

# Cancer

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Chapter 11

# Defining Cancer

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- “Cancer” represents a number of diseases
- Definition: A collection of cells that reproduce in an uncontrolled way to produce a mass of cells
- Causes: Chemical Agents; Biological Agents; Environmental Factors; Genetic Factors; Individual Behaviors

# Tumors

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- Cell mass=tumor (two types)
- Benign tumor (may grow in size, but do not reproduce or spread)
- Malignant tumor (life threatening)
- Tumors in action → Metastasize (spread)

# Categories of Cancer

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- Categorized based on cellular typology
  - 1) Carcinomas- epithelial cells found in skin, glands, or organs
  - 2) Sarcomas- soft tissues including fat, muscle, nerves, or tendons
  - 3) Leukemia- blood producing tissue, e.g., bone marrow
  - 4) Lymphomas- glandular (lymphatic system); organs producing white blood cells

# Examples of Cancer Categories

Type	Examples	Outcome	Other
Carcinomas	Skin, breast, liver, bladder, and prostate	Likely to be fatal (with the exception of skin cancer); the most common type is not always the deadliest	>50% of new cancer cases every year are skin cancer
Sarcomas	Kaposi's sarcoma	Typically malignant; often metastasize	Genetic as well as chemical and viral causes
Leukemia	Leukemia, Childhood leukemia	Very high mortality rate	70% of people in need of bone marrow transplant cannot find match; within families 40% of White/2% of Blacks find sibling matches
Lymphomas	Hodgkin's lymphoma, Non-Hodgkin's lymphoma	Non-Hodgkin's fatal; Hodgkin's less severe, less likely to metastasize	Affects T and B white blood cells; become malformed and malfunction

# Cancer: Gender Differences

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- Is cancer a women's disease?
- Men have higher risks (behaviorally and otherwise)
- Most common among U.S. men: prostate, lung, and colorectal
- Most common among U.S. women: breast, lung, and colorectal
- # of female smokers continues to grow
- **Cancer is not the leading cause of death for men or women in the U.S.**

# Cancer: Genetic Risk

Genetics: Let's recall what genes can tell us about a person?

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- Ancestral geography OR paternal/familial information
- BRCA1 and BRCA2 when mutated, have been linked to breast cancer
  - This speaks to geography—Ashkenazi Jewish women and groups of English/Icelandic women
  - Originally 18%-20% of all breast cancer occurred within Ashkenazi population
  - Ashkenazi women have an 82% risk for developing breast cancer *over their entire lifetime* (this includes an increase in risk with age)
- Lynch syndrome (an inherited disease) has been linked to colorectal cancers
  - This speaks to familial (or generational) transmission
  - 1<sup>st</sup>, 2<sup>nd</sup>, and 3<sup>rd</sup> degree relatives increases the likelihood (relative risk) for developing colorectal cancer

# Cancer: Racial Differences

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- Greater incidence of breast cancer in White U.S. women than in other racial groups
- Greater incidence of **death** due to breast cancer in Black and Latina women
- Why?
  - Access to care/insurance as it correlates to race in U.S.
  - Socioeconomic class as it correlates to race in U.S.

Unfortunately, these findings hold for *all* cancers, not just breast cancer



# Cancer: Risk Factors

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- Environmental (Carcinogens)

- Pesticides
- Air pollution
- Nuclear waste
- Asbestos
- Cell phones (?)

- Behavioral

- Smoking
- Diet
- Exercise
- Obesity
- STDs

# Prevention and Early Detection is EVERYTHING

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- Diet and Exercise: Fast food culture and colon cancer
- Breast self-examination
- Vaccinations

# The Diagnosis: What happens next?

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- Next week we will cover more about receiving a cancer diagnosis
- Psychologically
  - Comorbidity: depression, anxiety, fear
  - Patient-provider relations
- Medical treatment
  - Removal of mass/tumor
  - Chemotherapy

# Psychotherapeutic Approaches

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- Ms. Nobel will provide us with more detail next week!
- Cognitive behavioral therapy
- Educational intervention
- Bibliotherapy
- Supportive-Expressive therapy (meaning-making)
- Complementary/Alternative therapies (CAM)
- Coping strategies (emotion focused coping can leave you being *more* focused on your symptoms)
- Spirituality
- Social-emotional support: face to face or online
- Interpersonal relationships and advocacy