Add new Section 51XX to read:

§ 51XX. Safe Handling of Antineoplastic Drugs in Health Care

(a) Scope and Application.

This Section applies to all health care settings where employees have occupational exposure to antineoplastic drugs.

NOTE: This section does not preclude the application of Section 3203 or other Title 8 safety orders to occupational exposure to non-antineoplastic hazardous drugs not covered by this section, nor does it preclude the application of other sections of Title 8, including but not limited to Sections 3203 and 5194, to occupational exposure to antineoplastic drugs.

(b) Definitions.

"Antineoplastic drug" means a chemotherapeutic agent that controls or kills cancer cells.

"Closed-system drug-transfer device (CSTD)" means a drug transfer device that mechanically prohibits the transfer of environmental contaminants into the system and the escape of hazardous drugs or vapor concentrations outside the system.

"Compounding aseptic containment isolator (CACI)" means a specific type of compounding aseptic isolator that is designed for the compounding of sterile hazardous drugs (HDs). The CACI is designed to provide worker protection from exposure to undesirable levels of airborne drugs throughout the compounding and material transfer processes and to provide an aseptic environment with unidirectional airflow for compounding sterile preparations.

"Containment primary engineering control (C-PEC)" means a ventilated device designed and operated to minimize worker and environmental exposures to HDs by controlling emissions of airborne contaminants through the following:

- The full or partial enclosure of a potential contaminant source
- The use of airflow capture velocities to trap and remove airborne contaminants near their point of generation
- The use of air pressure relationships that define the direction of airflow into the cabinet
- The use of HEPA filtration on all potentially contaminated exhaust streams

Examples of C-PECs include Class I, II, or III biological safety cabinets (BSCs) or CACIs.

"Handling" means receiving, storing, compounding, dispensing, administering, transporting or disposing of antineoplastic drug products and preparations.

"Hazardous drug" means any drug including antineoplastic drugs identified by the National Institute for Occupational Safety and Health at the federal Centers for Disease Control and Prevention or any drug that meets at least one of the following six criteria: carcinogenicity, teratogenicity or developmental toxicity, reproductive toxicity in humans, organ toxicity at low doses in humans or animals, genotoxicity, or new drugs that mimic existing hazardous drugs in structure or toxicity.

"Health care setting" means any facility, service or operation in which employees handle or are otherwise reasonably anticipated to be exposed to antineoplastic drugs in the course of providing treatment or other medical services to patients. Health care settings include, but are not limited to, pharmacies, hospitals and other healthcare institutions, patient treatment clinics, physicians' practice facilities, or veterinarians' offices in which antineoplastic drugs are handled.

"NIOSH" means the National Institute for Occupational Safety and Health.

"Occupational exposure" means reasonably anticipated work exposure to an antineoplastic drug without regard to the use of engineering controls or personal protective equipment (PPE).

"Supplemental engineering control" means an adjunct control (e.g., CSTD) that may be used concurrently with primary and secondary engineering controls. Supplemental engineering controls offer additional levels of protection and may facilitate enhanced occupational protection, especially when handling antineoplastic drugs outside of primary and secondary engineering controls (e.g., during administering).

(c) Antineoplastic drugs safety and health plan.

As part of the Injury and Illness Prevention Program (IIPP) required by Section 3203, each health care setting covered by this section shall establish, implement and maintain an effective written antineoplastic drugs safety and health plan (Plan).The Plan may be incorporated into the IIPP or may be maintained as a separate document.

The Plan shall include:

(1) A written inventory of antineoplastic drugs in the workplace that shall include, but not be limited to, antineoplastic drugs listed in the NIOSH List of Antineoplastic and Other Hazardous Drugs in Healthcare Settings 2014 and reprinted in Appendix A.

(2) A hazard assessment that shall include:

(A) Identification of the units and operations where antineoplastic drugs are received, distributed to end of use locations, dispensed, compounded, and/or provided to patients, and disposal areas.

(B) Identification of job classifications with occupational exposure in those locations and units.

(C) A list of all tasks and procedures or groups of closely related task and procedures in which occupational exposure occurs and that are performed by employees in job classifications listed in accordance with the provisions of subsection (c)(2)(B) of this standard.

(D) Evaluation of engineering controls, work practice controls, and personal protective equipment that are in place in those areas to control exposure.

(E) Assessment by the employees with occupational exposure in those units, of the effectiveness of the controls being used.

(3) Policies and procedures to address the handling of antineoplastic drugs that shall include:

(A) Detailed procedures for preparing, administering, and disposing of antineoplastic drugs.

(B) Using and maintaining all equipment used to reduce exposure, such as ventilated cabinets, closed system drug-transfer devices, needleless systems, and PPE.

(C) Cleaning and decontaminating work areas.

(D) Waste handling and disposal, including patient waste.

(E) Spill control.

(F) Medical surveillance.

(G) Training.

(d) Methods of compliance.

Where occupational exposure exists, the following types of exposure controls shall be implemented to minimize the exposure to employees, with the selection of controls to be selected according to the type of exposure to be controlled.

(1) Engineering Controls. Table X provides the minimum control method for handling specific drug formulations. Employers shall adopt these control methods, or higher levels of protection during the use of these formulations as follows:

(A) A Class II or III biological safety cabinet (BSC) as defined in 5154.2 or compounding aseptic containment isolator (CACI) shall be used when compounding or preparing (withdrawing from vial or ampoule) antineoplastic drugs.

Note: When BSCs or CACIs are used to prevent harmful exposure from antineoplastic drugs or other hazardous drugs they shall conform to the provisions of Section 5143 and 5154.2 (BSCs only).

(B) Containment Supplemental Engineering Controls

1. A closed system drug transfer device (CSTD) shall not be used as a substitute for a BSC or CACI when compounding.
2. CSTDs shall be used when compounding or administering a prepared solution containing antineoplastic drugs through an IV or when compounding a solution for irrigation containing antineoplastic drugs, when the dosage form allows.
3. Needleless systems and needles with engineered sharps injury protection shall be used for administration of medications containing antineoplastic drugs and shall conform to the provisions of Section 5193.

(2) Personal Protective Equipment:

Employers shall perform a hazard assessment and select PPE in accordance with section 3380. Table X provides the minimum level of protection that shall be provided and used when handling the specific drug formulation as indicated. Employers shall provide the listed PPE or higher levels of protections for each formulation and activity, unless otherwise specified as follows:

(A) Gloves

1. Select and provide employees with appropriate chemotherapy gloves that are approved for the antineoplastic drug to be handled or when there is potential for contact with antineoplastic drug-contaminated items or surfaces. Such approval of gloves shall be in accordance with the American Society of Testing Materials ASTM D6978 (2013) standard for assessing permeation resistance or its equivalent.
2. Wear double gloves when there is a significant risk of breakage, contamination or permeation, such as during compounding, extended handling periods, and cleaning up large antineoplastic drug spills.
3. Provide latex-free gloves to latex-sensitive employees.
4. Inspect gloves for physical defects (pin holes or weak spots) before use.
5. Change gloves every 30 minutes or when torn, punctured, or contaminated.

(B) Protective clothing. When required, disposable gowns shall be tested and shown to resist permeability by antineoplastic drugs. Gowns shall be selected based on the antineoplastic drug handled.

1. Employees shall wear protective gowns when performing any of the following activities:
    a. Performing chemotherapy drug preparation activities such as opening drug packaging, handling vials or finished products, labeling antineoplastic drug containers, or disposing of waste;
    b. Reconstituting and admixing chemotherapy drugs;
    c. Performing all activities associated with chemotherapy drug administration—opening the outer bag, assembling the delivery system, delivering the drug to the patient, and disposing of all equipment used to administer drugs;
    d. Handling linens, feces, or urine from patients who have received chemotherapy drugs within the last 48 hours—or in cases where the drug may be present for longer periods of time, such as Cisplatin and Epirubicin hydrochloride, within the last 7 days.
2. Gowns shall be made of polyethylene-coated polypropylene or equivalent nonlinting and nonabsorbent protective material.
3. Gowns shall have closed fronts, long sleeves, and elastic or knit closed cuffs.
4. Gowns shall not have seams or closures that could allow antineoplastic drugs to pass through.
5. Gowns shall be changed per the manufacturer's information for permeation of the gown. If no permeation information is available for the gowns used, change them every 2–3 hours or immediately after a spill or splash.
6. Gowns worn in antineoplastic drug handling areas shall not be worn to other areas in order avoid spreading contamination and exposing other healthcare workers.

(C) Eye and Face protection

1. Appropriate eye and face protection shall be worn when there is a risk of spills or splashes of antineoplastic drugs or antineoplastic drug waste materials when

working outside of a containment primary engineering control (C-PEC) (e.g., administration in the surgical suite, working at or above eye level, or cleaning a spill).

2. Goggles shall be used whenever there is a splash hazard to the eyes.
3. Face shields in combination with goggles shall be used whenever there is a splash hazard to the face and eyes.

(D) Respiratory Protection

1. Employers shall ensure that employees are medically evaluated, fit-tested and trained to wear respiratory protection in accordance with section 5144.

   Note: Surgical masks do not provide respiratory protection from drug exposure and shall not be used when respiratory protection is required.
2. Employees shall use N95 or equivalent respiratory protection during spill cleanup and whenever there is a potential for inhalation exposure to chemotherapy drug particulates.
3. Employees shall wear an elastomeric half-mask with a multi-gas/vapor cartridge and P100-filter when unpacking antineoplastic drugs that are not contained in plastic. If the type of drug can be better defined, then a more targeted cartridge can be used.
4. Employees shall wear an appropriate chemical cartridge-type respirator for events such as large spills of chemotherapy drugs, e.g. when an intravenous (IV) bag breaks or line disconnects.
5. Employees shall wear an appropriate full-facepiece, chemical cartridge-type respirator when attending to antineoplastic drug spills larger than what can be contained with a spill kit, or when there is a known or suspected airborne exposure to powders or vapors.

Table X. Personal protective equipment and engineering controls for working with antineoplastic drugs in healthcare settings*

Formulation	Activity	Double gloves	Protective gown	Eye protection	Respiratory protection	Ventilated engineering controls
Intact tablet or capsule	Administration from unit-dose package	no (single glove should be used)	no	no	no	N/A
Tablets or capsules	Cutting, crushing or otherwise manipulating	yes	yes	no	yes, if not done in a control	yes†

	tablets or capsules				device	
	Administration	yes	yes	no[2]	yes, if powder generated	N/A
Oral liquid drug	Compounding	yes	yes	yes, if not done in a control device	yes, if not done in a control device	yes[†]
	Administration	yes	yes	no[‡]	no[‡]	N/A
Topical drug	Compounding	yes	yes	yes	yes, if not done in a control device	yes[†]
	Administration	yes	yes	yes, if liquid that could splash[‡]	yes, if inhalation potential	N/A
Ampoule	Opening	yes	yes	yes, if not done in a control device	yes, if not done in a control device	yes, BSC or CACI
Subcutaneous, intramuscular injection	Preparation (withdrawing from vial or ampoule)	yes	yes	yes, if not done in a control device	yes, if not done in a control device	yes, BSC or CACI
	Administration from prepared syringe	yes	yes	yes, if liquid that could splash[‡]	yes, if inhalation potential[‡]	N/A
Intravenous solution	Compounding	yes	yes	yes, if not done in a control device	yes, if not done in a control device	yes, BSC or CACI; CSTD
	Administration of prepared solution[§]	yes	yes	yes, if liquid that could	yes, if inhalation potential[‡]	N/A; CSTD

				splash‡		
Solution for irrigation	Compounding	yes	yes	yes, if not done in a control device	yes, if not done in a control device	yes, BSC or CACI; CSTD
	Administration (bladder, HIPEC, limb perfusion, etc.)	yes	yes	yes	yes	N/A
Powder/ solution for inhalation	Inhalation	yes	yes	yes	yes	yes, when applicable

*The table provides PPE and engineering control requirements for some of the possible scenarios that may be encountered in healthcare settings, but cannot cover all possible situations. For more detailed information on safe handling practices, see the reference list [NIOSH 2004; ASHP 2006; USP 2008, and ONS 2011]. BSC = Class II biological safety cabinet; CACI = compounding aseptic containment isolator; CSTD = closed system drug transfer device; HIPEC = hyperthermic intraperitoneal chemotherapy.

†For nonsterile preparations, an engineering control such as a fume hood or Class I BSC is sufficient. It is recommended that these activities be carried out in a control device, but it is recognized that under some circumstances, it is not possible. If the activity is performed in an engineering control that is used for sterile intravenous preparations, a thorough cleaning is required following the activity.

‡Required if patient may resist (infant, unruly patient, veterinary patient) or if administered by feeding tube.

§Intravenous tubing already attached and primed.

(3) Work Practice Controls.

(A) Receiving and Storage.

1. Employers shall establish procedures for receiving antineoplastic drugs that include visual examination of the shipping container for signs of damage or breakage (e.g., visible stains from leakage, sounds of broken glass containers).
2. Antineoplastic drugs shall be stored separately from non-hazardous drugs and separate from food/drink.
3. A spill kit shall be accessible in the receiving area.

(B) Drug Preparation and Administration. The employer shall ensure the following administrative and work practice controls are followed:

1. Prohibit eating, drinking, chewing gum, applying cosmetics, or storing food or drinks within the antineoplastic drug preparation area.
2. Properly clean all equipment, counters, and other surfaces.

3. Store and transport antineoplastic drugs in closed containers that minimize the risk of breakage.
4. IV tubing and syringes shall be primed inside the ventilated cabinet, or primed in-line with nondrug solutions—not in the patient's room.
5. When the antineoplastic drug preparation is complete, the final product shall be sealed in a plastic bag or other sealable container for transport before taking it out of the ventilated cabinet.
6. Seal and wipe all waste containers inside the ventilated cabinet before removing them from the cabinet.
7. Remove all outer gloves and sleeve covers and bag them for disposal while inside the ventilated cabinet.
8. Wash hands with soap and water immediately after removing gloves.
9. Antineoplastic drugs shall be administered safely using protective medical devices and techniques.
    a. Examples of protective medical devices include needleless and closed systems.
    b. Examples of protective techniques include spiking or priming of IV tubing in a C-PEC and crushing tablets in plastic sleeves.
10. CSTDs shall be used for administration when the dosage form allows.

(C) Routine Cleaning, Decontaminating, Housekeeping, and Waste Disposal. The employer shall ensure the following measures are followed:

1. Perform cleaning and decontamination work in areas that are sufficiently ventilated to prevent buildup of hazardous airborne drug concentrations.
2. Prohibit the use of unventilated areas such as storage closets for drug storage or any tasks involving antineoplastic drugs.
3. Clean work surfaces with an appropriate deactivation agent (if available) and cleaning agent before and after each activity and at the end of the work shift.
4. Establish periodic cleaning routines for all work surfaces and equipment that may become contaminated, including administration carts and trays.
5. At a minimum, employees shall wear safety glasses with side shields and protective gloves for cleaning and decontaminating work.
6. Employees shall wear face shields if splashing is possible.
7. Employees shall wear protective double gloves for decontaminating and cleaning work.
    a. Employees shall use gloves as required by subsection (d)(2)(A).
    b. Make sure the gloves are chemically resistant to the decontamination or cleaning agent used.
8. Employees shall wear two pairs of protective gloves and a disposable gown if they handle linens, feces, or urine from patients who have received antineoplastic drugs within the last 48 hours or in cases where the drug may be present for

longer periods of time, such as Cisplatin and Epirubicin hydrochloride, within the last 7 days.

9. Dispose of the gown after each use or whenever it becomes contaminated.
10. Wear face shields if splashing is possible.
11. Remove the outer gloves and the gown by turning them inside out and placing them into the yellow chemotherapy waste container. Repeat the procedure for the inner gloves.
12. Employees shall wash hands with soap and water after removing the gloves.
13. Properly dispose of all antineoplastic drug waste according to Federal, State, and local regulations (separately from regular waste).
14. Double-bag all chemotherapy waste including partially filled vials, undispensed products, unused IVs, needles and syringes, gloves, gowns, mats, and contaminated materials from spill cleanups or animal bodily fluids/waste.
15. Place materials with trace wastes (those that contain less than 3% by weight of the original quantity of antineoplastic drugs)—such as needles, empty vials and syringes, gloves, gowns, and tubing—in chemotherapy waste containers. Assure that such containers protect from sharps injuries.
16. Do not use red sharps containers for drug disposal.

(D) Spill Control.

1. The employer shall establish and implement effective written policies and procedures for antineoplastic drug spills.
2. Employers shall ensure that written policies and procedures address PPE required for various spill sizes, the possible spreading of material, restricted access to antineoplastic drug spills, and signs to be posted.
3. Employers shall ensure that cleanup of a large spill is handled by workers who are trained in handling hazardous materials in accordance with section 5192.
4. Spill kits shall be made available in areas where exposures may occur.
5. Employers shall ensure the proper disposal of spill cleanup materials in a hazardous chemical waste container, in accordance with EPA/ RCRA regulations regarding hazardous waste—not in a chemotherapy waste or biohazard container.

(e) Medical Surveillance.

The employer shall establish an effective medical surveillance program for workers exposed to antineoplastic drugs which shall include the following:

(1) Administering reproductive and general health questionnaires to be completed at the time of hire and periodically thereafter.

(2) Taking the history of employees' drug handling as an estimate of prior and current exposure, including dates of duty assignment related to antineoplastic drugs and similar types of information.

(3) A plan to provide initial baseline clinical evaluation, including appropriately targeted medical history, physical examination, and laboratory testing for workers identified as being potentially exposed to antineoplastic drugs that anticipates their potential toxicities.

(4) A follow-up plan as needed for workers who have shown health changes suggesting toxicity or who have experienced an acute exposure (substantial skin contact or inhalation exposure, cleaning a large spill [a broken IV bag, leaking IV line], etc.).

(f) Training. The employer shall ensure that all employees with occupational exposure participate in a training program at the time of initial assignment and whenever a new antineoplastic drug is introduced into their work area. Additional training and instruction shall be provided to all employees given new job assignments for which training has not previously been received; whenever new antineoplastic drugs and related processes, procedures or equipment are introduced to the workplace and represent a new hazard; whenever the employer is made aware of a new or previously unrecognized hazard involving antineoplastic drug handling; and, for supervisors to familiarize themselves with the safety and health hazards to which employees under their immediate direction and control may be exposed.

(1) Employees shall be trained on the employer's Plan and how to properly:

(A) Handle antineoplastic drugs safely, including all Hazard Communication training requirements in accordance with section 5194;

(B) Clean and decontaminate work areas;

(C) Handle waste and dispose of all contaminated materials, including patient waste;

(D) Clean up spills;

(E) Use and maintain equipment such as ventilated cabinets, closed-system drug-transfer devices, needle-less systems; and

(F) Select and use the appropriate PPE.

(2) Employees shall be trained on the health effects associated with the antineoplastic drugs they are exposed to, such as skin rashes and adverse reproductive outcomes (including infertility, spontaneous abortions, and congenital malformations), leukemia and other cancers.

(3) The employer shall conduct periodic training reviews with all potentially exposed workers in workplaces where antineoplastic drugs are used and seek their input regarding the quality and effectiveness of the Plan.

(g) Recordkeeping. The employer shall develop and maintain the following records in accordance with Section 3203(b) as records of the implementation of the Plan:

(1) Records of inspections, including the hazard assessment.

(2) Records of investigation of occupational injuries and illnesses related to antineoplastic drugs handling.

(3) Training records shall be created and maintained for a minimum of one year and include the following information: training dates; contents or a summary of the training sessions; names of training providers and employees.

(4) All records required by this subsection shall be made available on request to the Chief of the Division of Occupational Safety and Health and his or her representatives for examination and copying.

(5) Records of injury investigations shall not include "medical information" as defined by Civil Code Section 56.05(j).

(6) Records required by Division 1, Chapter 7, Subchapter 1, Occupational Injury or Illness Report and Records, of these orders shall be created and maintained in accordance with those orders.

Appendix A. Antineoplastic drugs listed Table 1. Antineoplastic drugs listed by NIOSH as of 2014 including their American Hospital Formulary Service (AHFS) classification and if it has manufacturers' safe handling guidance (MSHG).

Drug	AHFS classification	MSHG	Reason for listing
abiraterone*	10:00 antineoplastic agents		FDA Pregnancy Category X
ado-trastuzumab emtansine	10:00 antineoplastic agents	yes	Conjugated monoclonal antibody; FDA Pregnancy Category D
altretamine	10:00 antineoplastic agents	yes	FDA Pregnancy category D
amsacrine	NA antineoplastic agents	yes	IARC Group 2B
anastrozole	10:00 antineoplastic agents		FDA Pregnancy category X
arsenic trioxide	10:00 antineoplastic agents	yes	IARC Group 1 carcinogen**; FDA Pregnancy Category D
azacitidine	10:00 antineoplastic agents	yes	IARC Group 2A carcinogen; FDA Pregnancy Category D
bacillus calmette Guerin (BCG)***	80:12 vaccines	yes	See special handling requirements**; FDA Pregnancy Category C
bendamustine	10:00 antineoplastic agents	yes	FDA Pregnancy Category D
bexarotene	10:00 antineoplastic agents		FDA Pregnancy Category X
bicalutimide	10:00 antineoplastic agents		FDA Pregnancy Category X
bleomycin	10:00 antineoplastic agents	yes	IARC Group 2B; FDA Pregnancy Category D
bortezomib	10:00 antineoplastic agents	yes	FDA Pregnancy Category D
brentuximab vedotin	10:00 antineoplastic agents	yes	Conjugated monoclonal antibody; FDA Pregnancy Category D
busulfan	10:00 antineoplastic agents	yes	IARC Group 1 carcinogen; FDA Pregnancy Category D

Drug	AHFS classification	MSHG	Reason for listing
cabazitaxel	10:00 antineoplastic agents	yes	FDA Pregnancy Category D
capecitabine	10:00 antineoplastic agents	yes	Metabolized to 5-fluorouracil; FDA Pregnancy Category D
carboplatin	10:00 antineoplastic agents	yes	FDA Pregnancy Category D
carmustine	10:00 antineoplastic agents	yes	IARC Group 2A carcinogen; FDA Pregnancy Category D
chlorambucil	10:00 antineoplastic agents	yes	IARC Group 1 carcinogen; FDA Pregnancy Category D
cisplatin	10:00 antineoplastic agents	yes	IARC Group 2A carcinogen; FDA Pregnancy Category D
cladribine	10:00 antineoplastic agents	yes	FDA Pregnancy Category D
clofarabine	10:00 antineoplastic agents	yes	FDA Pregnancy Category D
crizotinib	10:00 antineoplastic agents		FDA Pregnancy Category D
cyclophospha-mide	10:00 antineoplastic agents	yes	IARC Group 1 carcinogen; FDA Pregnancy Category D
cytarabine	10:00 antineoplastic agents	yes	FDA Pregnancy Category D
dacarbazine	10:00 antineoplastic agents	yes	FDA Pregnancy Category C
dactinomycin	10:00 antineoplastic agents	yes	FDA Pregnancy Category D
dasatinib	10:00 antineoplastic agents	yes	FDA Pregnancy Category D
daunorubicin	10:00 antineoplastic agents	yes	IARC Group 2B, AKA daunomycin; FDA Pregnancy Category D
decitabine	10:00 antineoplastic agents	yes	FDA Pregnancy Category D
degarelix	10:00 antineoplastic agents		FDA Pregnancy Category X
docetaxel	10:00 antineoplastic agents	yes	FDA Pregnancy Category D
doxorubicin	10:00 antineoplastic agents	yes	IARC Group 2A carcinogen; FDA Pregnancy Category D

Drug	AHFS classification	MSHG	Reason for listing
epirubicin	10:00 antineoplastic agents	yes	FDA Pregnancy Category D
eribulin	10:00 antineoplastic agents		FDA Pregnancy Category D
erlotinib	10:00 antineoplastic agents		FDA Pregnancy Category D
estramustine	10:00 antineoplastic agents	yes	FDA Pregnancy Category X
etoposide	10:00 antineoplastic agents	yes	IARC Group 1 carcinogen; FDA Pregnancy Category D
everolimus	10:00 antineoplastic agents	yes	FDA Pregnancy Category D
exemestane	10:00 antineoplastic agents		FDA Pregnancy Category X
floxuridine	10:00 antineoplastic agents	yes	FDA Pregnancy Category D
fludarabine	10:00 antineoplastic agents	yes	FDA Pregnancy Category D
fluorouracil	10:00 antineoplastic agents	yes	FDA Pregnancy Category D
flutamide	10:00 antineoplastic agents		Indicated only for men; FDA Pregnancy Category D
fulvestrant	10:00 antineoplastic agents		FDA Pregnancy Category D
gemcitabine	10:00 antineoplastic agents	yes	FDA Pregnancy Category D
gemtuzumab ozogamicin	10:00 antineoplastic agents	yes	FDA Pregnancy Category D
goserelin	10:00 antineoplastic agents		FDA Pregnancy Category X
hydroxyurea	10:00 antineoplastic agents	yes	Special warning on handling bottles and capsules FDA Pregnancy Category D
idarubicin	10:00 antineoplastic agents	yes	FDA Pregnancy Category D
ifosfamide	10:00 antineoplastic agents	yes	FDA Pregnancy Category D
imatinib	10:00 antineoplastic agents	yes	FDA Pregnancy Category D

Drug	AHFS classification	MSHG	Reason for listing
irinotecan	10:00 antineoplastic agents	yes	FDA Pregnancy Category D
ixabepilone	10:00 antineoplastic agents	yes	FDA Pregnancy Category D
letrozole	10:00 antineoplastic agents		FDA pregnancy Category X
leuprolide	10:00 antineoplastic agents	yes	FDA Pregnancy Category X
lomustine	10:00 antineoplastic agents	yes	IARC Group 2A carcinogen; FDA Pregnancy Category D
mechlorethamine	10:00 antineoplastic agents	yes	FDA Pregnancy Category D
megestrol	10:00 antineoplastic agents		FDA Pregnancy Category X
melphalan	10:00 antineoplastic agents	yes	IARC Group 1 carcinogen; FDA Pregnancy Category D
mercaptopurine	10:00 antineoplastic agents	yes	FDA Pregnancy Category D
methotrexate	10:00 antineoplastic agents	yes	FDA Pregnancy Category X
mitomycin	10:00 antineoplastic agents	yes	IARC Group 2B; FDA Pregnancy Category D
mitotane	10:00 antineoplastic agents	yes	FDA Pregnancy Category D
mitoxantrone	10:00 antineoplastic agents	yes	IARC Group 2B; FDA Pregnancy Category D
nelarabine	10:00 antineoplastic agents	yes	FDA Pregnancy Category D
nilotinib	10:00 antineoplastic agents		FDA Pregnancy Category D
omacetaxin	10:00 antineoplastic agents	yes	FDA Pregnancy Category D
oxaliplatin	10:00 antineoplastic agents	yes	FDA Pregnancy Category D
paclitaxel	10:00 antineoplastic agents	yes	FDA Pregnancy Category D
pazopanib	10:00 antineoplastic agents		FDA Pregnancy Category D
pemetrexed	10:00 antineoplastic agents	yes	FDA Pregnancy Category D

Drug	AHFS classification	MSHG	Reason for listing
pentostatin	10:00 antineoplastic agents	yes	FDA Pregnancy Category D
pralatrexate	10:00 antineoplastic agents	yes	FDA Pregnancy Category D
procarbazine	10:00 antineoplastic agents	yes	IARC Group 2A carcinogen; FDA Pregnancy Category D
romidepsin	10:00 antineoplastic agents	yes	FDA Pregnancy Category D
sorafenib	10:00 antineoplastic agents		FDA Pregnancy Category D
streptozocin	10:00 antineoplastic agents	yes	IARC Group 2B; FDA Pregnancy Category D
sunitinib	10:00 antineoplastic agents		FDA Pregnancy Category D
tamoxifen	10:00 antineoplastic agents		IARC Group 1 carcinogen; FDA Pregnancy Category D
temozolomide	10:00 antineoplastic agents	yes	FDA Pregnancy Category D
temsirolimus	10:00 antineoplastic agents	yes	FDA Pregnancy Category D
teniposide	10:00 antineoplastic agents	yes	IARC Group 2A carcinogen; FDA Pregnancy Category D
thioguanine	10:00 antineoplastic agents	yes	FDA Pregnancy Category D
thiotepa	10:00 antineoplastic agents	yes	IARC Group 1 carcinogen; FDA Pregnancy Category D
topotecan	10:00 antineoplastic agents	yes	FDA Pregnancy Category D
toremifene	10:00 antineoplastic agents		FDA Pregnancy Category D
trimetrexate	10:00 antineoplastic agents	yes	FDA Pregnancy Category D
triptorelin	10:00 antineoplastic agents		FDA Pregnancy Category X
valrubicin	10:00 antineoplastic agents	yes	FDA Pregnancy Category C
vandetanib	10:00 antineoplastic agents	yes	FDA Pregnancy Category D

Drug	AHFS classification	MSHG	Reason for listing
vemurafenib	10:00 antineoplastic agents		FDA Pregnancy Category D
vinblastine	10:00 antineoplastic agents	yes	FDA Pregnancy Category D
vincristine	10:00 antineoplastic agents	yes	FDA Pregnancy Category D
vinorelbine	10:00 antineoplastic agents	yes	FDA Pregnancy Category D
vorinostat	10:00 antineoplastic agents	yes	FDA Pregnancy Category D