# A five-year follow up of gait in robotic assisted vs conventional unicompartmental knee arthroplasty

Lindsay Jane Millar[a], Matthew Banger[a], Philip John Rowe[a], Mark Blyth[b], Bryn Jones[b], Angus Maclean[b]

## Abstract

Recently, systems have been developed to improve alignment of unicompartmental knee arthroplasty (UKA) implants, although improvement in function has been difficult to document. The MAKO RIO robotic surgery system has previously shown improvements in in knee flexion during weight acceptance (WA) in comparison to conventional methods at a one year follow up. This study aimed to determine if these improvements remained at five years follow up. Twenty five MAKO and 21 conventional knees were tested using three dimensional gait analysis to measure knee kinematics. Results demonstrated that the MAKO group achieved significantly greater knee flexion in WA than the conventional group which was consistent with results are one year. This could be due to the improved accuracy of prosthesis implantation offered by the MAKO system.

## Keywords

Unicompartmental knee arthroplasty

Gait

Motion analysis

Knee kinematics