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Lower risk of prosthetic joint infection (PJI) and revision for infection with OXINIUM◊/XLPE primary THA versus other bearing combinations[1,2]

Why is PJI a growing concern?

No. 1 **indication** for revision arthroplasty[3]

400% projected increase in demand for arthroplasty from the early 2000s to 2030[4]

3.6x higher risk of death for THA patients after PJI versus average mortality risk at 65 years old[5]

$1.85 billion projected annual US hospital expense for PJI by 2030 (THA: $753.4 million, TKA: $1.1 billion)[6]

Evidence from two real-world analyses of primary THA patients has shown that:[1,2]

	Odds of PJI-related infection/ inflammation were:[1*]	Risk of revision for infection was:[2]
Versus metal/ XLPE	**27% lower with OXINIUM/XLPE** Medical record-diagnosed PJI-related infection or inflammation validated with procedure code hip imaging: OXINIUM/XLPE 1.29% vs metal/ XLPE 1.77% (odds ratio [OR] 0.73; p=0.025)	**24% lower with OXINIUM/XLPE** (adjusted hazard ratio [HR]: 0.76; p=0.008)
Versus ceramic/ XLPE	**34% lower with OXINIUM/XLPE** Medical record-diagnosed PJI-related infection or inflammation validated with procedure code hip imaging: OXINIUM/XLPE 1.33% vs ceramic/ XLPE 1.99% (OR 0.66; p=0.0027)	**20% lower with OXINIUM/XLPE** (adjusted HR: 0.80; p=0.016)
Analysis methodology	**Included >123,000 patients** Propensity score matched primary THA patients with PJI diagnosis from the PREMIER PINC AI Healthcare Database (2017–2022)	**Included >784,000 patients** Bespoke implant report produced by the NJR (data up to Jan 2026)‡ for primary THA patients with up to 20 years follow-up

Up to 2 years†

Up to 20 years

Proprietary OXINIUM (OXIdized zircoNIUM) Technology:

Contains virtually no cobalt, chromium or nickel[7,8]

Has been shown in laboratory testing to have: **Improved wear resistance**[9–14] **and biocompatibility**[15] versus CoCr

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Has shown the **lowest revision risk of all modern bearing combinations** across registries in primary THA (with XLPE)[16–19§]

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Abbreviations: CoCr = cobalt chrome; HR = hazard ratio; OR = odds ratio; PJI = prosthetic joint infection; THA = total hip arthroplasty; TKA = total knee arthroplasty; XLPE = cross-linked polyethylene.

*As the AJRR reported 96% of THAs used XLPE during the analysis period (2017–2022), it was assumed that all procedures captured used XLPE.[1] †Before validation via cross-referencing with imaging procedure codes (restricting to medical record-diagnosed infection/inflammation), PJI-related infection/inflammation rates for OXINIUM/XLPE vs ceramic/XLPE were significantly lower at 1, 3, and 6 months, but not at 12 or 24 months; versus metal/XLPE, differences were significantly lower at all time points (at 2 years: 7.37% vs 8.37%; OR 0.87 [95% CI: 0.77–0.99], p=0.032). ‡The data used for this analysis was obtained from the NJR Supplier Feedback System. The Healthcare Quality Improvement Partnership (HQIP) and/or the NJR take no responsibility for the accuracy, currency, reliability and correctness of any data used or referred to in this report, nor for the accuracy, currency, reliability and correctness of links or references to other information sources and disclaims all warranties in relation to such data, links and references to the maximum extent permitted by legislation. §See linked registry analysis (QR code) for other modern bearing combinations compared to metal/XLPE. Ceramicised metal/XLPE is equivalent to 'OXINIUM/XLPE'. As in previous years, the Registry urges caution in the interpretation of this result. This bearing is a single company product, used with a small number of femoral stem and acetabular component combinations. See linked registry analysis (QR code) for further details.

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