Reviewer's report

Title: The association between Femoral Tilt and impingement-free range-of-motion in total hip arthroplasty

Version: 1 Date: 21 February 2012

Reviewer: Glen Turley

Reviewer's report:

The authors have conducted a robust and thorough study on an aspect of prosthetic component orientation that has not been considered before. The abstract and background to the paper provide a clear introduction to the topic and a good overview of the results. The methods section is clear to a point. Description of the patient recruitment and computer simulation are easy to understand and concise. However, the description of the second part of the analysis needs more work. I would suggest breaking down the stages of this analysis into separate paragraphs with a topic sentence to introduce each stage [Minor Essential Revision].

The discussion section addresses the implications of the findings well and also discusses its limitations. I would say there is only one omission that could be commented upon - There are three factors that affect femoral stem orientation, femoral tilt which is the topic of the authors’ study, femoral antetorsion which is well commented upon in the literature and femoral varus/valgus. The authors have not acknowledged how this later factor can affect range of motion. It is the reviewer’s opinion that this merits being noted in the discussion and will strengthen the author findings that femoral stem orientation is a multi-faceted problem which has a significant effect upon post-operative range of motion [Discretionary Revision].

Level of interest: An article of outstanding merit and interest in its field

Quality of written English: Acceptable

Statistical review: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:

No competing interests.