Reviewer’s report

Title: Stereotactic Ablative Radiotherapy for the Comprehensive Treatment of 4-10 Oligometastatic Tumors (SABR-COMET-10): Study Protocol for a Randomized Phase III Trial

Version: 0 Date: 29 Mar 2019

Reviewer: Ugur Selek

Reviewer’s report:

The objective of this phase 3 trial is to assess the impact of SABR, compared to standard of care treatment, on overall survival, oncologic outcomes, and quality of life in patients with a controlled primary tumor and 4-10 metastatic lesions. I congratulate the authors for their effort to initiate this necessary trial.

I believe the study design will adequately test the hypothesis.

I would recommend to give more details about the allowed number of lesions treated in the Arm 1 "current standard of care treatment". Besides, other local treatments such as resection or radiofrequency ablation need to be documented for the allowed limits after randomization. If these details would be lacking, the analysis might be challenging.

Restaging within 12 weeks prior to randomization seemed not rationale due to repopulation of cancer in a patient with 4-10 metastases might be expedited in the given time frame. Therefore, 6 weeks for example might be fairer.

Additional criteria for staging might be needed such as for cranial contrast enhanced MRI, as slice thickness of 5-10 mm would probably miss metastatic lesions in comparison to an MRI with 1-3 mm slice thickness.

I would recommend to add a composite plan for all metastatic sites treated, at least the organ treated, to evaluate the DVH to avoid any risk regarding OAR tolerance doses, such as treating a right adrenal gland and two liver metastases which might totally risk the volume of normal liver doses (such as ≥ 700 cc less than 15 Gy in 3 fractions)

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:

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 organization 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 organization 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