Lung Cancer in the US

Lung cancer is the second most common cancer and the leading cause of cancer death for both men and women. Lung cancer is most often caused by exposure to tobacco smoke and other airborne chemicals.

Types of Lung Cancer

The 2 main types of lung cancer are non-small cell lung cancer (NSCLC) and small cell lung cancer (SCLC).

- NSCLC accounts for about 80%-85% of lung cancers and includes adenocarcinoma, squamous cell carcinoma, and large cell carcinoma. These subtypes have similar treatments and prognoses.
- SCLC accounts for about 10%-15% of all lung cancers and tends to metastasize faster than NSCLC. About 70% of people with SCLC already have metastases when they are first diagnosed.

Risk Factors

Tobacco use – Smoking is the leading risk factor of lung cancer, but it often interacts with other factors. About 80% of lung cancer deaths are caused by smoking. For people who do smoke, a higher pack-year history can lead to an increased risk of developing lung cancer. SCLC rarely develops in people who have never smoked.

Secondhand smoke – Even if people have never smoked, exposure to secondhand smoke (SHS) can increase their risk for lung cancer.

Radon – Exposure to radon is the second-leading cause of lung cancer. Radon is found at high levels in some homes.

Asbestos – Exposure to asbestos is another risk factor for lung cancer. Exposure may occur in mines, mills, textile plants, places where insulation is used, and shipyards. People exposed to large amounts of asbestos have a greater risk of developing mesothelioma.

Other carcinogens – Exposure to air pollutants and other chemicals and substances, such as arsenic, vinyl chloride, coal products, diesel exhaust, and radioactive ores like uranium, has been shown to increase lung cancer risk.

Personal or family history – People with a personal history of lung cancer have a higher risk of developing another lung cancer. First-degree relatives of people who have had lung cancer may also have a slightly higher risk of lung cancer.

Screening

Lung cancer screening may be beneficial for certain people at higher risk who are not exhibiting signs and symptoms. The American Cancer Society recommends yearly lung cancer screening with a low-dose CT (LDCT) scan for certain people at higher risk for lung cancer who meet all of the following criteria:

- 50 to 80 years old and in reasonably good health
- Currently smoke or have quit smoking in the past 15 years
- Have at least a 20 pack-year smoking history

In addition, it’s important that people who are going to be screened:

- Receive counseling to quit smoking, if they currently smoke
- Have been told about the possible benefits, limits, and harms of screening with LDCT scans
- Can go to a center that has experience in lung cancer screening and treatment

Signs and Symptoms

Signs and symptoms of lung cancer, which usually do not appear until the cancer is advanced, include persistent cough, blood-streaked sputum, chest pain, hoarse voice, shortness of breath, and recurrent pneumonia or bronchitis. Some people may present with Horner syndrome, superior vena cava (SVC) syndrome, or a paraneoplastic syndrome.
**Prevention**

Not all lung cancers can be prevented. However, patient education and guidance related to risk factors can help some people reduce their risk.

- Avoiding or quitting tobacco can significantly reduce a person’s risk of developing lung cancer. Exposure to secondhand smoke should also be avoided.
- Identifying people at risk for exposure to carcinogens, such as radon, asbestos, and other harmful chemicals at home or work, can lead to interventions that help prevent or minimize exposure. Monitoring indoor radon levels at home and getting homes treated, if needed, are additional strategies.
- Completing a periodic assessment for risk factors, following recommended screening guidelines, and providing health education, such as encouraging a healthy diet, to patients who may be at higher risk for lung cancer should be a regular part of care.

**Treatment**

NSCLC and SCLC have different treatment recommendations. Treatment options are based on the tumor subtype, stage, and molecular characteristics, along with patient comorbidities. Surgery, radiation therapy, chemotherapy, targeted therapy, and immunotherapy drugs, either in combination or alone, are common treatments that might be used. You can learn more about treatment options for the different types of lung cancer at cancer.org/cancer/lung-cancer.

**Quality of Life**

Common issues affecting quality of life for people with lung cancer include the effects of cancer and its treatment, fear of recurrence, activity intolerance, chronic and/or acute pain, weakness, anorexia, cachexia, dyspnea, anemia, and fatigue.

**References**