

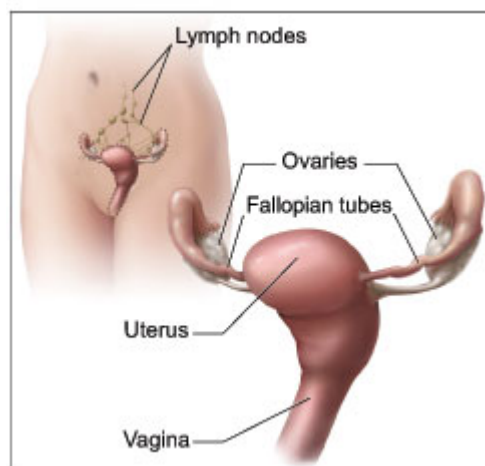
# Cancer of the Ovary

**Definition:** Ovarian cancer begins in the tissues of the ovaries.<sup>1</sup> Several different types of tumors can develop in the ovaries, those being benign or malignant.<sup>1</sup>

**Background:** From 2002 to 2006, there was a yearly average of approximately **826 newly** diagnosed cases of ovarian cancer in Ohio.<sup>2</sup> During this same time period, Ohio experienced approximately **611** deaths each year due to ovarian cancer.<sup>2</sup>

Ovarian cancer is the ninth most common cancer among women and it ranks fifth in cancer deaths.<sup>1</sup> The rate of diagnosis for this cancer has been decreasing over the last 20 years.<sup>1</sup> Ovarian cancer is more common in white women than African-American women.<sup>1</sup>

**Figure 19**



**Cuyahoga County Data:**

- The average annual number of newly diagnosed ovarian cancer cases from 2002-2006 was **107**, with an age-adjusted incidence rate of **12.3** per 100,000 people.
- This is **the same as** the **12.3** incidence rate for Ohio and **lower** than the **13.1** incidence rate for the Nation.
- The average annual number of ovarian cancer deaths from 2002-2006 was **81**, with an age-adjusted mortality rate of **8.7** per 100,000 people.
- This is **the same as** the **8.7** mortality rate for Ohio and **lower** than the **8.8** mortality rate for the Nation.

**Table 19a Ovarian 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
<b>Cuyahoga County</b>			107	12.3	107	12.3
<b>Ohio</b>			826	12.3	826	12.3
<b>National SEER</b>				13.1		13.1

\* Rate is calculated per 100,000 people.

**Table 19b Ovarian 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
<b>Cuyahoga County</b>			81	8.7	81	8.7
<b>Ohio</b>			611	8.7	611	8.7
<b>National SEER</b>				8.8		8.8

\* Rate is calculated per 100,000 people.

Figure 19a

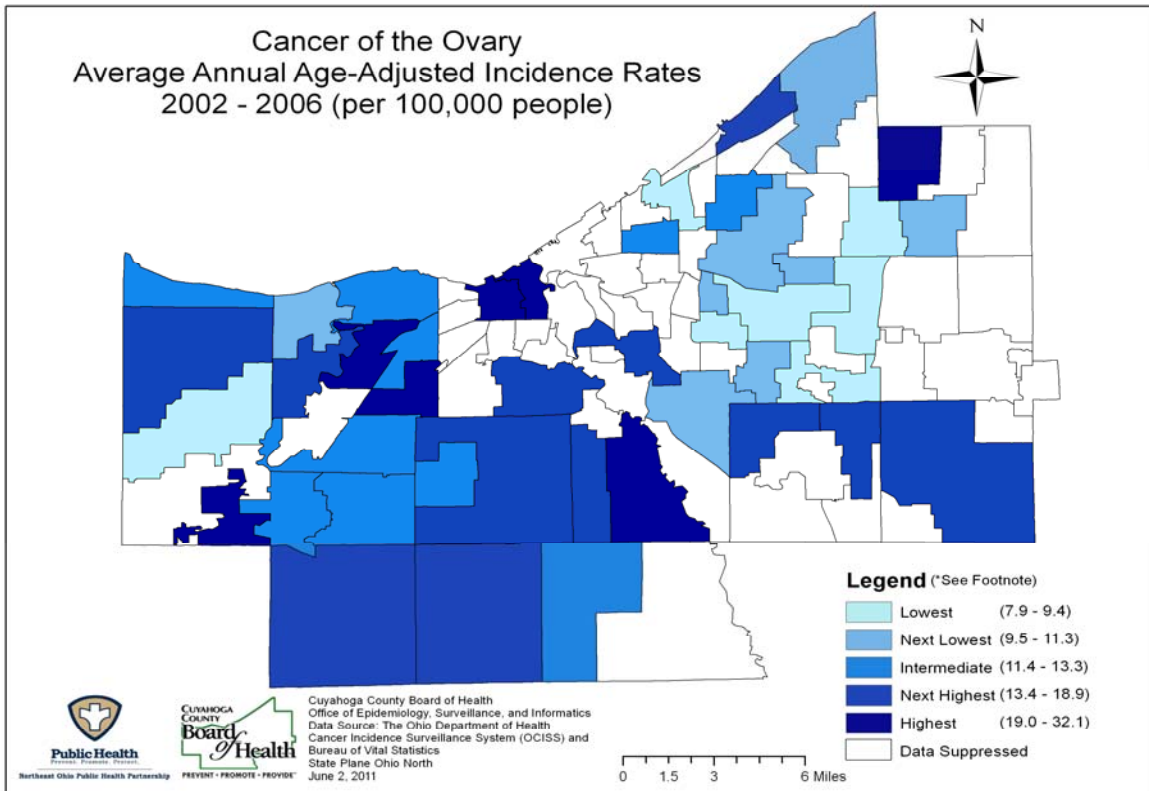
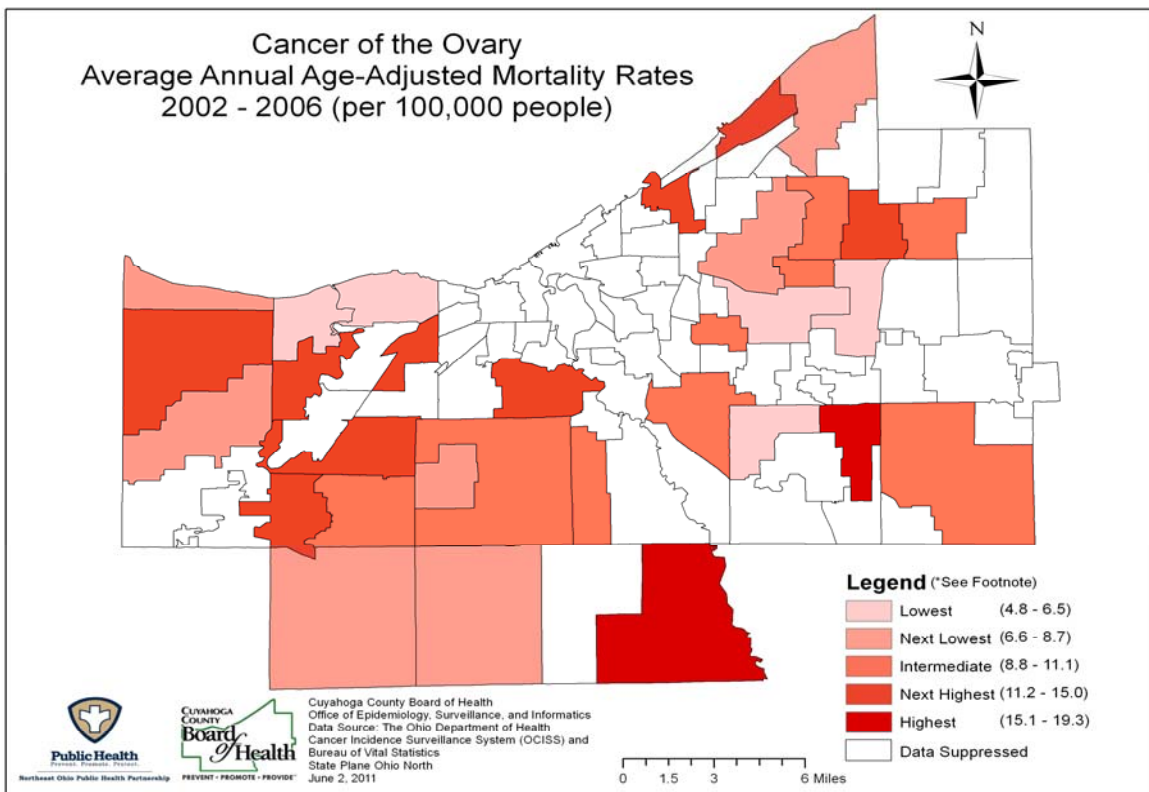
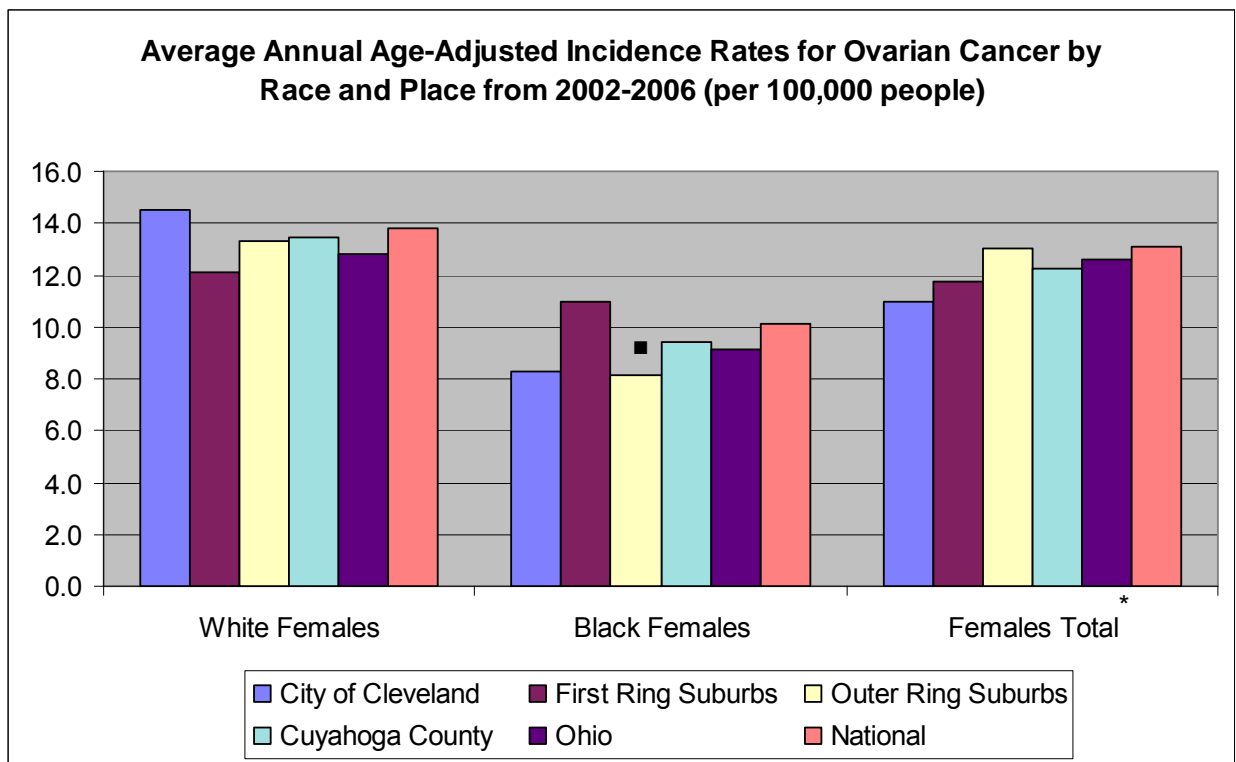


Figure 19b

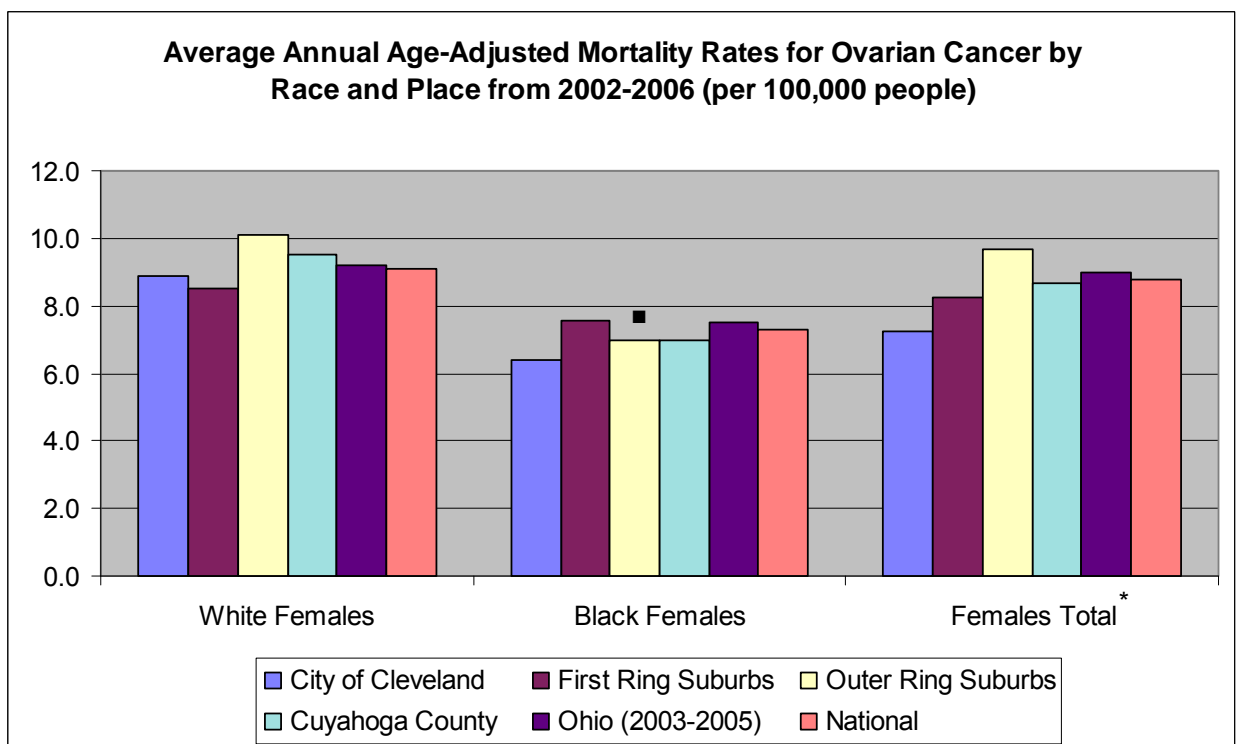


\*Data were suppressed to help maintain confidentiality and/or due to concerns over unstable numbers. See methods/limitations section for additional details.

**Chart 19a**



**Chart 19b**



- ▲ 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.
- \*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 72 females will develop ovarian cancer and 1 in 96 females will die from ovarian cancer.<sup>3</sup>

Several risk factors may contribute to the development of ovarian cancer. They include:<sup>1</sup>

- **Age-** Most ovarian cancers develop after menopause.
- **Obesity**
- **Reproductive history-** Women who have had children have a **lower** risk of developing ovarian cancer.
- **Gynecologic surgery-** Tubal ligation or hysterectomy may **reduce** the risk of ovarian cancer.
- **Fertility drugs**
- **Androgens**
- **Estrogen therapy and hormone therapy**
- **Family history of ovarian, breast, or colorectal cancer**
- **Personal history of breast cancer**
- **Talcum powder**
- **Diet-** Low fat diets have been shown to **lower** the risk of ovarian cancer.
- **Smoking and alcohol use**

## Symptoms<sup>4</sup>

- Pressure or pain the abdomen, pelvis, back, or legs
- Bloating abdomen
- Nausea, indigestion, gas, constipation, diarrhea
- Fatigue
- Shortness of breath
- Unusual vaginal bleeding
- Feeling the need to urinate often

## Screening, Prevention and Early Detection

### Screening:<sup>1</sup>

Ninety-four percent of patients live longer than 5 years if ovarian cancer is found early (at a localized stage). Currently, about 20% of ovarian cancers are found at an early stage. Regular women's health exams that include a pelvic exam by a health care professional can assist in diagnosing ovarian cancer at an early stage.

Two screening tests are available for women who are at high risk of developing ovarian cancer. One is transvaginal sonography which is an ultrasound used to find masses in the ovaries. The second test is a blood test called CA-125. CA-125 is a protein in the blood that is elevated in women with ovarian cancer. While the link between CA-125 and ovarian cancer has been established, this protein can be elevated in women with health conditions other than ovarian cancer.

## Prevention:<sup>1</sup>

Ovarian cancer may not be preventable and reducing common known risk factors may decrease risk only very slightly. It is important to see a physician if symptoms of ovarian cancer are present. Currently there are no practical methods of reducing risk factors to prevent ovarian cancer, but some things that may reduce risk are:

- Oral contraceptives
- Gynecologic surgery
  - Hysterectomy
  - Tubal ligation
- Genetic counseling

## 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.<sup>5</sup> Cancer staging is important in helping physicians plan appropriate treatment, as well as to estimate a patient's prognosis.<sup>5</sup> 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.<sup>2</sup> Detecting cancers at an early stage may increase long-term survival and can lead to a reduction in mortality.<sup>2</sup>

The National Cancer Institute groups staging into five main categories:<sup>5</sup>

- ***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 19c

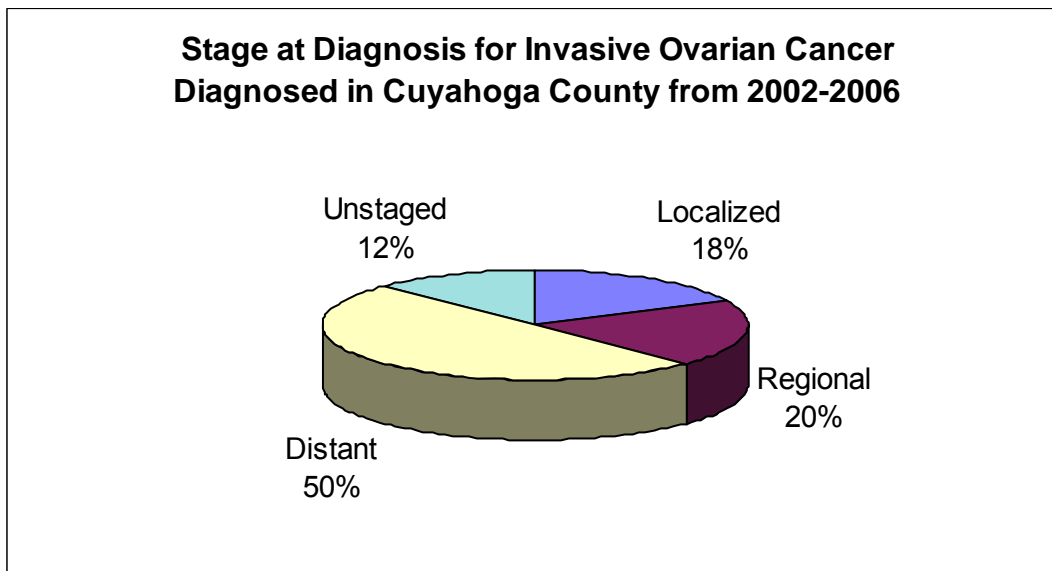


Table 19c

<b>5-year Relative Survival* by Stage at Diagnosis for Ovarian Cancer in the United States for 1999-2006, All Races, Both Sexes<sup>6</sup></b>	
<b>Stage at Diagnosis</b>	<b>5-year Relative Survival (%)</b>
Localized (confined to primary site)	93.5
Regional (spread to regional lymph nodes)	73.4
Distant (cancer has metastasized)	27.6
Unknown/Unstaged	27.2

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

## 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. Ovarian Cancer Detailed Guide <http://www.cancer.org/Cancer/OvarianCancer/DetailedGuide/index>. (Accessed December 21, 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](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. National Cancer Institute. What you need to know about ovarian cancer. <http://www.cancer.gov/cancertopics/wyntk/ovary/>. (Accessed December 21, 2010).
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: Ovary. <http://seer.cancer.gov/statfacts/html/oralcav.html>. (Accessed December 21, 2010).
7. National Cancer Institute. What you need to know about ovarian cancer. Ovary images from <http://www.cancer.gov/cancertopics/wyntk/ovary/page2>. (Accessed December 21, 2010).