

LETTER

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# Influence of pathogen and focus of infection on procalcitonin values in sepsis: are there additional confounding factors?

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We read the study by Thomas-Rüddel et al. with great interest [1]. Authors showed serum procalcitonin (PCT) concentrations were higher in patients with Gram-negative bacteremia (26 ng/ml) than in those with Gram-positive bacteremia (7.1 ng/ml) or candidemia ( $P < .0001$ ) [1]. They outlined some potential factors that could have impacted the PCT measurement outside to the type, location, and severity of the infection. In addition to their findings, it is essential to highlight that in patients with positive blood culture, septic shock is very common. Acute kidney injury (AKI) is prevalent among patients with sepsis, and a considerable proportion of patients with sepsis-associated AKI (SA-AKI) require renal replacement therapy (RRT) [2]. As PCT has an approximate molecular weight of 14.5 kDa [3], the contemporary continuous RRT membranes are able to remove it (CRRT cutoff is about 35 kDa) [4]. Also, using newer high adsorptive membranes (HAM) would make PCT removal even more prominent [4]. Accordingly, if in the study by Thomas-Rüddel et al., there was any imbalance between the uses of CRRT between the two groups, it could critically impact the observed results. We, therefore, suggest including the use of CRRT in the prediction model. In addition, the design of future studies to assess the performance of PCT among septic patients who are on CRRT seems to be necessary [5].

## Abbreviations

AKI: Acute kidney injury; CRRT: Continuous renal replacement therapy; HAM: Highly adsorptive membranes; PCT: Procalcitonin; RRT: Renal replacement therapy; SA-AKI: Sepsis-associated AKI

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## Authors' contributions

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## Competing interests

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