# Cancer Overview

Cancer is one of the scariest words in the English language. When you hear the word as part of a diagnosis, it’s natural to feel many emotions, especially fear.

A cancer diagnosis can cause you and your family a great deal of stress, but you have many resources to help you. You owe it to yourself to learn as much as possible about your diagnosis and how it can be treated. Knowledge is power, and it can help you deal with this disease.

## What is cancer?

Cancer is a disease that occurs when cells in the body begin to divide at a faster rate than the body requires. These rapidly dividing cells grow into a lump that is known as a tumor. The tumor can be benign (non-cancerous) or malignant (cancerous).

## What are the causes of cancer?

Many factors can cause the development of cancer in the body. Some of these factors, such as heredity (family members who have the disease) cannot be avoided. Others, such as lifestyle, can be controlled.

For instance, the use of tobacco is one of the main causes of cancer, especially lung cancer. Tobacco use, whether in the form of smoking, chewing, or exposure to second-hand smoke (smoking by others), can also cause cancer of the mouth and larynx, esophagus, throat, and many other parts of the body.

## Other primary causes of cancer include:

Diet/nutrition — The proper diet is always important, but a poor diet might also increase your risk of cancer. For instance, eating large amounts of high-fat foods can contribute to cancer of the colon and prostate. Exercise is also key. Excess weight might be a contributing factor for various types of cancer, including breast, uterus, ovary, prostate, and colon.

Environment — Cancer can develop if the person is exposed over a period of time to various chemicals in the environment, including pesticides, asbestos, and radon.

Exposure to radiation — Too much exposure to the sun (ultraviolet radiation) can cause skin cancer. In addition, over-exposure to X-rays or to radiation therapy (as part of cancer treatment) might be a risk factor for cancer.

Hormone therapy — Women who are going through menopause might receive a prescription for hormone replacement therapy, either estrogen alone or in combination with progesterone. The use of both of these hormones together has been shown to increase the risk of breast cancer. A woman who still has her uterus and is taking estrogen alone (without progesterone) has a greater risk of endometrial cancer.

## What are the symptoms of cancer?

The most prominent symptoms of cancer include the following:

A sore that doesn’t heal

A wart or mole that changes

An unusual lump anywhere in the body

A persistent cough/hoarseness

Indigestion or problems swallowing

Changes in bowel movement or urination habits

Unusual weight loss

Unusual bleeding or discharge from various parts of the body

Please note that these symptoms do not mean that you definitely have cancer. However, if any of these symptoms appear, you should see your doctor right away.

## How is cancer diagnosed?

If your doctor thinks you might have cancer, he or she will examine you and might order certain tests, including:

Blood and urine tests

Imaging tests that allow the doctor to see the inside your body to see if cancer is present (Imaging tests include X-rays, computed tomography (CT) scans, magnetic resonance imaging (MRI), radionuclide scanning, and ultrasonography.)

Biopsy (A procedure in which the doctor takes a small sample of the tumor and analyzes it under a microscope.)

## What is staging?

One of the biggest concerns about a cancer diagnosis is whether the cancer has spread (metastasized) beyond its original location. To determine this, the doctor assigns a number (I through IV) to your diagnosis. The higher the number, the more the cancer has spread throughout your body. This is called "staging." The doctor needs this information in order to plan your treatment.

## What are the treatments for cancer?

In order to treat your cancer, your doctor needs to know the location of the tumor, the stage (whether it has spread), and whether you are strong enough to handle the treatment.

### Cancer treatment can take the following forms:

Chemotherapy — This treatment uses powerful drugs that destroy the cancer cells. Chemotherapy is delivered orally (pills) or through an intravenous (IV) line.

Radiation — This is a treatment that kills cancerous cells with radiation (high-energy rays). Radiation therapy can either be internal (placed within the body) or external (delivered by a machine outside the body).

NOTE: In some cases, radiation therapy and chemotherapy are given to a patient at the same time.

Surgery — A surgeon removes the tumor, along with the surrounding area (in some cases).

Hormone therapy — Hormones (substances produced by the glands to regulate organ functions) might be given to the patient to block other hormones that might cause cancer. For example, men with prostate cancer might be given hormones to keep testosterone (which contributes to prostate cancer) at bay.

Biological response modifier therapy — Biological response modifier therapy uses natural or artificial (created in a laboratory) materials to reconstruct the body's natural defenses against disease. Biological therapy includes monoclonal antibody therapy and vaccines. (Monoclonal antibodies are created in a laboratory to work like natural antibodies, which are produced by the body’s immune system to fight disease.)

Stem cell transplantation — Stem cells (immature cells from which all blood cells develop) are removed from the patient's circulating blood or bone marrow and then returned after chemotherapy treatment.

## What are the side effects of cancer treatments?

Chemotherapy — Side effects include hair loss, fatigue, nausea, vomiting.

Radiation — Side effects include fatigue, hair loss, skin problems (darkening, dryness, itchiness).

Surgery — Pain and weakness are possible side effects of surgery.

Hormone therapy — This therapy can result in fatigue, water retention (bloating), hot flashes, impotence, and blood clots.

Biological response modifier therapy — This can result in symptoms that resemble the flu (fever, chills, muscle ache, etc.), skin rash, swelling, and increased tendency to bruise or bleed.

Stem cell transplantation — Side effects include nausea, vomiting, flu-like symptoms, and greater risk of infection.

## What other resources are available?

If you are diagnosed with cancer, it’s important to realize that you are not alone. You have your family and friends, and there are support groups for nearly every type of cancer. Ask your doctor for information about these groups. You can also contact your local chapter of the American Cancer Society for more information.

In addition, your doctor can refer you to a social worker or a mental health professional, both of whom can help you deal with the emotional aspects of your diagnosis. The social worker can also help you with the practical and financial issues related to the disease.