

**In Response**

**W**e thank Ajayan et al<sup>1</sup> for their interest regarding our article<sup>2</sup> and the Journal for allowing us to reply to the appropriate comments raised in their letter. They identify some issues that we hope to clarify in this reply.

We constructed the receiver operating characteristics (ROC) curves for the pulse pressure variation (PPV) and for the stroke volume variation (SVV) at both T0 and T3, but reported only the values obtained at T3, which have been considered the most informative for the readers. This was unfortunately not clearly stated in the Methods section. The area under the ROC curves (AUCs) of PPV and SVV were even smaller at T0 with respect to T3 (AUC = 0.51 and 0.52, respectively—data not reported in the article). These results suggest that the dynamic indexes may not be reliable in prone patients ventilated with protective tidal volumes and that the carryover effect related to the tidal volume challenge did not bias the results. Moreover, as stated in the Methods section, the study protocol was started before the administration of any vasopressors, obviating any bias related to the changes in the cardiovascular tone due to the use of these drugs. Some patients received vasopressors after the study protocol.

The colleagues suggest that the results of the study could be also biased by the use of the uncalibrated MOSTCARE (Vytech Health, Padua, Italy) system because Grensemann et al<sup>3</sup> showed a high degree of error by comparing the PiCCO (Pulsion Medical Systems, Munich, Germany) plus and the FloTrac/Vigileo (Edwards Lifesciences, Irvine, CA) systems in prone positioning.<sup>3</sup> First of all, the study by Grensemann et al<sup>3</sup> did not adopt the hemodynamic tool used in our study and, moreover, the study populations are not comparable. Grensemann et al<sup>3</sup> enrolled fewer patients (16 vs our 40), and they all were critically ill (25% of mortality) with acute lung injury. The percentage of error of the uncalibrated tool was high also in supine position (44%, Table 3 of the article).<sup>3</sup> These results are expected and consistent with earlier studies comparing the reliability of calibrated and uncalibrated devices in critically ill patients.

Finally, in our previous study regarding the reliability of functional hemodynamic tests in supine neurosurgical patients, the case-mix of the enrolled population was comparable to our current article.<sup>4</sup> For sure all the conditions identified by Neeraja et al<sup>1</sup> (diabetes, hypertension, and chronic renal failure) may affect the global cardiovascular response of the patients. Our results suggest that compensated systemic cardiovascular diseases do not affect the reliability of a hemodynamic test lasting only 1 minute

in hemodynamically stable elective neurosurgical patients without significant lung disease.

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**REFERENCES**

1. Ajayan N, Hrishi AP, Sethuraman M. How reliable are the functional hemodynamic tests in predicting fluid responsiveness in patients undergoing protective ventilation during prone spine surgeries? *Anesth Analg.* 2020;130:e150.
2. Messina A, Montagnini C, Cammarota G, et al. Assessment of fluid responsiveness in prone neurosurgical patients undergoing protective ventilation: role of dynamic indices, tidal volume challenge, and end-expiratory occlusion test. *Anesth Analg.* 2020;130:752–761.
3. Grensemann J, Bruecken U, Treszl A, Wappler F, Sakka SG. The influence of prone positioning on the accuracy of calibrated and uncalibrated pulse contour-derived cardiac index measurements. *Anesth Analg.* 2013;116:820–826.
4. Messina A, Montagnini C, Cammarota G, et al. Tidal volume challenge to predict fluid responsiveness in the operating room: an observational study. *Eur J Anaesthesiol.* 2019;36:583–591.

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**Devices or Care for Cancer Pain Management?**

**To the Editor**

**T**he analysis of a prospective, multicenter product surveillance registry of intrathecal drug delivery systems (IDDSs)<sup>1</sup> raises concerns about the underlying assumptions of need and the interpretation of data. The fact that cancer pain remains undertreated due to lack of adherence to guidelines does not imply such guidelines do not work; rather it is necessary to spread the knowledge regarding the use of opioids. The 3-step approach, improved by optimal use of opioids and tailored treatment, resolves most cancer pain issues, even in difficult cases. Thus, the bad examples should be not used to promote something other. The increased scrutiny of long-term systemic opioids used triggered by the opioid epidemic in the United States does not support the use of implantable techniques. Appropriate use by skilled professionals is a warranty for minimizing this risk.

Is the statistically significant reduction in pain intensity from 6.6 to 5.5 clinically relevant? To most clinicians and patients, this would be considered a failure corresponding to evitable and prolonged suffering. The minimal clinically important difference should be of at least 2 points or <33%.<sup>2</sup> Regarding data

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