

## **Clinical Policy: Sargramostim (Leukine)**

Reference Number: CP.PHAR.295

Effective Date: 12.01.16

Last Review Date: 08.19

Line of Business: HIM, Medicaid

[Coding Implications](#)

[Revision Log](#)

See [Important Reminder](#) at the end of this policy for important regulatory and legal information.

### **Description**

Sargramostim (Leukine<sup>®</sup>) is a recombinant human granulocyte-macrophage colony stimulating factor (GM-CSF).

### **FDA Approved Indication(s)**

Leukine is indicated:

- To shorten time to neutrophil recovery and to reduce the incidence of severe and life-threatening infections and infections resulting in death following induction chemotherapy in adult patients 55 years and older with acute myeloid leukemia (AML);
- For the mobilization of hematopoietic progenitor cells into peripheral blood for collection by leukapheresis and autologous transplantation in adult patients;
- For the acceleration of myeloid reconstitution following autologous peripheral blood progenitor cell (PBPC) or bone marrow transplantation in adult and pediatric patients 2 years of age and older with non-Hodgkin's lymphoma (NHL), acute lymphoblastic leukemia (ALL) and Hodgkin's lymphoma (HL);
- For the acceleration of myeloid reconstitution following allogeneic bone marrow transplantation in adult and pediatric patients 2 years of age and older;
- For treatment of delayed neutrophil recovery or graft failure after autologous or allogeneic bone marrow transplantation in adult and pediatric patients 2 years of age and older;
- To increase survival in adult and pediatric patients from birth to 17 years of age acutely exposed to myelosuppressive doses of radiation (Hematopoietic Syndrome of Acute Radiation Syndrome [H-ARS]).

### **Policy/Criteria**

*Provider must submit documentation (such as office chart notes, lab results or other clinical information) supporting that member has met all approval criteria.*

It is the policy of health plans affiliated with Centene Corporation<sup>®</sup> that Leukine is **medically necessary** when the following criteria are met:

#### **I. Initial Approval Criteria**

##### **A. Acute Myelogenous Leukemia (must meet all):**

1. Diagnosis of AML;
2. Prescribed for use following induction therapy for AML;
3. Age  $\geq$  55 years;
4. Dose does not exceed 250 mcg/m<sup>2</sup> IV daily.

**Approval duration: 6 months**

**B. Peripheral Blood Progenitor Cell Collection and Transplantation (must meet all):**

1. Prescribed for one of the following (a or b):
  - a. Mobilization of hematopoietic progenitor cells into peripheral blood for collection by leukapheresis and autologous transplantation;
  - b. Following autologous PBPC transplantation in members with NHL, ALL, HL for acceleration of myeloid reconstitution;
2. Age  $\geq$  2 years;
3. Dose does not exceed 250 mcg/m<sup>2</sup> IV or SC daily.

**Approval duration: 6 months**

**C. Bone Marrow Transplantation (must meet all):**

1. Prescribed for use in one of the following settings (a, b, or c):
  - a. Following autologous BMT in members with NHL, ALL, or HL for acceleration of myeloid reconstitution;
  - b. Following allogeneic BMT for acceleration of myeloid reconstitution;
  - c. Following BMT where engraftment is delayed or has failed;
2. Age  $\geq$  2 years;
3. Dose does not exceed 500 mcg/m<sup>2</sup> IV daily.

**Approval duration: 6 months**

**D. Acute Radiation Syndrome (must meet all):**

1. Prescribed for use following suspected or confirmed acute exposure to myelosuppressive doses of radiation;
2. Dose does not exceed 12 mcg/kg daily (See Section V for specific weight-based dosing).

**Approval duration: 6 months**

**E. Other diagnoses/indications**

1. Refer to the off-label use policy for the relevant line of business if diagnosis is NOT specifically listed under section III (Diagnoses/Indications for which coverage is NOT authorized): HIM.PHAR.21 for health insurance marketplace and CP.PMN.53 for Medicaid.

**II. Continued Therapy**

**A. All Indications in Section I (must meet all):**

1. Currently receiving medication via Centene benefit or member has previously met initial approval criteria;
2. Member is responding positively to therapy;
3. Dose does not exceed the FDA-approved maximum recommended dose for the relevant indication.

**Approval duration: 6 months**

**B. Other diagnoses/indications (must meet 1 or 2):**

1. Currently receiving medication via Centene benefit and documentation supports positive response to therapy.

- Approval duration: Duration of request or 6 months (whichever is less); or**
- Refer to the off-label use policy for the relevant line of business if diagnosis is NOT specifically listed under section III (Diagnoses/Indications for which coverage is NOT authorized): HIM.PHAR.21 for health insurance marketplace and CP.PMN.53 for Medicaid.

**III. Diagnoses/Indications for which coverage is NOT authorized:**

- Non-FDA approved indications, which are not addressed in this policy, unless there is sufficient documentation of efficacy and safety according to the off label use policies – HIM.PHAR.21 for health insurance marketplace and CP.PMN.53 for Medicaid or evidence of coverage documents.

**IV. Appendices/General Information**

*Appendix A: Abbreviation/Acronym Key*

ALL: acute lymphoblastic leukemia  
 AML: acute myelogenous leukemia  
 BMT: bone marrow transplantation  
 FDA: Food and Drug Administration  
 GM-CSF: granulocyte-macrophage colony stimulating factor

H-ARS: hematopoietic syndrome of acute radiation syndrome  
 NHL: non-Hodgkin's lymphoma  
 PBPC: peripheral blood progenitor cell

*Appendix B: Therapeutic Alternatives*  
 Not applicable

*Appendix C: Contraindications/Boxed Warnings*

- Contraindication(s): history of serious allergic reactions, including anaphylaxis
- Boxed warning(s): none reported

*Appendix D: General Information*

- Because of potential sensitivity of rapidly dividing hematopoietic progenitor cells, Leukine should not be administered simultaneously with cytotoxic chemotherapy or radiotherapy or within 24 hours preceding or following chemotherapy or radiotherapy.
- Use Leukine with caution in patients with pre-existing fluid retention, pulmonary infiltrates, or congestive heart failure.

**V. Dosage and Administration**

Indication	Dosing Regimen	Maximum Dose
AML	250 mcg/m <sup>2</sup> /day IV over a 4 hour period approximately on day 11 or four days following the completion of induction chemotherapy	250 mcg/m <sup>2</sup> IV daily
PBPC collection and transplantation	250 mcg/m <sup>2</sup> /day administered IV over 24 hours or SC once daily	250 mcg/m <sup>2</sup> IV or SC daily
Myeloid reconstitution after	250 mcg/m <sup>2</sup> /day IV over a 2 hour period beginning two to four hours after bone marrow infusion, and not	500 mcg/m <sup>2</sup> IV daily

Indication	Dosing Regimen	Maximum Dose
autologous or allogeneic BMT	less than 24 hours after the last dose of chemotherapy or radiotherapy	
BMT failure or engraftment delay	250 mcg/m <sup>2</sup> /day for 14 days as a 2 hour IV infusion	500 mcg/m <sup>2</sup> IV daily
Acute Radiation Syndrome	Weight-based dose SC QD: >40 kg: 7 mcg/kg 15 to 40 kg: 10 mcg/kg <15 kg: 12 mcg/kg	See dosing regimen

**VI. Product Availability**

Lyophilized powder: 250 mcg single-dose vial  
Solution: 500 mcg/mL multiple-dose vial

**VII. References**

1. Leukine Prescribing Information. Bridgewater, NJ: Sanofi-Aventis U.S., LLC.; March 2018. Available at: [www.leukine.com](http://www.leukine.com). Accessed May 15, 2019.
2. National Comprehensive Cancer Network: Myeloid Growth Factors Version 2.2019. Available at: [http://www.nccn.org/professionals/physician\\_gls/pdf/myeloid\\_growth.pdf](http://www.nccn.org/professionals/physician_gls/pdf/myeloid_growth.pdf). Accessed: May 15, 2019.
3. National Comprehensive Cancer Network Drugs and Biologics Compendium. Available at: [http://www.nccn.org/professionals/drug\\_compendium](http://www.nccn.org/professionals/drug_compendium). Accessed May 15, 2019.
4. DRUGDEX<sup>®</sup> System [Internet database]. Greenwood Village, Colo: Thomson Healthcare. Updated periodically. Accessed May 15, 2019.

**Coding Implications**

Codes referenced in this clinical policy are for informational purposes only. Inclusion or exclusion of any codes does not guarantee coverage. Providers should reference the most up-to-date sources of professional coding guidance prior to the submission of claims for reimbursement of covered services.

HCPCS Codes	Description
J2820	Injection, sargramostim (GM-CSF), 50 mcg

Reviews, Revisions, and Approvals	Date	P&T Approval Date
Leukine is split from CP.PHAR.26.Colony Stimulating Factors 2015, and converted to a new template. Contraindications added per PI. Labeled use: post-consolidation for AML is not a labeled use so was removed. Off-label use: Treatment of MDS and FN prophylaxis removed per NCCN; posttransplant support added per NCCN; Neulasta limitation is added to FN	10.01.17	12.16
Updated template and references. Added age, max dose, and continued approval section	11.21.17	11.17

Reviews, Revisions, and Approvals	Date	P&T Approval Date
3Q 2018 annual review: added HIM line of business, added new indication for acute radiation syndrome; removed contraindications that are no longer included in the product label; modified age restrictions consistent with label; references reviewed and updated.	05.02.18	08.18
3Q 2019 annual review: no significant changes; references reviewed and updated.	05.15.19	08.19

**Important Reminder**

This clinical policy has been developed by appropriately experienced and licensed health care professionals based on a review and consideration of currently available generally accepted standards of medical practice; peer-reviewed medical literature; government agency/program approval status; evidence-based guidelines and positions of leading national health professional organizations; views of physicians practicing in relevant clinical areas affected by this clinical policy; and other available clinical information. The Health Plan makes no representations and accepts no liability with respect to the content of any external information used or relied upon in developing this clinical policy. This clinical policy is consistent with standards of medical practice current at the time that this clinical policy was approved. “Health Plan” means a health plan that has adopted this clinical policy and that is operated or administered, in whole or in part, by Centene Management Company, LLC, or any of such health plan’s affiliates, as applicable.

The purpose of this clinical policy is to provide a guide to medical necessity, which is a component of the guidelines used to assist in making coverage decisions and administering benefits. It does not constitute a contract or guarantee regarding payment or results. Coverage decisions and the administration of benefits are subject to all terms, conditions, exclusions and limitations of the coverage documents (e.g., evidence of coverage, certificate of coverage, policy, contract of insurance, etc.), as well as to state and federal requirements and applicable Health Plan-level administrative policies and procedures.

This clinical policy is effective as of the date determined by the Health Plan. The date of posting may not be the effective date of this clinical policy. This clinical policy may be subject to applicable legal and regulatory requirements relating to provider notification. If there is a discrepancy between the effective date of this clinical policy and any applicable legal or regulatory requirement, the requirements of law and regulation shall govern. The Health Plan retains the right to change, amend or withdraw this clinical policy, and additional clinical policies may be developed and adopted as needed, at any time.

This clinical policy does not constitute medical advice, medical treatment or medical care. It is not intended to dictate to providers how to practice medicine. Providers are expected to exercise professional medical judgment in providing the most appropriate care, and are solely responsible for the medical advice and treatment of members. This clinical policy is not intended to recommend treatment for members. Members should consult with their treating physician in connection with diagnosis and treatment decisions.

Providers referred to in this clinical policy are independent contractors who exercise independent judgment and over whom the Health Plan has no control or right of control. Providers are not agents or employees of the Health Plan.

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**Note: For Medicaid members**, when state Medicaid coverage provisions conflict with the coverage provisions in this clinical policy, state Medicaid coverage provisions take precedence. Please refer to the state Medicaid manual for any coverage provisions pertaining to this clinical policy.

**For Health Insurance Marketplace members**, when applicable, this policy applies only when the prescribed agent is on your health plan approved formulary. Request for non-formulary drugs must be reviewed using the formulary exception policy.

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