Reviewer's report

Title: Comparing Radiation Exposure During Percutaneous Vertebroplasty Using One- vs. Two-fluoroscopic Technique

Version: 1 Date: 14 September 2012

Reviewer: Thomas Mroz

Reviewer's report:

This study attempts to assess radiation exposure to the patient and surgeon during vertebroplasty.

Please address the following:

1) It appears from the pictures that the source of the fluoroscope is closest to the surgeon. Was this true intraoperatively, and if so, why? Standing closest to the source is associated with higher exposure to surgeon.

2) Please discuss the power analysis that was done to arrive at your sample size.

3) The paper does a good job in reporting their results, but it leaves the reader without the ability to apply them if they do not know how to interpret the radiation doses reported. Several authors have mentioned this in their studies (e.g. Mroz et al). It would strengthen your paper if you add references and a short discussion on how to minimize exposure. The paramount concern of this topic is that ionizing radiation is associated with cancer. How do these doses reported in this paper relate to Occupational Exposure Limits? How many procedures can be done before surgeons need to worry about exceeding these limits? What techniques can be employed to minimize radiation exposure?

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