Allogeneic Stem Cell Transplantation
Clinical Coverage Criteria

Overview

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

In an allogeneic hematopoietic stem cell transplant (HSCT), stem cells are donated to the patient from another person who is a genetically matched stem cell donor. This is usually a sibling with the same tissue type as the patient. Where no sibling is available, a search is made of donor registries to find a suitably matched unrelated stem cell donor. Allogeneic HSCTs can offer the best chance of curing a number of blood and bone marrow cancers and other diseases. They are complex procedures that carry significant risks. The complexities and risks may be increased even more with a mismatched donor or volunteer unrelated donor transplant. As such, allogeneic HSCTs are usually not suitable for all patients.

There are two types of allogeneic HSCT treatment plans available: myeloablative and non-myeloablative. Before a myeloablative allogeneic HSCT, the patient receives a conditioning regimen of high-dose chemotherapy and, sometimes, radiation therapy. This conditioning regimen serves two purposes: (1) it destroys any remaining cancer cells in the body and (2) it weakens the patient's immune system to keep the body from rejecting the donated stem cells. When a transplant is successful, the donated stem cells move to the bone marrow where the they will begin to produce new blood cells, including red blood cells, platelets and white blood cells. This process is called engraftment. One of the benefits of allogeneic HSCT is that after the donated cells engraft in the patient, they create a new immune system that attacks any remaining cancer cells in the patient's body. This is called the graft-versus-tumor effect and it may be even more important than the conditioning regimen that is administered to destroy the cancer cells. This benefit can only occur in allogeneic stem cell transplantation.

One complication of allogeneic HSCT is that despite the treatment to suppress the immune system, the patient's body may reject the donated stem cells before they are able to engraft in the bone marrow. Another complication of allogeneic HSCT is that the immune cells from the donor (the graft) may attack healthy cells in the patient's body (host). This is called graft-versus-host-disease (GVHD). GVHD can be mild, moderate or severe. There are treatments for GVHD, but in some patients, GVHD does not respond to treatment and can be fatal.

Myeloablative allogeneic HSCT for patients who are older or have overall poor health are relatively uncommon. This is because the pre-transplant conditioning regimen is generally not well tolerated by such patients, especially those with poorly functioning internal organs. However, reduced intensity allogeneic stem cell transplants may be an appropriate treatment for some older or sicker patients. Reduced-intensity allogeneic transplants, sometimes called nonmyeloablative or mini-transplants, use lower, less toxic doses of chemotherapy and radiation than the conditioning regimen that is given before a standard myeloablative allogeneic HSCT. Reduced-intensity allogeneic transplants may be an option for certain patients who are older, who have organ complications or who are otherwise not healthy or strong enough to undergo standard allogeneic transplantation.

Policy

This Policy applies to the following Fallon Health products:

☒ Commercial

☒ Medicare Advantage
☒ MassHealth ACO
☒ NaviCare
☒ PACE

Fallon Health follows guidance from the Centers for Medicare and Medicaid Services (CMS) for organization (coverage) determinations for Medicare Advantage plan members. National Coverage Determinations (NCDs), Local Coverage Determinations (LCDs), Local Coverage Articles (LCAs) and guidance in the Medicare manuals are the basis for coverage determinations. When there is no NCD, LCD, LCA or manual guidance, Fallon Health Clinical Coverage Criteria are used for coverage determinations.

Medicare has an NCD for Stem Cell Transplantation (110.23). This NCD lists the nationally covered indications for allogeneic stem cell transplantation for all Medicare beneficiaries. In addition to the nationally covered indications for allogeneic stem cell transplantation, the Part A/B Medicare Administrative Carrier (MAC) with jurisdiction in our service area, National Government Services, Inc. has an LCA: Billing and Coding: Stem Cell Transplantation (A52879) that adds coverage for allogeneic stem cell transplantation for:

- Primary refractory Hodgkin's and non-Hodgkin's lymphoma; and
- Thalassemia major for patients with minimal or no portal fibrosis, hepatomegaly, or active hepatitis.

For plan members enrolled in NaviCare, Fallon Health follows Medicare guidance for coverage determinations. In the event that there is no Medicare guidance or if the plan member does not meet medical necessity criteria in Medicare guidance, Fallon Health Clinical Coverage Criteria are used for coverage determinations for NaviCare members. Fallon Health's Clinical Coverage Criteria are developed in accordance with the definition of Medical Necessity in 130 CMR 450.204.

See Part II. for coverage criteria for allogeneic stem cell transplantation for Medicare Advantage and NaviCare plan members.

Each PACE plan member is assigned to an Interdisciplinary Team. PACE provides participants with all the care and services covered by Medicare and Medicaid, as authorized by the interdisciplinary team, as well as additional medically necessary care and services not covered by Medicare and Medicaid. With the exception of emergency care and out-of-area urgently needed care, all care and services provided to PACE plan members must be authorized by the interdisciplinary team.

Fallon Health Clinical Coverage Criteria are used to determine medical necessity for allogeneic stem cell transplantation for MassHealth ACO members. Fallon Health Clinical Coverage Criteria are developed in accordance with the definition of Medical Necessity in 130 CMR 450.204.

Prior authorization is required.

Part I. Fallon Health Clinical Coverage Criteria

Fallon Health considers allogeneic stem cell transplantation medically necessary for the following indications when all criteria are met.

Acute Lymphoblastic Leukemia (ALL), Pediatric

- Relapsing ALL after a prior autologous stem cell transplant

Acute Lymphoblastic Leukemia (ALL), Adult

- In remission or relapsed or refractory
- Reduced intensity conditioning when the member is in complete marrow and extramedullary first or second remission
- Relapsing ALL after a prior autologous stem cell transplant

Acute myeloid leukemia (AML)
- In first complete remission with poor- to intermediate-risk
- Refractory/relapsed to standard chemotherapy but responsive to intensified chemotherapy
- Refractory/relapsed after autologous stem cell transplant but responsive to intensified chemotherapy
- Reduced intensity conditioning when the member is in complete marrow and extramedullary first or second remission

Chronic Myeloid Leukemia
- Using myeloablative
- With reduced intensity, with comorbidities

Hodgkin's Lymphoma
- Primary refractory or relapsed, using either myeloablative or reduced-intensity conditioning

Non-Hodgkin Lymphomas
- Aggressive B-cell subtypes
  - Myeloablative conditioning or high dose chemotherapy
    - Salvage therapy for those who do not achieve complete remission after first-line treatment with a full course of standard-dose chemotherapy
    - Consolidate or achieve a complete remission during responding treatment of a relapse
    - In patients with diffuse large B-cell lymphoma, with an adjusted International Prognostic Index score that predicts a high- or high-intermediate risk of relapse, who are in their first complete remission
- Indolent B-cell subtypes
  - Salvage therapy for those who do not achieve complete remission after first-line treatment with a full course of standard-dose chemotherapy
  - Consolidate or achieve a complete remission during responding treatment of a relapse
- Mantle cell or mature T-cell lymphoma
  - Salvage therapy with myeloablative or reduced-intensity conditioning
- Chronic lymphocytic leukemia (CLL) or small lymphocytic lymphoma(SLL) in patients with:
  - Non-response or early relapse (within 12 months) after purine analogue containing therapy
  - Relapse (within 24 months) after purine analogue combination therapy or treatment of similar efficacy (i.e., autologous stem cell transplantation)
  - p53 deletion/mutation (del 17p) requiring treatment

Part II. Medicare Advantage and NaviCare plan members

Medicare National Coverage Determination (NCD) for Stem Cell Transplantation (110.23) describes the covered indications for allogeneic stem cell transplants. Stem cell transplantation is a process which includes mobilization, harvesting, and transplant of bone marrow or peripheral blood stem cells and the administration of high dose chemotherapy or radiotherapy prior to the actual transplant. When stem cell transplantation is covered, all necessary steps are included in coverage. When bone marrow or peripheral blood stem cell transplantation is non-covered, none of the steps are covered.

The NCD lists the following nationally covered indications for allogeneic stem cell transplantation for Medicare beneficiaries:
- Leukemia
- Leukemia in remission
- Aplastic anemia
- Severe combined immunodeficiency disease (SCID)
- Wiskott-Aldrich syndrome

Additionally, allogeneic stem cell transplantation is covered for Medicare beneficiaries participating in a CMS-approved clinical trial pursuant to Coverage with Evidence Development (CED) for the following indications:

- Myelodysplastic Syndromes (MDS), pursuant to Coverage with Evidence Development (CED), in the context of a CMS-approved, prospective clinical trial. For a list of CMS-approved clinical trials, go to: https://www.cms.gov/Medicare/Coverage/Coverage-with-Evidence-Development/allo-HSCT.
- Durie-Salmon Stage II or III multiple myeloma or International Staging System (ISS) Stage II or Stage III multiple myeloma, pursuant to Coverage with Evidence Development (CED), in the context of a CMS-approved, prospective clinical trial. For a list of CMS-approved clinical trials, go to: https://www.cms.gov/Medicare/Coverage/Coverage-with-Evidence-Development/allo-MM.
- Dynamic International Prognostic Scoring System (DIPSSplus) intermediate-2 or high primary or secondary myelofibrosis (MF), pursuant to Coverage with Evidence Development (CED), in the context of a CMS-approved, prospective clinical trial. For a list of CMS-approved clinical trials, go to: https://www.cms.gov/Medicare/Coverage/Coverage-with-Evidence-Development/allo-myelo.
- Severe, symptomatic sickle cell disease (SCD), pursuant to Coverage with Evidence Development (CED), in the context of a CMS-approved, prospective clinical trial. For a list of CMS-approved clinical trials, go to: https://www.cms.gov/Medicare/Coverage/Coverage-with-Evidence-Development/allo-scd.

CMS has determined that the evidence does not demonstrate that the use of allogeneic HSCT improves health outcomes in Medicare beneficiaries with MDS, multiple myeloma, MF or SCD. CMS does believe the available evidence shows that allogeneic HSCT for MDS, multiple myeloma, MF or SCD, as described above, is reasonable and necessary under §1862(a)(1)(E) of the Social Security Act through Coverage with Evidence Development (CED). All other requests for allogeneic HSCT for MDS, multiple myeloma, MF or SCD are not reasonable and necessary under §1862(a)(1)(A) of the Social Security Act and are not covered.

In addition to the nationally covered indications for allogeneic HSCT, Medicare beneficiaries have coverage for the following indications under **National Government Services, Inc. Local Coverage Article: Billing and Coding: Stem Cell Transplantation (A52879)**:

- Primary refractory Hodgkin's and non-Hodgkin's lymphoma; and
- Thalassemia major for patients with minimal or no portal fibrosis, hepatomegaly, or active hepatitis.

Exclusions

- Allogeneic stem cell transplant is considered experimental and therefore is not covered for the following conditions:
  - Mantle cell lymphoma to consolidate a first remission
  - Tandem transplants to treat patients with any stage, grade, or subtype of NHL
  - NK-cell lymphoma to consolidate a first remission
  - Waldenstrom macroglobulinemia

Coding

The following codes are included below for informational purposes only; inclusion of a code does not constitute or imply coverage or reimbursement.

CPT code	Description
38204	Management of recipient hematopoietic cell donor search and cell acquisition
38205	Blood-derived hematopoietic progenitor cell harvesting for transplantation, per collection, allogeneic
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, without washing, per donor
38210	Transplant preparation of hematopoietic progenitor cells; specific cell depletion with 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
38240	Hematopoietic progenitor cell (HPC); allogeneic transplantation per donor
38242	Allogeneic lymphocyte infusions
38243	HPC boost

Medicare Claims Processing Manual, Chapter 32, Section 90 – Stem Cell Transplantation

Medicare Claims Processing Manual Transmittal 3556, dated July 1, 2016 (Change Request 9620) updated Chapter 32, Section 90 – Stem Cell Transplantation, effective for claims with dates of service on and after January 27, 2016, to include instructions for billing allogeneic hematopoietic stem cell transplantation (HSCT) for treatment of multiple myeloma, myelofibrosis, and sickle cell disease provided in the context of a Medicare-approved clinical study meeting specific criteria under the Coverage with Evidence Development (CED) paradigm. CR9620 also clarifies the appropriate ICD-10-CM diagnosis codes for allogeneic HSCT for treatment of myelodysplastic syndromes (MDS) (MLN Matters Number: MM9620). Additional ICD-10 codes may apply, see NCD 110.23 for details.

Claims for allogeneic stem cell transplantation pursuant to Coverage with Evidence Development (CED) in the context of a CMS-approved clinical trial should be billed with:

- Clinical Trial ICD-10-CM diagnosis code - Z00.6, along with the appropriate ICD-10 CM diagnosis code
- Condition Code 30 – Qualifying Clinical Trial
- Value Code D4 – Clinical Trial Number
- Q0 modifier

Refer to Fallon Health Clinical Trials Payment Policy for additional information on billing for clinical trials.

References

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Policy history

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Not all services mentioned in this policy are covered for all products or employer groups. Coverage is based upon the terms of a member's particular benefit plan which may contain its own specific provisions for coverage and exclusions regardless of medical necessity. Please consult the product's Evidence of Coverage for exclusions or other benefit limitations applicable to this service or supply. If there is any discrepancy between this policy and a member's benefit plan, the provisions of the benefit plan will govern. However, applicable state mandates take precedence with respect to fully-insured plans and self-funded non-ERISA (e.g., government, school boards, church) plans. Unless otherwise specifically excluded, federal mandates will apply to all plans.