OVERVIEW
Besponsa is an antibody-drug conjugate directed against human CD22.\(^1\) N-acetyl-gamma-calicheamicin is a cytotoxic agent which is covalently bound to the antibody. Besponsa binds to CD22 expressing tumor cells and is internalized where N-acetyl-gamma-calicheamicin is released from the antibody. N-acetyl-gamma-calicheamicin induces breaks in double-stranded DNA, leading to cell cycle arrest and apoptosis.

Besponsa is indicated for the treatment of adults with relapsed or refractory B-cell precursor acute lymphoblastic leukemia (ALL).\(^1\)

Guidelines
The National Comprehensive Cancer Network (NCCN) guidelines on Acute Lymphoblastic Leukemia (version 2.2019 – May 15, 2019) recommend Besponsa as a single-agent for the treatment of relapsed/refractory Philadelphia chromosome positive (Ph+) ALL (category 2A) with tyrosine kinase inhibitor (TKI) intolerant or refractory disease.\(^2,3\) The NCCN ALL guidelines (version 2.2019) also recommend Besponsa as a single-agent for the treatment of relapsed/refractory Ph- ALL (category 1).

The NCCN guidelines on Pediatric ALL (version 1.2020 – May 30, 2019) recommends Besponsa as a single-agent for the treatment of pediatric patients with relapsed/refractory Ph- B-cell ALL, or relapsed/refractory Ph+ B-cell ALL with TKI intolerant or refractory disease.\(^4\)

POLICY STATEMENT
Prior authorization is recommended for medical benefit coverage of Besponsa. Approval is recommended for those who meet the Criteria and Dosing for the listed indication(s). Extended approvals are allowed if the patient continues to meet the Criteria and Dosing. Requests for doses outside of the established dosing documented in this policy will be considered on a case-by-case basis by a clinician (i.e., Medical Director or Pharmacist). All approvals are provided for the duration noted below. In cases where the approval is in months, 1 month is equal to 30 days.

Because of the specialized skills required for evaluation and diagnosis of patients treated with Besponsa, as well as the monitoring required for adverse events and long-term efficacy, approval requires Besponsa to be prescribed by or in consultation with a physician who specializes in the condition being treated.

RECOMMENDED AUTHORIZATION CRITERIA
Coverage of Besponsa is recommended in those who meet one of the following criteria:

FDA-Approved Indications
1. **Acute Lymphoblastic Leukemia.** (Note: This applies to Philadelphia chromosome positive and negative acute lymphoblastic leukemia.) Approve for 6 months if the patient meets the following criteria (A, B, and C):

   A) Besponsa is prescribed by or in consultation with an oncologist; AND

   B) The patient has relapsed or refractory B-cell precursor acute lymphoblastic leukemia; AND
C) Besponsa is used as a single-agent.

**Dosing.** Approve the following dosing regimen (A and B):

- **A** Each individual dose must not exceed 0.8 mg/m² administered intravenously; AND
- **B** Administer no more than 3 doses in each treatment cycle (i.e., 21 days or 28 days).³

Note. Premedicate with a corticosteroid, antipyretic, and antihistamine prior to each dose. Dose modifications are recommended for hematologic toxicity, liver toxicity, infusion-related reactions, and non-hematologic toxicity grade ≥ 2.

## CONDITIONS NOT RECOMMENDED FOR APPROVAL
Besponsa has not been shown to be effective, or there are limited or preliminary data or potential safety concerns that are not supportive of general approval for the following conditions. (Note: This is not an exhaustive list of Conditions Not Recommended for Approval).

1. Coverage is not recommended for circumstances not listed in the Recommended Authorization Criteria. Criteria will be updated as new published data are available.

## REFERENCES

## HISTORY

<table>
<thead>
<tr>
<th>Type of Revision</th>
<th>Summary of Changes</th>
<th>Approval Date</th>
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<tbody>
<tr>
<td>New policy</td>
<td>New policy</td>
<td>08/01/2018</td>
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<tr>
<td>Annual review</td>
<td>Revised ALL criterion by removing age ≥ 15 years of age criteria based on NCCN Pediatric ALL guidelines. Added Besponsa use as a single-agent criteria. Revised dosing section. Removed Waste Management section.</td>
<td>07/17/2019</td>
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