What Is Cancer?

Cancer starts when something changes in the genes of one or more cells. Genes are pieces of DNA (deoxyribonucleic acid) that are inside every cell. Some genes tell the cell what to do and when to grow and divide. But when these genes are damaged, the cell can become a cancer cell, and it doesn't work the way it should. Once a cancer starts, it can grow out of control, crowd out normal cells, and keep the normal cells from doing what they're supposed to do.

Where can cancer start?

Cancer cells can form anywhere in the body, including organs, muscles, bones, and blood. Cancer is usually named for the part of the body or type of cell where it began. For example, cancer that starts in the breast is called breast cancer. Even if it spreads to other parts of the body, it is still called breast cancer.

Being able to spread to other parts of the body makes cancer cells different from normal cells. This spread is called metastasis. These cancer cells can end up in the lymph nodes or other body organs, causing problems with normal body functions.

Some types of cancer grow and spread fast. Others grow more slowly. Some are more likely to spread to other parts of the body. Others tend to stay where they started and don't spread.

What is a tumor?

A tumor is a growth made up of many cells that bunch together. Some tumors are cancer, meaning they have cancer cells in them. But many tumors are not cancer. Tumors that are not cancer are called benign. Tumors that are cancer are called malignant.

Some cancers don't start as tumors but happen because of damage to cells in the blood. These damaged cells can cause cancers such as leukemia, myeloma, and lymphoma.

What causes cancer?

Certain lifestyle habits, genes that are inherited from parents, and being exposed to cancer-causing agents can all affect how and when cancer might start. These things may damage the genes in cells, which can sometimes lead to cancer. But many times, there is no known cause for a cancer.

People can help reduce their risk of getting cancer by staying away from tobacco, staying at a healthy weight, eating healthy, being active, avoiding or limiting alcohol, and protecting their skin from the sun. However, there are things that increase a person's risk of cancer that they cannot control, like the genes they get from their parents and changes in cells that happen as a person gets older.

How is cancer found?

Some cancers are found when a person has symptoms that don't go away. Other cancers are found when a person gets regular screening tests. Screening can help find certain cancers before a person has symptoms, when cancers are smaller and easier to treat.

What does the stage of cancer mean?

For most types of cancer, tests are done to see how big it is, if it has grown outside of where it started, and if it has spread to other parts of the body. This is called the cancer's stage. Most types of cancer are given a stage from stage 1, which means that the cancer has not spread at all, up to stage 4, which means that the cancer has spread to other parts of the body. There is also a stage 0, which means that the damaged cells are still only in the layer of cells where they started. Stage 0 cells are not cancer but could become cancer because they are damaged. The stage of the cancer is important because it helps the doctors know what treatment is best.

For some types of cancer, extra tests are done on the cancer cells to see if they have gene or protein changes that might make certain treatments work better.

How is cancer treated?

Many types of cancer can be treated successfully. Common treatments for cancer are surgery, medicines, and radiation. Sometimes more than one type of treatment is used, depending on the type and stage of cancer. This is because different cancers respond to treatment in different ways.

- Surgery can be used to remove part or all of a cancer. Surgery may be the only treatment needed if a cancer is just in one place, or it may be used along with other treatments.
- Radiation may be used to kill or slow the growth of cancer cells in one area of the body. Most radiation treatment is like getting an x-ray. Other times it's given by putting a radioactive source inside or close to the tumor to give off the radiation.
- Many times, medicines are used to kill cancer cells or slow their growth. Some of these medicines are given into a vein through a needle (IV), others are a pill you swallow, and some might even be given in other ways. Each medicine works differently, and sometimes two or more are used together to treat a cancer. But they all work through your body, not just in one place. The kinds of medicines used to treat cancer are chemotherapy, targeted therapy, immunotherapy, and hormone therapy.

Each person's treatment is based on the type and stage of their cancer. The cancer care team looks at where the cancer started, how big it is, if it has spread, and all test results. A person's age and other health problems might affect treatment choices, too. When the cancer care team has the information they need, they look at treatment guidelines from experts to see what is most likely to work.

After seeing what treatment options are available, the cancer care team will discuss them with the person with cancer. Together, the person with cancer and the cancer care team will decide which treatment is best. The cancer care team will also be available throughout treatment to help answer questions, manage side effects, and track how the treatment is working.

For cancer information, day-to-day help, and support, call the American Cancer Society at **1-800-227-2345** or visit us online at **cancer.org**. We're here when you need us.