

Peer Review File

Article Information: <http://dx.doi.org/10.21037/jgo-20-586>

Reviewer A:

I think this is a very interesting study. However, there are some concerns. First, I feel that there are not enough factors being compared. There are not enough mentions of liver metastasis, peritoneal dissemination, and other factors that are of primary concern. Other factors such as lymphocyte count, inflammation, nutritional status, and sarcopenia have recently been found to be involved in the prognosis of cancer. Readers would like to see a comparison of these data as well. Translated with www.DeepL.com/Translator (free version)

Reply1: As the reviewer mentioned, many factors, including liver metastasis, peritoneal dissemination, lymphocyte count, inflammation, nutritional status and sarcopenia, are important to strengthen the reliability of the conclusion about our manuscript. However, our previous results showed that liver metastasis, peritoneal dissemination were not significantly related to the prognosis of CRC patients with BM, so we did not analyze it in this study. Then, because the treatment cycle for patients with BM is long and the treatment process is very complicated for these patients, these data including lymphocyte count, inflammation, nutritional status and sarcopenia are missing to a large extent. Therefore, it is regretful that we could not accurately and objectively evaluate the impact of these indicators on the prognosis. We will present this concerned issue in the part of **DISCUSSION** in revised manuscript. We appreciated your valuable comments.

Changes in the text: Page 14 line 11-15 [DISCUSSION]

Our study had some limitations. First, this was a retrospective designed study, and some data might have missed. For example, not every patient showed complete AJCC TNM stage. In addition, this was a single-center study. Because of the low incidence

of BM from CRC, the number of patients was small, which limited the external validation. Finally, because the treatment process for CRC patients with BM is very complicated, many potential prognostic factors including lymphocyte count, inflammation, nutritional status and sarcopenia are missing to a large extent. Therefore, it is regretful that we could not accurately and objectively evaluate the impact of these factors on the prognosis. Nonetheless, we believe our study will be useful to both clinicians and patients.

Reviewer B:

This is a well written paper of appropriate length reporting on 200 patients with CRC and bone metastases. The authors investigate multiple factors potentially associated with survival and propose a 4 stage risk score. The authors are to be congratulated on the high number of patients given the rare incident of bone metastases in CRC patients. The account of all aspects of the study is correct. I do have only some minor remarks: CA 19-9. Please explain all abbreviations (abstract – KPS?). Although the English is very good, some minor problems still exist which should be corrected by another proofread.

Reply:2 Thank you for your helpful suggestions. In order to make our manuscript more accurate, we check the whole manuscript again and again. In consideration of your concern, we did our best to make careful revisions throughout the whole manuscript, and correct all minor mistakes.

Changes in the text: Page 2 line 21- Page 3 line 1 [Abstract]

Results: The median CSS time was 11 months after BM diagnosis. Lymph node metastasis, Carbohydrate antigen 199 (CA199) levels, bone involvement, Karnofsky Performance Status (KPS) scores, primary tumor resection, bisphosphonates therapy and radiotherapy were identified as predictors of CSS. Four risk groups were stratified according to weighted scoring system, including low risk, medium risk, medium-high risk and high risk group, with 35, 16, 9 and 5 months of median CSS, respectively (P=0.000). The risk stratification displayed good accuracy in predicting CSS, with acceptable discrimination and calibration.