Author's response to reviews

Title: Stereotactic ablative body radiation therapy for tumors in the lung in octogenarians: a retrospective single institution study.

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Author's response to reviews: see over
To Whom it May Concern:

We appreciate your willingness to consider this article for publication in BMC Cancer and the effort and time from the reviewers. We have made changes based on the recommendations from the reviewers, and these changes are noted below. These changes have helped clarify the manuscript.

Thank you for your consideration.

Sincerely,
Nathan Cannon

Reviewer: Cliff Robinson

It is not clear how the "comorbidites" were defined. They are just categorized with no actual definition. For example, what is a thyroid comorbidity? Is there a threshold for TSH or just a remark in the chart that they have any thyroid condition? Same question for all comorbidites. Instead of making a new comorbidity scale, consider instead using ACE-27 or Charlson (or age adjusted Charlson), calculators for which are readily available online. If you do not wish to do that, then at least clarify how these comorbidites are defined. The definitions of some of these comorbidities have been more clearly defined in the methods as well as table 1. We have changed the “Total Cormobidity” section to reflect the Charlson Comorbidity Index.

Under results, the term CRT presumably refers to chemoradiotherapy but is not defined. CRT has been removed and replaced with chemoradiation.

In results, please report the 95% CI for the stage I patients. The 95% confidence interval was added.

How did you make the distinction between dyspnea and pneumonitis? This can be very challenging in this patient population. Consider clarifying in the text. This difference was clarified in the methods section.

For the 1 patient treated to 60 Gy/3 fx, was that actually 60Gy/3 or was it a pre-heterogeneity-era corrected 60 Gy/3 fx that should really be reported as 54Gy/3? This issue was clarified in the results section. The patient was treated pre-heterogeneity correction. However, the value noted in the table was not changed so the data will reflect what is noted in the patient chart for consistency. However, since these are equivalent dosing they were included in the updated toxicity data for patients treated with 54 Gy in 3 fractions.

The title and consistent use of octogenarians is a bit misleading, as there are more than octogenarians present (i.e. at least one patient is >= 90!). Consider changing to something more inclusive? Since only a single patient was over the age of 90, we kept the title the same including octogenarians so that this study would be considered in conjunction with previous surgical series including octogenarians. However, in the abstract as well as the background and methods, the specifics for this paper have been changed to note that the patients were more than 80 year sold at the time of treatment.

The paragraph on toxicity is challenging to follow. For example, consider moving the description of different grades of dyspnea to the same part of the paragraph, rather than being interposed with a
sentence about grade 2 pneumonitis. Minor revisions were made to the paragraph to clarify these issues.

Reviewer: Pierina Navarria

BACKGROUND: detail " to deliver potent dose ..in a shirt Time" How did you define patients tolerability? Tolerability was defined based on toxicity following treatment, and this was clarified in the background section.

In table 1 left age. The line for age was removed.

Methods: Can you detail what method did you used for different doses USED AND fractionation? There was a correlation between DOSES AND volume, DOSES AND Site? Patients were treated every day? These details were clarified in the methods section.

Results: For better comparison insert in manuscript detail about: no differences in SURVIVAL between 3 or 5 FRACTIONS, concerning total dose prescribed 58/3 50/5 60/5. The comparison between 3 and 5 fraction survival was noted in the fifth paragraph of the results. The difference between other dose fractionations is not further evaluated are we lack statistical power to detect differences due to the low numbers of treatments at each dose level.

What constraints have BEEN utilized? Particularly what dose received patients with chest wall pain? The dose received by patients with chest wall pain was added. Other constraints are not straight forward to include because these patients were included on multiple studies and were treated over 5 and a half years. The specific constraints for each site varied somewhat over that time and between different studies, so the specific constraints were not included.