#### **Peer Review File**

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### <mark>Reviewer A</mark>

The manuscript seems to be valuable with some novelties by investigating an association between marital quality and prognosis. I have some comments.

#### Answer:

Thank you very much for your kind and considerate suggestions that do help us to improve this manuscript. Moreover, thank you for your appreciation and acknowledgement for our results.

# 1. (Abstract, line 34-35) A sentence seems to be wrong as an English sentence.

#### **Answer:**

Thank you very much for your kindness and patience. As you suggested, we have corrected "The log-rank test was used to compare marital quality survival curves." as "The log-rank test was used to compare survival. "(see line 34-35 page 1-2 in the revised manuscript).

# 2. (Abstract, Methods) Did you use other characteristic than variables related to marital quality? **Answer:**

Thank you very much for your wonderful question. We feel very sorry for not expressing it clearly. Yes, there are also age at diagnosis, Grade, tumor-node-metastasis (TNM) stage (sixth AJCC), human epidermal growth factor receptor 2 (HER2) status, and hormone receptors status. As you suggested, we have added "adjusting for clinical variables." (see line 37 page 2 in the revised manuscript), as follows: "Cox proportional hazards models were used to estimate the associations between recurrence and metastasis, BC-specific mortality, and overall mortality and marital quality, adjusting for clinical variables."

# 2. (Abstract, Results) 1,043 were recruited, but there were 857 participants in the end? **Answer:**

Thank you very much for your wonderful question. I am very sorry for making this confuse. You are very right. We should clearly explain in Abstract the reasons for recruiting 1043 participants, but ultimately having 857 participants. As you suggested, we have revised "There were 59 deaths among 857 participants, including 57 from BC." as "45 (4.3%) patients refused to participate in this study and 141 (13.5%) were excluded from the analysis. Among 857 participants, there were 59 deaths, including 57 from BC."(see line 38-41 page 2 in the revised manuscript).

3. (Introduction) Weren't there any previous studies that investigating an association between marital quality and cancer prognosis? You should cite and mention those previous studies if those exist.

#### Answer:

Thank you very much for you wonderful question. No, there is one previous prospective study of 90 breast cancer patients. As you suggested, we have cited the study in Introduction (see line 66-68 page 2-3 in the revised manuscript), as follows: "Only one prospective study of 90 breast cancer women showed significant associations between confiding marriage and lower recurrence and mortality."

4. (Methods) Telephone follow-up was used to gather information about the outcomes. In this case, was it possible to identify specific date of the outcomes? In addition, if the covariates were used in the Cox regression, please write that way in the section of statistical analysis. **Answer:** 

Thank you very much for your wonderful question. You are very right. Telephone followup can' t identify specific date of the outcomes. However, during the follow-up from the diagnosis of breast cancer, we conduct telephone follow-up every April to determine the approximate month in which the outcomes occurred.

#### Answer:

Thank you for your kind suggestions. You are very right. The covariates were used in the Cox regression. We feel very sorry for not expressing it clearly. We have added the covariates in the section of statistical analysis, as you suggested (see line 142-144 on page 5 in the revised manuscript), as follows: "Kaplan-Meier analyses were used to estimate survival. After adjusting for age, TNM stage, Grade, HER2, and hormone receptors status, Cox proportional hazards regression analyses were employed to evaluate the associations between recurrence and metastasis, BC-specific mortality, and overall mortality and marital quality (marital satisfaction, couple communication, and sexual relationship)."

5. (Results) Tables 2 and 3 indicate the results for sexual relationships and marital satisfaction. Where is the result of couple communication? In addition, where is the result of Kaplan-Meier curve? Moreover, why did the authors conduct analysis for each category separately? Furthermore, what was the number of participants who were loss-to-follow-up?

### Answer:

Thank you for your kind suggestions. As you suggested (see table 4 on page 16 in the revised manuscript), we have added the table of couple communication in the revised manuscript.

#### Answer:

Thank you for your kind suggestions. We have added Kaplan-Meier curve, as you suggested (see Figure 1 on page 17 in the revised manuscript).

#### Answer:

Thank you very much for your kindness and patience. The marital quality questionnaire consists of 124 items divided into 12 categories. The large number of items in the original version was tiring for participants. Three of the 12 categories-marital satisfaction, sexual relationship, and couple communication-are widely used in China (22-24), therefore we used the short form of this questionnaire including these three categories and conduct analysis for each category separately.

#### Answer:

Thank you very much for your wonderful question. We feel very sorry for not describing the number of participants who were loss-to-follow-up. We have added "with survival status missing accounting for 6.5%", as you suggested (see line 125-126 on page 4 in the revised manuscript), as follows: "The censored observations included survival status missing, death resulting from other causes, or being alive at the time of the last follow-up in April 2022, with survival status missing accounting for 6.5%."

7. (Discussion) Could you clarify what was newly revealed in this study? In addition, I think that a limitation of this study is that it did not collect information about psychological status, socioeconomic status, and other comorbidities. Those factors can be related to marital quality. Answer:

Thank you for your kind suggestions. We feel very sorry for not expressing what was newly revealed clearly. We have rewritten it in Discussion, as you suggested (see line 181-184 on page 6 in the revised manuscript), as follows: "Our study showed that better Marital Satisfaction and Sexual Relationship were significantly associated with lower risks of recurrence and metastasis, BC-specific mortality, and overall mortality among married women, after controlling for clinical variables."

#### Answer:

Thank you for your exactly and considerate suggestions. You are very right. The absence of information on psychological status, socioeconomic status, and other comorbidities is a limitation of the study. We have added the limitation in Discussion, as you suggested (see line 227-230 on page 7 in the revised manuscript), as follows: "Furthermore, although the sample age, TNM stage, Grade, HER2, and hormone receptors status, and treatments received were assessed, no data were collected regarding psychological status, socioeconomic status, and other comorbidities."

### Reviewer B

As a prospective study, it is an ideal one.

### Answer:

Thank you for your appreciation and acknowledgement for our results.

# But two comments to be noted:

1- It would have been better if the questionnaire was obtained from the husband as well

2- It would also have been better if another questionnaire was obtained on the last follow up time to evaluate the effect of the disease on the marital quality

# Answer:

Thank you very much for your comments and suggestions. You are very right. It would have been better if the questionnaire was obtained from the husband as well and another questionnaire was obtained on the last follow up time. It is really pity for missing the opportunity. In the future, we will carry out research on the marital quality of breast cancer women's husbands. In this study, we only collected marital quality questionnaires at the time of diagnosis, without collecting another questionnaire on the last follow up time. It is a limitation of this study. We described it in Discussion, as follows: "In this study, we only assessed marital quality at the time of diagnosis. However, previous studies have indicated that BC patients' marital satisfaction is relatively stable in both the short and long term (12,13)."

Thanks again for your excellent suggestions and comments.