



Correspondence on “Ultrasound as diagnosis tool for grading bronchiolitis. Where are your limits lost?”

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Dear Editor,

We would like to thank Dr. Latrofa et al. for their interest and comments concerning our paper.

In our study, the score used for lung ultrasound evaluation is the same as previously described by Teveira et al. [1]. In our opinion, it is accurate, fast, and easy to use but it does not consider any subdivision into ultrasound classes. For this reason, we did not include some data which would have been useful for a better understanding of our results.

However, performing the ROC curve, we found that an ultrasound score ≥ 2 had a sensitivity of 66% and a specificity of 76% in predicting the need for oxygen therapy. The area under the curve (mean \pm SE) was 0.698 (\pm 0.06) with a 95% CI of 0.57–0.82 (p 0.007).

Considering this cutoff, children with higher ultrasound score had a higher clinical score (p 0.034, r 0.265).

We think that performing the lung ultrasound may be an effective tool to associate with the first clinical evaluation to easily identify children who will need respiratory support. In fact, we believe that the lung ultrasound could be useful especially for assessing children with a clinical score between 5 and 8 whose hospitalization should be considered on a case-by-case [2].

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As known, the bronchiolitis worsens in days following infection due to progressive inflammation as well as the presence of mucus inside tiny airways [3].

Therefore, how there is a progressive reduction in oxygen saturation, we hypothesize that also a worsening of the ultrasound images occurs.

This would explain why neither oxygen saturation nor ultrasound score in the emergency room was part of our linear regression model.

We agree with Dr. Latrofa et al. that multicenter studies would be needed in order to confirm our data and the role of lung ultrasound in monitoring bronchiolitis progression.

Authors’ contributions A. M. Musolino and D. Buonsenso carried out interpretation and drafting the article. M. C. Supino critically reviewed the manuscript from a conceptual point of view. All the authors approved the final manuscript.

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