Reviewer's report

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

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Reviewer: George Panayiotakis

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General comment:
This paper describes a comparison study between two techniques used for Percutaneous Vertebroplasty (PV). Although it could be of potential interest, the significance of the results is decreased due to insufficient data collection. The authors however could try to improve it based on the following comments. Probably this work could be better suited as a technical note rather than an original article.

Major Compulsory Revisions

1. Methods ("Dosimetry") and figure 1: The use of only one dosimeter to estimate patient dose, significantly decreases the accuracy and validity of the results. The authors should comment on this limitation.

2. Methods ("PV with two fluoroscopes"): The last sentence referring to 26 patients, should be removed, since it creates a discrepancy with what is mentioned previous paragraphs (13 patients).

3. Results: Validity of results is significantly limited due to the absence of parameters that are directly connected to the absorbed dose, such as the irradiation time, kV, pulses per second, etc. This limitation has to be clearly stated in the manuscript.

4. Discussion (first paragraph): The derived results should be further compared with relevant dose data corresponding to conventional (single fluoroscope) PV. Important references are missing (Miller et al, Interv. Radiol. 2003, Fitousi et al, Spine 2006, Mehdizade et al, Neuroradiology 2004).

5. Discussion (second paragraph): The operative time cannot be linked to radiation exposure. The authors should avoid such statements, since the irradiation time was not measured.

6. Discussion (third and fourth paragraph): The fact that, although the patient dose seems to decrease, the dose to the operator does not change, seems somehow strange. The authors should discuss and if possible justify this fact.

7. Figure 3: it is not relevant to any part of the manuscript, neither does it add any additional value to it.

Level of interest: An article of limited interest
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