Check for updates

Reply to: Clinical interpretation of an interpretable prognostic model for patients with COVID-19

Ye Yuan [1 ✉], Jorge Goncalves [2], Yan Xiao[1], Hai-Tao Zhang[1], Hui Xu [3] and Zhiguo Cao [1]

The article[1] by Giacobbe is very interesting and relevant. They suggest a new research direction regarding the hypothesis that severe bacterial superinfections are a major cause of death in patients with COVID-19. We would be open to exploring this hypothesis with the proposed machine learning approaches[2], provided that new data becomes available. The new data would need to confirm the existence of bacterial superinfections and quantify the type and severity of the infection. We could then test the impact of bacterial superinfections on COVID-19 mortality and determine how this additional information could improve predictions of patient outcomes. We also agree that ongoing collaboration and discussion between clinicians and machine learning modellers would drive advances in this field.

References

1. Giacobbe, D. Clinical interpretation of an interpretable prognostic model for patients with COVID-19. *Nat. Mach. Intell.* https://doi.org/10.1038/s42256-020-0207-0 (2020)

2. Yan, L., Zhang, H. & Goncalves, J. et al. An interpretable mortality prediction model for COVID-19 patients. *Nat. Mach. Intell.* **2**, 283–288 (2020).

Author contributions

All authors drafted the manuscript, provided critical review of the manuscript and approved the final draft for publication.

Competing interests

The authors declare no competing interests.

Additional information

Correspondence and requests for materials should be addressed to Y.Y.

Reprints and permissions information is available at www.nature.com/reprints.

Publisher's note Springer Nature remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.

[1]School of Artificial Intelligence and Automation, Huazhong University of Science and Technology, Wuhan, China. [2]LCSB, University of Luxembourg, Belvaux, Luxembourg. [3]Department of Anesthesiology, Tongji Hospital, Tongji Medical College, Huazhong University of Science and Technology, Wuhan, China. ✉e-mail: yye@hust.edu.cn