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

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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 BlueSM and Medicare PPO BlueSM 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
Pre-service approval is required for all inpatient services for all products.
See below for situations where prior authorization may be required or may not be required for outpatient services.
Yes indicates that prior authorization is required.
No indicates that prior authorization is not required.
N/A indicates that this service is primarily performed in an inpatient setting.

<table>
<thead>
<tr>
<th>Outpatient</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Commercial Managed Care (HMO and POS)</td>
<td>Yes</td>
</tr>
</tbody>
</table>
**Commercial PPO and Indemnity** | Yes
---|---
**Medicare HMO Blue℠** | Yes
**Medicare PPO Blue℠** | Yes

### CPT Codes / HCPCS Codes / ICD Codes

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.

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

The following codes are included below for informational purposes only; this is not an all-inclusive list.

The above **medical necessity criteria MUST** be met for the following codes to be covered for Commercial Members: Managed Care (HMO and POS), PPO, Indemnity, Medicare HMO Blue and Medicare PPO Blue:

#### CPT Codes

<table>
<thead>
<tr>
<th>CPT codes:</th>
<th>Code Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>38207</td>
<td>Transplant preparation of hematopoietic progenitor cells; cryopreservation and storage</td>
</tr>
<tr>
<td>38243</td>
<td>Hematopoietic progenitor cell (HPC); HPC boost</td>
</tr>
</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>
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</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>41.05</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>
</tr>
</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>
</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>2/2017</td>
<td>New references added from BCBSA National medical policy.</td>
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<tr>
<td>12/2016</td>
<td>Clarified coding information.</td>
</tr>
<tr>
<td>11/2015</td>
<td>New references added from BCBSA National medical policy.</td>
</tr>
<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>5/2011</td>
<td>Updated to remove information referencing related policies #092 and #126. The same 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**