Reviewer’s report

Title: Supplementary Addendum to "Radiation dose of digital radiography (DR) versus micro-dose x-ray (EOS) on patients with adolescent idiopathic scoliosis: 2016 SOSORT- IRSSD "John Sevastic Award" Winner in Imaging Research."

Version: 0 Date: 03 Nov 2017

Reviewer: Ian Stokes

Reviewer's report:

This is a useful addendum to the published paper, as it provides a value for effective dose that probably more likely corresponds to the clinical use of spinal radiography.

Some parts of the present addendum are unclear or incomplete. The following clarifications are recommended.

At some point in the main text it would be helpful to readers of Scoliosis and Spinal Disorders to note that filtration using copper and/or aluminum alters the energy spectrum of the x-ray beam, and this in turn alters tissue absorption and hence effective x-ray dose. (If I understand this issue correctly).

Line 17: "simulation of the effective dose" -> "dose calculated by simulation using PCXMC 2.0" (consistent with text in the original article Hui et al. 2016). Similarly line 29: "simulation of effective dose" -> "dose calculated by simulation using PCXMC 2.0"

Line 19: "one additional parameter" - specify "including more realistic representation of x-ray filtration" or similar.

Line 30: "the manuscript" -> "Hui et al. 2016"

Line 31. Apparently they recalculated effective dose for the EOS system only, after including dual filtration. If so, this should be specified here in the text. Also, lines 36/37: "We have verified that with the addition of the aluminum filter...." -> "We recalculated effective dose with the additional (aluminum) filtration and this showed that the average effective dose for the EOS micro-dose protocol..."

Line 38: specify that 2.6 corresponds to the value given for EOS Effective Dose (μSv) in Table 3 of Hui et al. 2016
Line 39: "Dr. Pedersen and colleagues" give a reference to these findings (if published) - otherwise cite as 'personal communication' or similar. (I could not find a corresponding publication via Medline search).

Line 49 "be" -> "been".

Line 52: "the article" -> "Hui et al. 2016"

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