Cancer:

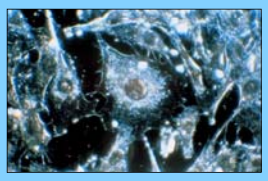
Another way to think of cancer is "Mitosis Run Amok."

Cancer Definition

- Cancer is a malignant tumor or growth caused when cells multiply uncontrollably, destroying healthy tissue.

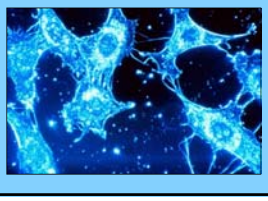
Cancer

- Cancer begins in cells or the building blocks that form tissues.
- These tissues, in turn, make up the organs of the body.



Normal Cells

- Normally, cells grow and divide to form new cells as the body needs them.
- When cells grow old, they die, and new cells take their place.



Cancer Cells

- However sometimes, this orderly process goes wrong.
- New cells form when the body does not need them, and old cells do not die when they should.
- These extra cells can form a mass of tissue called a growth or tumor.

These tumors can be benign or malignant.

Benign tumors are not cancer.

- Benign tumors are rarely life-threatening.
- Generally, benign tumors can be removed, and they usually do not grow back.
- Cells from benign tumors do not invade the tissues around them nor do they spread to other parts of the body.

Malignant tumors are cancer.

- Malignant tumors are generally more serious than benign tumors. They may be life-threatening.
- Malignant tumors often can be removed, but sometimes they grow back.

What causes cancer?

- Mutations cause cancer.
- Cancer cells escape the normal cell cycle and reproduce too rapidly.
- Cancer cells sap nutrients and energy from surrounding tissues and can literally overtake normal cells in one or more body organs.

Cells from malignant tumors can spread (metastasize) to other parts of the body.

- Cancer can spread via the lymphatic or circulatory systems.
- These cancer cells can invade other organs, forming new tumors that damage these organs.

Most cancers are named for where they start.

- Lung cancer, for example, starts in the lung, and breast cancer starts in the breast.
- Lymphoma is cancer that starts in the lymphatic system.
- And leukemia is cancer that starts in white blood cells (leukocytes).

Some Risk Factors

- Growing older
- Tobacco
- Sunlight
- Ionizing radiation
- Certain chemicals and other substances
- Some viruses and bacteria
- Certain hormones
- Family history of cancer
- Alcohol
- Poor diet, lack of physical activity, or being overweight

Growing Older

- The most important risk factor for cancer is growing older.
- Most cancers occur in people over the age of 65, but people of all ages, including children, can get cancer.

Tobacco

- Each year, more than 180,000 Americans die from cancer that is related to tobacco use.

Sunlight

- Ultraviolet (UV) radiation comes from the sun, sunlamps, and tanning booths.
- It causes early aging of the skin and skin damage that can lead to skin cancer.

Family History of Cancer

- Most cancers develop because of mutations in genes.
- Some gene changes that increase the risk of cancer are passed from parent to child.
- These changes are present at birth in all cells of the body.

It is NOT common for cancer to run in a family.

- Most of the time, multiple cases of cancer in a family are just a matter of chance.
- Certain types of cancer, however, do occur more often in some families than in the rest of the population.
  - Melanoma and cancers of the breast, ovary, prostate, and colon, for example, sometimes run in families.

Alcohol

- Having more than two drinks each day for many years may increase the chance of developing cancer.
- The risk increases with the amount of alcohol that a person drinks.

Poor Diet, Lack of Physical Activity, or Being Overweight

- Studies suggest that people whose diet is high in fat have an increased risk of cancer as well as lack of physical activity and being overweight.

Having risk factors does NOT mean that you will get cancer.

- Most people who have risk factors never develop cancer.
- Some people are more sensitive than others to the known risk factors.

Cancer Treatment

There are three major treatment options for cancer:

1. Surgery -an operation to remove the tumor
2. Chemotherapy - a treatment with drugs that kill cancer cells
3. Radiation - the use of high-energy radiation from x-rays, gamma rays, neutrons, and other sources to kill cancer cells and shrink tumors.

And finally, you can help prevent cancer.

- People can help protect themselves by staying away from known risk factors whenever possible.
- Having a healthy diet, being physically active, and maintaining a healthy weight may help reduce cancer risk.