



Australian
Orthopaedic
Association
National
Joint
Replacement
Registry

2019 Annual Report



AOANJRR

Australian
Orthopaedic
Association
National
Joint
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Knee Replacement

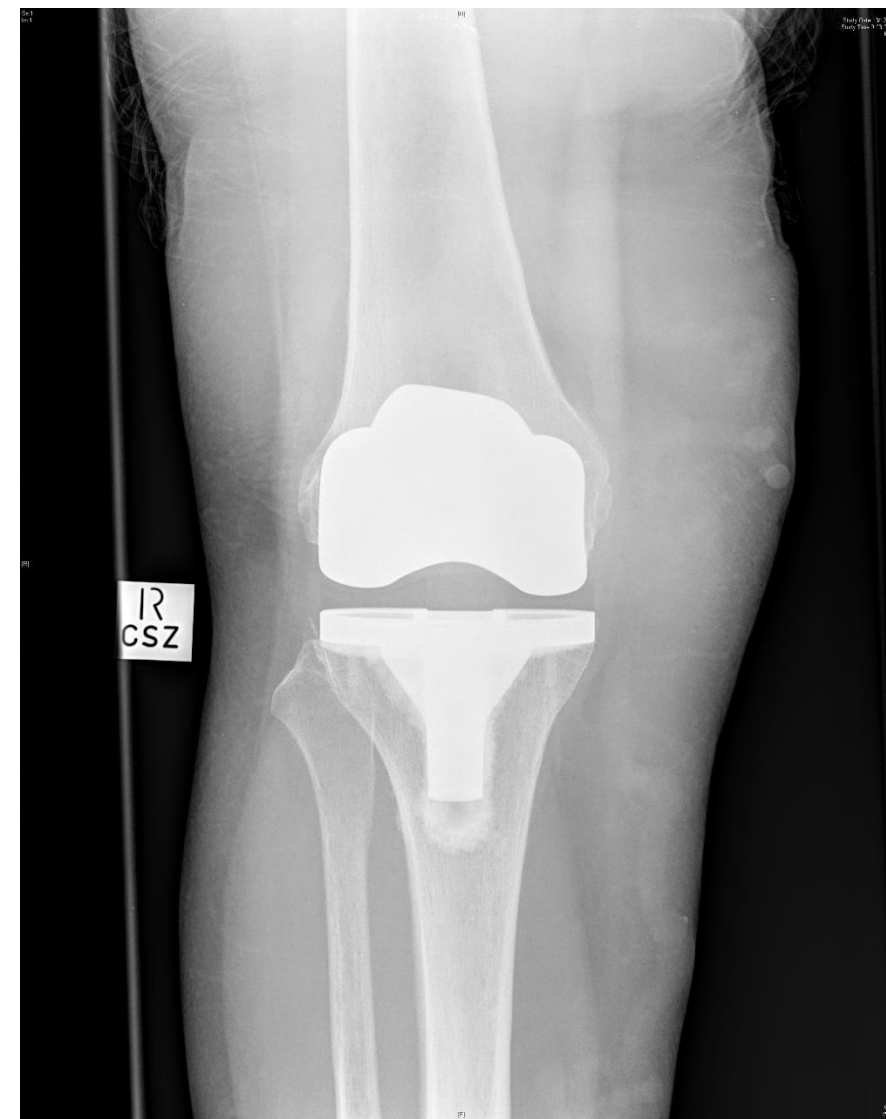
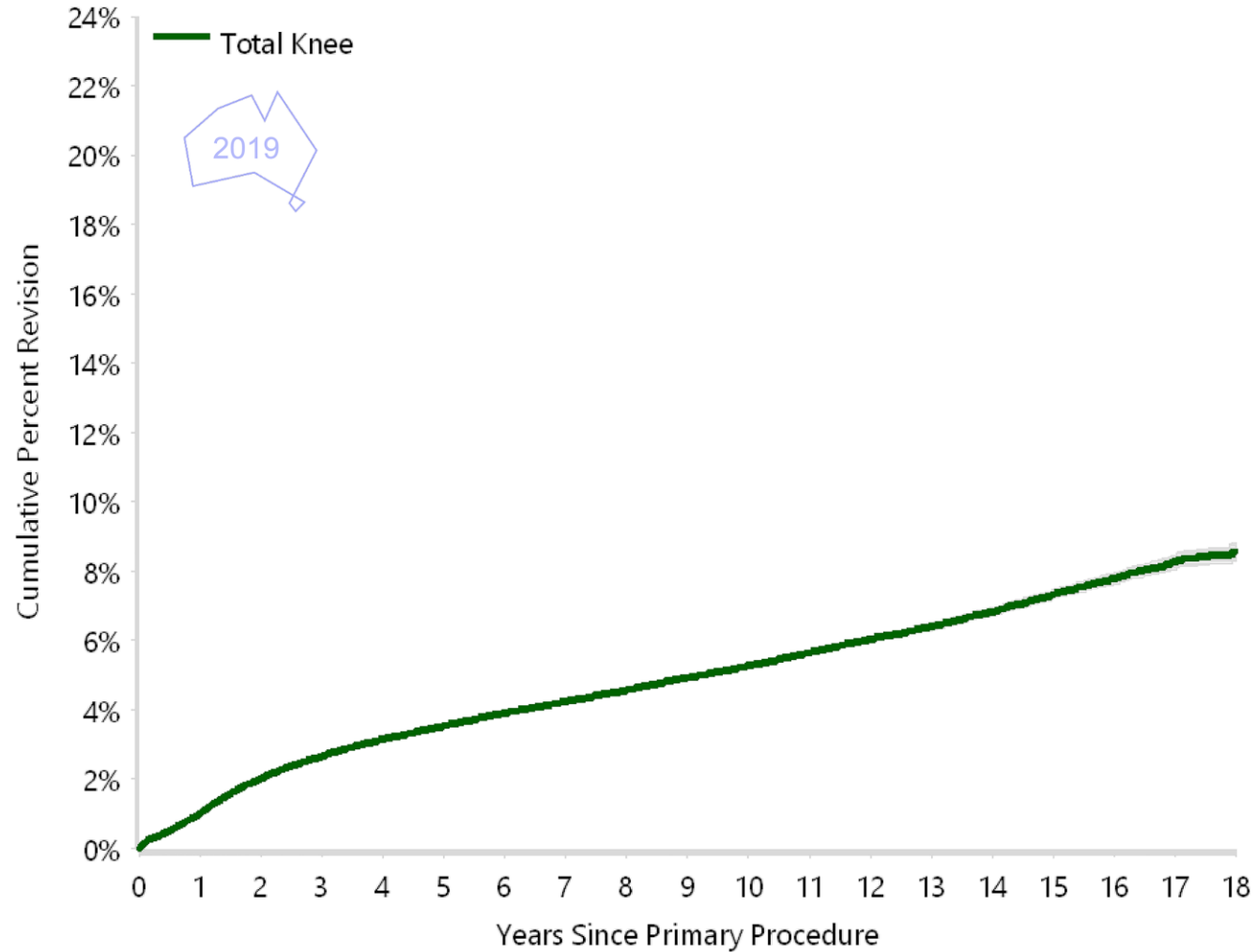


Figure KT8

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



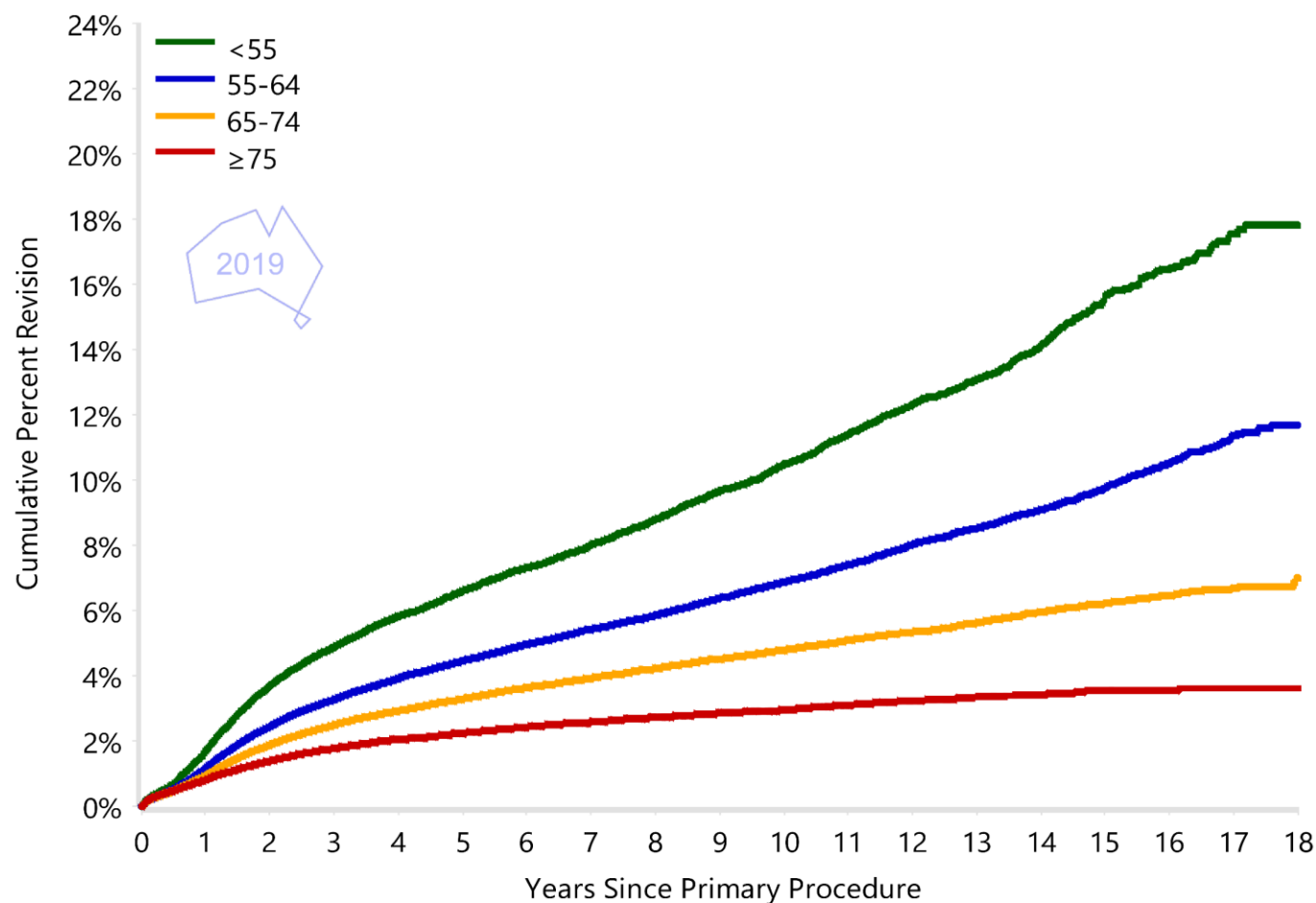
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8.6% at 18 years

Figure KT10

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



HR - adjusted for gender

<55 vs ≥75

0 - 6Mth: HR=1.45 (1.27, 1.66),p<0.001
 6Mth - 2Yr: HR=3.28 (3.06, 3.53),p<0.001
 2Yr - 2.5Yr: HR=3.10 (2.69, 3.58),p<0.001
 2.5Yr - 4Yr: HR=3.32 (2.97, 3.70),p<0.001
 4Yr - 6.5Yr: HR=4.46 (3.95, 5.04),p<0.001
 6.5Yr - 10Yr: HR=6.06 (5.33,6.88),p<0.001
 10Yr - 14Yr: HR=6.98 (5.96, 8.19),p<0.001
 14Yr+: HR=10.29 (7.85, 13.50),p<0.001

65-74 vs ≥75

0 - 6Mth: HR=1.03 (0.95, 1.12),p=0.508
 6Mth - 2.5Yr: HR=1.52 (1.45, 1.60),p<0.001
 2.5Yr - 4Yr: HR=1.55 (1.43, 1.68),p<0.001
 4Yr - 4.5Yr: HR=2.36 (1.94, 2.86),p<0.001
 4.5Yr+: HR=2.02 (1.85, 2.19),p<0.001

55-64 vs ≥75

0 - 3Mth: HR=0.99 (0.89, 1.11),p=0.869
 3Mth - 9Mth: HR=1.60 (1.47, 1.75),p<0.001
 9Mth - 4Yr: HR=2.16 (2.05, 2.27),p<0.001
 4Yr - 4.5Yr: HR=3.37 (2.77, 4.09),p<0.001
 4.5Yr - 6.5Yr: HR=2.96 (2.66, 3.28),p<0.001
 6.5Yr - 7Yr: HR=3.53 (2.89, 4.31),p<0.001
 7Yr - 7.5Yr: HR=3.09 (2.50, 3.82),p<0.001
 7.5Yr - 10Yr: HR=3.54 (3.14, 4.01),p<0.001
 10Yr - 15Yr: HR=4.14 (3.64, 4.71),p<0.001
 15Yr+: HR=8.10 (5.83, 11.26),p<0.001

Figure KT11 Cumulative Percent Revision of Primary Total Knee Replacement by Gender (Primary Diagnosis OA)

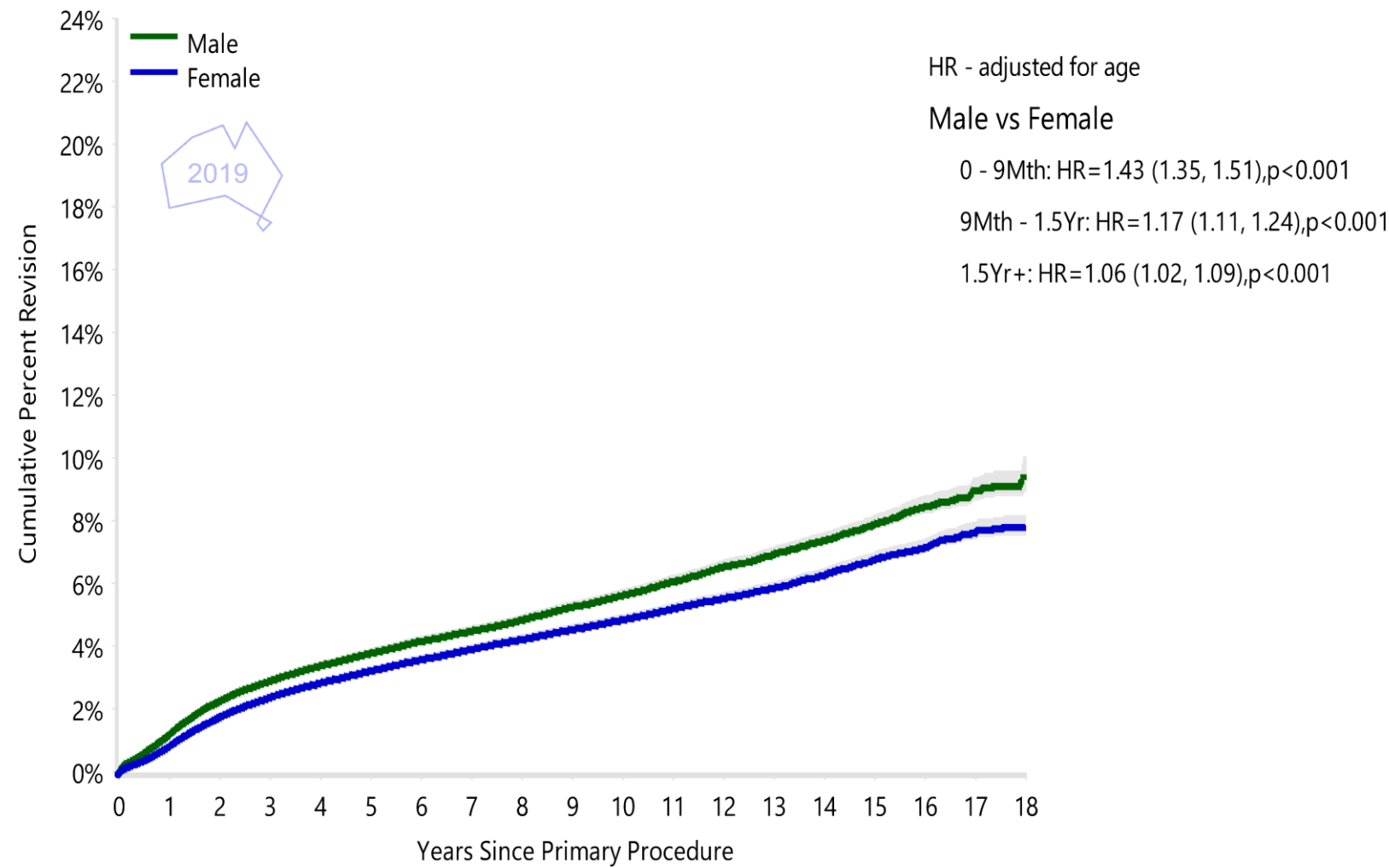
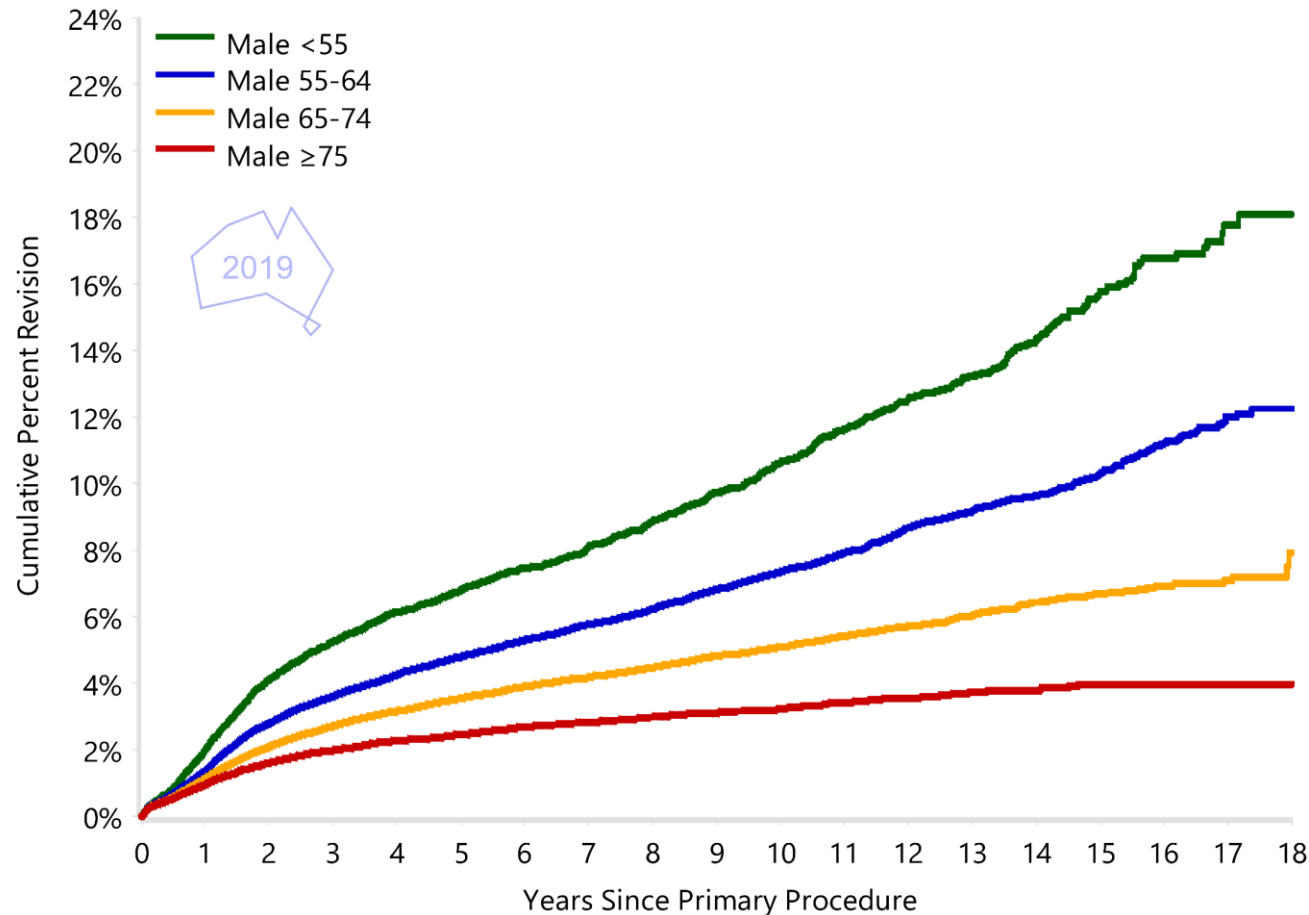


Figure KT13

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



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Male <55 vs Male ≥75

0 - 6Mth: HR=1.59 (1.33, 1.91), $p<0.001$
 6Mth - 1.5Yr: HR=2.95 (2.61, 3.33), $p<0.001$
 1.5Yr - 2Yr: HR=3.66 (3.04, 4.41), $p<0.001$
 2Yr - 2.5Yr: HR=2.81 (2.23, 3.53), $p<0.001$
 2.5Yr - 3Yr: HR=3.74 (2.91, 4.80), $p<0.001$
 3Yr - 3.5Yr: HR=2.97 (2.23, 3.95), $p<0.001$
 3.5Yr - 7Yr: HR=3.69 (3.18, 4.29), $p<0.001$
 7Yr - 8.5Yr: HR=4.61 (3.60, 5.90), $p<0.001$
 8.5Yr - 10Yr: HR=6.20 (4.75, 8.10), $p<0.001$
 10Yr+: HR=6.17 (5.06, 7.53), $p<0.001$

Male 65-74 vs Male ≥75

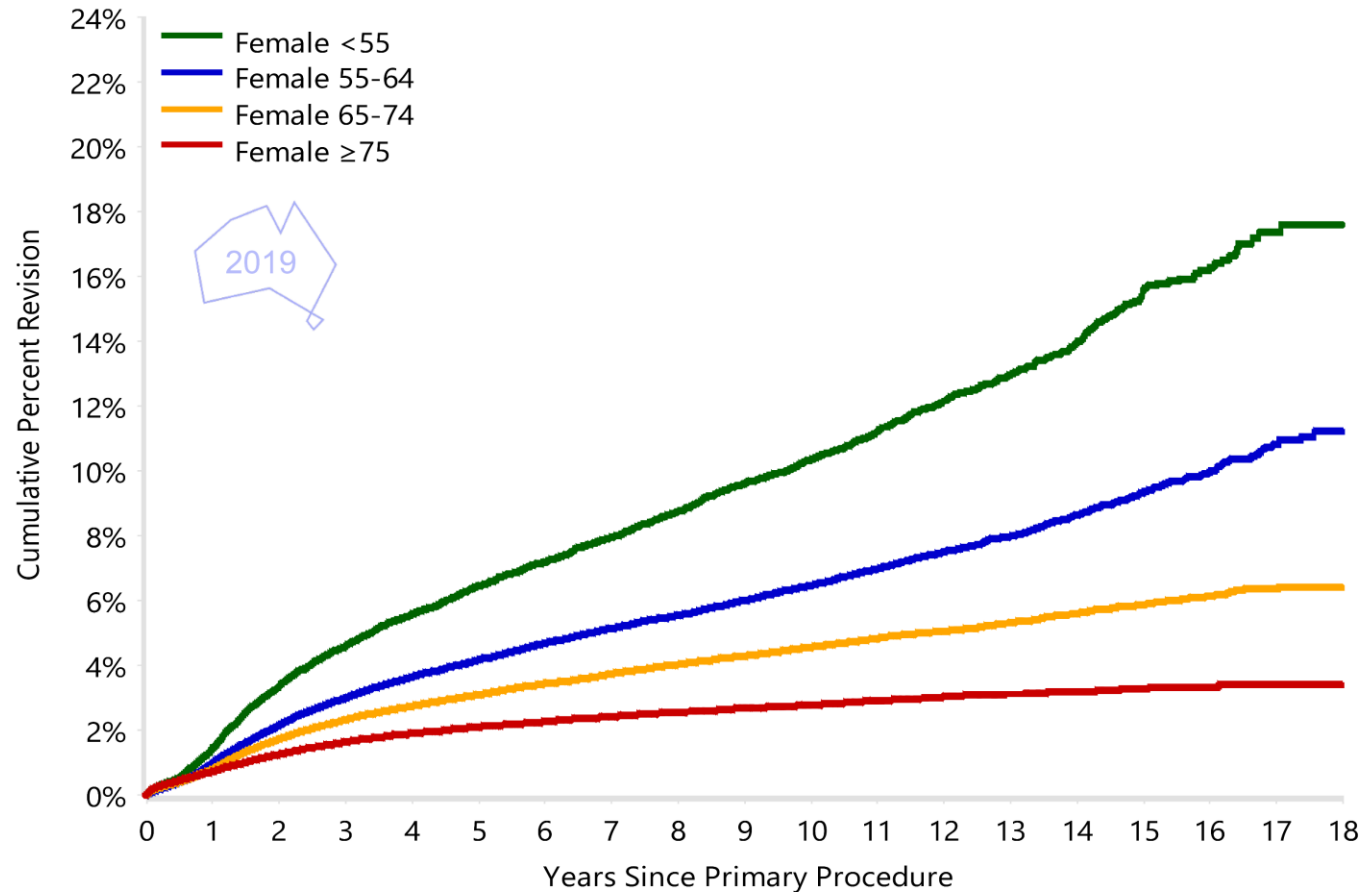
0 - 6Mth: HR=1.08 (0.96, 1.22), $p=0.218$
 6Mth - 1.5Yr: HR=1.40 (1.28, 1.53), $p<0.001$
 1.5Yr - 2.5Yr: HR=1.57 (1.40, 1.75), $p<0.001$
 2.5Yr+: HR=1.81 (1.66, 1.97), $p<0.001$

Male 55-64 vs Male ≥75

0 - 3Mth: HR=1.20 (1.03, 1.39), $p=0.020$
 3Mth - 9Mth: HR=1.53 (1.35, 1.73), $p<0.001$
 9Mth - 1Yr: HR=1.79 (1.52, 2.11), $p<0.001$
 1Yr - 4Yr: HR=2.24 (2.08, 2.42), $p<0.001$
 4Yr - 4.5Yr: HR=2.96 (2.35, 3.72), $p<0.001$
 4.5Yr - 8.5Yr: HR=2.78 (2.47, 3.13), $p<0.001$
 8.5Yr+: HR=3.80 (3.28, 4.39), $p<0.001$

Figure KT14

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



Female <55 vs Female ≥75

0 - 6Mth: HR=1.29 (1.06, 1.56),p=0.010
 6Mth - 1.5Yr: HR=3.50 (3.12, 3.93),p<0.001
 1.5Yr - 3Yr: HR=3.26 (2.90, 3.68),p<0.001
 3Yr - 4Yr: HR=3.78 (3.15, 4.54),p<0.001
 4Yr - 7.5Yr: HR=5.21 (4.52, 5.99),p<0.001
 7.5Yr - 8.5Yr: HR=7.38 (5.68, 9.60),p<0.001
 8.5Yr - 9Yr: HR=5.35 (3.53, 8.11),p<0.001
 9Yr+: HR=8.07 (6.79, 9.59),p<0.001

Female 55-64 vs Female ≥75

0 - 3Mth: HR=0.76 (0.64, 0.90),p=0.001
 3Mth - 9Mth: HR=1.56 (1.37, 1.78),p<0.001
 9Mth - 1Yr: HR=2.44 (2.07, 2.86),p<0.001
 1Yr - 3Yr: HR=2.15 (1.99, 2.33),p<0.001
 3Yr - 4Yr: HR=2.44 (2.12, 2.80),p<0.001
 4Yr - 6.5Yr: HR=3.17 (2.80, 3.59),p<0.001
 6.5Yr - 9Yr: HR=3.20 (2.75, 3.73),p<0.001
 9Yr - 11Yr: HR=4.17 (3.43, 5.06),p<0.001
 11Yr+: HR=4.93 (4.12, 5.90),p<0.001

Female 65-74 vs Female ≥75

0 - 6Mth: HR=0.95 (0.84, 1.07),p=0.428
 6Mth - 1Yr: HR=1.38 (1.22, 1.57),p<0.001
 1Yr - 1.5Yr: HR=1.80 (1.61, 2.02),p<0.001
 1.5Yr - 2Yr: HR=1.61 (1.42, 1.83),p<0.001
 2Yr - 4Yr: HR=1.55 (1.41, 1.71),p<0.001
 4Yr+: HR=2.10 (1.89, 2.33),p<0.001

Figure KT9

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

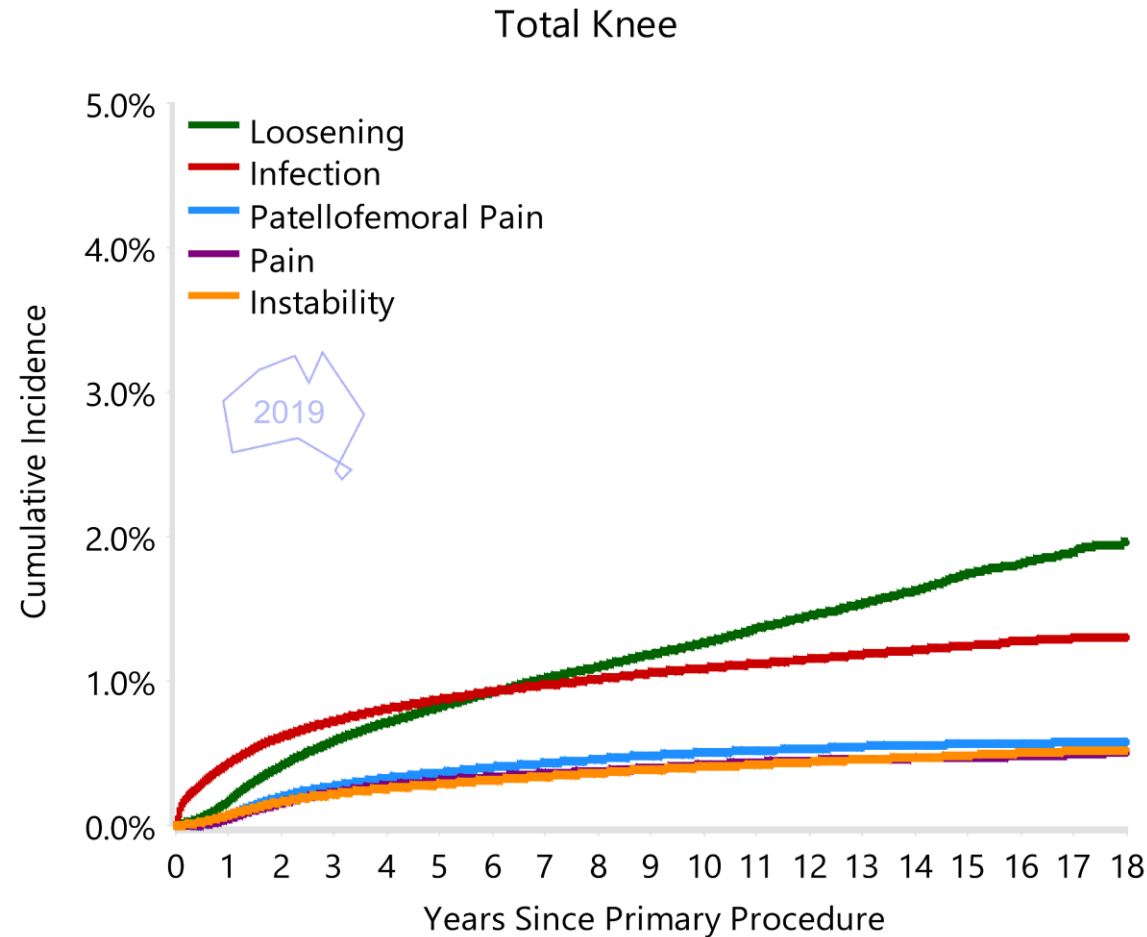
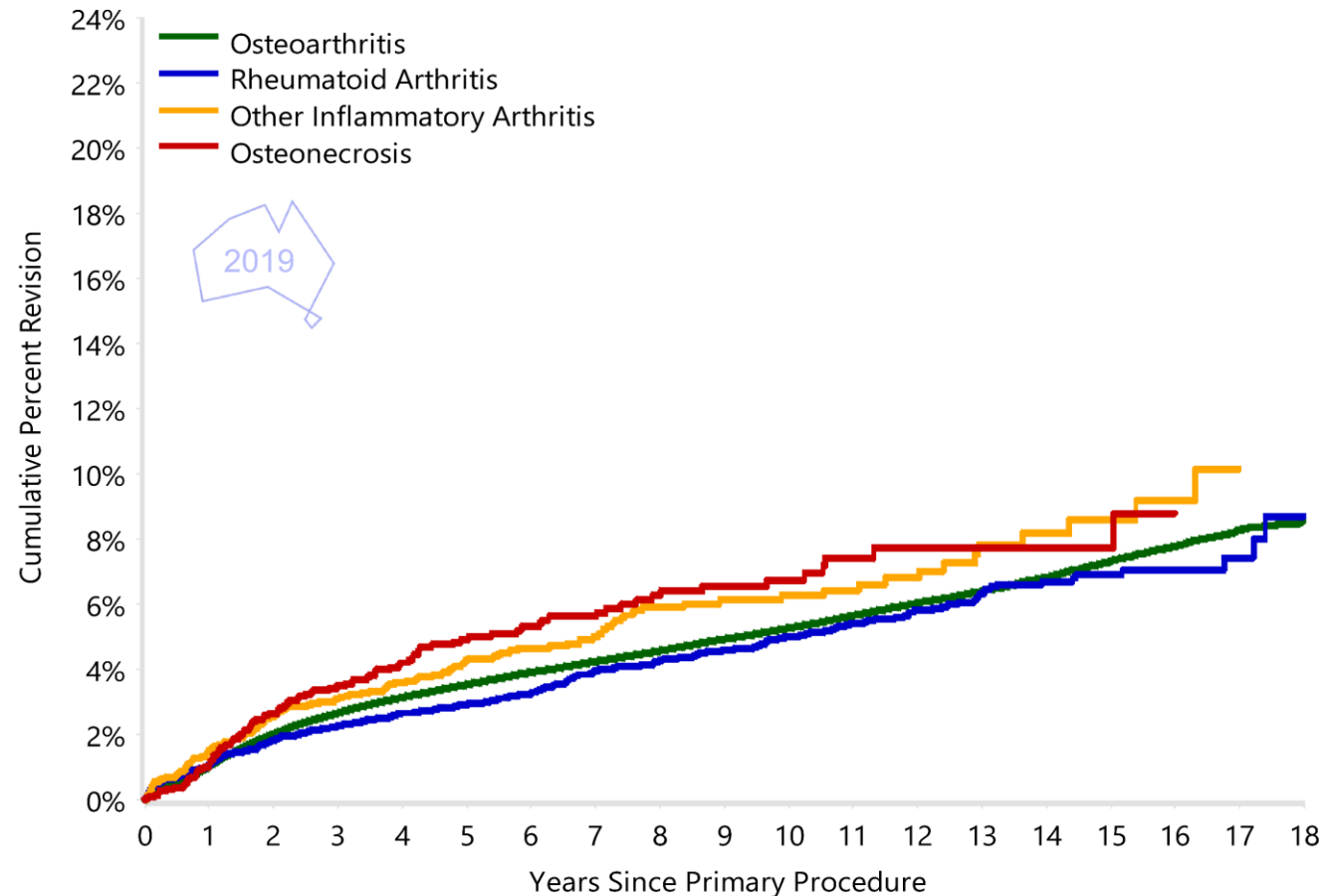


Figure KT7

Cumulative Percent Revision of Primary Total Knee Replacement by Primary Diagnosis



HR - adjusted for age and gender

Rheumatoid Arthritis vs Osteoarthritis

0 - 3Mth: HR=1.37 (1.02, 1.84),p=0.035

3Mth - 9Mth: HR=0.75 (0.53, 1.06),p=0.100

9Mth - 1.5Yr: HR=0.53 (0.39, 0.72),p<0.001

1.5Yr+: HR=0.72 (0.63, 0.83),p<0.001

Other Inflammatory Arthritis vs Osteoarthritis

0 - 9Mth: HR=1.50 (1.10, 2.05),p=0.010

9Mth - 1.5Yr: HR=0.71 (0.45, 1.11),p=0.134

1.5Yr+: HR=1.05 (0.85, 1.29),p=0.654

Osteonecrosis vs Osteoarthritis

Entire Period: HR=1.33 (1.10, 1.62),p=0.003