Omisirge® (omidubicel-onlv) (Intravenous)

Effective Date: 06/01/2024
Dates Reviewed: 03/27/2024, 5/21/2025
Scope: Medicaid, Commercial, Medicare

I. Length of Authorization

Coverage will be provided for 1 dose only

II. Dosing Limits

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

- 1 dose only (single-use culture containing at least 12×10^8 live cells, which include CD34+ and CD3+ cells)

III. Summary of Evidence

Omisirge (omidubicel-onlv) is indicated for use in adults and pediatric patients 12 years of age and older with hematologic malignancies who are planned for umbilical cord blood transplantation following myeloablative conditioning, to reduce the time to neutrophil recovery and the incidence of infection. Omisirge was evaluated in Study P0501, a global, open-label, multicenter, randomized study that enrolled 125 patients between 12 and 65 years of age with hematologic malignancies who were transplanted with either Omisirge or standard (unmanipulated) UCB following myeloablative conditioning. Of the patients randomized to Omisirge, 8% (5/62) were not able to receive Omisirge due to manufacturing failure. The primary endpoint of time to neutrophil recovery favored Omisirge with a median time of 12 days compared with UCB at a median time of 22 days (difference 10 days, 95% CI 6-14 days). Per the Blood and Marrow Transplant Clinical Trials Network (BMT CTN) grading criteria, 39% of patients in the Omisirge group experienced a Grade 2/3 bacterial or Grade 3 fungal infection compared to 60% of those in the standard UCB group within 100 days following transplantation. Omisirge did not demonstrate statistically significant improvements in nonrelapse mortality, disease relapse, disease-free survival, overall survival, or GVHD in comparison to standard UCB. There is a Boxed Warning for fatal infusion reactions, graft-versus-host disease (GVHD), engraftment syndrome, and graft failure, like all FDA-approved umbilical cord products. The most common adverse reactions (incidence >20%) are infections, GVHD, and infusion reactions.

IV. Initial Approval Criteria

Coverage is provided in the following conditions:

Umbilical cord blood transplantation (UCBT) following myeloablative conditioning in patients with hematologic malignancies to reduce the time to neutrophil recovery and incidence of infection † Φ [1-3]

- Patient is at least 12 years of age; **AND**

- Patient is eligible for allogeneic hematopoietic stem cell transplant (allo-HSCT) and has not received a prior allo-HSCT; **AND**
- Patient has a diagnosis of a high-risk hematologic malignancy and is planned for an umbilical cord blood transplantation (UCBT) following myeloablative conditioning; **AND**
- Therapy is used to reduce the time to neutrophil recovery and incidence of infection; **AND**
- Patient will receive prophylactic and supportive therapies for prevention or treatment of transplant complications (e.g., GVHD, infections, etc.) according to institutional guidelines; **AND**
- Patient does not have a known allergy or hypersensitivity to any of the following:
  - Dimethyl Sulfoxide (DMSO)
  - Dextran 40
  - Gentamicin
  - Human serum albumin or bovine material; **AND**

- Patients has no readily available matched related donor (MRD), matched unrelated donor (MUD), mismatched (7/8 matched) unrelated donor (MMUD), or haploidentical (half HLA-matched) related donor
- Medicare members who have previously received this medication within the past 365 days are not subject to Step Therapy Requirements.

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

V. Renewal Criteria [1]

Coverage cannot be renewed.

VI. Dosage/Administration [1]

Indication	Dose
Reduce the time to neutrophil recovery and the incidence of infection following myeloablative conditioning	• A single dose of Omisirge consists of – Cultured Fraction (CF): a minimum of 8.0×10^8 total viable cells of which a minimum of 8.7% is CD34+ cells and a minimum of 9.2×10^7 CD34+ cells, and – Non-cultured Fraction (NF): a minimum of 4.0×10^8 total viable cells with a minimum of 2.4×10^7 CD3+ cells • The CF and NF are supplied cryopreserved separately in two bags. Omisirge requires thaw and dilution with two infusion solution (IS) bags (one IS bag for the CF, and one IS bag for the NF) prior to administration. Infusion of the NF bag should begin within 1 hour after completion of the CF infusion. For timing of dosing of each fraction, refer to section 2.2 of the prescribing information under "Planning prior to Omisirge preparation".
– *For intravenous use only. Do not irradiate.* – *Do NOT use a leukodepleting filter.* – *Verify patient's identity upon receipt. Do NOT open the metal cassettes until time of thaw.*	

Indication	Dose
– *Verify patient's identity prior to thaw and prior to infusion.* – *Thawing should only take place immediately prior to use.* – *Administration of Omisirge should be under the supervision of a physician experienced in treatment of hematologic malignancies, in a center with expertise in hematopoietic stem cell transplants.*	

VII. Billing Code/Availability Information

HCPCS code:

- J3590 – Unclassified biologics
- C9399 – Unclassified drugs or biologicals

NDC(s):

- Omisirge single-use cryopreserved cell fractions culture containing at least 12×10^8 live cells *(At the time of cryopreservation, the CF contains a minimum of 8.0×10^8 total viable cells with a minimum of 8.7% CD34+ cells and a minimum of 9.2×10^7 CD34+ cells suspended in 20 mL of a cryopreservation solution containing 10% DMSO)*: 73441-0800-xx

VIII. References

1. Omisirge [package insert]. Boston, MA; Gamida Cell, Inc.; January 2025. Accessed May 2025.
2. Horwitz ME, Stiff PJ, Cutler C, et al. Omidubicel vs standard myeloablative umbilical cord blood transplantation: results of a phase 3 randomized study. Blood. 2021 Oct 21;138(16):1429-1440. doi: 10.1182/blood.2021011719.
3. Kanate AS, Majhail NS, Savani BN, et al. Indications for Hematopoietic Cell Transplantation and Immune Effector Cell Therapy: Guidelines from the American Society for Transplantation and Cellular Therapy (ASTCT). Transplantation and Cellular Therapy. Volume 26, Issue 7, P1247-1256, July 2020. DOI: https://doi.org/10.1016/j.bbmt.2020.03.002
4. Referenced with permission from the NCCN Clinical Practice Guidelines in Oncology (NCCN Guidelines®) for Hematopoietic Cell Transplantation 3.2023. National Comprehensive Cancer Network, 2023. 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 Guidelines, go online to NCCN.org. Accessed December 2023.
5. Sivaraman S, Sajeev G, Song Y, et al. Clinical Outcomes Following Allogeneic Hematopoietic Cell Transplantation with Omidubicel or Other Donor Sources in Patients with Hematologic Malignancies: Comparison of Clinical Trial Results to Center for International Blood and Marrow Transplant Research Database Controls. *Blood* (2022) 140 (Supplement 1): 660–661. https://doi.org/10.1182/blood-2022-162439
6. Natasha Kekre, Joseph H. Antin; Hematopoietic stem cell transplantation donor sources in the 21st century: choosing the ideal donor when a perfect match does not exist. *Blood* 2014; 124 (3): 334–343. doi: https://doi.org/10.1182/blood-2014-02-514760

Appendix 1 – Covered Diagnosis Codes

ICD-10	ICD-10 Description
Z94.81	Bone marrow 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 (applicable to existing NCD/LCD/LCA): N/A

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, LLC
M (11)	NC, SC, WV, VA (excluding below)	Palmetto GBA, LLC
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

Policy Rationale: Omisirge was reviewed by the Neighborhood Health Plan of Rhode Island Pharmacy & Therapeutics (P&T) Committee. Neighborhood adopted the following clinical coverage criteria to ensure that its members use Omisirge according to Food and Drug Administration (FDA) approved labeling and/or relevant clinical literature. Neighborhood worked with network prescribers and pharmacists to draft these criteria. These criteria will help ensure its members are using this drug for a medically accepted indication, while minimizing the risk for adverse effects and ensuring more cost-effective options are used first, if applicable and appropriate. For Medicare members, these coverage criteria will only apply in the absence of National Coverage Determination (NCD) or Local Coverage Determination (LCD) criteria. Neighborhood will give individual consideration to each request it reviews based on the information submitted by the prescriber and other information available to the plan.