Medical Policy
Placental/Umbilical Cord Blood as a Source of Stem Cells

Table of Contents
• Policy: Commercial
• Policy: Medicare
• Authorization Information
• Coding Information
• Description
• Policy History
• Information Pertaining to All Policies
• References

Policy Number: 285
BCBSA Reference Number: 7.01.50

Related Policies
None

Policy
Commercial Members: Managed Care (HMO and POS), PPO, and Indemnity
Medicare HMO Blue SM and Medicare PPO Blue SM Members
Transplantation of cord blood stem cells from related or unrelated donors may be MEDICALLY NECESSARY in patients with an appropriate indication for allogeneic stem-cell transplant.

Collection and storage of cord blood from a neonate may be MEDICALLY NECESSARY when an allogeneic transplant is imminent in an identified recipient with a diagnosis that is consistent with the possible need for allogeneic transplant.

Transplantation of cord blood stem cells from related or unrelated donors in all other situations is INVESTIGATIONAL.

Prophylactic collection and storage of cord blood from a neonate when proposed for some unspecified future use as an autologous stem-cell transplant in the original donor, or for some unspecified future use as an allogeneic stem-cell transplant in a related or unrelated donor is NOT MEDICALLY NECESSARY.

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 Blue SM
Prior authorization is required.

Medicare Members: PPO Blue SM
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>38243</td>
<td>Hematopoietic progenitor cell (HPC); HPC boost</td>
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</tbody>
</table>

**HCPCS Codes**

<table>
<thead>
<tr>
<th>HCPCS codes:</th>
<th>Code Description</th>
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<tbody>
<tr>
<td>S2140</td>
<td>Cord blood harvesting for transplantation, allogeneic</td>
</tr>
<tr>
<td>S2142</td>
<td>Cord blood-derived stem-cell transplantation, allogeneic</td>
</tr>
<tr>
<td>S2150</td>
<td>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</td>
</tr>
</tbody>
</table>

**ICD-9 Procedure Codes**

When the following ICD 9 procedure codes are associated with the service(s) described in this document coverage for the service(s) is aligned with the policy statement.

<table>
<thead>
<tr>
<th>ICD-9-CM procedure codes:</th>
<th>Code Description</th>
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<tbody>
<tr>
<td>41.04</td>
<td>Autologous hematopoietic stem cell transplant without purging</td>
</tr>
<tr>
<td>41.05</td>
<td>Allogeneic hematopoietic stem cell transplant without purging</td>
</tr>
<tr>
<td>41.06</td>
<td>Cord blood stem cell transplant</td>
</tr>
<tr>
<td>41.07</td>
<td>Autologous hematopoietic stem cell transplant with purging</td>
</tr>
<tr>
<td>41.08</td>
<td>Allogeneic hematopoietic stem cell transplant with purging</td>
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</tbody>
</table>

**ICD-10 Procedure Codes**

<table>
<thead>
<tr>
<th>ICD-10-PCS procedure codes:</th>
<th>Code Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>30233Y0</td>
<td>Transfusion of Autologous Hematopoietic Stem Cells into Peripheral Vein, Percutaneous Approach</td>
</tr>
<tr>
<td>30233X0</td>
<td>Transfusion of Autologous Cord Blood Stem Cells into Peripheral Vein, Percutaneous Approach</td>
</tr>
<tr>
<td>30233X1</td>
<td>Transfusion of Nonautologous Cord Blood Stem Cells into Peripheral Vein, Percutaneous Approach</td>
</tr>
<tr>
<td>30233Y1</td>
<td>Transfusion of Nonautologous Hematopoietic Stem Cells into Peripheral Vein, Percutaneous Approach</td>
</tr>
</tbody>
</table>
Description
Blood harvested from the umbilical cord and placenta shortly after delivery of neonates contains stem and progenitor cells capable of restoring hematopoietic function after myeloablation. This “cord” blood has been used as an alternative source of allogeneic stem cells. Cord blood is readily available and is thought to be antigenically “naive,” thus hopefully minimizing the incidence of graft-versus-host disease and permitting the broader use of unrelated cord blood transplants.

Cord blood banks are offering the opportunity of collecting and storing a neonate’s cord blood for some unspecified future use in the unlikely event that the child develops a condition that would require autologous transplantation. In addition, some cord blood is collected and stored from a neonate for use by a sibling in whom an allogeneic transplant is anticipated due to a history of leukemia or other condition requiring allogeneic transplant.

This policy addresses the collection, storage, and transplantation of placental/umbilical cord blood (“cord blood”) as a source of stem cells for allogeneic and autologous stem-cell transplantation. Potential indications for use of cord blood are included in the disease-specific reference policies.

Summary
Cord blood transplantation offers clear advantages over other sources of allogeneic stem cells; the most significant of these is the ability to perform a successful transplant from an unrelated donor with 1 or 2 HLA mismatches. Cord blood is also more readily available than other sources of stem cells, and generally can be prepared for clinical use within 1-2 weeks. Collection of the cells is painless, which facilitates recruitment and provides for a more ethnically diverse pool. Current limitations include small inventories, units with low cell doses, and too few donors to provide 5 of 6 and 6 of 6 matches for all patients in need. Longer hospital stays and higher utilization of medical resources are a consequence of slower engraftment when cord blood is used. Even with these limitations, cord blood is an important source of stem cells, increasing the access to allogeneic stem-cell transplantation for many patients. Because of these advantages, use of cord blood as a source of stem cells in this situation may be considered medically necessary.

However, the routine collection and storage of cord blood for possible future use is not considered current standard medical care and has not been shown to improve outcomes. As a result, routinely collecting and storing cord blood for a potential future use is considered not medically necessary.
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>
</tr>
<tr>
<td>12/2013</td>
<td>New references from BCBSA National medical policy.</td>
</tr>
<tr>
<td>12/2012</td>
<td>Updated to add new CPT code 38243</td>
</tr>
<tr>
<td></td>
<td>No changes to policy statements.</td>
</tr>
<tr>
<td>5/2011</td>
<td>Updated to remove information referencing related policies #092 and #126. The same</td>
</tr>
<tr>
<td></td>
<td>information was removed from policy #092, Allogeneic Stem Cell Transplants.</td>
</tr>
<tr>
<td>1/1/2011</td>
<td>New policy effective 1/1/2011 describing ongoing non-coverage.</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