Reply

TO THE EDITOR:

We thank Sookaromdee and Wiwanitkit for their interest in our article and for taking the time to express their opinion.[1]

Sahin et al. showed that BNT162b2 (Pfizer, New York, NY) messenger RNA (mRNA) vaccine induces robust and protective humoral and cellular responses to the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) spike protein.[2] Although immunocompetent individuals have detectable antibodies after the second vaccination, combined analysis with cellular immunity is superior in identifying vaccine responders among posttransplant individuals.[3] Risk factors for poor response after transplant include older age, immunosuppressive regimen including depleting antibodies and antimetabolites, and earlier time after transplantation. Underestimation of vaccine response based on humoral immunity may be particularly pronounced in individuals after vector priming, which induces higher levels of T cells compared with mRNA vaccines.[3]

In patients with cirrhosis, the so-called "cirrhosis-associated immune dysfunction" impairs both the cellular and humoral immune responses by reducing the number of lymphocytes and the ability to produce immunoglobulins.[3] This leads to greater susceptibility to infections and compromises the response to existing vaccinations. In our 89 pre–liver transplant patients, 94% achieved a seroconversion after mRNA vaccination against SARS-CoV-2. So far, we have no data on cellular immunity; however, none of our patients received a vector-based vaccine, and none of them developed coronavirus disease 2019 after vaccination.

At present, the results of the anti–SARS CoV-2 serological assays are not interchangeable, and individual immune monitoring should be performed using the same method. We tested the antibodies with the LIAISON SARS-CoV-2 TrimericS immunoglobulin G (IgG) assay (DiaSorin TrimericS IgG, Saluggia, Italy), and a receiver operating characteristic analysis for the detection of SARS-CoV-2 antibodies disclosed an area under the curve of 0.996 (95% confidence interval, 0.992-0.999) for this assay in the article by Bonelli et al.[4] Furthermore, Jung et al.[5] reported a sensitivity of 94% and a specificity of 100% with a correlation with the cPass (GenScript, Piscataway, NJ) neutralization antibody assay of 0.88 (using Spearman's rank-order correlation coefficient) for this test.

Persistence of humoral response in our pre–liver transplant patients should be monitored over time, and T cell immunity must be explored in the near future to better understand the global vaccine effect.

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