Lung Cancer

The lungs are 2 sponge-like organs. The right lung has 3 sections, called lobes. The left lung has 2 lobes. The left lung is smaller because the heart takes up more room on that side of the body. The lungs bring air in and out of the body, taking in oxygen and getting rid of carbon dioxide gas, a waste product.

The lining around the lungs, called the pleura, helps to protect the lungs and allows them to move during breathing. The windpipe (trachea) brings air down into the lungs. It divides into tubes called bronchi (or just one, bronchus) which divide into smaller branches called bronchioles. At the end of these small branches are tiny air sacs known as alveoli.

Most lung cancer starts in the lining of the bronchi, although it can also start in other parts of the lung. Lung cancer often takes many years to develop. First, there may be areas of pre-cancerous changes in the lung. These changes are not a mass or tumor. They can't be seen on an x-ray and they don't cause symptoms. But these changes can be found by special tests of cells in the lining of the airways of lungs damaged by smoke. As these pre-cancerous areas go on to become true cancer, they may make chemicals that cause new blood vessels to form nearby. These new blood vessels nourish the cancer cells and allow a tumor to form. Finally, the tumor
becomes large enough to show up on an x-ray. Once lung cancer occurs, cancer cells can break away and spread to other parts of the body in a process called metastasis. Lung cancer is a life-threatening disease because it often spreads in this way before it is found.

### Types of Lung Cancer

There are 2 main types of lung cancer and they are treated differently.

- small cell lung cancer (SCLC)
- non-small cell lung cancer (NSCLC)

If the cancer has features of both types, it is called **mixed small cell/large cell cancer**.

#### Small Cell Lung Cancer (SCLC)

About 15% of all lung cancers are the small cell type. This cancer often starts in the bronchi near the center of the chest. Although the cancer cells are small, they can multiply quickly and form large tumors that can spread widely through the body. This is important because it means that treatment must include drugs to kill the widespread disease. This kind of cancer is almost always caused by smoking. It is very rare for someone who has never smoked to have small cell lung cancer.

#### Non-small Cell Lung Cancer (NSCLC)

About 85% of all lung cancers are of the non-small cell type. There are 3 sub-types of NSCLC. The cells in these sub-types differ in size, shape, and chemical make-up.

- **Squamous cell carcinoma**: about 25% to 30% of all lung cancers are of this kind. They are linked to smoking and tend to be found near the bronchus.
- **Adenocarcinoma**: this type accounts for about 40% of lung cancers. It is usually found in the outer part of the lung.
- **Large-cell undifferentiated carcinoma**: about 10% to 15% of lung cancers are this type. It can start in any part of the lung. It tends to grow and spread quickly.

Other types of tumors can grow in the lungs as well. Some of these are not cancer and others are cancerous. Carcinoid tumors, for example, are slow-growing and usually cured by surgery.
Lung Cancer Information Sheet (continued)

Adapted from: www.cancer.org the website of the American Cancer Society

These Information Sheets are designed to provide a brief overview of various medical conditions. Referring to the Information Sheets may help you communicate more effectively with other members of the Primary Care Team. The Information Sheets are by no means an exhaustive description of the disorders. If you need additional information, please engage in a more detailed search. Don’t forget to consult with other members of the Primary Care Team. They are an invaluable source of information!