2021 Annual Report
Patient Presentation for Surgeons

KNEE REPLACEMENT
Knee Replacement
Figure KT7  Cumulative Percent Revision of Primary Total Knee Replacement (Primary Diagnosis OA)

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

Note: Restricted to modern prostheses
Males have a higher rate of revision compared to females.

Note: Restricted to modern prostheses
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
The rate of revision decreases with increasing age. This difference becomes more evident with time.
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
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.
### Table KT6  Cumulative Percent Revision of Primary Total Knee Replacement by Primary Diagnosis

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

Note: Restricted to modern prostheses
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
Restricted to modern prostheses
Cumulative Percent Revision Diagnosis of Primary Total Knee Replacement by BMI Category (OA)

**Obese Class 2 (35.00-39.99)**

- Infection
- Loosening
- Instability
- Pain
- Patella Erosion

**Obese Class 3 (≥40.00)**

- Infection
- Loosening
- Instability
- Pain
- Patella Erosion

Note: BMI has not been presented for patients aged ≤19 years
Restricted to modern prostheses
Unicompartmental Knee Replacement
Figure KP5  Cumulative Percent Revision of Primary Unicompartmental Knee Replacement (Primary Diagnosis OA)

Cumulative Percent Revision

- Unicompartmental

Years Since Primary Procedure

- 0
- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15
- 16
- 17
- 18
- 19
- 20

Note: Restricted to modern prostheses

30.7% at 20 years
The rate of revision decreases with increasing age. This difference becomes more evident with time.
Females have a higher rate of revision than males.

Note: Restricted to modern prostheses
<table>
<thead>
<tr>
<th>Gender</th>
<th>Age</th>
<th>N Revised</th>
<th>N Total</th>
<th>1 Yr</th>
<th>3 Yrs</th>
<th>5 Yrs</th>
<th>10 Yrs</th>
<th>15 Yrs</th>
<th>20 Yrs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>&lt;55</td>
<td>446</td>
<td>2694</td>
<td>3.0 (2.4, 3.7)</td>
<td>7.3 (6.4, 8.5)</td>
<td>9.6 (8.5, 10.9)</td>
<td>19.9 (17.9, 22.0)</td>
<td>33.0 (29.8, 36.4)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>55-64</td>
<td>908</td>
<td>8044</td>
<td>2.0 (1.7, 2.4)</td>
<td>4.7 (4.2, 5.2)</td>
<td>6.8 (6.2, 7.4)</td>
<td>13.0 (12.1, 14.1)</td>
<td>22.3 (20.7, 24.0)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>65-74</td>
<td>703</td>
<td>8801</td>
<td>1.6 (1.3, 1.9)</td>
<td>4.0 (3.6, 4.5)</td>
<td>5.5 (5.0, 6.1)</td>
<td>11.1 (10.2, 12.0)</td>
<td>16.9 (15.5, 18.4)</td>
<td></td>
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<tr>
<td></td>
<td>≥75</td>
<td>218</td>
<td>4683</td>
<td>1.6 (1.2, 2.0)</td>
<td>3.2 (2.7, 3.7)</td>
<td>4.0 (3.4, 4.7)</td>
<td>7.4 (6.4, 8.5)</td>
<td>9.0 (7.6, 10.7)</td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>&lt;55</td>
<td>571</td>
<td>3148</td>
<td>3.0 (2.4, 3.7)</td>
<td>8.1 (7.2, 9.2)</td>
<td>11.4 (10.3, 12.7)</td>
<td>20.2 (18.5, 22.1)</td>
<td>31.4 (28.9, 34.1)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>55-64</td>
<td>889</td>
<td>6557</td>
<td>1.9 (1.6, 2.3)</td>
<td>4.9 (4.4, 5.5)</td>
<td>7.6 (6.9, 8.3)</td>
<td>14.0 (13.0, 15.1)</td>
<td>25.7 (24.0, 27.6)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>65-74</td>
<td>705</td>
<td>6654</td>
<td>1.8 (1.5, 2.2)</td>
<td>4.5 (4.0, 5.1)</td>
<td>6.6 (5.9, 7.3)</td>
<td>13.5 (12.4, 14.6)</td>
<td>21.0 (19.4, 22.8)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>≥75</td>
<td>250</td>
<td>3799</td>
<td>1.9 (1.5, 2.4)</td>
<td>3.9 (3.3, 4.7)</td>
<td>5.5 (4.8, 6.4)</td>
<td>8.9 (7.8, 10.2)</td>
<td>10.6 (9.2, 12.2)</td>
<td></td>
</tr>
</tbody>
</table>

TOTAL   | 4690 | 44380     |

Note: Restricted to modern prostheses.
The main reasons for revision are for loosening and progression of disease.