

Documentation: sot-covid.csv

Shortly after mRNA vaccines against SARS-CoV-2 became available, there was great interest in identifying possible sources of variation in humoral (e.g., antibody) and cellular responses to the vaccine. One patient subgroup of particular interest has been the immunocompromised. Patients who receive solid organ transplants are placed on immunosuppressants for the remainder of their lives (though to a higher degree shortly after transplantation) and are therefore immunocompromised. Further, degree of immunosuppression varies by transplant type (e.g., liver transplant recipients tend to be less immunosuppressed as compared to, say, lung transplant recipients). The goal of this study was to compare humoral responses to a SARS-CoV-2 vaccine series between solid organ transplant (SOT) recipients and healthy controls (HCs).

The SARS-CoV-2 vaccine evaluated in this study was designed to elicit an immune response to the receptor binding domain (RBD) and the extracellular domain (ECD), both located on the spike protein. The vaccine was not intended to elicit a response to the nucleocapsid (NC) protein, although (at the time of this writing), there is ongoing debate regarding whether mRNA vaccine responses would be more robust if they included alternative components of the SARS-CoV-2 structural proteins—particularly in light of the recent (again, at the time of this writing) omicron variant. Nevertheless, in *this* study, an enzyme-linked immunosorbant assay (ELISA) was used to evaluate antibody response, measured in ELISA units (EU) as immunoglobulin-G (IgG) to RBD, ECD, and (as a control) NC. A bead-based immunoassay was also used to evaluate antibody response to RBD.

subj	participant identification number
organ	organ type (0 = healthy control, 1 = kidney, 2 = liver, 3 = heart, 4 = lung)
immuno	number of immunosuppressants in patient's treatment regimen
mopost	months post-transplant (months)
age	age (years)
male	gender (0 = female, 1 = male)
rbd1	ELISA response to RBD at baseline
rbd2	ELISA response to RBD three weeks following first vaccine dose
rbd3	ELISA response to RBD three weeks following second vaccine dose
ecd1	ELISA response to ECD at baseline
ecd2	ELISA response to ECD three weeks following first vaccine dose
ecd3	ELISA response to ECD three weeks following second vaccine dose
nc1	ELISA response to nucleocapsid protein at baseline
nc2	ELISA response to nucleocapsid protein three weeks following first vaccine dose
nc3	ELISA response to nucleocapsid protein three weeks following second vaccine dose
bead_rbd1	bead-based assay response to RBD at baseline
bead_rbd2	bead-based assay response to RBD three weeks following first vaccine dose
bead_rbd3	bead-based assay response to RBD three weeks following second vaccine dose
