Reviewer's report

Title: Modelling cancer outcomes of bone metastatic patients: combining survival data with N-Telopeptide of Type I Collagen (NTX) dynamics through Joint Models

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Reviewer: Xiaobo Zhou

Reviewer's report:

In this manuscript entitled "Modelling cancer outcomes of bone metastatic patients: combining survival data with N-Telopeptide of Type I Collagen (NTX) dynamics through Joint Models", Hugo Loureiro et.al., propose to apply JM for the analysis of bone metastatic patients and infer the association of their survival with several covariates, in particular the NTX dynamics. This biomarker has been identified as a relevant prognostic factor in patients with metastatic cancer, but only using static information in some specific time points.

This topic is interesting and fits in the scope. The following major concern should be addressed.

1) The English expression in the text needs to be re-examined. Such as "joint models" and "joint modelling", which one is more appropriate in this paper? There is no need to emphasize the abbreviation of joint models again at line 61 of Page 6, and "applicatino" is a wrong spelling at line 39 of page 10, etc.

2) Please highlight the biological process of bone metabolism in the section of Introduction.

3) One flowchart is suggested to be added as Fig. 1 to show the analytical methods and main results. If you do this, the readability of the article will be greatly enhanced.

4) The comparation of the JM and the extended Cox regression model is not so clear, please explain it in more depth.

5) Please summarize the results of this article in detail at the Conclusions section.

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.

Not relevant to this manuscript

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

Needs some language corrections before being published

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