An Introduction to Cancer

Making Sense of Cancer's Complexities

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Goals for this presentation

- Understanding
- Recognizing
- Awareness
- Prevention
- Treatment

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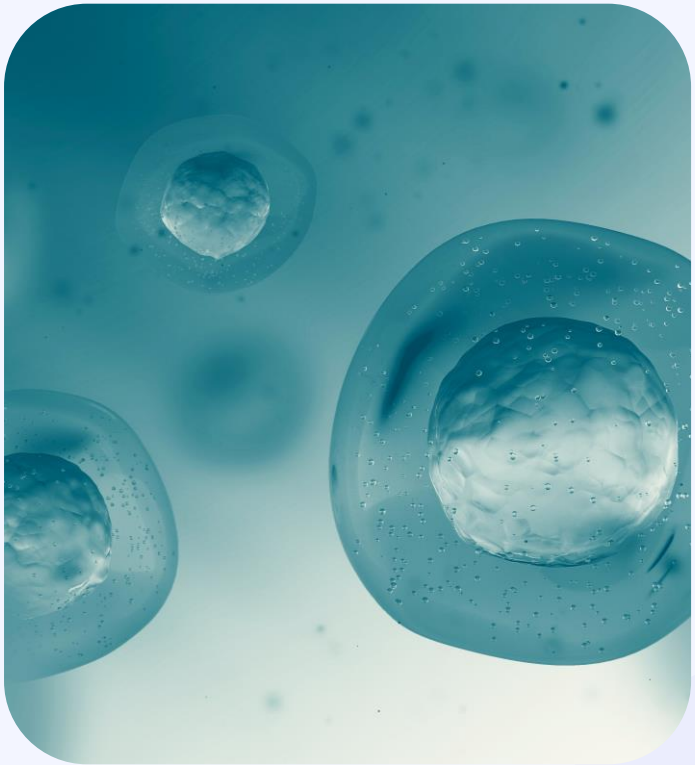
Introduction

01 Introduction

What is Cancer?

Cancer is a group of diseases characterized by the **uncontrolled growth** and **spread** of abnormal cells.

There are over 100 types of cancer, including breast cancer, skin cancer, lung cancer, colon cancer, prostate cancer, leukemia and lymphoma



01
Importance of Understanding Cancer

- Awareness: Understanding cancer can help us recognize early signs and symptoms. Early detection can significantly improve the chances of successful treatment and survival.
- Prevention: Knowledge about risk factors can help us make lifestyle changes to prevent certain types of cancer.
- Empathy: Understanding the challenges faced by cancer patients can foster empathy and support for those affected by this disease.

02
Epidemiology & Risk Factors of Cancer

02 Epidemiology of Cancer

Some fast facts...

1.7 MILLION
people diagnosed with cancer each year.

600,000 PEOPLE
die from cancer each year.

1 IN 3 PEOPLE
will have cancer in their lifetime.

$185 BILLION
is spent each year on cancer care.

Question #1

Which of the following cancers is the MOST common among MEN in the USA?

A. Colon Cancer

B. Lung Cancer

C. Prostate Cancer

D. Melanoma

E. Leukemia

Question #1

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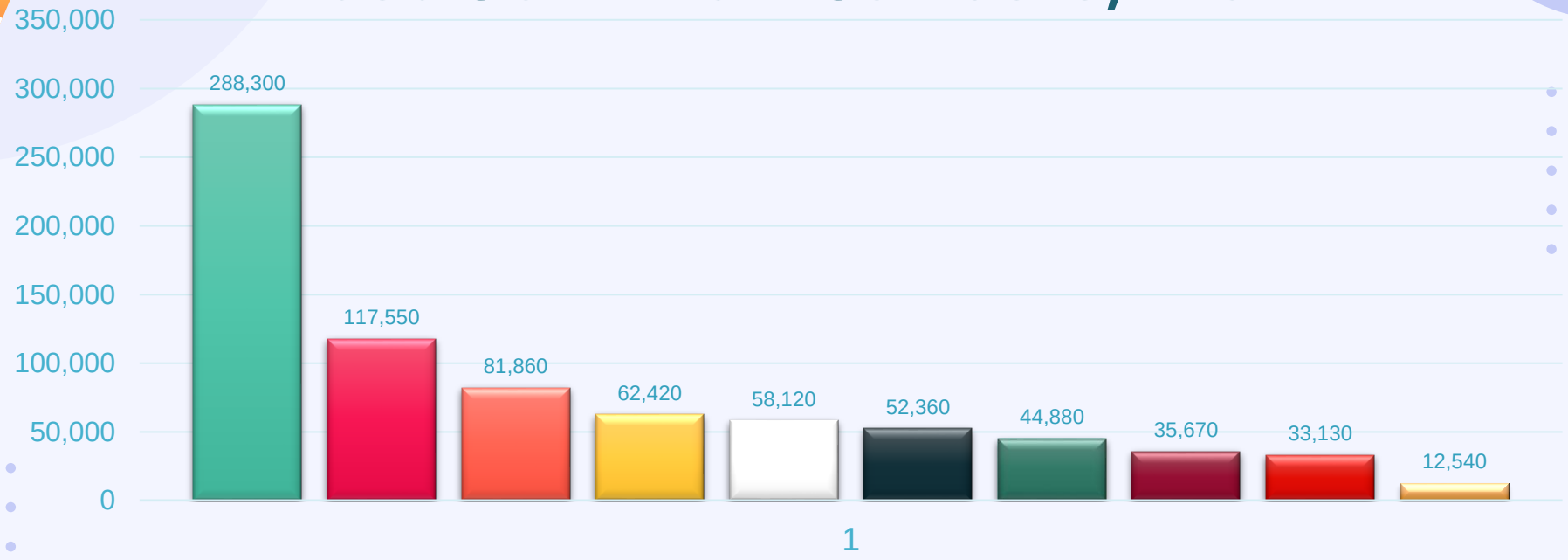
Most Common Cancers, Men

Rank	Cancer Diagnosis	Estimated New Cases
1	Prostate Cancer	288,300
2	Lung & Bronchus Cancer	117,550
3	Colorectal Cancer	81,860
4	Urinary Bladder Cancer	62,420
5	Melanoma of the Skin	58,120
6	Kidney and Renal Pelvis Cancer	52,360
7	Non-Hodgkin Lymphoma	44,880
8	Leukemia	35,670
9	Pancreatic Cancer	33,130
10	Thyroid	12,540

Most Common Cancers, Men



Question #2

Which of the following cancers is the MOST common among WOMEN in the USA?

A. Lung Cancer

B. Cervical Cancer

C. Colon Cancer

D. Uterine Cancer

E. Breast Cancer

Question #2

Which of the following cancers is the MOST common among WOMEN in the USA?

A. Lung Cancer

B. Cervical Cancer

C. Colon Cancer

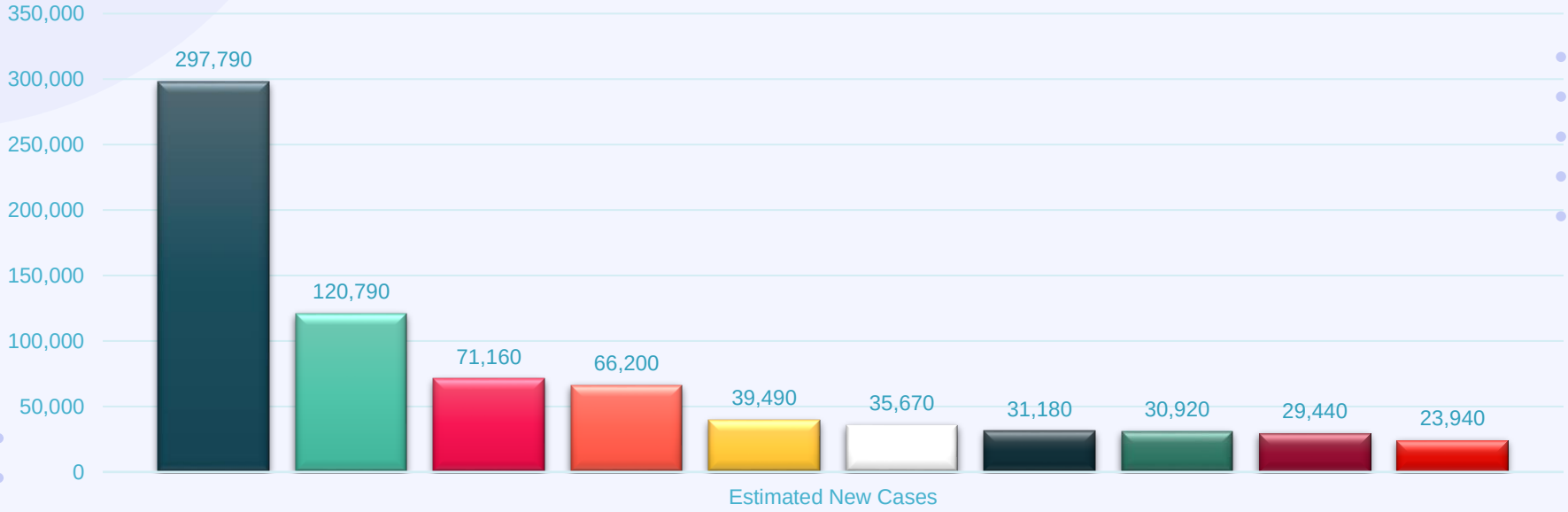
D. Uterine Cancer

E. <u>Breast Cancer</u>

Most Common Cancers, Women

Rank	Cancer Diagnosis	Estimated New Cases
1	Breast Cancer	297,790
2	Lung & Bronchus Cancer	120,790
3	Colorectal Cancer	71,160
4	Corpus & Uterus, NOS	66,200
5	Melanoma of the Skin	39,490
6	Non-Hodgkin Lymphoma	35,670
7	Thyroid Cancer	31,180
8	Pancreatic Cancer	30,920
9	Kidney/Renal Pelvis Cancer	29,440
10	Leukemia	23,940

Most Common Cancers, Women



- Breast Cancer
- Colorectal Cancer
- Melanoma of the Skin
- Thyroid Cancer
- Kidney and Renal Pelvis Cancer
- Lung & Bronchus Cancer
- Corpus & Uterus, NOS
- Non-Hodgkin Lymphoma
- Pancreatic Cancer
- Leukemia

Question #3

Which of the following cancers is the #1 most deadly cancer in America?

A. Lung Cancer

B. Leukemia

C. Colon Cancer

D. Melanoma

E. Breast Cancer

Question #3

Which of the following cancers is the #1 most deadly cancer in America?

A. **Lung Cancer**

B. Leukemia

C. Colon Cancer

D. Melanoma

E. Breast Cancer

Cancer Deaths?

Men	
Lung and bronchus	67,160
Colon and rectum	28,470
Pancreas	26,620
Breast	530
Prostate	34,700
Liver & Intrahepatic Bile Duct	19,000
Leukemia	13,900
Non-Hodgkin Lymphoma	11,780

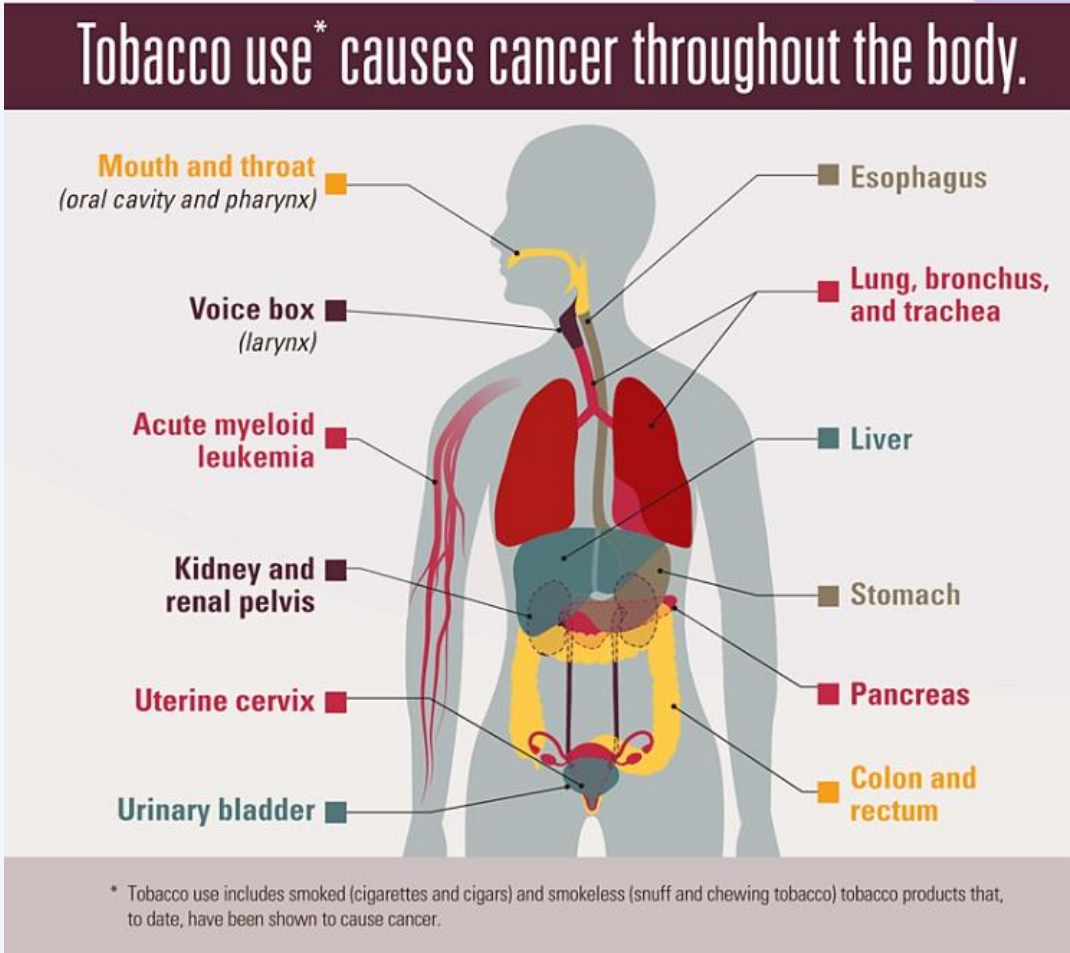
Women	
Lung and bronchus	59,910
Colon and rectum	24,080
Pancreas	23,930
Breast	43,170
Liver & Intrahepatic Bile Duct	10,380
Leukemia	9,810
Non-Hodgkin Lymphoma	8,400

Risk Factors for Cancer

What is a Risk Factor?

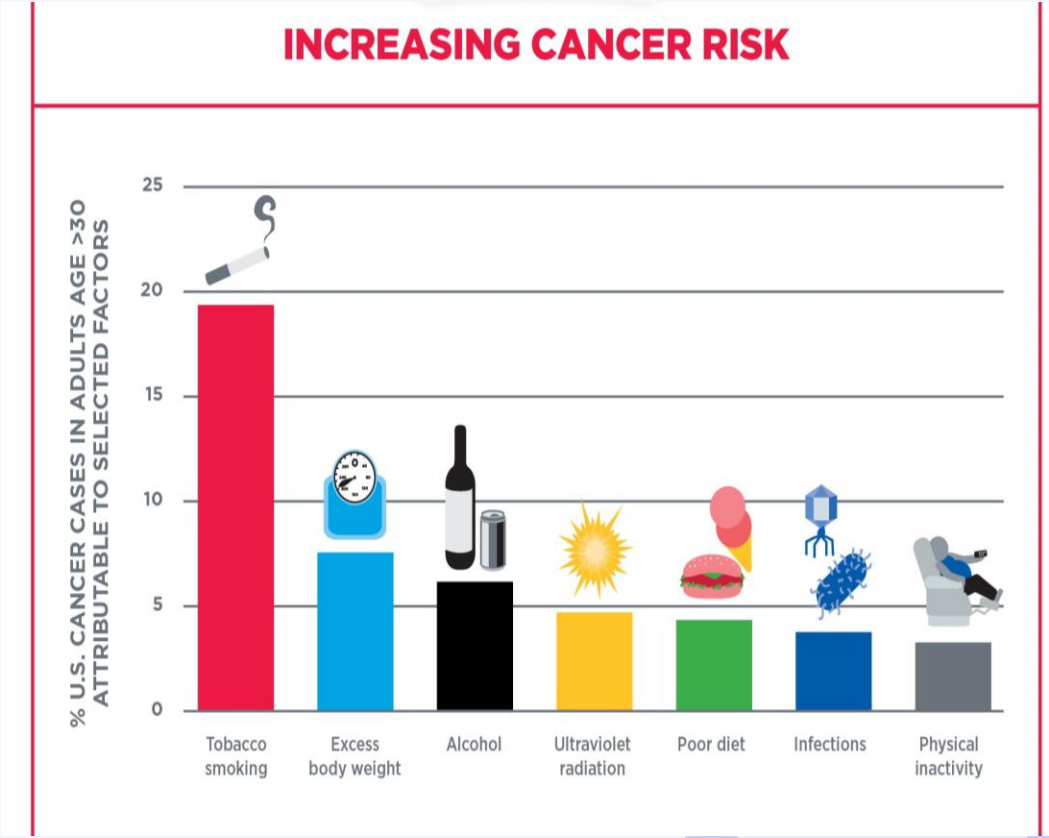
Risk factors are anything that increases an individual's chance of developing cancer.

- Smoking
- Sun Exposure
- Excessive alcohol
- Poor diet
- Certain infections
- Physical Inactivity



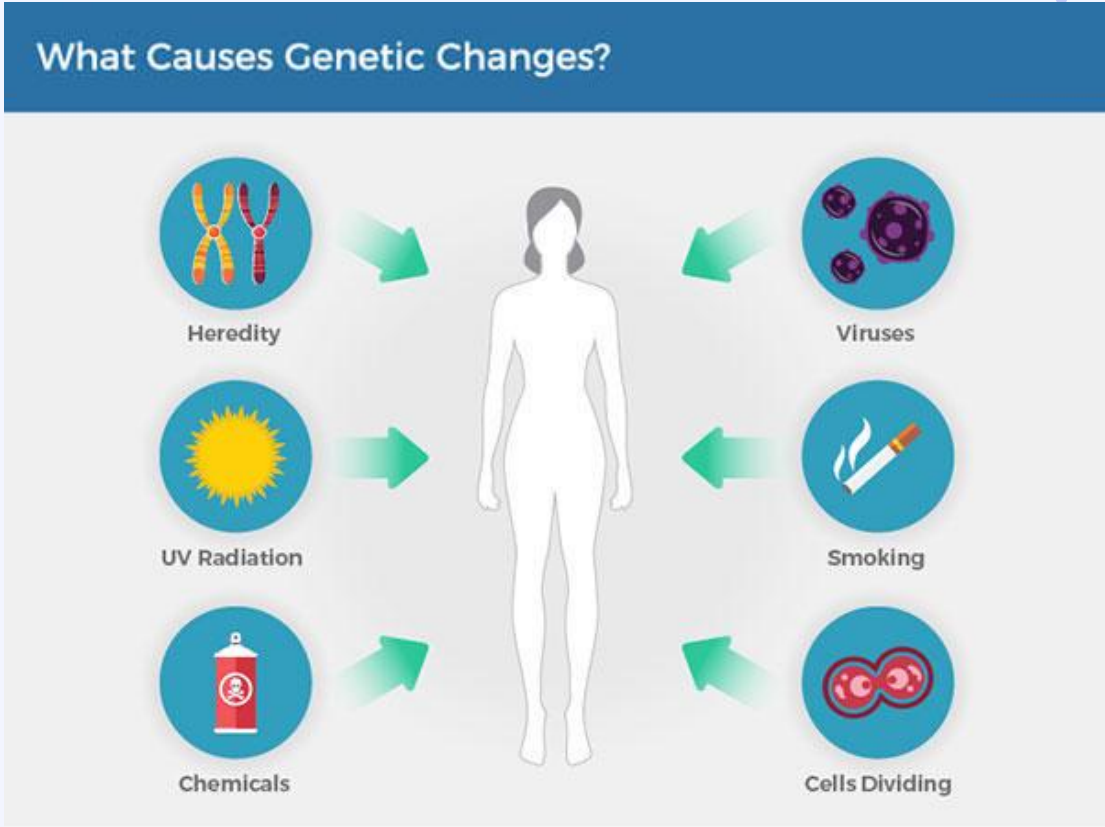
Risk Factors

- Smoking and Tobacco Use
- Diet and Physical Activity
- Sun and UV Exposure
- Certain Chemicals and Substances
    - Benzene, Asbestos, Radon & others
- Age
- Family History
- Genetics (more on the next slide)
- Infections (such as HIV, Hepatitis B and HPV)
- Heavy alcohol use
- Inactivity and Excess Body Weight



What about Genetics?

- Genetic risk factors are specific changes in certain genes which are inherited from a parent and can increase the likelihood of getting cancer
- Occasionally genetic changes can occur through environmental influences (see picture)
- While most cancers are NOT directly inherited, some people inherit gene changes from their parents that greatly increase their risk for certain types of cancer



What about Genetics?

Examples:

- BRCA1 and BRCA2 gene mutations can increase the risk of breast and ovarian cancers.
- Lynch Syndrome is due to inherited mutations that affect DNA repair which can lead to colon, stomach and pancreatic cancer
- **Importance**: Knowing your family's health history can help your doctor determine if genetic testing might be beneficial for you.

03
Presenting Symptoms

03 Presenting Symptoms

Unfortunately, cancer symptoms are often non-specific, and many times people are without any symptoms

Cancer can present in many ways depending on the type and stage of the disease

Common Presenting Symptoms

- **Lung Cancer**: Persistent cough, chest pain, shortness of breath.
- **Breast Cancer**: A new lump in the breast or underarm, thickening or swelling of part of the breast.
- **Prostate Cancer**: Trouble urinating, decreased force in the stream of urine.
- **Colorectal Cancer**: Changes in bowel habits, persistent abdominal discomfort.
- **Skin Cancer**: Any change in size or color of a mole or other skin lesion.

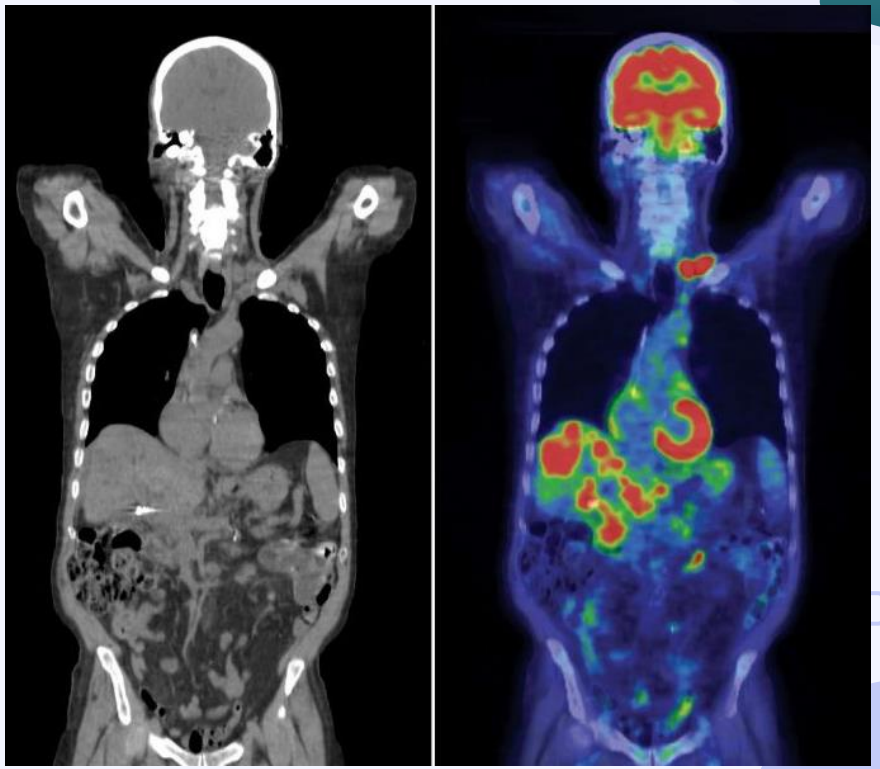
04
Cancer Screening & Prevention

Importance of Early Detection and Screening

Early detection of cancer through screening can significantly improve the chances of successful treatment and survival.

There are currently strong recommendations for screening for the following cancers:

- Breast
- Lung
- Colon
- Cervical



Current Screening Recommendations

- Breast Cancer: The USPSTF recommends biennial screening mammography for women aged 50 to 74 years.
- Cervical Cancer: The USPSTF recommends screening for cervical cancer every 3 years with cervical cytology alone in women aged 21 to 29 years.
- For women aged 30 to 65 years, Pap-Smear every 3 years alone, every 5 years with high-risk human papillomavirus (hrHPV) testing alone, or every 5 years with hrHPV testing in combination with cytology (cotesting).

USPSTF: U.S. Preventative Services Task Force

Current Screening Recommendations

- Colon Cancer: The USPSTF recommends that adults age 45 to 75 be screened for colorectal cancer. The decision to be screened between ages 76 and 85 should be made on an individual basis.

- Lung Cancer: The USPSTF has updated its guidelines to recommend more adults get screened for lung cancer, especially those who smoke or formerly smoked.

USPSTF: U.S. Preventative Services Task Force

1 in 5

Cancer deaths is estimated to be related to excess body weight and inactivity

Three Considerations for Cancer Prevention

Healthy Lifestyle

Maintaining a healthy diet, regular physical activity, and avoiding tobacco and alcohol can help reduce the risk of many types of cancer.

Regular Screening

Regular screenings can catch some types of cancer early when they're most treatable. Consider the screening options mentioned before.

Vaccinations

Certain vaccines can help protect against certain types of cancer. For example, the Human Papillomavirus (HPV) vaccine helps prevent most cervical cancers and several other types of cancer.

05
Overview of Cancer Treatment

07 Surgery

Surgery is a potential treatment options for many types of cancers and is often used when the disease is localized to one area of the body.

Surgery is often offered as part of cancer treatment first, however there may be situations when surgery is pursued after chemotherapy.

07 Chemotherapy

Chemotherapy is a type of cancer treatment that uses various medicines to kill cancer

Chemotherapy is often the backbone of cancer treatment and is often combined with other treatments such as surgery, radiation or other medications.

07 Radiation Therapy

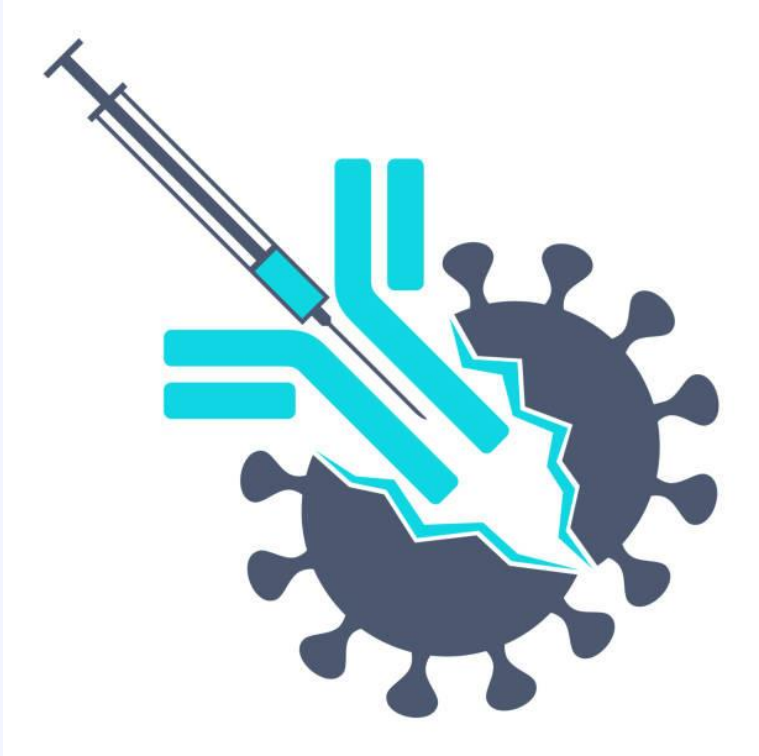
Uses high doses of radiation aimed at a specific location to kill cancer

Can be used by itself, however it is often used in combination with surgery and chemo. Can also be used to relieve pain/symptoms from advanced cancer

07 Immunotherapy

A type of cancer treatment that uses your own immune system to fight cancer

This is a relatively new form of treatment that uses manufactured antibodies to “unveil” cancer cells making them susceptible to your immune system.



07 Targeted Therapy

Treatment that targets a specific change/mutation in the cancer cell that helps them grow/divide/spread.

Frequently used in lung and colon cancers and are often highly effective.

Can be combined as well

07 Hormone Therapy

Treatment that slows or stops the growth of breast and prostate cancer that uses hormones to grow

Frequently combined with other forms of treatment but can also be used alone.

06
Conclusion

Conclusion

- **Importance of Awareness**: Understanding cancer is the first step in combating it. Awareness of the risk factors and symptoms can lead to early detection, which significantly improves the chances of successful treatment.
- **Role of Lifestyle Modification**: Many risk factors for cancer, such as smoking and diet, can be controlled. Making healthy lifestyle choices can reduce your risk of developing many types of cancer.
- **Early Detection is Key**: Regular screenings based on current recommendations can catch some types of cancer early when they’re most treatable. Early detection saves lives.

Thank You!

What questions do you have?

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