



## LUNG CANCER

### **1. Guidelines for Screening**

#### **High risk factors:**

- Cigarette smoking with a current or past history of at least the equivalent of smoking one pack / day for 10 years (10 pack-years)
- Age 50 or older
- Smokers who take beta-carotene supplements

#### **Screening recommendation for high risk patients:**

Annual low dose chest CT age 50 or older

#### **Low risk factors:**

- Radon gas exposure
- Second hand smoke
- Family history of lung cancer
- Workplace exposure to asbestos, arsenic, silica and chromium

#### **Screening recommendation for low risk patients:**

Annual chest X-ray age 50 or older

### **3. Cancer Prevention**

- Not smoking
- Quitting smoking preferably by joining a smoking cessation program
- Test lowest occupied part of house for radon
- Eating more fruits and vegetables
- Exercise
- Supplements: Vitamin E does not decrease the risk of lung cancer  
Beta-carotene **increases** the risk
- Smoking cessation programs:



## **LUNG CANCER BENEFITS AND RISKS - FREQUENTLY ASKED QUESTIONS (FAQs)**

### **What is lung cancer screening?**

Lung cancer screening checks the lungs for early signs of cancer in people who have no symptoms of lung cancer. Although screening is not likely to be helpful for all smokers, it might help prevent cancer deaths in some heavy smokers.

Researchers have been studying chest X-rays and “low-dose CT scans” to see if they are good screening tools. (CT stands for “computed tomography.”) A low-dose CT scan uses much less radiation than a normal CT scan and shows a more detailed image of the lungs than a standard X-ray. It turns out that X-rays do not work for screening. Low-dose CT scans can help find early (small) lung cancers that have high cure rates in heavy smokers.

The goal of lung cancer screening is to find cancer early, before it has a chance to grow, spread, or cause problems. One large study found that smokers who were screened with low-dose CT scans were less likely to die of lung cancer than those who were screened with a standard X-ray. Plus, screening comes with certain risks, including the need for more tests if a person has an abnormal screening test.

The best way to lower your chances of getting or dying from lung cancer is to quit smoking. It does not matter how much or how long you have smoked. Quitting now will reduce your chances not only of lung problems, but also of heart disease and many forms of cancer.

### **Can I be screened with a standard X-ray instead of a low-dose CT scan?**



No. Some doctors recommend that heavy smokers get a chest X-ray once a year to check for cancer, but there is no proof that this helps extend life. Experts do NOT recommend chest X-rays as a way to screen for lung cancer.

### **What happens during a low-dose CT scan?**

When you have a low-dose CT scan, you lie on a table that slides into a machine. The machine is shaped like a giant donut and you slide through the large hole in the center. As you slide through, the machine takes pictures of the inside of your body. The process takes several minutes and is painless.

### **What happens after a low-dose CT scan?**

After a low-dose CT scan, you should get a phone call or letter with your results. If you do not hear back about your results in about 2 weeks, call your doctor or nurse's office. Do not assume that your scan was normal if you hear nothing.

### **What if my CT scan is abnormal?**

If your scan is abnormal, do not panic. More than 95 out of 100 people with an abnormal scan turn out NOT to have lung cancer. You will need more tests to find out whether you actually have cancer.

### **What is the benefit of lung cancer screening?**

Lung cancer screening annually has been shown to detect small cancers and reduce the death rate by 20% in a major study sponsored by the National Cancer Institute. Other studies have shown higher cure rates.

### **Who should be screened for lung cancer?**

For some people with a long smoking history, screening can save lives. If the following 3 statements are all true for you, ask your doctor about screening:



Dedicated to promote cure by early detection and research to prevent cancer since 1933

- You are 55 to 80 years old. Some groups recommend starting at 50 years old and the decision may depend on clinical factors
- You have smoked an amount that is equal to at least 1 pack-a-day for 30 years (examples of what might be considered equal include 2 packs-a-day for 15 years or 3-packs-a-day for 10 years)
- You still smoke or quit smoking in the past 15 years

The decision to be screened should take these things into account:

- Your general health and level of risk – Your level of risk depends mostly on how much and how long you have smoked, and on whether you still smoke.
- The costs involved in screening – It's not yet clear whether insurance companies will pay for screening or the follow-up tests that are needed if a scan is abnormal. If you are thinking about screening, ask your doctor's office what you might have to pay.
- Access to experts in lung cancer screening – Not all doctors are experts at reading low-dose CT scans, or in deciding what to do if a test is abnormal. For screening to be helpful, a very experienced person must read the scan. Plus, it's important that any abnormal results be managed by a doctor who is an expert at diagnosing lung cancer.

### **What are the risks of being screened for lung cancer?**

The risks include:

- False positives – Low-dose CT scans sometimes give “false positives,” meaning they suggest cancer is present when it is not. This can lead to unneeded worry and to more tests. For example, people who have false positives sometimes have follow-up full-dose CT scans, which expose them to more radiation. They sometimes also need



Dedicated to promote cure by early detection and research to prevent cancer since 1933

a lung biopsy, which is a procedure to remove a small sample of lung tissue. This procedure can be painful and lead to problems, such as bleeding or a collapsed lung.

- Radiation exposure – Like all X-rays, CT scans expose you to some radiation. The radiation dose is less than a mammogram. Although the radiation dose from the first screening CT scan is low, you would need to have a scan every year, so your exposure would add up. Plus, if you have an abnormal result, you could end up having full dose CT scans.

#### **What are the risks of screening?**

False positives - One drawback of an LDCT scan is that it finds abnormalities in about one in four people that turn out not to be cancer but still need to be assessed to be sure. This may lead to additional scans or even more invasive tests such as needle biopsies or even surgery to remove a portion of lung in some people. A very small number of people who do not have cancer or have the earliest stage of cancer have died from these tests. There is also a risk that comes with increased exposure to radiation from the scan.

#### **How often should I have a low-dose CT scan?**

If you and your doctor decide that screening is right for you, you will need to have a low-dose CT scan once

***Strang Cancer Prevention Institute has developed and updates guidelines for cancer screening and best practices for cancer prevention. Strang is synonymous with cancer screening and prevention. Strang was the first medical facility to introduce the Pap test into clinical practice which has saved millions of women's lives worldwide. Strang was opened by first lady Eleanor Roosevelt in 1933***