

The COVID-19 Treatment Guidelines Panel's Statement on Omicron Subvariants and Anti-SARS-CoV-2 Monoclonal Antibodies

Last Updated: October 19, 2022

On October 14, 2022, the Centers for Disease Control and Prevention (CDC) reported a rapid increase in certain SARS-CoV-2 Omicron subvariants circulating in the United States¹ that are likely to be resistant to some anti-SARS-CoV-2 monoclonal antibodies (mAbs). The subvariants BQ.1 and BQ.1.1 are likely to be resistant to bebtelovimab, and the subvariants BA.4.6, BA.2.75.2, BF.7, BQ.1, and BQ.1.1 are likely to be resistant to tixagevimab plus cilgavimab (Evusheld). The anticipated loss of susceptibility is based on knowledge about amino acid mutations that confer antibody resistance and on available data from in vitro neutralization studies.²

Although the proportions of these potentially resistant SARS-CoV-2 subvariants are increasing, their prevalence is currently low or moderate. The COVID-19 Treatment Guidelines Panel (the Panel) continues to recommend bebtelovimab for the treatment of COVID-19 only when ritonavir-boosted nirmatrelvir (Paxlovid) or remdesivir cannot be used in nonhospitalized adults who are at high risk of progressing to severe COVID-19 (see [Therapeutic Management of Nonhospitalized Adults With COVID-19](#)). Ritonavir-boosted nirmatrelvir, remdesivir, and molnupiravir are expected to be active against these subvariants.

The Panel continues to recommend the anti-SARS-CoV-2 mAbs tixagevimab plus cilgavimab as pre-exposure prophylaxis (PrEP) for eligible individuals (see [Prevention of SARS-CoV-2 Infection](#)). Individuals who receive tixagevimab plus cilgavimab as PrEP should continue to take precautions to avoid infection. If they experience signs and symptoms consistent with COVID-19, they should be tested for SARS-CoV-2 and, if infected, promptly seek medical attention for consideration of antiviral treatment.

The Panel will closely monitor the prevalence of circulating subvariants with marked reduction in susceptibility to anti-SARS-CoV-2 mAbs. The recommendations for the use of bebtelovimab for the treatment of COVID-19 and for the use of tixagevimab plus cilgavimab for PrEP will be updated if the prevalence of these subvariants increases.

References

1. Centers for Disease Control and Prevention. Variant proportions. 2022. Available at: <https://covid.cdc.gov/covid-data-tracker/#variant-proportions>. Accessed October 18, 2022.
2. Cao Y, Jian F, Wang J, et al. Imprinted SARS-CoV-2 humoral immunity induces convergent Omicron RBD evolution. *bioRxiv*. 2022;Preprint. Available at: <https://www.biorxiv.org/content/10.1101/2022.09.15.507787v3>.