

# Lung Cancer

## Bottom Line

Lung cancer is the most common cause of cancer deaths for both men and women in the U.S., accounting for an estimated one in five cancer deaths.<sup>1</sup> According to the American Cancer Society (ACS), in 2024, approximately 125,070 individuals are expected to die of lung cancer in the U.S.<sup>2</sup> Lung cancer is the second-most commonly diagnosed cancer in men and women in the U.S. with 238,340 estimated cases in 2023.<sup>2</sup> This accounts for about 25 percent of all new cancer diagnoses. In Indiana, during 2023, approximately 6,020 residents were diagnosed with lung cancer and 3,250 are expected to die as a result of the disease.<sup>2</sup> Cigarette smoking is overwhelmingly the primary cause of lung cancer, as 80 to 90 percent of lung cancer deaths in the U.S. are related to smoking.<sup>3</sup> According to the Indiana Behavioral Risk Factor Surveillance System (IN-BRFSS), over 1 million adults in Indiana currently smoke cigarettes and Indiana's adult smoking rate of 16.2 (2022) percent remains above the national median adult smoking rate in the U.S. of 13.5 percent in 2022. Due to the decline in smoking rates, lung cancer death rates have also decreased in recent years.<sup>2</sup> However, there remains much to be done to reduce lung cancer burden.

**Table 11. Burden of Invasive Lung Cancer\* - Indiana, 2016-2020\***

\*Age-adjusted to the U.S. 2000 Standard Population. Source: Indiana State Cancer Registry

	Average number of cases per year	Rate per 100,000 people	Number of cases	Rate per 100,000 people
	(2016-2020)	(2016-2020)	(2020)	(2020)
<b>Indiana Incidence</b>	5,502	66.1	4,590	52.4
<b>Indiana Deaths</b>	3,612	43.6	3,158	36.7

## Who Gets Lung Cancer?

- **People who smoke tobacco products:** Approximately 80 to 90 percent of lung cancer deaths are related to smoking. An individual's risk for lung cancer increases as the duration of smoking and the quantity of cigarettes smoked increase.<sup>2</sup> In the U.S. in 2021, approximately 28 million adults, or 12 percent of the population smoked.<sup>4</sup> In 2022, according to the IN-BRFSS, 16.2% of adults living in Indiana reported current use of cigarettes while 3.4% reported using smokeless tobacco.<sup>6</sup>
- **Individuals exposed to secondhand smoke:** Tobacco smoke can harm all people—even those who do not smoke. Those who do not smoke may still encounter smoke in homes, cars and public places such as bars or casinos. There is no safe level of exposure to secondhand smoke. It is estimated that approximately 7,330 lung cancer deaths each year in the U.S. are a result of secondhand smoke exposure.<sup>5</sup> In 2024 an estimated 6,300 nonsmoking adults will be diagnosed with lung cancer as a result of secondhand smoke.<sup>2</sup> In Indiana, approximately 3,600 individuals died in 2023 from diseases definitively tied to secondhand smoke.<sup>4</sup>
- **Individuals exposed to other cancer-causing agents:** Several other factors are related to lung cancer, including exposure to radon, asbestos, chromium, cadmium, arsenic, radiation, air pollution and diesel exhaust.<sup>7</sup> Individuals who have occupational exposure in the fields of rubber manufacturing, painting, paving and roofing are also at increased risk. Radon, which is released from soil and building materials, is the second-leading cause of lung cancer deaths.<sup>2</sup> People are usually exposed to radon when it seeps through cracks and gaps in buildings or homes; therefore, home radon testing is



important to reduce the risk of exposure.<sup>8</sup>

- **Those with lower socioeconomic status:** The prevalence of smoking is higher in people of lower socioeconomic status, largely because marketing campaigns target this population. Furthermore, individuals of lower socioeconomic status are more at risk for workplace and environmental exposure to known carcinogens.<sup>2</sup>
- **Men, especially Black men:** Men are more likely to develop lung cancer than women. Furthermore, Black men are 15 percent more likely to develop lung cancer than their White, male counterparts.<sup>1</sup>

## Can Lung Cancer Be Detected Early?

The ACS recommends annual lung cancer screening for current or former heavy smokers ages 50 to 80 years old who are in relatively good health and have undergone evidence-based smoking cessation counseling (current smokers) and a process of shared decision making with a clinician that included a description of the potential benefits and harms of screening.<sup>2</sup> As indicated by the National Cancer Institute's National Lung Screening Trial, low-dose computed tomography (CT) screening can reduce the risk of death from lung cancer by 20 percent when compared to screening using standard chest x-rays. Certain types of lung cancers, such as adenocarcinomas and squamous cell carcinomas, can be detected at earlier stages with low-dose CT screening than with a chest x-ray.<sup>9</sup>

## What Factors Influence Lung Cancer Survival?

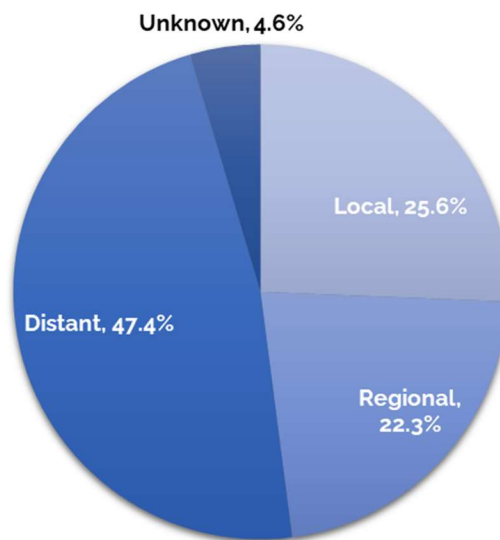
- Symptoms of lung cancer often do not arise until the cancer reaches an advanced, non-curable stage.<sup>2</sup> This negatively impacts a person's likelihood of surviving.
- Five-year survival rates are highest (58 percent) for lung cancer when the cancer is localized in the lungs.<sup>10</sup> However, only 23 percent of lung cancer cases in the U.S. and 25.6 percent in Indiana are diagnosed at the localized stage.<sup>11</sup> More than half of people with lung cancer die within one year of their initial diagnosis.<sup>10</sup>
- Treatment options for lung cancer are dependent on the type of lung cancer. Small cell lung cancer is typically very aggressive, but less common, and accounts for about 13 percent of cases.<sup>9</sup> Non-small cell lung cancer makes up about 84 percent of cases.<sup>12</sup> Depending on the type and stage of lung cancer, treatment can include surgery, radiation, chemotherapy, immunotherapy, and/or targeted therapy. Access to timely treatment is crucial in improving survival.<sup>2</sup>
- People of color with a lung cancer diagnosis generally experience lower survival rates compared to White Americans. They are less likely to be diagnosed early, less likely to receive surgical treatment, and more likely to not receive any treatment.<sup>9</sup>
- These racial differences are attributed to the complex interplay of social determinants of health—including socioeconomic status, income, housing, education, access to health care, insurance, treatment, screening and early detection—more than biological differences. Additionally, some implicit bias among healthcare providers could contribute to significantly poor health outcomes.



**Figure 27. Percent of Lung Cancer Cases Diagnosed During Each Stage\* - Indiana, 2016-2020\***

*Note: Excludes in situ*

*Source: Indiana State Cancer Registry*



From 2016-2020, of the 27,508 Indiana residents who received a diagnosis of invasive lung cancer, 7,052 (25.6 percent) were diagnosed in the local stage, 19,177 (69.7 percent) were diagnosed in the regional or distant stage, and 1,279 (4.6 percent) had unknown staging.

### **Be aware and take charge!**

Common signs and symptoms of lung cancer:

- Ongoing or worsening cough
- Blood or spit in phlegm
- Chest pain associated with coughing or deep breathing
- Hoarseness or voice changes
- Weight loss or decreased appetite
- Shortness of breath
- Fatigue
- Recurring infections, such as pneumonia or bronchitis<sup>1</sup>

What can you do to help prevent lung cancer?

- Be smoke-free—Visit [QuitNowIndiana.com](http://QuitNowIndiana.com) or call 1-800-Quit-Now for free tobacco dependence treatment resources
- The lungs can gradually repair themselves if an individual stops smoking before cancer develops. Regardless of how long a person has smoked, ending dependence on tobacco can help lower the risk of cancer and a multitude of other diseases.
- Eliminate exposure to secondhand smoke
- Have your home tested and treated for radon
- Avoid exposure to cancer-causing chemicals



- Eat a healthy diet, including fresh fruits and vegetables.<sup>2</sup>

What can the community do to help prevent lung cancer?

- Promote smoke-free policies, smoke-free workplaces, and higher taxes on tobacco products
- Support individuals in their efforts to end their dependence on tobacco
- Support efforts to reduce exposure to carcinogens known to cause lung cancer
- Educate community members about lung cancer screening programs
- Reduce barriers to health care access, such as those related to finances, transportation, health literacy, provider access and insurance



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