Reviewer’s report

Title: Use of Beta-blockers and Mortality Following Ovarian Cancer Diagnosis: A Population-Based Cohort Study

Version: 2 Date: 25 January 2013

Reviewer: Onchee Yu

Reviewer’s report:

I would like to thank the authors for their detailed responses to all the questions in my last review. I only have a few remaining points for the authors to consider.

Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct)

1) I notice that the authors have changed “mortality” to “improved prognosis” in various places. I am wondering why the change and think that mortality should be used because it was what was evaluated which is not entirely the same as prognosis (which could be recurrence, for example).

2) 2nd paragraph in “Statistical analysis”. To clarify, please add the underlined “First, we made a restriction to current users with at least one year of #-blocker use and compared them to non-users. Second, …, according to months of use among all user groups”.

3) I am trying to wrap my brain around the months of use analysis. The current and past users are now defined as use in the 1 year prior to diagnosis which is reasonable. But yet, months of use counted all the months with a #-blocker use recorded in the entire pharmacy database which was only available since 1998. As I noted in my previous review, this presented a differential length of time for defining number of months of use by diagnosis year. Those that were diagnosed in earlier years, say 1999, could only have a maximum of 12 months of use. I think this analysis is only reasonable if it is restricted to women diagnosed in later years and only evaluate use in the previous X years. For example, only include women diagnosed between 2003-2010 and look at use in previous 5 years. This way, all women would have the same opportunity to have a longer use.

4) Same issue as #3 above when reported median duration of use among current and past users in Table 1. I would suggest removing this information entirely.
5) Last paragraph in “Results - Mortality”. Table 2 and Table 3 should be “stratification by cancer stage” instead of by age.

6) 3rd paragraph in “Discussion”. Typo correction: “Finally, and most importantly, because authors’ decided that to be considered as exposed a patient …”

7) In that same paragraph, please mention that all-cause mortality was evaluated, not ovarian-cancer specific because that data was not available, etc.

8) There is a pretty consistent elevated risk among current users (overall, among regional cases, in older age group and among current users with 1+ year of use). But yet, this potential association is not given much attention or discussion. This is important and the authors should include this finding in their conclusions (instead of saying “no evidence of an association”).

9) In Tables 1-3 in the additional file 2, please add numbers of women and deaths in each group.

**Level of interest:** An article of outstanding merit and interest 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 declare that I have no competing interests.