Reviewer's report

Title: Buccal mucosa micronuclei counts in relation to exposure to low dose-rate radiation from the Chornobyl nuclear accident and other medical and occupational radiation exposures

Version: 0 Date: 17 Apr 2017

Reviewer: Richard Wakeford

Reviewer's report:

Page 6, Line 123: You need to say what was being studied in these case-control studies.

Page 6, Line 126: I wonder about the accuracy of the RADRUE exercise, and the impact of dosimetry uncertainties on the study outcomes could be examined further in this paper.

Page 8, Line 176: How many subjects were dead?

Page 9, Line 181: Were linear-quadratic (or other) models examined?

Page 12, Line 254: "borderline" is a bit of a stretch for this p-value.

Page 13, Line 281 ditto above.

Page 13, Discussion: Have other biodosimetry measures, such as translocations, been conducted on these liquidators? It would be of value to compare micronuclei rates with some other measure. If not, perhaps this should be recommended.
Level of interest
Please indicate how interesting you found the manuscript:

An article whose findings are important to those with closely related research interests

Quality of written English
Please indicate the quality of language in the manuscript:

Acceptable

Declaration of competing interests
Please complete a declaration of competing interests, considering the following questions:

1. Have you in the past five years received reimbursements, fees, funding, or salary from an organisation that may in any way gain or lose financially from the publication of this manuscript, either now or in the future?

2. Do you hold any stocks or shares in an organisation that may in any way gain or lose financially from the publication of this manuscript, either now or in the future?

3. Do you hold or are you currently applying for any patents relating to the content of the manuscript?

4. Have you received reimbursements, fees, funding, or salary from an organization that holds or has applied for patents relating to the content of the manuscript?

5. Do you have any other financial competing interests?

6. Do you have any non-financial competing interests in relation to this paper?

If you can answer no to all of the above, write 'I declare that I have no competing interests' below. If your reply is yes to any, please give details below.

I give technical advice to the UK Compensation Scheme for Radiation-linked Diseases, but I can't think this is a conflict with the work reported in this paper.

I agree to the open peer review policy of the journal. I understand that my name will be included on my report to the authors and, if the manuscript is accepted for publication, my named report including any attachments I upload will be posted on the website along with the authors' responses. I agree for my report to be made available under an Open Access Creative Commons CC-BY license (http://creativecommons.org/licenses/by/4.0/). I understand that any comments
which I do not wish to be included in my named report can be included as confidential comments to the editors, which will not be published.

I agree to the open peer review policy of the journal