Reviewer’s report

Title: Survival of endometrial cancer patients in Germany in the early 21st century: a period analysis by age, histology, and stage

Version: 1 Date: 27 February 2012

Reviewer: Laura Woods

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General comments

This is a well written, well referenced paper detailing patterns and trends in endometrial cancer survival in Germany. The authors provide a clear outline of the justification for their study, an appropriate analysis, well structured tables and a good discussion.

Major compulsory revisions

1) I was interested that this paper makes no mention of net survival and its relationship to relative survival. Relative survival has been the preferred means of estimating net survival from cancer registry data for a number of decades. However, recently it has been shown to be a biased method of estimating net survival. A case could still be made for using relative survival, including consistency with previous results and the fact that the bias is smaller in some circumstances in comparison to others. Yet this is not done in this paper. I would like to see the recent advances regarding the relationship between net survival and relative survival (as estimated using Ederer II) explained in full in the methods section of the paper, and a full justification of their chosen approach included.

2) The proportion of missing data for stage in this study is substantial (44%). Although this is noted, there is very little information given about who these persons might be, or why this information is likely to be missing. No attempt was made to analyse these data using strategies available to adjust for missing values such as multiple imputation. At this level of missingness, it may not be possible to impute appropriately. This means, however, that stage-specific results should be regarded with a good deal of caution. I would like to see the authors consider how to deal with these missing values in the analysis. If they chose to do a complete case analysis only, this should be justified. In either case, a description of who the missing cases are in terms of the other variables in the data set should be included, and the interpretation of the stage-specific results should be appropriately cautious in the light of these associations.

3) The follow up in this study is provided up to 2006. The analysis strategy uses period estimation which gives a more ‘up-to-date’ estimate of survival. Yet, since we are now in 2012, it must already be possible to know the vital status of all patients at least 4, if not nearer 5 years after their diagnosis. Most cancer
registries have a short time-lag for mortality data: therefore, why did the authors chose to limit the follow-up to 2006, rather than do a complete analysis of patients followed up to the end of 2010? This would be more 'up-to-date' than what has actually been provided. If vital status is now available for patients up to December 2011, a full 5-year cohort analysis could be performed and the results would be fully 'up-to-date' for this particular cohort of patients (those diagnosed up to 2006). Preferably, the data should be updated and the analyses re-run: if this is not possible a full explanation of why these dates have been chosen should be given.

Minor essential revisions

4) Abstract, page 3, Conclusion, line 1: "In this first population-based study" Is this true? How does this statement relate to reference number 11?

5) Introduction, page 4, paragraph 2, line 2: "... and reproductive factors.." Explain what these are (and the direction of the association).

6) Materials and methods, page 7, paragraph 3, line 1: "period analysis (13), model-based period analysis...." Explain in greater detail what this is and how it adds to the simple period analysis results.

Discretionary revisions

7) English: Abstract, page 3, Methods, line 5: "Age adjustment was PERFORMED using five...." [better than 'done']

8) English: Abstract, page 3, Results, line 3: "...70+ years. FURTHERMORE PROGNOSIS VARIED STRONGLY by histologic subtypes..." [better phrasing]

9) English: Introduction, page 4, paragraph 2, line 2: "... related to overweight..." Would normally be phrased in relation to 'higher BMI' or 'to obesity'

10) English: Materials and methods, page 6, paragraph 3, line 1: "Staging was built...." This is awkward English - perhaps "Stage of disease at diagnosis was defined according...."

Level of interest: An article of importance in its field

Quality of written English: Needs some language corrections before being published

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.