Mylotarg® (gemtuzumab ozogamicin)

Last Review Date: July 25th, 2018	Number: MG.MM.PH.56

Definitions

Mylotarg (gemtuzumab ozogamicin) is a humanized CD33 directed monoclonal antibody-drug conjugate, which is composed of the IgG4 kappa antibody gemtuzumab linked to a cytotoxic calicheamicin derivative. The cytotoxic agent is a small molecule, N-acetyl gamma calicheamicin, and the antibody portion, hP67.6, recognizes human CD33 antigen. CD33 is expressed on leukemic cells in over 80% of patients with acute myeloid leukemia (AML). Gemtuzumab ozogamicin binds to the CD33 antigen and forms a complex that is internalized by the tumor cell. Once internalized, the calicheamicin derivative is released and activated, causing DNA double-strand breaks, cell cycle arrest, and apoptotic cell death.

Mylotarg (gemtuzumab ozogamicin) is indicated for the treatment of newly-diagnosed CD33-positive acute myeloid leukemia (AML) in adults and for the treatment of relapsed or refractory CD33-positive AML in adults and pediatric patients 2 years of age or older.

Dosing

Max Units (per dose and over time):

- Newly diagnosed AML:
  - Induction: 135 billable units on day 1, and 68 billable units on day 8 of a 28 day cycle
  - Consolidation: 45 billable units on day 1 of a 28 day cycle
- Newly diagnosed de novo AML:
  - Induction: 45 billable units on day 1, 4, and 7 of a 28 day cycle
  - Consolidation: 45 billable units on day 1 of a 28 day cycle
- Relapsed or refractory AML:
  - 45 billable units on day 1, 4, and 7 of a 28 day cycle

Guideline

Mylotarg (gemtuzumab ozogamicin) is considered medically necessary for the following indications when subsequent criteria are met:

Newly diagnosed AML:

- The patient is 18 years of age or older; **AND**
- The patient has CD33-positive disease; **AND**
- Patients with hyperleukocytosis (leukocyte count greater than or equal to 30 Gi/L) will undergo cytoreductive treatment prior to administration of Mylotarg (gemtuzumab ozogamicin); **AND**
- The patient has de novo disease **AND** Mylotarg (gemtuzumab ozogamicin)will be used in combination with daunorubicin and cytarabine; **OR**
- Mylotarg (gemtuzumab ozogamicin) will be used as a single agent

Relapsed or refractory AML:

- The patient is 2 years of age or older; **AND**
- The patient has CD33-positive disease; **AND**
- Patients with hyperleukocytosis (leukocyte count greater than or equal to 30 Gi/L) will undergo cytoreductive treatment prior to administration of Mylotarg (gemtuzumab ozogamicin); **AND**
- Mylotarg (gemtuzumab ozogamicin) will be used as a single agent

Coverage for Mylotarg (gemtuzumab ozogamicin) may be renewed for the following indications when subsequent criteria are met:

Newly diagnosed AML:

- Patient does not have de novo disease; **AND**
- Patient has received no more than 8 cycles of continuation therapy; **AND**
- Disease response; **AND**
- Absence of unacceptable toxicity from the drug. Examples of unacceptable toxicity include the following: severe infusion related reactions, hemorrhage, hepatotoxicity including hepatic veno-occlusive disease (VOD)/sinusoidal obstruction syndrome (SOS), tumor lysis syndrome, symptomatic QTc prolongation, etc.

Limitations/Exclusions

- Approval will be granted for 1 month (1 cycle) for a diagnosis of relapsed or refractory AML, and may not be renewed
- Approval will be granted for 4 months (4 cycles) for newly diagnosed de novo AML and may not be renewed
- Approval will be granted for 6 months for newly diagnosed AML and may be renewed once

Applicable Procedure Codes

J9203	Injection, gemtuzumab ozogamicin, 0.1 mg

Applicable Diagnosis Codes

C92	Myeloid leukemia
C92.0	Acute myeloblastic leukemia
C92.00	Acute myeloblastic leukemia, not having achieved remission
C92.01	Acute myeloblastic leukemia, in remission
C92.02	Acute myeloblastic leukemia, in relapse
C92.4	Acute promyelocytic leukemia
C92.40	Acute promyelocytic leukemia, not having achieved remission
C92.41	Acute promyelocytic leukemia, in remission
C92.42	Acute promyelocytic leukemia, in relapse
C92.5	Acute myelomonocytic leukemia
C92.50	Acute myelomonocytic leukemia, not having achieved remission
C92.51	Acute myelomonocytic leukemia, in remission
C92.52	Acute myelomonocytic leukemia, in relapse
C92.6	Acute myeloid leukemia with 11q23-abnormality
C92.60	Acute myeloid leukemia with 11q23-abnormality, not having achieved remission
C92.61	Acute myeloid leukemia with 11q23-abnormality, in remission
C92.62	Acute myeloid leukemia with 11q23-abnormality, in relapse

References

1. Mylotarg™ [Product Information], Philadelphia, PA. Wyeth Pharmaceuticals Inc. Updated on September 1, 2017. Available at: https://www.accessdata.fda.gov/drugsatfda_docs/label/2017/761060lbl.pdf. Accessed on July 12, 2018.
2. National Cancer Institute (NCI). Available at: https://www.cancer.gov/types/leukemia/hp/adult-aml-treatment-pdq. Accessed on July 12, 2018
3. Adult Acute Myeloid Leukemia Treatment (PDQ®)–Health Professional Version. Modified January 20, 2017.
4. NCCN Clinical Practice Guidelines in Oncology© 2018 National Comprehensive Cancer Network, Inc. For additional information visit the NCCN website: http://www.nccn.org. Accessed on July 12, 2018. Acute Myeloid Leukemia (V1.2018). Revised February 7, 2018.
5. Abaza Y, Kantarjian H, Garcia-Manero G, et al. Long-term outcome of acute promyelocytic leukemia treated with all-trans-retinoic acid, arsenic trioxide, and gemtuzumab. Blood. 2017; 129(10):1275-1283.