



SmartPA Criteria Proposal

Drug/Drug Class:	Zynteglo Clinical Edit	
First Implementation Date:	TBD	
Proposed Date:	December 15, 2022	
Prepared for:	MO HealthNet	
Prepared by:	MO HealthNet/Conduent	
Criteria Status:	 □Existing Criteria □Revision of Existing Criteria ⊠New Criteria 	

Executive Summary

Purpose: Ensure appropriate utilization and control of Zynteglo® (betibeglogene autotemcel)

Why Issue Zynteglo[®] (betibeglogene autotemcel), approved by the FDA in August of 2022, is the Selected: first cell-based gene therapy indicated for the treatment of adult and pediatric patients with beta-thalassemia who require regular red blood cell (RBC) transfusions. Betathalassemia is an inherited blood disorder caused by pathogenic variants in the betaglobin gene leading to impaired production of beta-globin, an important component of hemoglobin. Transfusion-dependent thalassemia (TDT) is one of the more severe forms of thalassemia. Clinical manifestations include severe anemia, skeletal and growth deficits, and iron overload resulting in reduced life expectancy. Hematopoietic stem cell transplant (HSCT) offers a potential cure for TDT however it is associated with toxicities and transplant-related mortality, even for patients considered to be very good candidates. According to the FDA Cellular, Tissue, and Gene Therapies Advisory Committee only 25% of TDT patients have a matched sibling donor. Zynteglo, a one-time therapy, consists of an intravenous infusion containing a frozen suspension of genetically modified autologous cells, enriched for CD34+ cells. Zynteglo was shown to achieve 89% transfusion independence for a continuous period of \geq 12 months.

Due to the high cost and specific approved indication, MO HealthNet will impose clinical criteria to ensure appropriate utilization of Zynteglo.

Program-Specific		Cost per unit (WAC)
Information:	ZYNTEGLO INFUSION BAG-CASSETTE	\$2,800,000.00
Type of Criteria:	 ☐ Increased risk of ADE ☑ Appropriate Indications 	 □ Preferred Drug List ☑ Clinical Edit
Data Sources:	Only Administrative Databases	☑ Databases + Prescriber-Supplied

Setting & Population

- Drug class for review: Zynteglo® (betibeglogene autotemcel)
- Age range: All appropriate MO HealthNet participants

Approval Criteria

- Prescribed by or in consultation with a hematologist or other specialist in the treated disease state AND
- For participants aged < 5 years:
 - Participant weighs \geq 6 kg **AND**
 - Documentation of prescriber attestation that participant is reasonably anticipated to be able to provide at least the minimum number of cells required to initiate manufacturing process AND
- Documented diagnosis of beta-thalassemia confirmed by genetic testing AND
- Participant considered to be transfusion-dependent defined by:
 - Documented history of \geq 100 mL/kg/year of pRBCs in the past two years **OR**
 - For participants aged ≥ 12 years: ≥ 8 transfusions of pRBCs per year in the past two years AND
- Prescriber attestation that participant is clinically stable and eligible to undergo HSCT AND
- Participant must be evaluated for availability of matched donors for hematopoietic stem cell transplantation (HSCT)

Denial Criteria

- Therapy will be denied if all approval criteria are not met
- Participant is currently pregnant
- Participant has known and available HLA-matched family donor for HSCT
- History of HSCT
- Previous therapy with Zynteglo or any other gene therapy approved for TDT at any time

Required Documentation

Laboratory Results: MedWatch Form: Progress Notes: Other: -

Disposition of Edit

Denial: Exception code "0682" (Clinical Edit) Rule Type: CE

Default Approval Period

3 months

References

- Zynteglo® (betibeglogene autotemcel) [package insert]. Somerville, MA: bluebird bio, Inc.; August 2022.
- IPD Analytics: New Drug Review: Zynteglo (betibeglogene autotemcel). Accessed 10 September 2022.
- Beaudoin F, Richardson M, et al. Betibeglogene Autotemcel for Beta Thalassemia: Effectiveness and Value; Final Evidence Report. Institute for Clinical and Economic Review. https://icer.org/wp-
- content/uploads/2021/11/ICER_Beta-Thalassemia_Final-Report_071922.pdf. Accessed 10 September 2022.
 Thalassemia International Federation. 2021 Guidelines for the Management of Transfusion Dependent
- Thalassemia (TDT). https://www.thalassemia.org/wp-content/uploads/2021/06/TIF-2021-Guidelines-for-Mgmt-of-TDT.pdf. Accessed 10 September 2022.
- Kasamon K. Treatment of patients with β-Thalassemia who require regular red blood cell (RBC) transfusions. U.S. Food & Drug Administration. June 10, 2022. https://www.fda.gov/media/159128/download. Accessed 10 September 2022.

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