

Cervical Cancer

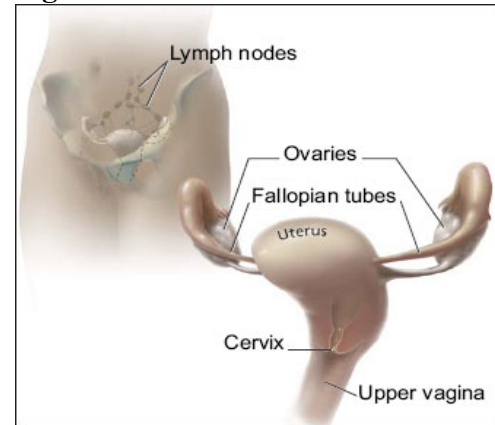
Definition: Cervical cancers begin in the lining of the cervix, which encompasses the lower part of the uterus.¹ Normal cells of the cervix can gradually develop pre-cancerous changes, that may eventually turn into cancer.¹ These changes can usually be detected by a Pap test.¹

Background: From 2002 to 2006, there was a yearly average of approximately **488** newly diagnosed cases of cervical cancer in Ohio.² During this same time period, Ohio experienced approximately **159** deaths each year due to cervical cancer.²

The rate of cervical cancer for African American females has declined by 8%, and the rate of cervical cancer for white females has declined by 21% from 1991 to 2007.²

The death rate from cervical cancer has declined by about 70% between 1955 and 1992.¹ The reason for this decline is attributed to the Pap test which can detect changes in the cervix prior to cancer developing, or early stages of cervical cancer that may be more treatable.¹

Figure 5



Cuyahoga County Data:

- The average annual number of newly diagnosed cervical cancer cases from 2002-2006 was **62**, with an age-adjusted incidence rate of **8.0** per 100,000 people.
- This is **the same as** the **8.0** incidence rate for Ohio and **lower** than the **8.2** incidence rate for the Nation.
- The average annual number of cervical cancer deaths from 2002-2006 was **18**, with an age-adjusted mortality rate of **2.2** per 100,000 people.
- This is **lower** than the **2.4** mortality rate for Ohio and **lower** than the **2.5** mortality rate for the Nation.

Table 5a Cervical 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			62	8.0	62	8.0
Ohio			488	8.0	488	8.0
National SEER				8.2		8.2

* Rate is calculated per 100,000 people.

Table 5b Cervical 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			18	2.2	18	2.2
Ohio			159	2.4	159	2.4
National SEER				2.5		2.5

* Rate is calculated per 100,000 people.

Figure 5a

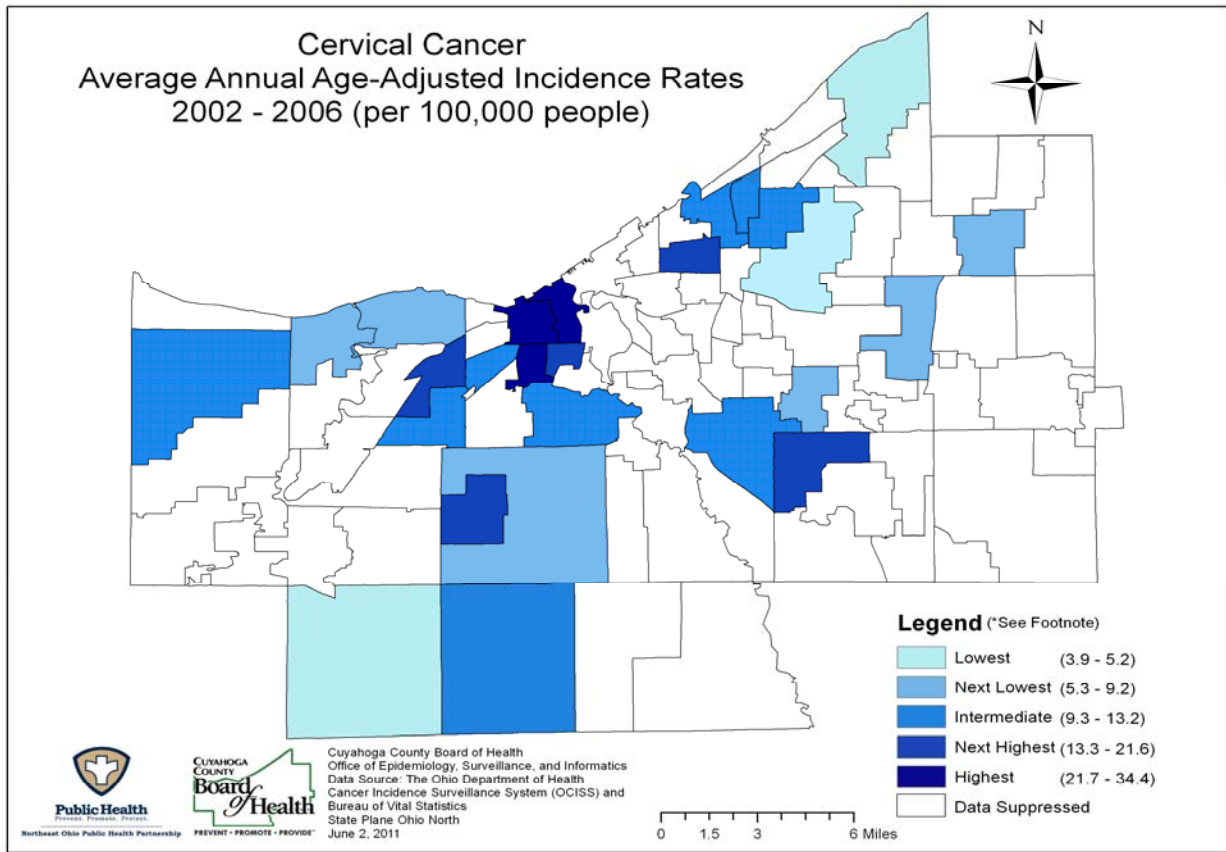
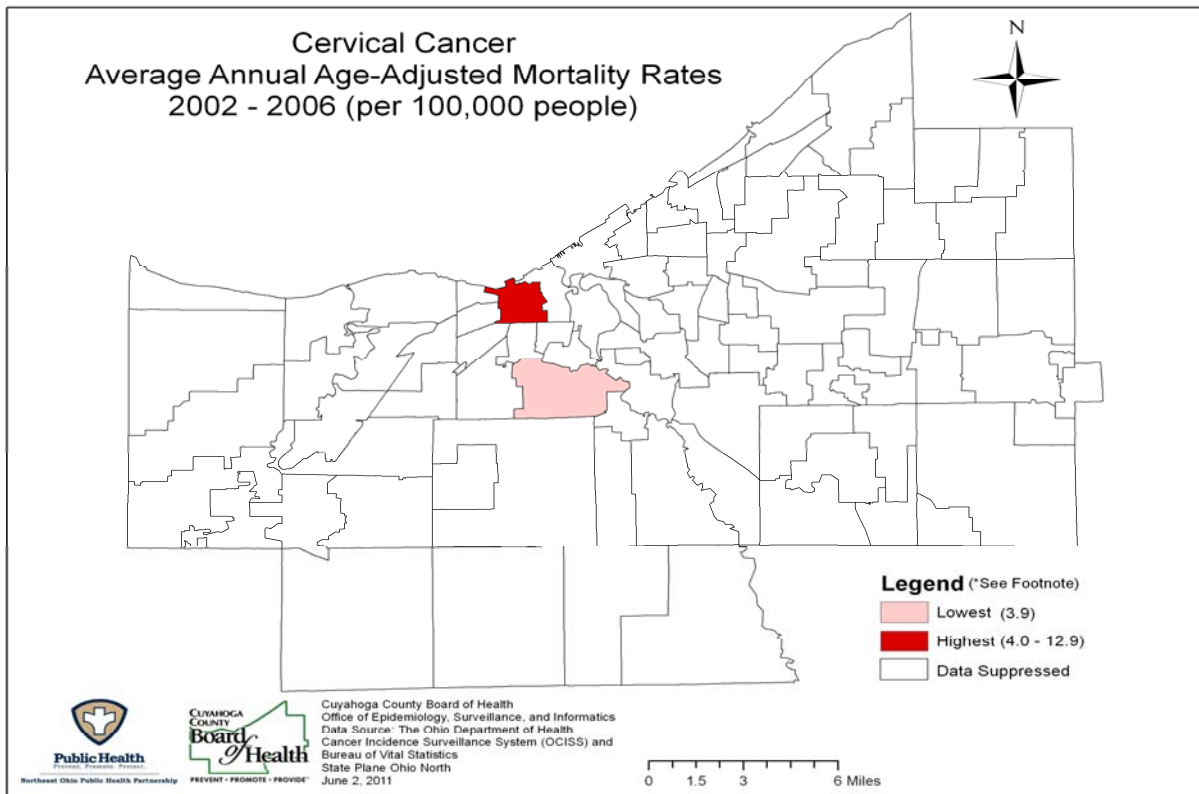


Figure 5b



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

Chart 5a

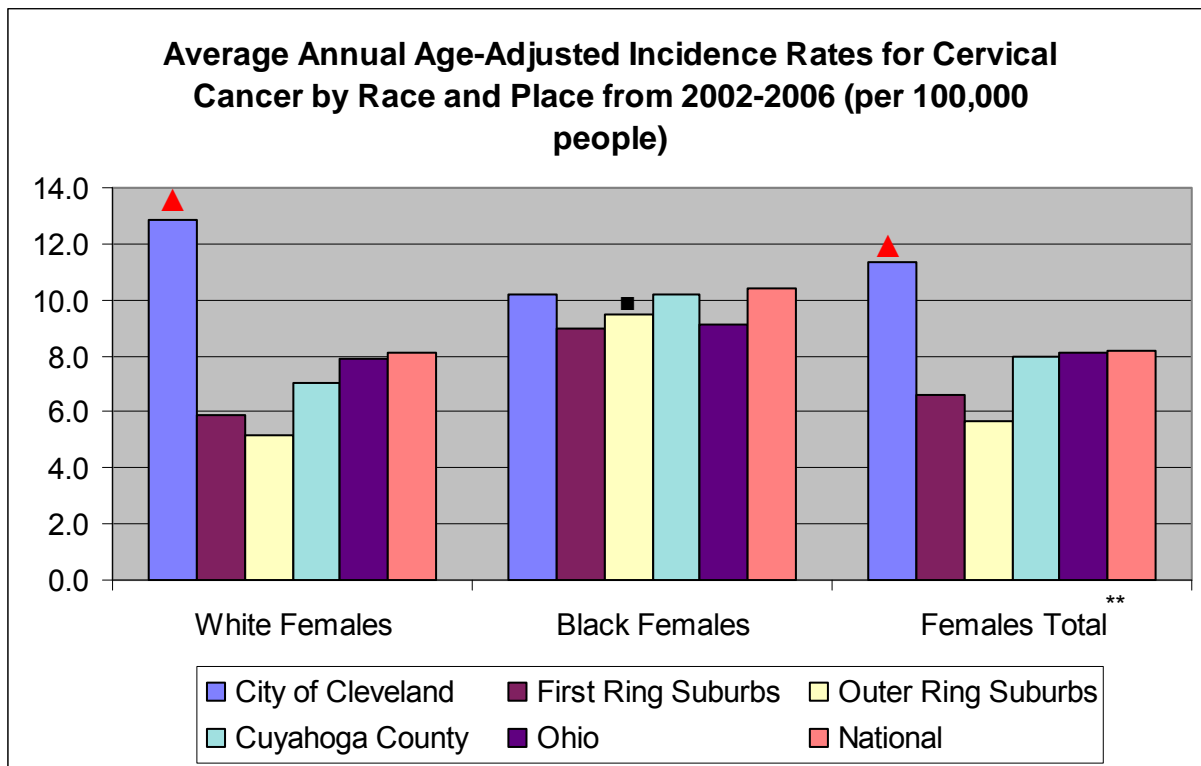
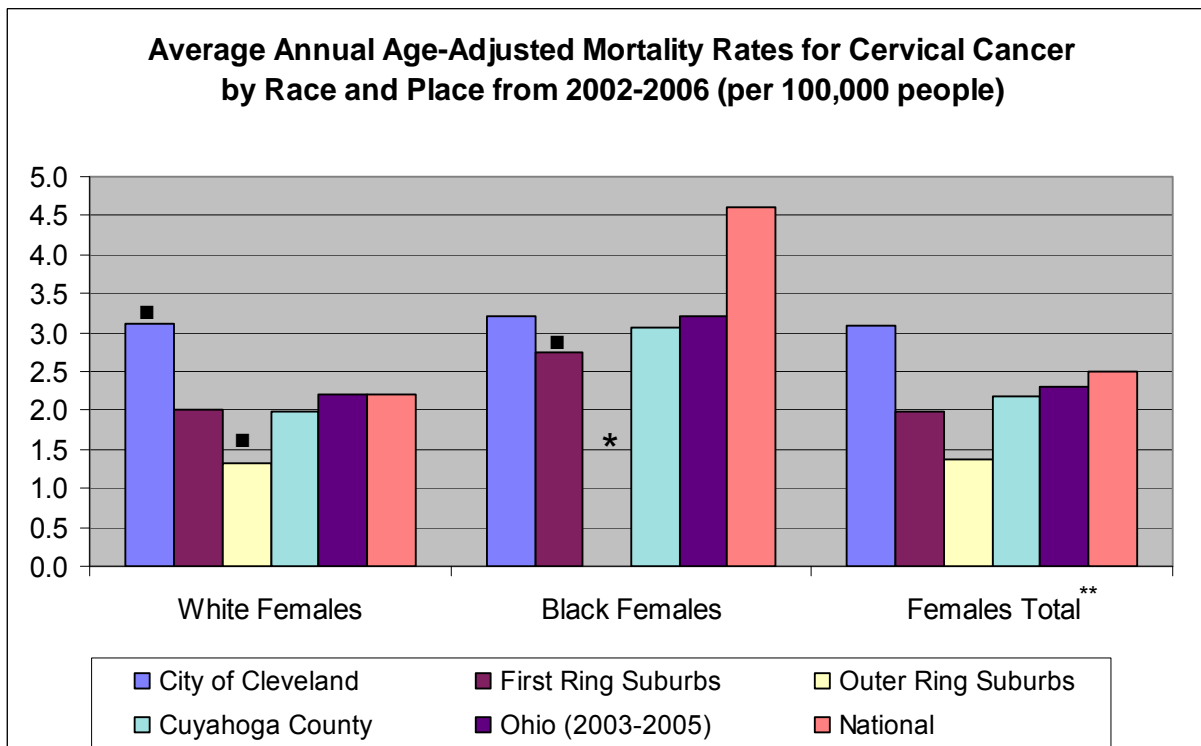


Chart 5b



▲ 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.

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**All races are included in the age-adjusted rate calculations and confidence interval analyses for total females.

Risk Factors

Females: In the United States, 1 in 147 females will develop cervical cancer and 1 in 417 females will die from cervical cancer.³

Several risk factors may contribute to the development of cervical cancer. They include:¹

- **Human papilloma virus infection (HPV)**
- **Smoking**
- **Immunosuppression**
- **Chlamydia infection**
- **Diet**
- **Oral contraceptives**
- **Multiple full-term pregnancies**
- **Young age at the first full-term pregnancy**
- **Poverty**
- **Diethylstilbestrol (DES).** DES was a hormonal drug given to some women to prevent miscarriage between 1940 and 1971.
- **Family history of cervical cancer.**

Symptoms¹

- Abnormal vaginal bleeding
- An unusual discharge from the vagina
- Pain during sex (vaginal intercourse)
- Vaginal bleeding after sexual intercourse

Screening, Prevention and Early Detection^{1,4}

Screening:

Screening tests offer the best chance to detect cervical cancers early, when treatment will be most successful. Screening can also prevent most cervical cancers by treating abnormal pre-cancerous cells before they turn into cervical cancer. Pap smear tests are recommended at least every 3 years after a woman turns 21 or three years after a woman begins having sexual intercourse.

Regular Pap smear screening has had a significant effect on the cervical cancer death rate in the United States, as it declined by 65% between 1955 and 1992. However, 60% to 80% of American women who are diagnosed with invasive cervical cancer have not had a Pap test in the past 5 years.

Prevention:

There are several things that can be done to prevent pre-cancers that may lead to cervical cancer. The American Cancer Society recommends avoiding exposure to HPV, getting vaccinated for HPV, and refraining from smoking. Administration of the HPV vaccine is recommended for adolescents and young adults, girls/young women and boys/young men.

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.⁵ Cancer staging is important in helping physicians plan appropriate treatment, as well as to estimate a patient’s prognosis.⁵ 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:⁵

- ***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 5c

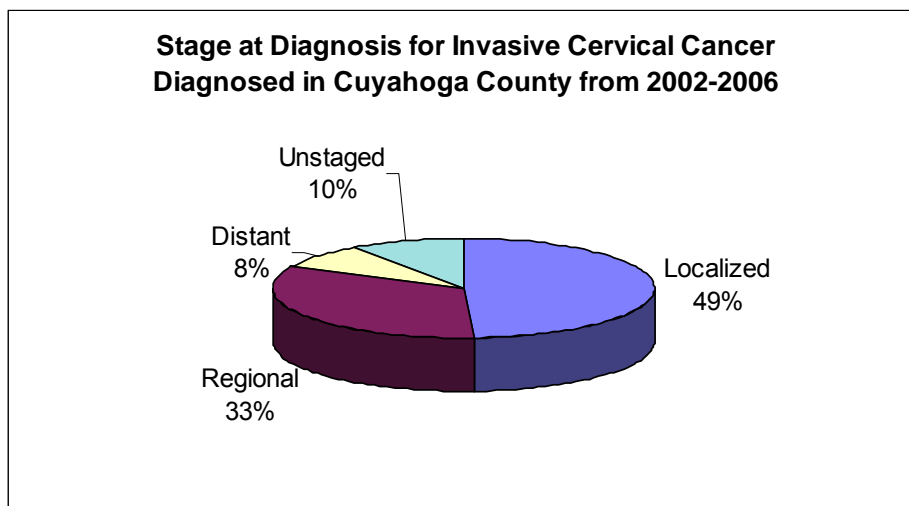


Table 5c

Stage at Diagnosis	5-year Relative Survival (%)
Localized (confined to primary site)	91.2
Regional (spread to regional lymph nodes)	57.8
Distant (cancer has metastasized)	17.0
Unknown/Unstaged	58.1

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

Figure 5c

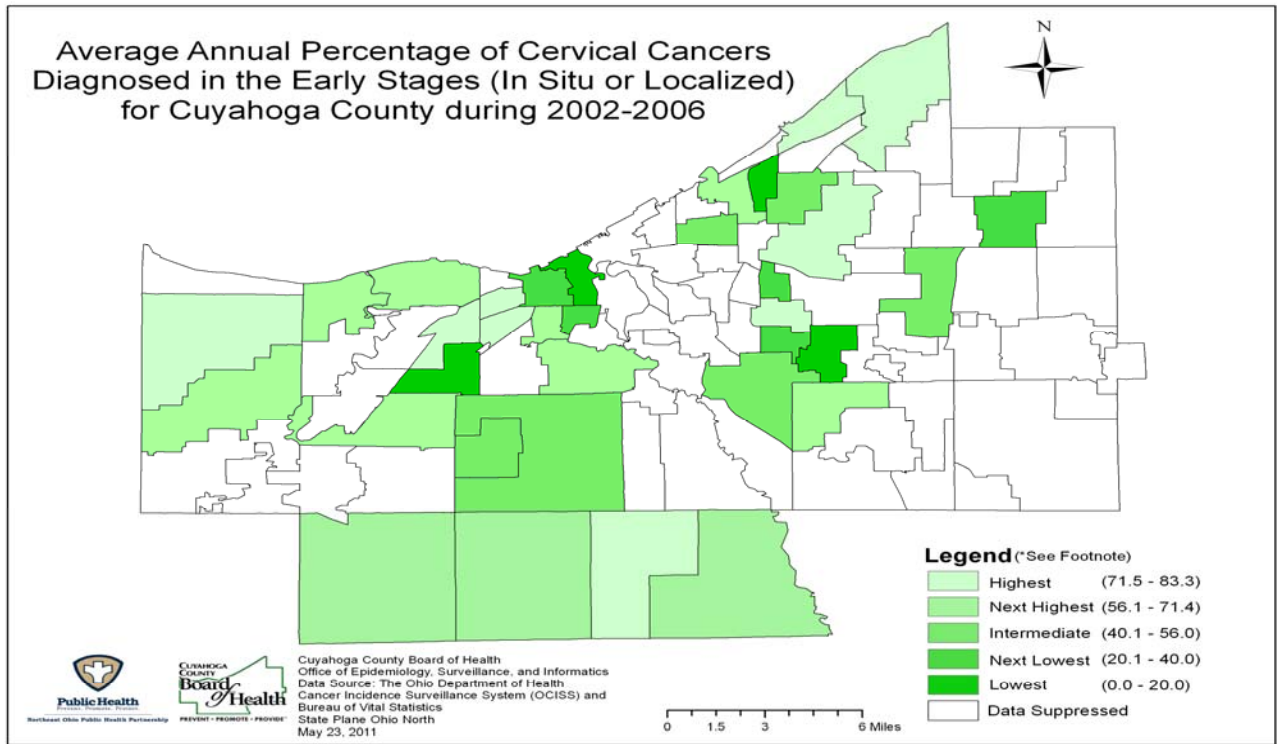
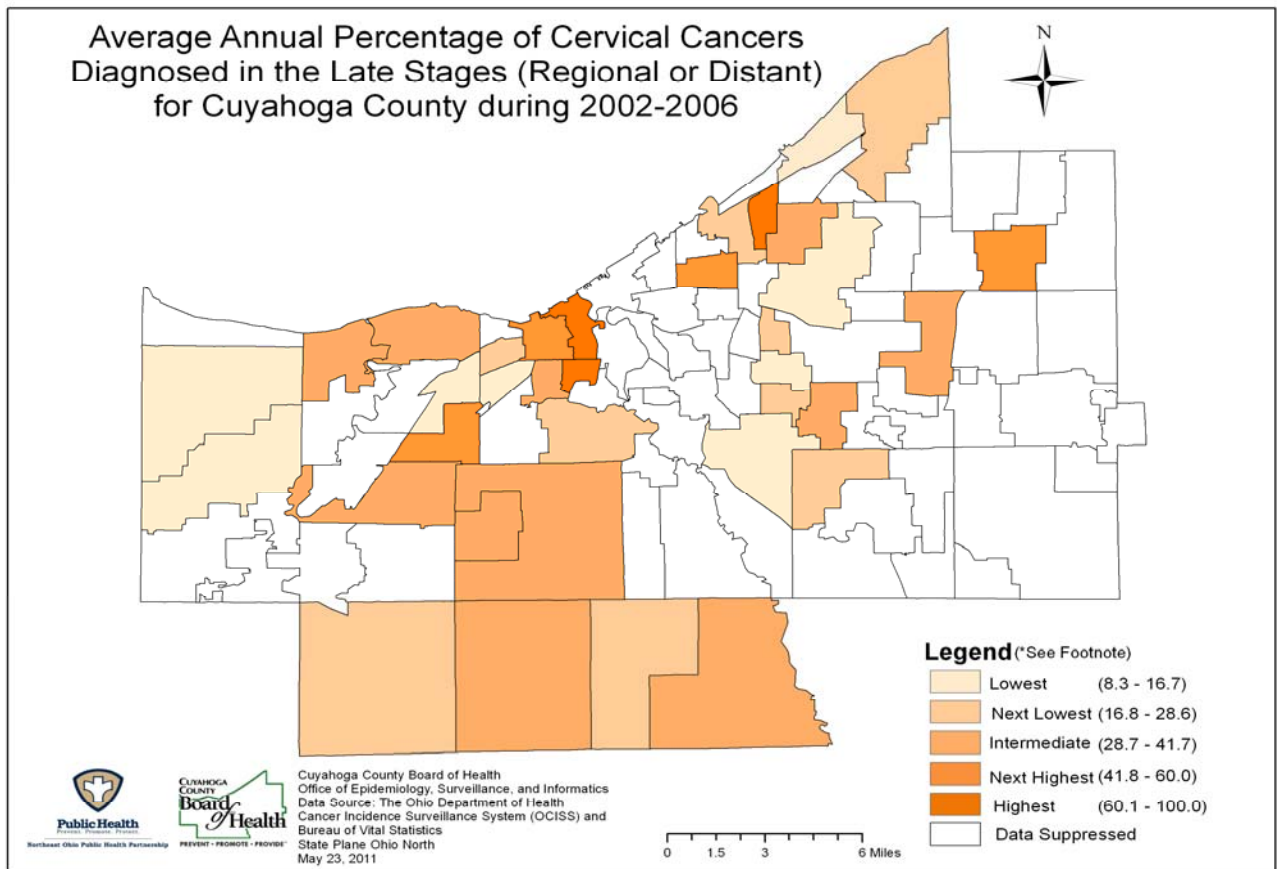
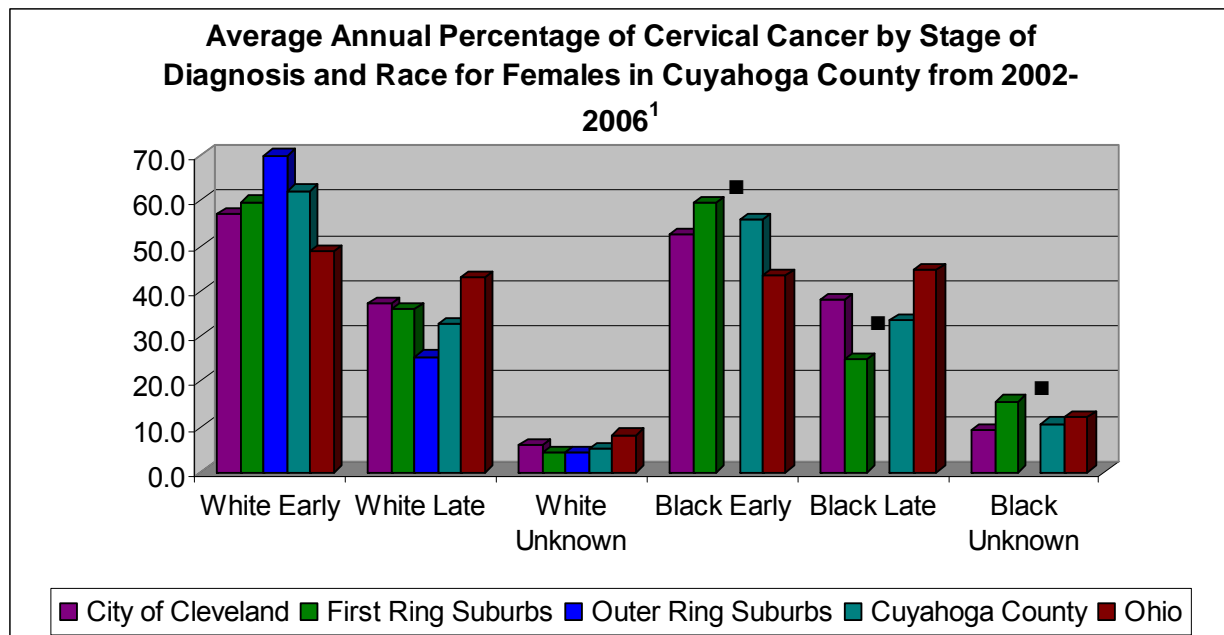


Figure 5d



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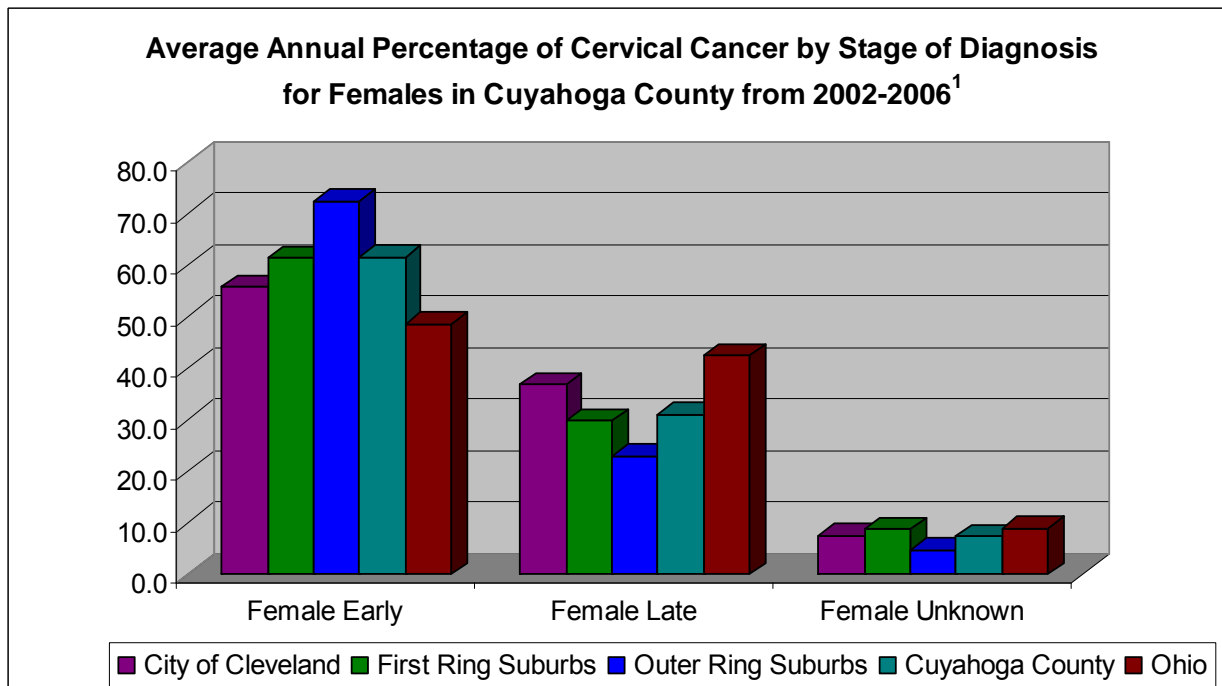
Chart 5d



¹*In Situ* cervical cancers are not required to be reported to OCISS, and therefore are not included in this analysis. See methods/limitations section for additional details.

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

Chart 5e



¹All races are included in the age-adjusted rate calculations and confidence interval analyses for total females.

More information

The Cuyahoga County Board of Health Breast and Cervical Cancer Project

<http://www.ccbh.net/ccbh/opencms/CCBH/modules/services/BreastCervicalCancer.html>

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. Cervical Cancer Detailed Guide. <http://www.cancer.org/cancer/cervicalcancer/index>. (Accessed December 10, 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 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).
4. Case Comprehensive Cancer Center <http://cancer.case.edu/> and Seidman Cancer Center Recommendations <http://www.uhhospitals.org/irelandcancer/tabid/800/uhseidmancancercenter.aspx> (February, 2011).
5. National Cancer Institute. Cancer Staging. <http://www.cancer.gov/cancertopics/factsheet/Detection/staging>. (Accessed December 23, 2010).
6. Surveillance Epidemiology and End Results. SEER Stat Fact Sheets: Cervix Uteri. <http://seer.cancer.gov/statfacts/html/cervix.html#survival>. (Accessed December 10, 2010).
7. National Cancer Institute. What you need to know about cervical cancer. Cervical images from <http://www.cancer.gov/cancertopics/wyntk/cervix/page2>. (Accessed December 10, 2010).