Reviewer’s report

Title: Development and validation of a novel MR imaging predictor of response to induction chemotherapy in locoregionally advanced nasopharyngeal cancer: a randomized controlled trial substudy (NCT01245959)

Version: 1 Date: 18 Jun 2019

Reviewer: Charlotte Robert

Reviewer's report:

I would like to thank the authors for their improvement of the manuscript. I still have some important remarks:

- Some results were added concerning FFS at 3 years and 5 years. Please add the corresponding HR values.
- Confusion between percentages and percentage points in the whole article
- All the patients included in the prospective randomized trial were not included in the present analysis, biasing the selection. Please therefore moderate this affirmation throughout the manuscript. It is not clear how this biased selection was taken into account in the validation cohort?
- In the training and validation cohorts, it is not clear how were managed the following patients:
  o In the ICT + CCRT group: patients who have exhibited toxicity with ICT and who have not received all 3 cycles + patient with toxicities who did not complete all the RT and chemo treatments
  o In the CCRT group: patient with toxicities who did not complete all the RT and chemo treatments
- Some points in the results section (risk stratification for low ICTOS patients in the validation group) were not detailed in the M&M section. Please improve that.

Minor remarks:

- Histogram matching: please add a reference for the choice of the 85% value
- Please mention clearly that 2D radiomics features were computed in the manuscript
- 719 features => 819 features
- Please mention Figure 1 in the M&M section instead of the results section
- Please rephrase the following sentence in the abstract section: "This finding was confirmed…"
- Please rephrase the last sentence of the introduction: "Then, we used data from…"
- M&M section: please mention the spatial resampling step in the manuscript
- M&M section - P12 - "All hazard ratios and 3-year and 5-year FFS"
- As seen on Figure 3, clinical results are not at all comparable between the two cohorts. Can you comment on that?
- P17: exacted => extracted
- P18: benefitted => benefited
- P18: Please rephrase the two following sentences: "Obviously, these patients…"
- Legend - Figure 1 : some featureS
- Figure 1: I do not understand the model construction step
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.

No

Are the conclusions drawn adequately supported by the data shown?
If not, please explain in your comments to the authors.

No

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.

I recommend additional statistical review

Quality of written English
Please indicate the quality of language in the manuscript:

Acceptable

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