

## Chemotherapy: Drugs A-D Policy

This section contains policy related to billing for injection services, listed in alphabetical order by generic drug name or drug type. For general billing policy information regarding injections services, refer to the *Chemotherapy: An Overview* section in this manual. Additional policy information for chemotherapy drug services can be found in the *Chemotherapy: Drugs E-O* and *Chemotherapy: P-Z* sections in this manual.

### **Ado-Trastuzumab Emtansine**

Ado-trastuzumab emtansine is a Human Epidermal Growth Factor Receptor 2 (HER2)-targeted antibody-drug conjugate which contains the humanized anti-HER2 IgG1, trastuzumab, covalently linked to the microtubule inhibitory drug DM1 (a maytansine derivative) via the stable thioether linker MCC (4-[N- maleimidomethyl] cyclohexane-1-carboxylate). Emtansine refers to the MCC- DM1 complex. Upon binding to sub-domain IV of the HER2 receptor, ado- trastuzumab emtansine undergoes receptor-mediated internalization and subsequent lysosomal degradation, resulting in intracellular release of DM1- containing cytotoxic catabolites. Binding of DM1 to tubulin disrupts microtubule networks in the cell, which results in cell cycle arrest and apoptotic cell death.

#### Indications

For the treatment of patients with HER2 positive metastatic breast cancer who previously received trastuzumab and a taxane, separately or in combination. They should have either:

- Received prior therapy for metastatic disease, or
- Developed disease recurrence during or within six months of completing adjuvant therapy

#### Authorization

An approved *Treatment Authorization Request (TAR)* is required for reimbursement. Documentation must be submitted with the TAR to establish medical necessity.

#### Dosage

The recommended dose of ado-trastuzumab emtansine is 3.6 mg/kg given as an intravenous infusion every three weeks (21-day cycle) until disease progression or unacceptable toxicity. Ado-trastuzumab emtansine should not be administered at doses greater than 3.6 mg/kg nor should it be substituted for or used with trastuzumab.

#### Billing

HCPCS code J9354 (injection, ado-trastuzumab emtansine, 1 mg)

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<b>Aldesleukin</b>	Aldesleukin is a lymphokine that stimulates growth of T-lymphocytes. Aldesleukin is used to treat metastatic renal cell carcinoma and metastatic malignant melanoma. It is a “biologic response modifier” that promotes anti-tumor activity mediated through the immune system.
<b>Required Codes</b>	Aldesleukin is reimbursable when billed in conjunction with ICD-9-CM diagnosis codes 172.0 – 172.9 (malignant melanoma of skin) or 189.0 – 189.1 (malignant neoplasm of kidney).
<b>Dosage</b>	Adult patients diagnosed with metastatic renal cell carcinoma or metastatic malignant melanoma may be treated with a dosage schedule consisting of two five-day treatment cycles separated by a rest period of nine days. Recipients receive a dose of 600,000 IU/kg of aldesleukin administered every eight hours through a 15-minute intravenous infusion, for a total of 14 doses. Following the rest period, the schedule is repeated for another 14 doses, to a maximum of 28 doses per course.
<b>Billing</b>	HCPCS code J9015 (injection, aldesleukin, per single use vial)  Aldesleukin may be billed in conjunction with CPT-4 code 96413 (chemotherapy administration, intravenous infusion technique; up to one hour, single or initial substance/drug).

**Asparaginase *Erwinia Chrysanthemi***

Asparaginase *Erwinia chrysanthemi* contains an asparaginase specific enzyme derived from *Erwinia chrysanthemi*. Asparaginase *Erwinia chrysanthemi* catalyzes the deamidation of asparagine to aspartic acid and ammonia, resulting in a reduction in circulating levels of asparagine. The mechanism of action of asparaginase *Erwinia chrysanthemi* is thought to be based on the inability of leukemic cells to synthesize asparagine due to lack of asparagine synthetase activity, resulting in cytotoxicity specific for leukemic cells that depend on an exogenous source of the amino acid asparagine for their protein metabolism and survival.

## Indications

For the treatment of patients with acute lymphoblastic leukemia who have developed hypersensitivity to *E. coli*-derived asparaginase.

## Dosage

To substitute for a dose of pegaspargase:

The recommended dose is 25,000 International Units/m<sup>2</sup> administered intramuscularly three times a week (Monday/Wednesday/Friday) for six doses for each planned dose of pegaspargase.

To substitute for a dose of native *E. coli* asparaginase:

The recommended dose is 25,000 International Units/m<sup>2</sup> administered intramuscularly for each scheduled dose of native *E. coli* asparaginase within a treatment.

Maximum dose of 50,000 units unless there is documentation that patient's body surface area (BSA) is greater than 2.6 m<sup>2</sup>.

## Required Diagnosis Codes

One of the following ICD-9-CM diagnosis codes is required for reimbursement:

204.00 or 204.02

## Billing

HCPCS code J9019 (injection asparaginase [erwinaze], 1,000 IU)

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<b>Azacitidine</b>	Azacitidine is a pyrimidine nucleoside analog of cytidine and is believed to exert its antineoplastic effects by causing hypomethylation of DNA and direct cytotoxicity on abnormal hematopoietic cells in the bone marrow.
Indications	Azacitidine is indicated for treatment of beneficiaries with: <ul style="list-style-type: none"><li>• Refractory anemia</li><li>• Refractory anemia with ringed sideroblasts (if accompanied by neutropenia or thrombocytopenia or requiring transfusions)</li><li>• Refractory anemia with excess blasts or excess blasts in transformation</li><li>• Chronic myelomonocytic leukemia</li><li>• Acute myeloid leukemia</li></ul>
Dosage	The recommended starting dosage of azacitidine is 75 mg/m <sup>2</sup> , given subcutaneously or intravenously once a day for seven days. This is usually repeated every four weeks for at least four cycles, and then continued as long as the patient continues to improve. The dosage may be increased to a maximum of 100 mg/m <sup>2</sup> if there is no initial response to treatment.
Billing	HCPCS code J9025 (injection, azacitidine, 1 mg)  Azacitidine is reimbursable for either intravenous or subcutaneous administration. Azacitidine may be billed either as an I.V. push or I.V. infusion over 40 minutes.  <b>Note:</b> Refer to the <i>Chemotherapy: An Overview</i> section of this manual for both subcutaneous injection and I.V. infusion administration billing codes.

**Bendamustine HCl**

Bendamustine HCl is a bifunctional mechlorethamine derivative containing a purine-like benzimidazole ring. Mechlorethamine and its derivatives form electrophilic alkyl groups. These groups form covalent bonds with electron-rich nucleophilic moieties, resulting in interstrand DNA crosslinks. The bifunctional covalent linkage can lead to cell death via several pathways. Bendamustine is active against both quiescent and dividing cells. The exact mechanism of action of bendamustine remains unknown.

**Indications**

For the treatment of patients with:

- Chronic lymphocytic leukemia or
- Indolent B-cell non-Hodgkin lymphoma that has progressed during or within six months of treatment with rituximab or a rituximab-containing regimen

**Required Codes**

Claims must be billed in conjunction with one of the following ICD-9-CM diagnosis codes:

200.00 – 200.08	200.40 – 200.48	202.00 – 202.88
200.10 – 200.18	200.70 – 200.78	204.10
200.30 – 200.38	200.80 – 200.88	204.12

**Billing**

HCPCS code J9033 (injection, bendamustine HCl, 1 mg)

**Bevacizumab**

Policy for intravitreal bevacizumab (HCPCS code J9035) is located in the *Ophthalmology* section of the appropriate Part 2 manual.

Bevacizumab is a vascular endothelial growth factor-specific angiogenesis inhibitor and is reimbursable for the treatment of:

- Metastatic breast cancer, with paclitaxel for treatment of patients who have not received chemotherapy for metastatic HER2-negative breast cancer
- Unresectable, locally advanced, recurrent or metastatic non-squamous, non-small cell lung cancer, with carboplatin and paclitaxel for first line treatment
- Metastatic colorectal cancer, with intravenous five fluorouacil-based chemotherapy for first- or second-line treatment
- Glioblastoma multiforme, as a single agent for patients with progressive disease following prior therapy
- Metastatic renal cell carcinoma with interferon alpha
- Cervical cancer, in combination with paclitaxel and cisplatin or paclitaxel and topotecan in persistent, recurrent, or metastatic disease
- Platinum-resistant recurrent epithelial ovarian, fallopian tube or primary peritoneal cancer, in combination with paclitaxel, pegylated liposomal doxorubicin or topotecan

**Dosage**

The recommended dosage for bevacizumab varies depending upon the disease being treated.

**Required Codes**

Bevacizumab is reimbursable only with one of the following ICD-9-CM diagnosis codes:

153.0 – 154.1	175.0 – 175.9
154.8	180.0 – 180.9
<b><u>158.8 – 158.9</u></b>	<b><u>183.0 – 183.9</u></b>
162.2 – 162.9	189.0
174.0 – 174.9	191.0 – 191.9

**Billing**

HCPCS code J9035 (injection, bevacizumab, 10 mg)  
One (1) unit = 10 mg

Bevacizumab is packaged in 100 mg and 400 mg vials, and it may be necessary to discard the unused portion of a vial. Providers may bill for a quantity equal to the amount given to the patient plus the amount wasted. Providers must specify the amount wasted in the *Remarks* field (Box 80)/*Additional Claim Information* field (Box 19) of the claim.

<b>Bortezomib</b>	Bortezomib is approved for the treatment of multiple myeloma and mantle cell lymphoma.
Dosage	The recommended initial dose for bortezomib is 1.3 mg/m <sup>2</sup> and may be administered intravenously at a concentration of 1 mg/ml or subcutaneously at a concentration of 2.5 mg/ml. Bortezomib is for intravenous or subcutaneous use only and should not be administered by any other route.
Required Codes	Bortezomib is reimbursable only with one of the following ICD-9-CM diagnosis codes: 200.40 – 200.48 203.00 – 203.02
Billing	HCPCS code J9041 (injection, bortezomib, 0.1 mg)  Reimbursement for any dosage in excess of 35 units requires documentation of body surface area > 2.7 m <sup>2</sup> or with an approved <i>Treatment Authorization Request (TAR)</i> .

**Brentuximab Vedotin**

Brentuximab vedotin is a CD30-directed antibody-drug conjugate (ADC) consisting of three components: (1) the chimeric IgG1 antibody cAC10, specific for human CD30, (2) the microtubule disrupting agent monomethyl auristatin E (MMAE), and (3) a protease-cleavable linker that covalently attaches MMAE to cAC10. Nonclinical data suggest that the anticancer activity of brentuximab vedotin is due to the binding of the ADC to CD30-expressing cells, followed by internalization of the ADC-CD30 complex, and the release of MMAE via proteolytic cleavage. Binding of MMAE to tubulin disrupts the microtubule network within the cell, subsequently inducing cell cycle arrest and apoptotic death of the cells.

Indications

Brentuximab vedotin is indicated for adults 18 years of age and older for the following:

- The treatment of patients with Hodgkin's lymphoma after failure of autologous stem cell transplant (ASCT) or after failure of at least two prior multi-agent chemotherapy regimens in patients who are not ASCT candidates.
- The treatment of patients with systemic anaplastic large cell lymphoma after failure of at least one prior multi-agent chemotherapy regimen.

Dosage

The recommended dose is 1.8 mg/kg administered only as an intravenous infusion over 30 minutes every three weeks. Treatment may be continued until the earliest of a maximum of 16 cycles, disease progression or unacceptable toxicity. The maximum dose is 180 mg every three weeks; however, this dose may be exceeded if justification for the higher dose is submitted with the claim. The maximum daily dosage is 180 mg.

Required Diagnosis Codes

One of the following ICD-9-CM diagnosis codes is required for reimbursement:

200.60 – 200.68	201.50 – 201.58
201.60 – 201.68	201.70 – 201.78
201.90 – 201.98	V10.72

Billing

HCPCS code J9042 (injection, brentuximab vedotin, 1 mg)

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<b>Cabazitaxel</b>	Cabazitaxel is an antineoplastic agent belonging to the taxane class. Cabazitaxel is a microtubule inhibitor that binds to tubulin and promotes its assembly into microtubules while simultaneously inhibiting disassembly. This leads to the stabilization of microtubules, which results in the inhibition of mitotic and interphase cellular functions.																				
Indications	Cabazitaxel is indicated in combination with prednisone for the treatment of patients with hormone-refractory metastatic prostate cancer previously treated with a docetaxel-containing treatment regimen.																				
Restrictions	Restricted to males ages 18 and older.																				
Diagnosis Restrictions	Restricted to ICD-9-CM diagnosis code 185.																				
Dosage	<p>The recommended dose is 25 mg/m<sup>2</sup> administered as a one-hour intravenous infusion every three weeks in combination with oral prednisone 10 mg administered daily throughout cabazitaxel treatment.</p> <p>When billing for more than 62 mg per dose, providers must document body surface area exceeds 2.5 meters squared.</p>																				
Billing	HCPCS code J9043 (injection, cabazitaxel, 1 mg) One billing unit = 1 mg																				
<b>Carboplatin</b>	<p>Carboplatin, 50 mg (HCPCS code J9045), a platinum-containing chemotherapeutic agent, is reimbursable to treat the following:</p> <table><tr><td>Testicular cancer</td><td>Breast cancer</td></tr><tr><td>Ovarian cancer</td><td>Cancer of the esophagus</td></tr><tr><td>Bladder cancer</td><td>Cancer of the nasal cavity</td></tr><tr><td>Adrenal gland cancer</td><td>Wilms' tumor</td></tr><tr><td>Lung cancer (small-cell and non-small cell)</td><td>Cancer without specification of the primary site</td></tr><tr><td>Cancer of the cervix</td><td>Retinoblastoma</td></tr><tr><td>Endometrial cancer</td><td>Brain cancer</td></tr><tr><td>Neuroblastoma</td><td>Cancer of the skin</td></tr><tr><td>Osteogenic sarcoma</td><td>Hodgkin's lymphoma</td></tr><tr><td>Head, face and neck cancer</td><td>Non-Hodgkin's lymphoma</td></tr></table>	Testicular cancer	Breast cancer	Ovarian cancer	Cancer of the esophagus	Bladder cancer	Cancer of the nasal cavity	Adrenal gland cancer	Wilms' tumor	Lung cancer (small-cell and non-small cell)	Cancer without specification of the primary site	Cancer of the cervix	Retinoblastoma	Endometrial cancer	Brain cancer	Neuroblastoma	Cancer of the skin	Osteogenic sarcoma	Hodgkin's lymphoma	Head, face and neck cancer	Non-Hodgkin's lymphoma
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CPT-4 code 96413 (chemotherapy administration, intravenous infusion technique; up to one hour, single or initial substance/drug) may be billed in conjunction with carboplatin code J9045.

Place of Service: Outpatient

Carboplatin is used as an alternative to cisplatin in the outpatient setting due to its lower gastrointestinal toxicity and short infusion time. No pre- or post-treatment hydration or forced diuresis is required, as with cisplatin.

Dosage

The maximum dose is for carboplatin is 20 units. Doses in excess of 20 units will be allowed when medically justified, such as dose based on age, sex, renal function, weight, height, etc. – Carboplatin Area Under Curve (AUC) Calculation.

Billing

HCPCS code J9045 (injection, carboplatin, 50 mg)

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<b>Carfilzomib</b>	Carfilzomib is a tetrapeptide epoxyketone proteasome inhibitor that irreversibly binds to the N-terminal threonine-containing active sites of the 20S proteasome, the proteolytic core particle within the 26S proteasome. Carfilzomib had antiproliferative and proapoptotic activities <i>in vitro</i> in solid and hematologic tumor cells.
Indications	Carfilzomib is indicated for the treatment of patients 18 years of age and older with multiple myeloma who have received at least two prior therapies including bortezomib and an immunomodulatory agent and who have demonstrated disease progression on or within 60 days of completion of the last therapy.
Dosage	<p>Carfilzomib is administered intravenously over 2 to 10 minutes, on two consecutive days, each week for three weeks (days 1, 2, 8, 9, 15 and 16), followed by a 12-day rest period (days 17 to 28). Each 28-day period is considered one treatment cycle. In cycle one, carfilzomib is administered at a dose of 20 mg/m<sup>2</sup>. If tolerated in cycle one, the dose should be escalated to 27 mg/m<sup>2</sup> beginning in cycle two and continued at 27 mg/m<sup>2</sup> in subsequent cycles. Treatment may be continued until disease progression or until unacceptable toxicity occurs. The dose is calculated using the patient's actual body surface area at baseline. Patients with a body surface area greater than 2.2 m<sup>2</sup> should receive a dose based upon a body surface area of 2.2 m<sup>2</sup>.</p> <p>The maximum allowable dose is 60 mg per day.</p>
Required Codes	Carfilzomib is reimbursable when billed with ICD-9-CM diagnosis code 203.02: multiple myeloma, in relapse.
Billing	HCPCS code J9047 (injection, carfilzomib, 1 mg)

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<b>Cetuximab</b>	Cetuximab is reimbursable for the treatment of locally or regionally advanced squamous cell carcinoma of the head and neck, and metastatic colorectal carcinoma.						
Dosage	<p>The recommended dosing schedule for intravenous infusion of cetuximab is an initial dose of 400 mg/m<sup>2</sup>, followed by 250 mg/m<sup>2</sup> every week or 500 mg/m<sup>2</sup> every two weeks.</p> <p>See additional billing information for cetuximab under panitumumab in the <i>Chemotherapy: Drugs P-Z Policy</i> section of this manual.</p>						
Required Codes	<p>Cetuximab is reimbursable only when billed in conjunction with one of the following ICD-9-CM diagnosis codes:</p> <table><tr><td>140.0 – 149.9</td><td>160.0 – 160.9</td></tr><tr><td>153.0 – 154.1</td><td>161.0 – 161.9</td></tr><tr><td>154.8</td><td>195.0</td></tr></table> <p><b>Note:</b> A California Children’s Services/Genetically Handicapped Persons Program (CCS/GHPP) Service Authorization Request (SAR) overrides the preceding diagnostic restrictions.</p>	140.0 – 149.9	160.0 – 160.9	153.0 – 154.1	161.0 – 161.9	154.8	195.0
140.0 – 149.9	160.0 – 160.9						
153.0 – 154.1	161.0 – 161.9						
154.8	195.0						
Billing	HCPCS code J9055 (injection, cetuximab, 10 mg)						

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**Cisplatin**

Cisplatin is reimbursable when used as treatment of the following:

- Testicular and ovarian tumors
- Transitional cell bladder cancer
- Malignancies of the head and neck
- Small cell lung cancer
  - Undifferentiated
  - Lymphocyte-like
  - Oat cell type carcinomas
- Cervical carcinomas
  - Squamous cell
  - Metastatic
- Solid tumors in children where radiation or other chemotherapeutic agents are not appropriate
  - Osteosarcomas
  - Neuroblastomas
  - Germ cell tumors

**Dosage**

Maximum dosage is 250 mg (25 billing units); greater dosage allowed if documentation shows body surface area (BSA) is greater than 2.5 m<sup>2</sup>.

**Inpatient Services Requirements**

This type of chemotherapy requires adequate hydration of the patient. If it is not possible to maintain hydration in an outpatient setting or if the patient has previously had severe reactions (such as nausea and vomiting), inpatient treatment may be required. If administration of cisplatin is the only reason for hospital admission, the Medi-Cal field office may approve a short hospitalization (less than 24 hours) up to three times in a 30-day period.

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Intraperitoneal  
Cisplatin Therapy  
for Ovarian Malignancy

Intraperitoneal cisplatin therapy for ovarian malignancy is reimbursable when re-exploration has shown that systemic therapy has failed, as indicated by persistence and/or recurrence of the disease. In most cases, the Medi-Cal field offices will authorize a one-day inpatient admission to permit adequate hydration prior to administration of the agent.

Normally, intraperitoneal catheters and shunts are established to permit instillation of the medication over an extended period.

Billing

HCPCS code J9060 (cisplatin, 10 mg)

**Clofarabine**

Clofarabine is indicated for the treatment of pediatric patients 1 to 21 years of age with relapsed or refractory acute lymphoblastic leukemia after at least two prior regimens.

Authorization

A *Treatment Authorization Request (TAR)* is required for reimbursement.

Dosage

The recommended pediatric dosage and schedule for clofarabine is 52 mg/m<sup>2</sup> administered by intravenous infusion over two hours daily for five consecutive days. Treatment cycles are repeated approximately every two to six weeks.

Billing

HCPCS code J9027 (injection, clofarabine, 1 mg)

Clofarabine may be billed in conjunction with CPT-4 code 96415 (chemotherapy administration, intravenous infusion technique; one to eight hours).

**Cyclophosphamide**

Cyclophosphamide, 100 mg (HCPCS code J9070) has a maximum dosage of 6.8 Gm. However, a dose in excess of 6.8 Gm is allowed with documentation of patient weight exceeding 136 kg.

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<b>Daunorubicin</b>	Daunorubicin has antimitotic and cytotoxic activity through a number of proposed mechanisms of action. Daunorubicin forms complexes with DNA by intercalation between base pairs. It inhibits topoisomerase II activity by stabilizing the DNA-topoisomerase II complex, preventing the relegation portion of the ligation-relegation reaction that topoisomerase II catalyzes. Single strand and double strand DNA breaks result. Daunorubicin may also inhibit polymerase activity, affect regulation of gene expression, and produce free radical damage to DNA.
Indications	Daunorubicin is administered for the treatment of remission induction in acute nonlymphocytic leukemia (myelogenous, monocytic, erythroid) in adults and remission induction in acute lymphocytic leukemia in children and adults.
Dosage	The usual dose of daunorubicin is 45 mg/m <sup>2</sup> (90 mg or 9 units) and requires no authorization. If the dose administered is greater than 90 mg, an approved <i>Treatment Authorization Request</i> (TAR) documenting that the recipient's body surface area is greater than 2.0 m <sup>2</sup> is required for reimbursement
Billing	HCPCS code J9150 (injection, daunorubicin, 10 mg)
<b>Decitabine</b>	Decitabine is used in the treatment of myelodysplastic syndrome and acute myeloid leukemia.
Dosage	Maximum dosage is 122 mg per day unless documented that the body surface area (BSA) is greater than 2.7 m <sup>2</sup> .
Billing	HCPCS code J0894 (injection, decitabine, 1 mg)

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<b>Degarelix</b>	Degarelix is reimbursable for treatment of advanced prostate cancer in males.
Dosage	Maximum dosage is 240 mg (quantity = 240); frequency is limited to once every rolling 28 days.
Required Codes	Degarelix is reimbursable when billed in conjunction with ICD-9-CM diagnosis code 185.
Billing	HCPCS code J9155 (injection, degarelix, 1 mg) One unit = 1 mg
<b>Denileukin Diftitox</b>	Denileukin diftitox is reimbursable for patients with persistent cutaneous T-cell lymphoma.
Authorization	<p>A TAR must be submitted with the following documentation that the patient has:</p> <ul style="list-style-type: none"><li>• A diagnosis of recurrent or persistent cutaneous T-cell lymphoma; and</li><li>• Stage IB, IIA, IIB, IIIA, IIIB or IVA (denileuken diftitox is not covered for patients in stage IA or IVB); and</li><li>• Failed or been intolerant of other U.S. Food and Drug Administration approved medications such as topical chemotherapeutic agents, and/or electron beam therapy, and/or phototherapy, and/or interferon, and/or topical retinoids, and/or systemic retinoids, and/or extracorporeal photopheresis, and/or single agent chemotherapy, and/or combination chemotherapy; and</li><li>• At least 20 percent of the malignant cells in any tissue sample expressing the CD25 component of the Interleukin-2 receptor.</li></ul> <p>The initial TAR is valid only for three cycles. Subsequent authorization should be based upon patient response and the documentation submitted with the TAR.</p>

Dosage	The usual dosage is 9 or 18 mcg/kg/day, administered intravenously for five consecutive days, every 21 days. Optimal duration of therapy has not been determined.
Billing	HCPCS code J9160 (injection, denileukin diftitox, 300 mcg)
<b>Denosumab (XGEVA)</b>	Policy for the use of denosumab in the treatment of giant cell tumor of bone may be found in <i>Injections: Drugs A-D Policy</i> section in this manual.
<b>Docetaxel</b>	Docetaxel is an antineoplastic agent that acts by disrupting the microtubular network in cells that is essential for mitotic and interphase cellular functions. Docetaxel binds to free tubulin and promotes the assembly of tubulin into stable microtubules while simultaneously inhibiting their disassembly. This leads to the production of microtubule bundles without normal function and to the stabilization of microtubules, which results in the inhibition of mitosis in cells.
Indications	Docetaxel is indicated for the treatment of: <ul style="list-style-type: none"><li>• Breast cancer</li><li>• Esophageal cancer</li><li>• Gastric cancer</li><li>• Head and neck cancer</li><li>• Non-small cell lung cancer</li><li>• Occult primary</li><li>• Ovarian cancer</li><li>• Prostate cancer</li><li>• Small cell lung cancer</li></ul>

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Billing

HCPCS code J9171 (injection, docetaxel, 1 mg)  
One (1) unit = 1 mg

CPT-4 code 96413 (chemotherapy administration, intravenous infusion technique; up to 1 hour, single or initial substance/drug) may be billed in conjunction with docetaxel and is separately reimbursable.

When billing for a quantity greater than 200 mg (200 units), providers must document that the patient's body surface area exceeds 2 meters squared.

**Doxorubicin HCl**

Doxorubicin is an anthracycline topoisomerase inhibitor isolated from *Streptomyces peucetius* var. *caesius*.

The mechanism of action of doxorubicin HCl is thought to be related to its ability to bind DNA and inhibit nucleic acid synthesis. Cell structure studies have demonstrated rapid cell penetration and perinuclear chromatin binding, rapid inhibition of mitotic activity and nucleic acid synthesis, and induction of mutagenesis and chromosomal aberrations.

Indications

Doxorubicin is indicated for the treatment of:

- Acute lymphoblastic leukemia
- Acute myeloblastic leukemia
- Wilms' tumor
- Soft tissue and bone sarcomas
- Ovarian carcinoma
- Transitional cell bladder carcinoma
- Thyroid carcinoma
- Gastric carcinoma
- Hodgkin's lymphoma
- Non-Hodgkin's lymphoma
- Small cell lung cancer
- Breast cancer

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**Dosage** The dose is variable depending upon the malignancy being treated. The maximum dose allowed is 200 mg, unless there is documentation that the patient's body surface is greater than 2.75 m<sup>2</sup>.

**Billing** HCPCS code J9000 (injection, doxorubicin hydrochloride, 10 mg)

**Doxorubicin HCl Liposome**

Doxorubicin is an anthracycline topoisomerase inhibitor isolated from *Streptomyces peucetius* var. *caesius*. Doxorubicin HCl liposome is doxorubicin hydrochloride encapsulated in liposomes for intravenous administration.

The mechanism of action of doxorubicin HCl is thought to be related to its ability to bind DNA and inhibit nucleic acid synthesis. Cell structure studies have demonstrated rapid cell penetration and perinuclear chromatin binding, rapid inhibition of mitotic activity and nucleic acid synthesis, and induction of mutagenesis and chromosomal aberrations.

The liposomes in doxorubicin HCl liposome are microscopic vesicles composed of a phospholipid bilayer that are capable of encapsulating active drugs. The liposomes are formulated with surface-bound methoxypolyethylene glycol, a process often referred to as pegylation, to protect liposomes from detection by the mononuclear phagocyte system and to increase blood circulation time.

Indications	<p>Doxorubicin HCl liposome is indicated for the treatment of:</p> <ul style="list-style-type: none"> <li>• Ovarian cancer after failure of platinum-based chemotherapy</li> <li>• AIDS-related Kaposi's Sarcoma after failure of prior systemic chemotherapy or intolerance to such therapy</li> <li>• Multiple myeloma in combination with bortezomib in patients who have not previously received bortezomib and have received at least one prior therapy</li> <li>• Breast cancer</li> </ul>
Dosage	<p>The dosage is variable depending upon the malignancy being treated. Doses greater than 140 mg require documentation that the patient's body surface area (BSA) is greater than 2.5 m<sup>2</sup>.</p>
Required Diagnosis Codes	<p>Doxorubicin HCl liposome is reimbursable when billed with any of the following ICD-9-CM diagnosis codes:</p> <p>174.0 – 176.9 183.0 – 183.9 203.00 – 203.82 238.6</p>
Billing	<p>HCPCS codes:</p> <ul style="list-style-type: none"> <li>• J9002 (injection, doxorubicin hydrochloride, liposomal, doxil, 10 mg) or</li> <li>• Q2049 (injection doxorubicin hydrochloride, liposomal, imported lipodox, 10 mg) or</li> <li>• Q2050 (injection, doxorubicin hydrochloride, liposomal, not otherwise specified, 10 mg)</li> </ul> <p>CPT-4 code 96413 (chemotherapy administration intravenous infusion technique; up to one hour, single or initial substance/drug) is reimbursable when billed with HCPCS code J9002, Q2049 or Q2050.</p>