Medical Policy
Hematopoietic Stem-Cell Transplantation for Primary Amyloidosis

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- Policy: Medicare
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Policy Number: 181
BCBSA Reference Number: 8.01.42

Related Policies
None

Policy
Commercial Members: Managed Care (HMO and POS), PPO, and Indemnity
Medicare HMO BlueSM and Medicare PPO BlueSM Members
Autologous hematopoietic stem-cell transplantation to treat primary systemic amyloidosis is considered MEDICALLY NECESSARY.

Allogeneic hematopoietic stem-cell transplantation to treat primary systemic amyloidosis is INVESTIGATIONAL.

Prior Authorization Information
Commercial Members: Managed Care (HMO and POS)
Prior authorization is required.

Commercial Members: PPO, and Indemnity
Prior authorization is required.

Medicare Members: HMO BlueSM
Prior authorization is required.

Medicare Members: PPO BlueSM
Prior authorization is required.

CPT Codes / HCPCS Codes / ICD-9 Codes
The following codes are included below for informational purposes. Inclusion or exclusion of a code does not constitute or imply member coverage or provider reimbursement. Please refer to the member’s contract benefits in effect at the time of service to determine coverage or non-coverage as it applies to an
individual member. A draft of future ICD-10 Coding related to this document, as it might look today, is included below for your reference.

Providers should report all services using the most up-to-date industry-standard procedure, revenue, and diagnosis codes, including modifiers where applicable.

**CPT Codes**

<table>
<thead>
<tr>
<th>CPT codes:</th>
<th>Code Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>38204</td>
<td>Management of recipient hematopoietic cell donor search and cell acquisition</td>
</tr>
<tr>
<td>38206</td>
<td>Blood-derived hematopoietic progenitor cell harvesting for transplantation, per collection; autologous</td>
</tr>
<tr>
<td>38208</td>
<td>Transplant preparation of hematopoietic progenitor cells; thawing of previously frozen harvest without washing</td>
</tr>
<tr>
<td>38209</td>
<td>Transplant preparation of hematopoietic progenitor cells; thawing of previously frozen harvest, with washing</td>
</tr>
<tr>
<td>38210</td>
<td>Transplant preparation of hematopoietic progenitor cells; specific cell depletion with harvest, T-cell depletion</td>
</tr>
<tr>
<td>38211</td>
<td>Transplant preparation of hematopoietic progenitor cells; tumor-cell depletion</td>
</tr>
<tr>
<td>38212</td>
<td>Transplant preparation of hematopoietic progenitor cells; red blood cell removal</td>
</tr>
<tr>
<td>38213</td>
<td>Transplant preparation of hematopoietic progenitor cells; platelet depletion</td>
</tr>
<tr>
<td>38214</td>
<td>Transplant preparation of hematopoietic progenitor cells; plasma (volume) depletion</td>
</tr>
<tr>
<td>38215</td>
<td>Transplant preparation of hematopoietic progenitor cells; cell concentration in plasma, mononuclear, oruffy coat layer</td>
</tr>
<tr>
<td>38232</td>
<td>Bone marrow harvesting for transplantation; autologous</td>
</tr>
<tr>
<td>38241</td>
<td>Hematopoietic progenitor cell (HPC); autologous transplantation</td>
</tr>
</tbody>
</table>

**HCPCS Codes**

<table>
<thead>
<tr>
<th>HCPCS codes:</th>
<th>Code Description</th>
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</thead>
<tbody>
<tr>
<td>S2150</td>
<td>Bone marrow or blood-derived peripheral stem-cell (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.</td>
</tr>
</tbody>
</table>

**ICD-9 Diagnosis Codes**

<table>
<thead>
<tr>
<th>ICD-9-CM diagnosis codes:</th>
<th>Code Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>277.30</td>
<td>Amyloidosis, unspecified</td>
</tr>
<tr>
<td>277.39</td>
<td>Other amyloidosis</td>
</tr>
</tbody>
</table>

**ICD-9 Procedure Codes**

<table>
<thead>
<tr>
<th>ICD-9-CM procedure codes:</th>
<th>Code Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>41.04</td>
<td>Autologous hematopoietic stem-cell transplant without purging</td>
</tr>
<tr>
<td>41.07</td>
<td>Autologous hematopoietic stem-cell transplant with purging</td>
</tr>
</tbody>
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ICD-10 Diagnosis Codes

<table>
<thead>
<tr>
<th>ICD-10-CM Diagnosis codes:</th>
<th>Code Description</th>
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</thead>
<tbody>
<tr>
<td>E85.9</td>
<td>Amyloidosis, unspecified</td>
</tr>
<tr>
<td>E85.4</td>
<td>Organ-limited amyloidosis</td>
</tr>
<tr>
<td>E85.8</td>
<td>Other amyloidosis</td>
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ICD-10 Procedure Codes

<table>
<thead>
<tr>
<th>ICD-10-PCS procedure codes:</th>
<th>Code Description</th>
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</thead>
<tbody>
<tr>
<td>30233Y0</td>
<td>Transfusion of Autologous Hematopoietic Stem Cells into Peripheral Vein, Percutaneous Approach</td>
</tr>
<tr>
<td>30243Y0</td>
<td>Transfusion of Autologous Hematopoietic Stem Cells into Central Vein, Percutaneous Approach</td>
</tr>
<tr>
<td>30263Y0</td>
<td>Transfusion of Autologous Hematopoietic Stem Cells into Central Artery, Percutaneous Approach</td>
</tr>
<tr>
<td>3E03305</td>
<td>Introduction of Other Antineoplastic into Peripheral Vein, Percutaneous Approach</td>
</tr>
<tr>
<td>3E04305</td>
<td>Introduction of Other Antineoplastic into Central Vein, Percutaneous Approach</td>
</tr>
<tr>
<td>3E05305</td>
<td>Introduction of Other Antineoplastic into Peripheral Artery, Percutaneous Approach</td>
</tr>
<tr>
<td>3E06305</td>
<td>Introduction of Other Antineoplastic into Central Artery, Percutaneous Approach</td>
</tr>
</tbody>
</table>

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. Hematopoietic stem cells may be obtained from the transplant recipient (autologous HSCT) or from a donor (allogeneic HSCT). They can be harvested from bone marrow, peripheral blood, or umbilical cord blood shortly after delivery of neonates. Although cord blood is an allogeneic source, the stem cells in it are antigenically naïve and thus are associated with a lower incidence of rejection or graft-versus-host disease.

Immunologic compatibility between infused hematopoietic stem cells and the recipient is not an issue in autologous HSCT. However, immunologic compatibility between donor and patient is a critical factor for achieving a good outcome of allogeneic HSCT.

The success of autologous HSCT is predicated on the ability of cytotoxic chemotherapy with or without radiation to eradicate cancerous cells from the blood and bone marrow.

Primary amyloidosis occurs when plasma cells within the bone marrow spontaneously overproduce a particular protein portion of an antibody and whose deposition of these amyloidogenic proteins adversely affect tissue and organ function. Historically, this disease has had a poor prognosis, although outcomes have improved with the advent of combination chemotherapy and autologous HSCT.

Summary

In addition to longer survival, evidence suggests improvement in symptoms for amyloidosis patients treated with autologous HSCT. There was a randomized trial that suggested that autologous HSCT may be no more efficacious than conventional chemotherapy in prolonging survival among patients with AL amyloidosis. However, the results are limited by the size of the study, a lack of assessor blinding or allocation concealment, and a large attrition post-randomization. Therefore, even though this was a randomized trial, the results are not sufficient to change the medically necessary policy statement given the body of evidence available from other, albeit nonrandomized, studies.
Data on the use of allogeneic SCT to treat AL amyloidosis are sparse, with no systematic evaluation in a clinical trial. Concerns about the use of allogeneic SCT include high treatment-related mortality (more than 40%), morbidity secondary to graft-versus-host (GVH) disease, and questions about the efficacy of a proposed graft-versus-malignancy (GVM) effect on low-grade plasma cell dyscrasias. Therefore, allogeneic SCT to treat AL amyloidosis is considered investigational.

Policy History

<table>
<thead>
<tr>
<th>Date</th>
<th>Action</th>
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<tbody>
<tr>
<td>6/2014</td>
<td>Updated Coding section with ICD10 procedure and diagnosis codes, effective 10/2015.</td>
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<tr>
<td>12/2012</td>
<td>Updated to add new CPT code 38243</td>
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Information Pertaining to All Blue Cross Blue Shield Medical Policies

Click on any of the following terms to access the relevant information:

- Medical Policy Terms of Use
- Managed Care Guidelines
- Indemnity/PPO Guidelines
- Clinical Exception Process
- Medical Technology Assessment Guidelines

References