Lung Nodule and Lung Cancer Screening Information Guide
Lung nodules

If your CT scan shows you have lung nodules, this brochure will help you understand:

What lung nodules are, including information about their size, appearance and composition
What your results can mean
What follow-up care you may need
What questions you should consider asking your physician

What are lung nodules?
Lung nodules are small areas of abnormal tissue in the lungs. They may also be called spots or lesions. They may be solitary (single) or multiple.

Lung nodules are common. In fact, nearly half of all people have one (or more) by the time they are 50. In the Chicagoland area, nodules (usually small) are found in approximately 85% of people who are screened for lung cancer.

Although most lung nodules are benign (not cancerous), almost all lung cancers do start out as nodules.

Many lung nodules are caused by infections. Infection causes inflammation. This leads to scarring that may heal in the form of small nodules. Other lung irritants may also cause lung nodules. Inhaling cigarette smoke, chemicals or fibers, such as at your place of work, may lead to cancerous lung nodules.
Types of lung nodules

Many larger lung nodules can be detected with a chest X-ray. But, small nodules are often only visible on a chest CT scan.

**Size**

**Small**
- Less than 6 millimeters (1/4 inch)
- Usually benign
- Follow-up care: Low dose chest CT scan once each year depending on your risk factors

**Medium**
- 6 to 8 millimeters (between 1/4 and 1/3 inch)
- Likely benign, but it depends on the nodule’s appearance
- Follow-up care: chest CT scan in 6 months to check for changes in the nodule

**Large**
- Greater than 8 millimeters (1/3 inch)
- Still likely benign, but because of the size and/or appearance of the nodule(s), you may need more careful follow-up
- Follow up care may include a chest CT scan in 3 months, another radiology test (such as a PET/CT), or a referral for further testing (such as a biopsy)

**Shape**

Nodules that are not cancer usually have smooth edges. Nodules that may be cancer often have uneven edges.

**Composition**

Nodules may be calcified or non-calcified.

**Calcified nodules** contain calcium. They are easy to see on a chest CT scan. Most calcified nodules are not cancer. Most calcified nodules do not require any follow up or treatment.

**Non-calcified** nodules do not contain calcium. They are often caused by past infections or inflammation. Non-calcified nodules are usually further described as being of solid, part-solid (or sub solid), and ground glass density. Most non-calcified nodules are not lung cancer, but a small number may require additional testing to determine their cause.
Lung Cancer Screening

A low-dose chest CT scan (LDCT) is a test that looks for lung cancer in those at high risk for lung cancer due to their smoking history. Your healthcare team looks for nodules (and other abnormalities) on this exam.

Lung cancer screening LDCT exam results are generally divided into 3 broad classes (based on the sizes and types of nodules present):

- **Negative** (approximately 85% of cases in our area)
- **Indeterminate** (approximately 8% of cases in our area)
- **Suspicious** (approximately 8% of cases in our area)

**Negative result**
A negative result means that no lung cancer was found. However, small nodules, very faint nodules, or nodules that look benign (not cancerous) may be present.

*Follow-up is always important because there is no way to know:*

- If or when a cancerous nodule will appear.
- If or when existing nodules will change or grow (either of which could be a sign of a more serious condition).

If you have a negative lung cancer screen exam result, you should continue with lung cancer screening every year.

**Indeterminate result**
An indeterminate result often means that you have 1 or more nodules that may be medium-sized or part solid in density. Most of the time, they are benign. But, you will need follow-up to learn if the nodules are changing or growing.

If you have an indeterminate result, schedule a follow-up LDCT scan in 6 months.

If your follow-up LDCT scan shows that the nodules have not changed or grown, you should have screening again in 1 year.

There is no way to know if or when a cancerous nodule will appear. Yearly screening is the best way to detect lung cancer early. Early detection is important for treatment to be successful.
A suspicious result often means there are larger lung nodules or nodules that look abnormal. There is a greater chance these nodules may be cancer.

If you have a suspicious result, you will need follow-up. Your specific follow-up depends on the number of nodules and their size, shape and appearance. Your radiologist will recommend at least 1 of these options:

- **Careful watching.** In some cases, you should get a follow-up LDCT in 3 months. If this test shows no changes after 3 months, you should have screening again in 1 year.

- **See a specialist,** such as:
  - Pulmonologist, a lung disease specialist
  - Thoracic surgeon, a specialist who operates on the chest or lungs
  - Other physician specializing in diagnostic procedures, such as an interventional pulmonologist or interventional radiologist

- **Get other special testing** to learn more about the nodules. Tests may include:
  - **A PET/CT scan.** A PET/CT scan shows how cells in your body use sugar (glucose). Cancer cells use more glucose than healthy cells, so they show up brighter on the PET images.
  - **Diagnostic chest CT scan or chest MRI.** An example is a contrast-enhanced diagnostic CT scan.
  - **Biopsy.** During a biopsy, the physician removes a small piece of the nodule. The pathologist then examines the nodule to determine if it is cancer. There are several ways to do a biopsy. Your care team will decide the best way for you. It will depend on how large the nodule is, where it is and your general health.
Questions to ask your physician

When you get your test results, you may want to ask your physician questions.

Consider asking:

Do I have one nodule, a few nodules or many nodules?
How large is the largest nodule?
Where are the nodules located?
What do the results mean for me?
What follow-up do you recommend?

If you have questions regarding your results, please contact your primary care provider. For questions about lung cancer screening, you may also call one of our screening locations:

**Downtown Chicago:** 312.926.9377  
**Northern Suburbs:** 847.535.7442  
**Northwest Suburbs:** 815.759.4262  
**Western Suburbs:** 630.315.1692  
**Greater DeKalb County:** 630.315.1692  
**TTY:** 711

To learn more about lung cancer, contact:

**GO2 Foundation for Lung Cancer**  
support@go2foundation.org  
Helpline: 800.298.2436  
General questions: 202.463.2080

**American Lung Association**  
lung.org/lung-health-and-diseases
Before undergoing lung cancer screening, you will need to talk with your physician to determine your eligibility. Your physician will provide you with information, including potential risks and benefits of screening.

- If you do not have a primary care physician, please call 844.344.6663 (TTY: 711) for help with choosing a physician and scheduling an appointment.
- All of our physician profiles can be viewed at nm.org/doctors.

If a lung cancer screening is ordered, you can schedule the procedure at your convenience at one of Northwestern Medicine’s centers of excellence accredited lung cancer screening locations:

**Downtown Chicago:** 312.926.6366  
**Western suburbs:** 630.933.5000  
**Far west suburbs:** 815.748.2975  
**Northern suburbs:** 847.535.8000  
**Northwest suburbs:** 815.334.5566  
TTY: 711

Visit the nm.org/lungscreening for more information.