Clinical Policy: Dasatinib (Sprycel)
Reference Number: ERX.SPMN.117
Effective Date: 03/14
Last Review Date: 09/16

See Important Reminder at the end of this policy for important regulatory and legal information.

Policy/Criteria
It is the policy of health plans affiliated with Envolve Pharmacy Solutions® that dasatinib (Sprycel®) is medically necessary when the following criteria are met:

I. Initial Approval Criteria
   A. Chronic Myelogenous Leukemia (must meet all):
      1. Diagnosis of chronic myeloid leukemia (CML);
      2. CML is Philadelphia chromosome positive (Ph+) and/or BCR-ABL1 positive;
      3. Member meets a or b:
         a. FDA approved use (one of the following):
            i. Newly diagnosed CML in chronic phase;
            ii. Chronic, accelerated, or blast phase CML with resistance or intolerance to imatinib;
         b. Off-label NCCN recommended use (one of the following):
            i. Chronic phase CML with history of resistance or intolerance to nilotinib;
            ii. As a single agent for accelerated or blast phase CML;
            iii. In combination with induction chemotherapy followed by hematopoietic stem cell transplant for blast phase CML;
            iv. Post-transplant treatment in the presence of relapse;
            v. As follow-up therapy after primary treatment with Sprycel.

   Approval duration: 3 months

   B. Acute Lymphoblastic Leukemia (must meet all):
      1. Diagnosis of Ph+ acute lymphoblastic leukemia (ALL);
      2. Member meets a or b:
         a. FDA approved use:
            i. Following resistance or intolerance to prior therapy;
         b. Off-label NCCN recommended use (one of the following):
            i. As induction/consolidation therapy and one of the following:
               a) As a component of HyperCVAD (cyclophosphamide, vincristine, doxorubicin, and dexamethasone) regimen alternating with high-dose methotrexate and cytarabine with dasatinib;
               b) In combination with corticosteroids;
               c) In combination with vincristine and dexamethasone;
            ii. After complete response to induction therapy is achieved following allogeneic hematopoietic stem cell transplant for consolidation;
            iii. As maintenance therapy in combination with vincristine and prednisone;
iv. For relapsed/refractory disease with Y253H, E255K/V, or F359V/C/I mutations if not administered during initial induction, and will be used in one of the following ways:
   a) As a single agent;
   b) In combination with an induction regimen not previously used.

**Approval duration: 3 months**

**C. Other diagnoses/indications:**
1. Additional NCCN compendial uses for dasatinib, meeting NCCN categories 1, 2a, or 2b, are covered for the following indications per the ERX.SPMN.16 Global Biopharm policy:
   a. Soft tissue sarcoma - gastrointestinal stromal tumors (GIST).

**II. Continued Approval**

**A. All Indications** (must meet all):
1. Currently receiving medication via health plan benefit or member has previously met all initial approval criteria;
2. Responding positively to therapy.

**Approval duration: 6 months**

**B. Other diagnoses/indications** (must meet 1 or 2):
1. Currently receiving medication via health plan benefit and documentation supports positive response to therapy; or
2. Refer to ERX.SPMN.16 - Global Biopharm Policy.

**Background**

*Description/Mechanism of Action:*
Sprycel (dasatinib) is a kinase inhibitor. Dasatinib, at nanomolar concentrations, inhibits the following kinases: BCR-ABL, SRC family (SRC, LCK, YES, FYN), c-KIT, EPHA2, and PDGFRβ. Based on modeling studies, dasatinib is predicted to bind to multiple conformations of the ABL kinase. In vitro, dasatinib was active in leukemic cell lines representing variants of imatinib mesylate-sensitive and resistant disease. Dasatinib inhibited the growth of chronic myeloid leukemia (CML) and acute lymphoblastic leukemia (ALL) cell lines overexpressing BCR-ABL. Under the conditions of the assays, dasatinib was able to overcome imatinib resistance resulting from BCR-ABL kinase domain mutations, activation of alternate signaling pathways involving the SRC family kinases (LYN, HCK), and multi-drug resistance gene overexpression.

*Formulations:*
Sprycel tablets for oral administration are available in the following strengths: 20 mg, 50 mg, 70 mg, 80 mg, 100 mg, and 140 mg.
FDA Approved Indications:
Sprycel (dasatinib) is a kinase inhibitor/oral tablet formulation indicated for treatment of adults with:
- Newly diagnosed Philadelphia chromosome-positive (Ph+) chronic myeloid leukemia (CML) in chronic phase.
- Chronic, accelerated, or myeloid or lymphoid blast phase Ph+ CML with resistance or intolerance to prior therapy including imatinib.
- Philadelphia chromosome-positive acute lymphoblastic leukemia (Ph+ ALL) with resistance or intolerance to prior therapy.

Appendices
Appendix A: Abbreviation Key
ALL: acute lymphoblastic leukemia
CML: chronic myelogenous leukemia
GIST: gastrointestinal stromal tumors
Ph+: Philadelphia chromosome positive

Reviews, Revisions, and Approvals

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<thead>
<tr>
<th>Event</th>
<th>Date</th>
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<tbody>
<tr>
<td>Policy created.</td>
<td>02/14</td>
<td>03/14</td>
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<tr>
<td>Policy converted to new template. Removed age restrictions, requests for documentation, cytogenenic response criteria, and safety criteria. Changed all approval durations to 3 months for initial and 6 months for re-auth. Updated criteria to specify &quot;Ph+&quot; for ALL and &quot;Ph+ and/or BCRABL1 positive&quot; for CML per NCCN compendial recommendations. Added all other NCCN compendial uses.</td>
<td>08/16</td>
<td>09/16</td>
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References
**Important Reminder**

This clinical policy has been developed by appropriately experienced and licensed health care professionals based on a review and consideration of currently available generally accepted standards of medical practice; peer-reviewed medical literature; government agency/program approval status; evidence-based guidelines and positions of leading national health professional organizations; views of physicians practicing in relevant clinical areas affected by this clinical policy; and other available clinical information.

This Clinical Policy is not intended to dictate to providers how to practice medicine, nor does it constitute a contract or guarantee regarding payment or results. Providers are expected to exercise professional medical judgment in providing the most appropriate care, and are solely responsible for the medical advice and treatment of members.

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