

## What happens if something is detected on my screening exam?

Lung cancer typically occurs in the form of a lung nodule, a relatively round lesion or area of abnormal tissue within the lung. The vast majority (greater than 95%) of these nodules do not represent cancer but instead represent areas of scarring in the lung from prior infection or small lymph nodes.

If your LDCT scan detects a nodule, your physician will likely recommend a follow-up LDCT scan several months later to check that the nodule does not change in size. In the event the nodule grows or is suspicious, your doctor may recommend further evaluation with an advanced imaging study (PET) and/or removal of a small piece of the nodule (called a biopsy). A pathologist can analyze the cells from the biopsy under a microscope in order to determine whether the nodule is malignant (cancerous) or benign.

If the nodule is cancerous, additional blood and imaging tests may be recommended to determine the stage of the tumor. The imaging tests usually include computed tomography (CT) scanning of the chest, and may include a bone scan or a PET/CT scan. The treatment options and expected results of treatment depend on the stage of the tumor.

### What is the cost of a screening CT?

Many insurance companies and Medicare are covering lung cancer screening or are considering covering in the near future. However, it is best to check with your insurance plan to determine if they cover this procedure. If not, we offer a low cash price for this procedure.

# Where can I find more information about lung cancer screening?

You can find more information on lung cancer screening at websites for the following organizations:

- Lung Cancer Alliance
- National Comprehensive Cancer Network
- American Lung Association
- The American Cancer Society
- The National Cancer Institute



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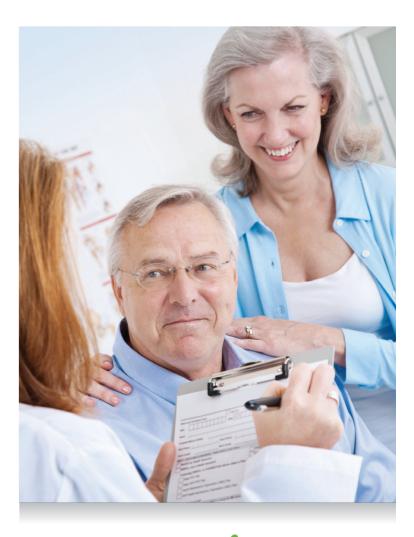
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## Lung Cancer Screening







Screening examinations are tests performed to find disease before symptoms begin. The goal of screening is to detect disease at its earliest and most treatable stage.

In lung cancer screening, individuals who have a high risk of developing lung cancer but no signs or symptoms of the disease undergo low-dose computed tomography (LDCT) scanning of the chest.

CT scanning combines special x-ray equipment with sophisticated computers to produce multiple, cross-sectional images or pictures of the inside of the body. LDCT produces images of sufficient quality to detect many lung diseases and abnormalities using up to 90 percent less ionizing radiation than a conventional chest CT scan.

# Who should consider Lung Cancer Screening – and why?

Lung cancer is cancer that forms in tissues of the lung, usually in the cells lining air passages. Lung cancer that is detected early — before spreading to other areas of the body — is more successfully treated. Lung cancer is the leading cause of cancer deaths in the United States and worldwide. Approximately 85 percent of lung cancer occurs in current or former cigarette smokers.

#### **Screening Trials**

Before a screening program is widely accepted and recommended by medical practitioners, it must do more than detect disease at an early stage. The accepted measure of screening effectiveness is a reduction in the number of deaths from the given disease.

#### **National Lung Screening Trial**

Current recommendations for lung cancer screening followed publication of a recent large, randomized clinical trial sponsored by the National Cancer Institute called the National Lung Screening Trial (NLST). The NLST was

performed to determine whether screening chest CT exams could reduce death rates from lung cancer among those at high risk for the disease. The trial studied more than 53,000 men and women aged 55 to 74 who were current or former heavy smokers at 33 sites across the United States. The trial demonstrated 20 percent fewer lung cancer deaths among the trial participants screened with LDCT.

#### **New Screening Recommendations**

Based on the NLST results and other studies, the National Comprehensive Cancer Network, American Lung Association, American Association for Thoracic Surgery, American Society of Clinical Oncologists, American College of Chest Physicians, American Thoracic Society and the American Cancer Society all now recommend that individuals at high risk for developing lung cancer consider annual screening with LDCT.

#### Risk Factors for Lung Cancer

Anything that increases an individual's chances of developing disease is called a risk factor. Risk factors for lung cancer include:

- tobacco smoking
- contact with radon, asbestos or other cancer-causing agents
- a personal history of smoking related cancer
- a family history of lung cancer
- certain chronic lung diseases

#### How to Compute "Pack-Years"

To translate your smoking history into 'pack years,' simply multiply the number of cigarette packs you have smoked per day by the number of years you have smoked. Example: 1½ packs a day smoked over a 30-year period = 45 pack years.

Individuals at high risk of developing lung cancer who might consider LDCT screening should meet the following criteria:

- Age between 55 to 74 years, AND
- Cigarette smoking history of at least 30 pack-years, AND
- Being a current cigarette smoker or a former smoker who quit within the last 15 years.

Individuals who are at least 50 years old and have at least a 20 pack-year history of smoking, as well as one other risk factor (except contact with secondhand smoke) are also considered to be at high risk and may also benefit from lung cancer screening with LDCT.

To determine whether you are a candidate for lung cancer screening, you should see your doctor, who will review your medical history and advise you on the benefits, limitations and potential risks of the test.

### How is lung cancer screening performed?

For low-dose chest CT, the technologist will position you on the examination table, usually lying flat on your back. You will usually be asked to raise your arms over your head. Next, the table will move quickly through the scanner to determine the correct starting position for the scans. Then, the table will move slowly through the machine as the actual CT scanning is performed while you hold your breath for the short five to 10 second scan.

### What are the benefits and risks of Lung Cancer Screening?

#### **Benefits**

- Because CT scans are able to detect even very small nodules in the lung, LDCT of the chest is especially effective for diagnosing lung cancer at its earliest, most treatable stage.
- CT is fast, which is important for patients who have trouble holding their breath.
- CT scanning is painless and noninvasive.
- No radiation remains in a patient's body after a CT examination.
- X-rays used in LDCT of the chest scans have no immediate side effects.
- Low-dose CT scans of the chest produce images of sufficient image quality to detect many lung diseases and abnormalities using up to 90 percent less ionizing radiation than a conventional chest CT scan.
- Lung cancer screening with LDCT has been proven to reduce the number of deaths from lung cancer in patients at high risk.
- Lung cancer found by screening with LDCT is often at an earlier stage of disease.
- When cancer is found with screening, patients can more often undergo minimally invasive surgery and have less lung tissue removed.

#### Risks

- False positive results occur when a test appears to be abnormal but no lung cancer is found. Abnormal findings may require additional testing to determine whether or not cancer is present. These tests, such as additional CT exams or more invasive tests in which a piece of lung tissue is removed (called a biopsy), have risks and may cause a patient anxiety.
- Test results that appear to be normal even when lung cancer is present are called false-negative results. A person who receives a false-negative test result may delay seeking medical care.
- Not all of the cancers detected by LDCT will be found in the early stage of the disease. Screening that detects lung cancer may not improve your health or help you live longer if the disease has already spread beyond the lungs to other places in the body.
- LDCT lung screening and all other screening exams can lead to the detection and treatment of cancer which may never have harmed you. This can result in unnecessary treatment, complications, and cost.
- Health insurance companies and Medicare may not cover the cost of an LDCT scan to screen for lung cancer.
- There is a theoretical small risk of cancer from exposure to low dose radiation.