

# Does the use of robotic technology impact revision rates in total knee arthroplasty?

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## Introduction

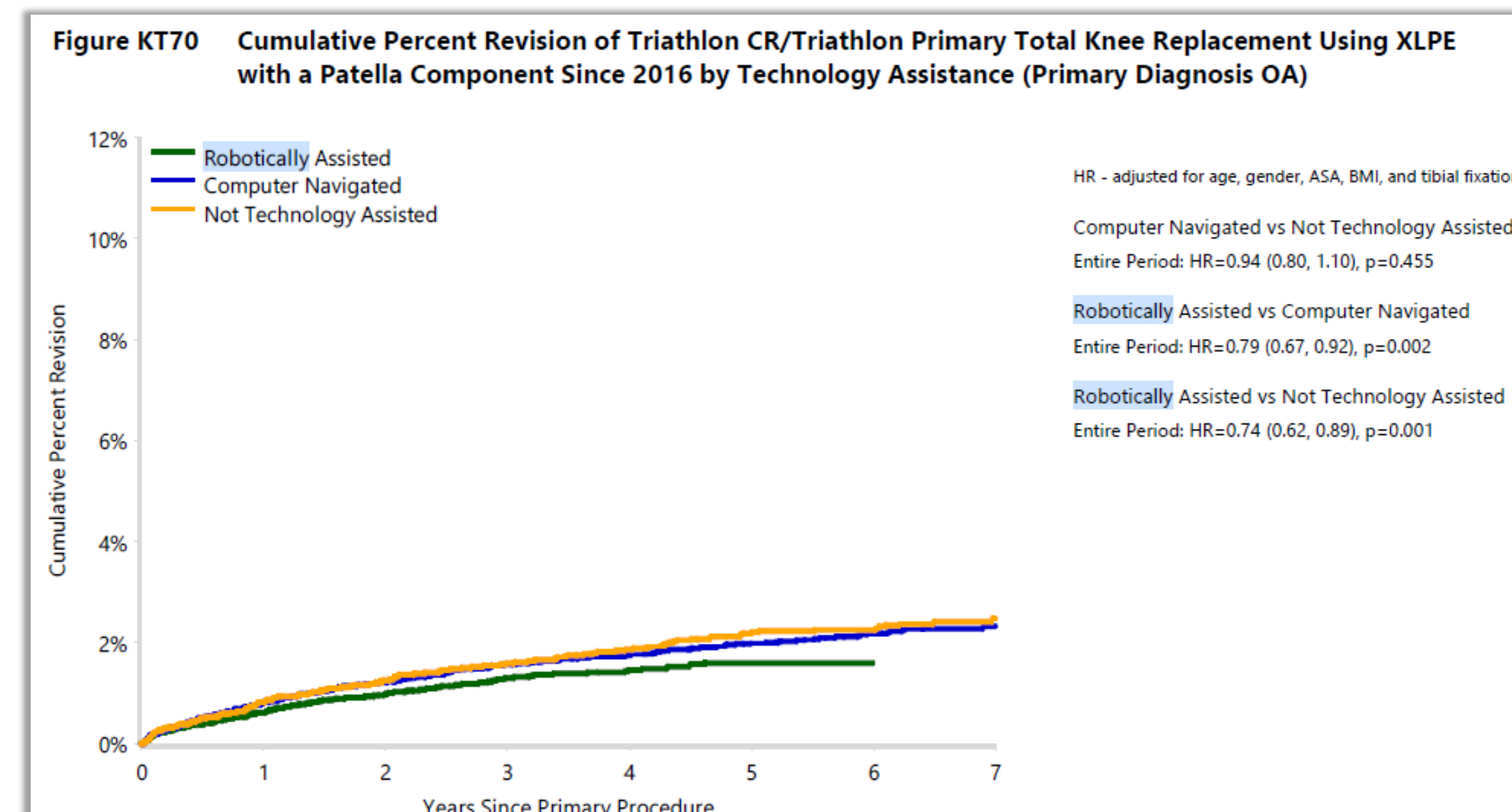
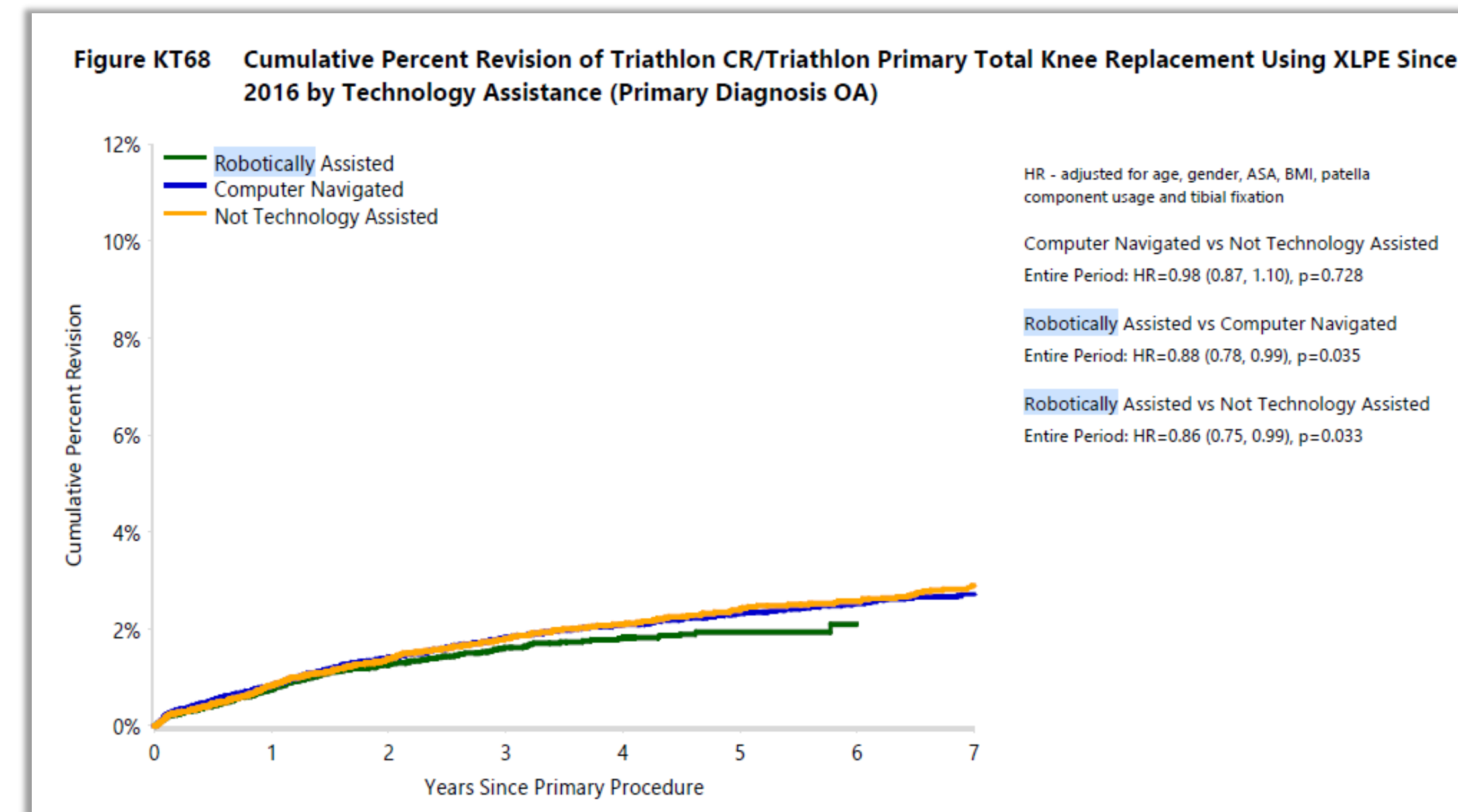
The purpose of this study was to review published data **comparing revision rates** in patients who underwent **RA-TKA versus M-TKA**.

## Methods

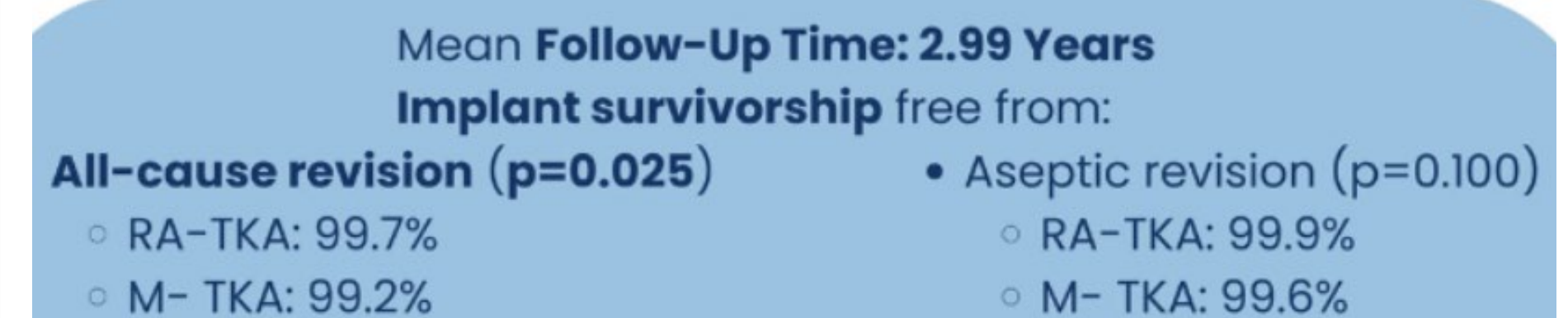
A literature search was conducted to review publications that reported implant survivorship comparing RA-TKA and M-TKA, including publications in peer-reviewed journals, national registry reports and abstracts presented at scientific conferences.

## Results

The 2024 Australian Orthopedic Association National Joint Replacement Registry (AOANRJJ) reported knees implanted with **RA-TKA** had **significantly reduced six-year revision rates** when compared to both computer navigation ( $p=0.035$ ) and procedures without technology assistance ( $p=0.033$ ).<sup>1</sup>



Additionally, the RA-TKA cohort experienced **significantly reduced revision rates** compared to computer-navigation ( $p=0.002$ ) and procedures without technology assistance ( $p=0.001$ ) **when implanted with a patella**.<sup>1</sup>



An Institutional Registry reported a mean follow-up of 2.99 years, **RA-TKA** had **significantly improved all-cause implant revision rate and improved aseptic revision rate** when compared to M-TKA.<sup>2</sup>

## Discussion

Improved implant revision rates with RA-TKA compared to M-TKA has been observed in both large real-world evidence sources and in institutional registry studies. This evidence is encouraging as it demonstrates the use of CT-based RA-TKA can help improve implant survivorship for TKA patients.