

Medical Policy

Zynteglo (betibeglogene autotemcel)

Policy Number: 063

	Commercial and Qualified Health Plans	MassHealth	Medicare Advantage
Authorization required	X	X	X
Authorization not required			
Not Covered			

Overview

Zynteglo (betibeglogene autotemcel) is an autologous hematopoietic stem cell-based gene therapy indicated for the treatment of adult and pediatric patients with β -thalassemia who require regular red blood cell (RBC) transfusions.

Coverage Criteria

1. Criteria for Approval (The member must meet **all** of the following requirements):
 - The member has confirmed and symptomatic genetic diagnosis of transfusion dependent β -thalassemia with a non- β^0/β^0 or β^0/β^0 genotype.
 - The member is transfusion-dependent with a history of at least 100 mL/kg/year of packed red blood cells (pRBC) in the previous two years OR be managed under standard thalassemia guidelines with ≥ 8 transfusions of pRBCs per year in the previous two years.
 - The member is between 4 and 50 years of age at the time of treatment decision/consent, and meets both of the following criteria:
 - a) Member weighs at least 6 kg; and
 - b) Member is reasonably anticipated to provide at least the minimum number of cells required to initiate the manufacturing process
 - The member has not previously received Zynteglo.
 - Iron chelation therapy has been discontinued for at least 7 days prior to initiation of conditioning.
 - The prescribing physician is a hematologist who specializes in the treatment of Beta-Thalassemia.
 - The member will have treatment administered at a Zynteglo Qualified Treatment Center (Zynteglo QTC).
2. Dosing and Administration
 - The member will receive a single-dose Zynteglo intravenously infusion within accordance of the FDA approved labeling; 1.1×10^{14} vector genomes (vg) per kilogram of body weight.
3. Duration of Therapy
 - Single-dose one-time intravenous infusion per lifetime.
 - A single dose contains a minimum of 5.0×10^6 CD34+ cells/kg of body weight, in one or more infusion bags.
 - Full myeloablative conditioning with busulfan must be administered before infusion of Zynteglo.

- The member should receive prophylaxis for hepatic veno-occlusive disease (VOD) / hepatic sinusoidal obstruction syndrome.
- The member should receive prophylaxis for seizures with agents other than phenytoin.

4. Facility Criteria

- The medication is prescribed by a hematologist, a neurologist, and/or a stem cell transplant specialist
- The treatment will be administered at a Zynteglo Qualified Treatment Center.

5. Exclusions

- The member has HIV-1 or HIV-2 infection.
- The member has a prior or current malignancy, a significant immunodeficiency, or myeloproliferative disorder (with the exception of adequately treated cone biopsied in situ carcinoma of the cervix uteri and basal or squamous cell carcinoma of the skin).
- The member does not have a parent or sibling with a known Familial Cancer Syndrome (included but not limited to hereditary breast and ovarian cancer syndrome, hereditary non-polyposis colorectal cancer syndrome, and familial adenomatous polyposis) or the member has not been shown to carry the abnormal gene for Familial Cancer Syndrome.
- The member does not have active bacterial, viral, fungal, parasitic infection such as HIV-1 or HIV-2 infection. Those with antibody evidence of hepatitis B infection are eligible if viral load is undetectable.
- Documentation of ONE of the following:
 - a) A recent (i.e. within 30 days) white blood cell count of at least $3 \times 10^9/L$;
 - b) A recent (i.e. within 30 days) platelet count of at least $100 \times 10^9/L$.
- Documentation of an estimated glomerular filtration rate (eGFR) of at least $70 \text{ mL/min/1.73 m}^2$
- The member has a history of receiving Zynteglo, any prior gene therapy, or allogenic hematopoietic stem cell transplant (HSCT).
- The member has clinical evidence of advanced liver disease by biopsy (e.g. bridging fibrosis, cirrhosis) or distinct findings of cirrhosis by MRI or CT.
- The member has aspartate transferase (AST), alanine transaminase (ALT), or direct bilirubin values greater than three times the upper limit of normal.
- The member has baseline prothrombin time (PT) or partial thromboplastin time (PTT) greater than 1.5 times the upper limit of normal.
- The member has severely elevated iron in the heart (i.e., member with cardiac T2* less than 10 msec by magnetic resonance imaging [MRI]).

Medicare Variation

Mass General Brigham Health Plan uses guidance from the Centers for Medicare and Medicaid Services (CMS) for coverage determinations for its Medicare Advantage plan members. National Coverage Determinations (NCDs), Local Coverage Determinations (LCDs), Local Coverage Articles (LCAs) and documentation included in the Medicare manuals are the basis for coverage determinations. When there is no guidance from CMS for the requested service, Mass General Brigham Health Plan’s medical policies are used for coverage determinations.

At the time of Mass General Brigham Health Plan’s most recent policy review, Medicare has an NCD for Chimeric Antigen Receptor (CAR) T-cell Therapy (110.24).

CPT/HCPC Codes

Authorized Code	Code Description
No specific code	



Effective

May 2023: Effective date.

References

Centers for Medicare & Medicaid Services. National Coverage Determination (NCD): Chimeric Antigen Receptor (CAR) T-cell Therapy (110.24). Implementation Date: 09/20/2021. Updated November 2020. Available:

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<https://doi.org/10.1182/blood-2019-128482>.

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