CORAIL®
Hip System
Clinical Summary
347 CORAIL® Stems were implanted in 320 patients between July 1986 and December 1990. The mean follow up of the cohort is 20.9 years. Only 12 stems (3%) were revised, and 7 of these were well-fixed stems that were removed to facilitate acetabular revision. When all causes of stem removal were considered, the CORAIL stem survival in this series was 97.7% at 15 years, 96.8% at 20 years and 96.3% in the 25th year. At final follow up 83% of patients were classified as having a totally normal hip using the Sedel score. The mean Harris Hip Score was 85.

A consecutive cohort of 153 patients aged over 80 years were included in this study. The mean age was 84.5 (range 80-95 years) and 120 (78%) were females. 144 patients received a collared CORAIL Stem. The mortality rate at 90 days was 0.65%. Only one patient required revision, due to a dislocation following trauma. The Oxford Hip Score improved from a mean of 24 (range 4-41) pre-operatively to a mean of 46 (range 9-48) at 90 days. This study demonstrates the successful use of a collared cementless implant in an elderly population, with excellent short-term postoperative complication rate, low mortality rate and good functional outcomes.
Over the last 15 years, the PINNACLE® Acetabular Cup System has been provided to over 2,500,000 patients.1

The CORAIL Hip System celebrated 30 years in 2016, and in that time has been provided to over 2,000,000 patients.2

According to the 2017 AOANJRR annual report, the CORAIL PINNACLE combination is the most implanted combination in cementless total hip replacement across Australia.4

Based on the 2017 Annual Report, CORAIL PINNACLE was the most implanted combination in total hip replacement across England, Wales, Northern Ireland and the Isle of Man.5,6

### Australian Orthopaedic Association National Joint Replacement Registry Data for the CORAIL/PINNACLE Combination

<table>
<thead>
<tr>
<th>Combination</th>
<th>Total</th>
<th>Year 1</th>
<th>Year 5</th>
<th>Year 10</th>
</tr>
</thead>
<tbody>
<tr>
<td>CORAIL, PINNACLE</td>
<td>34,210</td>
<td>1.6% (1.5%-1.8%)</td>
<td>3.1% (2.9%-3.3%)</td>
<td>5.2% (4.6%-5.8%)</td>
</tr>
</tbody>
</table>

### National Joint Registry for England, Wales, Northern Ireland and the Isle of Man. Registry Data for the CORAIL/PINNACLE Combination

<table>
<thead>
<tr>
<th>Combination</th>
<th>Implantations</th>
<th>Year 3</th>
<th>Year 5</th>
<th>Year 10</th>
</tr>
</thead>
<tbody>
<tr>
<td>CoC</td>
<td>37,846</td>
<td>1.79% (1.65%-1.93%)</td>
<td>2.40% (2.24%-2.58%)</td>
<td>3.90% (3.48%-3.47%)</td>
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<tr>
<td>CoP</td>
<td>21,533</td>
<td>1.21% (1.05%-1.39%)</td>
<td>1.74% (1.50%-2.00%)</td>
<td>2.78% (2.25%-3.44%)</td>
</tr>
<tr>
<td>MoP</td>
<td>48,744</td>
<td>1.37% (1.26%-1.48%)</td>
<td>1.70% (1.57%-1.84%)</td>
<td>3.05% (2.71%-3.43%)</td>
</tr>
</tbody>
</table>

* blue italics signify that fewer than 250 cases remained at risk at these time points
A total of 306 patients received a Cathcart modular head on a collared CORAIL uncemented stem as a hemi-arthroplasty. The mean age of the patients was 83.3 years (range 46.6 to 94) and 216 (70.6%) were women.

The mortality rate at 30 days was 5.8% which compares well to the 2011 NICE guidelines. 2 patients required revision to THR and in both cases this was due to continued deterioration of the acetabulum.

The primary aim of hemi-arthroplasty is to allow early mobilization and a return to normal activity. Within this study a total of 46.5% of patients returned to their own home by 30 days, which increased to 73.2% by 120 days. At one year a high proportion of patients had achieved their pre-fracture mobility rate.

Using a modern uncemented hip implant in a hemi-arthroplasty for intracapsular hip fracture provided satisfactory results, with a good rate of return to pre-injury place of residence and an acceptable mortality rate.

A total of 49 uncemented THRs were performed using the CORAIL Stem in 44 patients aged under 30 years (mean 25, range 15-30).

At a mean follow up of 13 years the survivorship of the femoral stem was 100%.

100% of stems were well integrated, with no signs of radiological loosening and no signs of subsidence.

The study reports excellent Harris Hip Scores (Mean 90, range 62-100)
References

3. Orthopaedic Data Evaluation Panel. ODEP product ratings. Latest ODEP ratings can be found at www.odep.org.uk [Accessed 02/01/2017].

Table TY1: Cumulative Percent Revision of Primary Total Conventional Hip Replacement Combinations with 10 Year Data

<table>
<thead>
<tr>
<th>Component</th>
<th>N Revised</th>
<th>N Total</th>
<th>1 Yr</th>
<th>5 Yrs</th>
<th>10 Yrs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Femoral</td>
<td>Pinnacle</td>
<td>34210</td>
<td>82</td>
<td>155</td>
<td>391</td>
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<tr>
<td>Acetabular</td>
<td>Pinnacle</td>
<td>34070</td>
<td>314</td>
<td>391</td>
<td>55</td>
</tr>
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</table>

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