Cancer, General Information

Cancer is a group of many related diseases that begin in cells. Cells are the building blocks of the body. Cells are also the basic unit of life. The body is made up of many types of cells. Normally, cells grow and divide to produce more cells only when the body needs them. This orderly process helps keep the body healthy. Sometimes cells keep dividing when new cells are not needed. These extra cells may form a mass of tissue. It is called a growth or tumor. **Tumors can be either:**

- **Not cancerous (*benign*).**
- **Cancerous (*malignant*).**

Cancer can begin in any organ or tissue of the body. The original tumor is where the tumor started out. It is called the primary cancer or primary tumor. Usually it is named for the part of the body in which it begins.

Metastases mean the spread of cancer. Cancer cells can break away from a primary tumor and travel locally. These grow next to the tumor. Cancer cells can also travel through the bloodstream or lymphatic system to other parts of the body. Cancer cells may spread to lymph nodes near the primary tumor regional lymph nodes, so called because they are in the region. This is called:

- Nodal involvement.
- Positive nodes.
- Regional disease.

Cancer cells can also spread to other parts of the body, distant from the primary tumor. Doctors use the term metastatic disease or distant disease to describe cancer that spreads to other organs or to lymph nodes other than those near the primary tumor.

When cancer cells spread and form a new tumor, the new tumor is called a secondary, or metastatic, tumor. The cancer cells that form the secondary tumor are like those in the original tumor. That means, for example, that if breast cancer spreads (*metastasizes*) to the lung, the secondary tumor is made up of abnormal breast cells. It is not made of abnormal lung cells. The disease in the lung is metastatic breast cancer. It is not lung cancer.

A metastasis is a tumor that started from a cancer cell or cells in another part of the body. But sometimes a primary cancer is discovered only after a metastasis causes problems (*symptoms*). For example, a man whose prostate cancer has spread to the bones in the pelvis may have lower back pain (caused by the cancer in his bones) before experiencing any symptoms from the prostate tumor itself.

The cells in a metastatic tumor resemble those in the primary tumor. The cancerous tissue is examined under a microscope to determine the cell type. Then a doctor can usually tell whether that type of cell is normally found in the part of the body from which the tissue sample was taken.

For instance, breast cancer cells look the same whether they are found in the breast or have spread to another part of the body. So, if a tissue sample taken from a tumor in the lung contains cells that look like breast cells, the doctor determines that the lung tumor is a secondary tumor. Metastatic cancers may be found at the same time as the primary tumor, or months or years later. When a second tumor is found in a patient who has been treated for cancer in the past, it is more often a metastasis than another primary tumor. In a small number of cancer patients, a secondary tumor is diagnosed, but no primary cancer can be found, in spite of extensive tests. Doctors refer to the primary tumor as unknown or occult. The patient is said tohave cancer of unknown primary origin (CUP). This means we do not know where the tumor came from.

TREATMENT

When cancer has metastasized, it may be treated with:

- **Chemotherapy.**
- **Radiation therapy.**
- **Biologic therapy.**
- **Hormone therapy.**
- **Surgery.**
- **A combination of these.**

The choice of treatment generally depends on the:

- Type of primary cancer.
- Size and location of the metastasis.
- Patient's age and general health.
- Types of treatments used previously.

In patients diagnosed with CUP, it is still possible to treat the disease even when the primary tumor cannot be located. It is also possible to treat the cancer even if the organ from which the cancer cells came cannot be identified.

New cancer treatments are currently under study. To develop new treatments, the National Cancer Institute (NCI) sponsors clinical trials (research studies) with cancer patients in many hospitals, universities, medical schools, and cancer centers around the country. Clinical trials are a critical step in the improvement of treatment. Before any new treatment can be recommended for general use, doctors conduct studies to find out whether the treatment is both safe for patients and effective against the disease. The results of such studies have led to progress not only in the treatment of cancer, but in the detection, diagnosis, improvement of survival rates, and prevention of the disease. Patients interested in participating in research should ask their doctor to find out whether they are eligible for a clinical trial.

This information courtesy of the National Cancer Institute.

For more information, contact:
http://www.cancer.gov

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