Reviewer's report

Title: Stereotactic body radiation therapy for post-pulmonary lobectomy isolated lung metastasis of thoracic tumor: survival and side-effects

Version: 2
Date: 19 August 2014

Reviewer: Yukinori Matsuo

Reviewer's report:

General comments:
The authors reviewed outcomes after SBRT for 23 patients from 3 hospitals who developed an isolated lung metastasis (ILM) after lobectomy. With a median follow-up time of 14 months, a median survival was 21.0 months. RP Gr 2 and 3+ were observed in 21.7% and 13.0%, respectively. They found PTV volume and V5 of ipsilateral lung be significant factors for RP.

I think the topic is of importance. However, the number of eligible patients was small and the follow-up period was limited, so that it is difficult to draw reliable results on survival and local control.

Major Compulsory Revisions:
#1. Inclusion criteria
I feel the number of patients who received SBRT after lobectomy was small (<10%) in this study. That might be related to the inclusion criteria for this study. Please clarify the criteria for ILM, especially in distinction with a second primary lung cancer.

The authors reviewed patients treated during Oct 2008 and Dec 2013. The last period of the follow-up was also Dec 2013. So, the follow-up period was too short (median 14.0mo, range 6.0-47.0mo) to evaluate OS or local control. Why did the authors include patients with such a short follow-up?

#2. DVH parameters for RP
The authors chose V5-V30 and MLD of ipsi-, contra- and bi-lateral lungs, and PTV volume for the DVH analysis. From Table 4, V5 for the ipsilateral lung was higher than I expected, even in the RP0-1 group. This may be related to lung volume reduction by the prior lobectomy. I suspect that a small lung volume after lobectomy was related to the high V5 value, that leads to such a high incidence of RP.

Please provide the data on tumor location (ipsi- or contra-lateral to lobectomy) and lung volumes separated into ipsi- and contra-lateral.

#3. Comparison with reports on SBRT after pneumonectomy
As the authors pointed, little data are known specific to the post-lobectomy situation. However, a few papers are available on SBRT after pneumonectomy.
Please add a discussion on comparison with the papers.


Minor Essential Revisions:
#1. L81-83: I cannot find the description on the recommendation of SBRT for ILM. The authors cited an old version of NCCN guideline. Please cite a newer version, and clarify which section describes the recommendation.

#2. L125: There are many PET tracers including FDG, FLT, Met, and so on. Please specify the tracer for PET.

#3. L141-143: Why did the start date of evaluation differ between OS and PFS? OS was defined periods between the start date of treatment and the last follow-up, while PFS was periods since the last date of SBRT.

#4. L167-168: Can the “initial stage after surgery” be rephrased as pathological stage confirmed with surgery?

#5. L180: Please clarify the type of “image guidance during treatment.” Is it stereo fluoroscopy like ExacTrac, cone-beam CT or others?

Discretionary Revisions:
#1. L242: The authors cited a paper by Rusthoven in 2009 as “recently.” It is now a year of 2014. So, “recently” is not suitable. The authors frequently used the words “recent” or “recently”.

Level of interest: An article whose findings are important to those with closely related research interests

Quality of written English: Needs some language corrections before being published

Statistical review: Yes, and I have assessed the statistics in my report.

Declaration of competing interests:
I declare that I have no competing interests