
About Lung Cancer

Get an overview of lung cancer and the latest key statistics in the US.

Overview and Types

If you have been diagnosed with lung cancer or are worried about it, you likely have a lot of questions. Learning some basics is a good place to start.

- [What Is Lung Cancer?](#)

Research and Statistics

See the latest estimates for new cases of lung cancer and deaths in the US and what research is currently being done.

- [Key Statistics for Lung Cancer](#)
- [What's New in Lung Cancer Research?](#)

What Is Lung Cancer?

Lung cancer is a type of cancer that starts in the lungs.

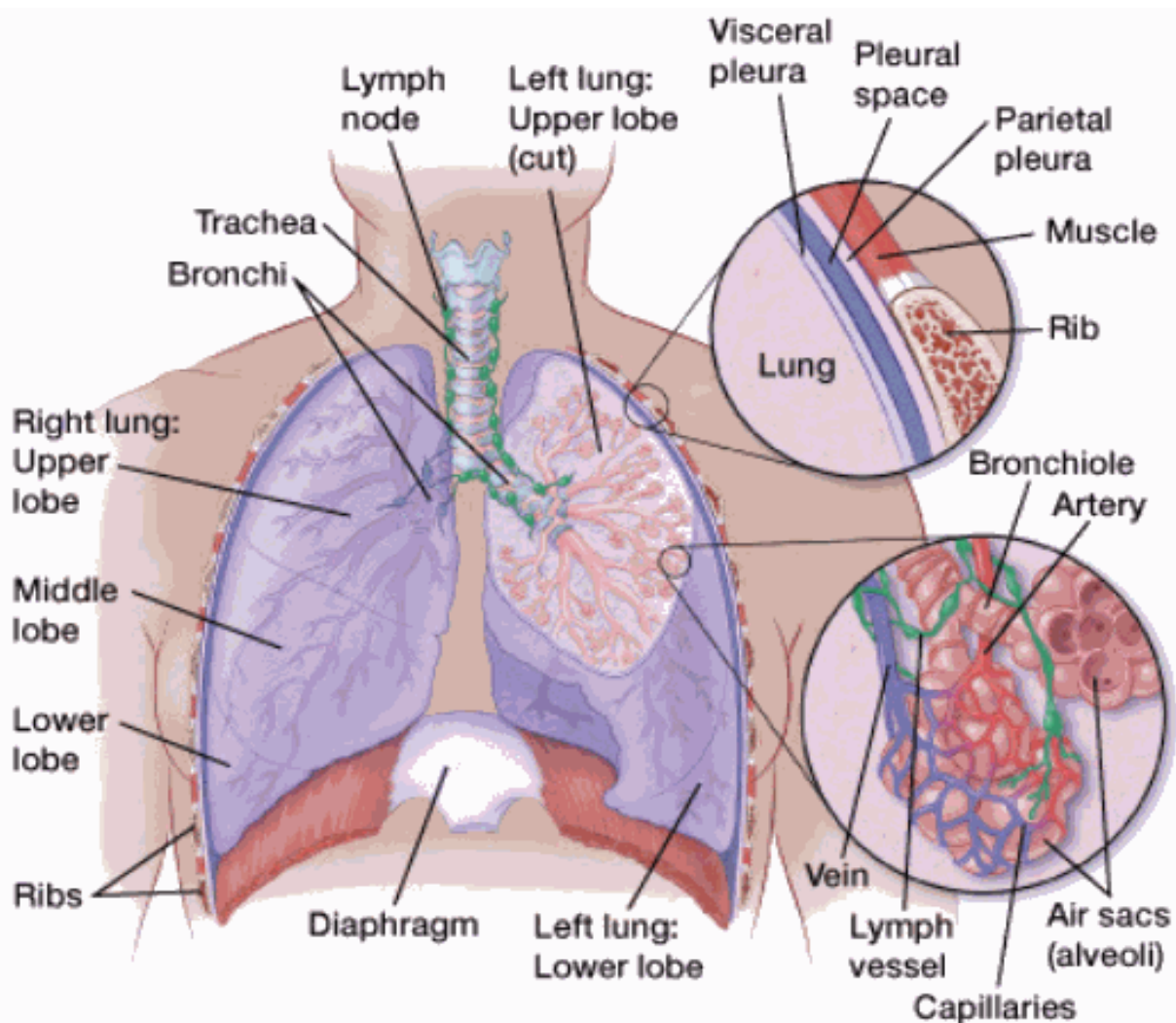
- [Normal structure and function of the lungs](#)
- [Types of lung cancer](#)
- [Other types of lung tumors](#)

Normal structure and function of the lungs

Your lungs are 2 sponge-like organs in your chest that are separated into sections called **lobes**. Your right lung has 3 **lobes**. Your left lung has 2 lobes. The left lung is smaller because the heart takes up more room on that side of the body.

When you inhale (breathe in), air enters through your mouth or nose and goes into your lungs through the **trachea** (windpipe). The trachea divides into tubes called **bronchi**, which enter the lungs and divide into smaller bronchi. These divide to form smaller branches called **bronchioles**. At the end of the bronchioles are tiny air sacs known as **alveoli**.

The alveoli absorb oxygen into your blood from the inhaled air and remove carbon dioxide from the blood when you exhale (breathe out). Taking in oxygen and getting rid of carbon dioxide are your lungs' main functions.



A thin lining layer called the **pleura** surrounds the lungs. The pleura protects your lungs and helps them slide back and forth against the chest wall as they expand and contract during breathing.

Below the lungs, a thin, dome-shaped muscle called the **diaphragm** separates the chest from the abdomen. When you breathe, the diaphragm moves up and down, forcing air in and out of the lungs.

[What Is Cancer? ¹](#)

Cancer starts when cells in the body begin to grow out of control. Cells in nearly any part of the body can become cancer cells. Learn more here.

[Anatomy Gallery: Respiratory System ²](#)

Explore our 3D interactive tour of the respiratory system.

Types of lung cancer

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

Non-small cell lung cancer (NSCLC)

About 80% to 85% of lung cancers are NSCLC. The main subtypes of NSCLC are adenocarcinoma, squamous cell carcinoma, and large cell carcinoma. These subtypes, which start from different types of lung cells, are grouped together as NSCLC because their treatment and prognoses (outlooks) are often similar.

Adenocarcinoma: Lung adenocarcinoma starts in cells in the lung that make mucus, called epithelial cells. Epithelial cells line the surface of the lungs. Adenocarcinoma is the most common type of non-small cell lung cancer

Lung adenocarcinoma occurs mainly in people who smoke or used to smoke, but it is also the most common type of lung cancer seen in people who don't smoke. It is more common in women than in men, and it is more likely to occur in younger people than other types of lung cancer.

Squamous cell carcinoma: Squamous cell carcinoma starts in squamous cells, which are flat cells that line the inside of the airways in the lungs. They are often linked to a history of smoking and tend to be found in the central part of the lungs, near a main airway (bronchus).

Large cell (undifferentiated) carcinoma: Large cell carcinoma can appear in any part of the lung. It tends to grow and spread quickly, which can make it harder to treat. A subtype of large cell carcinoma, known as **large cell neuroendocrine carcinoma (LCNEC)**, is a fast-growing cancer that is very similar to small cell lung cancer.

Other subtypes: A few other subtypes of NSCLC, such as adenosquamous carcinoma and sarcomatoid carcinoma, are much less common.

Small cell lung cancer (SCLC)

About 10% to 15% of all lung cancers are SCLC.

This type of lung cancer tends to grow and spread faster than NSCLC. In most people with SCLC, the cancer has already spread beyond the lungs at the time it is diagnosed. Since this cancer grows quickly, it tends to respond well to [chemotherapy](#)³ and [radiation](#)

[therapy](#)⁴. Unfortunately, for most people the cancer will return at some point.

Other types of lung tumors

Along with the main types of lung cancer, other tumors can develop in the lungs.

Lung carcinoid tumors: Carcinoid tumors of the lung account for fewer than 5% of lung tumors. Most of these grow slowly. For more information about these tumors, see [Lung Carcinoid Tumor](#)⁵.

Other lung tumors: Other types of lung cancer, such as adenoid cystic carcinomas, lymphomas, and sarcomas, as well as benign lung tumors such as hamartomas, are rare. These are treated differently from the more common lung cancers and are not discussed here.

Cancers that spread to the lungs: Cancers that start in other organs (such as the [breast](#)⁶, [pancreas](#)⁷, [kidney](#)⁸, or [skin](#)⁹) can sometimes spread (metastasize) to the lungs, but these are not lung cancers. For example, cancer that starts in the breast and spreads to the lungs is still breast cancer, not lung cancer. Treatment for metastatic cancer to the lungs is based on where it started (the primary cancer site).

Hyperlinks

1. www.cancer.org/cancer/understanding-cancer/what-is-cancer.html
2. www.cancer.org/cancer/understanding-cancer/anatomy-gallery/respiratory-system.html
3. www.cancer.org/cancer/types/lung-cancer/treating-small-cell/chemotherapy.html
4. www.cancer.org/cancer/types/lung-cancer/treating-small-cell/radiation-therapy.html
5. www.cancer.org/cancer/types/lung-carcinoid-tumor.html
6. www.cancer.org/cancer/types/breast-cancer.html
7. www.cancer.org/cancer/types/pancreatic-cancer.html
8. www.cancer.org/cancer/types/kidney-cancer.html
9. www.cancer.org/cancer/types/skin-cancer.html

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Key Statistics for Lung Cancer

Most lung cancer statistics include both small cell lung cancer (SCLC) and non-small cell lung cancer (NSCLC). In general, about 10% to 15% of all lung cancers are SCLC, and about 80% to 85% are NSCLC.

- [How common is lung cancer?](#)
- [Lifetime chance of getting lung cancer](#)

How common is lung cancer?

Lung cancer (both small cell and non-small cell) is the second most common cancer in both men and women in the United States (not counting [skin cancer](#)¹). In men, [prostate cancer](#)² is more common, while [breast cancer](#)³ is more common in women.

The American Cancer Society's estimates for lung cancer in the US for 2024 are:

- About 234,580 new cases of lung cancer (116,310 in men and 118,270 in women)
- About 125,070 deaths from lung cancer (65,790 in men and 59,280 in women)

Lung cancer mainly occurs in older people. Most people diagnosed with lung cancer are 65 or older; a very small number of people diagnosed are younger than 45. The average age of people when diagnosed is about 70.

Lung cancer is by far the leading cause of cancer death in the US, accounting for about 1 in 5 of all cancer deaths. Each year, more people die of lung cancer than of [colon](#)⁴, breast, and prostate cancers combined.

On a positive note, the number of new lung cancer cases continues to decrease, partly because more people are [quitting smoking](#)⁵ (or not starting). The number of deaths from lung cancer continues to drop as well, due to fewer people smoking and advances in early detection and treatment.

Lifetime chance of getting lung cancer

Overall, the chance that a man will develop lung cancer in his lifetime is about 1 in 16; for a woman, the risk is about 1 in 17. These numbers include both people who smoke and those who don't smoke. For people who smoke, the risk is much higher, while for those who don't, the risk is lower.

- Black men are about 12% more likely to develop lung cancer than White men. The rate is about 16% lower in Black women than in White women.
- Black and White women have lower rates than men, but the gap is closing. The lung cancer rate has been dropping among men over the past few decades, but only for about the past decade in women.
- Despite their overall risk of lung cancer being higher, Black men are **less** likely to develop SCLC than White men.

Statistics on survival in people with lung cancer vary depending on the type of lung cancer, the stage (extent) of the cancer when it is diagnosed, and other factors. For survival statistics, see [Lung Cancer Survival Rates](#)⁶.

Hyperlinks

1. www.cancer.org/cancer/types/skin-cancer.html
2. www.cancer.org/cancer/types/prostate-cancer.html
3. www.cancer.org/cancer/types/breast-cancer.html
4. www.cancer.org/cancer/types/colon-rectal-cancer.html
5. www.cancer.org/cancer/risk-prevention/tobacco.html
6. www.cancer.org/cancer/types/lung-cancer/detection-diagnosis-staging/survival-rates.html

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What's New in Lung Cancer Research?

Research into the prevention, early detection, and treatment of lung cancer is being done in many medical centers worldwide.

- [Prevention](#)
- [Early detection](#)
- [Diagnosis](#)
- [Treatment](#)

Prevention

Tobacco

Prevention offers the greatest opportunity to fight lung cancer. Decades have passed since the link between smoking and lung cancers became clear, but smoking is still responsible for most lung cancer deaths. Research is continuing on:

- Ways to help people [quit smoking](#)¹ and stay tobacco-free through counseling, nicotine replacement, and other medicines
- Ways to convince young people to never start smoking
- Inherited differences in genes that may make some people much more likely to get lung cancer if they smoke or are exposed to someone else's smoke (secondhand smoke)
- Ways to understand why nonsmokers get lung cancer

Environmental causes

Researchers also continue to look into some of the other causes of lung cancer, such as exposure to [asbestos](#)², [radon](#)³, and [diesel exhaust](#)⁴. Finding new ways to limit these exposures could possibly save many more lives.

Diet, nutrition, and medicines

Researchers are looking for ways to use vitamins or medicines to prevent lung cancer in people at high risk, but so far none have been shown to clearly reduce risk.

Some studies have suggested that a diet high in fruits and vegetables may offer some protection, but follow-up studies have not confirmed this. While any protective effect of fruits and vegetables on lung cancer risk is likely to be much smaller than the increased risk from smoking, following the [American Cancer Society dietary recommendations](#)⁵ (such as getting to at a healthy weight and eating a diet high in fruits, vegetables, and whole grains) may still be helpful.

Early detection

As mentioned in [Can Lung Cancer Be Found Early?](#)⁶, low-dose helical CT (LDCT) is used for lung cancer screening. People who used to or continue to smoke tobacco for a long period of time are considered to be at “high risk” and recommended for screening. Screening lowers the risk of death from lung cancer.

Ongoing studies are looking at new ways to improve early detection of lung cancer:

1. Ways to use molecular markers from your body fluid (i.e., sputum or blood) for lung cancer screening
2. Ways to use new forms of bronchoscopies for lung cancer screening, such as autofluorescence bronchoscopy

Diagnosis

At present, a diagnosis of lung cancer is based on tissue biopsy. Researchers are continuing to look for other ways to help patients achieve an earlier diagnosis, for example:

- Ways to look at blood samples to find tumor cells or parts of tumor cells
- Ways to look at sputum samples to find tumor cells or parts of tumor cells

Treatment

There continues to be focus and interest in looking at how we can better understand

each person's tumor cells to kill the cells more effectively. While we know a lot about [targeted therapy](#)⁷ and [immunotherapy](#)⁸, there is still much to understand about **when** these treatments should be offered (before and/or after surgery) and **if** they should be given in combination with chemotherapy. Furthermore, the answers to these questions will vary depending on the stage of lung cancer, as each stage is treated differently. To learn more about ongoing clinical trials for lung cancer, ask your cancer care team for more information.

[Lung Cancer Research Highlights](#)⁹

See examples of research we conduct and fund through grants to see how the American Cancer Society is working toward a world without lung cancer.

Hyperlinks

1. www.cancer.org/cancer/risk-prevention/tobacco/guide-quit-smoking.html
2. www.cancer.org/cancer/risk-prevention/chemicals/asbestos.html
3. www.cancer.org/cancer/risk-prevention/radiation-exposure/radon.html
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Written by

The American Cancer Society medical and editorial content team
(<https://www.cancer.org/cancer/acs-medical-content-and-news-staff.html>)

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