Reviewer’s report

Title: Discontinuation of adjuvant hormone therapy among breast cancer patients not previously attending mammography screening

Version: 0 Date: 26 Oct 2018

Reviewer: Stephane Cullati

Reviewer's report:

General comments:

Interesting paper, with good data, and with clinical value.

Major comments:

1) I suggest considering the link between mammography screening and breast cancer prognosis as an association rather than a causal influence, because attendance to mammography screening is not the cause per se. Thus, the authors should remove the causal language (“that non-adherence influences breast cancer prognosis”) and prefer the "associational" language.

2) The authors should clarify if we are in the presence of competing risks. I am not an oncologist; thus, I can hardly assess if these patients can experience other outcomes which could compete with the outcome of interest (i.e. the breast cancer events). If not, please clarify the rationale; if yes, then the analysis should be conducted/updated with a competing-risk survival regression.

3) Exposure definition: the cut-off of two years is clear for women aged 50+. However, women aged 40-49 since 2005 were invited every 18 months by the Stockholm Mammography Screening Program (page 5 line 12). Considering that the criteria is the longest screening interval, then two cut-offs are needed, one for women 50+ (24 months) and one for women 40-49 (18 months).

4) In the discussion, the authors said, "No study thus far has investigated predictors of screening non-participation among women who subsequently developed breast cancer" (page 11, lines 20-22). Two caveats must be put forward: first, this result was not an objective of the study, so you should rephrase this part or harmonise the objectives with it; second, authors can hardly speak of "predictor" of screening non-participation when the results are based on cross-tabulations and chi-square tests.
5) In the conclusion of the abstract, the authors stated that "the worse survival observed among breast cancer patients previously not attending the mammography screening program could partly be explained by discontinuation of adjuvant hormone therapy rather than solely due to later detection" (see also a similar wording in the conclusion). To support this conclusion, I expect having the covariate of therapy discontinuation in the multivariable model for breast cancer events, however it was not the case, isn't? (not entirely clear) The authors should either reword the conclusion or complete the multivariable model.

Minor comments:

6) The chi-square test may not be applicable to the cross-tabulation between mammography screening and employment status, as some cells have less than 10 individuals (unemployed and housewife non-participants). An exact test may be more appropriate.

Editing:

7) Page 5, lines 36-39, sentence "who received a mammography screening invitation within two years of breast cancer diagnosis.": the term "within" is not entirely clear. I understand it as "before", so two years before the diagnosis. Correct?

8) Figure 1 suggests that the 5107 women with breast cancer and who received an invitation were identified through 4 databases. However, these women were identified with two databases (the mammography database and the cancer registry). A bit confusing.

9) Reference 8: check journal's name

Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

No

Does the work include the necessary controls?
If not, please specify which controls are required in your comments to the authors.

Yes

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