Tasigna

Description

Tasigna (nilotinib)

Background

Tasigna (nilotinib) is indicated for the treatment of chronic myeloid leukemia (CML), a blood and bone marrow disease that usually affects older adults. Tasigna works by blocking the signal of the tyrosine kinase that promotes the development of abnormal and unhealthy granulocytes. Most people with CML have a genetic mutation, called the Philadelphia chromosome, which causes the bone marrow to make an enzyme called tyrosine kinase. This enzyme triggers the development of too many abnormal and unhealthy white blood cells called granulocytes. Granulocytes fight infection (1-2).

Regulatory Status

FDA-approved indication: Tasigna is a kinase inhibitor indicated for: (1)

1. Adult and pediatric patients greater than or equal to 1 year of age with newly diagnosed Philadelphia chromosome positive chronic myeloid leukemia (Ph+ CML) in chronic phase
2. Adult patients with chronic phase (CP) and accelerated phase (AP) Ph+ CML resistant to or intolerant to prior therapy that included imatinib
3. Pediatric patients greater than or equal to 1 year of age with Ph+ CML-CP resistant or intolerant to prior tyrosine-kinase inhibitor (TKI) therapy

Off Label Uses: (1-2)

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. Follow-up therapy for CML patients resistant or intolerant to primary treatment with tyrosine kinase inhibitors (TKIs)
4. Post-consolidation therapy for Ph+ ALL after complete response to induction chemotherapy following allogeneic hematopoietic stem cell transplant (HSCT)
5. Relapsed/ refractory Ph+ acute lymphoblastic leukemia for both adults and pediatrics
6. Gastrointestinal Stromal tumor (GIST) in patients with disease progression on imatinib, sunitinib or regorafenib

Tasigna includes boxed warnings for the risk of QT prolongation. Before initiation of Tasigna therapy, hypokalemia or hypomagnesemia should be corrected and deficiencies with these electrolytes should be monitored for and corrected as needed throughout therapy. ECGs should be obtained to monitor the QTc at baseline, seven days after starting therapy and periodically during therapy, as well as, after any dose adjustments. Tasigna is contraindicated in patients with hypokalemia, hypomagnesemia, or long QT syndrome. Also, Tasigna should not be used in combination with any drugs that are known to prolong the QT interval or strong CYP3A4 inhibitors. Food should be avoided 2 hours before and 1 hour after taking Tasigna (1).

Thrombocytopenia, neutropenia and anemia can occur; therefore, a complete blood count should be performed every 2 weeks for the 2 months and then monthly or as clinically indicated (1).

Hepatic function tests should be monitored for monthly or as clinically indicated. Tasigna therapy has been associated with elevations in bilirubin, AST/ALT and alkaline phosphatase. Patients with hepatic function impairment at baseline have increased exposure to Tasigna and require a dose reduction and close monitoring of QT interval (1).

**Related policies**
Bosulif, Gleevec, Iclusig, Sprycel

**Policy**

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

Tasigna may be considered **medically necessary** in patients that are 1 years of age or older with one of the following diagnoses: patient has chronic myeloid leukemia (CML), chronic myeloid leukemia (CML) with hematopoietic stem cell transplant (HSCT), Ph+ Acute lymphoblastic leukemia (ALL), Ph+ Acute lymphoblastic leukemia (ALL) post hematopoietic stem cell transplant (HSCT) and when the conditions indicated below are met.
Tasigna is considered **investigational** in patients that are less than 1 year of age and for all other indications.

**Prior-Approval Requirements**

**Age**

1 year of age and older

**Diagnoses**

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

1. Chronic myeloid leukemia (CML)
   a. Patient **MUST** have tried the preferred product (Sprycel) unless the patient has a valid medical exception (e.g. inadequate treatment response, intolerance, contraindication)

2. Chronic myeloid leukemia (CML) with hematopoietic stem cell transplant (HSCT)
   a. In combination with induction therapy

3. Ph+ Acute lymphoblastic leukemia (ALL)

4. Ph+ Acute lymphoblastic leukemia (ALL) post hematopoietic stem cell transplant (HSCT)
   a. After achieving complete response to induction therapy

**AND ALL** of the following for 1 thru 4:

1. Confirmed by molecular testing by the detection of the Ph chromosome or BCR-ABL gene 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

3. Gastrointestinal stromal tumor (GIST)
a. Disease progression after prior therapy with imatinib, sunitinib or regorafenib

Prior – Approval *Renewal* Requirements

**Age**

1 years of age and older

**Diagnoses**

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

1. Chronic myeloid leukemia (CML)
2. Chronic myeloid leukemia (CML) with hematopoietic stem cell transplant (HSCT)
3. Ph+ Acute lymphoblastic leukemia (ALL)
4. Ph+ Acute lymphoblastic leukemia (ALL) post hematopoietic stem cell transplant (HSCT)
5. Gastrointestinal stromal tumor (GIST)

**Policy Guidelines**

**Pre - PA Allowance**

None

**Prior - Approval Limits**

**Quantity**

<table>
<thead>
<tr>
<th>Strength</th>
<th>Quantity per 84 days</th>
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<tbody>
<tr>
<td>50 mg</td>
<td>504 capsules per 84 days OR</td>
</tr>
<tr>
<td>150 mg</td>
<td>336 capsules per 84 days OR</td>
</tr>
<tr>
<td>200 mg</td>
<td>336 capsules per 84 days</td>
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**Duration**

12 months

**Prior – Approval *Renewal* Limits**

Same as above
Summary
Tasigna is a kinase inhibitor that inhibits the BCR-ABL kinase, an enzyme that promotes chronic myeloid leukemia (CML). In studies, treatment with nilotinib inhibited BCR-ABL mediated proliferation of murine leukemic cell lines and human cell lines derived from patients with Ph+ CML. Tasigna treatment was also able to overcome imatinib resistance that resulted from BCR-ABL kinase mutations. Tasigna treatment reduced tumor size in a murine BCR-ABL xenograft model. The safety and efficacy of Tasigna in patients less than 1 years of age have not been established (1-2).

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

References

Policy History

<table>
<thead>
<tr>
<th>Date</th>
<th>Action</th>
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<tbody>
<tr>
<td>April 2016</td>
<td>New addition</td>
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<tr>
<td>June 2016</td>
<td>Annual review</td>
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<tr>
<td>November 2016</td>
<td>Removal of the requirement for “first-line therapy” for CML</td>
</tr>
<tr>
<td>December 2016</td>
<td>Annual review</td>
</tr>
<tr>
<td>March 2017</td>
<td>Annual editorial review and reference update</td>
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<tr>
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<td>Addition of no dual therapy with another tyrosine kinase inhibitor</td>
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<tr>
<td>May 2017</td>
<td>Additional requirement to chronic myeloid leukemia (CML) post hematopoietic stem cell transplant (HSCT) of in combination with induction therapy</td>
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<tr>
<td>September 2017</td>
<td>Annual review</td>
</tr>
<tr>
<td></td>
<td>Addition of quantity limits</td>
</tr>
<tr>
<td>March 2018</td>
<td>Annual editorial review and reference update</td>
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<td>Change the wording for the 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</td>
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<tr>
<td>Date</td>
<td>Updates</td>
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<tr>
<td>April 2018</td>
<td>Change of age from 18 yrs to 1 yr or older</td>
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<tr>
<td></td>
<td>Addition of requirement for GIST: disease progression after prior therapy with imatinib, sunitinib or regorafenib</td>
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<td>Addition of 50mg capsules</td>
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<tr>
<td>June 2018</td>
<td>Annual editorial review</td>
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<tr>
<td>June 2019</td>
<td>Annual review and reference update</td>
</tr>
<tr>
<td>December 2019</td>
<td>Annual review and reference update. Addition of requirement to trial preferred product for initiation CML diagnosis and removed no dual therapy with another TKI requirement</td>
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**Keywords**

This policy was approved by the FEP® Pharmacy and Medical Policy Committee on December 6, 2019 and is effective on January 1, 2020.