Hematopoietic Stem-Cell Transplantation for Non-Hodgkin Lymphoma

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<tr>
<th>Type:</th>
<th>Medical Necessity and Investigational / Experimental</th>
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<td>Policy Specific Section:</td>
<td>Transplant</td>
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<td>Original Policy Date:</td>
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<td>Effective Date:</td>
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Definitions of Decision Determinations

Medically Necessary: A treatment, procedure or drug is medically necessary only when it has been established as safe and effective for the particular symptoms or diagnosis, is not investigational or experimental, is not being provided primarily for the convenience of the patient or the provider, and is provided at the most appropriate level to treat the condition.

Investigational/Experimental: A treatment, procedure or drug is investigational when it has not been recognized as safe and effective for use in treating the particular condition in accordance with generally accepted professional medical standards. This includes services where approval by the federal or state governmental is required prior to use, but has not yet been granted.

Split Evaluation: Blue Shield policy review can result in a Split Evaluation, where a treatment, procedure or drug will be considered to be investigational for certain indications or conditions, but will be deemed safe and effective for other indications or conditions, and therefore potentially medically necessary in those instances.

Description

Hematopoietic stem-cell transplantation (HSCT) refers to a procedure in which hematopoietic stem cells are infused to restore bone marrow function in cancer patients who receive bone-marrow-toxic doses of cytotoxic drugs, with or without whole-body radiation therapy. Bone-marrow stem cells may be obtained from the transplant recipient (i.e., autologous HSCT) or from a donor (i.e., allogeneic HSCT).
Lymphomas are a heterogeneous group of malignant neoplasms of the lymph nodes. About 85% of malignant lymphomas are non-Hodgkin lymphomas (NHLs). Treatment varies depending on tumor stage, phenotype (B-, T- or NK/null-cell) histology (i.e., whether indolent, aggressive, or very aggressive), symptoms, performance status, age and comorbidities (Vinjamaram et al., 2010). Management may include radiation therapy, high-dose chemotherapy, bone marrow and HSCT.

Policy

Autologous hematopoietic stem cell transplantation (HSCT) is considered medically necessary for any of the following indications:

- Aggressive non-Hodgkin lymphoma (NHL) B-cell subtypes (except mantle cell lymphoma) for any of the following reasons:
  - As salvage therapy for patients who do not achieve a complete remission (CR) after first-line treatment (induction) with a full course of standard-dose chemotherapy
  - To achieve or consolidate a CR for those in a chemosensitive first or subsequent relapse
  - To consolidate a first CR in patients with diffuse large B-cell lymphoma, with an age-adjusted International Prognostic Index score that predicts a high- or high-intermediate risk of relapse

- Mantle cell lymphoma to consolidate a first remission

- Indolent NHL B-cell subtypes for any of the following reasons:
  - As salvage therapy for patients who do not achieve CR after first-line treatment (induction) with a full course of standard-dose chemotherapy
  - To achieve or consolidate CR for those in a first or subsequent chemosensitive relapse, whether or not their lymphoma has undergone transformation to a higher grade

- Peripheral T-cell lymphoma for either of the following reasons:
  - To consolidate a first complete remission in high-risk peripheral T-cell lymphoma (see Policy Guideline)
  - As salvage therapy

Allogeneic HSCT using a myeloablative conditioning regimen is considered medically necessary for any of the following indications:

- Aggressive non-Hodgkin lymphoma (NHL) B-cell subtypes (except mantle cell lymphoma) for any of the following reasons:
  - As salvage therapy for patients who do not achieve a complete remission (CR) after first-line treatment (induction) with a full course of standard-dose chemotherapy
  - To achieve or consolidate a CR for those in a chemosensitive first or subsequent relapse
To consolidate a first CR in patients with diffuse large B-cell lymphoma, with an age-adjusted International Prognostic Index score that predicts a high- or high-intermediate risk of relapse

- Mantle cell lymphoma as salvage therapy
- Indolent NHL B-cell subtypes for any of the following reasons:
  - As salvage therapy for patients who do not achieve CR after first-line treatment (induction) with a full course of standard-dose chemotherapy
  - To achieve or consolidate CR for those in a first or subsequent chemosensitive relapse, whether or not their lymphoma has undergone transformation to a higher grade
- Peripheral T-cell lymphoma as salvage therapy

**Reduced-intensity conditioning allogeneic HSCT** is considered medically necessary for any of the following indications:

- Mantle cell lymphoma as salvage therapy
- Peripheral T-cell lymphoma as salvage therapy
- Treatment of NHL in patients who meet criteria for an allogeneic HSCT but who do not qualify for a myeloablative allogeneic HSCT (See Policy Guideline)

The following applications of HSCT are considered investigational:

- Either autologous HSCT or allogeneic HSCT for any of the following circumstances:
  - As initial therapy (i.e., without a full course of standard-dose induction chemotherapy) for any NHL
  - To consolidate a first CR for patients with diffuse large B-cell lymphoma and an International Prognostic Index score that predicts a low- or low-intermediate risk of relapse
  - To consolidate a first CR for those with indolent NHL B-cell subtypes
- For mantle cell lymphoma in either of the following applications:
  - Autologous HSCT as salvage therapy
  - Allogeneic HSCT to consolidate a first remission
- Allogeneic HSCT to consolidate a first remission for patients with peripheral T-cell lymphoma
- Tandem autologous or allogeneic HCST to treat patients with any stage, grade, or subtype of NHL

**Policy Guideline**

Reduced-intensity conditioning (RIC) would be considered an option in patients who meet criteria for an allogeneic HSCT but whose age (typically older than 55 years) or comorbidities...
(e.g., liver or kidney dysfunction, generalized debilitation, prior intensive chemotherapy) preclude use of a standard conditioning regimen.

In patients who qualify for a myeloablative allogeneic HSCT on the basis of overall health and disease status, allogeneic HSCT using either myeloablative or RIC may be considered. However, a myeloablative conditioning regimen with allogeneic HSCT may benefit younger patients with good performance status and minimal comorbidities more than allogeneic HSCT with RIC.

The term salvage therapy describes chemotherapy given to patients who have either 1) failed to achieve complete remission after initial treatment for newly diagnosed lymphoma, or 2) relapsed after an initial complete remission.

A chemosensitive relapse is defined as relapsed NHL that does not progress during or immediately after standard-dose induction chemotherapy (i.e., achieves stable disease or a partial response).

Transformation describes a lymphoma whose histologic pattern has evolved to a higher-grade lymphoma. Transformed lymphomas typically evolve from a nodular pattern to a diffuse pattern.

Tandem HSCT usually are defined as the planned administration of two successive cycles of high-dose myeloablative chemotherapy, each followed by infusion of autologous hematopoietic stem cells, whether or not there is evidence of persistent disease following the first treatment cycle. Sometimes, the second cycle may use non-myeloablative immunosuppressive conditioning followed by infusion of allogeneic stem cells.

**High-risk peripheral T-cell lymphoma** is defined as one of the histologic subtypes as follows:

**Nodal:** peripheral T-cell lymphoma, not otherwise specified (PTCL-NOS), anaplastic lymphoma kinase negative anaplastic large cell lymphoma (ALK- ALCL) or angioimmunoblastic lymphoma (AIL). High-risk patients may also include the rare patient with ALK+ALCL who is refractory to conventional chemotherapy.


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The materials provided to you are guidelines used by this plan to authorize, modify, or deny care for persons with similar illness or conditions. Specific care and treatment may vary depending on individual need and the benefits covered under your contract. These Policies are subject to change as new information becomes available.