bosutinib (Bosulif®)

Commercial Pharmacy Benefit Drug Policy

Drug Details

USP Category: ANTINEOPLASTICS
Mechanism of Action: tyrosine kinase inhibitor

Label Name	Quantity Limit
Bosulif 100 MG CAP	
Bosulif 100 MG TAB	4 tabs/day
Bosulif 400 MG TAB	1 tab/day
Bosulif 50 MG CAP	
Bosulif 500 MG TAB	1 tab/day

Condition(s) listed in policy *(see coverage criteria for details)*

- acute lymphoblastic leukemia (ALL)
- chronic myeloid leukemia (CML)
- myeloid, lymphoid, or mixed lineage neoplasms

Any condition not listed in this policy requires a review to confirm it is medically necessary. For conditions that have not been approved for intended use by the Food and Drug Administration (i.e., off-label use), the criteria outlined in the Health and Safety Code section 1367.21 must be met.

Special Instructions and pertinent Information

Provider must submit documentation (such as office chart notes, lab results or other clinical information) to ensure the member has met all medical necessity requirements.

The member's specific benefit may impact drug coverage. Other utilization management processes, and/or legal restrictions may take precedence over the application of this clinical criteria.

The following condition(s) require Prior Authorization/Preservice:

acute lymphoblastic leukemia (ALL)

1. Patient is Philadelphia Chromosome positive, **and**
2. Intolerance or contraindication to imatinib (Gleevec), **and**
3. Dose does not exceed 600 mg per day.

Coverage Period:
one year

chronic myeloid leukemia (CML)

1. Intolerance or contraindication to imatinib (Gleevec) , **and**
2. Dose does not exceed 600 mg per day.

Coverage Period:
one year

myeloid, lymphoid, or mixed lineage neoplasms

- Patient has eosinophilia, **and**
- Patient has ABL1 rearrangement, **and**
- Dose does not exceed 600 mg per day.

Coverage Period:
one year

Additional Information

- The BCR-ABL mutation analysis test includes detection of the T315i mutation. The test is used to determine if a mutation is present that would interfere with response to TKI therapy in Philadelphia chromosome positive (Ph+) lymphoblastic leukemia or chronic myelogenous leukemia (CML). The test detects all common mutations, including T315I.
- Bosulif is supported for primary treatment as a single agent for newly diagnosed chronic phase CML (Philadelphia chromosome or BCR-ABL1 positive) in patients:
  - with a low-risk Sokal or Hasford score
  - with intermediate- or high-risk Sokal or Hasford score (preferred, especially for young women whose goal is to achieve a deep and rapid molecular response and eventual drug discontinuation of TKI therapy for fertility purposes)
- Resistant CML is CML that has come back after treatment or does not respond to treatment. This is different from CML that has developed a resistance to treatment, which means that a specific treatment no longer works. If the CML does return, there will be another round of tests to learn about the extent of the disease. These tests and scans are often similar to those done at the time of the original diagnosis.
- The definition of imatinib resistance included (1) failure to achieve or maintain any hematologic improvement within 4 weeks; (2) failure to achieve a CHR by 3 months, cytogenetic response by 6 months or major cytogenetic response (MCyR) by 12 months; (3) progression of disease after a previous cytogenetic or hematologic response; or (4) presence of a genetic mutation in the BCR-ABL gene associated with imatinib resistance. Imatinib intolerance was defined as inability to tolerate imatinib due to toxicity, or progression on imatinib and inability to receive a higher dose due to toxicity. The definitions of resistance and intolerance to both dasatinib and nilotinib were similar to those for imatinib.
- NCCN guidelines for ALL v3.2023:

Treatment options for relapsed/refractory ALL based on BCR-ABL1 Mutation profile	
Therapy	**Contraindicated Mutations**

bosutinib	T315I, V299L, G250E, or F317L[b]
dasatinib	T315I/A, F317L/V/I/C, or V299L
nilotinib	T315I, Y253H, E255K/V, F359V/C/I or G250E
ponatinib	None

- Mutations contraindicated for imatinib are too numerous to include (i.e.T315i gene mutation). There are compound mutations that can cause resistance to ponatinib, but those are uncommon following treatment with bosutinib, dasatinib or nilotinib.
- Bosutinib has minimal activity against F317L mutation. Nilotinib may be preferred over bosutinib in patients with F317L mutation.
- NCCN guidelines for CML v2.2024:
  - For newly diagnosed CML patients in chronic phase, second generation TKIs (bosutinib, dasatinib, nilotinib) are preferred over imatinib in patients with an intermediate- or high-risk score (preferred, especially for young women whose goal is to achieve a deep and rapid molecular response and eventual drug discontinuation of TKI therapy for family planning purposes)

Risk Score	Risk Category
Sokal score	Low < 0.8 Intermediate 0.8 -1.2 High > 1.2
Hasford (EURO) score	Low ≤ 780 Intermediate > 780 - ≤ 1480 High > 1480
EUTOS long-term survival (ELTS) score	Low ≤ 1.5680 Intermediate > 1.5680 but ≤ 2.2185 High > 2.2185

- Calculation of risk may include the following parameters: spleen size, blasts in peripheral blood, eosinophils, basophils and/or platelets.

References

1. Bosulif prescribing information. Pfizer: New York, NY. September 2023.
2. National Comprehensive Cancer Network. Chronic Myeloid Leukemia (Version 2.2024). Available at www.nccn.org.
3. National Comprehensive Cancer Network. Acute Lymphoblastic Leukemia (Version 3.2023). Available at www.nccn.org.
4. National Comprehensive Cancer Network. Myeloid/Lymphoid Neoplasms with Eosinophilia and Tyrosine Kinase Fusion Genes (Version 1.2024). Available at www.nccn.org.

Review History

Date of Last Annual Review: 1Q2024
Date of last revision: 02/28/2024
Changes from previous policy version:

- No clinical changes following annual review

Blue Shield of California Medication Policy to Determine Medical Necessity Reviewed by P&T Committee