



Reply: “Reconsidering the role of the pleural tail sign in predicting severe pneumothorax after computed tomography-guided lung biopsy”

Jacob Jalil Hassan

Hans-Jonas Meyer

University of Leipzig Faculty of Medicine, Department
of Diagnostic and Interventional Radiology, Leipzig,
Germany

Dear Editor,

We thank the authors for their insightful comments on our study investigating the pleural tail sign (PTS) as a predictor of severe pneumothorax following computed tomography (CT)-guided lung biopsy.¹

We agree that pneumothorax following CT-guided lung biopsy is a multifactorial complication influenced by established patient-related and procedural factors, particularly emphysema and needle trajectory.^{2,3} We acknowledge that an important limitation of our study is that emphysema burden and detailed needle trajectory-related factors were not systematically assessed and therefore could not be included in the multivariable analysis. Given their known impact, residual confounding cannot be excluded.

Our aim was not to replace established risk factors but to assess whether a simple, readily identifiable imaging procedure provides complementary prognostic information. While the observed effect size of the triangular PTS on the risk of pneumothorax requiring chest tube placement is moderate, such factors may still be clinically relevant when integrated into a broader risk assessment.

Given the retrospective design and the potential for confounding, our findings should not be incorporated into current procedural risk stratification without further validation but rather should be considered hypothesis-generating.

We thank the authors again for their constructive comments and for the opportunity to clarify the scope and interpretation of our work.

Footnotes

Conflict of interest disclosure

The authors declared no conflicts of interest.

References

1. Hassan JJ, Leonhardi J, Denecke T, et al. Pleural tail sign in computed tomography-guided lung biopsy: an imaging predictor of severe pneumothorax requiring chest tube placement. *Diagn Interv Radiol.* 2026;32(2):228-232. [\[Crossref\]](#)
2. Heerink WJ, de Bock GH, de Jonge GJ, Groen HJ, Vliegenthart R, Oudkerk M. Complication rates of CT-guided transthoracic lung biopsy: meta-analysis. *Eur Radiol.* 2017;27(1):138-148. [\[Crossref\]](#)
3. Huo YR, Chan MV, Habib AR, Lui I, Ridley L. Pneumothorax rates in CT-Guided lung biopsies: a comprehensive systematic review and meta-analysis of risk factors. *Br J Radiol.* 2020;93(1108):20190866. [\[Crossref\]](#)

Corresponding author: Jacob Jalil Hassan

E-mail: Jacob.Hassan@medizin.uni-leipzig.de

Received 19 April 2026; accepted 20 April 2026.



Epub: 05.05.2026

DOI: 10.4274/dir.2026.264075