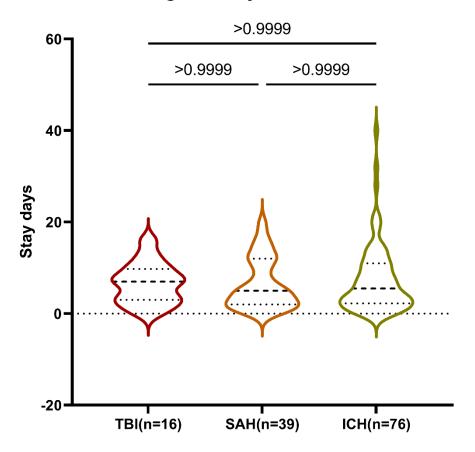


Fig S1. Study Flow Chart

## ICU length of stay of TBI, SAH or ICH



**Fig S2.** The violin plot suggests no significant differences in ICU length of stay among patients with ICH, SAH, and TBI in the present study.

## ICU stay days in four subset cohorts

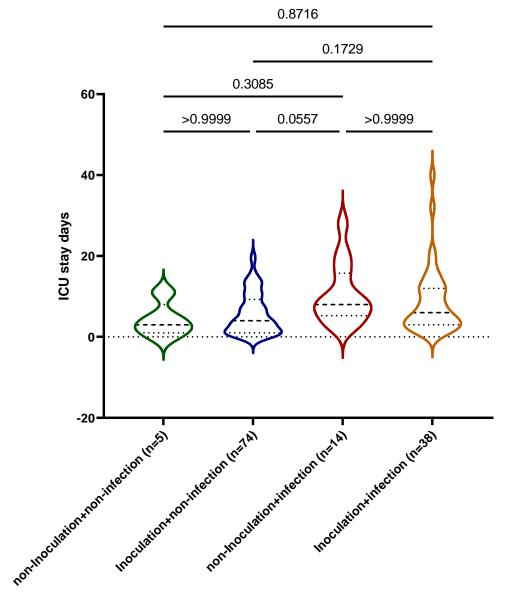


Fig S3. The violin plot did not show a significant difference between patients who received the COVID-19 vaccine and those who did not receive the vaccine