NEW DRUG APPROVAL

Brand Name	N/A
Generic Name	bamlanivimab
Drug Manufacturer	Eli Lilly and Company

New Drug Approval

- FDA Approval Date: November 9, 2020 - **Emergency Use Authorization Only**
- Review Designation: N/A
- Type of Review: Biologics License Application (BLA) (PHASE III)
- Dispensing Restrictions: bamlanivimab may only be administered in settings in which healthcare providers have immediate access to medications to treat a severe infusion reaction, such as anaphylaxis, and the ability to activate the emergency medical system (EMS), as necessary

Place in Therapy

DISEASE DESCRIPTION & EPIDEMIOLOGY

Coronavirus disease (COVID-19) is an infectious disease caused by newly discovered coronavirus (SARS-CoV-2). It affects different people in different ways. Most infected people will develop mild to moderate illness and recover without hospitalization. The COVID-19 virus spreads primarily through droplets of saliva or discharge from the nose.

In December 2019, pneumonia of unknown cause occurred in Wuhan (China) on January 7, 2020, a novel corona virus, named as severe acute respiratory syndrome corona virus 2 (SARS-CoV-2), was identified in the throat swab sample of 1 patient. Globally over 55 million confirmed cases of Covid-19 have been reported in all continents except Antarctica.

Efficacy

BLAZE-1: Randomized, double-blind, placebo-controlled Phase 2 clinical trial in ambulatory adults with mild to moderate COVID-19 symptoms who had sample collection for the first positive SARS-CoV-2 viral infection determination within 3 days prior to the start of the infusion. Subjects were treated with a single infusion of bamlanivimab at doses of 700 mg (N=101), 2,800 mg (N=107), or 7,000 mg (N=101) or placebo (N=156).

While viral load was used to define the primary endpoint in this Phase 2 trial, the most important evidence that bamlanivimab may be effective came from the predefined secondary endpoint of COVID-19-related hospitalizations or emergency room visits within 28 days after treatment. A lower proportion of bamlanivimab-treated subjects progressed to COVID-19-related hospitalization or emergency room visits compared to placebo-treated subjects. Results for this endpoint were suggestive of a relatively flat dose-response relationship.

The absolute risk reduction for bamlanivimab compared to placebo is greater in subjects at higher risk of hospitalization according to the high-risk criteria.

Safety

ADVERSE EVENTS

Common: Gastrointestinal, nausea (3%)
Serious: Immunologic – anaphylaxis, hypersensitivity reaction (2%)

Other: Infusion reaction

WARNINGS & PRECAUTIONS

Hypersensitivity Including Anaphylaxis and Infusion-Related Reactions
There is a potential for serious hypersensitivity reaction, including anaphylaxis, with administration of bamlanivimab. If signs and symptoms of a clinically significant hypersensitivity reaction or anaphylaxis occur, immediately discontinue administration, and initiate appropriate medications and/or supportive care. Infusion-related reactions have been observed with administration of bamlanivimab.

Signs and symptoms of infusion related reactions may include: fever, chills, nausea, headache, bronchospasm, hypotension, angioedema, throat irritation, rash including urticaria, pruritus, myalgia, and dizziness.

If an infusion-related reaction occurs, consider slowing or stopping the infusion and administer appropriate medications and/or supportive care.

CONTRAINDICATIONS

None.

Clinical Pharmacology

MECHANISMS OF ACTION

Bamlanivimab is a recombinant neutralizing human IgG1K monoclonal antibody (mAb) to the spike protein of SARS-CoV-2, and is unmodified in the Fc region. It binds to spike protein with a dissociation constant KD = 0.071 nM and blocks spike protein attachment to the human ACE2 receptor with an IC50 value of 0.025 µg/mL.

Dose & Administration

ADULTS

The dosage of bamlanivimab in adults and pediatric patients 12 years of age and older weighing at least 40 kg is a single intravenous (IV) infusion of 700 mg administered over at least 60 minutes. It should be administered as soon as possible after positive viral test for SARS-CoV-2 and within 10 days of symptom onset.

PEDIATRICS

If patient is 12 years of age and older and weighs at least 40 kg, refer to adult dosing.

GERIATRICS

Refer to adult dosing.

RENAL IMPAIRMENT

Not eliminated intact in the urine, thus renal impairment is not expected to affect the exposure.

HEPATIC IMPAIRMENT

Based on population PK analysis, patients with mild hepatic impairment had approximately 20% higher clearance than patients with normal hepatic function. This effect is statistically significant, but not clinically meaningful. Has not been studied in patients with moderate or severe hepatic impairment.

Product Availability

DOSAGE FORM(S) & STRENGTH(S)

Injection: 700 mg/20 mL (35 mg/mL), 2,800mg, 7,000mg as a sterile, preservative-free, clear to slightly opalescent and colourless to slightly yellow to slightly brown solution in a single-dose vial.