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Reply: Response to Clinical Outcomes of Solid Organ Transplant Recipients Hospitalized with COVID-19: A Propensity Score-Matched Cohort Study

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▸ See the letter "Response to clinical outcomes of solid organ transplant recipients hospitalized with COVID-19: a propensity score-matched cohort study" in volume 56 on page 415.

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Dear Editor:

We would like to express our gratitude to Prof. Sudip Bhattacharya for his interest in our research and for his valuable suggestions. We believe that his suggestions will be of great help to researchers in the future when the next pandemic of emerging infectious diseases occurs again, and the research is conducted on solid organ transplant recipients (SOTRs). We concur with most of his comments and offer some clarifications [1].

The study was conducted at Kyungpook National University Hospital and Kyungpook National University Chilgok Hospital, the leading dedicated coronavirus disease 2019 (COVID-19) hospitals in the region, which have treated the largest number of COVID-19 patients [2]. Both hospitals are affiliated with the same medical school and share many patient care protocols. Additionally, the Korean government has paid for all COVID-19 therapeutics and has controlled their supply, usage and indications. As a result, the treatment protocols for most COVID-19 patients do not vary significantly between hospitals. These government policies have been applied equally to all patients, regardless of their socioeconomic status or accessibility.

Postacute sequelae after the COVID-19 (PASC) is more common in SOTRs than in non-immunosuppressed/immunocompromised (non-ISC) patients, with 2.2% of SOTRs and 1.4% of non-ISC patients developing PASC (P <0.001) [3]. In SOTRs, risk factors for PASC include severe COVID-19 infection, older age, and mycophenolate mofetil use, while in non-ISC patients, depression and severe infection are significant risk factors [3].

Although we did not include the timing of vaccination as a variable in our study, we indirectly considered the duration of post-vaccination effectiveness by defining it as 7 days

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Infection & Chemotherapy

to 180 days after the last dose [4]. In the introduction section, we mentioned that the immune response to vaccination was lower in the SORTs group and that periotic boosters may be required, citing other studies [4].

The COVID-19 outcomes in SOTRs highlight a significant variation in the severity of the disease across different waves of the SARS-CoV-2 pandemic. According to Solera JT et al, the incidence of severe COVID-19 in SOTRs was most pronounced during the wildtype/Alpha/Delta wave, with 44.6% of cases being severe [5]. This incidence markedly decreased during the Omicron waves, where severe cases ranged from 5.7% to 16.1%. Furthermore, lung transplant recipients within this group had poorer outcomes compared to other types of organ transplant recipients. This suggests a greater potential benefit for lung transplant patients from preventive measures such as vaccination and early therapeutic interventions to mitigate the risk and severity of COVID-19. This information underscores the need for tailored healthcare strategies to protect the most vulnerable SOTRs, especially during surges of more virulent strains.

Maintenance dialysis patients were excluded from the analysis of SOTRs because they are no longer taking immunosuppressants. Their clinical condition often aligns more closely with that of regular dialysis patients rather than those who have recently undergone organ transplantation and are actively managing the complexities of immunosuppressive therapy.

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