

**In Reply:** We would like to thank Dr. Katyal for his interest in our article.<sup>1</sup> The comments highlight the ongoing uncertainties and urgent need for better data from prospective randomized controlled trials, such as those being developed under the National Heart, Lung, and Blood Institute's "Accelerating COVID-19 Therapeutic Interventions and Vaccines (ACTIV)" program, to guide optimal management of COVID-19-associated coagulopathy.

As Dr. Katyal correctly points out, the current guidelines from the American College of Chest Physicians recommend standard venous thromboembolism prophylaxis.<sup>2</sup> In contrast, an expert panel of the American College of Cardiology failed to reach consensus on their recommendation for standard vs intensified prophylaxis or empiric therapeutic-dose anticoagulation,<sup>3</sup> while the authors of the interim guidance from the Anticoagulation Forum recommend high-intensity prophylactic dosing for all critically ill patients.<sup>4</sup>

Our approach represents an attempt to balance the potential risks and benefits of intensified prophylaxis by selecting patients at greatest risk of thrombosis for intensified prophylaxis, while we await the results of prospective randomized controlled trials. We are encouraged, however, by recent reports of low overall bleeding risk even with empiric therapeutic anticoagulation.<sup>5</sup>

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#### REFERENCES

1. Mucha SR, Dugar S, McCrae K, Joseph D, Bartholomew J, Sacha GL, Militello M. Coagulopathy in COVID-19: manifestations and management. *Cleve Clin J Med* 2020; 87(8):461–468. doi:10.3949/ccjm.87a.ccc024
2. Moores LK, Tritschler T, Brosnahan S, et al. Prevention, diagnosis, and treatment of VTE in patients with coronavirus disease 2019. Chest guideline and expert panel report. *Chest* 2020; 158(3):1143–1163. doi:10.1016/j.chest.2020.05.559
3. Bikdeli B, Madhavan MV, Jimenez D, et al. COVID-19 and thrombotic or thromboembolic disease: implications for prevention, antithrombotic therapy, and follow-up: JACC state-of-the-art review. *J Am Coll Cardiol* 2020; 75(23): 2950–2973. doi:10.1016/j.jacc.2020.04.031
4. Barnes GD, Burnett A, Allen A, et al. Thromboembolism and anticoagulant therapy during the COVID-19 pandemic: interim clinical guidance from the Anticoagulation Forum. *J Thromb Thrombolysis* 2020; 51(1):72–81. doi:10.1007/s11239-020-02138-z
5. Nadkarni GN, Lala A, Bagiella E, et al. Anticoagulation, mortality, bleeding and pathology among patients hospitalized with COVID-19: a single health system study. *J Am Coll Cardiol* 2020; Aug 24;S0735-1097(20)36408-1. doi: 10.1016/j.jacc.2020.08.041

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