Reviewer’s report

Title: Obesity and breast cancer survival in Japanese women

Version: 2 Date: 30 January 2012

Reviewer: Huiyan Ma

Reviewer’s report:

The manuscript presented results from a hospital-based longitudinal study regarding the association between higher or lower obesity and the survival of 653 Japanese women diagnosed with breast cancer. The results are interesting and valuable for Japanese women, but several parts of this manuscript were presented unclearly or even inaccurately. Considering the fact that current data for Japanese women remain sparse, I would recommend publishing this after the authors address the concerns regarding unclear or inaccurate parts in the manuscript.

Minor Essential Comments


2. On page 2, Abstract, first paragraph: “Studies conducted mainly in Western countries have reported a relationship between body mass index (BMI) and a higher risk of all-cause death or breast cancer death among women with breast cancer”. Authors should point out which is higher BMI, lower BMI, or both. This suggestion also applies to a similar sentence in first paragraph for Background on page 3.

3. On page 2, Abstract, first paragraph: “we investigated the relationship between BMI and the risk of all-cause and breast cancer death among breast cancer patients differing in menopausal and hormone receptor status.” Does this mean “we investigated the relationship between BMI and the risk of all-cause and breast cancer death among breast cancer patients overall and by menopausal status and hormone receptor status”?

4. On page 2, Results, change “After adjustment for risk factors” to “After adjustment for other factors”
5. On page 3, Background: “Obesity is known to be an important risk factor for breast cancer in Japanese women [1], as is the case for women worldwide” is not accurate. Many previous epidemiologic studies reported that obesity was associated with an increase in risk of postmenopausal breast cancer while it was associated with a reduced risk of premenopausal breast cancer.

6. It would be more concise if the authors changed “subjects” to “women” and changed “breast cancer death” to “breast cancer-specific death” throughout this manuscript.

7. On page 3, Background, last sentence “and in fact several studies have already investigated the effects of tumor subtype in terms of hormone receptor status [2, 4, 9, 10, 13, 14]”. Authors could also reference literature that has looked at similar issues i.e. (J Clin Oncol. 2011 Sep 1;29(25):3358-65).

8. On page 4: In “Between January 1997 and December 2005, 718 female patients aged 29 years and over”, change “and” to “or”.

9. On page 5: It is unclear whether weight and height were collected immediately after diagnosis or not. It’s unclear whether patients had used any cancer treatments before they reported their weight?

10. On page 5: “The self-reported height and weight data were highly correlated with measured data in a subsample of our study.” Authors should provide some information regarding the subsample, such as when and how the authors conducted the subsample.

11. On page 6: Change “Tests for linear trend” to “Tests for trend.” This suggestion applies to all the statements regarding this test. In the Results section, change “linear relationship” to “dose-response relationship”. For detailed reasons for these changes, please see “Modern Epidemiology, Kenneth J, Rothman”.

12. In Materials and Methods section, authors should provide how they defined menopausal status, what methods were used to measure ER and PR status, and what were the cutoff points for ER or PR positive status.

13. Table 2 “Hazard ratio of all-cause death stratified by BMI according to menopausal status” is incorrect. The table shows results for the Hazard ratio (95% confidence intervals) of all-cause death associated with body mass index (BMI) overall and by menopausal status. Authors did stratification by menopausal status instead of BMI status. In addition, I would like authors to change “p for all trend” to “p for trend”, “p for trend in BMI#21.2” to “p for trend in women with BMI#21.2”. The corresponding changes should also be made for Table 3 and Table 4 when necessary.

14. On page 8, the first reason for why obese breast cancer patients show poorer survival is unpersuasive.

15. Possibly due to sample size issue, authors did not present results stratified
by both menopausal status and hormone receptor status, but it should be briefly mentioned what they found or list as a limitation.

16. Physical activity and comorbidites have not been controlled in the analyses. Why?

17. For a hospital-based study, authors should provide more information regarding Miyagi Cancer Center Hospital and tell readers whether the results based on patients from MCCH can be generalized to all breast cancer patients in Japan. If not, authors can list it as a limitation.

Level of interest: An article of importance in its field

Quality of written English: Need improvement

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

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.