Reviewer's report

Title: Space-time clusters of breast cancer using residential histories: A Danish case-control study

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Reviewer: Corinne Gower-Rousseau

Reviewer's report:

Dear authors

I reviewed your paper entitled « Space-time clusters of breast cancer using residential histories: A Danish case-control study » submitted by Nordsborg et al for publication in BMC cancer.

This detailed paper is well written and is conducted through population-based Registry regarding breast cancer as 2 population-based groups of controls matched on date of birth.

After the analyses were adjusted for individual reproductive factors and area-level socioeconomic indicators, the major result reported by the authors is the identification of a cluster with high incidence of breast cancer in the northern suburbs of Copenhagen.

I have several comments:

# 1. The paper is too long and must be reduced in the “mehods” part

#2. Is there any clinical particularities in the breast cancer of women leaving in the cluster with the highest incidence: younger age at diagnosis, more frequent family history of breast cancer? more aggressive course of the cancer? It is very important to have these clinical data to give details in the Discussion part. What are the arguments for a genetic cause in the presence of this cluster? Part of environmental factors?

#3. The authors should separate the results into 2 parts: constant space-time cluster and non constant space-time clusters. The results will be more easily to read.

#4. Can the authors briefly give arguments (exhaustivity rate?) of the completeness collection of cancers in the population-based Danish Cancer Registry?

#5. Regarding the Table 1, the authors must give the detailed statistical results in the comparison between cases and controls regarding the frequency of child birth, the repartition of the qualitative variable on number of children (0,1,2 and #3), the age at first child birth, the aggregated educational level in area and the aggregated average income in area. Indeed it was not evident that there is a
significant difference between cases and controls regarding these data.

**Level of interest:** An article of importance in its field

**Quality of written English:** Acceptable

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

**Declaration of competing interests:**

I have funding and fees by MSD and Abbvie during the last 5 years