Molina Clinical Policy
Kresladi (Marnetegragene autotemcel)
Policy No. 483

Last Approval: 04/08/2026
Next Review Due By: April 2027

DISCLAIMER

This Molina Clinical Policy (MCP) is intended to facilitate the Utilization Management process. Policies are not a supplementation or recommendation for treatment; Providers are solely responsible for the diagnosis, treatment, and clinical recommendations for the Member. It expresses Molina's determination as to whether certain services or supplies are medically necessary, experimental, investigational, or cosmetic for purposes of determining appropriateness of payment. The conclusion that a particular service or supply is medically necessary does not constitute a representation or warranty that this service or supply is covered (e.g., will be paid for by Molina) for a particular Member. The Member's benefit plan determines coverage – each benefit plan defines which services are covered, which are excluded, and which are subject to dollar caps or other limits. Members and their Providers will need to consult the Member's benefit plan to determine if there are any exclusion(s) or other benefit limitations applicable to this service or supply. If there is a discrepancy between this policy and a Member's plan of benefits, the benefits plan will govern. In addition, coverage may be mandated by applicable legal requirements of a State, the Federal government or CMS for Medicare and Medicaid Members. CMS's Coverage Database can be found on the CMS website. The coverage directive(s) and criteria from an existing National Coverage Determination (NCD) or Local Coverage Determination (LCD) will supersede the contents of this MCP and provide the directive for all Medicare members. References included were accurate at the time of policy approval and publication.

OVERVIEW

This policy covers Kresladi (Marnetegragene autotemcel) for the treatment of Leukocyte Adhesion Deficiency type I (LAD-I). LAD-I is a type of leukocyte adhesion deficiency syndrome. Leukocyte adhesion syndromes are a subgroup of inborn errors of immunity. LAD-I develops when ITGB2 gene is mutated in both parental alleles (autosomal recessive condition). When the ITGB2 gene (Integrin subunit beta 2; codes for CD18 protein) is mutated and dysfunctional, the interaction between leukocyte and endothelial cell is impaired and leukocytes cannot slow down from the circulation and move from inside a vessel to damaged tissue. The impairment affects both leukocytes and T-cells. Respiratory tract, skin and bowel infections develop and wound healing is impaired. Autoimmunity may also occur, for example Chron's-like colitis as well as neutrophilia (neutrophils confined to vasculature). The resulting severity of immunocompromise is related to the level of CD18 expression. Those with less than 2 percent of expression have severe LAD-I and typically demise by 2 years of age without a stem cell transplant. Patients with the severe form of LAD-I are at high risk for developing rapid and fatal dissemination of infections. Those with 2 - 30 percent CD18 expression have mild to moderate phenotypes and live to middle adulthood (mid-thirties), Etzioni et al (2025).

Treatments including antibiotics are predominantly supportive for mild to moderate LAD-I phenotypes but severe phenotypes require hematopoietic stem cell transplant (HSCT). Current HSCT is allogenic with outcomes dependent on HLA matching. There is an unmet need for those without an HLA match. To meet this need, the FDA approved Kresladi March 26, 2026. Kresladi is an ex vivo gene and cell therapy consisting of a patient's own CD34 stem cells transduced with a lentiviral vector carrying a functional ITGB2 gene (Integrin Subunit Beta 2). Restored ITGB2 gene function allows leukocytes and T-cells to again interact with endothelial cells and reduce or eliminate immune dysfunction. Kresladi requires myeloablative conditioning prior to delivery and a hospital stay while the genetically modified cell transplant engrafts.

COVERAGE POLICY

All Gene Therapy requests require Molina Medical Director review.

Kresladi gene and cell therapy may be **considered medically necessary** for the treatment of Leukocyte Adhesion Deficiency type I (LAD-I) when ALL the following criteria are met:

1. Member meets ONE of the following diagnostic criteria:
   a. Severe LAD-I as demonstrated by flow cytometry indicating CD18 expression on <2% neutrophils (polymorphonuclear neutrophils [PMNs])
   b. If CD18+ PMNs are >2%, Member meets ONE of the following criteria:
      i. Member has < 2% CD11a
      ii. CD11b expressing neutrophils with documentation of ITGB2 mutation AND clinical history consistent with LAD-I OR known family history of LAD-I

2. For Members who meet the above diagnostic criteria without a documented family history of LAD-I, Member must have had at least one prior significant bacterial or fungal infection occur in the past (i.e., Grade ≥ 2 according to National Cancer Institute's CTCAE v5.0)

3. Member is ≥ 3 months of age

4. Member is an appropriate candidate for autologous transplantation of hematopoietic stem cells

5. Absence of an available medically-eligible human leukocyte antigen (HLA)-identical sibling donor

6. Member has normal hepatic function, as defined by:
   a. Bilirubin ≤ 1.5× the upper limit of normal (ULN)
   b. Alanine aminotransferase (ALT) or aspartate aminotransferase (AST) ≤ 2.5×ULN

7. Member has normal renal function, as defined by:
   a. Sodium < 155 ; Sodium > 125 mmol/L
   b. Potassium < 6 ; Potassium > 2.5 mmol/L
   c. Calcium < 12.5 ; Calcium > 6mg/dL
   d. Magnesium < 3 ; Magnesium > 0.7 mg/Dl
   e. Phosphate < 7 ; Phosphate > 2mg/dL
   (Note: Renal dysfunction is defined by either Grade 3 or higher abnormalities in serum sodium, potassium, calcium, magnesium or phosphate according to the NCI CTCAE v5.0, or the requirement for either peritoneal dialysis or hemodialysis)

8. Normal pulmonary function, as defined by:
   a. No Need for supplemental oxygen during the prior 2 weeks
   b. Oxygen saturation (by pulse oximetry) ≥90%

9. No evidence of active metastatic or locoregionally advanced malignancy (including hematologic malignancy) for which survival is anticipated to be less than 3 years

10. No serious infections with persistent bloodstream pathogens present at the time of therapy

11. No contraindications for either leukapheresis or bone marrow harvest procedure

12. No contraindications for the administration of conditioning therapy

13. No significant medical co-morbid conditions, (i.e., human immunodeficiency virus (HIV) infection, poorly-controlled diabetes, poorly-controlled hypertension, poorly-controlled cardiac arrhythmia or congestive heart failure, or arterial thromboembolic events [e.g., stroke, myocardial infarction] within the past 6 months)

Limitations and Exclusions

QUANTITY LIMITATIONS: FDA approved dosing with one-time dose per lifetime. Additional infusions of Kresladi will not be authorized.

CONTINUATION OF THERAPY: Kresladi is indicated as a one-time infusion only. Repeat treatment or re-administration of a dose is not supported by labeling or compendia and is not considered medically necessary.

DOCUMENTATION REQUIREMENTS: Molina Healthcare reserves the right to require that additional documentation be made available as part of its coverage determination; quality improvement; and fraud; waste and abuse prevention processes. Documentation required may include, but is not limited to, patient records, test results and credentials of the provider ordering or performing a drug or service. Molina Healthcare may deny reimbursement or take additional appropriate action if the documentation provided does not support the initial determination that the drugs or services were medically necessary, not investigational, or experimental, and otherwise within the scope of benefits afforded to the member, and/or the documentation demonstrates a pattern of billing or other practice that is inappropriate or excessive.

SUMMARY OF MEDICAL EVIDENCE

NCT03812263 is a non-randomized open label phase 1 / 2 clinical trial looking at efficacy and safety for Kresladi in LAD-I. None of the participants had prior allogeneic hematopoietic transplant. Nine children were enrolled between the ages of 3 months to more than 48 months of age. Participants had to have less than 2% CD-18 expression and have one grade 2 or higher bacterial or fungal infection per NCI's CTCAE v5.0 criteria or a positive family history consistent with LAD-I. Participants with greater than 2% CD-18 expression PMNs could be eligible if there were less than 2% of PMNs expressing CD11a or CD11b (ITGB2 mutations affect binding to dimeric partners CD11 rendering the dimer nonfunctional), had a positive family history and confirmed pathogenic mutations in ITGB2. Exclusions included anyone with an available donor for allogeneic HSCT, acute infections or liver, pulmonary or renal dysfunction. The median age of all patients at infusion was 42.3 months.

The primary endpoint of the phase 2 portion of the trial was HSCT-free survival after at least 1 year post Kresladi infusion. All patients younger than 12 months (3 participants) were alive 1 year post infusion whereas historically only 39% of children would still be alive without allogeneic HSCT. All other older patients receiving Kresladi were also alive at follow-up. No participants had graft failure, nor had to receive additional allogeneic HSCT. Secondary endpoint was reduction of annualized infection related hospitalizations. Annualized infection related hospitalizations were 2.07 pre-treatment, and after treatment 0.53, a drop of approximately 75%. Prolonged hospitalization stays dropped by 82%. Seven participants were able to stop prophylactic antimicrobial therapy. Seven patients with LAD-I related skin infections prior to treatment resolved post infusion. All nine patients had 10% or more CD18 neutrophil expression. Adverse events related to busulfan conditioning were seen but no adverse events were attributed to the gene therapy. No evidence of oligoclonality or insertional mutagenesis in any of the 9 patients were noted. The authors noted that it may particularly advantageous to undergo Kresladi therapy instead of HSCT therapy because of the baseline immune-incompetence of the disorder and Kresladi does not require the immunosuppression that allogeneic HSCT does.

National and Specialty Organizations

There are no published guidelines for this therapy yet.

CODING & BILLING INFORMATION

CPT (Current Procedural Terminology)

Code	Description
96413	Chemotherapy administration, intravenous infusion technique; up to 1 hour, single or initial substance/drug
96415	Chemotherapy administration, intravenous infusion technique; each additional hour (List separately in addition to code for primary procedure)

HCPCS (Healthcare Common Procedure Coding System)

Code	Description
C9399	Unclassified drugs or biologicals [when specified as Kresladi (marnetegragene autotemcel)]
J3590	Unclassified biologics [when specified as Kresladi (marnetegragene autotemcel)]

CODING DISCLAIMER: Codes listed in this policy are for reference purposes only and may not be all-inclusive. Deleted codes and codes which are not effective at the time the service is rendered may not be eligible for reimbursement. Listing of a service or device code in this policy does not guarantee coverage. Coverage is determined by the benefit document. Molina adheres to Current Procedural Terminology (CPT®), a registered trademark of the American Medical Association (AMA). All CPT codes and descriptions are copyrighted by the AMA; this information is included for informational purposes only. Providers and facilities are expected to utilize industry standard coding practices for all submissions. When improper billing and coding is not followed, Molina has the right to reject/deny the claim and recover claim payment(s). Due to changing industry practices, Molina reserves the right to revise this policy as needed.

APPROVAL HISTORY

04/08/2026 New policy. IRO Peer Review on April 3, 2026, by a practicing physician board-certified in pediatric hematology oncology.

REFERENCES

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3. ClinicalTrials.gov. NCT06282432 Long-Term Follow-Up (LTFU) for Gene Therapy of Leukocyte Adhesion Deficiency-I (LAD-I). Last updated December 18, 2025. Accessed March 27, 2026. https://clinicaltrials.gov/
4. Etzioni A, Notarangelo, L, Fedlweg A. Leukocyte-adhesion deficiency disorders. Updated May 15, 2025. Accessed March 26, 2026. http://www.Uptodate.com
5. Kresladi Package insert (3/2026). United States Food and Drug Administration (FDA). https://www.fda.gov/
6. Hayes. Marnetegragene Autotemcel (Rocket Pharmaceuticals Inc.) for Severe Leukocyte Adhesion Deficiency-I Emerging Technology Report. Published Ocotber 23, 2025. Accessed March 27, 2026. blob:https://evidence.hayesinc.com/a01f2bca-2443-4bb5-a6fc-8f64a5844e5e
7. National Cancer Institute. Common Terminology Criteria for Adverse Events (CTCAE) Version 5.0. Published November 27, 2017. https://dctd.cancer.gov/