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Need for a biomarker to de-escalate antimicrobial empirical therapy

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Dear Editor,

We would like to thank Drs. Schuetz and Mueller for their comments and the interesting data that they reveal in their letter [1]. We completely agree with them that only well-designed prospectively randomized trials can definitively confirm our findings that de-escalation of empirical therapy is a protective factor for mortality in patients with severe sepsis and septic shock. However, we consider that our results confirm the safety of this strategy that had been recently questioned by a systematic review [2]. Interestingly, a very recent observational study has corroborated the safety of this strategy in 101 neutropenic patients with severe sepsis in a 1-year follow-up [3].

Another interesting point is the need for a biomarker as an aid to physicians to reduce or to stop antibiotics. A recent study has concluded that procalcitonin use safely assists decisions on antibiotics withdrawal and de-escalation in cancer patients [4]. Future clinical trials will shed light on the usefulness of procalcitonin or other biomarkers to guide physician decisions. We believe that a biomarker-guided strategy may increase the rate of de-escalation that is relatively low in ours and in other studies [5]. However, in the meantime, clinicians should strive to narrow or to discontinue antibiotics on the basis of the results of antimicrobial susceptibility tests in patients admitted to the ICU with severe sepsis and septic shock.

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