

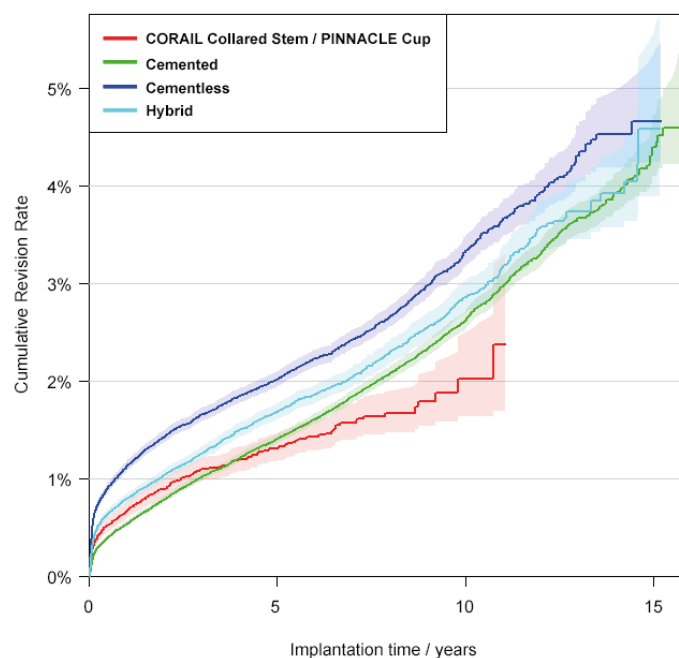
# NJR Analysis of the Collared CORAIL® Femoral Stem and the PINNACLE® Acetabular Cup in Patients aged 70 and over.

National Joint Registries provide valuable information on the revision rates and survivorship of orthopaedic implants. Typically they include large cohorts with data from all surgeons and from all centres, irrespective of surgeon experience level. The National Joint Registry for England, Wales, Northern Ireland and the Isle of Man (NJR) has been in operation since 2003 and in that time has collected data on over 990,000 primary total hip replacements (THR).<sup>1</sup>

The standard CORAIL® Femoral Stem is available both with and without a collar. Proponents of the use of a collared prosthesis claim that it provides advantages in the early stability of the implant, allowing for earlier post-operative weight bearing, protection against subsidence, and a positive dispersion of the vertical forces via the collar into the medial calcar.<sup>2-3</sup>

The NJR has produced specific reports analyzing the performance of the CORAIL Collared devices used in combination with the PINNACLE® Acetabular System in patients aged 70 and over at the time of surgery. This analysis was commissioned by DePuy Synthes, but conducted and validated by the NJR. The reports detail 34,808 implantations of CORAIL Collared Stems and PINNACLE Acetabular Cups in patients aged 70 and over (mean age 76.6, 37.8% male). In order to better understand the performance of the CORAIL and PINNACLE Implants the reports provide comparison to three sets of class data for patients aged 70 and over; all cemented THR (N=253,460), all Hybrid THR (130,237) and all cementless THR (N=144,511). The cumulative revision rates (CRR) are presented on the chart and the reports provide hazard ratios to compare the relative risk of revision. The hazard ratios presented below are adjusted for any differences in age, gender, diagnosis and year of implantation. All Metal-on-Metal was excluded. All reports can be accessed at <http://www.corailpinnacle.net/resources>.

**Primary Hip - Aged 70 and over  
Cumulative Revision Rate<sup>7</sup>**



## KEY MESSAGES

CORAIL Collared with PINNACLE in patients aged 70 and over displays a

**12%**  
**reduced risk of revision**  
when compared to all  
Cemented Hips  
HR - 0.88 (0.79, 0.98) p=0.025<sup>4</sup>

**20%**  
**reduced risk of revision**  
when compared to all  
Hybrid Hips  
HR - 0.80 (0.72, 0.90) p<0.001<sup>5</sup>

**42%**  
**reduced risk of revision**  
when compared to all  
Cementless Hips  
HR - 0.58 (0.52, 0.65) p<0.001<sup>6</sup>



## References

1. National Joint Registry for England, Wales, Northern Ireland and the Isle of Man, 15th Annual Report, 2018. Table 3.3. Available from: [www.njrreports.org.uk](http://www.njrreports.org.uk)
2. H. Strom, O. Nilsson, J. Milbrink, et al. The effect of early weight bearing on migration pattern of the uncemented CLS stem in total hip arthroplasty. *J Arthroplasty*, 22 (2007), p. 1122
3. Demey G, Fary C, Lustig S, Neyret P, Ait si Selmi T. Does a Collar Improve the Immediate Stability of Uncemented Femoral Hip Stems in Total Hip Arthroplasty? A Bilateral Comparative Cadaver Study. *J Arthroplasty* 26 (2011), No.8, p. 1549
4. Bespoke Implant report CORAIL Collared Stem-Pinnacle Cup vs Cemented NJR. Report can be accessed at <http://www.corailpinnacle.net/resources>
5. Bespoke Implant report CORAIL Collared Stem-Pinnacle Cup vs Hybrid NJR. Report can be accessed at <http://www.corailpinnacle.net/resources>
6. Bespoke Implant report CORAIL Collared Stem-Pinnacle Cup vs Cementless NJR. Report can be accessed at <http://www.corailpinnacle.net/resources>
7. Bespoke Implant report CORAIL Collared Stem-Pinnacle Cup KM Chart. Report can be accessed at <http://www.corailpinnacle.net/resources>

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