




Letter to the Editor

Authors' Response to Drs. Ece Salihoglu and Ziya Salihoglu's Letter to the Editor

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Associate Editor Stefan M. Duma oversaw the review of this article.

To the Editor,

We would like to thank Drs. Ece Salihoglu and Ziya Salihoglu for their interest in our article.²

While not directly addressed in the paper, the CURE clinical study data used in this paper considers patient gas concentration alongside both ventilator pressure and volume. The four CURE pilot trial patients had FiO₂ set to 40, 40, 55 and 65 with PaO₂ measurements of 71, 84, 60 and 101 mmHg, respectively. The McREM trial data used for validation did not provide specific oxygenation results.³ However, each patient's initial P/F ratio is provided in Table 1 of the paper, and indicates FiO₂ varied in typical ranges.³

The model presented in our paper was designed for use in an upcoming clinical trial that aims to optimise mechanical ventilation care.^{1,4} The trial uses two steps to optimise oxygenation. Step 1 optimises alveolar recruitment by titrating PEEP to the point of minimum elastance. The model thus safely maximises oxygenation *via* mechanics without adjusting FiO₂. Step 2 uses this foundation to titrate FiO₂ to achieve patient SpO₂ levels within 92–95%. This process minimises the risk

of excessively high oxygen levels, so the broad range of patients with respiratory failure can be optimally treated dependent on their specific condition and response to ventilation.

Thank you again for your time and interest.

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