

# Specialty Guideline Management

## Zynteglo

### Products Referenced by this Document

Drugs that are listed in the following table include both brand and generic and all dosage forms and strengths unless otherwise stated. Over-the-counter (OTC) products are not included unless otherwise stated.

Brand Name	Generic Name
Zynteglo	betibeglogene autotemcel

### Indications

The indications below including FDA-approved indications and compendial uses are considered a covered benefit provided that all the approval criteria are met and the member has no exclusions to the prescribed therapy.

#### FDA-approved Indication

Zynteglo is indicated for the treatment of adult and pediatric patients with beta-thalassemia who require regular blood cell (RBC) transfusions.

All other indications are considered experimental/investigational and not medically necessary

### Documentation

Submission of the following information is necessary to initiate the prior authorization review:

- Molecular or genetic testing results documenting transfusion-dependent beta-thalassemia genotype
- Chart notes or medical record documenting history of blood cell transfusions for the previous two years

### Prescriber Specialties

This medication must be prescribed by or in consultation with a hematologist.

# Coverage Criteria

## Transfusion-Dependent Beta-Thalassemia

Authorization of 3 months for one dose total may be granted for transfusion-dependent beta-thalassemia when all of the following criteria are met:

- Member is 4 years of age or older and meets both of the following criteria:
  - Member weighs at least 6 kg
  - Member is reasonably anticipated to provide at least the minimum number of cells required to initiate the manufacturing process
- Member has a diagnosis of transfusion-dependent beta-thalassemia with a non- $\beta^0/\beta^0$  OR  $\beta^0/\beta^0$  genotype confirmed via genetic testing (see Appendix for examples)
- Member requires regular blood cell transfusions and meets one of the following criteria within the previous two years:
  - Member has received at least 100 milliliter per kilogram of packed red blood cells (pRBCs) per year
  - Member has received at least 8 transfusions events of packed red blood cells (pRBCs) per year
- Member is eligible for a hematopoietic stem cell transplant (HSCT) but is unable to find a matched related donor
- Member has not received a prior hematopoietic stem cell transplant (HSCT)
- Member has not received Zynteglo or any other gene therapy previously

## Appendix

Examples of non- $\beta^0/\beta^0$  OR  $\beta^0/\beta^0$  genotypes:

- $\beta^0/\beta^0$
- $\beta^0/\beta^+$
- $\beta^E/\beta^0$
- $\beta^0/\text{IVS-I-110}$
- $\text{IVS-I-110}/\text{IVS-I-110}$

## References

1. Zynteglo [package insert]. Somerville, MA: Bluebird Bio; August 2022.
2. Locatelli F, Thompson AA, Kwiatkowski JL, et al. Betibeglogene Autotemcel Gene Therapy for Non- $\beta^0/\beta^0$  Genotype  $\beta$ -Thalassemia. N Engl J Med. 2022;386(5):415-427.
3. Ashutosh Lal, Franco Locatelli, Janet L. Kwiatkowski, Andreas E. Kulozik, Evangelia Yannaki, John B. Porter, Isabelle Thuret, Martin G. Sauer, Heidi Elliot, Ying Chen, Richard A. Colvin, Alexis A. Thompson; Northstar-3: Interim Results from a Phase 3 Study Evaluating Lentiglobin Gene Therapy in Patients with Transfusion-Dependent  $\beta$ -Thalassemia and Either a  $\beta^0$  or IVS-I-110 Mutation at Both Alleles of the HBB Gene. Blood 2019; 134 (Supplement\_1): 815.

Reference number(s)
5544-A

4. Cappellini MD, Farmakis D, Porter J, Taher A. 2021 Guidelines for the management of transfusion dependent thalassaemia (TDT). Nicosia, Cyprus: Thalassaemia International Federation, 2021.