

## Author's Reply

## RE: Lymphocytes and Eosinophils Associated with the Coronavirus Disease-2019 Severity

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Dear Editor,

We thank the authors for their valuable ideas<sup>1</sup> on our study.<sup>2</sup> Their main concerns are the white cell count is a laboratory statistic that can be impacted by a number of variables. Eosinophil, for instance, may be impacted by an ongoing parasite infestation. The quality control process itself is a crucial element that may go unmentioned.<sup>3,4</sup>

This is indeed true but as we mentioned in the study, data were obtained from the hospital's electronic database to prevent human errors. We have big data and even small differences can become significant with so many numbers. Our results were correlated with other publications, neglecting complicating illnesses. Hemogram values of all patients were studied in our hospital on admission. In our hospital, one laboratory and one system is used. Quality control is carried out periodically.<sup>2</sup>

Other concerns are that the basic complete blood count values, which are derived from an automated hematology analyzer, provide the basis for the parameter. It is important to note the specification and quality control of the analysis performed using an automated hematology analyzer. There may be differences between different analyzers. Different hematological analyzers and other complicating personal illnesses can have an impact on the results.<sup>3,4</sup>

In our study, as we stated in the material and methods section, a Coulter LH 780 Hematology Analyzer (Beckman Coulter Inc., Brea, Calif, USA) was used for complete blood counts (leukocyte, neutrophil, eosinophil, lymphocyte, and platelet) analysis. This same automated hematology analyzer was used for all patients in this study.<sup>2</sup>

Takubo et al<sup>3</sup> evaluated assays of the same fresh blood samples with 6 different types of reference automated hematology analyzers developed by the following manufacturers including Beckman Coulter. The complete blood counts and leukocyte differential counts were surveyed with a reference-automated hematology analyzer from each manufacturer and no large differences greater than 10% of mean value were observed with Beckman Coulter.<sup>3,4</sup>

In summary, we believe that our results are reliable, because the same automated hematology analyzer was used to evaluate complete blood count values of all patients. Quality control is carried out periodically. All blood samples were taken in our hospital on admission. Data were obtained from the hospital's electronic database neglecting human error. Hemogram values of a large population in this study correlate with other studies.

**Declaration of Interests:** The authors have no conflict of interest to declare.

### REFERENCES

1. Kleebayoon A, Wiwanitkit V. Lymphocytes and eosinophils associated with the coronavirus disease-2019 severity. *Thorac Res Pract.* 2023;24(4):235. [\[CrossRef\]](#)
2. Duman D, Karakurt Z, Durmuş Koçak N, et al. Are lymphocytes and eosinophils associated with the COVID-19 severity: a large, retrospective study. *Thorac Res Pract.* 2023;24(1):6-13. [\[CrossRef\]](#)
3. Takubo T, Tatsumi N, Satoh N, et al. Evaluation of hematological values obtained with reference automated hematology analyzers of six manufacturers. *Southeast Asian J Trop Med Public Health.* 2002;33(suppl 2):62-67.
4. Health devices miles Technicon. *Health Devices.* 1992;21(11):387-419.

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