Reviewer's report

Title: Exposure of the Swiss population to computed tomography

Version: 2 Date: 3 March 2013

Reviewer: Hassan Kharita

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Major Compulsory Revisions:

1. In page 2 line 9 and line 20 “100 CT examinations/1000 caput” instead of “100/caput” supposing that number of Swiss population 8 Million person. You can inclusion number of Swiss population in the manuscript.

2. In Page 14 table 1: The number of examinations/1000 population was 1700 in all x-ray modalities, in 2008, but in reference 1 “UNSCEAR Report 2010” the total number of medical and dental radiological examinations per 1000 population was 1398.

3. In Page 5 line 11, Is there relation between tissue weighting factor (wt) and the Effective dose in CT dosimetry? and what your methodology?

the effective dose E may be inferred from the DLP using appropriate conversion coefficient EDLP (or Cf or k) factor, these conversion coefficients are derived from mathematical phantoms using Monte Carlo modeling. and the equation is:

\[ E = Cf \cdot DLP \]

Minor Essential Revisions:

1. Keywords: definition “(CT) Computed Tomography” and insert some terms as collective dose, effective dose, exposures.


3. In Page 14 table 3: you can add year of this survey.

4. In Page 15 table 4: “Absolute number of examinations per thousand population” you can omit “Absolute” and write “per thousand” as preceding “/1000”

5. In Page 15 table 6: in terms NCT can you clarify it by note NCT is a number of CT examinations.

Discretionary Revisions:

1. In page 2 line 15 you can use “These results are …” instead of “These figures are …

2. There is no need to use the phrase: “Before being analyzed, the data provided by the participants were processed and checked carefully.” In Page 5
3. In page 5 the expression “National frequencies were established by projecting the collected data. The ratio of the number of CT units belonging to the respondents to the total number of CT units in the country was used in this projection. The projection was performed separately for each category of healthcare provider.” Is not clear.

4. In Page 8 line 20 you can add “examination” after CT:

5. “Table 6 shows also the contribution of CT examination”

6. In Page 9 line 5 you can change “examinations” instead of “procedures”

7. Modification the caption of table 1

8. In Page 14 table 2: in caption “Frequency and dose data for the most frequent or most irradiating CT procedures” you can omit “frequent or most irradiating”

**Level of interest**: An article whose findings are important to those with closely related research interests

**Quality of written English**: Acceptable

**Statistical review**: Yes, and I have assessed the statistics in my report.

**Declaration of competing interests**: I declare that I have no competing interests