

Lung and Bronchus Cancer

Definition: Lung cancer can form in the bronchi, alveoli, trachea, or bronchioles.¹ This cancer is assumed to develop over time, starting as small pre-cancerous changes and progressing to form masses or tumors.¹

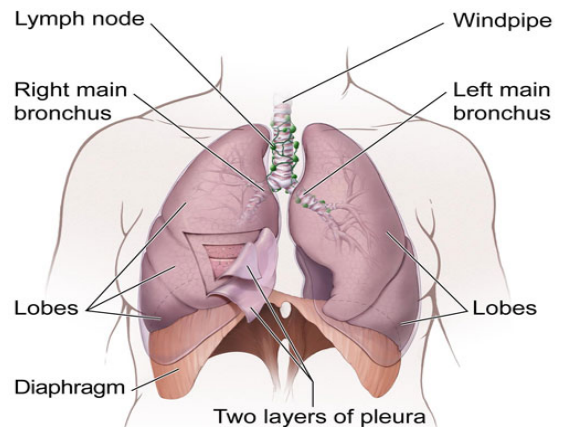
Background: From 2002 to 2006, there was a yearly average of approximately **9,212** newly diagnosed cases of lung and bronchus cancer in Ohio. During this same time period, Ohio experienced approximately **7,406** deaths each year due to lung and bronchus cancer.²

Lung Cancer is the leading cause of death in Ohio for both men and women.³ Morality rates for lung cancer in Ohio has decrease by 9% from 1991 to 2007, however the rates for both white females and African American females has increased.³

African American males had the highest rate of lung cancer deaths in 2007.³

Smoking is the most significant risk factor for developing lung cancer, and accounts for 87% of lung cancer deaths.³

Figure 14



Cuyahoga County Data:

- The average annual number of newly diagnosed lung and bronchus cancer cases from 2002-2006 was **1,142**, with an age-adjusted incidence rate of **70.7** per 100,000 people.
- This is **lower** than the **75.0** incidence rate for Ohio and **higher** than the **63.1** incidence rate for the Nation.
- The average annual number of lung and bronchus cancer deaths from 2002-2006 was **905**, with an age-adjusted mortality rate of **55.5** per 100,000 people.
- This is **lower** than the **60.2** mortality rate for Ohio and **higher** than the **53.4** mortality rate for the Nation.

Table 14a Lung and Bronchus Cancer

Average Annual Number of Cancer Cases and Age-adjusted Incidence Rates* for 2002-2006

Incidence	Male		Female		Total	
	Cases	Rate	Cases	Rate	Cases	Rate
Cuyahoga County	608	91.8	533	57.1	1,142	70.7
Ohio	5,107	96.7	4,105	59.6	9,212	75.0
National SEER		77.7		52.5		63.1

* Rate is calculated per 100,000 people.

Table 14b Lung and Bronchus Cancer

Average Annual Number of Cancer Deaths and Age-adjusted Mortality Rates* for 2002-2006

Mortality	Male		Female		Total	
	Cases	Rate	Cases	Rate	Cases	Rate
Cuyahoga County	504	76.6	400	41.8	905	55.5
Ohio	4,230	81.3	3,177	45.4	7,406	60.2
National SEER		70.5		40.9		53.4

* Rate is calculated per 100,000 people.

Figure 14a

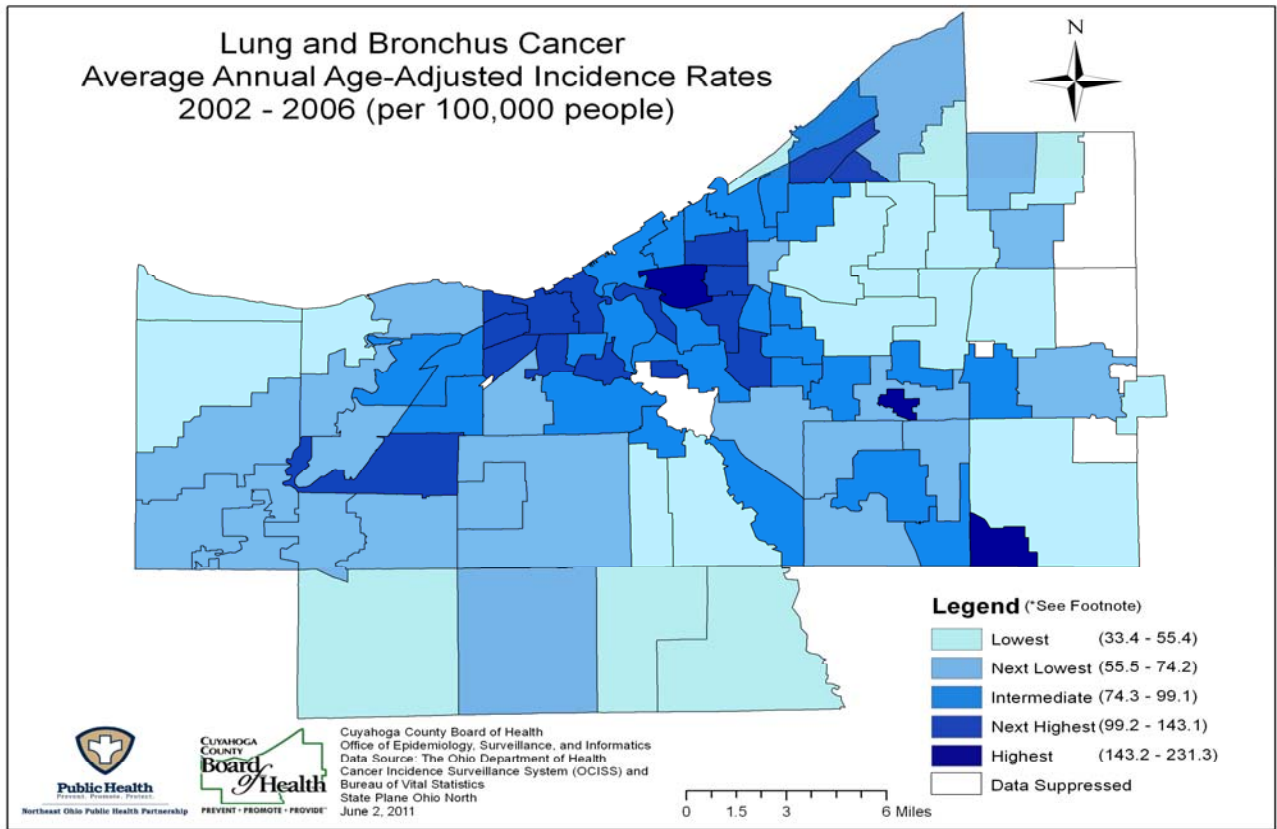
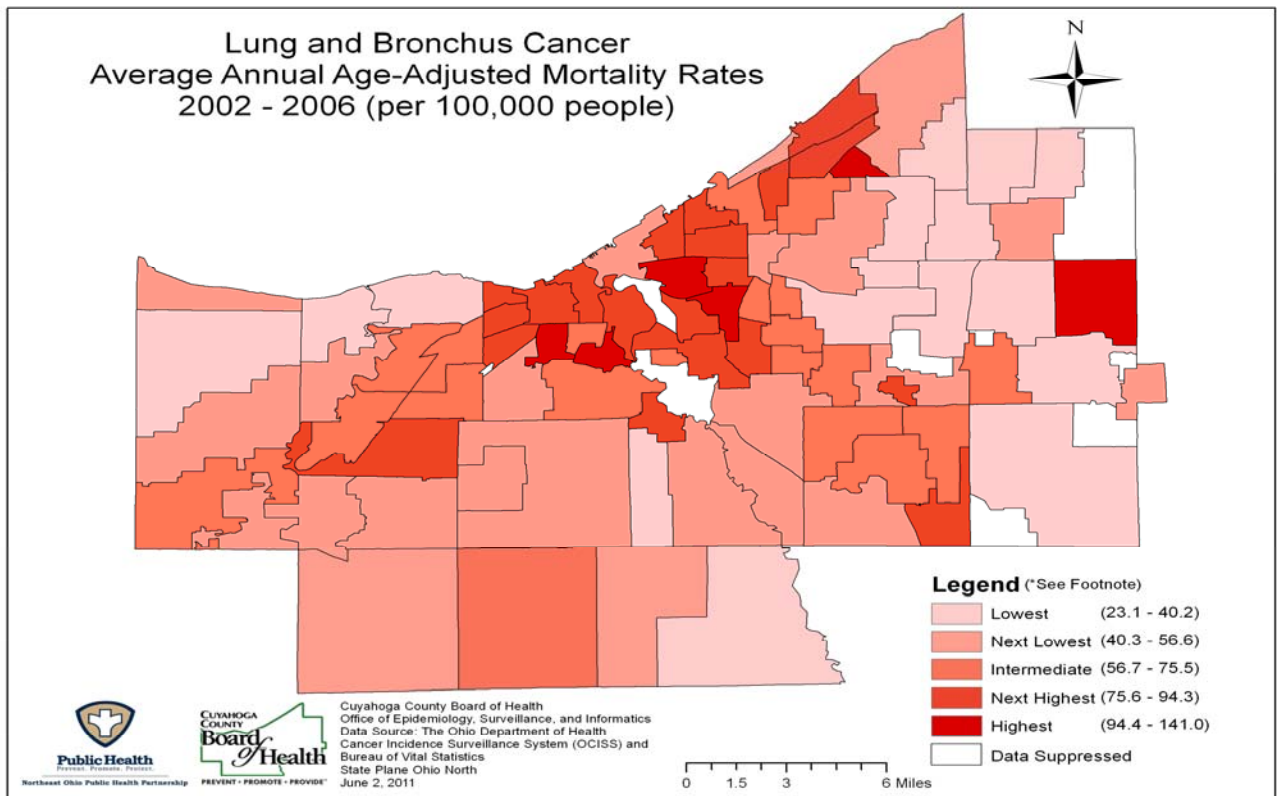


Figure 14b



*Data were suppressed to help maintain confidentiality and/or due to concerns over unstable numbers. See methods/limitations section for additional details.

Chart 14a

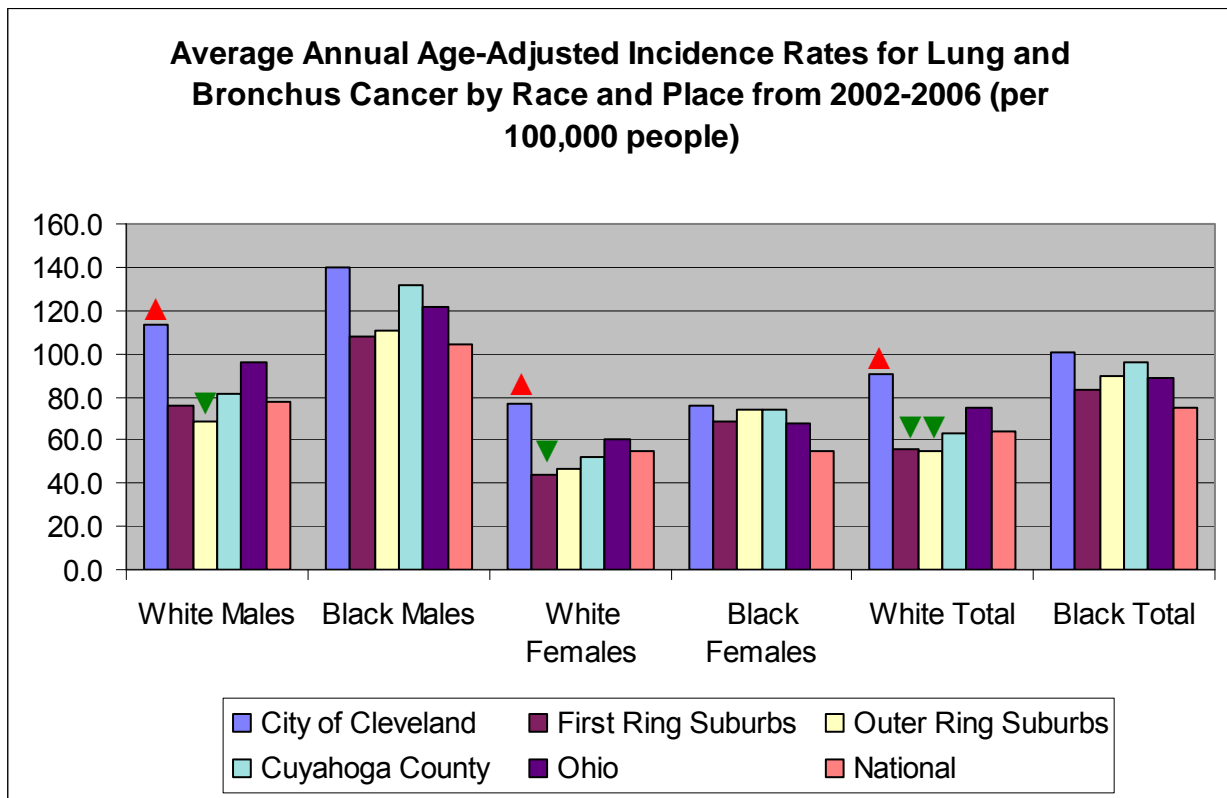
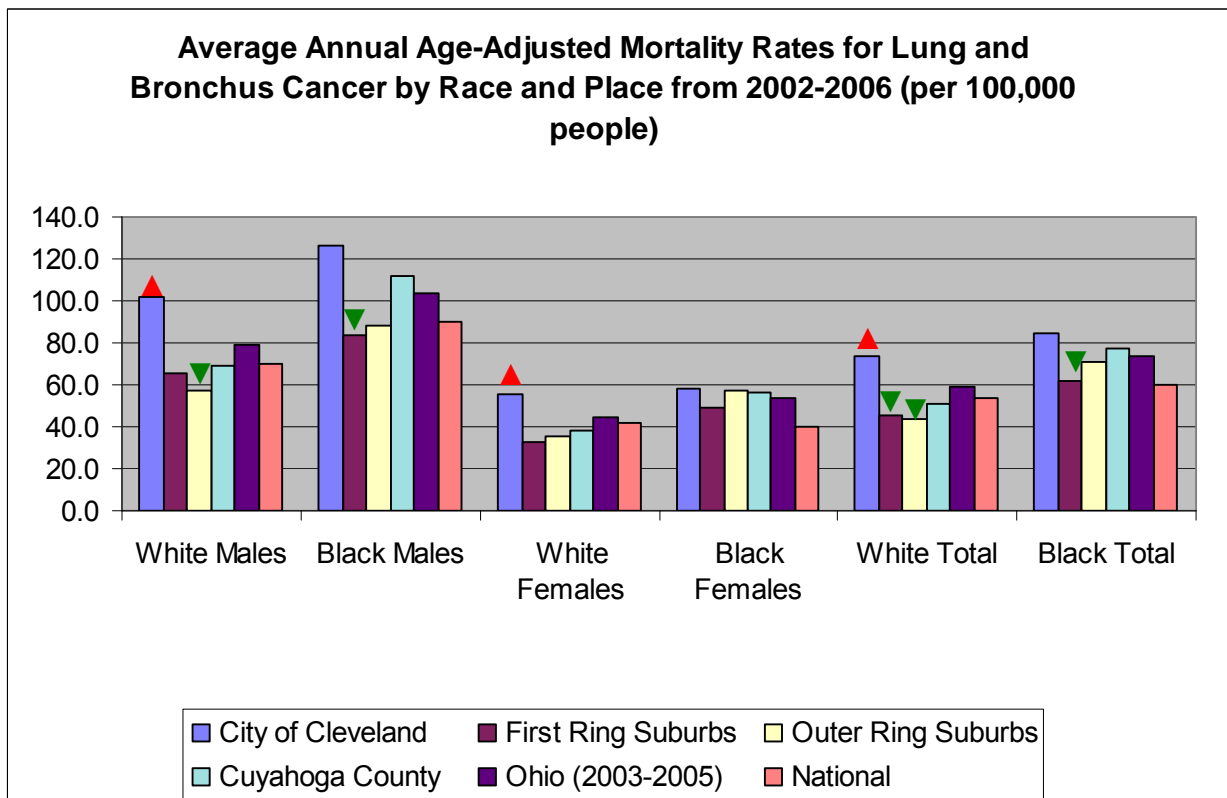


Chart 14b



▲ Rates are statistically significantly higher when compared to Cuyahoga County.

▼ Rates are statistically significantly lower when compared to Cuyahoga County.

■ Rates are not compared to Cuyahoga County when there are <20 cases total for 2002-2006 due to instability.

Risk Factors

Males: In the United States, 1 in 13 males will develop lung and bronchus cancer: and 1 in 14 males will die from lung and bronchus cancer.⁴

Females: In the United States, 1 in 16 females will develop lung and bronchus cancer: and 1 in 20 females will die from lung and bronchus cancer.⁴

Several risk factors may contribute to the development of lung and bronchus cancer: They include:⁵

- **Tobacco smoke**
- **Radon**
- **Asbestos**
- **Air pollution**
- **Family history of lung cancer**
- **Personal history of lung cancer**
- **Age over 65**

Symptoms⁵

- A cough that gets worse or does not go away
- Breathing trouble
- Constant chest pain
- Coughing up blood
- A hoarse voice
- Frequent lung infections (such as pneumonia)
- Fatigue
- Weight loss

Screening, Prevention and Early Detection¹

Screening:

There are currently no recommended screening tests available to detect lung and bronchus cancer. This may change in the near future as results from the National Lung Cancer Screening Trial (NLST) are analyzed. People who were smokers, are current smokers, have been exposed to secondhand smoke or have worked with materials that increase the risk of lung cancer should talk with a physician about lung cancer risks and screening methods that are currently being developed.

Prevention:

The best way to reduce the risk of lung cancer is to refrain from smoking and avoid breathing the smoke of others. The American Cancer Society also recommends having homes tested for radon, avoid being exposed to known cancer-causing chemicals, and eating a diet high in fruits and vegetables in order to decrease risk.

Staging

Stage at Diagnosis describes the severity of a person's cancer and the extent to which it has or has not spread throughout the body.⁶ Cancer staging is important in helping physicians plan appropriate treatment, as well as to estimate a patient's prognosis.⁶ Cancer diagnosed in the *in situ* and localized stages are generally referred to as early-stage tumors, whereas regional and distant tumors are referred to as late-stage tumors.² Detecting cancers at an early stage may increase long-term survival and can lead to a reduction in mortality.²

The National Cancer Institute groups staging into five main categories:⁶

- ***In situ***: Abnormal cells are present only in the layer of cells in which they developed. In this report, *in situ* cases are only included for bladder cancer.
- **Localized**: Cancer is limited to the organ in which it began, without evidence of spread.
- **Regional**: Cancer has spread beyond the primary site to nearby lymph nodes or organs and tissues.
- **Distant**: Cancer has spread from the primary site to distant organs or distant lymph nodes.
- **Unstaged/Unknown**: There is not enough information to determine the stage.

Chart 14c

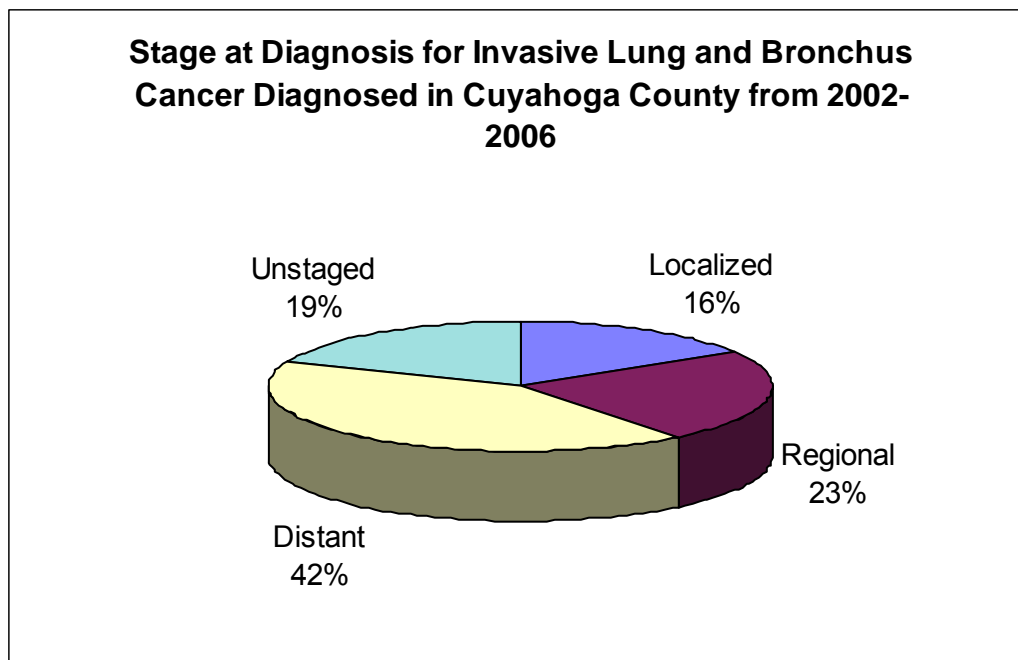


Table 14c

5-year Relative Survival*by Stage at Diagnosis for Lung and Bronchus Cancer in the United States 1999-2006, All Races, Both Sexes⁷	
Stage at Diagnosis	5-year Relative Survival (%)
Localized (confined to primary site)	52.9
Regional (spread to regional lymph nodes)	24.0
Distant (cancer has metastasized)	3.5
Unknown/Unstaged	8.7

*Relative survival compares observed survival for those with cancer to the expected survival for those without cancer.

Figure 14c

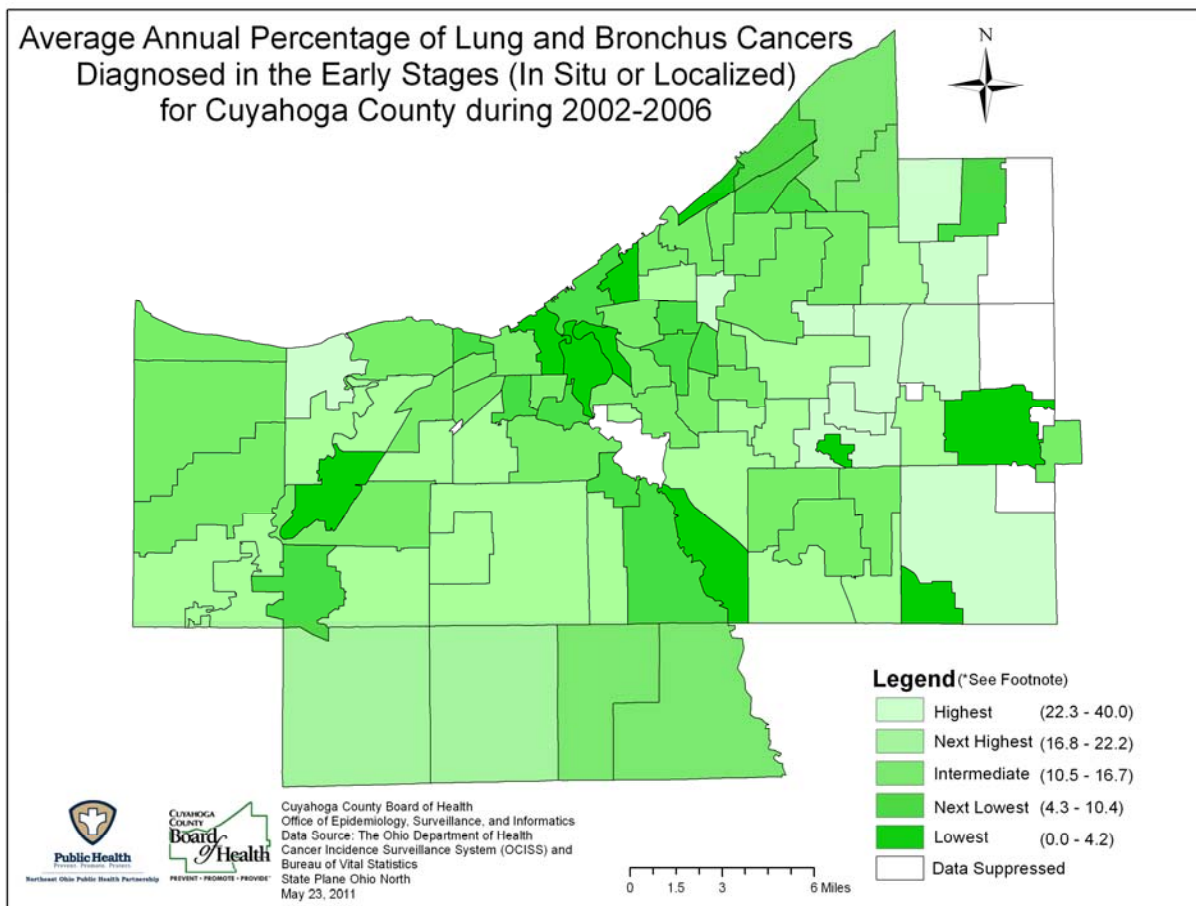
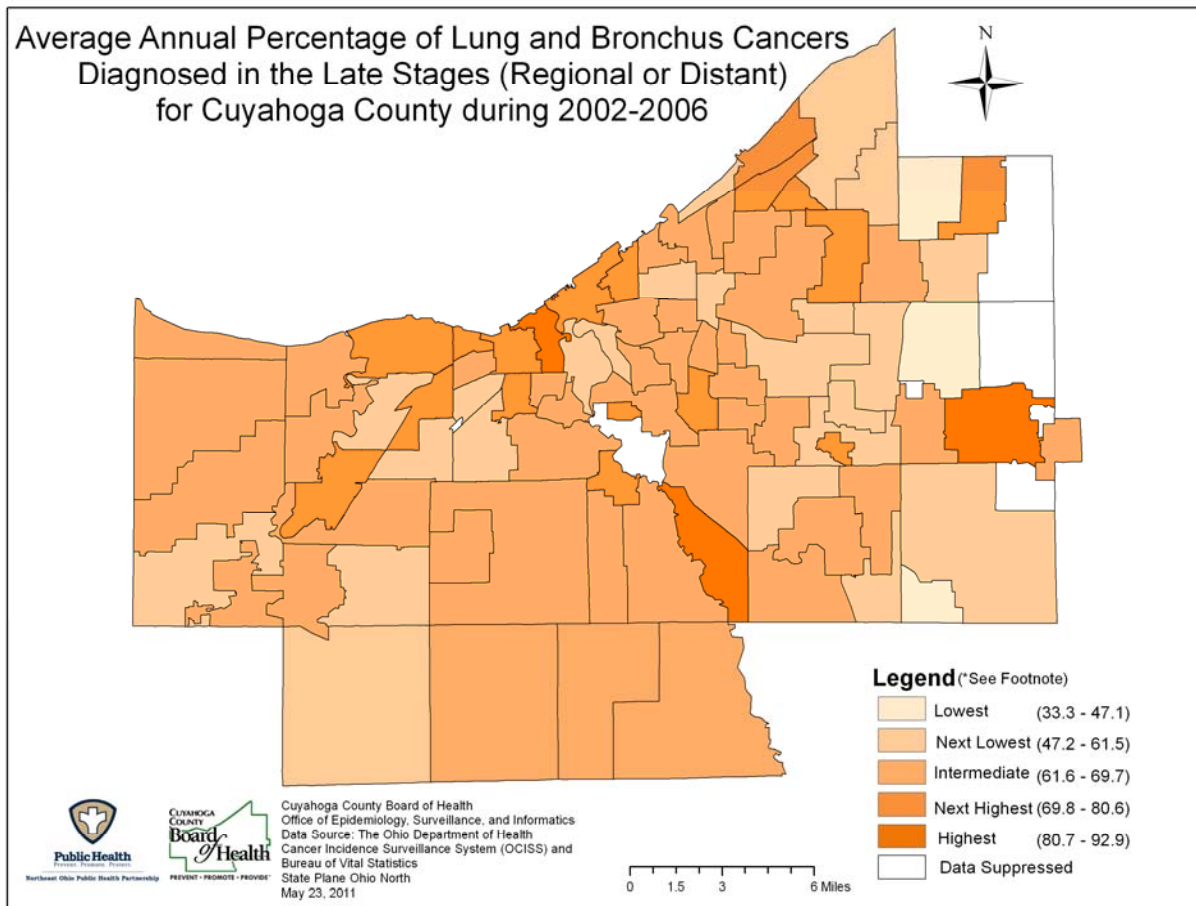


Figure 14d



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Chart 14d

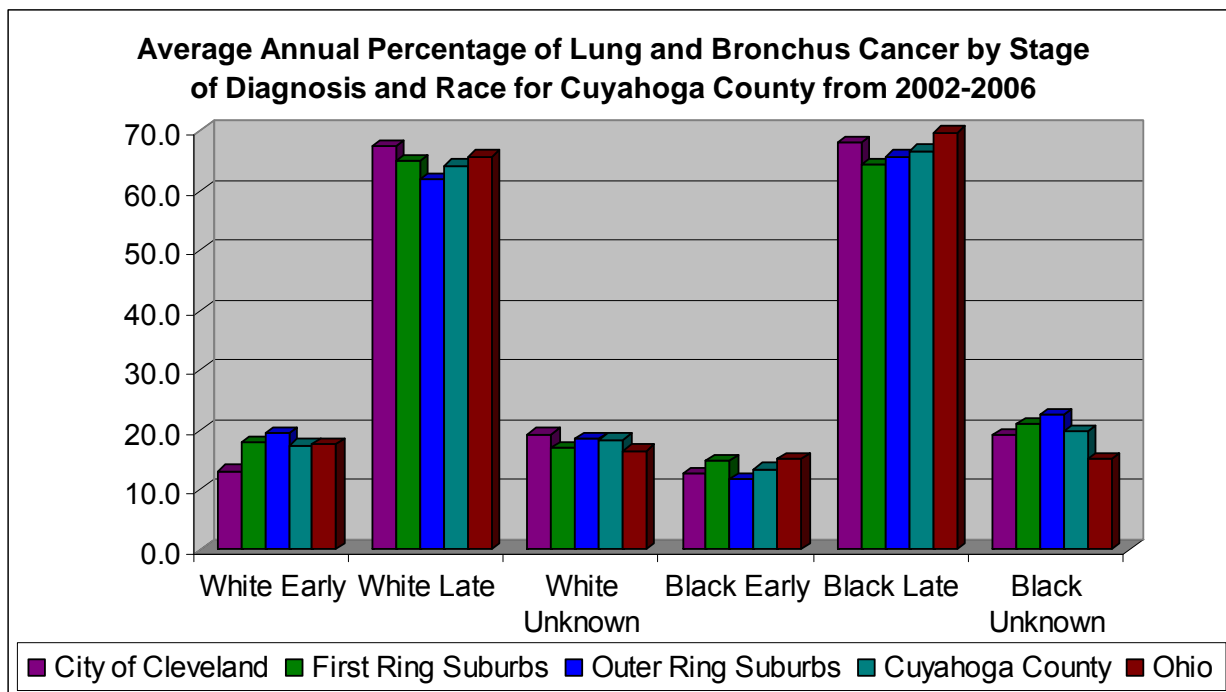
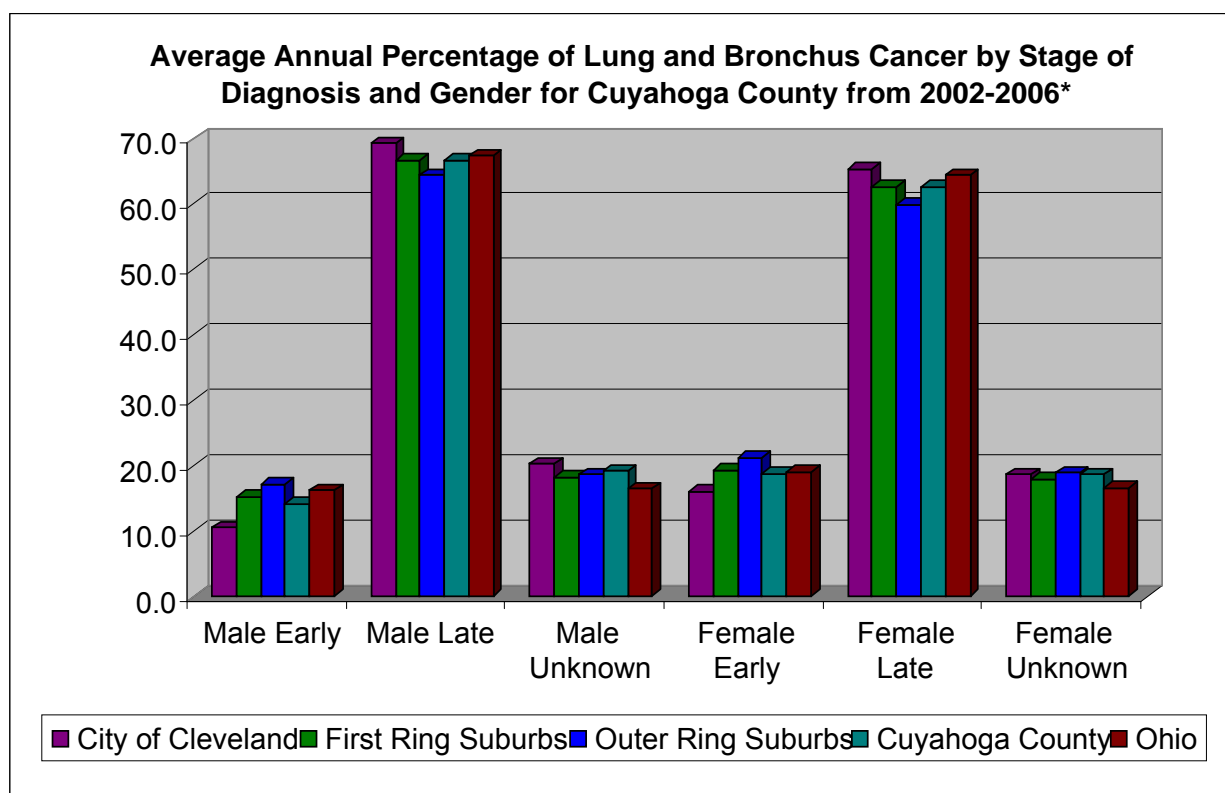


Chart 14e



*All races are included in staging calculations.

More Information

National Cancer Institute <http://www.cancer.gov/>

American Cancer Society <http://www.cancer.org>

Ohio Department of Health <http://www.odh.ohio.gov/>

Resources

1. The American Cancer Society. Lung Cancer (Non-Small Cell) Detailed Guide. <http://www.cancer.org/Cancer/LungCancer-SmallCell/DetailedGuide/small-cell-lung-cancer-what-is-small-cell-lung-cancer>. (Accessed December 15, 2010).
2. *Cancer Incidence and Mortality among Ohio Residents, 2002-2006*. Ohio Cancer Incidence Surveillance System, Ohio Department of Health and The Ohio State University, Columbus, Ohio, December 2009. http://www.odh.ohio.gov/ASSETS/79F9E92E210F477D885F8EAC864E2F27/0206Monograph_Final.pdf.
3. The Ohio Department of Health. Lung and Bronchus Cancer. <http://www.odh.ohio.gov/odhPrograms/pmlt/cancer/canctypes/lungc.aspx>. (Accessed December 15, 2010).
4. The American Cancer Society. Lifetime Risk of Developing or Dying From Cancer. <http://www.cancer.org/Cancer/CancerBasics/lifetime-probability-of-developing-or-dying-from-cancer>. (Accessed January 10, 2011).
5. National Cancer Institute. What you need to know about lung cancer. <http://www.cancer.gov/cancertopics/wyntk/lung/page4>. (Accessed December 15, 2010).
6. National Cancer Institute. Cancer Staging. <http://www.cancer.gov/cancertopics/factsheet/Detection/staging>. (Accessed December 23, 2010).
7. Surveillance Epidemiology and End Results. SEER Stat Fact Sheets: Lung and Bronchus. <http://seer.cancer.gov/statfacts/html/lungb.html>. (Accessed December 15, 2010).
8. National Cancer Institute. What you need to know about lung cancer. Lung Image from <http://www.cancer.gov/cancertopics/wyntk/lung/page2>. (Accessed December 15, 2010).