Reviewer’s report

Title: Development of a Disease-Specific Graded Prognostic Assessment index for the management of Sarcoma patients with Brain Metastases (Sarcoma-GPA).

Version: 0 Date: 05 Aug 2019

Reviewer: Wei Guo

Reviewer's report:

It is a novel work for Disease-Specific Graded Prognostic Assessment index for the management of Sarcoma patients with Brain Metastases. Especially for this orphan disease with multiple subtypes, it is really a hard work to collect 20 years' patients' data from multiple centers and to analyze them together! Plus the statistical description is clear and we get to know the survival prediction based on this Sarcoma-GPA scores.

However I have some questions that needed to be answered.

1) In my opinion, the most factors that influence the prognosis are the histological subtypes and the treatment methods. For the histological subtypes, from nauscript Line 22, why do the authors think H1 had the worst prognosis instead of H3? Also in this part, we found the ASPS with BM had a median OS for the ASPS cohort (n=14) of 17.33 months (Line 44) with comparison of H4 histology group, median OS 20.45 months. Why do you think it is related to better prognosis?

2) The major disadvantage of this study is diverse histological subtypes of this group people, which included only sporadic cases in each unique subtypes and might influence the outcome. Anyway for sarcoma, it is indeed very rare to see.

3) Can we incorporate the treatment methods with detailed of systemtic treatment? eg. classified into chemotherapy with dox and ifo, chemotherapy with only dox, 2rd line chemo, target therapy, immunotherapy and so on?

Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

Yes

Does the work include the necessary controls?
If not, please specify which controls are required in your comments to the authors.

Yes
Are the conclusions drawn adequately supported by the data shown?
If not, please explain in your comments to the authors.

Yes

Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

I recommend additional statistical review

Quality of written English
Please indicate the quality of language in the manuscript:

Acceptable

Declaration of competing interests
Please complete a declaration of competing interests, considering the following questions:

1. Have you in the past five years received reimbursements, fees, funding, or salary from an organisation that may in any way gain or lose financially from the publication of this manuscript, either now or in the future?

2. Do you hold any stocks or shares in an organisation that may in any way gain or lose financially from the publication of this manuscript, either now or in the future?

3. Do you hold or are you currently applying for any patents relating to the content of the manuscript?

4. Have you received reimbursements, fees, funding, or salary from an organization that holds or has applied for patents relating to the content of the manuscript?

5. Do you have any other financial competing interests?

6. Do you have any non-financial competing interests in relation to this paper?

If you can answer no to all of the above, write 'I declare that I have no competing interests' below. If your reply is yes to any, please give details below.

I declare that I have no competing interests
I agree to the open peer review policy of the journal. I understand that my name will be included on my report to the authors and, if the manuscript is accepted for publication, my named report including any attachments I upload will be posted on the website along with the authors' responses. I agree for my report to be made available under an Open Access Creative Commons CC-BY license (http://creativecommons.org/licenses/by/4.0/). I understand that any comments which I do not wish to be included in my named report can be included as confidential comments to the editors, which will not be published.

I agree to the open peer review policy of the journal