Author’s response to reviews

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

Authors:
Carolyn Ee (c.ee@westernsydney.edu.au)
Adele Cave (a.cave@westernsydney.edu.au)
Dhevaksha Naidoo (d.naidoo@westernsydney.edu.au)
Kellie Bilinski (kellie.bilinski@me.com)
John Boyages (john.boyages@mq.edu.au)

Version: 3 Date: 09 Jan 2020

Author’s response to reviews:

BCAN-D-19-02340R2

Response to Reviewer’s Comments

Many thanks for your thoughtful comments on our revised manuscript. We have made the necessary adjustments and hope that the manuscript is now acceptable for publication. We would be most agreeable to any further suggestions for improvement.

Abstract

Background - weight gain post-diagnosis 'is' associated with.. rather than 'are'

We have adjusted this now.

Conclusion - it may be more impactful to state the weight gain relative to age-match controls over a longer period rather than half a kg per year.

We have adjusted this now and the sentence now reads “Two-thirds (69.1%) of women aged 35-74 years gained, on average, 0.48 kg more weight per year than age-matched controls.” (Page 2, lines 43-45).

Methods
Comparing to normative data - state which year of AusDiab was used for matching - presumably it was the follow up in 2004-05?

Yes – follow-up for AusDiab was in 2004-5. Please see the further detail below.

Was it 1:1 matching? A little more detail required here.

We have now clarified further with the following changes: “The AusDiab study reported the following mean weight gains per year at 5-year follow-up (2004-5): 700g per year for 25-34yo, 500g for 35-44yo, 380g for 45-54yo, 140g for 55-64yo and 0g for 65-74yo). For each respondent in our study for which we could calculate a yearly weight gain, we compared this weight gain with the mean weight gain from AusDiab corresponding to the age group of the respondent by subtracting the AusDiab weight gain from the weight gain reported by that respondent in our study.” (Page 8 lines 173-178)

Results:

Sample characteristics (pg 9) - I'm not clear how the BCN A and non-BCNA groups have been compared. There are two comparisons being made, for retired and self-employed, but only one p-value. It is probably sufficient to say there were no significant differences and quote the p-values rather than giving all the chi-squared test details.

Thank you for this suggestion. The chi-square results reported were for the variable “employment” which had answer options including retired and self-employed. We have now removed the reference to the chi-square test details and simply stated that there were no differences between groups on chi-square testing. There are too many p-values to report and hence we have not reported them all here.

Weight change (pg 12) - 'Mean weight gain was 4.5 kg' - can the authors clarify why this is different to the figures at the start of the paragraph? 76.08 - 71.24 = 4.84 kg

We had 277 respondents that reported weight both at time of diagnosis and time of survey, while a further 16 women reported only their weight at the time of survey. This is the reason for the apparent discrepancy. We have reported the number of women (eg n=277) for clarity however we would be happy to make suggested revisions to make this clearer in the manuscript.

pg 13 - 'weight gain predominantly occurred within the first two years of diagnosis...' I don't understand how this matches with the following text and the data in Table 4 showing that there was no difference in weight gain with time since diagnosis. Please clarify the interpretation of this.

In the methods we have now clarified this a little further:
“To test the relationship between weight gain and time since diagnosis (and therefore the hypothesis that weight gain increases with time) we performed a Pearson’s correlation”. (page 7, lines 155-6).

We have changed the reporting in the Results section to read

“Women reported that weight gain predominantly occurred within the first two years of diagnosis (86.56%) with 57.53% reporting that weight gain mostly occurred within the first 12 months. Weight gain was not correlated with time since diagnosis (n=173, r=.114, p=0.14)”. (page 13, lines 341-3).

The point we were trying to make was that weight gain was not simply a function of time since diagnosis ie women did not gain weight simply because more time had elapsed since diagnosis. There appears to be a window of opportunity to prevent weight gain after breast cancer and we have mentioned this in the discussion. We would be very happy to make any further suggested revisions to make this clearer if needed.

Rate of weight gain (pg 14) - ‘On average, women gained 0.64 kg per year’ - which women does this refer to? The normative data or the matched study group?

This is for our study group. We have changed this to read “On average, women in our study gained 0.64kg per year (n=270, SD=1.76, range -8 to 10.5) (see Table 5).”(page 14 lines 372-3).

And in table 5 we have added “mean weight gain per year in kg in our study” to the heading for Column 2.

Table 5 - please add a row for the total 234 women.

Thank you – we have made this change.

Discussion

Page 16 - 'Median weight gain between 6 and 72 months was 0.7 kg...’ - which group is this referring to? Should this sentence come earlier?

Yes it should, we have moved to appear before the sentence starting “The authors of the cohort study..” and have changed it to read “Median weight gain for study participants between 6 and 72 months was 0.7kg, and mean BMI increase was 0.2kg/m2.” (page 15 lines 413-4).

Page 16 - mean weight gain in this study compared to the Australian cohort study was 9.07kg v 5.3 kg. Do these figures relate to comparable time frames? The comparison needs to be made at 6 years post-diagnosis.

The mean time since diagnosis in our study was 8.2 years. We have now noted this in the discussion for context and clarity
“Further, the mean weight gain in women who had gained weight overall in our study is substantially higher than what is reported in the Australian cohort study (9.07kg vs 5.3kg) although we note that the mean time since diagnosis in our study is 8.2 years, while the cohort study used a 6-year follow-up.”

Page 16, lines 422-6.

Conclusion - Survey respondents gained a significant amount of weight - please quantify this, what is significant?

We have changed this to read “substantial” and added “(mean of 9.07kg)” (Page 21 line 560)

General point - I think it would improve readability if figures were presented to 1 decimal place throughout the text and the tables.

Thank you for this suggestion. We agree that figures like percentages should be reduced to 1 decimal place. We have changed this in the text and tables. However, we think that some detail may be lost with one decimal place for weight, particularly with weight gain and comparison to normative data (AusDiab study reported in grams). Therefore we have left the decimal places at 2 for weight figures. Please advise if readability is sufficiently improved.