Gemtuzumab ozogamicin

DESCRIPTION

Gemtuzumab ozogamicin is a CD33-directed antibody-drug conjugate (ADC). The antibody portion (hP67.6) recognizes human CD33 antigen. The small molecule, N-acetyl gamma calicheamicin, is a cytotoxic agent that is covalently attached to the antibody via a linker. Nonclinical data suggest that the anticancer activity of gemtuzumab ozogamicin is due to the binding of the ADC to CD33-expressing tumor cells, followed by internalization of the ADC-CD33 complex, and the intracellular release of N-acetyl gamma calicheamicin dimethyl hydrazide via hydrolytic cleavage of the linker. Activation of N-acetyl gamma calicheamicin dimethyl hydrazide induces double-strand DNA breaks, subsequently inducing cell cycle arrest and apoptotic cell death.

REFER TO DECISION SUPPORT TREE

POLICY

- Gemtuzumab ozogamicin for the treatment of acute myeloid leukemia (AML) is considered medically necessary if the medical appropriateness criteria are met. (See Medical Appropriateness below.)

- Gemtuzumab ozogamicin for the treatment of other conditions/diseases is considered investigational.

MEDICAL APPROPRIATENESS

INITIAL APPROVAL

- Gemtuzumab ozogamicin is considered medically appropriate if ALL of the following criteria are met:
  - The individual has CD33-positive acute myeloid leukemia
  - Individuals with a history of, or predisposition for, QTc prolongation have a baseline electrocardiogram (ECG)
  - Individuals with hyperleukocytosis (leukocyte count equal to or greater than 30 x 10^9/L) have had cytoreduction
  - The individual has not previously received gemtuzumab ozogamicin
  - The individual meets ANY ONE of the following:
    - Disease is newly diagnosed and the individual is 18 years of age or older and use of agent meets ANY ONE of the following
      - Agent is used in combination with daunorubicin and cytarabine and meets ALL of the following
        - The individual has de novo disease
        - The individual does not have adverse risk cytogenetics or cytogenetic results are not yet known
      - Used as a single agent
    - Disease is relapsed or refractory and the individual is 2 years of age or older and use of agent meets ALL of the following:
      - Used as a single agent

RENEWAL CRITERIA

- Gemtuzumab ozogamicin is NOT considered medically appropriate for renewal.

<table>
<thead>
<tr>
<th>INDICATION(S)</th>
<th>DOSAGE &amp; ADMINISTRATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute Myeloid</td>
<td>Newly-diagnosed AML (combination regimen)</td>
</tr>
</tbody>
</table>
Leukemia

- Induction (1 cycle only): 3mg/m² (up to one 4.5 mg vial) on Days 1, 4 and 7 in combination with daunorubicin and cytarabine
- Consolidation (maximum of 2 cycles): 3mg/m² on Day 1 (up to one 4.5 mg vial) in combination with daunorubicin and cytarabine
  - Newly-diagnosed AML (single-agent regimen)
    - Induction (1 cycle only): 6mg/m² on Day 1 and 3mg/m² on Day 8
    - Continuation (maximum of 8 cycles): For individuals without evidence of disease progression following induction, up to 8 continuation courses 2mg/m² on Day 1 every 4 weeks
  - Relapsed or refractory AML (single-agent regimen)
    - 3mg/m² on Days 1, 4 and 7 (1 cycle only)

NOTE: Cycle length is 28 days

APPLICABLE TENNESSEE STATE MANDATE REQUIREMENTS

BlueCross BlueShield of Tennessee’s Medical Policy complies with Tennessee Code Annotated Section 56-7-2352 regarding coverage of off-label indications of Food and Drug Administration (FDA) approved drugs when the off-label use is recognized in one of the statutorily recognized standard reference compendia or in the published peer-reviewed medical literature.

IMPORTANT REMINDER

We develop Medical Policies to provide guidance to Members and Providers. This Medical Policy relates only to the services or supplies described in it. The existence of a Medical Policy is not an authorization, certification, explanation of benefits or a contract for the service (or supply) that is referenced in the Medical Policy. For a determination of the benefits that a Member is entitled to receive under his or her health plan, the Member's health plan must be reviewed. If there is a conflict between the Medical Policy and a health plan, the express terms of the health plan will govern.

ADDITIONAL INFORMATION

For appropriate chemotherapy regimens, dosage information, contraindications, precautions, warnings, and monitoring information, please refer to one of the standard reference compendia (e.g., the NCCN Clinical Practice Guidelines in Oncology (NCCN Guidelines® published by the National Comprehensive Cancer Network®, Drugdex Evaluations of Micromedex Solutions at Truven Health, or The American Hospital Formulary Service Drug Information).

SOURCE


EFFECTIVE DATE

ID_MRxEx

This document has been classified as public information
Pharmaceutical Decision Support Tree

**Gemtuzumab ozogamicin (MYLOTARG®)**

1. Is this the initial request for gemtuzumab ozogamicin?
   - If yes, go to question #2
   - If no, this does not meet medical necessity and/or medical appropriateness criteria

2. Does the individual have a diagnosis of CD33-positive acute myeloid leukemia (AML)?
   - If yes, go to question #3
   - If no, this does not meet medical necessity and/or medical appropriateness criteria

3. Does the individual have a history of, or predisposition for, QTc prolongation?
   - If yes, go to question #4
   - If no, go to question #5

4. Does the individual have a baseline electrocardiogram (ECG)?
   - If yes, go to question #5
   - If no, this does not meet medical necessity and/or medical appropriateness criteria

5. Does the individual have hyperleukocytosis (leukocyte count equal to or greater than 30 x 10⁹/L)?
   - If yes, go to question #6
   - If no, go to question #7

6. Has the individual had cytoreduction?
   - If yes, go to question #7
   - If no, this does not meet medical necessity and/or medical appropriateness criteria

7. Does the individual have newly diagnosed CD33 positive AML?
   - If yes, go to question #8
   - If no, go to question #9

8. Is the individual 18 years of age or older and use of the agent meets ANY ONE of the following?
   - Agent is used in combination with daunorubicin and cytarabine and meets ALL of the following:
     - The individual has de novo disease
     - The individual does not have adverse risk cytogenetics or cytogenetic results are not yet known
   - Used as a single agent
   - If yes, go to question #11
   - If no, this does not meet medical necessity and/or medical appropriateness criteria

9. Does the individual have relapsed or refractory CD33 positive AML?
   - If yes, go to question #10
   - If no, this does not meet medical necessity and/or medical appropriateness criteria

This document has been classified as public information
Pharmaceutical Decision Support Tree

10. Is the individual 2 years of age or older and the agent is intended only for single agent use?

   If yes, go to question #11
   If no, this does not meet medical necessity and/or medical appropriateness criteria

11. Is the request for 4.5 mg vials (5 vials per initial 28 days; 1 vial per 28 thereafter up to a maximum of 8 cycles [28 days per cycle]) billable units for ANY ONE of the following for an authorization?

### INDICATION(S) | DOSAGE & ADMINISTRATION
---|---
**Acute Myeloid Leukemia** | • Newly-diagnosed AML (combination regimen)
  - Induction (1 cycle only): 3mg/m² (up to one 4.5 mg vial) on Days 1, 4 and 7 in combination with daunorubicin and cytarabine
  - Consolidation (maximum of 2 cycles): 3mg/m² on Day 1 (up to one 4.5 mg vial) in combination with daunorubicin and cytarabine
• Newly-diagnosed AML (single-agent regimen)
  - Induction (1 cycle only): 6mg/m² on Day 1 and 3mg/m² on Day 8
  - Continuation (maximum of 8 cycles): For individuals without evidence of disease progression following induction, up to 8 continuation courses 2mg/m² on Day 1 every 4 weeks
• Relapsed or refractory AML (single-agent regimen)
  - 3mg/m² on Days 1, 4 and 7 (1 cycle only)

**NOTE:** Cycle length is 28 days

If yes, this satisfies medical necessity and medical appropriateness criteria
If no, this does not meet medical necessity and/or medical appropriateness criteria