Reviewer's report

Title: Comparison of breast cancer survival in two populations: Ardabil, Iran and British Columbia, Canada

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Reviewer: Terry Field

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Expanding the publication of information on breast cancer survival to include broader populations is of value both locally and internationally. This manuscript contributes to that information by comparing survival among woman diagnosed with cancer in Ardabil, Iran to those in British Columbia, Canada. Several major issues in this paper lessen its value.

Major compulsory revisions

1. No information is provided about breast cancer stage at diagnosis. This does not appear to be captured by the Ardabil registry. This missing information dramatically undermines the ability of the authors to both disentangle the potential causes of the low one-year survival rate in that area and present potential interventions for improvement. Stage at diagnosis is a very strong predictor of mortality, particularly over the short term. If women are diagnosed at stage IV, one year survival is low even in areas with available aggressive medical care. If diagnosis at late stage is responsible for the low survival rates in Ardibal, then recommendations for improvement may focus on screening. However, if few women diagnosed at earlier stages are surviving for one year, then improvements in treatment are a priority. Without information about stage, the discussion becomes moot. If staging is usually accomplished within the medical care facilities in the area but is not captured in the registry, additional work to locate and include that information would greatly improve the manuscript. Without this information, the conclusions and discussion section need major revisions to take into account this lack.

2. Insufficient information is provided about the two cancer registries. In order to interpret the results, the reader needs to understand how the cancer registries identify women with breast cancer, what information is collected on each case, and how it is collected. Have any validation studies been conducted to assess the extent to which the registries are complete and to identify any sub-groups of cancer patients who may be missed?

3. There is also insufficient information provided in the manuscript about the two health care systems. How do patients access care? Are the major components of breast cancer care available locally? Are there out of pocket costs to patients for care? Are there wait lists for access?

4. The discussion section requires extensive edits. First, it should focus on the
ramifications of the results. The summary of differences in survival across ethnic groups is drastically incomplete and not directly relevant. The recommendations provided for improving breast cancer diagnosis and treatment are very broad, including every aspect of care. However, there is no evidence in the study to support any one of these recommendations. This is a classic situation in which the primary recommendation should probably be a cry for more assessments of the situation to support setting priorities for improvement. This could include specific delineation of the data required to accomplish this.

Minor required revisions

5. With all survival information apparently based on all-cause mortality rather than breast cancer-specific mortality, it is important to take this into account in discussing age differences in one-year survival.

6. Survival has often been found to be lower for women diagnosed premenopause. The discussion of the association of age and survival should take this into account.

Level of interest: An article of limited interest

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.