Reviewer's report

Title: Pullout strength of pedicle screws with cement augmentation in severe osteoporosis: A comparative study between cannulated screws with cement injection and solid screws with cement pre-filling

Version: 3 Date: 29 November 2010

Reviewer: bryan conrad

Reviewer's report:

1. Although the manufacturer claims that the product is suitable for a variety of applications this does not mean that it is suitable for your particular investigation.

2. Based on the provided reference, the density of the synthetic material used in this investigation seems to be appropriate. However, I believe that the in addition to matching the density, it is important that the test model match the strength and modulus of osteoporotic bone. Based on the strength and modulus information provided by the manufacturer, it seems that it is well below what has previously been reported for osteoporotic cancellous bone.

3. I agree that for the purposes of this comparative study, using synthetic bone is appropriate. However, the discussion should note that the test material may not match the material properties of osteoporotic cancellous bone and that extrapolation of these findings to clinical utilization should be done with caution.

Level of interest: An article of importance 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:

I declare that I have no competing interests