Chapter 17
Care of the Patient with Cancer

What Is Cancer?

Oncology
- Branch of medicine that deals with the study of tumors
- Lung cancer is the leading cause of cancer-related death in both men and women
- More children 14 years of age and younger die of cancer than of any other disease
What types of diet may place a person at higher risk for cancer?

1. Diet high in fats
2. High fiber diet
3. Diet with lots of vegetables
4. Diet high in carbohydrates
Development, Prevention, and Detection of Cancer

- Carcinogenesis
  - The process by which normal cells are transformed into cancer cells.
  - Various factors are possible origins of cancer.

- Carcinogens
  - Substances known to increase the risk for the development of cancer.

Carcinogenesis and the prevention of cancer (continued)

- Risk factors
  - Smoking
    - 87% of people who develop lung cancer are smokers.
  - Dietary habits
    - Play a role in development of colon, rectum, and breast cancer.
  - Exposure to radiation
    - Ultraviolet rays are a factor in the development of basal and squamous cell skin cancers and melanoma.
Hereditary Cancers

- About 90% of cancers are NOT inherited
- Genetic susceptibility
  - Incidence of breast cancer is higher in women with a family history of this disease
- Cancer risk assessment and cancer genetic counseling
  - First step toward identifying hereditary cancer predisposition
Cancer Prevention and Early Detection

- Planned periodic examination and recognition of cancer's warning signs
- Colorectal tests
- Prostate cancer detection
- Pelvic examination with Pap smear for women
- Breast cancer detection (self-exams)
- Skin examinations

Cancer's seven warning signs

- 1. Changes in bowel or bladder habits
- 2. A sore that does not heal.
- 3. Unusual bleeding or discharge.
- 4. Thickening or lump in breast or elsewhere.
- 5. Indigestion or difficulty eating.
- 6. Obvious changes in warts or molds.
- 7. Nagging cough or hoarseness.

Pathophysiology of Cancer

- Cell mechanisms and growth
  - Normal cells
    - When cells are destroyed, cells of the same type reproduce until the correct number have been replenished
  - Cancer cells
    - Instead of limiting their growth to meet specific needs, they continue to reproduce in a disorderly and unrestricted manner
Grading and Staging of Tumors
- Stage I: Tumor limited to the tissue origin
- Stage II: Limited local spread
- Stage III: Extensive local and regional spread
- Stage IV: Metastasis

Tumor Staging

Diagnosis of Cancer
- Biopsy
  - Incisional, excisional, needle aspiration
Types of biopsy.


Diagnosis of Cancer
- Laboratory tests
  - Carcinoembryonic antigen (CEA)
  - PSA and CA-125
  - Stool examination for blood

Cancer Therapies
- Surgery
  - Preventive
  - Diagnostic
  - Curative
  - Palliative
- Radiation therapy
  - External radiation therapy
  - Internal radiation therapy
Cancer Therapies

- **Chemotherapy**
  - Side effects
    - Leukopenia
    - Anemia
    - Thrombocytopenia
    - Alopecia
    - Stomatitis
    - Nausea, vomiting, and diarrhea
    - Tumor lysis syndrome

Cancer Therapies

- **Bone marrow transplantation**
  - Process of replacing diseased or damaged bone marrow with normally functioning bone marrow
- **Peripheral stem cell transplantation**
  - This procedure is based on the fact that peripheral or circulating stem cells are capable of repopulating the bone marrow

Advanced Cancer

- **Pain management**
  - Opioids
    - Morphine, hydromorphone, fentanyl, methadone
    - Sustained-release morphine
      - MS Contin, Roxanol SR
  - Administration
    - IV drips and epidurally
    - Avoids peaks and valleys
    - Patient self-control
      - Distraction, massage, relaxation, biofeedback, hypnosis, and imagery
**Advanced Cancer**

- Pain management
  - Patients should not be subjected to severe suffering from potentially controllable pain
    - Fear of addiction should not be a factor when considering pain relief for the terminally ill

**Advanced Cancer**

- Nutritional therapy
  - Problems
    - Malnutrition
    - Anorexia
    - Altered taste sensation
    - Nausea/vomiting
    - Diarrhea
    - Stomatitis
    - Mucositis

**Advanced Cancer**

- Terminal prognosis
  - Most patients with advanced cancer know they are dying
  - Honesty and openness are the best approaches
  - Spiritual activities may provide mental and emotional strength
  - Social worker assists the patient and family in planning for home care
  - Hospice services can be arranged—efforts are directed toward relief from pain and other problems