

Cancer of the Pancreas

Definition: Cancer of the pancreas forms in either the exocrine cells or the endocrine cells that make up the pancreas.¹ Exocrine tumors make up the majority of pancreatic cancer.¹ Endocrine tumors are much less common.¹

Background: From 2002 to 2006, there was a yearly average of approximately **1,353** newly diagnosed cases of pancreatic cancer in Ohio.² During this same time period, Ohio experienced **1,331** deaths each year due to pancreatic cancer.²

Although pancreatic cancer remains the fourth leading cause of death, the rates of incidence have dropped slightly over the past two decades.¹ The lifetime risk of developing pancreatic cancer is 1 in 71, for both males and females.¹

Cuyahoga County Data:

- The average annual number of newly diagnosed pancreatic cancer cases from 2002-2006 was **199**, with an age-adjusted incidence rate of **12.3** per 100,000 people.
- This is **higher** than the **10.9** incidence rate for Ohio and **higher** than the **11.7** incidence rate for the Nation.
- The average annual number of pancreatic cancer deaths from 2002-2006 was **193**, with an age-adjusted mortality rate of **11.7** per 100,000 people.
- This is **higher** than the **10.7** mortality rate for Ohio and **higher** than the **10.7** mortality rate for the Nation.

Table 20a Pancreatic 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 | 92 | 14.1 | 108 | 10.9 | 199 | 12.3 |
| Ohio | 665 | 12.5 | 688 | 9.6 | 1,353 | 10.9 |
| National SEER | | 13.1 | | 10.4 | | 11.7 |

* Rate is calculated per 100,000 people.

Table 20b Pancreatic 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 | 89 | 13.6 | 105 | 10.3 | 193 | 11.7 |
| Ohio | 650 | 12.4 | 680 | 9.4 | 1,331 | 10.7 |
| National SEER | | 12.3 | | 9.3 | | 10.7 |

* Rate is calculated per 100,000 people.

Figure 20a

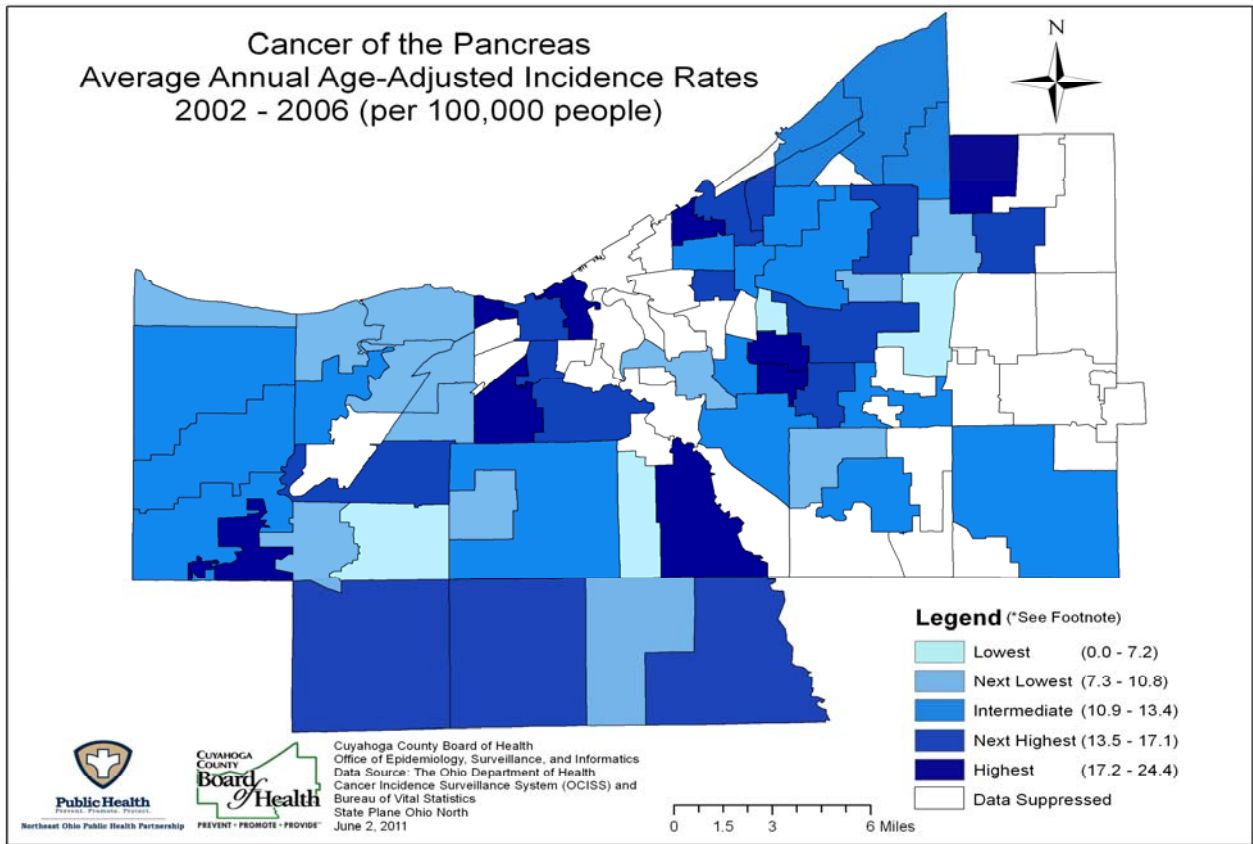
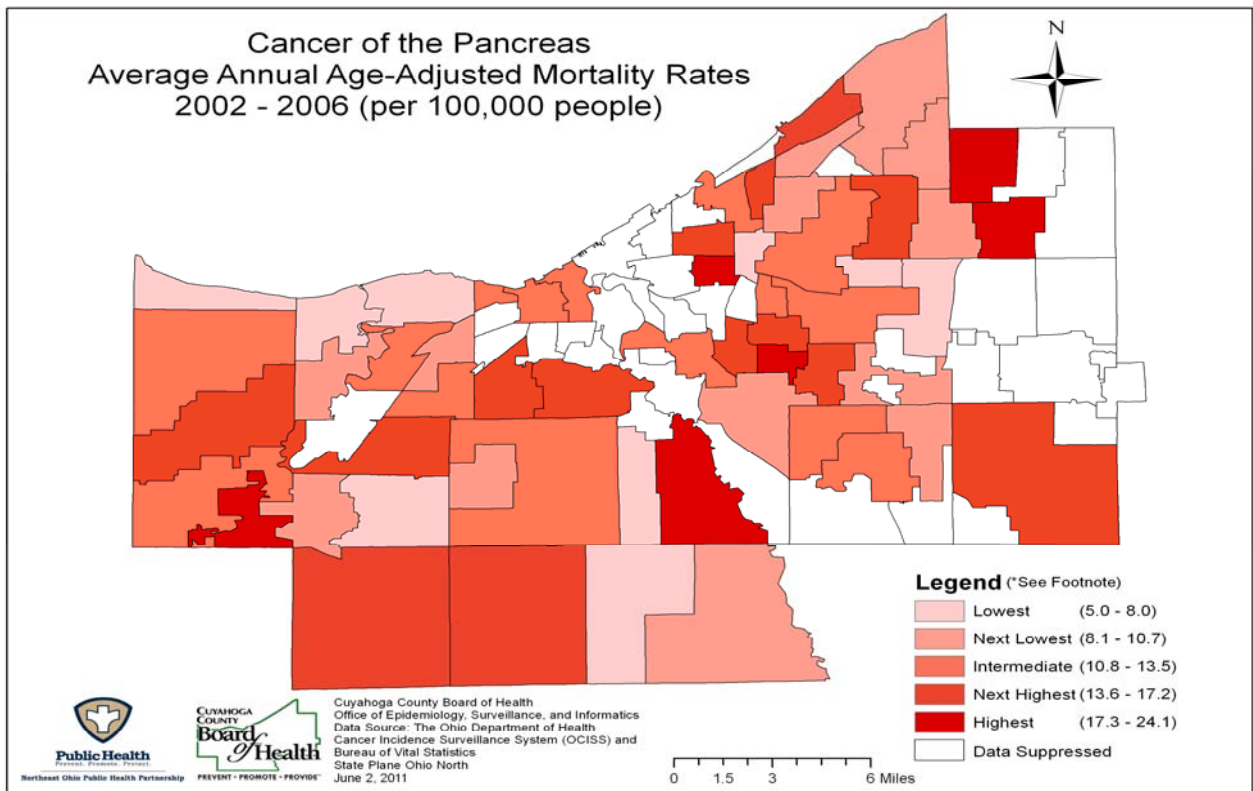


Figure 20b



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

Chart 20a

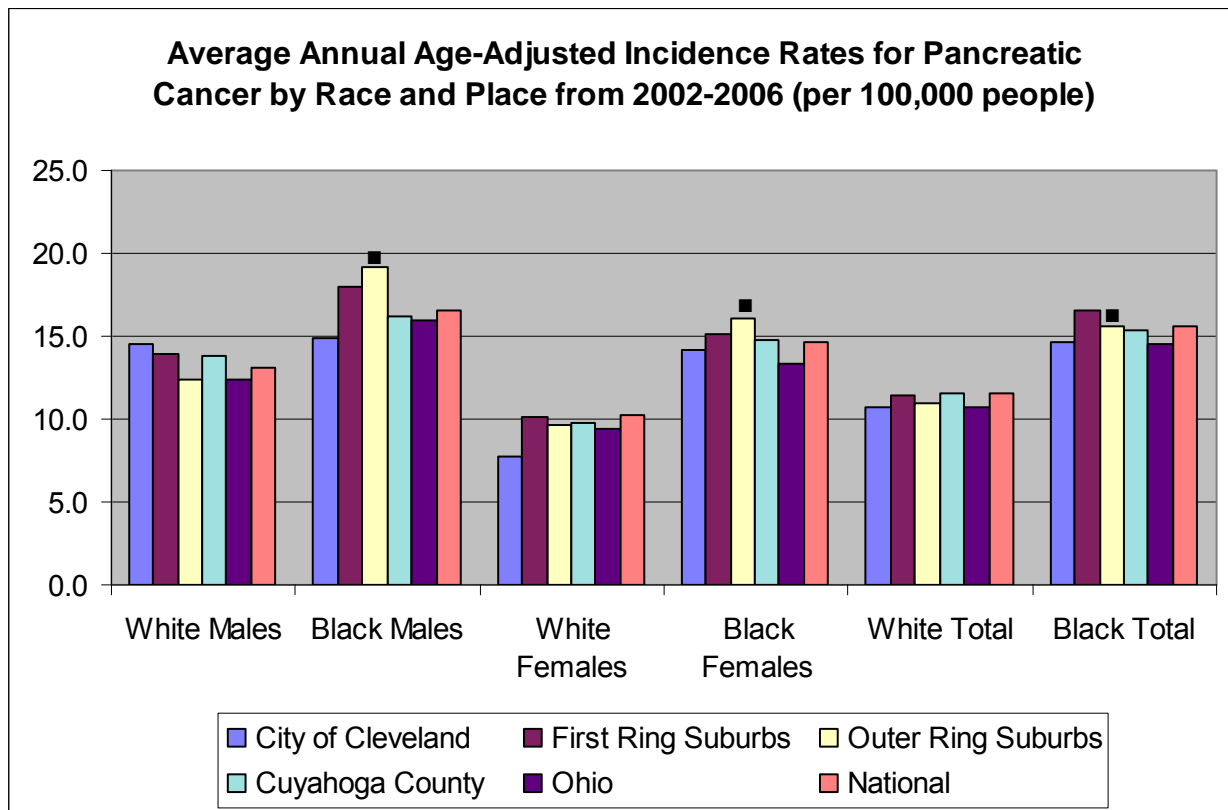
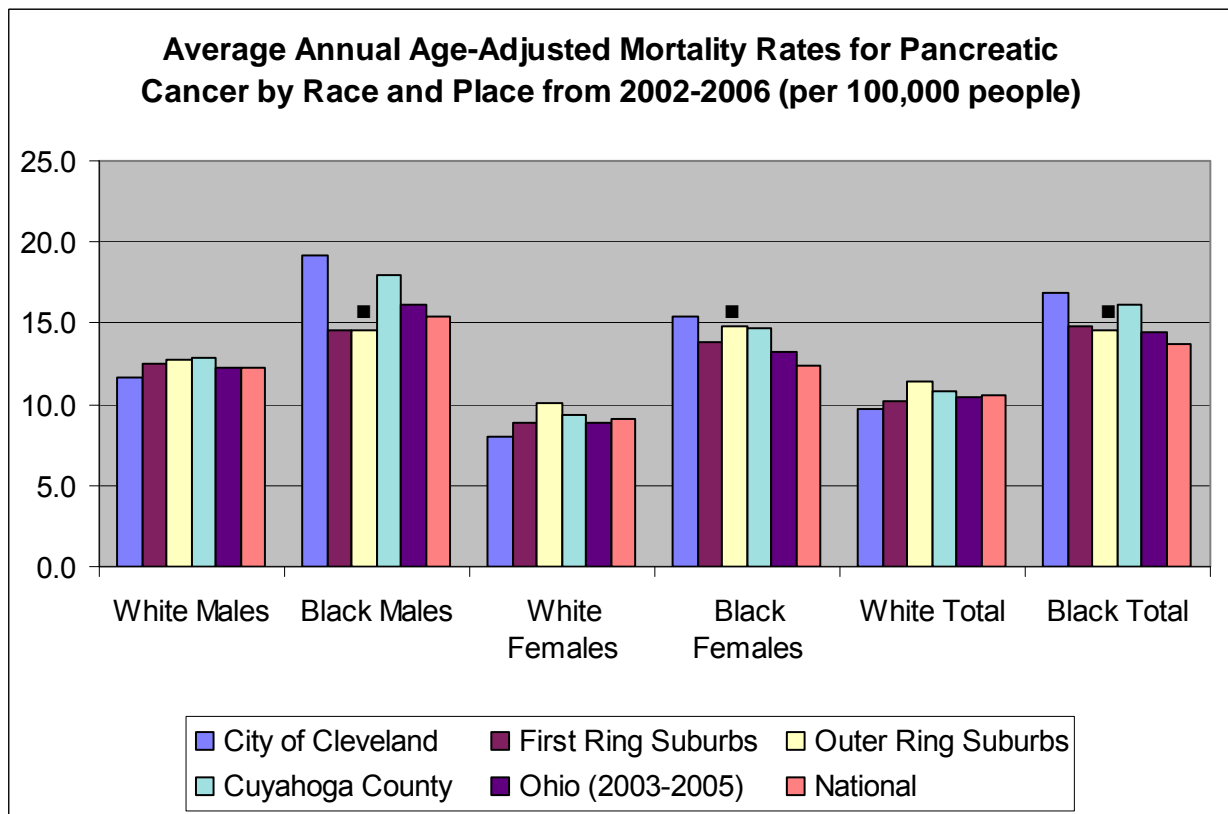


Chart 20b



- ▲ 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 71 males will develop pancreatic cancer and 1 in 78 males will die from pancreatic cancer.³

Females: In the United States, 1 in 71 females will develop pancreatic cancer and 1 in 79 females will die from pancreatic cancer.³

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

- **Age-** Most patients diagnosed with pancreatic cancer are older than 45 years of age. The average age at diagnosis is 72.
- **Gender-** Men have a slightly higher risk of developing pancreatic cancer than women.
- **Race-** African Americans have a higher risk of developing pancreatic cancer than whites.
- **Tobacco use-** The risk of pancreatic cancers is 2-3 times higher among smokers.
- **Obesity and physical inactivity**
- **Diabetes**
- **Chronic pancreatitis**
- **Cirrhosis of the liver**
- **Occupational exposure**
- **Family history**
- **Genetic syndromes**
 - **Hereditary breast and ovarian cancer syndrome**
 - **Familial melanoma**
 - **Familial pancreatitis**
 - **Hereditary non-polyposis colorectal cancer**
 - **Peutz-Jeghers syndrome**
 - **Von Hippel-lindau syndrome**
 - **Neurofibromatosis, type 1**
 - **Multiple endocrine neoplasia, type 1**
- **Stomach problems,** particularly infection with *Helicobacter pylori* which causes ulcers.
- **Coffee-** Drinking coffee *may* increase the risk of pancreatic cancer.
- **Alcohol-** Alcohol use *may* increase the risk of pancreatic cancer because it raises the risk for diabetes, liver cirrhosis, and chronic pancreatitis.

Symptoms⁴

- Jaundice causing dark urine, pale stools, and yellow skin
- Pain in upper part of the belly
- Pain in the middle of your back
- Nausea and vomiting
- Stools that float
- Weakness and fatigue
- Loss of appetite or feeling full
- Weight loss

Screening, Prevention and Early Detection

Screening:¹

Currently, it is very difficult to find pancreatic cancer early, due to the position of the organ inside of the body. Symptoms do not usually present until the cancer has spread to other organs.

At this time, there are no blood tests for early detection of pancreatic cancer. The blood test CA19-9 can be used for pancreatic cancer; however it can only detect cancer in later stages. Currently, physicians are trying to develop an endoscopic ultrasound to use in screening individuals with a high risk of pancreatic cancer.

Prevention:¹

Pancreatic cancer may not be preventable, though reducing common risk factors may decrease risk. The American Cancer Society advises that people avoid cigarette smoking, as this accounts for 20-30% of all pancreatic cancers. It is also recommended that maintenance of a healthy weight and diet, along with regular exercise can decrease an individual's risk of this cancer. Following a healthy lifestyle may decrease risk of pancreatic cancers, other cancers, and many non-cancerous diseases.

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 20c

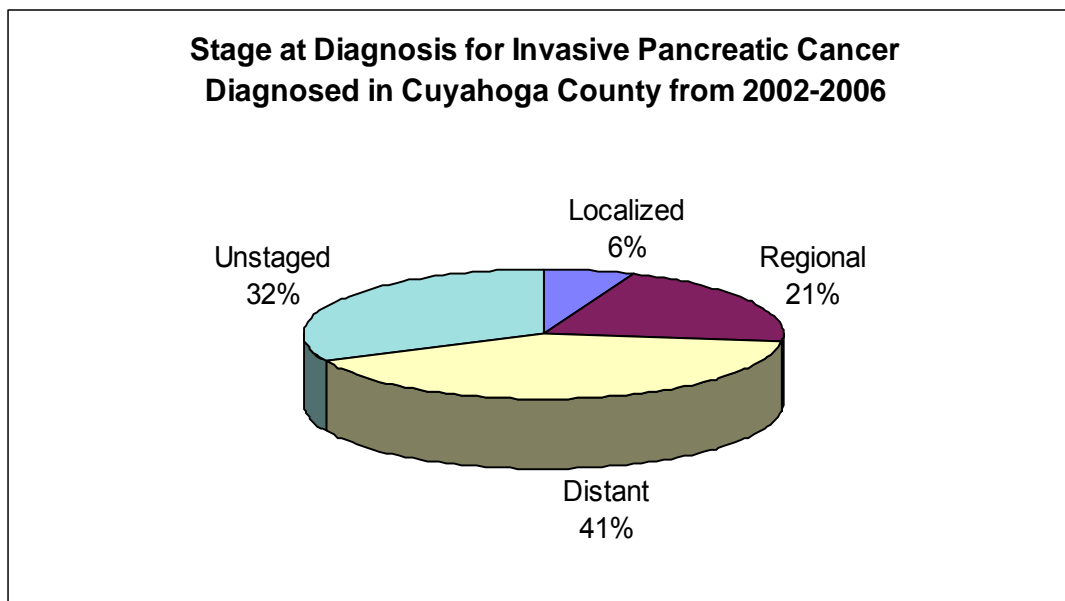


Table 20c

**5-year Relative Survival* by Stage at Diagnosis for
Pancreatic Cancer in the United States
for 1999-2006, All Races, Both Sexes⁶**

| Stage at Diagnosis | 5-year Relative Survival (%) |
|--|---------------------------------|
| Localized (confined to primary site) | 22.5 |
| Regional (spread to regional lymph nodes) | 8.8 |
| Distant (cancer has metastasized) | 1.9 |
| Unknown/Unstaged | 5.0 |

*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. Pancreatic Cancer Detailed Guide. <http://www.cancer.org/Cancer/PancreaticCancer/DetailedGuide/index>. (Accessed December 22, 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. National Cancer Institute. What you need to know about cancer of the pancreas. <http://www.cancer.gov/cancertopics/wyntk/pancreas>. (Accessed December 23, 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: Pancreas. <http://seer.cancer.gov/statfacts/html/pancreas.html>. (Accessed December 22, 2010).

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