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## Intraoperative lactate measurements are not predictive of death in high risk surgical patients

*A medida do lactato arterial intraoperatório não é determinante de mortalidade em pacientes cirúrgicos de alto risco*

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Dear Editor-in-chief,

I read with great interest the article on intraoperative lactate levels as a possible predictor of mortality<sup>(1)</sup>. I sincerely congratulate the authors for such a brilliant research. However, I would appreciate if some questions are clarified.

The inclusion criteria allowed patients to have at least one associated health factor, such as presenting with comorbidities, undergoing neoplasm surgery and/or being over the age of 70. However, the results do not describe how many patients actually fell into each category. The mortality for each of these different factors is apparently different, and combining these groups for analysis raises doubts about whether any factor was predominant. This suggests that there may have been a screening bias.

Furthermore, the methods used to determine the study's sample size was not described, preventing any statistical power analysis. Therefore, the results on intraoperative lactate levels may be unreliable. This observation comes from the authors themselves when they state "...larger studies are warranted to better evaluate these results reliability", meaning that there is a large probability that the results are not reliable and their conclusion may not be correct. Perhaps their conclusion could be rephrased, considering the study's statistical power.

Analysis of the results from Table 4, based on the coefficient of variation, leads to the conclusion that the data were not always homogenous. This suggests that the data distribution was not symmetric around the mean. Therefore, the Student's t and ANOVA statistics may have not been indicated for all situations, and these tests may have led to a bias in analyzing the data, as the possibility of type I errors were not accounted for.

Finally, I would like to congratulate the authors for their initiative to repeat their conclusion in the article's title. However, they should have mentioned the significant results, not the negative ones. This suggests that prior to completing analysis of the data, the authors were convinced of a conclusion that may or may not have been supported by this trial.

Sincerely,  
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### REFERENCE

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