What Is Cancer?

http://www.cancer.gov/cancertopics/cancerlibrary/what-is-cancer

Defining Cancer

Cancer is a term used for diseases in which abnormal cells divide without control and are able to invade other tissues. Cancer cells can spread to other parts of the body through the blood and lymph systems.

Cancer is not just one disease but many diseases. There are more than 100 different types of cancer. Most cancers are named for the organ or type of cell in which they start - for example, cancer that begins in the colon is called colon cancer; cancer that begins in basal cells of the skin is called basal cell carcinoma.

Cancer types can be grouped into broader categories. The main categories of cancer include:

- **Carcinoma** - cancer that begins in the skin or in tissues that line or cover internal organs.
- **Sarcoma** - cancer that begins in bone, cartilage, fat, muscle, blood vessels, or other connective or supportive tissue.
- **Leukemia** - cancer that starts in blood-forming tissue such as the bone marrow and causes large numbers of abnormal blood cells to be produced and enter the blood.
- **Lymphoma and myeloma** - cancers that begin in the cells of the immune system.
- **Central nervous system cancers** - cancers that begin in the tissues of the brain and spinal cord.

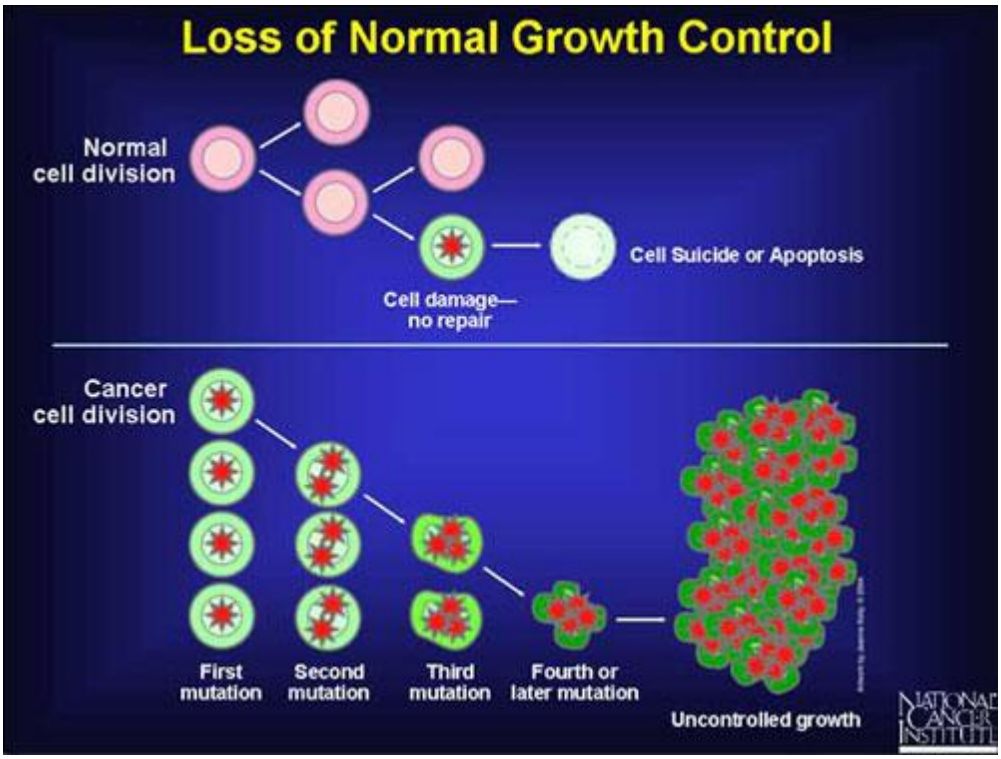
(For definitions of other cancer-related terms, see NCI's Dictionary of Cancer Terms.)

Origins of Cancer

All cancers begin in cells, the body's basic unit of life. To understand cancer, it's helpful to know what happens when normal cells become cancer cells.

The body is made up of many types of cells. These cells grow and divide in a controlled way to produce more cells as they are needed to keep the body healthy. When cells become old or damaged, they die and are replaced with new cells.

However, sometimes this orderly process goes wrong. The genetic material (DNA) of a cell can become damaged or changed, producing mutations that affect normal cell growth and division. When this happens, cells do not die when they should and new cells form when the body does not need them. The extra cells may form a mass of tissue called a tumor.



(Image from Understanding Cancer Series: Cancer.)

Not all tumors are cancerous; tumors can be benign or malignant.

- **Benign tumors** aren't cancerous. They can often be removed, and, in most cases, they do not come back. Cells in benign tumors do not spread to other parts of the body.
- **Malignant tumors** are cancerous. Cells in these tumors can invade nearby tissues and spread to other parts of the body. The spread of cancer from one part of the body to another is called metastasis.

Some cancers do not form tumors. For example, leukemia is a cancer of the bone marrow and blood.

Cancer Statistics

A report from the nation's leading cancer organizations shows that rates of new diagnoses and rates of death from all cancers combined declined significantly in the most recent time period for men and women overall and for most racial and ethnic populations in the United States. (Read more about the Annual Report.)

Estimated new cases and deaths from cancer in the United States in 2010:

- New cases: 1,529,560 (does not include nonmelanoma skin cancers)
- Deaths: 569,490

NCI's Cancer Stat Fact Sheets provide frequently requested cancer statistics for a number of cancer types.

Cancers that are diagnosed with the greatest frequency in the United States are listed below.

The risk of developing many types of cancer can be reduced by practicing healthy lifestyle habits, such as eating a healthy diet, getting regular exercise, and not smoking. Also, the sooner a cancer is found and treatment begins, the better the chances are that the treatment will be successful.

Because colon and rectal cancers are often referred to as "colorectal cancers," these two cancer types are combined for the list. For 2010, the estimated number of new cases of colon cancer and rectal cancer are 102,900 and 39,670, respectively, adding to a total of 142,570 new cases of colorectal cancer.

Kidney cancers can be divided into two major groups, renal parenchyma cancers and renal pelvis cancers. Approximately 92 percent of kidney cancers develop in the renal parenchyma,[2] and nearly all of these cancers are renal cell cancers. The estimated number of new cases of renal cell cancer for 2010 is 53,581.

The following table gives the estimated numbers of new cases and deaths for each common cancer type:

Cancer Type	Estimated New Cases	Estimated Deaths
Bladder	70,530	14,680
Breast (Female – Male)	207,090 – 1,970	39,840 – 390
Colon and Rectal (Combined)	142,570	51,370
Endometrial	43,470	7,950
Kidney (Renal Cell) Cancer	53,581	11,997
Leukemia	43,050	21,840
Lung (Including Bronchus)	222,520	157,300
Melanoma	68,130	8,700
Non-Hodgkin Lymphoma	65,540	20,210
Pancreatic	43,140	36,800
Prostate	217,730	32,050
Thyroid	44,670	1,690