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Letter to the Editor

Lung ultrasonography in pulmonary tuberculosis: Integrating chest radiology? Authors' reply

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We would like to thank Mirijello, De Cosmo and Sperandeo for their interest in our work [1]. In our article we evaluated lung ultrasonography (LUS) signs and their accuracy in the diagnosis of pulmonary tuberculosis (PTB) [2], a disease for which better tools, including active case finding especially in high-burden countries, are critically needed to improve control of the largest cause of death from an infectious disease [3].

As stated in the Methods section of our study, accuracy of LUS signs was assessed using bacteriologically confirmed or clinically diagnosed case of TB involving the lung parenchyma or the tracheobronchial tree as the gold standard for diagnosis as defined by WHO [4].

Sperandeo and his group have reported in numerous letters their skepticisms regarding LUS indications and use. As in the past [5], they unfortunately still bring no evidence to their criticisms, referring to personal judgment when stating of “borderline and off-label ultrasound approaches” “endangering patients management”. Their opinions have to be supported by evidence. What stated in the International Evidence-Based Recommendations on Lung Ultrasound [6] comes from numerous studies and has been confirmed by a huge amount of successive evidence.

It is well known that US can detect only lesions reaching the pleura and we underlined it in the discussion section. In the literature there are no data describing the incidence of tubercular consolidations not reaching the pleura in any of their extensions. We know from a relevant amount of evidence that this limitation is negligible for the diagnostic accuracy of LUS in bacterial pneumonia consolidations [7]. In any case, diagnostic accuracy of consolidation detected with LUS is clearly assessed in our study as it is discussed the potential usefulness of considering different US signs in the evaluation of suspected PTB.

There is no reason to exclude the possibility to follow-up evolution of lesions detected by ultrasonography.

The comments regarding air bronchograms is out of context. We described US signs referring to the International Consensus Conference document for terminology [6]. Aiming to better characterize US aspect of cavitated lesions, we reported in some of them the absence of air bronchograms. Comparison between US and CT images was not the aim of our study as it was not to asses specificity of hyperechogenic artifacts to infer the nature of consolidations.

Finally, we do not currently propose LUS as an alternative to conventional radiology and the necessary microbiological investigations. We described the US signs associated with PTB diagnosis, adding some evidence in a poorly investigated area. We outlined that our results together with US characteristics of portability, repeatability and low cost could indicate LUS as a potentially powerful diagnostic tool, particularly in resource-limited settings [8]. As clearly stated in our paper, further studies are needed in order to integrate this technique in the diagnostic algorithm of a suspected PTB case.

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Declaration of Competing Interest

The authors have no conflict of interest to disclose. On behalf of all authors, the corresponding author states that there is no conflict of interest.

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