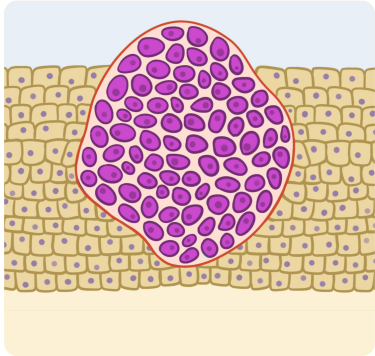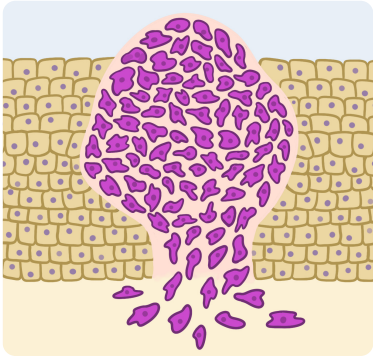## CONCEPT: AN OVERVIEW OF CANCER

Introduction to Cancer

◆ Cancer refers to a group of diseases characterized by _____ growth and spread of abnormal cells.

- **Neoplasm**: new tissue growth that has no physiological function.

  - When neoplasms clump together, _____ are formed.

  - Tumors can either be benign (noncancerous) or _____ (cancerous).

Types of Tumors	
Benign Tumors	**Malignant Tumors**
▸ Generally enclosed in a membrane that prevents _____.	▸ Malignant tumor invades surrounding structures. - Can also spread to _____ sites.

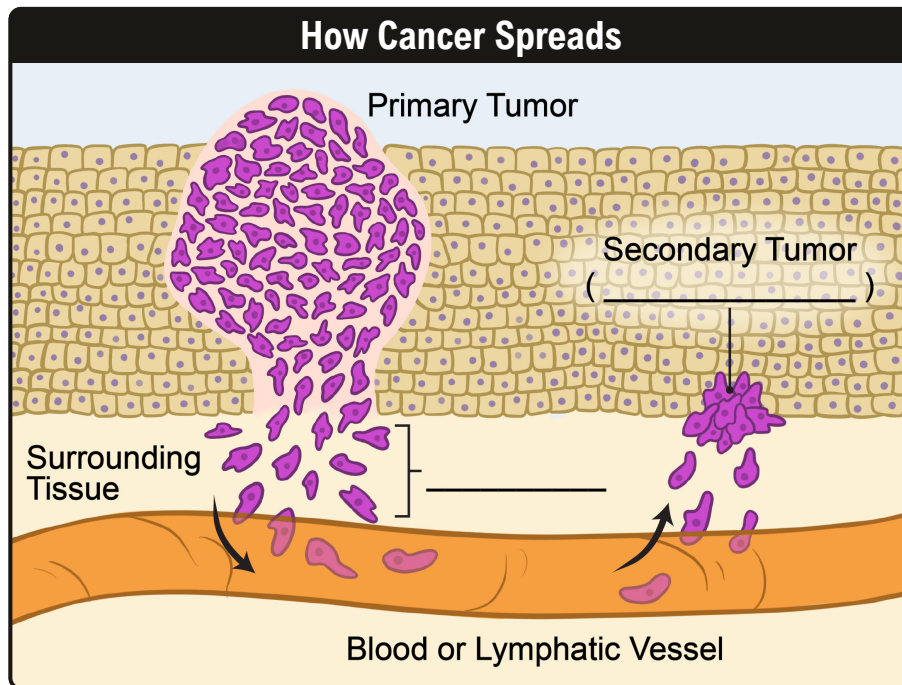◆ A _____ is the most accurate way to identify if a tumor is malignant.

EXAMPLE

Which of the following statements is incorrect?

a) Benign tumors are generally enclosed in a shell and do not spread.

b) A neoplasm is a new growth of tissue that can form a tumor if it clumps together.

c) All cancers result from uncontrolled growth and spread of skin cells.

d) Malignant tumors can also be referred to as cancerous.

CONCEPT: AN OVERVIEW OF CANCER

Metastasis: How Cancer Spreads

◆ Cancer cells don't stick together strongly and will inevitably spread.

  ▸ **Invasion**: The initial spread of cancer cells to the *surrounding* _____ tissues/structures.

  ▸ Can also enter the lymphatic system/blood vessel and spread to distant sites/other organs.

    - **Metastasis**: The spread of cancer from an initial (primary) site to a *distant* (secondary) site.

How Cancer Spreads

Primary Tumor

Secondary Tumor
(_____)

Surrounding
Tissue

_____

Blood or Lymphatic Vessel

EXAMPLE

An individual who was previously diagnosed with lung cancer started experiencing abdominal pain with swelling, yellowing of skin, and weight loss. Based on physical symptoms, lab tests, and biopsy results their doctor concluded that their lung cancer has spread to the liver. This spread is known as:
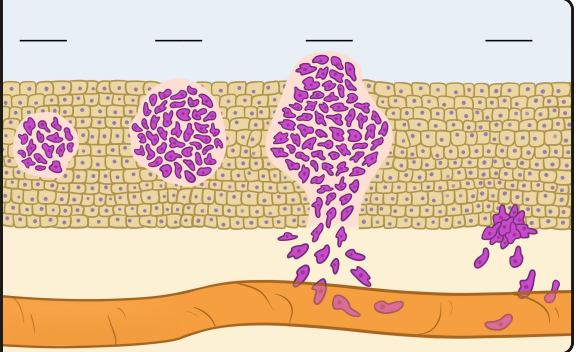
a) Invasion   b) Infiltration   c) Secondary tumor   d) Metastasis

CONCEPT: AN OVERVIEW OF CANCER

Stages of Cancer

◆ Describe how much/_____ a cancer has spread at the time it is diagnosed.

  ▪ Helps doctors to decide an appropriate treatment course and estimate patient life expectancy.

◆ Commonly classified through the _____ (tumor, node, metastasis) classification system.

  ▪ **T**: _____ of tumor.   ▪ **N**: ____ of affected lymph nodes.   ▪ **M**: if metastasis is present.

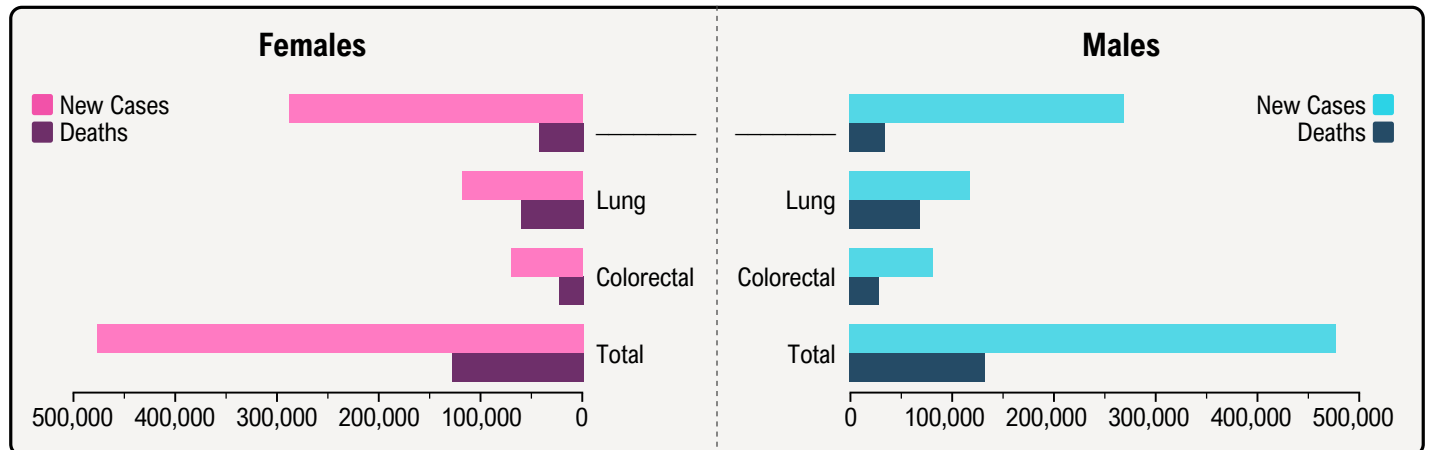| Stage	TNM			Description
0				**Cancer *in situ*:** _____ tumor, highly curable.
I				**Localized Cancer:** can grow/spread if untreated.
II & III				**Regional Spread:** grown & spread to surrounding areas. ▪ may/may not involve _____ nodes.
IV				**Distant Spread:** metastasized to distant sites/organs.

◆ Lower stage = ____ chance of successful treatment.

Which of the following is not a characteristic used in the TNM cancer classification system?

a) Number of lymph nodes affected by tumor.

b) Type of tumor.

c) The size of the tumor.

d) Absence of secondary tumors.

CONCEPT: AN OVERVIEW OF CANCER

The Incidence of Cancer

◆ Cancer is the _____ leading cause of death in the United States.

  • In 2022, there were about ___ million new cancer cases and more than 600,000 deaths.

◆ About 25% of all cancer-related deaths are due to _____ cancer.