



MASSACHUSETTS

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Medical Policy

Hematopoietic Cell Transplantation for Miscellaneous Solid Tumors in Adults

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Policy Number: 191

BCBSA Reference Number: 8.01.24

NCD/LCD: NA

Related Policies

- Hematopoietic Cell Transplantation for Solid Tumors of Childhood, [#208](#)
- Hematopoietic Cell Transplantation in the Treatment of Germ Cell Tumors, [#247](#)
- Hematopoietic Cell Transplantation for CNS Embryonal Tumors and Ependymoma, [#205](#)
- Hematopoietic Cell Transplantation for Epithelial Ovarian Cancer, [#204](#)
- Placental or Umbilical Cord Blood as a Source of Stem Cells, [#285](#)

Policy

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

Autologous or allogeneic cell transplant is [INVESTIGATIONAL](#) for the following malignancies in adults:

- Lung cancer, any histology
- Colon cancer
- Rectal cancer
- Pancreas cancer
- Stomach cancer
- Esophageal cancer
- Gall bladder cancer
- Cancer of the bile duct
- Renal cell cancer
- Cervical cancer
- Uterine cancer
- Cancer of the fallopian tubes
- Prostate cancer
- Nasopharyngeal cancer

- Paranasal sinus cancer
- Neuroendocrine tumors
- Soft tissue sarcomas
- Thyroid tumors
- Tumors of the thymus
- Tumors of unknown primary origin, or
- Malignant melanoma.

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 BlueSM	This is not a covered service.
Medicare PPO BlueSM	This is not a covered service.

Description

Hematopoietic Cell Transplantation

HCT is a procedure in which hematopoietic stem cells are intravenously infused to restore bone marrow and immune function in cancer patients who receive bone marrow-toxic doses of cytotoxic drugs with or without whole-body radiotherapy. Hematopoietic stem cells may be obtained from the transplant recipient (autologous HCT) or a donor (allogeneic HCT [allo-HCT]). They can be harvested from bone marrow, peripheral blood, or umbilical cord blood shortly after delivery of neonates. Cord blood transplantation is discussed in detail in policy #[285](#).

Immunologic compatibility between infused hematopoietic stem cells and the recipient is not an issue in autologous HCT. In allogeneic stem cell transplantation, immunologic compatibility between donor and patient is a critical factor for achieving a successful outcome. Compatibility is established by typing of human leukocyte antigens (HLA) using cellular, serologic, or molecular techniques. HLA refers to the gene complex expressed at the HLA-A, -B, and -DR (antigen-D related) loci on each arm of chromosome six. An acceptable donor will match the patient at all or most of the HLA loci.

Conditioning for HCT

Conventional Conditioning

The conventional ("classical") practice of allo-HCT involves administration of cytotoxic agents (e.g., cyclophosphamide, busulfan) with or without total body irradiation at doses sufficient to cause bone marrow ablation in the recipient. The beneficial treatment effect of this procedure is due to a combination of the initial eradication of malignant cells and subsequent graft-versus-malignancy effect mediated by non-self-immunologic effector cells. While the slower graft-versus-malignancy effect is considered the potentially curative component, it may be overwhelmed by existing disease in the absence of pretransplant conditioning. Intense conditioning regimens are limited to patients who are sufficiently medically fit to tolerate substantial adverse effects. These include opportunistic infections secondary to loss of endogenous bone marrow function and organ damage or failure caused by cytotoxic drugs. Subsequent to graft infusion in allo-HCT, immunosuppressant drugs are required to minimize graft rejection and graft-versus-host disease, which increases susceptibility to opportunistic infections.

The success of autologous HCT is predicated on the potential of cytotoxic chemotherapy, with or without radiotherapy, to eradicate cancerous cells from the blood and bone marrow. This permits subsequent engraftment and repopulation of the bone marrow with presumably normal hematopoietic stem cells obtained from the patient before undergoing bone marrow ablation. Therefore, autologous HCT is typically performed as consolidation therapy when the patient's disease is in complete remission. Patients who undergo autologous HCT are also susceptible to chemotherapy-related toxicities and opportunistic infections before engraftment, but not GVH disease.

Reduced-Intensity Conditioning Allo-HCT

RIC refers to the pretransplant use of lower doses of cytotoxic drugs or less intense regimens of radiotherapy than are used in traditional full-dose myeloablative conditioning treatments. Although the definition of RIC is variable, with numerous versions employed, all regimens seek to balance the competing effects of relapse due to residual disease and non-relapse mortality. The goal of RIC is to reduce disease burden and to minimize associated treatment-related morbidity and non-relapse mortality in the period during which the beneficial graft-versus-malignancy effect of allogeneic transplantation develops. RIC regimens range from nearly total myeloablative to minimally myeloablative with lymphoablation, with intensity tailored to specific diseases and patient condition. Patients who undergo RIC with allo-HCT initially demonstrate donor cell engraftment and bone marrow mixed chimerism. Most will subsequently convert to full-donor chimerism. In this review, the term *reduced-intensity conditioning* will refer to all conditioning regimens intended to be nonmyeloablative.

HCT in Solid Tumors in Adults

HCT is an established treatment for certain hematologic malignancies. Its use in solid tumors is less well established, although it has been investigated for a variety of solid tumors. With the advent of nonmyeloablative allogeneic transplant, interest has shifted to exploring the generation of alloreactivity to metastatic solid tumors via a graft-versus-tumor effect of donor-derived T cells.¹

HCT as a treatment for ovarian cancer, germ cell tumors, ependymoma, or malignant glioma is addressed separately (see policy #204, #247, and #205, respectively). HCT as a treatment for breast cancer is not addressed. This evidence review collectively addresses other solid tumors of adults for which HCT has been investigated, including lung cancer, malignant melanoma, tumors of the gastrointestinal tract (affecting the colon, rectum, pancreas, stomach, esophagus, gallbladder, or bile duct), male and female genitourinary systems (eg, renal cell carcinoma, prostate cancer, cervical cancer, uterine cancer, fallopian tube cancer), tumors of the head and neck, soft tissue sarcoma, thyroid tumors, tumors of the thymus, and tumors of unknown primary origin.

Summary

Hematopoietic cell transplantation (HCT) is an established treatment for certain hematologic malignancies and has been investigated for a variety of adult solid tumors. Interest continues in exploring nonmyeloablative allogeneic HCT (allo-HCT) for a graft-versus-tumor effect of donor-derived T-cells in metastatic solid tumors.

Autologous HCT

For individuals who have adult soft tissue sarcomas who receive autologous HCT, the evidence includes two TEC Assessments, a randomized controlled trial, and a number of phase 2 single-arm studies, some of which have been summarized in a systematic review. The relevant outcomes are overall survival (OS), disease-specific survival, and treatment-related mortality and morbidity. The 1995 and 1999 TEC Assessments, focusing on autologous HCT as primary and salvage therapy for a variety of solid tumors, found that the available evidence did not permit conclusions about the effect of HCT on patient survival. Although a small phase 2 randomized controlled trial reported longer survival for patients treated with autologous HCT than with standard chemotherapy, this trial did not show a survival benefit with HCT. The evidence is insufficient to determine the effects of the technology on health outcomes.

For individuals who have small cell lung cancer who receive autologous HCT, the evidence includes two TEC Assessments, several randomized controlled trials, and systematic reviews of these studies. The relevant outcomes are OS, disease-specific survival, and treatment-related mortality and morbidity. The 1995 and 1999 TEC Assessments, focusing on autologous HCT as primary and salvage therapy for a variety of solid tumors, found that the available evidence did not permit conclusions about the effect of HCT on patient survival. Studies published since the TEC Assessments have not reported increased OS for patients with small cell lung cancer treated with autologous HCT. The evidence is insufficient to determine the effects of the technology on health outcomes.

Allo-HCT

For individuals who have renal cell carcinoma, colorectal cancer, pancreatic cancer, or nasopharyngeal cancer who receive allo-HCT, the evidence includes a TEC Assessment and small single-arm series. The relevant outcomes are OS, disease-specific survival, and treatment-related mortality and morbidity. The 1995 and 1999 TEC Assessments, focusing on allo-HCT as primary and salvage therapy for a variety of solid tumors, found that the available evidence did not permit conclusions about the effect of allo-HCT on patient survival. Since the publication of the TEC Assessments, the evidence for allo-HCT to treat renal cell carcinoma, colorectal cancer, pancreatic cancer, and nasopharyngeal cancer has been limited to small case series. The evidence is insufficient to determine the effects of the technology on health outcomes.

Policy History

Date	Action
10/2020	Coding information clarified
2/2020	BCBSA National medical policy review. Description, summary and references updated. Policy statements unchanged.
3/2019	BCBSA National medical policy review. Description, summary and references updated. Policy statements unchanged.
1/2019	Outpatient prior authorization is required for all commercial products including Medicare Advantage. Effective 1/1/2019.
2/2018	New references added from BCBSA National medical policy.
3/2017	BCBSA National medical policy review. Title changed. New references added.
10/2016	Clarified coding information.
3/2016	New references added from BCBSA National medical policy.
12/2014	New references added from BCBSA National medical policy.
6/2014	Updated Coding section with ICD10 procedure and diagnosis codes, effective 10/2015.
11/2011-4/2012	Medical policy ICD 10 remediation: Formatting, editing and coding updates. No changes to policy statements.
7/2011	Reviewed - Medical Policy Group - Hematology and Oncology. No changes to policy statements.
9/2010	Reviewed - Medical Policy Group - Hematology and Oncology. No changes to policy statements.
6/1/2010	Medical policy 191 effective 6/1/2010 describing ongoing non-coverage

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

1. Carnevale-Schianca F, Ricchiardi A, Capaldi A, et al. Allogeneic hemopoietic stem cell transplantation in solid tumors. *Transplant Proc.* Jul-Aug 2005;37(6):2664-2666. PMID 16182778
2. Blue Cross and Blue Shield Association Technology Evaluation Center (TEC). High-Dose Chemotherapy with Autologous Stem-Cell Support for Miscellaneous Solid Tumors In Adults. *TEC Assessments.* 1995;10:Tab 4.
3. Blue Cross and Blue Shield Association Technology Evaluation Center (TEC). Salvage High-Dose Chemotherapy with Allogeneic Stem Cell Support for Relapse Following High-Dose Chemotherapy with Autologous Stem Cell Support for Non-lymphoid Solid Tumors. *TEC Assessments.* 1999;14:Tab 11.
4. Pedrazzoli P, Ledermann JA, Lotz JP, et al. High dose chemotherapy with autologous hematopoietic stem cell support for solid tumors other than breast cancer in adults. *Ann Oncol.* Oct 2006;17(10):1479-1488. PMID 16547069
5. National Comprehensive Cancer Network (NCCN). NCCN clinical practice guidelines in oncology: kidney cancer. Version 2.2018. http://www.nccn.org/professionals/physician_gls/pdf/kidney.pdf. Accessed November 11, 2019.
6. Kasper B, Dietrich S, Mechtersheimer G, et al. Large institutional experience with dose-intensive chemotherapy and stem cell support in the management of sarcoma patients. *Oncology.* Mar 2007;73(1-2):58-64. PMID 18334832
7. Schlemmer M, Wendtner CM, Falk M, et al. Efficacy of consolidation high-dose chemotherapy with ifosfamide, carboplatin and etoposide (HD-ICE) followed by autologous peripheral blood stem cell rescue in chemosensitive patients with metastatic soft tissue sarcomas. *Oncology.* Mar 2006;71(1-2):32-39. PMID 17344669
8. Peinemann F, Enk H, Smith LA. Autologous hematopoietic stem cell transplantation following high-dose chemotherapy for nonrhabdomyosarcoma soft tissue sarcomas. *Cochrane Database Syst Rev.* Apr 13 2017;4:CD008216. PMID 28407197
9. Peinemann F, Labeit AM. Autologous haematopoietic stem cell transplantation following high-dose chemotherapy for non-rhabdomyosarcoma soft tissue sarcomas: a Cochrane systematic review. *BMJ Open.* Jul 29 2014;4(7):e005033. PMID 25079925
10. Kasper B, Scharrenbroich I, Schmitt T, et al. Consolidation with high-dose chemotherapy and stem cell support for responding patients with metastatic soft tissue sarcomas: prospective, single-institutional phase II study. *Bone Marrow Transplant.* Jul 2010;45(7):1234-1238. PMID 19935728
11. Hartmann JT, Horger M, Kluba T, et al. A non-comparative phase II study of dose-intensive chemotherapy with doxorubicin and ifosfamide followed by high dose ICE consolidation with PBSC in non-resectable, high grade, adult-type soft tissue sarcomas. *Invest New Drugs.* Dec 2013;31(6):1592-1601. PMID 24091981
12. Tsujimura H, Miyaki T, Yamada S, et al. Successful treatment of histiocytic sarcoma with induction chemotherapy consisting of dose-escalated CHOP plus etoposide and upfront consolidation auto-transplantation. *Int J Hematol.* Nov 2014;100(5):507-510. PMID 25062797
13. Lorigan P, Woll PJ, O'Brien ME, et al. Randomized phase III trial of dose-dense chemotherapy supported by whole-blood hematopoietic progenitors in better-prognosis small-cell lung cancer. *J Natl Cancer Inst.* May 4 2005;97(9):666-674. PMID 15870437
14. Crivellari G, Monfardini S, Stragliotto S, et al. Increasing chemotherapy in small-cell lung cancer: from dose intensity and density to megadoses. *Oncologist.* Jan 2007;12(1):79-89. PMID 17227903
15. Jiang J, Shi HZ, Deng JM, et al. Efficacy of intensified chemotherapy with hematopoietic progenitors in small-cell lung cancer: A meta-analysis of the published literature. *Lung Cancer.* Aug 2009;65(2):214-218. PMID 19118919
16. Nishimura M, Nasu K, Ohta H, et al. High dose chemotherapy for refractory urothelial carcinoma supported by peripheral blood stem cell transplantation. *Cancer.* Nov 1 1999;86(9):1827-1831. PMID 10547557
17. Airolidi M, De Crescenzo A, Pedani F, et al. Feasibility and long-term results of autologous PBSC transplantation in recurrent undifferentiated nasopharyngeal carcinoma. *Head Neck.* Sep 2001;23(9):799-803. PMID 11505492

18. Lee JA, Choi SY, Kang HJ, et al. Treatment outcome of osteosarcoma after bilateral retinoblastoma: a retrospective study of eight cases. *Br J Ophthalmol.* Oct 2014;98(10):1355-1359. PMID 24795337
19. Imanguli MM, Childs RW. Hematopoietic stem cell transplantation for solid tumors. *Update Cancer Ther.* 2006;1(3):343-352.
20. Demirer T, Barkholt L, Blaise D, et al. Transplantation of allogeneic hematopoietic stem cells: an emerging treatment modality for solid tumors. *Nat Clin Pract Oncol.* May 2008;5(5):256-267. PMID 18398414
21. Childs R, Chernoff A, Contentin N, et al. Regression of metastatic renal-cell carcinoma after nonmyeloablative allogeneic peripheral-blood stem-cell transplantation. *N Engl J Med.* Sep 14 2000;343(11):750-758. PMID 10984562
22. Bregni M, Bernardi M, Servida P, et al. Long-term follow-up of metastatic renal cancer patients undergoing reduced-intensity allografting. *Bone Marrow Transplant.* Aug 2009;44(4):237-242. PMID 19234510
23. Aglietta M, Barkholt L, Schianca FC, et al. Reduced-intensity allogeneic hematopoietic stem cell transplantation in metastatic colorectal cancer as a novel adoptive cell therapy approach. The European Group for Blood and Marrow Transplantation Experience. *Biol Blood Marrow Transplant.* Mar 2009;15(3):326-335. PMID 19203723
24. Kanda Y, Omuro Y, Baba E, et al. Allo-SCT using reduced-intensity conditioning against advanced pancreatic cancer: a Japanese survey. *Bone Marrow Transplant.* Jul 2008;42(2):99-103. PMID 18391987
25. Abe Y, Ito T, Baba E, et al. Nonmyeloablative allogeneic hematopoietic stem cell transplantation as immunotherapy for pancreatic cancer. *Pancreas.* Oct 2009;38(7):815-819. PMID 19696692
26. Omazic B, Ayoglu B, Lohr M, et al. A preliminary report: radical surgery and stem cell transplantation for the treatment of patients with pancreatic cancer. *J Immunother.* Mar 23 2017. PMID 28338506
27. Toh HC, Chia WK, Sun L, et al. Graft-vs-tumor effect in patients with advanced nasopharyngeal cancer treated with nonmyeloablative allogeneic PBSC transplantation. *Bone Marrow Transplant.* Apr 2011;46(4):573-579. PMID 20661236
28. Omazic B, Remberger M, Barkholt L, et al. Long-term follow-up of allogeneic hematopoietic stem cell transplantation for solid cancer. *Biol Blood Marrow Transplant.* Apr 2016;22(4):676-681. PMID 26740375
29. National Comprehensive Cancer Network (NCCN). NCCN Clinical Practice Guidelines in Oncology. http://www.nccn.org/professionals/physician_gls/f_guidelines.asp. Accessed November 27, 2019.
30. Majhail NS, Farnia SH, Carpenter PA, et al. Indications for autologous and allogeneic hematopoietic cell transplantation: guidelines from the American Society for Blood and Marrow Transplantation. *Biol Blood Marrow Transplant.* Nov 2015;21(11):1863-1869. PMID 26256941
31. Centers for Medicare & Medicaid Services. National Coverage Determination (NCD) for STEM CELL Transplantation (110.8.1). 2010; <https://www.cms.gov/medicare-coverage-database/details/ncd-details.aspx?ncdid=45&ncdver=5&coverageselection=both&articletype=all&policytype=final&s=pennsylvania&keyword=stem+cell&keywordlookup=title&keywordsearchtype=and&bc=gaaaabaaaaaa&>. Accessed December 12, 2019.

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.

CPT Codes

CPT codes:	Code Description
38204	Management of recipient hematopoietic cell donor search and cell acquisition

38205	Blood-derived hematopoietic progenitor cell harvesting for transplantation, per collection; allogeneic
38206	Blood-derived hematopoietic progenitor cell harvesting for transplantation, per collection; autologous
38208	Transplant preparation of hematopoietic progenitor cells; thawing of previously frozen harvest without washing
38209	Transplant preparation of hematopoietic progenitor cells; thawing of previously frozen harvest, with washing
38210	Transplant preparation of hematopoietic progenitor cells; specific cell depletion with harvest, T-cell depletion
38211	Transplant preparation of hematopoietic progenitor cells; tumor-cell depletion
38212	Transplant preparation of hematopoietic progenitor cells; red blood cell removal
38213	Transplant preparation of hematopoietic progenitor cells; platelet depletion
38214	Transplant preparation of hematopoietic progenitor cells; plasma (volume) depletion
38215	Transplant preparation of hematopoietic progenitor cells; cell concentration in plasma, mononuclear, or buffy coat layer
38230	Bone marrow harvesting for transplantation; allogeneic
38232	Bone marrow harvesting for transplantation; autologous
38241	Hematopoietic progenitor cell (HPC); autologous transplantation

HCPCS Codes

HCPCS codes:	Code Description
S2140	Cord blood harvesting for transplantation; allogeneic
S2142	Cord blood derived stem-cell transplantation, allogeneic
S2150	Bone marrow or blood-derived peripheral stem-cell harvesting and transplantation, allogeneic or autologous, including pheresis, high-dose chemotherapy, and the number of days of post-transplant care in the global definition (including drugs; hospitalization; medical surgical, diagnostic and emergency services)

ICD-10 Diagnosis Codes

ICD-10-CM Diagnosis codes:	Code Description
C11.0	Malignant neoplasm of superior wall of nasopharynx
C11.1	Malignant neoplasm of posterior wall of nasopharynx
C11.2	Malignant neoplasm of lateral wall of nasopharynx
C11.3	Malignant neoplasm of anterior wall of nasopharynx
C11.8	Malignant neoplasm of overlapping sites of nasopharynx
C11.9	Malignant neoplasm of nasopharynx, unspecified
C15.3	Malignant neoplasm of upper third of esophagus
C15.4	Malignant neoplasm of middle third of esophagus
C15.5	Malignant neoplasm of lower third of esophagus
C15.8	Malignant neoplasm of overlapping sites of esophagus
C15.9	Malignant neoplasm of esophagus, unspecified
C16.0	Malignant neoplasm of cardia
C16.1	Malignant neoplasm of fundus of stomach
C16.2	Malignant neoplasm of body of stomach
C16.3	Malignant neoplasm of pyloric antrum
C16.4	Malignant neoplasm of pylorus
C16.5	Malignant neoplasm of lesser curvature of stomach, unspecified

C16.6	Malignant neoplasm of greater curvature of stomach, unspecified
C16.8	Malignant neoplasm of overlapping sites of stomach
C16.9	Malignant neoplasm of stomach, unspecified
C18.0	Malignant neoplasm of cecum
C18.1	Malignant neoplasm of appendix
C18.2	Malignant neoplasm of ascending colon
C18.3	Malignant neoplasm of hepatic flexure
C18.4	Malignant neoplasm of transverse colon
C18.5	Malignant neoplasm of splenic flexure
C18.6	Malignant neoplasm of descending colon
C18.7	Malignant neoplasm of sigmoid colon
C18.8	Malignant neoplasm of overlapping sites of colon
C18.9	Malignant neoplasm of colon, unspecified
C19	Malignant neoplasm of rectosigmoid junction
C20	Malignant neoplasm of rectum
C23	Malignant neoplasm of gallbladder
C24.0	Malignant neoplasm of extrahepatic bile duct
C24.9	Malignant neoplasm of biliary tract, unspecified
C25.0	Malignant neoplasm of head of pancreas
C25.1	Malignant neoplasm of body of pancreas
C25.2	Malignant neoplasm of tail of pancreas
C25.3	Malignant neoplasm of pancreatic duct
C25.4	Malignant neoplasm of endocrine pancreas
C25.7	Malignant neoplasm of other parts of pancreas
C25.8	Malignant neoplasm of overlapping sites of pancreas
C25.9	Malignant neoplasm of pancreas, unspecified
C30.0	Malignant neoplasm of nasal cavity
C31.9	Malignant neoplasm of accessory sinus, unspecified
C33	Malignant neoplasm of trachea
C34.00	Malignant neoplasm of unspecified main bronchus
C34.01	Malignant neoplasm of right main bronchus
C34.02	Malignant neoplasm of left main bronchus
C34.10	Malignant neoplasm of upper lobe, unspecified bronchus or lung
C34.11	Malignant neoplasm of upper lobe, right bronchus or lung
C34.12	Malignant neoplasm of upper lobe, left bronchus or lung
C34.2	Malignant neoplasm of middle lobe, bronchus or lung
C34.30	Malignant neoplasm of lower lobe, unspecified bronchus or lung
C34.31	Malignant neoplasm of lower lobe, right bronchus or lung
C34.32	Malignant neoplasm of lower lobe, left bronchus or lung
C34.80	Malignant neoplasm of overlapping sites of unspecified bronchus and lung
C34.81	Malignant neoplasm of overlapping sites of right bronchus and lung
C34.82	Malignant neoplasm of overlapping sites of left bronchus and lung
C34.90	Malignant neoplasm of unspecified part of unspecified bronchus or lung
C34.91	Malignant neoplasm of unspecified part of right bronchus or lung
C34.92	Malignant neoplasm of unspecified part of left bronchus or lung
C37	Malignant neoplasm of thymus
C43.0	Malignant melanoma of lip
C43.10	Malignant melanoma of unspecified eyelid, including canthus
C43.11	Malignant melanoma of right eyelid, including canthus

C43.12	Malignant melanoma of left eyelid, including canthus
C43.20	Malignant melanoma of unspecified ear and external auricular canal
C43.21	Malignant melanoma of right ear and external auricular canal
C43.22	Malignant melanoma of left ear and external auricular canal
C43.30	Malignant melanoma of unspecified part of face
C43.31	Malignant melanoma of nose
C43.39	Malignant melanoma of other parts of face
C43.4	Malignant melanoma of scalp and neck
C43.51	Malignant melanoma of anal skin
C43.52	Malignant melanoma of skin of breast
C43.59	Malignant melanoma of other part of trunk
C43.60	Malignant melanoma of unspecified upper limb, including shoulder
C43.61	Malignant melanoma of right upper limb, including shoulder
C43.62	Malignant melanoma of left upper limb, including shoulder
C43.70	Malignant melanoma of unspecified lower limb, including hip
C43.71	Malignant melanoma of right lower limb, including hip
C43.72	Malignant melanoma of left lower limb, including hip
C43.8	Malignant melanoma of overlapping sites of skin
C47.0	Malignant neoplasm of peripheral nerves of head, face and neck
C47.10	Malignant neoplasm of peripheral nerves of unspecified upper limb, including shoulder
C47.11	Malignant neoplasm of peripheral nerves of right upper limb, including shoulder
C47.12	Malignant neoplasm of peripheral nerves of left upper limb, including shoulder
C47.20	Malignant neoplasm of peripheral nerves of unspecified lower limb, including hip
C47.21	Malignant neoplasm of peripheral nerves of right lower limb, including hip
C47.22	Malignant neoplasm of peripheral nerves of left lower limb, including hip
C47.3	Malignant neoplasm of peripheral nerves of thorax
C47.4	Malignant neoplasm of peripheral nerves of abdomen
C47.5	Malignant neoplasm of peripheral nerves of pelvis
C47.6	Malignant neoplasm of peripheral nerves of trunk, unspecified
C47.8	Malignant neoplasm of overlapping sites of peripheral nerves and autonomic nervous system
C47.9	Malignant neoplasm of peripheral nerves and autonomic nervous system, unspecified
C49.0	Malignant neoplasm of connective and soft tissue of head, face and neck
C49.10	Malignant neoplasm of connective and soft tissue of unspecified upper limb, including shoulder
C49.11	Malignant neoplasm of connective and soft tissue of right upper limb, including shoulder
C49.12	Malignant neoplasm of connective and soft tissue of left upper limb, including shoulder
C49.20	Malignant neoplasm of connective and soft tissue of unspecified lower limb, including hip
C49.21	Malignant neoplasm of connective and soft tissue of right lower limb, including hip
C49.22	Malignant neoplasm of connective and soft tissue of left lower limb, including hip
C49.3	Malignant neoplasm of connective and soft tissue of thorax
C49.4	Malignant neoplasm of connective and soft tissue of abdomen
C49.5	Malignant neoplasm of connective and soft tissue of pelvis
C49.6	Malignant neoplasm of connective and soft tissue of trunk, unspecified
C49.8	Malignant neoplasm of overlapping sites of connective and soft tissue

C49.9	Malignant neoplasm of connective and soft tissue, unspecified
C53.0	Malignant neoplasm of endocervix
C53.1	Malignant neoplasm of exocervix
C53.8	Malignant neoplasm of overlapping sites of cervix uteri
C53.9	Malignant neoplasm of cervix uteri, unspecified
C54.0	Malignant neoplasm of isthmus uteri
C54.1	Malignant neoplasm of endometrium
C54.2	Malignant neoplasm of myometrium
C54.3	Malignant neoplasm of fundus uteri
C54.8	Malignant neoplasm of overlapping sites of corpus uteri
C54.9	Malignant neoplasm of corpus uteri, unspecified
C55	Malignant neoplasm of uterus, part unspecified
C57.00	Malignant neoplasm of unspecified fallopian tube
C57.01	Malignant neoplasm of right fallopian tube
C57.02	Malignant neoplasm of left fallopian tube
C58	Malignant neoplasm of placenta
C61	Malignant neoplasm of prostate
C64.1	Malignant neoplasm of right kidney, except renal pelvis
C64.2	Malignant neoplasm of left kidney, except renal pelvis
C64.9	Malignant neoplasm of unspecified kidney, except renal pelvis
C73	Malignant neoplasm of thyroid gland
C78.00	Secondary malignant neoplasm of unspecified lung
C78.01	Secondary malignant neoplasm of right lung
C78.02	Secondary malignant neoplasm of left lung
C78.30	Secondary malignant neoplasm of unspecified respiratory organ
C78.39	Secondary malignant neoplasm of other respiratory organs
C78.5	Secondary malignant neoplasm of large intestine and rectum
C78.7	Secondary malignant neoplasm of liver and intrahepatic bile duct
C78.80	Secondary malignant neoplasm of unspecified digestive organ
C78.89	Secondary malignant neoplasm of other digestive organs
C79.00	Secondary malignant neoplasm of unspecified kidney and renal pelvis
C79.01	Secondary malignant neoplasm of right kidney and renal pelvis
C79.02	Secondary malignant neoplasm of left kidney and renal pelvis
C79.82	Secondary malignant neoplasm of genital organs
C79.89	Secondary malignant neoplasm of other specified sites
C79.9	Secondary malignant neoplasm of unspecified site
C7B.00	Secondary carcinoid tumors, unspecified site
C7B.01	Secondary carcinoid tumors of distant lymph nodes
C7B.02	Secondary carcinoid tumors of liver
C7B.03	Secondary carcinoid tumors of bone
C7B.04	Secondary carcinoid tumors of peritoneum
D00.00	Carcinoma in situ of oral cavity, unspecified site
D00.01	Carcinoma in situ of labial mucosa and vermilion border
D00.02	Carcinoma in situ of buccal mucosa
D00.03	Carcinoma in situ of gingiva and edentulous alveolar ridge
D00.04	Carcinoma in situ of soft palate
D00.05	Carcinoma in situ of hard palate
D00.06	Carcinoma in situ of floor of mouth
D00.07	Carcinoma in situ of tongue

D00.08	Carcinoma in situ of pharynx
D00.1	Carcinoma in situ of esophagus
D00.2	Carcinoma in situ of stomach
D01.0	Carcinoma in situ of colon
D01.1	Carcinoma in situ of rectosigmoid junction
D01.2	Carcinoma in situ of rectum
D01.3	Carcinoma in situ of anus and anal canal
D01.40	Carcinoma in situ of unspecified part of intestine
D01.49	Carcinoma in situ of other parts of intestine
D01.5	Carcinoma in situ of liver, gallbladder and bile ducts
D01.7	Carcinoma in situ of other specified digestive organs
D01.9	Carcinoma in situ of digestive organ, unspecified
D02.20	Carcinoma in situ of unspecified bronchus and lung
D02.21	Carcinoma in situ of right bronchus and lung
D02.22	Carcinoma in situ of left bronchus and lung
D02.3	Carcinoma in situ of other parts of respiratory system
D02.4	Carcinoma in situ of respiratory system, unspecified
D03.0	Melanoma in situ of lip
D03.10	Melanoma in situ of unspecified eyelid, including canthus
D03.11	Melanoma in situ of right eyelid, including canthus
D03.12	Melanoma in situ of left eyelid, including canthus
D03.20	Melanoma in situ of unspecified ear and external auricular canal
D03.21	Melanoma in situ of right ear and external auricular canal
D03.22	Melanoma in situ of left ear and external auricular canal
D03.30	Melanoma in situ of unspecified part of face
D03.39	Melanoma in situ of other parts of face
D03.4	Melanoma in situ of scalp and neck
D03.51	Melanoma in situ of anal skin
D03.52	Melanoma in situ of breast (skin) (soft tissue)
D03.59	Melanoma in situ of other part of trunk
D03.60	Melanoma in situ of unspecified upper limb, including shoulder
D03.61	Melanoma in situ of right upper limb, including shoulder
D03.62	Melanoma in situ of left upper limb, including shoulder
D03.70	Melanoma in situ of unspecified lower limb, including hip
D03.71	Melanoma in situ of right lower limb, including hip
D03.72	Melanoma in situ of left lower limb, including hip
D03.8	Melanoma in situ of other sites
D04.20	Carcinoma in situ of skin of unspecified ear and external auricular canal
D04.21	Carcinoma in situ of skin of right ear and external auricular canal
D04.22	Carcinoma in situ of skin of left ear and external auricular canal
D04.30	Carcinoma in situ of skin of unspecified part of face
D04.39	Carcinoma in situ of skin of other parts of face
D04.4	Carcinoma in situ of skin of scalp and neck
D04.5	Carcinoma in situ of skin of trunk
D04.60	Carcinoma in situ of skin of unspecified upper limb, including shoulder
D04.61	Carcinoma in situ of skin of right upper limb, including shoulder
D04.62	Carcinoma in situ of skin of left upper limb, including shoulder
D04.70	Carcinoma in situ of skin of unspecified lower limb, including hip
D04.71	Carcinoma in situ of skin of right lower limb, including hip

D04.72	Carcinoma in situ of skin of left lower limb, including hip
D04.8	Carcinoma in situ of skin of other sites
D04.9	Carcinoma in situ of skin, unspecified
D06.0	Carcinoma in situ of endocervix
D06.1	Carcinoma in situ of exocervix
D06.7	Carcinoma in situ of other parts of cervix
D06.9	Carcinoma in situ of cervix, unspecified
D07.0	Carcinoma in situ of endometrium
D07.39	Carcinoma in situ of other female genital organs
D07.5	Carcinoma in situ of prostate
D3A.00	Benign carcinoid tumor of unspecified site
D3A.010	Benign carcinoid tumor of the duodenum
D3A.011	Benign carcinoid tumor of the jejunum
D3A.012	Benign carcinoid tumor of the ileum
D3A.019	Benign carcinoid tumor of the small intestine, unspecified portion
D3A.020	Benign carcinoid tumor of the appendix
D3A.021	Benign carcinoid tumor of the cecum
D3A.022	Benign carcinoid tumor of the ascending colon
D3A.023	Benign carcinoid tumor of the transverse colon
D3A.024	Benign carcinoid tumor of the descending colon
D3A.025	Benign carcinoid tumor of the sigmoid colon
D3A.026	Benign carcinoid tumor of the rectum
D3A.029	Benign carcinoid tumor of the large intestine, unspecified portion
D3A.090	Benign carcinoid tumor of the bronchus and lung
D3A.091	Benign carcinoid tumor of the thymus
D3A.092	Benign carcinoid tumor of the stomach
D3A.093	Benign carcinoid tumor of the kidney
D3A.094	Benign carcinoid tumor of the foregut, unspecified
D3A.095	Benign carcinoid tumor of the midgut, unspecified
D3A.096	Benign carcinoid tumor of the hindgut, unspecified
D3A.098	Benign carcinoid tumors of other sites
D3A.8	Other benign neuroendocrine tumors
D49.7	Neoplasm of unspecified behavior of endocrine glands and other parts of nervous system
D49.89	Neoplasm of unspecified behavior of other specified sites
D49.9	Neoplasm of unspecified behavior of unspecified site

ICD-10 Procedure Codes

ICD-10-PCS procedure codes:	Code Description
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
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
3E03305	Introduction of Other Antineoplastic into Peripheral Vein, Percutaneous Approach
3E04305	Introduction of Other Antineoplastic into Central Vein, Percutaneous Approach
3E05305	Introduction of Other Antineoplastic into Peripheral Artery, Percutaneous Approach
3E06305	Introduction of Other Antineoplastic into Central Artery, Percutaneous Approach