



## Lung Cancer

Lung cancer is the leading cause of cancer deaths in the United States and will claim more lives this year than cancer of the breast, prostate, and colon combined.



### What are my risks of developing lung cancer?

Exposure to tobacco smoke is the number one reason people develop lung cancer. Your chance of developing lung cancer increases with the amount you smoke and the number of years you have smoked. The more you smoke or are exposed to smoke from others, called second-hand smoke (see ATS Patient Series <http://patients.thoracic.org/information-series/en/resources/What-is-Second-and-Third-hand-Smoke.pdf>), the greater your risk for developing lung cancer.

### Can I only get lung cancer from smoke?

No, lung cancer can develop in anyone, including people who have never smoked. Of those who develop lung cancer, 85% currently smoke or have smoked in the past. Other causes of lung cancer include; air pollution, radon or asbestos exposure, and genetics (the tendency to develop lung cancer can run in families).

### What are the symptoms of lung cancer?

Symptoms of lung cancer can vary from person to person. You may have no symptoms at all or you may feel like you have bronchitis or a bad cold that does not get better. Symptoms which should alert you to see your health care provider are: a cough that gets worse or does not go away, more trouble breathing (shortness of breath) than usual, coughing up blood, chest pain, hoarse voice, frequent lung infections, feeling tired all the time, weight loss for no known reason, or swelling of your face or arms. Some people do not recall having any symptoms.

### Is there a test to see if I have lung cancer before I get symptoms?

The chances of curing lung cancer are greater if the cancer is diagnosed early. Looking for lung cancer before it causes symptoms is called **screening**. Until recently, no study had shown that screening was helpful, therefore screening for lung cancer was not recommended. Recent research has found that using CT ("cat") scans for screening decreases the number of people who die from lung cancer. As a result, several organizations, including the American Thoracic Society (ATS) and the United States Preventive Services Task Force (USPSTF) now recommend considering

lung cancer screening for adults with a history of cigarette smoking (see <http://www.freetobreathe.org/lung-cancer-info/facts/screening>). Talk to your health care provider about the risks and benefits of screening for you.

### What are the types of lung cancer?

Lung cancers are generally divided into two major types, *small cell lung cancer* and *non-small cell lung cancer*. The type of cancer is based on how it looks under the microscope. Non-small cell lung cancer (NSCLC) includes the following types; *squamous cell carcinoma*, *large cell carcinoma* and *adenocarcinoma*.

Small cell cancer (SCLC) tends to grow more quickly than non-small cell cancer. Because it grows more quickly, SCLC is often found when it has spread outside of the lung.

### What is staging of lung cancer?

Staging is a way of describing how far the cancer has spread (see ATS Patient Series <http://patients.thoracic.org/wp-content/uploads/2014/03/ATSLungCancerStaging.pdf>). Knowing the stage of lung cancer guides the medical team on how to best treat the cancer.

### Stages of Non-small cell lung cancer (NSCLC)

Staging your cancer guides your caregiver on the best-known treatment options for you. The **TNM system** stages the cancer by the size of the tumor (**T**), whether or not the lymph nodes also have cancer cells (**N**) and metastasis (**M**) if the tumor has spread beyond the lungs and lymph nodes. To follow is a summary of how the T, N and M are described. Your health care provider can provide more details about these.

- **Tumor size** is described as T1 if the tumor is less than 3 centimeters (cm) in size, T2 if more than 3 cm, T3 if the tumor has extended beyond the lung into the breathing tubes or lining of the lung or heart and T4 if the tumor has extended beyond the lungs into the heart, major blood vessels, esophagus or spine.
- **Nodes** are described as N0 if no cancer cells are found in the lymph nodes, N1 if there is spread of the lung cancer to the lymph nodes in the lungs, N2 if there is spread to the major lymph nodes in the chest

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(mediastinum) or N3 if there is spread to lymph nodes in the other side of the chest from where the lung cancer was first found.

- **Metastasis** is described as M0 if there is no known metastasis, M1 if there is spread to other organs.

An **X** after each of these (such as TX, NX or MX) indicates the information cannot be determined. Once the **T**, **N** and **M** are determined, the stage of lung cancer can be assigned from Stage I to Stage IV. The lower number (I is the lowest) means the lower the spread of cancer.

## What does Stage I, II, III and IV mean?

The TNM system helps assign your lung cancer to one of these four stages. These stages become very complicated because they all have sub stages depending on how large the tumor is and where it has spread.

## What is the treatment for SCLC?

The treatment for small cell lung cancer is usually chemotherapy and sometimes radiation. Small lung cancer is sometimes found early and can be cured with surgery and/or chemotherapy and radiation therapy. The treatment you receive will depend on the stage of your lung cancer.

## What is the treatment for the various stages of NSCLC?

The treatment for lung cancer is not the same for everyone. Treatment depends on the type of cancer, stage and other health issues you may have. Treatments can include surgery, chemotherapy, radiation therapy or targeted therapy. Targeted therapy is a relatively new type of drug treatment for lung cancer. These drugs “target” growth factors within the tumor to slow down its growth. It is important to ask the people treating your cancer about the treatments available so you can decide on the best treatment for you.

In the early stages of NSCLC, surgery may offer the best option for a cure. Cancer in stages III or IV is usually treated with chemotherapy and/or radiation. However if the tumor is blocking a major breathing tube, the surgeon may recommend surgery to remove as much of the tumor as possible, followed by radiation therapy to shrink the size of the tumor further.

The following is a guide used in the treatment of NSCLC (see ATS Patient Series <http://patients.thoracic.org/wp-content/uploads/2014/02/ATS-Patient-Ed-Lung-Cancer-Miniserie-3-for-IT.pdf>) however, keep in mind that everyone has unique situations which may result in your doctor recommending something different than what is described. Ask your doctor why they recommend a particular therapy(ies) for you so you can better understand your treatment.

Stage	Type of Treatment
I	Surgery. If you are not a candidate for surgery, radiation therapy.
II	Surgery, with chemotherapy before or after. If you are not a candidate for surgery, radiation therapy and chemotherapy.
III	A combination of surgery, chemotherapy, and/or radiation.
IV	Chemotherapy, radiation therapy (as a form of palliative treatment) to relieve pain or other symptoms affecting quality of life, targeted therapies.

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## Resources:

### American Cancer Society

<http://www.cancer.org/cancer/lungcancer-non-smallcell/detailedguide/non-small-cell-lung-cancer-key-statistics>

### American Lung Association

<http://www.lung.org/lung-disease/lung-cancer/lung-cancer-screening-guidelines/lung-cancer-screening-for-patients.pdf>

### Lung Cancer Alliance

<http://www.lungcanceralliance.org/get-information/>

### National Cancer Institute

<http://www.cancer.gov/cancertopics/types/lung> and <http://www.cancer.gov/newscenter/qa/2002/NLSTstudyGuidePatientsPhysicians>

### Free to Breathe

<http://www.freetobreathe.org/lung-cancer-info/understanding-a-diagnosis>

## Rx Action Steps

- ✓ If you smoke, get the help you need to quit
- ✓ Avoid second-hand smoke
- ✓ See your health care provider if you:
  - ◆ have a cough that will not go away
  - ◆ cough up blood
  - ◆ are more short of breath than usual
  - ◆ lose weight that was unplanned
  - ◆ develop a hoarse voice
  - ◆ feel tired all of the time
- ✓ Talk to your health care provider about screening if you have a history of smoking

### Doctor's Office Telephone:

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