

Screening for Lung Cancer



Is lung cancer screening right for me?

If you have all three of these risk factors, you should consider being screened:

- 55–77 years old **and**
- Have a 30 pack-year history of smoking (this means 1 pack a day for 30 years, 2 packs a day for 15 years, etc.) **and**
- Are a current smoker, or have quit within the last 15 years

What is screening?

- Screening is looking for a disease before a person has any symptoms, which can help to find lung cancer in an early, more treatable stage.
- Based on research, if a group of 1000 people were screened once a year for 3 years, 3 fewer people in 1000 would die of lung cancer after 6 years. This means that, instead of 21 people, 18 people per 1000 would die of lung cancer.

Why not screen everyone?

- There is no proof from research that it is best to screen everyone.
- Screening people who are not at high risk or who are very ill may cause more harm than good. False alarms can lead to more testing and risk of harm.

Lung cancer is the leading cause of cancer death in the United States. Unfortunately, many times lung cancer does not cause symptoms until it has spread to other parts of the body.

Are there any symptoms of lung cancer that I should watch for?

Contact your health care team if you notice any of the following:

- Have a new cough that doesn't go away
- Notice a change in a chronic cough
- Cough up blood, even a small amount
- Develop shortness of breath or chest pain
- Lose weight without trying

Is there a cost for the screening?

Talk with the Lung Cancer Screening Coordinator about potential costs for lung cancer screening. The coordinator can be reached at 843-792-1178.

How is screening for lung cancer done?

- We screen for lung cancer using a low-dose spiral CT (LDCT) scan. This LDCT scan gives a detailed picture of your lungs.
- You will go to the Radiology (X-Ray) department for your LDCT scan. You will lie on a table and raise your arms above your head. Then the table will slide into the scanner. We will ask you to hold your breath for about 20 seconds during the scan.

How often should screening be done?

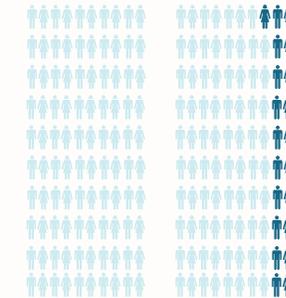
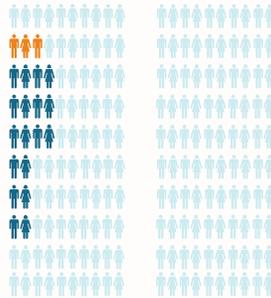
Based on current research, screening should be done once a year for as long as you meet the screening criteria.

53,454 current and former smokers were randomly assigned to be screened once a year for 3 years with low-dose CT or chest X-ray. Here's what happened after an average of 6.5 years:

SCREENED (1000 PEOPLE)

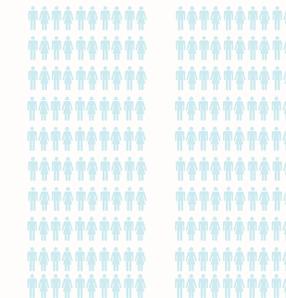
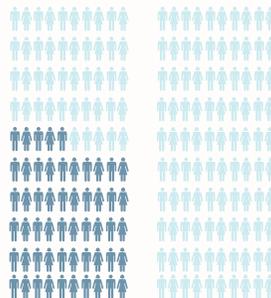
NOT SCREENED (1000 PEOPLE)

Benefits added by screening
18 people died from lung cancer in a group of 1000 people who are screened. This was **3 fewer deaths** from lung cancer compared to the not screened group.

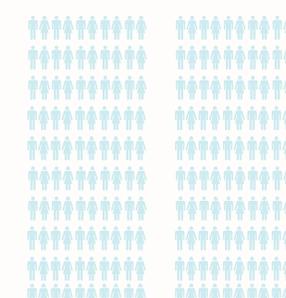
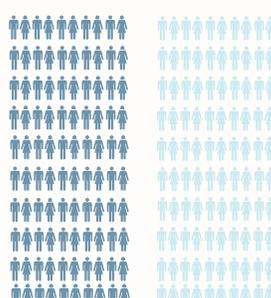


21 people died from lung cancer in a group of 1000 people who were not screened. This was **3 additional deaths** from lung cancer compared to the group that was screened.

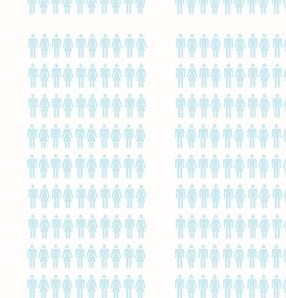
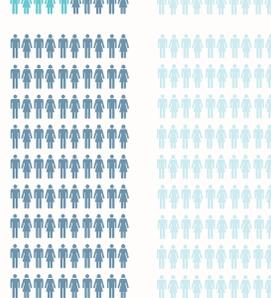
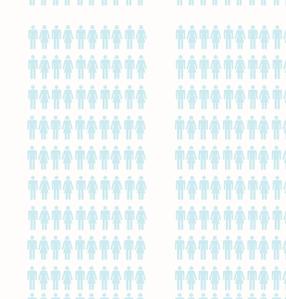
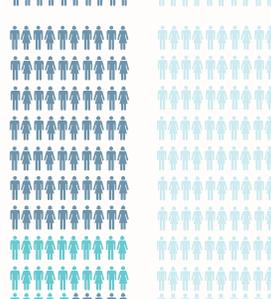
Harms added by screening
365 in 1000 people screened experienced a false positive result.



25 of those false positive results led to an invasive procedure.



3 people developed a major complication from the invasive procedure.



Take Home Messages

Lung cancer screening with CT scans is the only screening test shown to lower the chance of dying from lung cancer.

For perspective, the reduction in deaths from lung cancer with CT screening is larger than the reduction in deaths from the target cancers of other common screening tests, such as mammograms for breast cancer.

There is a tradeoff: CT screening decreases your chance of death but increases your chance of having a false alarm.

If you choose to have CT screening, it is important to have it done at a medical center with special expertise in lung cancer screening and treatment.

Graph data and information courtesy of www.cancer.gov/newscenter/qa/2002/NLSTStudyGuidePatientsPhysicians

Does screening have a downside?

Yes, all screening tests have both pros and cons.

False alarms

- Screening for lung cancer by LDCT scan may find something that is suspicious but, after further testing, turns out not to be cancer. This is called a “false positive.”
- Based on research, in a group of 1000 people screened once a year for 3 years:
 - 365 people would get a false positive result (they didn't have lung cancer). Most false positive results are resolved with further LDCT testing.
 - 26 people would get a true positive (they did have lung cancer).

Complications of further testing

About 25 of the 365 people who got a false positive result needed to have extra testing that involved putting a tube in the body or having surgery (these are called “invasive procedures”).

- About 3 people out of the 25 people who had an extra test had at least one major complication from the testing or surgery.
- Complications can include bleeding, infections, or rarely, a collapsed lung.

Radiation

The radiation received by the patient in LDCT is very small, less than half the amount of radiation received from natural background radiation during an entire year. Adverse health effects of radiation at this level are not detectable, while the benefit to the patient of providing vital diagnostic information is significant.

Stress/Anxiety

It is normal to feel stressed or anxious while waiting for your results or if you have something that is suspicious for lung cancer. Most patients with suspicious findings are reassured when they learn that most of these are false positives. Your health care team wants to hear from you if you have stress and anxiety about your results so that we can help.

Over-diagnosis

Sometimes screening tests find cancers that would have never caused problems. This is called over-diagnosis. Unfortunately, it is often impossible to tell which cancers fall into this category. So there is a very small chance someone may be treated unnecessarily for a cancer that would not have harmed them.

The bottom line on screening

Overall, there are both pros and cons to lung cancer screening.

- **Pros:** Research shows lung cancer screening reduces the risk of dying from lung cancer.
- **Cons:** This benefit comes at some cost in terms of false positive results, extra tests, and possible complications of these tests.
- It is important that you weigh these pros and cons before you decide on screening. Every person is different; many people will choose to be screened with this information, but not everyone will. You should think about how you feel about the pros and cons and talk to your provider before deciding.

Regardless of your decision about screening, avoiding cigarettes is the most important thing you can do to lower your chance of dying from a variety of diseases, not just lung cancer. Quitting smoking helps with emphysema and heart and vascular diseases as well.

If you are still smoking and need help quitting, talk with your MUSC Health care team, call our MUSC Tobacco Treatment Program at 843-792-9101, or call 1-800-QUIT-NOW (1-800-784-8669).

hollingscancercenter.org/lungscreening

843-792-1178



Changing What's Possible