Molina Clinical Policy
Hematopoietic Stem Cell Transplantation for Chronic Lymphoblastic Leukemia (CLL) and Small Lymphocytic Lymphoma (SLL): Policy No. 188

Last Approval: 6/14/2023
Next Review Due By: June 2024

DISCLAIMER

This Molina Clinical Policy (MCP) is intended to facilitate the Utilization Management process. Policies are not a supplementation or recommendation for treatment; Providers are solely responsible for the diagnosis, treatment, and clinical recommendations for the Member. It expresses Molina's determination as to whether certain services or supplies are medically necessary, experimental, investigational, or cosmetic for purposes of determining appropriateness of payment. The conclusion that a particular service or supply is medically necessary does not constitute a representation or warranty that this service or supply is covered (e.g., will be paid for by Molina) for a particular Member. The Member's benefit plan determines coverage – each benefit plan defines which services are covered, which are excluded, and which are subject to dollar caps or other limits. Members and their Providers will need to consult the Member's benefit plan to determine if there are any exclusion(s) or other benefit limitations applicable to this service or supply. If there is a discrepancy between this policy and a Member's plan of benefits, the benefits plan will govern. In addition, coverage may be mandated by applicable legal requirements of a State, the Federal government or CMS for Medicare and Medicaid Members. CMS's Coverage Database can be found on the CMS website. The coverage directive(s) and criteria from an existing National Coverage Determination (NCD) or Local Coverage Determination (LCD) will supersede the contents of this MCP and provide the directive for all Medicare members. References included were accurate at the time of policy approval and publication.

OVERVIEW

Chronic Lymphocytic Leukemia (CLL) and Small Lymphocytic Lymphoma (SLL)

(Chao 2022; Deeg & Sandmaier 2022; [1-2] Rai & Stilgenbauer 2023; Rai & Stilgenbauer 2022; Negrin & Rai 2021; Negrin 2020)

Chronic lymphocytic leukemia (CLL) and small lymphocytic lymphoma (SLL) are neoplasms of hematopoietic origin characterized by the accumulation of lymphocytes with a mature, well-differentiated morphology. CLL is also known as chronic lymphoblastic leukemia and both names are used interchangeably (NCI 2023). In CLL, these cells accumulate in blood, bone marrow, lymph nodes, and spleen, while in SLL they are confined to lymph nodes. The Revised European-American / World Health Organization (WHO) Classification of Lymphoid Neoplasms considers B-cell CLL and SLL a single disease entity. CLL and SLL share many common features and are often referred to as blood and tissue counterparts of each other, respectively. Both tend to present with asymptomatic enlargement of the lymph nodes andtend to be indolent in nature. They can undergo transformation to a more aggressive form of disease (e.g., Richter's transformation). The median age at diagnosis of CLL is approximately 72 years, but it may present in younger individuals, often as poor-risk disease with significantly reduced life expectancy.

In this disorder, lymphocyte counts in the blood are usually greater than or equal to 5,000/mm3 with a characteristic immunophenotype (CD5- and CD23-positive B cells). The clinical course of this disease progresses from an indolent lymphocytosis without other evident disease to one of generalized lymphatic enlargement with concomitant pancytopenia. There is usually an insidious onset, with diagnosis often resulting from incidental blood tests. Symptoms are usually nonspecific, and include fatigue, anorexia, weight loss, dyspnea on exertion, or a sense of abdominal fullness from an enlarging spleen. Late symptoms include susceptibility to bacterial, viral, and fungal infection. Complications of pancytopenia, including hemorrhage and infection, represent a major cause of death in these patients. Immunological aberrations, including Coombs-positive hemolytic anemia, immune thrombocytopenia, and depressed immunoglobulin levels may all complicate the management of CLL/SLL. Treatment ranges from periodic observation with supportive treatment of infectious, hemorrhagic, or immunologic complications, to a variety of therapeutic options, including steroids, alkylating agents, purine analogs, combination chemotherapy, monoclonal antibodies, and transplantation. For patients with progressing CLL/SLL, treatment with conventional doses of chemotherapy is not curative. Selected patients may be treated with allogeneic stem cell transplantation.

CLL is staged according to two common systems, the Rai and Binet. The Rai system has five stages of disease advancement from 0 through IV. The Binet system is a simplified staging with three stages A through C (A overlaps with Rai 0, I, and II; B with I and II; and C with III and IV). Patients in stages I/II are considered as having intermediate-risk / early-stage disease, and those in stages III/IV as having high-risk / advanced-stage disease.

Stem Cell Transplantation

Stem-cell transplantation refers to transplantation of hematopoietic stem cells (HSCs) from a donor 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 and peripheral blood. There is also a high concentration of HSCs in umbilical-cord blood. Hematopoietic stem-cell transplantation (HSCT) can be either autologous (using the person's own stem cells) or allogeneic (using stem cells from a donor). In allogeneic HSCT, it is preferable for donors to have a human leukocyte antigen (HLA) type that is identical to the recipient. Matching is performed based on variability at three or more loci of the HLA gene (e.g., HLA-A, HLA-B, HLA-DRB1). As HLA variability increases, transplant-related morbidity and mortality, including graft rejection and graft-versus-host disease (GVHD), also increase (Chao 2022; Deeg & Sandmaier 2022; Negrin & Rai 2021).

Chao (2022) notes that umbilical cord blood (UCB) is an important alternative graft source for allogeneic HSCT however, use for transplantation in adults is often limited by an inadequate cell dose – this can also delay engraftment. Ex vivo treatment of UCB using nicotinamide may increase the cell dose and may increase homing to marrow. In a recent phase 3 trial, allogeneic HCT using a single, ex vivo expanded UCB unit achieved faster engraftment, reduced infections, and shortened hospital stays compared with an unmanipulated UCB product. There was no difference in GVHD or overall survival. We consider allogeneic HCT using an ex vivo nicotinamide expanded UCB graft to be acceptable when the cell dose appears to be limiting.

Donor Lymphocyte Infusion

Following an allogeneic HSCT, donor lymphocyte infusion (DLI) is a form of adoptive immunotherapy and may be requested to induce a graft versus leukemia, or graft versus tumor, response without requiring the recipient to undergo additional high-dose chemotherapy. Donor lymphocytes are collected from the original donor through leukapheresis. This collection is an outpatient procedure for the donor. The lymphocytes are then either infused via vein into the recipient or are frozen for a more clinically appropriate time.

Pretransplant Evaluation

The goal of the pretransplant evaluation is to assess the ability of a patient to tolerate the treatment, post-operative immunosuppression, and transplant care. An extensive cardiopulmonary evaluation, screening for occult infection or additional cancer, and psychosocial evaluation is standard. Specific testing varies depending upon the patient's age, medical history, and transplant center practice. In addition, while a certain battery of tests may initiate the work up, more testing may be indicated depending upon the condition of the patient or the initial test results. In addition to a standard medical evaluation, the initial assessment should include a psychological and social support evaluation to identify issues that may impair a successful outcome after transplantation. These include a lack of information about the nature of the transplant procedure and post-transplant care, drug or alcohol dependence, compliance with complex medical and behavior regimens. The assessment includes education of the family and the support network of the patient because compliance with complex medical and behavior treatment is critical after any organ transplant procedure. Recipients must be able to incorporate complicated medications, follow-up appointments, and frequent laboratory visits into their schedules. Having an adequate support network aware of these requirements will encourage patient compliance and long-term success (Deeg & Sandmaier 2022; Negrin & Rai 2021).

COVERAGE POLICY

All transplants require prior authorization from the Corporate Transplant Department. Solid organ transplant requests will be reviewed by the Corporate Senior Medical Director or qualified clinical designee. All other transplants will be reviewed by the Corporate Senior Medical Director or covering Medical Director. If the criteria are met using appropriate NCD and/or LCD guidelines, State regulations, and/or MCP policies the Corporate Senior Medical Director's designee can approve the requested transplant.

Office visits with participating Providers do NOT require prior authorization. Providers should see the Member in office visits as soon as possible and without delay. Failure to see the Member in office visits may be considered a serious quality of care concern.

Transplant Evaluation

(NCCN 2023; NCI 2023; CMS 2016;[1-7] NMDP date unknown).

Please see *MCP-323 Pre-Transplant Evaluation* for additional criteria and information.

Components of the transplant evaluation include:

1. History and physical examination; **AND**

2. Psychosocial evaluation and clearance:
   a. No behavioral health disorder by history or psychosocial issues:
      - If history of behavioral health disorder, no severe psychosis or personality disorder;
      - Mood/anxiety disorder must be excluded or treated;
      - Member has understanding of surgical risk and post procedure compliance and follow-up required.

   AND
   b. Adequate family and social support.

AND

3. EKG; **AND**

4. Chest x-ray; **AND**

5. Cardiac clearance in the presence of any of the following:
   a. Chronic smokers; **OR**
   b. Members > 50 years age; **OR**
   c. Those with a clinical or family history of heart disease or diabetes.

AND

6. Pulmonary clearance if evidence of pulmonary artery hypertension or chronic pulmonary disease; **AND**

7. Neurological exam and clearance for transplant including **ONE** of the following:
   a. Normal neurologic exam; **OR**
   b. Non-life limiting neurological impairment that does not preclude transplant and not caused by hematologic malignancy (e.g., diabetic peripheral neuropathy); OR
   c. Abnormal neurological exam with positive findings including **ONE** of the following:
      - Lumbar puncture normal cytology; **OR**
      - Lumbar puncture with cytological exam abnormal, however central nervous system disease treated prior to clearance.

AND

8. A Performance Status that includes **ONE** of the following:
   a. Karnofsky score 70-100%; **OR**
   b. Eastern Cooperative Oncology Group (ECOG) grade 0-2.

AND

9. Lab studies that include:
   a. Complete blood count; kidney profile (blood urea nitrogen, creatinine); electrolytes; calcium; phosphorous; albumin; liver function tests; and coagulation profile (prothrombin time, and partial thromboplastin time);*
   b. Serologic screening for: Human Immunodeficiency Virus (HIV); Epstein Barr virus (EBV); Hepatitis B virus (HBV); Hepatitis C virus (HCV); cytomegalovirus (CMV); rapid plasma reagin (RPR) and/or fluorescent treponemal antibody (FTA):*
      - If HIV positive **ALL** of the following must be met:
         i. CD4 count >200 cells/mm-3 for >6 months; **AND**
         ii. Human Immunodeficiency Virus 1 (HIV-1) ribonucleic acid undetectable; **AND**

iii. On stable anti-retroviral therapy >3 months; **AND**
iv. No other complications from Acquired Immunodeficiency Syndrome (AIDS) (e.g., opportunistic infection, including aspergillus, tuberculosis, coccidioides mycosis, resistant fungal infections, Kaposi's sarcoma, or other neoplasm).

c. Urine drug screen if Member is current or gives a history of past drug abuse.

AND

10. Colonoscopy (if indicated or if Member is age ≥ 45) with complete workup and treatment of abnormal results as indicated; an initial screening colonoscopy after initial negative screening requires a follow-up colonoscopy every 10 years).*

AND

11. Gynecological examination with Pap smear for women ages ≥ 21 to ≤ 65 years of age or if indicated (not indicated in women who have had a total abdominal hysterectomy or a total vaginal hysterectomy) within the last three years with complete workup and treatment of abnormal results as indicated.*

Within the last 12 months:

1. Dental examination or oral exam showing good dentition and oral care or no abnormality on panorex or plan for treatment of problems pre- or post-transplant; **AND**
2. Mammogram (if indicated or > age 40) with complete workup and treatment of abnormal results as indicated;* **AND**
3. Prostate Specific Antigen (PSA) if history of prostate cancer or previously elevated PSA with complete workup and treatment of abnormal results as indicated.*

* Participating Centers of Excellence may waive these criteria.

Criteria for Allogeneic HSCT

(Chao 2022; Deeg & Sandmaier 2022; NCCN 2023; NCI 2023; [1-3] Rai & Stilgenbauer 2022; Negrin & Rai 2021; Negrin 2020; CMS 2016; Majhail et al. 2015; ECOG date unknown; [1-6] NMDP date unknown)

Allogeneic HSCT ablative (Member must be ≤ age 55) or non-myeloablative (Member must be ≤ age 75) from an HLA-matched donor (e.g., at least six out of eight match of the HLA-A, HLA-B, HLA-C and HLA-DRB1 markers) or from cord blood when there are no matched sibling or unrelated donors (e.g., at least four out of six match of the HLA-A, HLA-B and HLA-DRB-1 markers) **may be authorized for the treatment** of CLL and SLL when **ALL** of the following criteria are met:

1. All transplant criteria are met; **AND**

2. Responsive to salvage chemotherapy after having failed fludarabine based therapy; **AND**

3. Rai Stage III-IV disease with **ANY** of the following high-risk factors for relapse:^
   a. High-risk cytogenetics or molecular features (e.g., del(11q) or del(17p); ZAP70, CD38 positivity; unmutated immunoglobulin variable heavy-chain gene mutational status (IGVH); **OR**
   b. Short initial remission; **OR**
   c. Poor initial response; **OR**
   d. Richter's transformation to diffuse large cell lymphoma; **OR**
   e. Leukocyte count greater than 50 x109/L.

^ Rai Staging System
Stage 0: CLL characterized by absolute lymphocytosis (>15,000/mm^3) without adenopathy, hepatosplenomegaly, anemia, or thrombocytopenia.
Stage I: CLL characterized by absolute lymphocytosis with lymphadenopathy without hepatosplenomegaly, anemia, or thrombocytopenia.
Stage II: CLL characterized by absolute lymphocytosis with either hepatomegaly or splenomegaly with or without lymphadenopathy.

Stage III: CLL characterized by absolute lymphocytosis and anemia (hemoglobin <11 g/dL) with or without lymphadenopathy, hepatomegaly, or splenomegaly.
Stage IV: CLL characterized by absolute lymphocytosis and thrombocytopenia (<100,000/mm^3) with or without lymphadenopathy, hepatomegaly, splenomegaly, or anemia.

AND

4. The requesting transplant recipient should not have any of the following **absolute contraindications**:
   a. Cardiac, pulmonary, and nervous system disease that cannot be corrected and is a prohibitive risk for surgery; **OR**
   b. Malignant neoplasm with a high risk for reoccurrence, non-curable malignancy (excluding localized skin cancer); **OR**
   c. Systemic and/or uncontrolled infection; **OR**
   d. AIDS (CD4 count < 200cells/mm3); **OR**
   e. Unwilling or unable to follow post-transplant regimen as evidenced by **ONE** of the following:
      - Documented history of non-compliance; **OR**
      - Inability to follow through with medication adherence or office follow-up

   OR
   f. Chronic illness with one year or less life expectancy; **OR**
   g. Limited, irreversible rehabilitation potential; **OR**
   h. Active untreated substance abuse issues (requires documentation supporting that Member is free from addiction for minimally 6 months if previous addiction was present); **OR**
   i. No adequate social or family support.

AND

5. The requesting transplant recipient should be evaluated carefully and potentially treated if any of the relative contraindications below are present. (Irreversible lung disease patients require consultation and clearance by a Pulmonologist prior to consideration of transplantation).
   a. Smoking, documentation supporting free from smoking for 6 months; **OR**
   b. Active peptic ulcer disease; **OR**
   c. Active gastroesophageal reflux disease; **OR**
   d. Cerebrovascular accident (CVA) with long term impairment that is not amendable to rehabilitation or a patient with CVA/transient ischemic attack within past 6 months; **OR**
   e. Obesity with body mass index of >30 kg/m^2 may increase surgical risk; **OR**
   f. Chronic liver disease such as Hepatitis B/C/D, or cirrhosis which increases the risk of death from sepsis and hepatic failure requires consultation by a gastroenterologist or hepatologist; **OR**
   g. Gall bladder disease requires ultrasound of the gall bladder with treatment prior to transplantation.

Criteria for Repeat Allogeneic HSCT

Allogeneic HSCT, ablative or non-myeloablative, **may be authorized** after the first (prior) stem cell transplantation has occurred only one time for Members with CLL/SLL who meet **ALL** the above criteria for transplant and have **ANY** of the following:

1. Primary graft failure indicated by no signs of engraftment* by 42 days after the transplant; **OR**
2. Failure to engraft*; **AND**
3. A suitable allogeneic donor has been identified, if applicable.

* Engraftment is defined as the first 3 consecutive days on which the absolute neutrophil count (ANC) exceeds 5 x 10^9/L or > ANC500at any time after transplantation ([3] NMDP date unknown).

Criteria for DLI

(Chao 2022; Deeg & Sandmaier 2022; Negrin & Rai 2021)

DLI collection and cryopreservation **may be authorized** following a medically necessary allogeneic HSCT:

1. For incomplete chimerism and disease relapse in the setting of incomplete chimerism (defined as incomplete donor stem cell grafting in the recipient's bone marrow); **AND**
2. Donor lymphocytes must be collected from the original hematopoietic stem cell donor.

Continuation of Therapy

When extension of a previously approved transplant authorization is requested, review using updated clinical information is appropriate.

1. If Molina Healthcare has authorized prior requests for transplantation **ALL** the following information is required for medical review:
   a. Presence of no absolute contraindication as listed above; **AND**
   b. History and physical within the last 12 months; **AND**
   c. Kidney profile within the last 12 months; **AND**
   d. Cardiac update if history of cardiac disease within two years (≥ 50 years of age); **AND**
   e. Psychosocial evaluation or update within the last 12 months; **AND**
   f. Per initial and updated history and physical, any other clinically indicated tests and/or scans as determined by transplant center physician or Molina Medical Director.

2. If authorized prior requests for transplantation were obtained from another insurer, **ALL** the following information is required for medical review:
   a. Authorization letter/documentation from previous insurer; **AND**
   b. Presence of no absolute contraindication as listed above; **AND**
   c. History and physical within the last 12 months; **AND**
   d. Cardiac update if history of cardiac disease within two years (≥ 50 years of age); **AND**
   e. Psychosocial evaluation or update within the last 12 months; **AND**
   f. Per initial and updated history and physical, any other clinically indicated tests and/or scans as determined by transplant center physician or Molina Medical Director.

For Members with Significant or Daily Cannabis Use

1. Documentation of compliance with a physician prescribed and managed program of abstinence, and a reasonable expectation that the Member will be abstinent from cannabis use during the transplant and immediate post-transplant time period. Daily cannabis use is an absolute contraindication for both transplant and pre-transplant evaluation unless there is a state mandate applicable for medical cannabis use and transplants, and there is documentation of Member compliance with a physician prescribed plan of care for prescribed cannabis use.
2. If the Member's marijuana use follows a formal, State-based program for managed medical marijuana, the request should include:
   - Documentation of the Plan of Care for medical cannabis (including the medical decision making that supports the use of medical cannabis); **AND**
   - Transplant Provider agreement with the Plan of Care (including agreement to be accountable for managing the Member's use of medical cannabis).

Limitations and Exclusions

The items below **are not considered medically necessary.** This list includes, but is not limited to:
1. Allogeneic (ablative or non-myeloablative) HSCT when the above criteria are not met.
2. Patients with refractory progressive disease occurring more than 12 months after the discontinuation of treatment (NCI 2023).
3. Autologous HSCT in individuals with CLL or SLL.
4. HSC collection, storage and freezing for a future unplanned transplant is not covered.

SUMMARY OF MEDICAL EVIDENCE

There are currently no randomized trials that report the outcomes of high-dose chemotherapy followed by stem cell transplant compared to conventional therapy. However, single-arm prospective and registry-based studies suggest allogeneic HSCT can provide long-term disease control and overall survival in patients with poor-risk disease. There is a lack of randomized trials that report the outcomes of high-dose chemotherapy followed by autologous stem cell transplant compared to conventional therapy. A summary of medical evidence is outlined below.

Roeker et al. (2020) performed a multi-center, retrospective study that included 65 participants with CLL or SLL who underwent allogeneic HSCT following exposure to ≥ 1 novel agent prior to receiving allogeneic HSCT. A novel agent for this study was defined as a first-line drug or treatment for CLL or SLL. Participants with Richter transformation prior to allogeneic HSCT were excluded from the study. The study's overall goal was to determine progression-free survival of patients receiving HSCT after a novel agent. Secondary outcomes measured included overall survival rates, non-relapse mortality rates, and relapse incidence rates. The participants were followed after HSCT to determine long-term outcomes. At the 24-month mark following HSCT, it was noted that the progression-free survival rate was 63%, the overall survival rate was 81%, non-relapse mortality rate was 13%, and the relapse incidence rate was 27% among study participants. GVHD rates were also obtained at day 100 after transplantation. The overall incidence rate of grade II-IV GVHD was noted to be 37% and grade III-IV GVHD was 24%. Researchers noted they were unable to obtain median outcome rates at 27 months following HSCT due to 13 out of 65 patients expiring (6 due to progressive disease, 6 due to infection, and 1 due to GVHD). It was also noted that 16 patients developed disease relapse with 15 of those patients requiring CLL-directed therapy following allogeneic HSCT. Researchers also noted that the prior use of novel agents did not seem to affect the safety of allogeneic HSCT or improve survival outcomes.

Tournilhac et al. (2020) performed a multicenter, phase II trial evaluation to determine the “efficacy and safety of a preemptive immune-intervention based on [minimal risk disease] assessment in high-risk CLL.” Eligible patients were between the ages of 18 and 70 years, had high-risk features according to the 2006 European Society for Blood and Marrow Transplantation consensus, and were in complete or partial response with lymphadenopathy < 5cm and a comorbidity score ≤ 2. Transplant donors were HLA-matched siblings or unrelated donors. The conditioning regimen was fludarabine 30mg/m^2/day from day 5 to day 1 before transplant, intravenous busulfan 3.2mg/kg/day from day 4 to day 3 before transplant, and ATG (thymoglobulin) 2.5mg/kg/day from day 3 to day 2 before transplant. The HSC source was G-CSF mobilized peripheral blood cells. Participants also received a short course of methotrexate in case of minor donor/recipient ABO mismatching. Response evaluation was performed according to the 2008 iwCLL criteria. Computerized tomography scans were obtained prior to transplantation and then 3-, 6-, and 12-months post-transplantation. MRD (Minimal Residual Disease) analysis was performed on blood and/or bone marrow using 10-color multiparameter flow cytometry and was completed before transplantation, monthly from months 1-6 post-transplantation, and then at months 9 and 12 post-transplantation. MRD negative was defined as < 1 CLL cell detectable per 10,000 leukocytes. A total of 43 patients were initially included in the study with one patient eventually not being transplanted due to early death. Of the 42 remaining patients, 40 experienced engraftment and 2 experienced graft failure. Researchers noted 7 of the 42 patients died due to causes involving limited to extensive GVHD (n=3), disease progression and Richter transformation (n=3), and cytomegalovirus infection (n=1). MRD negative status was achieved in 64% of patients at 12-months post-transplantation. Median follow-up for the survivors was 36-months. Researchers noted the 3-year progression-free survival rate to be 62.9%, a non-relapse mortality rate of 9.5%, and an overall survival rate of 86.9%. Researchers also noted that allogeneic HSCT is a valid option for second-line treatment in failed first-line treatments such as BCR and BCL-2 inhibitors.

National and Specialty Organizations

The **National Comprehensive Cancer Network (NCCN)** guidelines for Non-Hodgkin’s Lymphoma do not include

autologous or tandem HSCT as a therapeutic option in CLL or SLL. NCCN indicates that allogeneic HSCT may be considered for select patients refractory to small molecule inhibitor therapy in patients without significant comorbidities and in those with high-risk disease (Rai high risk, or del17p). Allogeneic transplant is not considered a treatment option for refractory CLL or disease relapse within 12-24 months after initial purine analogue-based therapy (NCCN 2023).

The **American Society for Transplantation and Cellular Therapy (ASTCT)** guidelines consider the use of allogeneic HSCT for high-risk, first or greater remission of CLL and T-cell prolymphocytic leukemia to be the standard of care as use is backed with clinical evidence such as high-quality clinical trials and observational studies (Kanate et al. 2020).

SUPPLEMENTAL INFORMATION

Lymphocyte: A white blood cell that develops in the bone marrow and is found in the lymph tissue and blood (NCI 2023).

Lymphoblast: Refers to a lymphocyte that has gotten larger after being stimulated by an antigen or an immature cell that develops into a mature lymphocyte (NCI 2023).

CODING & BILLING INFORMATION

CPT (Current Procedural Terminology) Codes

CPT	Description
	Collection Codes
38205	Blood-derived hematopoietic progenitor cell harvesting for transplantation, per collection; allogeneic
38206	Blood-derived hematopoietic progenitor cell harvesting for transplantation, per collection; autologous
38230	Bone marrow harvesting for transplantation; allogeneic
38232	Bone marrow harvesting for transplantation; autologous

	Cell Processing Services
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
	Cell Infusion Codes
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
	Histocompatibility Codes
86812	HLA typing; A, B, or C (e.g., A10, B7, B27), single antigen
86813	HLA typing; A, B, or C, multiple antigens
86816	HLA typing; DR/DQ, single antigen

86817	HLA typing; DR/DQ, multiple antigens

HCPCS (Healthcare Common Procedure Coding System) Codes

HCPCS	Description
S2140	Cord blood harvesting for transplantation, allogeneic
S2142	Cord blood derived stem-cell transplantation, allogeneic
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

CODING DISCLAIMER. Codes listed in this policy are for reference purposes only and may not be all-inclusive. Deleted codes and codes which are not effective at the time the service is rendered may not be eligible for reimbursement. Listing of a service or device code in this policy does not guarantee coverage. Coverage is determined by the benefit document. Molina adheres to Current Procedural Terminology (CPT®), a registered trademark of the American Medical Association (AMA). All CPT codes and descriptions are copyrighted by the AMA; this information is included for informational purposes only. Providers and facilities are expected to utilize industry standard coding practices for all submissions. When improper billing and coding is not followed, Molina has the right to reject/deny the claim and recover claim payment(s). Due to changing industry practices, Molina reserves the right to revise this policy as needed.

APPROVAL HISTORY

6/14/2023	Policy reviewed, changes to the coverage section include "Pre-Transplant Evaluation" changed to "Transplant Evaluation," new criteria 7b, clarification edit to criteria #8 that only one of the sub-criteria need to be met, pertinent tests added to second sub-criteria for physician plan and/or treatment, removed abnormal serology statement under criteria 9b, criteria 10 changed to age 45 years, and added an asterisk to criteria 11 to denote it may be waived by a participating Center of Excellence. Updated Overview, Summary of Medical Evidence, Supplemental Information, and References sections. Grammatical edits to Disclaimer section and "Documentation Requirements" under Coverage Policy section. Replaced "marijuana" with "cannabis." Added codes 38221, 38222, 86812, 86813, 86816, 86817 and code descriptions updated for other codes. ICD-10 codes removed. Policy reviewed on May 17, 2023, by a practicing, board-certified physician in Medical Oncology and Hematology.
6/8/2022	Policy reviewed, no changes to criteria; included information regarding umbilical cord blood as an alternative graft source for allogeneic (HCT) included section on marijuana use; updated references.
7/10/2018, 6/19/2019, 6/17/2020, 6/9/2021	Policy reviewed, updated references.
7/27/2017	Updated Summary of Medical Evidence and Reference sections.
6/15/2016	Policy reviewed, no changes.
6/2/2015	Updated pre-transplant criteria, continuation of therapy, absolute and relative contraindications, and coding sections.
7/29/2014	New policy.

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