

**FACT SHEET FOR HEALTH CARE PROVIDERS
EMERGENCY USE AUTHORIZATION (EUA) OF BAMLANIVIMAB AND
ETESEVIMAB**

AUTHORIZED USE

The U.S. Food and Drug Administration (FDA) has issued an Emergency Use Authorization (EUA) to permit the emergency use of the unapproved products bamlanivimab and etesevimab administered together for the treatment of mild to moderate coronavirus disease 2019 (COVID-19) in adults and pediatric patients (12 years of age and older weighing at least 40 kg) with positive results of direct SARS-CoV-2 viral testing, and who are at high risk for progressing to severe COVID-19 and/or hospitalization.

RECENT MAJOR CHANGES

- Antiviral Resistance (Box and Section 15) - addition of information on susceptibility of SARS-CoV-2 variants to bamlanivimab and etesevimab (Table 3) Revised 03/2021

LIMITATIONS OF AUTHORIZED USE

- Bamlanivimab and etesevimab are not authorized for use in patients:
 - who are hospitalized due to COVID-19, OR
 - who require oxygen therapy due to COVID-19, OR
 - who require an increase in baseline oxygen flow rate due to COVID-19 in those on chronic oxygen therapy due to underlying non-COVID-19 related comorbidity.
- Treatment with bamlanivimab and etesevimab has not been studied in patients hospitalized due to COVID-19. Monoclonal antibodies, such as bamlanivimab and etesevimab, may be associated with worse clinical outcomes when administered to hospitalized patients with COVID-19 requiring high flow oxygen or mechanical ventilation.

Bamlanivimab and etesevimab have been authorized by FDA for the emergency uses described above.

Bamlanivimab and etesevimab are not FDA-approved for these uses.

Bamlanivimab and etesevimab are authorized only for the duration of the declaration that circumstances exist justifying the authorization of the emergency use of bamlanivimab and etesevimab under section 564(b)(1) of the Act, 21 U.S.C. § 360bbb-3(b)(1), unless the authorization is terminated or revoked sooner.

This EUA is for the use of the unapproved products bamlanivimab and etesevimab administered together for the treatment of mild to moderate COVID-19 in adults and pediatric patients (12 years of age and older weighing at least 40 kg) with positive results of direct SARS-CoV-2 viral testing, and who are at high risk for progressing to severe COVID-19 and/or hospitalization [see *Limitations of Authorized Use*].

High risk is defined as patients who meet at least one of the following criteria:

- Have a body mass index (BMI) ≥ 35
- Have chronic kidney disease
- Have diabetes
- Have immunosuppressive disease
- Are currently receiving immunosuppressive treatment
- Are ≥ 65 years of age
- Are ≥ 55 years of age AND have
 - cardiovascular disease, OR
 - hypertension, OR
 - chronic obstructive pulmonary disease/other chronic respiratory disease.
- Are 12 – 17 years of age AND have
 - BMI ≥ 85 th percentile for their age and gender based on CDC growth charts, https://www.cdc.gov/growthcharts/clinical_charts.htm, OR
 - sickle cell disease, OR
 - congenital or acquired heart disease, OR
 - neurodevelopmental disorders, for example, cerebral palsy, OR
 - a medical-related technological dependence, for example, tracheostomy, gastrostomy, or positive pressure ventilation (not related to COVID-19), OR
 - asthma, reactive airway or other chronic respiratory disease that requires daily medication for control.

Circulating SARS-CoV-2 viral variants may be associated with resistance to monoclonal antibodies. Health care providers should review the Antiviral Resistance information in Section 15 of this Fact Sheet for details regarding specific variants and resistance, and refer to the CDC website (<https://www.cdc.gov/coronavirus/2019-ncov/cases-updates/variant-proportions.html>) as well as information from state and local health authorities regarding reports of viral variants of importance in their region to guide treatment decisions.

Under this EUA, bamlanivimab and etesevimab must be administered together after dilution by intravenous (IV) infusion only.

Bamlanivimab and etesevimab may only be administered in settings in which health care 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.

Health care providers must submit a report on all medication errors and **ALL SERIOUS ADVERSE EVENTS** potentially related to bamlanivimab and etesevimab. See Sections 8 and 9 of the Full EUA Prescribing Information for reporting instructions below.

- The authorized dosage is 700 mg bamlanivimab and 1,400 mg of etesevimab administered together as a single intravenous (IV) infusion as soon as

possible after positive viral test for SARS-CoV-2 and within ten days of symptom onset.

- Based on analyses of the available nonclinical, clinical, and virologic data, as well as pharmacokinetic/pharmacodynamic modeling, the authorized dosage of 700 mg bamlanivimab and 1,400 mg etesevimab is expected to have similar clinical effect to a dosage of 2,800 mg bamlanivimab and 2,800 mg etesevimab [see *Dosage (2.2)*].
- Bamlanivimab and etesevimab are both available as solutions in separate vials and must be diluted and combined prior to administration.
- To prepare the dose you will need 1 vial of bamlanivimab and 2 vials of etesevimab.
- Administer bamlanivimab and etesevimab together as a single intravenous (IV) infusion via pump or gravity (see **Table 1** and **Table 2**).
- Clinically monitor patients during administration and observe patients for at least 1 hour after infusion is complete.
- Patients treated with bamlanivimab and etesevimab together should continue to self-isolate and use infection control measures (e.g., wear mask, isolate, social distance, avoid sharing personal items, clean and disinfect “high touch” surfaces, and frequent handwashing) according to CDC guidelines.

The authorized dosage may be updated as additional data from clinical trials becomes available.

For information on clinical trials that are testing the use of bamlanivimab and etesevimab in COVID-19, please see www.clinicaltrials.gov.

Contraindications

None.

Dosing

BAMLANIVIMAB AND ETESSEVIMAB MUST BE ADMINISTERED TOGETHER AFTER DILUTION BY INTRAVENOUS (IV) INFUSION ONLY.

Patient Selection and Treatment Initiation

This section provides essential information on the unapproved products bamlanivimab and etesevimab administered together for the treatment of mild to moderate COVID-19 in adults and pediatric patients (12 years of age and older weighing at least 40 kg) with positive results of direct SARS-CoV-2 viral testing, and who are at high risk for progressing to severe COVID-19 and/or hospitalization [see *Limitations of Authorized Use*].

High risk is defined as patients who meet at least one of the following criteria:

- Have a body mass index (BMI) ≥ 35
- Have chronic kidney disease
- Have diabetes
- Have immunosuppressive disease

- Are currently receiving immunosuppressive treatment
- Are ≥65 years of age
- Are ≥55 years of age AND have
 - cardiovascular disease, OR
 - hypertension, OR
 - chronic obstructive pulmonary disease/other chronic respiratory disease.
- Are 12 – 17 years of age AND have
 - BMI ≥85th percentile for their age and gender based on CDC growth charts, https://www.cdc.gov/growthcharts/clinical_charts.htm, OR
 - sickle cell disease, OR
 - congenital or acquired heart disease, OR
 - neurodevelopmental disorders, for example, cerebral palsy, OR
 - a medical-related technological dependence, for example, tracheostomy, gastrostomy, or positive pressure ventilation (not related to COVID-19), OR
 - asthma, reactive airway or other chronic respiratory disease that requires daily medication for control.

Dosage

The dosage of bamlanivimab and etesevimab for the treatment of mild-to-moderate COVID-19 in adults and pediatric patients (12 years of age and older weighing at least 40 kg) is:

- bamlanivimab 700 mg
- etesevimab 1,400 mg.

Administer bamlanivimab and etesevimab together as soon as possible after positive viral test for SARS-CoV-2 and within 10 days of symptom onset.

Under this EUA, bamlanivimab and etesevimab must be diluted and administered together as a single intravenous infusion.

Rationale for Authorized Dosage

The dosage of 700 mg bamlanivimab and 1,400 mg etesevimab administered together was selected based on analyses of available data incorporating the following factors:

- Available data demonstrate that a dosage of 700 mg bamlanivimab and 1,400 mg etesevimab administered together has similar antiviral activity to a dosage of 2,800 mg bamlanivimab and 2,800 mg etesevimab administered together, which is also supported by in vitro data and pharmacokinetics/pharmacodynamics (PK/PD) modeling [see *Clinical Trial Results and Supporting Data for EUA (18.2) and Pharmacodynamics (14.2)*].
- A dosage of 2,800 mg bamlanivimab and 2,800 mg etesevimab administered together reduced COVID-19 related hospitalizations and deaths in addition to significantly reducing viral load relative to placebo [see *Clinical Trial Results and Supporting Data for EUA (18.1)*].
- Bamlanivimab and etesevimab administered together resulted in fewer treatment-emergent variants relative to bamlanivimab alone [see *Microbiology/Resistance Information (15)*].

Based on analyses of the available nonclinical, clinical, and virologic data, as well as supportive data from pharmacokinetic/pharmacodynamic modeling, the authorized

dosage of 700 mg bamlanivimab and 1,400 mg etesevimab is expected to have similar clinical effect to a dosage of 2,800 mg bamlanivimab and 2,800 mg etesevimab.

Dosage Adjustment in Specific Populations

No dosage adjustment is recommended based on age, sex, race, body weight, renal or mild hepatic impairment, during pregnancy or while lactating, or for disease severity or inflammation [see Full EUA Prescribing Information, Use in Specific Populations (11)].

Preparation and Administration

Preparation

Bamlanivimab and etesevimab solution for infusion should be prepared by a qualified healthcare professional using aseptic technique:

- Gather the materials for preparation:
 - Polyvinyl chloride (PVC) or polyethylene (PE)-lined PVC, sterile prefilled infusion bag. Choose one of the following sizes:
 - Prefilled 50 mL, 100 mL, 150 mL, or 250 mL infusion bag containing 0.9% Sodium Chloride Injection (see **Table 1** and **Table 2**).
 - One vial of bamlanivimab (700 mg/20 mL) and two vials of etesevimab (700 mg/20 mL).
- Bamlanivimab and etesevimab are supplied in individual single-dose vials but are administered together using a single infusion bag.
- Remove 1 bamlanivimab vial and 2 etesevimab vials from refrigerated storage and allow to equilibrate to room temperature for approximately 20 minutes before preparation. **Do not expose to direct heat. Do not shake the vials.**
- Inspect both bamlanivimab and etesevimab vials visually for particulate matter and discoloration.
 - Bamlanivimab and etesevimab are clear to opalescent and colorless to slightly yellow to slightly brown solutions.
- Withdraw 20 mL from one bamlanivimab vial and 40 mL from two etesevimab vials and inject all 60 mL into a prefilled infusion bag containing 0.9% Sodium Chloride (see **Table 1** or **Table 2**).
- Discard any product remaining in the vials.
- Gently invert the bag by hand approximately 10 times to mix. **Do not shake.**
- These products are preservative-free and therefore, the diluted infusion solution should be administered immediately.
 - If immediate administration is not possible, store the diluted infusion solution for up to 24 hours at refrigerated temperature (2°C to 8°C [36°F to 46°F]) and up to 7 hours at room temperature (20°C to 25°C [68°F to 77°F]) including infusion time. If refrigerated, allow the infusion solution to equilibrate to room temperature for approximately 20 minutes prior to administration.

Administration

Bamlanivimab and etesevimab infusion solution should be administered by a qualified healthcare professional.

- Gather the materials for infusion:
 - Polyvinyl chloride (PVC) or polyethylene (PE)-lined PVC infusion set.
 - Use of an in-line or add-on 0.2/0.22 micron polyethersulfone (PES) filter is strongly recommended.

- Attach the infusion set to the IV bag.
- Prime the infusion set.
- Administer the entire infusion solution in the bag via pump or gravity according to the size of infusion bag used (see **Table 1 for patients weighing ≥ 50 kg** or **Table 2 for patients weighing < 50 kg**). Due to potential overfill of prefilled saline bags, the entire infusion solution in the bag should be administered to avoid underdosage.
- The prepared infusion solution should not be administered simultaneously with any other medication. The compatibility of bamlanivimab and etesevimab injection with IV solutions and medications other than 0.9% Sodium Chloride Injection is not known.
- Once infusion is complete, **flush the tubing** with 0.9% Sodium Chloride to ensure delivery of the required dose.
- Clinically monitor patients during administration and observe patients for at least 1 hour after infusion is complete.
- If the infusion must be discontinued due to an infusion reaction, discard any unused product.
- The use of closed system transfer devices (CSTDs), elastomeric pumps, and pneumatic transport with bamlanivimab has not been studied.

Table 1: Recommended Dilution and Administration Instructions for Bamlanivimab and Etesevimab for IV Infusion^a in Patients Weighing 50 kg or More

Drug ^a : Add 20 mL of bamlanivimab (1 vial) and 40 mL of etesevimab (2 vials) for a total of 60 mL to a prefilled infusion bag and administer as instructed below		
Size of Prefilled 0.9% Sodium Chloride Infusion Bag	Maximum Infusion Rate	Minimum Infusion Time
50 mL	310 mL/hr	21 minutes
100 mL	310 mL/hr	31 minutes
150 mL	310 mL/hr	41 minutes
250 mL	310 mL/hr	60 minutes

^a 700 mg of bamlanivimab and 1,400 mg of etesevimab are added to the same infusion bag and administered together as a single intravenous infusion.

Table 2: Recommended Dilution and Administration Instructions for Bamlanivimab and Etesevimab for IV Infusion in Patients Weighing Less Than 50 kg

Drug ^a : Add 20 mL of bamlanivimab (1 vial) and 40 mL of etesevimab (2 vials) for a total 60 mL to an infusion bag and administer as instructed below		
Size of Prefilled 0.9% Sodium Chloride Infusion Bag	Maximum Infusion Rate	Minimum Infusion Time
50 mL	310 mL/hr	21 minutes
100 mL	310 mL/hr	31 minutes
150 mL	310 mL/hr	41 minutes

250 mL ^b	266 mL/hr	70 minutes
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^a 700 mg of bamlanivimab and 1,400 mg of etesevimab are added to the same infusion bag and administered together as a single intravenous infusion.

^b The minimum infusion time for patients weighing less than 50 kg who are administered bamlanivimab and etesevimab together using the 250 mL prefilled 0.9% Sodium Chloride infusion bag must be extended to at least 70 minutes to ensure safe use (endotoxin load).

Storage

Refrigerate unopened vials at 2°C to 8°C (36°F to 46°F) in the original carton to protect from light. Do not freeze, shake, or expose to direct light.

Warnings

There are limited clinical data available for bamlanivimab and etesevimab. Serious and unexpected adverse events may occur that have not been previously reported with use of bamlanivimab and etesevimab together.

Hypersensitivity Including Anaphylaxis and Infusion-Related Reactions

Serious hypersensitivity reactions, including anaphylaxis, have been observed with administration of bamlanivimab with and without etesevimab. If signs and symptoms of a clinically significant hypersensitivity reaction or anaphylaxis occur, immediately discontinue administration and initiate appropriate medications and/or supportive therapy.

Infusion-related reactions have been observed with administration of bamlanivimab and etesevimab together. These reactions may be severe or life threatening.

Signs and symptoms of infusion related reactions may include:

- fever, difficulty breathing, reduced oxygen saturation, chills, fatigue, arrhythmia (e.g., atrial fibrillation, sinus tachycardia, bradycardia), chest pain or discomfort, weakness, altered mental status, nausea, headache, bronchospasm, hypotension, hypertension, angioedema, throat irritation, rash including urticaria, pruritus, myalgia, dizziness and diaphoresis.

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

Clinical Worsening After Bamlanivimab Administration

Clinical worsening of COVID-19 after administration of bamlanivimab has been reported and may include signs or symptoms of fever, hypoxia or increased respiratory difficulty, arrhythmia (e.g., atrial fibrillation, sinus tachycardia, bradycardia), fatigue, and altered mental status. Some of these events required hospitalization. It is not known if these events were related to bamlanivimab use or were due to progression of COVID-19.

Limitations of Benefit and Potential for Risk in Patients with Severe COVID-19

Treatment with bamlanivimab and etesevimab has not been studied in patients hospitalized due to COVID-19. Monoclonal antibodies, such as bamlanivimab and etesevimab, may be associated with worse clinical outcomes when administered to hospitalized patients with COVID-19 requiring high flow oxygen or mechanical ventilation. Therefore, bamlanivimab and etesevimab are not authorized for use in patients [see *Limitations of Authorized Use*]:

- who are hospitalized due to COVID-19, OR
- who require oxygen therapy due to COVID-19, OR

- who require an increase in baseline oxygen flow rate due to COVID-19 in those on chronic oxygen therapy due to underlying non-COVID-19 related comorbidity.

Side Effects

Adverse events have been reported with bamlanivimab and etesevimab [see *Full EUA Prescribing Information, Clinical Trials Experience (6.1)*].

Additional adverse events associated with bamlanivimab and etesevimab, some of which may be serious, may become apparent with more widespread use.

INSTRUCTIONS FOR HEALTHCARE PROVIDERS

As the healthcare provider, you must communicate to your patient or parent/caregiver, as age appropriate, information consistent with the “Fact Sheet for Patients, Parents and Caregivers” (and provide a copy of the Fact Sheet) prior to the patient receiving bamlanivimab and etesevimab, including:

- FDA has authorized the emergency use of bamlanivimab and etesevimab administered together for the treatment of mild to moderate COVID-19 in adults and pediatric patients (12 years of age and older weighing at least 40 kg) with positive results of direct SARS-CoV-2 viral testing, and who are at high risk for progressing to severe COVID-19 and/or hospitalization [see *Limitations of Authorized Use*].
- The patient or parent/caregiver has the option to accept or refuse bamlanivimab and etesevimab.
- The significant known and potential risks and benefits of bamlanivimab and etesevimab, and the extent to which such potential risks and benefits are unknown.
- Information on available alternative treatments and the risks and benefits of those alternatives, including clinical trials.
- Patients treated with bamlanivimab and etesevimab together should continue to self-isolate and use infection control measures (e.g., wear mask, isolate, social distance, avoid sharing personal items, clean and disinfect “high touch” surfaces, and frequent handwashing) according to CDC guidelines.

For information on clinical trials that are testing the use of bamlanivimab and etesevimab together for COVID-19, please see www.clinicaltrials.gov.

MANDATORY REQUIREMENTS FOR BAMLANIVIMAB AND ETESSEVIMAB ADMINISTRATION UNDER EMERGENCY USE AUTHORIZATION:

In order to mitigate the risks of using these unapproved products and to optimize the potential benefit of bamlanivimab and etesevimab under this EUA, the following items are required. Use of bamlanivimab and etesevimab under this EUA is limited to the following (all requirements **must** be met):

1. Treatment of mild to moderate COVID-19 in adults and pediatric patients (12 years of age and older weighing at least 40 kg) with positive results of direct SARS-CoV-2 viral testing, and who are at high risk for progressing to severe COVID-19 and/or hospitalization [see *Limitations of Authorized Use*].
2. As the healthcare provider, communicate to your patient or parent/caregiver, as age appropriate, information consistent with the “Fact Sheet for Patients, Parents

and Caregivers” prior to the patient receiving bamlanivimab and etesevimab. Healthcare providers (to the extent practicable given the circumstances of the emergency) must document in the patient’s medical record that the patient/caregiver has been:

- a. Given the “Fact Sheet for Patients, Parents and Caregivers”,
 - b. Informed of alternatives to receiving authorized bamlanivimab and etesevimab, and
 - c. Informed that bamlanivimab and etesevimab are unapproved drugs that are authorized for use under this Emergency Use Authorization.
3. Patients with known hypersensitivity to any ingredient of bamlanivimab or etesevimab must not receive bamlanivimab and etesevimab.
 4. The prescribing health care provider and/or the provider’s designee are/is responsible for mandatory reporting of all medication errors and serious adverse events* potentially related to bamlanivimab and etesevimab treatment within 7 calendar days from the onset of the event. The reports should include unique identifiers and the words “bamlanivimab and etesevimab use for COVID-19 under Emergency Use Authorization (EUA)” in the description section of the report.
- Submit adverse event reports to FDA MedWatch using one of the following methods:
 - Complete and submit the report online:
 - www.fda.gov/medwatch/report.htm, or
 - By using a postage-paid Form FDA 3500 (available at <http://www.fda.gov/downloads/AboutFDA/ReportsManualsForms/Forms/UCM163919.pdf>) and returning by mail (MedWatch, 5600 Fishers Lane, Rockville, MD 20852-9787), or by fax (1-800-FDA-0178), or
 - Call 1-800-FDA-1088 to request a reporting form
 - Submitted reports should include in the field name, “Describe Event, Problem, or Product Use/Medication Error” the statement “bamlanivimab and etesevimab use for COVID-19 under Emergency Use Authorization (EUA)”

*Serious Adverse Events are defined as:

- death;
 - a life-threatening adverse event;
 - inpatient hospitalization or prolongation of existing hospitalization;
 - a persistent or significant incapacity or substantial disruption of the ability to conduct normal life functions;
 - a congenital anomaly/birth defect;
 - a medical or surgical intervention to prevent death, a life-threatening event, hospitalization, disability, or congenital anomaly.
5. The prescribing health care provider and/or the provider’s designee are/is to provide mandatory responses to requests from FDA for information about adverse events and medication errors following receipt of bamlanivimab and etesevimab.
 6. OTHER REPORTING REQUIREMENTS
 - Healthcare facilities and providers must report therapeutics information and utilization data through HHS Protect, Teletracking or National

Healthcare Safety Network (NHSN) as directed by the U.S. Department of Health and Human Services.

- In addition, please provide a copy of all FDA MedWatch forms to:
Eli Lilly and Company, Global Patient Safety
Fax: 1-317-277-0853
E-mail: mailindata_gsmtindy@lilly.com
Or call Eli Lilly and Company at 1-855-LillyC19 (1-855-545-5921) to report adverse events.

APPROVED AVAILABLE ALTERNATIVES

There is no adequate, approved and available alternative to bamlanivimab and etesevimab administered together for the treatment of mild to moderate coronavirus disease 2019 (COVID-19) in adults and pediatric patients (12 years of age and older weighing at least 40 kg) with positive results of direct SARS-CoV-2 viral testing, and who are at high risk for progressing to severe COVID-19 and/or hospitalization. Additional information on COVID-19 treatments can be found at <https://www.cdc.gov/coronavirus/2019-ncov/index.html>. The health care provider should visit <https://clinicaltrials.gov/> to determine whether the patient may be eligible for enrollment in a clinical trial.

AUTHORITY FOR ISSUANCE OF THE EUA

The Secretary of the Department of Health and Human Services (HHS) has declared a public health emergency that justifies the emergency use of drugs and biological products during the COVID-19 pandemic. FDA has issued this EUA, requested by Eli Lilly and Company for the unapproved products bamlanivimab and etesevimab administered together for the treatment of mild to moderate COVID-19 in adults and pediatric patients (12 years of age and older weighing at least 40 kg) with positive results of direct SARS-CoV-2 viral testing, and who are at high risk for progressing to severe COVID-19 and/or hospitalization.¹ As a health care provider, you must comply with the mandatory requirements of the EUA (see above).

Although limited scientific information is available, based on the totality of the scientific evidence available to date, it is reasonable to believe that bamlanivimab and etesevimab administered together may be effective for the treatment of mild to moderate COVID-19 in certain high-risk patients as specified in this Fact Sheet. You may be contacted and asked to provide information to help with the assessment of the use of the product during this emergency.

This EUA for bamlanivimab and etesevimab will end when the Secretary determines that the circumstances justifying the EUA no longer exist or when there is a change in the approval status of the product such that an EUA is no longer needed.

¹ The health care provider should visit clinicaltrials.gov to determine whether there is an active clinical trial for the product in this disease/condition and whether enrollment of the patient(s) in a clinical trial is more appropriate than product use under this EUA.

CONTACT INFORMATION

For additional information visit

www.BAMandETE.com

If you have questions, please contact

1-855-LillyC19 (1-855-545-5921)

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FULL EUA PRESCRIBING INFORMATION

FULL EUA PRESCRIBING INFORMATION: CONTENTS*

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* Sections or subsections omitted from the full prescribing information are not listed.

1 AUTHORIZED USE

The U.S. Food and Drug Administration (FDA) has issued an Emergency Use Authorization (EUA) to permit the emergency use of the unapproved products bamlanivimab and etesevimab administered together for the treatment of mild to moderate coronavirus disease 2019 (COVID-19) in adults and pediatric patients (12 years of age and older weighing at least 40 kg) with positive results of direct SARS-CoV-2 viral testing, and who are at high risk for progressing to severe COVID-19 and/or hospitalization.

LIMITATIONS OF AUTHORIZED USE

- Bamlanivimab and etesevimab are not authorized for use in patients:
 - who are hospitalized due to COVID-19, OR
 - who require oxygen therapy due to COVID-19, OR
 - who require an increase in baseline oxygen flow rate due to COVID-19 in those on chronic oxygen therapy due to underlying non-COVID-19 related comorbidity.
- Treatment with bamlanivimab and etesevimab has not been studied in patients hospitalized due to COVID-19. Monoclonal antibodies, such as bamlanivimab and etesevimab, may be associated with worse clinical outcomes when administered to hospitalized patients with COVID-19 requiring high flow oxygen or mechanical ventilation [see *Warnings and Precautions* (5.3)].

2 DOSAGE AND ADMINISTRATION

2.1 Patient Selection

The optimal dosing regimen for treatment of COVID-19 has not yet been established. The recommended dosing regimen may be updated as data from clinical trials become available.

Bamlanivimab and etesevimab should be administered together as soon as possible after positive viral test for SARS-CoV-2 and within 10 days of symptom onset in adults and pediatric patients (12 years of age and older weighing at least 40 kg) who are at high risk for progressing to severe COVID-19 and/or hospitalization.

High risk is defined as patients who meet at least one of the following criteria:

- Have a body mass index (BMI) ≥ 35
- Have chronic kidney disease
- Have diabetes
- Have immunosuppressive disease
- Are currently receiving immunosuppressive treatment
- Are ≥ 65 years of age
- Are ≥ 55 years of age AND have
 - cardiovascular disease, OR
 - hypertension, OR
 - chronic obstructive pulmonary disease/other chronic respiratory disease.
- Are 12 – 17 years of age AND have
 - BMI ≥ 85 th percentile for their age and gender based on CDC growth charts, https://www.cdc.gov/growthcharts/clinical_charts.htm, OR
 - sickle cell disease, OR
 - congenital or acquired heart disease, OR
 - neurodevelopmental disorders, for example, cerebral palsy, OR
 - a medical-related technological dependence, for example, tracheostomy, gastrostomy, or positive pressure ventilation (not related to COVID-19), OR
 - asthma, reactive airway or other chronic respiratory disease that requires daily medication for control.

2.2 Dosage

The dosage of bamlanivimab and etesevimab for the treatment of mild-to-moderate COVID-19 in adults and pediatric patients (12 years of age and older weighing at least 40 kg) is:

- bamlanivimab 700 mg
- etesevimab 1,400 mg.

Administer bamlanivimab and etesevimab together as soon as possible after positive viral test for SARS-CoV-2 and within 10 days of symptom onset.

Under this EUA, bamlanivimab and etesevimab must be diluted and administered together as a single intravenous infusion.

Rationale for Authorized Dosage

The dosage of 700 mg bamlanivimab and 1,400 mg etesevimab administered together was selected based on analyses of available data incorporating the following factors:

- Available data demonstrate that a dosage of 700 mg bamlanivimab and 1,400 mg etesevimab administered together has similar antiviral activity to a dosage of 2,800 mg bamlanivimab and 2,800 mg etesevimab administered together, which is also supported by in vitro data and pharmacokinetics/pharmacodynamics (PK/PD) modeling [see *Pharmacodynamics (14.2)*].
- A dosage of 2,800 mg bamlanivimab and 2,800 mg etesevimab administered together reduced COVID-19 related hospitalizations and deaths in addition to significantly reducing viral load relative to placebo [see *Clinical Trial Results and Supporting Data for EUA (18.1)*].
- Bamlanivimab and etesevimab administered together resulted in fewer treatment-emergent variants relative to bamlanivimab administered alone [see *Microbiology/Resistance Information (15)*].

Based on analyses of the available nonclinical, clinical, and virologic data, as well as supportive data from pharmacokinetic/pharmacodynamic modeling, the authorized dosage of 700 mg bamlanivimab and 1,400 mg etesevimab is expected to have similar clinical effect to a dosage of 2,800 mg bamlanivimab and 2,800 mg etesevimab.

2.3 Dosage Adjustment in Specific Populations

Pregnancy or Lactation

No dosage adjustment is recommended in pregnant or lactating women [see *Use in Specific Populations (11.1, 11.2)*].

Pediatric Use

No dosage adjustment is recommended in pediatric patients who weigh at least 40 kg and are 12 years of age and older. Bamlanivimab and etesevimab are not authorized for patients weighing less than 40 kg or those less than 12 years of age [see *Use in Specific Populations (11.3)*].

Geriatric Use

No dosage adjustment is recommended in geriatric patients [see *Use in Specific Populations (11.4)*].

Renal Impairment

No dosage adjustment is recommended in patients with renal impairment [see *Use in Specific Populations (11.5)*].

Hepatic Impairment

No dosage adjustment is recommended in patients with mild hepatic impairment. Bamlanivimab and etesevimab has not been studied in patients with moderate or severe hepatic impairment [see *Use in Specific Populations (11.6)*].

2.4 Dose Preparation and Administration

Preparation

Bamlanivimab and etesevimab solution for infusion should be prepared by a qualified healthcare professional using aseptic technique:

- Gather the materials for preparation:

- Polyvinyl chloride (PVC) or polyethylene (PE)-line PVC, sterile infusion bag. Choose one of the following sizes:
 - Prefilled 50 mL, 100 mL, 150 mL, or 250 mL infusion bag containing 0.9% Sodium Chloride Injection (see **Table 1** and **Table 2**).
- One vial of bamlanivimab (700 mg/20 mL) and two vials of etesevimab (700 mg/20 mL).
- Bamlanivimab and etesevimab are supplied in individual single-dose vials but are administered together using a single infusion bag.
- Remove 1 bamlanivimab vial and 2 etesevimab vials from refrigerated storage and allow to equilibrate to room temperature for approximately 20 minutes before preparation. **Do not expose to direct heat. Do not shake the vials.**
- Inspect both bamlanivimab and etesevimab vials visually for particulate matter and discoloration.
 - Bamlanivimab and etesevimab are clear to opalescent and colorless to slightly yellow to slightly brown solutions.
- Withdraw 20 mL from one bamlanivimab vial and 40 mL from two etesevimab vials and inject all 60 mL into a prefilled infusion bag containing 0.9% Sodium Chloride (see **Table 1** or **Table 2**).
- Discard any product remaining in the vials.
- Gently invert the bag by hand approximately 10 times to mix. **Do not shake.**
- These products are preservative-free and therefore, the diluted infusion solution should be administered immediately.
 - If immediate administration is not possible, store the diluted infusion solution for up to 24 hours at refrigerated temperature (2°C to 8°C [36°F to 46°F]) and up to 7 hours at room temperature (20°C to 25°C [68°F to 77°F]) including infusion time. If refrigerated, allow the infusion solution to equilibrate to room temperature for approximately 20 minutes prior to administration.

Administration

Bamlanivimab and etesevimab infusion solution should be administered by a qualified healthcare professional.

- Gather the materials for infusion:
 - Polyvinyl chloride (PVC) or polyethylene (PE)-lined PVC infusion set
 - Use of an in-line or add-on 0.2/0.22 micron polyethersulfone (PES) filter is strongly recommended.
- Attach the infusion set to the IV bag.
- Prime the infusion set.
- Administer the entire infusion solution in the bag via pump or gravity according to the size of infusion bag used (see **Table 1 for patients weighing ≥50 kg** or **Table 2 for patients weighing <50 kg**). Due to potential overflow of prefilled saline bags, the entire infusion solution in the bag should be administered to avoid underdosage.
- The prepared infusion solution should not be administered simultaneously with any other medication. The compatibility of bamlanivimab and etesevimab injection with IV solutions and medications other than 0.9% Sodium Chloride Injection is not known.
- Once infusion is complete, **flush the tubing** with 0.9% Sodium Chloride to ensure delivery of the required dose.

- Clinically monitor patients during administration and observe patients for at least 1 hour after infusion is complete.
- If the infusion must be discontinued due to an infusion reaction, discard any unused product.
- The use of closed system transfer devices (CSTDs), elastomeric pumps, and pneumatic transport with bamlanivimab has not been studied.

Table 1: Recommended Dilution and Administration Instructions for Bamlanivimab and Etesevimab for IV Infusion^a in Patients Weighing 50 kg or More

Drug^a: Add 20 mL of bamlanivimab (1 vial) and 40 mL of etesevimab (2 vials) for a total of 60 mL to a prefilled infusion bag and administer as instructed below		
Size of Prefilled 0.9% Sodium Chloride Infusion Bag	Maximum Infusion Rate	Minimum Infusion Time
50 mL	310 mL/hr	21 minutes
100 mL	310 mL/hr	31 minutes
150 mL	310 mL/hr	41 minutes
250 mL	310 mL/hr	60 minutes

^a 700 mg of bamlanivimab and 1,400 mg of etesevimab are added to the same infusion bag and administered together as a single intravenous infusion.

Table 2: Recommended Dilution and Administration Instructions for Bamlanivimab and Etesevimab for IV Infusion^a in Patients Weighing Less Than 50 kg

Drug^a: Add 20 mL of bamlanivimab (1 vial) and 40 mL of etesevimab (2 vials) for a total of 60 mL to a prefilled infusion bag and administer as instructed below		
Size of Prefilled 0.9% Sodium Chloride Infusion Bag	Maximum Infusion Rate	Minimum Infusion Time
50 mL	310 mL/hr	21 minutes
100 mL	310 mL/hr	31 minutes
150 mL	310 mL/hr	41 minutes
250 mL ^b	266 mL/hr	70 minutes

^a 700 mg of bamlanivimab and 1,400 mg of etesevimab are added to the same infusion bag and administered together as a single intravenous infusion.

^b The minimum infusion time for patients weighing less than 50 kg who are administered bamlanivimab and etesevimab together using the 250 mL prefilled 0.9% Sodium Chloride infusion bag must be extended to at least 70 minutes to ensure safe use (endotoxin load).

Storage

This product is preservative-free and therefore, the diluted infusion solution should be administered immediately. If immediate administration is not possible, store the diluted infusion solution for up to 24 hours at refrigerated temperature (2°C to 8°C [36°F to 46°F]) and up to 7 hours at room temperature (20°C to 25°C [68°F to 77°F]) including transportation and infusion time. If refrigerated, allow the infusion solution to equilibrate to room temperature for approximately 20 minutes prior to administration.

3 DOSAGE FORMS AND STRENGTHS

Bamlanivimab is a sterile, preservative-free, clear to opalescent and colorless to slightly yellow to slightly brown solution available as:

- Injection: 700 mg/20 mL (35 mg/mL) as in a single-dose vial.

Etesevimab is a sterile, preservative-free, clear to opalescent and colorless to slightly yellow to slightly brown solution available as:

- Injection: 700 mg/20 mL (35 mg/mL) in a single-dose vial.

4 CONTRAINDICATIONS

None.

5 WARNINGS AND PRECAUTIONS

There are limited clinical data available for bamlanivimab and etesevimab. Serious and unexpected adverse events may occur that have not been previously reported with use of bamlanivimab and etesevimab together.

5.1 Hypersensitivity Including Anaphylaxis and Infusion-Related Reactions

Serious hypersensitivity reactions, including anaphylaxis, have been observed with administration of bamlanivimab with and without etesevimab. 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 and etesevimab together. These reactions may be severe or life threatening.

Signs and symptoms of infusion related reactions may include:

- fever, difficulty breathing, reduced oxygen saturation, chills, fatigue, arrhythmia (e.g., atrial fibrillation, sinus tachycardia, bradycardia), chest pain or discomfort, weakness, altered mental status, nausea, headache, bronchospasm, hypotension, hypertension, angioedema, throat irritation, rash including urticaria, pruritus, myalgia, dizziness and diaphoresis.

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

5.2 Clinical Worsening After Bamlanivimab Administration

Clinical worsening of COVID-19 after administration of bamlanivimab has been reported and may include signs or symptoms of fever, hypoxia or increased respiratory difficulty, arrhythmia (e.g., atrial fibrillation, sinus tachycardia, bradycardia), fatigue, and altered mental status. Some of these events required hospitalization. It is not known if these events were related to bamlanivimab use or were due to progression of COVID-19.

5.3 Limitations of Benefit and Potential for Risk in Patients with Severe COVID-19

Treatment with bamlanivimab and etesevimab has not been studied in patients hospitalized due to COVID-19. Monoclonal antibodies, such bamlanivimab and

etesevimab, may be associated with worse clinical outcomes when administered to hospitalized patients with COVID-19 requiring high flow oxygen or mechanical ventilation. Therefore, bamlanivimab and etesevimab are not authorized for use in patients [see *Limitations of Authorized Use*]:

- who are hospitalized due to COVID-19, OR
- who require oxygen therapy due to COVID-19, OR
- who require an increase in baseline oxygen flow rate due to COVID-19 in those on chronic oxygen therapy due to underlying non-COVID-19 related comorbidity.

6 OVERALL SAFETY SUMMARY

Approximately 1,500 subjects have been exposed to bamlanivimab and etesevimab administered together in clinical trials in ambulatory (non-hospitalized) subjects at doses of bamlanivimab 700 mg and etesevimab 1,400 mg or higher. More than 3,900 subjects have received bamlanivimab (either alone or with etesevimab) at doses ranging from 700 to 7,000 mg. Bamlanivimab and etesevimab at the authorized doses of 700 mg and 1,400 mg have been administered together to approximately 770 subjects [see *Clinical Pharmacology (14.2)*].

6.1 Clinical Trials Experience

The safety of bamlanivimab and etesevimab administered together is based on data from the Phase 2/3 BLAZE-1 trial of ambulatory subjects with COVID-19. The authorized dose is bamlanivimab 700 mg and etesevimab 1,400 mg administered together [see *Dosage (2.2)*].

BLAZE-1 is a randomized, double-blind, placebo-controlled 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.

Phase 2 Data from BLAZE-1

Five hundred seventy-seven (577) subjects were treated with a single infusion of bamlanivimab 2,800 mg and etesevimab 2,800 mg (N=112), bamlanivimab alone at doses of 700 mg (N=101), 2,800 mg (N=107), or 7,000 mg (N=101) or placebo (N=156).

Based on Phase 2 data from BLAZE-1 subjects followed for at least 28 days after treatment, adverse events occurred in 18% of subjects treated with both bamlanivimab and etesevimab and 28% of placebo-treated subjects.

Nausea was the most commonly reported adverse event, reported by 4% of subjects treated with bamlanivimab and etesevimab together and 4% treated with placebo. Pruritus and pyrexia were more frequently reported from subjects treated with both bamlanivimab and etesevimab (2% and 1%) compared to placebo (1% and 0%, respectively).

Phase 3 Data from BLAZE-1

Five hundred eighteen (518) subjects were treated with a single infusion of bamlanivimab 2,800 mg and etesevimab 2,800 mg together and 517 subjects were treated with a single infusion of placebo in Arms 7 and 8, respectively, of the BLAZE-1 Phase 3 trial. Adverse events occurred in 13% of subjects who received 2,800 mg of

bamlanivimab and 2,800 mg etesevimab together, and in 12% of placebo-treated subjects. The most common adverse events were nausea, dizziness, and rash. These events each occurred in 1% of subjects treated with bamlanivimab and etesevimab and in 1% of placebo subjects.

Hypersensitivity Including Anaphylaxis and Infusion-related Reactions:

Across ongoing, blinded clinical trials, a case of anaphylaxis and other cases of serious infusion-related reactions were reported with infusion of bamlanivimab with and without etesevimab. The infusions were stopped. All reactions required treatment, one required epinephrine. All events resolved.

Other Immediate Hypersensitivity Events

In the phase 2 portion of BLAZE-1, 2% of subjects treated with bamlanivimab and etesevimab, and 1% of placebo-treated subjects experienced immediate hypersensitivity events. Reported events of pruritus, flushing and hypersensitivity were mild and one case of face swelling was moderate.

In the phase 3 portion of BLAZE-1, 1% of subjects treated with bamlanivimab and etesevimab experienced immediate hypersensitivity events, including 2 infusion-related reactions (moderate severity), 2 cases of rash (1 mild, 1 moderate), 1 infusion site rash (mild), and 1 mild case of pruritus. All events resolved [see *Warnings and Precautions (5.1)*].

7 PATIENT MONITORING RECOMMENDATIONS

Clinically monitor patients during administration and observe patients for at least 1 hour after infusion is complete [see *Warnings and Precautions (5.1)* and *Clinical Trials Experience (6.1)*].

8 ADVERSE REACTIONS AND MEDICATION ERRORS REPORTING REQUIREMENTS AND INSTRUCTIONS

Clinical trials evaluating the safety of bamlanivimab and etesevimab are ongoing [see *Overall Safety Summary (6)*].

Completion of FDA MedWatch Form to report all medication errors and serious adverse events is mandatory. The prescribing healthcare provider and/or the provider's designee are/is responsible for the mandatory reporting of all medication errors and the following serious adverse events occurring during the use of bamlanivimab and etesevimab and considered to be potentially related to bamlanivimab and etesevimab. These adverse events must be reported within 7 calendar days from the onset of the event:

- death;
- a life-threatening adverse event;
- inpatient hospitalization or prolongation of existing hospitalization;
- a persistent or significant incapacity or substantial disruption of the ability to conduct normal life functions;
- a congenital anomaly/birth defect;
- a medical or surgical intervention to prevent death, a life-threatening event, hospitalization, disability, or congenital anomaly.

If a serious and unexpected adverse event occurs and appears to be associated with the use of bamlanivimab and etesevimab under this EUA, the prescribing healthcare provider and/or the provider's designee should complete and submit a MedWatch form to FDA using one of the following methods:

- Complete and submit the report online: www.fda.gov/medwatch/report.htm, or
- Use a postage-paid Form FDA 3500 (available at <http://www.fda.gov/downloads/AboutFDA/ReportsManualsForms/Forms/UCM163919.pdf>) and returning by mail (MedWatch, 5600 Fishers Lane, Rockville, MD 20852-9787), or by fax (1-800-FDA- 0178), or
- Call 1-800-FDA-1088 to request a reporting form

IMPORTANT: When reporting adverse events or medication errors to MedWatch, please complete the entire form with detailed information. It is important that the information reported to FDA be as detailed and complete as possible. Information to include:

- Patient demographics (e.g., patient initials, date of birth)
- Pertinent medical history
- Pertinent details regarding adverse events and course of illness
- Concomitant medications
- Timing of adverse event(s) in relationship to administration of bamlanivimab and etesevimab
- Pertinent laboratory and virology information
- Outcome of the event and any additional follow-up information if it is available at the time of the MedWatch report. Subsequent reporting of follow-up information should be completed if additional details become available.

The following steps are highlighted to provide the necessary information for safety tracking:

- In section A, box 1, provide the patient's initials in the Patient Identifier
- In section A, box 2, provide the patient's date of birth
- In section B, box 5, description of the event:
 - Write "bamlanivimab and etesevimab use for COVID-19 under Emergency Use Authorization (EUA)" as the first line
 - Provide a detailed report of medication error and/or adverse event. It is important to provide detailed information regarding the patient and adverse event/medication error for ongoing safety evaluation of this unapproved drug. Please see information to include listed above.
- In section G, box 1, name and address:
 - Provide the name and contact information of the prescribing healthcare provider or institutional designee who is responsible for the report.
 - Provide the address of the treating institution (NOT the healthcare provider's office address).

9 OTHER REPORTING REQUIREMENTS

- Healthcare facilities and providers must report therapeutics information and utilization data through HHS Protect, Teletracking or National Healthcare Safety Network (NHSN) as directed by the U.S. Department of Health and Human Services.

- In addition, please provide a copy of all FDA MedWatch forms to:
Eli Lilly and Company, Global Patient Safety
Fax: 1-317-277-0853
E-mail: mailindata_gsmtindy@lilly.com
Or call Eli Lilly and Company at 1-855-LillyC19 (1-855-545-5921) to report adverse events.

10 DRUG INTERACTIONS

Bamlanivimab and etesevimab are not renally excreted or metabolized by cytochrome P450 enzymes; therefore, interactions with concomitant medications that are renally excreted or that are substrates, inducers, or inhibitors of cytochrome P450 enzymes are unlikely.

11 USE IN SPECIFIC POPULATIONS

11.1 Pregnancy

Risk Summary

There are insufficient data to evaluate a drug-associated risk of major birth defects, miscarriage, or adverse maternal or fetal outcomes. Bamlanivimab and etesevimab should only be used during pregnancy if the potential benefit outweighs the potential risk for the mother and the fetus.

Nonclinical reproductive toxicity studies have not been performed with bamlanivimab or etesevimab. In tissue cross reactivity studies using human fetal tissues, no binding of clinical concern was detected for etesevimab or bamlanivimab. Human immunoglobulin G1 (IgG1) antibodies are known to cross the placental barrier; therefore, bamlanivimab and etesevimab have the potential to be transferred from the mother to the developing fetus. It is unknown whether the potential transfer of bamlanivimab or etesevimab provides any treatment benefit or risk to the developing fetus.

The estimated background risk of major birth defects and miscarriage for the indicated population is unknown. All pregnancies have a background risk of birth defect, loss, or other adverse outcomes. In the U.S. general population, the estimated background risk of major birth defects and miscarriage in clinically recognized pregnancies is 2 to 4% and 15 to 20%, respectively.

11.2 Lactation

Risk Summary

There are no available data on the presence of bamlanivimab or etesevimab in human or animal milk, the effects on the breastfed infant, or the effects on milk production. Maternal IgG is known to be present in human milk. The developmental and health benefits of breastfeeding should be considered along with the mother's clinical need for bamlanivimab and etesevimab and any potential adverse effects on the breastfed child from bamlanivimab and etesevimab or from the underlying maternal condition. Breastfeeding individuals with COVID-19 should follow practices according to clinical guidelines to avoid exposing the infant to COVID-19.

11.3 Pediatric Use

The safety and effectiveness of bamlanivimab and etesevimab administered together are being assessed in adolescent patients in ongoing clinical trials. The recommended dosing regimen is expected to result in comparable serum exposures of bamlanivimab and etesevimab in patients 12 years of age and older and weighing at least 40 kg as observed in adults, based on a pharmacokinetic (PK) modeling approach which accounted for effect of body weight changes associated with age on clearance and volume of distribution.

11.4 Geriatric Use

Of the 112 patients receiving bamlanivimab and etesevimab in BLAZE-1, 12% were 65 years of age and older and 2% were 75 years of age and older. Based on population PK analyses, there is no difference in PK of bamlanivimab or etesevimab in geriatric patients compared to younger patients.

11.5 Renal Impairment

Bamlanivimab and etesevimab are not eliminated intact in the urine, thus renal impairment is not expected to affect the exposure of bamlanivimab or etesevimab.

11.6 Hepatic Impairment

Based on population PK analysis, there is no difference in PK of bamlanivimab or etesevimab in patients with mild hepatic impairment compared to patients with normal hepatic function. Bamlanivimab and etesevimab have not been studied in patients with moderate or severe hepatic impairment.

11.7 Other Specific Populations

Based on population PK analysis, the PK of bamlanivimab and etesevimab was not affected by sex, race, or disease severity. Body weight had no clinically relevant effect on the PK of bamlanivimab and etesevimab in adults with COVID-19 over the body weight range of 41 kg to 173 kg.

12 OVERDOSAGE

Doses up to 7,000 mg of bamlanivimab (10 times the authorized dose of bamlanivimab) or 7,000 mg of etesevimab (5 times the authorized dose of etesevimab) have been administered in clinical trials without dose-limiting toxicity. Treatment of overdose with bamlanivimab and etesevimab should consist of general supportive measures including monitoring of vital signs and observation of the clinical status of the patient. There is no specific antidote for overdose with either bamlanivimab or etesevimab.

13 DESCRIPTION

Bamlanivimab

Bamlanivimab is a human immunoglobulin G-1 (IgG1 variant) monoclonal antibody consisting of 2 identical light chain polypeptides composed of 214 amino acids each and 2 identical heavy chain polypeptides composed of 455 amino acids produced by a Chinese Hamster Ovary (CHO) cell line and molecular weight of 146 kDa.

Bamlanivimab injection is a sterile, preservative-free, clear to opalescent and colorless to slightly yellow to slightly brown solution in a single-dose vial for intravenous infusion after dilution.

Each mL contains 35 mg of bamlanivimab, and L-histidine (0.4 mg), L-histidine hydrochloride monohydrate (0.6 mg), sodium chloride (2.9 mg), sucrose (60 mg), polysorbate 80 (0.5 mg), and Water for Injection. The bamlanivimab solution has a pH range of 5.5-6.5.

Etesevimab

Etesevimab is a human IgG1 variant monoclonal antibody (mAb) consisting of 2 identical light chain polypeptides composed of 216 amino acids each and 2 identical heavy chain polypeptides composed of 449 amino acids produced by a Chinese Hamster Ovary (CHO) cell line and molecular weight of 145 kDa.

Etesevimab injection is a sterile, preservative-free, clear to opalescent and colorless to slightly yellow to slightly brown solution in a single-dose vial for intravenous infusion after dilution.

Each mL contains 35 mg of etesevimab, L-histidine (1.55 mg), L-histidine hydrochloride monohydrate (2.10 mg), sucrose (80.4 mg), polysorbate 80 (0.5 mg), and Water for injection. The etesevimab solution has a pH range of 5.5.-6.5.

14 CLINICAL PHARMACOLOGY

14.1 Mechanism of Action

Bamlanivimab is a recombinant neutralizing human IgG1 κ monoclonal antibody (mAb) to the spike protein of SARS-CoV-2 and is unmodified in the Fc region. Bamlanivimab binds the spike protein with a dissociation constant $K_D = 0.071$ nM and blocks spike protein attachment to the human ACE2 receptor with an IC_{50} value of 0.17 nM (0.025 μ g/mL).

Etesevimab is a recombinant neutralizing human IgG1 κ mAb to the spike protein of SARS-CoV-2, with amino acid substitutions in the Fc region (L234A, L235A) to reduce effector function. Etesevimab binds the spike protein with a dissociation constant $K_D = 6.45$ nM and blocks spike protein attachment to the human ACE2 receptor with an IC_{50} value of 0.32 nM (0.046 μ g/mL).

Bamlanivimab and etesevimab bind to different but overlapping epitopes in the receptor binding domain (RBD) of the S-protein. Using both antibodies together is expected to reduce the risk of viral resistance.

14.2 Pharmacodynamics

A flat exposure-response relationship for efficacy was identified for bamlanivimab and etesevimab administered together within the dose range of 700 mg bamlanivimab and 1,400 mg etesevimab to 2,800 mg bamlanivimab and 2,800 mg etesevimab (4 and 2 times the authorized dose, respectively). This flat exposure-response relationship was assessed using available clinical data and pharmacokinetic/pharmacodynamic modeling [see *Clinical Trial Results and Supporting Data for EUA (18.2)*].

14.3 Pharmacokinetics

Pharmacokinetic profiles of bamlanivimab and etesevimab are linear and dose-proportional between 700 mg and 7000 mg following a single IV administration. There were no differences in PK of bamlanivimab between severe/moderate participants who were hospitalized and mild/moderate ambulatory participants. There were no differences in PK of etesevimab between mild/moderate ambulatory participants and healthy participants. There is no change in PK of bamlanivimab or etesevimab administered alone or together suggesting there is no interaction between the two antibodies.

Absorption

The mean maximum concentration (C_{max}) of 700 mg bamlanivimab was 196 µg/mL (90% CI: 102 to 378 µg/mL) following approximately 1 hour 700 mg IV infusion.

The mean maximum concentration (C_{max}) of 1400 mg etesevimab is estimated to be 504 µg/mL (90% CI: 262 to 974 µg/mL) following approximately 1 hour IV infusion.

Distribution

Bamlanivimab mean volume of distribution (V) was 2.87 L and 2.71 L for the central and peripheral compartments, respectively. The between subject variability was 23.2% CV.

Etesevimab mean volume of distribution (V) was 2.38 L and 1.98 L for the central and peripheral compartments, respectively. The between subject variability was 27.8% CV.

Metabolism

Bamlanivimab and etesevimab are expected to be degraded into small peptides and component amino acids via catabolic pathways in the same manner as endogenous IgG antibodies.

Elimination

Bamlanivimab clearance (CL) was 0.27 L/hr (between subject variability 22.3% CV) and the mean apparent terminal elimination half-life was 17.6 days (between subject variability 15.8% CV). Following a single 700 mg IV dose, bamlanivimab was quantifiable for at least 29 days. The mean concentration was 22 µg/mL (90% CI: 10.7 to 41.6 µg/mL) on Day 29.

Etesevimab clearance (CL) was 0.128 L/hr (between subject variability 33.8% CV) and the mean apparent terminal elimination half-life was 25.1 days (between subject variability 29.2% CV). Following a single 1,400 mg IV dose, etesevimab was quantifiable for at least 29 days. The mean concentration was 111 µg/mL (90% CI: 57.4 to 199 µg/mL) on Day 29.

Special Populations:

The PK profiles of bamlanivimab and etesevimab were not affected by age, sex, race, or disease severity based on a population PK analysis. Body weight had no clinically relevant effect on the PK of bamlanivimab or etesevimab in adults with COVID-19 over the body weight range of 41 kg to 173 kg [see *Use in Specific Populations (11.4, 11.7)*].

Pediatric population

The PK of bamlanivimab and etesevimab in pediatric patients have not been evaluated.

Using modeling and simulation, the recommended dosing regimen is expected to result in comparable plasma exposures of bamlanivimab and etesevimab in pediatric patients ages 12 years of age or older who weigh at least 40 kg as observed in adult patients [see *Use in Specific Populations (11.3)*].

Patients with renal impairment

Bamlanivimab and etesevimab are not eliminated intact in the urine. Renal impairment is not expected to impact the PK of bamlanivimab and etesevimab, since mAbs with molecular weight >69 kDa are known not to undergo renal elimination. Similarly, dialysis is not expected to impact the PK of bamlanivimab and etesevimab [see *Use in Specific Populations (11.5)*].

Patients with hepatic impairment

Based on population PK analysis, there is no significant difference in PK of bamlanivimab or etesevimab in patients with mild hepatic impairment compared to patients with normal hepatic function. Bamlanivimab and etesevimab have not been studied in patients with moderate or severe hepatic impairment [see *Use in Specific Populations (11.6)*].

Drug interactions:

Bamlanivimab and etesevimab are not renally excreted or metabolized by cytochrome P450 enzymes; therefore, interactions with concomitant medications that are renally excreted or that are substrates, inducers, or inhibitors of cytochrome P450 enzymes are unlikely.

15 MICROBIOLOGY/RESISTANCE INFORMATION

Antiviral Activity

The cell culture neutralization activity of bamlanivimab and of etesevimab against SARS-CoV-2 was measured in a dose-response model quantifying plaque reduction using cultured Vero E6 cells. Bamlanivimab, etesevimab and a 1:1 (weight/weight) ratio of bamlanivimab and etesevimab together neutralized the USA/WA/1/2020 isolate of SARS-CoV-2 with estimated EC₅₀ values = 0.14 nM (0.02 µg/mL), 0.97 nM (0.14 µg/mL) and 0.14 nM (0.02 µg/mL), respectively.

Bamlanivimab demonstrated antibody-dependent cell-mediated cytotoxicity on reporter Jurkat cells expressing FcγRIIIa following engagement with target cells expressing spike protein. Bamlanivimab did not elicit complement-dependent cytotoxicity activity in cell-based assays.

Etesevimab did not demonstrate detectable antibody-dependent cell-mediated cytotoxicity on Jurkat reporter cells expressing FcγRIIIa. Etesevimab did not elicit complement-dependent cytotoxicity activity in cell-based assays.

Antibody Dependent Enhancement (ADE) of Infection

The risk that bamlanivimab and etesevimab could mediate viral uptake and replication by immune cells was studied in THP-1 and Raji cell lines and primary human macrophages. In general, experiments with bamlanivimab, with etesevimab, and with bamlanivimab and etesevimab together did not demonstrate productive viral infection in

immune cells exposed to SARS-CoV-2 at concentrations of mAb(s) down to at least 100-fold below the respective EC₅₀ value(s).

Antiviral Resistance

There is a potential risk of treatment failure due to the development of viral variants that are resistant to both bamlanivimab and etesevimab. Prescribing healthcare providers should consider the prevalence of SARS-CoV-2 variants in their area, where data are available, when considering treatment options.

Resistant variants were identified using directed evolution of the spike protein and serial passage in cell culture of SARS-CoV-2 in the presence of bamlanivimab or etesevimab individually. Resistant variants were not identified when bamlanivimab and etesevimab were tested together using the same methodology. Viral variants identified in these studies that had reduced susceptibility to bamlanivimab included spike protein amino acid substitutions E484D/K/Q, F490S, Q493R, and S494P, and variants that had reduced susceptibility to etesevimab included substitutions K417N, D420N, and N460K/S/T. Neutralization assays using SARS-CoV-2, vesicular stomatitis virus-based pseudovirus, or binding assessment if pseudovirus construction was unsuccessful (E484D), confirmed reductions in susceptibility to the selecting antibody. Retention of susceptibility to the other antibody alone was observed, with the exception of the Q493R substitution. All variants maintained susceptibility to bamlanivimab and etesevimab together, with the exception of those with E484K, E484Q, and Q493R substitutions, which had reduced susceptibility of 17-fold, 22-fold, and >100-fold, respectively in a pseudovirus assay.

Evaluation of susceptibility of variants identified through global surveillance in subjects treated with bamlanivimab and etesevimab is ongoing. Pseudoviral evaluation of amino acid substitutions identified in global surveillance showed that the V483A substitution reduced susceptibility to bamlanivimab 48-fold, but activity was maintained with etesevimab, and with bamlanivimab and etesevimab together. N501Y and N501T substitutions reduced susceptibility to etesevimab approximately 5-fold and 20-fold, respectively. Activity against variants with N501Y or N501T substitutions was maintained with bamlanivimab alone, and with bamlanivimab and etesevimab together.

Bamlanivimab alone and bamlanivimab and etesevimab together retained activity against pseudovirus expressing del69-70 + N501Y found in the B.1.1.7 variant (UK origin). Pseudovirus expressing spike protein from the B.1.351 lineage (South Africa origin) or substitutions K417N + E484K + N501Y found in this lineage had reduced susceptibility to bamlanivimab and etesevimab together of >45-fold, and pseudovirus expressing K417T + E484K + N501Y found in the P.1 lineage (Brazil origin) had reduced susceptibility to bamlanivimab and etesevimab together of >511-fold. Pseudovirus expressing spike protein from the B.1.427/B.1.429 lineages (California origin), or the L452R substitution found in this lineage, had reduced susceptibility to bamlanivimab and etesevimab together of 7.7-fold or 7.4-fold, respectively (Table 3).

Table 3: Pseudovirus Neutralization Data for SARS-CoV-2 Variant Substitutions with Bamlanivimab and Etesevimab Together (1:2 Molar Ratio)

Lineage with Spike Protein Substitution	Key Substitutions Tested ^a	Fold Reduction in Susceptibility
B.1.1.7 (UK origin)	N501Y	no change ^b
B.1.351 (South Africa origin)	K417N + E484K + N501Y	>45 ^c
P.1 (Brazil origin)	K417T + E484K + N501Y	>511 ^c
B.1.427/B.1.429 (California origin)	L452R	7.4
B.1.526 (New York origin) ^d	E484K	17

^a For variants with more than one substitution of concern, only the one(s) with the greatest impact on activity is(are) listed.

^b No change: <5-fold reduction in susceptibility.

^c No activity observed at the highest concentration tested. Bamlanivimab and etesevimab together are unlikely to be active against variants from this lineage.

^d Not all isolates of the New York lineage harbor the E484K substitution (as of February 2021).

It is not known how pseudovirus data correlate with clinical outcomes. Given the similarities between the substitutions in B.1.351 and P.1, it is unlikely that bamlanivimab and etesevimab together will be active against these variants.

Genotypic and phenotypic testing are ongoing to monitor for potential bamlanivimab- and etesevimab-resistance associated spike variations in clinical trials. Detection of phenotypically confirmed bamlanivimab- or etesevimab-resistant variants in baseline samples were observed at a frequency of 0% (0/14) in the Phase 1 clinical study PYAA and 0.4% (2/523) in clinical study BLAZE-1.

In BLAZE-1, treatment-emergent variants were detected at spike protein amino acid positions K417, D420, N460, E484, F490 and S494, and included K417N, D420N, N460T, E484A/D/G/K/Q/V, F490L/S/V and S494L/P substitutions. Only K417N, D420N, N460T, E484D/K/Q, F490S and S494P have been assessed phenotypically to date. At positions K417, D420, N460, E484, F490 and S494, 9.2% (9/98) and 6.1% (6/98) of participants in the 700 mg bamlanivimab arm harbored such a variant post-baseline at $\geq 15\%$ and $\geq 50\%$ allele fractions, respectively. For subjects treated with bamlanivimab and etesevimab, the variant frequencies were 3.9% (4/102) and 0% (0/102) at $\geq 15\%$ and $\geq 50\%$ allele fractions, respectively. The majority of the variants were first observed on Day 7 following treatment initiation. Some of the variants were detected in individuals at more than one time point in the 700 mg bamlanivimab arm: 4/9 and 4/6 at $\geq 15\%$ and $\geq 50\%$ allele fractions, respectively; however, in the bamlanivimab and etesevimab arm there were no such observations (0/4 at $\geq 15\%$ allele fraction). When the genotypic analysis was restricted to high-risk participants, the 700 mg bamlanivimab arm showed a 14.0% (6/43) and 9.3% (4/43) variant frequency for the $\geq 15\%$ and $\geq 50\%$ allele fractions, respectively, and no variants were detected in the bamlanivimab and etesevimab arm. The clinical relevance of these findings is not known.

It is possible that bamlanivimab and etesevimab resistance-associated variants could have cross-resistance to other mAbs targeting the receptor binding domain of SARS-CoV-2. The clinical impact is not known.

Immune Response Attenuation

There is a theoretical risk that antibody administration may attenuate the endogenous immune response to SARS-CoV-2 and make patients more susceptible to re-infection.

16 NONCLINICAL TOXICOLOGY

Carcinogenesis, mutagenesis, and reproductive toxicology studies with bamlanivimab or etesevimab have not been conducted.

In toxicology studies, bamlanivimab and etesevimab had no adverse effects when administered intravenously to rats and monkeys, respectively. Non-adverse increases in neutrophils were observed in rats dosed with bamlanivimab.

In tissue cross reactivity studies using human adult and fetal tissues, no binding of clinical concern was detected for bamlanivimab or etesevimab.

17 ANIMAL PHARMACOLOGIC AND EFFICACY DATA

Antiviral Activity In Vivo

Prophylactic administration of bamlanivimab to female Rhesus macaques (n=3 or 4 per group) resulted in 1 to 4 log₁₀ decreases in viral genomic RNA and viral replication (sub-genomic RNA) in bronchoalveolar lavage samples relative to control animals, but less of an impact on viral RNA in throat and nasal swabs following SARS-CoV-2 inoculation.

Prophylactic or therapeutic administration of etesevimab to male Rhesus macaques (n=3 per group) resulted in approximately 4 or 3 log₁₀ average decreases, respectively, in viral genomic RNA in oropharyngeal swabs at Day 4 post infection relative to control animals.

The applicability of these findings to a prophylaxis or treatment setting is not known.

18 CLINICAL TRIAL RESULTS AND SUPPORTING DATA FOR EUA

The data supporting this EUA are based on analyses of data from the Phase 2/3 BLAZE-1 trial (NCT04427501) and the Phase 2 BLAZE-4 trial (NCT04634409). Both trials are evaluating the safety and efficacy of bamlanivimab and etesevimab together for treatment of subjects with mild to moderate COVID-19. BLAZE-1 provides clinical efficacy data from subjects receiving 2,800 mg bamlanivimab and 2,800 mg of etesevimab together. BLAZE-4 provides comparative virologic outcome data from subjects receiving 700 mg bamlanivimab and 1,400 mg etesevimab (the authorized doses), subjects receiving 2,800 mg bamlanivimab and 2,800 mg of etesevimab, and placebo.

18.1 Mild to Moderate COVID-19 (BLAZE-1)

BLAZE-1 is an ongoing randomized, double-blind, placebo-controlled clinical trial studying bamlanivimab and etesevimab administered together for the treatment of subjects with mild to moderate COVID-19 (subjects with COVID-19 symptoms who are not hospitalized). BLAZE-1 enrolled adult subjects who were not hospitalized and had at least 1 or more COVID-19 symptoms that were at least mild in severity. Treatment was initiated within 3 days of obtaining the clinical sample for the first positive SARS-CoV-2 viral infection determination.

Phase 2 Data from BLAZE-1

In the Phase 2 portion of the trial, subjects were treated with a single infusion of bamlanivimab 2,800 mg and etesevimab 2,800 mg (N=112), bamlanivimab alone (at doses of 700 mg [N=101], 2,800 mg [N=107], or 7,000 mg [N=101]) or placebo (N=156).

The data are from an interim analysis after all enrolled subjects completed at least Day 29 of the trial.

At baseline, median age was 45 years (with 12% of subjects aged 65 or older); 55% of subjects were female, 89% were White, 43% were Hispanic or Latino, and 6% were Black or African American; 42% of subjects were considered high risk (as defined in Section 2). Subjects had mild (78%) to moderate COVID-19 (22%); the mean duration of symptoms was 5 days; mean viral load by cycle threshold (CT) was 24 at baseline. The baseline demographics and disease characteristics were well balanced across treatment groups.

The pre-specified primary endpoint in this Phase 2 trial was change in viral load from baseline to Day 11 for 2,800 mg bamlanivimab and 2,800 mg etesevimab-treated subjects versus placebo. Most subjects, including those receiving placebo, effectively cleared virus by Day 11 (Figure 1).

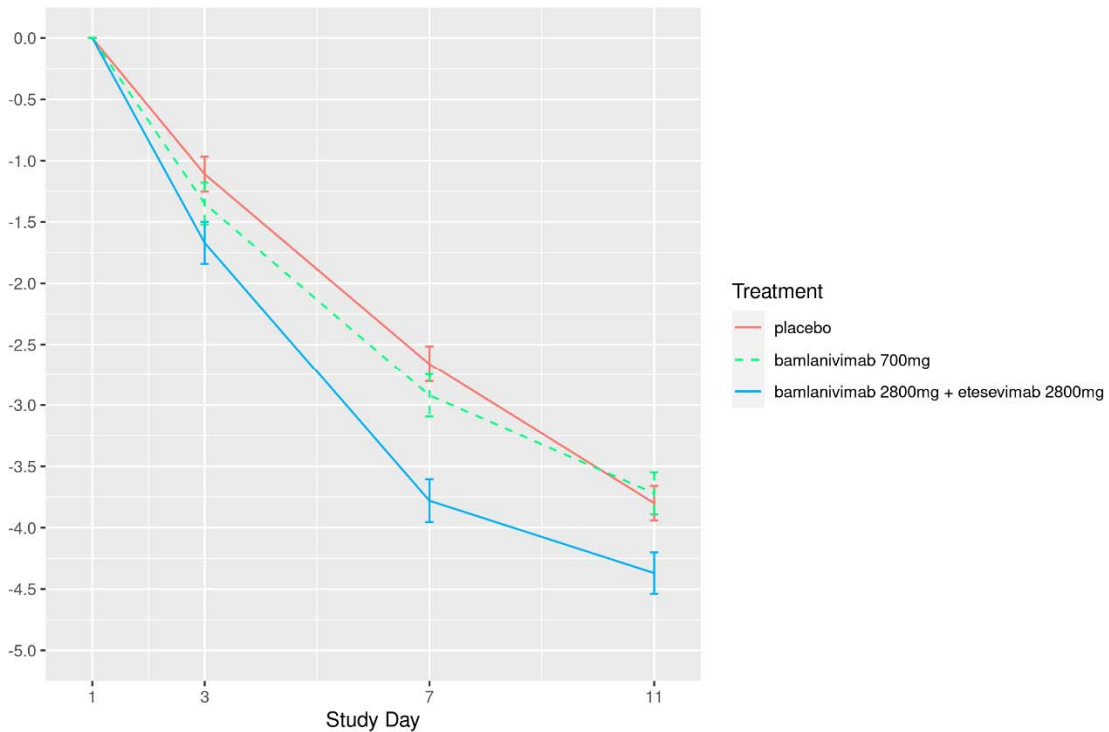


Figure 1: SARS-CoV-2 Viral Load Change from Baseline by Visit from the Phase 2 Portion of BLAZE-1.

While viral load was used to define the primary endpoint in this Phase 2 trial, the most important evidence that bamlanivimab and etesevimab 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 and etesevimab-treated subjects progressed to COVID-19-related hospitalization or emergency room visits compared to placebo-treated subjects (Table 4). No deaths occurred in any treatment arm.

Table 4: Proportion of Subjects with Events of Hospitalization or Emergency Room Visits within 28 Days After Treatment

Treatment	N ^a	Events	Proportion of Subjects %
Placebo	156	9	6%
Bamlanivimab and etesevimab ^b	112	1	1%
Bamlanivimab ^c 700 mg	101	1	1%

^a N = number of treated patients in analysis.

^b The doses for bamlanivimab and etesevimab were bamlanivimab 2,800 mg and etesevimab 2,800 mg.

^c Results for other doses of bamlanivimab were suggestive of a flat dose-response relationship for this endpoint.

The absolute risk reduction for bamlanivimab and etesevimab-treated subjects compared to placebo is greater in subjects at higher risk of hospitalization according to the high risk criteria (Table 5).

Table 5: Proportion of Subjects with Events of Hospitalization or Emergency Room Visits for Subjects at Higher Risk of Hospitalization

Treatment	N ^a	Events	Proportion of Subjects %
Placebo	68	7	10%
Bamlanivimab and etesevimab ^b	38	1	3%
Bamlanivimab ^c 700 mg	46	1	2%

^a N = number of treated patients in analysis.

^b The doses for bamlanivimab and etesevimab were bamlanivimab 2,800 mg and etesevimab 2,800 mg.

^c Results for other doses of bamlanivimab were suggestive of a flat dose-response relationship for this endpoint.

The median time to symptom improvement as recorded in a trial specific daily symptom diary was 6 days for bamlanivimab and etesevimab-treated subjects, as compared with 8 days for placebo-treated subjects. Symptoms assessed were cough, shortness of breath, feeling feverish, fatigue, body aches and pains, sore throat, chills, and headache. Symptom improvement was defined as symptoms scored as moderate or severe at baseline being scored as mild or absent, and symptoms scored as mild or absent at baseline being scored as absent.

Phase 3 Data from BLAZE-1

In the Phase 3 portion of the trial, subjects were treated with a single infusion of bamlanivimab 2,800 mg and etesevimab 2,800 mg (N=518) or placebo (N=517). All of the patients enrolled in these dose arms met the criteria for high-risk (as defined in Section 2).

At baseline, median age was 56 years (with 31% of subjects aged 65 or older); 52% of subjects were female, 87% were White, 29% were Hispanic or Latino, and 8% were Black or African American. Subjects had mild (77%) to moderate (23%) COVID-19; the mean duration of symptoms was 4 days; mean viral load by cycle threshold (CT) was 24 at baseline. The baseline demographics and disease characteristics were well balanced across treatment groups.

The primary endpoint was the proportion of subjects with COVID-19 related hospitalization (defined as ≥ 24 hours of acute care) or death by any cause by Day 29.

Events occurred in 36 subjects treated with placebo (7%) as compared to 11 events in subjects treated with bamlanivimab 2,800 mg and etesevimab 2,800 mg together (2%) [$p < 0.001$], a 70% reduction. There were 10 deaths in subjects treated with placebo and no deaths in subjects treated with bamlanivimab 2,800 mg and etesevimab 2,800 mg together ($p < 0.001$).

At Day 7, 29% of subjects treated with placebo and 10% of subjects treated with bamlanivimab 2,800 mg and etesevimab 2,800 mg together had persistently high viral loads ($p < 0.000001$), which was defined as SARS-CoV-2 viral load > 5.27 .

Secondary endpoints include mean change in viral load from baseline to Day 3, 5, and 7 (Figure 2).

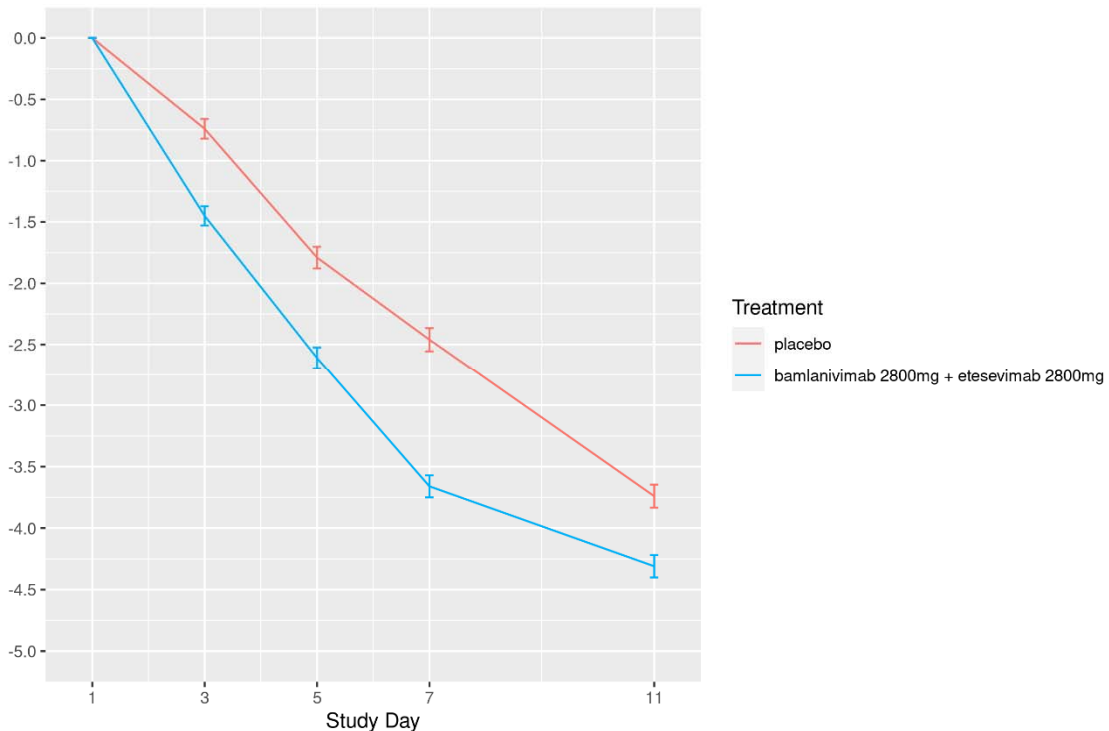


Figure 2: SARS-CoV-2 Viral Load Change from Baseline by Visit from the Phase 3 Portion of BLAZE-1.

18.2 Mild to Moderate COVID-19 (BLAZE-4)

BLAZE-4 is an ongoing Phase 2, randomized, double-blind, placebo-controlled clinical trial studying bamlanivimab and etesevimab for the treatment of subjects with mild to moderate COVID-19 (subjects with COVID-19 symptoms who are not hospitalized). BLAZE-4 enrolled adult subjects who were not hospitalized and had at least 1 or more COVID-19 symptoms that were at least mild in severity, and excluded subjects ≥ 65 years old or with BMI ≥ 35 . Treatment was initiated within 3 days of obtaining the clinical sample for the first positive SARS-CoV-2 viral infection determination. Subjects were treated with a single infusion of bamlanivimab 700 mg and etesevimab 1,400 mg (N=158), bamlanivimab 2,800 mg and etesevimab 2,800 mg (N=101), bamlanivimab

alone at a dose of 700 mg (N=103), or placebo (N=153). Results are not yet complete for additional arms in this trial.

At baseline, median age was 39 years (with 1% of subjects aged 65 or older); 50% of subjects were female, 87% were White, 29% were Hispanic or Latino, and 6% were Black or African American; 8% of subjects were considered high risk (as defined in Section 2). Subjects had mild (84%) to moderate (16%) COVID-19; the mean duration of symptoms was 4 days; mean viral load by cycle threshold (CT) was 25 at baseline. The baseline demographics and disease characteristics were well balanced across treatment groups.

The pre-specified primary endpoint in this Phase 2 trial was the proportion of participants with SARS-CoV-2 viral load greater than 5.27 on Day 7 (+2 days). The rates were 31% (42/135) for placebo, 14% (21/147, $p < 0.001$ versus placebo) for bamlanivimab 700 mg and etesevimab 1,400 mg together, and 10% (10/99, $p < 0.001$ versus placebo) for bamlanivimab 2,800 mg and etesevimab 2,800 mg together.

Secondary endpoints include mean change in viral load from baseline to Day 3, 5, and 7 (Figure 3).

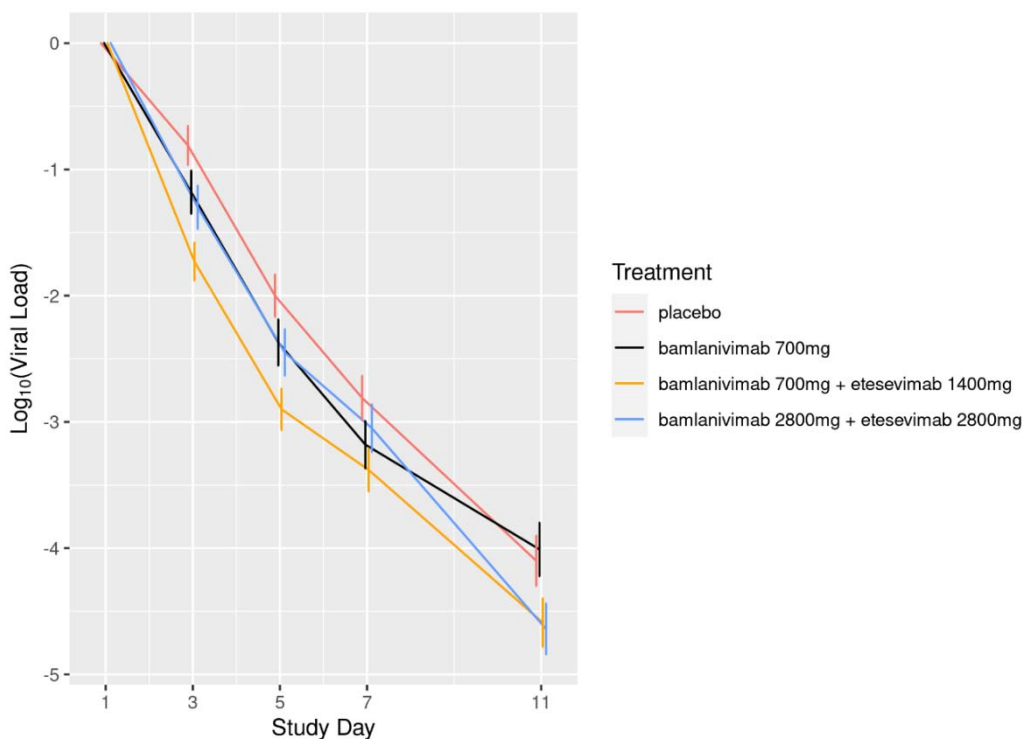


Figure 3: SARS-CoV-2 Viral Load Change from Baseline by Visit from Phase 2 Trial BLAZE-4.

19 HOW SUPPLIED/STORAGE AND HANDLING

How Supplied

UNDER THIS EUA, BAMLANIVIMAB AND ETESSEVIMAB MUST BE ADMINISTERED TOGETHER.

Bamlanivimab

Bamlanivimab injection is a sterile, preservative-free clear to opalescent and colorless to slightly yellow to slightly brown solution supplied in a single-dose vial.

Etesevimab

Etesevimab injection is a sterile, preservative-free clear to opalescent and colorless to slightly yellow to slightly brown solution supplied in a single-dose vial.

Bamlanivimab and etesevimab are supplied as:

Antibody	Concentration	Package Size	NDC
Bamlanivimab	700 mg/20 mL (35 mg/mL)	one vial per carton	0002-7910-01
Etesevimab	700 mg/20 mL (35 mg/mL)	one vial per carton	0002-7950-01

Storage and Handling

Bamlanivimab is preservative-free. Discard unused portion.

Etesevimab is preservative-free. Discard unused portion.

Store unopened vials in a refrigerator at 2°C to 8°C (36°F to 46°F) in the original carton to protect from light.

DO NOT FREEZE, SHAKE, OR EXPOSE TO DIRECT LIGHT.

Solution in vial requires dilution prior to administration. The prepared infusion solution is intended to be used immediately. If immediate administration is not possible, store diluted infusion solution in the refrigerator at 2°C to 8°C (36°F to 46°F) for up to 24 hours and at room temperature (20°C to 25°C [68°F to 77°F]) and for up to 7 hours, including infusion time. If refrigerated, allow the infusion solution to equilibrate to room temperature prior to administration.

20 PATIENT COUNSELING INFORMATION

Patients treated with bamlanivimab and etesevimab should continue to self-isolate and use infection control measures (e.g., wear mask, isolate, social distance, avoid sharing personal items, clean and disinfect “high touch” surfaces, and frequent handwashing) according to CDC guidelines. Also see Fact Sheet for Patients, Parents and Caregivers.

21 CONTACT INFORMATION

For additional information visit:

www.BAMandETE.com

If you have questions, please contact:

1-855-LillyC19 (1-855-545-5921)

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