Author’s response to reviews

Title: Palliative radiotherapy near the end of life

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Author’s response to reviews:

Dear Dr. Olson and Dr. Murray,

Thank you for your thoughtful reviews of our manuscript entitled “Palliative radiotherapy near the end of life”. We have carefully addressed each of your concerns, which we believe have made the manuscript stronger. Specific changes are detailed below.

Dr. Olson (Reviewer 1)

• Consider a Bonferroni (or similar correction) given you are performing so many exploratory tests; this should also be described as a limitation in your discussion.

Thank you for this suggestion; we feel this is very appropriate given our exploratory analysis. We have performed a Bonferroni correction and adjusted our α to 0.003 for statistical significance, to account for 16 exploratory variables. This has been described in the methods section (page 4, lines 17-20) and as a limitation in our discussion section (page 15, lines 12-15).

As a result of this correction, D30RT was no longer associated with, 1) age at RT (deleted on page 5, lines 19-20 and described as a non-significant result on page 6, line 8), 2) presence of liver, lung or brain metastases (deleted on page 5, lines 21-22), or 3) RT site (bone vs. brain, described as a non-significant result on page 6, lines 6-8). Inability to complete RT was no longer associated with treatment site (deleted on page 6, lines 19-20 and described as a non-significant result on page 7, lines 3-4).
• Multivariate analysis could have been performed.

We have added results of multivariate logistic regression for D30RT (page 6, lines 8-10) and incomplete RT (page 7, lines 4-6).

• [Even] more useful to clinicians would be the proportion of patients who died within 30 days by category.

We agree that our data would be helpful presented an alternative way and have added Table 4 (Tables document, page 6), which describes risk of death within 30 days of RT based on patient age at treatment (>60, >70, >80), KPS <70, treatment site (bone vs. brain), hospitalization within 30 days of consult, inpatient status at RT consult, and by TEACHH/CHOW group.

• The discussion could adhere to more standard format and grammar…1st paragraph could better outline why [their] study is unique and readers should keep reading. Grouping the arguments into more succinct arguments, with clearer flow would also help

We have substantially revised the discussion section to improve the organization and flow. We have revised paragraph 1 (page 7, line 18 through page 8, line 5) to provide better context for our study and emphasize the importance of this work. We acknowledge that our original discussion attempted to cover too many topics that, while of interest to our authors, do not serve to further support our findings. We have eliminated the sections on economics of palliative RT, availability of RT on hospice, and piloted programs to increase access to palliative RT in the United State (page 13, line 22).

The somewhat extensive discussion of the relative efficacy of palliative RT for bone/brain metastases and cord compression flows poorly, in part because we tried to include too much nuance that likely is not of primary importance to the readers. We have streamlined this portion of the discussion to highlight the fact that that palliative RT may improve symptoms, but often does not prolong survival; we have left the references in case readers wish to delve into the subject further (page 11, lines 18-20).

We have also eliminated the odd single sentence paragraph (page 10, line 9); thank you for catching that. Please note that due to the way the changes are tracked in the proof, the sentence still appears to be a separate paragraph even though the paragraph break has been removed.

Dr. Murray (Reviewer 2):

• A conclusion that appears rather weak, and indeed misses 2 major points—that 1) prognostication for patients with advanced disease is very difficult for individual patients [and] 2) that authors should acknowledge that generalist or specialist palliative care should, indeed must, be named as an alternative… I would thus suggest [that] the authors could revise the discussion and conclusions, especially that all patients with progressive cancer should be offered a palliative care approach as well as palliative RT if specifically indicated.
Thank you for this thoughtful comment, and for helping us refine our discussion to better fit the BMC Palliative Care audience. We agree that radiotherapy is no substitute for palliative care services, and indeed is only a local treatment that may result in symptoms that in turn require palliation. We have added to our discussion emphasizing the importance of offering palliative care early in the disease course, with the notion that primary palliative care can be provided by any member of the multidisciplinary team, with referral to specialists as warranted (page 13, lines 2-21). We have similarly carried this sentiment through to the conclusion (page 16, lines 6-10).

To further support this principle of early palliative care, we have also added references to the NCCN, WHO, and ASCO guidelines (page 13, lines 8-11). We have also incorporated references highlighted in your comment to further articulate the need to reassess palliative care on an ongoing basis throughout a patient’s disease course (Murray et al., BMJ 2017; page 13, line 21) and the need for all treating clinicians to be equipped to provide palliative care (Quill and Abernethy, NEJM 2013; page 13, line 17).

* …various payment issues have and still restrict the ability for some patients in the USA to benefit form palliative care… but that’s should not interfere with or restrict the conclusions.*

We agree that our tangent into the economics of palliative RT in the US, particularly as it pertains to patients who may also be candidates for hospice care, does not contribute but rather detracts somewhat from the conclusions of the paper. As such we have removed that section from the discussion (page 13, line 22).

Editorial edits:

* We have included the rationale for not making our data publically available in the text per BMC policy, though it will be available to interested researchers directly (page 3, lines 20-22).*

Thank you for this opportunity to improve our manuscript. We hope we have addressed each of your concerns.

Sincerely,

Steve E. Braunstein, MD, PhD