



December 7, 2021

****Emergency Use Authorization (Expanded Use)****

FDA authorizes bamlanivimab/etesevimab for COVID-19 treatment and post-exposure prevention in pediatric patients, including newborns

Background & Current Status^{1,2}:

On December 3, 2021, the U.S. Food and Drug Administration revised the [emergency use authorization](#) (EUA) of bamlanivimab and etesevimab (previously authorized for pediatric patients 12 years of age and older weighing at least 40 kilograms, or about 88 pounds), to additionally authorize bamlanivimab and etesevimab administered together for the *treatment of mild to moderate COVID-19* in all younger pediatric patients, including newborns, who have a positive COVID-19 test and are at high risk for progression to severe COVID-19, including hospitalization or death.

This revision also authorizes bamlanivimab and etesevimab, to be administered together, for *post-exposure prophylaxis* for prevention of COVID-19 in all pediatric patients, including newborns, at high risk of progression to severe COVID-19, including hospitalization or death.

Precautions for Use²

- Bamlanivimab and etesevimab may **only** be administered together
- Bamlanivimab and etesevimab are authorized for use **only** in states, territories, and U.S. jurisdictions in which the combined frequency of variants resistant to bamlanivimab and etesevimab administered together is less than or equal to 5%, as determined by FDA. A list of states, territories and U.S. jurisdictions in which bamlanivimab and etesevimab are/are not currently authorized is available on FDA's website at: www.fda.gov/media/151719/download
- Bamlanivimab and etesevimab are **not** authorized for use in patients 2 years of age and older who are hospitalized due to COVID-19
- Bamlanivimab and etesevimab are **not** authorized for use in patients, regardless of age, who:
 - require oxygen therapy and/or respiratory support due to COVID-19; or
 - require an increase in baseline oxygen flow rate and/or respiratory support due to COVID-19 and are on chronic oxygen therapy and/or respiratory support due to underlying non-COVID-19 related comorbidity
- Bamlanivimab and etesevimab may only be administered together 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
- The use of bamlanivimab and etesevimab covered by this authorization must be in accordance with the authorized Fact Sheets.
- Bamlanivimab and etesevimab administered together is **not** authorized for pre-exposure prophylaxis for prevention of COVID-19

Efficacy and Safety^{1,3}:

To support the FDA's action, bamlanivimab and etesevimab, administered together, were studied in a clinical trial of pediatric patients, all with at least one risk factor for severe COVID-19, to evaluate the safety and pharmacokinetics of treatment in pediatric patients. A total of 125 non-hospitalized pediatric subjects with mild-to-moderate COVID-19 symptoms and were high risk for progression to severe COVID-19 were studied in the Phase 3 portion of the double-blind, placebo-controlled [BLAZE-1 trial](#). Pediatric patients weighing 40 kg or more received the same dose as adults (700 mg bamlanivimab and 1,400 mg etesevimab), while those weighing less than 40 kg received weight-based dosing.

Of the 125 pediatric subjects, 33 subjects ages 12 to <18 were evaluated in BLAZE-1, and 1 subject age 12 to <18 was evaluated in a controlled addendum to BLAZE-1. Of the 33 pediatric subjects, 14 received placebo, 14 received the authorized dose or a higher dose for their age, and 5 received a lower dose than authorized for their age. A total of 91 pediatric subjects were evaluated in an open-label addendum to BLAZE-1, with 40 subjects ages 12 to <18, 36 subjects ages 6 to <12, 10 subjects ages 2 to <6, and 5 subjects ages 0 to <2. The youngest participant was 10 months of age and weighed 8.6 kg.

Bamlanivimab and etesevimab were well tolerated in these participants, with a safety profile similar to adults. Because only limited numbers of children were enrolled in the placebo-controlled portion of BLAZE-1, efficacy relative to a placebo was not determined. The efficacy extrapolation for pediatric patients was supported by similarities in pathogenesis, the course of the disease, and the effect of the drugs when comparing pediatric patients and adults. The drug exposure in children ≥ 2 years or weighing >12 kg who were administered the authorized dose were comparable to those observed in adults administered the authorized dose. Using pharmacokinetic modeling and simulation, the drug exposure in children <2 years or weighing ≤ 12 kg who are administered the authorized dose is expected to match the exposure observed in adults at the authorized dose. Additionally, viral load reduction was comparable between pediatrics and adult patients administered the authorized dose. Given the similar course of COVID-19 disease, the authorization of bamlanivimab and etesevimab in younger pediatric patients, including neonates, is supported by safety and efficacy data in adolescents and adults, together with additional pharmacokinetic and safety data from the clinical trial in pediatric patients.

Serious adverse events including hypersensitivity, anaphylaxis, and infusion-related reactions have been observed with bamlanivimab with and without coadministration of etesevimab. Possible side effects of bamlanivimab and etesevimab administered together include nausea, dizziness, pruritus, and rash.

Current EUA Fact Sheets:

The EUA Fact Sheets for the monoclonal antibody combination, bamlanivimab and etesevimab, are accessible below:

- ❖ [Healthcare Providers](#)
- ❖ [Patients, Parents and Caregivers](#)

Mandatory Requirements under the EUA^{4,5}:

- Use bamlanivimab and etesevimab only in authorized patients described in the respective Fact Sheets.
- Communicate to recipients, parents or caregivers, as age appropriate, information consistent with the “Fact Sheet for Patients, Parents Recipients and Caregivers” prior to 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 authorized for use under this EUA.
- Patients with known hypersensitivity to any ingredient of bamlanivimab or etesevimab must not receive bamlanivimab and etesevimab.
- The prescribing health care provider and/or the provider’s designee is/are 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
 - Complete and submit a postage-paid FDA Form 3500: www.fda.gov/media/76299/download
- *Federal, Tribal, and Urban programs are all encouraged to **put “IHS” into field #26 of the reporting forms.***

References:

1. Food and Drug Administration. FDA News Release. [FDA Expands Authorization of Two Monoclonal Antibodies for Treatment and Post-Exposure Prevention of COVID-19 to Younger Pediatric Patients, Including Newborns](#). Published online December 3, 2021.
2. Food and Drug Administration. [Emergency Use Authorization](#) for bamlanivimab and etesevimab.
3. Food and Drug Administration. [Frequently Asked Questions on the Emergency Use Authorization for Bamlanivimab and Etesevimab](#). Accessed December 7, 2021.
4. Food and Drug Administration. Bamlanivimab and Etesevimab: [FACT SHEET FOR HEALTHCARE PROVIDERS](#). Updated December 3, 2021.
5. Food and Drug Administration. Bamlanivimab and Etesevimab: [FACT SHEET FOR PATIENTS, PARENTS AND CAREGIVERS](#). Updated December 3, 2021.