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<b><u>CHEMOTHERAPY PROCESSING AND DISPENSING</u></b>		

**POLICY:**

It is the pharmacist's responsibility to review chemotherapy orders for appropriateness and dispense chemotherapy in accordance with the procedure listed below.

**PROCEDURE:**

- I. Chemotherapy Prescribing Authority and Order Form
  - A. In all cases, the pharmacist should insure that chemotherapy is prescribed according to The University of Kansas Hospital's Chemotherapy Prescribing Policy and Procedure. This includes who may prescribe chemotherapy, required order forms and that intrathecal chemotherapy must be written on a separate chemotherapy order form.
- II. Reviewing Chemotherapy Order
  - A. Height, weight, age, and Body Surface Area should be included on the order or will be obtained. The pharmacist will double-check the BSA. Additionally, the pharmacist will double-check BSA calculations if ideal or adjusted body weight is used.
  - B. The chemotherapy orders, including drugs, dosages, calculations, routes, and schedules, will be checked against the appropriate protocol. Most chemotherapy protocols can be found in one of the following places:
    - a. KUMC Hematology Manual for Housestaff (Division of Hematology)
    - b. KUMC Cancer Chemotherapeutic Treatments (Division of Oncology)
    - c. Gynecology-Oncology Protocol Notebook
    - d. SWOG, GOG, CCG or COG (POG) protocols located in the Investigational Drug Services area
    - e. Hematopoetic Stem Cell Transplant protocols individualized for each patient (provided by the transplant coordinator)
    - f. New Protocols and Approved Exceptions Notebook kept in the Command Center
    - g. Other oncology handbooks or drug information searches
  - C. If the protocol cannot be located, the pharmacist will refer to the University of Kansas Hospital Chemotherapy Prescribing Policy and Procedure and proceed as directed.
  - D. Any order clarification must be documented in the patient chart.
  - E. For new patients, begin a new Patient Chemotherapy File. The Patient Chemotherapy File shall contain:
    - a. Attach to the LEFT side of file:
      1. A *Chemotherapy Tracker*
    - b. Attach to the RIGHT side of file:
      1. A copy of the written protocol or care plan (Include any pertinent information pertaining to the protocol)
      2. A copy of the chemotherapy order (Include any notes or subsequent orders or changes relative to the order)

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- F. For returning chemotherapy patients, obtain the patient's Chemotherapy File, review prior orders/protocols, and proceed with above.
  - G. Evaluate the patient's labs.
- III. Chemotherapy Tracker
- A. Fill in patient information.
  - B. Fill in the dates for days of the regimen.
  - C. Fill in the following information for each drug:
    - a. Drug and Dose
    - b. Fluid amount, ingredients, and if in glass bottle
    - c. Frequency, # of Days, and if Continuous Infusion
    - d. Times for all doses due
    - e. Cross out any spaces not used on each line
  - D. The pharmacist preparing the Tracker should initial in the space provided, "Scribe".
- IV. Order Entry
- A. Enter the orders into the Pharmacy computer system. Only pharmacists can enter chemotherapy orders.
  - B. The fee code, CHEMO, should be selected on each chemotherapy drug entered.
  - C. Obtain the labels from the printer or, if entering the orders on the nursing unit, contact the central pharmacist to obtain the labels for verification.
  - D. The entering pharmacist will give the labels, Chemotherapy File, Chemotherapy Tracker, protocol, orders, and any other pertinent information to a second pharmacist for verification.
- V. Order Verification by the Second Pharmacist
- A. The verifying pharmacist should make every effort to verify orders without interruption.
  - B. Roles of the verifying pharmacist:
    - a. Verify the BSA
    - b. Verify the dosage calculations
    - c. Verify the order with the protocol, care plan, or other references provided
    - d. Evaluate any other pertinent information provided by the first pharmacist
    - e. Evaluate the patient's labs
    - f. Look at the order in the pharmacy computer for accuracy and verify each order according to the appropriate procedure for computer verification.
    - g. Verify the written Chemotherapy Tracker card and initial to the left of each drug line.
    - h. Inspect the computer label for accuracy.

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- i. The verifying pharmacist may print labels for review purposes of doses due at a later date/time; however, these labels should be promptly discarded when finished to prevent inadvertent preparation.
- j. For doses due at this time, initial next to the time that dose is due in the "Label Check" space on the Chemotherapy Tracker.
- k. Initial the chemotherapy work label in the "Tracker Check" blank to indicate that this label is one to be used in preparation

C. The following items will be taken to the IV room:

- a. Patient's Chemotherapy File properly assembled and including the initialed Chemotherapy Tracker.
- b. Initialed work label(s)

#### VI. Chemotherapy Preparation

- A. For first doses, the IV room pharmacist will assure the Chemotherapy Tracker is initialed and the work label is initialed.
- B. For subsequent doses, the IV room pharmacist assures all labels that print in the row agree with each patient's plan on the Chemotherapy Tracker and initial doses on the Tracker prior to each dose being made.
- C. If a label does not agree with the Chemotherapy Tracker, contact the clinical pharmacist for more information and clarify before proceeding.
- D. The following steps may be completed by the technician, then checked and initialed by the pharmacist prior to preparation:
  - a. Obtain solution or pump solution that will be utilized for preparation and initial work label.
  - b. Obtain drug vials that will be utilized for preparation, record lot number of each vial of each chemotherapeutic ingredient on the work label and initial work label.
  - c. Prepare chemotherapy in vertical flow hood using appropriate aseptic and cytoprotective technique. See the procedure for Handling Cytotoxic and Hazardous Drugs.
- E. Preparing Vinca Alkaloids: Vinblastine, Vincristine, Vinorelbine
  - a. Vinca alkaloids will be prepared only in a small volume infusion bag for rapid intravenous infusion per nursing standards. These medications will be prepared in an appropriate small volume of a compatible solution.
  - b. Vinca alkaloids will be labeled "For Intravenous Use Only – Fatal if given intrathecally" prior to dispensing.

#### VII. Chemotherapy Checking and Dispensing

- A. The final product must be checked by a pharmacist and initialed on the work label.
- B. The pharmacist checking the final product assures that all required checks have been initialed on the work label.

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- C. Each chemotherapy dose will be labeled with the appropriate auxiliary labels and expiration date. Drug-specific auxiliary labeling provided by the manufacturer will be utilized for chemotherapy doses.
  - D. Place final product in a sealed bag labeled "Caution Chemotherapy/Cytotoxic Material" or similar warning message. Each chemotherapy dose will be placed in a separate protective bag. Glass bottles will be double-bagged.
  - E. Arrange delivery to the nursing unit with a Medication Delivery Slip except for intrathecal, which must be picked up in the pharmacy.
  - F. The person delivering the medication to the nursing unit will have the Delivery Slip signed and that slip will be brought back to the pharmacy and filed appropriately.
  - G. Dispensing Intrathecal Chemotherapy
    - a. Labels for intrathecal medications will indicate the intrathecal route of administration.
    - b. Intrathecal chemotherapy doses will be dispensed when picked up in the Inpatient Pharmacy by a chemotherapy nurse or physician.
    - c. No other chemotherapy medications (for the same or a different patient) will be dispensed at this time.
    - d. The person receiving the intrathecal will review the order with the pharmacist and verify his/her status as an Attending Physician, Fellow or Chemotherapy Certified nurse by signing for the medication.
- VIII. Chemotherapy for Hematopoietic Stem Cell Transplant
- A. The Transplant Coordinator will provide an individualized patient protocol to the pharmacist for each Hematopoietic Stem Cell Transplant patient.
  - B. The pharmacist will check the chemotherapy orders against the protocol provided.
  - C. The pharmacist will process the chemotherapy orders following the same procedures as described in the above sections.
  - D. Any questions concerning these orders will be directed to the appropriate transplant physician.
- IX. Chemotherapy Orders During Hours of One Pharmacist Coverage
- A. If a chemotherapy order is received when only one pharmacist is available (i.e. midnights, weekend evenings), the physician will be contacted to determine if the order is emergent. If chemotherapy must be prepared, the pharmacist may dispense the chemotherapy in accordance with the above procedures. The pharmacist shall communicate with the next available pharmacist to assure that double-check and order verification occur in follow-up.
  - B. A second pharmacist should perform the verification process soon as possible.
- X. Exceptions

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- A. The above procedures apply to all antineoplastic agents, excluding:
  - a. Topical chemotherapeutic agents
  - b. Chemotherapeutic agents used in the Operating Room
  
- B. Cytotoxic agents that are not considered chemotherapy agents but require special handling (i.e. ganciclovir, pentamidine) are excluded from the above procedures. (Refer to the procedures for The Use and Handling of Hazardous Drugs for additional information.)
  
- C. Exceptions to the patient Chemotherapy File and Chemotherapy Tracker Procedure Only
  - a. Chemotherapeutic agents used for non-cancer purposes (i.e. cyclophosphamide or mitoxantrone for multiple sclerosis) and one time Infusion Room doses should follow the above procedures with the exception that a patient Chemotherapy File and Chemotherapy Tracker will not be required.

**RESPONSIBLE FOR REVIEW:** Director of Pharmacy



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DIRECTOR OF PHARMACY