

Statement on COVID-19 Vaccination in Solid Organ Transplant Recipients

Recently, multiple studies have been published examining the response to SARS-CoV-2 mRNA-based vaccines in solid organ transplant (SOT) recipients.(1-7) Overall, these have demonstrated reduced antibody responses to vaccine when compared with reports involving the general public.

The low antibody response rate is concerning but not unexpected as SOT recipients have lower rates of immune responses to other vaccines as well.(8) Further data are needed to evaluate B- and T- cellular responses in SOT recipients after SARS-CoV-2 vaccination and to assess vaccine effectiveness particularly for protection against severe COVID-19 as a clinical end-point. Previous experience with influenza vaccination in transplant patients has demonstrated reduced influenza-related lower respiratory tract disease and hospitalization despite low antibody response.(9, 10). While breakthrough cases of COVID-19 after partial or full vaccination in SOT recipients may occur, it is important to recognize that we may be preventing more cases or reducing severity through vaccination.(11, 12) Thus, we strongly caution against concluding that low antibody response rate to SARS-CoV-2 vaccination will lead to reduced clinical effectiveness until more information is available. These results should not prompt or encourage vaccine hesitancy in SOT recipients.

Immunosuppressed patients are known to have prolonged viral shedding of actively replicating virus which may promote the development of viral variants.(13) Additionally, there are data to suggest worse outcomes in SOT recipients with COVID-19 compared to the general population.(14) The effect of immunization on duration of viral shedding and clinical outcomes remains unknown for this population.

Until more complete data are available, we urge:

- **Pre-transplant vaccination of all SOT candidates as a priority whenever feasible.**
- **Continued SARS-CoV-2 vaccination in SOT recipients and priority for vaccination of their household members and caregivers to reduce exposure risk for these vulnerable patients.**
- **Continuation of a stable immunosuppression regimen at the time of vaccination to avoid the risk of organ rejection until more comprehensive data are available.**
- **Continued adherence of all transplant recipients to protective measures including masking and social distancing regardless of vaccination status.**



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