LUNG CANCER (Small Cell Lung Cancer)

Small cell lung cancer is a disease in which cancer (malignant) cells are found in the tissues of the lungs. The lungs are a pair of cone-shaped organs that take up much of the room inside the chest. The lungs bring oxygen into the body and take out carbon dioxide, which is a waste product of the body's cells. Tubes called bronchi make up the inside of the lungs.

There are two kinds of lung cancer based on how the cells look under a microscope: small cell and non-small cell.

Small cell lung cancer is usually found in people who smoke or who used to smoke cigarettes. A doctor should be seen if there are any of the following symptoms: a cough or chest pain that doesn't go away, a wheezing sound when breathing, shortness of breath, coughing up blood, hoarseness, or swelling in the face and neck.

If there are symptoms, a doctor may want to look into the bronchi through a special instrument, called a bronchoscope, that slides down the throat and into the bronchi. This test, called bronchoscopy, is usually done in the hospital. Before the test, the patient will be given a local anesthetic (a drug that causes a loss of feeling for a short period of time) in the back of the throat. Some pressure may be felt, usually with no pain. The doctor can take cells from the walls of the bronchi tubes or cut small pieces of tissue to look at under the microscope to see if there are any cancer cells. This is called a biopsy.

The doctor may also use a needle to remove tissue from a place in the lung that may be hard to reach with the bronchoscope. A cut will be made in the skin and the needle will be put in between the ribs. This is called a needle aspiration biopsy. The doctor will look at the tissue under the microscope to see if there are any cancer cells. Before the test, a local anesthetic will be given to keep the patient from feeling pain.

The chance of recovery (prognosis) and choice of treatment depend on the stage of the cancer (whether it is just in the lung or has spread to other places), and the patient's gender and general state of health.

STAGES OF SMALL CELL LUNG CANCER

Once small cell lung cancer has been found, more tests will be done to find out if cancer cells have spread from one or both lungs to other parts of the body (staging). A doctor needs to know the stage of the disease to plan treatment. The following stages are used for small cell lung cancer:

Limited stage

Cancer is found only in one lung and in nearby lymph nodes. (Lymph nodes are small, bean-shaped structures that are found throughout the body. They produce and store infection-fighting cells.)

Extensive stage

Cancer has spread outside of the lung where it began to other tissues in the chest or to other parts of the body.

Recurrent stage

Recurrent disease means that the cancer has come back (recurred) after it has been treated. It may come back in the lungs or in another part of the body.

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TREATMENT OF LUNG CANCER (SMALL CELL LUNG CANCER)

There are treatments for all patients with small cell lung cancer. Three kinds of treatment are used:

- surgery (taking out the cancer)
- radiation therapy (using high-dose x-rays or other high-energy rays to kill cancer cells)
- chemotherapy (using drugs to kill cancer cells)

Additionally, clinical trials are testing the effect of new therapies on the treatment of small cell lung cancer.

Surgery may be used if the cancer is found only in one lung and in nearby lymph nodes. Because this type of lung cancer is usually not found in only one lung, surgery alone is not often used. Occasionally, surgery may be used to help determine exactly which type of lung cancer the patient has. If a patient does have surgery, the doctor may take out the cancer in one of the following operations:

- Wedge resection removes only a small part of the lung.
- Lobectomy removes an entire section (lobe) of the lung.
- Pneumonectomy removes the entire lung.

During surgery, the doctor will also take out lymph nodes to see if they contain cancer.

Radiation therapy uses x-rays or other high-energy rays to kill cancer cells and shrink tumors. Radiation therapy for small cell lung cancer usually comes from a machine outside the body (external beam radiation therapy). It may be used to kill cancer cells in the lungs or in other parts of the body where the cancer has spread. Radiation therapy may also be used to prevent the cancer from growing in the brain. This is called prophylactic cranial irradiation (PCI). Because PCI may affect brain function, the doctor will help the patient decide whether to have this kind of radiation therapy. Radiation therapy can be used alone or in addition to surgery and/or chemotherapy.

Chemotherapy is the most common treatment of all stages of small cell lung cancer. Chemotherapy may be taken by pill, or it may be put into the body by a needle in the vein or muscle. Chemotherapy is called a systemic treatment because the drug enters the bloodstream, travels through the body, and can kill cancer cells outside the lungs, including cancer cells that have spread to the brain.

LUNG CANCER (NON SMALL CELL LUNG CANCER)

What is non-small cell lung cancer?

Lung cancers can be divided into two types: small cell lung cancer and non-small cell lung cancer. The cancer cells of each type grow and spread in different ways, and they are treated differently. Non-small cell lung cancer is usually associated with prior smoking, passive smoking, or radon exposure.

The main kinds of non-small cell lung cancer are named for the type of cells found in the cancer: squamous cell carcinoma (also called epidermoid carcinoma), adenocarcinoma, large cell carcinoma, adenosquamous carcinoma, and undifferentiated carcinoma.

Non-small cell lung cancer is a common disease. It is usually treated by surgery (taking out the cancer in an operation) or radiation therapy (using high-dose x-rays to kill cancer cells). However, chemotherapy may be used in some patients.

The prognosis (chance of recovery) and choice of treatment depend on the stage of the cancer (whether it is just in the lung or has spread to other places), tumor size, the type of lung cancer, whether there are symptoms, and the patient's general health.

LUNG CANCER PREVENTION

Lung cancer is the leading cause of cancer deaths in U.S. men and women.

Lung cancer can often be associated with known risk factors for the disease. Many risk factors are modifiable though not all can be avoided.

Tobacco

Studies show that smoking tobacco products in any form is the major cause of lung cancer. Environmental, or second-hand, tobacco smoke is also implicated in causing lung cancer. Many products, such as nicotine gum, nicotine sprays, or nicotine inhalers, may be helpful to people trying to quit smoking. In addition, a number of efforts at the community, state,
and national level have helped to reduce smoking rates.