Reviewer's report

Title: Weight before and after a diagnosis of breast cancer or ductal carcinoma in situ: A national Australian survey

Version: 1 Date: 05 Nov 2019

Reviewer: Amy Downing

Reviewer's report:

I am reviewing this paper with an emphasis on the statistics, as some of the previous reviewers indicated they did not feel able to assess this aspect. Overall, this is an interesting study but it is hampered by two major limitations - the low response rate and the lack of control data. Whilst the response rate is acknowledged as a limitation, the authors need to be very cautious in their claims. Throughout the whole manuscript there is no mention of, or comparison to, control or general population data. It is impossible to properly interpret the results without this context.

Major comments:

1. In the introduction the authors refer to a paper by Vagenas et al (ref 8). This was a prospective cohort study of 287 women, assessing weight at several time points and using a control group for comparison. The current study included a few more cases (309) but with a more limited methodology. The authors need to make a stronger case as to how these results improve on previous research.

2. The group which was invited to participate were members of a breast cancer network who had agreed to receive emails about research studies (2% of all members). This is a self-selected group who are likely to have particular characteristics. On top of this, only 15% chose to participate. This severely limits generalisability to breast cancer patients as a whole. Is any comparative data available to show how similar or different this sample of women was to all BC patients?

3. In order to interpret these results properly there needs to be some comparison with women from the general population. What % of women would be expected to gain weight (and how much?) through the natural ageing process and after going through menopause etc? How much of the weight gain seen is 'extra' to what would be expected?

4. The statistics are descriptive only, however they seem appropriate. It would be useful to include the results for concern about weight gain in one of the tables, perhaps could be added to Table 3?

5. In the first line of the discussion the authors state 'this is the first nationally representative survey conducted in Australia' - in my opinion, the sampling process and the response rate do not support this and this wording should be changed.
6. Again, with reference to other studies, how does this study improve on what has been shown before?

7. The authors go on in the discussion on to state that the respondents were from a higher socioeconomic group, more highly educated and mainly Caucasian, so contradicting their earlier point that this is a representative survey.

8. 'Strengths include a higher than expected response rate' - if it was expected to get a 10% response it does question the use of this group as a methodology.

9. There is no mention anywhere about the % of women who lost weight or remained stable. Yes this information is in the tables but I think it is important to point out for added context.

10. It appears that information on exercise was collected as part of the survey. It would be very interesting to know what % (before and after) took regular exercise. It seems that detailed info on lifestyle habits was collected but not reported (although the authors state this will be in a follow-on paper). Inclusion of some of this data into the current paper may give it the added 'edge' needed.

11. Tables - I am worried about the small numbers being presented in the tables - a patient could feasibly identify themselves. It is standard practice in many organisations to suppress small numbers (say &lt;5) or to combine some categories.

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.

No

Are the conclusions drawn adequately supported by the data shown?
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