Lung Cancer in the US

Lung cancer is the second most common cancer in both men and women, and is the leading cause of cancer death for both men and women. Each year, more people die of lung cancer than of colorectal, breast, and prostate cancers combined. Lung cancer is most often caused by exposure to chemicals and other airborne particles.

Types of Lung Cancer

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

- **NSCLC** accounts for about 80%-85% of lung cancer and includes adenocarcinoma, squamous cell carcinoma, and large cell carcinoma. These subtypes have similar treatment and prognosis.

- **SCLC** (sometimes called “oat cell cancer”) accounts for about 10%-15% of lung cancers and tends to metastasize faster than NSCLC. About 70% of people with SCLC present with metastasis at the time of diagnosis.

Risk Factors

**Tobacco use** Tobacco smoking is the leading cause of lung cancer, but often interacts with other factors including genetics. Still, about 20% of people who die of lung cancer have never used any form of tobacco. For people who do smoke, a higher pack-year history can lead to an increased risk of developing lung cancer. SCLC rarely occurs in people who have never smoked.

**Secondhand smoke** For people who have never smoked, exposure to secondhand smoke (SHS) can increase their risk for lung cancer.

**Radon** Exposure to radon is one of the leading causes of lung cancer. Radon is found at high levels in some homes.

**Asbestos** Exposure to asbestos is another risk factor for lung cancer, specifically mesothelioma. Exposure may occur in mines, mills, textile plants, places where insulation is used, and shipyards. How much exposure might raise lung cancer risk is not known.

**Other carcinogens** Exposure to air pollutants and other chemicals and substances, including 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 have a slightly higher risk of lung cancer.

Screening and Detection

Screening may be beneficial for certain patients who are not exhibiting signs and symptoms. The American Cancer Society has lung cancer screening guidelines for people at higher risk of lung cancer.

We recommend yearly lung cancer screening with a low-dose computer tomography (LDCT) scan for certain people at higher risk for lung cancer who meet all of the following criteria:

- Are ages 55 to 74 and in reasonably good health
- Currently smoke or have quit smoking in the past 15 years

• Have at least a 30 pack-year smoking history
• Receive counseling for cessation, if they currently smoke
• Have been told about the possible benefits, limits, and risks of screening with LDCT scans

Have a facility available with experience in lung cancer screening and treatment

**Signs and Symptoms**

Signs and symptoms of lung cancer that warrant further investigation include persistent cough, sputum streaked with blood, chest pain, voice change, worsening shortness of breath, and recurrent pneumonia or bronchitis. Symptoms usually do not appear until the cancer is advanced.

**Prevention**

Not all lung cancers can be prevented. But educating patients and altering certain risk factors can help reduce the risk of lung cancer.

- Avoiding or quitting tobacco can significantly reduce an individual’s risk of developing lung cancer. Exposure to SHS should also be avoided.
- Identifying people at risk for exposure to carcinogens, such as radon, asbestos, phosphate fertilizers, 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 prevention strategies.
- Completing a periodic assessment for risk factors, following recommended screening guidelines, and providing health education to patients who may be at higher risk for lung cancer should be a regular part of care. Knowledge can empower them and increase patient competency with recognizing risk factors and symptoms. Emphasizing the importance of follow-up appointments is also key.

**Treatment**

Patient factors unrelated to cancer, or comorbidities may affect treatment options.

Treatment options are based on the specific type and stage of lung cancer. NSCLC and SCLC have different treatment recommendations. Surgery, radiation therapy, chemotherapy, targeted therapy and immunotherapy agents, either in combination or alone, are common treatments used for the different types of lung cancer.

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**2019 estimates**

- New cases: 228,150
- Deaths: 142,670
- 5-year relative survival rate for localized stage: 56%
- 5-year relative survival rate for all stages combined: 19%

**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, sexual or body image problems, weakness, appetite changes, and fatigue. Social stigma and guilt associated with a lung cancer diagnosis and its low survival rate can cause stress, worry, or guilt that affects quality of life. Patients may feel (or be made to feel) they somehow delayed screening or treatment, ignored symptoms, or did things that may have caused the cancer.

Clinicians should assess for distress and depression, as well as for ongoing changes in physical appearance, weight, comfort level, sleep pattern, activity tolerance, financial burden, and relationships and roles.

Palliative care can improve both symptom management and quality of life for the patient and family. It can be offered and given at any time throughout the patient’s cancer trajectory, from the time of diagnosis and until the end of life. Palliative care offers holistic support that can be given before, during, and after treatment to assist patients and families with social, economic, psychological, physical, and spiritual issues.
References


