COVID-19 Monoclonal Antibodies – Inpatient Use

What are the COVID-19 Monoclonal Antibodies?

The COVID-19 monoclonal antibodies (mAbs) are manufactured antibodies targeting the SARS-CoV-2 spike protein to provide passive immunity for patients with COVID-19 reducing progression of disease.[1-2] There are currently emergency use authorizations (EUA) for three mAbs/combinations (Note: EUA ≠ FDA approval):

- **Casirivimab-imdevimab 600mg-600mg (Regeneron; currently used at UCLA)**
- Sotrovimab (GlaxoSmithKline; not currently in use at UCLA)
- Bamlanivimab/etesevimab (Lilly; no longer used at UCLA due to local variants)

Patient Eligibility

- Adult and pediatric patients (≥ 12 and weight ≥ 40 kg) are eligible to receive COVID-19 mAbs if they test positive for SARS-CoV-2, have mild-moderate symptoms, non-hypoxic or on their baseline oxygen requirements, and are at risk for progression to severe disease. Patients can either be outpatient, in the emergency department, in observation, or admitted for reasons other than COVID-19.
- Hypoxic patients that are negative for COVID-19 IgG antibodies may be treated on a case-by-case basis under guidance from an infectious diseases specialist via compassionate use.

Workflow

1. Review patient fact sheet with patient/caregiver (English link; Spanish Link)
2. Administer monoclonal antibody (see Administration)
3. Monitor patient for at least 60 minutes after end of infusion (see Adverse Reactions)

Administration

- Notable areas eligible for administration: ED, observations, inpatient
- Intravenous – Administer through 0.2 micron in-line filter over 20-60 minutes, flush line with 0.9% NS to ensure entire contents administered
- Subcutaneous – Administer 4 subcutaneous injections consecutively, each at a different injection site, into the thigh, back of the upper arm, or abdomen, except for 2 inches around the navel avoiding waistline.
    - **Intravenous infusion is the preferred route. Subcutaneous injection is an alternative route of administration when intravenous infusion is not feasible and would lead to delay in treatment.**

Adverse Reactions

Hypersensitivity: Serious hypersensitivity reactions, including anaphylaxis, have been observed with mAbs.

- If signs or symptoms of a clinically significant hypersensitivity reaction or anaphylaxis occur, immediately discontinue administration and contact physician to initiate appropriate medications and/or supportive therapy.

Infusion-related Reactions: Infusion reactions, occurring during the infusion and up to 24 hours after infusion, have been observed. These reactions may be severe or life threatening. Signs and symptoms of infusion reactions may include:

- Fever, difficulty breathing, hypoxia, chills, nausea, arrhythmia, chest pain or discomfort, weakness, altered mental status, headache, bronchospasm, hypotension, hypertension, angioedema, throat irritation, rash, pruritus, myalgia, vasovagal reactions, dizziness, fatigue, and diaphoresis.
- If an infusion-related reaction occurs, consider slowing or stopping the infusion and contact physician to initiate appropriate medications and/or supportive care.

References:

1. Weinreich DM, Sivapalasingam S, Norton T, et al. REGN-COV2, a Neutralizing Antibody Cocktail, in Outpatients with Covid-19. N Engl J Med. 2021 Jan 21;384(3):238-251. doi: 10.1056/NEJMoa2035002. Epub 2020 Dec 17. PMID: 33332778.
2. Dougan M, Nirula A, Azizad M, et al. Bamlanivimab plus Etesevimab in Mild or Moderate Covid-19. N Engl J Med. 2021 Jul 14. doi: 10.1056/NEJMoa2102685. Epub ahead of print. PMID: 34260849.