Peer Review File

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Reviewer A

In this paper, the authors report three cases of RET fusion NSCLC undergoing radiation therapy and pemetrexed-based chemotherapy.
The RET fusion gene is a rare fraction, and it is desirable to know the detailed course of the case.
However, there are some points that need to be revised.

Cover

Comment 1: There is a gap between the title and the running title.
Reply: We thank the reviewer. The updated the running title, trying to be more specific according to the main concepts reported in the manuscript.
Changes in the text: lines 13-14, page 1; the running title was modified.

Case presentation

Comment 2: It is better to list the version of TNM classification.
Reply: The version of TNM status regarding the first and the second case was added.
Changes in the text:
TNM version was added for the first case and the second case (lines 70-71, page 4 and line 90, page 5, respectively).

Comment 3: It is better to describe the dose fractionation of radiation therapy.
Reply: The total dose and the fractionated daily dose of radiation therapy was specified.
Changes in the text:
Cases 1-2-3: doses were specified (77-78, page 4; lines 97-99, page 5 and lines 118-119, page 6).

Comment 4: Is '2019' on the 4th line of case2 correct?
Reply: we apologize for the mistake. The year was 2017.
Changes in the text: the year was corrected (line 93, page 5).

Discussion

Comment 5: At the end of abstract and introduction, authors discribed RT prolonged time to pemetrexed-based chemotherapy failure, but I think that more discussion is needed about effect of radiation therapy.
Reply: we thank the reviewer. We added a more complete discussion making a final hypothesis in the end.
Loco-regional treatments are currently a valid option for oligo-progressive and oligo-metastatic oncogene addicted NSCLC. Despite our patients were not upon specific

anti-RET TKI, Pemetrexed showed high activity against RET-positive NSCLC. We hypothesized that radiation treatment could prolong the time to Pemetrexed failure.
Changes in the text: a more definite discussion was added at the end of the manuscript (lines 159-170, pages 7-8).

Reviewer B

Comment 1: *This is an interesting monoinstitutional case series on RET-rearranged NSCLC. As the authors pointed out the small share of patients not only share clinico-pathological similarities with ALK- or ROS1 positive patients but also a good response to pemetrexed-based chemotherapy. Whether additional SBRT really offers an "unique" improvement in PFS in these patients or might rather result in a generally improved survival (in selected patients) can't be addressed in a case series but might be hypothesis-generating. I just have one minor comment concerning case #2: It seems to me that the dates might not be reported correctly.*

Reply: we thank the reviewer for the comments. With regards to the major revision, we added a more extensive discussion at the end of the manuscript. We specified that we formulated a hypothesis relying on the clinical outcomes experienced by our patients.
We corrected the wrong date of the case 2.
Changes in the text: an edited discussion was added at the end of the manuscript (lines 159-170, pages 7-8).
The year was corrected (line 93, page 5).