

Reply to A. Lasagna et al

We thank Lasagna et al¹ for their letter in response to our recent report.² In our article, we discussed the management of febrile neutropenia associated with a SARS-CoV-2 infection in a patient with lung cancer. The disease presented a favorable evolution with spontaneous recovery of hematologic values without the need to use granulocyte colony-stimulating factors (G-CSFs). The immune response against the virus, generating macrophage activation and a cascade of cytokines, is the main cause of its morbidity and mortality.

Use of the neutrophil-to-lymphocyte ratio (NLR) as a predictor of mortality in patients with coronavirus disease 2019³ is interesting. Nawar et al⁴ published a series of three cases of patients with SARS-CoV-2 infection who received G-CSF who had NLR values greater than 5 at 72 hours after administration. Patients' disease had unfavorable evolutions, leading to death.

The patient discussed in our report² had an initial NLR of 3.5, which decreased to 1.1 at 48 hours after admission. These data support the use of NLR as a prognostic predictor of SARS-CoV-2 infection and could be helpful in avoiding the use of G-CSF. When we analyzed the data from our institution, we observed that a patient with urothelial carcinoma who developed febrile neutropenia secondary to chemotherapy and coinciding with SARS-CoV-2 infection also presented a favorable evolution without the use of G-CSF. He received treatment with piperacillin-tazobactam, hydroxychloroquine, and lopinavir/ritonavir, and was discharged from the hospital in 10 days. The highest NLR level in this patient during admission was 2.1.

We consider that the use of G-CSF may be related to an imbalance in neutrophil and lymphocyte levels in patients, thereby increasing NLR and worsening the prognosis of patients with SARS-CoV-2 infection. For this reason, the indiscriminate use of G-CSF in these patients should be avoided and assessed individually.

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AUTHORS' DISCLOSURES OF POTENTIAL CONFLICTS OF INTEREST AND DATA AVAILABILITY STATEMENT

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AUTHORS' DISCLOSURES OF POTENTIAL CONFLICTS OF INTEREST

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