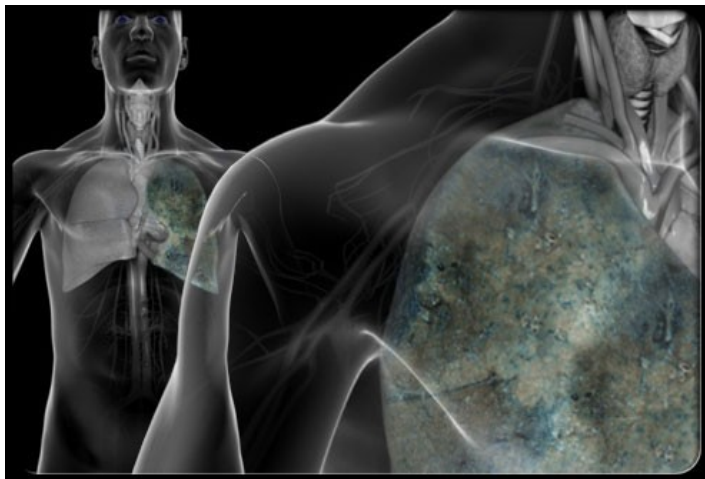


Lung Cancer: Causes, Symptoms, Types and Treatment



Lung Cancer: The Big Picture

Lung cancer is the top cause of cancer deaths in both men and women. But this wasn't always the case. Prior to the widespread use of mechanical cigarette rollers, lung cancer was rare. Today, smoking causes nearly nine out of 10 lung cancer deaths, while radon gas, pollution, and other chemical exposures play a smaller role. Newly-developed drugs provide new hope for those diagnosed today.



How Smoking Causes Lung Cancer

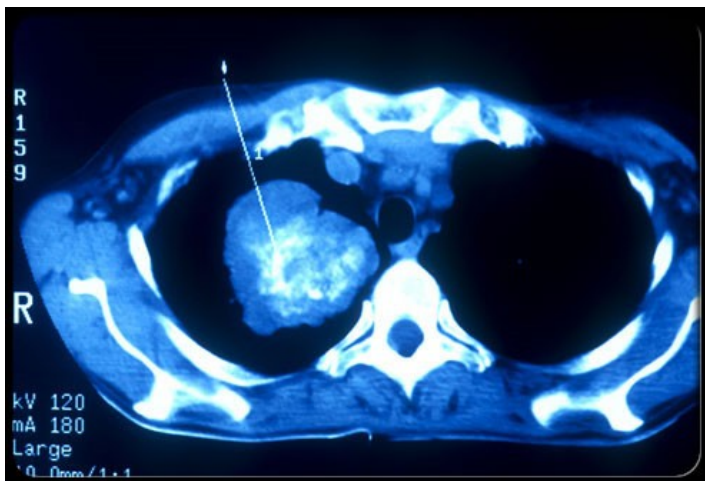
Cigarettes are not only packed with cancer-causing chemicals – they also disarm the lungs' natural defense system. The airways are lined with tiny hairs known as cilia. These hairs protect the lungs by sweeping out toxins, bacteria, and viruses. Tobacco smoke paralyzes the cilia so they can't do their job. This allows carcinogens to collect in the lungs.



Lung Cancer Symptoms

Lung cancer begins in stealth mode. There are usually no symptoms or warning signs in the early stages. As it progresses, symptoms are typically non-specific and may include:

- A cough that won't go away.
- Chest pain, especially during deep breaths.
- Wheezing or shortness of breath.
- Coughing up bloody phlegm.
- Fatigue.



Lung Cancer Screening

Can lung cancer be found early? A type of scan called spiral CT has shown promise in picking up early lung cancers in some people, but it's not clear whether it finds them early enough to save lives. The National Cancer Institute is currently evaluating the test's usefulness. One drawback is that spiral CT reveals a lot of harmless abnormalities in the lungs, which can lead to unnecessary biopsies, worry, and surgeries.



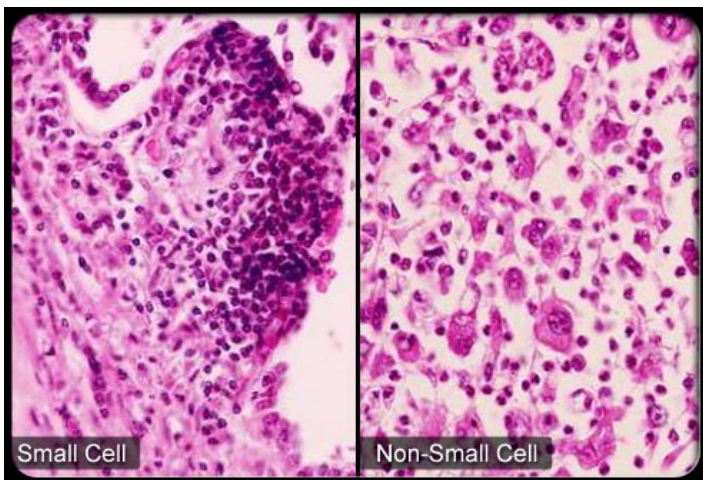
Diagnosing Lung Cancer

In most cases, lung cancer is not suspected until it causes symptoms like a chronic cough or wheezing. At that point, your doctor will most likely order a chest X-ray and/or other imaging tests. You may also be asked to cough up phlegm for a sputum test. If either of these tests suggest the presence of cancer, you'll most likely undergo a biopsy.



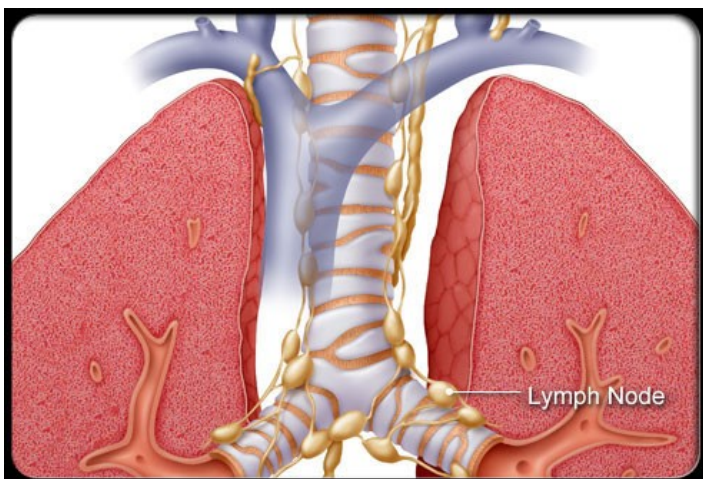
Lung Biopsy

If a suspected tumor is visible on an X-ray, or cancer cells show up in a sputum test, a biopsy is used to confirm the diagnosis. A small sample of the suspicious mass is removed, usually with a needle, for examination under a microscope. By studying the sample, a pathologist can determine whether the tumor is lung cancer, and if so, what kind.



Types of Lung Cancer

There are two main types of lung cancer, distinguished by the appearance of the cancer cells under a microscope. Small-cell lung cancer is the more aggressive of the two, meaning it can spread quickly to other parts of the body early in the disease. It is strongly tied to cigarette use and rarely seen in nonsmokers. Non-small-cell lung cancer grows more slowly and is more common, accounting for almost 90% of all lung cancers.



Lung Cancer Stages

Staging is used to describe how far a patient's cancer has spread. There are different systems for the two main types of lung cancer. Small-cell lung cancer is divided into two stages: "Limited" means the cancer is confined to one lung and maybe nearby lymph nodes. "Extensive" means the cancer has spread to the other lung or beyond. Non-small-cell lung cancer is assigned a stage of one through four, depending on how far it has spread.



Lung Cancer Survival Rates

Survival rates for lung cancer can be misleading. The American Cancer Society's latest data is based on people who were diagnosed between 1998 and 2000. Depending on the stage at diagnosis, a patient's odds of living at least five years after diagnosis ranged from 1% to 49% for people with non-small cell lung cancer. But treatments have progressed over the past decade, so the outlook may be better for patients who are diagnosed today.



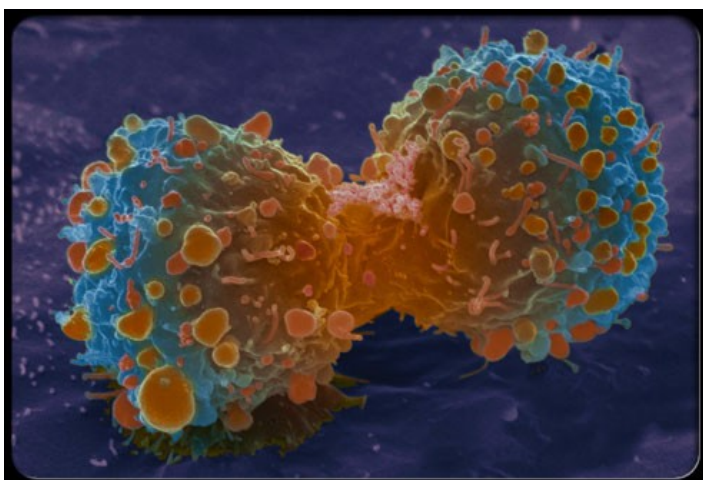
Treating Early-Stage Lung Cancer

When non-small-cell lung cancer is found before it spreads beyond one lung, surgery can sometimes offer a cure. The surgeon may remove the part of the lung that contains the tumor, or if necessary, an entire lung. Some patients are given radiation therapy and/or chemotherapy after surgery to kill any remaining cancer cells. Surgery is usually not an option for patients with small-cell lung cancer because it typically has already spread at the time of diagnosis.



Treating Advanced Lung Cancer

When lung cancer is too advanced to be cured, treatments can still help patients live longer and maintain a better quality of life. Radiation therapy and chemotherapy can shrink tumors and help control symptoms, such as bone pain or blocked airways. Chemotherapy is usually the main treatment for small-cell lung cancer.



Targeted Therapies

Targeted therapies are a newer form of cancer treatment that are often used in combination with chemotherapy or when other therapies fail. One type prevents the growth of new blood vessels that feed cancer cells. It has been shown to help people with advanced lung cancer live longer when given with chemotherapy. Other targeted therapies interrupt the signals that cause lung cancer cells to multiply, as shown in the highly magnified image here.



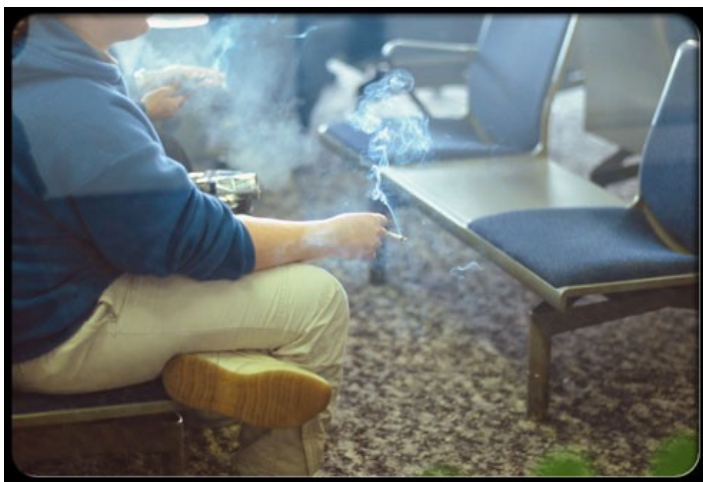
Lung Cancer Clinical Trials

Clinical trials help doctors explore promising new treatments for lung cancer. And they help patients get access to comprehensive care. To see the current list of lung cancer clinical trials, visit the National Cancer Institute's site. And be sure to ask your doctor if there's a local clinical trial that might be right for you.



Life After Diagnosis

Being diagnosed with lung cancer can be a shock, and if it's linked to smoking, you may suffer from guilt as well. But now is not the time to blame yourself. Instead, experts recommend looking forward. It's not too late to make healthy changes to your lifestyle. There's evidence that patients who quit smoking after learning they have lung cancer do better than those who keep smoking.



Lung Cancer and Secondhand Smoke

While smoking is the top cause of lung cancer, it is not the only risk factor. Breathing in secondhand smoke at home or at work also appears to raise your risk. People who are married to smokers are 20% to 30% more likely to develop lung cancer than the spouses of nonsmokers.



Lung Cancer and Work Exposures

Certain occupations can raise the risk of lung cancer in both smokers and nonsmokers. People who work with uranium, arsenic, and other industrial chemicals should take precautions to limit their exposure. Asbestos, which was once widely used in insulation materials, is a notorious cause of lung cancer. It is rarely used now, but workers who were exposed years ago are still at risk.

Lung Cancer and Radon Gas

Radon is a natural radioactive gas that occurs at higher than normal levels in certain parts of the U.S. The gas can build up inside homes and raise the risk of lung cancer, especially in people who smoke. It is the second leading cause of lung cancer in the U.S. About 12% of lung cancer deaths are linked to radon exposure. The gas can't be seen or smelled, but can be detected with simple test kits.



Lung Cancer and Air Pollution

While it causes far fewer cases than smoking, air pollution may contribute to the development of lung cancer. Experts believe pollution from cars, factories, and power plants may affect the lungs in a way similar to secondhand smoke. Worldwide, air pollution is estimated to cause about 5% of lung cancer deaths.



Other Risk Factors for Lung Cancer

- A family history of lung cancer.
- Drinking water that's high in arsenic.

Lung cancer does occur in people with no well-known risk factors – including those who've never smoked. Researchers don't know the cause yet, but lung cancer in nonsmokers appears to affect more women than men. And one type, adenocarcinoma, is more common in nonsmokers than smokers.



Lung Cancer Prevention

Lung cancer may be one of the deadliest forms of cancer, but it's also one of the most preventable. In two words: don't smoke. And if you do, get the help you need to quit. Within five years of quitting, your risk of dying from lung cancer will drop to half that of someone who smokes a pack a day. And 10 years after quitting, your odds of dying from lung cancer will be virtually the same as if you had never smoked.



Source: http://www.medicinenet.com/lung_cancer_pictures_slideshow/article.htm