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

Version: 0 Date: 21 Aug 2018

Reviewer: Reviewer 2

Reviewer's report:

PEER REVIEWER COMMENTS: To view the full report from the academic peer reviewer, please see the attached file.

REVIEWER COMMENTS FROM REPORT: This article is an interesting analyses of patient data to validate a medelling approach to predict cancer outcomes. Bone metastasis of cancers is devastating and very lethal. Use of such modelling tools can definitely help in a better management of metastatic patients.

REQUESTED REVISIONS:

The Introduction is little too long. Some information can possibly be moved to 'Discussion', such as, information on associated challenges and comparison with cox models. Introduction should be used to define the field, the lack of good models and the basic introduction of models to be evaluated in the present study.

At some point, authors mention that the major cancers that eventually metastasize to bones are breast and prostate cancers. However, I do not see explicit information (may be I missed it…sorry!) on how many patients evaluated here were breast cancer patients and how many were prostate cancer patients. Were there bone metastatic patients representing other primary cancers (other than breast and prostate cancer)? Such information, along with other patient demographics, should be provided in a tabular form upfront.

Further to my question above, is NTX relevant to all different human cancers?

Also, prostate and breast cancers are very gender-specific and a role of hormones is well documented. Further, breast cancers in particular are sub-divided into many different subtypes. How did authors control for these variables? Perhaps a cancer-specific evaluation can reveal more meaningful information. At the very least this can be discussed. Discussion section can be further elaborated.

ADDITIONAL REQUESTS/SUGGESTIONS:

See comments above
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.

No

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:

Acceptable

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