Peer Review File

Article Information: https://dx.doi.org/10.21037/atm-22-6149

Reviewer A

Comment: The authors have reviewed the landscape and have suggested a probable approach for patients susceptible to TAAD. However, it would be nice to see a working algorithm on how they visualize the clinical management could be affected using radiogenomics in the current management of TAAD.

Reply:

We appreciate the reviewer's constructive comment. The reviewer raised one very important point regarding radiogenomics: in what way it can be integrated to daily working algorithm of our clinical practice. I must say it is still at the very early stage of the development of this technology. With the machine learning from combined radiomics and genomics information, we hope to see in one day after a CT scan is performed for a patient, there will be an automatic analysis of the imaging data and the associated radiomics features, and together with patient's ethnicity, basic demographics(age, height, weight), family history etc, a polygenic score can be generated in predicting the patient is of low, moderate or high risk of developing aortic event and its complications per year. To confirm the diagnosis with the patient exhibit high risk radiomics features, WGS can be done. Currently, there is already guideline to recommend surgical intervention at different aortic aneurysm size based on the type of genetically triggered thoracic aortic aneurysm. So, the radiogenomics could also potentially provide a rapid and timely guidance of the indication and timing of operation/interventions.

Changes: We have added corresponding statements regarding our vision in the manuscript (Page 12, Lines: 4-13)

Reviewer B

1. All abbreviations in figures/tables and legends should be explained. GTAAD, ROI, CT, and MRI in Figure 1 for example. Please check all your figure and tables.

   Reply: Revised.

2. It is suggested to add a complete table as follows in the Methods section.

Table X. The search strategy summary

Items	**Specification**
Date of Search (specified to date, month and year)	
Databases and other sources searched	

Search terms used (including MeSH and free text search terms and filters) Note: please use an independent supplement table to present detailed search strategy of one database as an example	
Timeframe	
Inclusion and exclusion criteria (study type, language restrictions etc.)	
Selection process (who conducted the selection, whether it was conducted independently, how consensus was obtained, etc.)	
Any additional considerations, if applicable	

Reply: Provided.