

Lung Cancer

Facts About Lung Cancer

According to the American Cancer Society, this year nearly 175,000 Americans will learn they have lung cancer. The one-year survival rate for lung cancer has increased from 34 percent in 1975 to 42 percent in 1998.

Risk Factors for Lung Cancer

Smoking greatly increases your chances of developing lung cancer. Other risk factors include exposure to substances like second-hand smoke, arsenic, some organic chemicals, radon, asbestos, air pollution and tuberculosis.

Quitting Smoking

If you quit smoking, the health benefits begin immediately. For patients with lung cancer, quitting smoking makes treatment more effective. Quitting smoking also reduces the risks of infections, such as pneumonia, improves breathing, and reduces the risks associated with surgery. To learn how to quit, talk to your doctor.

Symptoms of Lung Cancer

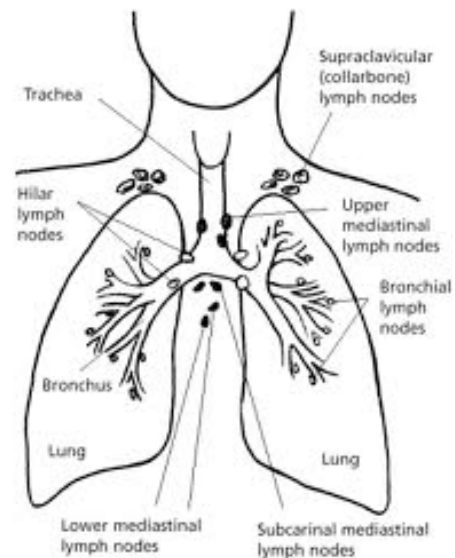
Some signs and symptoms of lung cancer include:

- Persistent cough, coughing blood or shortness of breath.
- Chest pain.
- Recurring pneumonia or bronchitis.
- Swelling of the neck and face.
- Unexplained weight loss, loss of appetite or fatigue.

Diagnosing Lung Cancer

- A chest X-ray will often reveal a tumor and where it is located.
- Other tests, such as CT scans and PET scans, can provide more detailed information.
- To be certain if you have lung cancer, tissue from your lung will be removed and analyzed. This is called a biopsy.

- The biopsy may be done during a bronchoscopy, a test where a flexible tube with a light is inserted into your nose or mouth to look at the airways of the lungs.
- A biopsy may also be done with a needle inserted through the skin directly into the tumor under CT guidance.



Types of Lung Cancer

Non-small cell lung cancer and small cell lung cancer are the two main types of lung cancer.

- Non-small cell lung cancer is the most common type of lung cancer. It often grows and spreads less rapidly than small cell lung cancer. There are three types of non-small cell lung cancer: squamous cell carcinoma, adenocarcinoma and large cell carcinoma.
- Small cell lung cancer is less common than non-small cell lung cancer. It grows more rapidly and is more likely to spread to other organs in the body. Lung cancer usually begins in one lung. If left untreated, it can spread to lymph nodes or other parts of the chest, including the other lung.

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Lung cancer can also metastasize (or spread) throughout the body to the bones, brain, liver or other organs. Both types of external beam radiotherapy are acceptable treatment; IMRT offers advantages for some but not all prostate cancer patients. With either type of therapy, painless radiation treatments are delivered in a series of daily sessions, each under half-hour in duration, Monday through Friday, for seven to ten weeks overall.

Treatment for Lung Cancer

Lung cancer treatment depends on several factors, including the type and size of the cancer, its location, and your overall health. Typically, several different treatments and combinations of treatments will be used to combat lung cancer. During treatment, a team of doctors may be involved in your care, including a radiation oncologist, a medical oncologist and a surgeon.

- Non-small cell lung cancer may be treated first with surgery. Your doctor may also suggest radiation therapy or chemotherapy either alone or in combination.
- Small cell lung cancer is often treated with chemotherapy and radiation therapy either at the same time or one right after the other.

Understanding Radiation Therapy

Radiation therapy, sometimes called radiotherapy, is the careful use of radiation to safely and effectively treat cancer.

- Cancer doctors called radiation oncologists use radiation therapy to try to cure cancer, to control cancer growth or to relieve symptoms, such as pain.
- Radiation therapy works within cancer cells by damaging their ability to multiply. When these cells die, the body naturally eliminates them.
- Healthy cells are also affected by radiation, but they are able to repair themselves in a way cancer cells cannot.

External Beam Radiation Therapy

External beam radiation therapy involves a series of daily radiation treatments targeting your lung tumor.

- Radiation therapy treatments are delivered in a series of daily sessions. Each treatment itself is painless and will last less than 30 minutes, Monday through Friday, for several weeks.
- 3-dimensional conformal radiotherapy (3D-CRT) combines multiple radiation treatment fields to deliver precise doses of radiation to the lung tumor. Tailoring each of the radiation beams to accurately focus on the tumor targets the cancer while protecting nearby healthy tissue.
- Intensity modulated radiation therapy (IMRT) is a form of 3D-CRT that modifies the radiation by varying the intensity of each radiation beam. This technique allows a precise adjustment of radiation doses to the tissues within the target area, possibly allowing a higher radiation dose to the tumor and keeping more radiation away from nearby normal tissues. IMRT is still being studied for lung cancer.
- Your radiation oncologist may recommend applying radiation to the brain after successfully treating small cell lung cancer. Called prophylactic cranial irradiation, or PCI, this treatment is not recommended for all patients.

Internal Radiation

In some cases, your doctor may recommend brachytherapy. Also called internal radiation, brachytherapy involves placing radioactive material into a tumor or its surrounding tissue.

- During bronchoscopy, one or two thin plastic tubes called catheters will be placed down your nose and into the airways of the lung.
- The tube or tubes are then connected to a brachytherapy machine. This holds the radioactive source, which is in the form of a



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ribbon with radioactive seeds. Your doctor slides the ribbon into the tube in your lung so the seeds are next to the tumor.

- The ribbon will be left in place from a few minutes to a few days.

Possible Side Effects

Patients often experience little or no side effects from radiation therapy and are able to continue normal routines.

- Side effects are temporary and usually limited to the area that received radiation.
- Possible problems include skin irritation, difficulty or pain when swallowing, shortness of breath, and fatigue.
- Talk to your doctor about any discomfort you feel. He or she may be able to provide drugs and other treatments to help.

CARING FOR YOURSELF DURING TREATMENT

- Get plenty of rest during treatment, and don't be afraid to ask for help.
- Follow your doctor's orders. In many cases, your doctor may ask you to call if you develop a fever of 101° F or higher.
- Ask if you are unsure about anything.
- Tell your doctor about any medications or vitamins you are taking to make sure they are safe to use during radiation therapy.
- Eat a balanced diet. Radiation to the chest should not upset your stomach, so tell your doctor or dietitian if food tastes funny or if you're having trouble eating. They might be able to help you change the way you eat.
- Treat the skin exposed to radiation with special care. Wear a shirt when you're in the sun, avoid hot or cold packs, only use lotions and ointments after checking with your doctor or nurse, and clean the area with warm water and mild soap.
- Coping with cancer is tough. Support groups and friends may be able to help.
- Talk to your doctor about any discomfort or pain you may feel. He or she can provide treatments or medications to help.

- Everyone responds differently to the stress of cancer and treatment. Doctors, nurses, social workers and support groups are available to help.

