10.5%). A total of 23 HCWs complained of systemic rash and/or angioedema that occurred anytime post vaccination. Fifteen HCWs (0.29% of the cohort) were considered to have probable allergic reaction to the vaccine. None of the reactions were classified as anaphylaxis or severe reactions, but 4 HCWs required short hospitalization stay for observation. HCWs with pre-existing allergy had 2.6 times the risk of having probable vaccine-related allergic reaction than HCWs without pre-existing allergy (RR 2.6, 95% CI 0.9 to 7.3, p=0.068) but this was not statistically significant.

Conclusion. No anaphylaxis or severe reactions were observed in our institution. Acute side effects in our cohort were in line with published trial reports. We noted a raised relative risk of 2.6 of pre-existing allergy with probable vaccine-related allergic reaction but this was not statistically significant.

Disclosures. All Authors: No reported disclosures

586. Immunogenicity of COVID-19 mRNA Vaccines in Patients with Lymphoid Malignancies
Natalie E. Izaguirre, MS; Amy C. Sherman, MD; Jennifer Cromptie, MD; Michael Desjardins, MD; Chi-An Cheng, PhD; Tal Gilboa, PhD; Megan Powell, BA; Bruce P. Bausk, BS; Noah Abasciiano, B.S., Biology; Peter Baker, MSc; Mikaela McDonough, Bachelors of Science; Philippe Armand, MD PhD; David Witz, PhD; Nicolas C. Iota, MD; Lindsey R. Baden, MD; Brigham and Women’s Hospital, Boston, Massachusetts; Harvard Medical School/Brigham and Women’s Hospital, Boston, Massachusetts; Dana Farber Cancer Institute, Boston, Massachusetts; Brigham and Women’s Hospital, Brookline, Massachusetts; BWH Division of Infectious Diseases, Boston, Massachusetts; Brigham And Women’s Hospital, Hampton, New Hampshire; Dana-Farber Cancer Institute, Boston, Massachusetts; Harvard Medical School/Brigham and Women’s Hospital/Wyss Institute, Boston, Massachusetts
Session: P-25. COVID-19 Vaccines

Background. Patients with lymphoid malignancies are at high risk of severe COVID-19 disease and were not included in the phase 3 mRNA vaccine trials. Many patients with lymphoid malignancies receive immunosuppressive therapies, including B-cell depleting agents, that may negatively impact humoral response to vaccination.

Methods. We recruited patients with lymphoid malignancies and healthy participants who planned to receive two doses of SARS-CoV-2 mRNA vaccine (BNT162b2 or mRNA-1273). Blood was drawn at baseline, prior to second dose of vaccine, and 28 days after last vaccination. Disease characteristics and therapies were extracted from patients’ electronic medical record. An ultrasensitive, single molecule array (Simoa) assay detected anti-Spike (S), anti-S1, anti-receptor binding domain (RBD), and anti-Nucleocapsid (N) IgG from plasma at each timepoint.

Results. 23 healthy participants and 37 patients with lymphoid malignancies were enrolled (Table 1). Low titers of anti-N (Fig 1A) demonstrate no prior exposure or acute infection. The dotted line at 1.07 marks in an internally validated threshold to mark antibody acquisition of COVID-19 before vaccination or during the study. 37.8% of the lymphoid malignancy cohort responded to the vaccine, using an internally validated AEB cutoff of 1.07. A significantly higher magnitude of anti-S (p<0.0001), anti-S1 (p<0.0001) and anti-RBD (p<0.0001) are present in the healthy as compared to lymphoid malignancy cohort. Many patients’ electronic medical record. An ultrasensitive, single molecule array (Simoa) assay detected anti-Spike (S), anti-S1, anti-receptor binding domain (RBD), and anti-Nucleocapsid (N) IgG from plasma at each timepoint.

Conclusion. The vaccine-induced immune response was poor among treatment-experienced patients with lymphoid malignancies, especially among those who received CD20 therapies within 12 months.
We evaluated seroconversion rates in adults reporting COVID-19 vaccination. Participants had periodic home-based serologic testing using either a SARS-CoV-2 nucleocapsid and spike IgM/IgG lateral flow assay (63% of participants) or a SARS-CoV-2 spike IgG enzyme-linked immunosorbent assay (37% of participants). The timing and number of tests before and after vaccination varied based on participant time in study. Participants were included if they were seronegative on the last test before and had >1 test result after vaccination (some had previously been seropositive, but seroreverted). A weighted Cox regression model with right censoring was used to obtain adjusted hazard ratios for sex, age, race/ethnicity, and prior seropositivity. Time-to-event (seroconversion) was defined as time to first positive test > 4 days after vaccination; participants were censored at the date of their last available test result.

Results. 13,459 participants were included and 11,722 seroconverted (Table). Median time in study was 272 days (range 31–395). Median follow-up time from vaccine to last available test was 56 days (range 1–147). Participants had a median of 3 tests (range 1–12) before and 2 tests (range 1–8) after vaccination. Based on the Kaplan-Meier method, median time to seroconversion after first COVID-19 vaccination was 35 days (interquartile range: 25–45). Likelihood of seroconversion decreased with older age (Table). Female participants, non-Hispanic Black participants, and participants who were previously seropositive were more likely to seroconvert (Table).