



Ideal predictor studies

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Dear Editor,

We have read the article titled “Evaluation of Covid-19 cases that applied to the hospital at the first peak of the pandemic” prepared by Akdoğan et al. with great interest (1). Firstly, we thank the authors for their research from Turkey that aims create an alternative diagnosis method by using some laboratory parameters in the early phase of COVID-19. Although the study bore negative findings, these studies by academics from Turkey for humanity at a time when the whole world was affected by the pandemic are commendable. Secondly, we thank the authors and the editorial board for their courage in publishing this informative and successful article with negative findings. As mentioned in an article published in Nature, highlighting negative results will improve science (2). We also would like to mention a few important points about ideal predictor studies in the early phase of COVID-19.

COVID 19 is affecting economies, social life, and health systems around the world. It significantly increases the burden on the health system. It is difficult for patients to access medical support at peak periods (3). Various scoring systems and laboratory parameters were studied to determine the priorities of the patients and the severity of the disease (4). The importance of triage practice, used to determine the priority of patients in emergency services, has increased. Research were done on the ideal early warning score for patients with symptoms of COVID-19. Rapid Emergency Medicine, National early warning, Rapid Acute Physiology, and Modified early warning scores are the most studied early warning scores for COVID-19 in literature (5-7). Even vital parameters were combined with laboratory parameters such as lactate in patients with COVID-19-like symptoms to approach the ideal early warning score (8). On the other hand, scoring systems such as Pneumonia Severity Index, CURB, and CURB-65, used in pneumonia and critical patients, were validated against COVID-19 to use scarce resources effectively (9). Many authors, such as Akdoğan et al., research laboratory parameters to detect critical diseases in the early phase of the COVID-19 pandemic (1,10-12). Hematological

parameters were the leading ones because they were cheap and easily accessible (11,12). Lymphocyte count, C-reactive protein, D-dimer, ferritin were associated with mortality and critical illness. These parameters were used to decide on hospitalization and admission to the intensive care unit (1,10-12). Weng et al., similar to Akdoğan et al., developed the ANDC score by aiming for a quantitative tool for early predicting mortality risk of patients with COVID-19 in the early phase of the pandemic. This score, developed with mathematical and statistical calculations, was calculated with the formula $(1.14 \times \text{age} - 20) \text{ (years)} + 1.63 \times \text{neutrophil/lymphocyte ratio} + 5.00 \times \text{D-dimer (mg/L)} + 0.14 \times \text{C-reactive protein (mg/L)}$ (13). Bilge et al. confirmed in their study that ANDC is an independent biomarker (14).

As a result, the effort of researchers to reach the ideal predictor in patients with COVID-19 continues. The ideal predictor should be inexpensive, accessible, and best predictive of COVID-19-related mortality.

Conflict of interest

None to declare.

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