

# Clinical Policy: Omisirge (omidubicel): Nicotinamide-modified allogeneic hematopoietic progenitor cell therapy

Reference Number: CP.MP.249

Last Review Date: 06/24

Effective Date: 09/01/2024

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## Description

This policy describes the medical necessity criteria for Omisirge (omidubicel), a nicotinamide-modified allogeneic hematopoietic progenitor cell therapy, to be delivered following myeloablative conditioning for hematologic malignancies.<sup>1</sup>

*Note: For criteria applicable to Medicare plans, please see MC.CP.MP.249 Omisirge (omidubicel): Nicotinamide-modified allogeneic hematopoietic progenitor cell therapy.*

## Policy/Criteria

- I. It is the policy of non-Medicare health plans affiliated with Centene Corporation® that Omisirge (omidubicel) is **medically necessary** when all of the following criteria are met:
  - A. Member/enrollee is  $\geq$  12 years of age;
  - B. Diagnosis of hematologic malignancies;
  - C. Member/enrollee is planned for an umbilical cord blood transplantation following myeloablative conditioning to reduce the time to neutrophil recovery and the incidence of infection;
  - D. Request is for one administration post-myeloablative conditioning.

## Background

Allogeneic hematopoietic cell transplantation (HCT) has been used as a treatment for cancer and diseases of the blood system for decades. For this treatment, stem cells are collected from either related or unrelated healthy donors instead of from the patients themselves.<sup>2,3</sup> During the conditioning phase, high doses of chemotherapy (HDC), with or without radiation therapy, are used to eradicate the disease, and this is followed by infusion of stem cells to rescue bone marrow and restore normal immune function. Major limitations of this technique include the increased risk of high morbidity and mortality related to increased age, relapsed or refractory disease or disease with an elevated risk of relapse following HCT, a history of aggressive chemotherapy, and comorbidities.<sup>3</sup> All stem cell transplant (SCT) preparative regimens have the potential for extensive toxicity. Loss of appetite and energy, alopecia, and nausea/vomiting occur frequently and contribute to poor physical and emotional tolerance of the transplant procedure. In addition, mucositis, diarrhea, and transient pancytopenia are inevitable side effects of most preparative regimens, and these complications are synergistic in dramatically increasing the risk of infections during and post-transplant.<sup>4</sup> Any decrease in toxicity, without concomitant loss of efficacy, would be desirable.

Myeloablative means that the treatment kills (ablates) the stem cells in the bone marrow; the cells that produce new blood cells. Myeloablative conditioning (MAC) is a regimen that consists of a single agent or combination of agents that are anticipated to destroy the hematopoietic cells

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in the bone marrow.<sup>4</sup> Extensive pancytopenia occurs within one to three weeks after administration of a MAC regimen and is typically irreversible.<sup>4</sup>

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In April 2023, the U.S. Food and Drug Administration (FDA) approved Omisirge, a nicotinamide-modified allogeneic hematopoietic progenitor cell therapy. Omisirge is derived from cord blood and quickens the recovery of neutrophils in the body and reduces the incidence of infection. The product is intended to be used in patients  $\geq 12$  years of age with blood malignancies who have a planned umbilical cord blood transplantation following myeloablative conditioning.<sup>1,5</sup>

A randomized, multicenter study with 125 enrollees comparing transplantation of Omisirge to transplantation of umbilical cord blood supports the safety and effectiveness of Omisirge.<sup>5,6,7</sup> The study found that 87% of subjects who received Omisirge attained neutrophil recovery in an average of 12 days after treatment. In comparison, neutrophil recovery was achieved in an average of 22 days in 83% of subjects who received umbilical cord blood transplantation.<sup>6,7</sup> Additionally, subjects in the study who received Omisirge had fewer bacterial or fungal infections than the group of subjects who received umbilical cord blood transplantation.<sup>5,6,7</sup> Further analysis of this study regarding healthcare resource utilization showed that in the first 100 days after transplantation, patients who received Omisirge had fewer days in the intensive care unit, a shorter total hospital length of stay, and fewer deaths compared to the group of patients who received umbilical cord blood transplantation.<sup>8</sup> These findings suggest that the use of Omisirge is associated with reduced healthcare resources due to faster hematopoietic recovery.<sup>8</sup>

#### Coding Implications

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HCPCS Codes	Description
J3590	Unclassified biologics
C9399	Unclassified drugs or biologicals

Reviews, Revisions, and Approvals	Review Date	Approval Date
Policy developed.	06/23	06/23
Annual review. Added note to policy to refer to MC.CP.MP.249 for Medicare criteria. Added “non-Medicare” to health plans in	06/24	06/24

Reviews, Revisions, and Approvals	Review Date	Approval Date
Policy/Criteria I. Background updated with no impact on criteria. References reviewed and updated. Reviewed by external specialist.		

**References**

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5. U.S. Food and Drug Administration. FDA Approves Cell Therapy for Patients with Blood Cancers to Reduce Risk of Infection Following Stem Cell Transplantation. <https://www.fda.gov/news-events/press-announcements/fda-approves-cell-therapy-patients-blood-cancers-reduce-risk-infection-following-stem-cell>. Published April 17, 2023. Accessed April 30, 2024.
6. 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;138(16):1429 to 1440. doi:10.1182/blood.2021011719
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**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

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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.

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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.

**Note: For Medicare members**, to ensure consistency with the Medicare National Coverage Determinations (NCD) and Local Coverage Determinations (LCD), all applicable NCDs, LCDs, and Medicare Coverage Articles should be reviewed prior to applying the criteria set forth in this clinical policy. Refer to the CMS website at <http://www.cms.gov> for additional information.

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