**Supplemental Materials**

A graph of different colors

Description automatically generated

XBB/EG5/FL1

***Supplemental Figure 1****: Variant distributions reported by NYC department of health were used as weights for MSKCC variant burden estimates. NYC distributions are based on a subset of randomly sampled specimens collected from confirmed COVID-19 cases that meet their technical criteria (e.g. sufficient levels of virus in the sample).8 All positive tests prior to plot start were categorized as “pre-omicron”. Several omicron sublineages were grouped together and newer variants FL1 and EG5 were grouped with XBB. BF7 and uncategorized/unknown variants were removed due to small sample sizes.*

A group of graphs with different colored bars

Description automatically generated with medium confidence

***Supplemental Figure 3:*** *Weekly positivity rates for XBB infections per prior variant infection group, stratified by bivalent vaccine status. Rate bars are calculated using a variable moving window (between 7 and 20 days) to stabilize estimates when test counts are low.*