Medical Policy

BlueCross BlueShield Kansas
An Independent licensee of the Blue Cross Blue Shield Association

Title: Casgevy

Professional / Institutional
Original Effective Date: August 1, 2024
Latest Review Date: July 23, 2026
Current Effective Date: July 23, 2026

State and Federal mandates and health plan member contract language, including specific provisions/exclusions, take precedence over Medical Policy and must be considered first in determining eligibility for coverage. To verify a member's benefits, contact Blue Cross and Blue Shield of Kansas Customer Service.

The BCBSKS Medical Policies contained herein are for informational purposes and apply only to members who have health insurance through BCBSKS or who are covered by a self-insured group plan administered by BCBSKS. Medical Policy for FEP members is subject to FEP medical policy which may differ from BCBSKS Medical Policy.

The medical policies do not constitute medical advice or medical care. Treating health care providers are independent contractors and are neither employees nor agents of Blue Cross and Blue Shield of Kansas and are solely responsible for diagnosis, treatment and medical advice.

If your patient is covered under a different Blue Cross and Blue Shield plan, please refer to the Medical Policies of that plan.

POLICY AGENT SUMMARY – MEDICAL PRIOR AUTHORIZATION

Indication	Dose
Sickle Cell Disease or Beta Thalassemia	Casgevy is provided as a single dose for intravenous infusion containing a suspension of CD34+ cells in one or more vials to achieve the patient-specific dose. Administer all vials. • The minimum recommended dose of Casgevy is 3×10^6 CD34+ cells/kg.
- *Sickle Cell Disease: Mobilization should occur using single agent plerixafor* - *Beta Thalassemia: Mobilization should occur using both plerixafor and Granulocyte-Colony Stimulating Factor (G-CSF)* - *Myeloablative conditioning (e.g., busulfan) should not occur until Casgevy (and back-up cell collection) are received. Prophylaxis for hepatic veno-occlusive disease (VOD)/hepatic sinusoidal obstruction syndrome should be considered prior to initiating busulfan conditioning.* - *Casgevy must be administered between 48 hours and 7 days after the last dose of the myeloablative conditioning.* - *Casgevy is for autologous use only. Before infusion, confirm that the patient's identity matches the unique patient identifiers on the Casgevy vial(s). Do not infuse if the information on the patient-specific label does not match the intended patient.*	

PRIOR AUTHORIZATION CLINICAL CRITERIA FOR APPROVAL

I. Length of Authorization

- Initial: Prior authorization validity will be provided initially for one treatment course (1 dose of Casgevy.
- Renewal: Prior authorization validity may not be renewed

II. Dosing Limits

Max Units (per dose and over time) [HCPS Unit]:

- 1 billable unit for one dose

III. Initial Approval Criteria [1]

Submission of supporting clinical documentation (including but not limited to medical records, chart notes, lab results, and confirmatory diagnostics) related to the medical necessity criteria is REQUIRED on all requests for authorizations. Records will be reviewed at the time of submission as part of the evaluation of this request. Please provide documentation related to diagnosis, step therapy, and clinical markers (i.e., genetic, and mutational testing) supporting initiation when applicable. Please provide documentation via direct upload through the PA web portal or by fax. Failure to submit the medical records may result in the denial of the request due to inability to establish medical necessity in accordance with policy guidelines

Prior authorization validity is provided in the following conditions:

- Patient is at least 12 years of age; **AND**
- Provider has considered use of prophylaxis therapy for seizures with agents other than phenytoin prior to initiating myeloablative conditioning; **AND**
- Patient has been screened and found negative for hepatitis B virus (HBV), hepatitis C virus (HCV), and human immunodeficiency virus 1 & 2 (HIV-1/HIV-2) in accordance with clinical guidelines prior to collection of cells (leukapheresis); **AND**
- Provider will confirm that patient will not receive live vaccines concurrently while immunosuppressed; **AND**
- Patient does not have a history of hypersensitivity to dimethyl sulfoxide (DMSO) or dextran 40; **AND**

- Patient has not received other gene therapies used for the treatment of sickle cell disease OR beta thalassemia [e.g., Lyfgenia® (lovotibeglogene autotemcel), Zynteglo® (betibeglogene autotemcel), etc.]**§**; **AND**
- Patient will not receive therapy concomitantly with any of the following:
    - Iron chelators for at least 7-days prior to myeloablative conditioning and 6 months post-treatment for myelosuppressive iron chelators (e.g., deferiprone) OR 3-months post-treatment for non-myelosuppressive iron chelators; **AND**
    - Disease-modifying agents (e.g., hydroxyurea, or crizanlizumab) for at least 8-weeks prior to mobilization and conditioning; **AND**
- Patient is a candidate for autologous hematopoietic stem cell transplant (HSCT) and has not had prior HSCT; **AND**
- Patient does not have a known and available suitable 10/10 human leukocyte antigen matched related donor willing to participate in an allogeneic HSCT; **AND**

§ *Requests for subsequent use of exagamglogene after receipt of other gene therapies for sickle cell disease or beta thalassemia (e.g., lovotibeglogene, betibeglogene, etc.) will be evaluated on a case-by-case basis*

Sickle Cell Disease † Φ [1,3]

- Patient has a confirmed diagnosis of sickle-cell disease (includes genotypes βS/βS or βS/β0 or βS/β+) as determined by one of the following:
    - Identification of significant quantities of hemoglobin S(HbS) with or without an additional abnormal β-globin chain variant by hemoglobin assay; **OR**
    - Identification of biallelic *HBB* pathogenic variants where at least one allele is the p.Glu6Val pathogenic variant on molecular genetic testing; **AND**
- Patient has uncontrolled disease despite treatment with hydroxyurea and crizanlizumab *(Note: trial of crizanilzumab not applicable to patients less than 16 years of age)* **OR** has required repeat transfusions to treat symptomatic disease and/or reduce the risk of stroke; **AND**
- Patient will be transfused prior to apheresis to a total hemoglobin (Hb) ≤ 11 g/dL and a HbS level <30% and patient will be transfused at least 8 weeks prior to initiation of myeloablative conditioning (with aforementioned Hb and HbS goals); **AND**
- Patient will not receive granulocyte-colony stimulating factor (G-CSF) for the mobilization of hematopoietic stem cells (HSC)

Patient has severe, symptomatic disease despite treatment with supportive care measures, as experienced by one or more of the following:

- Patient has echocardiographic evidence of a tricuspid regurgitant jet velocity (TRJV) of > 2.5 m/s ; **OR**

- Patient has had or has a history of an overt stroke (Note: Defined as a sudden neurologic change lasting more than 24 hours that is accompanied by cerebral MRI changes); **OR**
- Patient has experienced an 'acute chest syndrome' episode, defined as an acute event with pneumonia-like symptoms and the presence of a new pulmonary infiltrate in the previous 2 year, while experiencing treatment failure to hydroxyurea*Δ*;**OR**
- Patient experienced two or more vaso-occlusive events/crises (VOE/VOC)***** in the previous year

*******VOE/VOC is defined as an event requiring a visit to a medical facility for evaluation which results in a diagnosis of such being documented due to one (or more) of the following: acute pain, acute chest syndrome, acute splenic sequestration, acute hepatic sequestration, priapism lasting > 2 hours AND necessitating subsequent interventions such as opioid pain management, non-steroidal anti-inflammatory drugs, RBC transfusion, etc.*

Δ Treatment failure to hydroxyurea is defined as experiencing an event despite at least 3 months of therapy OR patient experienced hydroxyurea intolerance defined as the inability to be maintained on an adequate dose due to marrow suppression or severe drug-induced toxicity (e.g., gastrointestinal distress, fatigue, etc.)

Beta Thalassemia † [1,2,11]

Patient has a documented diagnosis of homozygous beta thalassemia or compound heterozygous beta thalassemia including β-thalassemia/hemoglobin E (HbE) as outlined by the following:

- Patient diagnosis is confirmed by *HBB* sequence gene analysis showing biallelic pathogenic variants; **OR**
- Patient has severe microcytic hypochromic anemia, absence of iron deficiency, anisopoikilocytosis with nucleated red blood cells on peripheral blood smear, and hemoglobin analysis that reveals decreased amounts or complete absence of hemoglobin A (HbA) and increased HbA_2 with or without increased amounts of hemoglobin F (HbF); **AND**

Patient has transfusion-dependent disease defined as a history of transfusions of at least 100 mL/kg/year or ≥10 units/year of packed red blood cells (pRBCs) in the 2 years preceding therapy; **AND**

Patient will be transfused prior to apheresis to a total Hb ≥ 11 g/dL for 60 days prior to myeloablative conditioning; **AND**

Patient does not have any of the following:

- Severely elevated iron in the heart (i.e., patients with cardiac T2* less than 10 msec by magnetic resonance imaging [MRI] or left ventricular ejection fraction [LVEF] < 45% by echocardiogram); **OR**
- Advanced liver disease [i.e., AST or ALT > 3 times the upper limit of normal (ULN), or direct bilirubin value > 2.5 times the ULN, or if a liver biopsy demonstrated bridging fibrosis or cirrhosis]

† FDA Approved Indication(s); ǂ Compendia Recommended Indication(s); **Φ** Orphan Drug

IV. Renewal Criteria [1]

- Duration of authorization has not been exceeded (refer to Section I).

Please refer to the member's contract benefits in effect at the time of service to determine coverage or non-coverage of these services as it applies to an individual member.

CLINICAL RATIONALE

See package insert for FDA preshttps://dailymed.nlm.nih.gov/dailymed/index.cfm

CODING

The following codes for treatment and procedures applicable to this policy are included below for informational purposes. This may not be a comprehensive list of procedure codes applicable to this policy.

Inclusion or exclusion of a procedure, diagnosis or device code(s) does not constitute or imply member coverage or provider reimbursement. Please refer to the member's contract benefits in effect at the time of service to determine coverage or non-coverage of these services as it applies to an individual member.

The code(s) listed below are medically necessary ONLY if the procedure is performed according to the "Policy" section of this document.

HCPCS Code(s):

J3392 – Injection, exagamglogene autotemcel, per treatment; 1 billable unit = 1 treatment

NDC:

- Casgevy containing a minimum of 3.0 × 10^6 CD34+ cells/kg of body weight, in one or more vials packaged in carton(s): 51167-0290-xx

REVISIONS	
Posted 07-01/2024 Effective 08-01-2024	New medical policy added to the bcbsks.com web site. Policy maintained by Prime Therapeutics LLC.
Posted 10-22-2024 Effective 11-21-2024	Clinical Criteria Updated. Section I: Length of Authorization ▪ Changed "may not" to "will not" Section III: Initial Approval Criteria ▪ Added criteria requirement that patient has not had a prior HSCT ▪ Added criteria that for patients under the age of 18, the patient must not have a known and suitable 10/10 human leukocyte antigen matched related donor willing to participate in an allogenic HSCT ▪ Added criteria requirement for sickle cell disease that patient must have symptomatic sickle cell disease despite treatment with hydroxyurea or has an intolerance to hydroxyurea ▪ Added criteria requirement that patient will be transfused prior to apheresis and at least 8 weeks prior to initiation of myeloablative conditioning to meet Hb and HbS goals Removed criteria requirement that patients with 4 events/crises within the past 24 months would meet criteria (now must have 2 or more within the last year)
01-01-2025	Coding Section ▪ Added J3392 (eff. 01-01-2025) Removed J3590
04-08-2025	Updated Initial Approval Criteria ▪ Edited requirement for seizure prophylaxis during myeloablative conditioning to not include phenytoin (Phenytoin was not used for anti-seizure prophylaxis in clinical trials because of its induction of cytochrome P-450 and resultant increased clearance of busulfan, the agent used for myeloablative conditioning) Clarified wording regarding use of iron chelators prior to myeloablative conditioning

REVISIONS	
Posted: 11-26-2025 Effective: 12-26-2025	Initial Approval Criteria Section Coverage is provided in the following conditions: ▪ Under: Patient will not receive therapy concomitantly with any of the following: o Iron chelators for at least 7-days prior to myeloablative conditioning and 6 months post-treatment (3-months post-treatment for non-myelosuppressive iron chelators); AND Changed to read "OR 3-months post-treatment for non-myelosuppressive iron chelators; AND" Iron chelators for at least 7-days prior to myeloablative conditioning and 6 months post-treatment for myelosuppressive iron chelators (e.g., deferiprone) OR 3-months post-treatment for non-myelosuppressive iron chelators; AND" ▪ Under Sickle Cell Disease o Added: "Patient has uncontrolled disease despite treatment with hydroxyurea OR crizanlizumab at any point in the past *(Note: trial of crizanilzumab not applicable to patients less than 16 years of age)* at any point in the past OR has experienced intolerance OR has required repeat transfusions to treat symptomatic disease and/or reduce the risk of stroke;" o Added: "Patient has severe, symptomatic disease despite treatment with supportive care measures, as experienced by one or more of the following: • Patient has echocardiographic evidence of a tricuspid regurgitant jet velocity (TRJV) of > 2.5 m/s ; OR • Patient has had or has a history of an overt stroke (Note: Defined as a sudden neurologic change lasting more than 24 hours that is accompanied by cerebral MRI changes); OR • Patient has experienced an 'acute chest syndrome' episode, defined as an acute event with pneumonia-like symptoms and the presence of a new pulmonary infiltrate in the previous 2 years; OR • Patient experienced two or more vaso-occlusive events/crises (VOE/VOC)***** in the previous year" o Removed "Patient has symptomatic disease despite treatment with hydroxyurea at any point in the past OR add-on therapy (e.g., crizanlizumab, voxelotor, etc.) OR has experienced intolerance; AND" o Removed: under Sickle Cell Disease • "Patient experienced two or more vaso occlusive event/crises (VOE/VOC) in the previous year, AND"
	Medical Policy is maintained by Prime Therapeutics, LLC
Posted: 06-23-2026 Effective: 07-23-2026	Policy Title Updated: • Removed: "(exagamglogene autotemcel) Medical Drug Criteria" Length of Authorization Initial Approval Criteria updates: • Changed: 'Coverage' to 'Prior authorization validity' • Removed: and "will not be renewed." • Added: "Renewal: Prior authorization validity may not be renewed Initial Approval Criteria Updated: • Added: o Submission of supporting clinical documentation (including but not limited to medical records, chart notes, lab results, and confirmatory diagnostics) related to the medical necessity criteria is REQUIRED on all requests for authorizations. Records will be reviewed at the time of submission as part of the evaluation of this request. Please provide documentation related to

REVISIONS	
	diagnosis, step therapy, and clinical markers (i.e., genetic, and mutational testing) supporting initiation when applicable. Please provide documentation via direct upload through the PA web portal or by fax. Failure to submit the medical records may result in the denial of the request due to inability to establish medical necessity in accordance with policy guidelines • Removed: ○ Submission of medical records (chart notes) related to the medical necessity criteria is REQUIRED on all requests for authorizations. Records will be reviewed at the time of submission. Please provide documentation related to diagnosis, step therapy, and clinical markers (i.e. genetic and mutational testing) supporting initiation when applicable. Please provide documentation via direct upload through the PA web portal or by fax. Prior authorization validity • Changed: "Must not be administered concurrently with live vaccines while immunosuppressed; AND" to read "Provider will confirm that patient will not receive live vaccines concurrently while immunosuppressed; AND • Added: "used for the treatment of sickle cell disease OR beta thalassemia" to "Patient has not received other gene therapies…[e.g., Lyfgenia® (lovotibeglogene autotemcel), Zynteglo® (betibeglogene autotemcel), etc.]§; AND" • Removed: "For patients under 18 years of age, the" from "does not have a known and available suitable 10/10 human leukocyte antigen matched related donor willing to participate in an allogeneic HSCT; AND" • Added: "for sickle cell disease or beta thalassemia" to § footnote • Changed: Patient has uncontrolled disease despite treatment with hydroxyurea from "or" to "and" crizanlizumab and removed: "at any point in the past OR has experienced intolerance" • Changed: "Patient has experienced an 'acute chest syndrome' episode, defined as an acute event with pneumonia-like symptoms and the presence of a new pulmonary infiltrate in the previous" from "2 years" to "year while experiencing treatment failure to hydroxyureaΔ;" OR • Added: "while experiencing treatment failure to hydroxyureaΔ" to "Patient experienced two or more vaso-occlusive events/crises (VOE/VOC)* in the previous year" • Added Footnote: Δ Treatment failure to hydroxyurea is defined as experiencing an event despite at least 3 months of therapy OR patient experienced hydroxyurea intolerance defined as the inability to be maintained on an adequate dose due to marrow suppression or severe drug-induced toxicity (e.g., gastrointestinal distress, fatigue, etc.) Updated Reference Section
	Policy is maintained by Prime Therapeutics LLC.

REFERENCES

1. Casgevy [package insert]. Boston, MA; Vertex Pharmaceuticals Incorporated, Inc., September 2025. Accessed November 2025.
2. Frangoul H, Altshuler D, Cappellini MD, et al. CRISPR-Cas9 Gene Editing for Sickle Cell Disease and β-Thalassemia. Jan 21, 2021 N Engl J Med 2021; 384:252-260 DOI: 10.1056/NEJMoa2031054. Epub 2020 Dec 5.
3. Bender MA, Carlberg K. Sickle Cell Disease. 2003 Sep 15 [Updated 2022 Nov 17]. In: Adam MP, Bick, Mirzaa GM, et al., editors. GeneReviews® [Internet]. Seattle (WA): University of Washington, Seattle; 1993-2022. Available from: https://www.ncbi.nlm.nih.gov/books/NBK1377/.
4. Yawn BP, Buchanan GR, Afenyi-Annan AN, et al. Management of sickle cell disease: summary of the 2014 evidence-based report by expert panel members. JAMA. 2014 Sep 10;312(10):1033-48.

5. Tisdale JF, Pierciey FJ, Bonner M, et al. (2020) Safety and feasibility of hematopoietic progenitor stem cell collection by mobilization with plerixafor followed by apheresis vs bone marrow harvest in patients with sickle cell disease in the multi-center HGB-206 trial. Am J Hematol E239–E242. https://doi.org/10.1002/ajh.25867.
6. Palmer J, McCune JS, Perales M-A, et al. (2016) Personalizing Busulfan-Based Conditioning: Considerations from the American Society for Blood and Marrow Transplantation Practice Guidelines Committee. Biol Blood Marrow Transplant 1915–1925. https://doi.org/10.1016/j.bbmt.2016.07.013
7. Brunson A, Keegan THM, Bang H, et al. (2017) Increased risk of leukemia among sickle cell disease patients in California. Blood 130:1597–1599. doi: 10.1182/blood-2017-05-783233.
8. Seminog OO, Ogunlaja OI, Yeates D, Goldacre MJ (2016) Risk of individual malignant neoplasms in patients with sickle cell disease: English national record linkage study. J R Soc Med 109:303–309. doi: 10.1177/0141076816651037.
9. Brusson M, Miccio A. Genome editing approaches to beta-hemoglobinopathies. Prog Mol Biol Transl Sci. 2021;182:153-183. doi: 10.1016/bs.pmbts.2021.01.025. Epub 2021 Mar 1.
10. Modarai SR, Kanda S, Bloh K, et al. Precise and error-prone CRISPR-directed gene editing activity in human CD34+ cells varies widely among patient samples. Gene Ther. 2021 Feb;28(1-2):105-113. doi: 10.1038/s41434-020-00192-z. Epub 2020 Sep 1
11. Langer AL.Beta-Thalassemia. 2000 Sep 28 [Updated 2024 Feb 8].GeneReviews® [Internet]. Seattle (WA): University of Washington, Seattle; 1993-2023. Available from: https://www.ncbi.nlm.nih.gov/books/NBK1426/.
12. Locatelli F, Thompson AA, Kwiatkowski JL, et al. Betibeglogene Autotemcel Gene Therapy for Non-β(0)/β(0) Genotype β-Thalassemia. N Engl J Med. 2022 Feb 3;386(5):415-427. doi: 10.1056/NEJMoa2113206. Epub 2021 Dec 11.