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Lung Cancer Early Detection, Diagnosis, and Staging

Know the signs and symptoms of lung cancer. Find out how lung cancer is tested for, diagnosed, and staged.

Detection and Diagnosis

Catching cancer early often allows for a higher likelihood of successful treatment. Some early cancers may have signs and symptoms that can be noticed, but that is not always the case.

- [Can Lung Cancer Be Found Early?](#)
- [Lung Nodules](#)
- [Signs and Symptoms of Lung Cancer](#)
- [Tests for Lung Cancer](#)
- [Understanding Your Pathology Report](#)

Stages and Outlook (Prognosis)

After a cancer diagnosis, staging provides important information about the extent of cancer in the body and anticipated response to treatment.

- [Non-Small Cell Lung Cancer Stages](#)
- [Small Cell Lung Cancer Stages](#)
- [Lung Cancer Survival Rates](#)

Questions to Ask About Lung Cancer

Here are some questions you can ask your cancer care team to help you better understand your cancer diagnosis and treatment options.

- [Questions to Ask About Lung Cancer](#)

Can Lung Cancer Be Found Early?

Screening is the use of tests or exams to find a disease in people who don't have symptoms.

- [Screening options for lung cancer](#)
- [Reasons to screen people at higher risk for lung cancer](#)
- [American Cancer Society lung cancer screening guideline](#)
- [How screening is done](#)

Screening options for lung cancer

Regular chest x-rays have been studied as a screening test for people at higher risk for lung cancer, but they haven't been shown to help most people live longer, and therefore they aren't recommended for lung cancer screening.

At present, a test known as a **low-dose CT (LDCT) scan is used to screen** people at higher risk (mainly because they smoke or used to smoke) for lung cancer. LDCT scans can help find abnormal areas in the lungs that may be cancer. Research has shown that unlike chest x-rays, yearly LDCT scans to screen people at higher risk of lung cancer can save lives. For these people, getting yearly LDCT scans before symptoms start helps lower the risk of dying from lung cancer.

Reasons to screen people at higher risk for lung cancer

In the United States, lung cancer is the second most common cancer. It's also the leading cause of death from cancer.

If lung cancer is found at an earlier stage, when it is small and before it has spread, it is more likely to be treated successfully. Lung cancer screening is recommended for certain people who smoke or used to smoke, but who don't have any [signs or symptoms](#).

Usually symptoms of lung cancer don't appear until the disease is already at an

advanced [stage](#). Even when lung cancer does cause symptoms, many people may mistake them for other problems, such as an infection or long-term effects from smoking. This may delay the diagnosis. **If you have symptoms that could be from lung cancer, see your doctor right away.** (People who already have symptoms that might be from lung cancer may need tests such as CT scans to find the cause, which in some cases may be cancer. But this kind of testing is for diagnosis and is not the same as screening.)

American Cancer Society lung cancer screening guideline

The American Cancer Society recommends yearly screening for lung cancer with a low-dose CT (LDCT) scan for people ages 50 to 80 years who:

- Smoke or used to smoke

AND

- Have at least a 20 pack-year history of smoking

A pack-year is equal to smoking 1 pack (or about 20 cigarettes) per day for a year. For example, a person could have a 20 pack-year history by smoking 1 pack a day for 20 years, or by smoking 2 packs a day for 10 years.

Before deciding to be screened, people should have a discussion with a health care professional about the purpose of screening and how it is done, as well as the benefits, limits, and possible harms of screening.

People who still smoke should be counseled about quitting and offered interventions and resources to help them.

People should not be screened if they have serious health problems that will likely limit how long they will live, or if they won't be able to or won't want to get treatment if lung cancer is found.

Benefits and possible risks of lung cancer screening

The main benefit of screening is finding the cancer earlier and thus, lowering the chance of dying from lung cancer.

As with any type of screening, it's important to be aware that, not everyone who gets

screened will benefit. Screening with LDCT will not find all lung cancers. Not all of the cancers that are found will be found at an early stage. Some people with lung cancer that is found by screening will still die from that cancer.

LDCT scans can also find things that turn out not to be cancer, but that still have to be checked out with more tests to know what they are. You might need more CT scans, or less often, invasive tests such as a lung biopsy, in which a piece of lung tissue is removed with a needle or during surgery. These tests may lead to serious complications, but they rarely do.

LDCTs also expose people to a small amount of radiation with each test. It is less than the dose from a standard CT, but it is more than the dose from a chest x-ray. Some people who are screened may end up needing further CT scans, which means more radiation exposure.

Other things to consider if you're thinking about screening

If you are at higher risk for lung cancer, your doctor can explain your risk and how lung cancer screening might apply to you. Your doctor can also talk with you about what happens during screening and the best places to get the yearly screening test. Lung cancer screening is covered by Medicare and by many private health insurance plans. Your health care team can help you find out if your insurance will provide coverage.

Screening should only be done at facilities that have the right type of CT scanner and that have experience in LDCT scans for lung cancer screening. The facility should also have a team of specialists that can give patients the appropriate care and follow-up if there are abnormal results on the scans. You might not have the right kind of facility nearby, so you may need to travel some distance to be screened.

If you smoke, you might want to get counseling about stopping. You should be told about your risk of lung cancer and referred to a smoking cessation program. **Screening is not a good alternative to stopping smoking. By quitting, people who smoke can lower their risk of getting and dying from lung cancer.** For help quitting, see [How to Quit Using Tobacco](#)¹ or call the American Cancer Society at 1-800-227-2345.

To get the most benefit from screening, people need to be in fairly good health. For example, they need to be healthy enough to have surgery and receive other treatments if lung cancer is found. People who have major health issues that could keep them from having lung surgery might not be good candidates for lung cancer screening. The same is true for people who might have a shortened life expectancy because they already have other serious medical conditions. These people might not benefit enough from screening for it to be worth the risks.

It's important to talk to your doctor about all your health issues when deciding if lung cancer screening is right for you.

How screening is done

Screening for lung cancer is done with a yearly **low-dose CT scan (LDCT)**. For this test, you lie on a thin, flat table that slides back and forth inside the hole in the middle of the CT scanner, which is a large, doughnut-shaped machine.

As the table moves into the opening, an x-ray tube rotates within the scanner, sending out many tiny x-ray beams at precise angles. These beams quickly pass through your body and are detected on the other side of the scanner. A computer then converts these results into detailed images of the lungs.

An LDCT scan is painless and only takes a few minutes, although the entire visit (including getting you ready and into place on the table) can take up to half an hour. You don't need to swallow anything or get any type of injection before this type of CT scan. LDCT does expose you to a small amount of radiation, although it is less than that from a standard CT scan.

To learn more about CT scans and what getting one is like, see [CT Scan for Cancer²](#).

If something abnormal is found during screening

Sometimes screening tests will show something abnormal in the lungs or nearby areas. Most of these abnormal findings will turn out not to be cancer, but more CT scans or other tests will be needed to be sure. Some of these tests are described in [Tests for Lung Cancer](#).

CT scans of the lungs can also sometimes show problems in other organs near the.

3. [thoracicrad.org/](https://www.thoracicrad.org/)

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The American Cancer Society acknowledges the [Society of Thoracic Radiology](https://www.thoracicrad.org/)³ for providing their expert collaboration and the LDCT images used in the development of our animated lung cancer screening content.

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Lung Nodules

A lung nodule is a small (3 cm) abnormal area that is sometimes found during a CT scan of the chest and/or abdomen.

- [If you have a lung nodule](#)
- [After the biopsy](#)

If you have a lung nodule

Frequently, CT scans of the lung and/or abdomen are done that are not related to lung cancer screening or to diagnose lung cancer in patients who already have lung symptoms. These reasons include trauma, heart disease, non-cancer related lung disease, or lung infection. Lung nodules that are found on these scans are called “incidental pulmonary nodules.” In contrast, lung nodules that are found on lung cancer screening scans (i.e., LDCT) are not called incidental pulmonary nodules, and are managed differently.

Most lung nodules seen on CT scans are not cancer. They are more often the result of old infections, scar tissue, or other causes. But tests are often needed to be sure a nodule is not cancer.

Most often, the next step is to get a repeat CT scan to see if the nodule is growing over time. The time between scans might range anywhere from a few months to a year, depending on how likely your doctor thinks that the nodule could be cancer. This is based on the size, shape, and location of the nodule, as well as whether it appears to be solid or hazy. If a repeat scan shows that the nodule has grown, your doctor might also want to get another type of imaging test called a positron emission tomography (PET) scan, which can often help tell if it is cancer.

If later scans show that the nodule has grown, or if the nodule has other concerning features, your doctor will want to get a sample of it to check it for cancer cells. This is called a *biopsy*. This can be done in different ways:

- The doctor might pass a long, thin tube (called a [bronchoscope](#)¹) down your throat and into the airways of your lung to reach the nodule. A small tweezer on the end of the bronchoscope can be used to get a sample of the nodule.
- If the nodule is in the outer part of the lung, the doctor might pass a thin, hollow needle through the skin of the chest wall (with the guidance of a CT scan) and into the nodule to get a sample.
- If there is a higher chance that the nodule is cancer (or if the nodule can't be reached with a needle or bronchoscope), surgery might be done to remove the nodule and some surrounding lung tissue. Sometimes larger parts of the lung might be removed as well.

These types of tests, biopsies, and surgeries are described in more detail in [Tests for Lung Cancer](#).

After the biopsy

After a biopsy is done, the tissue sample will be looked at closely in the lab by a doctor called a *pathologist*. The pathologist will check the biopsy for cancer, infection, scar tissue, and other lung problems. If cancer is found, then special tests will be done to find out what kind of cancer it is. If something other than cancer is found, the next step will depend on the diagnosis. Some nodules will be followed with a repeat CT scan in 6-12 months for a few years to make sure it does not change. If the lung nodule biopsy shows an infection, you might be sent to a specialist called an infectious disease doctor, for further testing and treatment. Your doctor will decide on the next step, depending on the results of the biopsy.

Hyperlinks

1. www.cancer.org/cancer/diagnosis-staging/tests/endoscopy/bronchoscopy.html

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Signs and Symptoms of Lung Cancer

Most lung cancers do not cause any symptoms until they have spread, but some people with early lung cancer do have symptoms.

- [Let your doctor know if you have symptoms](#)

Let your doctor know if you have symptoms

If you go to your doctor when you first notice symptoms, your cancer might be diagnosed at an earlier stage, when treatment is more likely to be effective.

Most of these symptoms are more likely to be caused by something other than lung cancer. Still, if you have any of these problems, it's important to see your doctor right away so the cause can be found and treated, if needed.

The most common symptoms of lung cancer are:

- A cough that does not go away or gets worse
- Coughing up blood or rust-colored sputum (spit or phlegm)
- Chest pain that is often worse with deep breathing, coughing, or laughing
- Hoarseness
- Loss of appetite
- Unexplained weight loss
- Shortness of breath
- Feeling tired or weak
- Infections such as bronchitis and pneumonia that don't go away or keep coming back
- New onset of wheezing

If lung cancer spreads to other parts of the body, it may cause:

- Bone pain (like pain in the back or hips)
- Nervous system changes (such as headache, weakness or numbness of an arm or leg, dizziness, balance problems, or seizures), from cancer spread to the brain
- Yellowing of the skin and eyes (jaundice), from cancer spread to the liver
- Swelling of lymph nodes (collection of immune system cells) such as those in the neck or above the collarbone

Some lung cancers can cause **syndromes**, which are groups of specific symptoms.

Horner syndrome

Cancers of the upper part of the lungs are sometimes called **Pancoast tumors**. These tumors are more likely to be non-small cell lung cancer (NSCLC) than small cell lung cancer (SCLC).

Pancoast tumors can affect certain nerves to the eye and part of the face, causing a group of symptoms called Horner syndrome:

- Drooping or weakness of one upper eyelid
- A smaller pupil (dark part in the center of the eye) on the same side of the face
- Little or no sweating on the same side of the face

Pancoast tumors can also sometimes cause severe shoulder pain.

Superior vena cava syndrome

The superior vena cava (SVC) is a large vein that carries blood from the head and arms down to the heart. It passes next to the upper part of the right lung and the lymph nodes inside the chest. Tumors in this area can press on the SVC, which can cause the blood to back up in the veins. This can lead to swelling in the face, neck, arms, and upper chest (sometimes with a bluish-red skin color), as well as trouble breathing. It can also cause headaches, dizziness, and a change in consciousness if it affects the brain. While SVC syndrome can develop gradually over time, in some cases it can become life-threatening, and needs to be treated right away.

Paraneoplastic syndromes

Some lung cancers may cause problems in distant tissues and organs, even though the cancer has not spread to those places. These problems are called paraneoplastic syndromes. Paraneoplastic syndromes can affect your nervous system (paraneoplastic neurologic syndrome) or your endocrine system (paraneoplastic endocrine syndrome). Sometimes these syndromes may be the first symptoms of lung cancer. Because the symptoms affect other organs, a disease other than lung cancer may first be suspected as causing them.

Paraneoplastic syndromes can happen with any lung cancer but are more often

associated with small cell lung cancer (SCLC).

In **paraneoplastic endocrine syndrome**, the lung tumor makes hormone-like substances that enter the bloodstream and affect distant organs. Examples include:

- **SIADH (syndrome of inappropriate anti-diuretic hormone):** There are many diseases that can cause SIADH. Cancer is one of them. In this condition, the cancer cells make ADH (anti-diuretic hormone), a hormone that causes the kidneys to keep too much water in the body. This lowers salt levels in the blood. Symptoms of SIADH can include fatigue, loss of appetite, muscle weakness or cramps, nausea, vomiting, restlessness, and confusion. Without treatment, severe cases may lead to seizures and coma.
- **Cushing syndrome:** There are many reasons why a person may develop Cushing syndrome. Cancer is one of them and is called ectopic Cushing syndrome. In this condition, the cancer cells make ACTH (adrenocorticotropic hormone), a hormone that causes the adrenal glands to make cortisol. This can lead to symptoms that include weight gain, easy bruising, weakness, drowsiness, and fluid retention. Cushing syndrome can also cause high blood pressure, high blood sugar levels, or even diabetes.
- **Hypercalcemia:** The tumor can make a hormone called parathyroid hormone-related peptide (PTHrP) that acts on the bones and kidney to increase the level of calcium in the blood. High levels of calcium in the blood (hypercalcemia) can cause frequent urination, thirst, constipation, nausea, vomiting, belly pain, weakness, fatigue, dizziness, and confusion.

In **paraneoplastic neurologic syndrome**, the tumor can cause the body's immune

arm and leg movement, trouble speaking, trouble swallowing, and changes in vision.

- **Paraneoplastic limbic encephalitis:** The limbic system is a part of the brain that is in charge of storing memory, and controlling emotions and behavior, as well as blood pressure and heart rate. The tumor may cause the immune system to damage the limbic system. This can lead to memory loss, personality changes, mood changes, sleep issues, and seizures.

Again, many of these symptoms are more likely to be caused by something other than lung cancer. Still, if you have any of these problems, it's important to see your doctor right away so the cause can be found and treated, if needed.

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Tests for Lung Cancer

A [CT scan](#)³ uses x-rays to make detailed cross-sectional images of your body. Instead of taking 1 or 2 pictures, like a regular x-ray, a CT scanner takes many pictures and a computer then combines them to show a slice of the part of your body being studied.

A CT scan is more likely to find lung tumors than routine chest x-rays. It can also show the size, shape, and position of any lung tumors and can help find enlarged lymph nodes that might contain cancer that has spread. This test can also be used to look for masses in other parts of the body that might be due to the lung cancer spread.

CT-guided needle biopsy: If a suspected area of cancer is deep within your body, a CT scan might be used to guide a biopsy needle into this area to get a tissue sample to check for cancer.

Magnetic resonance imaging (MRI) scan

Like CT scans, [MRI scans](#)⁴ show detailed images of soft tissues in the body. But MRI scans use radio waves and strong magnets instead of x-rays. MRI scans are most often used to look for possible spread of lung cancer to the brain, spinal cord, or liver.

Positron emission tomography (PET) scan

For a [PET scan](#)⁵, a slightly radioactive form of sugar (known as fluorodeoxyglucose [FDG]) is injected into the blood and collects mainly in cancer cells. This is because cancer cells tend to take up more sugar (or glucose) than normal cells do.

PET/CT scan: Often a PET scan is combined with a CT scan using a special machine that can do both at the same time. This lets the doctor compare areas of higher radioactivity on the PET scan with a more detailed picture on the CT scan. This is the type of PET scan most often used in patients with cancer. PET/CT scans are used for cancer staging, which is to see if and where the cancer has spread. While they can be used to look at most organs in the body, they are not useful for looking at the brain or spinal cord.

Bone scan

For a [bone scan](#)⁶, a small amount of low-level radioactive material is injected into the blood and collects mainly in abnormal areas of bone. It can help show if a cancer has spread to the bones.

Tests to diagnose lung cancer

Symptoms and the results of certain tests may strongly suggest that a person has lung cancer, but the actual diagnosis is made by looking at lung cells in the lab.

The cells can be taken from a suspicious area using a needle or surgery (needle [biopsy](#)⁷), fluid removed from the area around the lung (thoracentesis), or lung secretions (mucus you cough up from the lungs). The choice of which test(s) to use depends on the situation.

Needle biopsy

Doctors often use a hollow needle to get a small sample from a suspicious area (mass). An advantage of needle biopsies is that they don't require an incision. The drawback is that they remove only a small amount of tissue, and in some cases, the amount of tissue removed might not be enough to both make a diagnosis and to perform more tests on the cancer cells that can help doctors choose anticancer drugs. The main types of needle biopsies are: fine needle aspiration (FNA) biopsy and core needle biopsy (CNB).

Fine needle aspiration (FNA) biopsy

A syringe with a very thin, hollow needle is used to withdraw (aspirate) cells and small fragments of tissue. FNA biopsy may be done to check for cancer in very small masses or in the lymph nodes located around the lungs. **Transtracheal FNA or transbronchial FNA** is done by passing the needle through the wall of the trachea (windpipe) or bronchi (the large airways leading into the lungs) during a bronchoscopy or endobronchial ultrasound (described below).

In some patients, an FNA biopsy is done during an endoscopic esophageal ultrasound (described below) by passing the needle through the wall of the esophagus.

Core biopsy

A larger needle is used to remove one or more small cores of tissue. Samples from core biopsies are often preferred because they are larger than FNA biopsies.

Core biopsies can be done during many lung procedures and/or surgeries. One example would be during a **Transthoracic needle biopsy**, where the biopsy needle is

pneumothorax. It can cause part of the lung to collapse and sometimes cause trouble breathing. If the air leak is small, it often gets better without any treatment. Large air leaks are treated by inserting a chest tube (a small tube into the chest space), which

PD-L1 testing on tumor cells

Patients diagnosed with non-small cell lung carcinoma (NSCLC) will have the lung tumor cells tested for PD-L1. PD-L1 is a protein (program death ligand 1) on cancer cells. A score is calculated depending on “if” and “how much” PD-L1 protein the tumor is making. This score will guide decisions about whether the patient would benefit from certain [immunotherapy drugs](#)¹⁷.

Hyperlinks

1. www.cancer.org/cancer/types/lung-cancer/causes-risks-prevention/risk-factors.html
2. www.cancer.org/cancer/diagnosis-staging/tests/imaging-tests/x-rays-and-other-radiographic-tests.html
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Non-Small Cell Lung Cancer Stages

The earliest stage of NSCLC is stage 0 (also called carcinoma in situ, or CIS). Other stages range from I (1) through IV (4). As a rule, the lower the number, the less the cancer has spread. A higher number, such as stage IV, means cancer has spread more. And within a stage, an earlier letter (or number) means a lower stage. Although each person's cancer experience is unique, cancers with similar stages tend to have a similar outlook and are often treated in much the same way.

The staging system most often used for NSCLC is the American Joint Committee on Cancer (AJCC) **TNM** system, which is based on 3 key pieces of information:

- The size and extent of the main **tumor (T)**: How large is the tumor? Has it grown into nearby structures or organs?
- The spread to nearby lymph **nodes (N)**: Has the cancer spread to nearby lymph nodes? (See image.)
- The spread (**metastasis**) to distant sites (**M**): Has the cancer spread to distant organs, such as the brain, bones, adrenal glands, liver, the pleural fluid, or the other lung?



Numbers or letters after T, N, and M provide more details about each of these factors. Higher numbers mean the cancer is more advanced. Once a person's T, N, and M categories have been determined, this information is combined in a process called **stage grouping** to assign an overall stage. For more information, see [Cancer Staging](#)².

The system described below is the most recent version of the AJCC system, effective as of January 2018.

NSCLC is typically given a **clinical stage** based on the results of a physical exam, biopsy, and imaging tests (as described in [Tests for Lung Cancer](#)

understand.

Stages of non-small cell lung cancer

AJCC Stage	Stage grouping	Stage description*
Occult (hidden) cancer	TX	The main tumor can't be assessed for some reason, or cancer cells are seen in a sample of sputum or other lung fluids, but the cancer isn't found with other tests, so its location can't be determined (TX). The cancer is not thought to have spread to nearby lymph nodes (N0) or to distant parts of the body (M0).
	N0	
	M0	
0	Tis	The tumor is ... (Tis)m1utN X). The cance1s2 0 0 0yi2a.m fr
	N0	
	M0	

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IIB	<p>T2a/T2b</p> <p>N1</p> <p>M0</p>	<p>The tumor has one or more of the following features (T2):</p> <ul style="list-style-type: none"> • It is larger than 3 cm but not larger than 5 cm across. • It has grown into a main bronchus, but not the carina (the point where the windpipe splits into the left and right main bronchi) and it is not larger than 5 cm across. • It has grown into the visceral pleura (the membranes surrounding the lungs) and is not larger than 5 cm. • It is partially clogging the airways (and is not larger than 5 cm). <p>The cancer has also spread to lymph nodes within the lung and/or around the area where the bronchus enters the lung (peribronchial, hilar, or intrapulmonary lymph nodes). These lymph nodes are on the same side as the cancer (N1). The cancer has not spread to distant parts of the body (M0).</p>
	OR	
	<p>T3</p> <p>N0</p> <p>M0</p>	<p>The tumor has one or more of the following features (T3):</p> <ul style="list-style-type: none"> • It is larger than 5 cm but not larger than 7 cm across. It has grown into the chest wall, the inner lining of the

	M0	<p>(mediastinum), the heart, the large blood vessels near the heart (such as the aorta), the windpipe (trachea), the tube connecting the throat to the stomach (esophagus), the thin muscle separating the chest from the abdomen (diaphragm), the backbone, or the carina.</p> <ul style="list-style-type: none"> • There are 2 or more separate tumor nodules in different lobes of the same side of the lung. <p>The cancer may or may not have spread to lymph nodes within the lung and/or around the area where the bronchus enters the lung (peribronchial, hilar, or intrapulmonary lymph nodes). Any affected lymph nodes are on the same side as the cancer (N0 or N1). The cancer has not spread to distant parts of the body (M0).</p>
IIIB	T1a/T1b/T1c N3 M0	<p>The cancer is no larger than 3 cm across, has not grown into the membranes that surround the lungs, and does not affect the main branches of the bronchi (T1). The cancer has spread to lymph nodes above the collarbone on either side of the body, and/or has spread to hilar or mediastinal lymph nodes on the other side of the body from the main tumor (N3). The cancer has not spread to distant parts of the body (M0).</p>
	OR	
	T2a/T2b N3 M0	<p>The tumor has one or more of the following features (T2):</p> <ul style="list-style-type: none"> • It is larger than 3 cm but not larger than 5 cm across. • It has grown into a main bronchus, but not the carina (the point where the windpipe splits into the left and right main bronchi) and it is not larger than 5 cm across. • It has grown into the visceral pleura (the membranes surrounding the lungs) and is not larger than 5 cm. • It is partially clogging the airways (and is not larger than 5 cm). <p>The cancer has spread to lymph nodes above the collarbone on either side of the body, and/or has spread to hilar or mediastinal lymph nodes on the other side of the body from the main tumor (N3). The cancer has not spread to distant parts of the body (M0).</p>

	OR	
<p>T3</p> <p>N2</p> <p>M0</p>		<p>The tumor has one or more of the following features (T3):</p> <ul style="list-style-type: none"> • It is larger than 5 cm but not larger than 7 cm across. • It has grown into the chest wall, the inner lining of the chest wall (parietal pleura), the phrenic nerve, or membranes of the sac surrounding the heart (parietal pericardium). • There are 2 or more separate tumor nodules in the same lobe of a lung.

		(N2). The cancer has not spread to distant parts of the body (M0).
IIIC	T3 N3 M0	<p>The tumor has one or more of the following features (T3):</p> <ul style="list-style-type: none"> • It is larger than 5 cm but not larger than 7 cm across. • It has grown into the chest wall, the inner lining of the chest wall (parietal pleura), the phrenic nerve, or membranes of the sac surrounding the heart (parietal pericardium). • There are 2 or more separate tumor nodules in the same lobe of a lung. <p>The cancer has spread to lymph nodes above the collarbone on either side of the body, and/or has spread to hilar or mediastinal lymph nodes on the other side of the body from the same side.</p>

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New York, NY: Springer; 2017: 431-456.

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Small Cell Lung Cancer Stages

After someone is diagnosed with small cell lung cancer (SCLC), doctors will try to figure out if it has spread, and if so, how far. This process is called **staging**. The stage of a cancer describes where the cancer is in the body. It helps determine how best to treat it. Doctors also use a cancer's stage when talking about survival statistics.

- [How is the stage determined?](#)
- [Limited versus extensive stage](#)
- [The TNM staging system](#)

How is the stage determined?

The stage of SCLC is based on the results of physical exams, biopsies, imaging tests,

cancer. Some doctors also include lymph nodes at the center of the chest (**mediastinal lymph nodes**) even when they are closer to the other side of the chest.

What is important is that the cancer is confined to an area that is small enough to be treated with radiation therapy in one treatment area. Only about 1 out of 3 people with SCLC have limited-stage cancer when it is first found.

Extensive stage

This describes cancers that have spread widely throughout the lung, to the other lung, or to other parts of the body (including the bone marrow). Many doctors consider SCLC that has spread to the fluid around the lung and/or heart to be extensive stage as well. About 2 out of 3 people with SCLC have extensive disease when their cancer is first found.

The TNM staging system

A more formal system to describe the growth and spread of lung cancer is the American Joint Committee on Cancer (AJCC) **TNM** staging system, which is based on 3 key pieces of information:

The size and extent of the main **tumor (T)**: How large is the tumor? Has it grown

(NSCLC), although it's generally not as important for SCLC. For more detailed information about this system, see [Non-Small Cell Lung Cancer Stages](#). Staging with the TNM system can be complex, so if your health care team is using it, ask them to explain it to you in a way you understand.

Hyperlinks

1. www.cancer.org/cancer/types/lung-cancer/treating-small-cell/chemotherapy.html
2. www.cancer.org/cancer/types/lung-cancer/treating-small-cell/radiation-therapy.html
3. www.cancer.org/cancer/diagnosis-staging/staging.html

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American Joint Committee on Cancer. Lung. In: *AJCC Cancer Staging Manual*. 8th ed. New York, NY: Springer; 2017: 431-456.

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Lung Cancer Survival Rates

Survival rates can give you an idea of what percentage of people with the same type and stage of cancer are still alive a certain amount of time (usually 5 years) after they were diagnosed.

[TNM stages](#) (stage 1, stage 2, stage 3, etc.). Instead, it groups cancers into localized, regional, and distant stages:

- **Localized:** There is no sign that the cancer has spread outside of the lung.
- **Regional:** The cancer has spread outside the lung to nearby structures or lymph nodes.
- **Distant:** The cancer has spread to distant parts of the body, such as the brain, bones, liver, or the other lung.

5-year relative survival rates for nonytloant: 12 T20 8GS1597 gs 1.5 Q BT2 J97 GT 175 wj

Understanding the numbers

- **These numbers apply only to the stage of the cancer when it is first diagnosed.** They do not apply later on if the cancer grows, spreads, or comes back after treatment.
- **These numbers don't take everything into account.** Survival rates are grouped based on how far the cancer has spread. But other factors, such as the [subtype of NSCLC¹](#), [gene changes in the cancer cells](#), your age and overall health, and how well the cancer responds to treatment, can also affect your outlook.
- **People now being diagnosed with NSCLC or SCLC may have a better outlook than these numbers show.** Treatments have improved over time, and these numbers are based on people who were diagnosed and treated at least 5 years earlier.

Hyperlinks

1. www.cancer.org/cancer/types/lung-cancer/about/what-is.html

References

SEER*Explorer: An interactive website for SEER cancer statistics [Internet]. Surveillance Research Program, National Cancer Institute. Accessed at <https://seer.cancer.gov/explorer/> on Jan 23, 2024.

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- What are the risks and side effects with the treatments you suggest? How long are they likely to last?
- Will treatment affect my daily activities?
- What would my options be if the treatment doesn't work or if the cancer [comes back](#) (recur) after treatment?

professionals, such as nurses and social workers, can also answer some of your questions. You can find out more about speaking with your health care team in [The Doctor-Patient Relationship](#).

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