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2021 Annual Report Patient Presentation for Surgeons

KNEE REPLACEMENT



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Knee Replacement

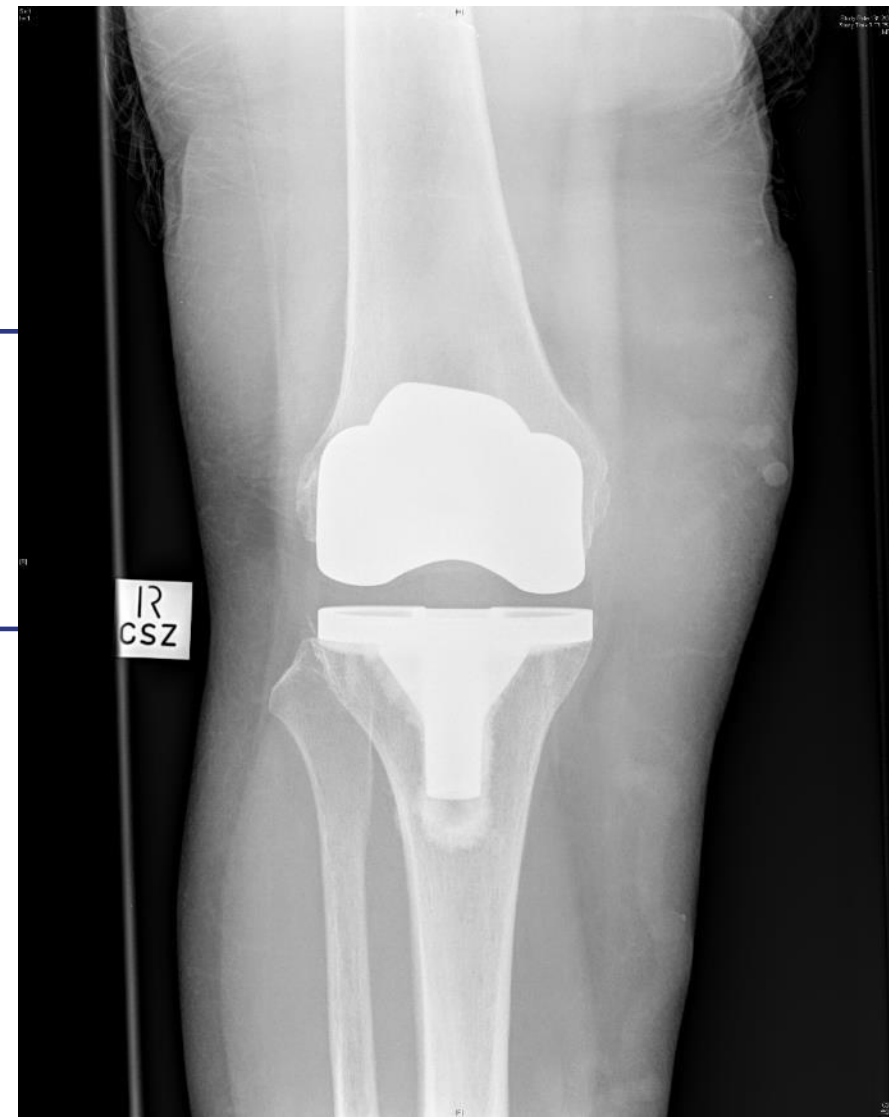
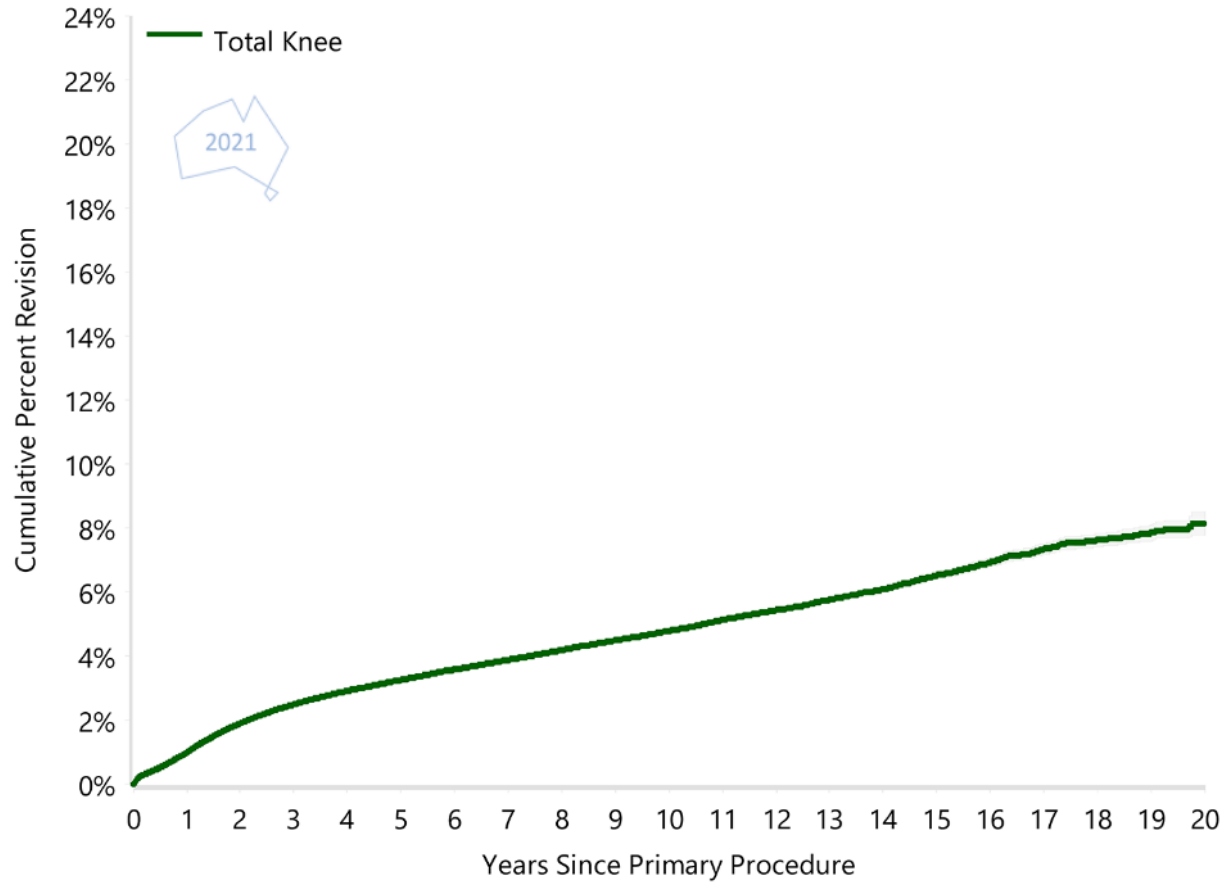


Figure KT7

Cumulative Percent Revision of Primary Total Knee Replacement (Primary Diagnosis OA)



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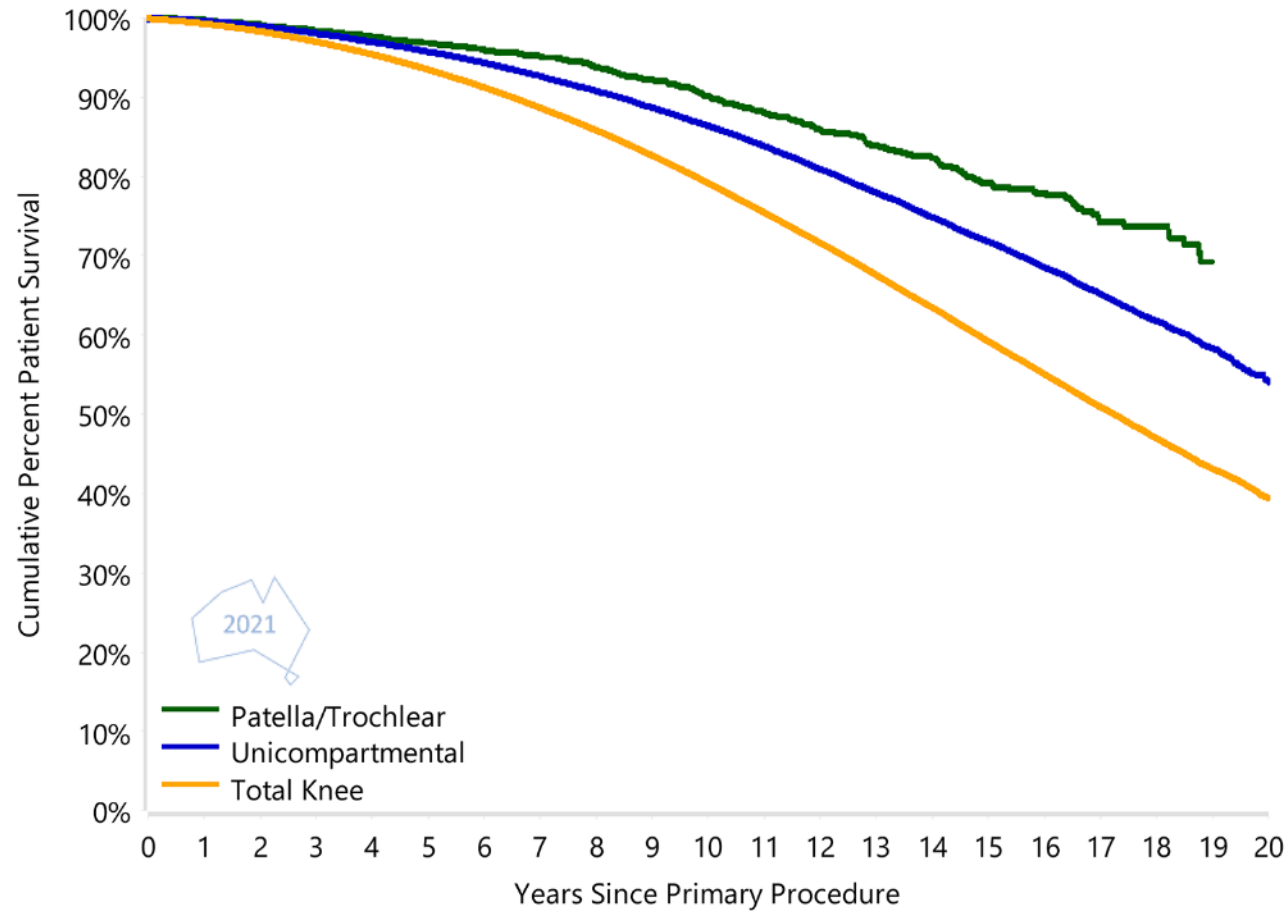


8.1% at 20 years

Note: Restricted to modern prostheses

Figure M5

Cumulative Percent Survival of Patients with Primary Knee Replacement by Class (Primary Diagnosis OA)



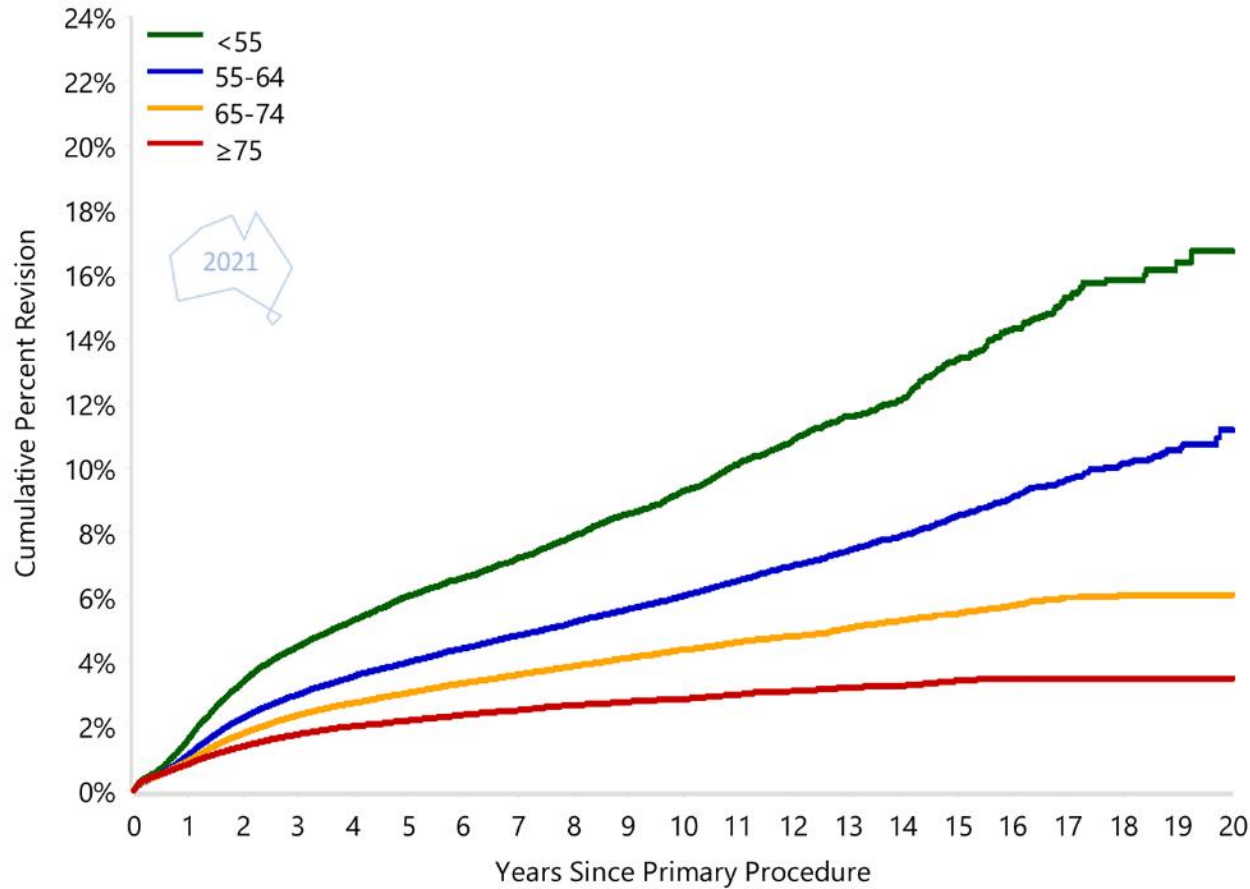
Patients with unicompartmental knees have higher rates of survival compared to patients with total knees and patients with a patella/trochlea replacement.

Figure KT9

Cumulative Percent Revision of Primary Total Knee Replacement by Age (Primary Diagnosis OA)



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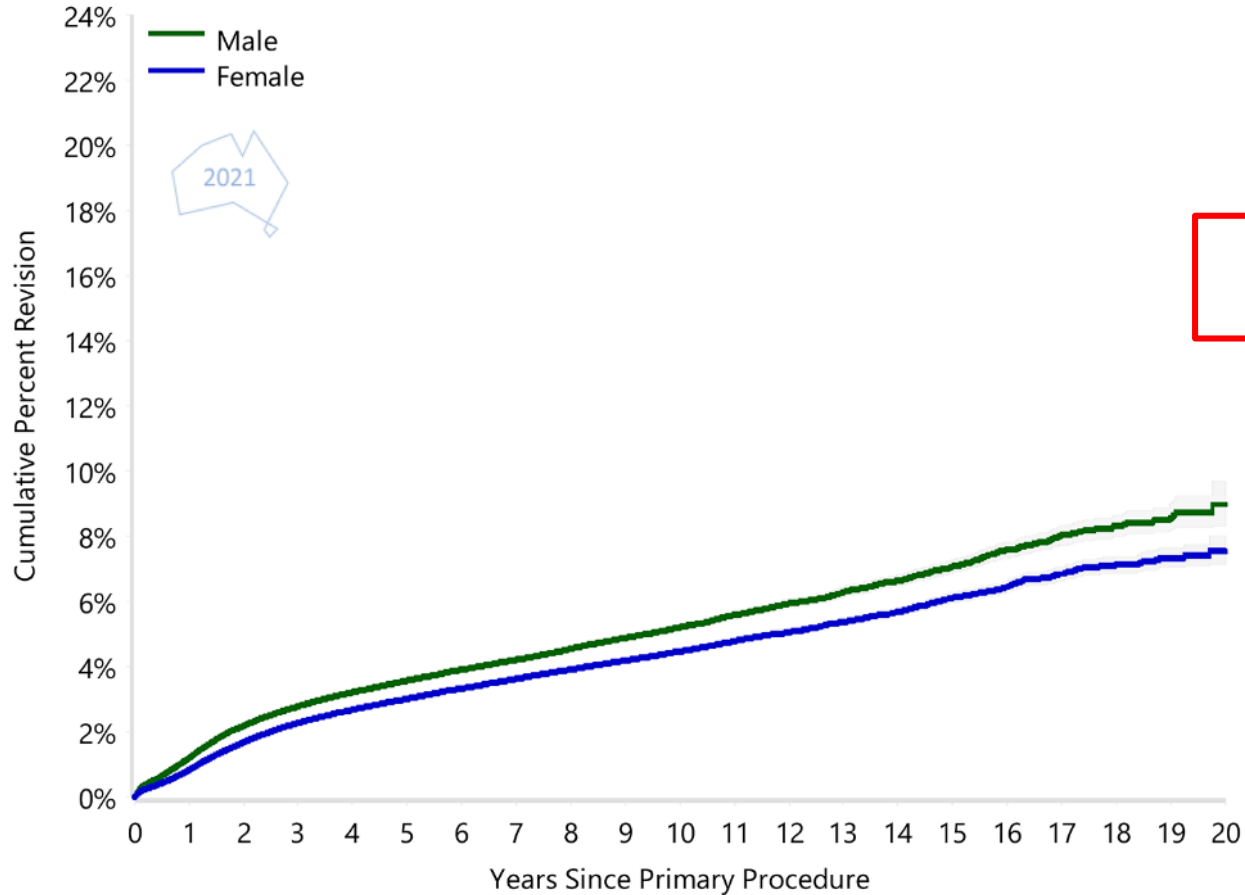


The rate of revision decreases with increasing age. This difference becomes more evident with time.

Note: Restricted to modern prostheses

Figure KT10

Cumulative Percent Revision of Primary Total Knee Replacement by Gender (Primary Diagnosis OA)

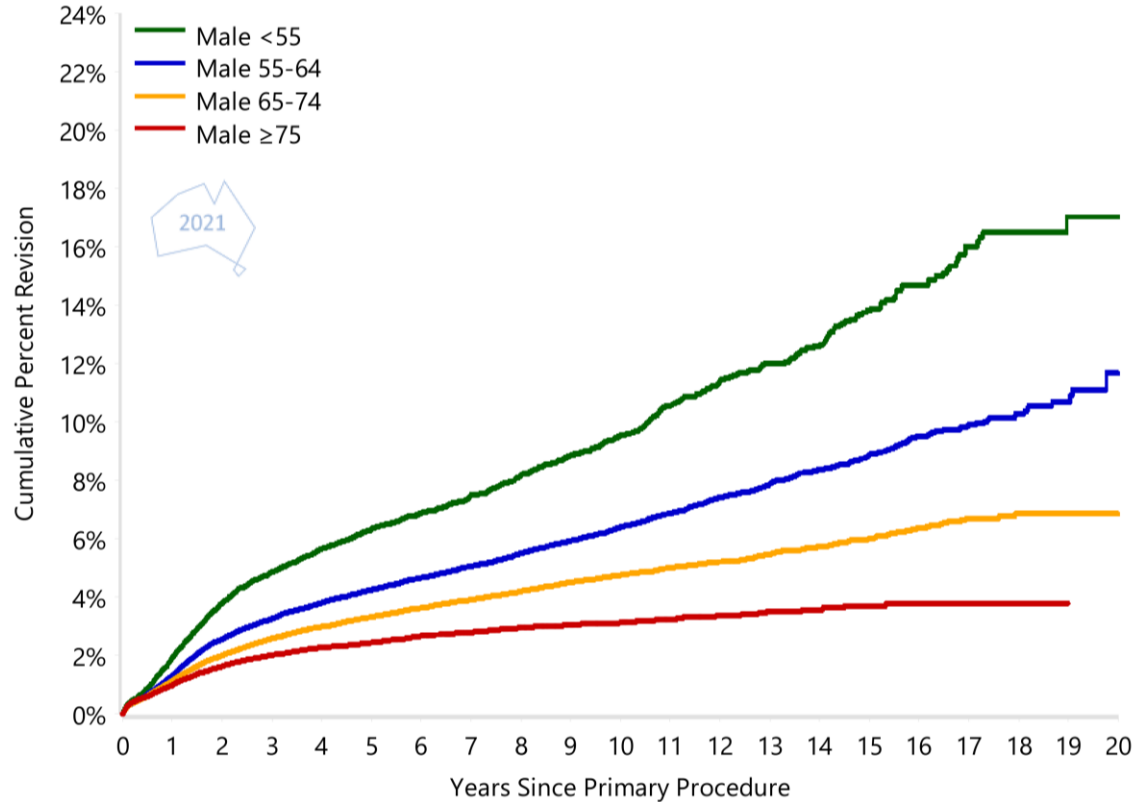


Males have a higher rate of revision compared to females.

Note: Restricted to modern prostheses

Figure KT12

Cumulative Percent Revision of Primary Total Knee Replacement in Males by Age (Primary Diagnosis OA)

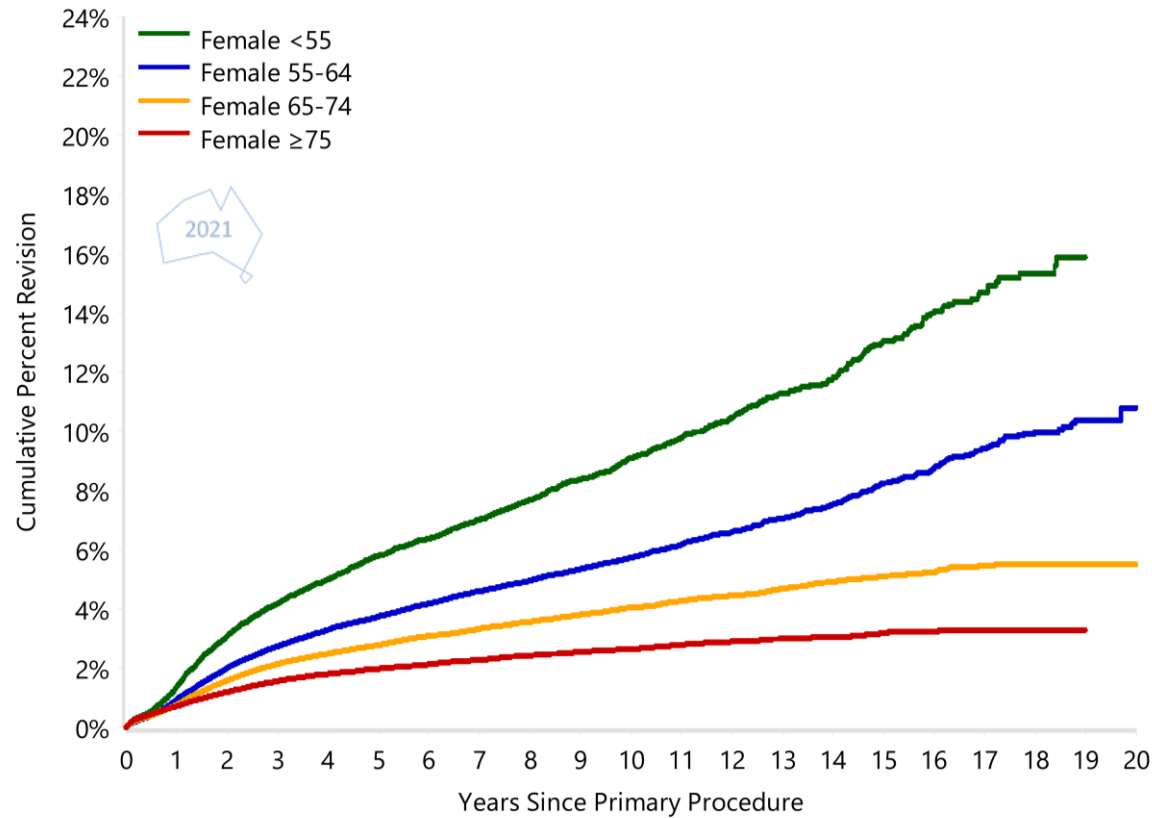


The rate of revision decreases with increasing age. This difference becomes more evident with time.

Note: Restricted to modern prostheses

Figure KT13

Cumulative Percent Revision of Primary Total Knee Replacement in Females by Age (Primary Diagnosis OA)

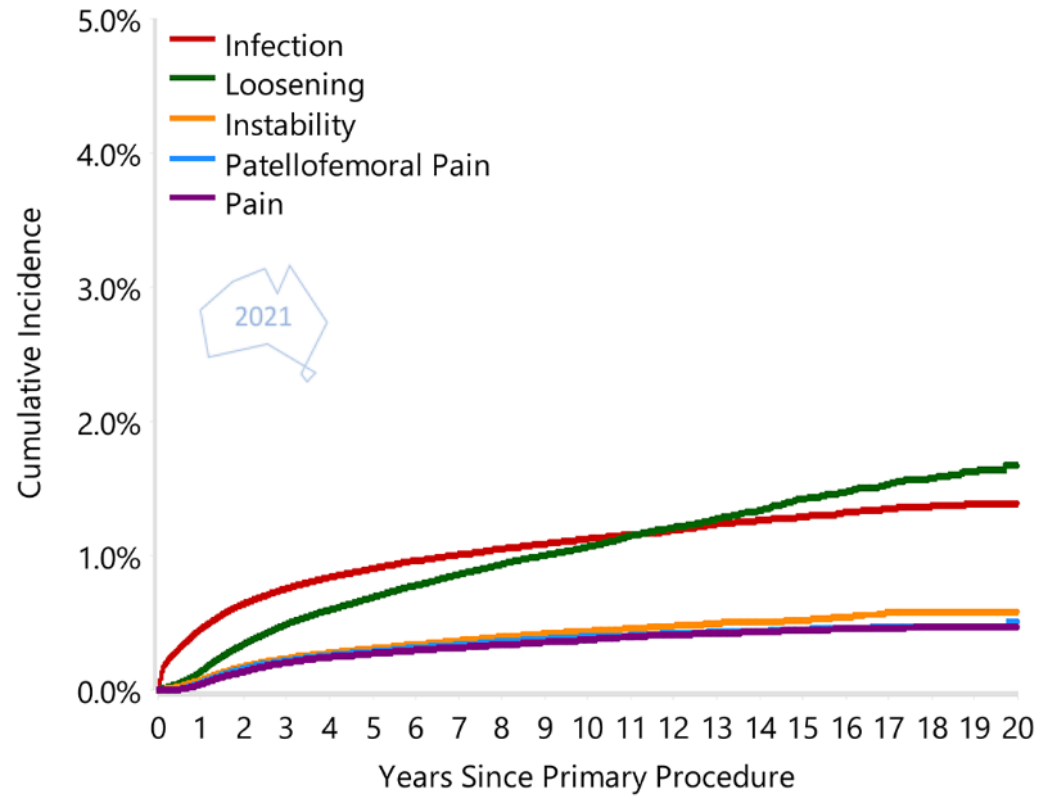


The rate of revision decreases with increasing age. This difference becomes more evident with time.

Note: Restricted to modern prostheses

Figure KT8

Cumulative Incidence Revision Diagnosis of Primary Total Knee Replacement (Primary Diagnosis OA)

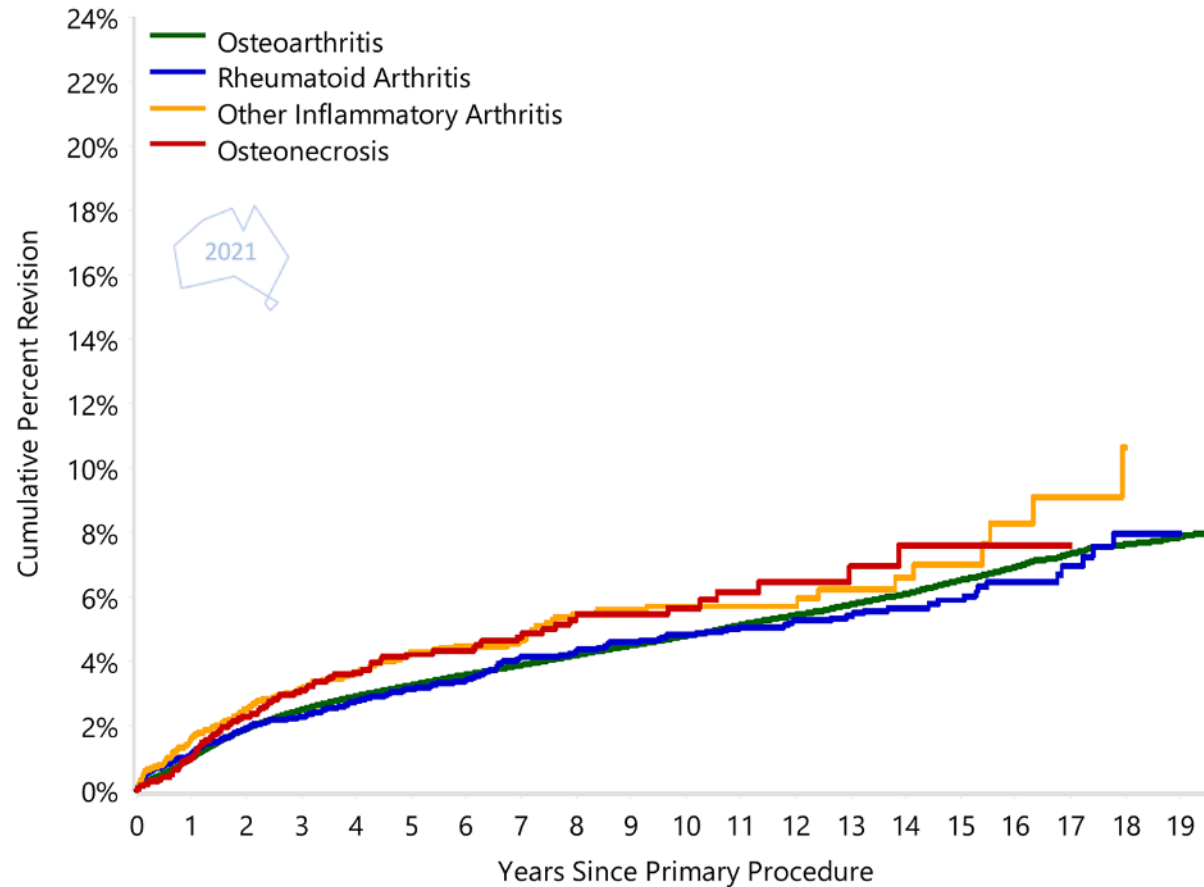


There are more revisions for loosening and infection.

Note: Restricted to modern prostheses

Figure KT6

Cumulative Percent Revision of Primary Total Knee Replacement by Primary Diagnosis



Osteoarthritis has a:

- lower rate of revision in the first 3 months compared to **rheumatoid arthritis**. After 9 months, it has a higher rate of revision.
- lower rate of revision compared to **osteonecrosis**.
- lower rate of revision compared to **other inflammatory arthritis** in the first 1 year with no difference after this time.

Note: Only primary diagnoses with over 1,000 procedures have been listed
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Table KT6

Cumulative Percent Revision of Primary Total Knee Replacement by Primary Diagnosis



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Primary Diagnosis	N Revised	N Total	1 Yr	3 Yrs	5 Yrs	10 Yrs	15 Yrs	20 Yrs
Osteoarthritis	22899	654260	1.0 (1.0, 1.0)	2.5 (2.5, 2.5)	3.3 (3.2, 3.3)	4.8 (4.7, 4.9)	6.5 (6.4, 6.6)	8.1 (7.8, 8.5)
Rheumatoid Arthritis	296	7672	1.1 (0.9, 1.4)	2.3 (2.0, 2.7)	3.1 (2.7, 3.6)	4.8 (4.3, 5.5)	5.9 (5.1, 6.8)	
Other Inflammatory Arthritis	145	3385	1.6 (1.2, 2.1)	3.1 (2.6, 3.8)	4.3 (3.6, 5.1)	5.7 (4.8, 6.8)	7.0 (5.5, 8.9)	
Osteonecrosis	89	2036	1.0 (0.7, 1.6)	3.1 (2.4, 4.0)	4.2 (3.3, 5.3)	5.7 (4.5, 7.1)	7.6 (5.7, 10.1)	
Other (4)	173	1499	4.4 (3.4, 5.6)	9.4 (7.9, 11.3)	12.8 (10.9, 15.1)	20.6 (17.4, 24.3)		
TOTAL	23602	668852						

Note: Restricted to modern prostheses

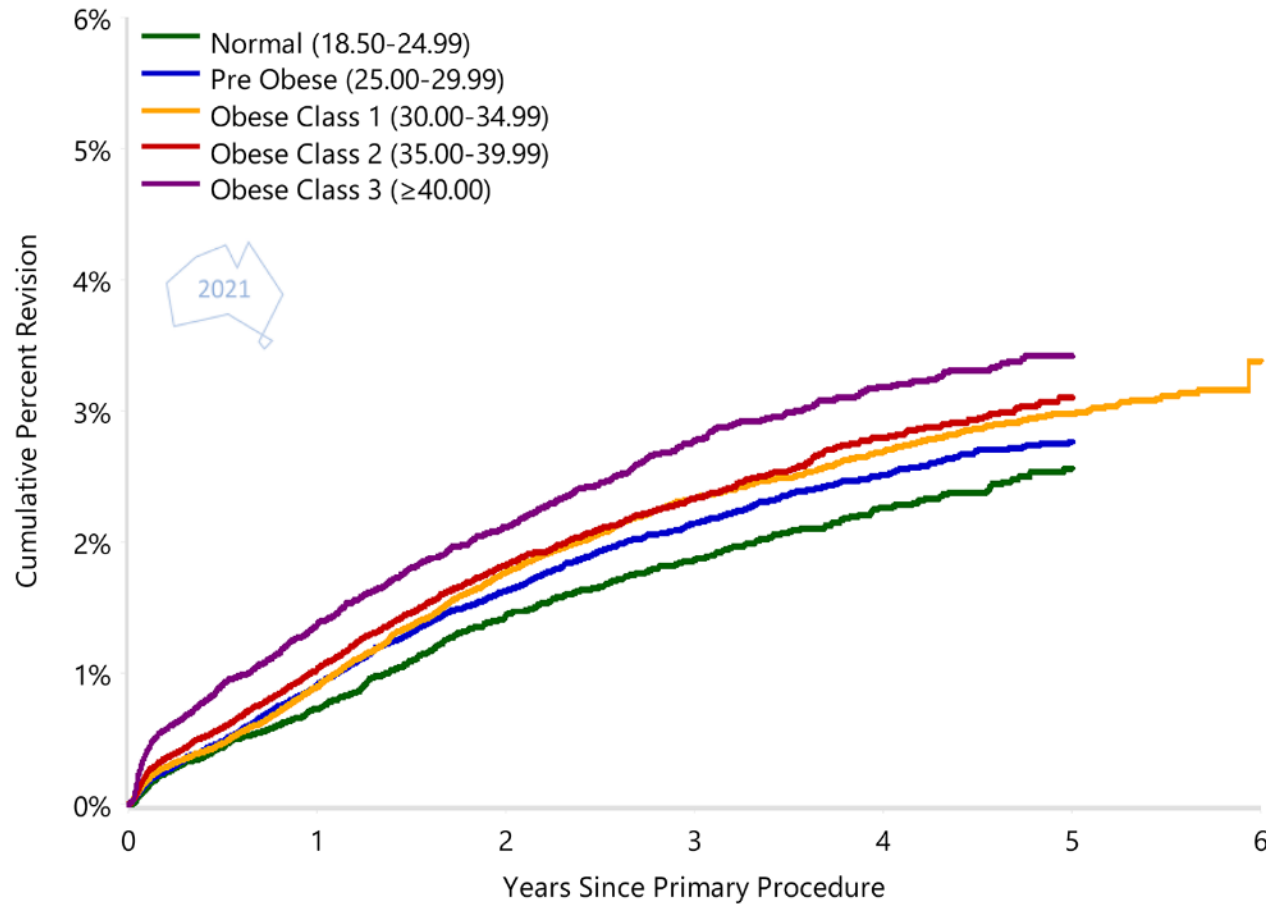
Figure KT16

Cumulative Percent Revision of Primary Total Knee Replacement by BMI Category (OA)



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Compared to patients with a normal BMI, there is an early higher rate of revision for patients in:

- obese class 2 (for the first 1 month)
- obese class 3 (for the first 6 months)

Note: BMI has not been presented for patients aged ≤19 years
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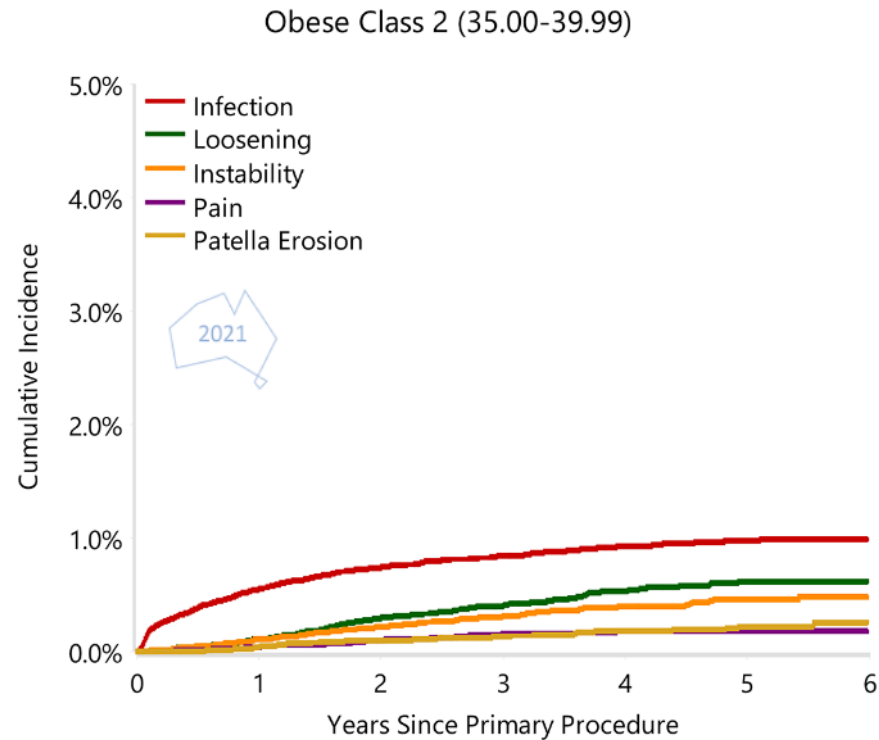
Figure KT17

Cumulative Percent Revision Diagnosis of Primary Total Knee Replacement by BMI Category (OA)



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Note: BMI has not been presented for patients aged ≤ 19 years
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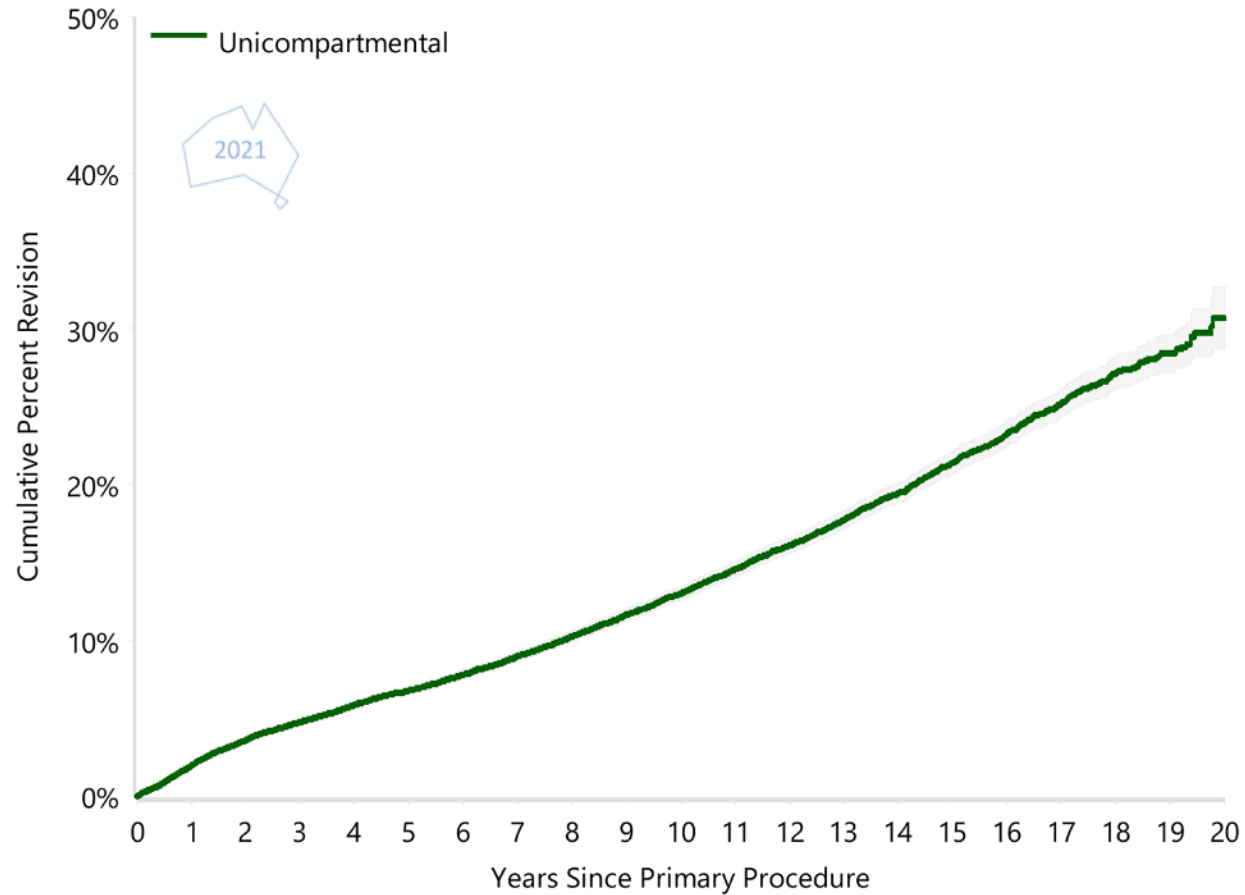
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Unicompartmental Knee Replacement



Figure KP5

Cumulative Percent Revision of Primary Unicompartmental Knee Replacement (Primary Diagnosis OA)

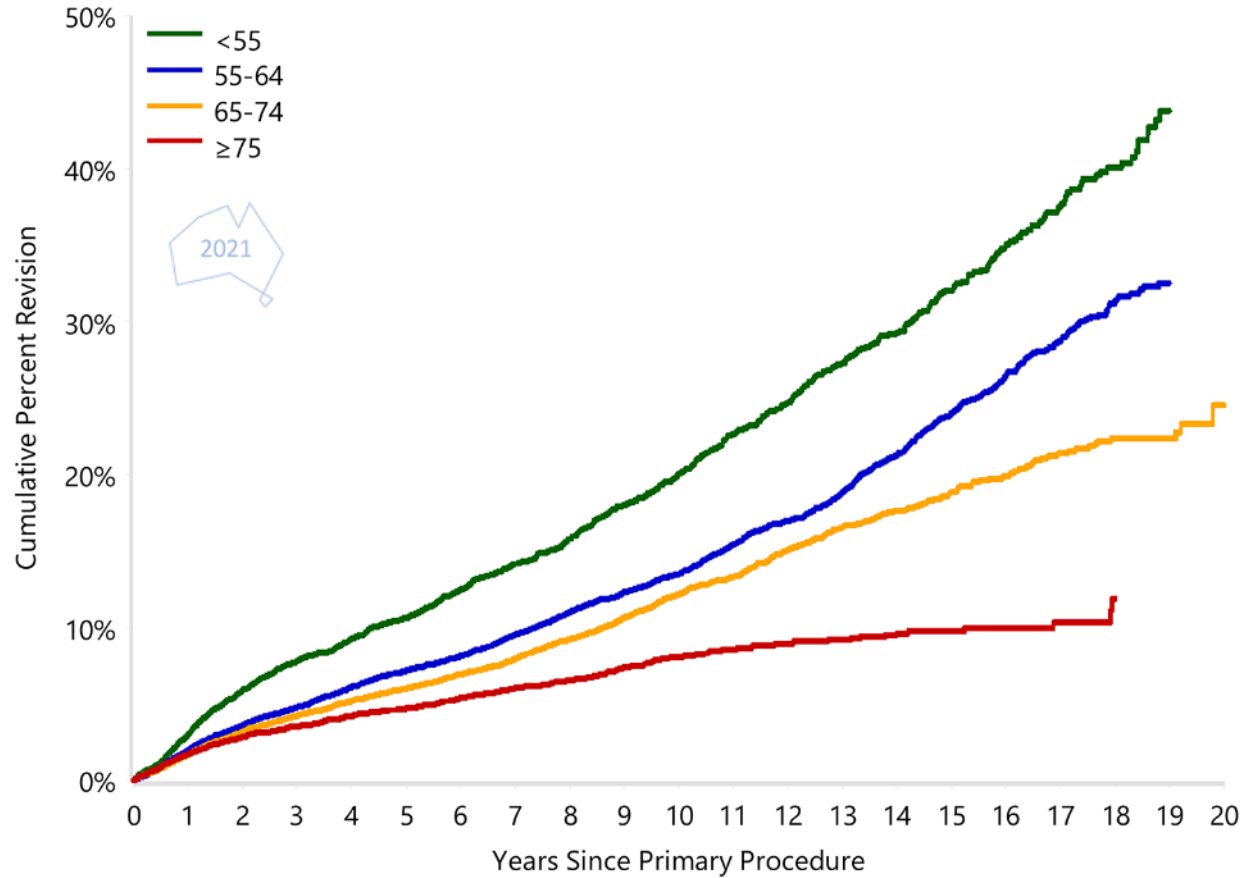


30.7% at 20 years

Note: Restricted to modern prostheses

Figure KP7

Cumulative Percent Revision of Primary Unicompartmental Knee Replacement by Age (Primary Diagnosis OA)



The rate of revision decreases with increasing age. This difference becomes more evident with time.

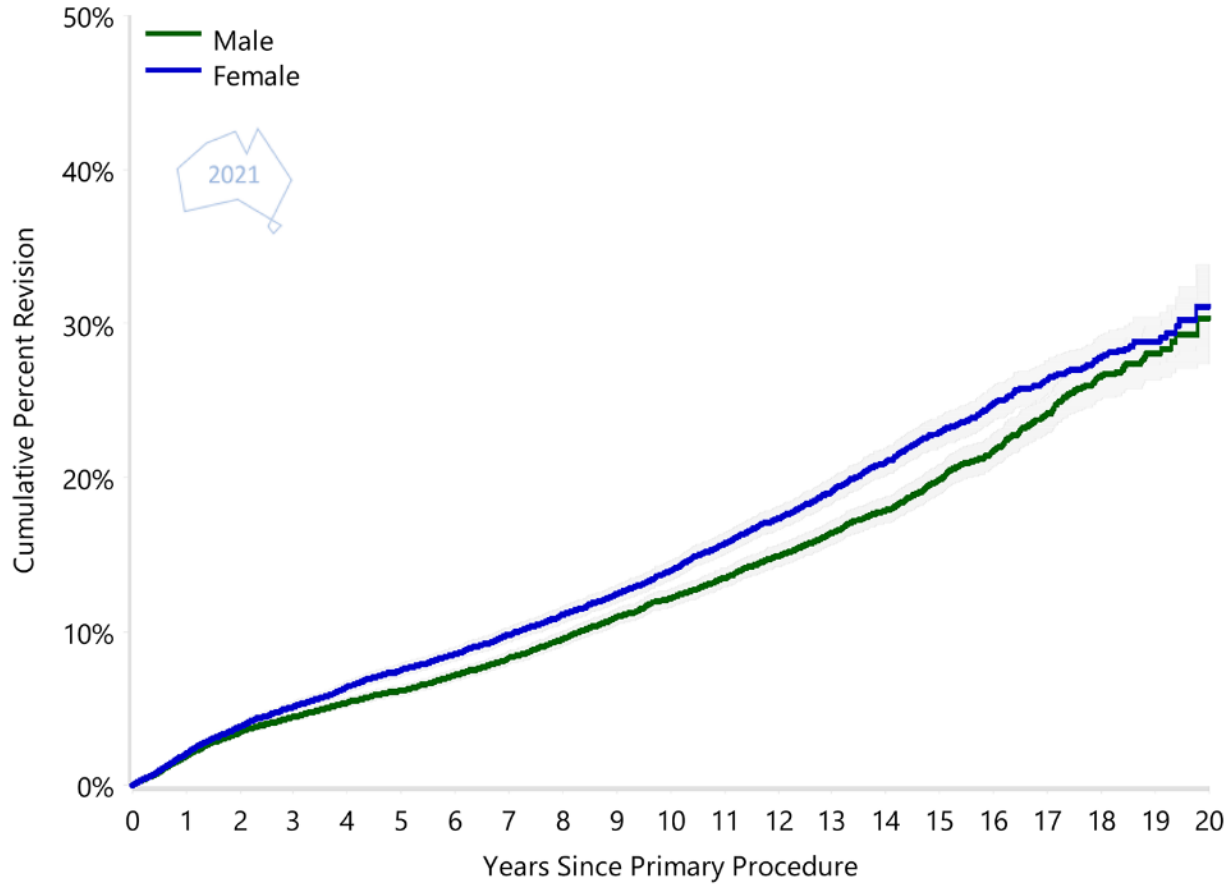
Note: Restricted to modern prostheses

Figure KP8

Cumulative Percent Revision of Primary Unicompartamental Knee Replacement by Gender (Primary Diagnosis OA)



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Females have a higher rate of revision than males.

Note: Restricted to modern prostheses

Table KP10

Cumulative Percent Revision of Primary Unicompartmental Knee Replacement by Gender and Age (Primary Diagnosis OA)



Gender	Age	N Revised	N Total	1 Yr	3 Yrs	5 Yrs	10 Yrs	15 Yrs	20 Yrs
Male		2275	24222	1.9 (1.7, 2.1)	4.5 (4.2, 4.7)	6.1 (5.8, 6.5)	12.1 (11.6, 12.7)	19.8 (18.9, 20.8)	30.3 (27.4, 33.5)
	<55	446	2694	3.0 (2.4, 3.7)	7.3 (6.4, 8.5)	9.6 (8.5, 10.9)	19.9 (17.9, 22.0)	33.0 (29.8, 36.4)	
	55-64	908	8044	2.0 (1.7, 2.4)	4.7 (4.2, 5.2)	6.8 (6.2, 7.4)	13.0 (12.1, 14.1)	22.3 (20.7, 24.0)	
	65-74	703	8801	1.6 (1.3, 1.9)	4.0 (3.6, 4.5)	5.5 (5.0, 6.1)	11.1 (10.2, 12.0)	16.9 (15.5, 18.4)	
	≥75	218	4683	1.6 (1.2, 2.0)	3.2 (2.7, 3.7)	4.0 (3.4, 4.7)	7.4 (6.4, 8.5)	9.0 (7.6, 10.7)	
Female		2415	20158	2.1 (1.9, 2.3)	5.1 (4.8, 5.4)	7.5 (7.1, 7.9)	13.9 (13.3, 14.6)	22.9 (21.9, 23.9)	31.1 (28.6, 33.8)
	<55	571	3148	3.0 (2.4, 3.7)	8.1 (7.2, 9.2)	11.4 (10.3, 12.7)	20.2 (18.5, 22.1)	31.4 (28.9, 34.1)	
	55-64	889	6557	1.9 (1.6, 2.3)	4.9 (4.4, 5.5)	7.6 (6.9, 8.3)	14.0 (13.0, 15.1)	25.7 (24.0, 27.6)	
	65-74	705	6654	1.8 (1.5, 2.2)	4.5 (4.0, 5.1)	6.6 (5.9, 7.3)	13.5 (12.4, 14.6)	21.0 (19.4, 22.8)	
	≥75	250	3799	1.9 (1.5, 2.4)	3.9 (3.3, 4.7)	5.5 (4.8, 6.4)	8.9 (7.8, 10.2)	10.6 (9.2, 12.2)	
TOTAL		4690	44380						

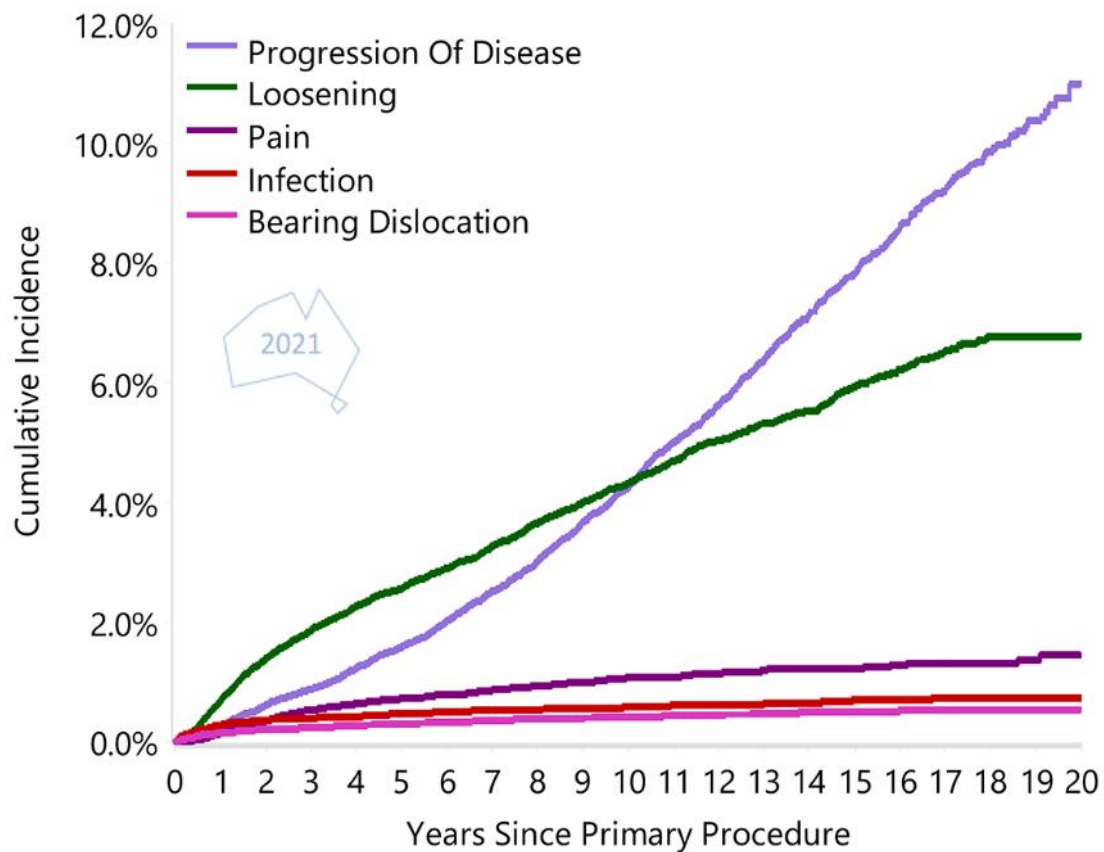
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The effect of age on the rate of revision is evident in both males and females.

Figure KP6

Cumulative Incidence Revision Diagnosis of Primary Unicompartamental Knee Replacement (Primary Diagnosis OA)



The main reasons for revision are for loosening and progression of disease.

Note: Restricted to modern prostheses