

## **NCLEX Week 6: Hematological Disorders and Oncology**

**Cancer:** is a malignant neoplastic disorder that can involve all body organs with manifestations that vary according to the body system affected and type of tumor cells

**Metastasis:** Cancer cells move from their original location to other sites

**Biopsy:** definitive means of diagnosing cancer and provides histological proof of malignancy

**Chemotherapy:** kills or inhibits the reproduction of neoplastic cells and kills normal cells

**Radiation therapy:** destroys cancer cells with minimal exposure of normal cells to the damaging effects of radiation

**Bone marrow transplantation:** replaces stem cells that have been destroyed by high doses of chemotherapy and radiation therapy

### **Factors that can increase cancer development**

- Obesity
- Genetic predisposition
- Advancing age
- Environmental factors like carcinogens

### **Early Detection for Cancer**

- Mammography
- Pap Smear
- Skin Inspection
- Breast and Testicular association

### **Causes of Cancer Pain**

- Bone destruction
- Obstruction of an organ
- Compression of peripheral nerves
- Infiltration
- Inflammation

## **Lymphomas**

- Classified as Hodgkins and non-Hodgkins
  - **Assessment**
    - Fever
    - Malaise
    - Fatigue
    - Night Sweats
    - Loss of appetite
    - Anemia
    - Enlarged Lymph nodes, spleen, and liver

## **Multiple Myeloma**

- A malignant proliferation of plasma cells within the bone
- An excessive number of abnormal plasma cells invade the bone marrow and ultimately destroy the bone; invasion of the lymph nodes, spleen, and live occurs
  - Assessment
    - Bone pain
    - Weakness and fatigue
    - Recurrent infections
    - Anemia
    - Osteoporosis

## **Testicular Cancer**

- Most often occurs between the ages of 25 and 50 years old
- Associated with a history of undescended testicles and genetic predisposition
  - **Assessment**
    - Painless testicular swelling occurs
    - Palpable lymphadenopathy
    - Back and bone pain

## **Cervical Cancer**

- Preinvasive: just the cervix
- Invasive: in the cervix and other pelvic structures
  - **Risk factors**
    - HPV infection
    - Cigarette smoking
    - Multiple sex partners, early first intercourse, male partners with multiple sex partners
  - **Assessment**
    - Painless vaginal postmenstrual and postcoital bleeding

- Foul-smelling or serosanguineous vaginal discharge
- Pelvic, lower floor, leg, or groin painDysuria
- Hematuria

## **Leukemia**

- Leukemia s are the group of hematological malignancies involving abnormal overproduction of leukocytes, usually at an immature stage, in the bone marrow
  - Assessment
    - Anorexia
    - fatigue
    - weakness
    - weight loss
    - Anemia
    - Headache
    - Bone pain

## **Breast Cancer**

- Classified as invasive when it penetrated the tissue surrounding the mammary duct and grows in an irregular pattern
  - **Risk Factors**
    - Age
    - Family history of breast cancer
    - Arly menarche and late menopause
    - Obesity
    - High-dose radiation exposure to the best

## **Esophageal Cancer**

- Is a malignancy frown in the esophageal mucosa
  - **Assessment**
    - Dysphagia
    - Odynophagia
    - Epigastric pain

## **Gastric Cancer**

- Is a malignant growth of the mucosal cells in the inner lining of the stomach, with invasion to the muscle
  - **Assessment**
    - Indigestion
    - Full Feeling

- Abdominal discomfort
- Weakness
- Fatigue
- Anorexia
- Nausea
- Dysphagia
- Ascites

### **Pancreatic Cancer**

- Assessment
  - Nausea and vomiting
  - Jaundice
  - Unexplained weight loss
  - Clay-colored stools
  - Glucose intolerance abdominal pain

### **Lung Cancer**

- Lung cancer is a malignant tumor of bronchi and peripheral lung tissue
  - Assessment
    - Cough
    - Wedding
    - Hoarseness
    - Hemoptysis
    - Chest Pain
    - Anorexia
    - Weakness

### **Prostate cancer**

- Slow growing malignancy of the prostate gland
  - **Assessment**
    - Hard, pea-sized nodules or irregularities palpated on rectal examination
    - Gross, painless hematuria
    - Weightloss
    - urinary obstruction
    - bone pain

### **Treatments for Cancer**

- **Surgery**

- Used to remove the cancer from the body
- Hope is that once removed the cancer will not spread to other locations in the body

- Example

- Mastectomy

- **Chemotherapy**

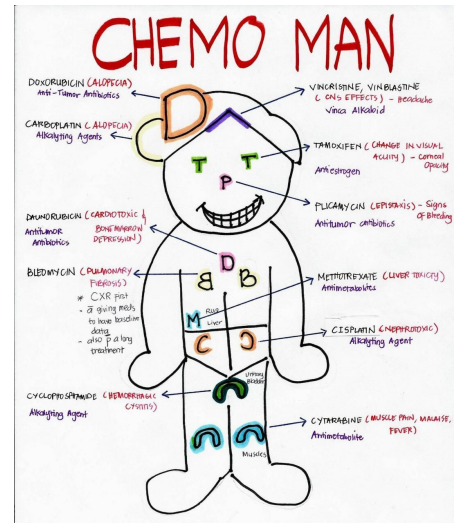
- Medication is used to kill the cancer cells

- Examples

- Altretamine.
    - Bendamustine.
    - Carboplatin.
    - Carmustine.
    - Chlorambucil.
    - Cyclophosphamide.

- Side Effects of chemotherapy

- Alopecia
    - Nausea
    - Vomiting
    - Weakened immune system



- **Radiation therapy**

- is a type of cancer treatment that uses beams of intense energy to kill cancer cells.
- Most often uses X-rays, but protons or other types of energy also can be used

- Side Effects

- Fatigue
    - Skin changes
    - Mouth problems like dryness when radiation is given this way

- **Bone marrow transplant**

- is a procedure that infuses healthy blood-forming stem cells into the body to replace damaged or diseased bone marrow.

- Side Effects

- Mouth and throat pain
    - Infection
    - Bleeding
    - Graft failure
    - Pneumonitis

- **Immunotherapy**

- the prevention or treatment of disease with substances that stimulate the immune response.
  - Examples
    - Ipilimumab
    - Nivolumab
    - Pembrolizumab
    - Atezolizumab
    - Avelumab
    - Durvalumab
  - Side Effects
    - Fatigue
    - Chills
    - Fever
    - Nausea
    - Weakness
    - High or low blood pressure
- **Cryoablation**
  - Uses extremely cold temperatures to kill cancer cells
  - Most often with skin cancer and cervical cancer.
  - Liquid nitrogen is placed on the skin or in an instrument called a cryoprobe which is inserted into the body so that it touches the tumor
    - Side Effects
      - Stomach, chest, or throat pain
      - Bleeding
      - Perforation
      - Ulcers