

## List of Responses

Dear Editors and Reviewers:

Thank you for your letter and for the reviewers' comments concerning our manuscript entitled "Radiomics for differentiating tumor deposits from lymph node metastasis in rectal cancer" (ID: 74574). Those comments are all valuable and very helpful for revising and improving our paper. We have studied comments carefully and have made correction which we hope meet with approval.

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### For Editor:

1. We provided a new language certificate along with the manuscript **as required**.
2. We adjusted the ranking of the authors Mou Li and Yong-Chang Zhang.
3. Almost no statistics related content has been changed in this minor revision. So the file **Biostatistics Review Certificate** has not changed.

### For Reviewer #1:

Scientific Quality: Grade B (Very good)

Language Quality: Grade B (Minor language polishing)

Conclusion: Minor revision

### Specific Comments to Authors:

1. has it been evaluated whether vascular infiltration on histological examination has any meaning? since these are lymph node deposits or metastases could correlate if the neoplasm follows a lymphatic pathway

**Response:** Thanks for your suggestion. We extracted the data of pathological extramural vascular invasion (EMVI) from the pathological reports. Then the chi-squared test was used to find that the difference was statistically significant between TDs+ and LNM+ patients ( $P < 0.001$ , added in Table 1 and Results), indicating that TDs were significantly associated with EMVI. This result was consistent with the previous study: Significance of extranodal tumour deposits in colorectal cancer: A systematic review and meta-analysis. Eur J Cancer 2017. However, in our article, considering the research purpose, we did not further analyze the question of TDs' origin.

2. redundant features were randomly removed by correlation analysis .... how were the deleted features chosen? why randomly?

**Response:** Thanks for your comments. We found that we made a mistake in this sentence through consulting experts. It was changed to the following sentence: Redundant features were removed using correlation analysis with a threshold of 0.40 (if the correlation coefficient between two features was  $> 0.4$ , the one with a lower correlation coefficient with the dependent variable was removed).

### For Reviewer #2:

Scientific Quality: Grade B (Very good)

Language Quality: Grade B (Minor language polishing)

Conclusion: Minor revision

### Specific Comments to Authors:

1. This manuscript, however, needs more explanation (minor revision) for the performance decline when used to diagnose both TDs (+) and LNM (+) patients because preoperative diagnosis of both positive patients is of great clinical significance. Authors noted the discordance between the nodules used in the training cohort and mixed groups, and small sample size of mixed group in the discussion. However, above explanations are not enough and it would be better to add other explanations. It could be useful to discuss whether the radiomics feature details of both positive cases are different from those of TDs (+) and LNM (-) patients. I hope that my comments could be helpful for both authors and readers and appreciate for the patience of editors.

**Response:** .Thanks for your advice. We checked the specific radiomics features of these TDs+ LNM+patients according to your suggestion. We found that among these double-positive patients, some LNMs were incorrectly evaluated as TDs. In these lesions, the value of wavelet-HLH\_firstorder\_Median (a radiomics feature) decreased. In the future, we will enroll a larger sample to adjust this feature. We added this explanation in Discussion.