Adult Health Nursing (1)
lecture 5
Management for patient with cancer

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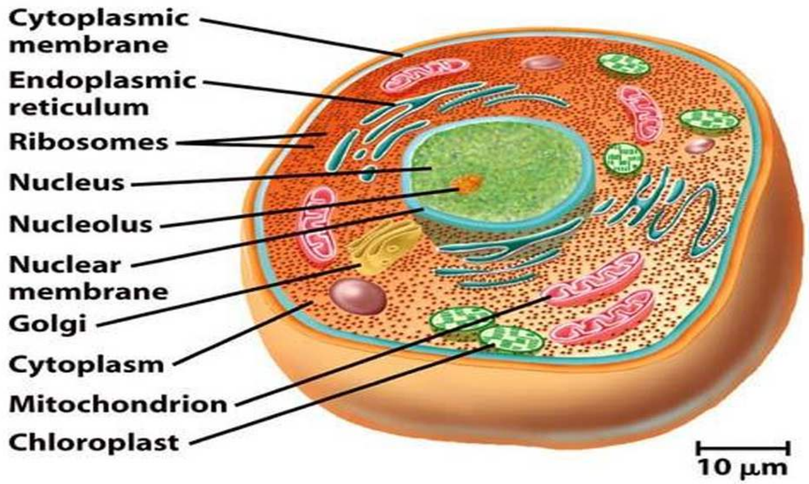
Learning Objectives

1. Understand Cancer Pathophysiology and Classification
2. Identify Cancer Risk Factors and Prevention Strategies
3. Recognize Clinical Manifestations and Diagnostic Techniques
4. Comprehend Cancer Treatment Modalities and Their Goals
5. Manage Side Effects and Complications of Cancer Treatments
6. Develop Skills in Symptom Management and Palliative Care
7. Deliver Patient and Family Education on Cancer Care and Management
8. Address the Psychosocial and Emotional Needs of Cancer Patients and Families
9. Promote Ethical, Culturally Sensitive, and Patient-Centered Care
10. Collaborate with an Interdisciplinary Team for Comprehensive Care

- **Cell structures** Cells are the smallest living structural and functional subunits of the body. Although human cells vary in size, shape, and certain metabolic activities



- **Cell Cycle** The cell cycle involves a series of changes through which a cell progresses, starting from the time it develops until it reproduces itself.

- **Oncologyis** the branch of medicine dealing with tumors. Oncology nursing is also called cancer nursing; it is an important component of medical-surgical nursing care. • Cancer: Is a group of cells that grows out of control, taking over the function of the affected organ.

- **Cancer** cells are poorly constructed, loosely formed, and disorganized. A simplistic definition is “confused cell.” An organ with a cancerous tumor eventually ceases to function. • Is a disease process that begins when an abnormal cell is transformed by the genetic mutation of the cellular DNA.

Types of cancer

- **Benign Tumors:** Cells that reproduce abnormally result in neoplasms. A benign tumor is a cluster of cells that is not normal to the body but is noncancerous. Benign tumors grow more slowly than malignant ones and have cells that are the same as the original tissue. An organ containing a benign tumor usually continues to function normally. A neoplastic growth is difficult to detect until it contains about 500 cells and is about 1 cm in diameter.

- Malignant: a term often used to describe cancer, means that the tumor resists treatment and tends to worsen and threaten life.

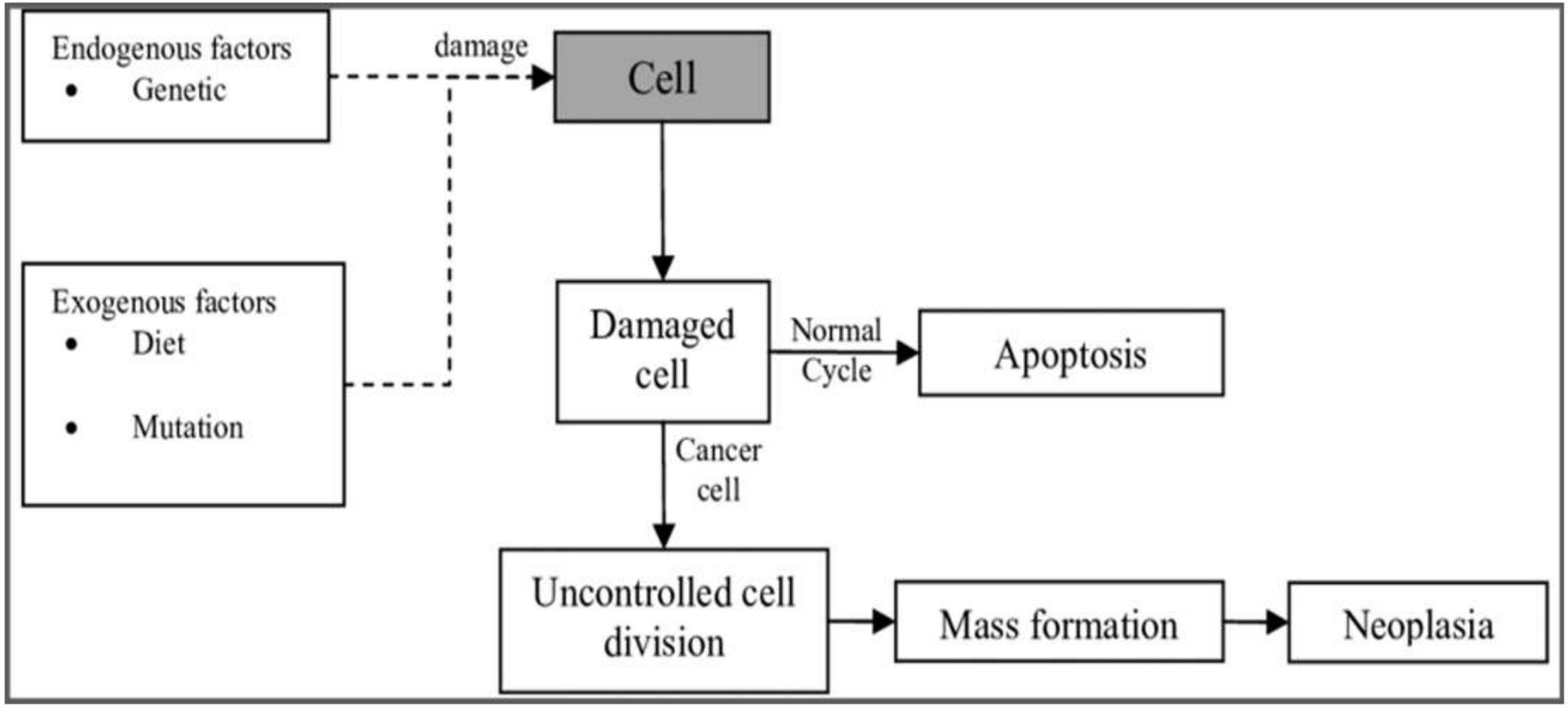
Benign Tumors	**Malignant** Tumors

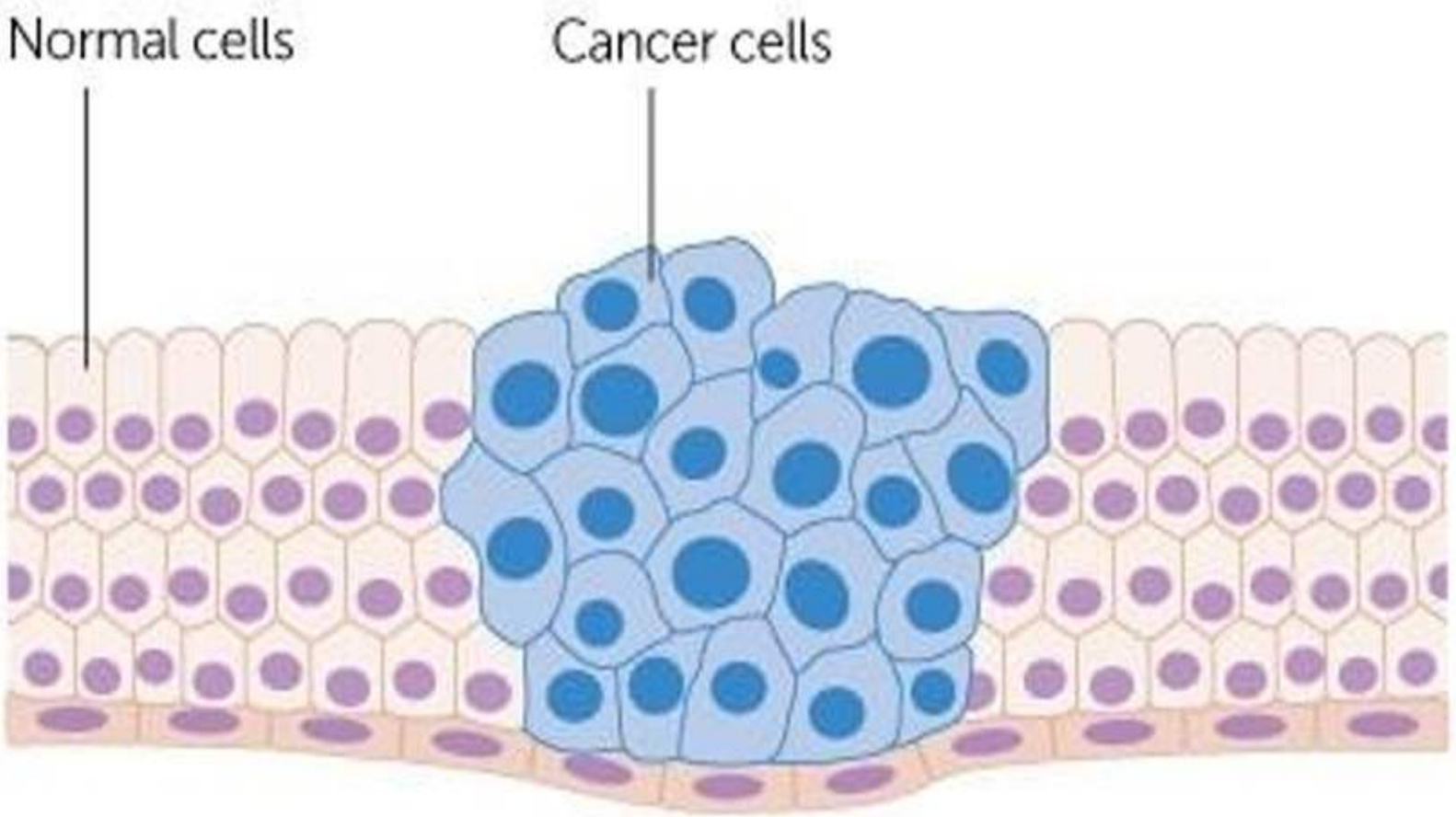
• Small
• Slow-growing
• Non-invasive
• Well-differentiated
• Stay localized
  • Stay where they are.
  • Can't invade or metastasize.
	• Large
	• Fast-growing
	• Invasive
	• Poorly-differentiated
	• Metastasize
	  • Infiltrate, invade, destroy surrounding tissue.
	  • Then metastasize to other parts of body.

Pathophysiology

- Cancer is not one disease but many diseases with different causes, manifestations, treatments, and prognoses.
- There are more than 100 types of cancer caused by mutation of cellular genes.
- Normal cells are limited to about 50 to 60 divisions before they die.

Pathophysiology




Normal cells
Cancer cells

Risk Factors

Increased risk of cancer is linked to many environmental factors.

- Viruses
- Exposure to radiation, chemicals, and irritants;
- Genetics
- Diet.
- Hormones
- General immunity.

Cancer 7 early warning signs (CAUTION)

The acronym **CAUTION** is commonly used to remember the seven early warning signs of cancer, helping in early detection and diagnosis:

C - Change in bowel or bladder habits

- Persistent changes in bowel movements (constipation, diarrhea) or urinary frequency may indicate cancers of the digestive or urinary system.

A - A sore that does not heal

- Sores, especially in the mouth or skin, that do not heal with normal care might signal skin or oral cancers.

U - Unusual bleeding or discharge

- Unexplained bleeding (such as blood in urine, stool, or sputum) or discharge may be a sign of cancers in various organs.

T - Thickening or lump in the breast or elsewhere

- A new lump or thickening under the skin, especially in the breast, testicles, or lymph nodes, could be an early sign of cancer.

I - Indigestion or difficulty swallowing

- Persistent indigestion or swallowing difficulties may be associated with cancers of the esophagus, stomach, or throat.

O - Obvious change in a wart or mole

Changes in size, shape, color, or texture of a wart, mole, or skin lesion could be a sign of skin cancer, particularly melanoma.

N - Nagging cough or hoarseness

A persistent cough, hoarseness, or changes in voice could indicate lung, throat, or thyroid cancer.

Note:

If any of these signs persist for more than two weeks, medical evaluation is recommended to rule out or diagnose potential cancers. Early detection improves the chances of successful treatment.

Diagnostic tests

1. A physical examination is important with careful and thorough assessment of the patient's, medical and surgical histories, and family history should be completed.

2. BIOPSY: Accurate identification of a cancer can be made only by biopsy. Microscopic examination of a sample of suspected tissue.

3. RADIOLOGICAL PROCEDURES:

- X-ray examination is a valuable diagnostic tool in detecting cancer of the bones and hollow organs.
- Chest x-ray Mammography is a reliable and noninvasive low-radiation xray procedure for detecting breast masses.
- Contrast media x-ray studies are used to detect abnormalities of bone and the GI and urinary systems
- Computed tomography (CT) scans are important in the diagnosis and staging of malignancies and can detect minor variations in tissue thickness.

4. NUCLEAR IMAGING PROCEDURES: Nuclear medicine imaging involves camera imaging of organs or tissues containing radioactive media. These studies are highly sensitive.

5. ULTRASOUND PROCEDURES: Ultrasonography helps detect tumors of the pelvis and breast.

6. MAGNETIC RESONANCE IMAGING (MRI) is valuable in the detection, localization, and staging of malignant tumors in the central nervous system, spine, head, and musculoskeletal system.

7. ENDOSCOPIC PROCEDURES. An endoscopic examination allows the direct visualization of a body cavity or opening. And used to detect lesions of the throat, esophagus, stomach, colon, and lungs.

8. LABORATORY TESTS: For normal values for the following laboratory tests, (Blood, serum, and urine tests, and learn the number, size, and shape of RBCs, WBCs, and platelets).

9. CYTOLOGICAL STUDY: Cytology is the study of the formation, structure, and function of cells.

Treatment for Cancer:

- Treatment options offered to cancer patients should be based on realistic and achievable goals for each specific type of cancer.
- The range of possible treatment goals may include complete eradication of malignant disease (cure)
- prolonged survival and containment of cancer cell growth (control)
- or relief of symptoms associated with the disease (palliation)
- Multiple modalities are commonly used in cancer treatment.

- **Surgery:** Surgery can be curative when it is possible to remove the entire tumor.
- **Radiation therapy:** Radiation is used commonly in cancer control and palliation, and it can be curative if the disease is localized.
- **Chemotherapy:** Chemotherapy is chemical therapy that uses cytotoxic drugs to treat cancer. Cytotoxic drugs can be used for cure, control, or palliation of cancerous tumors.

Manage Side Effects and Complications of Cancer Treatments

- **Side Effects**: Chemotherapy and radiation often result in nausea, fatigue, hair loss, skin irritation, and immunosuppression. Targeted therapies and immunotherapy may cause specific adverse effects such as skin rashes or gastrointestinal problems.
- **Complications**: Common complications include infections due to immunosuppression, anemia, bleeding, and organ damage (e.g., liver, heart). Nurses should monitor for these and intervene appropriately.

Nursing Diagnosis:

1. Risk for Ineffective Coping related to the diagnosis and treatment of cancer as evidenced by behaviors such as denial, isolation, anxiety, and depression.

2. Acute Pain or Chronic Pain related to tissue injury from disease process and treatment.

3. Risk for Infection related to diminished immunity and bone marrow suppression as a result of chemotherapy or radiation.

Develop Skills in Symptom Management and Palliative Care

- **Symptom Management**: Nurses play a crucial role in managing symptoms like pain, nausea, fatigue, and emotional distress. Pharmacologic (e.g., opioids for pain) and non-pharmacologic methods (e.g., relaxation techniques) are both important.
- **Palliative Care**: Palliative care focuses on improving quality of life by managing symptoms, providing psychological support, and offering spiritual care. It can be offered alongside curative treatment or as the primary approach in terminal stages of cancer.

Deliver Patient and Family Education on Cancer Care and Management

- **Patient Education**: Nurses should provide patients and families with accurate information on the nature of the cancer, treatment options, and potential side effects. This includes educating on lifestyle changes, medication adherence, and recognizing signs of complications.
- **Family Support**: Educating families on how to care for the patient, provide emotional support, and manage side effects can improve the patient's overall care experience.

Address the Psychosocial and Emotional Needs of Cancer Patients and Families

- **Psychosocial Support**: Cancer can have significant emotional and psychological impacts on patients and families, including anxiety, depression, and fear of death. Nurses should provide emotional support, refer to counseling services, and help patients and families navigate the challenges of cancer care.
- **Grief and Coping**: Palliative and end-of-life care also includes support for grief and bereavement, preparing patients and families for potential loss.

Promote Ethical, Culturally Sensitive, and Patient-Centered Care

- **Ethical Issues**: Nurses must respect patient autonomy, informed consent, and decisions regarding treatment, particularly in end-of-life care. Ethical dilemmas may arise in decision-making, especially when balancing treatment options with quality of life.
- **Culturally Sensitive Care**: Understanding the cultural background, beliefs, and values of the patient is critical in delivering patient-centered care. Nurses should be aware of the impact that cultural factors can have on decision-making and care preferences.

Collaborate with an Interdisciplinary Team for Comprehensive Care

- **Team-Based Care**: Cancer care is most effective when delivered by an interdisciplinary team, including oncologists, nurses, pharmacists, social workers, dietitians, and chaplains. Collaboration ensures that all aspects of the patient's care—physical, emotional, and psychological—are addressed.
- **Interdisciplinary Approach**: Nurses should engage in regular communication with the team, share observations, contribute to care planning, and provide holistic care to meet the diverse needs of cancer patients.

Thank you for listening