

## Screening for Lung Cancer

The U.S. Preventive Services Task Force (Task Force) has issued a **final** recommendation statement on *Screening for Lung Cancer*.

This final recommendation statement applies to adults who have no signs or symptoms of lung cancer but who are at high risk for developing the disease because of their age and smoking history.

The final recommendation statement summarizes what the Task Force learned about the potential

benefits and harms of screening for lung cancer: Adults between 55 and 80 years old who are at high risk for lung cancer because they are current heavy smokers or have quit within the past 15 years should be screened every year with a test called low-dose computed tomography.

This fact sheet explains these recommendations and what they might mean for you.

What is  
lung cancer?

Lung cancer is cancer that occurs in several kinds of cells in the lung. As with other cancers, lung cancer happens when abnormal cells grow out of control. These cells can form a tumor or spread to other parts of the body.

### Facts About Lung Cancer

Lung cancer is the leading cause of cancer death in the United States. However, the most common type—non-small cell lung cancer—can sometimes be cured if it is found early enough.

Treatment involves surgery to remove the part of the lung that has cancer. Unfortunately, about 90 percent of the people who have lung cancer die from the disease, in part because it is often not found until the cancer is at an advanced stage.

Smoking is the biggest risk factor for lung cancer. About 85 percent of lung cancers are caused by smoking. The risk of developing lung cancer increases with the amount a person smokes and the length of time a person smokes. The risk of lung cancer also increases as people get older. Most lung cancers occur in people 55 and older.

The most important way to reduce the risk of developing lung cancer is to not smoke or stop smoking, and to avoid exposure to tobacco smoke. People who quit smoking greatly reduce their risk of developing and dying from lung cancer. This risk continues to go down over time.

### Screening for Lung Cancer

The main test used to detect lung cancer is low-dose computed tomography (also called a low-dose CT scan, or LDCT). In this test, an x-ray machine scans the body and uses low doses of radiation to make a series of detailed pictures of the lungs.

## Potential Benefits and Harms of Lung Cancer Screening

The goal of screening for lung cancer is to identify the cancer at an early stage so that it can be successfully treated. Most screening programs focus on detecting non-small cell lung cancer because it is the most common type of lung cancer and can sometimes be cured if it is found and treated early.

The Task Force reviewed studies on the potential benefits and harms of lung cancer screening, including results from the National Lung Screening Trial, a very large study of more than 50,000 people (see the link in the Learn More box for information about this study).

The Task Force found that low-dose CT scans more accurately identify early stage cancer than do other screening tests. They also found that many lung cancer deaths can be prevented by screening high-risk people every year. High-risk can be defined as people who:

- are 55 through 80 years old, and
- have a history of heavy smoking, and
- are either current smokers or who have quit within the past 15 years.

Heavy smoking means a smoking history of 30 “pack years” or more. A “pack year” is smoking an average of 1 pack of cigarettes per day for 1 year. For example, a person could have a 30 pack-year history by smoking 1 pack a day for 30 years or 2 packs a day for 15 years.

The Task Force also found that lung cancer screening has some harms. The test can suggest that a person has lung cancer when, in fact, no cancer is present. This is called a false-positive result. False-positive results cause worry and anxiety and can lead to follow-up tests and surgeries that aren’t needed and that may have their own significant risks. Additionally, people who have other serious illnesses or poor overall health shouldn’t be screened because they are more likely to be harmed by the resulting treatment, including surgery.

In addition, people receive radiation during a low-dose CT scan. This can be harmful because radiation from repeated scans can cause cancer in otherwise healthy people.

## The Final Recommendation on Lung Cancer: What Does It Mean?

Here is the Task Force’s final recommendation on screening for lung cancer. Recommendations have letter grades. The grades are based on the quality and strength of the evidence about the potential benefits and harms of screening for this purpose. They also are based on the size of the potential benefits and harms. Task Force recommendation grades are explained in the box at the end of this fact sheet.

When the Task Force recommends screening (**Grade B**), it is because it has more potential benefits than potential harms. The Notes explain key ideas.

Visit the Task Force Web site to read the full [final recommendation statement](#). The statement explains the evidence the Task Force reviewed and how it decided on the grade. An [evidence report](#) provides more detail about the studies the Task Force reviewed

**1** The Task Force recommends *annual* screening for lung cancer with *low-dose computed tomography* in adults aged 55 to 80 years who have a 30 *pack-year smoking history* and currently smoke or have quit within the past 15 years. Screening should be *discontinued* once the individual has not smoked for 15 years or develops *a health problem that significantly limits life expectancy or the ability or willingness to have curative lung surgery*. **Grade B**

## Notes

**1** *annual*

Once a year.

*low-dose computed tomography*

A test in which an x-ray machine scans the body and uses low doses of radiation to make a series of detailed pictures of the lungs. The x-ray machine is linked to a computer, which makes the pictures.

*pack-year smoking history*

A term that describes how much and how long a person has smoked. It is used to determine whether a person should be screened.

*discontinued*

Stopped.

*a health problem that...*

The goal of screening is to identify a cancer so it can be treated. If a person has a condition that prevents him or her from having treatment (such as surgery) that would cure the cancer, then screening has no benefit and should be stopped.

## Should You Be Screened for Lung Cancer?

Getting the best health care means making smart decisions about what screening tests, counseling services, and preventive medications to get and when to get them. Many people don't get the tests, counseling, or medications they need. Others get tests, counseling, or medications they don't need or that may be harmful to them.

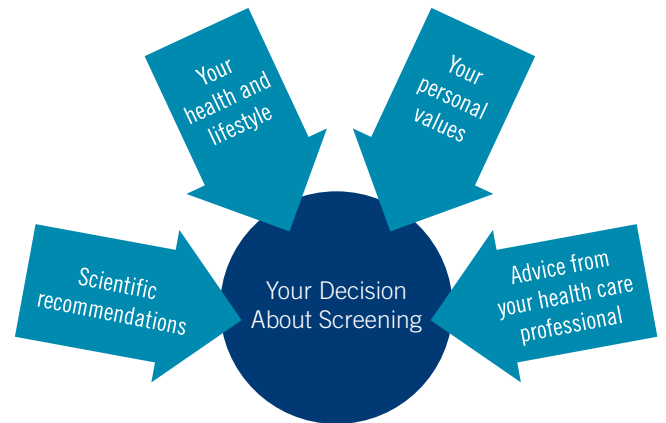
Task Force recommendations can help you learn about screening tests, counseling services, and preventive medications. These services can keep you healthy and prevent disease. The Task Force recommendations do not cover diagnosis (tests to find out why you are sick) or treatment of disease.

Task Force recommendations also apply to some groups of people, but not others. For example, this recommendation applies only to a certain group of adult smokers.

## Making a decision about lung cancer screening

The most important way to prevent lung cancer is to not smoke and to avoid exposure to tobacco smoke. If you do smoke, quitting can greatly reduce your risk of developing lung cancer, and your risk will continue to go down over time.

If you are thinking about screening, consider your own health and lifestyle. Think about your personal beliefs and preferences for health care. Talk with your health care professional about your risk factors for lung cancer, including your age and history of smoking. Also talk with your doctor or nurse about any other health conditions you have that may prevent you from having successful treatment if lung cancer is found as a result of screening. Be comfortable that all your questions have been answered. And consider scientific recommendations, like this one from the Task Force. Use this information to become fully informed and to decide whether screening for lung cancer is right for you.








## What is the U.S. Preventive Services Task Force?

The Task Force is an independent group of national experts in prevention and evidence-based medicine. The Task Force works to improve the health of all Americans by making evidence-based recommendations about clinical preventive services such as screenings, counseling services, or preventive medicines. The recommendations apply to people with no signs or symptoms of the disease being discussed.

To develop a recommendation statement, Task Force members consider the best available science and research on a topic. For each topic, the Task Force posts draft documents for public comment, including a draft recommendation statement. All comments are reviewed and considered in developing the **final recommendation statement**. To learn more, visit the [Task Force Web site](#).

### Click Here to Learn More About Lung Cancer and Screening for Lung Cancer

-  [SmokeFree.gov](#)  
(U.S. Department of Health and Human Services)
-  [What You Need To Know About™ Lung Cancer](#)  
(National Cancer Institute)
-  [Lung Cancer](#)  
(MedlinePlus)
-  [Lung Cancer Screening](#)  
(National Cancer Institute)
-  [Patient and Physician Guide: National Lung Screening Trial](#)  
(National Cancer Institute)

### USPSTF Recommendation Grades

Grade	Definition
A	Recommended.
B	Recommended.
C	Recommendation depends on the patient's situation.
D	Not recommended.
I statement	There is not enough evidence to make a recommendation.