

Warren County Cancer Profile

Ohio Department of Health

2017



Introduction

This report provides an overview of cancer in Warren County, Ohio, including data on cancer incidence (new cases) and mortality (deaths), Ohio and U.S. comparisons, trends, stage at diagnosis and risk factors. This information can be used to increase awareness about the impact of cancer on Ohio residents and to develop targeted programs for cancer prevention, early detection and control. High mortality rates may be associated with a later stage at diagnosis, lack of access to health care, inadequate treatment or other risk factors that should be addressed in cancer control initiatives.

Overview

- An average of 1,011 new invasive cancer cases and 346 deaths occurred each year among Warren County residents from 2010-2014.
- In 2010-2014, the cancer incidence rate for all sites/types combined in Warren County was 444.8 per 100,000, compared with the Ohio rate of 459.8 per 100,000 and the U.S. rate of 442.7 per 100,000.
- The 2010-2014 cancer mortality rate in Warren County was 159.5 per 100,000, compared with the Ohio rate of 181.1 per 100,000 and the U.S. rate of 166.1 per 100,000.

Table 1. Average Annual Number and Age-adjusted Rates of Invasive Cancer Cases and Cancer Deaths by Sex and Race in Warren County, Ohio and the United States, 2010-2014^{1,2,3}

Demographics		Incidence				Mortality			
		Warren County		Ohio	U.S.	Warren County		Ohio	U.S.
		Cases	Rate	Rate	Rate	Deaths	Rate	Rate	Rate
Total		1,011	444.8	459.8	442.7	346	159.5	181.1	166.1
Sex	Male	508	490.6	508.3	492.4	177	185.2	219.1	200.5
	Female	503	416.9	427.5	408.7	169	141.1	154.6	141.5
Race	White	935	433.3	454.0	451.8	337	161.9	179.5	166.2
	Black	19	397.6	458.8	459.3	5	122.8	206.6	194.2

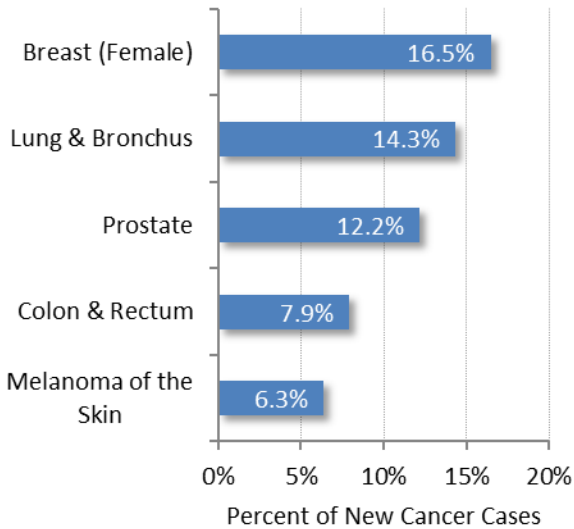
¹ Source of Ohio data: Ohio Cancer Incidence Surveillance System and the Bureau of Vital Statistics, Ohio Department of Health, 2017.

² Source of U.S. data: Surveillance, Epidemiology and End Results Program, National Cancer Institute and the National Center for Health Statistics, 2017.

³ Rates are per 100,000 and age-adjusted to the 2000 U.S. standard population.

Leading Cancers

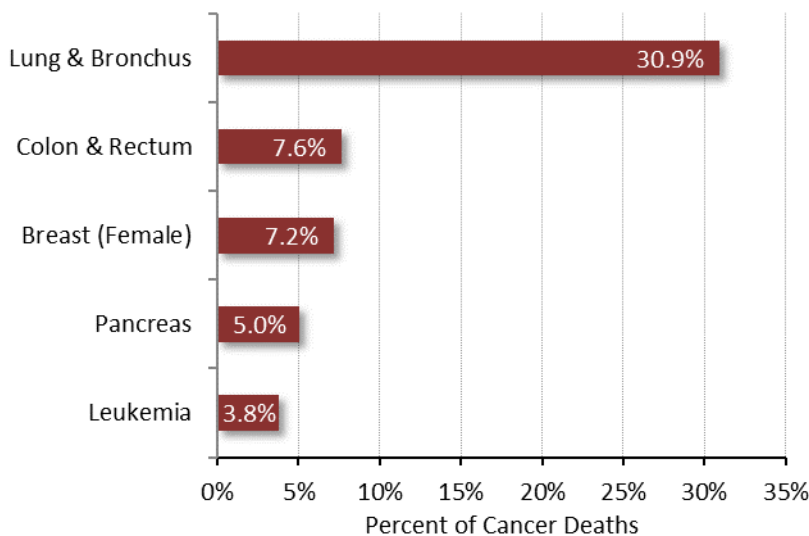
Figure 1. Percentage of Cancer Cases by Site/Type for the Top Five Cancers in Warren County, 2010-2014¹



The leading sites/types of cancer incidence in Warren County in 2010-2014 were female breast, lung and bronchus, prostate, colon and rectum, and melanoma of the skin, representing 57 percent of all invasive cancer cases.

¹ Source: Ohio Cancer Incidence Surveillance System, Ohio Department of Health, 2017.

Figure 2. Percentage of Cancer Deaths by Site/Type for the Top Five Cancers in Warren County, 2010-2014¹



The leading sites/types of cancer mortality in Warren County in 2010-2014 were lung and bronchus, colon and rectum, female breast, pancreas and leukemia, representing 55 percent of all cancer deaths.

¹ Source: Bureau of Vital Statistics, Ohio Department of Health, 2017.

Female breast cancer was the leading cause of cancer incidence in Warren County in 2010-2014, accounting for 16.5 percent of cancer cases. Lung and bronchus cancer was the leading cause of cancer mortality in Warren County in 2010-2014, accounting for 30.9 percent of cancer deaths.

Cancer Sites/Types

Table 2. Average Annual Number and Age-adjusted Rates of Invasive Cancer Cases and Cancer Deaths by Site/Type in Warren County, Ohio and the United States, 2010-2014^{1,2,3}

Cancer Site/Type	Incidence				Mortality			
	Warren County		Ohio	U.S.	Warren County		Ohio	U.S.
	Cases	Rate	Rate	Rate	Deaths	Rate	Rate	Rate
All Sites/Types	1,011	444.8	459.8	442.7	346	159.5	181.1	166.1
Bladder	51	23.8	21.9	19.8	10	5.4	5.1	4.4
Brain & Other CNS	15	6.4	6.8	6.4	9	4.0	4.5	4.3
Breast (Female)	166	135.3	123.8	124.9	25	20.5	23.0	21.2
Cervix	6	5.1	7.4	7.4	2	1.4	2.5	2.3
Colon & Rectum	80	36.4	41.5	40.1	26	12.2	16.3	14.8
Esophagus	11	4.6	5.2	4.2	9	4.0	5.0	4.1
Hodgkin Lymphoma	5	2.6	2.6	2.6	<1	*	0.4	0.3
Kidney & Renal Pelvis	39	16.8	16.6	15.6	10	4.7	4.1	3.9
Larynx	11	4.5	4.1	3.1	2	0.8	1.3	1.0
Leukemia	25	10.9	12.0	13.7	13	6.3	7.1	6.8
Liver & Intrahepatic Bile Duct	14	6.0	6.5	8.6	11	4.7	5.6	6.3
Lung & Bronchus	145	65.8	69.9	55.8	107	50.1	52.7	44.7
Melanoma of the Skin	64	28.7	20.4	22.3	7	2.9	2.9	2.7
Multiple Myeloma	10	4.4	5.9	6.6	7	3.1	3.6	3.3
Non-Hodgkin Lymphoma	39	17.2	18.9	19.5	12	5.7	6.5	5.9
Oral Cavity & Pharynx	24	9.8	11.4	11.2	4	1.9	2.5	2.5
Ovary	17	13.6	11.4	11.7	12	9.9	7.6	7.4
Pancreas	21	9.8	12.5	12.5	17	8.1	11.4	10.9
Prostate	123	111.3	113.1	119.8	11	13.9	19.9	20.1
Stomach	11	5.2	6.4	7.3	4	1.7	2.8	3.2
Testis	4	3.7	5.6	5.7	<1	*	0.3	0.3
Thyroid	29	13.3	14.5	14.2	2	0.9	0.5	0.5
Uterus	33	26.5	28.7	25.7	5	4.0	4.9	4.6

¹ Source of Ohio data: Ohio Cancer Incidence Surveillance System and the Bureau of Vital Statistics, Ohio Department of Health, 2017.

² Source of U.S. data: Surveillance, Epidemiology and End Results Program, National Cancer Institute and the National Center for Health Statistics, 2017.

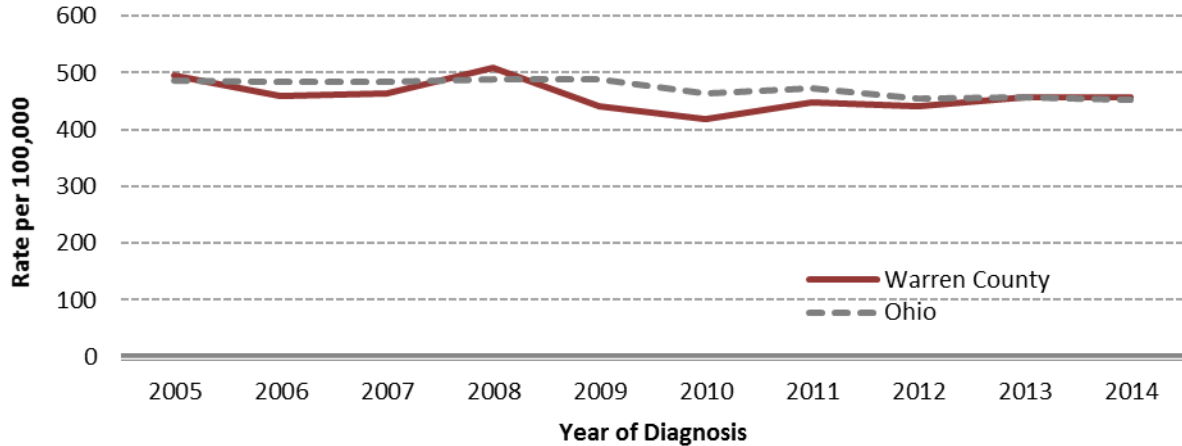
³ Rates are per 100,000 and age-adjusted to the 2000 U.S. standard population. Rates are sex specific for cancers of the breast, cervix, ovary, prostate, testis and uterus.

CNS = Central Nervous System

* Rates may be unstable and are not presented when the count for 2010-2014 is less than five (i.e., average annual count is less than one).

Trends

Figure 3. Age-adjusted Cancer Incidence Rates in Warren County and Ohio by Year, 2005-2014^{1,2}



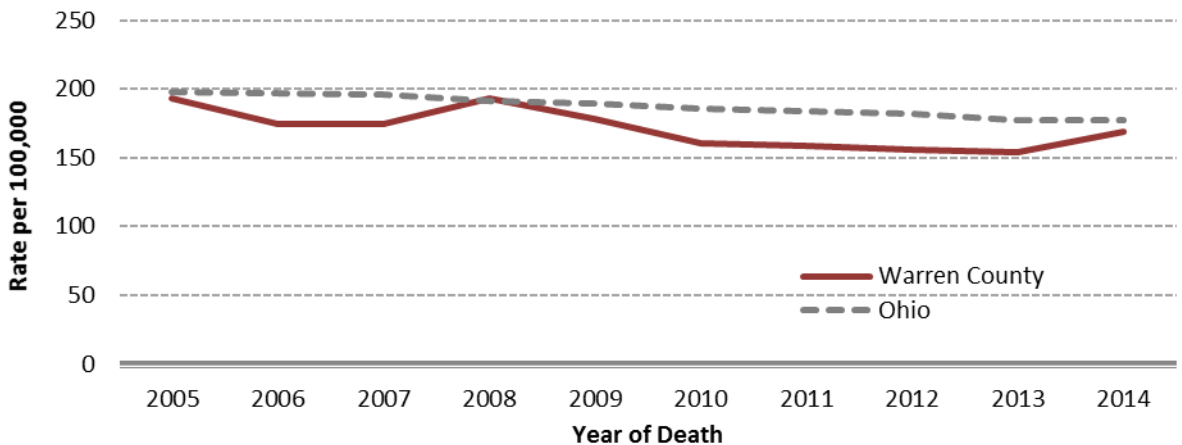
¹ Source: Ohio Cancer Incidence Surveillance System, Ohio Department of Health, 2017.

² Rates are per 100,000 and age-adjusted to the 2000 U.S. Standard Population.

Note: Incidence rates are often variable over time at the county level, particularly for counties with small populations.

Cancer incidence rates decreased 8 percent in Warren County and 7 percent in Ohio from 2005-2014.

Figure 4. Age-adjusted Cancer Mortality Rates in Warren County and Ohio by Year, 2005-2014^{1,2}



¹ Source: Bureau of Vital Statistics, Ohio Department of Health, 2017.

² Rates are per 100,000 and age-adjusted to the 2000 U.S. Standard Population.

Note: Mortality rates are often variable over time at the county level, particularly for counties with small populations.

Cancer mortality rates decreased 13 percent in Warren County and 10 percent in Ohio from 2005-2014.

Stage at Diagnosis

Table 3. Percent of Cancer Cases by Stage at Diagnosis for Select Cancer Sites/Types in Warren County, Ohio and the United States, 2010-2014^{1,2,3}

Cancer Site/Type	Warren County		Ohio		U.S.	
	Early Stage	Late Stage	Early Stage	Late Stage	Early Stage	Late Stage
Breast (Female)	69.8	29.5	68.9	28.9	70.9	27.5
Cervix	43.3	40.0	43.0	51.7	43.6	51.0
Colon & Rectum	42.4	51.3	38.3	52.5	41.7	52.9
Lung & Bronchus	17.1	73.5	18.0	71.6	19.0	74.9
Melanoma of the Skin	85.8	7.1	84.8	8.8	90.8	7.0
Oral Cavity & Pharynx	31.9	62.2	29.6	65.3	45.3	50.1
Pancreas	15.6	67.9	9.1	72.1	11.1	78.6
Prostate	69.8	14.8	75.6	15.9	77.1	17.9
Testis	66.7	23.8	67.6	29.3	67.8	30.6

¹ Source of Ohio data: Ohio Cancer Incidence Surveillance System, Ohio Department of Health, 2017.

² Source of U.S. data: Surveillance, Epidemiology and End Results Program, National Cancer Institute, 2017.

³ Early and late stage values do not add up to 100 percent because unstaged/missing stage cancers are not included.

Cancer stage at diagnosis is the extent or spread of the tumor from the site of origin. The stages, in order of increasing spread, are *in situ*, local, regional and distant. Early stage cancers are those diagnosed at the *in situ* or local stage, and late stage cancers are those diagnosed at the regional or distant stage. Cancers may be reported as unstaged or with a missing stage (not shown). Regular screening can result in the detection of these cancers (with the exception of pancreas) at earlier stages, when treatment is more likely to be successful.

- Among the cancers selected, those with the highest proportions of late-stage tumors in Warren County were lung and bronchus cancer (73.5 percent), followed by pancreatic cancer (67.9 percent), and oral cavity and pharynx cancer (62.2 percent).
- Cervical cancer had a lower proportion (40.0 percent) of late-stage tumors in Warren County compared to Ohio (51.7 percent) and the United States (51.0 percent).

Risk Factors

Table 4. Percent of Adults who are Current Smokers, Obese or Physically Inactive in Warren County with Comparison to Ohio and the United States, 2013, 2015¹

Risk Factor	Warren County	Ohio	U.S.
Current Smoker	14.8	21.6	17.5
Obese	29.9	31.4	28
Physically Inactive	24.2	25.3	22

¹ Source: County Health Rankings, www.countyhealthrankings.org, 2017. Current smoker data are from 2015, and obesity and physical inactivity data are from 2013.

Current Smoker = Percentage of adults who are current smokers

Obese = Percentage of adults that report body mass index (BMI) \geq 30

Physically Inactive = Percentage of adults that report no leisure-time physical activity

A cancer risk factor is anything that increases a person's risk of developing cancer. Modifiable cancer risk factors include health behaviors and lifestyle factors (e.g., tobacco use, obesity and physical inactivity). It is often not just one factor that increases a person's risk of developing cancer; rather, cancer most often results from a complex interaction of multiple factors.

- The percentage of adults in Warren County who are current smokers is 14.8 percent, compared to 21.6 percent in Ohio and 17.5 percent in the United States.
- The percentage of adults who are obese in Warren County is 29.9 percent, compared to 31.4 percent in Ohio and 28 percent in the United States.
- The percentage of adults that report no leisure-time physical activity in Warren County is 24.2 percent, compared to 25.3 percent in Ohio and 22 percent in the United States.

Did You Know?

Tobacco use is associated with 12 types of cancer and is estimated to cause more than 30 percent of all cancer deaths in the United States, including 80 percent of lung cancer deaths among men and women.

It is estimated that a 5 percent reduction in body mass index (BMI) would prevent 23,000 cancer cases in Ohio by 2030, saving \$1 billion.

Physical activity may reduce the risk of several types of cancer including cancer of the breast, colon and rectum, and endometrium as well as advanced prostate cancer.

Sources of Data and Additional Information

Ohio Cancer Incidence Surveillance System (OCISS)

Cancer incidence data were provided by OCISS, the central cancer registry for Ohio. OCISS data can be accessed through the **Ohio Public Health Data Warehouse**, <http://publicapps.odh.ohio.gov/EDW/DataCatalog>.

Ohio Vital Statistics

Cancer mortality data were provided by the Bureau of Vital Statistics and analyzed by the Chronic Disease Epidemiology and Evaluation Section at the Ohio Department of Health. Cancer mortality data can also be accessed through the Ohio Public Health Data Warehouse.

County Health Rankings

Risk factor data were obtained from *County Health Rankings Key Findings 2017*, University of Wisconsin Population Health Institute, available at www.countyhealthrankings.org.

U.S. Statistics

Cancer statistics for the United States were obtained from the Surveillance, Epidemiology, and End Results (SEER) Program, National Cancer Institute, and the National Center for Health Statistics, available at: <http://seer.cancer.gov>. Data sources include the *SEER Cancer Statistics Review, 1975-2014* and the SEER*Stat Database, SEER 18 Registries Research Data, released April 2017, based on the November 2016 submission. Stage distributions were calculated using SEER*Stat software version 8.3.4.

Other Sources of Information

Ohio Department of Health, Cancer Data and Statistics:

<http://www.odh.ohio.gov/health/cancer/ocisshs/newrpts1.aspx>

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

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

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OCISS website: http://www.odh.ohio.gov/health/cancer/ocisshs/ci_surv1.aspx

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