

NURSING CLINICAL STANDARD

CHEMOTHERAPY/BIOTHERAPY/ IMMUNOTHERAPY

- PURPOSE:** To outline management of patients receiving chemotherapy, biotherapy and immunotherapy for the treatment of cancer.
- SUPPORTIVE DATA:** There are specific guidelines for administration of each chemotherapeutic agent. Cancer chemotherapy refers to chemical agents used to fight cancer/disease while biotherapy/immunotherapy refers to agents that modulate the immune system to fight cancer/disease or restore the host's immune responses. All RNs share the responsibility for managing patients receiving these agents. Specific guidelines for administration, handling and disposal of each chemotherapy/biotherapy/immunotherapy agent and management of relevant side effects are described in the Medical Center Hazardous Medications Medical Center Policy. Only RNs certified in Chemotherapy are authorized to administer such agents. This standard applies to the care provided by chemotherapy certified nurses during administration of the medication, and during the immediate post administration period. Duration of monitoring is based on the properties of the medication being administered.
- There are many side effects associated with chemotherapy/biotherapy/immunotherapy. In addition to these usual side effects these medications may cause an immune mediated reaction resulting in pneumonitis, colitis, hepatitis, or endocrinopathies such as diabetes mellitus or hyper- and hypothyroidism.
- ASSESSMENT:**
1. Weigh patient and determine body surface area (BSA):
 - Within one week of therapy (inpatients)
 - Before each treatment (outpatients)
 2. Verify provider's order with a second RN for correct medication(s), calculated dosage and route prior to administration.
Note: Ensure accurate weight and BSA are used
 3. Obtain vital signs, including pain score before administration and a minimum of:
 - Acute care units: Every 4 hours
 - ICU: Every 2 hours
 - Outpatients: Per Chemotherapy/Bio-infusion Guidelines
 - Note: Some drugs require more intense monitoring.
 4. Monitor for side effects a minimum of every 4 hours (Some drugs require more intense monitoring), such as:
 - Nausea, vomiting
 - Stomatitis
 - Anorexia
 - Diarrhea/constipation
 - Fatigue
 - Thrombocytopenia (e.g., petechiae, bleeding gums)
 - Shortness of breath
 - Signs and symptoms of infection
 - Chills, fever, rigors
 - Hot flash
 - Change in level of consciousness
 - Chest pain
 - Back pain
 - Peripheral neuropathy
 - Abdominal cramping
 - Skin changes (e.g. rash, petechiae, ulceration, flare reaction)
 5. Assess for hypersensitivity reaction per Chemotherapy/ Bio-infusion Guidelines
 - Mild to moderate
 - Anxiety

- Flushing
 - Rash
 - Drug fever
 - Temperature greater than or equal to 38 ° C (100.4° F)
 - Urticaria
 - Angioedema
 - Dyspnea
 - Chest pain
 - Back pain
 - Itching
 - Hypertension
 - Gastrointestinal symptoms (e.g. nausea, vomiting, diarrhea, cramping)
 - Dizziness
 - Nasal congestion
 - Sinus tachycardia
 - Severe
 - Wheezing
 - Dyspnea
 - Hypotension
 - Impending sense of doom
 - Ventricular tachycardia/ ventricular fibrillation (if on monitor)
6. Assess IV site for I.V. chemotherapy:
- Every 30 minutes during chemotherapy infusion
 - Pediatrics: Every 5 minutes during vesicant infusion
 - Before and throughout IVP administration
7. Order labs as follows and monitor laboratory values as drawn:
- Confirm pregnancy test has been obtained within 72 hours for patients with childbearing capacity (ages 12 or onset of menses through 55) prior to administration of chemotherapy
 - Other pertinent labs (e.g. platelet count, white blood cell count with absolute neutrophil count [ANC], hemoglobin, electrolytes)
- SUPPORTIVE CARE:
8. Provide supportive care for expected side effects such as:
- Nausea/vomiting
 - Hair loss
 - Anorexia
 - Diarrhea/constipation
 - Fatigue
 - Pain
 - Dysrhythmias
 - Myalgias, joint and bone pain
 - Neuropathies
 - Fever, chills, rigors
 - Stomatitis
 - Depression
 - Hypersensitivity
 - Skin changes
 - Immune mediated reaction
9. Encourage verbalization of concerns and feelings a minimum of every 8 hours while awake.
- SAFETY:
10. Ensure two RNs perform independent double check to verify provider's order matches patient, chemotherapy drug and dose using two patient identifiers (in the presence of the patient) prior to administration and document on Electronic Health Record (EHR). At least one RN must be chemotherapy certified.
11. Ensure the availability of an intact extravasation kit (including extravasation protocol in kit) and an approved spill kit at bedside during vesicant administration.
- Hyaluronidase (antidote for Vincristine, Vinblastine, Taxol, and Navelbine) is not in the extravasation kit, must be stored in refrigerator

- Dexrazoxane must be ordered by the provider and will be provided by the pharmacy each day for 3 days
12. Observe neutropenic precautions for immunocompromised patients (Patients with absolute neutrophil count less than 1000), including:
- Maintain strict hand washing
 - Protect patient from crowds and contact with sources of infection
 - Do not assign patient to room with patients with cough or infected wounds
 - No fresh flowers/plants in room (not applicable for pediatric patients)
 - Follow strict aseptic technique in handling wounds and central lines
 - Avoid invasive procedures
 - No rectal temperatures/suppositories/enemas
13. Adhere to chemotherapy waste disposal and spill guidelines in handling waste, spills, and bodily excretions (see Hazardous Medications Medical Center Policy)

COLLABORATION:

14. Collaborate with the interdisciplinary team regarding:
- Special dietary needs
 - Psychosocial needs
 - Self image issues
 - Symptom management
 - Pastoral Care
 - Survivorship issues

PATIENT/FAMILY TEACHING:

15. Give patient/family chemotherapy drug and side effect handouts from Electronic Health Record (EHR).

REPORTABLE CONDITIONS:

16. Report the following immediately to the provider:
- Change in vital signs from baseline (including hypotension/hypertension)
 - Shortness of breath, wheezing after initiation of chemotherapy
 - Chest pain
 - Back pain
 - Signs/symptoms of infection
 - Fever, chills
 - Uncontrolled nausea, vomiting, diarrhea
 - Changes in level of consciousness/orientation
 - Anxiety
 - Bleeding, erythema, ecchymosis, petechiae, rash, ulceration
 - Significant laboratory value deviations from baseline
 - Extravasation (extravasation treatment performed by Chemotherapy certified nurse should not be delayed by required notification)
 - Immune mediated reaction
 - Hypersensitivity reaction
 - Positive pregnancy test

ADDITIONAL STANDARDS/

17. Refer to the following as indicated:
- Blood and Blood Products
 - Central Venous Catheter and Midline Peripheral Venous Catheter
 - Grieving
 - Intravenous Therapy

GUIDELINES:

18. Refer to the following guidelines as indicated:
- Extravasation Management by Chemotherapy Certified Registered Nurses for Adult Patients Standardized Procedure
 - Management of High Risk for Hypersensitivity Reaction during Chemotherapy Administration by Chemotherapy Certified Registered Nurses for Adult Patients Standardized Procedure
 - Chemotherapy Biotherapy Infusion Guidelines

- DOCUMENTATION:
19. Document in accordance with “documentation standards”
 20. Document in Chemotherapy Navigator Band of Electronic Healthcare Record (EHR) when:
 - Starting administration of each medication
 - Finishing administration of a medication
 - Titrating a medication
 - There is an unexpected response
 21. Both RNs document independent double check on Medication Administration Record (MAR) using Medication Administration Wizard in EHR.

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REFERENCES:

Polovich, M., Whitford, J. M., & Olsen, M. (2009). *Chemotherapy and Biotherapy Guidelines and Recommendations for Practice (3rd ed.)* Oncology Nursing Society.