Leukine® (sargramostim)
(Subcutaneous/Intravenous)

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I. Length of Authorization

Neuroblastoma:

- When used in combination with dinutuximab and isotretinoin regimen, coverage will be provided for five months and may not be renewed.
- When used in all other regimens, coverage will be provided for six months and may be renewed.

All other indications: Coverage will be provided for four months and may be renewed.

II. Dosing Limits

A. Quantity Limit (max daily dose) [NDC Unit]:

- Leukine 250 mcg vial: 28 vials per 14 days

B. Max Units (per dose and over time) [HCPCS Unit]:

- 15 billable units per day (acute radiation syndrome)
- 140 billable units every 24 days (neuroblastoma)
- 10 billable units per day (all other indications)

III. Initial Approval Criteria

Coverage is provided in the following conditions:

Zarxio is the preferred short-acting granulocyte colony-stimulating factor product and does not require prior authorization.

- Patients must have failed, or have a contraindication, or intolerance to Zarxio prior to consideration of any other short-acting G-CSF product.

Myeloid reconstitution after autologous or allogeneic bone marrow transplant (BMT) † [1]

Peripheral Blood Progenitor Cell (PBPC) mobilization and transplant † [1]

Acute Myeloid Leukemia (AML) following induction or consolidation chemotherapy † Φ [1]

Bone Marrow Transplantation (BMT) failure or Engraftment Delay † Φ [1]

Treatment of chemotherapy-induced febrile neutropenia ‡ [2,3,5,6]

- Used for the treatment of chemotherapy induced febrile neutropenia in patients who have not received prophylactic therapy with a granulocyte colony stimulating factor; **AND**
- Patient has one or more of the following risk factors for developing infection-related complications:
  - Sepsis Syndrome
  - Age greater than 65 years
  - Absolute neutrophil count [ANC] less than 100/mcL
  - Duration of neutropenia expected to be greater than 10 days
  - Pneumonia or other clinically documented infections
  - Invasive fungal infection
  - Hospitalization at the time of fever
  - Prior episode of febrile neutropenia

Patients acutely exposed to myelosuppressive doses of radiation (Hematopoietic Subsyndrome of Acute Radiation Syndrome [H-ARS]) † Φ ‡ [1-3]

Neuroblastoma ‡ [2,13-15]

- Used in combination with a regimen containing a GD2-binding monoclonal antibody (i.e., naxitamab, dinutuximab, etc.) for the treatment of high-risk neuroblastoma

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

IV. Renewal Criteria [1,2,12-14]

Neuroblastoma

- Use in combination with dinutuximab and isotretinoin-based regimens may not be renewed.
- Used in combination with a naxitamab-based regimen, or in combination with dinutuximab, temozolomide, and irinotecan; **AND**
  - Patient continues to meet indication-specific relevant criteria such as concomitant therapy requirements (not including prerequisite therapy), performance status, etc. identified in section III; **AND**
  - Absence of unacceptable toxicity from the drug. Examples of unacceptable toxicity include severe hypersensitivity reactions, severe effusions and capillary leak syndrome, severe supraventricular arrythmias, etc.

All Other Indications

- Refer to initial prior authorization criteria.

V. Dosage/Administration[1-16]

Indication	Dose
Acute Exposure to Myelosuppressive Doses of Radiation	• 7 mcg/kg/day in adult and pediatric patients weighing > 40 kg • 10 mcg/kg/day in pediatric patients weighing 15 kg to 40 kg • 12 mcg/kg/day in pediatric patients weighing < 15 kg – *Administer sargramostim as soon as possible after suspected or confirmed exposure to radiation doses greater than 2 gray (Gy).* – *Continue administration of sargramostim until the ANC remains greater than 1,000/mm³ for three consecutive CBCs or exceeds 10,000/mm³ after a radiation-induced nadir.*
Neuroblastoma	**In combination with dinutuximab, temozolomide, and irinotecan** 250 mcg/m² subcutaneously daily on days 6 through 12 every 21 days **In combination with dinutuximab and isotretinoin** 250 mcg/m² subcutaneously daily on days 1 through 14 every 28 days for a maximum of 5 cycles only **OR** 250 mcg/m² daily on days 1 through 14 of cycles 1, 3 and 5 (aldesleukin is given alternatively during cycles 2 and 4) for a maximum of 5 cycles only Note: *Cycle length is 24 days in cycles 1,3,5 and 32 days in cycles 2,4* **In combinations with naxitamab** 250 mcg/m² subcutaneously daily for 5 doses starting 5 days prior to the day 1 of naxitamab infusion followed by sargramostim 500 mcg/m² subcutaneously daily on days 1, 2, 3, 4, and 5 repeated each cycle in combination with naxitamab. Note: *Treatment cycles are repeated every 4 weeks until complete or partial response, followed by 5 additional cycles (every 4 weeks). Subsequent cycles may be repeated every 8 weeks. Discontinue (naxitamab and sargramostim) with disease progression or unacceptable toxicity.*
All other indications	250 mcg/m² daily for up to 14 days

VI. Billing Code/Availability Information

HCPCS Code:

- J2820 – Injection, sargramostim (gm-csf), 50 mcg: 1 billable unit = 50 mcg

NDC:

- Leukine 250 mcg single-dose vial: 71837-5843-xx

VII. References

1. Leukine [package insert]. Lexington, MA; Partner Therapeutics, Inc.; August 2023. Accessed March 2024.
2. Referenced with permission from the NCCN Drugs & Biologics Compendium (NCCN Compendium®) sargramostim. National Comprehensive Cancer Network, 2024. The NCCN Compendium® is a derivative work of the NCCN Guidelines®. NATIONAL COMPREHENSIVE CANCER NETWORK®, NCCN®, and NCCN GUIDELINES® are trademarks owned by the National Comprehensive Cancer Network, Inc. To view the most recent and complete version of the Compendium, go online to NCCN.org. Accessed March 2024.
3. Referenced with permission from the NCCN Drugs & Biologics Compendium (NCCN Compendium®) Hematopoietic Growth Factors. Version 3.2023. National Comprehensive Cancer Network, 2024. The NCCN Compendium® is a derivative work of the NCCN Guidelines®. NATIONAL COMPREHENSIVE CANCER NETWORK®, NCCN®, and NCCN GUIDELINES® are trademarks owned by the National Comprehensive Cancer Network, Inc." To view the most recent and complete version of the Compendium, go online to NCCN.org. Accessed March 2024.
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15. Referenced with permission from the NCCN Drugs & Biologics Compendium (NCCN Compendium®) Neuroblastoma. Version 1.2024. National Comprehensive Cancer Network, 2024. The NCCN Compendium® is a derivative work of the NCCN Guidelines®. NATIONAL COMPREHENSIVE CANCER NETWORK®, NCCN®, and NCCN GUIDELINES® are trademarks owned by the National Comprehensive Cancer Network, Inc." To view the most recent and complete version of the Compendium, go online to NCCN.org. Accessed March 2024.
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Appendix 1 – Covered Diagnosis Codes

ICD-10	ICD-10 Description
C72.0	Malignant neoplasm of spinal cord
C72.1	Malignant neoplasm of cauda equina
C72.20	Malignant neoplasm of unspecified olfactory nerve
C72.21	Malignant neoplasm of right olfactory nerve
C72.22	Malignant neoplasm of left olfactory nerve
C72.30	Malignant neoplasm of unspecified optic nerve
C72.31	Malignant neoplasm of right optic nerve
C72.32	Malignant neoplasm of left optic nerve
C72.40	Malignant neoplasm of unspecified acoustic nerve
C72.41	Malignant neoplasm of right acoustic nerve
C72.42	Malignant neoplasm of left acoustic nerve
C72.50	Malignant neoplasm of unspecified cranial nerve
C72.59	Malignant neoplasm of other cranial nerves

ICD-10	ICD-10 Description
C72.9	Malignant neoplasm of central nervous system, unspecified
C74.00	Malignant neoplasm of cortex of unspecified adrenal gland
C74.01	Malignant neoplasm of cortex of right adrenal gland
C74.02	Malignant neoplasm of cortex of left adrenal gland
C74.10	Malignant neoplasm of medulla of unspecified adrenal gland
C74.11	Malignant neoplasm of medulla of right adrenal gland
C74.12	Malignant neoplasm of medulla of left adrenal gland
C74.90	Malignant neoplasm of unspecified part of unspecified adrenal gland
C74.91	Malignant neoplasm of unspecified part of right adrenal gland
C74.92	Malignant neoplasm of unspecified part of left adrenal gland
C92.00	Myeloid leukemia not having achieved remission
C92.02	Myeloid leukemia in relapse
C92.50	Acute myelomonocytic leukemia not having achieved remission
C92.52	Acute myelomonocytic leukemia in relapse
C92.60	Acute myeloid leukemia with 11q23-abnormality not having achieved remission
C92.62	Acute myeloid leukemia with 11q23-abnormality in relapse
C92.A0	Acute myeloid leukemia with multilineage dysplasia not having achieved remission
C92.A2	Acute myeloid leukemia with multilineage dysplasia in relapse
C93.00	Acute monoblastic/monocytic leukemia not having achieved remission
C93.02	Acute monoblastic/monocytic leukemia in relapse
D61.810	Antineoplastic chemotherapy induced pancytopenia
D70.1	Agranulocytosis secondary to cancer chemotherapy
D70.9	Neutropenia, unspecified
T45.1X5A	Adverse effect of antineoplastic and immunosuppressive drugs initial encounter
T45.1X5D	Adverse effect of antineoplastic and immunosuppressive drugs subsequent encounter
T45.1X5S	Adverse effect of antineoplastic and immunosuppressive drugs sequela
T66.XXXA	Radiation sickness, unspecified, initial encounter
T66.XXXD	Radiation sickness, unspecified, subsequent encounter
T66.XXXS	Radiation sickness, unspecified, sequela
W88.1	Exposure to radioactive isotopes
W88.8	Exposure to other ionizing radiation
Z41.8	Encounter for other procedures for purposes other than remedying health state
Z48.290	Encounter for aftercare following bone marrow transplant
Z51.11	Encounter for antineoplastic chemotherapy
Z51.12	Encounter for antineoplastic immunotherapy
Z51.89	Encounter for other specified aftercare
Z52.001	Unspecified donor, stem cells

ICD-10	ICD-10 Description
Z52.011	Autologous donor, stem cells
Z52.091	Other blood donor, stem cells
Z76.89	Persons encountering health services in other specified circumstances
Z94.81	Bone marrow transplant status
Z94.84	Stem cells transplant status

Appendix 2 – Centers for Medicare and Medicaid Services (CMS)

The preceding information is intended for non-Medicare coverage determinations. Medicare coverage for outpatient (Part B) drugs is outlined in the Medicare Benefit Policy Manual (Pub. 100-2), Chapter 15, §50 Drugs and Biologicals. In addition, National Coverage Determinations (NCDs) and/or Local Coverage Determinations (LCDs) may exist and compliance with these policies is required where applicable. Local Coverage Articles (LCAs) may also exist for claims payment purposes or to clarify benefit eligibility under Part B for drugs which may be self-administered. The following link may be used to search for NCD, LCD, or LCA documents: https://www.cms.gov/medicare-coverage-database/search.aspx. Additional indications, including any preceding information, may be applied at the discretion of the health plan.

Medicare Part B Covered Diagnosis Codes		
Jurisdiction	NCD/LCA/LCD Document (s)	Contractor
J, M	A56748	Palmetto GBA

Medicare Part B Administrative Contractor (MAC) Jurisdictions		
Jurisdiction	Applicable State/US Territory	Contractor
E (1)	CA, HI, NV, AS, GU, CNMI	Noridian Healthcare Solutions, LLC
F (2 & 3)	AK, WA, OR, ID, ND, SD, MT, WY, UT, AZ	Noridian Healthcare Solutions, LLC
5	KS, NE, IA, MO	Wisconsin Physicians Service Insurance Corp (WPS)
6	MN, WI, IL	National Government Services, Inc. (NGS)
H (4 & 7)	LA, AR, MS, TX, OK, CO, NM	Novitas Solutions, Inc.
8	MI, IN	Wisconsin Physicians Service Insurance Corp (WPS)
N (9)	FL, PR, VI	First Coast Service Options, Inc.
J (10)	TN, GA, AL	Palmetto GBA
M (11)	NC, SC, WV, VA (excluding below)	Palmetto GBA
L (12)	DE, MD, PA, NJ, DC (includes Arlington & Fairfax counties and the city of Alexandria in VA)	Novitas Solutions, Inc.
K (13 & 14)	NY, CT, MA, RI, VT, ME, NH	National Government Services, Inc. (NGS)
15	KY, OH	CGS Administrators, LLC