MASSACHUSETTS

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Medical Policy

Autologous Hematopoietic Stem Cell Transplantation for Malignant Astrocytomas and Gliomas

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Policy Number: 159

BCBSA Reference Number: 8.01.31A
NCD/LCD: NA

Related Policies

None

Policy

Commercial Members: Managed Care (HMO and POS), PPO, and Indemnity Medicare HMO Blue℠ and Medicare PPO Blue℠ Members

Autologous hematopoietic stem-cell transplantation as a treatment of malignant astrocytomas and gliomas (including glioblastoma multiforme and oligodendroglioma) is **INVESTIGATIONAL**.

Prior Authorization Information

Inpatient

- For services described in this policy, precertification/preauthorization **IS REQUIRED** for all products if the procedure is performed **inpatient**.

Outpatient

- For services described in this policy, see below for products where prior authorization **might be required** if the procedure is performed **outpatient**.

	Outpatient
Commercial Managed Care (HMO and POS)	This is **not** a covered service.
Commercial PPO and Indemnity	This is **not** a covered service.
Medicare HMO Blue℠	This is **not** a covered service.
Medicare PPO Blue℠	This is **not** a covered service.

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.
According to the policy statement above, the following CPT/ICD procedure codes are considered investigational for the conditions listed for Commercial Members: Managed Care (HMO and POS), PPO, Indemnity, Medicare HMO Blue and Medicare PPO Blue:

CPT Codes

CPT codes:	Code Description
38206	Blood-derived hematopoietic progenitor cell harvesting for transplantation, per collection; autologous
38232	Bone marrow harvesting for transplantation; autologous
38241	Bone marrow or blood-derived peripheral stem-cell transplantation; autologous

HCPCS Codes

HCPCS codes:	Code Description
S2150	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

ICD-10 Procedure Codes

ICD-10-PCS procedure codes:	Code Description
30230G0	Transfusion of Autologous Bone Marrow into Peripheral Vein, Open Approach
30230AZ	Transfusion of Embryonic Stem Cells into Peripheral Vein, Open Approach
30230X0	Transfusion of Autologous Cord Blood Stem Cells into Peripheral Vein, Open Approach
30230Y0	Transfusion of Autologous Hematopoietic Stem Cells into Peripheral Vein, Open Approach
30233AZ	Transfusion of Embryonic Stem Cells into Peripheral Vein, Percutaneous Approach
30233G0	Transfusion of Autologous Bone Marrow into Peripheral Vein, Percutaneous Approach
30233X0	Transfusion of Autologous Cord Blood Stem Cells into Peripheral Vein, Percutaneous Approach
30233Y0	Transfusion of Autologous Hematopoietic Stem Cells into Peripheral Vein, Percutaneous Approach
30240AZ	Transfusion of Embryonic Stem Cells into Central Vein, Open Approach
30240G0	Transfusion of Autologous Bone Marrow into Central Vein, Open Approach
30240X0	Transfusion of Autologous Cord Blood Stem Cells into Central Vein, Open Approach
30240Y0	Transfusion of Autologous Hematopoietic Stem Cells into Central Vein, Open Approach
30243AZ	Transfusion of Embryonic Stem Cells into Central Vein, Percutaneous Approach

30243G0	Transfusion of Autologous Bone Marrow into Central Vein, Percutaneous Approach
30243X0	Transfusion of Autologous Cord Blood Stem Cells into Central Vein, Percutaneous Approach
30243Y0	Transfusion of Autologous Hematopoietic Stem Cells into Central Vein, Percutaneous Approach
30250G0	Transfusion of Autologous Bone Marrow into Peripheral Artery, Open Approach
30250X0	Transfusion of Autologous Cord Blood Stem Cells into Peripheral Artery, Open Approach
30250Y0	Transfusion of Autologous Hematopoietic Stem Cells into Peripheral Artery, Open Approach
30253G0	Transfusion of Autologous Bone Marrow into Peripheral Artery, Percutaneous Approach
30253X0	Transfusion of Autologous Cord Blood Stem Cells into Peripheral Artery, Percutaneous Approach
30253Y0	Transfusion of Autologous Hematopoietic Stem Cells into Peripheral Artery, Percutaneous Approach
30260G0	Transfusion of Autologous Bone Marrow into Central Artery, Open Approach
30260X0	Transfusion of Autologous Cord Blood Stem Cells into Central Artery, Open Approach
30260Y0	Transfusion of Autologous Hematopoietic Stem Cells into Central Artery, Open Approach
30263G0	Transfusion of Autologous Bone Marrow into Central Artery, Percutaneous Approach
30263X0	Transfusion of Autologous Cord Blood Stem Cells into Central Artery, Percutaneous Approach
30263Y0	Transfusion of Autologous Hematopoietic Stem Cells into Central Artery, Percutaneous Approach
3E03005	Introduction of Other Antineoplastic into Peripheral Vein, Open Approach
3E03305	Introduction of Other Antineoplastic into Peripheral Vein, Percutaneous Approach
3E04005	Introduction of Other Antineoplastic into Central Vein, Open Approach
3E04305	Introduction of Other Antineoplastic into Central Vein, Percutaneous Approach
3E05005	Introduction of Other Antineoplastic into Peripheral Artery, Open Approach
3E05305	Introduction of Other Antineoplastic into Peripheral Artery, Percutaneous Approach
3E06005	Introduction of Other Antineoplastic into Central Artery, Open Approach
3E06305	Introduction of Other Antineoplastic into Central Artery, Percutaneous Approach

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.

Astrocytoma and glioma are the most common brain tumors in adults. Astrocytomas are tumors that arise from brain cells called astrocytes. Gliomas originate from glial cells (which are most often from astrocytes). Sometimes the terms “astrocytoma” and “glioma” are used interchangeably. Glioblastomas are the most malignant of these tumors and have the poorest prognosis despite significant progress in

neuro-oncological therapies and technology. Malignant glial cells often disseminate throughout the brain, making it exceedingly difficult to target and treat all intracranial neoplastic foci with the result that tumor recurrence is inevitable despite aggressive surgery and adjuvant radio and/or chemotherapy.

Summary

Treatment of primary brain tumors focuses on surgery, either with curative intent or optimal tumor debulking. Survival after chemoradiotherapy is largely dependent on the extent of residual tumor after surgical debulking. Therefore, tumors arising in the midline, basal ganglia, or corpus callosum or those arising in the eloquent speech or motor areas of the cortex, which typically cannot be extensively resected, have a particularly poor outcome. A review article on HSCTconcluded that the high drug doses used in this treatment caused excessive toxicity that was not balanced by a significant improvement in survival. Additional reports on small, uncontrolled series of patients with pontine gliomas, recurrent oligodendrogliomas, or those undergoing radiation therapy for high-grade gliomas also did not suggest that this treatment improves survival. The results of a non-randomized study suggest myeloablative chemotherapy with autologous HSCT can produce long-term survival among children with recurrent malignant astrocytoma. However, lack of a contemporaneous treatment comparison group precludes conclusions as to the relative efficacy of this approach. Since the net health outcome of autologous hematopoietic stem-cell transplantation as a treatment of malignant astrocytomas and gliomas cannot be determined, the treatment is investigational.

Policy History

Date	Action
1/2019	Outpatient prior authorization is required for all commercial products including Medicare Advantage. Effective 1/1/2019.
11/2015, 2/2018	Clarified coding information.
6/2014	Updated Coding section with ICD10 procedure and diagnosis codes. Effective 10/2015.
12/2012	Updated to add new CPT code 38243.
11/2011, 4/2012	Medical policy ICD 10 remediation: Formatting, editing and coding updates. No changes to policy statements.
9/2010, 7/2011	Reviewed - Medical Policy Group – Hematology and Oncology. No changes to policy statements.
3/01/2010	New medical policy describing on-going non-coverage. Effective 3/1/2010.

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

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