LUNG CANCER

Indiana State Department of Health

LUNG CANCER is not a single disease; rather, it is a group of cancers that originate in the lung and associated tissues. Lung cancers are divided into three major types: small cell lung cancer (SCLC), non-small cell lung cancer (NSCLC) and lung carcinoid tumors. Lung cancer accounts for more deaths than any other cancer in men and women.[1] In Indiana, during 2014, approximately 4,899 residents were diagnosed with lung cancer and 4,040 died as a result of the disease (Table 1).[2]

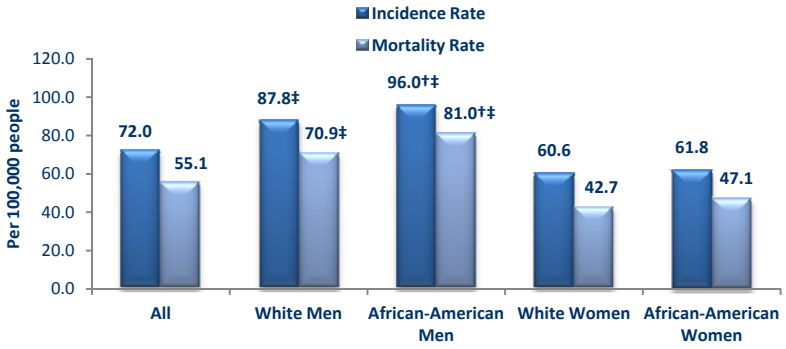
Table 1. Burden of Invasive Lung Cancer* — Indiana, 2010–2014

	Average number of cases per year (2010–2014)	Rate per 100,000 people† (2010–2014)	Number of cases (2014)	Rate per 100,000 people† (2014)
Indiana Incidence	5,237	72.0	4,899	65.5
Indiana Deaths	3,988	55.1	4,040	54.3

**Includes lung and bronchus cancers combined*
†Age-adjusted
Source: Indiana State Cancer Registry. Accessed on June 3, 2016.

DISPARITIES between lung cancer incidence and mortality rates exist between genders and races. In Indiana, during 2010-2014, white and African-American males had significantly higher incidence and mortality rates when compared to females of the same race. In addition, African-American males had higher incidence and mortality rates when compared to white males (Figure 1).[2]

Figure 1. Age-adjusted Lung Cancer Incidence and Mortality Rates in Indiana, by Race and Sex, 2010-2014*



**Age-adjusted*
†Significantly elevated (P<.05) compared to white males
‡Rate among males is significantly higher (P<.05) than rate among females of the same race
Source: Indiana State Cancer Registry. Accessed on June 3, 2016.

Who Is Most At Risk?

Smokers

- Lung cancer mortality rates are about 23 times higher for current male smokers and 13 times higher for current female smokers.[3]
- Over 1 million adults in Indiana still smoke, and Indiana's adult smoking rate (20.6 percent) remains above the national average (median adult smoking rate in the United States: 17.5 percent in 2015).[4]
- Cigarette use causes premature death. Quitting smoking before the age of 40 reduces the risk of dying from smoking-related disease by about 90 percent.[5]

Those exposed to secondhand smoke

- According to the *Indiana Cancer Facts and Figures 2015* report, an estimated 50,000 people in the United States die from exposure to secondhand smoke each year.
- The report also indicates that an estimated 1,240 people die each year as a result of secondhand smoke exposure in Indiana.

Those exposed to other cancer-causing agents[1]

- Exposure to radon gas is estimated to be the second-leading cause of lung cancer in the United States.
- Exposure to asbestos, certain metals, some organic chemicals, radiation, air pollution and diesel exhaust can lead to lung cancer.
- Occupational exposures include rubber manufacturing, paving, roofing, painting and chimney sweeping.

Males[2]

- During 2010-2014, Indiana males, compared to females, had a 45 percent greater lung cancer incidence rate and a 66 percent greater mortality rate. This is mainly because a higher percentage of males have been smokers compared to females.
- In Indiana, during 2015, 21.9 percent of adult males and 19.3 percent of adult females reported being current smokers.[4]
- However, national data indicates the gap between men and women is narrowing. Women's disease risks from smoking have risen sharply over the last 50 years nationally and are now equal to men's for lung cancer.[3]

For additional information on the impact of cancer in Indiana, please visit: www.chronicdisease.isdh.in.gov

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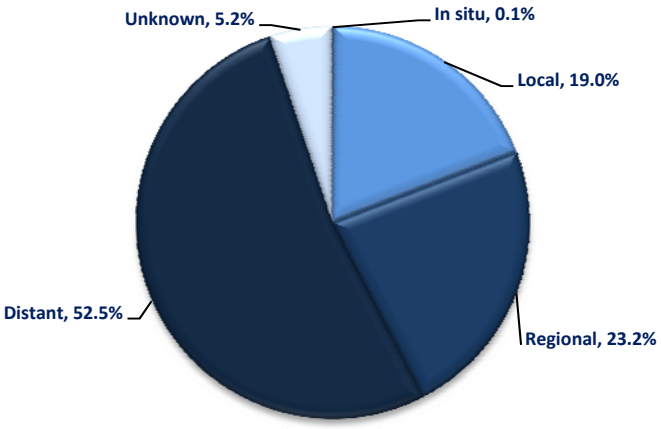
Can Lung Cancer Be Detected Early?

- The United States Preventive Services Task Force recommends annual screening for lung cancer with low-dose computed tomography in adults aged 55 to 80 years who have a 30-pack-per-year smoking history and currently smoke, or have quit within the past 15 years. Screening should be discontinued once a person has not smoked for 15 years, or develops a health problem that substantially limits life expectancy or the ability or willingness to have curative lung surgery.

Common Signs and Symptoms of Lung Cancer

- Persistent cough
- Sputum streaked with blood
- Chest pain
- Voice changes
- Recurrent pneumonia or bronchitis

Figure 2. Percent of Lung Cancer Cases Diagnosed During Each Stage*— Indiana, 2010–2014



*Includes invasive and in situ cases.

Source: Indiana State Cancer Registry. Accessed on June 3, 2016.

What Factors Influence Lung Cancer Survival?

- Lung cancer is often diagnosed at a later stage, which negatively impacts a person's odds of survival. The five-year survival rate is highest (55 percent) if the lung cancer is diagnosed when it is confined entirely within the lung (i.e., localized).[1] However, in Indiana, during 2010-2014, only 19.0 percent of lung cancers were diagnosed during this stage (Figure 2).
- The five-year survival rate is different for SCLC, NSCLC and lung carcinoid tumor. For SCLC, the five-year survival rate is 7 percent. The five-year survival rate for NSCLC is higher at 21 percent.[1] According to the American Cancer Society, the five-year survival rate for lung carcinoid tumor varies by type and stage. In general, the five-year survival rate ranges from 93 percent for Stage I diagnoses to 57 percent for Stage IV diagnoses.
- Treatment options are determined by the type (SCLC, NSCLC or lung carcinoid tumor) and stage of cancer and include surgery, radiation therapy, chemotherapy and targeted therapies. For localized cancers, surgery is usually the treatment of choice. Because the disease has usually spread by the time it is discovered, radiation therapy and chemotherapy are often used, sometimes in combination with surgery.

GET INVOLVED: Join the Indiana Cancer Consortium (ICC)

- The ICC is a statewide network of over 100 agencies, including the Indiana State Department of Health.
- ICC seeks to reduce the cancer burden in Indiana through the development, implementation and evaluation of a comprehensive plan that addresses cancer across the continuum from prevention through palliation.
- Become a member at www.IndianaCancer.org.

References

1. American Cancer Society. Cancer Facts & Figures 2016. Atlanta: American Cancer Society; 2016.
2. Indiana State Department of Health. Indiana State Cancer Registry Statistics Report Generator. Accessed online at http://www.in.gov/isdh/24360.htm on June 3, 2016.
3. U.S. Department of Health and Human Services. *The Health Consequences of Smoking—50 Years of Progress. A Report of the Surgeon General.* Atlanta: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health, 2014.
4. Indiana State Department of Health, Data Analysis Team. (2016). *Indiana Behavioral Risk Factor Surveillance System, 2015.*
5. Centers for Disease Control and Prevention, Smoking and Tobacco Fact Sheet. Accessed at http://www.cdc.gov/tobacco/data_statistics/fact_sheets/health_effects/tobacco_related_mortality/ on October 19, 2016.

Community Resources

- To get help with tobacco cessation, call the Indiana Tobacco Quitline at 1-800-QUIT-NOW (1-800-784-8669) or visit www.in.gov/quitline/.
- To learn more about Indiana's Smoke Free Air Law, visit www.BreatheIndiana.com.
- To view the *Tips from a Former Smoker* public service announcements, visit http://www.cdc.gov/tobacco/campaign/tips/.
- Visit www.surgeongeneral.gov/initiatives/tobacco/index.html to read *The Health Consequences of Smoking — 50 Years of Progress. A Report of the Surgeon General.*
- To learn more about the lung cancer burden in Indiana, refer to the *Indiana Cancer Facts and Figures 2015: Lung Cancer* report at www.IndianaCancer.org.