



## Lung Cancer

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# Lung Cancer

Of all the types of cancer, lung cancer is responsible for the most deaths in men and women. It is estimated that about 169,400 new cases of lung cancer and about 154,900 lung cancer deaths will have occurred in the United States in 2002.

Tobacco smoking is thought to be responsible for 8 out of 10 cases of lung cancer. Smoking greatly increases the risk of developing lung cancer because tobacco smoke contains **carcinogens** (substances that can cause cancer). Exposure to second-hand smoke from being around people who smoke also increases the risk of developing lung cancer.

An article in the January 15, 2003, issue of *JAMA* reports that a screening technique called **helical computed tomography** using computerized x-ray images is unlikely to be a cost-effective method for early detection of lung cancer in smokers. At this time, stopping smoking is the only proven method for reducing the risk of developing lung cancer.

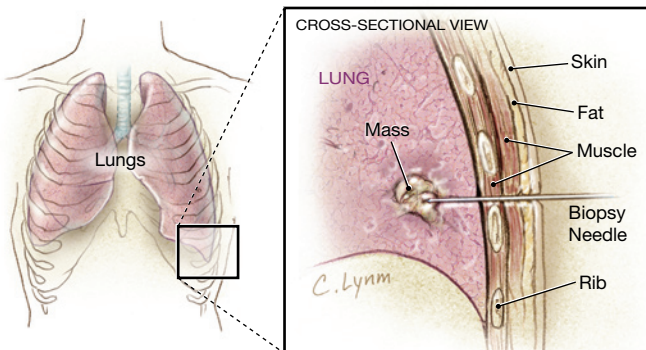
## SYMPTOMS OF LUNG CANCER

- Persistent cough
- Constant chest pain
- Fatigue
- Loss of appetite or weight loss
- Recurrent pneumonia
- Swelling of neck and face
- Coughing up blood

## DIAGNOSIS

If lung cancer is suspected, your doctor may order a chest x-ray and a sputum test, in which mucus coughed up from the lungs is analyzed. To confirm the presence of lung cancer, a **biopsy** may be performed: a small sample of lung tissue is removed and examined for cancerous cells. If lung cancer is diagnosed, your doctor will want to determine the extent of the cancer and whether it has spread to other organs, a process known as **staging**. Knowing the stage of the disease is important in determining treatment.

Image-Guided Needle Biopsy



Sources: American Cancer Society, National Cancer Institute, American Lung Association

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## TREATMENT

Many factors go into determining the best treatment for lung cancer, including the stage of the disease, the specific type of cancer cells, the location in the lungs, and the general health of the patient.

- **Surgery** to remove part of the lung, or in some cases an entire lung, may be performed. Surgery for some tumors may not be possible because of their size or location.
- **Chemotherapy** (using drugs that kill cancer cells) is commonly used to treat cancer. Chemotherapy drugs are often given by vein.
- **Radiation** therapy kills cancer cells by using high-energy rays supplied either by an external source aimed at the tumor or by implanting tiny radioactive particles directly in the tumor. Chemotherapy and radiation therapy can have serious side effects, especially because these two treatments affect healthy as well as cancerous cells. Typical side effects include nausea, vomiting, hair loss, mouth sores, and fatigue.

## FOR MORE INFORMATION

- American Cancer Society  
800/ACS-2345  
[www.cancer.org](http://www.cancer.org)
- National Cancer Institute  
800/4-CANCER (800/422-6237)  
[www.cancer.gov](http://www.cancer.gov)

## INFORM YOURSELF

To find this and previous *JAMA* Patient Pages, go to the Patient Page Index on *JAMA*'s Web site at [www.jama.com](http://www.jama.com). A Patient Page on tobacco use was published in the September 1, 1999, issue, and one on quitting smoking was published in the July 24/31, 2002, issue.

