

Carroll County Cancer Profile

Ohio Department of Health

2017



Introduction

This report provides an overview of cancer in Carroll 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 179 new invasive cancer cases and 74 deaths occurred each year among Carroll County residents from 2010-2014.
- In 2010-2014, the cancer incidence rate for all sites/types combined in Carroll County was 454.7 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 Carroll County was 185.3 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 Carroll County, Ohio and the United States, 2010-2014^{1,2,3}

Demographics		Incidence				Mortality			
		Carroll County		Ohio	U.S.	Carroll County		Ohio	U.S.
		Cases	Rate	Rate	Rate	Deaths	Rate	Rate	Rate
Total		179	454.7	459.8	442.7	74	185.3	181.1	166.1
Sex	Male	102	534.9	508.3	492.4	45	241.9	219.1	200.5
	Female	77	388.6	427.5	408.7	29	139.8	154.6	141.5
Race	White	176	454.6	454.0	451.8	73	185.1	179.5	166.2
	Black	<1	*	458.8	459.3	<1	*	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.

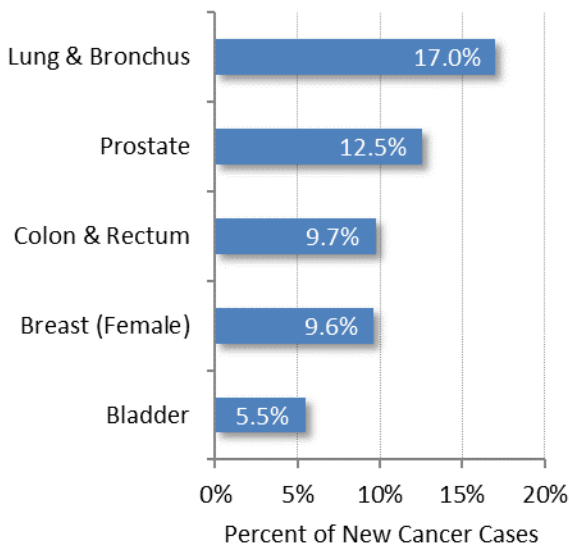
² Source of U.S. data: Surveillance, Epidemiology and End Results Program, National Cancer Institute and the National Center for Health Statistics, 2017.

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

* 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).

Leading Cancers

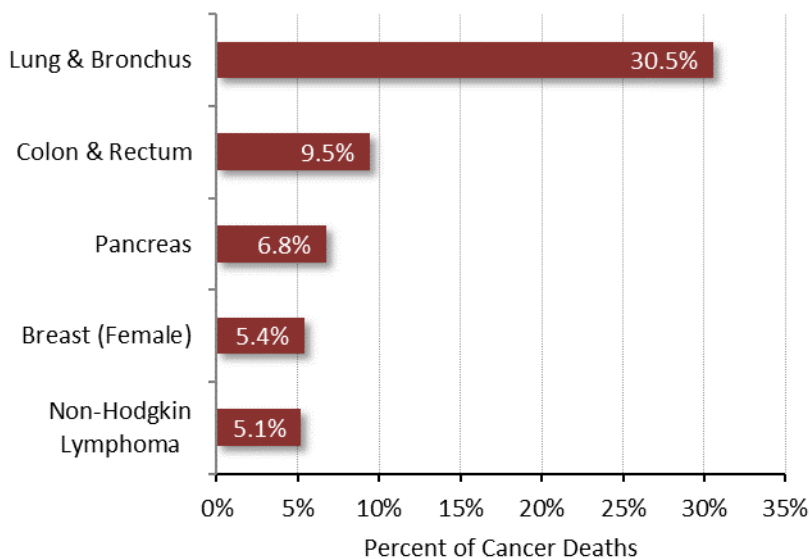
Figure 1. Percentage of Cancer Cases by Site/Type for the Top Five Cancers in Carroll County, 2010-2014¹



The leading sites/types of cancer incidence in Carroll County in 2010-2014 were lung and bronchus, prostate, colon and rectum, female breast and bladder, representing 54 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 Carroll County, 2010-2014¹



The leading sites/types of cancer mortality in Carroll County in 2010-2014 were lung and bronchus, colon and rectum, pancreas, female breast and non-Hodgkin lymphoma, representing 57 percent of all cancer deaths.

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

Lung and bronchus cancer was the leading cause of cancer incidence and mortality in Carroll County in 2010-2014, accounting for 17.0 percent of cancer cases and 30.5 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 Carroll County, Ohio and the United States, 2010-2014^{1,2,3}

Cancer Site/Type	Incidence				Mortality			
	Carroll County		Ohio	U.S.	Carroll County		Ohio	U.S.
	Cases	Rate	Rate	Rate	Deaths	Rate	Rate	Rate
All Sites/Types	179	454.7	459.8	442.7	74	185.3	181.1	166.1
Bladder	10	25.6	21.9	19.8	2	4.9	5.1	4.4
Brain & Other CNS	3	6.6	6.8	6.4	2	5.5	4.5	4.3
Breast (Female)	17	86.5	123.8	124.9	4	20.9	23.0	21.2
Cervix	1	8.0	7.4	7.4	<1	*	2.5	2.3
Colon & Rectum	17	44.0	41.5	40.1	7	16.9	16.3	14.8
Esophagus	3	6.7	5.2	4.2	3	6.4	5.0	4.1
Hodgkin Lymphoma	<1	*	2.6	2.6	<1	*	0.4	0.3
Kidney & Renal Pelvis	7	18.5	16.6	15.6	2	5.0	4.1	3.9
Larynx	2	4.8	4.1	3.1	<1	*	1.3	1.0
Leukemia	3	8.4	12.0	13.7	3	7.7	7.1	6.8
Liver & Intrahepatic Bile Duct	2	4.9	6.5	8.6	1	3.3	5.6	6.3
Lung & Bronchus	30	76.6	69.9	55.8	23	57.3	52.7	44.7
Melanoma of the Skin	8	19.6	20.4	22.3	1	3.2	2.9	2.7
Multiple Myeloma	2	4.8	5.9	6.6	1	2.7	3.6	3.3
Non-Hodgkin Lymphoma	8	20.9	18.9	19.5	4	9.5	6.5	5.9
Oral Cavity & Pharynx	5	13.2	11.4	11.2	<1	*	2.5	2.5
Ovary	3	17.8	11.4	11.7	1	4.2	7.6	7.4
Pancreas	6	14.9	12.5	12.5	5	12.8	11.4	10.9
Prostate	22	106.7	113.1	119.8	3	17.0	19.9	20.1
Stomach	1	3.7	6.4	7.3	1	2.9	2.8	3.2
Testis	<1	*	5.6	5.7	<1	*	0.3	0.3
Thyroid	5	13.6	14.5	14.2	<1	*	0.5	0.5
Uterus	7	33.4	28.7	25.7	1	6.5	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.

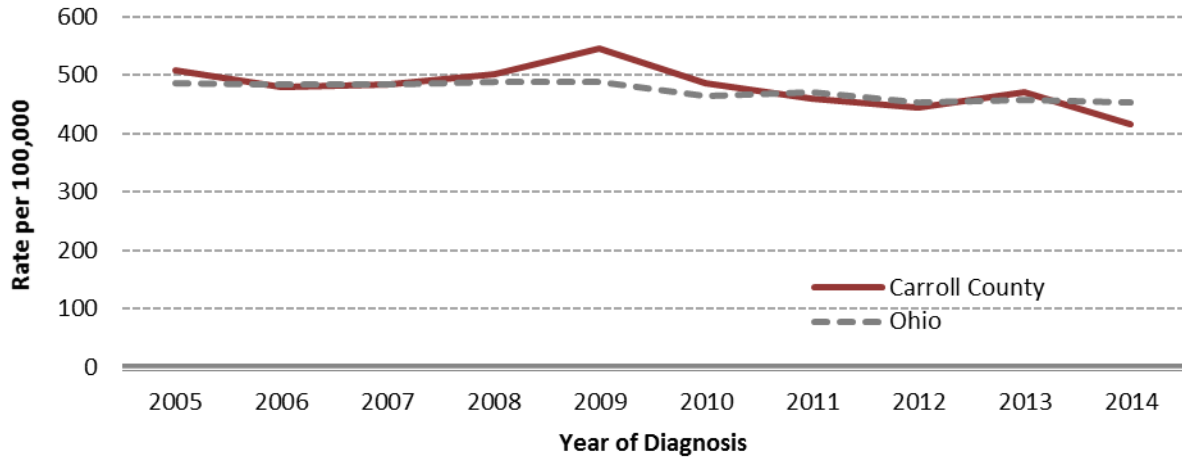
³ Rates are per 100,000 and age-adjusted to the 2000 U.S. standard population. Rates are sex specific for cancers of the breast, cervix, ovary, prostate, testis and uterus.

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 Carroll County and Ohio by Year, 2005-2014^{1,2}



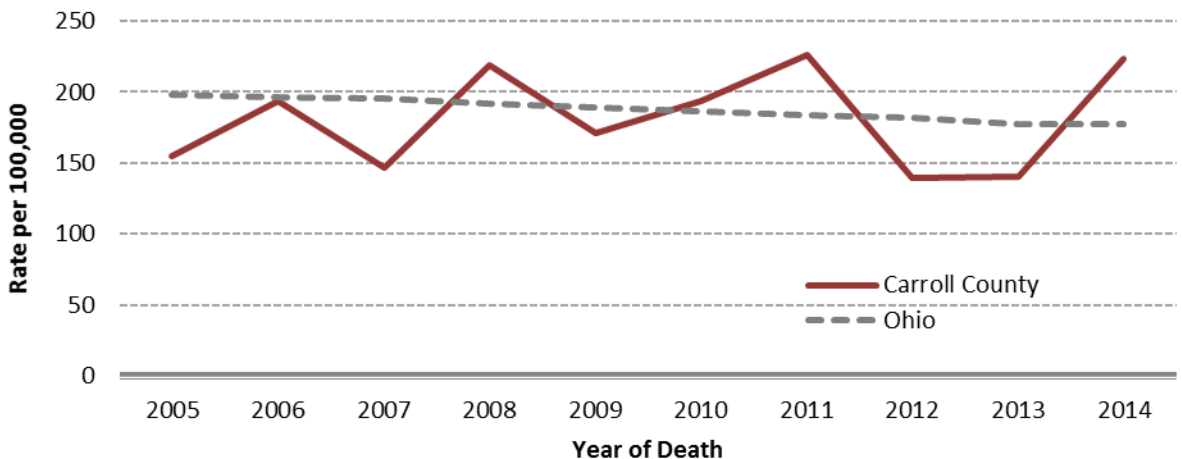
¹ Source: Ohio Cancer Incidence Surveillance System, Ohio Department of Health, 2017.

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 18 percent in Carroll County and 7 percent in Ohio from 2005-2014.

Figure 4. Age-adjusted Cancer Mortality Rates in Carroll 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 varied over time in Carroll County and decreased 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 Carroll County, Ohio and the United States, 2010-2014^{1,2,3}

Cancer Site/Type	Carroll County		Ohio		U.S.	
	Early Stage	Late Stage	Early Stage	Late Stage	Early Stage	Late Stage
Breast (Female)	72.6	25.5	68.9	28.9	70.9	27.5
Cervix	28.6	71.4	43.0	51.7	43.6	51.0
Colon & Rectum	34.8	59.8	38.3	52.5	41.7	52.9
Lung & Bronchus	9.9	78.3	18.0	71.6	19.0	74.9
Melanoma of the Skin	90.8	6.2	84.8	8.8	90.8	7.0
Oral Cavity & Pharynx	23.1	69.2	29.6	65.3	45.3	50.1
Pancreas	3.4	72.4	9.1	72.1	11.1	78.6
Prostate	77.7	14.3	75.6	15.9	77.1	17.9
Testis*	100.0	0.0	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.

* Comparisons should be interpreted with caution due to small numbers.

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 Carroll County were lung and bronchus cancer (78.3 percent), followed by pancreatic cancer (72.4 percent) and cervical cancer (71.4 percent).

Risk Factors

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

Risk Factor	Carroll County	Ohio	U.S.
Current Smoker	19.0	21.6	17.5
Obese	34.7	31.4	28
Physically Inactive	23.9	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) ≥ 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 Carroll County who are current smokers is 19.0 percent, compared to 21.6 percent in Ohio and 17.5 percent in the United States.
- The percentage of adults who are obese in Carroll County is 34.7 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 Carroll County is 23.9 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>

To address comments and information requests:

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

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