JOHNS HOPKINS HEALTHCARE

| Medical Policy: Bone Marrow and Stem Cell Transplantation |
| Department: Health Services |
| Lines of Business: EHP, USFHP, PPMCO, ADVANTAGE MD |

**Policy Number** CMS02.10

**Overview**

Johns Hopkins HealthCare LLC (JHHC) provides a full spectrum of health care products and services for Employer Health Programs, Priority Partners, Advantage MD, and US Family Health Plan. Each line of business possesses its own unique contract and guidelines which, for benefit and payment purposes, should be consulted to know what benefits are available for reimbursement. Specific contract benefits, guidelines or policies supersede the information outlined in this policy.

For Advantage MD, see Medicare Coverage Database:
National Coverage Determination (NCD) for Stem Cell Transplantation Formerly 110.8.1 (110.23)

**POLICY:**

For US Family Health Plan see TRICARE Policy Manual 6010.57-M, February 1, 2008, High Dose Chemotherapy (HDC) and Stem Cell Transplantation: Chapter 4, Section 23.1.

I. All transplants must be performed at a facility certified for bone marrow transplant (BMT).

II. When benefits are provided under the member’s contract, JHHC considers evaluation for bone marrow and stem cell transplant medically necessary when sufficient clinical information is provided by the transplant center to substantiate that the patient has no contraindications to transplantation listed below.

III. Once the evaluation has been completed, JHHC will make a determination regarding approval of the transplant using the condition-specific criteria below.

**GENERAL MEDICAL CRITERIA:**

I. For autologous (marrow or peripheral blood) patients, there must be adequate bone marrow function for marrow harvesting or PBSC (Peripheral Blood Stem Cell) mobilization: absolute neutrophil count ≥ 1,000/ul, platelets ≥ 75,000/ul.

II. The following contraindications apply to all bone marrow and stem cell transplants:
   A. Major psychiatric illness that cannot be managed sufficiently to allow post-transplant care and safety
B. Evidence of significant non-compliance  
C. Multiple uncorrectable congenital anomalies  
D. Severe neurological deficit  
E. Life expectancy with successful transplant < 5 years  
F. Active substance abuse (drugs, alcohol)  
G. Advanced cardiopulmonary disease  
H. Significant organ system failure  
I. Pregnancy  

III. CANCER AND RELATED INDICATIONS:  

Once the evaluation has been completed, JHHC will make a determination regarding approval of the transplant using the condition-specific criteria below:  
A. When benefits are provided under the member’s contract, JHHC considers allogeneic hematopoietic cell transplantation medically necessary for the treatment of Acute lymphocytic leukemia (ALL), when members meet the transplanting institution's selection criteria.  
1. In the absence of an institution's selection criteria, JHHC considers allogeneic hematopoietic cell transplantation medically necessary 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 members in 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 considered medically necessary for the treatment of ALL for members with no persistent disease who meet ALL of the selection criteria above.  
   b. Persons with persistent disease should not be candidates for a mini-allograft transplant.  
   c. Autologous hematopoietic cell transplantation is considered medically necessary for persons with standard risk ALL where no suitable donor is available.  

B. When benefits are provided under the member’s contract, JHHC considers autologous hematopoietic cell transplantation medically necessary for the treatment of Acute Myelogenous Leukemia (AML) when members meet the transplanting institution's selection criteria.  
1. In the absence of an institution's selection criteria, JHHC considers autologous hematopoietic cell transplantation medically necessary for the treatment of AML for ANY indication (e.g., first or second remission or relapsed AML if responsive to intensified induction chemotherapy) except as first-line treatment.
2. Allogeneic hematopoietic cell transplantation (allo-HSCT) (ablative or mini-allograft) is considered medically necessary for the treatment of AML when members meet the transplanting institution's selection criteria.
   a. In the absence of an institution's selection criteria, JHHC considers allogeneic hematopoietic cell transplantation for the treatment of AML in ANY one of the following indications:
      i. Members who have relapsed following a prior autologous hematopoietic cell transplantation and who are medically able to tolerate the procedure, OR;
      ii. Poor-risk to intermediate-risk AML in remission, OR;
      iii. Primary refractory AML (i.e., leukemia that does not achieve a complete remission after conventional dose chemotherapy)
   b. Repeat autologous hematopoietic cell transplantation or allogeneic hematopoietic cell transplantation (ablative or mini-allograft) is considered medically necessary for the treatment of AML when members meet the transplanting institution's selection criteria.
   c. In the absence of an institution's selection criteria, JHHC considers a repeat autologous or allogeneic hematopoietic cell transplantation (ablative or mini-allograft) medically necessary 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 hematopoietic cell transplantation.
   d. Unless specific benefits are provided under the members contract, repeat allogeneic hematopoietic cell transplantation (ablative or mini-allograft) is considered experimental and investigational for members with persistent or progressive AML disease who have not been in remission as it does not meet Technology Evaluation Criteria (TEC) #2-5.
   e. Unless specific benefits are provided under the members contract, repeat autologous hematopoietic cell transplantation for AML is considered experimental and investigational as it does not meet Technology Evaluation Criteria (TEC) #2-5.

C. When benefits are provided under the member’s contract, JHHC considers Allogeneic (ablative or non-myeloablative) hematopoietic cell transplantation medically necessary for the treatment of Chronic Myelo-Monocytic Leukemia (CMML) and Juvenile Myelo-Monocytic Leukemia (JMML) when a matched or haploidentical donor is available.
1. Repeat allogeneic (ablative or non-myeloablative) hematopoietic cell transplantation due to primary graft failure or failure to engraft is considered medically necessary for the treatment of CMML and JMML.
2. Unless specific benefits are provided under the members contract, Autologous hematopoietic cell transplantation for the treatment of CMML and JMML is considered experimental and investigational as it does not meet Technology Evaluation Criteria (TEC) #2-5.
D. Allogeneic (ablative or non-myeloablative) hematopoietic cell transplantation is considered medically necessary for T-Cell Prolymphocytic Leukemia.

E. Hematopoietic cell transplantation (allogeneic or autologous) is considered medically necessary as consolidation therapy of Acute Promyelocytic Leukemia in second or subsequent remission.

F. When benefits are provided under the member’s contract, JHHC considers Allogeneic hematopoietic cell transplantation medically necessary for the treatment of Chronic Myelogenous Leukemia (CML) when the member meets the transplanting institution's written eligibility criteria.
   1. In the absence of such criteria, allogeneic hematopoietic cell transplantation is considered medically necessary for the treatment of members with CML who have failed to respond to, who have developed resistance to, or who are intolerant to tyrosine kinase inhibitors (imatinib, dasatinib, nilotinib) for persons without serious organ dysfunction based on the transplanting institution's evaluation.
   2. Unless specific benefits are provided under the member's contract, Autologous hematopoietic cell transplantation (autologous bone marrow/peripheral stem cell transplantation [auto-BM/PSCT]) is considered experimental and investigational for the treatment of CML under all circumstances as it does not meet Technology Evaluation Criteria (TEC) #2-5.

G. When benefits are provided under the member’s contract, JHHC considers autologous hematopoietic cell transplantation medically necessary for the treatment of Hodgkin's Disease (HD) when members meet the transplanting institution's selection criteria.
   1. In the absence of such criteria, autologous hematopoietic cell transplantation is considered medically necessary for the treatment of HD when BOTH of the following selection criteria are met:
      a. The member is in primary induction failure or beyond first remission, AND;
      b. The member is without serious organ dysfunction based on the transplanting institution's evaluation.
   2. Allogeneic hematopoietic cell transplantation is considered medically necessary for the treatment of members with relapsed HD (including members who have relapsed or have had persistent disease from an autologous hematopoietic cell transplant) or primary refractory HD when the member meets the transplanting institution's selection criteria.
      a. In the absence of such criteria, allogeneic hematopoietic cell transplantation is considered medically necessary for the treatment of members with relapsed or primary refractory HD when BOTH of the following selection criteria are met:
         i. The member is in primary induction failure or beyond first remission, AND;
         ii. The member is without serious organ dysfunction based on the transplanting institution's evaluation.
b. Non-myeloablative allogeneic hematopoietic cell transplantation ("mini-transplant," reduced intensity conditioning transplant) is considered medically necessary for the treatment of members with relapsed HD (including members who have relapsed or have had persistent disease after an autologous hematopoietic cell transplant), OR; primary refractory HD when they are eligible for conventional allografting.

c. 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.

H. When benefits are provided under the member’s contract, JHHC considers autologous hematopoietic cell transplantation for the treatment of persons with relapsed or primary refractory (see "Note" below) Non-Hodgkin’s Lymphoma (NHL) medically necessary when members meet the transplanting institution's protocol eligibility criteria.

1. In the absence of a protocol, autologous hematopoietic cell transplantation is considered medically necessary for the treatment of NHL when ALL of the following selection criteria are met:
   a. Person has relapsed or refractory NHL*, AND;
   b. Upon clinical review, JHHC may also consider autologous hematopoietic cell transplantation medically necessary for persons in first clinical remission with lymphoblastic NHL, Burkitt’s lymphoma, mediastinal B-cell lymphoma, mantle cell lymphoma, high-risk diffuse large B-cell lymphoma and other NHLs that are associated with poor prognosis.
   c. Evidence of chemotherapy responsive (see note below) disease,*, AND;
   d. Upon medical review, autologous hematopoietic cell transplantation may be considered medically necessary for persons with chemoresistant disease where disease is relapsed and widely metastatic and allogeneic transplantation cannot be offered.
   e. There is no evidence of serious organ dysfunction based upon the transplanting institution's evaluation.

*Note ~ Responsiveness is defined as a tumor demonstrating either a complete or partial remission. Partial remission (response) is defined as at least a 50% decrease in tumor burden.

*Note ~ 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).

I. When benefits are provided under the member’s contract, JHHC considers autologous or allogeneic hematopoietic cell transplantation for the treatment of persons with Selected Childhood Solid Tumors, High-Risk Neuroblastomas (see below for definition of high-risk neuroblastoma) medically necessary in any of the following situations when the member
meets the transplanting institution's protocol selection criteria.

1. In the absence of a protocol, autologous or allogeneic hematopoietic cell transplantation is considered medically necessary for the treatment of high-risk neuroblastoma in members without concurrent disease that would seriously compromise the chance of obtaining a durable complete remission and when ANY of the following selection criteria are met:
   a. As primary treatment for persons in Stage II to Stage III neuroblastoma (see table in the background section below for staging of neuroblastoma) when associated with more than 10 copies of the n-myc oncogene, OR;
   b. As primary treatment for persons in Stage IV neuroblastoma, OR;
   c. As therapy for primary recurrent or refractory (see note below) disease when further treatment with a conventional-dose therapy is unlikely to attain a durable remission.

2. High-risk neuroblastoma is defined as ANY ONE of the following categories:
   a. Stage IV disease in infants less than 1 year of age with amplified n-myc gene status, OR; Persons 1 year of age or older, OR;
   b. Stage IVS disease in infants less than 1 year of age with amplified n-myc gene status, OR;
   c. Stage III disease in infants less than 1 year of age with amplified n-myc gene status, OR; Persons 1 year of age or older with amplified n-myc gene status and/or unfavorable histology, OR;
   d. Stage IIA or IIB disease, in persons 1 year of age or older, with amplified n-myc gene status and unfavorable histology.

3. Repeat allogeneic or autologous hematopoietic cell transplantation is considered medically necessary for persons with chemosensitive neuroblastoma who have relapsed after an autologous hematopoietic cell transplant.

4. Tandem (also known as sequential) transplantation is considered medically necessary for the treatment of persons with high-risk neuroblastoma who meet the criteria for hematopoietic cell transplantation set forth above.

5. Autologous hematopoietic cell transplantation is considered medically necessary for ANY of the following:
   a. Treatment of members with relapsed or progressive chemotherapy sensitive Ewing's sarcoma family of tumors, OR;
   b. Treatment of members with primitive neuroectodermal tumors (PNET) including medulloblastoma and pineoblastoma, OR;
   c. Treatment of members with ependymoma who are ineligible for radiotherapy, OR;
   d. For members with extraocular retinoblastoma.

6. Primary refractory is defined as a tumor that does not achieve a complete remission after initial standard-dose chemotherapy. Relapse is defined as a tumor recurrence after a prior complete remission.
J. When benefits are provided under the member’s contract, JHHC considers autologous hematopoietic stem cell transplantation in young adults with Primitive Neuroectodermal Tumors, Medulloblastoma, and Ewing Sarcoma family of tumors medically necessary when criteria are met above under [Selected Childhood Solid Tumors](#).

K. Unless specific benefits are provided under the member’s contract, JHHC considers autologous hematopoietic cell transplantation for Breast Cancer experimental and investigational as it does not meet Technology Evaluation Criteria (TEC) #2-5.

1. Unless specific benefits are provided under the member’s contract, JHHC considers tandem hematopoietic cell transplantation for breast cancer experimental and investigational as it does not meet Technology Evaluation Criteria (TEC) #2-5.

2. Unless specific benefits are provided under the member’s contract, JHHC considers allogeneic hematopoietic cell transplantation for breast cancer experimental and investigational as it does not meet Technology Evaluation Criteria (TEC) #2-5.

L. When benefits are provided under the member’s contract, JHHC considers autologous hematopoietic cell transplantation medically necessary for the treatment of persons with relapsed germ cell tumors of the ovary that were responsive to standard chemotherapy.

1. Autologous hematopoietic cell transplantation is considered medically necessary as consolidation therapy for persons with germ cell tumors of the ovary that is in complete remission.

2. Tandem autologous hematopoietic cell transplantation is considered medically necessary for persons with germ cell tumors of the ovary that is in remission.

M. When benefits are provided under the member’s contract, JHHC considers autologous hematopoietic cell transplantation medically necessary for the treatment of persons with Testicular cancer who do not attain a complete remission after an initial course of standard-dose chemotherapy, i.e., those with refractory (less than 50% reduction in tumor burden) testicular cancer or those exhibiting a partial response (at least a 50% reduction in tumor burden).

1. Autologous hematopoietic cell transplantation as consolidation therapy is considered medically necessary for persons with testicular cancer who relapse after an initial course of standard-dose chemotherapy.

2. Tandem autologous hematopoietic cell transplantation is considered medically necessary for persons with testicular cancer who have relapsed.

N. When benefits are provided under the member’s contract, JHHC considers allogeneic (ablative and non-myeloablative) hematopoietic cell transplantation medically necessary for individuals with intermediate-risk or high-risk Myelodysplastic Syndrome (MDS), and who have not responded to prior therapy and have an available human leukocyte antigen (HLA)-compatible donor.
1. Repeat allogeneic (ablative or non-myeloablative) hematopoietic cell transplantation is considered medically necessary for individuals with intermediate-risk or high-risk MDS due to primary graft failure or failure to engraft.

O. When benefits are provided under the member’s contract, JHHC considers allogeneic (ablative and non-myeloablative) hematopoietic cell transplantation medically necessary for individuals with Myelofibrosis (MF) when ANY of the following criteria are met:
   1. The individual is dependent on transfusions of red blood cells, OR;
   2. The individual is dependent on transfusions of platelets or has frequent infarctions, OR;
   3. The individual has an absolute neutrophil count less than 1000/mm³, OR;
   4. The individual is resistant to conservative therapy, OR;
   5. The individual has intermediate or high risk MF.
   6. JHHC considers a repeat allogeneic (ablative or non-myeloablative) hematopoietic cell transplantation medically necessary for individuals with myelofibrosis and primary graft failure or who have relapsed.

P. When benefits are provided under the member’s contract, JHHC considers autologous hematopoietic cell transplantation medically necessary as salvage treatment for chemosensitive Waldenstrop Macroglobulinemia.

Q. When benefits are provided under the member’s contract, JHHC considers autologous hematopoietic cell transplantation medically necessary for the treatment of Multiple Myeloma (MM), amyloidosis, or polyneuropathy, organomegaly, endocrinopathy, monoclonal gammopathy, and skin changes (POEMS) syndrome when the transplanting institution's written eligibility criteria are met.
   1. In the absence of such criteria, JHHC considers autologous hematopoietic cell transplantation medically necessary for the treatment of MM or POEMS syndrome when ALL of the following selection criteria are met:
      a. Member must not have significant co-morbid medical conditions, AND;
      b. Members should not have had extensive prior chemotherapy or radiation therapy (i.e., more than 1 year of alkylator-based chemotherapy; radiation therapy to no more than 10% of marrow producing bones, AND;
      c. The member has adequate major organ function based on the transplant institution's evaluation.
      d. Members with indolent myeloma, smoldering myeloma, and monoclonal gammopathy of uncertain significance [MGUS] are excluded.
   2. Allogeneic hematopoietic cell transplantation is considered medically necessary for the treatment of MM or POEMS syndrome when the member meets the transplanting institution's protocol eligibility criteria.
      a. In the absence of a protocol, JHHC considers allogeneic hematopoietic cell transplantation medically necessary for the treatment of MM or POEMS syndrome
when the member has adequate major organ function based upon the transplanting institution's evaluation.

b. JHHC considers non-myeloablative allogeneic hematopoietic cell transplantation ("mini-transplant," reduced intensity conditioning transplant) medically necessary for the treatment of persons with MM or POEMS syndrome when they are eligible for conventional allografting.

c. Tandem (also known as sequential) transplants are considered medically necessary for the treatment of MM or POEMS syndrome when the transplanting institution's protocol eligibility criteria are met.

d. In the absence of a protocol, JHHC considers tandem 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 for the treatment of MM or POEMS syndrome when the aforementioned criteria 1a – 1f as well as ALL of the following selection criteria are met:
   i. Members with Durie-Salmon stage I (1 bone lesion), II or III myeloma, AND;
   ii. Planned 1st and 2nd transplantation should be within a 6-month period.

e. Exclusion Criteria for Single or Tandem Transplantation (any of the following):
   i. Inadequate cardiac, renal, pulmonary, or hepatic function, OR;
   ii. Presence of another life-limiting cancer or cancer that may become life-threatening with immunosuppression, OR;
   iii. Presence of psychiatric disease that would interfere with the member’s ability to comply with the therapeutic regimen.

f. A second course of autologous hematopoietic cell transplantation in members who have relapsed is not considered tandem transplantation. A second course of autologous hematopoietic cell transplantation may be considered medically necessary for the treatment of responsive MM or POEMS syndrome that has relapsed after a durable complete or partial remission following an autologous transplantation.

R. When benefits are provided under the member’s contract, JHHC considers allogeneic hematopoietic cell transplantation medically necessary for the treatment of ANY of the following when members meet the transplanting institution's selection criteria:
1. Severe aplastic anemia
2. Diamond-Blackfan anemia
3. Fanconi's anemia
4. Paroxysmal nocturnal hemoglobinuria
5. Pure red cell aplasia
   a. In the absence of the transplant institution's selection criteria, JHHC considers allogeneic hematopoietic cell transplantation medically necessary for the treatment
of severe aplastic anemia when the member has AT LEAST 3 OF THE 4 following features:

i. Bone marrow cellularity less than 25 % (markedly hypocellular)
ii. Neutrophil count less than 0.5 x 10^9/L
iii. Reticulocyte count less than 1 % or less than 20 x 10^9/L (corrected for hematocrit)
iv. Untransfused platelet count less than 20 x 10^9/L

b. In the absence of an institution's selection criteria, JHHC considers allogeneic hematopoietic cell transplantation medically necessary for the treatment of Diamond-Blackfan anemia in persons who are refractory to corticosteroids.

c. In the absence of an institution's selection criteria, JHHC considers allogeneic hematopoietic cell transplantation medically necessary for Fanconi's anemia in persons with severe bone marrow failure, myelodysplastic syndrome, or acute myelogenous leukemia.

d. In the absence of an institution's selection criteria, JHHC considers allogeneic hematopoietic cell transplantation medically necessary in persons with paroxysmal nocturnal hemoglobinuria with ongoing transfusion requirements and a suitable HLA-matched donor.

e. In the absence of an institution's selection criteria, JHHC considers allogeneic hematopoietic cell transplantation medically necessary for the treatment of pure red cell aplasia when the criteria for the treatment of severe aplastic anemia listed above are met.

IV. NON-CANCER INDICATIONS:

Once the evaluation has been completed, JHHC will make a determination regarding approval of the transplant using the condition-specific criteria below:

A. When benefits are provided under the member’s contract, JHHC considers allogeneic hematopoietic cell transplantation medically necessary for the following Primary Immunodeficiency Disorders (PID):

1. Cartilage hair hypoplasia
2. CD40 ligand deficiency
3. Chediak-Higashi syndrome
4. Chronic granulomatous disease
5. DiGeorge syndrome
6. Griscelli syndrome type 2
7. Hemophagocytic lymphohistiocytosis
8. Immune dysregulation, polyendocrinopathy, enteropathy, X-linked syndrome (IPEX)
9. Kostmann syndrome (also known as severe congenital neutropenia, autosomal recessive type 3 (SCN3))
10. Leukocyte adhesion deficiency type 1
11. MHC class II deficiency
12. Severe combined immunodeficiency (SCID)
13. Severe congenital neutropenia
14. Wiskott-Aldrich syndrome (WAS)
15. WAS X-linked thrombocytopenia
16. X-linked lymphoproliferative syndrome

B. When benefits are provided under the member’s contract, JHHC considers allogeneic hematopoietic cell transplantation medically necessary for the treatment of Thalassemia Major (i.e., homozygous beta-thalassemia) in children or young adults when the member meets transplanting institution's written eligibility criteria.
   1. In the absence of such criteria, JHHC considers allogeneic hematopoietic cell transplantation medically necessary for the treatment of thalassemia major (i.e., homozygous beta-thalassemia) in children or young adults with an HLA-matched donor.
   2. When benefits are provided under the member’s contract, JHHC considers allogeneic hematopoietic cell transplantation medically necessary for the treatment of Sickle Cell Anemia in children or young adults when the member meets transplanting institution's written eligibility criteria.
   3. In the absence of such criteria, JHHC considers allogeneic hematopoietic cell transplantation medically necessary for the treatment of sickle cell anemia in children or young adults when BOTH of the following criteria are met:
      a. Members have an HLA-matched donor, AND;
      b. Members with either a history of stroke or at increased risk of stroke or end-organ damage (see Note below).
   4. Factors associated with increased risk of stroke or end-organ damage include recurrent chest syndrome, recurrent vaso-occlusive crises, and red blood cell alloimmunization on chronic transfusion therapy.

C. Unless specific benefits are provided under the member’s contract, JHHC considers hematopoietic cell transplantation (autologous or allogeneic) experimental and investigational for any of the following Autoimmune Diseases (not an all-inclusive list):
   1. Autoimmune cytopenia (e.g., autoimmune hemolytic anemia, Evans syndrome, and idiopathic thrombocytopenic purpura)
   2. Celiac disease
   3. Chronic inflammatory demyelinating polyradiculopathy
   4. Crohn's disease
   5. Dermatomyositis
   6. Juvenile rheumatoid arthritis
   7. Multiple sclerosis
   8. Neuromyelitis optica
   9. Polymyositis
10. Rheumatoid arthritis
11. Systemic lupus erythematosus
12. Systemic sclerosis
13. Systemic vasculitis
14. Ulcerative colitis

D. Unless specific benefits are provided under the member’s contract, JHHC considers hematopoietic cell transplantation (autologous or allogeneic) experimental and investigational for any of the following miscellaneous indications (not an all-inclusive list):
   1. Age-related macular degeneration
   2. Amyotrophic lateral sclerosis
   3. Diabetes mellitus (type I)
   4. Essential thrombocythemia
   5. Polycythemia vera
   6. Recessive dystrophic epidermolysis bullosa
   7. Retinitis pigmentosa
   8. Thrombotic thrombocytopenic purpura

V. Unless specific benefits are provided under the member’s contract, JHHC considers all other bone marrow and stem cell transplants experimental and investigational, as they do not meet Technology Evaluation Criteria (TEC) #2-5.

BACKGROUND:

Bone marrow transplants are often referred to as stem cell transplants. Bone marrow transplant procedures refer to the replacement of damaged bone marrow with specialized stem cells which eventually develop into healthy bone marrow. The procedure often occurs in several phases, taking from weeks to months to complete treatment. Research has shown bone marrow and stem cell transplantations are effective treatment options for patients with leukemia, lymphoma, myeloma, and other genetic diseases.

There are two common types of stem cell transplants: autologous and allogenic. The main difference between the two is that for an autologous procedure, the patient’s own stem cells are collected and stored for use. Patients that undergo an allogenic transplant receive their stem cells from a donor. Donors can include close relatives and/or individuals that aren’t related to the patient. However to avoid potential side effects it is recommended the donor’s stem cells match the patient’s stem cells as closely as possible.
CODING INFORMATION:

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Note: The following CPT/HCPCS codes are included below for informational purposes. Inclusion or exclusion of a CPT/HCPCS code(s) below does not signify or imply member coverage or provider reimbursement. The member's specific benefit plan determines coverage and referral requirements. All inpatient admissions require pre-authorization.

PRE-AUTHORIZATION REQUIRED
*Compliance with the provision in this policy may be monitored and addressed through post-payment data analysis and/or medical review audits*

<table>
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<th>Employer Health Programs (EHP) <strong>See Specific Summary Plan Description (SPD)</strong></th>
<th>Priority Partners (PPMCO) refer to COMAR guidelines and PPMCO SPD then apply policy criteria</th>
<th>US Family Health Plan (USFHP), TRICARE Medical Policy supersedes JHHC Medical Policy. If there is no Policy in TRICARE, apply the Medical Policy Criteria</th>
<th>Advantage MD, LCD and NCD Medical Policy supersedes JHHC Medical Policy. If there is no LCD or NCD, apply the Medical Policy Criteria</th>
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### HCPCS CODES

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#### ICD10 CODES ARE FOR INFORMATIONAL PURPOSES ONLY

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<td>Carcinoma in situ of other male genital organs [testis]</td>
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<tr>
<td>D46.0 - D46.9</td>
<td>Myelodysplastic syndromes (MDS)</td>
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<td>D47.2</td>
<td>Monoclonal gammopathy</td>
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<td>D47.29</td>
<td>Other specified neoplasms of uncertain behavior of lymphoid, hematopoietic and related tissue</td>
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<tr>
<td>D56.1</td>
<td>Beta thalassemia</td>
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<td>D57.00 - D57.819</td>
<td>Sickle-cell disorders</td>
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<tr>
<td>D59.5</td>
<td>Paroxysmal nocturnal hemoglobinuria [Marchiafava-Micheli]</td>
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<td>D60.0 - D61.9</td>
<td>Aplastic anemia</td>
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<td>D69.42</td>
<td>Congenital and hereditary thrombocytopenia purpura</td>
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<td>D70.0</td>
<td>Congenital agranulocytosis</td>
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<td>D71</td>
<td>Functional disorders of polymorphonuclear neutrophils</td>
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<td>D75.81</td>
<td>Myelofibrosis</td>
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<td>D76.1</td>
<td>Hemophagocytic lymphohistiocytosis</td>
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<td>D80.5</td>
<td>Immunodeficiency with increased immunoglobulin M [IgM]</td>
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<td>DiGeorge's syndrome</td>
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<td>D82.3</td>
<td>Immunodeficiency follow hereditary defective response to Epstein-Barr virus</td>
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<td>D84.8</td>
<td>Other specified immunodeficiencies</td>
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<td>E34.8</td>
<td>Other specified endocrine disorders</td>
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<td>E85.0 - E85.9</td>
<td>Amyloidosis</td>
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<td>Revenue Codes</td>
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<td>0302</td>
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<td>0360</td>
<td>Operating Room Services-General; Hospital; outpatient</td>
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<td>0362</td>
<td>Operating Room Services-Organ Transplant-Other than Kidney; Hospital; outpatient</td>
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<tr>
<td>0819</td>
<td>Acquisition of Body Components-Other Donor; Hospital; outpatient</td>
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</table>
REFERENCE STATEMENT:

Analyses of the scientific and clinical references cited below were conducted and utilized by the Johns Hopkins HealthCare LLC (JHHC) Medical Policy Team during the development and implementation of this medical policy. Per NCQA standards, the Medical Policy Team will continue to monitor and review any newly published clinical evidence and adjust the references below accordingly if deemed necessary.

REFERENCES:


