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LETTER TO THE EDITOR

Comment on "Predicting the risk stratification of gastrointestinal stromal tumors using machine learning-based ultrasound radiomics"

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To the Editor:

We read with great interest the article by Zhuo et al. [1]. The authors have integrated the characteristics of radiomics and machine learning (ML) algorithms to identify the likelihood of postoperative recurrence of gastrointestinal stromal tumors (GISTs). Their study was well-designed to predict the possible malignant features of GISTs. As detecting malignant potential before surgery is crucial for clinical decision-making including postsurgical adjuvant therapy, we believe this work will contribute to the body of evidence related to ultrasonic medicine. However, we would like to raise a few points of concern regarding this study.

First, we would like to discuss the possible difficulties of acquiring images of GISTs using abdominal ultrasound. Although this study highlights the advantages of ML algorisms compared to traditional bedside radiologist evaluations, gaining reliable images of gastric neoplasms available for ML requires skilled ultrasound imaging by proficient physicians or sonographers. In fact, this study excluded 41 out of 188 patients due to the criteria for the training or test cohort [1]. Considering the variation in radiologists' skill, we are not sure if a ML model is suitable for all facilities including education systems.

Next, this study does not take into account the lymphatic involvement of GISTs. GIST may spread via lymphatic vessels to the liver and abdominal cavity [2]. Although lymph node metastases are not frequently observed, it is a part of the important ultrasound radionic features. Therefore, it may be beneficial to include abdominal lymph node enlargement in ML models, potentially leading to better prognosis prediction with more accuracy.

In summary, we believe there are issues regarding the skill of the practitioners performing the ultrasound examinations and the radionic characteristics actually collected, but there is no doubt about the clinical significance of this study. Addressing these issues will be essential in future studies.

Declarations

Conflict of interest The authors declare no potential conflicts of interest.

Ethical approval All procedures followed were in accordance with the ethical standards of the responsible committee on human experimentation (institutional and national) and with the Helsinki Declaration of 1964 and later versions.

References

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