Anti-SARS-CoV-2 Monoclonal Antibodies (mAb)

Investigational medications approved for emergency use in patients by the FDA

May reduce progression to severe disease and shorten recovery in highrisk patients

INDICATIONS

- For treatment of patients (≥12 years) with mild to moderate COVID-19 and NOT requiring hospitalization or supplemental oxygen
- For post-exposure prophylaxis (PEP) in patients (≥12 years) who are nonvaccinated, incompletely vaccinated, or immunocompromised
- Must be given within 10 days of first symptoms of COVID-19 (or exposure for PEP)
- Treatment is usually IV; good evidence for SC administration for PEP and can be given SC if IV not feasible for treatment. Efficacy varies depending on circulating variant.

EXISTING MONOCLONAL ANTIBODY THERAPIES

Sotrovimab	Targets an epitope conserved between SARS-CoV-1 and SARS-CoV-2. Active against Omicron.
Bebtelovimab	Recombinant neutralizing human mAb that binds to spike protein of SARS-CoV-2. Active against Omicron.
Casirivimab plus imdevimab (REGEN-COV)	Recombinant human mAbs that bind to nonoverlapping epitopes in the spike protein of SARS-CoV-2. EUA updated 1/24/2022 - not active against Omicron.
Bamlanivimab plus etesevimab	Neutralizing mAbs that bind to different, but overlapping, epitopes in the spike protein of SARS-CoV-2. EUA updated 1/24/2022 - not active against Omicron.

NIH GUIDELINES: WHO SHOULD GET mAb THERAPY?

- Aged ≥65 years
- Obesity (BMI >30)
- Diabetes mellitus
- Cardiovascular disease
- Chronic lung diseases
- An immunocompromising condition or immunosuppressive treatment (eg, transplant, rheumatic diseases, HIV infection)
- Chronic kidney disease
- Pregnancy
- Sickle cell disease
- Neurodevelopmental disorders (eg, cerebral palsy) or other conditions that confer medical complexity (eg, genetic or metabolic syndromes and severe congenital anomalies)
- Medical-related technological dependence (eg, tracheostomy, gastrostomy, or positive pressure ventilation that is not related to COVID-19)

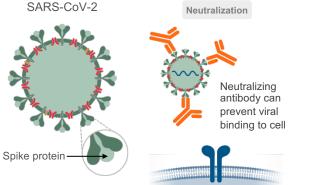
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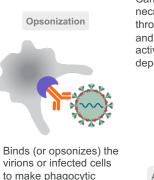
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SEVERAL MECHANISMS OF ACTION





uptake easier

Can cause apoptosis or necrosis of the infected cell through complement fixation and membrane attack complex activation or antibodydependent cytotoxicity



