THE OHIO STATE UNIVERSITY
HEALTH PLAN

Subject: Mozobil (plerixafor)

Effective Date: 04/20
Revision Date: 02/21

DESCRIPTION

Plerixafor is an inhibitor of the CXCR4 chemokine receptor and blocks binding of its cognate ligand, stromal cell-derived factor-1α (SDF-1α). SDF-1α and CXCR4 play a role in the trafficking and homing of human hematopoietic stem cells (HSCs) to the marrow compartment. Once in the marrow, stem cell CXCR4 can act to help anchor these cells to the marrow matrix, either directly via SDF-1α or through the induction of other adhesion molecules. Treatment with plerixafor resulted in leukocytosis and elevations in circulating hematopoietic progenitor cells in mice, dogs and humans. CD34+ cells mobilized by plerixafor were capable of engraftment with long-term repopulating capacity up to one year in canine transplantation models.

POLICY

OSU Health Plan (OSUHP) considers plerixafor medically necessary as a "just in time" strategy for patients who do not mount a sufficient CD34+ cell count for an autologous hematopoietic stem cell transplant when the following criteria are met:

- Diagnosis of non-Hodgkin's lymphoma (NHL) or multiple myeloma (MM); and
- CD34+ cell count after granulocyte colony-stimulating factor (G-CSF) alone meets one of the following:
    - Peripheral blood CD34+ cell count on day 4 of G-CSF is less than 25 cells/μL; or
    - Prior apheresis with G-CSF yields less than 6 x 10^6 cells/kg (current or previous cycle).

PROCEDURE

When the above criteria are met, OSUHP will approve plerixafor 0.24 mg/kg per day (maximum dose 40 mg/day) for 4 days starting on day 4 of G-CSF. Prior authorization is required.

EXCLUSIONS

OSUHP considers plerixafor experimental and investigational for the following indications (not all-inclusive):

- Peripheral blood CD34+ cell count is greater than or equal to 25 cells/μL;
- Prior apheresis yields 6 x 10^6 cells/kg or greater;
- Dose, frequency or duration outside FDA approval;
- Use in diagnoses other than NHL or MM.

CODES

HCPCS codes covered when criteria are met:	
J2562	Injection, plerixafor, 1 mg

REFERENCES

DiPersio JF, Micallef IN, Stiff PJ, et al. Phase III prospective randomized double-blind placebo-controlled trial of plerixafor plus granulocyte colony-stimulating factor compared with placebo plus granulocyte colony-stimulating factor for autologous stem-cell mobilization and transplantation for patients with non-Hodgkin's lymphoma. *J Clin Oncol.* 2009;27(28):4767-4773.

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Wuchter P, Ran D, Bruckner T, et al. Poor mobilization of hematopoietic stem cells: definitions, incidence, risk factor, and impact on outcome of autologous transplantation. *Biol Blood Marrow Transplant.* 2010;16:490-499.