

DATA YOU CAN USE

Accessing Online Statistics for Childhood Cancer
Incidence in Pennsylvania

and

Net Cancer Survival in Pennsylvania

Presented by:

Data Advisory Committee

A Committee of the Pennsylvania Cancer Advisory Board

January 25, 2018



Today's Presenters

- **Richard Aplenc, MD, PhD, MCSE**
Professor of Pediatrics-Children's Hospital of Philadelphia
- **Alan Fleegal**
Statistical Analyst Supervisor
Pennsylvania Department of Health (DOH)
- **Nathan Werth**
Statistical Analyst (DOH)
- **Joanna Stoms-Moderator**
Cancer Plan Manager (DOH)


Disclaimer

“Funding for this webinar was made possible (in part) by the Centers for Disease Control and Prevention. The views expressed in written conference materials or publications and by speakers and moderators do not necessarily reflect the official policies of the Department of Health and Human Services, nor does the mention of trade names, commercial practices, or organizations imply endorsement by the U.S. Government.”

Thank You

Thank you to the Northeast Region
American Cancer Society for hosting
this webinar





Accessing Online Statistics for Childhood Cancer Incidence in Pennsylvania

Tables, Charts, and Maps

- **Childhood Cancer Incidence**

- ▣ About EDDIE
- ▣ Accessing EDDIE and Childhood Cancer Incidence
- ▣ Help files
- ▣ Primary Site definitions
- ▣ Creating a table
- ▣ Exporting data
- ▣ Creating Maps and charts
- ▣ Data Highlights

About EDDIE

Enterprise
Data
Dissemination
Informatics
Exchange

- DOH's primary tool for data dissemination
- Customized data tables, charts, and maps for various health related data including behavioral risk factors, births, deaths, and cancer incidence
- Released in January 2016
- Replaced EpiQMS system

Accessing EDDIE

<http://www.statistics.health.pa.gov>

The screenshot shows the website's navigation bar with the following items: PA.GOV, HEALTH STATISTICS, HEALTH STATISTICS A TO Z, NEWS AND UPDATES, and STATISTICAL RESOURCES. A dropdown menu is open under 'STATISTICAL RESOURCES', listing: EDDIE, COMMUNITY HEALTH ASSESSMENT, UNDERSTANDING HEALTH STATS, ADDITIONAL LINKS, CONTACT US, and ABOUT US. The 'EDDIE' link is circled in red in two locations: once in the dropdown menu and once in a secondary menu on the right side of the page. The background of the page features a photograph of a woman speaking at a podium in a conference room, with a 'pennsylvania HEALTH STATISTICS' logo and text identifying 'TOM WOLF, GOVERNOR' and 'DR. RACHEL LEVINE, ACTING SECRETARY'.

WELCOME TO THE PA HEALTH STATS WEBSITE

Please browse through our webpages to find the latest available health statistics and data analysis for Pennsylvania. Our statistical products cover a wide variety of health topics suitable for community health assessments, research, and public inquiry. All statistical reports and webpages are maintained by the Division of Health Informatics within the Pennsylvania Department of Health. A [flyer listing our materials](#) is available for download.

WHAT'S NEW

10/25/2017 - The Communicable Disease dataset in [EDDIE](#) was updated with 2016 data.

10/4/2017 - The Sexually Transmitted Diseases

QUICK STATS

[EDDIE](#)

[Birth, Death, and Other Vital Statistics](#)

STAT RESOURCES

[Tools of the Trade](#)

[Health Statistics A to Z](#)

Accessing EDDIE

[Health Statistics Home](#) > [Statistical Resources](#) > EDDIE

EDDIE

[ENTERPRISE DATA DISSEMINATION INFORMATICS EXCHANGE](#)



(Click the above logo to launch)

[EDDIE](#) is an interactive health statistics dissemination web tool where you can create customized data tables for various health related data.

The EDDIE system was developed to empower public health professionals by enhancing and expanding upon their ability to use data and statistics to drive public health policy and program decisions. Users of the EDDIE system must agree to make no attempt to identify an individual, and must agree to notify the Pennsylvania Department of Health, Division of Health Informatics immediately if an individual is inadvertently identified along with an explanation on how this occurred.

THE FOLLOWING DATASETS ARE AVAILABLE:

- Air Quality
- Behavioral Risk Factor Surveillance System (BRFSS)
- Birth Defects
- Births
- Cancer Incidence
- Carbon Monoxide Poisoning Mortality
- Childhood Cancer Incidence
- Childhood Lead Poisoning
- Children Less Than Age 5 Living in Poverty
- Communicable Diseases (other than STDs)
- Deaths
- Drinking Water Quality
- Hospitalizations
- Housing by Year Built
- Infant Deaths
- Population
- Reported Pregnancies
- Reproductive Health Outcomes
- Sexually Transmitted Diseases (STDs)

PLEASE REVIEW THESE HELPFUL RESOURCES:

- [Frequently Asked Questions \(FAQs\)](#)
- [Tutorial Video Library \(YouTube\)](#)
- [Printable Instructions - Short \(PDF\)](#)
- [Promotional Flyer \(PDF\)](#)
- [Informational Flyer \(PDF\)](#)

Creating a Table in EDDIE



Enterprise Data Dissemination Informatics Exchange



Home

Menu Notes

1: Select a Group	2: Select a Category	3: Select a Geography	4: Select a Report
<ul style="list-style-type: none">All DatasetsBehavioral HealthDemographicsDiseasesEnvironmental Public Health TrackingVital Statistics	<ul style="list-style-type: none">Air QualityBehavioral Risk Factor Surveillance System (BRFSS)Birth DefectsBirthsCancer IncidenceCarbon Monoxide Poisoning MortalityChildhood Cancer IncidenceChildhood Lead PoisoningChildren Less Than Age 5 Living in PovertyCommunicable Diseases (Other than STD)DeathsDrinking Water QualityHospitalizationsHousing by Year BuiltInfant DeathsPopulationReported PregnanciesReproductive Health OutcomesSexually Transmitted Diseases (STDs)	<ul style="list-style-type: none">County/State	<ul style="list-style-type: none">TableChartMap

Reset Selections

Next

[Health Statistics](#) | [EPHT Home](#) | [Contact Us](#) | [Feedback](#) | [Help](#) | [Legal Statement & Disclaimers](#)

2016 Pennsylvania Excellence in Technology Award Winner

© 2017: Commonwealth of Pennsylvania



Creating a Table in EDDIE



Home > Childhood Cancer : County State : Table

Short Menu Menu Notes

1: Primary Site or Type

Select All

- All Cancers
- Leukemias, Myeloproliferative Diseases, and Myelodysplastic Diseases
- Lymphomas and Reticuloendothelial Neoplasms
- CNS and Miscellaneous Intracranial and Intraspinial Neoplasms
- Neuroblastoma and Other Peripheral Nervous Cell Tumors
- Retinoblastoma
- Renal Tumors
- Hepatic Tumors
- Malignant Bone Tumors
- Soft Tissue and Other Extrasosseous Sarcomas
- Germ Cell Tumors, Trophoblastic Tumors, and Neoplasms of Gonads
- Other Malignant Epithelial Neoplasms and Malignant Melanomas
- Other and Unspecified Malignant Neoplasms

2: County / State

Select All

- Pennsylvania
- Adams
- Allegheny
- Armstrong
- Beaver
- Bedford
- Berks
- Blair
- Bradford
- Bucks
- Butler
- Cambria
- Cameron
- Carbon
- Centre
- Chester
- Clarion
- Clearfield
- Clinton
- Columbia
- Crawford
- Cumberland
- Dauphin
- Delaware
- Elk

3: Year

Select All

- 2010-2014
- 2009-2013
- 2008-2012
- 2007-2011
- 2006-2010
- 2005-2009
- 2004-2008

4: Sex

Select All

- Total
- Male
- Female

5: Race / Ethnicity

Select All

- All Races
- White
- Black

6: Rate / Ratio

- Age-Adjusted Rate
- Crude/Age-Specific Rate

7: Age

Select All

- < 20

Create Table

Reset Selections



Creating a Table in EDDIE



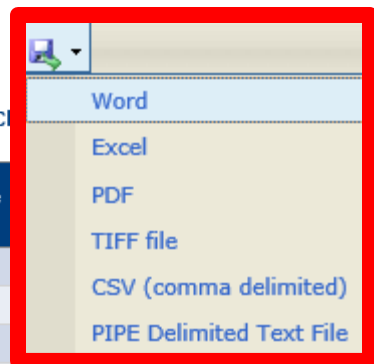
Home > Childhood Cancer : County State : Table

Short Menu Menu Notes

1: Primary Site or Type	2: County / State	3: Year	4: Sex	7: Age
<input type="checkbox"/> Select All All Cancers Leukemias, Myeloproliferative Diseases, and Myelodysplastic Diseases Lymphomas and Reticuloendothelial Neoplasms CNS and Miscellaneous Intracranial and Intraspinial Neoplasms Neuroblastoma and Other Peripheral Nervous Cell Tumors Retinoblastoma Renal Tumors Hepatic Tumors Malignant Bone Tumors Soft Tissue and Other Extrasosseous Sarcomas Germ Cell Tumors, Trophoblastic Tumors, and Neoplasms of Gonads Other Malignant Epithelial Neoplasms and Malignant Melanomas Other and Unspecified Malignant Neoplasms	<input type="checkbox"/> Select All Pennsylvania Adams Allegheny Armstrong Beaver Bedford Berks Blair Bradford Bucks Butler Cambria Cameron Carbon Centre Chester Clarion Clearfield Clinton Columbia Crawford Cumberland Dauphin Delaware Elk	<input type="checkbox"/> Select All 2010-2014 2009-2013 2008-2012 2007-2011 2006-2010 2005-2009 2004-2008	<input type="checkbox"/> Select All Total Male Female	<input type="checkbox"/> Select All < 20
			<input type="checkbox"/> Select All All Races White Black	<input type="checkbox"/> Short Menu <input type="checkbox"/> Menu Notes Create Table Reset Selections
			<input type="checkbox"/> Select All 6: Rate / Ratio Age-Adjusted Rate Crude/Age-Specific Rate	



Creating a Table in EDDIE



Pennsylvania Cancer Registry - Age-Adjusted Rates per 100,000 Created: 11/09/2017

Primary Site or Type	State	Year	Age Group	Race	Count	Expected Count	Population	Age-Adjusted Rate	Lower Bound	Upper Bound
All Cancers			< 20	All Races	3,244	ND	15,576,080	20.6	19.9	21.3
All Cancers			< 20	All Races	3,255	ND	15,764,505	20.4	19.7	21.1
All Cancers			< 20	All Races	3,157	ND	15,897,010	19.6	18.9	20.3
All Cancers	Pennsylvania	2007-2011	Total	All Races	3,177	ND	16,009,045	19.6	18.9	20.3
All Cancers	Pennsylvania	2006-2010	Total	All Races	3,145	ND	16,107,234	19.3	18.6	20.0
All Cancers	Pennsylvania	2005-2009	Total	All Races	3,103	ND	16,179,076	18.9	18.3	19.6
All Cancers	Pennsylvania	2004-2008	Total	All Races	3,055	ND	16,189,757	18.7	18.0	19.3
Malignant Bone Tumors	Pennsylvania	2010-2014	Total	All Races	141	ND	15,576,080	0.9	0.7	1.0
Malignant Bone Tumors	Pennsylvania	2009-2013	Total	All Races	143	ND	15,764,505	0.9	0.7	1.0
Malignant Bone Tumors	Pennsylvania	2008-2012	Total	All Races	141	ND	15,897,010	0.9	0.7	1.0
Malignant Bone Tumors	Pennsylvania	2007-2011	Total	All Races	137	ND	16,009,045	0.8	0.7	1.0
Malignant Bone Tumors	Pennsylvania	2006-2010	Total	All Races	132	ND	16,107,234	0.8	0.7	0.9
Malignant Bone Tumors	Pennsylvania	2005-2009	Total	All Races	137	ND	16,179,076	0.8	0.7	1.0
Malignant Bone Tumors	Pennsylvania	2004-2008	Total	All Races	139	ND	16,189,757	0.8	0.7	1.0

ND = Not Displayed. Age-adjusted rates will not be shown for counts < 20 due to unreliability of such calculations based on small numbers. For similar reasons all other rates, ratios, or percentages will not be shown for counts < 10. If the population is less than 300 then the frequency count and rate will be suppressed.

Note: A rate that appears in red for a county denotes a significantly higher value compared to Pennsylvania. A blue rate denotes a significantly lower value. Exported data may contain a + symbol indicating a significantly higher value or a - symbol indicating a significantly lower value compared to Pennsylvania.

Creating a Table in EDDIE

RATE

Select the statistic to display in the output table.

Only one selection allowed.

Selections include:

- Age-Adjusted Rate (*direct method per 100,000 US 2000 standard million population*)
- Crude/Age-Specific Rate (*per 100,000 population*)

The frequency count (*Count*) and 95% confidence intervals (*Lower Bound* and *Upper Bound*) are displayed for all selections.

A rate that appears in **red** for a county denotes a significantly higher figure compared to Pennsylvania. A **blue** rate denotes a significantly lower value. Significance for Pennsylvania rates are not calculated and shown.

Important: Age-adjusted rates will not be shown if *Count* is less than 20, due to the unreliability of calculations based on small numbers. For similar reasons, crude/age-specific rates will not be shown if *Count* is less than 10. If the population is less than 300, *Count* and the selected *Rate* will be suppressed.

For more information on rates and ratios, please see our [Tools of the Trade](#).

09/2017

per und	
	21.3
	21.1
	20.3
	20.3
	20.0
	19.6
	19.3
	1.0
	1.0
	1.0
	1.0
	0.9
	1.0
	1.0

reasons all other rates,

due. Exported data may

sylvania

DEPARTMENT OF HEALTH

Creating a Chart in EDDIE



Home > Childhood Cancer : County State : Chart

Short Menu Menu Notes

1: Primary Site or Type

All Cancers
Leukemias, Myeloproliferative Diseases, and Myelodysplastic Diseases
Lymphomas and Reticuloendothelial Neoplasms
CNS and Miscellaneous Intracranial and Intraspinial Neoplasms
Neuroblastoma and Other Peripheral Nervous Cell Tumors
Retinoblastoma
Renal Tumors
Hepatic Tumors
Malignant Bone Tumors
Soft Tissue and Other Extrasosseous Sarcomas
Germ Cell Tumors, Trophoblastic Tumors, and Neoplasms of Gonads
Other Malignant Epithelial Neoplasms and Malignant Melanomas
Other and Unspecified Malignant Neoplasms

2: County / State

Select All

Pennsylvania
Adams
Allegheny
Armstrong
Beaver
Bedford
Berks
Blair
Bradford
Bucks
Butler
Cambria
Cameron
Carbon
Centre
Chester
Clarion
Clearfield
Clinton
Columbia
Crawford
Cumberland
Dauphin
Delaware
Elk

3: Year

4: Sex

7: Age

Chart Settings

Show table below chart

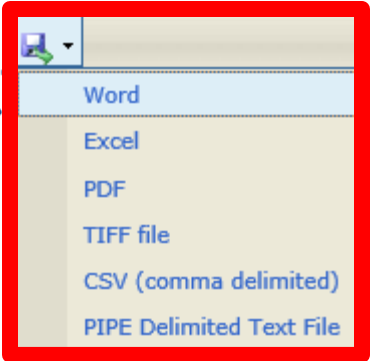
Select chart type:

Vertical Bar
Trend Line

6: Rate / Ratio

Age-Adjusted Rate
Crude/Age-Specific Rate

Vertical Bar Chart



ND = Not Displayed

Primary Site or Type	County/State	Year	Sex	Race	Age	Count	Expected Count	Population	Age-Adjusted Rate	Lower Bound	Upper Bound
Leukemias, Myeloproliferative Diseases, and Myelodysplastic Diseases	Pennsylvania	2010-2014	Total	All Races	< 20	729	ND	15,576,080	4.7	4.4	5.1
Leukemias, Myeloproliferative Diseases, and Myelodysplastic Diseases	Philadelphia	2010-2014	Total	All Races	< 20	80	96.3	1,984,459	4.0	3.1	4.9
Leukemias,	Pennsylvania	2009-2013	Total	All Races	< 20	726	ND	15,764,505	4.7	4.3	5.0

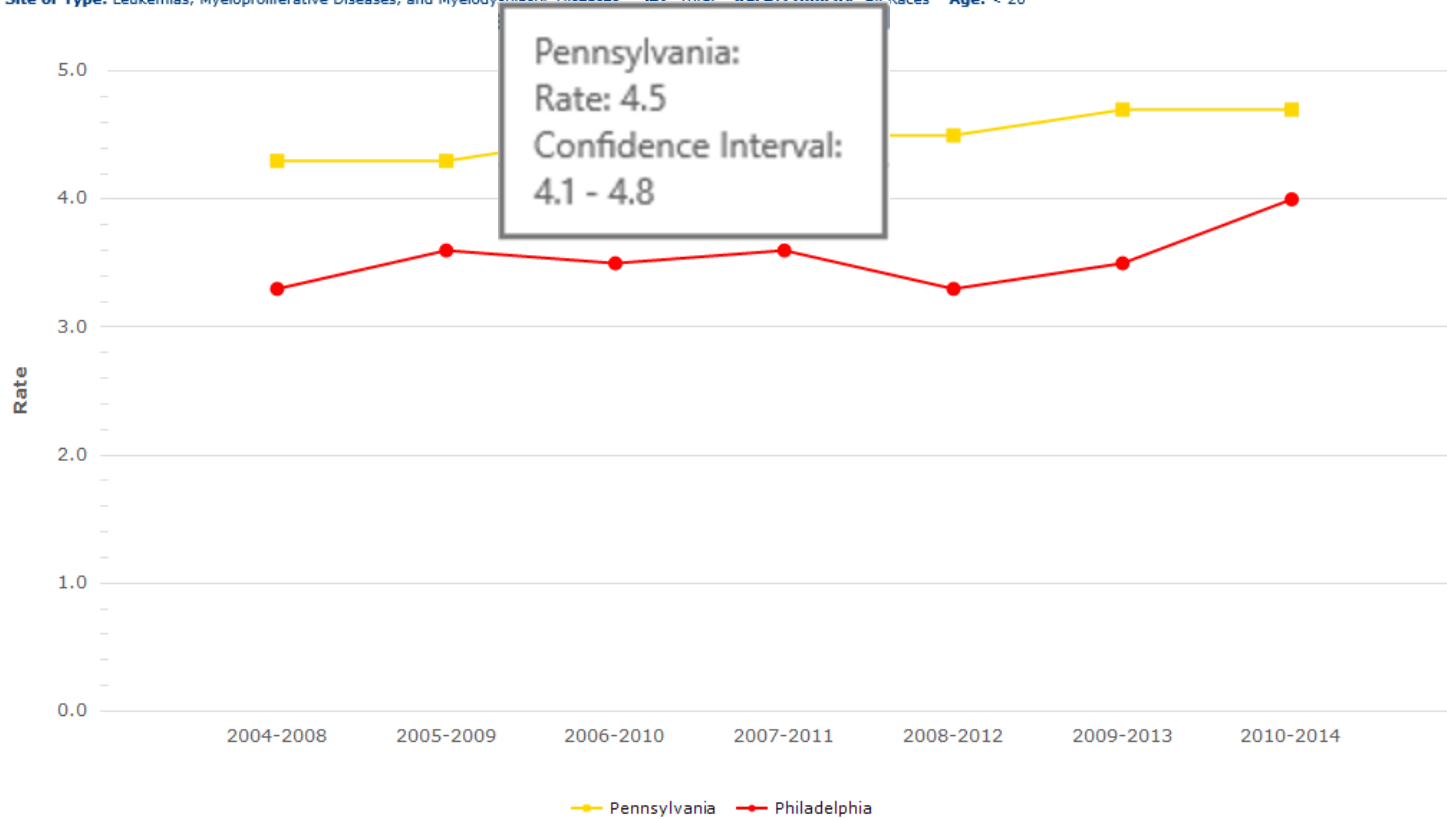
Trend Line Chart



Pennsylvania Childhood Cancer Incidence: Age-Adjusted Rates per 100,000

Created: 11/14/2017

Primary Site or Type: Leukemias, Myeloproliferative Diseases, and Myelodysplastic Diseases Sex: Total Race/Ethnicity: All Races Age: < 20



Creating a Map in EDDIE



Enterprise Data Dissemination Informatics Exchange



Home > Childhood Cancer : County State : Map

Short Menu Menu Notes

1: Primary Site or Type

- All Cancers
- Leukemias, Myeloproliferative Diseases, and Myelodysplastic Diseases
- Lymphomas and Reticuloendothelial Neoplasms
- CNS and Miscellaneous Intracranial and Intraspinal Neoplasms
- Neuroblastoma and Other Peripheral Nervous Cell Tumors
- Retinoblastoma
- Renal Tumors
- Hepatic Tumors
- Malignant Bone Tumors
- Soft Tissue and Other Extrasosseous Sarcomas
- Germ Cell Tumors, Trophoblastic Tumors, and Neoplasms of Gonads
- Other Malignant Epithelial Neoplasms and Malignant Melanomas
- Other and Unspecified Malignant Neoplasms

2: Year

- 2010-2014
- 2009-2013
- 2008-2012
- 2007-2011
- 2006-2010
- 2005-2009
- 2004-2008

3: Sex

- Total
- Male
- Female

4: Race / Ethnicity

- All Races
- White
- Black

5: Rate / Ratio

6: Age

- < 20

Optimal
Equal Interval
Equal Distribution

Map Settings

Show table below map

Data classification type: **Optimal**

Number of classes: **4**

Color palette: **Blue**

Transparency percent: **10**

Create Map

Reset Selections

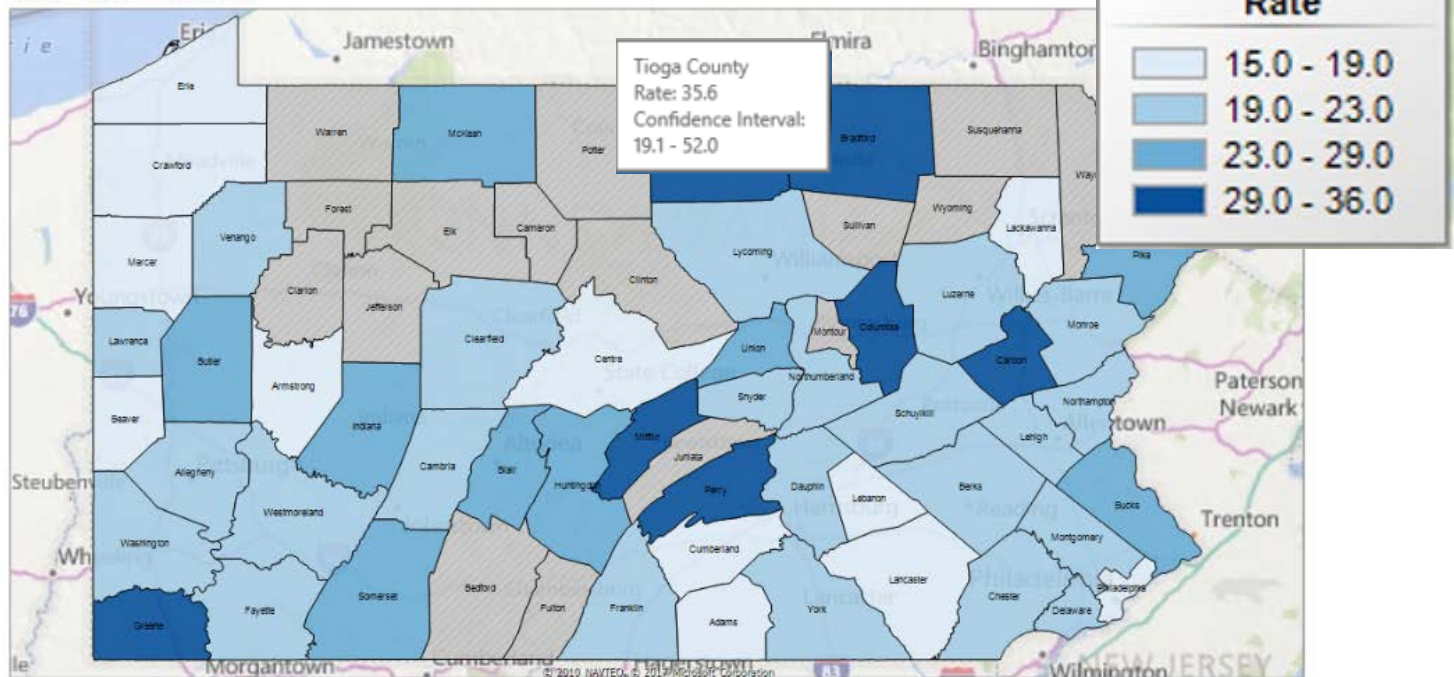
Creating a Map in EDDIE



Pennsylvania Childhood Cancer Incidence: Crude/Age-Specific Rates per 100,000

Created: 11/14/2017

Primary Site or Type: All Cancers Year: 2010-2014 Sex: Total Race/Ethnicity: All Races
 Age: < 20 Distribution Type: Optimal



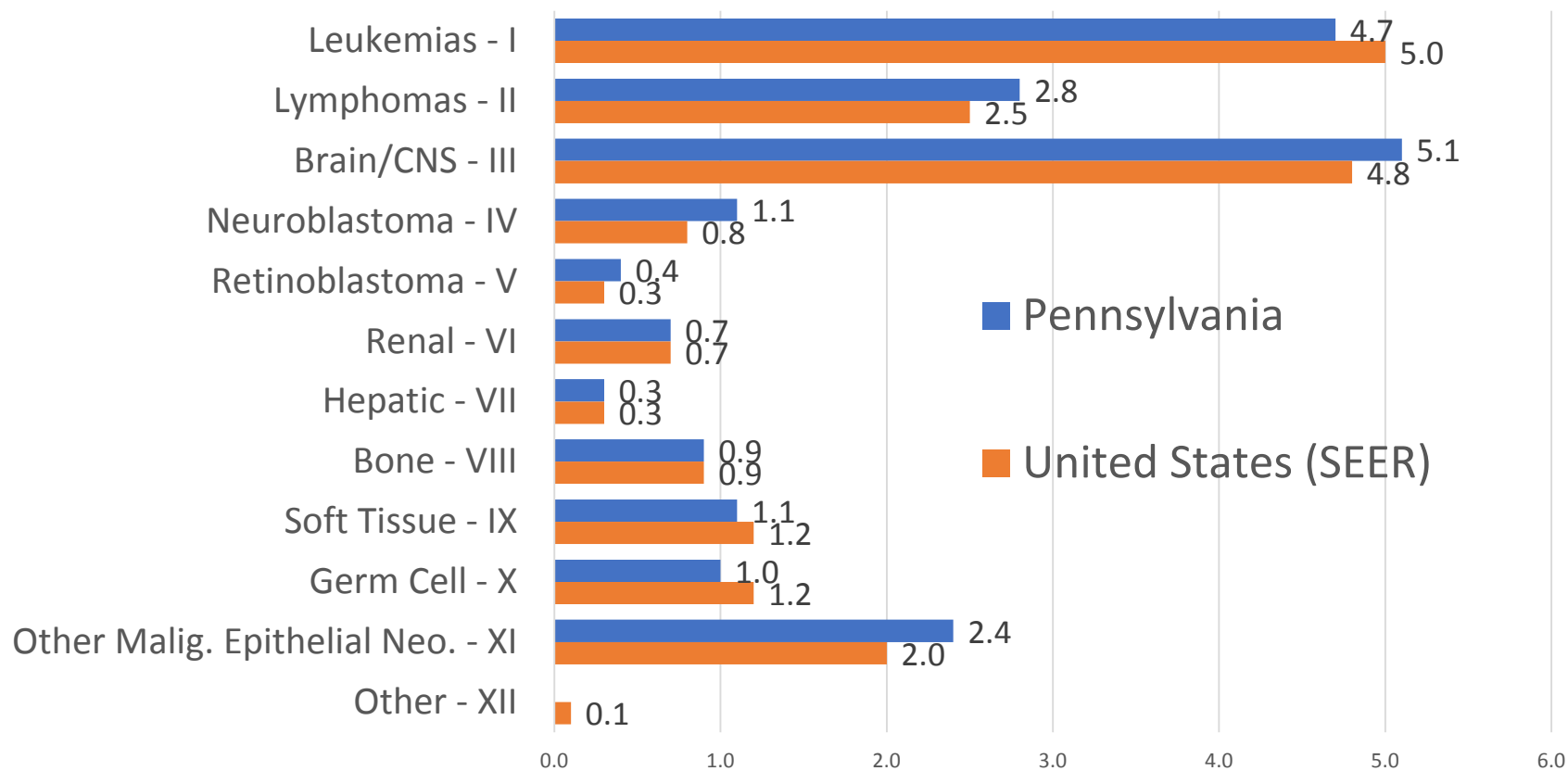
Primary Site or Type	County/State	Year	Sex	Race	Age	Count	Expected Count	Population	Crude/Age-Specific Rate	Lower Bound	Upper Bound
All Cancers	Pennsylvania	2010-2014	Total	All Races	< 20	3,244	ND	15,576,080	20.8	20.1	21.5
All Cancers	Adams	2010-2014	Total	All Races	< 20	21	25.8	124,352	16.9	9.7	24.1
All Cancers	Allegheny	2010-2014	Total	All Races	< 20	303	284.9	1,358,953	22.3	19.8	24.8
All Cancers	Armstrong	2010-2014	Total	All Races	< 20	13	15.6	75,486	17.2	7.9	26.6
All Cancers	Beaver	2010-2014	Total	All Races	< 20	34	39.4	190,145	17.9	11.9	23.9
All Cancers	Bedford	2010-2014	Total	All Races	< 20	9	11.7	57,161	ND	ND	ND

Data Highlights

- According to the American Cancer Society, childhood cancers make up less than one percent of all cancers diagnosed each year.
- Childhood cancers are less likely to be linked to lifestyle or environmental risks compared to cancer in adults. This makes prevention of childhood cancer very difficult or unlikely.

Data Highlights, PA Compared to US

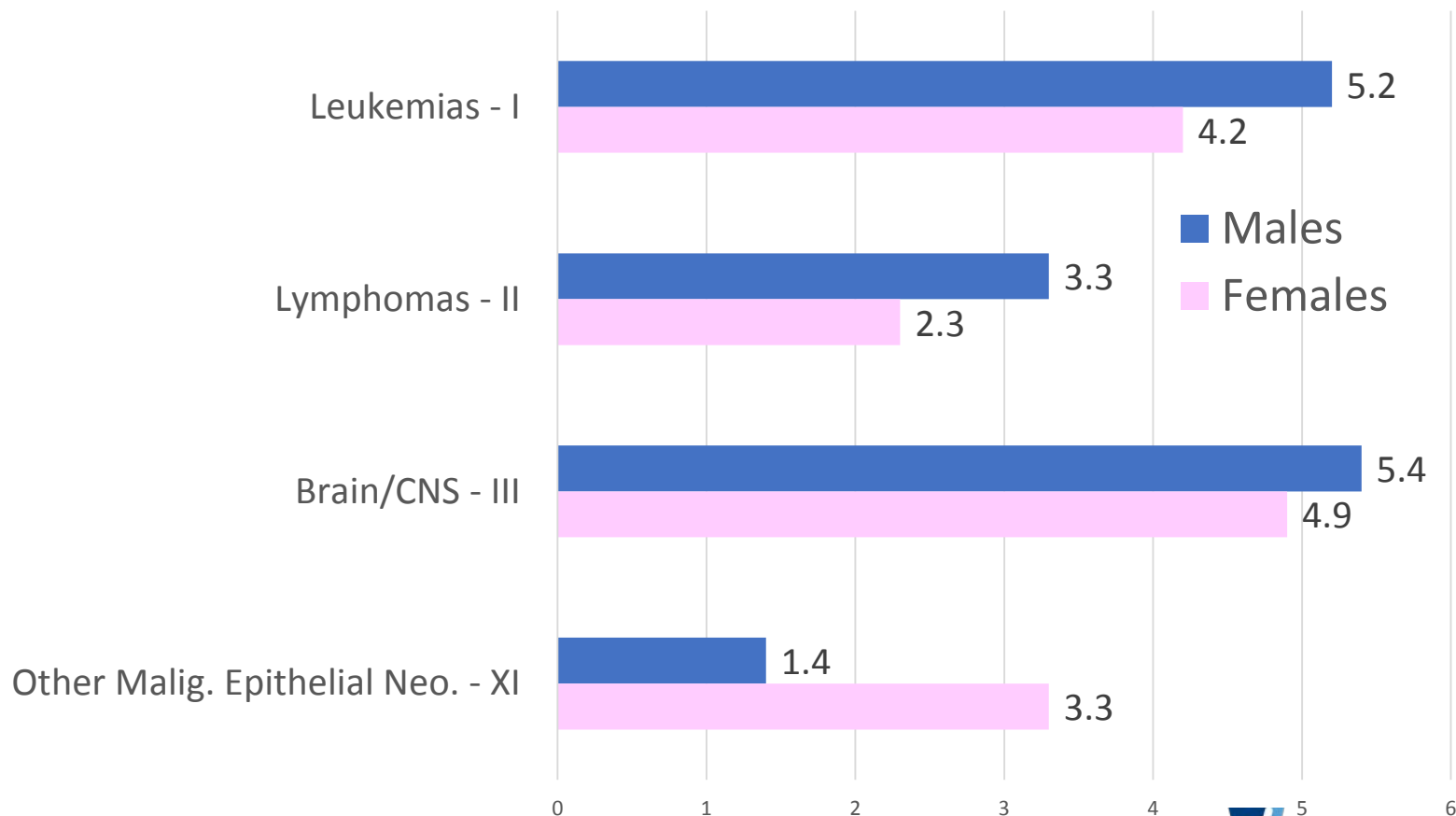
Childhood Cancer Incidence, Age-Adjusted Rates, Ages < 20,
Pennsylvania compared to United States (SEER), 2010-2014



Sources: Pennsylvania Department of Health and National Cancer Institute's SEER program

Data Highlights, Gender Differences

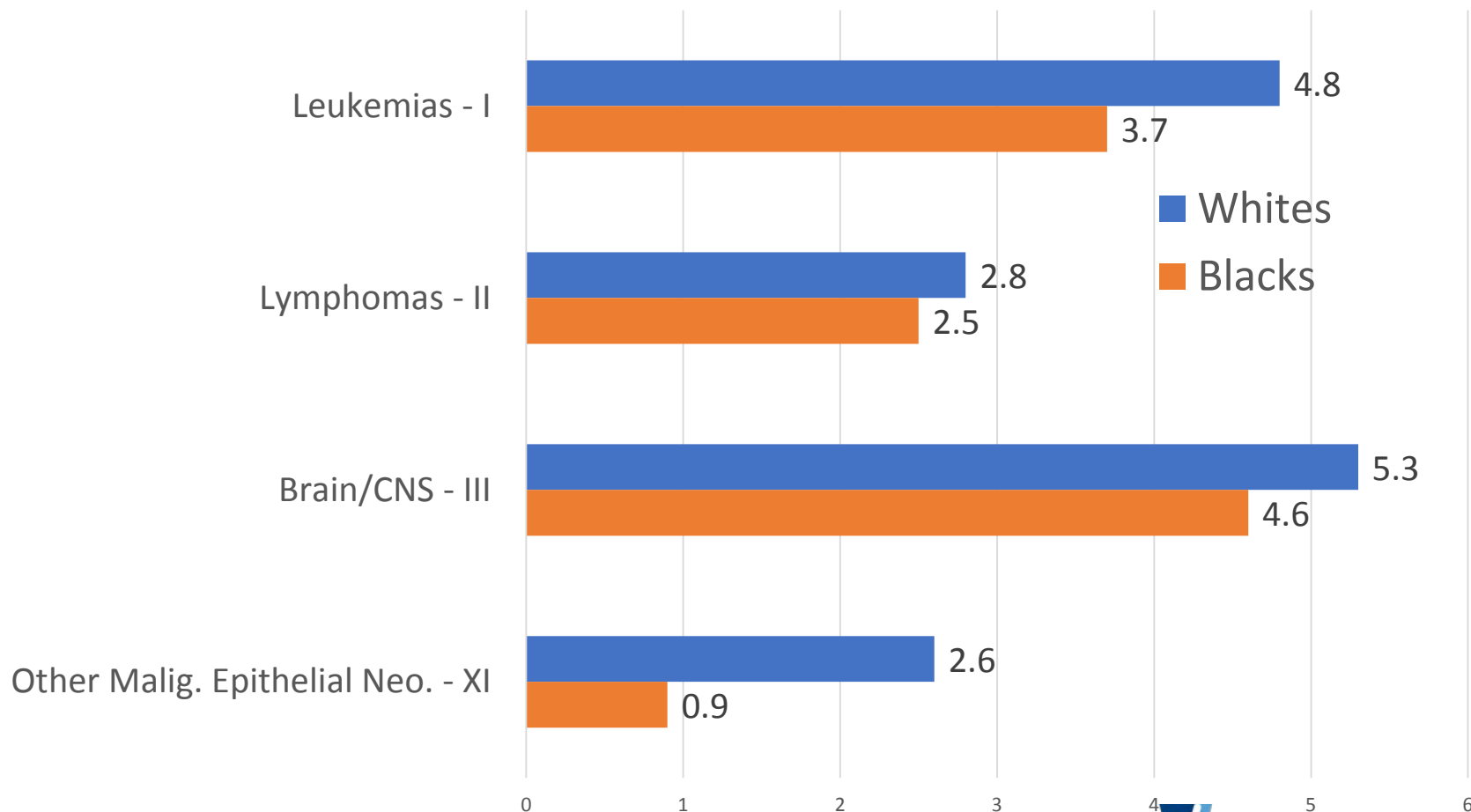
Childhood Cancer Incidence, Age-Adjusted Rates, Ages < 20,
Males compared to Females, PA residents, 2010-2014



Source: Pennsylvania Department of Health

Data Highlights, Race Differences

Childhood Cancer Incidence, Age-Adjusted Rates, Ages < 20, Whites compared to Blacks, Pennsylvania Residents, 2010-2014



Source: Pennsylvania Department of Health

Contact

Website

<http://www.statistics.health.pa.gov>

Phone

(717) 782-2448

Email

RA-DHIContactUs@pa.gov

Net Cancer Survival in Pennsylvania

Joanna Stoms
Nathan Werth

What is Net Survival?

Informal definition:

“Survival in the hypothetical situation where the disease under study would be the only possible cause of death.”

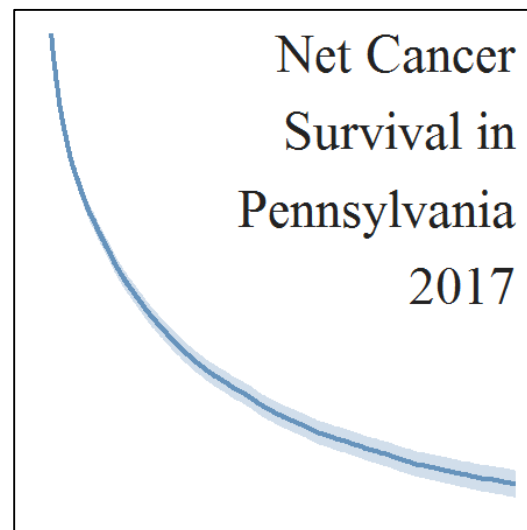
- Pohar Perme, et. al (2012)

Value of Net Survival

- Removes “background” death risks
- Unaffected by inaccurate cause of death
- Great for **comparing** the effects of:
 - Screening
 - Treatment

Online Report

- Net survival for different populations
- Trends
- Comparison of outcomes by stage
- Download the data



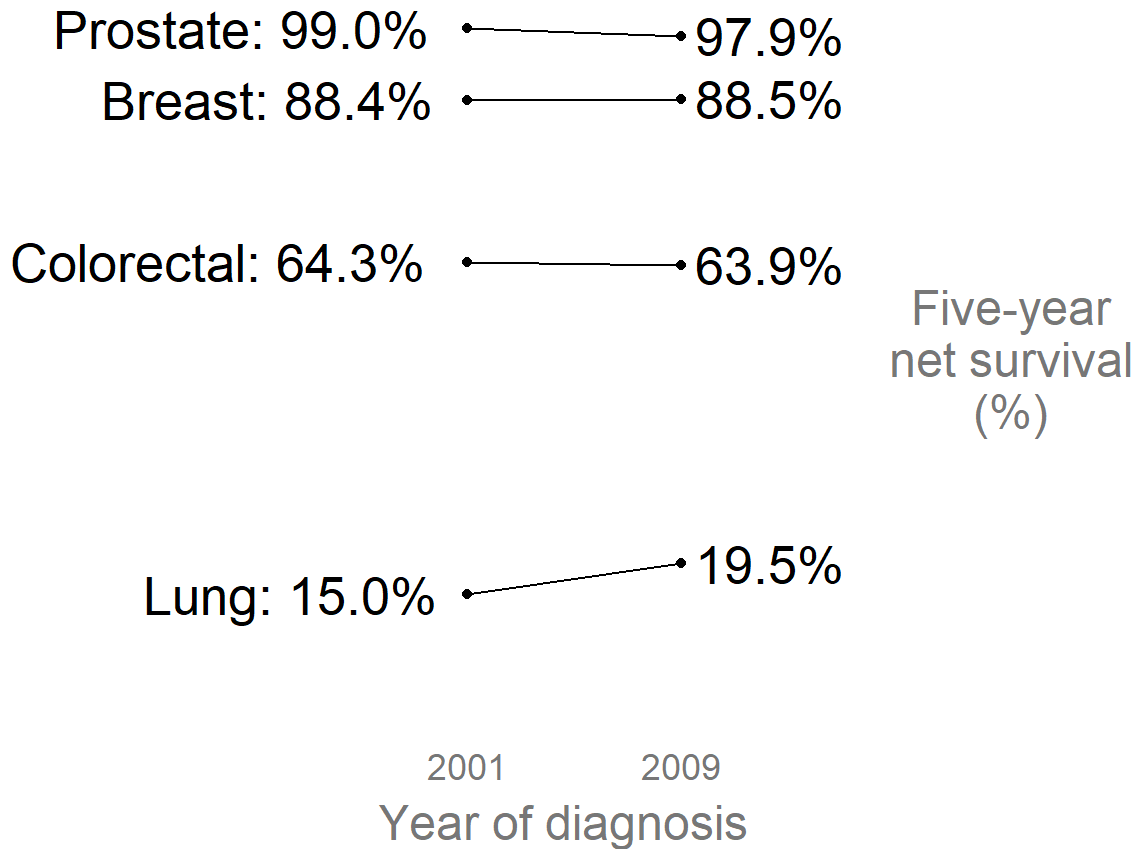
<http://www.statistics.health.pa.gov/HealthStatistics/CancerStatistics/net-survival>

ANALYSIS

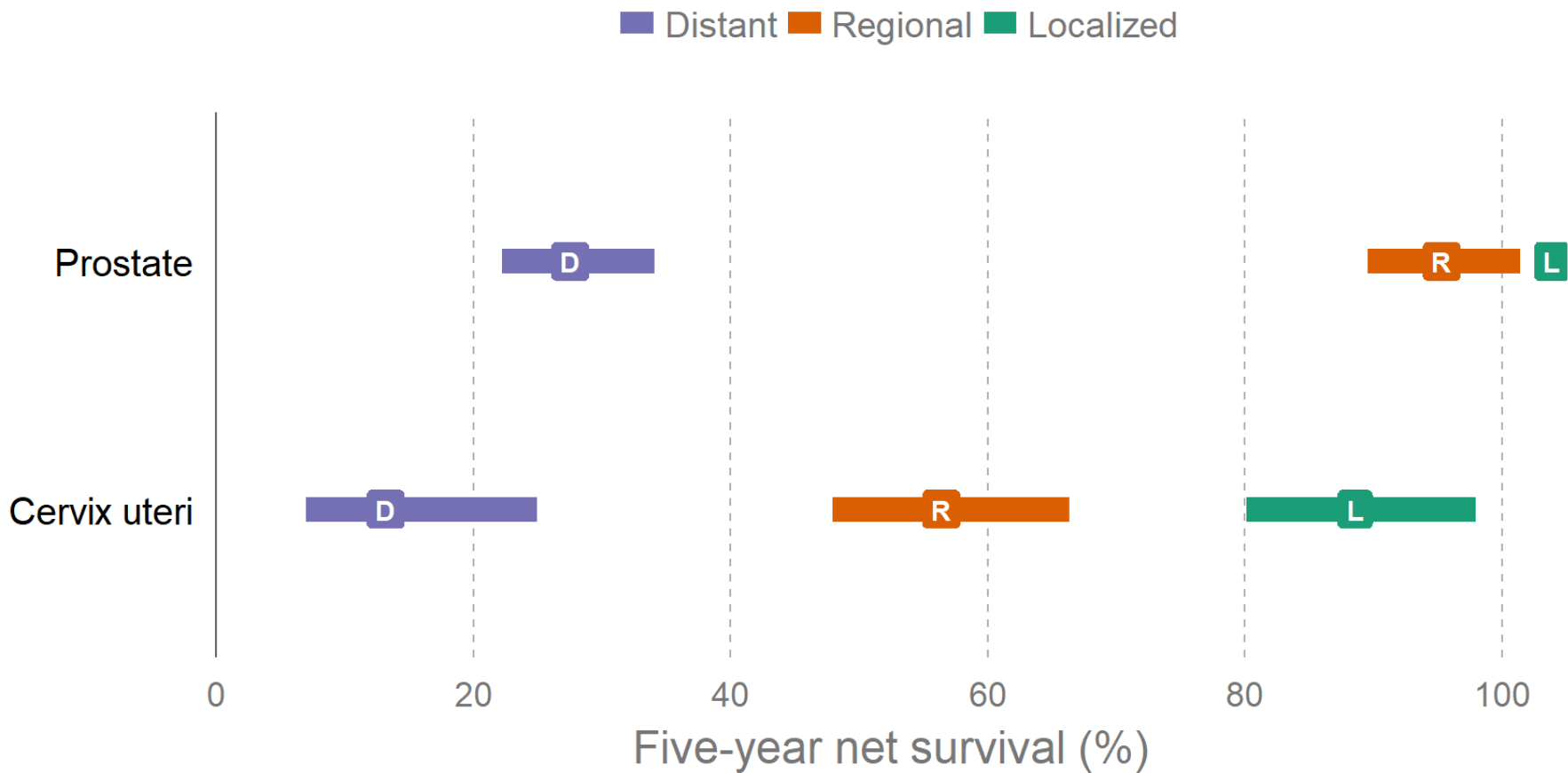
Included Cases

- Provided by the Pennsylvania Cancer Registry
- Pennsylvania residents
- Ages 15 to 99 at diagnosis
- Invasive tumors
- Unless noted, diagnosed during 2007-2013

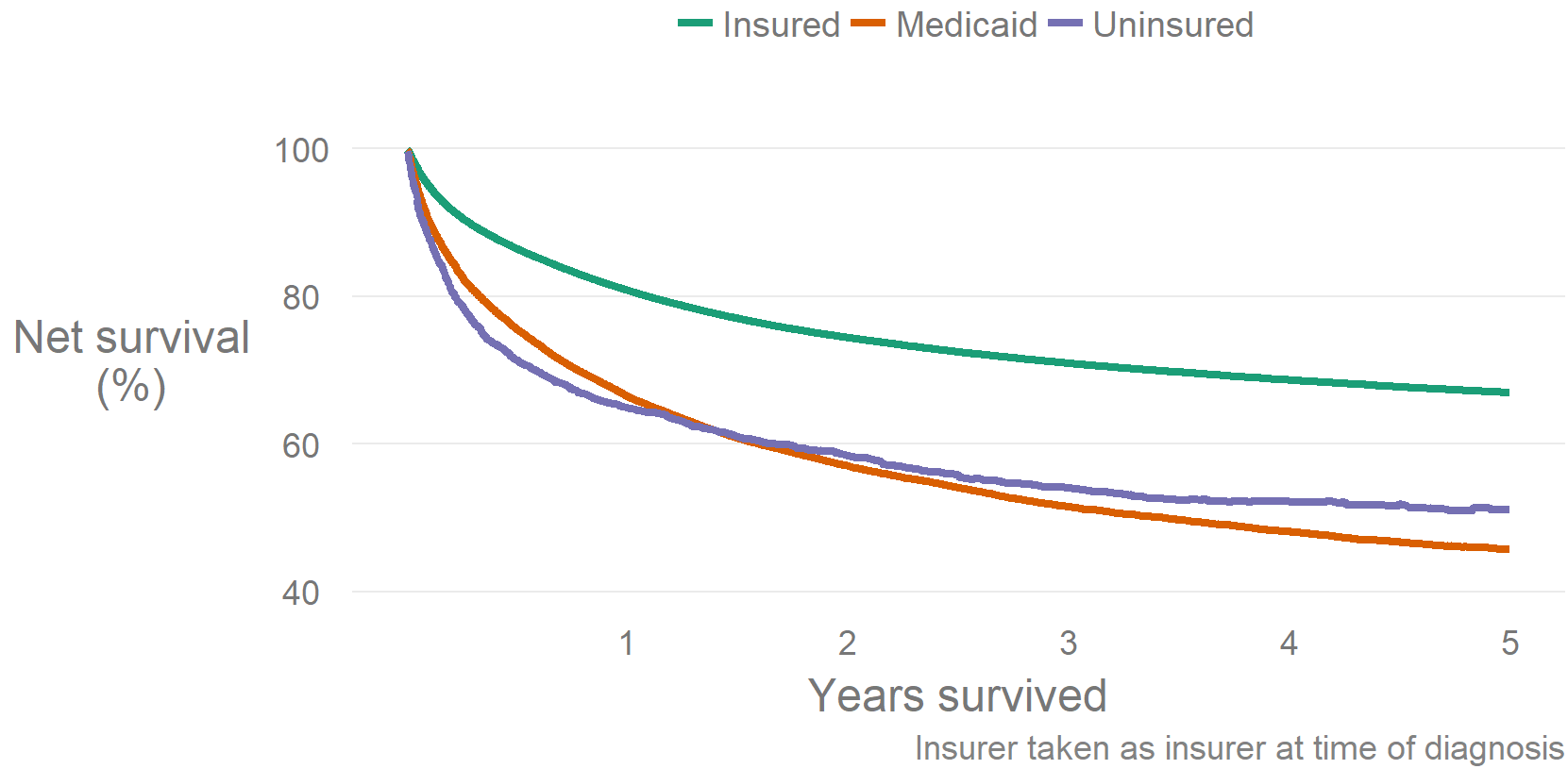
Net Survival Changes, 2001 to 2009



Net Survival by Stage at Diagnosis



Net Survival by Insurer



USING THE DATA

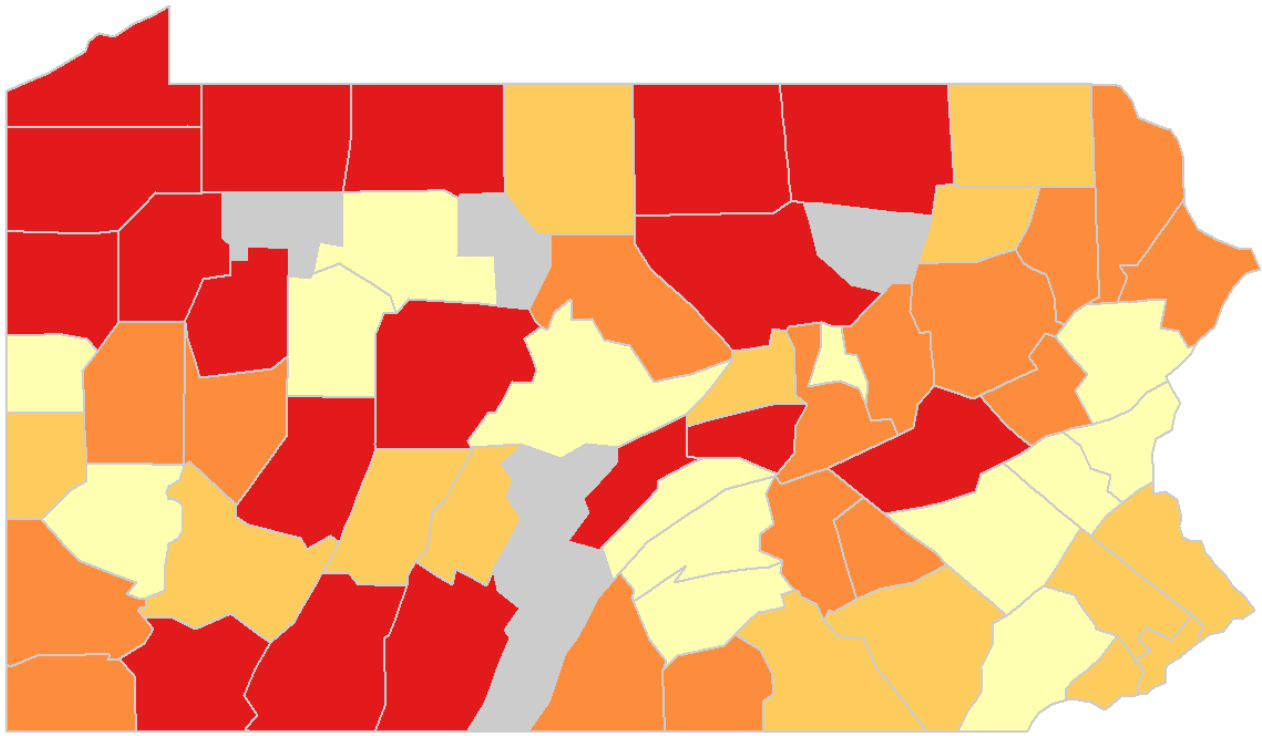
LIVESTRONG and HealthyWoman Program

- **LIVESTRONG** at the YMCA
 - Physical activity for cancer survivors
 - Professional trainers
 - Low or no cost
- But which locations?
- PA HealthyWoman Program helped choose

Lung Cancer Control

- PA Comprehensive Cancer Control Program examined
 - Net lung cancer survival
 - Prevalence of smokers
 - Home radon levels

Net Lung Cancer Survival by County



Five-year net survival

- NA
- 21.6 - 27.3%
- 20.0 - 21.5%
- 17.7 - 19.9%
- 13.9 - 17.6%

Questions and Answers

THANK YOU

Thank you for attending
today's webinar!

Contact:

Joanna Stoms, Cancer Plan Manager

jstoms@pa.gov