Accolade I	Mitch TRH*MoM	106	357	49	22	25	10	3.7 (2.1, 6.2)	10.3 (7.5, 14.0)	18.9 (15.1, 23.5)
Accolade I	Trident (Shell)*	585	8574	68	238	111	168	2.4 (2.1, 2.7)	3.8 (3.4, 4.2)	5.7 (5.2, 6.2)
Accolade I	Trident/Tritanium (Shell)*	37	696	5	16	6	10	2.0 (1.2, 3.4)	2.9 (1.9, 4.5)	5.0 (3.6, 7.0)
Accolade II	Trident (Shell)	389	16178	38	131	61	159	2.2 (1.9, 2.4)	2.8 (2.5, 3.1)	3.7 (3.0, 4.5)
Adapter	Bionik*MoM	98	376	21	10	23	44	5.1 (3.3, 7.9)	15.0 (11.7, 19.2)	25.0 (20.8, 30.0)
Alloclassic	Allofit	342	5170	40	149	59	94	1.8 (1.5, 2.2)	2.9 (2.4, 3.4)	5.0 (4.4, 5.7)
Alloclassic	Durom*MoM	107	547	30	15	47	15	3.4 (2.1, 5.3)	7.4 (5.5, 10.0)	16.3 (13.4, 19.9)
Alloclassic	Fitmore*	146	1709	15	73	19	39	4.2 (3.4, 5.3)	5.6 (4.6, 6.8)	7.5 (6.3, 8.9)
Alloclassic	Metasul*	24	371	4	2	12	6	2.2 (1.1, 4.3)	3.6 (2.1, 6.1)	5.1 (3.3, 8.1)
Alloclassic	Trabecular Metal (Shell)*	52	957	5	16	6	25	2.5 (1.7, 3.7)	4.0 (2.9, 5.5)	5.1 (3.9, 6.8)
Anthology	R3	267	8073	27	75	53	112	2.3 (2.0, 2.7)	2.8 (2.5, 3.2)	3.7 (3.3, 4.2)
Anthology	Reflection (Shell)*	42	909	4	16	14	8	2.3 (1.5, 3.5)	3.0 (2.1, 4.4)	4.6 (3.4, 6.2)
Apex	Fin II*	63	924	8	13	23	19	2.3 (1.5, 3.5)	3.4 (2.4, 4.8)	6.1 (4.6, 7.9)
Avenir	Continuum	67	1670	5	15	12	35	3.3 (2.5, 4.2)	3.7 (2.9, 4.8)	4.6 (3.5, 5.9)
Avenir	Trilogy*	14	553	1	6	2	5	1.1 (0.5, 2.4)	1.3 (0.6, 2.6)	2.8 (1.6, 4.8)
C-Stem	Duraloc*	95	894	13	26	14	42	2.8 (1.9, 4.2)	3.8 (2.7, 5.3)	6.9 (5.3, 8.9)
C-Stem	Elite Plus LPW*	25	367	11	5	9	0	1.1 (0.4, 3.0)	2.7 (1.4, 5.0)	5.3 (3.3, 8.6)
C-Stem AMT	Marathon	10	497	2	2	3	3	0.8 (0.3, 2.2)	1.5 (0.7, 3.2)	2.6 (1.4, 4.9)
C-Stem AMT	PINNACLE	147	5106	14	61	15	57	1.6 (1.3, 2.0)	2.7 (2.3, 3.3)	4.4 (3.6, 5.4)
CLS	Allofit*	67	817	6	37	15	9	2.5 (1.6, 3.8)	3.8 (2.7, 5.4)	6.1 (4.6, 8.0)
CORAIL	ASR*MoM	1302	2654	239	46	949	68	5.1 (4.3, 6.0)	27.6 (25.9, 29.3)	46.4 (44.5, 48.4)
CORAIL	DeltaMotion*	38	1209	7	12	11	8	1.5 (0.9, 2.4)	2.2 (1.5, 3.2)	3.4 (2.4, 4.6)
CORAIL	Duraloc*	114	1267	22	48	17	27	1.6 (1.0, 2.5)	2.5 (1.8, 3.6)	5.1 (4.0, 6.6)
CORAIL	PINNACLE	2309	60363	208	880	346	875	2.0 (1.9, 2.2)	3.0 (2.8, 3.1)	4.6 (4.4, 4.8)
CORAIL	PINNACLE*MoM	135	880	19	46	22	48	2.9 (1.9, 4.2)	6.2 (4.7, 8.0)	12.2 (10.1, 14.7)
CORAIL	Trident (Shell)	26	599	4	6	3	13	3.3 (2.1, 5.1)	4.6 (3.0, 7.0)	6.9 (4.3, 11.1)
CPCS	R3	247	7513	25	74	48	100	2.3 (2.0, 2.7)	3.1 (2.7, 3.6)	4.4 (3.8, 5.1)
CPCS	Reflection (Cup)	86	851	27	5	41	13	1.6 (0.9, 2.7)	2.9 (1.9, 4.3)	8.0 (6.0, 10.6)
CPCS	Reflection (Shell)	112	2836	14	50	14	34	0.9 (0.6, 1.4)	1.7 (1.2, 2.2)	3.2 (2.6, 4.0)
CPT	Allofit	65	1801	11	28	5	21	1.3 (0.9, 2.0)	3.0 (2.3, 4.1)	4.9 (3.7, 6.4)
CPT	Continuum	145	2807	10	55	19	61	3.2 (2.6, 3.9)	4.2 (3.5, 5.0)	6.0 (5.1, 7.1)
CPT	Trabecular Metal (Shell)	115	2091	11	49	18	37	2.7 (2.1, 3.5)	4.0 (3.2, 5.0)	6.5 (5.3, 7.9)
CPT	Trilogy	416	7874	47	162	42	165	2.3 (2.0, 2.7)	3.5 (3.1, 4.0)	5.4 (4.9, 6.0)
CPT	ZCA	41	867	14	10	10	7	1.2 (0.6, 2.2)	2.4 (1.6, 3.7)	4.6 (3.2, 6.4)
Charnley	Charnley Ogee*	67	630	40	9	6	12	2.1 (1.2, 3.6)	5.1 (3.6, 7.3)	9.1 (7.0, 12.0)
Charnley	Charnley*	51	563	41	7	3	0	0.9 (0.4, 2.2)	2.2 (1.3, 3.9)	6.5 (4.6, 9.1)
Charnley	Vitalock*	44	370	9	20	4	11	2.7 (1.5, 5.0)	4.4 (2.7, 7.1)	7.9 (5.5, 11.4)
Citation	Trident (Shell)*	62	1036	3	18	16	25	1.9 (1.3, 3.0)	3.3 (2.4, 4.6)	4.4 (3.3, 5.9)
Citation	Vitalock*	53	508	4	10	20	19	1.0 (0.4, 2.4)	2.0 (1.1, 3.7)	5.2 (3.5, 7.7)
E2	Austral	24	759	1	1	6	16	1.9 (1.1, 3.1)	2.8 (1.8, 4.3)	3.8 (2.5, 5.7)
EVOK	Austral	46	1080	4	10	18	14	3.0 (2.1, 4.2)	4.1 (3.0, 5.6)	5.5 (4.1, 7.4)
Elite Plus	Duraloc*	115	953	19	66	6	24	2.2 (1.5, 3.4)	5.1 (3.9, 6.8)	9.2 (7.4, 11.5)
Epoch	Trilogy*	47	990	1	9	10	27	2.7 (1.9, 4.0)	3.6 (2.6, 4.9)	4.5 (3.3, 6.0)

Femoral Component	Acetabular Component	N Revised	N Total	Type of Revision THR	Femoral	Acetabular	Other	2 Yrs	5 Yrs	10 Yrs
Exeter	Contemporary*	39	428	10	7	14	8	2.9 (1.7, 5.0)	4.2 (2.6, 6.6)	6.0 (4.0, 8.9)
Exeter	Vitalock*	78	1076	14	16	29	19	2.0 (1.3, 3.0)	2.3 (1.5, 3.4)	4.6 (3.4, 6.1)
Exeter V40	ABGII*	43	976	9	14	13	7	0.8 (0.4, 1.6)	1.8 (1.1, 2.9)	3.4 (2.4, 4.8)
Exeter V40	Contemporary	312	4609	85	48	145	34	2.1 (1.8, 2.6)	3.2 (2.7, 3.8)	5.5 (4.8, 6.3)
Exeter V40	Exeter	137	1538	32	17	66	22	1.3 (0.8, 2.0)	2.9 (2.1, 3.9)	4.6 (3.6, 5.9)
Exeter V40	Exeter Contemporary	173	2970	58	35	57	23	1.9 (1.4, 2.4)	3.0 (2.4, 3.7)	4.6 (3.8, 5.4)
Exeter V40	Exeter X3 Rimfit	123	4519	31	35	32	25	1.8 (1.4, 2.2)	2.6 (2.1, 3.1)	3.4 (2.8, 4.1)
Exeter V40	Mallory-Head*	46	1434	8	27	4	7	0.8 (0.4, 1.4)	1.1 (0.6, 1.8)	2.4 (1.7, 3.4)
Exeter V40	Trabecular Metal (Shell)	21	486	2	3	2	14	2.7 (1.6, 4.6)	3.8 (2.4, 6.0)	4.8 (3.1, 7.5)
Exeter V40	Trident (Shell)	2334	78537	316	757	290	971	1.5 (1.4, 1.6)	2.3 (2.2, 2.4)	3.5 (3.4, 3.7)
Exeter V40	Trident/Tritanium (Shell)	149	5055	15	35	27	72	1.9 (1.5, 2.3)	2.8 (2.3, 3.3)	3.9 (3.2, 4.7)
Exeter V40	Trilogy*	18	517	2	5	2	9	2.3 (1.3, 4.1)	2.5 (1.5, 4.3)	3.6 (2.2, 5.8)
Exeter V40	Vitalock*	99	1795	20	27	27	25	1.4 (1.0, 2.1)	2.3 (1.7, 3.1)	3.2 (2.5, 4.2)
F2L	SPH-Blind*	65	571	10	20	18	17	3.9 (2.6, 5.8)	6.1 (4.4, 8.4)	7.6 (5.7, 10.2)
H-Max	Delta-TT	75	1708	6	34	11	24	2.4 (1.8, 3.3)	3.8 (2.9, 4.9)	6.0 (4.7, 7.8)
M/L Taper	Allofit*	27	719	1	13	4	9	1.7 (1.0, 2.9)	2.1 (1.3, 3.5)	4.0 (2.6, 6.1)
M/L Taper	Continuum	61	1523	6	18	10	27	2.8 (2.1, 3.7)	3.6 (2.8, 4.7)	4.2 (3.3, 5.5)
M/L Taper	Trabecular Metal (Shell)*	17	362	1	5	3	8	1.7 (0.8, 3.7)	2.0 (0.9, 4.1)	4.4 (2.6, 7.4)
M/L Taper Kinectiv	Continuum*	99	2085	4	30	16	49	2.8 (2.2, 3.6)	3.5 (2.8, 4.4)	4.9 (4.0, 6.0)
MS 30	Allofit*	69	1539	14	22	20	13	1.3 (0.8, 2.0)	2.1 (1.5, 3.0)	3.5 (2.6, 4.6)
MS 30	Fitmore	30	823	1	9	9	11	1.0 (0.5, 2.0)	2.0 (1.2, 3.4)	2.9 (1.8, 4.5)
MS 30	Low Profile Cup*	26	604	11	3	10	2	0.5 (0.2, 1.5)	1.3 (0.6, 2.7)	2.8 (1.6, 4.8)
Mallory-Head	Mallory-Head*	227	2908	19	14	81	113	2.1 (1.6, 2.7)	3.0 (2.4, 3.7)	4.6 (3.9, 5.5)
Meridian	Vitalock*	44	354	2	3	18	21	1.4 (0.6, 3.4)	3.5 (2.0, 6.1)	6.7 (4.4, 10.0)
Metafix	Trinity	383	18506	42	105	79	157	1.8 (1.6, 2.0)	2.4 (2.2, 2.7)	3.3 (2.8, 3.8)
MiniHip	Trinity	42	1270	2	22	10	8	2.8 (2.0, 3.9)	3.2 (2.3, 4.3)	3.5 (2.6, 4.8)
Natural Hip	Fitmore*	44	882	2	8	13	21	0.9 (0.5, 1.8)	2.0 (1.3, 3.2)	4.2 (3.0, 5.9)
Novation	BSC-Cup*	24	387	1	9	5	9	4.1 (2.6, 6.7)	5.8 (3.8, 8.6)	6.7 (4.5, 9.9)
Omnifit	Secur-Fit*	90	716	10	23	23	34	3.7 (2.5, 5.3)	6.2 (4.6, 8.2)	9.9 (7.9, 12.5)
Omnifit	Trident (Shell)*	169	3841	14	41	31	83	2.2 (1.8, 2.7)	3.0 (2.5, 3.6)	3.9 (3.3, 4.6)
Polarstem	R3	531	19229	31	176	81	243	2.2 (2.0, 2.4)	2.9 (2.7, 3.2)	3.9 (3.5, 4.4)
Quadra-C	Versafitcup CC	42	2152	7	10	10	15	1.6 (1.1, 2.2)	1.9 (1.3, 2.6)	3.3 (2.2, 4.9)
Quadra-H	Mpact	237	6406	23	116	27	71	2.4 (2.0, 2.8)	3.9 (3.4, 4.5)	6.2 (5.1, 7.6)
Quadra-H	Versafitcup CC	752	17659	78	359	153	162	2.0 (1.8, 2.3)	3.1 (2.9, 3.4)	5.1 (4.7, 5.5)
S-Rom	Duraloc Option*	27	523	4	9	5	9	2.1 (1.2, 3.8)	3.3 (2.1, 5.2)	4.6 (3.0, 6.8)
S-Rom	PINNACLE	158	2637	15	89	15	39	2.9 (2.3, 3.6)	4.4 (3.7, 5.3)	5.7 (4.8, 6.7)
SL-Plus	EP-Fit Plus	125	2135	5	55	23	42	1.9 (1.4, 2.6)	3.4 (2.7, 4.2)	5.4 (4.4, 6.5)
SL-Plus	R3	104	1702	6	28	25	45	3.2 (2.5, 4.2)	4.3 (3.4, 5.4)	6.1 (5.0, 7.4)
Secur-Fit	Trident (Shell)	522	9864	38	228	94	162	2.5 (2.2, 2.8)	3.6 (3.3, 4.0)	4.8 (4.4, 5.3)
Secur-Fit Plus	Trident (Shell)	243	6017	18	67	59	99	1.6 (1.4, 2.0)	2.3 (2.0, 2.8)	3.4 (2.9, 3.9)
Spectron EF	BHR*MoM	79	430	17	0	52	10	2.6 (1.4, 4.6)	6.0 (4.1, 8.8)	15.9 (12.5, 20.0)
Spectron EF	R3	101	2162	18	19	20	44	2.4 (1.9, 3.2)	3.9 (3.1, 4.8)	5.1 (4.1, 6.2)
Spectron EF	Reflection (Cup)	127	1405	49	12	57	9	1.3 (0.8, 2.0)	2.9 (2.1, 4.0)	7.2 (5.8, 8.9)
Spectron EF	Reflection (Shell)*	331	4646	71	113	50	97	1.5 (1.2, 1.9)	2.7 (2.3, 3.3)	5.3 (4.7, 6.1)
Stability	Duraloc*	58	374	4	10	18	26	1.3 (0.6, 3.2)	2.2 (1.1, 4.3)	8.9 (6.3, 12.5)
Summit	ASR*MoM	491	1041	17	6	441	27	3.0 (2.1, 4.2)	20.1 (17.7, 22.7)	44.5 (41.5, 47.7)
Summit	PINNACLE	195	5770	15	45	33	102	1.8 (1.5, 2.2)	2.3 (2.0, 2.8)	3.5 (3.0, 4.1)
Summit	PINNACLE*MoM	93	730	10	6	18	59	1.7 (0.9, 2.9)	3.5 (2.4, 5.1)	8.9 (7.0, 11.3)
Synergy	BHR*MoM	126	698	8	11	70	37	2.7 (1.8, 4.2)	4.8 (3.4, 6.7)	12.4 (10.1, 15.2)

Femoral Component	Acetabular Component	N Revised	N Total	Type of Revision THR	Femoral	Acetabular	Other	2 Yrs	5 Yrs	10 Yrs
Synergy	R3	181	5239	6	51	45	79	2.1 (1.8, 2.6)	2.7 (2.3, 3.2)	3.5 (3.0, 4.1)
Synergy	Reflection (Shell)	421	7543	36	86	146	153	2.0 (1.7, 2.3)	2.6 (2.3, 3.0)	3.9 (3.5, 4.4)
Synergy	Trident (Shell)*	21	438	0	4	8	9	1.2 (0.5, 2.7)	1.9 (0.9, 3.7)	3.8 (2.3, 6.2)
Taper Fit	Trinity	104	4819	10	37	14	43	1.7 (1.3, 2.1)	2.8 (2.2, 3.4)	5.4 (3.3, 8.9)
Taperloc	Exceed*	68	2191	7	20	25	16	1.9 (1.4, 2.6)	2.4 (1.9, 3.2)	3.2 (2.5, 4.1)
Taperloc	M2a*MoM	69	471	14	2	46	7	2.6 (1.5, 4.5)	6.9 (4.9, 9.6)	12.2 (9.5, 15.6)
Taperloc	Mallory-Head*	99	1903	10	20	31	38	2.3 (1.7, 3.0)	3.0 (2.4, 3.9)	4.7 (3.7, 5.8)
Taperloc	Recap*MoM	53	456	13	7	25	8	2.4 (1.4, 4.4)	5.6 (3.8, 8.2)	9.8 (7.3, 13.0)
Taperloc	Regenerex*	17	530	2	4	3	8	1.9 (1.0, 3.5)	2.3 (1.3, 4.0)	3.3 (2.0, 5.3)
Trabecular Metal	Allofit*	21	435	2	5	4	10	3.0 (1.8, 5.1)	4.4 (2.9, 6.9)	5.0 (3.3, 7.5)
Trabecular Metal	Continuum*	47	645	3	16	10	18	5.8 (4.2, 7.9)	6.5 (4.9, 8.8)	6.9 (5.2, 9.1)
Tri-Fit TS	Trinity	120	4883	14	55	18	33	1.8 (1.5, 2.2)	2.4 (2.0, 2.9)	2.9 (2.4, 3.6)
Tri-Lock	DeltaMotion*	23	755	3	5	11	4	0.9 (0.4, 1.9)	1.5 (0.8, 2.6)	2.8 (1.8, 4.3)
Tri-Lock	PINNACLE	30	1110	0	10	8	12	1.7 (1.0, 2.6)	2.4 (1.7, 3.6)	3.4 (2.3, 5.1)
VerSys	Trilogy*	268	4432	19	92	50	107	3.0 (2.6, 3.6)	3.9 (3.4, 4.5)	5.2 (4.6, 5.9)
twinSys (cless)	RM Cup	58	1567	5	14	6	33	2.7 (2.0, 3.6)	3.4 (2.6, 4.5)	4.6 (3.4, 6.1)
TOTAL		**20232**	**431268**	**2580**	**6234**	**5089**	**6329**			

Note: Only prostheses with >350 procedures have been listed

* denotes prosthesis combinations that have not had any reported use in primary total hip procedures in 2023

MoM refers to metal/metal prosthesis combinations used with head sizes >32mm

Table CP2 **Cumulative Percent Revision of Primary Total Knee Replacement Combinations with 10 Year Data (Primary Diagnosis OA)**

Femoral Component	Tibial Component	N Revised	N Total	Type of Revision TKR	Femoral	Tibial	Other	2 Yrs	5 Yrs	10 Yrs
ACS	ACS Fixed	157	3654	41	10	21	85	2.8 (2.3, 3.4)	4.3 (3.6, 5.0)	5.3 (4.5, 6.3)
ACS	ACS Mobile	103	2157	36	9	4	54	3.1 (2.4, 3.9)	4.8 (3.9, 5.9)	6.1 (5.0, 7.5)
AGC	AGC*	339	5028	155	5	26	153	1.7 (1.4, 2.1)	3.2 (2.8, 3.8)	4.9 (4.3, 5.6)
Active Knee	Active Knee	897	10825	269	29	43	556	2.4 (2.1, 2.7)	4.6 (4.2, 5.0)	7.9 (7.3, 8.5)
Advance	Advance II*	124	1623	51	3	13	57	3.6 (2.8, 4.6)	5.0 (4.1, 6.2)	6.7 (5.5, 8.1)
Advance	Advance*	76	992	31	4	8	33	3.9 (2.8, 5.3)	6.0 (4.7, 7.7)	8.3 (6.6, 10.4)
Apex Knee CR	Apex Knee	219	12702	47	19	12	141	1.3 (1.1, 1.5)	2.1 (1.8, 2.5)	2.8 (2.3, 3.4)
Apex Knee PS	Apex Knee	192	6839	75	7	11	99	1.7 (1.4, 2.0)	3.1 (2.7, 3.6)	5.7 (4.5, 7.3)
Attune CR	Attune	698	32013	172	36	45	445	1.6 (1.5, 1.8)	2.8 (2.6, 3.0)	3.6 (3.3, 4.0)
Attune PS	Attune	343	15350	107	19	43	174	1.6 (1.4, 1.8)	2.6 (2.3, 2.9)	5.9 (4.2, 8.2)
BalanSys	BalanSys	141	4746	48	7	9	77	1.4 (1.1, 1.8)	2.5 (2.0, 3.0)	3.9 (3.3, 4.7)
Buechel-Pappas	Buechel-Pappas*	57	467	21	2	2	32	4.3 (2.8, 6.6)	8.1 (5.9, 11.0)	10.7 (8.2, 14.0)
Columbus	Columbus	225	7336	60	9	10	146	1.9 (1.6, 2.3)	3.7 (3.2, 4.4)	6.3 (5.2, 7.5)
Duracon	Duracon*	1368	19830	387	32	68	881	2.1 (1.9, 2.3)	3.5 (3.2, 3.7)	5.2 (4.9, 5.5)
E.Motion	E.Motion	74	1020	20	9	4	41	4.4 (3.3, 5.9)	6.6 (5.2, 8.4)	8.2 (6.6, 10.3)
Evolution	Evolution	332	12504	79	3	15	235	1.7 (1.4, 1.9)	2.9 (2.6, 3.3)	4.2 (3.6, 5.0)
GMK Primary	GMK Primary	132	3615	37	3	16	76	2.5 (2.0, 3.1)	3.8 (3.1, 4.5)	5.1 (4.2, 6.1)
GMK Sphere Primary	GMK Primary	514	21590	108	14	30	362	2.1 (1.9, 2.3)	3.2 (2.9, 3.5)	4.2 (3.6, 4.8)
Genesis II CR	Genesis II	1264	26274	269	78	57	860	2.0 (1.8, 2.2)	3.5 (3.2, 3.7)	5.0 (4.7, 5.3)
Genesis II CR	Profix Mobile*	140	1209	59	9	8	64	2.7 (1.9, 3.8)	5.4 (4.2, 6.8)	8.8 (7.3, 10.6)
Genesis II Oxinium CR (ctd)	Genesis II	633	11066	123	35	27	448	1.9 (1.6, 2.2)	3.5 (3.1, 3.8)	5.9 (5.4, 6.4)
Genesis II Oxinium PS (ctd)	Genesis II	1495	22342	222	37	175	1061	2.8 (2.5, 3.0)	4.9 (4.6, 5.2)	7.2 (6.8, 7.6)
Genesis II PS	Genesis II	981	20811	180	33	62	706	2.0 (1.8, 2.2)	3.6 (3.3, 3.8)	5.0 (4.7, 5.3)
Journey Oxinium	Journey*	407	2975	65	7	31	304	3.4 (2.8, 4.1)	6.5 (5.7, 7.5)	11.3 (10.2, 12.6)
Kinemax Plus	Kinemax Plus*	140	1815	83	4	5	48	1.8 (1.3, 2.6)	3.2 (2.4, 4.1)	4.6 (3.7, 5.7)
LCS CR	LCS	635	8345	261	24	90	260	2.5 (2.1, 2.8)	4.5 (4.0, 5.0)	6.4 (5.9, 7.0)
LCS CR	MBT Duofix*	909	15248	265	38	44	562	2.7 (2.4, 2.9)	4.1 (3.8, 4.4)	5.3 (4.9, 5.7)
LCS CR	MBT*	1557	33003	559	71	162	765	1.9 (1.8, 2.1)	3.5 (3.3, 3.7)	4.9 (4.6, 5.2)
LCS Duofix	MBT Duofix*	536	3606	369	27	8	132	3.7 (3.2, 4.4)	10.2 (9.2, 11.2)	13.3 (12.3, 14.5)
LCS Duofix	MBT*	147	1169	100	9	2	36	3.3 (2.4, 4.5)	8.1 (6.7, 9.9)	11.9 (10.1, 13.9)
LCS PS	MBT*	47	482	12	5	1	29	4.6 (3.1, 6.9)	6.6 (4.7, 9.2)	10.4 (7.9, 13.6)
Legion CR	Genesis II	320	9453	63	24	14	219	2.1 (1.8, 2.4)	3.7 (3.3, 4.2)	5.4 (4.7, 6.2)
Legion Oxinium CR	Genesis II	314	11445	77	24	11	202	1.7 (1.5, 2.0)	3.3 (2.9, 3.7)	4.2 (3.7, 4.8)
Legion Oxinium PS	Genesis II	755	18337	113	21	64	557	2.2 (2.0, 2.4)	3.8 (3.6, 4.2)	5.4 (5.0, 5.9)
Legion PS	Genesis II	215	6263	55	4	8	148	2.0 (1.7, 2.4)	3.1 (2.6, 3.5)	4.1 (3.5, 4.7)
MBK (Zimmer)	Nexgen*	39	448	22	1	1	15	2.3 (1.2, 4.1)	4.1 (2.6, 6.5)	6.2 (4.2, 8.9)
MRK	MRK	33	844	9	1	0	23	2.0 (1.2, 3.2)	2.7 (1.8, 4.2)	4.7 (3.2, 6.8)
Maxim	Maxim*	158	1819	54	11	6	87	2.1 (1.5, 2.8)	3.3 (2.6, 4.3)	5.2 (4.3, 6.4)
Maxim	Vanguard*	101	628	47	6	6	42	3.1 (2.0, 4.8)	5.6 (4.0, 7.7)	8.3 (6.3, 10.9)
Natural Knee Flex	Natural Knee II	185	6272	49	8	9	119	1.5 (1.2, 1.8)	2.4 (2.0, 2.8)	3.2 (2.8, 3.8)
Natural Knee II	Natural Knee II*	468	6443	221	10	60	177	1.6 (1.4, 2.0)	2.8 (2.4, 3.2)	4.9 (4.4, 5.5)
Nexgen CR	Nexgen TM CR*	60	867	22	5	11	22	2.4 (1.6, 3.7)	5.4 (4.0, 7.1)	6.4 (4.9, 8.4)
Nexgen CR	Nexgen*	452	11582	148	22	33	249	1.2 (1.1, 1.5)	2.2 (1.9, 2.4)	3.1 (2.8, 3.5)
Nexgen CR Flex	Nexgen	1731	60434	446	118	137	1030	1.4 (1.3, 1.5)	2.3 (2.2, 2.4)	3.1 (2.9, 3.3)
Nexgen CR Flex	Nexgen TM CR	379	12310	134	23	30	192	1.2 (1.0, 1.4)	2.2 (1.9, 2.5)	3.1 (2.8, 3.5)
Nexgen LCCK	Nexgen	56	980	9	3	1	43	3.0 (2.1, 4.3)	4.6 (3.5, 6.2)	6.2 (4.6, 8.3)
Nexgen LPS	Nexgen TM LPS*	38	1476	13	4	6	15	1.0 (0.6, 1.6)	2.1 (1.5, 3.0)	2.7 (2.0, 3.8)

Femoral Component	Tibial Component	N Revised	N Total	Type of Revision TKR	Femoral	Tibial	Other	2 Yrs	5 Yrs	10 Yrs
Nexgen LPS	Nexgen*	386	7024	104	22	34	226	1.9 (1.6, 2.3)	3.3 (2.9, 3.7)	4.8 (4.3, 5.3)
Nexgen LPS Flex	Nexgen	1782	37832	520	72	258	932	1.8 (1.6, 1.9)	3.1 (3.0, 3.3)	4.9 (4.6, 5.1)
Nexgen LPS Flex	Nexgen TM LPS*	74	1576	35	5	6	28	2.0 (1.4, 2.8)	3.4 (2.6, 4.5)	4.4 (3.4, 5.6)
Nexgen RH	Nexgen	37	752	3	5	4	25	2.9 (1.9, 4.5)	4.8 (3.3, 6.9)	7.9 (5.6, 11.2)
Optetrak-CR	Optetrak*	59	504	24	3	4	28	3.2 (2.0, 5.2)	6.1 (4.3, 8.7)	10.2 (7.7, 13.3)
Optetrak-PS	Optetrak RBK*	100	1112	34	3	3	60	2.8 (2.0, 4.0)	5.9 (4.7, 7.5)	8.2 (6.7, 10.1)
Optetrak-PS	Optetrak*	343	2365	166	8	30	139	3.4 (2.8, 4.2)	6.4 (5.4, 7.4)	12.2 (10.8, 13.6)
PFC Sigma CR	MBT Duofix*	171	3314	29	18	6	118	2.4 (1.9, 3.0)	3.4 (2.9, 4.1)	4.6 (3.9, 5.5)
PFC Sigma CR	MBT*	350	6273	80	35	45	190	2.6 (2.3, 3.1)	3.9 (3.4, 4.4)	5.0 (4.5, 5.6)
PFC Sigma CR	PFC Sigma*	953	24917	249	59	71	574	1.5 (1.4, 1.7)	2.5 (2.3, 2.7)	3.5 (3.3, 3.8)
PFC Sigma PS	MBT Duofix*	187	2212	45	4	6	132	3.5 (2.8, 4.3)	5.9 (5.0, 6.9)	7.9 (6.8, 9.1)
PFC Sigma PS	MBT*	391	6334	138	17	25	211	2.2 (1.9, 2.6)	4.0 (3.5, 4.5)	5.4 (4.9, 6.0)
PFC Sigma PS	PFC Sigma*	403	8041	146	14	28	215	2.0 (1.7, 2.3)	3.3 (2.9, 3.7)	4.7 (4.3, 5.2)
Persona PS	Persona	119	5654	21	8	4	86	1.8 (1.4, 2.2)	2.7 (2.3, 3.3)	2.9 (2.4, 3.6)
Profix	Profix Mobile*	111	986	40	6	5	60	5.1 (3.9, 6.7)	8.2 (6.6, 10.1)	9.9 (8.1, 12.0)
Profix	Profix*	318	5370	79	13	18	208	2.3 (1.9, 2.8)	3.8 (3.3, 4.3)	5.4 (4.8, 6.1)
Profix Oxinium (ctd)	Profix*	117	1049	29	5	14	69	4.1 (3.1, 5.6)	7.0 (5.6, 8.7)	8.9 (7.3, 10.8)
RBK	RBK*	616	11019	246	18	44	308	2.3 (2.1, 2.6)	3.9 (3.6, 4.3)	5.4 (4.9, 5.8)
Rocc	Rocc*	45	575	17	1	2	25	3.3 (2.1, 5.2)	5.2 (3.6, 7.3)	6.8 (5.0, 9.3)
Rotaglide Plus	Rotaglide Plus*	86	616	42	1	5	38	3.3 (2.2, 5.1)	5.8 (4.1, 8.0)	11.2 (8.8, 14.2)
SAIPH	SAIPH	102	5998	26	4	0	72	1.0 (0.8, 1.3)	2.1 (1.7, 2.6)	2.9 (2.1, 4.1)
Score	Score	424	6169	174	22	12	216	3.0 (2.6, 3.5)	5.7 (5.2, 6.4)	9.2 (8.3, 10.2)
Scorpio CR	Scorpio+*	217	2448	53	10	34	120	2.1 (1.6, 2.7)	4.3 (3.6, 5.2)	7.1 (6.2, 8.3)
Scorpio CR	Series 7000*	677	11561	178	27	48	424	1.8 (1.6, 2.1)	3.3 (3.0, 3.6)	5.1 (4.7, 5.6)
Scorpio NRG CR	Series 7000*	240	5070	68	15	13	144	2.1 (1.7, 2.5)	3.2 (2.7, 3.7)	4.6 (4.0, 5.2)
Scorpio NRG PS	Series 7000*	198	3931	41	8	19	130	2.0 (1.6, 2.5)	3.7 (3.1, 4.3)	4.5 (3.9, 5.3)
Scorpio PS	Scorpio*	36	524	10	0	11	15	2.1 (1.2, 3.8)	4.5 (3.0, 6.7)	6.1 (4.3, 8.6)
Scorpio PS	Scorpio+*	165	2036	49	14	10	92	2.7 (2.1, 3.5)	5.1 (4.2, 6.1)	6.7 (5.7, 8.0)
Scorpio PS	Series 7000*	380	4696	135	10	70	165	2.6 (2.2, 3.1)	4.7 (4.1, 5.3)	6.9 (6.2, 7.7)
Trekking	Trekking	72	1274	33	7	3	29	3.0 (2.2, 4.1)	4.7 (3.7, 6.1)	6.3 (5.0, 7.9)
Triathlon CR	Triathlon	3802	164229	708	149	187	2758	1.4 (1.4, 1.5)	2.4 (2.3, 2.5)	3.6 (3.4, 3.7)
Triathlon FS	Triathlon	25	448	7	2	1	15	4.8 (3.1, 7.4)	6.9 (4.6, 10.0)	6.9 (4.6, 10.0)
Triathlon PS	Triathlon	677	14957	128	35	84	430	2.3 (2.1, 2.6)	3.8 (3.5, 4.1)	5.4 (5.0, 5.9)
Vanguard CR	Regenerex*	100	1708	26	5	10	59	2.6 (2.0, 3.5)	4.0 (3.2, 5.1)	6.1 (4.9, 7.5)
Vanguard CR	Vanguard	1157	27179	278	44	72	763	1.7 (1.6, 1.9)	2.9 (2.7, 3.1)	4.7 (4.4, 5.0)
Vanguard PS	Regenerex*	45	462	21	3	4	17	5.0 (3.3, 7.4)	7.8 (5.7, 10.7)	10.0 (7.4, 13.4)
Vanguard PS	Vanguard*	356	5273	95	7	60	194	3.3 (2.9, 3.9)	5.1 (4.6, 5.8)	7.2 (6.5, 8.0)
TOTAL		**35507**	**845725**	**9870**	**1561**	**2699**	**21377**			

Note: Only prostheses with >350 procedures have been listed
* Denotes prosthesis combinations that have not had any reported use in primary total knee procedures in 2023

Table CP3 **Cumulative Percent Revision of Primary Total Stemmed Anatomic Shoulder Replacement Combinations with 10 Year Data (Primary Diagnosis OA)**

Humeral Component	Glenoid Component	N Revised	N Total	Type of Revision TSR	Humeral	Glenoid	Other	2 Yrs	5 Yrs	10 Yrs
Aequalis	Aequalis*	97	1564	56	7	9	25	2.3 (1.6, 3.1)	3.4 (2.6, 4.4)	6.0 (4.8, 7.4)
Affinis	Affinis	20	188	6	1	7	6	1.1 (0.3, 4.3)	5.1 (2.7, 9.6)	9.0 (5.5, 14.5)
Ascend	Aequalis*	18	236	14	1	1	2	3.0 (1.4, 6.2)	5.6 (3.3, 9.5)	9.5 (5.7, 15.5)
Ascend	Perform*	5	107	3	0	0	2	1.9 (0.5, 7.4)	3.9 (1.5, 10.0)	3.9 (1.5, 10.0)
Bigliani/Flatow	Bigliani/Flatow*	11	142	5	3	2	1	2.1 (0.7, 6.4)	3.6 (1.5, 8.3)	8.0 (4.4, 14.4)
Bigliani/Flatow TM	Bigliani/Flatow TM*	44	643	21	3	3	17	3.8 (2.5, 5.6)	5.0 (3.6, 7.1)	6.9 (5.1, 9.3)
Bigliani/Flatow TM	Bigliani/Flatow*	36	453	24	1	4	7	3.6 (2.2, 5.7)	5.4 (3.7, 8.0)	8.4 (6.0, 11.7)
Comprehensive	Comprehensive	49	873	35	4	1	9	4.8 (3.5, 6.4)	5.5 (4.2, 7.4)	7.6 (5.4, 10.7)
Global AP	Global	148	2969	83	16	9	40	2.3 (1.8, 2.9)	3.3 (2.7, 4.0)	5.2 (4.4, 6.2)
Global Advantage	Global*	53	725	24	6	10	13	2.4 (1.5, 3.8)	3.8 (2.6, 5.5)	6.9 (5.1, 9.3)
SMR	SMR	31	503	24	1	1	5	4.3 (2.8, 6.5)	5.2 (3.5, 7.6)	6.3 (4.4, 9.0)
SMR	SMR L1	411	2278	10	383	1	17	8.8 (7.7, 10.1)	13.3 (11.9, 14.8)	20.2 (18.4, 22.2)
SMR	SMR L2*	305	798	6	253	7	39	17.5 (15.0, 20.3)	30.3 (27.2, 33.7)	39.1 (35.7, 42.7)
TOTAL		**1228**	**11479**	**311**	**679**	**55**	**183**			

Note: Only prostheses with >50 procedures have been listed
* Denotes prosthesis combinations that have not had any reported use in primary total stemmed anatomic shoulder procedures in 2023

Table CP4 **Cumulative Percent Revision of Primary Total Stemmed Reverse Shoulder Replacement Combinations with 10 Year Data (All Diagnoses)**

Humeral Component	Glenoid Component	N Revised	N Total	Type of Revision TSR	Humeral	Glenoid	Other	2 Yrs	5 Yrs	10 Yrs
Aequalis	Aequalis	205	4344	13	37	16	139	2.9 (2.4, 3.4)	4.5 (3.9, 5.3)	6.8 (5.8, 7.9)
Comprehensive	Comprehensive Reverse	118	6595	39	54	3	22	1.7 (1.4, 2.1)	2.6 (2.1, 3.1)	4.1 (2.2, 7.4)
Delta CTA	Delta CTA*	11	89	1	0	3	7	5.7 (2.4, 13.1)	6.9 (3.1, 14.6)	10.0 (5.1, 19.1)
Delta Xtend	Delta Xtend	453	11515	23	68	28	334	2.8 (2.5, 3.1)	3.7 (3.4, 4.1)	5.1 (4.6, 5.7)
SMR	SMR L1	459	10943	32	101	33	293	3.7 (3.3, 4.0)	4.3 (3.9, 4.7)	5.4 (4.8, 6.0)
SMR	SMR L2*	75	1141	2	17	2	54	4.3 (3.2, 5.6)	5.5 (4.3, 7.1)	7.2 (5.7, 8.9)
Trabecular Metal	Trabecular Metal	95	1916	2	8	32	53	3.5 (2.8, 4.5)	5.0 (4.1, 6.2)	5.9 (4.7, 7.3)
TOTAL		**1416**	**36543**	**112**	**285**	**117**	**902**			

Note: Only prostheses with >50 procedures have been listed
* Denotes prosthesis combinations that have not had any reported use in primary total stemmed reverse shoulder procedures in 2023

Fifteen Year Outcomes

HIP REPLACEMENT

There are 79 hip prosthesis combinations listed that have been used in >350 procedures and have data to at least 15 years These listed prosthesis combinations were used in 60.2% of all primary total conventional hip replacement procedures performed for osteoarthritis. The 15 year cumulative percent revision ranges from 3.7% to 53.6% (Table CP5).

KNEE REPLACEMENT

There are 63 knee prosthesis combinations that have been used in >350 procedures and have data to least 15 years. The listed prosthesis combinations were used in 75.8% of all primary total knee replacement procedures performed for osteoarthritis. The 15 year cumulative percent revision ranges from 3.3% to 17.2% (Table CP6).

Table CP5 **Cumulative Percent Revision of Primary Total Conventional Hip Replacement Combinations with 15 Year Data (Primary Diagnosis OA)**

Femoral Component	Acetabular Component	N Revised	N Total	Type of Revision THR	Femoral	Acetabular	Other	5 Yrs	10 Yrs	15 Yrs
ABGII	ABGII (Shell/Insert)*	101	853	20	54	18	9	2.7 (1.8, 4.1)	6.6 (5.1, 8.6)	10.4 (8.4, 12.9)
ABGII	ABGII*	369	2772	61	181	86	41	4.1 (3.4, 5.0)	6.9 (5.9, 7.9)	12.0 (10.7, 13.4)
ABGII	Trident (Shell)*	295	2439	16	184	38	57	4.9 (4.1, 5.9)	8.5 (7.4, 9.7)	13.5 (12.0, 15.2)
Accolade I	Mitch TRH*MoM	106	357	49	22	25	10	10.3 (7.5, 14.0)	18.9 (15.1, 23.5)	32.2 (27.2, 37.8)
Accolade I	Trident (Shell)*	585	8574	68	238	111	168	3.8 (3.4, 4.2)	5.7 (5.2, 6.2)	7.4 (6.8, 8.1)
Adapter	Bionik*MoM	98	376	21	10	23	44	15.0 (11.7, 19.2)	25.0 (20.8, 30.0)	29.9 (25.2, 35.4)
Alloclassic	Allofit	342	5170	40	149	59	94	2.9 (2.4, 3.4)	5.0 (4.4, 5.7)	7.8 (6.9, 8.7)
Alloclassic	Durom*MoM	107	547	30	15	47	15	7.4 (5.5, 10.0)	16.3 (13.4, 19.9)	21.5 (18.0, 25.5)
Alloclassic	Fitmore*	146	1709	15	73	19	39	5.6 (4.6, 6.8)	7.5 (6.3, 8.9)	9.6 (8.2, 11.4)
Alloclassic	Metasul*	24	371	4	2	12	6	3.6 (2.1, 6.1)	5.1 (3.3, 8.1)	6.6 (4.4, 9.8)
Alloclassic	Trabecular Metal (Shell)*	52	957	5	16	6	25	4.0 (2.9, 5.5)	5.1 (3.9, 6.8)	6.3 (4.7, 8.3)
Anthology	R3	267	8073	27	75	53	112	2.8 (2.5, 3.2)	3.7 (3.3, 4.2)	4.5 (3.8, 5.4)
Anthology	Reflection (Shell)*	42	909	4	16	14	8	3.0 (2.1, 4.4)	4.6 (3.4, 6.2)	5.0 (3.7, 6.7)
Apex	Fin II*	63	924	8	13	23	19	3.4 (2.4, 4.8)	6.1 (4.6, 7.9)	8.9 (6.8, 11.6)
C-Stem	Duraloc*	95	894	13	26	14	42	3.8 (2.7, 5.3)	6.9 (5.3, 8.9)	11.9 (9.6, 14.7)
C-Stem	Elite Plus LPW*	25	367	11	5	9	0	2.7 (1.4, 5.0)	5.3 (3.3, 8.6)	8.5 (5.6, 12.8)
C-Stem AMT	PINNACLE	147	5106	14	61	15	57	2.7 (2.3, 3.3)	4.4 (3.6, 5.4)	7.4 (4.6, 11.7)
CLS	Allofit*	67	817	6	37	15	9	3.8 (2.7, 5.4)	6.1 (4.6, 8.0)	8.4 (6.5, 10.8)
CORAIL	ASR*MoM	1302	2654	239	46	949	68	27.6 (25.9, 29.3)	46.4 (44.5, 48.4)	53.6 (51.6, 55.7)
CORAIL	Duraloc*	114	1267	22	48	17	27	2.5 (1.8, 3.6)	5.1 (4.0, 6.6)	9.7 (8.0, 11.9)
CORAIL	PINNACLE	2309	60363	208	880	346	875	3.0 (2.8, 3.1)	4.6 (4.4, 4.8)	7.3 (6.8, 7.8)
CORAIL	PINNACLE*MoM	135	880	19	46	22	48	6.2 (4.7, 8.0)	12.2 (10.1, 14.7)	17.6 (15.0, 20.6)
CPCS	R3	247	7513	25	74	48	100	3.1 (2.7, 3.6)	4.4 (3.8, 5.1)	5.3 (4.4, 6.3)
CPCS	Reflection (Cup)	86	851	27	5	41	13	2.9 (1.9, 4.3)	8.0 (6.0, 10.6)	17.8 (14.2, 22.2)
CPCS	Reflection (Shell)	112	2836	14	50	14	34	1.7 (1.2, 2.2)	3.2 (2.6, 4.0)	5.6 (4.5, 6.9)
CPT	Allofit	65	1801	11	28	5	21	3.0 (2.3, 4.1)	4.9 (3.7, 6.4)	6.8 (4.9, 9.4)
CPT	Trabecular Metal (Shell)	115	2091	11	49	18	37	4.0 (3.2, 5.0)	6.5 (5.3, 7.9)	9.1 (7.2, 11.4)
CPT	Trilogy	416	7874	47	162	42	165	3.5 (3.1, 4.0)	5.4 (4.9, 6.0)	7.0 (6.3, 7.7)
CPT	ZCA	41	867	14	10	10	7	2.4 (1.6, 3.7)	4.6 (3.2, 6.4)	6.3 (4.4, 8.8)
Charnley	Charnley Ogee*	67	630	40	9	6	12	5.1 (3.6, 7.3)	9.1 (7.0, 12.0)	13.7 (10.7, 17.4)
Charnley	Charnley*	51	563	41	7	3	0	2.2 (1.3, 3.9)	6.5 (4.6, 9.1)	10.4 (7.8, 13.8)
Charnley	Vitalock*	44	370	9	20	4	11	4.4 (2.7, 7.1)	7.9 (5.5, 11.4)	11.5 (8.4, 15.7)
Citation	Trident (Shell)*	62	1036	3	18	16	25	3.3 (2.4, 4.6)	4.4 (3.3, 5.9)	6.0 (4.6, 7.7)

				Type of Revision						
Femoral Component	Acetabular Component	N Revised	N Total	THR	Femoral	Acetabular	Other	5 Yrs	10 Yrs	15 Yrs
Citation	Vitalock*	53	508	4	10	20	19	2.0 (1.1, 3.7)	5.2 (3.5, 7.7)	9.1 (6.7, 12.4)
Elite Plus	Duraloc*	115	953	19	66	6	24	5.1 (3.9, 6.8)	9.2 (7.4, 11.5)	14.9 (12.3, 18.0)
Epoch	Trilogy*	47	990	1	9	10	27	3.6 (2.6, 4.9)	4.5 (3.3, 6.0)	5.0 (3.8, 6.6)
Exeter	Contemporary*	39	428	10	7	14	8	4.2 (2.6, 6.6)	6.0 (4.0, 8.9)	12.6 (9.1, 17.5)
Exeter	Vitalock*	78	1076	14	16	29	19	2.3 (1.5, 3.4)	4.6 (3.4, 6.1)	6.8 (5.3, 8.8)
Exeter V40	ABGII*	43	976	9	14	13	7	1.8 (1.1, 2.9)	3.4 (2.4, 4.8)	4.4 (3.2, 6.2)
Exeter V40	Contemporary	312	4609	85	48	145	34	3.2 (2.7, 3.8)	5.5 (4.8, 6.3)	8.8 (7.8, 10.0)
Exeter V40	Exeter	137	1538	32	17	66	22	2.9 (2.1, 3.9)	4.6 (3.6, 5.9)	10.0 (8.2, 12.0)
Exeter V40	Exeter Contemporary	173	2970	58	35	57	23	3.0 (2.4, 3.7)	4.6 (3.8, 5.4)	7.6 (6.5, 9.0)
Exeter V40	Mallory-Head*	46	1434	8	27	4	7	1.1 (0.6, 1.8)	2.4 (1.7, 3.4)	4.0 (2.9, 5.5)
Exeter V40	Trabecular Metal (Shell)	21	486	2	3	2	14	3.8 (2.4, 6.0)	4.8 (3.1, 7.5)	5.3 (3.4, 8.1)
Exeter V40	Trident (Shell)	2334	78537	316	757	290	971	2.3 (2.2, 2.4)	3.5 (3.4, 3.7)	5.0 (4.8, 5.3)
Exeter V40	Trilogy*	18	517	2	5	2	9	2.5 (1.5, 4.3)	3.6 (2.2, 5.8)	4.0 (2.5, 6.3)
Exeter V40	Vitalock*	99	1795	20	27	27	25	2.3 (1.7, 3.1)	3.2 (2.5, 4.2)	5.0 (4.0, 6.3)
F2L	SPH-Blind*	65	571	10	20	18	17	6.1 (4.4, 8.4)	7.6 (5.7, 10.2)	11.5 (9.0, 14.7)
MS 30	Allofit*	69	1539	14	22	20	13	2.1 (1.5, 3.0)	3.5 (2.6, 4.6)	6.0 (4.6, 7.8)
MS 30	Fitmore	30	823	1	9	9	11	2.0 (1.2, 3.4)	2.9 (1.8, 4.5)	6.5 (4.3, 9.8)
MS 30	Low Profile Cup*	26	604	11	3	10	2	1.3 (0.6, 2.7)	2.8 (1.6, 4.8)	5.0 (3.1, 8.3)
Mallory-Head	Mallory-Head*	227	2908	19	14	81	113	3.0 (2.4, 3.7)	4.6 (3.9, 5.5)	8.1 (7.0, 9.4)
Meridian	Vitalock*	44	354	2	3	18	21	3.5 (2.0, 6.1)	6.7 (4.4, 10.0)	11.4 (8.3, 15.5)
Natural Hip	Fitmore*	44	882	2	8	13	21	2.0 (1.3, 3.2)	4.2 (3.0, 5.9)	4.9 (3.5, 6.7)
Omnifit	Secur-Fit*	90	716	10	23	23	34	6.2 (4.6, 8.2)	9.9 (7.9, 12.5)	13.4 (10.8, 16.4)
Omnifit	Trident (Shell)*	169	3841	14	41	31	83	3.0 (2.5, 3.6)	3.9 (3.3, 4.6)	5.0 (4.2, 5.9)
Quadra-H	Versafitcup CC	752	17659	78	359	153	162	3.1 (2.9, 3.4)	5.1 (4.7, 5.5)	8.2 (6.5, 10.3)
S-Rom	Duraloc Option*	27	523	4	9	5	9	3.3 (2.1, 5.2)	4.6 (3.0, 6.8)	5.0 (3.4, 7.3)
S-Rom	PINNACLE	158	2637	15	89	15	39	4.4 (3.7, 5.3)	5.7 (4.8, 6.7)	7.0 (6.0, 8.3)
SL-Plus	EP-Fit Plus	125	2135	5	55	23	42	3.4 (2.7, 4.2)	5.4 (4.4, 6.5)	6.5 (5.4, 7.7)
SL-Plus	R3	104	1702	6	28	25	45	4.3 (3.4, 5.4)	6.1 (5.0, 7.4)	7.7 (6.3, 9.4)
Secur-Fit	Trident (Shell)	522	9864	38	228	94	162	3.6 (3.3, 4.0)	4.8 (4.4, 5.3)	6.4 (5.8, 7.0)
Secur-Fit Plus	Trident (Shell)	243	6017	18	67	59	99	2.3 (2.0, 2.8)	3.4 (2.9, 3.9)	4.4 (3.9, 5.1)
Spectron EF	BHR*^{MoM}	79	430	17	0	52	10	6.0 (4.1, 8.8)	15.9 (12.5, 20.0)	21.8 (17.7, 26.7)
Spectron EF	Reflection (Cup)	127	1405	49	12	57	9	2.9 (2.1, 4.0)	7.2 (5.8, 8.9)	13.0 (10.8, 15.5)
Spectron EF	Reflection (Shell)*	331	4646	71	113	50	97	2.7 (2.3, 3.3)	5.3 (4.7, 6.1)	8.8 (7.8, 9.9)
Stability	Duraloc*	58	374	4	10	18	26	2.2 (1.1, 4.3)	8.9 (6.3, 12.5)	15.9 (12.1, 20.6)
Summit	ASR*^{MoM}	491	1041	17	6	441	27	20.1 (17.7, 22.7)	44.5 (41.5, 47.7)	50.4 (47.3, 53.7)
Summit	PINNACLE	195	5770	15	45	33	102	2.3 (2.0, 2.8)	3.5 (3.0, 4.1)	5.0 (4.2, 6.0)
Summit	PINNACLE*^{MoM}	93	730	10	6	18	59	3.5 (2.4, 5.1)	8.9 (7.0, 11.3)	12.0 (9.7, 14.8)
Synergy	BHR*^{MoM}	126	698	8	11	70	37	4.8 (3.4, 6.7)	12.4 (10.1, 15.2)	17.9 (15.1, 21.2)
Synergy	R3	181	5239	6	51	45	79	2.7 (2.3, 3.2)	3.5 (3.0, 4.1)	5.0 (4.1, 6.0)
Synergy	Reflection (Shell)	421	7543	36	86	146	153	2.6 (2.3, 3.0)	3.9 (3.5, 4.4)	5.6 (5.0, 6.2)
Synergy	Trident (Shell)*	21	438	0	4	8	9	1.9 (0.9, 3.7)	3.8 (2.3, 6.2)	6.5 (4.1, 10.1)
Taperloc	Exceed*	68	2191	7	20	25	16	2.4 (1.9, 3.2)	3.2 (2.5, 4.1)	3.7 (2.7, 5.0)
Taperloc	M2a*^{MoM}	69	471	14	2	46	7	6.9 (4.9, 9.6)	12.2 (9.5, 15.6)	15.1 (12.0, 18.8)
Taperloc	Mallory-Head*	99	1903	10	20	31	38	3.0 (2.4, 3.9)	4.7 (3.7, 5.8)	6.7 (5.3, 8.4)
Taperloc	Recap*^{MoM}	53	456	13	7	25	8	5.6 (3.8, 8.2)	9.8 (7.3, 13.0)	12.4 (9.5, 16.0)
VerSys	Trilogy*	268	4432	19	92	50	107	3.9 (3.4, 4.5)	5.2 (4.6, 5.9)	6.1 (5.4, 6.9)
TOTAL		**16987**	**320170**	**2265**	**5133**	**4525**	**5064**			

Note: Only prostheses with >350 procedures have been listed

* denotes prosthesis combinations with no reported use in primary total conventional hip procedures in 2023

^{MoM} refers to metal/metal prosthesis combinations used with head sizes >32mm

Table CP6 **Cumulative Percent Revision of Primary Total Knee Replacement Combinations with 15 Year Data (Primary Diagnosis OA)**

Femoral Component	Tibial Component	N Revised	N Total	Type of Revision TKR	Femoral	Tibial	Other	5 Yrs	10 Yrs	15 Yrs
AGC	AGC*	339	5028	155	5	26	153	3.2 (2.8, 3.8)	4.9 (4.3, 5.6)	7.6 (6.8, 8.5)
Active Knee	Active Knee	897	10825	269	29	43	556	4.6 (4.2, 5.0)	7.9 (7.3, 8.5)	11.4 (10.6, 12.2)
Advance	Advance II*	124	1623	51	3	13	57	5.0 (4.1, 6.2)	6.7 (5.5, 8.1)	8.2 (6.8, 9.9)
Advance	Advance*	76	992	31	4	8	33	6.0 (4.7, 7.7)	8.3 (6.6, 10.4)	8.9 (7.0, 11.1)
BalanSys	BalanSys	141	4746	48	7	9	77	2.5 (2.0, 3.0)	3.9 (3.3, 4.7)	5.5 (4.0, 7.6)
Buechel-Pappas	Buechel-Pappas*	57	467	21	2	2	32	8.1 (5.9, 11.0)	10.7 (8.2, 14.0)	13.7 (10.6, 17.5)
Columbus	Columbus	225	7336	60	9	10	146	3.7 (3.2, 4.4)	6.3 (5.2, 7.5)	8.8 (7.0, 11.1)
Duracon	Duracon*	1368	19830	387	32	68	881	3.5 (3.2, 3.7)	5.2 (4.9, 5.5)	7.3 (6.9, 7.7)
Genesis II CR	Genesis II	1264	26274	269	78	57	860	3.5 (3.2, 3.7)	5.0 (4.7, 5.3)	6.1 (5.8, 6.5)
Genesis II CR	Profix Mobile*	140	1209	59	9	8	64	5.4 (4.2, 6.8)	8.8 (7.3, 10.6)	12.4 (10.5, 14.7)
Genesis II Oxinium CR (ctd)	Genesis II	633	11066	123	35	27	448	3.5 (3.1, 3.8)	5.9 (5.4, 6.4)	8.3 (7.7, 9.1)
Genesis II Oxinium PS (ctd)	Genesis II	1495	22342	222	37	175	1061	4.9 (4.6, 5.2)	7.2 (6.8, 7.6)	9.4 (8.9, 10.0)
Genesis II PS	Genesis II	981	20811	180	33	62	706	3.6 (3.3, 3.8)	5.0 (4.7, 5.3)	6.4 (5.9, 6.9)
Journey Oxinium	Journey*	407	2975	65	7	31	304	6.5 (5.7, 7.5)	11.3 (10.2, 12.6)	17.1 (15.4, 18.9)
Kinemax Plus	Kinemax Plus*	140	1815	83	4	5	48	3.2 (2.4, 4.1)	4.6 (3.7, 5.7)	7.9 (6.6, 9.4)
LCS CR	LCS	635	8345	261	24	90	260	4.5 (4.0, 5.0)	6.4 (5.9, 7.0)	8.1 (7.5, 8.8)
LCS CR	MBT Duofix*	909	15248	265	38	44	562	4.1 (3.8, 4.4)	5.3 (4.9, 5.7)	7.1 (6.6, 7.6)
LCS CR	MBT*	1557	33003	559	71	162	765	3.5 (3.3, 3.7)	4.9 (4.6, 5.2)	6.1 (5.7, 6.4)
LCS Duofix	MBT Duofix*	536	3606	369	27	8	132	10.2 (9.2, 11.2)	13.3 (12.3, 14.5)	15.6 (14.4, 16.9)
LCS Duofix	MBT*	147	1169	100	9	2	36	8.1 (6.7, 9.9)	11.9 (10.1, 13.9)	13.7 (11.7, 16.0)
Legion Oxinium CR	Genesis II	314	11445	77	24	11	202	3.3 (2.9, 3.7)	4.2 (3.7, 4.8)	5.8 (4.5, 7.3)
Legion Oxinium PS	Genesis II	755	18337	113	21	64	557	3.8 (3.6, 4.2)	5.4 (5.0, 5.9)	7.9 (6.6, 9.4)
MBK (Zimmer)	Nexgen*	39	448	22	1	1	15	4.1 (2.6, 6.5)	6.2 (4.2, 8.9)	8.2 (5.8, 11.4)
Maxim	Maxim*	158	1819	54	11	6	87	3.3 (2.6, 4.3)	5.2 (4.3, 6.4)	9.4 (7.9, 11.1)
Maxim	Vanguard*	101	628	47	6	6	42	5.6 (4.0, 7.7)	8.3 (6.3, 10.9)	14.7 (11.9, 18.2)
Natural Knee Flex	Natural Knee II	185	6272	49	8	9	119	2.4 (2.0, 2.8)	3.2 (2.8, 3.8)	4.4 (3.6, 5.4)
Natural Knee II	Natural Knee II*	468	6443	221	10	60	177	2.8 (2.4, 3.2)	4.9 (4.4, 5.5)	8.5 (7.7, 9.4)
Nexgen CR	Nexgen TM CR*	60	867	22	5	11	22	5.4 (4.0, 7.1)	6.4 (4.9, 8.4)	7.6 (5.9, 9.9)
Nexgen CR	Nexgen*	452	11582	148	22	33	249	2.2 (1.9, 2.4)	3.1 (2.8, 3.5)	4.4 (4.0, 4.9)
Nexgen CR Flex	Nexgen	1731	60434	446	118	137	1030	2.3 (2.2, 2.4)	3.1 (2.9, 3.3)	4.0 (3.7, 4.2)
Nexgen CR Flex	Nexgen TM CR	379	12310	134	23	30	192	2.2 (1.9, 2.5)	3.1 (2.8, 3.5)	4.1 (3.7, 4.6)
Nexgen LCCK	Nexgen	56	980	9	3	1	43	4.6 (3.5, 6.2)	6.2 (4.6, 8.3)	10.4 (7.1, 15.1)
Nexgen LPS	Nexgen TM LPS*	38	1476	13	4	6	15	2.1 (1.5, 3.0)	2.7 (2.0, 3.8)	3.3 (2.4, 4.7)
Nexgen LPS	Nexgen*	386	7024	104	22	34	226	3.3 (2.9, 3.7)	4.8 (4.3, 5.3)	6.4 (5.7, 7.1)
Nexgen LPS Flex	Nexgen	1782	37832	520	72	258	932	3.1 (3.0, 3.3)	4.9 (4.6, 5.1)	6.4 (6.1, 6.8)
Nexgen LPS Flex	Nexgen TM LPS*	74	1576	35	5	6	28	3.4 (2.6, 4.5)	4.4 (3.4, 5.6)	5.9 (4.5, 7.6)
Optetrak-CR	Optetrak*	59	504	24	3	4	28	6.1 (4.3, 8.7)	10.2 (7.7, 13.3)	14.0 (10.8, 18.0)
Optetrak-PS	Optetrak RBK*	100	1112	34	3	3	60	5.9 (4.7, 7.5)	8.2 (6.7, 10.1)	11.8 (9.6, 14.5)
Optetrak-PS	Optetrak*	343	2365	166	8	30	139	6.4 (5.4, 7.4)	12.2 (10.8, 13.6)	17.2 (15.5, 19.0)
PFC Sigma CR	MBT Duofix*	171	3314	29	18	6	118	3.4 (2.9, 4.1)	4.6 (3.9, 5.5)	6.3 (5.3, 7.4)
PFC Sigma CR	MBT*	350	6273	80	35	45	190	3.9 (3.4, 4.4)	5.0 (4.5, 5.6)	6.3 (5.6, 7.0)
PFC Sigma CR	PFC Sigma*	953	24917	249	59	71	574	2.5 (2.3, 2.7)	3.5 (3.3, 3.8)	4.9 (4.5, 5.2)
PFC Sigma PS	MBT Duofix*	187	2212	45	4	6	132	5.9 (5.0, 6.9)	7.9 (6.8, 9.1)	9.9 (8.6, 11.5)
PFC Sigma PS	MBT*	391	6334	138	17	25	211	4.0 (3.5, 4.5)	5.4 (4.9, 6.0)	7.3 (6.6, 8.1)
PFC Sigma PS	PFC Sigma*	403	8041	146	14	28	215	3.3 (2.9, 3.7)	4.7 (4.3, 5.2)	6.2 (5.6, 6.9)
Profix	Profix Mobile*	111	986	40	6	5	60	8.2 (6.6, 10.1)	9.9 (8.1, 12.0)	12.0 (10.0, 14.3)
Profix	Profix*	318	5370	79	13	18	208	3.8 (3.3, 4.3)	5.4 (4.8, 6.1)	6.3 (5.6, 7.0)

Femoral Component	Tibial Component	N Revised	N Total	Type of Revision TKR	Femoral	Tibial	Other	5 Yrs	10 Yrs	15 Yrs
Profix Oxinium (ctd)	Profix*	117	1049	29	5	14	69	7.0 (5.6, 8.7)	8.9 (7.3, 10.8)	10.7 (8.9, 12.8)
RBK	RBK*	616	11019	246	18	44	308	3.9 (3.6, 4.3)	5.4 (4.9, 5.8)	6.7 (6.1, 7.3)
Rocc	Rocc*	45	575	17	1	2	25	5.2 (3.6, 7.3)	6.8 (5.0, 9.3)	8.3 (6.2, 11.1)
Rotaglide Plus	Rotaglide Plus*	86	616	42	1	5	38	5.8 (4.1, 8.0)	11.2 (8.8, 14.2)	15.2 (12.3, 18.7)
Score	Score	424	6169	174	22	12	216	5.7 (5.2, 6.4)	9.2 (8.3, 10.2)	10.8 (9.6, 12.2)
Scorpio CR	Scorpio+*	217	2448	53	10	34	120	4.3 (3.6, 5.2)	7.1 (6.2, 8.3)	9.1 (8.0, 10.5)
Scorpio CR	Series 7000*	677	11561	178	27	48	424	3.3 (3.0, 3.6)	5.1 (4.7, 5.6)	7.0 (6.4, 7.5)
Scorpio NRG CR	Series 7000*	240	5070	68	15	13	144	3.2 (2.7, 3.7)	4.6 (4.0, 5.2)	6.5 (5.6, 7.6)
Scorpio NRG PS	Series 7000*	198	3931	41	8	19	130	3.7 (3.1, 4.3)	4.5 (3.9, 5.3)	6.3 (5.4, 7.4)
Scorpio PS	Scorpio*	36	524	10	0	11	15	4.5 (3.0, 6.7)	6.1 (4.3, 8.6)	7.3 (5.2, 10.2)
Scorpio PS	Scorpio+*	165	2036	49	14	10	92	5.1 (4.2, 6.1)	6.7 (5.7, 8.0)	8.5 (7.3, 9.9)
Scorpio PS	Series 7000*	380	4696	135	10	70	165	4.7 (4.1, 5.3)	6.9 (6.2, 7.7)	9.0 (8.2, 10.0)
Triathlon CR	Triathlon	3802	164229	708	149	187	2758	2.4 (2.3, 2.5)	3.6 (3.4, 3.7)	4.8 (4.6, 5.1)
Triathlon PS	Triathlon	677	14957	128	35	84	430	3.8 (3.5, 4.1)	5.4 (5.0, 5.9)	6.8 (6.2, 7.5)
Vanguard CR	Vanguard	1157	27179	278	44	72	763	2.9 (2.7, 3.1)	4.7 (4.4, 5.0)	6.8 (6.3, 7.4)
Vanguard PS	Vanguard*	356	5273	95	7	60	194	5.1 (4.6, 5.8)	7.2 (6.5, 8.0)	8.8 (7.7, 10.0)
TOTAL		**31628**	**700943**	**8872**	**1364**	**2449**	**18943**			

Note: Only prostheses with >350 procedures have been listed
* denotes prosthesis combinations that have not had any reported use in primary total knee procedures in 2023

Twenty Year Outcomes

The Registry has information on 50 hip and 36 knee prosthesis combinations that have been used in >350 procedures for osteoarthritis and have a follow-up of at least 20 years.

HIP REPLACEMENT

The listed prosthesis combinations have been used in 35.8% of all primary total conventional hip replacement procedures performed for osteoarthritis. The 20 year cumulative percent revision ranges from 5.0% to 20.0% (Table CP7).

KNEE REPLACEMENT

The listed prosthesis combinations were used in 36.2% of all primary total knee replacement procedures performed for osteoarthritis. The 20 year cumulative percent revision ranges from 5.7% to 22.8% (Table CP8).

Table CP7 Cumulative Percent Revision of Primary Total Conventional Hip Replacement Combinations with 20 Year Data (Primary Diagnosis OA)

Femoral Component	Acetabular Component	N Revised	N Total	Type of Revision: THR	Femoral	Acetabular	Other	10 Yrs	15 Yrs	20 Yrs
ABGII	ABGII (Shell/Insert)*	101	853	20	54	18	9	6.6 (5.1, 8.6)	10.4 (8.4, 12.9)	17.4 (14.2, 21.2)
ABGII	ABGII*	369	2772	61	181	86	41	6.9 (5.9, 7.9)	12.0 (10.7, 13.4)	17.7 (16.0, 19.6)
ABGII	Trident (Shell)*	295	2439	16	184	38	57	8.5 (7.4, 9.7)	13.5 (12.0, 15.2)	18.7 (16.2, 21.5)
Accolade I	Trident (Shell)*	585	8574	68	238	111	168	5.7 (5.2, 6.2)	7.4 (6.8, 8.1)	9.3 (8.4, 10.3)
Alloclassic	Allofit	342	5170	40	149	59	94	5.0 (4.4, 5.7)	7.8 (6.9, 8.7)	10.7 (9.4, 12.2)
Alloclassic	Fitmore*	146	1709	15	73	19	39	7.5 (6.3, 8.9)	9.6 (8.2, 11.4)	11.5 (9.5, 13.8)
Alloclassic	Metasul*	24	371	4	2	12	6	5.1 (3.3, 8.1)	6.6 (4.4, 9.8)	7.1 (4.7, 10.5)
C-Stem	Duraloc*	95	894	13	26	14	42	6.9 (5.3, 8.9)	11.9 (9.6, 14.7)	16.8 (13.6, 20.6)
C-Stem	Elite Plus LPW*	25	367	11	5	9	0	5.3 (3.3, 8.6)	8.5 (5.6, 12.8)	11.6 (7.5, 17.7)
CLS	Allofit*	67	817	6	37	15	9	6.1 (4.6, 8.0)	8.4 (6.5, 10.8)	11.5 (8.9, 15.0)
CORAIL	Duraloc*	114	1267	22	48	17	27	5.1 (4.0, 6.6)	9.7 (8.0, 11.9)	15.7 (12.6, 19.4)
CPCS	Reflection (Shell)	112	2836	14	50	14	34	3.2 (2.6, 4.0)	5.6 (4.5, 6.9)	8.4 (6.4, 11.1)
CPT	Trilogy	416	7874	47	162	42	165	5.4 (4.9, 6.0)	7.0 (6.3, 7.7)	8.1 (7.1, 9.4)
CPT	ZCA	41	867	14	10	10	7	4.6 (3.2, 6.4)	6.3 (4.4, 8.8)	9.0 (6.2, 13.1)
Charnley	Charnley Ogee*	67	630	40	9	6	12	9.1 (7.0, 12.0)	13.7 (10.7, 17.4)	16.0 (12.5, 20.3)
Charnley	Charnley*	51	563	41	7	3	0	6.5 (4.6, 9.1)	10.4 (7.8, 13.8)	13.7 (10.3, 18.1)
Charnley	Vitalock*	44	370	9	20	4	11	7.9 (5.5, 11.4)	11.5 (8.4, 15.7)	14.8 (11.0, 19.7)
Citation	Trident (Shell)*	62	1036	3	18	16	25	4.4 (3.3, 5.9)	6.0 (4.6, 7.7)	8.0 (5.9, 10.9)
Citation	Vitalock*	53	508	4	10	20	19	5.2 (3.5, 7.7)	9.1 (6.7, 12.4)	13.2 (10.0, 17.2)
Elite Plus	Duraloc*	115	953	19	66	6	24	9.2 (7.4, 11.5)	14.9 (12.3, 18.0)	19.4 (16.0, 23.4)
Epoch	Trilogy*	47	990	1	9	10	27	4.5 (3.3, 6.0)	5.0 (3.8, 6.6)	5.0 (3.8, 6.6)
Exeter	Contemporary*	39	428	10	7	14	8	6.0 (4.0, 8.9)	12.6 (9.1, 17.5)	15.4 (11.0, 21.3)
Exeter	Vitalock*	78	1076	14	16	29	19	4.6 (3.4, 6.1)	6.8 (5.3, 8.8)	9.2 (7.3, 11.7)
Exeter V40	ABGII*	43	976	9	14	13	7	3.4 (2.4, 4.8)	4.4 (3.2, 6.2)	5.9 (4.2, 8.4)
Exeter V40	Contemporary	312	4609	85	48	145	34	5.5 (4.8, 6.3)	8.8 (7.8, 10.0)	13.8 (11.9, 16.0)
Exeter V40	Exeter	137	1538	32	17	66	22	4.6 (3.6, 5.9)	10.0 (8.2, 12.0)	15.9 (13.2, 19.1)
Exeter V40	Exeter Contemporary	173	2970	58	35	57	23	4.6 (3.8, 5.4)	7.6 (6.5, 9.0)	11.3 (8.9, 14.4)
Exeter V40	Mallory-Head*	46	1434	8	27	4	7	2.4 (1.7, 3.4)	4.0 (2.9, 5.5)	5.7 (4.0, 8.2)
Exeter V40	Trident (Shell)	2334	78537	316	757	290	971	3.5 (3.4, 3.7)	5.0 (4.8, 5.3)	6.5 (6.0, 7.0)
Exeter V40	Vitalock*	99	1795	20	27	27	25	3.2 (2.5, 4.2)	5.0 (4.0, 6.3)	8.2 (6.6, 10.2)
F2L	SPH-Blind*	65	571	10	20	18	17	7.6 (5.7, 10.2)	11.5 (9.0, 14.7)	13.4 (10.6, 17.0)
MS 30	Allofit*	69	1539	14	22	20	13	3.5 (2.6, 4.6)	6.0 (4.6, 7.8)	8.0 (6.0, 10.8)
MS 30	Fitmore	30	823	1	9	9	11	2.9 (1.8, 4.5)	6.5 (4.3, 9.8)	8.8 (5.7, 13.2)
MS 30	Low Profile Cup*	26	604	11	3	10	2	2.8 (1.6, 4.8)	5.0 (3.1, 8.3)	12.0 (7.4, 19.0)

Femoral Component	Acetabular Component	N Revised	N Total	Type of Revision THR	Femoral	Acetabular	Other	10 Yrs	15 Yrs	20 Yrs
Mallory-Head	Mallory-Head*	227	2908	19	14	81	113	4.6 (3.9, 5.5)	8.1 (7.0, 9.4)	12.9 (11.0, 15.0)
Meridian	Vitalock*	44	354	2	3	18	21	6.7 (4.4, 10.0)	11.4 (8.3, 15.5)	15.7 (11.8, 20.7)
Natural Hip	Fitmore*	44	882	2	8	13	21	4.2 (3.0, 5.9)	4.9 (3.5, 6.7)	6.2 (4.5, 8.4)
Omnifit	Secur-Fit*	90	716	10	23	23	34	9.9 (7.9, 12.5)	13.4 (10.8, 16.4)	15.9 (12.9, 19.4)
Omnifit	Trident (Shell)*	169	3841	14	41	31	83	3.9 (3.3, 4.6)	5.0 (4.2, 5.9)	6.4 (5.4, 7.7)
S-Rom	Duraloc Option*	27	523	4	9	5	9	4.6 (3.0, 6.8)	5.0 (3.4, 7.3)	5.6 (3.8, 8.0)
Secur-Fit	Trident (Shell)	522	9864	38	228	94	162	4.8 (4.4, 5.3)	6.4 (5.8, 7.0)	7.8 (7.0, 8.8)
Secur-Fit Plus	Trident (Shell)	243	6017	18	67	59	99	3.4 (2.9, 3.9)	4.4 (3.9, 5.1)	5.4 (4.7, 6.2)
Spectron EF	Reflection (Cup)	127	1405	49	12	57	9	7.2 (5.8, 8.9)	13.0 (10.8, 15.5)	16.3 (13.2, 20.0)
Spectron EF	Reflection (Shell)*	331	4646	71	113	50	97	5.3 (4.7, 6.1)	8.8 (7.8, 9.9)	12.2 (10.7, 13.8)
Stability	Duraloc*	58	374	4	10	18	26	8.9 (6.3, 12.5)	15.9 (12.1, 20.6)	20.0 (15.5, 25.6)
Summit	PINNACLE	195	5770	15	45	33	102	3.5 (3.0, 4.1)	5.0 (4.2, 6.0)	6.1 (4.6, 8.2)
Synergy	Reflection (Shell)	421	7543	36	86	146	153	3.9 (3.5, 4.4)	5.6 (5.0, 6.2)	7.6 (6.8, 8.4)
Taperloc	M2a*MoM	69	471	14	2	46	7	12.2 (9.5, 15.6)	15.1 (12.0, 18.8)	17.7 (13.4, 23.1)
Taperloc	Mallory-Head*	99	1903	10	20	31	38	4.7 (3.7, 5.8)	6.7 (5.3, 8.4)	11.0 (8.1, 14.7)
VerSys	Trilogy*	268	4432	19	92	50	107	5.2 (4.6, 5.9)	6.1 (5.4, 6.9)	7.5 (6.6, 8.5)
TOTAL		**9556**	**190409**	**1381**	**3133**	**1986**	**3056**			

Note: Only prostheses with >350 procedures have been listed
* denotes prosthesis combinations with no reported use in primary total conventional knee procedures in 2023

Table CP8 **Cumulative Percent Revision of Primary Total Knee Replacement Combinations with 20 Year Data (Primary Diagnosis OA)**

Femoral Component	Tibial Component	N Revised	N Total	Type of Revision TKR	Femoral	Tibial	Other	10 Yrs	15 Yrs	20 Yrs
AGC	AGC*	339	5028	155	5	26	153	4.9 (4.3, 5.6)	7.6 (6.8, 8.5)	10.1 (9.0, 11.4)
Active Knee	Active Knee	897	10825	269	29	43	556	7.9 (7.3, 8.5)	11.4 (10.6, 12.2)	14.0 (12.9, 15.1)
Advance	Advance II*	124	1623	51	3	13	57	6.7 (5.5, 8.1)	8.2 (6.8, 9.9)	10.5 (8.6, 12.8)
Duracon	Duracon*	1368	19830	387	32	68	881	5.2 (4.9, 5.5)	7.3 (6.9, 7.7)	9.2 (8.7, 9.8)
Genesis II CR	Genesis II	1264	26274	269	78	57	860	5.0 (4.7, 5.3)	6.1 (5.8, 6.5)	7.5 (6.9, 8.1)
Genesis II CR	Profix Mobile*	140	1209	59	9	8	64	8.8 (7.3, 10.6)	12.4 (10.5, 14.7)	14.9 (12.6, 17.6)
Genesis II Oxinium CR (ctd)	Genesis II	633	11066	123	35	27	448	5.9 (5.4, 6.4)	8.3 (7.7, 9.1)	10.4 (9.4, 11.5)
Genesis II Oxinium PS (ctd)	Genesis II	1495	22342	222	37	175	1061	7.2 (6.8, 7.6)	9.4 (8.9, 10.0)	12.1 (10.2, 14.3)
Genesis II PS	Genesis II	981	20811	180	33	62	706	5.0 (4.7, 5.3)	6.4 (5.9, 6.9)	7.3 (6.7, 8.0)
Kinemax Plus	Kinemax Plus*	140	1815	83	4	5	48	4.6 (3.7, 5.7)	7.9 (6.6, 9.4)	10.2 (8.6, 12.1)
LCS CR	LCS	635	8345	261	24	90	260	6.4 (5.9, 7.0)	8.1 (7.5, 8.8)	9.3 (8.6, 10.0)
LCS CR	MBT Duofix*	909	15248	265	38	44	562	5.3 (4.9, 5.7)	7.1 (6.6, 7.6)	8.9 (8.1, 9.7)
LCS CR	MBT*	1557	33003	559	71	162	765	4.9 (4.6, 5.2)	6.1 (5.7, 6.4)	8.0 (7.2, 8.9)
MBK (Zimmer)	Nexgen*	39	448	22	1	1	15	6.2 (4.2, 8.9)	8.2 (5.8, 11.4)	11.4 (8.3, 15.6)
Maxim	Maxim*	158	1819	54	11	6	87	5.2 (4.3, 6.4)	9.4 (7.9, 11.1)	13.8 (11.6, 16.4)
Maxim	Vanguard*	101	628	47	6	6	42	8.3 (6.3, 10.9)	14.7 (11.9, 18.2)	22.8 (18.8, 27.4)
Natural Knee II	Natural Knee II*	468	6443	221	10	60	177	4.9 (4.4, 5.5)	8.5 (7.7, 9.4)	11.5 (10.3, 12.8)
Nexgen CR	Nexgen*	452	11582	148	22	33	249	3.1 (2.8, 3.5)	4.4 (4.0, 4.9)	5.7 (5.2, 6.4)
Nexgen LPS	Nexgen*	386	7024	104	22	34	226	4.8 (4.3, 5.3)	6.4 (5.7, 7.1)	8.0 (7.1, 8.9)
Nexgen LPS Flex	Nexgen	1782	37832	520	72	258	932	4.9 (4.6, 5.1)	6.4 (6.1, 6.8)	7.9 (7.2, 8.6)
Optetrak-CR	Optetrak*	59	504	24	3	4	28	10.2 (7.7, 13.3)	14.0 (10.8, 18.0)	14.5 (11.2, 18.8)
Optetrak-PS	Optetrak*	343	2365	166	8	30	139	12.2 (10.8, 13.6)	17.2 (15.5, 19.0)	19.5 (17.1, 22.2)
PFC Sigma CR	MBT Duofix*	171	3314	29	18	6	118	4.6 (3.9, 5.5)	6.3 (5.3, 7.4)	9.1 (7.1, 11.7)
PFC Sigma CR	MBT*	350	6273	80	35	45	190	5.0 (4.5, 5.6)	6.3 (5.6, 7.0)	8.1 (7.0, 9.4)
PFC Sigma CR	PFC Sigma*	953	24917	249	59	71	574	3.5 (3.3, 3.8)	4.9 (4.5, 5.2)	6.6 (5.9, 7.4)
PFC Sigma PS	MBT*	391	6334	138	17	25	211	5.4 (4.9, 6.0)	7.3 (6.6, 8.1)	9.5 (7.8, 11.5)
PFC Sigma PS	PFC Sigma*	403	8041	146	14	28	215	4.7 (4.3, 5.2)	6.2 (5.6, 6.9)	8.4 (7.1, 9.8)
Profix	Profix Mobile*	111	986	40	6	5	60	9.9 (8.1, 12.0)	12.0 (10.0, 14.3)	12.9 (10.8, 15.4)
Profix	Profix*	318	5370	79	13	18	208	5.4 (4.8, 6.1)	6.3 (5.6, 7.0)	7.6 (6.7, 8.6)
Profix Oxinium (ctd)	Profix*	117	1049	29	5	14	69	8.9 (7.3, 10.8)	10.7 (8.9, 12.8)	14.7 (11.8, 18.2)
RBK	RBK*	616	11019	246	18	44	308	5.4 (4.9, 5.8)	6.7 (6.1, 7.3)	8.5 (7.4, 9.6)
Rotaglide Plus	Rotaglide Plus*	86	616	42	1	5	38	11.2 (8.8, 14.2)	15.2 (12.3, 18.7)	18.5 (15.0, 22.7)
Scorpio CR	Scorpio+*	217	2448	53	10	34	120	7.1 (6.2, 8.3)	9.1 (8.0, 10.5)	10.8 (9.4, 12.4)
Scorpio CR	Series 7000*	677	11561	178	27	48	424	5.1 (4.7, 5.6)	7.0 (6.4, 7.5)	7.9 (7.3, 8.6)
Scorpio PS	Scorpio+*	165	2036	49	14	10	92	6.7 (5.7, 8.0)	8.5 (7.3, 9.9)	9.7 (8.1, 11.5)
Scorpio PS	Series 7000*	380	4696	135	10	70	165	6.9 (6.2, 7.7)	9.0 (8.2, 10.0)	10.9 (9.6, 12.3)
TOTAL		**19225**	**334724**	**5682**	**800**	**1635**	**11108**			

Note: * denotes prosthesis combinations with no reported use in primary total conventional hip procedures in 2023

List of Tables

Australian
Orthopaedic
Association
National
Joint
Replacement
Registry

AOANJRR
SAHMRI Building
North Terrace, Adelaide SA 5000
T: +61 8 8128 4280

aoanjrr.sahmri.com
aoa.org.au

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