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5.21.022

Section:	Prescription Drugs	**Effective Date:**	January 1, 2023
Subsection:	Antineoplastic Agents	**Original Policy Date:**	October 17, 2012
Subject:	Bosulif	**Page:**	1 of 5

Last Review Date: December 2, 2022

Bosulif

Description

Bosulif (bosutinib)

Background
Bosulif (bosutinib) is a tyrosine kinase inhibitor indicated for the treatment of chronic myelogenous leukemia (CML). Bosulif is intended for patients with chronic, accelerated or blast phase Philadelphia chromosome positive CML (Ph+ CML) who are resistant to or who cannot tolerate other therapies, including imatinib. Bosulif inhibits the BCR-ABL kinase, an enzyme that promotes chronic myelogenous leukemia (CML) (1-2).

Regulatory Status
FDA-approved indications: Bosulif is a kinase inhibitor indicated for the treatment of adult patients with: (1)

1. Newly-diagnosed chronic phase Ph+ chronic myelogenous leukemia (CML)
2. Chronic, accelerated, or blast phase Ph+ chronic myelogenous leukemia (CML) with resistance or intolerance to prior therapy

Off-Label Uses: (2-4)

1. Treatment of patients with advanced phase CML (accelerated phase or blast phase)
2. Follow-up therapy for CML patients after hematopoietic stem cell transplant (HSCT)
3. Relapsed or refractory Philadelphia chromosome positive acute lymphoblastic leukemia (Ph+ ALL)

Bosulif has warnings and precautions regarding gastrointestinal toxicity, myelosuppression, hepatic toxicity, fluid retention and embryo-fetal toxicity. Patients should be monitored and

managed using standards of care. Therapy should be interrupted, the dose reduced or discontinued as necessary (1).

Liver enzymes should be monitored at least monthly for the first 3 months and as needed Thrombocytopenia, anemia and neutropenia can occur; therefore, a complete blood count should be performed weekly for the first month and then monthly or as clinically indicated (1).

The safety and efficacy of Bosulif in patients less than 18 years of age have not been established (1).

Related policies
Gleevec, Iclusig, Scemblix, Sprycel, Tasigna

Policy

This policy statement applies to clinical review performed for pre-service (Prior Approval, Precertification, Advanced Benefit Determination, etc.) and/or post-service claims.

Bosulif may be considered **medically necessary** in patients that are 18 years of age and older with Ph+ chronic myelogenous leukemia, chronic myeloid leukemia post hematopoietic stem cell transplant, Ph+ acute lymphoblastic leukemia; and if the conditions indicated below are met.

Bosulif is considered **investigational** in patients that are less than 18 years of age and for all other indications.

Prior-Approval Requirements

Age 18 years of age and older

Diagnoses

Patient must have **ONE** of the following:

1. Newly-diagnosed chronic phase Ph+ chronic myelogenous leukemia (CML)
2. Chronic phase Ph+ chronic myelogenous leukemia (CML)
    a. Resistance or intolerance to prior therapy with one or more tyrosine kinase inhibitors
3. Accelerated phase Ph+ chronic myelogenous leukemia (CML)
4. Blast phase Ph+ chronic myelogenous leukemia (CML)
5. Chronic myeloid leukemia (CML) post hematopoietic stem cell transplant (HSCT)

6. Relapsed or refractory Ph+ acute lymphoblastic leukemia (ALL)

AND the following for **ALL** indications:

1. Confirmed by detection of the Ph chromosome or BCR-ABL gene by cytogenetic and/or molecular testing prior to initiation of therapy
2. If the patient has had prior therapy with a TKI then **ONE** of the following requirements must be met:
    a. Member experienced resistance to prior therapy with TKI
        i. Results from mutational testing are negative for the T315I mutation
    b. Member experienced toxicity or intolerance to prior therapy with a TKI

Prior – Approval *Renewal* Requirements

Age 18 years of age and older

Diagnoses

Patient must have **ONE** of the following:

1. Ph+ Chronic myelogenous leukemia (CML)
2. Chronic myeloid leukemia (CML) post hematopoietic stem cell transplant (HSCT)
3. Relapsed or refractory Ph+ acute lymphoblastic leukemia (ALL)

Policy Guidelines

Pre - PA Allowance

None

Prior - Approval Limits

Quantity

Strength	Quantity
100 mg	540 tablets per 90 days **OR**
400 mg	90 tablets per 90 days **OR**
500 mg	90 tablets per 90 days

Maximum daily limit of any combination: 600 mg

*** Quantity limits listed above must be used to achieve dose optimization**

**Utilizing the highest strengths available to achieve the dosage is recommended to minimize dosing errors and improve compliance

Duration 12 months

Prior – Approval *Renewal* Limits

Same as above

Rationale

Summary

Bosulif (bosutinib) is a kinase inhibitor that inhibits the BCR-ABL kinase, an enzyme that promotes chronic myelogenous leukemia (CML). In studies, treatment with bosutinib reduced the size of CML tumors relative to controls and inhibited growth of murine myeloid tumors expressing several Gleevec (imatinib)-resistant forms of BCR-ABL. Bosulif has warnings and precautions regarding gastrointestinal toxicity, myelosuppression, hepatic toxicity, fluid retention and embryo-fetal toxicity. The safety and efficacy of Bosulif in patients less than 18 years of age have not been established (1).

Prior approval is required to ensure the safe, clinically appropriate, and cost-effective use of Bosulif while maintaining optimal therapeutic outcomes.

References

1. Bosulif [package insert]. New York, NY: Pfizer Labs; October 2021.
2. NCCN Drugs & Biologics Compendium® Bosutinib 2022. National Comprehensive Cancer Network, Inc. Accessed on October 13, 2022.
3. NCCN Clinical Practice Guidelines in Oncology® Chronic Myeloid Leukemia (CML) (Version 1.2023). National Comprehensive Cancer Network, Inc. August 2022. Accessed on October 13, 2022.
4. NCCN Clinical Practice Guidelines in Oncology® Acute Lymphoblastic Leukemia (Version 1. 2022). National Comprehensive Cancer Network, Inc. April 2022. Accessed on October 13, 2022.

Policy History

Date	Action
October 2012	New addition
March 2013	Annual review and update.

September 2014	Annual editorial review and reference update
December 2015	Annual editorial review and reference update Removed tyrosine kinase inhibitors examples
June 2016	Annual editorial review and reference update Policy number change from 5.04.22 to 5.21.22
March 2017	Annual review and reference update Addition of no dual therapy with another tyrosine kinase inhibitor and addition of the age requirement in the renewal section
January 2018	Addition of new indication of newly-diagnosed chronic phase Ph+ chronic myelogenous leukemia (CML), chronic myeloid leukemia (CML) post hematopoietic stem cell transplant (HSCT), Ph+ acute lymphoblastic leukemia (ALL); and accelerated, or blast phase Ph+ chronic myelogenous leukemia (CML) with no prior therapy Addition of quantity limits
March 2018	Annual editorial review Addition of mutational testing requirement to “If the patient has had prior therapy with a TKI then ONE of the following requirements must be met: member experienced resistance to prior therapy with TKI and results from mutational testing are negative for the T315I mutation or member experienced toxicity or intolerance to prior therapy with a TKI
June 2019	Annual review and reference update
June 2020	Annual editorial review and reference update. Removed no dual therapy with another TKI requirement
March 2021	Annual review and reference update
March 2022	Annual editorial review and reference update
December 2022	Annual review and reference update. Changed policy number to 5.21.022

Keywords

This policy was approved by the FEP® Pharmacy and Medical Policy Committee on December 2, 2022 and is effective on January 1, 2023.