

# Lung and Bronchus Cancer in West Virginia



The lungs are two sponge-like organs located in your chest cavity. When you inhale, air enters the mouth or nose and flows into the lungs through the trachea (i.e. windpipe). The trachea then divides into smaller tubes called bronchi, then divides into even smaller tubes called bronchioles. At the end of the bronchioles are small air sacs called alveoli, which absorb the inhaled oxygen and remove carbon dioxide from your blood. Lung cancer usually starts in the cells lining the bronchi, the bronchioles, or alveoli.<sup>1</sup>

There are two primary forms of lung cancer: Non-small cell lung cancer (NSCLC) and small cell lung cancer (SCLC). Even though both occur in the lungs, each grow very differently and are treated very differently. Non-small cell lung cancer is the most common of the two, with several subtypes including adenocarcinoma, squamous cell carcinoma, and large cell carcinoma.<sup>1</sup> Small cell lung cancer is much less common than non-small cell lung cancer but tends to grow and spread much faster than NSCLC. About 70% of SCLC cases usually have already metastasized (i.e. has spread) by the time they are diagnosed.<sup>1</sup>

Currently, the only recommended screening test for lung cancer is low-dose computed tomography (i.e. low-dose CT scan). A low-dose CT scan involves an x-ray scanning the body with low doses of radiation to make detailed images of the lungs. The United States Preventive Services Task Force recommends this screening test for individuals that meet the following guidelines<sup>2</sup>:

- Between the ages of **50 and 80 years old**, *and*
- **Smoke now or have quit within the last 15 years**, *and*
- Have a **20 pack-year\*** or more smoking history.

**\*Pack-year:** the number of packs of cigarettes smoked per day multiplied by the number of years smoked:

2 packs a day x 10 years = 20 pack years  
1 pack a day x 20 years = 20 pack years  
1/2 pack a day x 40 years = 20 pack years

In West Virginia, lung and bronchus cancer is the second most commonly diagnosed cancer for both sexes, and is the leading cause of cancer related mortality in the state.<sup>4</sup> Between 2015 and 2019, 10,438 people were diagnosed with lung and bronchus cancer, which is about 2,087 cases a year.<sup>3</sup> The total number of lung cancer deaths (6,897) is over 50% greater than the number of deaths due to female breast, colorectal, and prostate cancer combined.<sup>3,4</sup> Also, 71% of all lung cancer cases in this period were diagnosed as late-stage, showing a need for lung cancer screening.<sup>3</sup>

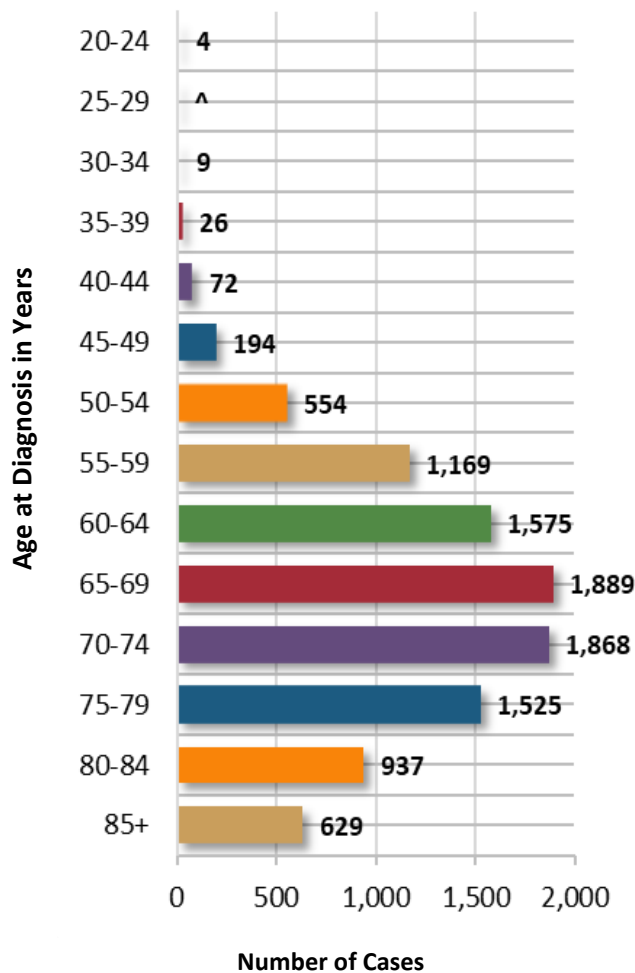
Cigarette smoking is the primary risk factor for lung cancer, with about 80% to 90% of all lung cancer cases being linked to smoking. Other risk factors include secondhand smoke, radon exposure, exposure to certain substances and pollutants (namely asbestos, arsenic, diesel exhaust, and some forms of silica and chromium), personal family history of lung cancer, previous radiation therapy to the chest, and possibly diet.<sup>5</sup>

- 1) American Cancer Society. Accessed at <https://www.cancer.org/cancer/lung-cancer/about/what-is.html> on 1/17/22 at 12:30 PM.
- 2) U.S. Preventive Services Task Force. Accessed at <https://www.uspreventiveservicestaskforce.org/Page/Document/RecommendationStatementFinal/lung-cancer-screening> on 1/17/22 at 1:15 PM.
- 3) West Virginia Cancer Registry
- 4) U.S. Cancer Statistics Working Group. U.S. Cancer Statistics Data Visualizations Tool, based on 2021 submission data (1999-2019): U.S. Department of Health and Human Services, Centers for Disease Control and Prevention and National Cancer Institute; [www.cdc.gov/cancer/dataviz](http://www.cdc.gov/cancer/dataviz), released in June 2022.
- 5) Centers for Disease Control and Prevention. Accessed at [https://www.cdc.gov/cancer/lung/basic\\_info/risk\\_factors.htm](https://www.cdc.gov/cancer/lung/basic_info/risk_factors.htm) on 1/17/21 at 2:30 PM.

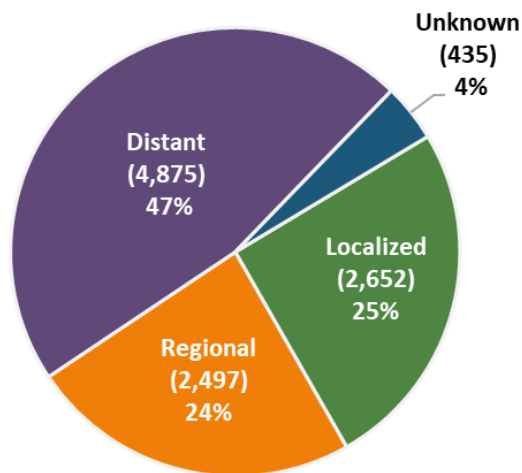
Lung and Bronchus Cancer Incidence and Mortality Rate (per 100,000) and Counts, West Virginia, 2015-2019

	Incidence		Mortality	
	Rate	Cases	Rate	Deaths
<b>Both</b>	<b>77.9</b>	<b>10,438</b>	<b>51.5</b>	<b>6,897</b>
<b>Males</b>	<b>89.1</b>	<b>5,562</b>	<b>64.1</b>	<b>3,917</b>
<b>Females</b>	<b>69.2</b>	<b>4,876</b>	<b>41.6</b>	<b>2,980</b>

Lung and Bronchus Cancer Case Counts by Age Group, West Virginia, 2015-2019



Percentage of Lung and Bronchus Cancer Cases by Stage at Diagnosis, West Virginia, 2015-2019



Average Annual Age-Adjusted Lung and Bronchus Cancer Incidence Rates by County West Virginia, 2015-2019

