Reviewer's report

Title: Estimating Radiation Effective Doses from Whole Body Computed Tomography Scans Based on U.S. Soldier Patient Height and Weight

Version: 1 Date: 6 July 2011

Reviewer: Kosuke Matsubara

Reviewer's report:

- Major Compulsory Revisions
This paper has a serious problem. Please read ICRP publication 103. Effective dose cannot be used for the assessment of individual risk. Tissue weighting factors that are used for calculation of effective dose are mean values representing an average over many individuals of both sexes. Precisely, effective dose is defined and estimated in a Reference Person. This quantity provides a value which takes account of the given exposure conditions but not of the characteristics of a specific individual. In ICRP publication 102 and 103, it is recommended that effective dose should be used for comparing doses from different diagnostic procedures and for comparing the use of similar technologies and procedures in different hospitals and countries as well as for use of different technologies for the same medical examinations.

- Minor Essential Revisions
1) Page 5: Please replace "machine-baed" with "machine-based."
2) Page 8: Please specify details about luminescent dosimeters (material, etc).
3) Page 9: Significant digits of equation 5 should be two digits because significant digit of the conversion coefficient (0.015) is two digits. Significant digit of the effective dose is also two digits.
4) Page 13: You should not put a quote in the conclusion section.
5) Page 17: Where is the caption of Figure 5? Where do you refer to Figure 5?

- Discretionary Revisions
1) I think the background section is too long. Please shorten it as possible.
2) You should use subtitles in the methods section.

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 interest' below.