Stem Cell Transplantation

Policy Number: HS-069

Original Effective Date: 12/18/2008


APPLICATION STATEMENT

The application of the Clinical Coverage Guideline is subject to the benefit determinations set forth by the Centers for Medicare and Medicaid Services (CMS) National and Local Coverage Determinations and state-specific Medicaid mandates, if any.

DISCLAIMER

The Clinical Coverage Guideline (CCG) is intended to supplement certain standard WellCare benefit plans and aid in administering benefits. Federal and state law, contract language, etc., take precedence over the CCG (e.g., Centers for Medicare and Medicaid Services [CMS] National Coverage Determinations [NCDs], Local Coverage Determinations [LCDs] or other published documents). The terms of a member’s particular Benefit Plan, Evidence of Coverage, Certificate of Coverage, etc., may differ significantly from this Coverage Position. For example, a member’s benefit plan may contain specific exclusions related to the topic addressed in this CCG. Additionally, CCGs relate exclusively to the administration of health benefit plans and are NOT recommendations for treatment, nor should they be used as treatment guidelines. Providers are responsible for the treatment and recommendations provided to the member. The application of the CCG is subject to the benefit determinations set forth by the Centers for Medicare and Medicaid Services (CMS) National and Local Coverage Determinations and state-specific Medicaid mandates, if any. All links are current at time of approval by the Medical Policy Committee (MPC) and are subject to change prior to the annual review date. Lines of business (LOBs) are subject to change without notice; current LOBs can be found at www.wellcare.com. All guidelines can be found at this site as well but selecting the Provider tab, then “Tools” and “Clinical Guidelines”.

BACKGROUND

Stem-cell transplantation refers to the transplantation of hematopoietic stem cells (HSCs) into a patient. HSCs are immature cells that can develop into any of the three types of blood cells (red cells, white cells or platelets). HSCs are created in the bone marrow and are found in the bone marrow (BM) and peripheral blood. There is also a high concentration of HSCs in umbilical-cord blood. HSC transplantation (HSCT) can be either autologous (i.e., using the patient’s own stem cells) or allogeneic (i.e., using stem cells from a donor). HSCT is provided to patients with hematological disorders to rescue the patients from treatment-induced aplasia after high-dose chemotherapy.
and/or radiotherapy has been administered to eliminate the recipient’s immune system.

Durie-Salmon Classification for Multiple Myeloma

**Stage I** - The earliest stage of multiple myeloma and is characterized by the following:
- No sign of anemia (hemoglobin values are normal; greater than 10 g/dL)
- No sign of hypercalcemia (serum calcium values are normal; less than 12 mg/dL)
- X-rays of bone are normal or exhibit only a single bone plasmacytoma
- Low M protein production rates:
  - IgG value is less than 5 g/dL
  - IgA value is less than 3 g/dL
  - Bence-Jones protein (free immunoglobulin light chains in urine) as measured by protein electrophoresis is less than 4g/24h

**Stage II** - Intermediate stage of multiple myeloma; more advanced than Stage I but not as advanced as Stage III.

**Stage III** - Advanced stage of multiple myeloma; classification assigned if one or more of the following are present:
- Anemia (hemoglobin value is less than 8.5 g/dL)
- Hypercalcemia (serum calcium value greater than 12 mg/dL)
- X-rays reveal multiple bone lesions
- High M protein production rates:
  - IgG value is greater than 7 g/dL
  - IgA value is greater than 5 g/dL
  - Bence-Jones protein is greater than 12g/24h

**POSITION STATEMENT**

**Applicable To:**
- Medicaid
- Medicare

**Exclusions**

Allogeneic bone marrow transplantation is considered experimental and NOT a covered benefit for the treatment of multiple myeloma or any other indication not listed below.

Autologous Stem Cell Transplantation (AuSCT) is considered experimental and NOT a covered benefit for treatment for the following indications:
- Acute leukemia not in remission; OR,
- Chronic granulocytic leukemia; OR,
- Solid tumors (other than neuroblastoma); OR,
- Tandem transplantation (multiple rounds of AuSCT) for members with multiple myeloma; OR,
- Non-primary AL amyloidosis; OR,
- Indications not listed above.

**Coverage**

**Allogeneic Stem Cell Transplantation**

Members undergoing Allogeneic Stem Cell Transplantation (ASCT) must complete a pre-transplant evaluation as evidenced by all of the following:
- Psychosocial screen to include the following three items:
  - Drug / alcohol screen with no drug / alcohol abuse by history OR drug / alcohol free for ≥ 6 months
Allogeneic bone marrow transplantation is considered medically necessary and a covered benefit for the treatment of the following indications:

- Aplastic anemia; OR
- Leukemia; OR
- Leukemia in remission; OR
- Multiple myeloma; OR
- Myelofibrosis; OR
- Sickle cell disease; OR
- Severe combined immunodeficiency disease (SCID); OR
- Wiskott-Aldrich syndrome.

ASCT for Acute Myelogenous Leukemia (AML)

ASCT is considered medically necessary and a covered benefit for AML if ALL of the following criteria are met:

- HLA matched donor; AND, Therapeutic response confirmed by bone marrow Bx as evidenced by one of the following:
  - First remission in intermediate / high-risk patient; OR,
  - Second remission; OR,
  - Relapsed disease; OR,
  - Induction failure.
- Pre-transplant evaluation (see criteria above).

ASCT for Lymphocytic Leukemia

ASCT is considered medically necessary and a covered benefit for lymphocytic leukemia if ALL of the following criteria are met:

- HLA matched donor; AND, Therapeutic response confirmed by bone marrow Bx as evidenced by one of the following:
  - First remission in intermediate / high-risk patient; OR,
  - Second remission; OR,
  - Relapsed disease; OR,
  - Induction failure.
- Pre-transplant evaluation to include (in addition to items listed above), a neurological screen with results of one of the following:
  - Normal by history and physical examination; OR,
  - Positive symptoms from normal cytology by LP and treated CNS disease.

ASCT for Myelodysplastic Syndrome

ASCT is considered medically necessary and a covered benefit for myelodysplastic syndrome if ALL of the following criteria are met:

- HLA matched donor; AND, Intermediate-risk / high-risk patient by IPSS*; AND, Pre-transplant evaluation (see criteria above).
* NOTE: IPSS = International Prognostic Scoring System

**ASCT for Chronic Myelogenous Leukemia (CML)**

ASCT is considered medically necessary and a covered benefit for CML if ALL of the following criteria are met:

- HLA matched donor; AND,
- Disease stage confirmed by bone marrow Bx – chronic phase OR accelerated phase OR blast crisis; AND,
- No / incomplete response to imatinib mesylate; AND,
- Pre-transplant evaluation (see criteria above).

**ASCT for Non-Hodgkin’s Lymphoma**

ASCT is considered medically necessary and a covered benefit for Non-Hodgkin’s Lymphoma if ALL of the following criteria are met:

- HLA matched donor; AND,
- Type of Non-Hodgkin’s Lymphoma includes one of the following:
  - Diffuse large B cell with first remission in intermediate high-risk patient OR relapsed disease; OR,
  - Mantle cell and first remission; OR,
  - Burkitt’s lymphoma as evidenced by the following:
    - Therapeutic response with first remission OR relapsed disease in chemosensitive patient; AND,
    - A neurological screen with results of one of the following:
      - Normal by history and physical examination; OR,
      - Positive symptoms from normal cytology by LP and treated CNS disease.
  - OR
  - Mantle cell and first remission; OR,
  - Burkitt’s lymphoma as evidenced by the following:
    - Therapeutic response with first remission OR relapsed disease in chemosensitive patient; AND,
    - A neurological screen with results of one of the following:
      - Normal by history and physical examination; OR,
      - Positive symptoms from normal cytology by LP and treated CNS disease.
- Pre-transplant evaluation (see criteria above).

**ASCT for Chronic Lymphocytic Leukemia (CLL)**

ASCT is considered medically necessary and a covered benefit for CLL if ALL of the following criteria are met:

- HLA matched donor; AND,
- Therapeutic response confirmed by bone marrow Bx as evidenced by one of the following:
  - First remission in intermediate / high-risk patient; OR,
  - Second remission; OR,
  - Relapsed disease; OR,
  - Induction failure.
- Pre-transplant evaluation (see criteria above).

**Autologous Stem Cell Transplantation (AuSCT)**

Members undergoing AuSCT must complete a pre-transplant evaluation as evidenced by all of the following:

- Serum creatinine / creatinine clearance results; AND,
- Psychosocial screen to include the following three items:
  - Drug / alcohol screen with no drug / alcohol abuse by history OR drug / alcohol free for > 6 months
  - Behavioral health disorder with no behavioral health disorder by history and physical examination OR treated behavioral health disorder; AND
  - Adequate social / family support.
- Performance status of Karnofsky score ≥ 70% OR Eastern Cooperative Oncology Group grade 0-2.
AuSCT for Multiple Myeloma

AuSCT is considered medically necessary and a covered benefit for Durie-Salmon Stage II or III members if ALL of the following criteria are met:

- Newly diagnosed or responsive multiple myeloma*; AND,
- Adequate cardiac, renal, pulmonary, and hepatic function; AND,
- Treatment responsive as evidenced by at one of the following post induction therapy for active myeloma:
  - Improved symptoms; OR,
  - Relapsed disease; OR,
  - Refractory disease.

AND,

- Pre-transplant evaluation (see criteria above).

*NOTE: This includes those members with previously untreated disease, those with at least a partial response to prior chemotherapy (defined as a 50% decrease either in measurable paraprotein [serum and/or urine] or in bone marrow infiltration, sustained for at least one month), and those in responsive relapse.

AuSCT for Leukemia, Neuroblastoma, Hodgkin’s Lymphoma & Non-Hodgkin’s Lymphoma

AuSCT is considered medically necessary for the treatment of members with the following indications:

- Acute leukemia in remission who have a high probability of relapse and who have no human leucocyte antigens (HLA)-matched; OR,
- Resistant non-Hodgkin’s lymphomas or those presenting with poor prognostic features following initial response; OR,
- Recurrent or refractory neuroblastoma; OR,
- Advanced Hodgkin’s disease who have failed conventional therapy and have no HLA-matched donor.

AuSCT is considered medically necessary for Hodgkin's Lymphoma if a therapeutic response is evidenced by one of the following:

- Induction failure; OR,
- Partial remission; OR,
- Relapsed disease.

AND,

- Pre-transplant evaluation (see criteria above).

AuSCT is considered medically necessary and a covered benefit when diagnosed with one of the following types of Non-Hodgkin’s Lymphoma:

- Diffuse large B cell with first remission in intermediate high-risk patient OR relapsed disease; OR,
- Mantle cell and first remission; OR,
- Burkitt’s lymphoma as evidenced by the following:
  - Therapeutic response with first remission OR relapsed disease in chemosensitive patient; AND,
  - A neurological screen with results of one of the following:
    - Normal by history and physical examination; OR,
    - Positive symptoms from normal cytology by LP and treated CNS disease.

AND,

- Pre-transplant evaluation (see criteria above).

AuSCT for Acute Myelogenous Leukemia (AML)

AuSCT is considered medically necessary for the treatment of members with AML meeting the following criteria:

- Identified human leucocyte antigens (HLA) donor; AND,
- Therapeutic response confirmed by bone marrow with first remission ≥ 6 months AND second complete.
remission attained; AND,
- Pre-transplant evaluation to include (in addition to items listed above), a neurological screen with results of one of the following:
  - Normal by history and physical examination; OR,
  - Positive symptoms from normal cytology by LP and treated CNS disease.

**AuSCT for Breast Cancer**

**AuSCT is considered medically necessary** for breast cancer if ONE of the following criteria are met:
- Chemosensitive Stage IV disease; OR,
- Stage IV disease with relapse after a complete response to first line therapy for metastatic disease; OR,
- Therapy is administered as part of a clinical trial.

**CODING**

**Covered CPT® 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; per donor
- 38209 Transplant preparation of hematopoietic progenitor cells; thawing of previously frozen harvest, with washing; per donor
- 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
- 38220 Bone marrow; aspiration only
- 38221 Bone marrow; biopsy, needle or trocar
- 38230 Bone marrow harvesting for transplantation; autologous
- 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

**Covered HCPCS Codes**

- S2150 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.

**ICD-10-PCS (Inpatient Only)**

Refer to the following **ICD-10-PCS tables for specific code assignment based on physician documentation**.

**NOTE:** Per ICD-10-PCS Coding Guidelines, "ICD-10-PCS codes are composed of seven characters. Each character is an axis of classification that specifies information about the procedure performed. Within a defined code range, a character specifies the same type of information in that axis of classification. One of 34 possible values can be assigned to each axis of classification in the seven-character code".

- 079 Med/Surg Lymphatic and Hemic Systems Drainage
- 07D Med/Surg Lymphatic and Hemic Systems Extraction
- 302 Administration Circulatory Transfusion
- 6A5 Extracorporeal therapies; physiological systems; pheresis

**Covered ICD-10-CM Diagnosis Codes**

**ASCT - Allogeneic Stem Cell Transplantation Covered Diagnosis**

- C83.70 - Mantle cell lymphoma, unspecified site
- C83.70 - Burkitt lymphoma, unspecified site (C83.70)
- C85.80 - Other specified types of non-Hodgkin lymphoma unspecified site (C85.80)
- C91.00 - Acute lymphoblastic leukemia not having achieved remission
- C92.00 - Acute myeloblastic leukemia, not having achieved remission (C92.00)
- D46.0 - D46.9 Myelodysplastic syndromes, unspecified (D46.9) (D46.0) Refractory anemia without ring sideroblasts, so stated
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Covered ICD-10 Diagnosis Codes

D61.01 - D61.9 Constitutional (pure) red blood cell aplasia
D61.0 - D61.2 Severe combined immunodeficiency [SCID] with reticular dysgenesis (D61.0)
D62.0 Wiskott-Aldrich syndrome

AuSCT - Autologous Stem Cell Transplantation Covered Diagnosis
C50.011 - C50.929 Malignant neoplasm of nipple and areola, right female breast (C50.011)
C81.00 Nodular lymphocyte predominant Hodgkin lymphoma, unspecified site
C83.10 - C83.39 Mantle cell lymphoma, unspecified site (C83.10)
C83.70 - C83.79 Burkitt lymphoma, unspecified site (C83.70)
C85.80 - C85.89 Other specified types of non-Hodgkin lymphoma unspecified site (C85.80)
C90.00 - C90.02 Multiple myeloma not having achieved remission (C90.00)
C91.01 Acute lymphoblastic leukemia, in remission
C92.00 - C92.92 Acute myeloblastic leukemia

Various Codes
Neuroblastoma, by specified or unspecified site; recurrent or refractory;

D61.01 - D61.9 Constitutional (pure) red blood cell aplasia
D61.0 - D61.2 Severe combined immunodeficiency [SCID] with reticular dysgenesis (D61.0)
D62.0 Wiskott-Aldrich syndrome

AuSCT - Autologous Stem Cell Transplantation Covered Diagnosis
C50.011 - C50.929 Malignant neoplasm of nipple and areola, right female breast (C50.011)
C81.00 Nodular lymphocyte predominant Hodgkin lymphoma, unspecified site
C83.10 - C83.39 Mantle cell lymphoma, unspecified site (C83.10)
C83.70 - C83.79 Burkitt lymphoma, unspecified site (C83.70)
C85.80 - C85.89 Other specified types of non-Hodgkin lymphoma unspecified site (C85.80)
C90.00 - C90.02 Multiple myeloma not having achieved remission (C90.00)
C91.01 Acute lymphoblastic leukemia, in remission
C92.00 - C92.92 Acute myeloblastic leukemia

Various Codes
Neuroblastoma, by specified or unspecified site; recurrent or refractory;
Acute myeloblastic leukemia, in relapse
Acute myeloblastic leukemia, in remission
Other
Other lymphoid leukemia, in remission
Other lymphoid leukemia not having achieved remission
Mature B
Lymphoid leukemia, unspecified, in relapse
Lymphoid leukemia, unspecified, in remission
Lymphoid leukemia, unspecified not having achieved remission
Prolymphocytic leukemia of T
Prolymphocytic leukemia of T
Prolymphocytic leukemia of T
Adult
Adult T
Prolymphocytic leukemia of B
Prolymphocytic leukemia of B
Prolymphocytic leukemia of B
Chronic lymphocytic leukemia of B
Chronic lymphocytic leukemia of B
Chronic
Acute lymphoblastic leukemia, in relapse
Acute lymphoblastic leukemia not having achieved remission
Subcutaneous panniculitis
Enteropathy
Hodgkin lymphoma, unspecified, lymph nodes of multiple sites
Hodgkin lymphoma, unspecified, spleen
Hodgkin lymphoma, unspecified, lymph nodes of inguinal region and lower limb
Hodgkin lymphoma, unspecified, lymph nodes of axilla and upper limb
Hodgkin lymphoma, intrathoracic lymph nodes
Hodgkin lymphoma, lymph nodes of head, face, and neck
Hodgkin lymphoma, extranodal
Hodgkin lymphoma, lymph nodes of inguinal region and lower limb
Hodgkin lymphoma, lymph nodes of axilla and upper limb
Hodgkin lymphoma, intraabdominal lymph nodes
Hodgkin lymphoma, intrapelvic lymph nodes
Hodgkin lymphoma, lymph nodes of inguinal region and lower limb
Hodgkin lymphoma, lymph nodes of axilla and upper limb
Hodgkin lymphoma, spleen
Hodgkin lymphoma, unspecified site
Hodgkin lymphoma, lymph nodes of multiple sites
Hodgkin lymphoma, extranodal and solid organ sites
Hodgkin lymphoma, lymph nodes of axilla and upper limb
Hodgkin lymphoma, lymph nodes of inguinal region and lower limb
Hodgkin lymphoma, lymph nodes of multiple sites
Hodgkin lymphoma, nasal type
Hepatosplenic T-cell lymphoma
Enteropathy-type (intestinal) T-cell lymphoma
Subcutaneous panniculitis-like T-cell lymphoma
Acute lymphoblastic leukemia not having achieved remission
Acute lymphoblastic leukemia, in remission
Acute lymphoblastic leukemia, in relapse
Chronic lymphocytic leukemia of B-cell type not having achieved remission
Chronic lymphocytic leukemia of B-cell type in remission
Chronic lymphocytic leukemia of B-cell type in relapse
Prolymphocytic leukemia of B-cell type not having achieved remission
Prolymphocytic leukemia of B-cell type, in remission
Prolymphocytic leukemia of B-cell type, in relapse
Adult T-cell lymphoma/leukemia (HTLV-1-associated) not having achieved remission
Adult T-cell lymphoma/leukemia (HTLV-1-associated), in remission
Prolymphocytic leukemia of T-cell type not having achieved remission
Prolymphocytic leukemia of T-cell type, in remission
Prolymphocytic leukemia of T-cell type, in relapse
Lymphoid leukemia, unspecified not having achieved remission
Lymphoid leukemia, unspecified, in remission
Lymphoid leukemia, unspecified, in relapse
Mature B-cell leukemia Burkitt-type not having achieved remission
Mature B-cell leukemia Burkitt-type, in remission
Mature B-cell leukemia Burkitt-type, in relapse
Other lymphoid leukemia not having achieved remission
Other lymphoid leukemia, in remission
Other lymphoid leukemia, in relapse
Acute myeloblastic leukemia, in remission
Acute myeloblastic leukemia, in relapse
C92.41  Acute promyelocytic leukemia, in remission
C92.42  Acute promyelocytic leukemia, in relapse
C92.51  Acute myelomonocytic leukemia, in remission
C92.52  Acute myelomonocytic leukemia, in relapse
C92.61  Acute myeloid leukemia with 11q23-abnormality in remission
C92.62  Acute myeloid leukemia with 11q23-abnormality in relapse
D46.0  Refractory anemia without ring sideroblasts, so stated
D46.1  Refractory anemia with excess of blasts, unspecified
D46.20 Refractory anemia with excess of blasts 1
D46.21 Refractory anemia with excess of blasts 2
D46.3  Myelodysplastic syndrome, unspecified
D46.4  Myelodysplastic syndromes
D61.01 Constitutional (pure) red blood cell aplasia
D61.09 Other constitutional aplastic anemia
D81.0  Severe combined immunodeficiency [SCID] with reticular dysgenesis
D81.1  Severe combined immunodeficiency [SCID] with low T- and B-cell numbers
D81.2  Severe combined immunodeficiency [SCID] with low or normal B-cell numbers
D81.6  Major histocompatibility complex class I deficiency
D81.7  Major histocompatibility complex class II deficiency
D81.89 Other combined immunodeficiencies
D81.9  Combined immunodeficiency, unspecified
D82.0  Wiskott-Aldrich syndrome

Non-Covered ICD-10-CM Diagnosis Codes

ASCT - Allogeneic Stem Cell Transplantation non-covered diagnosis
C90.00 - C90.02 Multiple myeloma not having achieved remission (C90.00)

AuSCT - Autologous Stem Cell Transplantation non-covered diagnosis
C90.00 - C90.02 Tandem transplantation (multiple rounds of AuSCT) for members with multiple myeloma
C92.10 Chronic myeloid leukemia, BCR/ABL-positive, not having achieved remission
C92.11 Chronic myeloid leukemia , BCR/ABL-positive, in remission
C95.00 Acute leukemia of unspecified cell type not having achieved remission
C95.10 Chronic leukemia of unspecified cell type, not having achieved remission
E85.0 - E85.9 Amyloidosis , unspecified (E85.9)

Coding information is provided for informational purposes only. The inclusion or omission of a CPT, HCPCS, or ICD-10 code does not imply member coverage or provider reimbursement. Consult the member's benefits that are in place at time of service to determine coverage (or non-coverage) as well as applicable federal / state laws.

REFERENCES

MEDICAL POLICY COMMITTEE HISTORY AND REVISIONS

<table>
<thead>
<tr>
<th>Date</th>
<th>Action</th>
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<tr>
<td>9/7/2017, 11/3/2016</td>
<td>Approved by MPC. Updated item from CMS NCD.</td>
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<tr>
<td>5/7/2015, 6/5/2014</td>
<td>Approved by MPC. No changes.</td>
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<tr>
<td>5/2/2013</td>
<td>Approved by MPC. Added additional criteria for autologous and allogeneic stem cell transplantation.</td>
</tr>
<tr>
<td>5/13/2012</td>
<td>Approved by MPC. No changes.</td>
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<tr>
<td>12/1/2011</td>
<td>New template design approved by MPC.</td>
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