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2020 Annual Report Patient Presentation for Surgeons

KNEE REPLACEMENT



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Knee Replacement

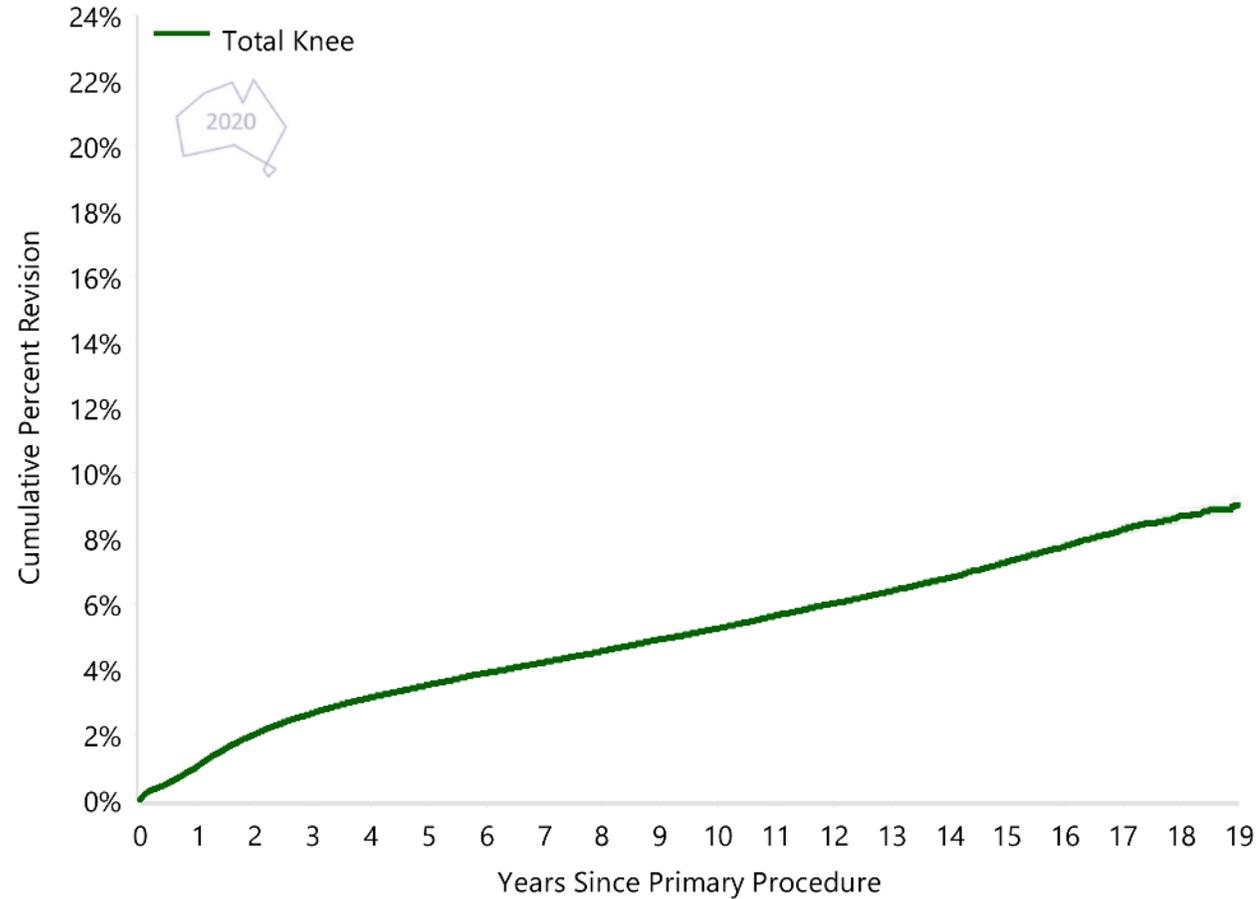


Figure KT8

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



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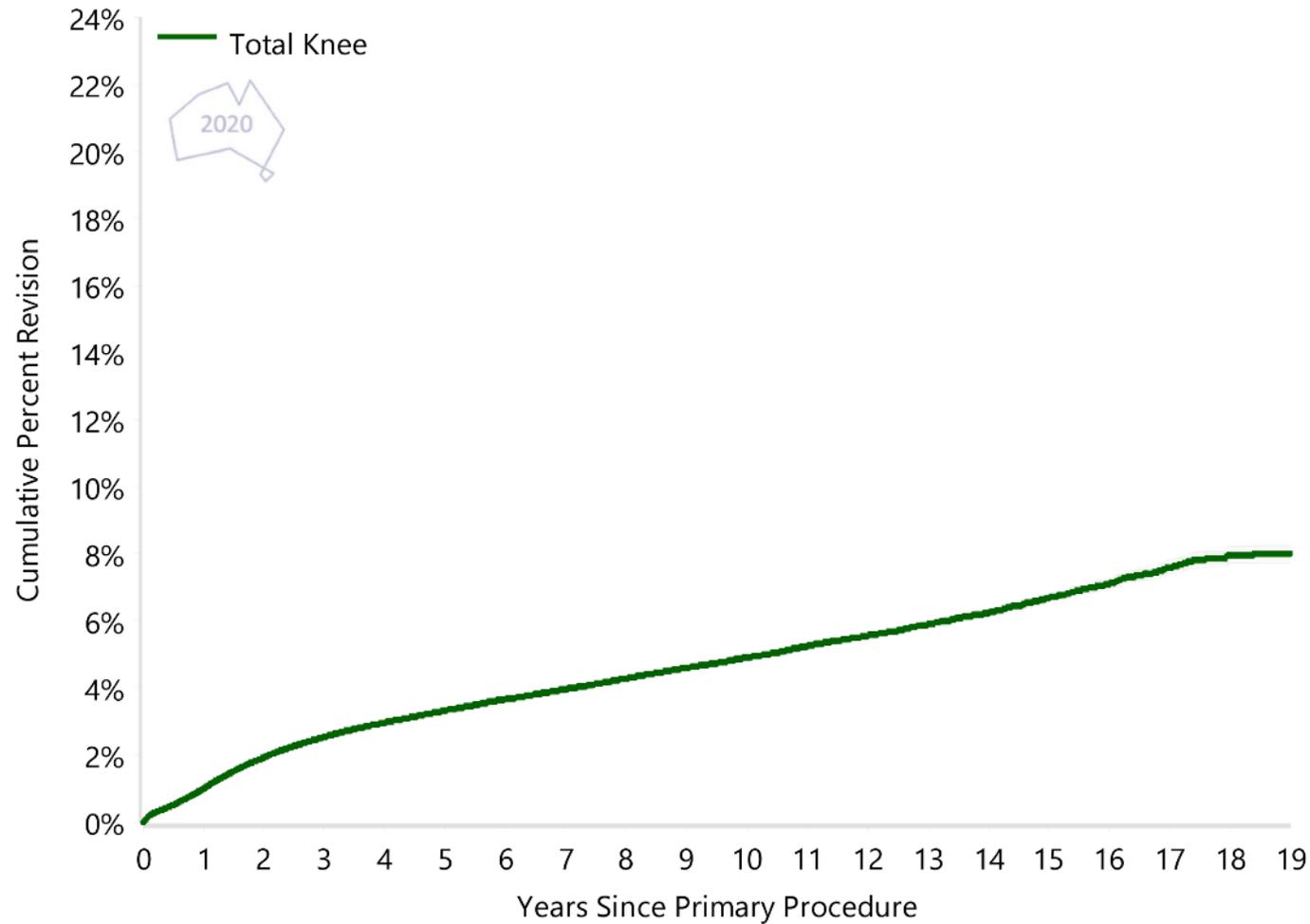
9.0% at 19 years

Figure KT10

Cumulative Percent Revision of Primary Knee Replacement (Primary Diagnosis OA, Excluding Combinations with No Recorded Use in 2019)



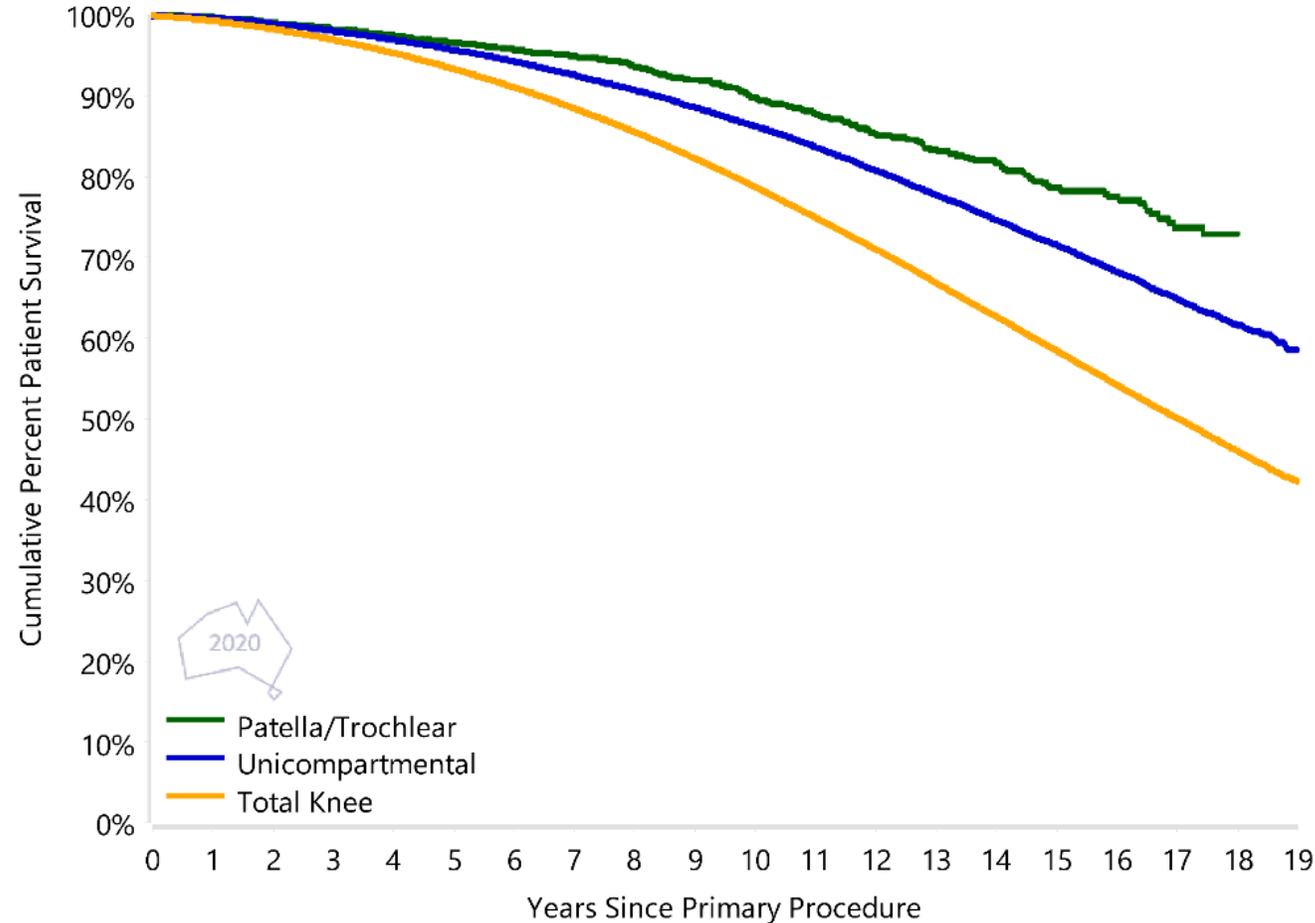
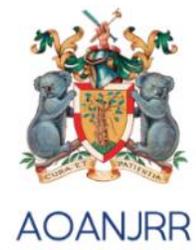
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8.0% at 19 years

Figure M5

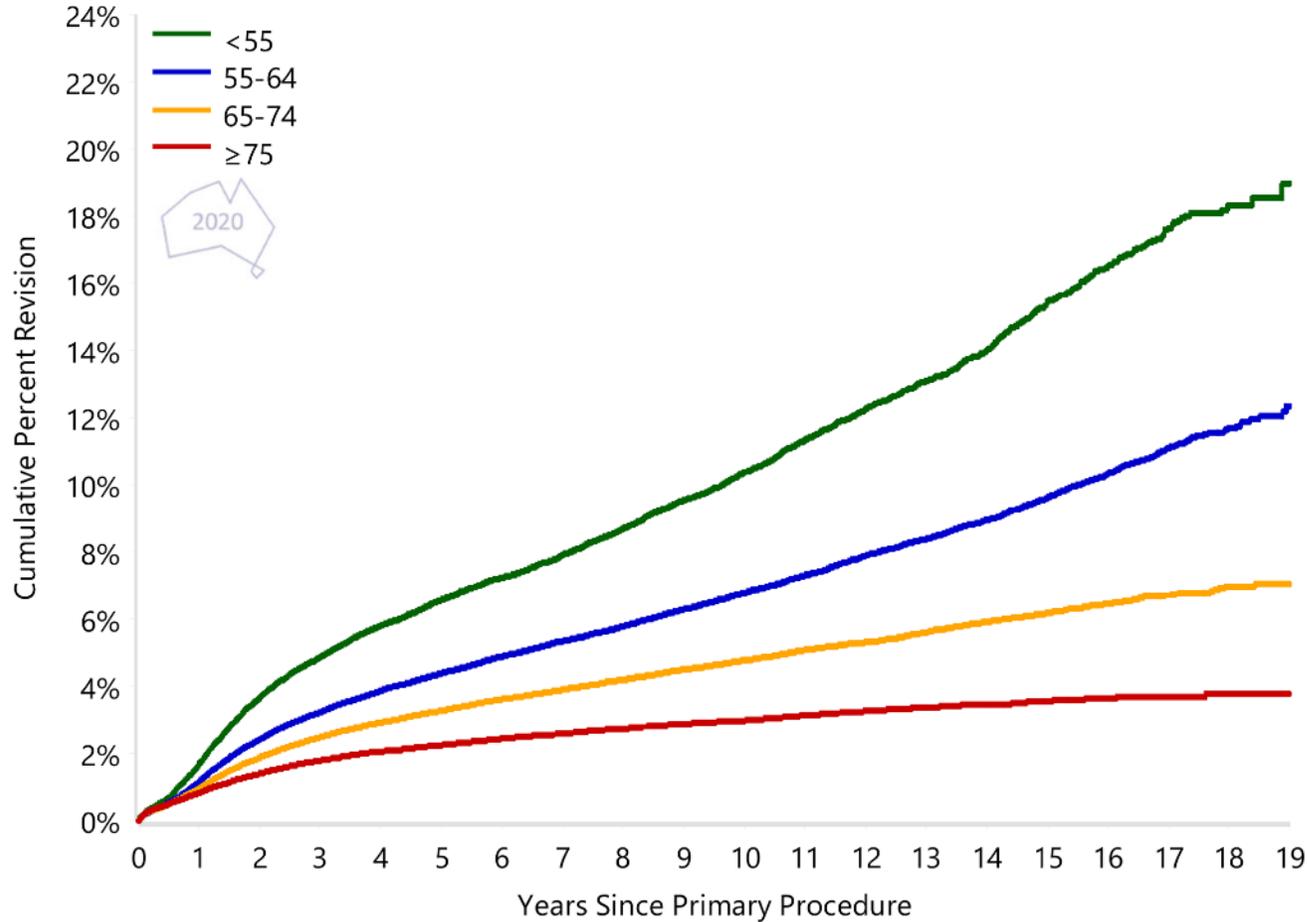
Cumulative Percent Survival of Patients with Primary Knee Replacement by Class (Primary Diagnosis OA)



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

Figure KT12

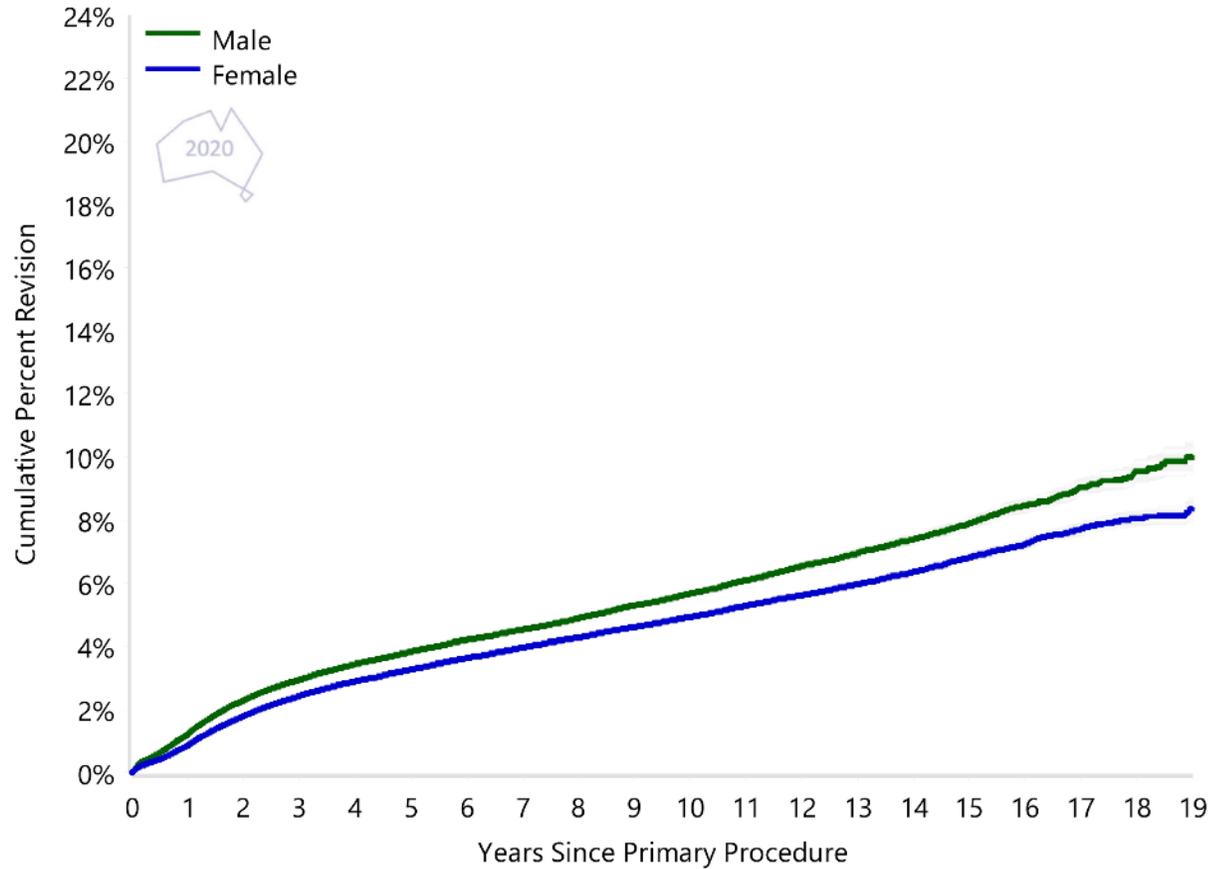
Cumulative Percent Revision of Primary Total Knee Replacement by Age (Primary Diagnosis OA)



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

Figure KT13

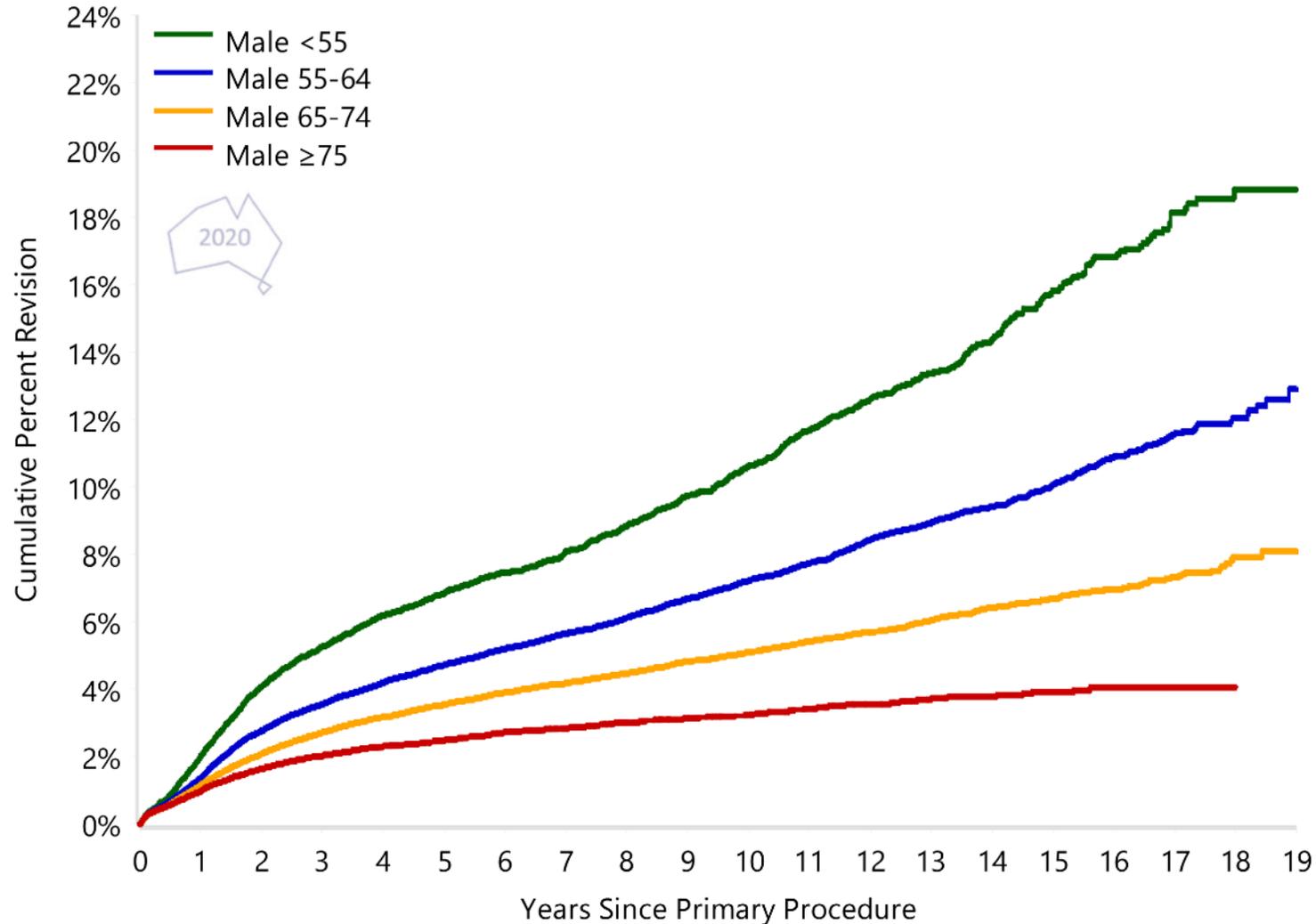
Cumulative Percent Revision of Primary Total Knee Replacement by Gender (Primary Diagnosis OA)



Males have a higher rate of revision compared to females.

Figure KT15

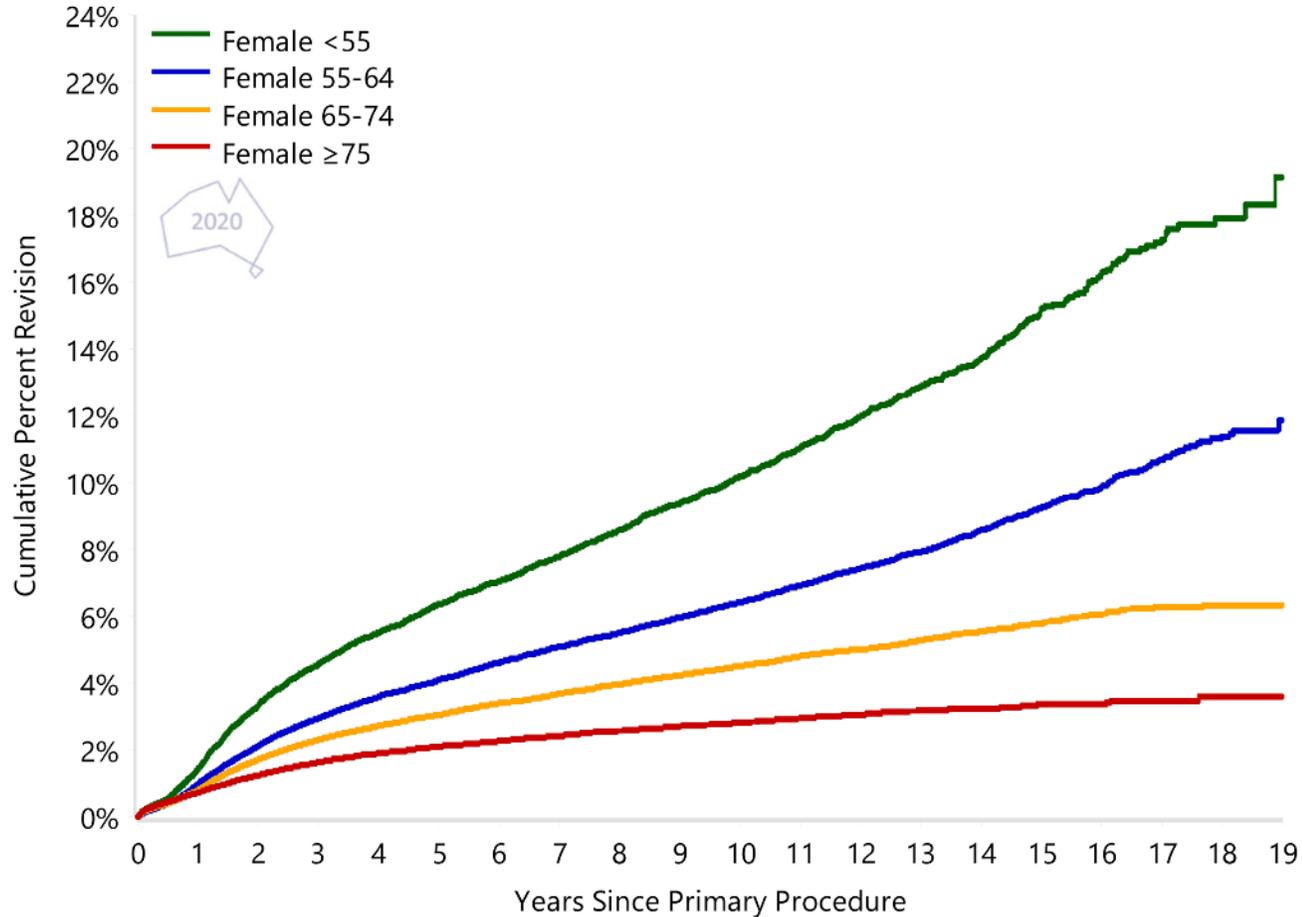
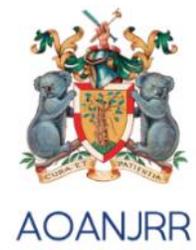
Cumulative Percent Revision of Primary Total Knee Replacement in Males by Age (Primary Diagnosis OA)



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

Figure KT16

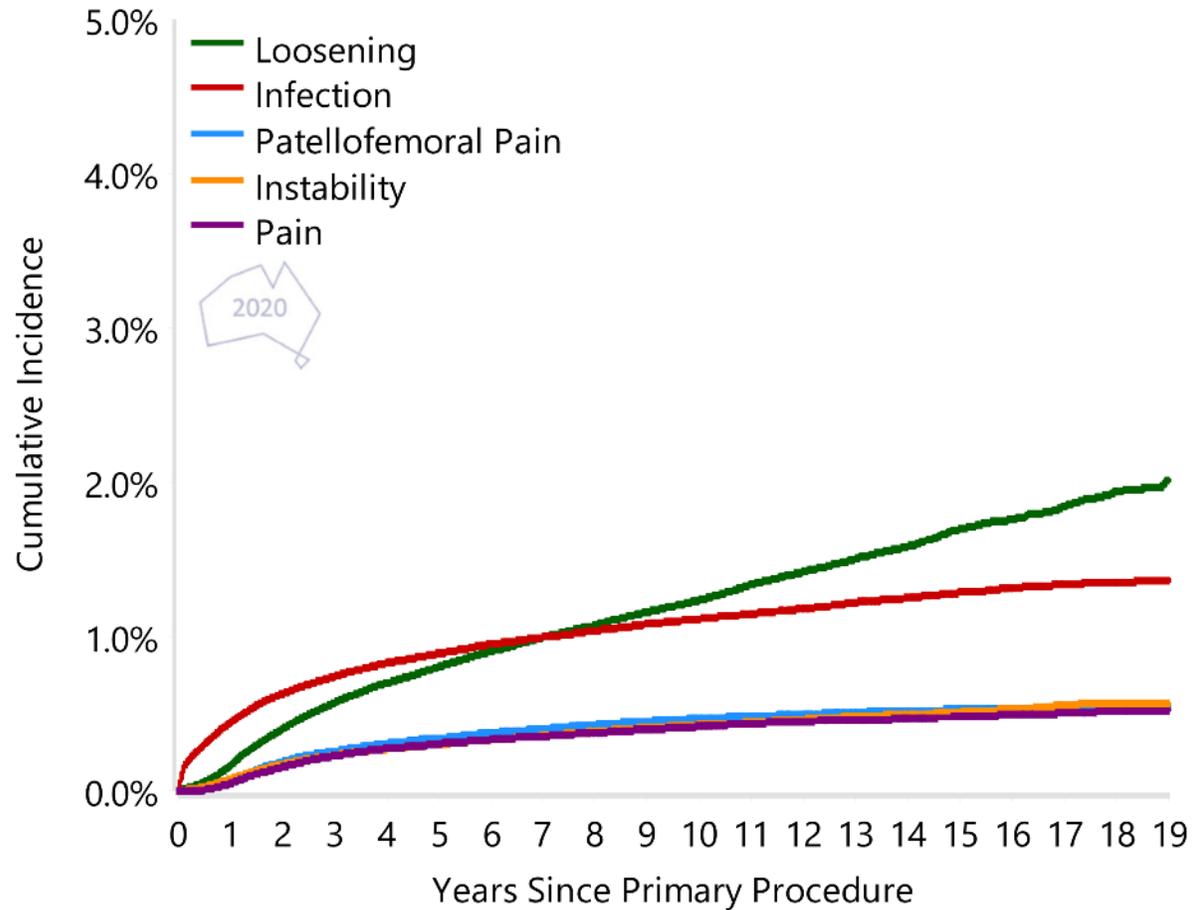
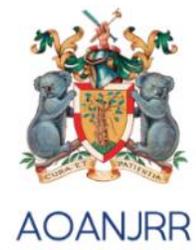
Cumulative Percent Revision of Primary Total Knee Replacement in Females by Age (Primary Diagnosis OA)



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

Figure KT9

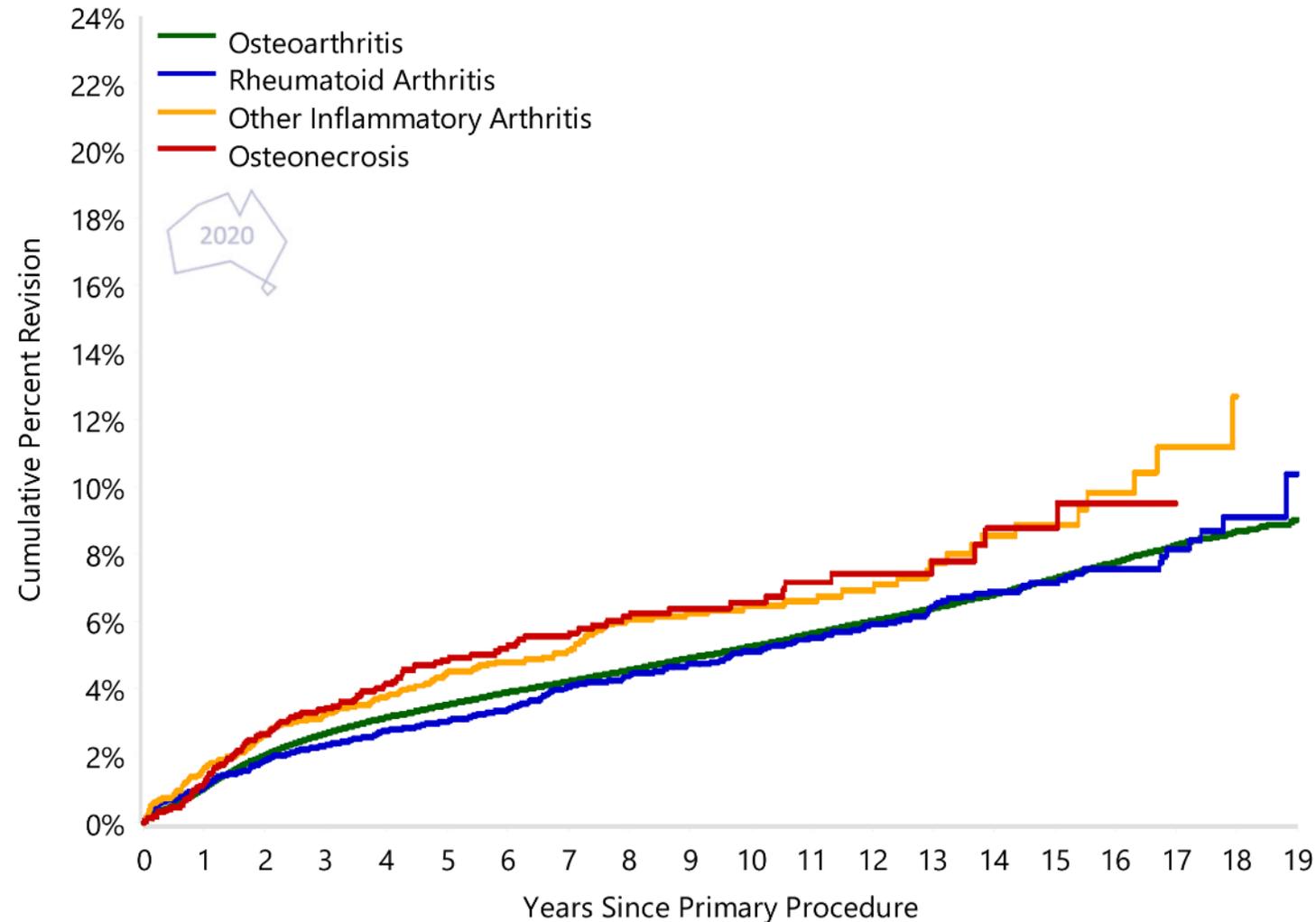
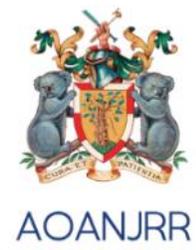
Cumulative Incidence Revision Diagnosis of Primary Total Knee Replacement (Primary Diagnosis OA)



There are more revisions for loosening and infection.

Figure KT7

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 3 months with no difference after this time.

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

Table KT6 Cumulative Percent Revision of Primary Total Knee Replacement by Primary Diagnosis

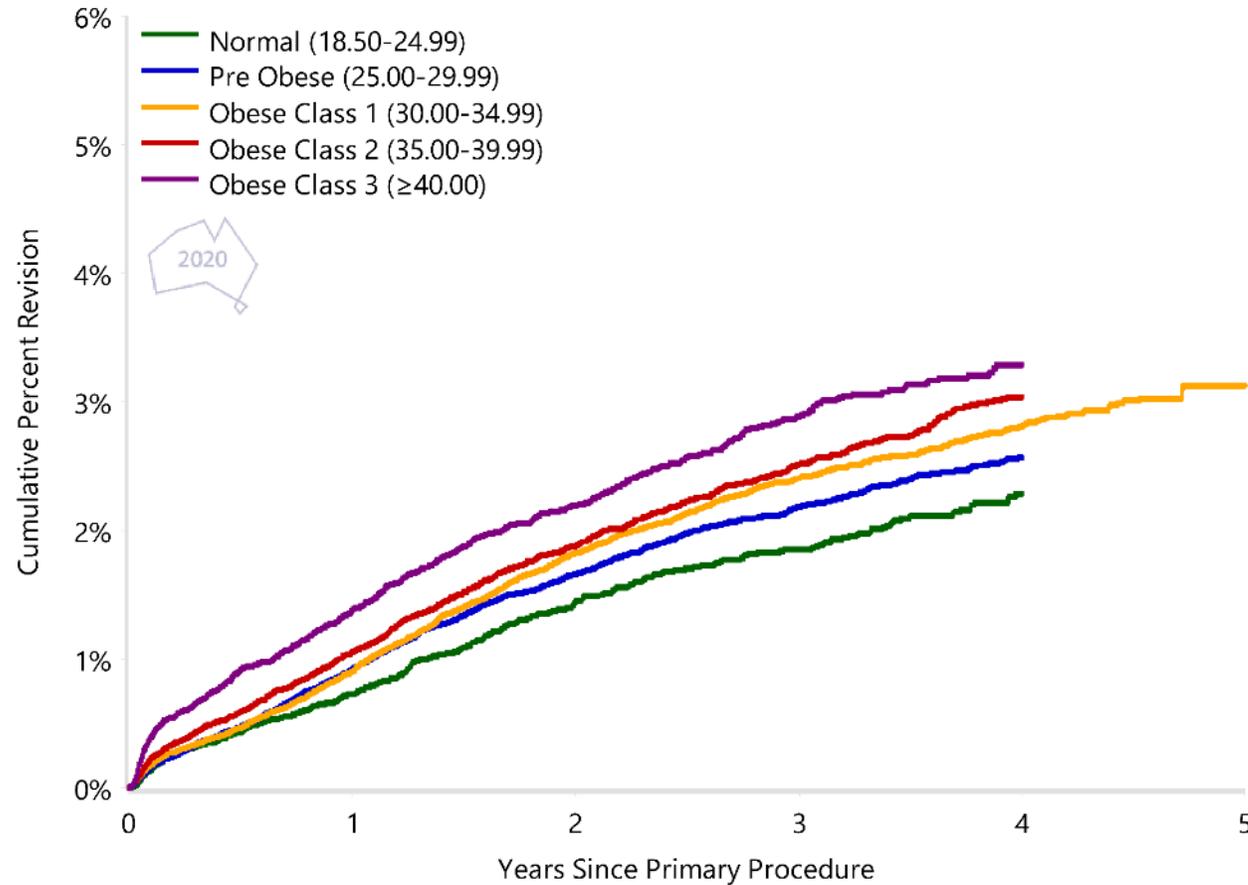


Primary Diagnosis	N Revised	N Total	1 Yr	3 Yrs	5 Yrs	10 Yrs	15 Yrs	19 Yrs
Osteoarthritis	27580	699283	1.0 (1.0, 1.0)	2.7 (2.6, 2.7)	3.5 (3.5, 3.6)	5.2 (5.2, 5.3)	7.3 (7.2, 7.4)	9.0 (8.7, 9.3)
Rheumatoid Arthritis	383	9016	1.1 (0.9, 1.3)	2.3 (2.0, 2.7)	3.0 (2.7, 3.4)	5.1 (4.6, 5.7)	7.1 (6.3, 8.0)	10.4 (7.8, 13.8)
Other Inflammatory Arthritis	177	3616	1.6 (1.3, 2.1)	3.2 (2.7, 3.9)	4.5 (3.8, 5.3)	6.5 (5.5, 7.6)	8.9 (7.3, 10.9)	
Osteonecrosis	114	2236	1.2 (0.8, 1.7)	3.4 (2.7, 4.3)	4.8 (3.9, 5.9)	6.6 (5.4, 8.0)	8.8 (6.8, 11.2)	
Other (5)	197	1634	3.5 (2.7, 4.6)	9.0 (7.6, 10.8)	12.5 (10.7, 14.7)	20.1 (17.3, 23.3)	29.6 (24.4, 35.6)	
TOTAL	28451	715785						

2020

Figure KT19

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



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

- obese class 2
- obese class 3

For the first 1.5 years.

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

Figure KT20

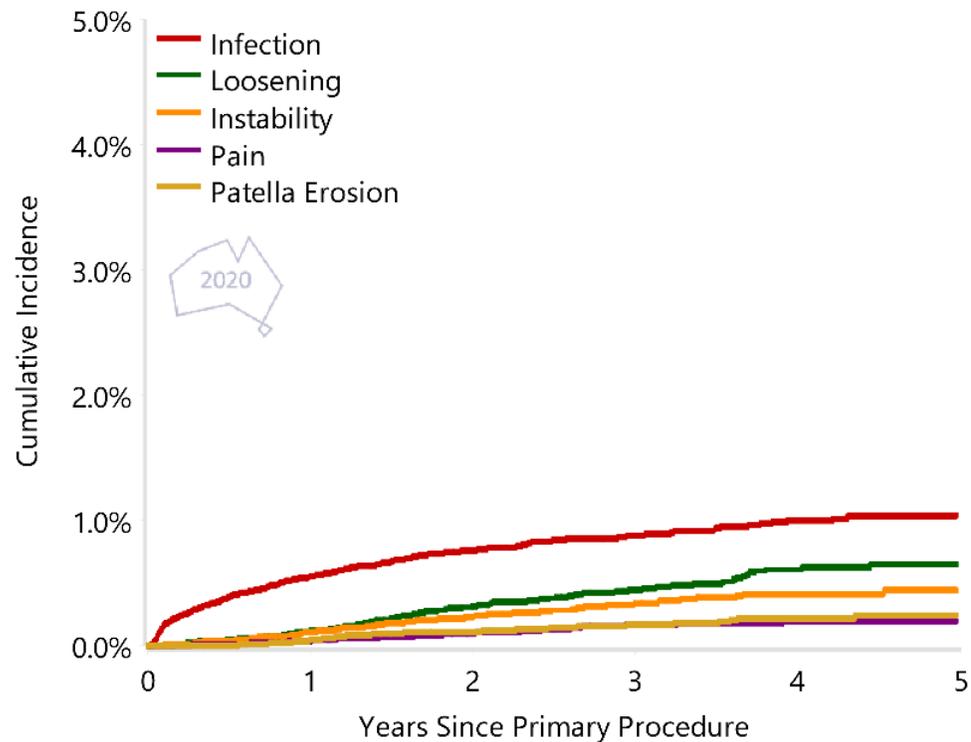
Cumulative Percent Revision Diagnosis of Primary Total Knee Replacement by BMI Category (OA)



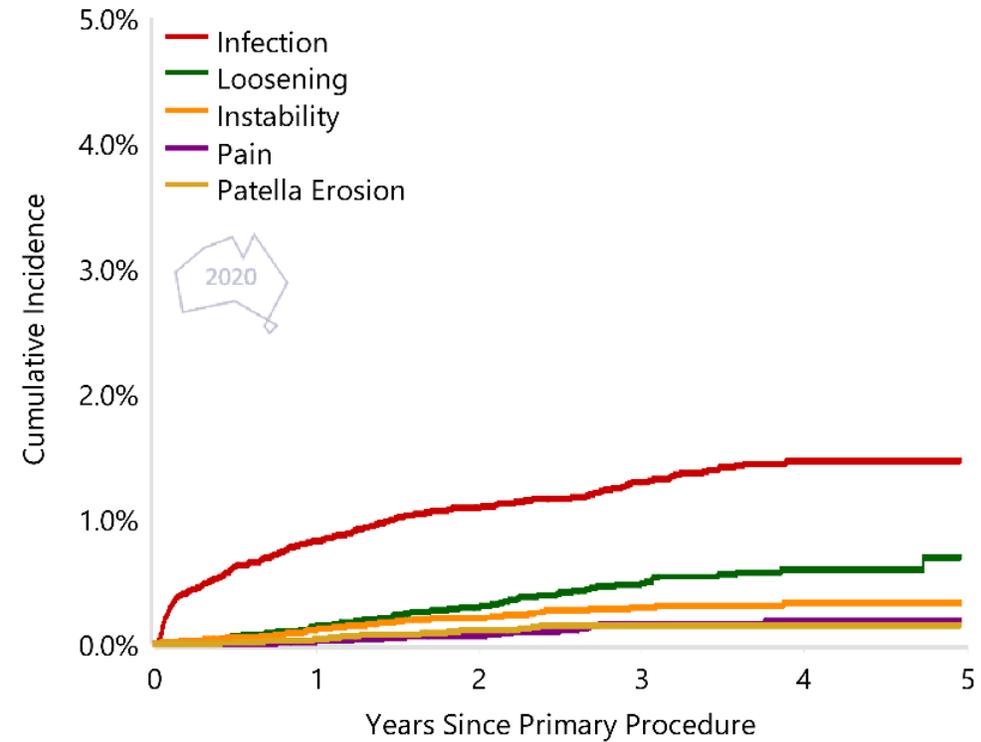
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Obese Class 2 (35.00-39.99)



Obese Class 3 (≥ 40.00)





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Unicompartmental Knee Replacement

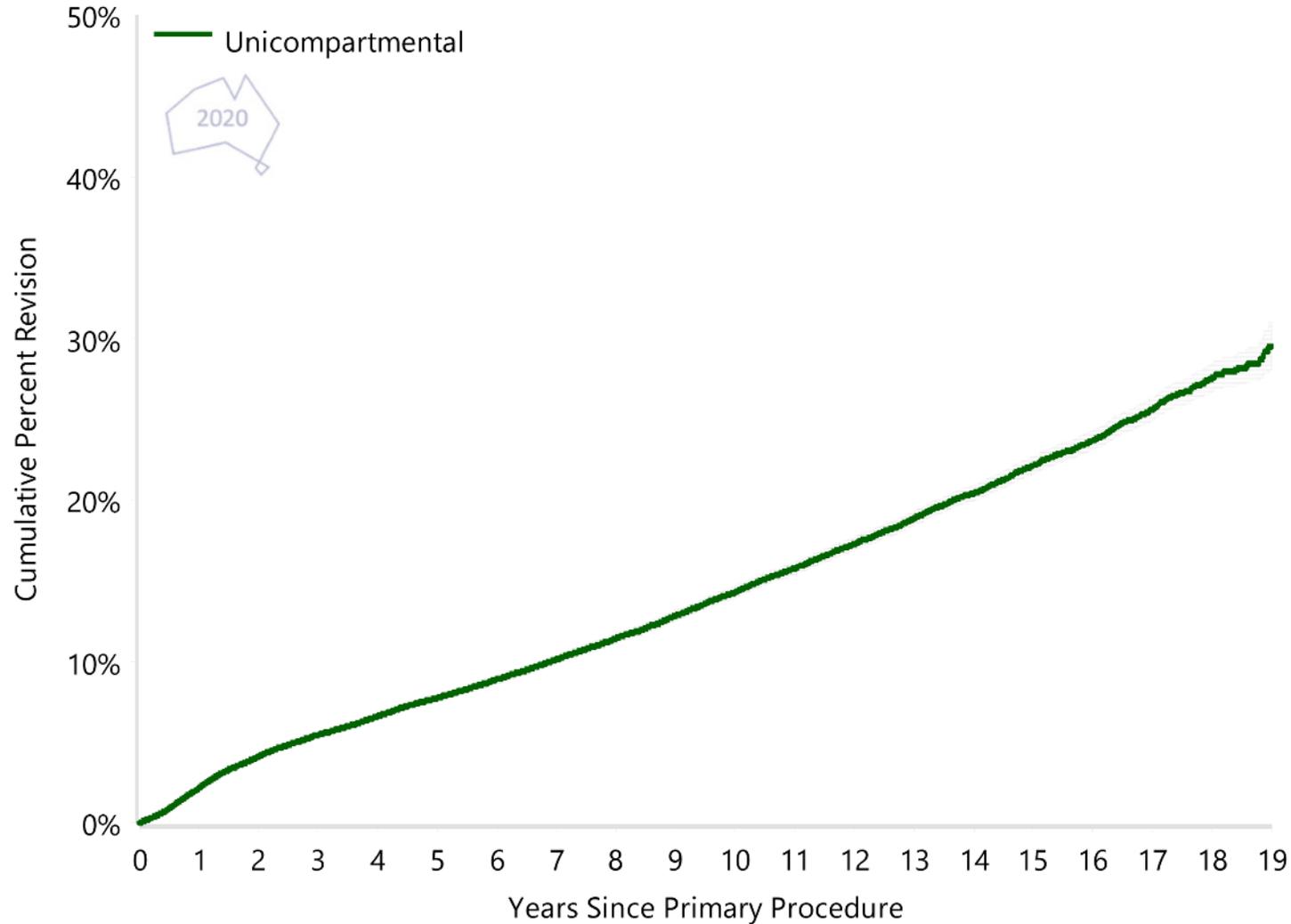


Figure KP6

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



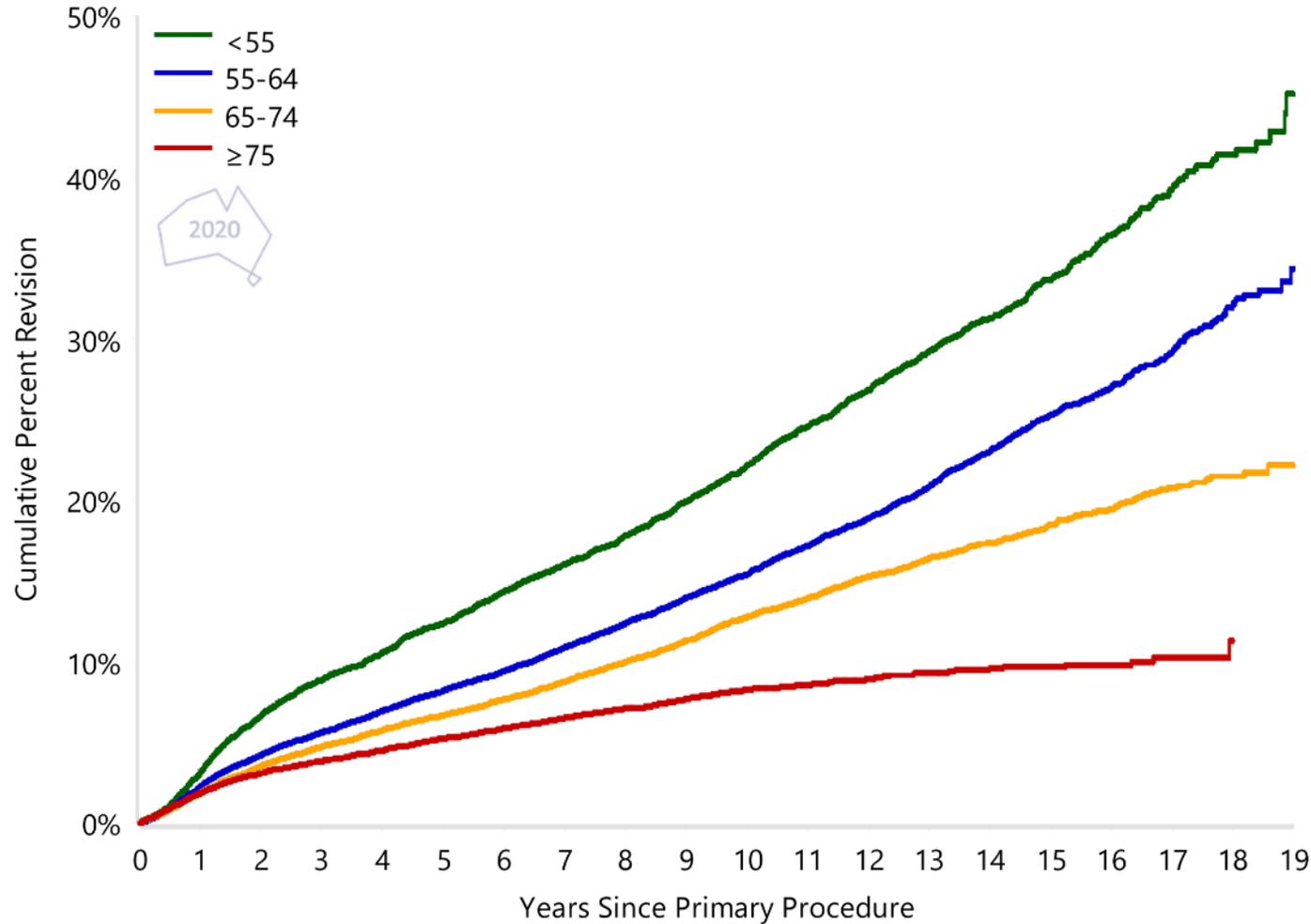
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29.5% at 19 years

Figure KP8

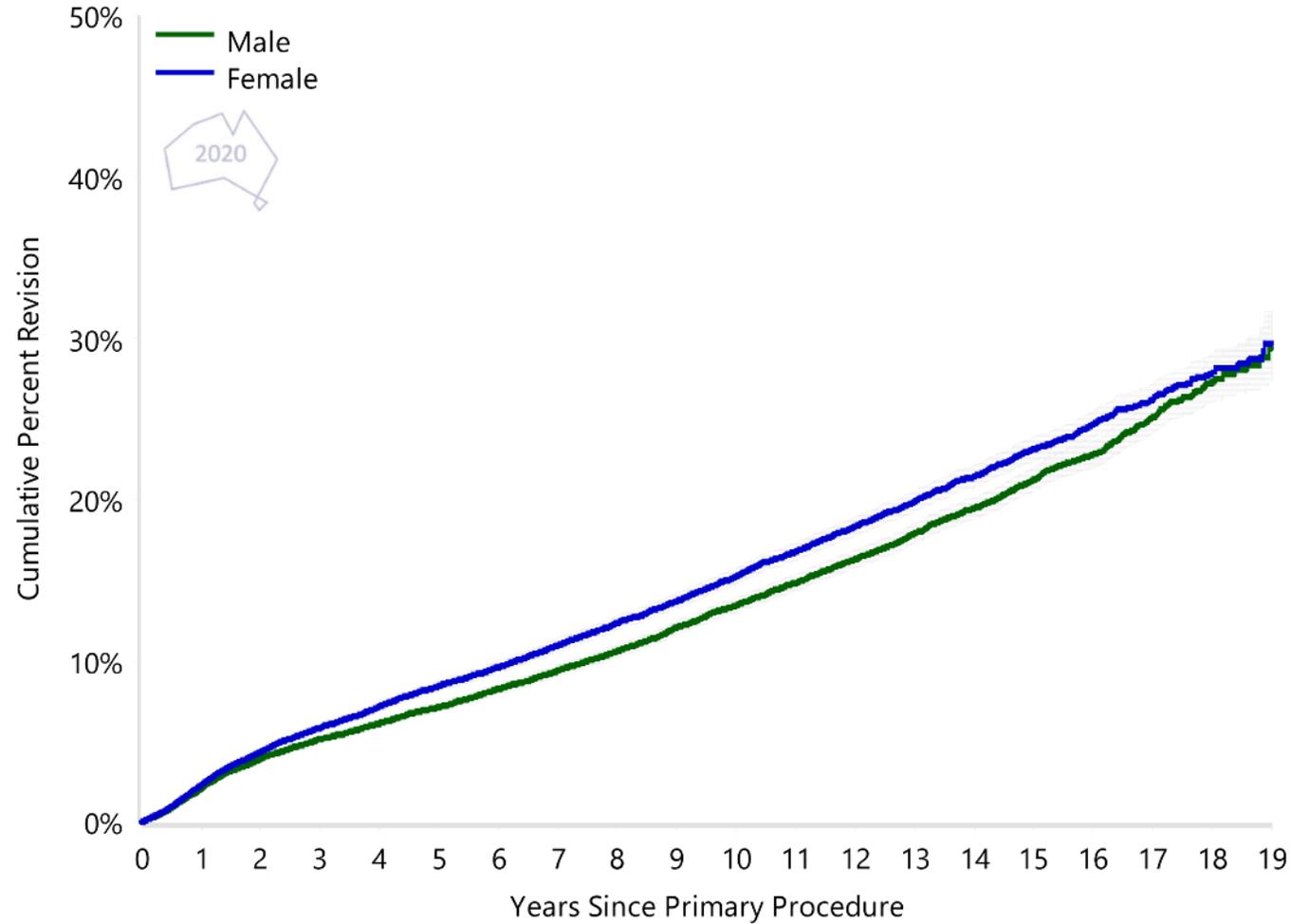
Cumulative Percent Revision of Primary Unicompartmental Knee Replacement by Age (Primary Diagnosis OA)



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

Figure KP9

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



Females have a higher rate of revision than males.

Table KP11

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

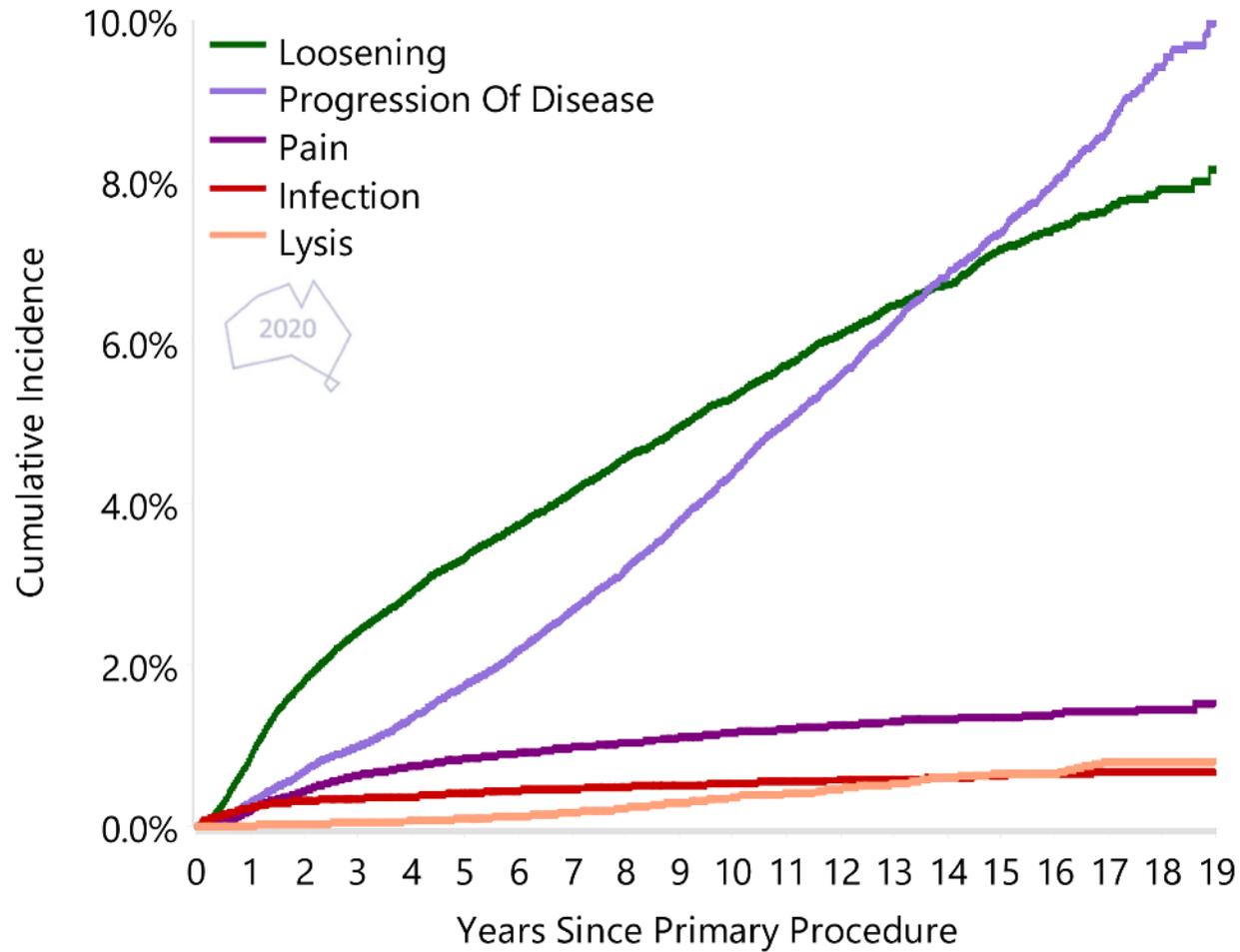
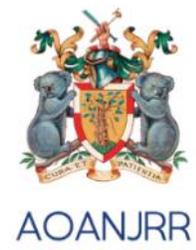


Gender	Age	N Revised	N Total	1 Yr	3 Yrs	5 Yrs	10 Yrs	15 Yrs	19 Yrs
Male		3850	32167	2.1 (1.9, 2.2)	5.1 (4.9, 5.4)	7.1 (6.8, 7.4)	13.4 (13.0, 13.9)	21.2 (20.5, 22.0)	29.4 (27.3, 31.5)
	<55	823	3799	3.2 (2.7, 3.9)	8.9 (8.0, 9.9)	11.8 (10.8, 13.0)	21.8 (20.3, 23.5)	35.1 (32.8, 37.5)	
	55-64	1610	10861	2.3 (2.0, 2.6)	5.5 (5.1, 6.0)	8.0 (7.5, 8.6)	15.3 (14.5, 16.1)	24.7 (23.5, 26.0)	35.6 (32.0, 39.4)
	65-74	1076	11289	1.7 (1.5, 1.9)	4.3 (3.9, 4.7)	5.9 (5.4, 6.4)	11.4 (10.6, 12.1)	16.8 (15.7, 17.9)	20.9 (18.5, 23.7)
	≥75	341	6218	1.7 (1.4, 2.0)	3.6 (3.1, 4.1)	4.7 (4.1, 5.3)	7.4 (6.7, 8.3)	8.9 (7.8, 10.1)	
Female		4014	27643	2.3 (2.1, 2.5)	5.8 (5.5, 6.1)	8.4 (8.1, 8.8)	15.2 (14.7, 15.7)	23.1 (22.4, 23.8)	29.7 (27.8, 31.7)
	<55	1031	4581	3.1 (2.6, 3.6)	8.8 (8.0, 9.7)	12.8 (11.8, 13.8)	22.4 (21.0, 23.8)	32.7 (30.8, 34.6)	
	55-64	1491	9151	2.3 (2.0, 2.6)	5.8 (5.3, 6.3)	8.4 (7.8, 9.0)	15.4 (14.6, 16.3)	25.8 (24.5, 27.1)	
	65-74	1105	8624	2.1 (1.8, 2.4)	5.3 (4.8, 5.8)	7.7 (7.1, 8.3)	14.4 (13.6, 15.4)	20.5 (19.3, 21.8)	23.8 (22.1, 25.7)
	≥75	387	5287	2.0 (1.7, 2.4)	4.2 (3.6, 4.8)	5.9 (5.3, 6.6)	9.1 (8.2, 10.1)	10.5 (9.4, 11.6)	
TOTAL		7864	59810						

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

Figure KP7

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



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