

Datavant Life Sciences Case Study: Validating an Antibody Test to Predict Infection Rates in COVID-19

Client Situation

Despite high effectiveness of COVID-19 vaccines in the real-world, there have been cases of fully vaccinated patients contracting COVID. A diagnostics company with an approved test for measuring COVID antibody levels wanted to understand if certain thresholds of antibody levels were associated with stronger immunity and protection from infection. The hypothesis was that if there were consistent observable levels of antibodies associated with lower rates of infection, the test could be a predictor of patients likely to become infected with COVID after vaccination.

For this, the client needed to study patients with different levels of antibodies from the test and observe whether they developed COVID over time. This required identification of a cohort of patients that had been vaccinated, tokenizing and matching them to antibody test results and electronic health records.

How Datavant Helped

Datavant supported tokenization, matching, and deidentification of patients across multiple data sets. First Datavant helped the client tokenize longitudinal claims confirming that patients had received two vaccine doses. Then Datavant helped match and link those patients to their lab tests and electronic health records held by other data partners.

Results

The potential data partners were identified via overlaps that revealed shared patients across data sets. Claims data were used to identify fully vaccinated patients. Lab data provided specific antibody levels and EHRs combined with claims revealed patients who reported symptoms or were diagnosed with COVID-19.

