MEDICAL POLICY
No. 91066-R1

STEM CELL OR BONE MARROW TRANSPLANTATION

Effective Date: May 2, 2016
Review Dates: 1/93, 7/95, 12/99, 12/01, 12/02, 11/03, 12/04, 10/05, 10/06, 6/07, 6/08, 6/09, 6/10, 6/11, 6/12, 6/13, 8/14, 8/15
Date Of Origin: April 10, 1992
Status: Current

Summary of Changes

Clarifications:
- Pg. 2, Section I, Transportation and lodging for the patient, donor or family are not covered benefits, unless otherwise specified in coverage documents.

Deletions:
- 

Additions:
- 

General Coverage Criteria for all Stem Cell or Bone Marrow or other Blood Cell Transplants

Allogeneic or Autologous Bone Marrow, Peripheral Stem Cell, or other Blood Cell Transplants are a covered benefit for specific indications that are not experimental or investigational and for which the procedure has been proven to be effective. All bone marrow, peripheral stem cell, or other blood cell transplants must be pre-authorized by Priority Health and performed at a Priority Health approved facility. Requests for authorization should be submitted on the Bone Marrow/Peripheral Stem Cell or Other Blood Cell Transplant prior authorization form.

Transplant referrals will be directed and approved in the following order:

1. Priority Health network facilities. If not available in network, then
2. LifeTrac Select facilities. If not available, then
3. LifeTrac Supplemental facilities. If not available, then
4. Out of network (OON) facilities.

An approved Bone Marrow, Peripheral Stem Cell, or other Blood Cell Transplant includes coverage for the following:

1. Pre-transplant care, including the transplant evaluation. One evaluation per transplant. Note: A second opinion consult only to determine transplant candidacy would be approved at a contracted or in network transplant facility if a second transplant evaluation is requested and the member has been previously turned down for transplant.
2. Transplant care, facility and professional fees.
3. Harvesting of donor. Priority Health will cover donor fees for transplant recipients who are members, unless donor fees are covered by another Health Plan.
4. Post Transplant immunosuppressant drug therapy if the group has outpatient prescription drug coverage.

5. Post-transplant care:
   a. Follow-up care and services are covered at the transplant facility for one year following the transplant, for both contracted and non-contracted transplant facilities.
   b. Follow-up care beyond one year post-transplant:
      1. Covered at contracted transplant facilities.
      2. Non-contracted facilities: only physician services are covered. Testing, labs, and imaging are covered in network only.

General guidelines for consideration for bone marrow/stem cell transplantation must be met. These guidelines include, but are not limited to, the following:

The member must meet all of the criteria below:
   1. Adequate major organ function and lack of major systemic complications to include adequate liver function, cardiac function, pulmonary function and renal function
   2. Predicted ability to tolerate the surgical procedure as well as the post-transplant immunosuppression regimen and potential complications
   3. Emotional and psychiatric stability, including a strong family or alternative support network (documented by formal social work evaluation)
   4. Ability to understand the risks of the procedures

Priority Health does not cover bone marrow/stem cell transplantation when any of the following conditions are present:
   1. Persistent or active substance or alcohol abuse
   2. Presence of psychiatric disease that would interfere with the member’s ability to comply with the pre or post transplant therapeutic regimen
   3. Significant history of medical noncompliance
   4. Unwillingness or inability to adhere to post transplant lifestyle restrictions and medical regimen

Transportation and lodging for the patient, donor or family are not covered benefits, unless otherwise specified in coverage documents.

Experimental, investigational or unproven bone marrow, peripheral stem cell, or other blood cell transplants are not a covered benefit unless coverage is determined to be appropriate under the Experimental/Investigational/Unproven Care/Benefit Exceptions medical policy, the Clinical Trials for Cancer Care or the Clinical Trials medical policy.

MEDICAL NECESSITY REVIEW

☑ Required ☐ Not Required ☐ Not Applicable
APPLICATION TO PRODUCTS

Coverage is subject to member’s specific benefits. Group specific policy will supersede this policy when applicable.

- **HMO/EPO:** This policy applies to insured HMO/EPO plans.
- **POS:** This policy applies to insured POS plans.
- **PPO:** This policy applies to insured PPO plans. Consult individual plan documents as state mandated benefits may apply. If there is a conflict between this policy and a plan document, the provisions of the plan document will govern.
- **ASO:** For self-funded plans, consult individual plan documents. If there is a conflict between this policy and a self-funded plan document, the provisions of the plan document will govern.
- **INDIVIDUAL:** For individual policies, consult the individual insurance policy document. If there is a conflict between this medical policy and the individual insurance policy document, the provisions of the individual insurance policy will govern.
- **MEDICARE:** Coverage is determined by the Centers for Medicare and Medicaid Services (CMS); if a coverage determination has not been adopted by CMS, this policy applies.
- **MEDICAID/HEALTHY MICHIGAN PLAN:** For Medicaid/Healthy Michigan Plan members, this policy will apply. Coverage is based on medical necessity criteria being met and the appropriate code(s) from the coding section of this policy being included on the Michigan Medicaid Fee Schedule located at: [http://www.michigan.gov/mdch/0,1607,7-132-2945_42542_42543_42546_42551-159815--,00.html](http://www.michigan.gov/mdch/0,1607,7-132-2945_42542_42543_42546_42551-159815--,00.html). If there is a discrepancy between this policy and the Michigan Medicaid Provider Manual located at: [http://www.michigan.gov/mdch/0,1607,7-132-2945_5100-87572--,00.html](http://www.michigan.gov/mdch/0,1607,7-132-2945_5100-87572--,00.html), the Michigan Medicaid Provider Manual will govern. For Medical Supplies/DME/Prosthetics and Orthotics, please refer to the Michigan Medicaid Fee Schedule to verify coverage.

### TRANSPLANT COVERAGE CRITERIA BY CONDITION

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Stem Cell Transplant for Treatment of Non-Malignant Conditions
Allogeneic bone marrow transplants may be considered medically necessary for selected patients with the following disorders:

- Sickle cell anemia for children or young adults with either a history of prior stroke or at increased risk of stroke or end-organ damage, and with an HLA-identical donor. Factors associated with a high risk of stroke or end-organ damage include: recurrent chest pain syndrome, recurrent vaso-occlusive crises, red blood cell alloimmunization or chronic transfusion therapy.
- Severe or very severe aplastic anemia, including congenital (e.g., Fanconi's anemia or Diamond-Blackfan syndrome) or acquired (e.g., secondary to drug or toxin exposure) forms. Appropriate patients include those with platelets less than 20 x 10^9/L, granulocytes less than 0.5 x 10^9/L, and reticulocytes less than 1% (corrected for hematocrit) and who have failed antithymocyte globulin therapy.
- Homozygous beta-thalassemia (i.e., thalassemia major)
- Wiskott-Aldrich syndrome
- Severe combined immunodeficiencies
- Chediak-Higashi syndrome
- Infantile malignant osteopetrosis (Albers-Schönberg disease or marble bone disease)
- Mucopolysaccharidoses (e.g., Hunter's, Hurler's Sanfilippo, Maroteaux-Lamy variants) in patients who are neurologically intact.
- Mucolipidoses (e.g., Gaucher's disease, metachromatic leukodystrophy, globoid cell leukodystrophy, adrenoleukodystrophy) for patients who have failed conventional therapy (e.g., diet, enzyme replacement) and who are neurologically intact.
- Kostmann's syndrome (severe congenital neutropenia)
- Leukocyte adhesion deficiencies
- X-linked lymphoproliferative syndrome

Stem Cell Transplant for Autoimmune Diseases, Including Multiple Sclerosis
Stem-cell transplantation (autologous or allogeneic) for the treatment of an autoimmune disease, including, but not limited to any of the following indications, is considered experimental, investigational or unproven and not a covered benefit:

- autoimmune hemolytic anemia
- autoimmune hepatitis
- celiac disease
- Crohn’s disease
- cryptogenic cirrhosis
- dermatomyositis
- immune vasculitis
- juvenile idiopathic arthritis
- multiple sclerosis
- neuromyelitis optica
- polymyositis
- rheumatoid arthritis
- systemic lupus erythematosus
- systemic sclerosis, also known as scleroderma
- thrombotic thrombocytopenia purpura
- type I diabetes mellitus
- ulcerative colitis

**Stem Cell Transplant for Solid Tumors in Adults**

Autologous or allogeneic hematopoietic stem cell transplant (ablative and non-myeloablative) for the treatment of any of the following solid tumors in adults is considered experimental and investigational because its effectiveness for these indications has not been established:

- bile duct
- breast
  - central nervous system tumors (e.g., astrocytoma, choroid plexus tumors, ependymoma, gliomas, oligodendroglioma)
- cervix
- colon
- epithelial ovarian
- esophagus
- gallbladder
- kidney
- lung
- melanoma
- nasopharynx
- pancreas
- paranasal sinus
- prostate
- rectum
- renal cell carcinoma
- soft tissue sarcomas
- stomach
- thymus
- thyroid
- uterus

**Stem Cell Transplant for Childhood Solid Tumors**

High-dose chemotherapy followed by autologous hematopoietic stem-cell transplantation is a covered benefit for the following:

- relapsed Wilms’ tumor
• metastatic non-central nervous system (non-CNS) retinoblastoma
• relapsed or progressive Ewing family of tumors

**Stem Cell Transplant for Neuroblastoma**

Autologous stem-cell transplantation (SCT) is a covered benefit for the treatment of high-risk neuroblastoma. A maximum of three tandem autologous HSCTs are covered for high-risk neuroblastoma.

Allogeneic SCT from an appropriately-matched human leukocyte antigen (HLA) donor following high-dose chemotherapy is covered for the treatment of high-risk neuroblastoma when the individual is not a candidate for autologous HSCT.

**High Risk Neuroblastoma Definition:**

<table>
<thead>
<tr>
<th>Risk</th>
<th>Stage</th>
<th>Age</th>
<th>MYCN status</th>
<th>DNA ploidy</th>
<th>INPC</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>HighΔ</td>
<td>2a/2b</td>
<td>Any</td>
<td>Amp</td>
<td>Any</td>
<td>Any</td>
<td>Any degree of resection</td>
</tr>
<tr>
<td>3</td>
<td>Any</td>
<td>&gt;547 days</td>
<td>Not Amp</td>
<td>Any</td>
<td>UH</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>&lt;365 days</td>
<td>Amp</td>
<td>Any</td>
<td>Any</td>
<td>Any</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>365 - &lt;547 days</td>
<td>Amp</td>
<td>Any</td>
<td>Any</td>
<td>Any</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>365 - &lt;547 days</td>
<td>Any</td>
<td>DI = 1</td>
<td>Any</td>
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<td>4</td>
<td>365 - &lt;547 days</td>
<td>Any</td>
<td>Any</td>
<td>UH</td>
<td>Any</td>
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<tr>
<td>4</td>
<td>&gt;547 days</td>
<td>Any</td>
<td>Any</td>
<td>Any</td>
<td>Any</td>
<td>Asymptomatic or symptomatic</td>
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<tr>
<td>4s</td>
<td>&lt;365 days</td>
<td>Amp</td>
<td>Any</td>
<td>Any</td>
<td>Any</td>
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</tr>
</tbody>
</table>

INPC: International Neuroblastoma Pathology Classification; UH: unfavorable histology; Amp: amplified; DI: DNA Index

Δ High risk group as defined in the Children’s Oncology Group trial AnBL0532

Risk strata:


**High risk**

- Any child who is Stage 2A or 2B, whose cancer has extra copies of the *MYCN* gene
- Any child who is Stage 3, whose cancer has extra copies of the *MYCN* gene
- Any child who is Stage 3, older than 18 months of age, whose cancer has unfavorable histology
- Any child who is Stage 4, whose cancer has extra copies of the *MYCN* gene regardless of age
- Any child who is Stage 4 and older than 18 months
▪ Any child who is Stage 4 and between 12 and 18 months old whose cancer has extra copies of the MYCN gene, unfavorable histology, and/or normal DNA ploidy (a DNA index of 1)
▪ Any child who is Stage 4S (younger than age 1), whose cancer has extra copies of the MYCN gene

Definitions from: https://childrensoncologygroup.org/index.php/anbl0532 (Retrieved 7/15/15)

**Stem Cell Transplant for Primitive Neuroectodermal Tumors (PNET) and Ependymoma**
Autologous stem cell transplantation is a covered benefit for the treatment of primitive neuroectodermal tumors (PNET) including medulloblastoma and pineoblastoma.

Allogeneic stem cell transplantation is considered experimental and investigational for the treatment of PNET including medulloblastoma and pineoblastoma because of insufficient evidence of its safety and effectiveness.

Autologous stem cell transplantation is a covered benefit for the treatment of ependymoma if patient is ineligible for radiotherapy.

Allogeneic stem cell transplantation is considered experimental and investigational for the treatment of ependymoma because of insufficient evidence of its safety and effectiveness.

**Stem Cell Transplant for Treatment of Ovarian or Testicular Germ Cell Tumors**
Single or tandem autologous hematopoietic stem-cell transplantation (SCT) is a covered benefit for relapsed or refractory testicular and ovarian germ cell tumors.

The following procedures are experimental, investigational or unproven and not covered for germ cell cancers:
▪ autologous SCT as front-line therapy
▪ allogeneic SCT

Note: SCT is not covered for epithelial ovarian cancer (see section on solid tumors in adults)

**Stem Cell Transplant for Hodgkin's Disease**
High dose chemotherapy with either autologous or allogeneic stem cell support may be covered in patients with refractory, primary progressive, or recurrent Hodgkin's disease.

Nonmyeloablative allogeneic SCT is covered for relapsed or refractory Hodgkin disease following a prior SCT. Nonmyeloablative allogeneic HSCT for any other indication is considered experimental and investigational.

Tandem stem cell transplant (sequential) for Hodgkin's disease is considered investigational.

Note: Relapse is the re-appearance of disease in regions of prior disease (recurrence) and/or in new regions (extension) after initial therapy and attainment of complete response
Stem Cell Transplant for Non-Hodgkin's Lymphomas
Autologous or allogeneic stem cell is a covered benefit for relapsed or primary refractory non-Hodgkin's lymphoma (NHL)

High dose chemotherapy with autologous or allogeneic stem cell support is considered investigational as initial therapy of all non-Hodgkin's lymphomas. Non-myeloablative allogeneic hematopoietic cell transplantation ("mini-transplant", reduced intensity conditioning transplant) may be covered for relapsed or primary refractory NHL when a reduced intensity regimen is preferred by the transplant center.

Tandem autologous hematopoietic cell transplantation (auto-auto) or tandem autologous stem cell transplantation followed by allogeneic stem cell transplantation (auto-allo) is considered experimental and investigational for NHL.

Stem Cell Transplantation for Myelofibrosis
Allogeneic (ablative and non-myeloablative) stem cell transplantation is a covered benefit myelofibrosis (MF) when any of the following criteria is met:

- The individual is transfusion (RBC or Platelet) dependent; or
- The individual is resistant to conservative therapy; or
- The individual has intermediate or high risk MF

Repeat allogeneic (ablative or non-myeloablative) hematopoietic cell transplantation medically necessary for individuals with myelofibrosis and primary graft failure or who have relapsed.

Autologous stem cell transplantation is considered experimental and investigational for myelofibrosis.

Stem Cell Transplant for Myelodysplastic Syndrome
Allogeneic (ablative and non-myeloablative) stem cell transplantation is a covered benefit  for intermediate-risk or high-risk myelodysplastic syndrome (MDS), when individual has not responded to prior therapy and has an available human leukocyte antigen (HLA)-matched donor.

A repeat allogeneic (ablative or non-myeloablative) stem cell transplant is a covered benefit for individuals with intermediate-risk or high-risk MDS due to primary graft failure or failure to engraft.

A repeat allogeneic (ablative or non-myeloablative) SCT is considered experimental for individuals with MDS who have relapsed.

Autologous stem cell transplantation is considered experimental and investigational for MDS because the effectiveness has not been established.

Stem Cell Transplant for the Treatment of Chronic Myelogenous Leukemia (CML)
High dose chemotherapy with allogeneic stem cell support is a covered benefit for the treatment of chronic myelogenous leukemia.
High dose chemotherapy with autologous stem cell support is considered investigational as a treatment of chronic myelogenous leukemia.

**Stem Cell Transplant for Acute Myelogenous Leukemia (AML)**

Autologous or allogeneic stem cell transplant is a covered benefit for the treatment of AML in first complete remission, for primary refractory AML (i.e., leukemia that does not achieve a complete remission after conventional dose chemotherapy), or relapsed AML. Both ablative and non-myeloablative transplants are covered for these indications.

A repeat autologous or allogeneic hematopoietic cell transplantation (ablative or mini-allograft) is a covered benefit when the first autologous or allogeneic hematopoietic cell transplantation was unsuccessful due to primary graft failure or failure to engraft or for persons who have relapsed after a prior stem cell transplantation.

A repeat autologous or allogeneic stem cell transplantation (ablative or mini-allograft) for persistent or progressive disease is considered experimental and investigational.

Tandem stem cell transplant for AML is considered investigational and not a covered benefit.

**Stem Cell Transplant as a Treatment of Acute Lymphocytic Leukemia (ALL)**

Allogeneic stem cell transplantation is a covered benefit for the treatment of ALL, including primary refractory ALL (i.e., leukemia that does not achieve a complete remission after conventional dose chemotherapy), except for refractory relapse, defined as persons in relapse who are unresponsive to 3 or more months of adequate chemotherapy.

A non-myeloablative allogeneic hematopoietic cell transplantation, also known as mini-allograft or reduced intensity conditioning transplant, is a covered benefit for the treatment of ALL for members with no persistent disease who meet all of the selection criteria above. **Note:** Persons with persistent disease should not be candidates for a mini-allograft transplant.

A second myeloablative allogeneic HSCT from an appropriately-matched HLA donor is a covered benefit for the treatment of ALL when relapsed disease occurs more than six months after first allogeneic SCT.

Autologous stem cell transplantation is a covered benefit for ALL where no suitable donor is available.

Tandem stem cell transplant for ALL is considered experimental and not a covered benefit.

**Stem Cell Transplant for Chronic Lymphocytic Leukemia (CLL) and Small Lymphocytic Lymphoma (SLL)**

Allogeneic stem-cell transplantation is a covered benefit for the treatment of chronic lymphocytic leukemia (CLL) that is not responsive to standard therapy.
Autologous SCT is a covered benefit for the treatment of CLL in an individual in complete or good partial remission.

**Stem Cell Transplant for Multiple Myeloma, Amyloidosis or Polyneuropathy, Organomegaly, Endocrinopathy, Monoclonal gammopathy, and skin changes (POEMS syndrome)**

1. **Multiple Myeloma**
   
   Autologous stem-cell transplantation is covered for the treatment of active (i.e., symptomatic) multiple myeloma (MM) for EITHER of the following indications:
   
   - after response to primary therapy
   - refractory to primary therapy in an individual with relapse or progressive disease

   A second course of autologous hematopoietic cell transplantation may be considered medically necessary for the treatment of responsive MM that has relapsed after a durable complete or partial remission following an autologous transplantation.

   A third autologous SCT for the treatment of active (i.e., symptomatic) MM is a covered benefit in an individual with progressive disease following a previous autologous HSCT.

   Tandem (e.g., Sequential or double) autologous transplants or autologous transplant followed by allogeneic transplant from an haploidentical to fully matched related donor or well-matched unrelated donor (i.e., meeting National Donor Marrow Program (NDMP) criteria for selection of unrelated donors) medically necessary if planned 1st and 2nd transplantation are within a 6-month period.

   Allogeneic SCT is a covered benefit from an appropriately-matched human leukocyte antigen (HLA) donor for the treatment of active (i.e., symptomatic) MM in an individual with progressive disease following autologous HSCT.

2. **Amyloidosis**

   Autologous stem cell support is a covered benefit for primary systemic amyloidosis (e.g. Amyloid light chain, AL).

   The following are considered experimental and investigational and are not covered for amyloidosis:
   
   - second autologous SCT for the treatment of recurrent or refractory amyloidosis
   - tandem autologous SCT
   - allogeneic SCT

3. **Polyneuropathy, Organomegaly, Endocrinopathy, Monoclonal Gammopathy and skin changes (POEMS Syndrome)**

   Autologous SCT is a covered benefit.

**Nonmyeloablative Allogeneic Stem Cell Transplantation for Treatment of Malignancy**

Nonmyeloablative allogeneic stem cell transplantation ("mini-transplant," reduced intensity conditioning transplant) may be considered medically necessary in patients who would otherwise...
meet patient selection criteria for high dose chemotherapy and allogeneic stem cell transplantation for the following conditions.

- Non-Hodgkin lymphoma
- Hodgkin’s disease
- myelodysplastic diseases / myelodysplastic syndrome
- acute myelogenous leukemia
- chronic myelogenous leukemia
- acute lymphocytic/lymphoblastic leukemia
- chronic lymphocytic leukemia
- multiple myeloma
- aplastic anemia
- myelofibrosis
- neuroblastoma
- sickle cell anemia
- thalassemia major

Other applications of nonmyeloablative allogeneic stem cell transplantation are considered investigational, including its use in patients who do not meet criteria for high dose chemotherapy and allogeneic stem cell transplantation due to either age or co-morbidities, or as a treatment of other malignancies, including melanoma, or other solid tumors (eg. renal cell carcinoma, breast cancer, ovarian cancer, testicular cancer).

**Tandem Stem Cell Transplants**
Tandem stem cell transplants may be a covered benefit for specific conditions if noted as covered in the applicable section of this policy. Use of tandem transplants for some conditions is considered experimental and investigational.

**Umbilical Cord Blood Stem Cell Transplant (UCBSCT)**
Priority Health covers UCBSCT in patients who meet all eligibility requirements for an allogeneic stem cell transplant. Priority Health does not cover UCBSCT for patients not meeting patient selection criteria for allogeneic stem cell transplant. This coverage decision is based on lack of evidence regarding safety and efficacy of stem cell transplant in patients whose primary disease or overall physical condition do not warrant this procedure.

**Stem Cell Implant for Spinal Cord Injury**
Stem cell implants for spinal cord injury are considered experimental and not a covered benefit.

**Other Non-covered Indications**
The following are considered experimental and unproven and are excluded from coverage:

- autologous stem cell transplantation for Crohn’s Disease
- stem cell therapy for erectile dysfunction
- autologous bone marrow cells, including transendocardial delivery, for coronary artery disease, left ventricular dysfunction, heart failure or angina
- age-related macular degeneration
- amyotrophic lateral sclerosis
• multiple sclerosis  
• diabetes mellitus (type I)  
• essential thrombocythemia  
• polycythemia vera  
• recessive dystrophic epidermolysis bullosa  
• retinitis pigmentosa  
• thrombotic thrombocytopenic purpura

Definitions

Tandem Transplantation is defined as two or more planned courses of high dose chemotherapy and stem cell support, either autologous or allogeneic. Tandem transplants are typically administered at intervals of two to six months, contingent on recovery from prior toxicity. Multiple cycles of high-dose chemotherapy with stem cell transplantation differs from tandem transplant in that more time is allowed between transplantation to permit hematopoietic recovery.

Responsive is defined as a tumor showing either a complete or partial remission.

Partial remission is defined as at least a 50% reduction in tumor burden.

Relapse is defined as a tumor recurrence after a prior complete remission

Refractory disease is a failure to attain a complete or partial response. The refractoriness can be primary (failure to respond to initial therapy) or secondary (initial response but failure to respond after disease relapse).

Myeloablative Chemotherapy is high-dose chemotherapy that kills cells in the bone marrow, including cancer cells. It lowers the number of normal blood-forming cells in the bone marrow, and can cause severe side effects. Myeloablative chemotherapy is usually followed by a bone marrow or stem cell transplant to rebuild the bone marrow.

Non-myeloablative transplants or “mini-transplants” or mini-allograft or reduced intensity conditioning transplant: lower and less toxic doses of chemotherapy and radiation are given, followed by the infusion of donor stem cells.

Sources of Stem Cells

Autologous: Stem cells may be harvested from the patient's bone marrow or more commonly, peripheral blood. Peripheral stem cells are harvested via one or more pheresis procedures. A prior course of chemotherapy (typically cyclophosphamide) or growth factors or both can increase the number of circulating stem cells.

Syngeneic: Syngeneic stem cells refer to genetically identical bone marrow or peripheral stem cells harvested from an identical twin.

Allogeneic: Allogeneic stem cell support (ie. using stem cells from a donor) provides two
theoretical advantages; the lack of tumor contamination of autologous stem cells and the possibility of a beneficial graft vs. tumor effect. Allogeneic stem cells can be harvested from either the bone marrow or peripheral blood. See policy on Non-Myeloablative Allogeneic Stem Cell Transplant.

**Umbilical Cord Blood:** Blood harvested from the umbilical cord and placenta shortly after delivery of neonates contains stem and progenitor cells. Although cord blood is an allogeneic source, these stem cells are antigenically "naïve" and thus are associated with a lower incidence of rejection or graft vs. host disease.

**CODING INFORMATION**

**ICD-9 Codes** that may apply (for dates of service on or before September 30, 2015):
(List is not inclusive or a guarantee of coverage - see criteria)

- 200.00 – 200.88 Lymphosarcoma and reticulosarcoma and other specified malignant tumors of lymphatic tissue
- 201.00 – 201.98 Hodgkin's disease
- 202.00 – 202.08 Nodular lymphoma
- 202.80 – 202.98 Other lymphoma
- 203.00 – 203.82 Multiple myeloma and immunoproliferative neoplasms
- 204.00 – 208.92 Leukemia
- 238.4 Neoplasm of uncertain behavior of polycythemia vera
- 238.5 Neoplasm of uncertain behavior of histiocytic and mast cells
- 238.6 Neoplasm of uncertain behavior of plasma cells
- 238.71 – 238.79 Neoplasm of uncertain behavior of other sites and tissues
- 272.7 Lipidoses
- 277.30 Amyloidosis, unspecified
- 277.39 Other amyloidosis
- 277.5 Mucopolysaccharidosis
- 279.12 Wiskott-Aldrich syndrome
- 279.2 Combined immunity deficiency
- 279.9 Unspecified disorder of immune mechanism
- 282.40 – 282.47 Thalassemias
- 282.60 – 282.69 Sickle-cell diseases
- 284.01 – 284.9 Aplastic Anemia and other bone marrow failure syndromes
- 288.01 Congenital neutropenia
- 756.52 Osteopetrosis
- V42.81 Tissue replaced by transplant, bone marrow
- V42.82 Tissue replaced by transplant, peripheral stem cells

**ICD-10 Codes** that may apply (for dates of service on or after October 1, 2015):

- C81.00 – C81.99 Hodgkin lymphoma
- C82.00 – C82.99 Follicular lymphoma
- C83.00 – C83.99 Small cell B-cell lymphoma
- C84.60 – C84.99 Anaplastic large cell lymphoma
- C84.a0 – C84.a9 Cutaneous T-cell lymphoma
- C84.z0 – C84.z9 Other mature T/NK-cell lymphomas, unspecified site
C85.10 – C85.99 Other specified and unspecified types of non-Hodgkin lymphoma
C86.0 – C86.6 Other specified types of T/NK-cell lymphoma
C88.4 Extranodal marginal zone B-cell lymphoma of mucosa-associated lymphoid tissue [MALT-lymphoma]
C88.8 Other malignant immunoproliferative diseases
C88.9 Malignant immunoproliferative disease, unspecified
C90.00 – C90.32 Multiple myeloma and malignant plasma cell neoplasms
C91.00 – C91.z2 Lymphoid leukemia
C92.00 – C92.z2 Myeloid leukemia
C93.00 – C93.z2 Monocytic leukemia
C94.00 – C94.82 Other leukemias of specified cell type
C95.00 – C95.92 Leukemia of unspecified cell type
C96.9 Malignant neoplasm of lymphoid, hematopoietic and related tissue, unspecified
C96.z Other specified malignant neoplasms of lymphoid, hematopoietic and related tissue
D89.9 Disorder involving the immune mechanism, unspecified

Z48.290 Encounter for aftercare following bone marrow transplant
Z94.81 Bone marrow transplant status

NOT COVERED INDICATIONS

ICD-9 Codes that may apply (for dates of service on or before September 30, 2015):
174.0 – 174.9 Malignant neoplasm of female breast
175.0 – 175.9 Malignant neoplasm of male breast
183.0 Malignant neoplasm of ovary
191.0 -191.9 Malignant neoplasm of the brain
230.5 Carcinoma in situ of skin of trunk, except scrotum
233.0 Carcinoma in situ, breast
233.39 Carcinoma in situ, other female genital organ
283.0 Autoimmune hemolytic anemias
286.6 Defibrination syndrome
340 Multiple sclerosis
341.0 Neuromyelitis optica
411.0 – 411.89 Other acute and subacute forms of ischemic heart disease
413.0 – 413.9 Angina decubitus
414.00-414.07 Coronary atherosclerosis
414.3 Coronary atherosclerosis due to lipid rich plaque
414.4 Coronary atherosclerosis due to calcified coronary lesion
414.8 Other specified forms of chronic ischemic heart disease
414.9 Chronic ischemic heart disease, unspecified
555.0 – 555.9 Regional enteritis
556.0 – 556.9 Ulcerative colitis
571.5 Cirrhosis of liver without mention of alcohol
579.0 Celiac disease
607.84 Impotence of organic origin
701.0 Circumscribed scleroderma
710.0    Systemic lupus erythematosus
710.1    Systemic sclerosis
714.0    Rheumatoid arthritis
714.1    Felty's syndrome
714.2    Other rheumatoid arthritis with visceral or systemic involvement
907.2    Late effect of spinal cord injury
V42.81    Tissue replaced by transplant, bone marrow
V42.82    Tissue replaced by transplant, peripheral stem cells

**ICD-10 Codes** that may apply (for dates of service on or after October 1, 2015):

**C50.011- C50.929** Malignant neoplasm, breast
**C56.1 – C56.9** Malignant neoplasm, ovary
**C71.0 – C71.9** Malignant neoplasm of brain
**D04.5** Carcinoma in situ of skin of trunk
**D59.0** Drug-induced autoimmune hemolytic anemia Use additional code for adverse effect, if applicable, to identify drug
**D59.1** Other autoimmune hemolytic anemias
**D65** Disseminated intravascular coagulation [defibrination syndrome]

**G35** Multiple sclerosis
**G36.0** Neuromyelitis optica [Deyic]
**I20.0 – I20.9** Angina pectoris
**I24.0 – I24.9** Other acute ischemic heart diseases
**I25.10 – I25.9** Chronic ischemic heart disease
**K50.00 – K50.919** Crohn's disease
**K74.0** Hepatic fibrosis
**K74.60** Unspecified cirrhosis of liver
**K74.69** Other cirrhosis of liver
**K90.0** Celiac disease
**L53.8** Other specified erythematous conditions
**L90.0** Lichen sclerosus et atrophicus
**L94.0** Localized scleroderma [morphea]
**L94.1** Linear scleroderma
**L94.3** Sclerodactyly
**M05.00 – M06.9** Rheumatoid arthritis with rheumatoid factor
**M32.0 – M32.9** Systemic lupus erythematosus (SLE)
**M33.00 – M33.99** Dermatopolymyositis
**M34.0 – M34.9** Systemic sclerosis [scleroderma]

**N52.01 – N52.9** Systemic lupus erythematosus (SLE)
**S14.0xxA- S14.9xxS** Injury of nerves and spinal cord at neck level
**S24.0xxA – S24.9xxS** Injury of nerves and spinal cord at thorax level
**S34.01xA – S34.9xxS** Injury of lumbar and sacral spinal cord and nerves at abdomen, lower back and pelvis level

**CPT/HCPCS Codes**

38204    Management of recipient hematopoietic progenitor cell donor search and cell acquisition
38205  Blood-derived hematopoietic progenitor cell harvesting for transplantation, per collection; allogeneic
38206  Blood-derived hematopoietic progenitor cell harvesting for transplantation, per collection; autologous
38207  Transplant preparation of hematopoietic progenitor cells; cryopreservation and storage
38208  Transplant preparation of hematopoietic progenitor cells; thawing of previously frozen harvest, without washing
38209  Transplant preparation of hematopoietic progenitor cells; thawing of previously frozen harvest, with washing
38210  Transplant preparation of hematopoietic progenitor cells; specific cell depletion within harvest, T-cell depletion
38211  Transplant preparation of hematopoietic progenitor cells; tumor cell depletion
38212  Transplant preparation of hematopoietic progenitor cells; red blood cell removal
38213  Transplant preparation of hematopoietic progenitor cells; platelet depletion
38214  Transplant preparation of hematopoietic progenitor cells; plasma (volume) depletion
38215  Transplant preparation of hematopoietic progenitor cells; cell concentration in plasma, mononuclear, or buffy coat layer

38230  Bone marrow harvesting for transplantation; allogeneic
38232  Bone marrow harvesting for transplantation; autologous
38240  Hematopoietic progenitor cell (HPC); allogeneic transplantation per donor
38241  Hematopoietic progenitor cell (HPC); autologous transplantation
38242  Allogeneic lymphocyte infusions
38243  Hematopoietic progenitor cell (HPC); HPC boost  *(no prior authorization required)*

81267  Chimerism (engraftment) analysis, post transplantation specimen (eg, hematopoietic stem cell), includes comparison to previously performed baseline analyses; without cell selection
81268  Chimerism (engraftment) analysis, post transplantation specimen (eg, hematopoietic stem cell), includes comparison to previously performed baseline analyses; with cell selection (eg, CD3, CD33), each cell type

86367  Stem cells (i.e., CD34), total count
88240  Cryopreservation, freezing and storage of cells, each cell line
88241  Thawing and expansion of frozen cells, each aliquot

86812 – 86822  Tissue typing
86920 – 86926  Compatibility testing

96401 - 96549  Chemotherapy  *(no prior authorization required)*

S2140  Cord blood harvesting for transplantation, allogeneic  *(Not payable for Medicaid or Medicare)*
S2142  Cord blood-derived stem-cell transplantation, allogeneic  *(Not payable for Medicaid or Medicare)*

Not Covered
0263T  Intramuscular autologous bone marrow cell therapy, with preparation of harvested cells, multiple injections, 1 leg, including ultrasound guidance, if performed; complete procedure including unilateral or bilateral bone marrow harvest
Intramuscular autologous bone marrow cell therapy, with preparation of harvested cells, multiple injections, 1 leg, including ultrasound guidance, if performed; complete procedure excluding bone marrow harvest

Intramuscular autologous bone marrow cell therapy, with preparation of harvested cells, multiple injections, 1 leg, including ultrasound guidance, if performed; unilateral or bilateral bone marrow harvest only for intramuscular autologous bone marrow cell

Bone marrow or blood-derived stem cells (peripheral or umbilical), allogeneic or autologous, harvesting, transplantation, and related complications; including: pheresis and cell preparation/storage; marrow ablative therapy; drugs, supplies, hospitalization with outpatient follow-up; medical/surgical, diagnostic, emergency, and rehabilitative services; and the number of days of pre and post transplant care in the global definition

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