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Oncology Spectrums

The 2016 Guide to Oncologic Dosing

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The doses outlined in this work are for patients with normal hematologic indices, renal function, and hepatic function. Doses are expressed in accordance with Kohler DK, Montello MJ, Green L, et al. Standardizing the expression and nomenclature of cancer treatment regimens. *Am J Health Syst Pharm*. 1998;55:137-144.

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The 2016 Guide to Oncologic Dosing

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Current Oncologic Dosing Guidelines

by
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This handbook is meant to provide quick, bedside, basic information about currently approved anticancer and chemoprotectant agents. Drug indications approved by the US Food and Drug Administration (FDA) are included to provide a framework for deciding use of that agent. However, anticancer agents are often used outside of FDA labeling and sometimes used based on minimal clinical data. In this situation, the dosage guidelines will provide an estimate for a safe dose to use in a particular patient, especially with regard to the total to be administered per cycle or treatment course. To prevent errors though, the original reference source for use of that agent or combination should always be consulted first.

Proper drug therapy management in the cancer patient is necessary to produce optimal outcomes and prevent medication misadventures. Many new anticancer agents have become available over the last few years. The availability of some of these new therapies is related in part to new initiatives by the FDA to improve patient access to promising therapies. Historically, the FDA has required that a manufacturer of a pharmaceutical with antineoplastic activity prove the agent demonstrates reasonable safety, efficacy, and improvements in survival time or quality of life prior to drug approval. Unfortunately, this system often delayed patients from receiving potentially life-saving therapies and occasionally forced American cancer patients to seek alternative therapies available only outside the United States. In response to these concerns, the FDA announced in 1996 an initiative to accelerate the approval process. This initiative allows the FDA to now approve a new pharmaceutical based on objective evidence of tumor shrinkage or other surrogate markers, and permits the manufacturer to provide additional evidence of increased survival and/or improved quality of life associated with that therapy after the marketing of the drug.

Although anticancer drugs can be used alone, they are usually administered as part of combination chemotherapy regimens. After the chemotherapist has decided on a specific regimen, he or she must select an appropriate dose of each agent. This is based on knowing the maximally-tolerated dosage, anticipating the degree of impairment of organs involved for any single agent for possible drug elimination, and the functional capacity of organs that are potentially vulnerable to drug toxicities. In addition to the dosages of specific agents, clinicians must also decide on the route and schedule of administration for each agent. As more agents are incorporated into the regimen and as the route and schedule of drug administration become more complex, the likelihood for prescription, preparation, and administration errors increases.

Anticancer Agent Dosage Guidelines

Mechanism of Action	FDA-Approved Indications	Initial Dosage: Dose Range	Total Dose/Cycle
Aldesleukin (Proleukin)			
Activation of cellular immunity with profound lymphocytosis and cytokine production.	Metastatic renal cell carcinoma, metastatic melanoma	600,000 IU/kg IV over 15 minutes q8 hours for a maximum of 14 doses. This schedule may be repeated following 9 days of rest. Separate courses by at least 7 weeks from date of hospital discharge.	8,400,000 IU/kg (1 cycle=14 doses maximum)
Altretamine (Hexalen)			
Alkylating-like in structure but mechanism of action unknown.	Palliative treatment of persistent or recurrent ovarian cancer following first-line therapy with cisplatin (Platinol) and/or alkylating agent-based combination.	65 mg/m^2 PO QID (total daily dose 260 mg/m^2) for 14 or 21 consecutive days in a 28-day cycle.	3,640 mg/m^2 (14 days) or 5,460 mg/m^2 (21 days)
Amifostine (Ethyol®)			
Chemoprotectant and radioprotectant prodrug that is dephosphorylated by alkaline phosphatase in tissues to a pharmacologically active free thiol metabolite. This metabolite is believed to be responsible for the reduction of the cumulative renal toxicity of cisplatin and for the reduction of the toxic effects of radiation on normal oral tissues. (Please see full prescribing info.)	Indicated for reduction of moderate to severe xerostomia in patients undergoing post-operative radiation treatment for head and neck cancer, where the radiation port includes a substantial portion of the parotid glands. Also indicated to reduce the cumulative renal toxicity associated with repeated administration of cisplatin in patients with advanced ovarian cancer or non-small-cell lung cancer. For approved indications, the clinical data do not suggest the effectiveness of cisplatin-based chemotherapy regimens or radiation therapy is altered by amifostine. Only limited data exist on effects of amifostine on the efficacy of chemotherapy or radiotherapy in other settings. Amifostine should not be given to patients when chemotherapy can produce significant survival benefit or cure, or in patients receiving definitive radiotherapy, except in the context of clinical study.	Radiotherapy: The recommended dose is 200 mg/m^2 IV QD over 3 minutes, completed 15–30 minutes before radiotherapy. Patients should be hydrated prior to amifostine infusion. Prophylactic antiemetic administration is recommended. Oral 5-HT$_3$ receptor antagonists have been used effectively in the radiotherapy setting. Blood pressure should be monitored before and immediately after infusion, and thereafter as clinically indicated. Chemotherapy: The recommended dose is 740–910 mg/m^2 IV administered QD as a 15-minute infusion, starting 30 minutes prior to chemotherapy. Monitor blood pressure during infusion. Premedication: antiemetics (eg, dexamethasone plus a serotonin antagonist should be given in conjunction with amifostine administration). Patients should be hydrated prior to the amifostine infusion and should remain in the supine position during infusion.	

Mechanism of Action	FDA-Approved Indications	Initial Dosage Dose Range	Total Dose/Cycle
Anastrazole (Arimidex)			
Selective, nonsteroidal aromatase inhibitor that decreases estradiol concentrations without affecting adrenal corticosteroids or aldosterone.	First-line treatment of postmenopausal women with hormone receptor positive or hormone receptor unknown locally advanced or metastatic breast cancer. Treatment of advanced breast cancer in postmenopausal women with disease progression following tamoxifen therapy.	1 mg PO QD (no requirement for glucocorticoid or mineralocorticoid replacement therapy)	
Arsenic trioxide (Trisenox)			
Mechanism not known. Causes morphological changes and DNA fragmentation characteristic of apoptosis. Also causes damage or degradation of the fusion protein PML-RAR alpha.	Second-line treatment of relapsed or refractory APL following tretinoin (ATRA) plus an anthracycline and whose APL is characterized by the presence of the t(15;17) translocation or PML/RAR-alpha gene expression.	*Induction:* 0.15 mg/kg IV over 1–2 hours QD until remission *Consolidation:* Beginning 3–6 weeks after completion of induction therapy, 0.15 mg/kg IV QD X 25 doses over a period of up to 5 weeks	3.75 mg/kg
Asparaginase (Elspar)			
Depletes extracellular stores of asparagine, an amino acid required by some leukemic cells.	Acute lymphocytic leukemia (ALL) (primarily in combination with other agents during induction).	Package insert recommends intradermal skin test before first dose or when more than 1 week elapses between doses. However, negative skin test does not preclude the possibility of an allergic reaction. ALL induction in combination with prednisone and vincristine: *Regimen 1:* 1,000 IU/m^2 IV (infuse over at least 30 minutes) QD for 10 days starting day 22 or *Regimen 2:* 6,000 IU/m^2 IM q3 days for 9 doses starting day 4 of induction (day 1=first day of chemotherapy) *Single agent:* (rarely used) 200 IU/kg IV (infuse over at least 30 minutes) QD X 28 days	*Regimen 1:* 10,000 IU/m^2 *Regimen 2:* 54,000 IU/m^2 *Single agent:* 5,600 IU/kg

Mechanism of Action	FDA-Approved Indications	Initial Dosage Dose Range	Total Dose/Cycle
BCG (Bacillus Calmette-Gúerin) Live (Intravesical) (TheraCys, TICE BCG)			
Causes a local inflammatory response that leads to reduction of superficial cancerous lesions of the urinary bladder.	Primary and relapsed carcinoma in situ (CIS) of the urinary bladder	*TheraCys:* Vial contains 10.5±8.7 X 10^8 colony-forming unit/mL or 81 mg when resuspended in diluent provided. One vial diluted in 50 mL NS and instill into bladder for 2 hours qweek for 6 weeks followed by one treatment at 3, 6, 12, 18, and 24 months after initial treatment. *TICE BCG:* Vial contains 1 to 8 X 10^8 colony-forming units/mL or 50 mg. One vial diluted in 50 mL NS and instill into bladder for 2 hours qweek for 6 weeks followed by once monthly for 6–12 months.	
Bexarotene (Targretin)			
Mechanism not known. Retinoid that selectively activates retinoid X receptors resulting in inhibition of tumor growth.	Cutaneous manifestations of cutaneous T-cell lymphoma in patients who are refractory to at least one prior systemic therapy.	300 mg/m^2 (rounded to the nearest 75 mg) PO QD taken with a meal Limit vitamin A intake to < 15,000 IU QD	
Bicalutamide (Casodex)			
Inhibits androgen uptake or binding of androgen in target tissues.	In combination therapy with an luteinizing hormone–releasing hormone (LHRH) analogue for advanced prostate cancer (Stage D_2).	50 mg PO QD	
Bleomycin (Blenoxane)			*see next page*
Mechanism unknown, but may inhibit DNA and RNA synthesis.	Squamous cell cancers, non-Hodgkin's lymphoma, testicular cancer	A test dose (2U or less) for the first two doses is recommended in lymphoma patients.	

Mechanism of Action	FDA-Approved Indications	Initial Dosage: Dose Range	Initial Dosage: Total Dose/Cycle
Bleomycin (Blenoxane) *continued*			
	Hodgkin's disease	0.25–0.50 units/kg (10 to 20 units/m^2 IV, IM, or SC) qweek or twice weekly. Maintenance doses of 1 unit daily or 5 units qweek IV or IM can be considered after a 50% response.	
	Malignant pleural effusions	60 units as single intrapleural bolus dose	60 units
Busulfan (Myleran)			
Alkylating agent	Chronic myelogenous leukemia (CML)	*Induction:* 4–8 mg PO QD *Maintenance:* 1–4 mg PO QD	
Busulfan Injection (Busulfex)			
Alkylating agent	For use in combination with cyclophosphamide as a conditioning regimen prior to allogeneic hematopoietic progenitor cell transplantation for CML.	Premedicate patients with phenytoin. For non-obese patients, use ideal body weight or actual body weight, whichever is lower. For obese or severely obese patients, use adjusted ideal body weight (AIBW). AIBW should be calculated as follows: AIBW=IBW + 0.25 X (actual weight-IBW). 0.8 mg/kg IV over 2 hours via a central venous catheter q6 hours X 16 doses with cyclophosphamide	12.8 mg/kg
Capecitabine (Xeloda)			
Antimetabolite	Metastatic breast cancer resistant to both paclitaxel and an anthracycline-containing chemotherapy regimen or resistant to paclitaxel (Taxol) and further anthracycline is not indicated.	1250 mg/m^2 PO BID [total daily dose=2500 mg/m^2] at the end of a meal for 2 weeks followed by a 1 week rest period given as 3 week cycles.	35,000 mg/m^2
Carboplatin (Paraplatin)			*see next page*
Alkylating-like agent producing interstrand DNA crosslinks	Initial treatment of advanced ovarian cancer in combination with other agents.	Formula dosing based on renal function may be used as an alternative to body surface area (BSA)-based dosing With cyclophosphamide (Cytoxan): 300 mg/m^2 IV X 1 dose on day 1 q4 weeks X 6 cycles	300 mg/m^2

Mechanism of Action	FDA-Approved Indications	Initial Dosage: Dose Range	Initial Dosage: Total Dose/Cycle
Carboplatin (Paraplatin) *continued*			
	Secondary treatment of advanced ovarian cancer including patients who have previously received cisplatin (Platinol).	Single agent: 360 mg/m^2 IV X 1 dose q4 weeks *Total dose in mg=(target area under curve [AUC]) X (glomerular filtration rate [GFR] +25) Target AUC: 4–6 mg/mL • min GFR: estimated by ^{51}Cr-EDTA clearance	360 mg/m^2
Carmustine (BiCNU)			
Alkylating agent	Brain tumors, multiple myeloma, Hodgkin's disease, non-Hodgkin's lymphomas.	150–200 mg/m^2 IV QD X 1 dose q6 weeks or 75–100 mg/m^2 IV QD X 2 days q6 weeks	150–200 mg/m^2
Chlorambucil (Leukeran)			
Alkylating agent	Palliation of chronic lymphocytic leukemia (CLL), Hodgkin's disease, non-Hodgkin's disease.	Initial and short courses of therapy: 0.1 to 0.2 mg/kg PO QD for 3–6 weeks as required. Usually the 0.1 mg/kg/day dose is used except for Hodgkin's disease where 0.2 mg/kg/day is used. Alternate regimen in CLL (intermittent, biweekly, or once monthly pulses): Initial single dose of 0.4 mg/kg PO X 1 dose. Increase dose by 0.1 mg/kg until control of lymphocytosis *Maintenance:* Not to exceed 0.1 mg/kg/day	
Cisplatin (Platinol and others)			*see next page*
Alkylating-like agent producing interstrand DNA crosslinks	Metastatic testicular tumors (in combination with other agents). Metastatic ovarian tumors: In combination with other agents in patients who have already received appropriate surgical and/or radiotherapeutic procedures.	20 mg/m^2 IV QD X 5 days 75–100 mg/m^2 IV X 1 dose (in combination with cyclophosphamide) q3 weeks 100 mg/m^2 IV X 1 dose q4 weeks	100 mg/m^2 75–100 mg/m^2 100 mg/m^2

Mechanism of Action	FDA-Approved Indications	Initial Dosage Dose Range	Total Dose/Cycle
Cisplatin (Platinol and others) *continued*			
		50 to 70mg/m^2 IV X 1 dose q3–4 weeks	50–70 mg/m^2
	As a single agent for second-line therapy of ovarian cancer.	100 mg/m^2 IV X 1 dose q4 weeks	100 mg/m^2
	Advanced bladder cancer as a single agent in patients with transitional cell carcinoma that is no longer amendable to local therapy.	50 to 70 mg/m^2 IV X 1 dose q3–4 weeks	50–70 mg/m^2
Cladribine, 2-CdA (Leustatin)			
Antimetabolite	Hairy cell leukemia	0.09 mg/kg IV over 24 hours QD X 7d X 1 course See package insert for preparation of total cycle dose in one container.	0.63 mg/m^2
Cyclophosphamide (Cytoxan and others)			
Alkylating agent	Lymphomas, leukemias, multiple myeloma, mycosis fungoides, neuroblastoma, adenocarcinoma of the ovary, retinoblastoma, breast cancer.	Many dosing regimens reported. Body surface area dosing is most commonly used for cyclical chemotherapy regimens. Consult current literature for doses used in bone marrow or peripheral blood progenitor cell transplantation. IV (single agent): 20–25 mg/kg IV QD X 2 days or 13.3–16.6 mg/kg IV QD X 3 days or 10–12.5 mg/kg IV QD X 4 days or 8–10 mg/kg IV QD X 5 days or 10–15 mg/kg IV QD 7–10 days, or 3–5 mg/kg IV twice weekly PO: 1–5 mg/kg/day	
Cytarabine (Cytosar and others)			
Antimetabolite	In combination with other agents for induction therapy of acute nonlymphoblastic leukemia (ANLL), acute lymphocytic leukemia (ALL), blast phase chronic myleogenous leukemia (CML). Intrathecal prophylaxis and treatment of meningeal leukemia	ANLL induction (in combination with other agents) 100 mg/m^2 IV over 24h QD X 7days or 100 mg/m^2 IV q12h X 7days Consult current literature for doses in ALL. 30 mg/m^2 intrathecally q4 days until CSF clear, then 1 additional dose	700 mg/m^2 1,400 mg/m^2

Mechanism of Action	FDA-Approved Indications	Initial Dosage Dose Range	Total Dose/Cycle
Cytarabine Liposomal Injection (DepoCyt)			
Antimetabolite	Intrathecal treatment of lymphomatous meningitis	Only given by intrathecal route either via an intraventricular reservoir or directly into the lumbar sac over a period of 1 to 5 minutes. Patients should be started on dexamethasone 4 mg PO or IV BID X 5 days beginning on the day of the Cytarabine Liposome Injection. *Induction:* 50 mg intrathecally q14 days X 2 doses (weeks 1, 3) *Consolidation:* 50 mg intrathecally q14 days X 3 doses (weeks 5, 7, 9) followed by an additional dose at week 13. *Maintenance:* 50 mg intrathecally q28 days X 4 doses (weeks 17, 21, 25, 29)	
Dacarbazine (DTIC-Dome)			
Exact mechanism unknown, possible actions include: alkylating agent, purine antimetabolite, interaction with sulfhydryl groups.	Metastatic melanoma	2–4.5 mg/kg IV QD X 10 days, repeat q4 weeks or 250 mg/m^2 IV QD X 5 days repeat q3 weeks	20–45 mg/kg 1,250 mg/m^2
	Second-line therapy for Hodgkin's disease	In combination with other active drugs: 150 mg/m^2 IV QD X 5 days, repeat q4 weeks or 375 mg/m^2 IV on day 1, repeat q15 days	750 mg/m^2 375 mg/m^2
Dactinomycin (Cosmegen)			
Intercalating agent	Wilm's tumor, Ewing's sarcoma, rhabdomyosarcoma, testicular and uterine cancer.	For obese or edematous patients, dose should be based on BSA. Not to exceed 15 micrograms/kg IV QD X 5 days or 400–600 micrograms/m^2 IV QD X 5 days repeated q3–6 weeks *Adult:* 500 mcg IV QD X 5 days q3 weeks	 75 mcg/kg 2,000–3,000 micrograms/m^2 2,500 micrograms

Mechanism of Action	FDA-Approved Indications	Initial Dosage Dose Range	Total Dose/Cycle
Daunorubicin (Cerubidine)			
Intercalating agent, free radical production, topoisomerase-II inhibition.	In combination with other agents for remission induction in acute nonlymphoblastic leukemia (ANLL) (adult) or ALL (children and adults).	ANLL: (with cytarabine) *Age<60:* (first course) 45 mg/m^2 IV days 1, 2, 3 (subsequent course) 45 mg/m^2 IV days 1, 2 *Age 60:* (first course) 30 mg/m^2 IV days 1, 2, 3 (subsequent course) 30 mg/m^2 IV days 1, 2 *Adult ALL:* (with vincristine, prednisone, L-asparaginase) 45 mg/m^2 IV days 1, 2, 3	 135 mg/m^2 90 mg/m^2 90 mg/m^2 60 mg/m^2 135 mg/m^2
Daunorubicin citrate liposome injection (DaunoXome)			
Intercalating agent, free radical production, topoisomerase-II inhibition.	First-line cytotoxic therapy for advanced HIV-associated Kaposi's sarcoma.	40 mg/m^2 IV over 60 minutes X 1 dose q2 weeks	40 mg/m^2
Denileukin diftitox (Ontak)			
Fusion protein composed of diphtheria toxin fragments linked to IL-2 sequences.	Treatment of persistent or recurrent cutaneous T-cell lymphoma (CTCL) whose malignant cells express the CD25 component of the IL-2 receptor.	Cells should be tested for CD25 before administration. 9 or 18 micrograms/kg IV over at least 15 minutes QD X 5 days q21 days	 45 or 90 micrograms/kg
Dexrazoxane (Zinecard)			
Not fully understood chemoprotectant EDTA derivative and chelating agent that penetrates cell membrane.	Indicated for reducing the incidence and severity of cardiomyopathy associated with doxorubicin administration in women with metastatic breast cancer who have received a cumulative doxorubicin dose of 300 mg/m^2 and who, in their physician's opinion, would benefit from continuing therapy with doxorubicin. Not recommended for use with initiation of doxorubicin therapy.	The recommended dosage ratio of Dexrazoxane: Doxorubicin is 10:1 (eg, 500 mg/m^2 Dexrazoxane:50 mg/m^2 Doxorubicin) given by slow IV push or rapid drip IV infusion from a bag. After completing the Dexrazoxane infusion and prior to a total elapsed time of 30 minutes (from the beginning of the Dexrazoxane infusion), the IV injection of doxorubicin should be given.	According to doxorubicin

Mechanism of Action	FDA-Approved Indications	Initial Dosage Dose Range	Total Dose/Cycle
Docetaxel (Taxotere)			
Microtubule assembly stabilization		Premedication for hypersensitivity reactions and fluid retention: Dexamethasone 8 mg PO BID for 3–5 days starting 1 day prior to docetaxel administration.	
	Locally advanced or metastatic breast cancer after failure of prior chemotherapy.	60 to 100 mg/m^2 IV over 1 hour q3 weeks	60–100 mg/m^2
	Non-small-cell lung cancer (NSCLC) after failure of prior platinum-based chemotherapy.	75 mg/m^2 IV over 1 hour q3 weeks	75 mg/m^2
Doxorubicin (Adriamycin and others)			
Intercalating agent, free radical production, topoisomerase-II inhibition.	Acute lymphocytic leukemia (ALL), acute nonlymphocytic leukemia (ANLL), Wilm's tumor, neuroblastoma, sarcoma, breast, ovarian, bladder, thyroid, bronchiogenic, and gastric cancer, Hodgkin's disease, lymphoma.	*Single agent:* 60–75 mg/m^2 IV X 1 dose, repeated q3–4 weeks	60–75 mg/m^2
		In combination with other agents: 40–60 mg/m^2 IV X 1 dose, repeated q3–4 weeks	40–60 mg/m^2
Doxorubicin, Liposomal (Doxil®)			
Intercalating agent, free radical production, topoisomerase-II inhibition	The treatment of metastatic carcinoma of the ovary in patients with disease that is refractory to both paclitaxel (Taxol) and platinum-based chemotherapy regimens. Refractory disease is defined as disease that has progressed while on treatment, or within 6 months of completing treatment.	50 mg/m^2 IV repeated q4 weeks Infusion should start at an initial rate of 1 mg/minute to minimize the risk of infusion reactions. If no infusion-related adverse events are observed, the rate of infusion can be increased to complete administration of the drug over 1 hour.	50 mg/m^2
	The treatment of AIDS-related Kaposi's sarcoma in patients with disease that has progressed on prior combination chemotherapy or inpatients who are intolerant to such therapy. These indications are based on objective tumor response rates. No results are available from controlled trials that demonstrate clinical benefit from treatment, such as improvement in disease-related symptoms or increased survival. (Please see full product info. including boxed warning.)	20 mg/m^2 IV over 30 minutes repeated q3 weeks.	20 mg/m^2

Mechanism of Action	FDA-Approved Indications	Initial Dosage Dose Range	Total Dose/Cycle
Epirubicin (Ellence)			
Intercalating agent, free radical production, topoisomeras-II inhibition.	Adjuvant therapy of breast cancer in patients with evidence of axillary-node tumor involvement.	*CEF 120:* 60 mg/m^2 IV, days 1,8, repeated q28 days X 6 cycles *FEC 100:* 100 mg/m^2, day 1, repeated q21 days X 6 cycles	120 mg/m^2 100 mg/m^2
Estramustine (Emcyt)			
Alkylating agent, estrogen, microtubule instability	Palliative treatment of metastatic and/or progressive carcinoma of the prostate.	4.67 mg/kg PO TID or 3.5 mg/kg PO QID (total daily dose 14 mg/kg for 30–90 days) Administer with water, 1 hour before or 2 hours after meals. Avoid calcium-containing beverages.	
Etoposide (VePesid and others)			
Interacts with topoisomerase-II	Refractory testicular cancer First-line therapy for small-cell-lung cancer (SCLC) in combination with other agents.	*IV:* 35 mg/m^2 IV over 30–60 minutes QD X 4 days to 50 mg/m^2 IV over 30–60 minutes QD X 5 days 50 to 100 mg/m^2 IV over 30–60 minutes QD X 5 days, repeated q3–4 weeks *PO:* Two times the IV dose rounded to the nearest 50 mg	140–250 mg/m^2 250–500 mg/m^2
Etoposide Phosphate (Etopophos)			
Rapidly and completely converted to etoposide in plasma, etoposide interacts with topoisomerase-II.	Refractory testicular cancer in combination with other approved agents. First-line therapy for SCLC in combination with other agents	Doses are expressed as etoposide equivalents *IV:* 50–100 mg/m^2 IV over 5–10 minutes QD X 5 days, repeated q3–4 weeks 35 mg/m^2 IV over 5–210 minutes QD X 4 days to 50 mg/m^2 IV over 5–210 minutes QD X 5 days	140–250 mg/m^2 250–500 mg/m^2
Exemestane (Aromasin)			
Irreversible steroidal aromatase inactivator that lowers estrogen concentrations in postmenopausal women.	Treatment of advanced breast cancer in postmenopausal women whose disease has progressed following tamoxifen (Nolvadex) therapy.	25 mg PO QD after a meal	

Mechanism of Action	FDA-Approved Indications	Initial Dosage Dose Range	Total Dose/Cycle
Fludarabine (Fludara)			
Antimetabolite	In patients with B-cell chronic lymphocytic leukemia (CLL) who have not responded to or whose disease has progressed during therapy with at least one alkylating agent.	25 mg/m^2 IV over 30 minutes QD X 5 days, repeated q28 days	125 mg/m^2
Fluorouracil (Adrucil and others)			
Antimetabolite	Palliative management of colon, rectal, breast, stomach, and pancreatic cancer.	Body surface area dosing is most commonly used for cyclical chemotherapy regimens. Use actual body weight unless obese or spurious weight gain in which case ideal body weight (dry weight) should be used. *Initial:* 12 mg/kg/day, IV QD days 1 to 4 (max 800 mg/day) *Maintenance:* 6 mg/kg IV every other day on days 8, 10, 12, repeat q30 days or 15 mg/kg/week	48 mg/kg
Flutamide (Eulexin)			
Inhibits androgen uptake or binding of androgen in target tissues.	In combination with LHRH agonists for the management of stage D2 metastatic carcinoma of the prostate or locally confined stage B2-C.	250 mg PO TID (q8 hours) 250 mg PO TID (q8 hours) beginning 8 weeks prior to and continuing through radiation	
Gemcitabine (Gemzar)			
Antimetabolite	Adenocarcinoma of the pancreas in patients previously treated with fluorouracil.	1,000 mg/m^2 over 30 minutes qweek for up to 7 weeks, followed by 1 week of rest from treatment. Subsequent cycles will consist of weekly infusions for 3 consecutive weeks out of q4 weeks.	7,000 mg/m^2
	In combination with cisplatin for first-line treatment of patients with inoperable, locally advanced (stage IIIa or IIIb), or metastatic (stage IV) non-small-cell lung cancer (NSCLC).	4-week schedule: 1,000 mg/m^2 IV over 30 minutes on days 1, 8, and 15 of each 28-day cycle. Cisplatin (Platinol) should be administered IV at 100 mg/m^2 IV X 1 dose on day 1 after the infusion of gemcitabine. 3-week schedule: 1,250 mg/m^2 IV over 30 minutes on days 1 and 8 of each 21-day cycle. Cisplatin at a dose of 100 mg/m^2 IV X 1 dose should be administered IV after the infusion of gemcitabine on day 1.	3,000 mg/m^2 2,500 mg/m^2

Mechanism of Action	FDA-Approved Indications	Initial Dosage Dose Range	Total Dose/Cycle
Gemtuzumab Ozogamicin (Mylotarg)			
Humanized monoclonal antibody directed at CD33 antigen conjugated to a cytotoxic antitumor antibiotic, calicheamicin. Cytotoxin is internalized upon antibody binding resulting in cell death.	Treatment of patient with CD33-positive AML in first relapse who are 60 years of age and older and not candidates for other cytotoxic therapy.	9 mg/m^2 IV over 2 hours, with second dose given at 2 weeks. (1 course) Premedicate patient with diphenhydramine and acetaminophen to prevent hypersensitivity reactions. Vital signs should be monitored during and for 4 hours after infusion. Appropriate measures should be taken to prevent hyperuricemia.	18 mg/m^2
Goserelin Acetate Implant (Zoladex)			
Luteinizing hormone-releasing hormone (LHRH) agonist	Palliative treatment of advanced prostate cancer In combination with flutamide for the management of locally confined stage T2b-T4 (stage B2-C) carcinoma of the prostate. Palliative treatment of advanced breast cancer in pre- and perimenopausal women.	3.6 mg SC monthly or 10.8 mg SC q12 weeks Start 8 weeks prior to radiotherapy and continue through radiation. 3.6 mg followed in 28 days by 10.8 mg SC 3.6 mg SC q4 weeks	
Hydroxyurea (Hydrea, Droxia)			
Inhibits DNA synthesis When used in combination with radiation, hydroxyurea causes radioresistant S-phase cells to become sensitive, creates a G1 block where cells are most sensitive to radiation effects, and/or impairs DNA repair processes.	Chronic myelogenous lymphoma (CML) Melanoma, ovarian cancer Head and neck tumors (not lip) in combination with radiation therapy.	Dose based on actual or ideal body weight, whichever is less: 20–30 mg/kg PO QD *Intermittent therapy:* 80 mg/kg PO every third day *Continuous therapy:* 20–30 mg/kg PO QD *In combination with irradiation:* 80 mg/kg PO every third day, beginning 7 days before initiation of irradiation and continued indefinitely thereafter based on adverse effects and response.	
Idarubicin (Idamycin)			
Intercalating agent, free radical production, topoisomerase-II inhibition.	In combination with other agents for acute myeloid leukemia (AML) French British American classifications (FAB) M1 to M7.	AML induction in combination with cytarabine: 12 mg/m^2/day slow IV (over 10–15 minutes) QD for 3 days.	36 mg/m^2

Mechanism of Action	FDA-Approved Indications	Initial Dosage Dose Range	Total Dose/Cycle
Ifosfamide (Ifex)			
Alkylating agent	In combination with other agents as third-line therapy for germ cell testicular cancer.	1.2 g/m^2 IV QD for 5 days, repeated q3 weeks Give mesna 20% (w/w) (= 240 mg/m^2 per dose for a 1.2 g/m^2 ifosfamide dose) at time of ifosfamide, then 4 and 8 hours after ifosfamide.	6 g/m^2
Interferon alfa-2a (Roferon-A)			
Suppression of cell proliferation, enhancement of macrophage phagocytic activity, augmentation of lymphocyte cytotoxicity, inhibition of virus replication in virus-infected cells.	Hairy cell leukemia	*Induction:* 3 million IU IM or SC QD for 16–24 weeks *Maintenance:* 3 million IU SC or IM 3 times a week	
	AIDS-related Kaposi's sarcoma	*Induction:* 36 million IU IM or SC QD for 10–12 weeks *Maintenance:* 36 million IU 3 times a week	
	Chronic myelogenous lymphoma (CML) (Philadelphia chromosome positive)	*Initial:* 9 million IU IM or SC QD, may increase to 9 million IU over the first week Continue treatment until disease progression or severe toxicity.	
Interferon alfa-2b (Intron A)			
See Interferon alfa-2a	Hairy-cell leukemia in patients>18 years	2 million IU/m^2 IM or SC 3 times a week for up to 6 months	
	Malignant melanoma in patients>18 years	*Induction:* 20 million IU/m^2 IV QD for 5 consecutive days per week for 4 weeks *Maintenance:* 10 million IU/m^2 SC 3 times per week for 48 weeks	
	AIDS-related Kaposi's sarcoma	30 million IU/m^2 SC or IM 3 times a week	
	Follicular lymphoma	In combination with an anthracycline-containing chemotherapy regimen: 5 million IU SC 3 times a week for up to 18 months	

Mechanism of Action	FDA-Approved Indications	Initial Dosage Dose Range	Total Dose/Cycle
Irinotecan (Camptosar)			
Topoisomerase I inhibitor	Component of first-line therapy in combination with 5-fluorouracil and leucovorin for patients with metastatic carcinoma of the colon or rectum.	See current product labeling for 5-fluorouracil and leucovorin dosing. *Regimen 1:* (In combination with 5-fluorouracil and leucovorin) 125 mg/m^2 IV 90 minutes qweek (days 1, 8, 15, 22) followed by 2 weeks rest, repeat q6 weeks. *Regimen 2:* (leucovorin over 2 hours and 5-fluorouracil bolus over 22 hours) 180 mg/m^2 IV over 90 minutes q2 weeks (days 1, 15, 29)	500 mg/m^2 540 mg/m^2
	Metastatic carcinoma of the colon or rectum refractory to or recurrent after fluorouracil-based therapy.	125 mg/m^2 IV over 90 minutes weekly for 4 weeks (days 1, 8, 15, 22) followed by 2 weeks rest, repeat q6 weeks 350 mg/m^2 IV over 90 minutes q3 weeks	500 mg/m^2 350 mg/m^2
Letrozole (Femara)			
Selective, nonsteroidal aromatose inhibitor that decreases estradiol concentrations without affecting adrenal corticosteroids or aldosterone.	First-line treatment of postmenopausal women with hormone receptor positive or hormone receptor unknown locally advanced or metastatic breast cancer. Advanced breast cancer in postmenopausal women with disease progression following antiestrogen therapy.	2.5 mg PO QD	
Leuprolide (Lupron, Lupron Depot, Lupron Depot-3 month, Lupron Depot-4 month, Viadur)			
Leutinizing hormone-releasing hormone (LHRH) agonist	Palliative treatment of advanced prostate cancer	*Lupron:* 1 mg SC QD *Lupron Depot:* 7.5 mg IM monthly *Lupron Depot-3 months:* 22.5 mg IM q3 months *Lupron Depot-4 months:* 30 mg IM q4 months *Viadur:* 1 implant (65 mg leuprolide) inserted q12 months	

Mechanism of Action	FDA-Approved Indications	Initial Dosage Dose Range	Total Dose/Cycle
Levimasole (Ergamisol)			
In combination with 5-fluorouracil (5-FU) mechanism unknown, immunomodulator.	Adjuvant treatment in combination with 5-FU after surgical resection in patients with Dukes' stage C colon cancer.	50 mg PO q8 hours for 3 days (starting 7–30 days post-surgery), then 50 mg PO q8 hours for 3 days q2 weeks Fluorouracil is always given concomitantly.	450 mg
Lomustine, CCNU (CeeNU)			
Alkylating agent	Primary and metastatic brain tumors, secondary therapy in combination with other agents for Hodgkin's disease.	130 mg/m^2 as a single oral dose q6 weeks	130 mg/m^2
Mechlorethamine (Mustargen)			
Alkylating agent	Bronchogenic carcinoma, chronic lymphocytic leukemia (CLL), chronic myelogenous leukemia (CML), Hodgkin's lymphoma, lymphosarcoma, malignant effusions, mycosis fungoides.	0.4 mg/kg IV ideal dry body weight single dose per course or 0.2 mg/kg IV QD X 2 days q3–6 weeks *Mechlorethamine, Oncovin (vincristine), Procarbazine, and Prednisone (MOPP) regimen:* 6 mg/m^2 IVP given on day 1 and day 8 of a 28-day cycle	0.4 mg/kg 12 mg/m^2
Megestrol (Megace and others)			
Progestational agent	Palliative therapy of breast cancer and endometrial cancer	40 mg PO QID 10 mg PO QID to 80 mg PO QID	
Melphalan (Alkeran)			
Alkylating agent	Palliative therapy of multiple myeloma Palliative therapy of non-resectable ovarian cancer	6 mg PO QD X 2–3 weeks. Wait up to 4 weeks for count recovery, then 2 mg PO QD to achieve mild myelosuppression. 0.2 mg/kg PO QD X 5 days q4–5 weeks	 1 mg/kg
Melphalan Injection			
Alkylating agent	Palliative treatment of patients with multiple myeloma for whom oral therapy is not appropriate.	16mg/m^2 IV over 15–20 minutes q2 weeks X 4 doses, then q4 weeks	

Mechanism of Action	FDA-Approved Indications	Initial Dosage Dose Range	Total Dose/Cycle
Mercaptopurine (Purinethol)			
Antimetabolite	Remission induction and maintenance therapy of acute lymphatic leukemia, acute lymphocytic leukemia, acute lymphoblastic leukemia, acute myelogenous leukemia, acute myelomonocytic leukemia.	*Induction:* 2.5 mg/kg (to nearest 25 mg) PO QD as a single dose, then adjust according to blood counts *Maintenance:* 1.5 to 2.5 mg/kg PO QD as a single dose	
MESNA (Mesenex)			
Sulfhydryl compound that binds to bladder-toxic oxazaphosphorine, a metabolite	Shown to be effective as a prophylactic agent in reducing the incidence of ifosfamide-induced hemorrhagic cystitis.	MESNA is given as intravenous bolus injections in a dosage equal to 20% of the ifosfamide dosage (w/w) at the time of ifosfamide administration and 4 and 8 hours after each dose of ifosfamide. The total daily dose of mesna is 60% of the ifosfamide dose. This dosing schedule should be repeated on each day that ifosfamide is administered.	MESNA dose depends on ifosfamide dose.
Methotrexate (various manufacturers)			*see next page*
Antimetabolite, inhibits dihydrofolate reductase	Gestational tumors (choriosarcoma, choricadenoma destruens, hydatidiform mole), and trophoblastic neoplasms.	15–30 mg PO or IM QD X 5 day X 3–5 courses with 1 week in between courses	
	Acute leukemia induction	Consult current literature for leucovorin use	
	Maintenance	15 mg/m^2 PO or IM twice weekly or 2.5 mg/Kg IV q14 days	
	Prophylaxis, treatment, and in combination with other agents for maintenance therapy of meningeal leukemia in acute lymphotic leukemia (ALL).	<1 year old: 6 mg intrathecally 1 to <2 years old: 8 mg intrathecally 2 to <3 years old: 10 mg intrathecally >3 years old: 12 mg intrathecally	
	Burkitt's lymphoma	10–25 mg PO QD X 4–8 days	
	Mycosis fungoides	2.5–10 mg PO QD or 50 mg IM qweek, or 25 mg IM twice weekly	

Mechanism of Action	FDA-Approved Indications	Initial Dosage Dose Range	Total Dose/Cycle
Methotrexate (various manufacturers) *continued*			
	Breast, epidermoid head or neck, lung cancers, non-Hodgkin's lymphoma, lymphosarcoma.	Various regimens used. Consult current literature.	
	High-dose in combination with leucovorin rescue for patients with non-metastatic osteosarcoma.	12 g/m^2 IV over 4 hours X 1 dose [with leucovorin 15 mg PO q6 hours X 10 days starting 24 hours after beginning of methotrexate infusion] given qweek (weeks 4, 5, 6, 7 post-surgery), then weeks 11, 12, 15, 16, 29, 30, 44, 45.	
Mitomycin-C (Mutamycin)			
Inhibits DNA synthesis and induces DNA crosslinks	Palliative therapy of gastric cancer or pancreatic cancer when other modalities have failed.	20 mg/m^2 IV q6–8 weeks	20 mg/m^2
Mitotane (Lysodren)			
Adrenal cytotoxic agent, modifies peripheral metabolism of steroids, suppresses adrenal function.	Inoperable, functional and nonfunctional adrenal cortical carcinoma.	Initial dose 333–2000 mg PO TID or 250–1300 PO QID (total initial daily dose=1–6 g/day) increased to a total daily dose of 8 to 10 g until excessive toxicity. Maximum tolerated dose varies from 2–16 g PO QD, usual dose range is 8–10 g PO QD.	
Mitoxantrone (Novantrone)			
Interacts with DNA, intercalating agent, does not undergo redox cycling, electrophilic free-radical formation, topoisomerase-II inhibition.	In combination with other agents for initial therapy of ANLL (myelogenous, promyelocytic, monocytic, erythroid) in adults.	*Induction:* 12 mg/m^2 IV QD X 3 days (days 1, 2, 3) in combination with cytarabine	36 mg/m^2
		Consolidation: 12 mg/m^2 IV QD X 2 days (days 1, 2) in combination with cytarabine	24 mg/m^2
	In combination with corticosteroids for initial therapy of treatment of pain in patients with hormone refractory prostate cancer.	12–14 mg/m^2 IV X 1 dose q21 days	12–14 mg/m^2

Mechanism of Action	FDA-Approved Indications	Initial Dosage Dose Range	Total Dose/Cycle
Nilutamide (Nilandron)			
Inhibits androgen uptake or binding of androgen in target tissues	In combination therapy with surgical castration for metastatic prostate cancer (stage D2).	300 mg PO QD X 30 days, then 150 mg PO QD Dosing should begin on same day or day after surgical castration.	
Paclitaxel (Taxol, Onxol)			
Microtubule assembly stabilization		Patients should be premedicated to prevent severe hypersensitivity reactions. Such premedication may include dexamethasone 20 mg PO administered approximately 12 and 6 hours before, diphenydramine (or its equivalent) 50 mg IV 30–60 minutes before, cimetidine 300 mg or ranitidine 50 mg IV 30–60 minutes before.	
	First-line treatment of advanced ovarian cancer in combination with cisplatin.	135 mg/m^2 IV over 24 hours (followed by cisplatin 75 mg/m^2) q3 weeks	135 mg/m^2
	Subsequent treatment of advanced ovarian cancer.	135 or 175 mg/m^2 IV over 3 hours q3 weeks	135 or 175 mg/m^2
	Adjuvant treatment of node-positive breast cancer administered sequentially to standard doxorubicin-containing combination chemotherapy.	175 mg/m^2 IV over 3 hours q3 weeks X 4 cycles (administered sequentially to doxorubicin-containing chemotherapy).	175 mg/m^2
	Treatment of breast cancer after failure of combination chemotherapy for metastatic disease or relapse within 6 months of adjuvant therapy	175 mg/m^2 IV over 3 hours q3 weeks	175 mg/m^2
	Second-line treatment of AIDS-related Kaposi's sarcoma	135 mg/m2 IV over 3 hours q3 weeks or 100 mg/m^2 IV over 3 hours q2 weeks (reduce each dexamethasone dose to 10 mg PO)	135 mg/m^2 100 mg/m^2
	In combination with cisplatin in patients for the first-line treatment of non-small-cell lung cancer (NSCLC) in patients who are not candidates for potentially curative surgery and/or radiation therapy.	135 mg/m^2 IV over 24 hours (followed by cisplatin 75mg/m2) q3 weeks	135 mg/m2

Mechanism of Action	FDA-Approved Indications	Initial Dosage: Dose Range	Initial Dosage: Total Dose/Cycle
Pegasparagase (Oncaspar)			
Depletes extracellular stores of asparagine, an amino acid required by some leukemic cells.	Acute lymphocytotic leukemia (ALL) in patients hypersensitive to native forms of L-asparaginase.	IM is the preferred route because of a lower incidence of hepatotoxicity, coagulopathy, and gastrointestinal and renal disorders. IV administration should be over 1–2 hours. Combination or sole induction therapy: Adults and children 0.6 m^2: 2,500 IU/m^2 IM or IV X 1 dose q14 days. Children <0.6m2: 82.5 IU/kg q14 days	2,500 IU/m^2
Pentostatin (Nipent)			
Adenosine deaminase inhibitor	Single-agent therapy in adults with alfa-interferon refractory hairy cell leukemia with active disease.	4 mg/m^2 IV every other week	
Plicamycin (Mithracin)			
Intercalating agent	Testicular cancer when successful therapy with surgery or radiation not possible.	Use actual body weight unless abnormal fluid retention present in which case use ideal body weight 25–30 microgram/kg IV QD X 8–10 days qmonth.	200–300 microgram/kg
Porfimer Injection (Photofrin)			
Photosensitizing agent	Palliation of esophageal cancer (complete or partial obstruction) or photodynamic therapy of endobronchial NSCLC.	2 mg/kg IV X 1 dose followed by photodynamic therapy Additional courses (up to 3) should be administered no sooner than 30 days after initial course.	2 mg/kg
Procarbazine (Matulane)			*see next page*
Mechanism unknown, may inhibit transmethylation of t-RNA or may damage DNA directly.	In combination with other anticancer drugs for treatment of stage III and IV Hodgkin's lymphoma.	All doses based on actual body weight unless the patient is obese or there has been a spurious weight increase in which case lean body weight (dry weight) should be used. Doses may be given as a single daily dose or divided throughout the day. *Mechlorethamine, Oncovin (vincristine), Procarbazine, Prednisone (MOPP) regimen:* 100 mg/m^2 PO QD X 14d	1,400 mg/m^2

Mechanism of Action	FDA-Approved Indications		Initial Dosage Dose Range	Total Dose/Cycle
Procarbazine (Matulane) *continued*				
			Other uses: 2–4 mg/kg PO QD X 7 days, then 4–6 mg/kg PO QD until maximum response is obtained *Maintenance dose:* 1–2 mg/kg PO QD	
Prolifeprosan 20 with carmustine implant wafer (Gliadel)				
Alkylating agent	Adjuvant to surgery to prolong survival in patients with recurrent glioblastoma multiforme for whom surgical resection is indicated.		Each wafer contains 7.7 mg carmustine. Up to 8 wafers should be implanted at time of surgery.	61.6 mg
Rituximab (Rituxan)				
Chimeric (murine, human) monoclonal antibody directed at CD20, which is found on normal and malignant B cells.	Relapsed or refractory low-grade or follicular, CD20 positive, B cell, non-Hodgkin's lymphoma.		Premedication with acetaminophen and/or diphenhydramine should be considered before each infusion. *First infusion:* Start at 50 mg/h, then may increase by 50 mg/h q30 minutes up to a maximum of 400 mg/h. If patient experiences an infusion-related reaction, the infusion should be stopped, the patient managed symptomatically, and then the infusion should be restarted at half the rate once the symptoms have resolved. *Subsequent infusions if prior infusions tolerated:* Start at 100 mg/h, then may increase by 100 mg/h q30 minutes up to a maximum of 400 mg/h. 375 mg/m^2 IV weekly X 4 doses (days 1, 8, 15, 22)	1,500 mg/m^2
Streptozotocin (Zanosar)				
Alkylating agent	Metastatic, functional or nonfunctional islet carcinoma of the pancreas.		500 mg/m^2 IV QD X 5 days q6 weeks or 1 g/m^2 IV qweek X 2 weeks, then adjust based on tolerance (individual doses should be 1,500 mg/m^2).	2,500 mg/m^2

Mechanism of Action	FDA-Approved Indications	Initial Dosage Dose Range	Total Dose/Cycle
Tamoxifen (Nolvadex)			
Antiestrogen	In women with DCIS, following breast surgery and radiation, tamoxifen is indicated to reduce the risk of invasive breast cancer.	20 mg PO QD X 5 years	
	Breast cancer	20 mg PO QD or 10–20 mg PO BID X 5 years. Doses greater than 20 mg per day should be given in divided doses (morning and evening).	
	To reduce the incidence of breast cancer in women at high risk for breast cancer.	20 mg PO QD X 5 years	
Temozolomide (Temodar)			
Alkylating agent	Treatment of adult patients with refractory anaplastic astrocytoma (ie, patients at first relapse who have experienced disease progression on a drug regimen containing a nitrosourea and procarbazine).	150 mg/m^2 PO QD X 5 consecutive days. Cycles are repeated q28 days.	750 mg/m^2
Teniposide (Vumon)			
Topoisomerase-II inhibitor	Induction therapy for refractory childhood acute lymphocytic leukemia in combination with other agents.	In combination with cytarabine: 165 mg/m^2 IV over 30–60 minutes twice weekly X 8–9 doses	1,320–1,485 mg/m^2
		In combination with vincristine and prednisone: 250 mg/m^2 IV over 30–60 minutes qweek X 4–8 doses	1,000–2,000 mg/m^2
Thioguanine (Tabloid)			
Antimetabolite	Acute nonlymphoblastic leukemias	2 mg/kg PO QD as a single daily dose, may increase to 3 mg/kg PO QD as a single daily dose after 4 weeks if no clinical improvement.	

Mechanism of Action	FDA-Approved Indications	Initial Dosage Dose Range	Total Dose/Cycle
Thiotepa (Thioplex and others)			
Alkylating agent	Superficial papillary carcinoma of the bladder	Intravesical: Dehydrate patient for 12–24 hours before procedure. 60 mg in 30–60 mL SWFI (retain solution for 2 hours) qweek X 4 weeks May repeat for up to 2 more courses.	60 mg/dose
	Controlling intracavitary effusions secondary to diffuse or localized neoplasms of the serosal cavities.	Intracavitary: 0.6–0.8 mg/kg X 1 dose through tubing used to remove fluid from cavity	0.6–0.8 mg/kg
	Carcinoma of the breast, ovaries, Hodgkin's lymphoma, non-Hodgkin's lymphoma.	0.3–0.4 mg/kg IV q1–4 weeks	
Topotecan (Hycamtin)			
Topoisomerase-I inhibitor	Metastatic or refractory metastatic ovarian cancer after failure of initial or subsequent chemotherapy.	1.5 mg/m^2 IV over 30 minutes QD X 5 days q21 days	7.5 mg/m^2
	Small cell lung cancer sensitive* disease after failure of first-line therapy. *=Disease responding to therapy but progressing at least 60 days (phase 3 studies) or 90 days (phase 2 studies) after chemotherapy.	1.5 mg/m^2 IV over 30 minutes QD X 5 days q21 days	7.5 mg/m^2
Toremifene (Fareston)			
Nonsteroidal antiestrogen	Metastatic breast cancer in post-menopausal women with estrogen-receptor positive or unknown tumors.	60 mg PO QD	
Trastuzumab (Herceptin)			*see next page*
Humanized monoclonal antibody directed at the HER2 neu receptor.	Single agent for treatment of patients with metastatic breast cancer whose tumors overexpress the HER2 neu protein and who have received one or more chemotherapy regimens for their metastatic disease.	Initial loading dose of 4 mg/kg IV infused over 90 minutes. Maintenance dose (start 1 week after loading dose) 2 mg/kg IV infused over 30 minutes (if first dose tolerated) q week.	

Mechanism of Action	FDA-Approved Indications	Initial Dosage Dose Range	Total Dose/Cycle
Trastuzumab (Herceptin) *continued*			
	In combination with paclitaxel (Taxol) for patients with metastatic breast cancer whose tumors overexpress the HER2 neu protein and who have not received chemotherapy for their metastatic disease.		
Tretinoin (Vesanoid)			
Induces maturation, cytodifferentiation, and decreased proliferation of acute promyelocytic leukemia (APL) cells.	Induction of remission in patients with APL FAB M3 (including the M3 variant), characterized by the t(15:17) translocation and/or the presence of the PML/RARa gene, who are refractory to or relapsed after anthracycline chemotherapy or for whom anthracycline therapy is contraindicated.	22.5 mg/m^2 PO BID (total daily dose=45 mg/m^2) until complete remission is documented. Therapy should be discontinued 30 days after complete remission is obtained or after 90 days of treatment, whichever comes first.	
Triptorelin (Trelstar Depot)			
LHRH agonist	Palliative treatment of advanced prostate cancer	3.75 mg IM every month	
Valrubicin (Valstar)			
Intercalating agent, free radical production, topoisomerase-II inhibition.	Intravesical therapy of BCG-refractory carcinoma in situ (CIS) of the urinary bladder in patients for whom immediate cytectomy would be associated with unacceptable morbidity or mortality.	800 mg intravesically qweek X 6 weeks. Patient should retain drug in bladder for 2 hours, then void.	800 mg/dose
Vinblastine (Velban and others)			
Inhibits microtubule formation	*Frequently responsive:* Testicular cancer, Hodgkin's lymphoma, non-Hodgkin's lymphoma, mycosis fungoides, Kaposi's sarcoma, histiocytic lymphoma. *Less responsive:* Breast cancer Resistant choriocarcinoma	*Initial (adults):* 3.7 mg/m^2 IV qweek May increase (5.5 mg/m^2 2nd week; 7.4 mg/m^2 3rd week; 9.25 mg/m^2 4th week; 11.1 mg/m^2 5th week) up to 18.5 mg/m^2 qweek to maintain WBC>3000/mm^3	

Mechanism of Action	FDA-Approved Indications	Initial Dosage Dose Range	Total Dose/Cycle
Vincristine (Oncovin and others)			
	Acute lymphocytic leukemia, activity in combination with other agents for Hodgkin's lymphoma, non-Hodgkin's lymphoma, neuroblastoma, Wilm's tumor, rhabdomyosarcoma.	*Adults:* 1.4 mg/m^2 IV X 1 dose. Can be given qweek. Sometimes doses are capped at 2 mg. *Pediatrics:* 1.5–2 mg/m2 IV X 1 dose qweek 10 kg or less: 0.05 mg/kg IV qweek	
Vinorelbine (Navelbine)			
Inhibits microtubule formation	Single agent (stage IV) or in combination with cisplatin (Platinol) (stage III or IV) for the first-line treatment of ambulatory patients with unresectable, advanced non-small-cell lung cancer.	30 mg/m^2 IV over 6–10 minutes qweek (in combination with cisplatin 120 mg/m^2 IV given on days 1 and 29, then every 6 weeks) Flush line with 75–125 mL of fluid (eg, 0.9% sodium chloride) after administration.	

References

Drug information was provided by the following references. An additional source for all drug information included in this "Guide to Oncologic Dosing" comes from the current product labeling as of 4/17/01, as well as from the *Physicians' Desk Reference*. 55th ed. Montvale, NJ: Medical Economics Co.; 2001.

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