Hematopoietic Cell Transplantation (Hematopoietic Stem Cell Transplantation, Bone Marrow Transplantation): How CPT Codes Are Reported

This article describes the hematopoietic cell transplantation (HCT) process and identifies the appropriate CPT codes to use at each step along the way, including identifying a suitable donor, pretransplant patient conditioning, harvesting and infusing the graft, and posttransplant care. The information in this article is generally applicable to all three types of HCT (autologous, allogeneic related, and allogeneic unrelated) and all three graft sources (bone marrow, blood-derived peripheral stem cells, and umbilical cord blood). Special notation will be made when these codes do not apply. For ease of discussion, codes are presented in numerical sequence, not in the order in which the services are performed. It is critical that the specific codes designed to report the HCT procedures or services described in this article are used whenever possible. However, because the HCT field does not have codes to describe all its procedures and search services, this may not always be possible. Only when no specific code exists should an HCT service be reported using the appropriate unlisted procedure or service code.

Apheresis Codes Relevant to HCT: Codes 36511-36522

Although there are seven CPT codes in the range 36511-36522 to report therapeutic apheresis, only two codes are associated with HCT, 36514 and 36522. Code 36514, *Therapeutic apheresis; for plasma pheresis*, is reported when apheresis for plasma pheresis is used to treat posttransplant thrombotic thrombocytopenic purpura (TTP) or other microangiopathic hemolytic anemias. Code 36522, *Photopheresis, extracorporeal*, is reported when extracorporeal photopheresis is used to treat chronic graft-versus-host disease (GVHD). To report apheresis codes 36514 and 36522, the physician is required to examine the patient during the procedure, document the examination, and demonstrate active supervision of the procedure by documenting review of pertinent laboratory and clinical issues prior to apheresis. The documentation of his or her presence during part of the procedure is usually accomplished by documenting an examination of the patient during apheresis, and by documenting instructions to staff performing apheresis. The physician need not stay in the immediate apheresis suite for the entire 3-4 hour procedure, but must be immediately available on the facility premises throughout the procedure for emergencies and must periodically examine the patient during the procedure. These codes can be reported for both facility services and for physician services for the same patient on the same day. The supervising physician must document his involvement appropriately for these services to be reported.

Management of Recipient Hematopoietic Progenitor Cell Donor Search and Cell Acquisition: Code 38204

Code 38204, *Management of recipient hematopoietic progenitor cell donor search and cell acquisition*, covers the medical judgment and decision making related to the physician supervision of coordinators performing the unrelated donor search and the cognitive work effort involved in evaluating and selecting the optimal graft for the intended recipient.

Code 38204 should not be reported for services such as requesting a confirmatory typing of the donor purchased through the National Marrow Donor Program (NMDP), other cell source providers, or other line item services that may be included in the cell source invoice. Code 38204 is to be used only once per recipient patient whether successful or unsuccessful, and regardless of how long the search lasted. If a second transplant from the same donor is required, this code may not be reported again. However, if a second transplant is performed from a different donor—whether marrow, blood-derived peripheral stem cells, or umbilical cord blood—this code may be reported a second time, because a second search was conducted.

For the physician to report code 38204, the managing physician must document the cognitive work effort of reviewing the donor or cord blood search and selection, as well as the coordination activities with the associated collection center or cord blood bank for the service.

Allogeneic and Autologous HCT Collection by Apheresis: Codes 38205-38206

Code 38205, *Blood-derived hematopoietic progenitor cell harvesting for transplantation, per collection; allogenic:* The typical patient has acute myelogenous leukemia (AML) in first relapse with an HLA-identical sibling.

First, the physician evaluates whether the donor is a good candidate, by determining the donor's HLA type, the presence of any transmissible diseases or hepatitis, and donor size versus recipient size before making a decision about using an allogeneic stem cell harvest. Then, the actual peripheral mononuclear stem cells are harvested from the allogeneic donor using an FDA-approved apheresis device. Before starting the procedure that day, the physician checks donor's electrolytes, creatinine, complete blood count (CBC), and electrocardiogram (ECG). The physician monitors the amount of red blood cells (RBCs) removed by the machine if the donor and recipient are ABO mismatched. The physician also monitors donor's safety by evaluating blood pressure, pulse, and replaces electrolytes, especially calcium, as determined by patient symptoms and ECG monitoring. Post-procedure, the donor's CBC is checked to determine if platelets need to be given back from the product. Quality assessment of the collection procedure is performed by the physician using cell counts, cell differentials, flow cytometry, infection control cultures, and so forth.

Code 38206, *Blood-derived hematopoietic progenitor cell harvesting for transplantation, per collection; autologous:* The typical patient is a 35-year-old female with Hodgkin's disease in second relapse with no marrow involvement, a potential candidate for HCT. The recipient is assessed for risk of myelodysplasia and potential need for autologous peripheral stem cell collection.

First, the patient's bone marrow cellularity is assessed. The hematopoietic progenitor cells are assessed for any cytogenetic defects and for any blood transmissible diseases. Blood-derived hematopoietic progenitor cells are harvested. Before starting the procedure that day, the physician checks patient's electrolytes, creatinine, CBC, and ECG. The physician continuously monitors patient's safety by evaluating blood pressure and pulse, and replaces electrolytes, especially calcium, as determined by patient symptoms and ECG monitoring. Post-procedure, the donor's CBC is checked to determine if platelets need to be given back from the product. Quality assessment of the collection procedure is performed by the physician using cell counts, cell differentials, flow cytometry, infection control cultures, and so forth.

There are two codes to report blood-derived peripheral stem cell collection, 38205, for allogeneic (related and unrelated) collections and 38206, for autologous collections. The codes are to be reported only once per day, but both the collection facility and the supervising physician can report these codes.

To report physician services, a physician does not have to personally perform the procedure but must examine the donor during the procedure, demonstrate active supervision of the procedure, and document his or her activity as noted below. The physician must remain in the facility for the entire procedure and be immediately available if needed at the bedside.

Supervision includes the following: 1) Before starting the procedure, the physician checks the donor's electrolytes, creatinine, complete blood count, and ECG; 2) during the procedure, the physician monitors the amount of RBCs if the donor and recipient are ABO mismatched, evaluates donor blood pressure and pulse and replaces electrolytes, especially calcium, as determined by patient symptoms. The physician documents his or her presence during the procedure, usually by documenting an examination, as well as instructions on the technical aspects of collection to the staff. After the procedure, the donor's CBC result is checked to see whether platelets need to be given back from the product. Quality assessment of the procedure is performed by the physician using cell counts, cell differentials, flow cytometry, infection control cultures, all of which may be a distinct and separate service, such as the need for adjustment in electrolytes. These codes can be reported both by the facility and physician services for the same patient on the same day. Although the physician supervising cell collection can, on the same day, report an evaluation and management service, but it should not include the condition for which the cell collection is being done or toxicities incurred during cell collection.

Both code 38205 for allogeneic collections and code 38206 for autologous collections, are to be reported only once per day. These codes can be reported by both the collection facility (technical procedure component) and the supervising physician (clinical patient assessment component) for the same patient on the same date of service. The supervising physician must document his or her involvement appropriately in order for these services to be reported.

Cell Processing: Codes 38207-38215

All codes in this section apply to procedures used to prepare hematopoietic cells for allogeneic transplantation or

Table 1: Codes for transplant preparation of hematopoietic progenitor cells

38207	Transplant preparation of hematopoietic progenitor cells; cryopreservation and storage
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 within 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

autologous reinfusion (see Table 1). Infusion of all types of stem cells (bone marrow, blood-derived peripheral stem cells, and cord blood) should be reported when performed separately. However, these codes should only be reported once per day regardless of the quantity of bone marrow or stem cells manipulated. These services are currently valued by Medicare for the facility costs in hospital outpatient setting only.

When these codes were created, the CPT Editorial Panel recognized physician services in codes 38207-38215, such as work effort and the judgment involved with cell processing services to determine whether a product does or does not meet the specifications of a transplantable product. Therefore, CPT guidlines allow professional reporting of these services with the appropriate designation of site of service even if payer policies may restrict usage.

Note that codes 38207 and 38208 are for *therapeutic* cryopreservation and thawing of hematopoietic progenitor cells, respectively. It is important to distinguish these codes from codes 88240 and 88241, which should be used to report *diagnostic* cryopreservation and storage of cells (88240) and diagnostic thawing and expansion of frozen cells (88241). Also note that codes 38207-38215 are not separately reported in conjunction with the flow cytometry codes (88182 and 88184-88189). Use code 86367, *Stem cells (ie, CD34), total count*, when determining cell counts of a *donor* before an apheresis procedure begins, but use the appropriate code from 38207-38215 when assessing cell counts in a collection *during* the apheresis procedure.

Examples: Codes 38207- 38215

Physician work effort covered in code 38207 includes cognitive work effort of a physician evaluating or reviewing donor/recipient HLA typing, ABO compatibility, infectious disease serology, and appropriate quality-assurance procedures, such as CD34, CD3, and microbiology testing. This review must be documented in a report in the patient's medical record. Similarly, appropriate documentation is required for the physician work effort for the other cell processing codes 38208, 38209, 38210, 38211, 38212, 38213, 38214 and 38215.

Code 38207, freezing and storage of hematopoietic and lymphopoietic cells for transplantation encompasses physician oversight and several laboratory processes and services. All flow cytometry procedures for quality assurance of an individual product are included in this code. Hospital outpatient departments report these codes separately to account for the facility resources they expend in terms of technician time, laboratory supplies, machine depreciation, space utilization, and other overhead expenses.

Thawing of a previously cryopreserved progenitor cell harvest, including cord blood, without washing is reported with code 38208, and thawing with washing is reported with code 38209. These codes are intended for the thawing of the harvest on the day of infusion. This code is a per-day code like the other cell-processing codes. Code 38209 is intended to report washing of thawed cells to remove dimethyl sulfoxide (DMSO). When reported by the facility, this code is intended to cover hospital

costs including technician time, machinery, supplies, machinery depreciation, and pre- and post-wash viability testing, and other overhead expenses.

Codes 38210-38215 are each described separately and in more detail below. When reported by the facility, these codes include equipment, depreciation, technician time, space utilization, viability testing (including flow cytometry), and supplies for performing the test or procedure in question.

Code 38210 is reported for the removal of T-cells from a bone marrow or stem cell harvest to prevent GVHD, and includes a physician's work and decision making in assessing the need for T-cell depletion and document its efficacy to meet the needs of the intended transplant. If cryopreservation (code 38207) is to be performed before infusion, then cryopreservation should be reported separately. Mononuclear cell separation (code 38215) may also be reported separately if it is not routinely performed before T-cell depletion.

Code 38211 describes tumor cell depletion or tumor purging, which is similar to T-cell depletion, and is reported for purging contaminating tumor cells from an autologous product. When reported by the physician, this code includes decision making and assessment, which consists of determining the necessity for tumor purging, assessing the quality of the product received in the laboratory for tumor purging, supervising technical staff, assessing the efficacy of the procedure, and reviewing the quality of the product to meet specifications. Because cryopreservation is always performed in the context of tumor purging for an autologous transplant, this code includes cryopreservation (code 38207), which should not be reported separately.

Code 38212 is reported for removal services, of RBCs from a fresh allogeneic stem cell product with major ABO incompatibility prior to transplant. This code also encompasses services (including flow cytometry testing) to ensure the efficacy of RBC removal and the viability of the progenitor cells in the stem cell product after RBC removal.

Code 38213 is reported for services provided to the donor undergoing a multiple-day progenitor cell harvest who requires a platelet soft spin to add back platelets as a result of a decrease in platelet count after the progenitor cell collection.

Code 38214 is reported for plasma volume depletion performed on a fresh HCT harvest for plasma removal for the purposes of either minor ABO incompatibility or volume reduction in the circumstance in which the donor is much larger than the recipient.

Code 38215 describes cell concentration of the plasma, mononuclear, or buffy coat layer for mononuclear cell separation for either major or minor ABO incompatibility from a fresh HCT harvest or when a mononuclear cell separation is necessary for further cell processing, such as T-cell depletion or tumor purging.

Bone Marrow Harvesting for Transplantation: Code 38230

Code 38230, *Bone marrow harvesting for transplantation*, is used to report a bone marrow harvest from an autologous or allogeneic (related or unrelated) donor. Code 38230 is a surgical procedure that includes a preoperative day assessment, harvesting the bone marrow, the management of complications, and postoperative care by the physician within the 10-day global period as stipulated in Medicare guidelines. Two other CPT codes —38220, *Bone marrow; aspiration only*, and 38221, *Bone marrow; biopsy, needle or trocar*—also describe bone marrow aspirations, which are used to obtain bone marrow for testing purposes. They do not involve obtaining a sufficient amount of bone marrow for transplant purposes and would not be separately reported if these services happened to be performed concurrently with code 38230.

Allogeneic and Autologous Stem Cell Transplantation: Codes 38240 and 38241

Codes 38240 and 38241 report infusions of stem cells into transplant recipients. Bone marrow, blood-derived peripheral stem cells, and cord blood stem cells are all infused using the intravenous push technique, which is similar to the administration of units of platelets. A physician should be present in the facility and immediately available for the infusion of one or more stem cells, and to confirm identity of the cells. This code is reported for both facility and physician services. The physician must document his or her involvement appropriately in order for these services to be reported. Physician work effort includes reviewing the donor-recipient identity, approving the cell dose infused to meet the clinical needs of treating the recurrent malignancy or infection, obtaining consent from the patient, ordering the premedications, infusing the product, and managing any acute toxicities from the infusion. Code 38240, *Bone marrow or blood-derived peripheral stem cell transplantation; allogenic*, is reported for each *allogeneic* stem cell transplant, and may be derived from bone marrow, blood-derived peripheral stem cells, or cord bloodstem cell sources, regardless of whether the donor is related or unrelated to the patient. Code 38241, *Bone marrow or blood-derived peripheral stem cell transplantation; autologous*, is reported for each *autologous* stem cell

continued on page 11

determinations, performed for other than colorectal neoplasm screening, should be reported when a single specimen obtained from a digital rectal examination is tested.

Medicine/Neurology and Neuromuscular Procedures

Question: *Is CPT code 95874 reported when EMG guidance is used for chemical denervation injection and the equipment only provides audio and no visual/graphic readings?*

Answer: Yes, it is appropriate to report CPT code 95874, *Needle electromyography for guidance in conjunction with chemodenervation (list separately in addition to code for primary procedure)*, for EMG guidance for chemical denervation injection using equipment that only provides audio without visual/graphic readings. ◆

Hematopoietic Cell Transplantation, continued from page 6

transplant (reinfusion of stem cells), regardless of whether the cells are from the patient's marrow or peripheral blood. When the cell-processing laboratory performs the cryopreservation and thawing of the product for the infusion, the facility should report codes 38207, 38208, and/or 38209, as appropriate.

Allogeneic Donor Lymphocyte Infusions: Codes 38242

Code 38242, *Bone marrow or blood-derived peripheral stem cell transplantation; allogeneic donor lymphocyte infusions*, describes allogeneic donor lymphocyte infusions (DLIs) from the original transplant donor to treat relapse or viral infections in allogeneic transplant recipients. This code is used to report facility and physician services for management of DLI complications and the risk associated with the infusion on a single day. Physician work effort includes reviewing the donor-recipient identity, approving the cell dose infused to meet the clinical needs of treating the recurrent malignancy or infection, obtaining consent from the patient, ordering the pre-medications, infusing the product, and managing any acute toxicities with the infusion. These activities must be documented in a report in the patient's medical record. When the cell-processing laboratory performs the cryopreservation and thawing of the product for the infusion, the facility should report codes 38207, 38208, and/or 38209, as appropriate.

The Role of Modifier 25

Evaluation and management (E/M) services that are typically provided to the patient on the day of the apheresis service are included in apheresis codes 36511-36516, 36522, 38205, 38206, and 38240-38242. Therefore, a separate visit code, such as an office or outpatient visit or subsequent hospital care, should not generally be reported by the physician on the day when an apheresis service is reported. However, separate reporting of E/M services is permitted when separately identifiable E/M services such as consultation, initial hospital care, or discharge day management are performed. In these instances, modifier 25 may be appended to the appropriate level of E/M service provided. ◆

CTA Chest for Pulmonary Embolism, continued from page 9

described by 71275 with respect to field of view, slice thickness, gating requirements, reconstruction algorithms, and even scanner requirements.[1] For that reason new cardiac CTA Category III codes (0144T-0151T) were created and are available for use. When cardiac CTA is performed, you are required to use the established Category III codes, because they accurately describe the cardiac CT and coronary CTA procedures and are specific to this service. ◆

[1] Coronary CT Angiography, ACR Radiology Coding Source, January/February 2005.

[2] Coding Q&A, ACR Radiology Coding Source, November/December 2005.

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