Reviewer's report

Title: Changes over time in the effect of marital status on cancer survival

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Reviewer: Jane Turner

Reviewer's report:

The manuscript addresses an area of clinical interest and has implications for clinical practice. The sample size is large and one would anticipate seeing significant results.

In general the paper is well-written, although there are some points which require clarification:

- In the abstract under the results heading, there is a statement "Among elderly (sic) women the excess of never-married has increased" but it does not state relative to what
- The discussion is long and somewhat repetitive and could be shortened considerably, as this is really a series of speculations to explain the results
- One statement should be carefully re-examined: on page 10 the final sentence in para 2 asserts: "Stress has also been shown to have a more direct effect on physical health as well as on tumor growth". The reference cited reports higher mortality in those with perceived stress but the authors should be clear about whether tumor growth was examined as an outcome. This is an important point. The Chida et al meta-analysis findings are at variance with other studies exploring stress and cancer (see 1. Graham J, Ramirez A, Love S, Richards M, Burgess C. Stressful life experiences and risk of relapse of breast cancer: Observational cohort study. British Medical Journal 2002. 324:1420–1422. 2. Surtees PG, Wainwright NWG, Luben RN, Kwah K-T, Bingham SA. No evidence that social stress is associated with breast cancer incidence. Breast Cancer Research and Treatment 2010; 120:169–174. 3. Johansen C, Olsen JH. Psychological stress, cancer incidence and mortality from non-malignant diseases. British Journal of Cancer 1997; 75: 144-148.) This is clearly an area in which findings are mixed
- The implication that stress may play a role in increased mortality is contentious, and it seems that the authors conjecture that stress is more common in the never-married but they have offered no evidence of this

Level of interest: An article of importance in its field

Quality of written English: Acceptable

Statistical review: Yes, but I do not feel adequately qualified to assess the statistics.
Declaration of competing interests:

I declare that I have no competing interests