

About Prostate Cancer

A total of 220,800 new cases of prostate cancer and 27,540 deaths from the disease are anticipated in the United States in 2015.

Prostate Cancer is the second most common type of cancer among men in this country.

Only skin cancer is more common

Prostate cancer risk factors

Prostate cancer can sometimes be associated with known risk factors for the disease. Many risk factors are modifiable though not all can be avoided.

Age over 65: Age is the main risk factor for prostate cancer. The chance of getting prostate cancer increases as you get older. In the United States, most men with prostate cancer are over 65. This disease is rare in men under 45.

Family history: Your risk is higher if your father, brother, or son had prostate cancer.

Race: Prostate cancer is more common among black men than white or Hispanic/Latino men. It's less common among Asian/Pacific Islander and American Indian/Alaska Native men.

Certain prostate changes: Men with cells called high-grade prostatic intraepithelial neoplasia (PIN) may be at increased risk of prostate cancer. These prostate cells look abnormal under a microscope.

Certain genome changes: Researchers have found specific regions on certain chromosomes that are linked to the risk of prostate cancer. According to recent studies, if a man has a genetic change in one or more of these regions, the risk of prostate cancer may be increased. The risk increases with the number of genetic changes that are found. Also, other studies have shown an elevated risk of prostate cancer among men with changes in certain genes, such as BRCA1 and BRCA2.

Symptoms

A man with prostate cancer may not have any symptoms. For men who do have symptoms, the common symptoms include:

- Weak or interrupted ("stop-and-go") flow of urine.
- Sudden urge to urinate.
- Frequent urination (especially at night).
- Trouble starting the flow of urine.
- Trouble emptying the bladder completely.
- Pain or burning while urinating.
- Blood in the urine or semen.
- A pain in the back, hips, or pelvis that doesn't go away.
- Shortness of breath, feeling very tired, fast heartbeat, dizziness, or pale skin caused by anemia.

Most often, these symptoms are not due to cancer. BPH, an infection, or another health problem may cause them. If you have any of these symptoms, you should tell your doctor so that problems can be diagnosed and treated.

About Breast Cancer

Estimated new cases and deaths from breast cancer in the United States in 2015

New Cases:

231,840 Females 2,360 Males

Deaths:

40,290 Females 430 Males

What you should do

- Screening mammogram
- Women in their 40s and older should have mammograms every 1 to 2 years.
- Clinical Breast Exams
During a clinical breast exam, your health care provider checks your breasts.
- Breast Self Exams
Perform monthly breast self-exams to check for any changes in your breasts. Breast self-exams cannot replace regular screening mammograms and clinical breast exams.

To prevent new cancers from starting, scientists look at risk factors and protective factors. Anything that increases your chance of developing cancer is called a cancer risk factor; anything that decreases your chance of developing cancer is called a cancer protective factor.

Some risk factors for cancer can be avoided, but many cannot. Avoiding risk factors and increasing protective factors may lower your risk but it does not mean that you will not get cancer.

Risk Factor that may increase the risk of Breast Cancer

- Estrogen
- Hormone replacement
- Radiation therapy to the chest
- Being overweight or obese after menopause
- Lack of physical activity
- Drinking alcohol
- Inherited Risk

Protective Factors that may decrease the risk of Breast Cancer

- Exercise
Exercising four or more hours a week may decrease hormone levels.

- * Estrogen :Decreasing the length of time a woman's breast tissue is exposed to estrogen may help prevent breast cancer. Exposure to estrogen is reduced in the following ways:

Pregnancy: Estrogen levels are lower during pregnancy.

Breast Feeding: Estrogen levels remain low while a woman is breast feeding.

Ovarian ablation: Removal of one or more of the ovaries which make estrogen.

Late menstruation; menstrual periods at age 14 or older.

Early menopause: Estrogen levels decrease with menopause.

- Selective estrogen receptor modulators are drugs that act like estrogen on some tissues in the body, but block the effect of estrogen on other tissues.

- Prophylactic mastectomy:
The removal of both breasts when there are no signs of cancer.

- Prophylactic oophorectomy:
The removal of both ovaries when there are no signs of cancer.

- Fenretinide: A type of vitamin A called a retinoid. When given to premenopausal women who have a history of breast cancer, fenretinide may lower the risk of forming a new breast cancer.

About Lung Cancer

Definition of lung cancer: Cancer that forms in tissues of the lung, usually in the cells lining air passages. The two main types are small cell lung cancer and non-small cell lung cancer. These types are diagnosed based on how the cells look under a microscope.

Estimated new cases and deaths from lung cancer in the United States in 2015
New cases: 221,200
Deaths: 158,040

Risk factors:

- Tobacco smoke: Tobacco smoke causes most cases of lung cancer. It's by far the most important risk factor for lung cancer. Harmful substances in smoke damage lung cells. That's why smoking cigarettes, pipes, or cigars can cause lung cancer and why secondhand smoke can cause lung cancer in nonsmokers.
- Radon: Radon is a radioactive gas that you cannot see, smell, or taste. It forms in soil and rocks.
- Asbestos and other substances: People who have certain jobs (such as those who work in the construction and chemical industries) have an increased risk of lung cancer.
- Air pollution: Air pollution may slightly increase the risk of lung cancer.
- Family history of lung cancer: People with a father, mother, brother, or sister who had lung cancer may be at slightly increased risk of the disease, even if they don't smoke.
- Personal history of lung cancer: People who have had lung cancer are at increased risk of developing a second lung tumor.
- Age over 65: Most people are older than 65 years when diagnosed with lung cancer.

Symptoms:

- a cough that gets worse or does not go away
- breathing trouble, such as shortness of breath
- constant chest pain
- coughing up blood
- a hoarse voice
- frequent lung infections, such as pneumonia
- feeling very tired all the time
- weight loss with no known cause

Treatment:

Lung cancer is hard to control with current treatments. Many doctors encourage patients with this disease to consider taking part in a clinical trial Treatment options are surgery, radiation therapy, chemotherapy and targeted therapy.

About Leukemia

Leukemia is cancer that starts in the tissue that forms blood. White blood cells, red blood cells, and platelets are made from stem cells as the body needs them. When cells grow old or get damaged, they die, and new cells take their place. In a person with leukemia, the bone marrow makes abnormal white blood cells. The abnormal cells are leukemia cells. Unlike normal blood cells, leukemia cells don't die when they should. They may crowd out normal white blood cells, red blood cells, and platelets. This makes it hard for normal blood cells to do their work

Estimated new cases and deaths from leukemia
in the United States in 2015

New cases: 54,270
Deaths: 24,450

Risk factors:

- *Radiation* - People exposed to very high levels of radiation.
- Smoking - Smoking cigarettes increases the risk of acute myeloid leukemia
- Benzene - Exposure to benzene in the workplace can cause acute myeloid leukemia. Benzene is used widely in the chemical industry. It's also found in cigarette smoke and gasoline
- Chemotherapy - Cancer patients treated with certain types of cancer-fighting drugs sometimes later get acute myeloid leukemia or acute lymphocytic leukemia.
- Down syndrome and certain other inherited diseases
- Myelodysplastic syndrome and certain other blood disorders
- Human T-cell leukemia virus type I (HTLV-I)
- Family history of leukemia - It's rare for more than one person in a family to have leukemia.

Symptoms:

- Swollen lymph nodes that usually don't hurt (especially lymph nodes in the neck or armpit)
- Fevers or night sweats
- Frequent infections
- Feeling weak or tired
- Bleeding and bruising easily (bleeding gums, purplish patches in the skin, or tiny red spots under the skin)
- Swelling or discomfort in the abdomen (from a swollen spleen or liver)
- Weight loss for no known reason
- Pain in the bones or joints

Most often, these symptoms are not due to cancer. An infection or other health problems may also cause these symptoms. Only a doctor can tell for sure.

Treatment:

- *Watchful Waiting*
- *Chemotherapy*
- *Targeted Therapy*
- *Biological Therapy*
- *Radiation Therapy*
- *Stem Cell Transplant*

This prevention and awareness brochure
created with the support of
Medical Mutual and
The Motorists Insurance Group

Ohio Cancer Research is an independent statewide, nonprofit organization dedicated to the cure and prevention of the many forms of cancer and the reduction of its debilitating effects through aggressive basic seed money research, cancer information and awareness. Ohio Cancer Research is not affiliated with any other organization.

Individual researchers have been or are being funded at The Ohio State University, Nationwide Children's Hospital, University of Toledo, Bowling Green State University, Cincinnati Children's Hospital Medical Center, University of Cincinnati, Case Western Reserve University, The Cleveland Clinic, University Hospitals of Cleveland, MetroHealth Medical Center in Cleveland, University of Dayton, Ohio University, Wright State University and the former Hipple Cancer Research Center in Dayton.

Over \$18 million has been spent on cancer awareness and seed money research projects. Of that amount, over \$7 million in seed money provided to researchers by Ohio Cancer Research has generated more than \$220 million in new money from other sources to continue basic cancer research on projects initially funded as well as translational clinical trials at institutions including The Ohio State University, University Hospitals Seidman Cancer Center, The Cleveland Clinic, and Cincinnati Children's Hospital Medical Center.



50 W. Broad Street
Suite 1132
Columbus, Ohio 43215-3388
phone 614-224-1127
toll free 800-232-6272
fax 614-224-0654
ohiocancer.org

Funding seed money cancer research projects
and supporting cancer awareness and early detection.

Cancer Awareness and Prevention

What is prevention?

Cancer prevention is action taken to lower the chance of getting cancer. By preventing cancer, the number of new cases of cancer in a group or population is lowered. Hopefully, this will lower the number of deaths caused by cancer.

To prevent new cancers from starting, scientists look at risk factors and protective factors. Anything that increases your chance of developing cancer is called a cancer risk factor; anything that decreases your chance of developing cancer is called a cancer protective factor.

Some risk factors for cancer can be avoided, but many cannot. For example, both smoking and inheriting certain genes are risk factors for some types of cancer, but only smoking can be avoided. Regular exercise and a healthy diet may be protective factors for some types of cancer. Avoiding risk factors and increasing protective factors may lower your risk but it does not mean that you will not get cancer.

Different ways to prevent cancer are being studied, including:

- * Changing lifestyle or eating habits.
- * Avoiding things known to cause cancer.
- * Taking medicines to treat a precancerous condition or to keep cancer from starting.