CareSource Rx Innovations

PHARMACY POLICY STATEMENT
Arkansas PASSE

DRUG NAME	Casgevy (exagamglogene autotemcel)
BENEFIT TYPE	Medical
STATUS	Prior Authorization Required

Casgevy is an autologous genome edited hematopoietic stem cell-based gene therapy indicated for the treatment of patients 12 years and older with sickle cell disease (SCD) with recurrent vaso-occlusive crises (VOCs), or for transfusion-dependent β-thalassemia (TDT). After Casgevy infusion, the edited CD34+ cells engraft in the bone marrow and differentiate to erythroid lineage cells with reduced BCL11A expression. This prevents the red blood cells from sickling and addresses the underlying cause of disease, thus eliminating VOCs. In beta-thalassemia, reduced BCL11A expression increases γ-globin production to improve α-globin to non-α-globin imbalance thereby reducing ineffective erythropoiesis and hemolysis and increasing total hemoglobin levels, eliminating the dependence on regular red blood cell (RBC) transfusions.
SCD is caused by an inherited mutation in the beta globin gene, resulting in abnormal hemoglobin called sickle hemoglobin (HbS). Red blood cells become rigid, undergo premature hemolysis leading to anemia, and become unable to transport oxygen to critical organs. Patients experience severe pain from vaso-occlusive crises. First line therapy for sickle cell disease is hydroxyurea.
Beta-thalassemia is a rare blood disorder caused by mutations in the beta-globin (HBB) gene which lead to absent (β0) or reduced (β+) production of functional adult hemoglobin (HbA), impeding RBC development and survival (ineffective erythropoiesis) to result in microcytic anemia, iron overload, and other complications. The most severely affected patients have lifelong dependency on RBC transfusions and require iron chelation. An interim analysis of the CLIMB THAL-111 trial showed that 91.4% achieved the primary endpoint of transfusion independence for at least 12 months.

Casgevy (exagamglogene autotemcel) will be considered for coverage when the following criteria are met:

Sickle Cell Disease (SCD)

For **initial** authorization:

1. Member is at least 12 years of age; AND
2. Medication must be prescribed by or in consultation with a hematologist; AND
3. Member has a diagnosis of severe sickle cell disease with genotype *β*S/*β*S or *β*S/*β*0; AND
4. Member has had at least **TWO** severe VOCs per year within the past two years (ex. acute pain event requiring a visit to a medical facility and administration of pain medications or red blood cell transfusions, acute chest syndrome, priapism lasting >2 hours and requiring a visit to a medical facility, splenic sequestration); AND
5. Member has screening completed or scheduled for HIV-1, HIV-2, hepatitis B and hepatitis C; AND
6. Member has had a 6-month trial of hydroxyurea without relief from VOCs; AND
7. Therapy with disease modifying therapies for sickle cell disease (hydroxyurea, crizanlizumab, voxelotor, etc) will be discontinued prior to Casgevy infusion; AND
8. Member does **NOT** have any of the following:
   a) A willing matched donor for a hematopoietic stem cell transplant (HSCT);
   b) Prior HSCT;
   c) Advanced liver disease;
   d) Prior use of gene therapy.
9. **Dosage allowed/Quantity limit:** the minimum recommended dose is 3×10^6 $CD34^+$ cells/kg as a single infusion.

If all the above requirements are met, the medication will be approved for 3 months.
Note: provider must submit timeline for administration with request.

For **reauthorization**:

1. Casgevy is a one-time infusion and will not be reauthorized.

Beta-Thalassemia

For **initial** authorization:

1. Member is at least 12 years of age; AND
2. Medication must be prescribed by or in consultation with a hematologist or transplant specialist; AND
3. Member has a diagnosis of beta-thalassemia, confirmed by genetic testing results; AND
4. Member is transfusion dependent, defined as requiring at least 100 mL/kg/year OR 10 units/year of pRBC transfusions in the prior 2 years; AND
5. Member is clinically stable and eligible for HSCT but does NOT have a 10/10 human leukocyte antigen (HLA) matched sibling/family donor; AND
6. Member has tested negative for Hepatitis B, Hepatitis C, HIV-1, and HIV-2 before cell collection; AND
7. Member does **NOT** have any of the following:
   a) Prior or current malignancy
   b) Prior HSCT
   c) Prior gene therapy
   d) Advanced liver disease
   e) Severe iron overload in the heart (e.g., Cardiac T2* <10 ms on MRI).
8. **Dosage allowed/Quantity limit:** Minimum 3×10^6 $CD34^+$ cells/kg as a one-time IV infusion.

If all the above requirements are met, the medication will be approved for 3 months.
Note: provider must submit timeline for administration with request.

For **reauthorization**:

1. Casgevy is a one-time infusion and will not be reauthorized.

CareSource considers Casgevy (exagamglogene autotemcel) not medically necessary for the treatment of conditions that are not listed in this document. For any other indication, please refer to the Off-Label policy.

DATE	ACTION/DESCRIPTION
12/12/2023	New policy for Casgevy created.

References:

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8. Farmakis D, Porter J, Taher A, Domenica Cappellini M, Angastiniotis M, Eleftheriou A. 2021 Thalassaemia International Federation Guidelines for the Management of Transfusion-dependent Thalassemia. *Hemasphere*. 2022;6(8):e732. Published 2022 Jul 29. doi:10.1097/HS9.0000000000000732
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11. Locatelli F, Lang P, Wall D, et al. Exagamglogene autotemcel for transfusion-dependent β-thalassemia. Presented at: American Society of Hematology Annual Meeting and Exposition; December 11, 2023; San Diego, CA.

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