# An Analysis of Cancer Incidence in Pennsylvania Counties 2008-2012



# An Analysis of Cancer Incidence in Pennsylvania Counties

# 2008-2012

Pennsylvania Department of Health Division of Health Informatics May 2015

HD0016P

The Division of Health Informatics welcomes comments and suggestions on the content and format of this report. Staff are available to answer questions regarding the report, including utilization and limitations of the data. Please address all comments, questions, requests for data, etc., to:

#### Division of Health Informatics Pennsylvania Department of Health 2150 Herr St. Harrisburg, PA 17103

This report and many other health statistics are on the Health Statistics Web page of the Department of Health's website at <a href="http://www.statistics.health.pa.gov/">www.statistics.health.pa.gov/</a>

The Pennsylvania Department of Health has also developed an interactive Web tool for health data users to create customized data tables, charts, maps, and county assessments/profiles of birth, death, infant death, teen pregnancy, cancer, behavioral risk, sexually transmitted disease and population statistics online called Epidemiologic Query and Mapping System (EpiQMS). Historical data back to 1990 are available for most datasets using this tool, which is also accessible at http://www.statistics.health.pa.gov/ (click on EpiQMS under the Quick Stats section).

Cancer incidence data were collected by the Pennsylvania Cancer Registry (PCR) located at the Bureau of Health Statistics and Registries. The PCR is a full participant in the National Program of Cancer Registries (NPCR) of the Centers for Disease Control and Prevention (CDC).

The Pennsylvania Department of Health is an equal opportunity provider of grants, contracts, services, and employment.

# **CONTENTS:**

#### PAGE

INTRODUCTION:	2
---------------	---

#### **TECHNICAL NOTES:**

Observed Cases	3
Expected Cases	.3
Standardized Incidence Ratio	
Determining Significance	.4
Data Limitations	
County Maps	
Completeness Rates	.5
Age-Adjusted Rates	
Graphs of Age-Adjusted Rates	.5
Surveillance, Epidemiology and End Results (SEER) Data	

 6
••

COUNTY MAPS:
--------------

#### **APPENDICES:**

ICD-O-3 Coding	90
References	
County Outline Map	

# **INTRODUCTION**

Cancer incidence data were collected by the Pennsylvania Cancer Registry located in the Bureau of Health Statistics and Registries. Cancer incidence data are submitted to the PCR by hospitals through tumor registries or health information departments, select private pathology laboratories, death certificates, and data exchange when Pennsylvania residents are diagnosed or treated in other states. The PCR conforms to national cancer registry data standards by collecting all recommended malignant diagnoses and data items using established codes, definitions, and record formats. Cancer reporting is mandated by The Pennsylvania Cancer Control, Prevention, and Research Act, a key element in the success of the PCR. The PCR is a full participant in the National Program of Cancer Registries of the Centers for Disease Control and Prevention.

Starting in 2001, topography, histology, behavior, and grade for cancer incidence data were coded according to the International Classification of Diseases for Oncology, Third Edition (ICD-O-3).

There are many problems inherent with county-level data, primarily the small numbers of events. This report used a statistical approach that is commonly accepted and used for small area analysis and can also be rather easily understood by the general population. Five-year summary data for 2008-2012 were used to provide larger numbers and also to correspond to the latest available data from the National Cancer Institute's (NCI) Surveillance, Epidemiology and End Results (SEER) Program. Even with five-year summary figures, there are many counties with primary cancer sites that have very few cases. Therefore, in the interest of reliability, statistical analysis is not shown for any primary site in a county with fewer than 10 cases reported during the five-year period of 2008-2012.

This report tabulates the number of observed and expected cancer cases and standardized incidence ratios for 23 primary cancer sites, as well as all cancer sites combined, by county and by sex. The observed cases represent the total number of primary malignant tumors reported to the PCR (excluding in situ staged cases, with the exception of urinary bladder cancer). The expected cases represent the total number of primary, malignant tumors that would have been diagnosed if Pennsylvania's (or a specific county's) male and female population had experienced the same age-specific rates of cancer incidence as those reported by the NCI's SEER program during the five-year period of 2008-2012. The standardized incidence ratios, or SIRs, that appear in this report were calculated by dividing the number of observed cases by the number of expected cases and multiplying the dividend by 100. Also shown in this report is whether a SIR represents a statistically significant higher or lower number of observed cancer cases (at the 95% confidence level).

A Technical Notes section appears at the beginning of this report to emphasize the importance of understanding and appropriately using the data shown here. This section fully explains all the steps used in the presentation and analysis of the data for this report. A selected series of county outline maps that graphically depict the results of the analysis are presented. Along with all primary sites combined, maps were created for the five leading sites for males and the five leading sites for females. At the bottom of each county outline map is a rate depicting the completeness of case ascertainment for Pennsylvania. Following this are graphs which show the counties with the five lowest and five highest age-adjusted rates for this selected series of sites. If you use any of the statistics presented in this report, we highly recommend that you read the Technical Notes section carefully and thoroughly. Please note all the qualifications listed in this report and review as many of the cited references as possible before you proceed any further.

# TECHNICAL NOTES

(NOTE: It is highly recommended that any user of the data presented in this report read the information provided in this Technical Notes section carefully and thoroughly. This section explains how the figures that appear in this report were computed, followed by a discussion of the limitations and appropriate use of such computations. Users should also review references cited in the Appendix.)

#### **OBSERVED CASES**

This figure represents the total number of primary malignant tumors reported to the PCR. If a resident of the state was diagnosed as having more than one primary tumor, each tumor is required to be reported and is counted separately by site. Thus, counts or the observed number of cases reported in this publication are based on the number of primary tumors, rather than the number of people diagnosed with cancer.

The analysis for this report involved the use of PCR data and published data from the NCI's SEER Program. Since SEER data exclude in situ or non-invasive cases (except for urinary bladder cancers), Pennsylvania data were also counted in the same manner, so that the two data sets for this report are directly comparable.

Starting with 1999 data, other cancer reports released by the Pennsylvania Department of Health (Department) also exclude in situ cases (except for bladder cancers). Prior to 1999 data, most cancer reports released by the Department included in situ cases for all primary sites, except for cancer of the cervix uteri. The Department chose to follow the SEER ICD-O coding structure used to identify primary sites (types) of cancer to better ensure comparability between SEER and Pennsylvania data. The SEER coding structure for the major primary sites shown in this report, using ICD-O-3, appears in the Appendix.

#### **EXPECTED CASES**

This figure represents the total number of primary, malignant tumors that would have been reported to the Pennsylvania Cancer Registry if Pennsylvania's (or a county's) male and female populations had experienced the same age-specific rates of cancer incidence as those reported by the SEER program during the same time. The calculation of expected cases (E) is based upon the following formula:

$$\mathsf{E} = \sum_{n=1}^{18} \frac{p_n r_n}{100,000}$$

where:

 $\Sigma = \text{sum} \text{ across all age groups}$ 

p<sub>n</sub> = state or county population by age/sex

r<sub>n</sub> = age-specific SEER rate per 100,000 by sex

n = age groups (five-year groups up to 85+)

It requires the application of the average annual (2008-2012) SEER incidence rates for each age group and sex by site to the corresponding age and sex distributions of Pennsylvania's (or a county's) population for the years 2008-2012. There are 18 age groups (five-year groupings from 0-4 to 85+) used by SEER in calculating age-specific rates. After the number of expected cases was calculated for each age group, these 18 numbers were summed to obtain the total number of expected cases (E) for each sex and site.

For example, the SEER average annual (2008-2012) agespecific incidence rate for all cancer sites among males 0-4 years of age was 23.2 per 100,000. By adding together the estimated Pennsylvania male population ages 0-4 for each of the years from 2008 to 2012, one would obtain the figure of 1,857,093. According to the formula, the next step is to divide the SEER rate of 23.2 per 100,000 by 100,000. The result is .000232. Then, simply multiply this figure against the corresponding Pennsylvania male population ages 0-4 for 2008-2012 (1,857,093). The product is 430.8. This procedure is followed for each of the remaining 17 five-year age groupings, up to and including those aged 85 and older. These 18 numbers are then summed to obtain the number of expected cancer cases among Pennsylvania males for the years 2008 through 2012. The number of expected cases that appear in this report are rounded figures, obtained after all the age group calculations have been completed.

#### STANDARDIZED INCIDENCE RATIO

This statistic is calculated by dividing the number of observed cases by the number of expected cases and multiplying the dividend by 100.

The formula for a standardized incidence ratio or SIR is:

$$SIR = \frac{Observed cases}{Expected cases} \times 100$$

A ratio of 100 indicates that the observed number of cases equals the expected number of cases. A ratio above 100 indicates that there were more cases observed than expected. Thus, a ratio of 125 means that there were 25 percent more observed cases than expected. A ratio below 100 indicates that there were fewer observed cases than expected. Therefore, a ratio of 85 is interpreted as 15 percent fewer observed cases occurring than expected.

Please note that the SIR was calculated using the expected number of cases in decimal format. Therefore, manual calculation of the SIR using the rounded figures for expected cases (as shown in this report) may not obtain exactly the same value for the SIR that appears in this report.

#### **DETERMINING SIGNIFICANCE**

There are two steps in determining whether there was a statistically significant higher or lower number of observed cases than expected or whether the difference between the number of observed cases and the number of expected cases was due merely to chance. The first step is the calculation of the standard error (SE) of the standardized incidence ratio or SIR. The standard error defines the variability of the SIR. The formula for the calculation of the SE follows:

$$SE = \frac{SIR}{\sqrt{n}}$$

where n = number of observed cases.

The second step is the calculation of the 95% confidence interval (CI) for the SIR, i.e., a range that should include the "true" ratio 95 percent of the time. The confidence interval at the 95 percent level is obtained by using the standard error in the formula shown below:

$$CI = SIR \pm (1.96 \text{ x SE})$$

The confidence interval of a standardized incidence ratio is then interpreted as follows:

in the interval is greater than or equal to 100, there is no statistically significant difference between the number of observed cases and the number of expected cases.

- If the lower number in the confidence interval is above 100, there is a 95 percent probability that a significantly higher number of cases were observed than expected.
- If the upper number in the confidence interval is less than 100, there is a 95 percent probability that significantly fewer cases were observed than expected.
- If the range of the confidence interval is very wide, the ratio is probably based on a very small number of observed cases, and, therefore, no reliable conclusions can be made. A "very wide" range can be defined as 50 or more.

The last statement regarding "wide" ranges for confidence intervals was the basis for the decision not to perform the above analysis for sites with less than 10 observed cases. The confidence intervals for these small numbers are usually "very wide" and, therefore, not reliable for comparative analysis.

#### **DATA LIMITATIONS**

The observed or reported number of cancer cases should be viewed as an estimate of the "true" number of cases, subject to chance variation. Of primary concern when using county statistics is the small number of events that can occur. Pennsylvania has many rural counties with small populations, and, with a small number of events, there is a higher probability of chance variation in an observed number, rather than a real change or difference. The statistical methodology used for this report is a commonly accepted approach and is particularly suited for small-area analysis. However, it should be noted that there is no absolute analytical approach that will take into account every possible chance variation for every observed number. There is always the possibility that a certain number of events could have occurred solely by chance. Other valid analyses involving the use of chi square testing (goodness of fit) or (null) hypothesis testing are suggested for additional evaluation of the results shown in this report (see Appendix - References).

#### **COUNTY MAPS**

• If the lower number in the confidence interval is less than or equal to 100 and the upper number

The series of county outline maps depict the results of the tests for significant difference between observed and expected cases for the five leading primary sites by sex and all cancer sites. These geographic presentations provide unique perspectives based on the analyses performed for this report.

#### **COMPLETENESS RATES**

At the bottom of each county outline map is a rate depicting the completeness of case ascertainment for Pennsylvania. Completeness of case ascertainment is defined as the extent to which all the incident cancers occurring in a defined population are included in the registry database. Ideally, completeness case ascertainment should be 100 percent. There are several statistical methods for estimating the relative completeness of case registration. In this report, the incidence to mortality ratio (I/M) was used as a measure for completeness of casefinding.

The calculation of expected cause-specific cancer incidence values was derived from the 2008-2012 incidence and U.S. mortality age-adjusted rates as published by the National Cancer Institute's SEER program. The SEER cause-specific I/M ratios were applied to the Pennsylvania cancer mortality rates to calculate the expected cause-specific Pennsylvania cancer incidence rates. The observed cause-specific cancer incidence rates were then divided by these expected values and multiplied by 100. The results are the completeness rates displayed in this report.

Please note that completeness rates can exceed 100 percent when expected cancer incidence rates are less than the observed incidence rates. Completeness rates exceeding 100 are displayed as 100 percent. There are many factors which can affect the I/M ratio and the accuracy of these completeness rates. Two of the more common factors are the lack of reporting from non-hospital sources and the detection of asymptomatic cancers when a cancer screening program or test is first introduced.

#### **AGE-ADJUSTED RATES**

Age-specific rates for a selected population are applied to a standard population in order to calculate what rate would be expected if the selected population had the same age distribution as the standard. The total of these expected events divided by the total of the standard population and multiplied by 100,000 yields the age-adjusted rate per 100,000. In this report, the 2000 U.S. standard million population was used in the computation of each age-adjusted rate to allow proper comparability.

The series of bar graphs of age-adjusted rates display the counties with the five lowest and five highest rates for the five leading primary cancer sites and all cancer sites by sex. Also displayed on each graph are the 95% confidence intervals for each rate. These intervals are calculated in the same method as used for the SIR discussed on page 4. In these equations, the SIR is instead replaced by the rate. To ensure more reliability, rates were not calculated for counties with less than 20 cases during the five-year period.

#### **SEER DATA**

In the absence of a national population-based cancer registry, the NCI's SEER Program has been considered the primary source for national statistics. However, for this report, consideration was given to other sources of population-based cancer rates, such as the age-specific rates for the entire state of Pennsylvania or the North American Association of Central Cancer Registries (NAACCR) rates. Some problems were soon discovered while exploring these other sources. Using rates for the entire state would limit the analyses to the counties. Examining the state as a whole was not possible. The CINA+ (Cancer Incidence in North America) Online software is a Web-based cancer query system provided by NAACCR, which allows for the calculation of age-specific rates. However, certain primary sites could not be produced to match those published in other cancer reports released by the Pennsylvania Department of Health. Therefore, the age-specific rates produced by the National Cancer Institute's SEER Program were the preferred populationbased rates used in the analyses presented in this report.

Due to the geographic, racial/ethnic, and socio-economic differences in the occurrence of cancers, the pattern of incidence reflected in SEER data cannot be expected to correspond exactly to cancer incidence as reported among Pennsylvanians. The 2008-2012 SEER data were collected and provided under contract with several tumor registries throughout the country. These nine registries were located in the states of Connecticut, Hawaii, Iowa, New Mexico, Utah, and four metropolitan areas: Detroit-Metropolitan, Atlanta-Metropolitan, San Francisco-Oakland SMSA and Seattle-Puget Sound. These areas were selected primarily for their ability to operate and maintain a population-based cancer reporting system and for their epidemiologically significant population subgroups. With respect to selected demographic and epidemiological factors, these combined areas are a reasonably representative subset of the United States population.

#### **GRAPHS OF AGE-ADJUSTED RATES**

# DATA HIGHLIGHTS

#### **ALL CANCER SITES:**

Thirty-five counties for both males and females were determined (at the 95% confidence level) to have had a significantly higher number of observed cancer cases than expected among residents during the five-year period of 2008 through 2012, based on corresponding SEER age-specific rates. Significantly lower numbers of cases occurred in eight counties (Cumberland, Dauphin, Huntingdon, Indiana, Juniata, Lancaster, Pike, and Wayne) for males and one county (Indiana) for females. There was no significant difference between observed and expected cases in 24 counties for males and 31 for females. Huntingdon and Wayne counties were among those with the five lowest age-adjusted rates found for both males and females. Indiana County had significantly lower observed cancer cases than were expected from 2008 through 2012 for both sexes. **(See pages 8, 11, 14 and 17 for maps and graphs.)** 

#### **CANCER of the LUNG and BRONCHUS:**

Thirty-seven counties for males and 16 for females reported significantly more cases than expected, based on corresponding SEER age-specific rates during the five-year period of 2008-2012. The observed number of cases was significantly lower than expected among residents in eight counties for females but in only one (Chester) for males. There was no significant difference between observed and expected cases in 29 counties for males and 43 for females. Indiana County had among the lowest age-adjusted rates found for both sexes. Four of the top five age-adjusted rates for males and all five of the highest age-adjusted rates for females were found in counties with significantly higher observed cases than expected. Four of the five lowest age-adjusted rates for females were in counties with significantly lower cases than expected. However, only one of the five counties with the lowest age-adjusted rates for males (Chester) had significantly fewer cases than expected. **(See pages 9, 12, 15 and 18 for maps and graphs.)** 

#### **CANCER of the PROSTATE:**

Ten counties (Butler, Cameron, Clarion, Delaware, Elk, Mercer, Montgomery, Northampton, Philadelphia, and Warren) experienced a significantly higher number of observed cases than were expected among residents. Thirty-seven counties experienced significantly fewer cases than expected during the years 2008 through 2012. There was no significant difference between observed and expected cases for 20 counties. Butler, Cameron, Elk, Montour, and Warren counties had the five highest age-adjusted rates for prostate cancer during the five-year period of 2008 through 2012. The counties with the five lowest age-adjusted rates during this five year period were Cumberland, Greene, Juniata, Perry, and Wayne. All five of these counties had significantly fewer observed cases of prostate cancer than were expected during this time period. **(See pages 8 and 14 for map and graph.)** 

#### **CANCER of the BREAST:**

Five counties (Allegheny, Bucks, Delaware, Mercer, and Montgomery) were determined to have had a significantly higher number of observed cases than expected for female breast cancer. Fifteen counties had significantly lower numbers than expected during the five-year period of 2008-2012 for female Pennsylvania residents. There was no significant difference between observed and expected cases in 47 counties for this five-year period. Beaver, Cameron, Lycoming, Mercer, and Wyoming counties had the five highest age-adjusted rates for female breast cancer during this period. Mercer County also had a significantly higher number of observed cases than expected. The counties with the five lowest age-adjusted rates among females were Fulton, Huntingdon, Indiana, Somerset, and Wayne, four of which had fewer observed cases than expected (Huntingdon, Indiana, Somerset, and Wayne). Males experiencing breast cancer during this time accounted for about 1 percent of the total number of breast cancer cases.

(See pages 11 and 17 for map and graph.)

# DATA HIGHLIGHTS

#### **CANCER of the COLON and RECTUM:**

In 20 counties for males and 19 for females, the observed number of colon and rectum cancer cases was determined to be significantly higher than expected, based on SEER age-specific rates for 2008-2012. Two counties for males (Centre and Chester) and zero counties for females had significantly fewer observed cases than were expected. There was no significant difference between observed and expected cases for 45 counties for males and 46 for females. For females, too few (less than 10) cases occurred in two counties (Forest and Sullivan) to reliably determine significance. All of the top five age-adjusted rates for males were among the counties which showed significantly higher cases than expected. Similarly, all of the top five rates for females also had significantly higher cases than expected.

(See pages 9, 12, 15 and 18 for maps and graphs.)

#### **CANCER of the URINARY BLADDER:**

Thirty-two counties for males and 15 for females had significantly more observed cases than expected of urinary bladder cancer. One county for both males and females (Union and Dauphin, respectively) had significantly fewer cases observed than expected for urinary bladder cancer. There was no significant difference in 33 counties for males and 42 for females for observed cases compared to expected cases during this five-year period. Too few (less than 10) cases occurred in one county for males and nine for females to reliably determine significance. Carbon, Clinton, Fayette, Northampton, and Warren counties had the top five age-adjusted rates for males during the five-year period of 2008-2012. These counties also showed significantly higher observed cases of cancer than was expected. Centre, Dauphin, Franklin, Tioga, and Union Counties had the five lowest age-adjusted rates for urinary bladder cancer for males, but as previously noted, only Union county showed significantly fewer cases than was expected for males.

(See pages 10 and 16 for map and graph.)

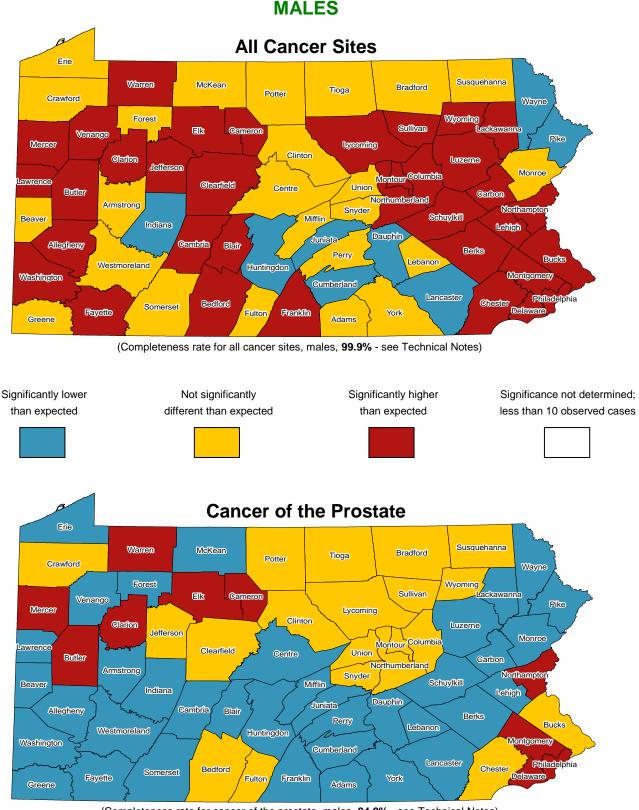
#### **NON-HODGKIN LYMPHOMA:**

Two counties for males (Bucks and Montgomery) and six counties for females (Allegheny, Berks, Bucks, Butler, Columbia, and Northampton) experienced a significantly higher number of observed cases than expected. No counties for males and three counties for females (Lackawanna, Philadelphia, and Pike) experienced fewer cases than expected. There was no significant difference between observed and expected cases in 63 counties for males and 54 for females. Too few (less than 10) cases occurred in two counties for males and four for females during the five-year period to reliably determine significance. Clarion, Jefferson, Perry, Snyder, and Union counties had the five highest age-adjusted rates for males during this period; Bedford, Butler, Columbia, Huntingdon, and Lycoming counties had the five highest age-adjusted rates for females. The five lowest age-adjusted rates were in Greene, Huntingdon, Indiana, Pike, and Susquehanna counties for males, and Armstrong, Indiana, Jefferson, Lackawanna, and McKean Counties for females.

(See pages 10, 13, 16 and 19 for maps and graphs.)

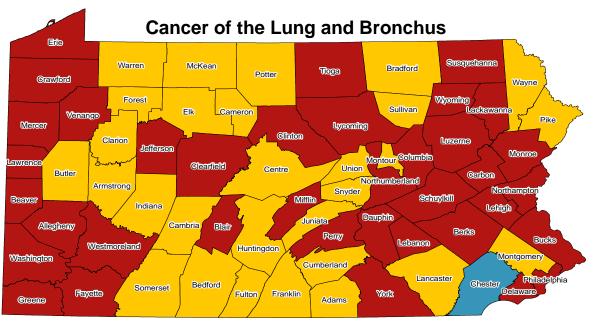
#### **CANCER of the CORPUS and UTERUS, Not Otherwise Specified (NOS):**

Twenty-eight counties had significantly more uterine cancer cases among residents than was expected during the five-year period of 2008-2012. No counties experienced significantly fewer observed cases than was expected. There was no significant difference between observed and expected cases in 37 counties. Too few (less than 10) cases occurred in two counties (Cameron and Forest) to reliably determine significance during this time period. Columbia, Juniata, Lebanon, Montour, and Wyoming counties had the five highest age-adjusted rates for uterine cancer during the five-year period of 2008-2012. Adams, Butler, Lawrence, Monroe, and Wayne counties had the five lowest age-adjusted rates calculated for this period. (See pages 13 and 19 for map and graph.)

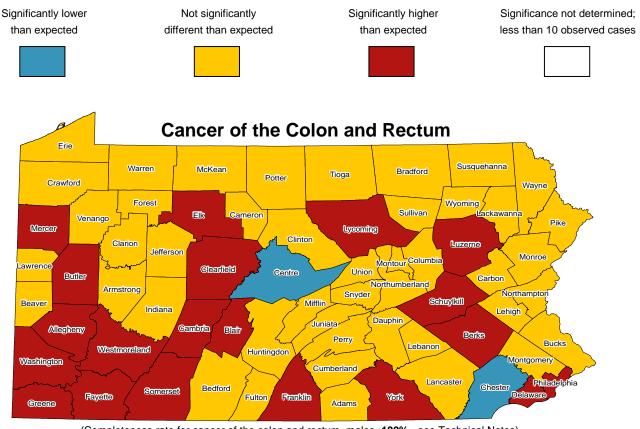


(Completeness rate for cancer of the prostate, males, 94.0% - see Technical Notes)

Note: "Significantly" refers to statistical significance at the 95% confidence level of the standardized incidence ratio.



#### (Completeness rate for cancer of the lung and bronchus, males, 100.0% - see Technical Notes)

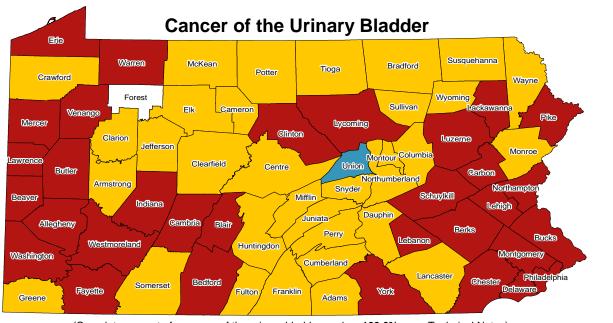


(Completeness rate for cancer of the colon and rectum, males, 100% - see Technical Notes)

Note: "Significantly" refers to statistical significance at the 95% confidence level of the standardized incidence ratio.

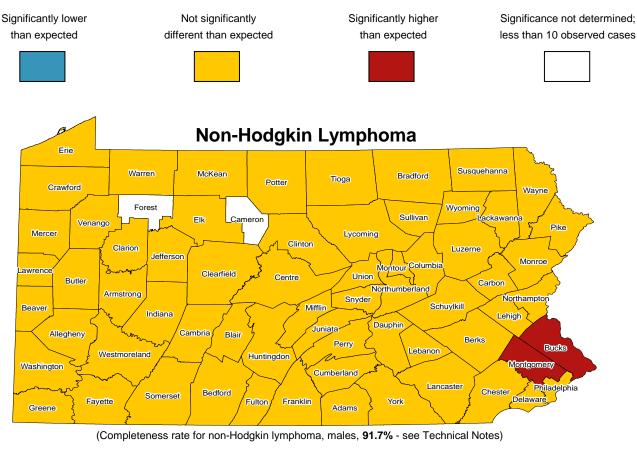
Pennsylvania Department of Health - An Analysis of Cancer Incidence in Pennsylvania Counties 2008-2012 - Page 9

#### MALES

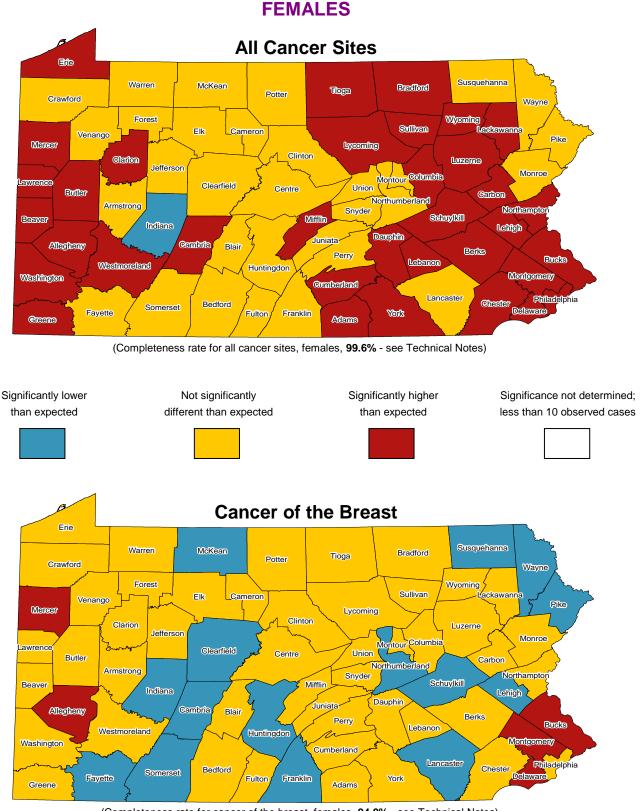


MALES

(Completeness rate for cancer of the urinary bladder, males, 100.0% - see Technical Notes)

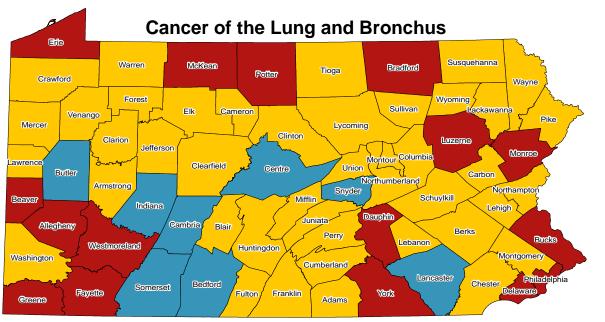


Note: "Significantly" refers to statistical significance at the 95% confidence level of the standardized incidence ratio.



(Completeness rate for cancer of the breast, females, 94.0% - see Technical Notes)

Note: "Significantly" refers to statistical significance at the 95% confidence level of the standardized incidence ratio.



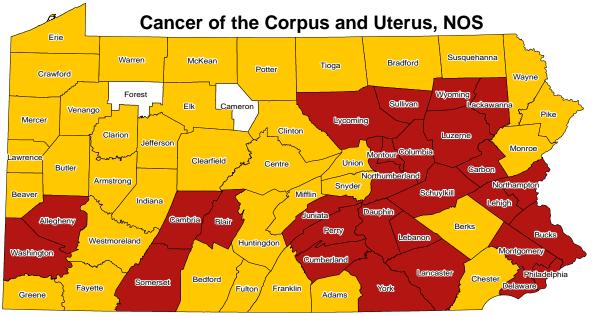
#### **FEMALES**

(Completeness rate for cancer of the lung and bronchus, females, 100.0% - see Technical Notes)

Significantly lower Not significantly Significantly higher Significance not determined; than expected different than expected than expected less than 10 observed cases Cancer of the Colon and Rectum Erie Susquehanna McKean Warren Bradford Tioga Potter Crawford Wayne Forest Wyoming Sullivan ckawann Elk Cameron Venango Pike Mercer Lycoming Clinton Clarion Luzerne Jefferson Montour Columbia Monroe awrence Clearfield Centre Union Butler Carbor Northumberland Armstrong Snyder Northampton Schuylkill Beaver Mifflin Indiana Lehigh Dauphin Juniata Allegheny Cambria Blair Berks Perry Bucks Lebanon Westmoreland Huntingdon Montgomery Washington Cumberland Lancaste Philadelphia Bedford Chester Somerset Delaware Fayette Fultor Franklin York Greene Adams

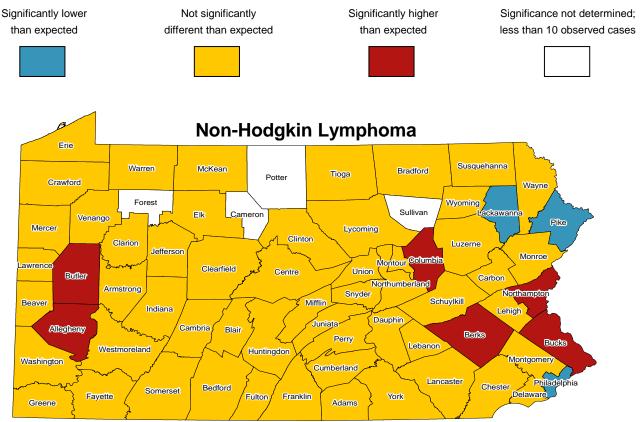
(Completeness rate for cancer of the colon and rectum, females, 100.0% - see Technical Notes)

Note: "Significantly" refers to statistical significance at the 95% confidence level of the standardized incidence ratio.



#### **FEMALES**

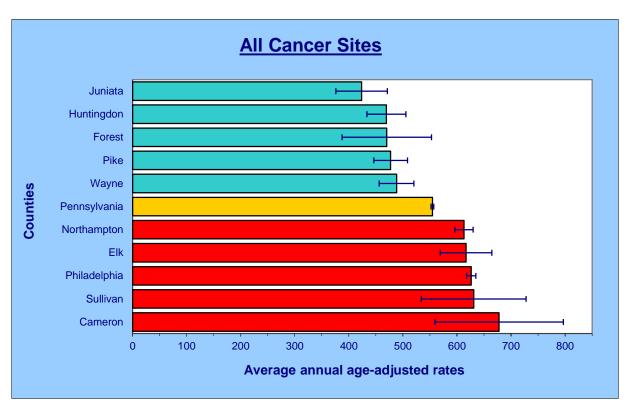
(Completeness rate for cancer of the corpus and uterus, NOS, females, 100.0% - see Technical Notes)

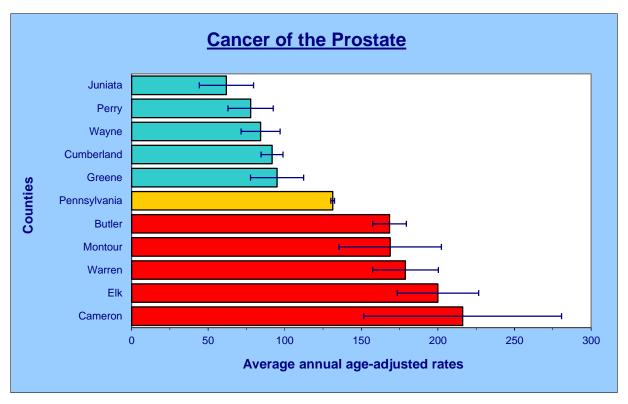


(Completeness rate for non-Hodgkin lymphoma, females, 97.7% - see Technical Notes)

Note: "Significantly" refers to statistical significance at the 95% confidence level of the standardized incidence ratio.

#### Five Lowest and Highest County Average Annual Age-Adjusted Rates\* Pennsylvania Male Residents, 2008-2012





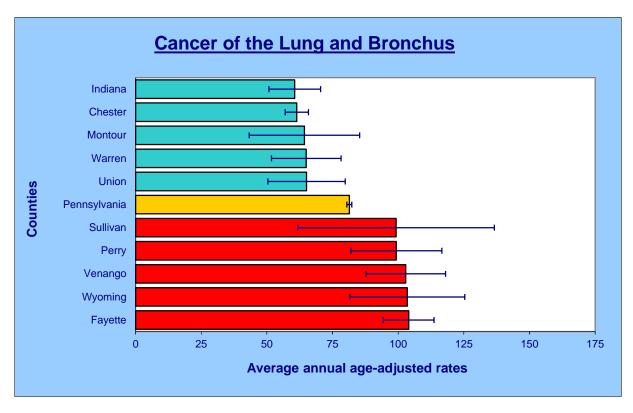
Note: The symbol represents the 95% confidence interval.

Pennsylvania Department of Health - An Analysis of Cancer Incidence in Pennsylvania Counties 2008-2012- Page 14

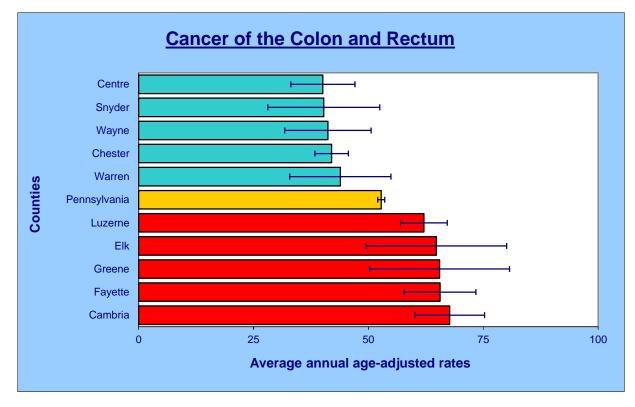
MALES

<sup>\*</sup>per 100,000 2000 U.S. standard million population

#### Five Lowest and Highest County Average Annual Age-Adjusted Rates\* Pennsylvania Male Residents, 2008-2012



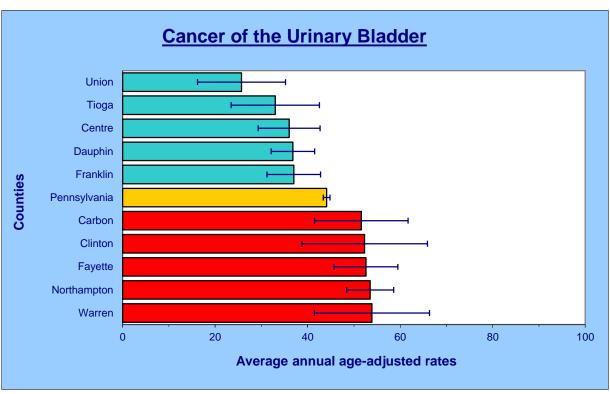




Note: The symbol | represents the 95% confidence interval.

\*per 100,000 2000 U.S. standard million population

#### Five Lowest and Highest County Average Annual Age-Adjusted Rates\* Pennsylvania Male Residents, 2008-2012



Non-Hodgkin Lymphoma Greene Pike Huntingdon Susquehanna Indiana Counties Pennsylvania Jefferson Snyder Clarion Perry Union 0 10 20 30 40 50 Average annual age-adjusted rates

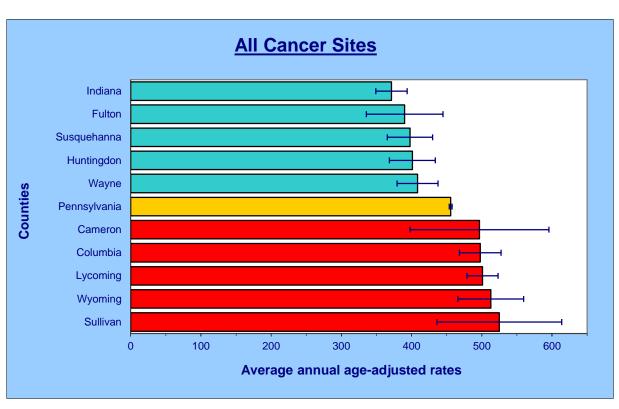
Note: The symbol |------- represents the 95% confidence interval.

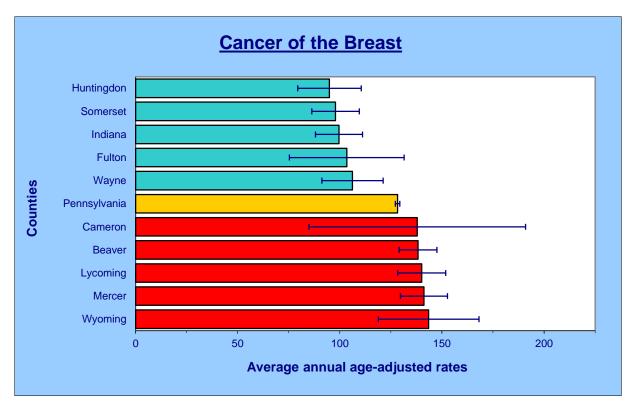
\*per 100,000 2000 U.S. standard million population

Pennsylvania Department of Health - An Analysis of Cancer Incidence in Pennsylvania Counties 2008-2012- Page 16

MALES

#### Five Lowest and Highest County Average Annual Age-Adjusted Rates\* Pennsylvania Female Residents, 2008-2012





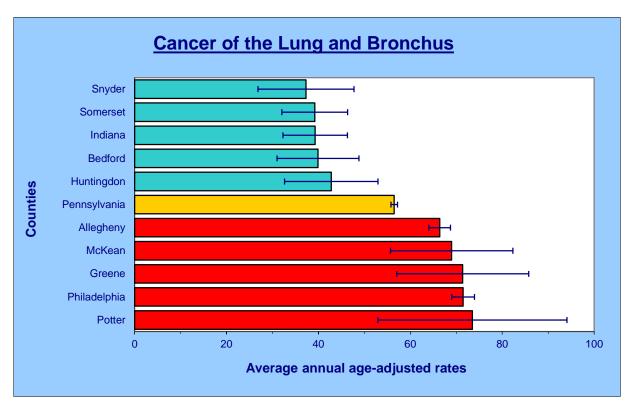
Note: The symbol represents the 95% confidence interval.

\*per 100,000 2000 U.S. standard million population

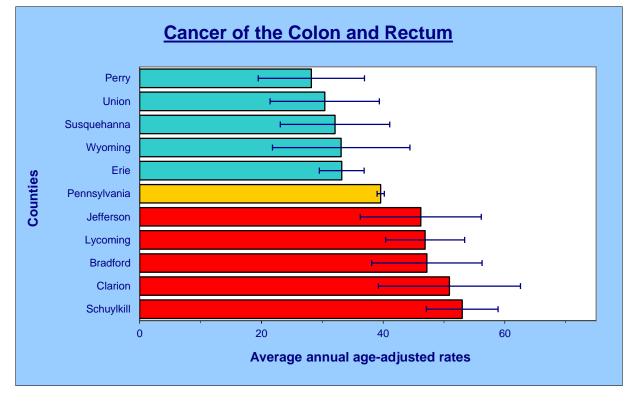
Pennsylvania Department of Health - An Analysis of Cancer Incidence in Pennsylvania Counties 2008-2012- Page 17

#### **FEMALES**

#### Five Lowest and Highest County Average Annual Age-Adjusted Rates\* Pennsylvania Female Residents, 2008-2012



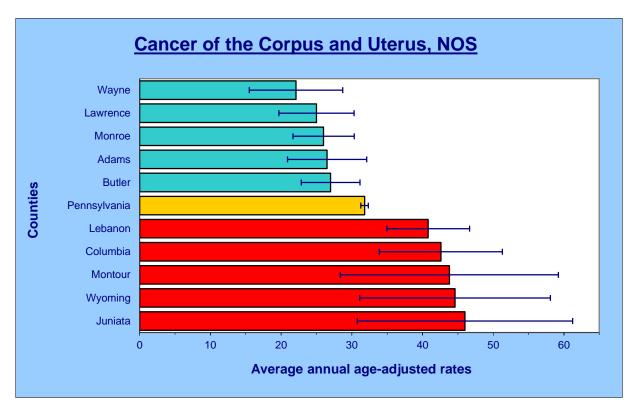
FEMALES



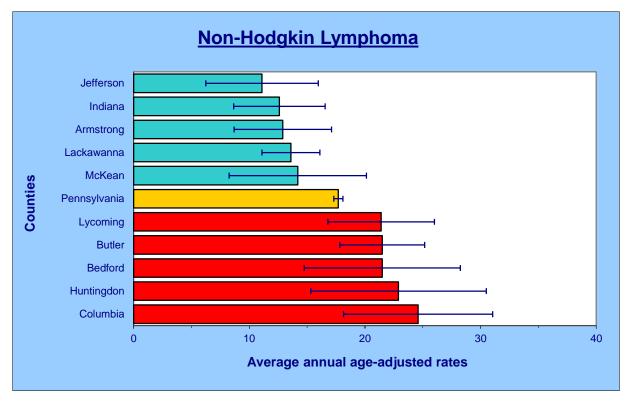
Note: The symbol |------- represents the 95% confidence interval.

\*per 100,000 2000 U.S. standard million population

#### Five Lowest and Highest County Average Annual Age-Adjusted Rates\* Pennsylvania Female Residents, 2008-2012



FEMALES



Note: The symbol | represents the 95% confidence interval.

\*per 100,000 2000 U.S. standard million population

# Pennsylvania



#### Number of Observed and Expected Cancer Cases and Standardized Incidence Ratios By Sex and Primary Site, Pennsylvania Residents, 2008-2012

		Males			Females	
Primary Site	Observed Cases	Expected Cases	SIR*	Observed Cases	Expected Cases	SIR*
All cancer sites	191,317	179,660	106.5 +	189,433	175,216	108.1 +
Oral cavity and pharynx	6,030	5,817	103.7 +	2,782	2,720	102.3
Esophagus	3,261	2,714	120.2 +	900	826	109.0 +
Stomach	3,381	3,358	100.7	1,954	2,239	87.3 -
Colon and rectum	17,905	16,093	111.3 +	17,625	16,278	108.3 +
Liver and intrahepatic bile duct	4,125	4,589	89.9 -	1,578	1,901	83.0 -
Pancreas	5,136	4,951	103.7 +	5,269	5,234	100.7
Larynx	2,396	1,938	123.7 +	642	458	140.1 +
Lung and bronchus	27,851	22,967	121.3 +	24,729	22,211	111.3 +
Melanoma of the skin	8,561	9,951	86.0 -	6,446	7,159	90.0 -
Breast	564	435	129.7 +	52,095	52,399	99.4
Cervix uteri	-	-	-	2,664	2,300	115.8 +
Corpus and uterus, NOS	-	-	-	13,405	11,372	117.9 +
Ovary	-	-	-	5,288	5,215	101.4
Prostate	47,606	51,188	93.0 -	-	-	-
Testis	1,957	1,758	111.3 +	-	-	-
Urinary bladder**	14,843	12,290	120.8 +	4,941	4,117	120.0 +
Kidney and renal pelvis	7,788	7,312	106.5 +	4,860	4,398	110.5 +
Brain and other nervous system	2,735	2,556	107.0 +	2,305	2,140	107.7 +
Thyroid	3,350	2,372	141.3 +	10,237	7,260	141.0 +
Non-Hodgkin lymphoma	8,747	8,442	103.6 +	7,606	7,170	106.1 +
Hodgkin lymphoma	1,160	1,003	115.7 +	971	827	117.4 +
Myeloma	2,601	2,799	92.9 -	2,178	2,347	92.8 -
Leukemia	5,747	5,902	97.4 -	4,426	4,487	98.6

\* A positive sign following the SIR (standardized incidence ratio) represents a statistically significant excess number of cancer cases. A negative sign following the SIR represents a statistically significant lower number of cancer cases. See the Technical Notes for more information.

- A dash appears where a SIR could not be calculated due to the fact that there were less than 10 observed cases. A dash also appears in the observed and expected cases fields for unsuitable sex specific cancers.

\*\* Includes in situ and invasive cases. All other sites listed above only include invasive cases.

Note: Expected cases are computed based on 2008-2012 age-specific rates from the National Cancer Institute's SEER Program.





#### Number of Observed and Expected Cancer Cases and Standardized Incidence Ratios By Sex and Primary Site, Adams County Residents, 2008-2012

		Males			Females	
Primary Site	Observed Cases	Expected Cases	SIR*	Observed Cases	Expected Cases	SIR*
All cancer sites	1,447	1,520	95.2	1,490	1,367	109.0 +
Oral cavity and pharynx	50	49	101.6	25	21	118.0
Esophagus	33	23	143.2	5	6	-
Stomach	21	28	74.3	9	17	-
Colon and rectum	154	135	113.8	147	124	118.3
Liver and intrahepatic bile duct	25	39	64.5 -	14	15	95.4
Pancreas	37	42	88.7	48	40	120.8
Larynx	16	16	97.0	1	4	-
Lung and bronchus	211	194	108.5	195	172	113.5
Melanoma of the skin	84	84	100.5	64	56	114.0
Breast	3	4	-	415	415	100.0
Cervix uteri	-	-	-	23	18	125.8
Corpus and uterus, NOS	-	-	-	86	91	94.9
Ovary	-	-	-	40	41	98.0
Prostate	306	440	69.5 -	-	-	-
Testis	13	14	93.7	-	-	-
Urinary bladder**	117	103	113.5	33	31	105.4
Kidney and renal pelvis	59	62	95.2	41	34	119.1
Brain and other nervous system	27	21	126.9	18	17	107.6
Thyroid	39	20	196.7 +	87	58	150.5 +
Non-Hodgkin lymphoma	66	71	93.2	60	55	108.4
Hodgkin lymphoma	5	8	-	6	6	-
Myeloma	21	24	88.7	15	18	82.7
Leukemia	48	49	97.4	36	34	104.7

\* A positive sign following the SIR (standardized incidence ratio) represents a statistically significant excess number of cancer cases. A negative sign following the SIR represents a statistically significant lower number of cancer cases. See the Technical Notes for more information.

- A dash appears where a SIR could not be calculated due to the fact that there were less than 10 observed cases. A dash also appears in the observed and expected cases fields for unsuitable sex specific cancers.

\*\* Includes in situ and invasive cases. All other sites listed above only include invasive cases.

Note: Expected cases are computed based on 2008-2012 age-specific rates from the National Cancer Institute's SEER Program.





#### Number of Observed and Expected Cancer Cases and Standardized Incidence Ratios By Sex and Primary Site, Allegheny County Residents, 2008-2012

		Males			Females	
Primary Site	Observed Cases	Expected Cases	SIR*	Observed Cases	Expected Cases	SIR*
All cancer sites	18,886	17,858	105.8 +	20,843	18,377	113.4 +
Oral cavity and pharynx	605	572	105.8	331	286	115.7 +
Esophagus	282	270	104.3	97	89	109.2
Stomach	414	338	122.6 +	237	240	98.6
Colon and rectum	1,777	1,613	110.2 +	1,805	1,748	103.3
Liver and intrahepatic bile duct	438	454	96.6	168	202	83.0 -
Pancreas	537	499	107.7	592	566	104.6
Larynx	261	192	136.2 +	71	48	149.3 +
Lung and bronchus	2,954	2,310	127.9 +	3,082	2,367	130.2 +
Melanoma of the skin	660	991	66.6 -	520	738	70.4 -
Breast	62	43	142.7 +	5,752	5,424	106.0 +
Cervix uteri	-	-	-	221	231	95.6
Corpus and uterus, NOS	-	-	-	1,343	1,176	114.2 +
Ovary	-	-	-	553	545	101.4
Prostate	4,498	5,019	89.6 -	-	-	-
Testis	179	169	105.7	-	-	-
Urinary bladder**	1,588	1,254	126.7 +	570	445	128.1 +
Kidney and renal pelvis	725	720	100.7	535	461	116.2 +
Brain and other nervous system	255	249	102.3	228	220	103.8
Thyroid	383	230	166.8 +	1,345	728	184.8 +
Non-Hodgkin lymphoma	832	842	98.9	817	760	107.5 +
Hodgkin lymphoma	102	97	105.3	87	83	104.9
Myeloma	267	280	95.3	232	250	92.9
Leukemia	559	590	94.8	478	475	100.7

\* A positive sign following the SIR (standardized incidence ratio) represents a statistically significant excess number of cancer cases. A negative sign following the SIR represents a statistically significant lower number of cancer cases. See the Technical Notes for more information.

- A dash appears where a SIR could not be calculated due to the fact that there were less than 10 observed cases. A dash also appears in the observed and expected cases fields for unsuitable sex specific cancers.

\*\* Includes in situ and invasive cases. All other sites listed above only include invasive cases.

Note: Expected cases are computed based on 2008-2012 age-specific rates from the National Cancer Institute's SEER Program.



## **Armstrong County**

#### Number of Observed and Expected Cancer Cases and Standardized Incidence Ratios By Sex and Primary Site, Armstrong County Residents, 2008-2012

		Males			Females	
Primary Site	Observed Cases	Expected Cases	SIR*	Observed Cases	Expected Cases	SIR*
All cancer sites	1,115	1,150	97.0	1,096	1,067	102.8
Oral cavity and pharynx	34	37	92.5	18	17	108.8
Esophagus	18	18	102.7	4	5	-
Stomach	25	22	115.3	14	14	101.0
Colon and rectum	114	103	110.3	104	101	103.4
Liver and intrahepatic bile duct	15	29	51.3 -	8	12	-
Pancreas	18	32	56.0 -	24	33	73.3
Larynx	10	12	80.3	4	3	-
Lung and bronchus	173	150	115.6	137	140	97.9
Melanoma of the skin	43	63	68.2 -	33	42	78.7
Breast	2	3	-	297	317	93.7
Cervix uteri	-	-	-	13	13	99.6
Corpus and uterus, NOS	-	-	-	79	69	114.3
Ovary	-	-	-	29	32	91.9
Prostate	268	330	81.2 -	-	-	-
Testis	9	9	-	-	-	-
Urinary bladder**	93	81	115.5	23	26	89.1
Kidney and renal pelvis	33	46	71.1 -	34	27	126.1
Brain and other nervous system	15	15	97.2	10	13	79.7
Thyroid	19	14	133.3	67	41	164.6 ·
Non-Hodgkin lymphoma	59	53	110.4	36	44	81.8
Hodgkin lymphoma	3	6	-	5	4	-
Myeloma	22	18	121.6	10	15	68.4
Leukemia	38	37	101.9	23	27	84.5

\* A positive sign following the SIR (standardized incidence ratio) represents a statistically significant excess number of cancer cases. A negative sign following the SIR represents a statistically significant lower number of cancer cases. See the Technical Notes for more information.

- A dash appears where a SIR could not be calculated due to the fact that there were less than 10 observed cases. A dash also appears in the observed and expected cases fields for unsuitable sex specific cancers.

\*\* Includes in situ and invasive cases. All other sites listed above only include invasive cases.

Note: Expected cases are computed based on 2008-2012 age-specific rates from the National Cancer Institute's SEER Program.

# **Beaver County**



#### Number of Observed and Expected Cancer Cases and Standardized Incidence Ratios By Sex and Primary Site, Beaver County Residents, 2008-2012

		Males			Females	
Primary Site	Observed Cases	Expected Cases	SIR*	Observed Cases	Expected Cases	SIR*
All cancer sites	2,851	2,774	102.8	2,843	2,720	104.5 +
Oral cavity and pharynx	86	88	97.6	30	42	<b>71.0</b> ·
Esophagus	38	42	89.9	16	13	120.8
Stomach	56	53	106.6	27	36	75.9
Colon and rectum	259	250	103.5	249	259	96.2
Liver and intrahepatic bile duct	57	70	81.3	18	30	<b>59.8</b> ·
Pancreas	98	78	125.8 +	79	84	94.0
Larynx	38	30	127.1	3	7	-
Lung and bronchus	513	363	141.2 +	400	356	112.4 +
Melanoma of the skin	81	153	53.1 -	79	107	73.7 ·
Breast	5	7	-	858	805	106.5
Cervix uteri	-	-	-	30	33	90.4
Corpus and uterus, NOS	-	-	-	178	175	101.7
Ovary	-	-	-	75	81	93.1
Prostate	551	787	70.0 -	-	-	-
Testis	33	22	148.5	-	-	-
Urinary bladder**	273	196	139.0 +	94	66	142.0 +
Kidney and renal pelvis	143	111	128.3 +	56	69	81.7
Brain and other nervous system	44	37	117.7	26	32	81.5
Thyroid	37	34	108.2	131	104	126.2 -
Non-Hodgkin lymphoma	147	129	113.5	120	113	106.6
Hodgkin lymphoma	20	14	147.7	14	11	124.0
Myeloma	37	44	84.4	41	37	109.9
Leukemia	91	91	100.3	64	70	91.9

\* A positive sign following the SIR (standardized incidence ratio) represents a statistically significant excess number of cancer cases. A negative sign following the SIR represents a statistically significant lower number of cancer cases. See the Technical Notes for more information.

- A dash appears where a SIR could not be calculated due to the fact that there were less than 10 observed cases. A dash also appears in the observed and expected cases fields for unsuitable sex specific cancers.

\*\* Includes in situ and invasive cases. All other sites listed above only include invasive cases.

Note: Expected cases are computed based on 2008-2012 age-specific rates from the National Cancer Institute's SEER Program.



## **Bedford County**

#### Number of Observed and Expected Cancer Cases and Standardized Incidence Ratios By Sex and Primary Site, Bedford County Residents, 2008-2012

		Males			Females	
Primary Site	Observed Cases	Expected Cases	SIR*	Observed Cases	Expected Cases	SIR*
All cancer sites	903	837	107.9 +	750	750	100.0
Oral cavity and pharynx	33	26	124.7	8	12	-
Esophagus	16	13	125.5	4	4	-
Stomach	21	16	133.7	5	10	-
Colon and rectum	88	75	117.8	67	70	95.8
Liver and intrahepatic bile duct	8	21	-	7	8	-
Pancreas	19	23	81.6	19	23	83.6
Larynx	14	9	154.5	4	2	-
Lung and bronchus	113	110	103.2	77	98	78.3
Melanoma of the skin	46	46	100.7	20	30	67.4
Breast	0	2	-	214	224	95.6
Cervix uteri	-	-	-	7	9	-
Corpus and uterus, NOS	-	-	-	50	49	102.2
Ovary	-	-	-	17	22	76.7
Prostate	255	242	105.3	-	-	-
Testis	7	7	-	-	-	-
Urinary bladder**	80	58	137.1 +	30	18	167.2
Kidney and renal pelvis	32	34	94.9	17	19	89.5
Brain and other nervous system	14	11	124.6	11	9	124.1
Thyroid	16	10	154.9	57	29	195.4
Non-Hodgkin lymphoma	36	39	92.8	39	31	126.5
Hodgkin lymphoma	5	4	-	4	3	-
Myeloma	13	13	98.6	6	10	-
Leukemia	18	27	66.5 -	19	19	99.9

\* A positive sign following the SIR (standardized incidence ratio) represents a statistically significant excess number of cancer cases. A negative sign following the SIR represents a statistically significant lower number of cancer cases. See the Technical Notes for more information.

- A dash appears where a SIR could not be calculated due to the fact that there were less than 10 observed cases. A dash also appears in the observed and expected cases fields for unsuitable sex specific cancers.

\*\* Includes in situ and invasive cases. All other sites listed above only include invasive cases.

Note: Expected cases are computed based on 2008-2012 age-specific rates from the National Cancer Institute's SEER Program.

# **Berks County**



#### Number of Observed and Expected Cancer Cases and Standardized Incidence Ratios By Sex and Primary Site, Berks County Residents, 2008-2012

		Males			Females	
Primary Site	Observed Cases	Expected Cases	SIR*	Observed Cases	Expected Cases	SIR*
All cancer sites	5,808	5,649	102.8 +	5,548	5,319	104.3 +
Oral cavity and pharynx	167	183	91.0	86	82	104.4
Esophagus	120	85	140.8 +	21	25	85.1
Stomach	98	106	92.8	46	67	68.4 -
Colon and rectum	602	507	118.8 +	523	489	107.0
Liver and intrahepatic bile duct	117	144	81.1 -	52	57	90.9
Pancreas	141	155	90.7	148	156	94.7
Larynx	64	61	105.2	17	14	122.3
Lung and bronchus	808	720	112.2 +	705	665	105.9
Melanoma of the skin	284	314	90.5	227	220	103.1
Breast	8	14	-	1,564	1,600	97.8
Cervix uteri	-	-	-	68	72	94.5
Corpus and uterus, NOS	-	-	-	352	346	101.8
Ovary	-	-	-	135	159	85.1 -
Prostate	1,377	1,603	85.9 -	-	-	-
Testis	63	56	112.5	-	-	-
Urinary bladder**	460	385	119.3 +	130	123	105.7
Kidney and renal pelvis	239	231	103.6	157	133	117.7
Brain and other nervous system	91	82	111.4	86	66	129.5 +
Thyroid	95	75	125.9 +	262	227	115.2 +
Non-Hodgkin lymphoma	278	266	104.3	254	217	117.3 +
Hodgkin lymphoma	40	32	125.0	41	26	156.7 +
Myeloma	80	88	90.9	64	70	90.8
Leukemia	206	187	110.2	126	137	92.3

\* A positive sign following the SIR (standardized incidence ratio) represents a statistically significant excess number of cancer cases. A negative sign following the SIR represents a statistically significant lower number of cancer cases. See the Technical Notes for more information.

- A dash appears where a SIR could not be calculated due to the fact that there were less than 10 observed cases. A dash also appears in the observed and expected cases fields for unsuitable sex specific cancers.

\*\* Includes in situ and invasive cases. All other sites listed above only include invasive cases.

Note: Expected cases are computed based on 2008-2012 age-specific rates from the National Cancer Institute's SEER Program.



### **Blair County**

#### Number of Observed and Expected Cancer Cases and Standardized Incidence Ratios By Sex and Primary Site, Blair County Residents, 2008-2012

		Males			Females	
Primary Site	Observed Cases	Expected Cases	SIR*	Observed Cases	Expected Cases	SIR*
All cancer sites	2,108	1,951	108.0 +	2,004	1,933	103.7
Oral cavity and pharynx	77	62	123.8	27	30	89.9
Esophagus	41	30	138.2	8	9	-
Stomach	43	37	117.7	25	25	98.8
Colon and rectum	226	174	129.8 +	230	184	125.3 +
Liver and intrahepatic bile duct	43	49	87.1	11	21	51.4 ·
Pancreas	60	54	110.9	49	60	81.8
Larynx	34	21	161.1 +	9	5	-
Lung and bronchus	314	253	124.1 +	232	253	91.6
Melanoma of the skin	93	107	87.0	62	76	81.2
Breast	6	5	-	538	570	94.4
Cervix uteri	-	-	-	21	24	88.7
Corpus and uterus, NOS	-	-	-	150	124	120.9 +
Ovary	-	-	-	56	57	98.0
Prostate	443	562	78.9 -	-	-	-
Testis	17	17	100.8	-	-	-
Urinary bladder**	175	135	129.5 +	45	47	95.4
Kidney and renal pelvis	85	79	108.0	64	49	131.4
Brain and other nervous system	30	27	111.9	33	23	143.6
Thyroid	23	25	93.5	73	74	98.4
Non-Hodgkin lymphoma	108	91	119.0	91	80	113.6
Hodgkin lymphoma	11	10	109.7	7	8	-
Myeloma	27	31	88.3	18	27	67.8 ·
Leukemia	73	64	114.9	59	50	118.1

\* A positive sign following the SIR (standardized incidence ratio) represents a statistically significant excess number of cancer cases. A negative sign following the SIR represents a statistically significant lower number of cancer cases. See the Technical Notes for more information.

- A dash appears where a SIR could not be calculated due to the fact that there were less than 10 observed cases. A dash also appears in the observed and expected cases fields for unsuitable sex specific cancers.

\*\* Includes in situ and invasive cases. All other sites listed above only include invasive cases.

Note: Expected cases are computed based on 2008-2012 age-specific rates from the National Cancer Institute's SEER Program.

## **Bradford County**



#### Number of Observed and Expected Cancer Cases and Standardized Incidence Ratios By Sex and Primary Site, Bradford County Residents, 2008-2012

		Males			Females	
Primary Site	Observed Cases	Expected Cases	SIR*	Observed Cases	Expected Cases	SIR*
All cancer sites	1,058	1,015	104.3	1,027	909	113.0 +
Oral cavity and pharynx	31	32	95.9	14	14	99.4
Esophagus	16	15	103.5	5	4	-
Stomach	11	19	58.0 -	7	12	-
Colon and rectum	89	90	98.6	104	84	123.9 +
Liver and intrahepatic bile duct	17	26	66.3 -	8	10	-
Pancreas	30	28	106.8	32	27	117.9
Larynx	17	11	154.2	2	2	-
Lung and bronchus	150	132	113.7	142	117	121.5 +
Melanoma of the skin	51	55	92.4	48	36	131.7
Breast	5	2	-	263	273	96.2
Cervix uteri	-	-	-	14	12	121.0
Corpus and uterus, NOS	-	-	-	70	60	117.0
Ovary	-	-	-	28	27	103.7
Prostate	279	296	94.4	-	-	-
Testis	10	8	125.6	-	-	-
Urinary bladder**	86	70	122.8	30	21	140.3
Kidney and renal pelvis	42	41	102.5	27	23	117.6
Brain and other nervous system	6	14	-	8	11	-
Thyroid	13	13	103.4	28	36	77.0
Non-Hodgkin lymphoma	54	47	115.2	37	37	99.7
Hodgkin lymphoma	3	5	-	7	4	-
Myeloma	13	16	81.7	11	12	89.6
Leukemia	39	33	119.1	28	23	121.6

\* A positive sign following the SIR (standardized incidence ratio) represents a statistically significant excess number of cancer cases. A negative sign following the SIR represents a statistically significant lower number of cancer cases. See the Technical Notes for more information.

- A dash appears where a SIR could not be calculated due to the fact that there were less than 10 observed cases. A dash also appears in the observed and expected cases fields for unsuitable sex specific cancers.

\*\* Includes in situ and invasive cases. All other sites listed above only include invasive cases.

Note: Expected cases are computed based on 2008-2012 age-specific rates from the National Cancer Institute's SEER Program.



### **Bucks County**

#### Number of Observed and Expected Cancer Cases and Standardized Incidence Ratios By Sex and Primary Site, Bucks County Residents, 2008-2012

		Males			Females	
Primary Site	Observed Cases	Expected Cases	SIR*	Observed Cases	Expected Cases	SIR*
All cancer sites	9,690	9,024	107.4 +	9,357	8,469	110.5 +
Oral cavity and pharynx	312	300	104.0	170	131	129.7 +
Esophagus	167	137	122.3 +	43	39	111.3
Stomach	150	167	89.7	90	105	85.7
Colon and rectum	782	808	96.8	769	767	100.2
Liver and intrahepatic bile duct	192	236	81.4 -	76	90	84.2
Pancreas	252	246	102.4	278	243	114.5 +
Larynx	105	98	106.7	23	23	102.0
Lung and bronchus	1,250	1,137	109.9 +	1,154	1,043	110.6 +
Melanoma of the skin	603	500	120.5 +	417	352	118.5 +
Breast	28	22	128.9	2,709	2,594	104.4 +
Cervix uteri	-	-	-	98	117	84.1
Corpus and uterus, NOS	-	-	-	665	563	118.1 +
Ovary	-	-	-	283	254	111.5
Prostate	2,577	2,603	99.0	-	-	-
Testis	117	85	137.6 +	-	-	-
Urinary bladder**	770	601	128.2 +	242	191	126.8 +
Kidney and renal pelvis	423	373	113.4 +	212	212	99.8
Brain and other nervous system	149	129	115.6	123	103	118.9
Thyroid	190	122	155.2 +	525	367	143.2 +
Non-Hodgkin lymphoma	482	422	114.2 +	404	340	118.7 +
Hodgkin lymphoma	59	49	120.2	53	39	135.8
Myeloma	123	140	88.0	97	111	87.4
Leukemia	247	292	84.6 -	201	211	95.2

\* A positive sign following the SIR (standardized incidence ratio) represents a statistically significant excess number of cancer cases. A negative sign following the SIR represents a statistically significant lower number of cancer cases. See the Technical Notes for more information.

- A dash appears where a SIR could not be calculated due to the fact that there were less than 10 observed cases. A dash also appears in the observed and expected cases fields for unsuitable sex specific cancers.

\*\* Includes in situ and invasive cases. All other sites listed above only include invasive cases.

Note: Expected cases are computed based on 2008-2012 age-specific rates from the National Cancer Institute's SEER Program.

## **Butler County**



#### Number of Observed and Expected Cancer Cases and Standardized Incidence Ratios By Sex and Primary Site, Butler County Residents, 2008-2012

		Males		1. I.	Females	
Primary Site	Observed Cases	Expected Cases	SIR*	Observed Cases	Expected Cases	SIR*
All cancer sites	3,023	2,675	113.0 +	2,705	2,527	<b>107.0</b> ·
Oral cavity and pharynx	78	88	88.8	38	39	96.8
Esophagus	57	40	140.9 +	7	12	-
Stomach	56	50	112.2	21	32	65.4
Colon and rectum	279	240	116.3 +	233	234	99.7
Liver and intrahepatic bile duct	45	69	65.0 -	15	27	55.0
Pancreas	58	74	78.9 -	58	75	77.6
Larynx	29	29	100.0	7	7	-
Lung and bronchus	375	340	110.5	283	316	89.5
Melanoma of the skin	145	148	97.8	91	104	87.8
Breast	4	6	-	813	762	106.6
Cervix uteri	-	-	-	33	34	98.2
Corpus and uterus, NOS	-	-	-	162	165	98.1
Ovary	-	-	-	77	75	102.0
Prostate	901	767	117.5 +	-	-	-
Testis	29	25	116.0	-	-	-
Urinary bladder**	232	181	128.1 +	65	59	110.7
Kidney and renal pelvis	103	110	94.0	60	63	94.7
Brain and other nervous system	49	38	129.2	48	31	155.8 -
Thyroid	84	36	236.0 +	241	106	227.9 ·
Non-Hodgkin lymphoma	139	125	110.8	132	103	128.5 ·
Hodgkin lymphoma	15	15	103.0	15	12	128.2
Myeloma	34	42	81.8	28	34	83.4
Leukemia	82	87	94.0	83	64	129.2 ·

\* A positive sign following the SIR (standardized incidence ratio) represents a statistically significant excess number of cancer cases. A negative sign following the SIR represents a statistically significant lower number of cancer cases. See the Technical Notes for more information.

- A dash appears where a SIR could not be calculated due to the fact that there were less than 10 observed cases. A dash also appears in the observed and expected cases fields for unsuitable sex specific cancers.

\*\* Includes in situ and invasive cases. All other sites listed above only include invasive cases.

Note: Expected cases are computed based on 2008-2012 age-specific rates from the National Cancer Institute's SEER Program.



## **Cambria County**

#### Number of Observed and Expected Cancer Cases and Standardized Incidence Ratios By Sex and Primary Site, Cambria County Residents, 2008-2012

		Males			Females	
Primary Site	Observed Cases	Expected Cases	SIR*	Observed Cases	Expected Cases	SIR*
All cancer sites	2,546	2,347	108.5 +	2,394	2,269	105.5 +
Oral cavity and pharynx	60	75	80.1	39	35	110.3
Esophagus	50	36	140.0 +	9	11	-
Stomach	51	44	115.0	28	30	92.4
Colon and rectum	305	211	144.4 +	275	220	125.0 +
Liver and intrahepatic bile duct	45	60	75.5 -	12	25	47.2 -
Pancreas	87	66	132.4 +	57	72	78.9 -
Larynx	36	25	142.3	7	6	-
Lung and bronchus	341	305	111.8	257	301	85.3 -
Melanoma of the skin	92	129	71.2 -	77	88	87.4
Breast	10	6	174.9	607	661	91.8 -
Cervix uteri	-	-	-	30	27	113.0
Corpus and uterus, NOS	-	-	-	193	144	134.3 +
Ovary	-	-	-	73	67	109.1
Prostate	619	669	92.6 -	-	-	-
Testis	29	20	146.4	-	-	-
Urinary bladder**	228	165	138.2 +	86	57	151.3 +
Kidney and renal pelvis	79	94	83.6	69	57	120.8
Brain and other nervous system	35	32	110.1	29	27	109.3
Thyroid	33	29	112.3	123	83	148.3 +
Non-Hodgkin lymphoma	119	110	108.6	104	95	109.6
Hodgkin lymphoma	11	12	93.1	7	9	-
Myeloma	22	37	59.6 -	33	32	104.6
Leukemia	104	77	135.9 +	68	59	114.8

\* A positive sign following the SIR (standardized incidence ratio) represents a statistically significant excess number of cancer cases. A negative sign following the SIR represents a statistically significant lower number of cancer cases. See the Technical Notes for more information.

- A dash appears where a SIR could not be calculated due to the fact that there were less than 10 observed cases. A dash also appears in the observed and expected cases fields for unsuitable sex specific cancers.

\*\* Includes in situ and invasive cases. All other sites listed above only include invasive cases.

Note: Expected cases are computed based on 2008-2012 age-specific rates from the National Cancer Institute's SEER Program.





#### Number of Observed and Expected Cancer Cases and Standardized Incidence Ratios By Sex and Primary Site, Cameron County Residents, 2008-2012

Primary Site		Males			Females	
	Observed Cases	Expected Cases	SIR*	Observed Cases	Expected Cases	SIR*
All cancer sites	125	97	128.3 +	97	86	113.4
Oral cavity and pharynx	3	3	-	2	1	-
Esophagus	2	1	-	0	0	-
Stomach	3	2	-	2	1	-
Colon and rectum	16	9	183.7	11	8	131.7
Liver and intrahepatic bile duct	1	2	-	0	1	-
Pancreas	0	3	-	1	3	-
Larynx	2	1	-	0	0	-
Lung and bronchus	15	13	117.3	15	11	132.5
Melanoma of the skin	2	5	-	2	3	-
Breast	0	0	-	26	25	104.2
Cervix uteri	-	-	-	3	1	-
Corpus and uterus, NOS	-	-	-	5	5	-
Ovary	-	-	-	0	3	-
Prostate	43	28	151.3 +	-	-	-
Testis	0	1	-	-	-	-
Urinary bladder**	12	7	173.8	3	2	-
Kidney and renal pelvis	3	4	-	4	2	-
Brain and other nervous system	1	1	-	3	1	-
Thyroid	2	1	-	3	3	-
Non-Hodgkin lymphoma	5	4	-	4	4	-
Hodgkin lymphoma	2	0	-	1	0	-
Myeloma	0	2	-	0	1	-
Leukemia	3	3	-	3	2	-

\* A positive sign following the SIR (standardized incidence ratio) represents a statistically significant excess number of cancer cases. A negative sign following the SIR represents a statistically significant lower number of cancer cases. See the Technical Notes for more information.

- A dash appears where a SIR could not be calculated due to the fact that there were less than 10 observed cases. A dash also appears in the observed and expected cases fields for unsuitable sex specific cancers.

\*\* Includes in situ and invasive cases. All other sites listed above only include invasive cases.

Note: Expected cases are computed based on 2008-2012 age-specific rates from the National Cancer Institute's SEER Program.



### **Carbon County**

#### Number of Observed and Expected Cancer Cases and Standardized Incidence Ratios By Sex and Primary Site, Carbon County Residents, 2008-2012

		Males			Females	
Primary Site	Observed Cases	Expected Cases	SIR*	Observed Cases	Expected Cases	SIR*
All cancer sites	1,156	1,047	110.4 +	1,086	973	111.7 +
Oral cavity and pharynx	26	34	77.0	20	15	132.8
Esophagus	22	16	137.9	7	5	-
Stomach	21	19	107.7	6	12	-
Colon and rectum	89	93	95.6	90	90	100.0
Liver and intrahepatic bile duct	28	27	104.7	8	11	-
Pancreas	23	29	79.7	35	29	120.4
Larynx	14	11	122.7	5	3	-
Lung and bronchus	197	135	146.0 +	135	125	107.6
Melanoma of the skin	51	57	89.1	37	39	94.9
Breast	2	3	-	290	292	99.2
Cervix uteri	-	-	-	13	12	105.0
Corpus and uterus, NOS	-	-	-	91	64	142.3 +
Ovary	-	-	-	29	29	100.4
Prostate	254	306	83.1 -	-	-	-
Testis	9	9	-	-	-	-
Urinary bladder**	100	71	140.1 +	25	23	109.0
Kidney and renal pelvis	58	43	136.3 +	24	25	97.7
Brain and other nervous system	14	14	98.6	14	12	121.4
Thyroid	22	13	165.3	57	39	146.7 +
Non-Hodgkin lymphoma	47	48	97.1	51	40	128.3
Hodgkin lymphoma	10	5	192.1	6	4	-
Myeloma	12	16	73.4	12	13	91.2
Leukemia	38	34	113.4	21	24	85.9

\* A positive sign following the SIR (standardized incidence ratio) represents a statistically significant excess number of cancer cases. A negative sign following the SIR represents a statistically significant lower number of cancer cases. See the Technical Notes for more information.

- A dash appears where a SIR could not be calculated due to the fact that there were less than 10 observed cases. A dash also appears in the observed and expected cases fields for unsuitable sex specific cancers.

\*\* Includes in situ and invasive cases. All other sites listed above only include invasive cases.

Note: Expected cases are computed based on 2008-2012 age-specific rates from the National Cancer Institute's SEER Program.

### **Centre County**



### Number of Observed and Expected Cancer Cases and Standardized Incidence Ratios By Sex and Primary Site, Centre County Residents, 2008-2012

		Males		Females		
Primary Site	Observed Cases	Expected Cases	SIR*	Observed Cases	Expected Cases	SIR*
All cancer sites	1,644	1,718	95.7	1,509	1,535	98.3
Oral cavity and pharynx	41	56	73.6 -	26	24	108.7
Esophagus	37	25	145.5	8	7	-
Stomach	18	31	57.3 -	14	19	73.6
Colon and rectum	127	152	83.8 -	140	138	101.6
Liver and intrahepatic bile duct	25	43	57.6 -	8	16	-
Pancreas	43	46	93.2	34	44	77.3
Larynx	20	18	109.3	5	4	-
Lung and bronchus	217	214	101.3	163	189	86.1
Melanoma of the skin	118	96	122.9 +	87	66	131.0
Breast	3	4	-	454	456	99.5
Cervix uteri	-	-	-	14	21	66.0
Corpus and uterus, NOS	-	-	-	111	99	111.6
Ovary	-	-	-	45	46	97.3
Prostate	440	482	91.2 -	-	-	-
Testis	19	26	73.2	-	-	-
Urinary bladder**	111	114	97.6	27	35	78.1
Kidney and renal pelvis	53	69	76.4 -	41	38	107.3
Brain and other nervous system	29	26	109.5	14	20	68.8
Thyroid	28	25	113.4	81	72	112.5
Non-Hodgkin lymphoma	88	82	106.9	56	63	89.5
Hodgkin lymphoma	16	14	115.1	12	11	110.0
Myeloma	17	26	64.8 -	11	20	54.9
Leukemia	64	57	111.7	39	40	98.1

\* A positive sign following the SIR (standardized incidence ratio) represents a statistically significant excess number of cancer cases. A negative sign following the SIR represents a statistically significant lower number of cancer cases. See the Technical Notes for more information.

- A dash appears where a SIR could not be calculated due to the fact that there were less than 10 observed cases. A dash also appears in the observed and expected cases fields for unsuitable sex specific cancers.

\*\* Includes in situ and invasive cases. All other sites listed above only include invasive cases.

Note: Expected cases are computed based on 2008-2012 age-specific rates from the National Cancer Institute's SEER Program.



### **Chester County**

### Number of Observed and Expected Cancer Cases and Standardized Incidence Ratios By Sex and Primary Site, Chester County Residents, 2008-2012

		Males			Females		
Primary Site	Observed Cases	Expected Cases	SIR*	Observed Cases	Expected Cases	SIR*	
All cancer sites	6,792	6,532	104.0 +	6,699	6,137	109.1 +	
Oral cavity and pharynx	201	219	92.0	107	95	112.8	
Esophagus	92	98	93.7	39	27	142.9	
Stomach	112	121	92.9	56	75	75.0 -	
Colon and rectum	507	584	86.9 -	543	545	99.6	
Liver and intrahepatic bile duct	129	171	75.5 -	34	64	52.8 -	
Pancreas	183	177	103.6	175	171	102.4	
Larynx	58	71	81.7	22	16	134.7	
Lung and bronchus	737	813	90.7 -	738	738	100.0	
Melanoma of the skin	447	364	122.7 +	340	261	130.0 +	
Breast	29	16	185.2 +	1,952	1,894	103.1	
Cervix uteri	-	-	-	78	89	88.0	
Corpus and uterus, NOS	-	-	-	434	410	105.8	
Ovary	-	-	-	215	185	116.5 +	
Prostate	1,877	1,873	100.2	-	-	-	
Testis	86	69	124.6	-	-	-	
Urinary bladder**	531	429	123.8 +	152	134	113.2	
Kidney and renal pelvis	264	271	97.3	137	154	89.1	
Brain and other nervous system	118	97	121.4	104	78	134.1 +	
Thyroid	174	92	189.7 +	458	281	163.1 +	
Non-Hodgkin lymphoma	329	308	106.8	266	245	108.7	
Hodgkin lymphoma	35	39	90.5	40	31	128.8	
Myeloma	106	100	105.5	80	79	101.3	
Leukemia	246	214	114.7 +	173	153	112.8	

\* A positive sign following the SIR (standardized incidence ratio) represents a statistically significant excess number of cancer cases. A negative sign following the SIR represents a statistically significant lower number of cancer cases. See the Technical Notes for more information.

- A dash appears where a SIR could not be calculated due to the fact that there were less than 10 observed cases. A dash also appears in the observed and expected cases fields for unsuitable sex specific cancers.

\*\* Includes in situ and invasive cases. All other sites listed above only include invasive cases.

Note: Expected cases are computed based on 2008-2012 age-specific rates from the National Cancer Institute's SEER Program.

## **Clarion County**



### Number of Observed and Expected Cancer Cases and Standardized Incidence Ratios By Sex and Primary Site, Clarion County Residents, 2008-2012

		Males		Females		
Primary Site	Observed Cases	Expected Cases	SIR*	Observed Cases	Expected Cases	SIR*
All cancer sites	706	605	116.6 +	614	553	111.0 +
Oral cavity and pharynx	20	19	104.3	6	9	-
Esophagus	11	9	119.7	4	3	-
Stomach	11	11	97.4	5	7	-
Colon and rectum	70	54	130.2	73	51	142.3 +
Liver and intrahepatic bile duct	9	15	-	5	6	-
Pancreas	20	17	119.5	23	17	138.0
Larynx	4	7	-	1	1	-
Lung and bronchus	94	79	119.4	62	72	86.1
Melanoma of the skin	28	33	84.9	26	22	117.3
Breast	2	1	-	161	164	98.0
Cervix uteri	-	-	-	7	7	-
Corpus and uterus, NOS	-	-	-	42	36	116.7
Ovary	-	-	-	17	16	103.4
Prostate	207	175	118.2 +	-	-	-
Testis	3	5	-	-	-	-
Urinary bladder**	55	42	131.4	18	13	136.9
Kidney and renal pelvis	26	24	107.0	18	14	128.8
Brain and other nervous system	6	8	-	9	7	-
Thyroid	8	8	-	30	22	135.5
Non-Hodgkin lymphoma	38	28	135.2	24	23	105.4
Hodgkin lymphoma	2	3	-	0	3	-
Myeloma	10	9	105.4	4	8	-
Leukemia	20	20	101.9	19	14	133.9

\* A positive sign following the SIR (standardized incidence ratio) represents a statistically significant excess number of cancer cases. A negative sign following the SIR represents a statistically significant lower number of cancer cases. See the Technical Notes for more information.

- A dash appears where a SIR could not be calculated due to the fact that there were less than 10 observed cases. A dash also appears in the observed and expected cases fields for unsuitable sex specific cancers.

\*\* Includes in situ and invasive cases. All other sites listed above only include invasive cases.

Note: Expected cases are computed based on 2008-2012 age-specific rates from the National Cancer Institute's SEER Program.



## **Clearfield County**

### Number of Observed and Expected Cancer Cases and Standardized Incidence Ratios By Sex and Primary Site, Clearfield County Residents, 2008-2012

		Males		Females		
Primary Site	Observed Cases	Expected Cases	SIR*	Observed Cases	Expected Cases	SIR*
All cancer sites	1,422	1,327	107.2 +	1,223	1,204	101.6
Oral cavity and pharynx	49	43	114.2	14	19	75.0
Esophagus	23	20	114.6	6	6	-
Stomach	19	25	76.5	12	16	76.6
Colon and rectum	144	119	121.0 +	137	114	120.6 -
Liver and intrahepatic bile duct	24	34	71.3 -	16	13	120.8
Pancreas	39	37	106.6	38	37	102.8
Larynx	25	14	174.3 +	6	3	-
Lung and bronchus	206	170	121.0 +	137	157	87.0
Melanoma of the skin	60	74	81.6	39	48	81.9
Breast	2	3	-	304	357	<b>85.0</b> ·
Cervix uteri	-	-	-	18	15	120.8
Corpus and uterus, NOS	-	-	-	94	78	121.0
Ovary	-	-	-	33	36	92.7
Prostate	356	380	93.8	-	-	-
Testis	14	13	111.7	-	-	-
Urinary bladder**	94	91	103.5	27	29	92.7
Kidney and renal pelvis	71	54	131.2 +	36	30	118.5
Brain and other nervous system	20	18	108.8	13	14	91.7
Thyroid	17	18	97.1	48	46	103.5
Non-Hodgkin lymphoma	67	62	107.8	51	50	102.7
Hodgkin lymphoma	5	7	-	5	5	-
Myeloma	19	21	91.6	18	16	109.2
Leukemia	51	43	118.8	30	31	97.6

\* A positive sign following the SIR (standardized incidence ratio) represents a statistically significant excess number of cancer cases. A negative sign following the SIR represents a statistically significant lower number of cancer cases. See the Technical Notes for more information.

- A dash appears where a SIR could not be calculated due to the fact that there were less than 10 observed cases. A dash also appears in the observed and expected cases fields for unsuitable sex specific cancers.

\*\* Includes in situ and invasive cases. All other sites listed above only include invasive cases.

Note: Expected cases are computed based on 2008-2012 age-specific rates from the National Cancer Institute's SEER Program.

## **Clinton County**



### Number of Observed and Expected Cancer Cases and Standardized Incidence Ratios By Sex and Primary Site, Clinton County Residents, 2008-2012

		Males		Females		
Primary Site	Observed Cases	Expected Cases	SIR*	Observed Cases	Expected Cases	SIR*
All cancer sites	612	573	106.9	563	526	107.0
Oral cavity and pharynx	18	18	99.9	9	8	-
Esophagus	8	9	-	3	3	-
Stomach	10	11	93.3	4	7	-
Colon and rectum	59	51	115.8	53	49	107.9
Liver and intrahepatic bile duct	8	14	-	5	6	-
Pancreas	21	16	132.2	17	16	106.6
Larynx	5	6	-	2	1	-
Lung and bronchus	97	75	130.0 +	77	68	112.8
Melanoma of the skin	27	31	86.3	17	21	80.4
Breast	1	1	-	133	156	85.5
Cervix uteri	-	-	-	5	7	-
Corpus and uterus, NOS	-	-	-	46	34	135.5
Ovary	-	-	-	15	16	96.1
Prostate	144	164	87.6	-	-	-
Testis	4	5	-	-	-	-
Urinary bladder**	57	40	142.8 +	18	13	143.2
Kidney and renal pelvis	13	23	56.7 -	15	13	113.2
Brain and other nervous system	8	8	-	4	6	-
Thyroid	13	7	181.8	35	21	165.9 ·
Non-Hodgkin lymphoma	31	27	116.1	26	22	119.8
Hodgkin lymphoma	2	3	-	3	3	-
Myeloma	8	9	-	4	7	-
Leukemia	21	19	111.9	18	14	132.2

\* A positive sign following the SIR (standardized incidence ratio) represents a statistically significant excess number of cancer cases. A negative sign following the SIR represents a statistically significant lower number of cancer cases. See the Technical Notes for more information.

- A dash appears where a SIR could not be calculated due to the fact that there were less than 10 observed cases. A dash also appears in the observed and expected cases fields for unsuitable sex specific cancers.

\*\* Includes in situ and invasive cases. All other sites listed above only include invasive cases.

Note: Expected cases are computed based on 2008-2012 age-specific rates from the National Cancer Institute's SEER Program.



## **Columbia County**

### Number of Observed and Expected Cancer Cases and Standardized Incidence Ratios By Sex and Primary Site, Columbia County Residents, 2008-2012

		Males			Females		
Primary Site	Observed Cases	Expected Cases	SIR*	Observed Cases	Expected Cases	SIR*	
All cancer sites	1,088	961	113.2 +	1,080	924	116.9 +	
Oral cavity and pharynx	42	31	137.6	11	14	76.4	
Esophagus	28	15	192.1 +	4	4	-	
Stomach	16	18	89.1	11	12	92.5	
Colon and rectum	95	85	111.1	102	86	118.3	
Liver and intrahepatic bile duct	15	24	62.0 -	8	10	-	
Pancreas	29	27	109.1	27	28	96.4	
Larynx	15	10	144.7	3	2	-	
Lung and bronchus	175	124	140.6 +	109	119	91.2	
Melanoma of the skin	64	53	121.6	47	37	126.1	
Breast	1	2	-	270	273	98.7	
Cervix uteri	-	-	-	13	12	112.8	
Corpus and uterus, NOS	-	-	-	92	60	153.9 +	
Ovary	-	-	-	27	28	98.1	
Prostate	256	276	92.6	-	-	-	
Testis	11	9	122.9	-	-	-	
Urinary bladder**	82	66	123.4	31	22	140.6	
Kidney and renal pelvis	38	39	98.4	32	23	137.8	
Brain and other nervous system	9	13	-	10	11	88.6	
Thyroid	18	12	147.8	57	37	152.7 +	
Non-Hodgkin lymphoma	39	45	87.0	56	38	147.0 +	
Hodgkin lymphoma	8	5	-	6	5	-	
Myeloma	13	15	86.5	11	13	87.8	
Leukemia	38	31	121.2	24	24	100.9	

\* A positive sign following the SIR (standardized incidence ratio) represents a statistically significant excess number of cancer cases. A negative sign following the SIR represents a statistically significant lower number of cancer cases. See the Technical Notes for more information.

- A dash appears where a SIR could not be calculated due to the fact that there were less than 10 observed cases. A dash also appears in the observed and expected cases fields for unsuitable sex specific cancers.

\*\* Includes in situ and invasive cases. All other sites listed above only include invasive cases.

Note: Expected cases are computed based on 2008-2012 age-specific rates from the National Cancer Institute's SEER Program.





### Number of Observed and Expected Cancer Cases and Standardized Incidence Ratios By Sex and Primary Site, Crawford County Residents, 2008-2012

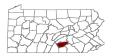
		Males		Females		
Primary Site	Observed Cases	Expected Cases	SIR*	Observed Cases	Expected Cases	SIR*
All cancer sites	1,420	1,382	102.7	1,310	1,255	104.4
Oral cavity and pharynx	56	44	127.2	21	19	108.0
Esophagus	26	21	123.4	8	6	-
Stomach	15	26	58.3 -	7	16	-
Colon and rectum	136	123	111.0	127	115	110.5
Liver and intrahepatic bile duct	18	35	51.3 -	13	14	95.6
Pancreas	43	38	112.5	36	37	97.3
Larynx	11	15	73.2	4	3	-
Lung and bronchus	239	179	133.4 +	186	160	116.5
Melanoma of the skin	45	75	59.9 -	47	51	92.3
Breast	2	3	-	345	378	91.2
Cervix uteri	-	-	-	27	16	165.8 -
Corpus and uterus, NOS	-	-	-	94	83	113.1
Ovary	-	-	-	33	37	88.3
Prostate	405	403	100.4	-	-	-
Testis	12	11	107.2	-	-	-
Urinary bladder**	104	95	109.4	25	29	85.8
Kidney and renal pelvis	49	56	87.9	33	32	104.3
Brain and other nervous system	21	19	111.7	20	15	131.0
Thyroid	19	17	110.8	75	52	145.4 -
Non-Hodgkin lymphoma	64	64	100.3	44	51	86.2
Hodgkin lymphoma	8	7	-	3	6	-
Myeloma	16	22	74.0	18	17	107.0
Leukemia	34	45	76.2	29	32	91.5

\* A positive sign following the SIR (standardized incidence ratio) represents a statistically significant excess number of cancer cases. A negative sign following the SIR represents a statistically significant lower number of cancer cases. See the Technical Notes for more information.

- A dash appears where a SIR could not be calculated due to the fact that there were less than 10 observed cases. A dash also appears in the observed and expected cases fields for unsuitable sex specific cancers.

\*\* Includes in situ and invasive cases. All other sites listed above only include invasive cases.

Note: Expected cases are computed based on 2008-2012 age-specific rates from the National Cancer Institute's SEER Program.



# **Cumberland County**

### Number of Observed and Expected Cancer Cases and Standardized Incidence Ratios By Sex and Primary Site, Cumberland County Residents, 2008-2012

		Males		Females		
Primary Site	Observed Cases	Expected Cases	SIR*	Observed Cases	Expected Cases	SIR*
All cancer sites	3,218	3,372	95.4 -	3,475	3,239	107.3 +
Oral cavity and pharynx	110	109	101.0	52	50	103.5
Esophagus	45	51	88.4	11	15	71.9
Stomach	46	63	73.2 -	33	41	79.8
Colon and rectum	310	301	103.0	341	300	113.5 +
Liver and intrahepatic bile duct	48	86	55.9 -	21	35	59.6 -
Pancreas	101	93	109.0	93	97	96.0
Larynx	36	36	98.9	5	9	-
Lung and bronchus	464	431	107.7	400	414	96.7
Melanoma of the skin	242	187	129.7 +	181	132	137.5 +
Breast	9	8	-	1,012	968	104.6
Cervix uteri	-	-	-	36	42	86.0
Corpus and uterus, NOS	-	-	-	244	211	115.8 +
Ovary	-	-	-	82	96	85.1
Prostate	627	965	65.0 -	-	-	-
Testis	38	34	111.5	-	-	-
Urinary bladder**	245	230	106.7	91	76	119.3
Kidney and renal pelvis	145	137	105.7	90	81	110.5
Brain and other nervous system	49	48	102.5	42	39	106.5
Thyroid	49	45	109.5	159	133	119.6 +
Non-Hodgkin lymphoma	169	158	106.8	152	133	114.5
Hodgkin lymphoma	23	19	119.9	21	15	135.6
Myeloma	50	52	95.3	40	44	91.8
Leukemia	87	110	79.0 -	70	83	84.6

\* A positive sign following the SIR (standardized incidence ratio) represents a statistically significant excess number of cancer cases. A negative sign following the SIR represents a statistically significant lower number of cancer cases. See the Technical Notes for more information.

- A dash appears where a SIR could not be calculated due to the fact that there were less than 10 observed cases. A dash also appears in the observed and expected cases fields for unsuitable sex specific cancers.

\*\* Includes in situ and invasive cases. All other sites listed above only include invasive cases.

Note: Expected cases are computed based on 2008-2012 age-specific rates from the National Cancer Institute's SEER Program.

# **Dauphin County**



### Number of Observed and Expected Cancer Cases and Standardized Incidence Ratios By Sex and Primary Site, Dauphin County Residents, 2008-2012

		Males			Females		
Primary Site	Observed Cases	Expected Cases	SIR*	Observed Cases	Expected Cases	SIR*	
All cancer sites	3,381	3,530	95.8 -	3,699	3,543	104.4 -	
Oral cavity and pharynx	125	117	106.6	59	55	107.5	
Esophagus	45	53	84.4	12	16	74.1	
Stomach	61	65	93.4	31	44	70.4	
Colon and rectum	312	315	99.0	371	321	115.5 -	
Liver and intrahepatic bile duct	91	93	98.3	32	38	84.5	
Pancreas	106	96	110.3	94	102	92.3	
Larynx	44	38	114.7	10	9	106.6	
Lung and bronchus	529	443	119.5 +	481	436	110.3 -	
Melanoma of the skin	184	196	93.8	159	148	107.2	
Breast	6	8	-	1,047	1,078	97.1	
Cervix uteri	-	-	-	55	49	112.0	
Corpus and uterus, NOS	-	-	-	280	235	119.2 -	
Ovary	-	-	-	92	106	86.7	
Prostate	722	1,014	71.2 -	-	-	-	
Testis	37	36	102.4	-	-	-	
Urinary bladder**	235	234	100.3	64	80	79.9	
Kidney and renal pelvis	147	146	100.9	109	89	122.6	
Brain and other nervous system	59	52	114.4	26	44	59.2	
Thyroid	49	48	101.1	172	155	110.8	
Non-Hodgkin lymphoma	170	166	102.6	136	143	95.2	
Hodgkin lymphoma	27	20	133.8	33	17	192.5 -	
Myeloma	39	54	71.6 -	37	46	79.7	
Leukemia	89	115	77.1 -	72	89	80.7	

\* A positive sign following the SIR (standardized incidence ratio) represents a statistically significant excess number of cancer cases. A negative sign following the SIR represents a statistically significant lower number of cancer cases. See the Technical Notes for more information.

- A dash appears where a SIR could not be calculated due to the fact that there were less than 10 observed cases. A dash also appears in the observed and expected cases fields for unsuitable sex specific cancers.

\*\* Includes in situ and invasive cases. All other sites listed above only include invasive cases.

Note: Expected cases are computed based on 2008-2012 age-specific rates from the National Cancer Institute's SEER Program.



### **Delaware County**

### Number of Observed and Expected Cancer Cases and Standardized Incidence Ratios By Sex and Primary Site, Delaware County Residents, 2008-2012

		Males			Females		
Primary Site	Observed Cases	Expected Cases	SIR*	Observed Cases	Expected Cases	SIR*	
All cancer sites	8,561	7,299	117.3 +	8,439	7,521	112.2 +	
Oral cavity and pharynx	281	238	117.8 +	121	117	103.6	
Esophagus	137	110	124.8 +	41	35	116.4	
Stomach	134	137	98.0	75	96	78.1 -	
Colon and rectum	804	658	122.3 +	773	699	110.5 +	
Liver and intrahepatic bile duct	200	188	106.4	83	81	102.2	
Pancreas	214	201	106.4	215	224	96.2	
Larynx	112	78	142.8 +	31	19	159.0 +	
Lung and bronchus	1,179	927	127.2 +	1,181	939	125.7 +	
Melanoma of the skin	474	407	116.3 +	354	311	113.8 +	
Breast	26	18	147.5	2,400	2,251	106.6 +	
Cervix uteri	-	-	-	130	101	128.8 +	
Corpus and uterus, NOS	-	-	-	548	485	112.9 +	
Ovary	-	-	-	238	224	106.1	
Prostate	2,295	2,050	111.9 +	-	-	-	
Testis	86	76	112.5	-	-	-	
Urinary bladder**	556	499	111.5 +	225	176	128.1 +	
Kidney and renal pelvis	370	298	124.1 +	222	188	118.1 +	
Brain and other nervous system	127	107	118.9	105	93	112.7	
Thyroid	133	99	134.8 +	399	319	125.0 +	
Non-Hodgkin lymphoma	360	346	104.0	305	307	99.3	
Hodgkin lymphoma	52	43	120.8	40	37	108.7	
Myeloma	115	113	101.4	97	100	97.2	
Leukemia	219	243	90.1	169	194	87.2	

\* A positive sign following the SIR (standardized incidence ratio) represents a statistically significant excess number of cancer cases. A negative sign following the SIR represents a statistically significant lower number of cancer cases. See the Technical Notes for more information.

- A dash appears where a SIR could not be calculated due to the fact that there were less than 10 observed cases. A dash also appears in the observed and expected cases fields for unsuitable sex specific cancers.

\*\* Includes in situ and invasive cases. All other sites listed above only include invasive cases.

Note: Expected cases are computed based on 2008-2012 age-specific rates from the National Cancer Institute's SEER Program.





### Number of Observed and Expected Cancer Cases and Standardized Incidence Ratios By Sex and Primary Site, Elk County Residents, 2008-2012

		Males			Females		
Primary Site	Observed Cases	Expected Cases	SIR*	Observed Cases	Expected Cases	SIR*	
All cancer sites	644	549	117.4 +	531	499	106.3	
Oral cavity and pharynx	13	18	74.2	7	8	-	
Esophagus	4	8	-	2	2	-	
Stomach	8	10	-	6	7	-	
Colon and rectum	69	49	139.8 +	48	48	100.6	
Liver and intrahepatic bile duct	12	14	86.4	4	6	-	
Pancreas	18	15	117.4	17	16	109.4	
Larynx	9	6	-	1	1	-	
Lung and bronchus	88	72	122.7	75	65	114.6	
Melanoma of the skin	18	30	59.8 -	15	20	76.5	
Breast	2	1	-	146	148	98.9	
Cervix uteri	-	-	-	6	6	-	
Corpus and uterus, NOS	-	-	-	38	32	119.4	
Ovary	-	-	-	13	15	88.1	
Prostate	218	157	138.6 +	-	-	-	
Testis	7	4	-	-	-	-	
Urinary bladder**	42	38	109.3	21	12	171.6	
Kidney and renal pelvis	18	22	81.1	14	13	111.4	
Brain and other nervous system	8	7	-	7	6	-	
Thyroid	13	7	191.0	34	19	179.8	
Non-Hodgkin lymphoma	21	26	82.3	17	21	82.2	
Hodgkin lymphoma	3	3	-	1	2	-	
Myeloma	13	9	150.0	4	7	-	
Leukemia	19	18	107.1	12	13	93.5	

\* A positive sign following the SIR (standardized incidence ratio) represents a statistically significant excess number of cancer cases. A negative sign following the SIR represents a statistically significant lower number of cancer cases. See the Technical Notes for more information.

- A dash appears where a SIR could not be calculated due to the fact that there were less than 10 observed cases. A dash also appears in the observed and expected cases fields for unsuitable sex specific cancers.

\*\* Includes in situ and invasive cases. All other sites listed above only include invasive cases.

Note: Expected cases are computed based on 2008-2012 age-specific rates from the National Cancer Institute's SEER Program.





### Number of Observed and Expected Cancer Cases and Standardized Incidence Ratios By Sex and Primary Site, Erie County Residents, 2008-2012

		Males			Females	
Primary Site	Observed Cases	Expected Cases	SIR*	Observed Cases	Expected Cases	SIR*
All cancer sites	3,790	3,829	99.0	3,904	3,695	105.7 +
Oral cavity and pharynx	134	125	107.5	57	57	99.2
Esophagus	59	58	102.2	22	17	126.8
Stomach	64	71	89.7	39	47	82.7
Colon and rectum	336	342	98.1	311	343	90.8
Liver and intrahepatic bile duct	55	98	55.9 -	28	40	69.9 -
Pancreas	115	105	109.4	105	110	95.4
Larynx	43	41	104.1	8	10	-
Lung and bronchus	566	486	116.4 +	535	465	115.1 +
Melanoma of the skin	130	212	61.2 -	122	152	80.2 -
Breast	14	9	151.7	1,132	1,103	102.6
Cervix uteri	-	-	-	41	49	83.9
Corpus and uterus, NOS	-	-	-	255	240	106.3
Ovary	-	-	-	116	110	105.3
Prostate	1,023	1,090	93.8 -	-	-	-
Testis	39	39	98.9	-	-	-
Urinary bladder**	304	260	116.9 +	83	86	96.0
Kidney and renal pelvis	133	156	85.3 -	111	93	119.9
Brain and other nervous system	54	55	97.5	41	46	89.5
Thyroid	67	51	130.9	259	156	166.5 +
Non-Hodgkin lymphoma	171	180	94.9	160	151	105.9
Hodgkin lymphoma	21	22	94.1	15	18	81.6
Myeloma	45	59	75.8 -	46	49	93.4
Leukemia	133	126	105.4	93	95	97.7

\* A positive sign following the SIR (standardized incidence ratio) represents a statistically significant excess number of cancer cases. A negative sign following the SIR represents a statistically significant lower number of cancer cases. See the Technical Notes for more information.

- A dash appears where a SIR could not be calculated due to the fact that there were less than 10 observed cases. A dash also appears in the observed and expected cases fields for unsuitable sex specific cancers.

\*\* Includes in situ and invasive cases. All other sites listed above only include invasive cases.

Note: Expected cases are computed based on 2008-2012 age-specific rates from the National Cancer Institute's SEER Program.

### **Fayette County**



### Number of Observed and Expected Cancer Cases and Standardized Incidence Ratios By Sex and Primary Site, Fayette County Residents, 2008-2012

		Males		Females		
Primary Site	Observed Cases	Expected Cases	SIR*	Observed Cases	Expected Cases	SIR*
All cancer sites	2,426	2,215	109.5 +	2,242	2,151	104.2
Oral cavity and pharynx	86	71	120.4	34	33	101.7
Esophagus	47	34	139.5	8	10	-
Stomach	43	42	103.5	36	28	128.3
Colon and rectum	271	199	136.5 +	223	204	109.4
Liver and intrahepatic bile duct	39	57	68.7 -	30	24	126.3
Pancreas	57	61	92.7	54	66	81.5
Larynx	41	24	170.8 +	12	6	212.9
Lung and bronchus	445	285	155.9 +	345	280	123.3
Melanoma of the skin	52	122	42.7 -	26	85	30.5
Breast	9	5	-	570	638	89.3
Cervix uteri	-	-	-	28	27	105.3
Corpus and uterus, NOS	-	-	-	153	139	109.9
Ovary	-	-	-	72	64	113.0
Prostate	496	637	77.9 -	-	-	-
Testis	24	19	126.9	-	-	-
Urinary bladder**	223	153	145.8 +	62	52	118.9
Kidney and renal pelvis	116	90	129.2 +	62	54	114.5
Brain and other nervous system	30	30	99.0	20	25	79.0
Thyroid	53	28	187.8 +	124	83	149.6 ·
Non-Hodgkin lymphoma	100	103	96.9	105	89	118.2
Hodgkin lymphoma	19	11	169.5	12	9	134.2
Myeloma	30	35	86.6	27	29	91.7
Leukemia	47	72	65.5 -	31	55	56.3

\* A positive sign following the SIR (standardized incidence ratio) represents a statistically significant excess number of cancer cases. A negative sign following the SIR represents a statistically significant lower number of cancer cases. See the Technical Notes for more information.

- A dash appears where a SIR could not be calculated due to the fact that there were less than 10 observed cases. A dash also appears in the observed and expected cases fields for unsuitable sex specific cancers.

\*\* Includes in situ and invasive cases. All other sites listed above only include invasive cases.

Note: Expected cases are computed based on 2008-2012 age-specific rates from the National Cancer Institute's SEER Program.





### Number of Observed and Expected Cancer Cases and Standardized Incidence Ratios By Sex and Primary Site, Forest County Residents, 2008-2012

		Males		Females		
Primary Site	Observed Cases	Expected Cases	SIR*	Observed Cases	Expected Cases	SIR*
All cancer sites	124	139	89.3	96	88	109.1
Oral cavity and pharynx	3	4	-	4	1	-
Esophagus	1	2	-	0	0	-
Stomach	2	3	-	1	1	-
Colon and rectum	16	12	131.2	9	8	-
Liver and intrahepatic bile duct	0	3	-	1	1	-
Pancreas	5	4	-	3	3	-
Larynx	1	1	-	0	0	-
Lung and bronchus	23	18	130.3	18	12	149.5
Melanoma of the skin	4	8	-	4	3	-
Breast	1	0	-	27	26	102.7
Cervix uteri	-	-	-	2	1	-
Corpus and uterus, NOS	-	-	-	5	6	-
Ovary	-	-	-	2	3	-
Prostate	28	40	70.2 -	-	-	-
Testis	4	2	-	-	-	-
Urinary bladder**	9	9	-	1	2	-
Kidney and renal pelvis	2	6	-	4	2	-
Brain and other nervous system	1	2	-	0	1	-
Thyroid	6	2	-	6	3	-
Non-Hodgkin lymphoma	4	7	-	2	4	-
Hodgkin lymphoma	0	1	-	0	0	-
Myeloma	1	2	-	0	1	-
Leukemia	4	4	-	0	2	-

\* A positive sign following the SIR (standardized incidence ratio) represents a statistically significant excess number of cancer cases. A negative sign following the SIR represents a statistically significant lower number of cancer cases. See the Technical Notes for more information.

- A dash appears where a SIR could not be calculated due to the fact that there were less than 10 observed cases. A dash also appears in the observed and expected cases fields for unsuitable sex specific cancers.

\*\* Includes in situ and invasive cases. All other sites listed above only include invasive cases.

Note: Expected cases are computed based on 2008-2012 age-specific rates from the National Cancer Institute's SEER Program.

# **Franklin County**



### Number of Observed and Expected Cancer Cases and Standardized Incidence Ratios By Sex and Primary Site, Franklin County Residents, 2008-2012

		Males		Females		
Primary Site	Observed Cases	Expected Cases	SIR*	Observed Cases	Expected Cases	SIR*
All cancer sites	2,345	2,246	104.4 +	2,076	2,081	99.8
Oral cavity and pharynx	74	71	104.3	32	32	99.3
Esophagus	46	34	135.0	6	10	-
Stomach	33	42	78.3	20	27	75.0
Colon and rectum	248	200	123.9 +	230	193	119.1 -
Liver and intrahepatic bile duct	29	56	51.6 -	7	23	-
Pancreas	65	62	104.3	59	63	94.3
Larynx	29	24	120.0	4	5	-
Lung and bronchus	325	292	111.3	242	268	90.3
Melanoma of the skin	157	123	127.5 +	99	84	117.8
Breast	12	5	219.6	535	620	86.2 ·
Cervix uteri	-	-	-	38	27	141.3
Corpus and uterus, NOS	-	-	-	144	135	106.6
Ovary	-	-	-	58	62	94.1
Prostate	593	645	92.0 -	-	-	-
Testis	22	20	112.4	-	-	-
Urinary bladder**	157	156	100.4	59	49	119.7
Kidney and renal pelvis	108	90	119.4	61	52	116.2
Brain and other nervous system	26	31	83.5	23	25	90.4
Thyroid	29	28	102.7	88	84	104.4
Non-Hodgkin lymphoma	115	105	109.8	87	85	101.9
Hodgkin lymphoma	11	12	95.0	9	9	-
Myeloma	34	35	96.5	25	28	88.9
Leukemia	66	74	89.4	67	54	125.2

\* A positive sign following the SIR (standardized incidence ratio) represents a statistically significant excess number of cancer cases. A negative sign following the SIR represents a statistically significant lower number of cancer cases. See the Technical Notes for more information.

- A dash appears where a SIR could not be calculated due to the fact that there were less than 10 observed cases. A dash also appears in the observed and expected cases fields for unsuitable sex specific cancers.

\*\* Includes in situ and invasive cases. All other sites listed above only include invasive cases.

Note: Expected cases are computed based on 2008-2012 age-specific rates from the National Cancer Institute's SEER Program.



### **Fulton County**

### Number of Observed and Expected Cancer Cases and Standardized Incidence Ratios By Sex and Primary Site, Fulton County Residents, 2008-2012

		Males			Females		
Primary Site	Observed Cases	Expected Cases	SIR*	Observed Cases	Expected Cases	SIR*	
All cancer sites	247	241	102.4	196	208	94.2	
Oral cavity and pharynx	7	8	-	4	3	-	
Esophagus	6	4	-	0	1	-	
Stomach	4	4	-	0	3	-	
Colon and rectum	16	21	75.0	16	19	85.4	
Liver and intrahepatic bile duct	3	6	-	3	2	-	
Pancreas	7	7	-	15	6	247.9 +	
Larynx	2	3	-	0	1	-	
Lung and bronchus	37	31	118.6	19	27	70.8	
Melanoma of the skin	18	13	136.9	9	8	-	
Breast	0	1	-	52	63	82.3	
Cervix uteri	-	-	-	3	3	-	
Corpus and uterus, NOS	-	-	-	11	14	78.8	
Ovary	-	-	-	4	6	-	
Prostate	63	71	89.0	-	-	-	
Testis	0	2	-	-	-	-	
Urinary bladder**	21	16	127.7	7	5	-	
Kidney and renal pelvis	13	10	133.0	6	5	-	
Brain and other nervous system	2	3	-	1	3	-	
Thyroid	1	3	-	9	9	-	
Non-Hodgkin lymphoma	13	11	116.6	15	8	177.8	
Hodgkin lymphoma	3	1	-	1	1	-	
Myeloma	2	4	-	2	3	-	
Leukemia	8	8	-	6	5	-	

\* A positive sign following the SIR (standardized incidence ratio) represents a statistically significant excess number of cancer cases. A negative sign following the SIR represents a statistically significant lower number of cancer cases. See the Technical Notes for more information.

- A dash appears where a SIR could not be calculated due to the fact that there were less than 10 observed cases. A dash also appears in the observed and expected cases fields for unsuitable sex specific cancers.

\*\* Includes in situ and invasive cases. All other sites listed above only include invasive cases.

Note: Expected cases are computed based on 2008-2012 age-specific rates from the National Cancer Institute's SEER Program.

## **Greene County**



### Number of Observed and Expected Cancer Cases and Standardized Incidence Ratios By Sex and Primary Site, Greene County Residents, 2008-2012

		Males			Females	
Primary Site	Observed Cases	Expected Cases	SIR*	Observed Cases	Expected Cases	SIR*
All cancer sites	601	592	101.6	615	524	117.3 -
Oral cavity and pharynx	24	20	122.4	12	8	147.2
Esophagus	10	9	111.8	4	2	-
Stomach	13	11	118.8	5	7	-
Colon and rectum	71	53	134.6 +	59	49	121.0
Liver and intrahepatic bile duct	16	15	103.5	2	6	-
Pancreas	15	16	93.1	12	16	76.4
Larynx	13	6	201.8	2	1	-
Lung and bronchus	101	74	135.9 +	95	67	142.2 -
Melanoma of the skin	19	33	57.9 -	10	21	47.0
Breast	2	1	-	159	157	101.3
Cervix uteri	-	-	-	7	7	-
Corpus and uterus, NOS	-	-	-	44	34	127.8
Ovary	-	-	-	14	16	89.6
Prostate	115	171	67.3 -	-	-	-
Testis	4	6	-	-	-	-
Urinary bladder**	40	39	101.8	14	12	113.3
Kidney and renal pelvis	28	24	114.9	28	13	212.5 -
Brain and other nervous system	14	8	166.1	4	6	-
Thyroid	13	8	160.6	38	21	177.9 -
Non-Hodgkin lymphoma	20	28	72.2	22	21	102.5
Hodgkin lymphoma	1	3	-	6	2	-
Myeloma	7	9	-	7	7	-
Leukemia	21	19	110.3	14	13	105.2

\* A positive sign following the SIR (standardized incidence ratio) represents a statistically significant excess number of cancer cases. A negative sign following the SIR represents a statistically significant lower number of cancer cases. See the Technical Notes for more information.

- A dash appears where a SIR could not be calculated due to the fact that there were less than 10 observed cases. A dash also appears in the observed and expected cases fields for unsuitable sex specific cancers.

\*\* Includes in situ and invasive cases. All other sites listed above only include invasive cases.

Note: Expected cases are computed based on 2008-2012 age-specific rates from the National Cancer Institute's SEER Program.



# **Huntingdon County**

### Number of Observed and Expected Cancer Cases and Standardized Incidence Ratios By Sex and Primary Site, Huntingdon County Residents, 2008-2012

		Males			Females		
Primary Site	Observed Cases	Expected Cases	SIR*	Observed Cases	Expected Cases	SIR*	
All cancer sites	651	721	90.2 -	580	614	94.5	
Oral cavity and pharynx	24	23	102.2	8	9	-	
Esophagus	11	11	100.9	3	3	-	
Stomach	8	13	-	4	8	-	
Colon and rectum	67	64	104.9	60	57	106.1	
Liver and intrahepatic bile duct	12	18	65.2	3	7	-	
Pancreas	19	20	97.0	19	18	103.6	
Larynx	14	8	178.8	1	2	-	
Lung and bronchus	107	91	117.0	68	80	85.2	
Melanoma of the skin	24	40	60.2 -	25	24	102.1	
Breast	3	2	-	143	184	77.7	
Cervix uteri	-	-	-	8	8	-	
Corpus and uterus, NOS	-	-	-	38	40	93.9	
Ovary	-	-	-	10	18	54.9	
Prostate	158	210	75.4 -	-	-	-	
Testis	10	7	134.0	-	-	-	
Urinary bladder**	50	48	104.1	19	14	131.2	
Kidney and renal pelvis	20	30	67.6 -	16	16	102.9	
Brain and other nervous system	5	10	-	14	7	189.8	
Thyroid	8	10	-	23	24	94.4	
Non-Hodgkin lymphoma	28	34	83.1	35	25	139.2	
Hodgkin lymphoma	4	4	-	4	3	-	
Myeloma	6	11	-	8	8	-	
Leukemia	20	23	86.4	24	16	154.5	

\* A positive sign following the SIR (standardized incidence ratio) represents a statistically significant excess number of cancer cases. A negative sign following the SIR represents a statistically significant lower number of cancer cases. See the Technical Notes for more information.

- A dash appears where a SIR could not be calculated due to the fact that there were less than 10 observed cases. A dash also appears in the observed and expected cases fields for unsuitable sex specific cancers.

\*\* Includes in situ and invasive cases. All other sites listed above only include invasive cases.

Note: Expected cases are computed based on 2008-2012 age-specific rates from the National Cancer Institute's SEER Program.

# **Indiana County**



### Number of Observed and Expected Cancer Cases and Standardized Incidence Ratios By Sex and Primary Site, Indiana County Residents, 2008-2012

		Males		Females		
Primary Site	Observed Cases	Expected Cases	SIR*	Observed Cases	Expected Cases	SIR*
All cancer sites	1,213	1,286	94.3 -	1,059	1,191	88.9
Oral cavity and pharynx	36	41	87.4	14	19	75.3
Esophagus	20	19	102.7	4	6	-
Stomach	18	24	75.0	11	15	71.5
Colon and rectum	131	115	114.3	121	112	108.4
Liver and intrahepatic bile duct	15	33	45.9 -	5	13	-
Pancreas	26	36	73.1	21	36	57.9
Larynx	9	14	-	4	3	-
Lung and bronchus	146	165	88.3	121	153	78.9
Melanoma of the skin	49	71	69.5 -	24	48	50.0
Breast	5	3	-	288	352	81.9
Cervix uteri	-	-	-	15	15	101.4
Corpus and uterus, NOS	-	-	-	87	77	113.0
Ovary	-	-	-	22	35	62.0
Prostate	307	370	83.0 -	-	-	-
Testis	18	12	146.3	-	-	-
Urinary bladder**	116	89	130.9 +	34	29	119.3
Kidney and renal pelvis	45	52	87.1	24	30	80.3
Brain and other nervous system	26	18	145.3	13	15	89.0
Thyroid	21	16	128.2	69	48	144.1
Non-Hodgkin lymphoma	51	60	85.0	39	49	79.4
Hodgkin lymphoma	7	7	-	11	6	180.1
Myeloma	23	20	114.9	13	16	80.5
Leukemia	41	42	97.6	26	31	84.2

\* A positive sign following the SIR (standardized incidence ratio) represents a statistically significant excess number of cancer cases. A negative sign following the SIR represents a statistically significant lower number of cancer cases. See the Technical Notes for more information.

- A dash appears where a SIR could not be calculated due to the fact that there were less than 10 observed cases. A dash also appears in the observed and expected cases fields for unsuitable sex specific cancers.

\*\* Includes in situ and invasive cases. All other sites listed above only include invasive cases.

Note: Expected cases are computed based on 2008-2012 age-specific rates from the National Cancer Institute's SEER Program.



## **Jefferson County**

#### Number of Observed and Expected Cancer Cases and Standardized Incidence Ratios By Sex and Primary Site, Jefferson County Residents, 2008-2012

		Males		Females		
Primary Site	Observed Cases	Expected Cases	SIR*	Observed Cases	Expected Cases	SIR*
All cancer sites	819	734	111.6 +	697	682	102.1
Oral cavity and pharynx	24	23	103.3	8	11	-
Esophagus	16	11	143.3	6	3	-
Stomach	18	14	130.1	5	9	-
Colon and rectum	75	66	113.9	83	64	128.9 -
Liver and intrahepatic bile duct	14	18	75.9	3	8	-
Pancreas	22	20	107.4	24	21	114.5
Larynx	11	8	138.9	2	2	-
Lung and bronchus	125	96	130.3 +	95	90	106.1
Melanoma of the skin	26	40	64.6 -	35	27	129.9
Breast	2	2	-	183	202	90.5
Cervix uteri	-	-	-	7	8	-
Corpus and uterus, NOS	-	-	-	58	44	131.7
Ovary	-	-	-	17	20	84.3
Prostate	227	210	108.0	-	-	-
Testis	4	6	-	-	-	-
Urinary bladder**	61	52	118.3	22	17	133.1
Kidney and renal pelvis	36	30	122.0	18	17	104.4
Brain and other nervous system	8	10	-	5	8	-
Thyroid	10	9	110.1	20	26	76.2
Non-Hodgkin lymphoma	42	34	122.9	20	28	70.9
Hodgkin lymphoma	6	4	-	1	3	-
Myeloma	8	12	-	9	9	-
Leukemia	24	24	100.2	13	17	74.3

\* A positive sign following the SIR (standardized incidence ratio) represents a statistically significant excess number of cancer cases. A negative sign following the SIR represents a statistically significant lower number of cancer cases. See the Technical Notes for more information.

- A dash appears where a SIR could not be calculated due to the fact that there were less than 10 observed cases. A dash also appears in the observed and expected cases fields for unsuitable sex specific cancers.

\*\* Includes in situ and invasive cases. All other sites listed above only include invasive cases.

Note: Expected cases are computed based on 2008-2012 age-specific rates from the National Cancer Institute's SEER Program.

# **Juniata County**



### Number of Observed and Expected Cancer Cases and Standardized Incidence Ratios By Sex and Primary Site, Juniata County Residents, 2008-2012

		Males			Females	
Primary Site	Observed Cases	Expected Cases	SIR*	Observed Cases	Expected Cases	SIR*
All cancer sites	305	377	80.8 -	320	341	93.8
Oral cavity and pharynx	12	12	99.8	6	5	-
Esophagus	5	6	-	1	2	-
Stomach	6	7	-	3	4	-
Colon and rectum	43	33	128.4	29	32	90.8
Liver and intrahepatic bile duct	3	9	-	4	4	-
Pancreas	8	10	-	11	10	106.3
Larynx	4	4	-	2	1	-
Lung and bronchus	49	49	100.4	36	44	81.6
Melanoma of the skin	20	21	97.0	17	14	124.6
Breast	1	1	-	84	101	82.8
Cervix uteri	-	-	-	5	4	-
Corpus and uterus, NOS	-	-	-	35	22	158.6 -
Ovary	-	-	-	8	10	-
Prostate	47	110	42.8 -	-	-	-
Testis	0	3	-	-	-	-
Urinary bladder**	28	26	108.3	6	8	-
Kidney and renal pelvis	15	15	98.2	10	9	116.2
Brain and other nervous system	4	5	-	2	4	-
Thyroid	3	5	-	12	14	88.8
Non-Hodgkin lymphoma	19	18	108.5	19	14	135.4
Hodgkin lymphoma	0	2	-	2	1	-
Myeloma	6	6	-	2	5	-
Leukemia	10	12	81.8	8	9	-

\* A positive sign following the SIR (standardized incidence ratio) represents a statistically significant excess number of cancer cases. A negative sign following the SIR represents a statistically significant lower number of cancer cases. See the Technical Notes for more information.

- A dash appears where a SIR could not be calculated due to the fact that there were less than 10 observed cases. A dash also appears in the observed and expected cases fields for unsuitable sex specific cancers.

\*\* Includes in situ and invasive cases. All other sites listed above only include invasive cases.

Note: Expected cases are computed based on 2008-2012 age-specific rates from the National Cancer Institute's SEER Program.



# Lackawanna County

### Number of Observed and Expected Cancer Cases and Standardized Incidence Ratios By Sex and Primary Site, Lackawanna County Residents, 2008-2012

		Males			Females		
Primary Site	Observed Cases	Expected Cases	SIR*	Observed Cases	Expected Cases	SIR*	
All cancer sites	3,407	3,194	106.7 +	3,495	3,264	107.1 +	
Oral cavity and pharynx	137	102	134.5 +	54	51	106.3	
Esophagus	55	48	113.5	17	16	106.2	
Stomach	66	60	110.1	31	43	71.7 -	
Colon and rectum	315	286	110.3	362	313	115.5 +	
Liver and intrahepatic bile duct	67	81	83.0	28	36	77.4	
Pancreas	92	89	103.8	96	102	93.7	
Larynx	50	34	145.2 +	23	8	273.8 +	
Lung and bronchus	591	413	143.0 +	459	428	107.2	
Melanoma of the skin	120	176	68.3 -	94	129	72.8 -	
Breast	7	8	-	920	955	96.3	
Cervix uteri	-	-	-	47	40	118.1	
Corpus and uterus, NOS	-	-	-	241	206	116.7 +	
Ovary	-	-	-	105	96	108.9	
Prostate	725	916	79.2 -	-	-	-	
Testis	35	29	122.2	-	-	-	
Urinary bladder**	293	222	132.2 +	93	81	115.4	
Kidney and renal pelvis	139	129	107.9	87	82	106.1	
Brain and other nervous system	56	44	127.2	52	39	133.9	
Thyroid	64	41	157.9 +	220	125	176.3 +	
Non-Hodgkin lymphoma	153	149	102.6	113	136	83.1 -	
Hodgkin lymphoma	18	17	107.3	13	14	90.4	
Myeloma	49	50	98.0	30	45	66.8 -	
Leukemia	94	104	90.2	72	85	84.6	

\* A positive sign following the SIR (standardized incidence ratio) represents a statistically significant excess number of cancer cases. A negative sign following the SIR represents a statistically significant lower number of cancer cases. See the Technical Notes for more information.

- A dash appears where a SIR could not be calculated due to the fact that there were less than 10 observed cases. A dash also appears in the observed and expected cases fields for unsuitable sex specific cancers.

\*\* Includes in situ and invasive cases. All other sites listed above only include invasive cases.

Note: Expected cases are computed based on 2008-2012 age-specific rates from the National Cancer Institute's SEER Program.

## **Lancaster County**



### Number of Observed and Expected Cancer Cases and Standardized Incidence Ratios By Sex and Primary Site, Lancaster County Residents, 2008-2012

		Males		Females		
Primary Site	Observed Cases	Expected Cases	SIR*	Observed Cases	Expected Cases	SIR*
All cancer sites	6,942	7,171	96.8 -	6,717	6,771	99.2
Oral cavity and pharynx	196	229	85.5 -	76	105	72.4
Esophagus	99	108	91.5	14	32	44.1 -
Stomach	118	135	87.7	65	86	75.3 ·
Colon and rectum	638	643	99.3	610	627	97.4
Liver and intrahepatic bile duct	123	181	68.0 -	48	73	65.5 ·
Pancreas	184	198	92.7	177	201	87.9
Larynx	75	77	97.5	9	18	-
Lung and bronchus	933	923	101.1	752	856	87.8 -
Melanoma of the skin	368	397	92.7	241	278	86.7
Breast	16	17	91.9	1,926	2,022	95.3 -
Cervix uteri	-	-	-	100	90	111.4
Corpus and uterus, NOS	-	-	-	543	438	123.9 +
Ovary	-	-	-	207	201	102.8
Prostate	1,772	2,030	87.3 -	-	-	-
Testis	98	70	140.6 +	-	-	-
Urinary bladder**	521	497	104.9	165	158	104.1
Kidney and renal pelvis	288	290	99.3	135	170	<b>79.3</b> ·
Brain and other nervous system	133	103	129.3 +	86	85	101.6
Thyroid	115	93	123.3 +	330	284	116.1 +
Non-Hodgkin lymphoma	347	338	102.7	302	277	109.0
Hodgkin lymphoma	40	40	99.9	32	33	96.5
Myeloma	92	112	82.1 -	71	90	78.5 ·
Leukemia	238	239	99.6	191	175	108.9

\* A positive sign following the SIR (standardized incidence ratio) represents a statistically significant excess number of cancer cases. A negative sign following the SIR represents a statistically significant lower number of cancer cases. See the Technical Notes for more information.

- A dash appears where a SIR could not be calculated due to the fact that there were less than 10 observed cases. A dash also appears in the observed and expected cases fields for unsuitable sex specific cancers.

\*\* Includes in situ and invasive cases. All other sites listed above only include invasive cases.

Note: Expected cases are computed based on 2008-2012 age-specific rates from the National Cancer Institute's SEER Program.



### **Lawrence County**

### Number of Observed and Expected Cancer Cases and Standardized Incidence Ratios By Sex and Primary Site, Lawrence County Residents, 2008-2012

		Males			Females		
Primary Site	Observed Cases	Expected Cases	SIR*	Observed Cases	Expected Cases	SIR*	
All cancer sites	1,543	1,455	106.1 +	1,570	1,436	109.4 +	
Oral cavity and pharynx	47	46	102.4	24	22	107.4	
Esophagus	29	22	130.9	11	7	155.5	
Stomach	23	28	83.4	15	19	78.9	
Colon and rectum	139	131	106.1	159	138	115.2	
Liver and intrahepatic bile duct	26	37	71.1 -	13	16	81.2	
Pancreas	40	41	97.8	47	45	104.1	
Larynx	20	16	127.7	5	4	-	
Lung and bronchus	249	191	130.4 +	216	189	114.1	
Melanoma of the skin	57	80	71.4 -	45	56	80.2	
Breast	9	4	-	429	421	101.9	
Cervix uteri	-	-	-	17	17	99.3	
Corpus and uterus, NOS	-	-	-	85	92	92.9	
Ovary	-	-	-	43	42	101.4	
Prostate	339	414	82.0 -	-	-	-	
Testis	13	12	112.5	-	-	-	
Urinary bladder**	129	103	124.8 +	39	36	109.8	
Kidney and renal pelvis	62	58	106.4	35	36	96.8	
Brain and other nervous system	20	20	102.2	16	17	94.6	
Thyroid	46	18	258.4 +	112	54	209.2 +	
Non-Hodgkin lymphoma	69	68	101.6	58	60	97.0	
Hodgkin lymphoma	5	7	-	8	6	-	
Myeloma	24	23	104.4	22	20	110.9	
Leukemia	51	48	107.0	30	37	80.4	

\* A positive sign following the SIR (standardized incidence ratio) represents a statistically significant excess number of cancer cases. A negative sign following the SIR represents a statistically significant lower number of cancer cases. See the Technical Notes for more information.

- A dash appears where a SIR could not be calculated due to the fact that there were less than 10 observed cases. A dash also appears in the observed and expected cases fields for unsuitable sex specific cancers.

\*\* Includes in situ and invasive cases. All other sites listed above only include invasive cases.

Note: Expected cases are computed based on 2008-2012 age-specific rates from the National Cancer Institute's SEER Program.

# **Lebanon County**



#### Number of Observed and Expected Cancer Cases and Standardized Incidence Ratios By Sex and Primary Site, Lebanon County Residents, 2008-2012

		Males			Females		
Primary Site	Observed Cases	Expected Cases	SIR*	Observed Cases	Expected Cases	SIR*	
All cancer sites	2,062	2,018	102.2	2,010	1,910	105.2 -	
Oral cavity and pharynx	62	64	96.8	25	30	84.3	
Esophagus	43	31	140.5	9	9	-	
Stomach	33	38	87.1	18	25	72.8	
Colon and rectum	194	180	107.6	184	179	102.6	
Liver and intrahepatic bile duct	39	51	76.8	9	21	-	
Pancreas	42	56	75.0 -	58	58	99.6	
Larynx	23	22	105.8	4	5	-	
Lung and bronchus	313	262	119.5 +	248	248	100.1	
Melanoma of the skin	106	111	95.6	75	76	98.1	
Breast	5	5	-	534	566	94.3	
Cervix uteri	-	-	-	34	24	141.1	
Corpus and uterus, NOS	-	-	-	187	123	151.8 -	
Ovary	-	-	-	50	57	88.4	
Prostate	502	577	86.9 -	-	-	-	
Testis	18	18	100.4	-	-	-	
Urinary bladder**	179	140	127.5 +	67	46	146.0 -	
Kidney and renal pelvis	79	81	97.1	59	48	122.5	
Brain and other nervous system	24	28	85.7	25	23	108.3	
Thyroid	38	26	148.8 +	92	76	121.6	
Non-Hodgkin lymphoma	92	94	97.6	83	79	105.4	
Hodgkin lymphoma	14	11	133.0	2	9	-	
Myeloma	31	32	97.9	16	26	61.6	
Leukemia	68	66	102.7	45	49	91.3	

\* A positive sign following the SIR (standardized incidence ratio) represents a statistically significant excess number of cancer cases. A negative sign following the SIR represents a statistically significant lower number of cancer cases. See the Technical Notes for more information.

- A dash appears where a SIR could not be calculated due to the fact that there were less than 10 observed cases. A dash also appears in the observed and expected cases fields for unsuitable sex specific cancers.

\*\* Includes in situ and invasive cases. All other sites listed above only include invasive cases.

Note: Expected cases are computed based on 2008-2012 age-specific rates from the National Cancer Institute's SEER Program.



## Lehigh County

### Number of Observed and Expected Cancer Cases and Standardized Incidence Ratios By Sex and Primary Site, Lehigh County Residents, 2008-2012

		Males		Females		
Primary Site	Observed Cases	Expected Cases	SIR*	Observed Cases	Expected Cases	SIR*
All cancer sites	5,132	4,808	106.7 +	4,953	4,722	104.9 +
Oral cavity and pharynx	160	156	102.4	80	73	109.2
Esophagus	75	73	103.4	20	22	90.3
Stomach	101	90	112.5	42	60	69.7 -
Colon and rectum	432	431	100.3	420	438	95.9
Liver and intrahepatic bile duct	115	123	93.5	39	51	76.4
Pancreas	120	132	90.8	148	141	105.3
Larynx	58	52	111.9	14	12	113.8
Lung and bronchus	705	612	115.2 +	624	595	104.8
Melanoma of the skin	265	267	99.3	192	194	99.0
Breast	15	12	129.0	1,323	1,413	93.6 -
Cervix uteri	-	-	-	79	63	125.8
Corpus and uterus, NOS	-	-	-	361	306	118.1 +
Ovary	-	-	-	141	141	100.3
Prostate	1,282	1,368	93.7 -	-	-	-
Testis	46	48	95.7	-	-	-
Urinary bladder**	416	327	127.2 +	134	111	121.2 +
Kidney and renal pelvis	241	196	122.7 +	146	118	123.3 +
Brain and other nervous system	74	69	106.8	77	58	132.3 +
Thyroid	92	64	143.1 +	278	198	140.6 +
Non-Hodgkin lymphoma	241	226	106.4	213	193	110.4
Hodgkin lymphoma	42	27	154.4 +	33	23	146.6
Myeloma	79	75	105.7	60	63	95.2
Leukemia	185	159	116.7	135	121	111.2

\* A positive sign following the SIR (standardized incidence ratio) represents a statistically significant excess number of cancer cases. A negative sign following the SIR represents a statistically significant lower number of cancer cases. See the Technical Notes for more information.

- A dash appears where a SIR could not be calculated due to the fact that there were less than 10 observed cases. A dash also appears in the observed and expected cases fields for unsuitable sex specific cancers.

\*\* Includes in situ and invasive cases. All other sites listed above only include invasive cases.

Note: Expected cases are computed based on 2008-2012 age-specific rates from the National Cancer Institute's SEER Program.

## **Luzerne County**



### Number of Observed and Expected Cancer Cases and Standardized Incidence Ratios By Sex and Primary Site, Luzerne County Residents, 2008-2012

		Males		Females		
Primary Site	Observed Cases	Expected Cases	SIR*	Observed Cases	Expected Cases	SIR*
All cancer sites	5,403	4,901	110.2 +	5,605	4,911	114.1 +
Oral cavity and pharynx	199	157	127.0 +	84	76	110.0
Esophagus	118	74	158.7 +	31	24	128.2
Stomach	107	92	116.3	68	65	104.2
Colon and rectum	572	439	130.3 +	563	473	119.0 +
Liver and intrahepatic bile duct	82	124	66.2 -	49	55	89.8
Pancreas	169	136	124.3 +	142	155	91.7
Larynx	69	53	130.5	18	13	142.4
Lung and bronchus	842	634	132.8 +	701	647	108.4 +
Melanoma of the skin	231	270	85.4 -	143	193	74.0 -
Breast	18	12	151.1	1,372	1,436	95.5
Cervix uteri	-	-	-	92	59	155.1 +
Corpus and uterus, NOS	-	-	-	466	310	150.2 +
Ovary	-	-	-	161	145	111.1
Prostate	1,151	1,400	82.2 -	-	-	-
Testis	56	44	126.1	-	-	-
Urinary bladder**	396	340	116.5 +	160	122	131.4 +
Kidney and renal pelvis	193	198	97.3	128	123	103.8
Brain and other nervous system	66	68	97.7	62	58	107.0
Thyroid	78	63	124.0	327	185	176.5 +
Non-Hodgkin lymphoma	248	229	108.2	223	205	108.9
Hodgkin lymphoma	35	26	135.6	30	21	143.1
Myeloma	83	77	108.0	50	68	73.7 -
Leukemia	179	160	112.1	145	128	113.4

\* A positive sign following the SIR (standardized incidence ratio) represents a statistically significant excess number of cancer cases. A negative sign following the SIR represents a statistically significant lower number of cancer cases. See the Technical Notes for more information.

- A dash appears where a SIR could not be calculated due to the fact that there were less than 10 observed cases. A dash also appears in the observed and expected cases fields for unsuitable sex specific cancers.

\*\* Includes in situ and invasive cases. All other sites listed above only include invasive cases.

Note: Expected cases are computed based on 2008-2012 age-specific rates from the National Cancer Institute's SEER Program.



# Lycoming County

### Number of Observed and Expected Cancer Cases and Standardized Incidence Ratios By Sex and Primary Site, Lycoming County Residents, 2008-2012

		Males			Females		
Primary Site	Observed Cases	Expected Cases	SIR*	Observed Cases	Expected Cases	SIR*	
All cancer sites	1,939	1,755	110.5 +	1,965	1,676	117.2 +	
Oral cavity and pharynx	59	56	105.2	22	26	84.6	
Esophagus	28	27	105.2	15	8	188.3	
Stomach	29	33	88.2	16	22	74.3	
Colon and rectum	199	157	126.8 +	200	157	127.7 +	
Liver and intrahepatic bile duct	25	45	56.1 -	15	18	82.1	
Pancreas	41	49	84.2	52	51	102.9	
Larynx	25	19	132.0	8	4	-	
Lung and bronchus	287	227	126.5 +	216	215	100.6	
Melanoma of the skin	96	96	99.5	93	68	137.1 +	
Breast	9	4	-	544	500	108.8	
Cervix uteri	-	-	-	28	22	129.8	
Corpus and uterus, NOS	-	-	-	137	109	126.1 +	
Ovary	-	-	-	49	50	98.4	
Prostate	462	502	92.1	-	-	-	
Testis	14	16	87.1	-	-	-	
Urinary bladder**	155	122	127.4 +	49	40	123.2	
Kidney and renal pelvis	73	71	103.2	48	42	113.9	
Brain and other nervous system	24	24	98.6	23	20	113.9	
Thyroid	42	22	188.1 +	127	68	186.9 +	
Non-Hodgkin lymphoma	85	82	103.7	83	69	120.7	
Hodgkin lymphoma	16	9	169.5	8	8	-	
Myeloma	30	27	109.3	28	23	123.8	
Leukemia	66	57	115.0	43	43	100.5	

\* A positive sign following the SIR (standardized incidence ratio) represents a statistically significant excess number of cancer cases. A negative sign following the SIR represents a statistically significant lower number of cancer cases. See the Technical Notes for more information.

- A dash appears where a SIR could not be calculated due to the fact that there were less than 10 observed cases. A dash also appears in the observed and expected cases fields for unsuitable sex specific cancers.

\*\* Includes in situ and invasive cases. All other sites listed above only include invasive cases.

Note: Expected cases are computed based on 2008-2012 age-specific rates from the National Cancer Institute's SEER Program.

# **McKean County**



### Number of Observed and Expected Cancer Cases and Standardized Incidence Ratios By Sex and Primary Site, McKean County Residents, 2008-2012

		Males		Females		
Primary Site	Observed Cases	Expected Cases	SIR*	Observed Cases	Expected Cases	SIR*
All cancer sites	683	677	100.9	619	614	100.9
Oral cavity and pharynx	28	22	129.6	9	10	-
Esophagus	16	10	156.5	4	3	-
Stomach	7	13	-	8	8	-
Colon and rectum	78	61	128.3	56	58	96.8
Liver and intrahepatic bile duct	11	17	64.6	3	7	-
Pancreas	18	19	95.8	22	19	117.1
Larynx	5	7	-	5	2	-
Lung and bronchus	100	88	114.3	103	80	128.6
Melanoma of the skin	28	38	74.6	25	24	102.5
Breast	2	2	-	149	182	81.9
Cervix uteri	-	-	-	9	8	-
Corpus and uterus, NOS	-	-	-	45	39	114.0
Ovary	-	-	-	16	18	88.1
Prostate	155	191	80.9 -	-	-	-
Testis	7	6	-	-	-	-
Urinary bladder**	56	47	119.0	19	15	128.3
Kidney and renal pelvis	26	27	94.9	16	15	103.4
Brain and other nervous system	7	9	-	2	7	-
Thyroid	12	9	136.0	28	24	116.9
Non-Hodgkin lymphoma	32	32	100.4	22	25	86.8
Hodgkin lymphoma	6	4	-	1	3	-
Myeloma	8	11	-	5	8	-
Leukemia	15	22	67.5	18	16	114.1

\* A positive sign following the SIR (standardized incidence ratio) represents a statistically significant excess number of cancer cases. A negative sign following the SIR represents a statistically significant lower number of cancer cases. See the Technical Notes for more information.

- A dash appears where a SIR could not be calculated due to the fact that there were less than 10 observed cases. A dash also appears in the observed and expected cases fields for unsuitable sex specific cancers.

\*\* Includes in situ and invasive cases. All other sites listed above only include invasive cases.

Note: Expected cases are computed based on 2008-2012 age-specific rates from the National Cancer Institute's SEER Program.



### **Mercer County**

### Number of Observed and Expected Cancer Cases and Standardized Incidence Ratios By Sex and Primary Site, Mercer County Residents, 2008-2012

		Males		Females		
Primary Site	Observed Cases	Expected Cases	SIR*	Observed Cases	Expected Cases	SIR*
All cancer sites	2,033	1,856	109.5 +	1,946	1,775	109.7 +
Oral cavity and pharynx	61	59	104.2	25	28	90.5
Esophagus	46	28	162.9 +	3	9	-
Stomach	39	35	111.0	10	23	42.7 -
Colon and rectum	201	167	120.4 +	213	170	125.3 +
Liver and intrahepatic bile duct	34	47	73.1 -	10	20	50.7 -
Pancreas	48	52	92.2	49	56	88.2
Larynx	22	20	110.2	4	5	-
Lung and bronchus	305	243	125.3 +	228	234	97.6
Melanoma of the skin	67	102	65.7 -	68	70	97.7
Breast	7	5	-	579	521	111.2 +
Cervix uteri	-	-	-	28	21	131.5
Corpus and uterus, NOS	-	-	-	134	113	118.4
Ovary	-	-	-	54	52	103.0
Prostate	584	527	110.8 +	-	-	-
Testis	21	15	138.2	-	-	-
Urinary bladder**	161	132	122.3 +	49	44	112.0
Kidney and renal pelvis	59	74	79.3 -	51	45	114.1
Brain and other nervous system	23	25	91.5	26	21	123.4
Thyroid	43	23	188.2 +	109	67	163.1 +
Non-Hodgkin lymphoma	76	87	87.6	79	74	107.0
Hodgkin lymphoma	11	9	118.0	5	8	-
Myeloma	18	29	61.4 -	17	24	69.4
Leukemia	48	61	78.8	38	46	82.4

\* A positive sign following the SIR (standardized incidence ratio) represents a statistically significant excess number of cancer cases. A negative sign following the SIR represents a statistically significant lower number of cancer cases. See the Technical Notes for more information.

- A dash appears where a SIR could not be calculated due to the fact that there were less than 10 observed cases. A dash also appears in the observed and expected cases fields for unsuitable sex specific cancers.

\*\* Includes in situ and invasive cases. All other sites listed above only include invasive cases.

Note: Expected cases are computed based on 2008-2012 age-specific rates from the National Cancer Institute's SEER Program.





### Number of Observed and Expected Cancer Cases and Standardized Incidence Ratios By Sex and Primary Site, Mifflin County Residents, 2008-2012

		Males		Females		
Primary Site	Observed Cases	Expected Cases	SIR*	Observed Cases	Expected Cases	SIR*
All cancer sites	763	753	101.3	776	702	110.6 +
Oral cavity and pharynx	17	24	72.2	9	11	-
Esophagus	8	11	-	3	3	-
Stomach	12	14	84.9	5	9	-
Colon and rectum	85	67	126.9	67	66	101.5
Liver and intrahepatic bile duct	10	19	53.6 -	7	8	-
Pancreas	21	21	100.2	19	22	88.1
Larynx	7	8	-	3	2	-
Lung and bronchus	137	99	138.4 +	110	92	119.0
Melanoma of the skin	35	41	85.4	27	28	97.7
Breast	1	2	-	224	208	107.7
Cervix uteri	-	-	-	8	9	-
Corpus and uterus, NOS	-	-	-	46	45	101.5
Ovary	-	-	-	20	21	96.6
Prostate	176	218	80.8 -	-	-	-
Testis	11	6	185.0	-	-	-
Urinary bladder**	66	53	125.1	22	17	129.3
Kidney and renal pelvis	25	30	82.7	16	18	90.0
Brain and other nervous system	11	10	108.0	17	8	202.7 +
Thyroid	10	9	108.7	44	27	163.7 +
Non-Hodgkin lymphoma	31	35	88.8	25	29	86.2
Hodgkin lymphoma	2	4	-	2	3	-
Myeloma	7	12	-	8	10	-
Leukemia	21	25	85.5	18	18	99.6

\* A positive sign following the SIR (standardized incidence ratio) represents a statistically significant excess number of cancer cases. A negative sign following the SIR represents a statistically significant lower number of cancer cases. See the Technical Notes for more information.

- A dash appears where a SIR could not be calculated due to the fact that there were less than 10 observed cases. A dash also appears in the observed and expected cases fields for unsuitable sex specific cancers.

\*\* Includes in situ and invasive cases. All other sites listed above only include invasive cases.

Note: Expected cases are computed based on 2008-2012 age-specific rates from the National Cancer Institute's SEER Program.



### **Monroe County**

### Number of Observed and Expected Cancer Cases and Standardized Incidence Ratios By Sex and Primary Site, Monroe County Residents, 2008-2012

		Males			Females		
Primary Site	Observed Cases	Expected Cases	SIR*	Observed Cases	Expected Cases	SIR*	
All cancer sites	2,226	2,262	98.4	2,114	2,055	102.9	
Oral cavity and pharynx	64	76	83.7	30	32	94.6	
Esophagus	39	34	114.1	10	9	112.0	
Stomach	36	41	87.3	22	24	90.3	
Colon and rectum	197	200	98.4	193	178	108.3	
Liver and intrahepatic bile duct	64	60	106.7	13	21	61.0 -	
Pancreas	73	61	120.4	46	55	83.0	
Larynx	30	25	120.6	13	6	232.7 +	
Lung and bronchus	371	280	132.5 +	296	245	121.1 +	
Melanoma of the skin	65	125	52.1 -	79	88	89.6	
Breast	4	5	-	600	644	93.2	
Cervix uteri	-	-	-	46	30	153.2 +	
Corpus and uterus, NOS	-	-	-	138	141	98.0	
Ovary	-	-	-	79	62	127.1	
Prostate	571	665	85.9 -	-	-	-	
Testis	17	23	75.0	-	-	-	
Urinary bladder**	170	145	117.1	58	44	133.1	
Kidney and renal pelvis	71	94	75.3 -	40	52	77.6	
Brain and other nervous system	36	33	108.9	30	26	116.3	
Thyroid	30	32	95.2	86	96	89.5	
Non-Hodgkin lymphoma	94	105	89.3	75	81	92.6	
Hodgkin lymphoma	18	13	136.4	12	11	112.5	
Myeloma	24	35	69.3 -	28	26	107.0	
Leukemia	67	72	92.4	44	50	88.1	

\* A positive sign following the SIR (standardized incidence ratio) represents a statistically significant excess number of cancer cases. A negative sign following the SIR represents a statistically significant lower number of cancer cases. See the Technical Notes for more information.

- A dash appears where a SIR could not be calculated due to the fact that there were less than 10 observed cases. A dash also appears in the observed and expected cases fields for unsuitable sex specific cancers.

\*\* Includes in situ and invasive cases. All other sites listed above only include invasive cases.

Note: Expected cases are computed based on 2008-2012 age-specific rates from the National Cancer Institute's SEER Program.

# **Montgomery County**



### Number of Observed and Expected Cancer Cases and Standardized Incidence Ratios By Sex and Primary Site, Montgomery County Residents, 2008-2012

		Males			Females		
Primary Site	Observed Cases	Expected Cases	SIR*	Observed Cases	Expected Cases	SIR*	
All cancer sites	12,025	11,187	107.5 +	11,783	10,949	107.6 +	
Oral cavity and pharynx	342	364	94.0	159	170	93.7	
Esophagus	194	169	115.0	38	51	74.2 -	
Stomach	168	210	80.0 -	115	140	82.4 -	
Colon and rectum	984	1,008	97.6	1,069	1,016	105.3	
Liver and intrahepatic bile duct	234	286	81.8 -	102	118	86.4	
Pancreas	335	309	108.5	375	325	115.5 +	
Larynx	112	120	93.0	26	29	91.2	
Lung and bronchus	1,433	1,427	100.4	1,361	1,371	99.2	
Melanoma of the skin	723	624	115.9 +	497	451	110.2 +	
Breast	36	27	132.7	3,468	3,291	105.4 +	
Cervix uteri	-	-	-	135	148	91.5	
Corpus and uterus, NOS	-	-	-	875	709	123.4 +	
Ovary	-	-	-	384	326	117.8 +	
Prostate	3,322	3,158	105.2 +	-	-	-	
Testis	127	110	115.2	-	-	-	
Urinary bladder**	988	767	128.8 +	301	255	117.9 +	
Kidney and renal pelvis	498	457	108.9	264	274	96.3	
Brain and other nervous system	158	161	98.4	159	134	118.8 +	
Thyroid	204	150	136.1 +	594	462	128.7 +	
Non-Hodgkin lymphoma	600	529	113.5 +	486	446	108.9	
Hodgkin lymphoma	74	62	119.2	76	51	150.2 +	
Myeloma	147	175	84.2 -	124	146	85.2	
Leukemia	348	370	94.1	256	280	91.5	

\* A positive sign following the SIR (standardized incidence ratio) represents a statistically significant excess number of cancer cases. A negative sign following the SIR represents a statistically significant lower number of cancer cases. See the Technical Notes for more information.

- A dash appears where a SIR could not be calculated due to the fact that there were less than 10 observed cases. A dash also appears in the observed and expected cases fields for unsuitable sex specific cancers.

\*\* Includes in situ and invasive cases. All other sites listed above only include invasive cases.

Note: Expected cases are computed based on 2008-2012 age-specific rates from the National Cancer Institute's SEER Program.



## **Montour County**

#### Number of Observed and Expected Cancer Cases and Standardized Incidence Ratios By Sex and Primary Site, Montour County Residents, 2008-2012

		Males		Females		
Primary Site	Observed Cases	Expected Cases	SIR*	Observed Cases	Expected Cases	SIR*
All cancer sites	320	284	112.6 +	307	292	105.3
Oral cavity and pharynx	10	9	109.6	3	5	-
Esophagus	8	4	-	2	1	-
Stomach	2	5	-	2	4	-
Colon and rectum	23	25	90.8	29	28	104.0
Liver and intrahepatic bile duct	5	7	-	0	3	-
Pancreas	7	8	-	11	9	121.1
Larynx	4	3	-	1	1	-
Lung and bronchus	36	37	97.7	39	38	101.4
Melanoma of the skin	19	15	122.6	8	11	-
Breast	2	1	-	83	86	96.7
Cervix uteri	-	-	-	1	4	-
Corpus and uterus, NOS	-	-	-	31	19	166.5 +
Ovary	-	-	-	8	9	-
Prostate	98	82	119.0	-	-	-
Testis	2	2	-	-	-	-
Urinary bladder**	23	20	117.6	4	7	-
Kidney and renal pelvis	13	12	113.0	11	7	149.5
Brain and other nervous system	6	4	-	4	3	-
Thyroid	4	4	-	16	11	145.4
Non-Hodgkin lymphoma	17	13	129.3	11	12	90.8
Hodgkin lymphoma	4	1	-	0	1	-
Myeloma	1	4	-	7	4	-
Leukemia	12	9	130.8	9	8	-

\* A positive sign following the SIR (standardized incidence ratio) represents a statistically significant excess number of cancer cases. A negative sign following the SIR represents a statistically significant lower number of cancer cases. See the Technical Notes for more information.

- A dash appears where a SIR could not be calculated due to the fact that there were less than 10 observed cases. A dash also appears in the observed and expected cases fields for unsuitable sex specific cancers.

\*\* Includes in situ and invasive cases. All other sites listed above only include invasive cases.

Note: Expected cases are computed based on 2008-2012 age-specific rates from the National Cancer Institute's SEER Program.

# **Northampton County**



### Number of Observed and Expected Cancer Cases and Standardized Incidence Ratios By Sex and Primary Site, Northampton County Residents, 2008-2012

		Males		Females		
Primary Site	Observed Cases	Expected Cases	SIR*	Observed Cases	Expected Cases	SIR*
All cancer sites	4,984	4,262	116.9 +	4,719	4,120	114.5 -
Oral cavity and pharynx	143	138	103.7	64	64	99.9
Esophagus	81	64	125.8	26	19	134.0
Stomach	94	80	117.7	59	53	111.9
Colon and rectum	413	383	107.9	418	383	109.1
Liver and intrahepatic bile duct	106	109	97.4	41	45	91.8
Pancreas	125	118	106.1	132	123	107.2
Larynx	51	46	111.1	15	11	139.2
Lung and bronchus	682	545	125.1 +	540	520	103.8
Melanoma of the skin	253	236	107.0	179	168	106.4
Breast	12	10	116.3	1,251	1,234	101.4
Cervix uteri	-	-	-	56	54	103.5
Corpus and uterus, NOS	-	-	-	393	268	146.8 +
Ovary	-	-	-	133	123	108.4
Prostate	1,317	1,211	108.8 +	-	-	-
Testis	48	41	116.9	-	-	-
Urinary bladder**	426	293	145.4 +	139	97	143.6 +
Kidney and renal pelvis	196	173	113.1	128	103	124.0 +
Brain and other nervous system	68	61	112.4	52	50	103.6
Thyroid	99	56	176.6 +	286	170	167.9 +
Non-Hodgkin lymphoma	224	201	111.7	202	168	120.0 +
Hodgkin lymphoma	27	24	113.7	19	19	98.9
Myeloma	70	66	105.3	63	55	114.3
Leukemia	172	140	122.6 +	123	105	116.7

\* A positive sign following the SIR (standardized incidence ratio) represents a statistically significant excess number of cancer cases. A negative sign following the SIR represents a statistically significant lower number of cancer cases. See the Technical Notes for more information.

- A dash appears where a SIR could not be calculated due to the fact that there were less than 10 observed cases. A dash also appears in the observed and expected cases fields for unsuitable sex specific cancers.

\*\* Includes in situ and invasive cases. All other sites listed above only include invasive cases.

Note: Expected cases are computed based on 2008-2012 age-specific rates from the National Cancer Institute's SEER Program.



# **Northumberland County**

### Number of Observed and Expected Cancer Cases and Standardized Incidence Ratios By Sex and Primary Site, Northumberland County Residents, 2008-2012

		Males		Females		
Primary Site	Observed Cases	Expected Cases	SIR*	Observed Cases	Expected Cases	SIR*
All cancer sites	1,662	1,524	109.0 +	1,473	1,450	101.6
Oral cavity and pharynx	53	49	109.0	26	23	115.4
Esophagus	24	23	103.6	8	7	-
Stomach	28	29	97.8	7	19	-
Colon and rectum	134	136	98.2	133	139	95.7
Liver and intrahepatic bile duct	19	39	49.3 -	8	16	-
Pancreas	50	42	118.1	38	45	83.5
Larynx	28	16	170.0 +	7	4	-
Lung and bronchus	273	198	138.1 +	199	192	103.8
Melanoma of the skin	59	84	70.4 -	62	57	109.5
Breast	9	4	-	374	426	87.8
Cervix uteri	-	-	-	23	17	132.3
Corpus and uterus, NOS	-	-	-	116	93	125.2
Ovary	-	-	-	46	43	107.6
Prostate	422	438	96.4	-	-	-
Testis	14	13	106.7	-	-	-
Urinary bladder**	122	106	115.3	28	36	78.2
Kidney and renal pelvis	68	62	110.4	36	37	98.4
Brain and other nervous system	21	21	101.0	21	17	123.5
Thyroid	31	19	160.7 +	62	54	114.8
Non-Hodgkin lymphoma	78	71	109.8	60	60	99.5
Hodgkin lymphoma	12	8	155.6	7	6	-
Myeloma	19	24	79.4	14	20	69.8
Leukemia	53	50	107.1	37	38	98.6

\* A positive sign following the SIR (standardized incidence ratio) represents a statistically significant excess number of cancer cases. A negative sign following the SIR represents a statistically significant lower number of cancer cases. See the Technical Notes for more information.

- A dash appears where a SIR could not be calculated due to the fact that there were less than 10 observed cases. A dash also appears in the observed and expected cases fields for unsuitable sex specific cancers.

\*\* Includes in situ and invasive cases. All other sites listed above only include invasive cases.

Note: Expected cases are computed based on 2008-2012 age-specific rates from the National Cancer Institute's SEER Program.

### **Perry County**



#### Number of Observed and Expected Cancer Cases and Standardized Incidence Ratios By Sex and Primary Site, Perry County Residents, 2008-2012

		Males			Females		
Primary Site	Observed Cases	Expected Cases	SIR*	Observed Cases	Expected Cases	SIR*	
All cancer sites	665	661	100.6	613	581	105.5	
Oral cavity and pharynx	20	22	90.2	13	9	144.6	
Esophagus	16	10	159.5	5	3	-	
Stomach	15	12	124.3	9	7	-	
Colon and rectum	56	58	96.1	40	51	77.9	
Liver and intrahepatic bile duct	8	18	-	1	6	-	
Pancreas	15	18	84.3	21	16	129.9	
Larynx	15	7	206.2 +	2	2	-	
Lung and bronchus	126	82	153.4 +	80	71	113.4	
Melanoma of the skin	39	36	107.5	29	24	118.4	
Breast	2	2	-	160	180	89.0	
Cervix uteri	-	-	-	7	8	-	
Corpus and uterus, NOS	-	-	-	60	40	151.5	
Ovary	-	-	-	21	17	120.2	
Prostate	106	196	54.1 -	-	-	-	
Testis	6	6	-	-	-	-	
Urinary bladder**	51	43	119.5	13	13	102.2	
Kidney and renal pelvis	24	27	87.5	11	15	75.2	
Brain and other nervous system	15	9	158.1	8	7	-	
Thyroid	12	9	133.1	36	26	138.2	
Non-Hodgkin lymphoma	38	31	124.4	28	23	121.0	
Hodgkin lymphoma	3	4	-	1	3	-	
Myeloma	12	10	118.6	8	8	-	
Leukemia	25	21	118.5	14	14	97.7	

\* A positive sign following the SIR (standardized incidence ratio) represents a statistically significant excess number of cancer cases. A negative sign following the SIR represents a statistically significant lower number of cancer cases. See the Technical Notes for more information.

- A dash appears where a SIR could not be calculated due to the fact that there were less than 10 observed cases. A dash also appears in the observed and expected cases fields for unsuitable sex specific cancers.

\*\* Includes in situ and invasive cases. All other sites listed above only include invasive cases.

Note: Expected cases are computed based on 2008-2012 age-specific rates from the National Cancer Institute's SEER Program.



## **Philadelphia County**

#### Number of Observed and Expected Cancer Cases and Standardized Incidence Ratios By Sex and Primary Site, Philadelphia County Residents, 2008-2012

		Males			Females		
Primary Site	Observed Cases	Expected Cases	SIR*	Observed Cases	Expected Cases	SIR*	
All cancer sites	20,139	16,544	121.7 +	20,858	18,598	112.2 +	
Oral cavity and pharynx	634	541	117.2 +	297	289	102.9	
Esophagus	305	245	124.2 +	154	85	181.4 +	
Stomach	408	307	133.1 +	329	234	140.8 +	
Colon and rectum	1,936	1,478	131.0 +	1,925	1,694	113.6 +	
Liver and intrahepatic bile duct	940	422	222.5 +	300	198	151.7 +	
Pancreas	554	448	123.7 +	626	539	116.1 +	
Larynx	298	176	169.3 +	119	48	248.5 +	
Lung and bronchus	2,990	2,060	145.2 +	3,215	2,279	141.1 +	
Melanoma of the skin	438	933	46.9 -	317	799	39.7 -	
Breast	63	40	158.6 +	5,493	5,555	98.9	
Cervix uteri	-	-	-	494	266	185.4 +	
Corpus and uterus, NOS	-	-	-	1,400	1,199	116.7 +	
Ovary	-	-	-	520	556	93.6	
Prostate	5,496	4,603	119.4 +	-	-	-	
Testis	166	223	74.5 -	-	-	-	
Urinary bladder**	1,186	1,105	107.3 +	510	423	120.4 +	
Kidney and renal pelvis	913	678	134.7 +	613	464	132.2 +	
Brain and other nervous system	249	259	96.2	217	240	90.3	
Thyroid	264	238	110.7	929	854	108.8 +	
Non-Hodgkin lymphoma	791	795	99.5	705	757	93.1 -	
Hodgkin lymphoma	136	115	117.8	106	106	99.7	
Myeloma	322	254	126.9 +	323	243	133.2 +	
Leukemia	465	562	82.7 -	425	483	88.0 -	

\* A positive sign following the SIR (standardized incidence ratio) represents a statistically significant excess number of cancer cases. A negative sign following the SIR represents a statistically significant lower number of cancer cases. See the Technical Notes for more information.

- A dash appears where a SIR could not be calculated due to the fact that there were less than 10 observed cases. A dash also appears in the observed and expected cases fields for unsuitable sex specific cancers.

\*\* Includes in situ and invasive cases. All other sites listed above only include invasive cases.

Note: Expected cases are computed based on 2008-2012 age-specific rates from the National Cancer Institute's SEER Program.





#### Number of Observed and Expected Cancer Cases and Standardized Incidence Ratios By Sex and Primary Site, Pike County Residents, 2008-2012

		Males		Females		
Primary Site	Observed Cases	Expected Cases	SIR*	Observed Cases	Expected Cases	SIR*
All cancer sites	898	977	91.9 -	824	807	102.1
Oral cavity and pharynx	31	32	97.6	12	12	96.4
Esophagus	18	15	120.6	5	4	-
Stomach	14	18	77.6	10	10	102.7
Colon and rectum	89	86	103.1	82	71	115.3
Liver and intrahepatic bile duct	14	25	55.7 -	8	9	-
Pancreas	21	27	78.5	22	23	97.6
Larynx	12	11	111.9	5	2	-
Lung and bronchus	135	125	107.8	115	100	115.1
Melanoma of the skin	28	53	52.8 -	30	33	90.3
Breast	4	2	-	217	251	86.3
Cervix uteri	-	-	-	13	11	118.8
Corpus and uterus, NOS	-	-	-	63	56	113.4
Ovary	-	-	-	26	24	107.3
Prostate	220	290	76.0 -	-	-	-
Testis	14	8	183.7	-	-	-
Urinary bladder**	84	65	128.3 +	17	18	95.8
Kidney and renal pelvis	33	40	82.7	20	20	98.1
Brain and other nervous system	15	13	113.6	6	10	-
Thyroid	16	12	128.9	31	35	89.6
Non-Hodgkin lymphoma	34	45	75.9	19	32	59.2
Hodgkin lymphoma	5	5	-	4	4	-
Myeloma	22	15	144.7	12	11	113.4
Leukemia	32	31	103.6	30	19	154.2

\* A positive sign following the SIR (standardized incidence ratio) represents a statistically significant excess number of cancer cases. A negative sign following the SIR represents a statistically significant lower number of cancer cases. See the Technical Notes for more information.

- A dash appears where a SIR could not be calculated due to the fact that there were less than 10 observed cases. A dash also appears in the observed and expected cases fields for unsuitable sex specific cancers.

\*\* Includes in situ and invasive cases. All other sites listed above only include invasive cases.

Note: Expected cases are computed based on 2008-2012 age-specific rates from the National Cancer Institute's SEER Program.



### **Potter County**

#### Number of Observed and Expected Cancer Cases and Standardized Incidence Ratios By Sex and Primary Site, Potter County Residents, 2008-2012

		Males			Females		
Primary Site	Observed Cases	Expected Cases	SIR*	Observed Cases	Expected Cases	SIR*	
All cancer sites	320	307	104.2	259	261	99.1	
Oral cavity and pharynx	3	10	-	5	4	-	
Esophagus	7	5	-	0	1	-	
Stomach	3	6	-	4	3	-	
Colon and rectum	27	27	99.1	25	25	101.4	
Liver and intrahepatic bile duct	4	8	-	1	3	-	
Pancreas	10	9	116.7	4	8	-	
Larynx	5	3	-	2	1	-	
Lung and bronchus	45	40	111.5	49	34	143.1 +	
Melanoma of the skin	20	17	120.8	7	10	-	
Breast	2	1	-	67	78	86.4	
Cervix uteri	-	-	-	4	3	-	
Corpus and uterus, NOS	-	-	-	18	17	105.9	
Ovary	-	-	-	6	8	-	
Prostate	91	90	100.9	-	-	-	
Testis	2	2	-	-	-	-	
Urinary bladder**	17	22	78.9	7	6	-	
Kidney and renal pelvis	15	12	122.4	6	7	-	
Brain and other nervous system	7	4	-	6	3	-	
Thyroid	4	4	-	13	10	131.3	
Non-Hodgkin lymphoma	15	14	106.6	6	11	-	
Hodgkin lymphoma	4	1	-	2	1	-	
Myeloma	6	5	-	2	4	-	
Leukemia	7	10	-	5	7	-	

\* A positive sign following the SIR (standardized incidence ratio) represents a statistically significant excess number of cancer cases. A negative sign following the SIR represents a statistically significant lower number of cancer cases. See the Technical Notes for more information.

- A dash appears where a SIR could not be calculated due to the fact that there were less than 10 observed cases. A dash also appears in the observed and expected cases fields for unsuitable sex specific cancers.

\*\* Includes in situ and invasive cases. All other sites listed above only include invasive cases.

Note: Expected cases are computed based on 2008-2012 age-specific rates from the National Cancer Institute's SEER Program.

### **Schuylkill County**



#### Number of Observed and Expected Cancer Cases and Standardized Incidence Ratios By Sex and Primary Site, Schuylkill County Residents, 2008-2012

		Males			Females		
Primary Site	Observed Cases	Expected Cases	SIR*	Observed Cases	Expected Cases	SIR*	
All cancer sites	2,522	2,387	105.7 +	2,561	2,234	114.6 +	
Oral cavity and pharynx	96	77	125.4 +	31	35	89.4	
Esophagus	49	36	135.6	14	11	127.1	
Stomach	46	45	102.4	33	30	111.3	
Colon and rectum	271	215	126.2 +	310	215	144.2 +	
Liver and intrahepatic bile duct	43	60	71.4 -	15	25	60.4	
Pancreas	74	66	111.7	74	70	105.2	
Larynx	33	26	128.5	9	6	-	
Lung and bronchus	402	308	130.4 +	318	296	107.6	
Melanoma of the skin	99	133	74.7 -	77	87	88.1	
Breast	8	6	-	594	655	90.7 ·	
Cervix uteri	-	-	-	45	27	167.4 +	
Corpus and uterus, NOS	-	-	-	202	141	142.8 +	
Ovary	-	-	-	60	66	91.1	
Prostate	496	677	73.3 -	-	-	-	
Testis	27	22	120.6	-	-	-	
Urinary bladder**	200	166	120.7 +	87	55	157.0 +	
Kidney and renal pelvis	97	97	100.1	75	56	133.3 +	
Brain and other nervous system	34	33	102.9	36	26	137.5	
Thyroid	40	31	128.3	86	83	103.1	
Non-Hodgkin lymphoma	106	112	94.4	92	93	98.8	
Hodgkin lymphoma	14	13	111.0	14	9	153.3	
Myeloma	35	37	93.4	22	31	71.2	
Leukemia	92	78	118.1	65	58	112.2	

\* A positive sign following the SIR (standardized incidence ratio) represents a statistically significant excess number of cancer cases. A negative sign following the SIR represents a statistically significant lower number of cancer cases. See the Technical Notes for more information.

- A dash appears where a SIR could not be calculated due to the fact that there were less than 10 observed cases. A dash also appears in the observed and expected cases fields for unsuitable sex specific cancers.

\*\* Includes in situ and invasive cases. All other sites listed above only include invasive cases.

Note: Expected cases are computed based on 2008-2012 age-specific rates from the National Cancer Institute's SEER Program.



### **Snyder County**

#### Number of Observed and Expected Cancer Cases and Standardized Incidence Ratios By Sex and Primary Site, Snyder County Residents, 2008-2012

		Males			Females		
Primary Site	Observed Cases	Expected Cases	SIR*	Observed Cases	Expected Cases	SIR*	
All cancer sites	578	553	104.6	523	517	101.1	
Oral cavity and pharynx	22	18	123.4	7	8	-	
Esophagus	10	8	119.7	2	2	-	
Stomach	8	10	-	2	7	-	
Colon and rectum	42	49	85.4	55	48	115.3	
Liver and intrahepatic bile duct	11	14	78.1	5	6	-	
Pancreas	10	15	65.9	15	15	97.6	
Larynx	8	6	-	1	1	-	
Lung and bronchus	87	71	122.9	49	66	74.5	
Melanoma of the skin	31	30	101.9	28	21	132.3	
Breast	4	1	-	141	155	91.2	
Cervix uteri	-	-	-	2	7	-	
Corpus and uterus, NOS	-	-	-	45	34	133.6	
Ovary	-	-	-	18	15	116.8	
Prostate	139	159	87.5	-	-	-	
Testis	7	5	-	-	-	-	
Urinary bladder**	41	38	109.1	8	12	-	
Kidney and renal pelvis	21	22	93.5	9	13	-	
Brain and other nervous system	13	8	165.3	13	6	202.7	
Thyroid	16	7	220.9 +	30	22	138.9	
Non-Hodgkin lymphoma	33	26	127.6	25	21	118.1	
Hodgkin lymphoma	3	3	-	2	3	-	
Myeloma	5	9	-	5	7	-	
Leukemia	24	18	132.6	17	13	127.9	

\* A positive sign following the SIR (standardized incidence ratio) represents a statistically significant excess number of cancer cases. A negative sign following the SIR represents a statistically significant lower number of cancer cases. See the Technical Notes for more information.

- A dash appears where a SIR could not be calculated due to the fact that there were less than 10 observed cases. A dash also appears in the observed and expected cases fields for unsuitable sex specific cancers.

\*\* Includes in situ and invasive cases. All other sites listed above only include invasive cases.

Note: Expected cases are computed based on 2008-2012 age-specific rates from the National Cancer Institute's SEER Program.

### **Somerset County**



#### Number of Observed and Expected Cancer Cases and Standardized Incidence Ratios By Sex and Primary Site, Somerset County Residents, 2008-2012

		Males			Females		
Primary Site	Observed Cases	Expected Cases	SIR*	Observed Cases	Expected Cases	SIR*	
All cancer sites	1,322	1,324	99.8	1,190	1,187	100.2	
Oral cavity and pharynx	38	42	90.1	19	18	102.9	
Esophagus	27	20	134.3	4	6	-	
Stomach	27	25	107.8	10	16	63.7	
Colon and rectum	143	119	119.9 +	120	114	105.3	
Liver and intrahepatic bile duct	15	33	45.0 -	4	13	-	
Pancreas	34	37	91.9	40	37	107.3	
Larynx	19	14	133.3	4	3	-	
Lung and bronchus	168	172	97.7	115	157	73.2 -	
Melanoma of the skin	56	73	76.5 -	43	46	93.0	
Breast	3	3	-	271	349	77.6 ·	
Cervix uteri	-	-	-	24	14	169.5 +	
Corpus and uterus, NOS	-	-	-	97	76	127.8 +	
Ovary	-	-	-	39	35	111.3	
Prostate	317	377	84.1 -	-	-	-	
Testis	12	12	103.2	-	-	-	
Urinary bladder**	104	93	111.9	42	29	143.0	
Kidney and renal pelvis	44	53	82.4	27	30	90.2	
Brain and other nervous system	24	18	133.9	8	14	-	
Thyroid	19	17	113.0	72	44	163.7 +	
Non-Hodgkin lymphoma	58	62	93.6	61	49	123.5	
Hodgkin lymphoma	15	7	223.5 +	9	5	-	
Myeloma	16	21	76.8	27	16	164.3 +	
Leukemia	55	43	127.7	32	31	104.5	

\* A positive sign following the SIR (standardized incidence ratio) represents a statistically significant excess number of cancer cases. A negative sign following the SIR represents a statistically significant lower number of cancer cases. See the Technical Notes for more information.

- A dash appears where a SIR could not be calculated due to the fact that there were less than 10 observed cases. A dash also appears in the observed and expected cases fields for unsuitable sex specific cancers.

\*\* Includes in situ and invasive cases. All other sites listed above only include invasive cases.

Note: Expected cases are computed based on 2008-2012 age-specific rates from the National Cancer Institute's SEER Program.



### **Sullivan County**

#### Number of Observed and Expected Cancer Cases and Standardized Incidence Ratios By Sex and Primary Site, Sullivan County Residents, 2008-2012

		Males			Females		
Primary Site	Observed Cases	Expected Cases	SIR*	Observed Cases	Expected Cases	SIR*	
All cancer sites	163	137	118.6 +	134	110	122.0 +	
Oral cavity and pharynx	2	4	-	7	2	-	
Esophagus	2	2	-	0	1	-	
Stomach	1	3	-	0	1	-	
Colon and rectum	18	12	147.8	6	11	-	
Liver and intrahepatic bile duct	2	3	-	0	1	-	
Pancreas	5	4	-	4	4	-	
Larynx	5	1	-	1	0	-	
Lung and bronchus	27	19	144.7	15	15	99.4	
Melanoma of the skin	7	7	-	7	4	-	
Breast	0	0	-	32	32	99.5	
Cervix uteri	-	-	-	1	1	-	
Corpus and uterus, NOS	-	-	-	15	7	211.7 +	
Ovary	-	-	-	3	3	-	
Prostate	36	40	89.2	-	-	-	
Testis	1	1	-	-	-	-	
Urinary bladder**	10	10	100.4	6	3	-	
Kidney and renal pelvis	4	5	-	4	3	-	
Brain and other nervous system	1	2	-	2	1	-	
Thyroid	3	2	-	4	4	-	
Non-Hodgkin lymphoma	10	6	159.8	6	5	-	
Hodgkin lymphoma	3	1	-	2	0	-	
Myeloma	3	2	-	1	2	-	
Leukemia	7	4	-	6	3	-	

\* A positive sign following the SIR (standardized incidence ratio) represents a statistically significant excess number of cancer cases. A negative sign following the SIR represents a statistically significant lower number of cancer cases. See the Technical Notes for more information.

- A dash appears where a SIR could not be calculated due to the fact that there were less than 10 observed cases. A dash also appears in the observed and expected cases fields for unsuitable sex specific cancers.

\*\* Includes in situ and invasive cases. All other sites listed above only include invasive cases.

Note: Expected cases are computed based on 2008-2012 age-specific rates from the National Cancer Institute's SEER Program.

# Susquehanna County



#### Number of Observed and Expected Cancer Cases and Standardized Incidence Ratios By Sex and Primary Site, Susquehanna County Residents, 2008-2012

		Males		Females		
Primary Site	Observed Cases	Expected Cases	SIR*	Observed Cases	Expected Cases	SIR*
All cancer sites	718	725	99.0	583	622	93.7
Oral cavity and pharynx	25	23	106.9	11	10	113.9
Esophagus	14	11	126.3	1	3	-
Stomach	9	13	-	3	8	-
Colon and rectum	68	64	105.7	49	57	86.0
Liver and intrahepatic bile duct	6	19	-	2	7	-
Pancreas	21	20	105.0	22	18	120.1
Larynx	3	8	-	2	2	-
Lung and bronchus	115	94	122.6 +	70	79	88.4
Melanoma of the skin	33	39	83.9	22	25	88.1
Breast	0	2	-	157	189	83.1
Cervix uteri	-	-	-	12	8	151.7
Corpus and uterus, NOS	-	-	-	43	42	102.9
Ovary	-	-	-	13	19	70.0
Prostate	195	214	91.3	-	-	-
Testis	6	5	-	-	-	-
Urinary bladder**	52	49	105.3	15	14	104.1
Kidney and renal pelvis	30	29	102.0	15	16	95.4
Brain and other nervous system	12	10	124.1	15	7	203.4
Thyroid	6	9	-	25	25	100.1
Non-Hodgkin lymphoma	28	33	84.2	29	25	115.1
Hodgkin lymphoma	1	3	-	1	3	-
Myeloma	6	11	-	5	8	-
Leukemia	11	23	47.8 -	14	15	90.5

\* A positive sign following the SIR (standardized incidence ratio) represents a statistically significant excess number of cancer cases. A negative sign following the SIR represents a statistically significant lower number of cancer cases. See the Technical Notes for more information.

- A dash appears where a SIR could not be calculated due to the fact that there were less than 10 observed cases. A dash also appears in the observed and expected cases fields for unsuitable sex specific cancers.

\*\* Includes in situ and invasive cases. All other sites listed above only include invasive cases.

Note: Expected cases are computed based on 2008-2012 age-specific rates from the National Cancer Institute's SEER Program.





#### Number of Observed and Expected Cancer Cases and Standardized Incidence Ratios By Sex and Primary Site, Tioga County Residents, 2008-2012

		Males			Females		
Primary Site	Observed Cases	Expected Cases	SIR*	Observed Cases	Expected Cases	SIR*	
All cancer sites	740	699	105.9	662	599	110.5 +	
Oral cavity and pharynx	18	22	82.5	10	9	107.4	
Esophagus	12	11	112.4	0	3	-	
Stomach	16	13	122.0	3	8	-	
Colon and rectum	78	62	125.6	56	55	101.2	
Liver and intrahepatic bile duct	5	17	-	6	7	-	
Pancreas	18	20	92.3	22	18	122.4	
Larynx	8	8	-	2	2	-	
Lung and bronchus	116	92	126.1 +	93	78	119.7	
Melanoma of the skin	42	38	111.1	32	24	133.9	
Breast	0	2	-	166	179	92.7	
Cervix uteri	-	-	-	6	7	-	
Corpus and uterus, NOS	-	-	-	46	39	116.7	
Ovary	-	-	-	20	18	112.3	
Prostate	198	203	97.5	-	-	-	
Testis	6	5	-	-	-	-	
Urinary bladder**	46	49	93.6	16	14	113.0	
Kidney and renal pelvis	32	28	115.0	22	15	145.2	
Brain and other nervous system	13	9	140.8	3	7	-	
Thyroid	7	8	-	27	24	113.6	
Non-Hodgkin lymphoma	30	32	93.2	27	25	110.1	
Hodgkin lymphoma	1	3	-	2	3	-	
Myeloma	8	11	-	6	8	-	
Leukemia	21	23	93.0	27	15	177.0 +	

\* A positive sign following the SIR (standardized incidence ratio) represents a statistically significant excess number of cancer cases. A negative sign following the SIR represents a statistically significant lower number of cancer cases. See the Technical Notes for more information.

- A dash appears where a SIR could not be calculated due to the fact that there were less than 10 observed cases. A dash also appears in the observed and expected cases fields for unsuitable sex specific cancers.

\*\* Includes in situ and invasive cases. All other sites listed above only include invasive cases.

Note: Expected cases are computed based on 2008-2012 age-specific rates from the National Cancer Institute's SEER Program.

# **Union County**



#### Number of Observed and Expected Cancer Cases and Standardized Incidence Ratios By Sex and Primary Site, Union County Residents, 2008-2012

		Males			Females		
Primary Site	Observed Cases	Expected Cases	SIR*	Observed Cases	Expected Cases	SIR*	
All cancer sites	617	635	97.1	541	537	100.7	
Oral cavity and pharynx	18	21	86.4	6	8	-	
Esophagus	12	9	127.0	5	3	-	
Stomach	8	12	-	2	7	-	
Colon and rectum	57	57	100.3	44	51	86.1	
Liver and intrahepatic bile duct	13	16	81.0	1	6	-	
Pancreas	15	17	87.5	13	17	78.0	
Larynx	8	7	-	2	1	-	
Lung and bronchus	75	79	94.5	75	70	107.1	
Melanoma of the skin	35	36	97.1	39	21	182.0 +	
Breast	1	2	-	137	157	87.0	
Cervix uteri	-	-	-	7	7	-	
Corpus and uterus, NOS	-	-	-	39	34	114.4	
Ovary	-	-	-	9	16	-	
Prostate	165	178	92.6	-	-	-	
Testis	9	8	-	-	-	-	
Urinary bladder**	28	42	66.4 -	8	13	-	
Kidney and renal pelvis	23	26	87.7	14	13	103.8	
Brain and other nervous system	5	10	-	5	7	-	
Thyroid	10	9	106.8	33	21	156.8 +	
Non-Hodgkin lymphoma	43	30	141.0	27	22	121.0	
Hodgkin lymphoma	1	4	-	5	3	-	
Myeloma	9	10	-	6	7	-	
Leukemia	25	21	119.8	8	14	-	

\* A positive sign following the SIR (standardized incidence ratio) represents a statistically significant excess number of cancer cases. A negative sign following the SIR represents a statistically significant lower number of cancer cases. See the Technical Notes for more information.

- A dash appears where a SIR could not be calculated due to the fact that there were less than 10 observed cases. A dash also appears in the observed and expected cases fields for unsuitable sex specific cancers.

\*\* Includes in situ and invasive cases. All other sites listed above only include invasive cases.

Note: Expected cases are computed based on 2008-2012 age-specific rates from the National Cancer Institute's SEER Program.



## **Venango County**

#### Number of Observed and Expected Cancer Cases and Standardized Incidence Ratios By Sex and Primary Site, Venango County Residents, 2008-2012

		Males		Females		
Primary Site	Observed Cases	Expected Cases	SIR*	Observed Cases	Expected Cases	SIR*
All cancer sites	959	895	107.1 +	879	835	105.3
Oral cavity and pharynx	36	29	125.3	10	13	77.2
Esophagus	21	14	153.8	3	4	-
Stomach	19	17	113.5	4	11	-
Colon and rectum	85	80	106.4	92	78	118.0
Liver and intrahepatic bile duct	18	23	78.6	6	9	-
Pancreas	22	25	88.5	20	25	79.2
Larynx	9	10	-	4	2	-
Lung and bronchus	178	116	153.4 +	123	109	113.3
Melanoma of the skin	46	49	94.1	25	33	75.7
Breast	3	2	-	247	250	98.9
Cervix uteri	-	-	-	8	10	-
Corpus and uterus, NOS	-	-	-	56	55	101.9
Ovary	-	-	-	25	25	100.9
Prostate	223	259	85.9 -	-	-	-
Testis	10	7	141.2	-	-	-
Urinary bladder**	84	62	135.9 +	20	20	100.4
Kidney and renal pelvis	47	36	129.9	28	21	132.5
Brain and other nervous system	11	12	90.9	11	10	111.3
Thyroid	18	11	161.4	50	32	154.7
Non-Hodgkin lymphoma	40	41	96.6	38	34	110.9
Hodgkin lymphoma	3	4	-	4	3	-
Myeloma	12	14	85.6	15	11	131.8
Leukemia	28	29	97.0	16	21	75.6

\* A positive sign following the SIR (standardized incidence ratio) represents a statistically significant excess number of cancer cases. A negative sign following the SIR represents a statistically significant lower number of cancer cases. See the Technical Notes for more information.

- A dash appears where a SIR could not be calculated due to the fact that there were less than 10 observed cases. A dash also appears in the observed and expected cases fields for unsuitable sex specific cancers.

\*\* Includes in situ and invasive cases. All other sites listed above only include invasive cases.

Note: Expected cases are computed based on 2008-2012 age-specific rates from the National Cancer Institute's SEER Program.

### **Warren County**



#### Number of Observed and Expected Cancer Cases and Standardized Incidence Ratios By Sex and Primary Site, Warren County Residents, 2008-2012

		Males			Females	
Primary Site	Observed Cases	Expected Cases	SIR*	Observed Cases	Expected Cases	SIR*
All cancer sites	802	721	111.3 +	663	634	104.6
Oral cavity and pharynx	15	23	65.7 -	4	10	-
Esophagus	21	11	190.7 +	4	3	-
Stomach	12	14	88.7	10	8	123.1
Colon and rectum	61	64	94.8	60	59	101.5
Liver and intrahepatic bile duct	9	18	-	2	7	-
Pancreas	7	20	-	19	19	99.2
Larynx	17	8	217.3 +	1	2	-
Lung and bronchus	92	94	97.5	102	82	123.8
Melanoma of the skin	34	39	86.7	21	25	83.8
Breast	1	2	-	191	190	100.5
Cervix uteri	-	-	-	7	8	-
Corpus and uterus, NOS	-	-	-	50	42	119.6
Ovary	-	-	-	25	19	132.9
Prostate	266	209	127.2 +	-	-	-
Testis	5	5	-	-	-	-
Urinary bladder**	72	50	142.9 +	21	15	139.1
Kidney and renal pelvis	29	29	100.1	8	16	-
Brain and other nervous system	10	10	104.9	7	7	-
Thyroid	9	9	-	25	25	101.9
Non-Hodgkin lymphoma	35	33	105.2	25	26	96.2
Hodgkin lymphoma	5	3	-	4	3	-
Myeloma	8	11	-	5	9	-
Leukemia	29	23	125.1	15	16	93.9

\* A positive sign following the SIR (standardized incidence ratio) represents a statistically significant excess number of cancer cases. A negative sign following the SIR represents a statistically significant lower number of cancer cases. See the Technical Notes for more information.

- A dash appears where a SIR could not be calculated due to the fact that there were less than 10 observed cases. A dash also appears in the observed and expected cases fields for unsuitable sex specific cancers.

\*\* Includes in situ and invasive cases. All other sites listed above only include invasive cases.

Note: Expected cases are computed based on 2008-2012 age-specific rates from the National Cancer Institute's SEER Program.



### **Washington County**

#### Number of Observed and Expected Cancer Cases and Standardized Incidence Ratios By Sex and Primary Site, Washington County Residents, 2008-2012

		Males			Females	
Primary Site	Observed Cases	Expected Cases	SIR*	Observed Cases	Expected Cases	SIR*
All cancer sites	3,396	3,277	103.6 +	3,380	3,155	107.1 +
Oral cavity and pharynx	114	105	108.4	51	49	104.0
Esophagus	71	50	142.4 +	17	15	112.0
Stomach	55	61	89.5	37	41	90.6
Colon and rectum	339	293	115.5 +	336	297	113.2 +
Liver and intrahepatic bile duct	61	84	72.9 -	31	35	89.4
Pancreas	83	91	91.2	81	96	84.1
Larynx	44	35	124.0	15	8	180.7
Lung and bronchus	521	424	122.9 +	440	409	107.7
Melanoma of the skin	111	180	61.7 -	86	126	68.5 -
Breast	10	8	125.7	950	939	101.1
Cervix uteri	-	-	-	52	39	132.4
Corpus and uterus, NOS	-	-	-	235	205	114.7 +
Ovary	-	-	-	98	94	104.7
Prostate	816	942	86.6 -	-	-	-
Testis	36	28	130.4	-	-	-
Urinary bladder**	292	227	128.6 +	99	76	130.7 +
Kidney and renal pelvis	137	132	103.4	86	79	108.2
Brain and other nervous system	46	45	102.8	45	37	120.3
Thyroid	54	41	130.6	163	123	132.3 +
Non-Hodgkin lymphoma	152	152	99.7	135	130	104.0
Hodgkin lymphoma	24	17	144.7	22	14	162.3
Myeloma	42	51	81.8	22	43	51.2 -
Leukemia	100	106	94.0	79	80	98.2

\* A positive sign following the SIR (standardized incidence ratio) represents a statistically significant excess number of cancer cases. A negative sign following the SIR represents a statistically significant lower number of cancer cases. See the Technical Notes for more information.

- A dash appears where a SIR could not be calculated due to the fact that there were less than 10 observed cases. A dash also appears in the observed and expected cases fields for unsuitable sex specific cancers.

\*\* Includes in situ and invasive cases. All other sites listed above only include invasive cases.

Note: Expected cases are computed based on 2008-2012 age-specific rates from the National Cancer Institute's SEER Program.





#### Number of Observed and Expected Cancer Cases and Standardized Incidence Ratios By Sex and Primary Site, Wayne County Residents, 2008-2012

		Males			Females	
Primary Site	Observed Cases	Expected Cases	SIR*	Observed Cases	Expected Cases	SIR*
All cancer sites	883	966	91.4 -	754	796	94.7
Oral cavity and pharynx	29	31	93.4	9	12	-
Esophagus	23	15	155.7	4	4	-
Stomach	24	18	133.7	7	10	-
Colon and rectum	74	86	86.5	87	73	118.9
Liver and intrahepatic bile duct	32	25	130.0	5	9	-
Pancreas	17	27	63.8 -	29	24	121.8
Larynx	8	11	-	7	2	-
Lung and bronchus	146	125	116.9	103	104	98.7
Melanoma of the skin	32	52	61.0 -	21	31	67.5
Breast	1	2	-	193	241	80.2
Cervix uteri	-	-	-	6	10	-
Corpus and uterus, NOS	-	-	-	43	54	80.2
Ovary	-	-	-	25	24	105.7
Prostate	168	286	58.8 -	-	-	-
Testis	8	8	-	-	-	-
Urinary bladder**	80	66	121.6	20	19	106.4
Kidney and renal pelvis	41	39	104.6	16	20	79.1
Brain and other nervous system	11	13	86.1	9	9	-
Thyroid	20	12	165.7	43	30	142.4
Non-Hodgkin lymphoma	48	44	108.4	34	32	104.7
Hodgkin lymphoma	4	5	-	5	3	-
Myeloma	11	15	72.8	9	11	-
Leukemia	22	30	72.2	17	20	86.2

\* A positive sign following the SIR (standardized incidence ratio) represents a statistically significant excess number of cancer cases. A negative sign following the SIR represents a statistically significant lower number of cancer cases. See the Technical Notes for more information.

- A dash appears where a SIR could not be calculated due to the fact that there were less than 10 observed cases. A dash also appears in the observed and expected cases fields for unsuitable sex specific cancers.

\*\* Includes in situ and invasive cases. All other sites listed above only include invasive cases.

Note: Expected cases are computed based on 2008-2012 age-specific rates from the National Cancer Institute's SEER Program.



### **Westmoreland County**

#### Number of Observed and Expected Cancer Cases and Standardized Incidence Ratios By Sex and Primary Site, Westmoreland County Residents, 2008-2012

		Males			Females	
Primary Site	Observed Cases	Expected Cases	SIR*	Observed Cases	Expected Cases	SIR*
All cancer sites	6,071	6,087	99.7	6,184	5,815	106.3 +
Oral cavity and pharynx	174	194	89.7	94	90	104.1
Esophagus	109	93	117.4	25	28	88.4
Stomach	130	115	113.4	66	76	87.0
Colon and rectum	612	546	112.1 +	614	551	111.4 +
Liver and intrahepatic bile duct	82	154	53.1 -	46	64	71.5 -
Pancreas	164	170	96.5	161	179	89.7
Larynx	87	66	132.0 +	17	15	111.1
Lung and bronchus	1,023	794	128.8 +	856	762	112.3 +
Melanoma of the skin	169	333	50.7 -	135	228	59.1 -
Breast	18	15	121.5	1,727	1,726	100.0
Cervix uteri	-	-	-	72	70	102.2
Corpus and uterus, NOS	-	-	-	408	377	108.3
Ovary	-	-	-	179	172	104.0
Prostate	1,375	1,751	78.5 -	-	-	-
Testis	71	48	148.2 +	-	-	-
Urinary bladder**	542	426	127.3 +	208	141	147.1 +
Kidney and renal pelvis	263	245	107.2	166	147	113.2
Brain and other nervous system	90	81	110.6	73	68	107.6
Thyroid	117	75	155.3 +	325	220	147.7 +
Non-Hodgkin lymphoma	290	283	102.6	255	240	106.2
Hodgkin lymphoma	33	29	112.5	27	24	114.5
Myeloma	80	96	83.5	75	80	93.9
Leukemia	170	197	86.4 -	130	148	87.7

\* A positive sign following the SIR (standardized incidence ratio) represents a statistically significant excess number of cancer cases. A negative sign following the SIR represents a statistically significant lower number of cancer cases. See the Technical Notes for more information.

- A dash appears where a SIR could not be calculated due to the fact that there were less than 10 observed cases. A dash also appears in the observed and expected cases fields for unsuitable sex specific cancers.

\*\* Includes in situ and invasive cases. All other sites listed above only include invasive cases.

Note: Expected cases are computed based on 2008-2012 age-specific rates from the National Cancer Institute's SEER Program.





#### Number of Observed and Expected Cancer Cases and Standardized Incidence Ratios By Sex and Primary Site, Wyoming County Residents, 2008-2012

		Males			Females	
Primary Site	Observed Cases	Expected Cases	SIR*	Observed Cases	Expected Cases	SIR*
All cancer sites	488	440	111.0 +	462	387	119.4
Oral cavity and pharynx	14	14	97.9	7	6	-
Esophagus	14	7	209.1	1	2	-
Stomach	9	8	-	1	5	-
Colon and rectum	43	39	111.6	33	35	94.2
Liver and intrahepatic bile duct	12	11	105.9	6	4	-
Pancreas	11	12	92.1	14	11	124.7
Larynx	8	5	-	1	1	-
Lung and bronchus	86	56	153.9 +	50	49	102.4
Melanoma of the skin	23	24	96.5	20	16	126.8
Breast	3	1	-	130	118	110.4
Cervix uteri	-	-	-	5	5	-
Corpus and uterus, NOS	-	-	-	42	26	161.5 +
Ovary	-	-	-	21	12	181.8 -
Prostate	113	131	86.0	-	-	-
Testis	3	4	-	-	-	-
Urinary bladder**	31	29	106.6	11	9	124.4
Kidney and renal pelvis	16	18	89.1	9	10	-
Brain and other nervous system	8	6	-	9	5	-
Thyroid	12	6	212.2	26	16	161.3
Non-Hodgkin lymphoma	19	20	94.3	18	16	115.1
Hodgkin lymphoma	1	2	-	1	2	-
Myeloma	10	7	147.3	4	5	-
Leukemia	14	14	100.3	16	10	165.8

\* A positive sign following the SIR (standardized incidence ratio) represents a statistically significant excess number of cancer cases. A negative sign following the SIR represents a statistically significant lower number of cancer cases. See the Technical Notes for more information.

- A dash appears where a SIR could not be calculated due to the fact that there were less than 10 observed cases. A dash also appears in the observed and expected cases fields for unsuitable sex specific cancers.

\*\* Includes in situ and invasive cases. All other sites listed above only include invasive cases.

Note: Expected cases are computed based on 2008-2012 age-specific rates from the National Cancer Institute's SEER Program.





#### Number of Observed and Expected Cancer Cases and Standardized Incidence Ratios By Sex and Primary Site, York County Residents, 2008-2012

		Males			Females	
Primary Site	Observed Cases	Expected Cases	SIR*	Observed Cases	Expected Cases	SIR*
All cancer sites	6,187	6,045	102.4	6,144	5,619	109.4 +
Oral cavity and pharynx	221	200	110.7	79	87	90.9
Esophagus	128	91	140.4 +	27	26	105.9
Stomach	85	112	76.0 -	46	70	66.1 -
Colon and rectum	615	539	114.0 +	559	506	110.4 +
Liver and intrahepatic bile duct	94	157	60.0 -	42	60	70.3 -
Pancreas	174	164	105.8	158	160	98.4
Larynx	84	66	128.0 +	15	15	100.7
Lung and bronchus	899	761	118.2 +	772	691	111.7 +
Melanoma of the skin	385	335	114.8 +	319	235	135.5 +
Breast	22	15	151.1	1,703	1,716	99.3
Cervix uteri	-	-	-	79	79	100.6
Corpus and uterus, NOS	-	-	-	468	373	125.5 +
Ovary	-	-	-	156	168	92.8
Prostate	1,333	1,742	76.5 -	-	-	-
Testis	84	60	139.1 +	-	-	-
Urinary bladder**	487	402	121.2 +	124	126	98.2
Kidney and renal pelvis	254	249	101.9	144	141	102.1
Brain and other nervous system	90	87	102.9	66	70	94.6
Thyroid	127	83	153.7 +	413	247	166.9 +
Non-Hodgkin lymphoma	279	284	98.4	255	226	112.8
Hodgkin lymphoma	41	34	120.4	34	27	125.4
Myeloma	73	93	78.1 -	58	73	78.9 -
Leukemia	195	197	99.0	160	141	113.4

\* A positive sign following the SIR (standardized incidence ratio) represents a statistically significant excess number of cancer cases. A negative sign following the SIR represents a statistically significant lower number of cancer cases. See the Technical Notes for more information.

- A dash appears where a SIR could not be calculated due to the fact that there were less than 10 observed cases. A dash also appears in the observed and expected cases fields for unsuitable sex specific cancers.

\*\* Includes in situ and invasive cases. All other sites listed above only include invasive cases.

Note: Expected cases are computed based on 2008-2012 age-specific rates from the National Cancer Institute's SEER Program.



### SEER CANCER SITE CODING STRUCTURE (ICD-0-3)

#### **SEER PRIMARY SITES**

#### ICD-O-3 CODES

Oral cavity and pharynx	C00.0-C14.8
Esophagus	C15.0-C15.9
Stomach	C16.0-C16.9
Colon and rectum	C18.0-C20.9, C26.0
Liver and intrahepatic bile duct	C22.0-C22.1
Pancreas	C25.0-C25.9
Larynx	C32.0-C32.9
Lung and bronchus	C34.0-C34.9
Melanoma of the skin	C44.0-C44.9 & M8720-M8790
Breast*	C50.0-C50.9
Cervix uteri	C53.0-C53.9
Corpus and uterus, NOS	C54.0-C55.9
Ovary	C56.9
Prostate	C61.9
Testis	C62.0-C62.9
Urinary bladder**	C67.0-C67.9
Kidney and renal pelvis	C64.9, C65.9
Brain and other nervous system	C70.0-C72.9
Thyroid	C73.9
Non-Hodgkin lymphoma	M9590-M9597, M9670-M9671, M9673, M9675, M9678-M9680, M9684, M9687, M9688, M9689- M9691, M9695, M9698-M9702, M9705, M9708- M9709, M9712, M9714-M9719, M9724-M9729, M9735, M9737, M9738, M9811-M9818†, M9823†, M9827†, M9837†
Hodgkin lymphoma	M9650-M9667
Myeloma	M9731-M9732, M9734
Leukemia	<ul> <li>M9733, M9742, M9800, M9801, M9805,</li> <li>M9806-M9809, M9811-M9818§, M9820, M9823§,</li> <li>M9826, M9827§, M9831, M9832-M9834, M9835-</li> <li>M9836, M9837§, M9840, M9860, M9861, M9863,</li> <li>M9865, M9866, M9867, M9869, M9870, M9871-</li> <li>M9874, M9875, M9876, M9891, M9895-M9897,</li> <li>M9898, M9910, M9911, M9920, M9930, M9931,</li> <li>M9940, M9945, M9946, M9948, M9963, M9964</li> </ul>

\* Excludes skin of breast

\*\* Includes in situ cases — all other sites exclude in situ cases

† Excludes topography codes C42.0, C42.1, and C42.4

§ Includes only topography codes C42.0, C42.1, and C42.4

Note: Sites oral cavity and pharynx through thyroid as listed above exclude histologies M9050-M9055, M9140 and M9590-M9992 of ICD-O-3.

# **R**EFERENCES:

Applied Statistics Training Institute. *Small Area Analysis: The Basics Call 911*, Prepared by Dever, GEA. for presentation in Scottsdale, AZ., May 17-19, 1993. National Center for Health Statistics, Hyattsville, MD. May, 1993.

Dever, GEA. Epidemiology in Health Services Management, Rockville, MD., Aspen Systems Corporation, 1984.

National Cancer Institute. *SEER Cancer Statistics Review 1975-2012*, Bethesda, MD., U.S. Department of Health and Human Services, < WWW.SEER.CANCER.GOV >.

North American Association of Central Cancer Registries. *Cancer in North America: 2008-2012, Volume One: Combined Cancer Incidence for the United States and Canada*, Springfield, IL. May, 2015.

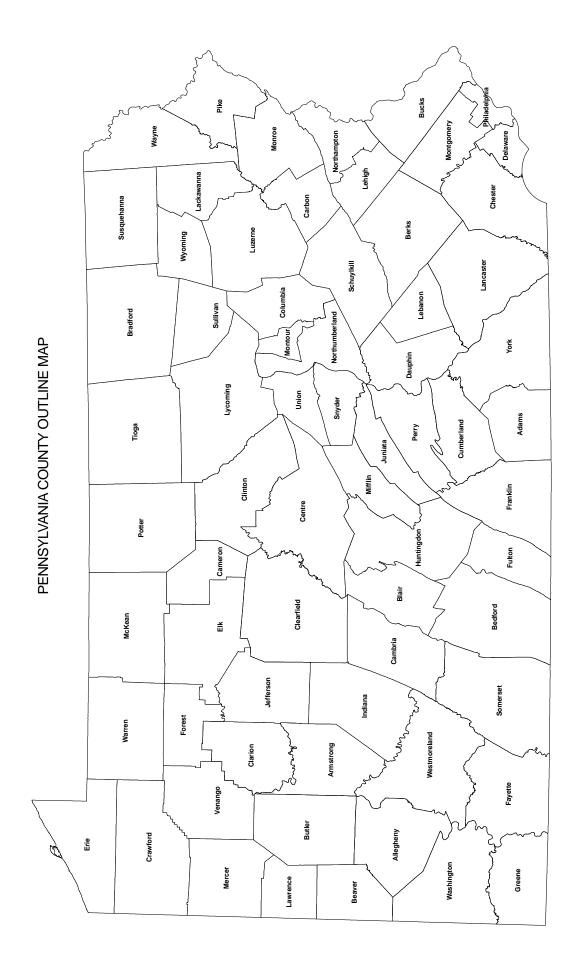
North American Association of Central Cancer Registries. CINA+ Online, <WWW.NAACCR.ORG>.

Pennsylvania Department of Health. *Pennsylvania Cancer Incidence and Mortality 2012*, Harrisburg, PA. August, 2014.

Pennsylvania Department of Health. *Cancer Incidence in Pennsylvania Counties 1985-1989*, Harrisburg, PA. September, 1993.

Pennsylvania Department of Health. An Analysis of Cancer Incidence in Pennsylvania Counties 2007-2011, Harrisburg, PA. October, 2014.

World Health Organization. *ICD-O International Classification of Diseases for Oncology Third Edition*, Geneva. ISBN 92 4 154534 8; 2000.



	Cancer Ribbon Color	Associated Cancer
	Lavender	All cancers
	Red and white	Oral and larynx
	Periwinkle blue	Esophagus and stomach
	Brown	Colon
	Yellow	Liver and bladder
	Purple	Pancreas and thyroid
Ŕ	Pearl	Lung
8	Black	Melanoma
Ŕ	Pink	Breast
i i i i i i i i i i i i i i i i i i i	Teal and white	Cervix
Ŕ	Peach	Uterus
l Â	Teal	Ovary
Ŕ	Light blue	Prostate
Â	Orchid	Testis
l X	Green	Kidney
Ŕ	Gray	Brain
l X	Lime green	Lymphomas
2	Burgundy	Myeloma
2	Orange	Leukemia
V V		

### Pennsylvania Department of Health Division of Health Informatics

HD0016P