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## Outcome of Triathlon total knee replacement: Minimum six-year follow-up

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The Triathlon Total Knee Replacement (TKR) was designed with a single Flexion-Extension Axis (FEA) to maintain ligament tension throughout range of motion, reduce mid-flexion instability and reduce contact stresses and sub-laminal wear. Our study assessed mid-term survivorship of the Triathlon TKR. Secondary outcomes of radiological loosening and clinical Oxford knee scores were assessed. We retrospectively analyzed 394 patients who received Triathlon TKR from January 2009 to October 2011. Mean patient age was 68 years. Indication for operation was predominantly osteoarthritis and mean follow-up was over seven years. Almost 95% of operations used articular surface mounted navigation for distal femoral and proximal tibial cuts. Implant survivorship was assessed via all cause revision rate and revision for aseptic loosening. Follow-up radiographs were assessed using 'The Knee Society Roentgenographic Evaluation System'. Oxford knee scores were obtained using virtual arthroplasty databases and telephone questionnaires. Results showed that 359 TKRs were cruciate retaining; the remaining 35 were posterior stabilized. Patella resurfacing occurred in 363 knees. All cause revision rate was 3.04% (12/394) with aseptic loosening in 0.76% (3/394). Radiological assessment showed that of the 382 non-revised TKR, 348 had no evidence of radiolucent lines. Of the 34 TKR with radiolucent lines, five showed radiolucency to all tibial component zones. Oxford knee scores showed an improvement in clinical outcome for patients post-operatively. In conclusion, to our knowledge this is the largest study with mid-term follow-up reporting on navigated Triathlon TKR and our results are comparable to other knee replacement designs in orthopedic literature.

## Biography

Andrew Clarke is an NHS Orthopaedic Consultant at Institution of Plymouth Hospitals NHS Trust at UK. His are of interest are Wrist surgery, Elbow and Hand surgery.

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