

## Stem Cell / Bone Marrow Transplants

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### IMPORTANT REMINDER

*The Medicare Advantage Medical Policy manual is not intended to override the member Evidence of Coverage (EOC), which defines the insured's benefits, nor is it intended to dictate how providers are to practice medicine. Physicians and other health care providers are expected to exercise their medical judgment in providing the most appropriate care for the individual member.*

*The Medicare Advantage Medical Policies are designed to provide guidance regarding the decision-making process for the coverage or non-coverage of services or procedures in accordance with the member EOC and the Centers of Medicare and Medicaid Services (CMS) policies, when available. In the event of a conflict, applicable CMS policy or EOC language will take precedence over the Medicare Advantage Medical Policy. In the absence of CMS guidance for a requested service or procedure, the health plan may apply their Medical Policy Manual or MCG™ criteria, both of which are developed with an objective, evidence-based process using scientific evidence, current generally accepted standards of medical practice, and authoritative clinical practice guidelines.*

*Medicare and EOCs exclude from coverage, among other things, services or procedures considered to be investigational, cosmetic, or not medically necessary, and in some cases, providers may bill members for these non-covered services or procedures. Providers are encouraged to inform members in advance when they may be financially responsible for the cost of non-covered or excluded services.*

## DESCRIPTION

Stem cell transplantation is a process in which stem cells are harvested from either a patient's (autologous) or donor's (allogeneic) bone marrow or peripheral blood for intravenous infusion.

Autologous stem cell transplantation (AuSCT) is a technique for restoring stem cells using the patient's own previously stored cells. AuSCT must be used to effect hematopoietic reconstitution following severely myelotoxic doses of chemotherapy (HDCT) and/or radiotherapy used to treat various malignancies.

Allogeneic hematopoietic stem cell transplantation (HSCT) uses a portion of a healthy donor's stem cell or bone marrow for intravenous infusion. Allogeneic HSCT may be used to restore function in recipients having an inherited or acquired deficiency or defect. Hematopoietic stem cells are multi-potent stem cells that give rise to all the blood cell types; these stem cells form blood and immune cells. A hematopoietic stem cell is a cell isolated from blood or bone marrow that can renew itself, differentiate to a variety of specialized cells, can mobilize out of the bone marrow into circulating blood, and can undergo programmed cell death, called

apoptosis - a process by which cells that are unneeded or detrimental will self-destruct. (NCD 110.23)

## MEDICARE ADVANTAGE POLICY CRITERIA

### Indication:

Listed by type of transplant (HSCT or AuSCT) and then by indication

CMS Coverage Manuals, National Coverage Determinations (NCD), and Noridian Local Coverage Determinations (LCD) and Articles (LCA)\*

Medical Policy Manual

### ALLOGENEIC HEMATOPOIETIC STEM CELL TRANSPLANTATION (HSCT)

*If the request is for HSCT, and if the indication is not in the following list, check the "All Others" list below. Also, additional coverage guidance is found in the "Policy Guidelines" section below.*

|          |  |
|----------|--|
| Leukemia | Stem Cell Transplantation Formerly<br>110.8.1 ( <a href="#">110.23</a> ) (Section B.I.a) |
|----------|--|

#### Examples:

- Chronic Lymphocytic Leukemia (CLL)
- Chronic Myelogenous Leukemia (CML)
- Acute Lymphoblastic Leukemia (ALL)
- Acute Myeloid Leukemia (AML)

|                       |  |
|-----------------------|--|
| Leukemia in remission | Stem Cell Transplantation Formerly<br>110.8.1 ( <a href="#">110.23</a> ) (Section B.I.a) |
|-----------------------|--|

#### Examples:

- Same as above

|                 |  |
|-----------------|--|
| Aplastic anemia | Stem Cell Transplantation Formerly<br>110.8.1 ( <a href="#">110.23</a> ) (Section B.I.a) |
|-----------------|--|

|  |  |
|--|--|
| Severe combined immunodeficiency disease (SCID) (Also known as Autoimmune disease) | Stem Cell Transplantation Formerly<br>110.8.1 ( <a href="#">110.23</a> ) (Section B.I.b) |
|--|--|

|                          |  |
|--------------------------|--|
| Wiscott-Aldrich syndrome | Stem Cell Transplantation Formerly<br>110.8.1 ( <a href="#">110.23</a> ) (Section B.I.b) |
|--------------------------|--|

| <b>Indication:</b><br><br><i>Listed by type of transplant (HSCT or AuSCT) and then by indication</i>   | <b>CMS Coverage Manuals, National Coverage Determinations (NCD), and Noridian Local Coverage Determinations (LCD) and Articles (LCA)*</b> | <b>Medical Policy Manual</b> |
|--|---|------------------------------|
| Myelodysplastic Syndromes (MDS)<br><br><b>NCD Definition:</b> "MDS refers to a group of diverse blood disorders in which the bone marrow does not produce enough healthy, functioning blood cells."              | Stem Cell Transplantation Formerly 110.8.1 ( <a href="#">110.23</a> ) ( <i>Section B.I.c</i> )  |                              |
| Multiple myeloma (MM) (on and after 1/26/2016)   | Stem Cell Transplantation Formerly 110.8.1 ( <a href="#">110.23</a> ) ( <i>Section B.I.d</i> )  |                              |
| Myelofibrosis (MF)   | Stem Cell Transplantation Formerly 110.8.1 ( <a href="#">110.23</a> ) ( <i>Section B.I.e</i> )  |                              |
| Severe, symptomatic sickle cell disease (SCD)  | Stem Cell Transplantation Formerly 110.8.1 ( <a href="#">110.23</a> ) ( <i>Section B.I.f</i> )  |                              |
| Multiple myeloma (MM) (between 5/24/1996 to 1/26/2016)   | Stem Cell Transplantation Formerly 110.8.1 ( <a href="#">110.23</a> ) ( <i>Section C.I</i> )  |                              |
| <b>AUTOLOGOUS STEM CELL TRANSPLANTATION (AuSCT)</b>  |   |                              |
| <i>If the request is for AuSCT, and if the indication is not in the following list, check the "All Others" list below. Also, additional coverage guidance is found in the "Policy Guidelines" section below.</i> |   |                              |
| Acute leukemia in remission  | Stem Cell Transplantation Formerly 110.8.1 ( <a href="#">110.23</a> ) ( <i>Section B.II.a.1</i> )   |                              |
| Non-Hodgkin's lymphomas  | Stem Cell Transplantation Formerly 110.8.1 ( <a href="#">110.23</a> ) ( <i>Section B.II.a.2</i> )   |                              |
| Neuroblastoma  | Stem Cell Transplantation Formerly 110.8.1 ( <a href="#">110.23</a> ) ( <i>Section B.II.a.3</i> )   |                              |
| Advanced Hodgkin's disease   | Stem Cell Transplantation Formerly 110.8.1 ( <a href="#">110.23</a> ) ( <i>Section B.II.a.4</i> )   |                              |

| <b>Indication:</b><br><br><i>Listed by type of transplant (HSCT or AuSCT) and then by indication</i> | <b>CMS Coverage Manuals, National Coverage Determinations (NCD), and Noridian Local Coverage Determinations (LCD) and Articles (LCA)*</b>   | <b>Medical Policy Manual</b>  |
|--|---|---|
| Multiple myeloma (MM)  | Stem Cell Transplantation Formerly 110.8.1 ( <a href="#">110.23</a> ) ( <i>Section B.II.b</i> )   |   |
| Primary amyloid light chain (AL) amyloidosis   | Stem Cell Transplantation Formerly 110.8.1 ( <a href="#">110.23</a> ) ( <i>Section B.II.c</i> )   |   |
| Acute leukemia not in remission  | Stem Cell Transplantation Formerly 110.8.1 ( <a href="#">110.23</a> ) ( <i>Section C.II.a</i> )   |   |
| Chronic granulocytic leukemia  | Stem Cell Transplantation Formerly 110.8.1 ( <a href="#">110.23</a> ) ( <i>Section C.II.b</i> )   |   |
| Solid tumors (other than neuroblastoma)  | Stem Cell Transplantation Formerly 110.8.1 ( <a href="#">110.23</a> ) ( <i>Section C.II.c</i> )   |   |
| Multiple myeloma (prior to 10/1/2000)  | Stem Cell Transplantation Formerly 110.8.1 ( <a href="#">110.23</a> ) ( <i>Section C.II.d</i> )   |   |
| Tandem transplantation for multiple myeloma  | Stem Cell Transplantation Formerly 110.8.1 ( <a href="#">110.23</a> ) ( <i>Section C.II.e</i> )   |   |
| Non-primary AL amyloidosis   | Stem Cell Transplantation Formerly 110.8.1 ( <a href="#">110.23</a> ) ( <i>Section C.II.f</i> )   |   |
| Primary AL amyloidosis (between 10/1/2000 to 3/14/2015)  | Stem Cell Transplantation Formerly 110.8.1 ( <a href="#">110.23</a> ) ( <i>Section C.II.g</i> )   |   |
| <b>ALL OTHER INDICATIONS NOT ADDRESSED BY NCD</b>  |   |   |
| Waldenström Macroglobulinemia (HSCT or AuSCT)  | <i>According to NCD 110.23, stem cell transplantation for indications not otherwise noted within the NCD as nationally covered or non-covered remain at Medicare Administrative Contractor discretion. Medicare coverage guidance is not available in the health plan's</i> | Hematopoietic Cell Transplantation Index, Transplant, <a href="#">Policy No. 45</a> (Select the applicable transplant policy within this index) ( <i>See "Note" below</i> ) |
| Astrocytomas (HSCT or AuSCT)   |   |   |
| Gliomas (HSCT or AuSCT)  |   |   |
| Breast cancer (HSCT only)  |   |   |

**Indication:**

*Listed by type of transplant (HSCT or AuSCT) and then by indication*

**CMS Coverage Manuals, National Coverage Determinations (NCD), and Noridian Local Coverage Determinations (LCD) and Articles (LCA)\***

**Medical Policy Manual**

Solid Tumors (HSCT only)

Central Nervous System (CNS) Embryonal Tumors and Ependymoma

*service area for stem cell transplantation for various carcinomas and conditions. Therefore, the health plan's medical policy is applicable for conditions not otherwise specified in the NCD.*

**Examples:**

- Medulloblastoma
- Medulloepithelioma
- Supratentorial PNETs [pineoblastoma, cerebral neuroblastoma, ganglioneuroblastoma]
- Ependymoblastoma
- Atypical teratoid/rhabdoid tumor [AT/RT])

*For **any** type of neuroblastoma, this section would apply to HSCT ONLY. All other types of CNS tumors and ependymoma, this section would apply to both HSCT and AuSCT*

Chronic Lymphocytic Leukemia (CLL)  
(AuHCT and tandem HCT only)

Chronic Myelogenous Leukemia (CML)  
(AuHCT and tandem HCT only)

Donor Lymphocyte Infusion (DLI)

**Indication:**

*Listed by type of transplant (HSCT or AuSCT) and then by indication*

**CMS Coverage Manuals, National Coverage Determinations (NCD), and Noridian Local Coverage Determinations (LCD) and Articles (LCA)\***

**Medical Policy Manual**

Epithelial Ovarian Cancer

*For cystic only. If for solid, see separate "solid tumor" listing) (HSCT or AuSCT)*

Genetic Diseases, acquired anemias (includes sickle cell disease, or SCD) (Not by the NCD)

Germ Cell Tumors

*Germ cells are in egg and sperm cells. Germ cell tumors may include testicular neoplasms [seminomas or nonseminomatous tumors] and ovarian and extragonadal germ-cell tumors [e.g., retroperitoneal or mediastinal tumors]*

Hodgkin Lymphoma (HSCT and tandem HCT only)

Non-Hodgkin Lymphoma (HSCT and tandem HCT only)

POEMS syndrome (HSCT or AuSCT)

*(Also known as osteosclerotic myeloma, Crow-Fukase syndrome, or Takasaki syndrome)*

**Indication:**

*Listed by type of transplant (HSCT or AuSCT) and then by indication*

**CMS Coverage Manuals, National Coverage Determinations (NCD), and Noridian Local Coverage Determinations (LCD) and Articles (LCA)\***

**Medical Policy Manual**

Small Lymphocytic Lymphoma and

Myeloproliferative Neoplasms (MPN) (*Not addressed by the NCD*)

**NOTE:** If a procedure or device lacks scientific evidence regarding safety and efficacy because it is investigational or experimental, the service is noncovered as not reasonable and necessary to treat illness or injury. ([Medicare IOM Pub. No. 100-04, Ch. 23, §30 A](#)). According to Title XVIII of the Social Security Act, §1862(a)(1)(A), only medically reasonable and necessary services are covered by Medicare. In the absence of a NCD, LCD, or other coverage guideline, CMS guidelines allow a Medicare Advantage Organization (MAO) to make coverage determinations, applying an **objective, evidence-based process, based on authoritative evidence**. ([Medicare IOM Pub. No. 100-16, Ch. 4, §90.5](#)). The Medicare Advantage Medical Policy - Medicine Policy No. M-149 - provides further details regarding the plan's evidence-assessment process (see Cross References).



## POLICY GUIDELINES

**Note:** The *Medicare Claims Processing Manual, Chapter 32 – Billing Requirements for Special Services*, [§90.2 - HCPCS and Diagnosis Coding – ICD-9-CM Applicable](#) provides a list of medical conditions that may be considered approved conditions for stem cell transplantation.

**Important note:** Stem cell transplantation is only covered when the coverage criteria in the NCD are satisfied. **Inclusion of a medical condition on the list does not imply automatic coverage. All applicable criteria from the cited policy reference must still be met.** (See also [§90.3 - Non-Covered Conditions](#).)

## REQUIRED DOCUMENTATION

The information below **must** be submitted for review to determine whether policy criteria are met. If any of these items are not submitted, it could impact our review and decision outcome:

- Type of stem cell or bone marrow transplant (autologous stem cell transplantation, or AuSCT, or allogeneic hematopoietic stem cell transplantation, HSCT);
- Indication being treated; and,
- All chart notes and medical records pertinent to the condition and treatment plan, including any past therapies and those outcomes;
- For allogeneic HSCT as a treatment of Myelodysplastic Syndromes (MDS) and multiple myeloma, documentation regarding the Medicare-approved, prospective clinical study, including the National Clinical Trial (NCT) (or study) number.

## CROSS REFERENCES

[Immunological Cellular Therapies and Gene Therapies](#), Medicine, Policy No. M-42

[Coverage with Evidence Development \(CED\) Studies and Registries](#), Medicine, Policy No. M-156

## REFERENCES

1. Services, [§90.6 - Clinical Trials for Allogeneic Hematopoietic Stem Cell Transplantation \(HSCT\) for Myelodysplastic Syndrome \(MDS\), B. Adjudication Requirements](#)
2. Medicare Coverage With Evidence Development Webpage - [Allogeneic Hematopoietic Stem Cell Transplant for MDS](#)

## CODING

**NOTE:** HCPCS codes S2140, S2142, and S2150 are Medicare Status “I” codes, and therefore, are not valid for Medicare or Medicare Advantage use.

| Codes | Number          | Description  |
|-------|-----------------|--|
| CPT   | 38204           | Management of recipient hematopoietic cell donor search and cell acquisition   |
|       | 38205           | Blood-derived hematopoietic progenitor cell harvesting for transplantation, per collection, allogeneic   |
|       | 38206           | ; autologous   |
|       | 38207           | Transplant preparation of hematopoietic progenitor cells; cryopreservation and storage   |
|       | 38208           | ; thawing of previously frozen harvest, without washing, per donor   |
|       | 38209           | ; thawing of previously frozen harvest with washing, per donor   |
|       | 38210           | ; specific cell depletion with harvest, T cell depletion   |
|       | 38211           | ; tumor cell depletion   |
|       | 38212           | ; red blood cell removal   |
|       | 38213           | ; platelet depletion   |
|       | 38214           | ; plasma (volume) depletion  |
|       | 38215           | ; cell concentration in plasma, mononuclear, or buffy coat layer   |
|       | 38220           | Diagnostic bone marrow; aspiration(s)  |
|       | 38221           | Diagnostic bone marrow; biopsy(ies)  |
|       | 38222           | Diagnostic bone marrow; biopsy(ies) and aspiration(s)  |
|       | 38230           | Bone marrow harvesting for transplantation; allogeneic   |
|       | 38232           | Bone marrow harvesting for transplantation; autologous   |
|       | 38240           | Hematopoietic progenitor cell (HPC); allogeneic transplantation per donor  |
|       | 38241           | ; autologous transplantation   |
|       | 38242           | Allogeneic lymphocyte infusions  |
| HCPCS | J9000–<br>J9999 | Chemotherapy drugs code range  |
|       | Q0083–<br>Q0085 | Chemotherapy administration code range   |
|       | S2140           | Cord blood harvesting for transplantation; allogeneic ( <i>Not valid for Medicare purposes</i> )   |
|       | S2142           | Cord blood derived stem-cell transplantation, allogeneic ( <i>Not valid for Medicare purposes</i> )  |
|       | S2150           | Bone marrow or blood-derived peripheral stem-cell harvesting and transplantation, allogeneic or autologous, including pheresis, high-dose chemotherapy, and the number of days of post-transplant care in the global definition (including drugs; hospitalization; medical surgical, diagnostic and emergency services) ( <i>Not valid for Medicare purposes</i> ) |

**\*IMPORTANT NOTE:** Medicare Advantage medical policies use the most current Medicare references available at the time the policy was developed. Links to Medicare references will take viewers to external websites outside of the health plan's web control as these sites are not maintained by the health plan.