Reviewer's report

Title: Influence of family size and birth order on risk of cancer: a population-based study

Version: 6 Date: 24 January 2011

Reviewer: Jacqueline Clavel

Reviewer's report:

The paper is not improved enough. Some of my previous comments should still be accounted for.

2.b: Do you mean that all the positive results were similar when the cases with affected parents were included? If so, this is an interesting result and it should be added at the end of the Results section. Even if it concerns a subset of results, it is still noteworthy.

2.c: I still think that using 1% confidence intervals is not sufficient to account for multiple testing. Even if you keep it, you have to discuss further the issue of multiple testing in the Discussion section.

2.d: I am convinced that overall the power is very good, but for some cancer sites such as stomach cancer (see 3.c below) the numbers may be small when stratifying before/after 50 years of age. For these sites, information on power may still be useful.

4.a: The association with CLL should be given in the text.

4.b: Please, help the reader to distinguish between birth order and family size, and explain how their relationship with SES changes with age in your data.

4.d: I still think that figures and tables are redundant and that tables are far more useful. Having a consistent presentation from table to table is necessary, and the present inversion of columns and lines between tables is misleading.

5.a: The discussion on endometrial cancer is confused and misleading (second paragraph page 9): the 2 first sentences of the paragraph contradict each other, and there is no actual difference in the relationships before and after 50 years old. The explanation on SES is not clear either (specify “obesity is associated with lower socioeconomic status”), and the last sentence of the paragraph should be dropped of clarified.

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 interests