

FEATURE STORY

About Cancer: What is Cancer?

Understanding cancer means knowing it's more than one disease

Although there are many kinds of cancer, they all start because of out-of-control growth of abnormal cells. Normal body cells grow, divide, and die in an orderly fashion. Because cancer cells continue to grow and divide, they are different from normal cells. Instead of dying, they outlive normal cells and continue to form new abnormal cells.

Cancer cells develop because of damage to DNA, which directs all activities in each cell. When DNA becomes damaged, the body is usually able to repair it. In cancer cells, however, the damaged DNA is not repaired. People can inherit damaged DNA, which results in approximately 10 percent of all cancers. More often, though, a person's DNA becomes damaged by exposure to something in the environment or random cellular events.

Most cancers originate almost anywhere in the body and usually form as a solid tumor, while others, such as leukemia and myeloma, are sometimes referred to as liquid tumors. These cancer cells involve the blood and blood-forming organs (bone marrow) and circulate through other tissues, where they grow.

[View Illustration: Cause & Effect](#)

The different types of cancer include:

Carcinomas: The most common type of cancer, these tumors arise from the cells that cover external and internal body surfaces. The most frequent cancers of this type in the United States are lung, breast, colon, and prostate cancer.

Sarcomas: Cancers that arise from cells found in the supporting tissues of the body, such as bone, cartilage, fat, connective tissue, and muscle.

Lymphomas: Cancers that arise in the lymph nodes and tissues of the body's immune system.

Leukemias: Cancers of the immature blood cells that grow in the bone marrow and tend to accumulate in large numbers in the bloodstream.

The place where a cancer starts is called the primary site. From there, it can spread (metastasize) to other parts of the body. Regardless of where a cancer may spread, it is always named for the place it began. For instance, breast cancer that spreads to the liver is still called breast cancer, not liver cancer.

Different types of cancer can behave very differently. For example, lung cancer and breast cancer are very different diseases. They grow at different rates and respond to different treatments. That is why people with cancer need treatment that is aimed at their particular kind of cancer.

Not all tumors are malignant (cancerous). Benign, or noncancerous, tumors do not spread to other parts of the body and, with very rare exceptions, are not life-threatening.

During the second half of the 20th century, scientists uncovered many of the intricacies of cancer and developed the technology to pinpoint the exact site of the damage to a specific gene, which has had a tremendous impact on the types of therapies now available.

Adapted with permission of the American Cancer Society