



# An Update on Vermont Cancer Data

## VTAAC Steering Committee Retreat March 29, 2019

# Outline

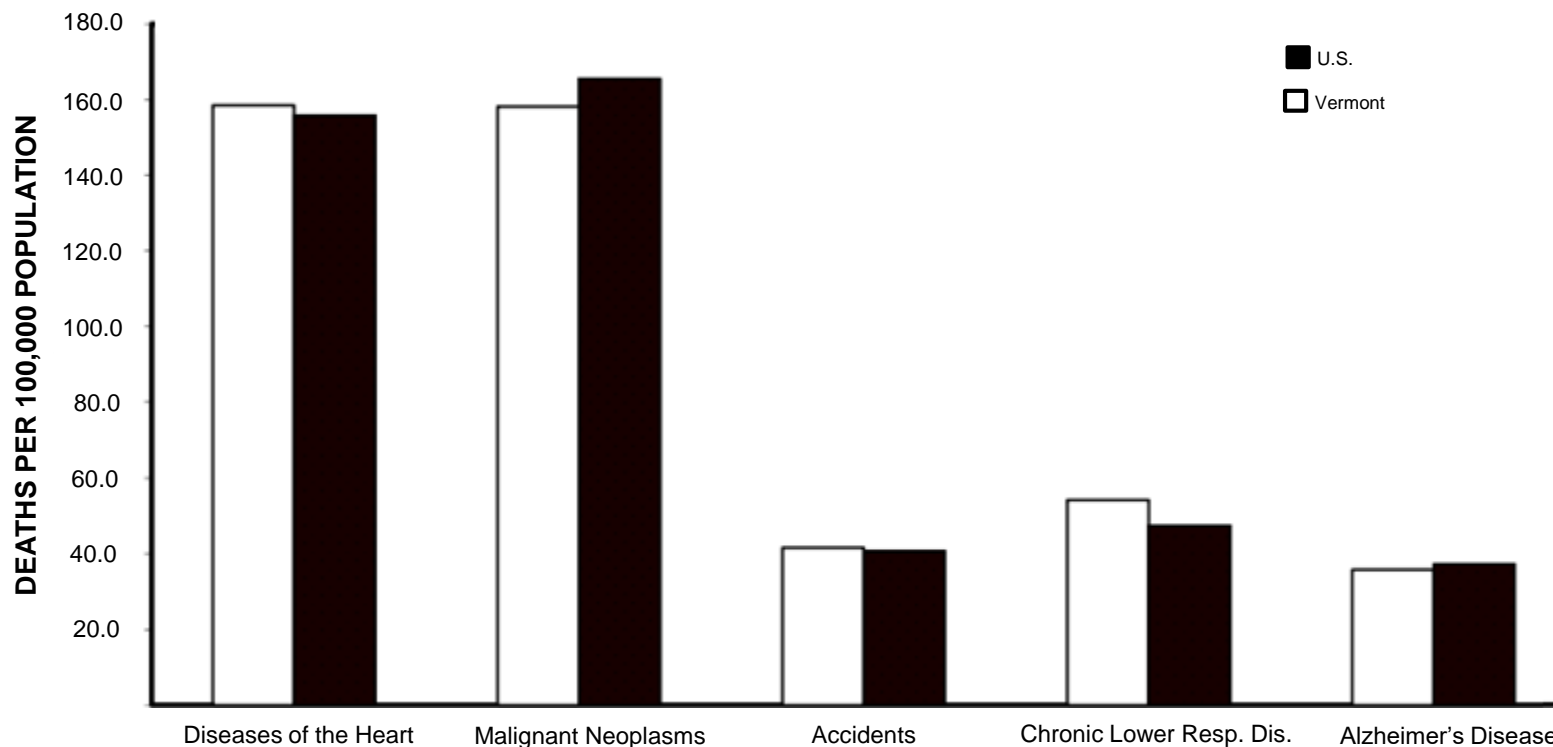
- ❑ Cancer Incidence and Mortality
- ❑ Current Cancer Trend Data
- ❑ Communicating Cancer Data to Vermont Healthcare Professionals
- ❑ Results of Cancer Plan Value and Use Survey
- ❑ Results of Membership Satisfaction Survey
- ❑ Next Steps

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# Cancer Incidence and Mortality

# Leading Causes of Death in Vermont

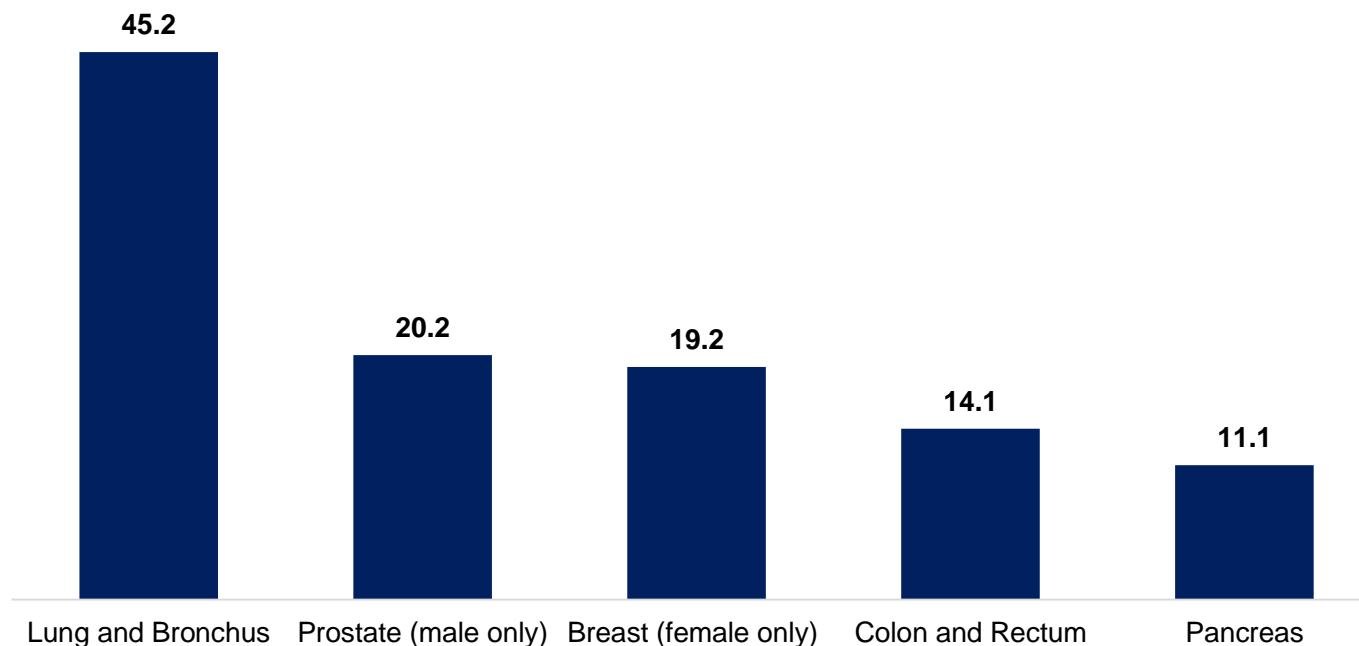
**Leading Causes of Death in Vermont per 100,000 Population (2016)**



*Note: All rates shown are age adjusted to the 2000 U.S. standard population.*

# Cancer Mortality

**Top 5 Fatal Cancers in Vermont per 100,000 Population  
(2011-2015)**



*Note:* All rates are age-adjusted to the 2000 U.S. standard population.

Vermont is ranked 18<sup>th</sup> in the U.S. for lung cancer mortality.

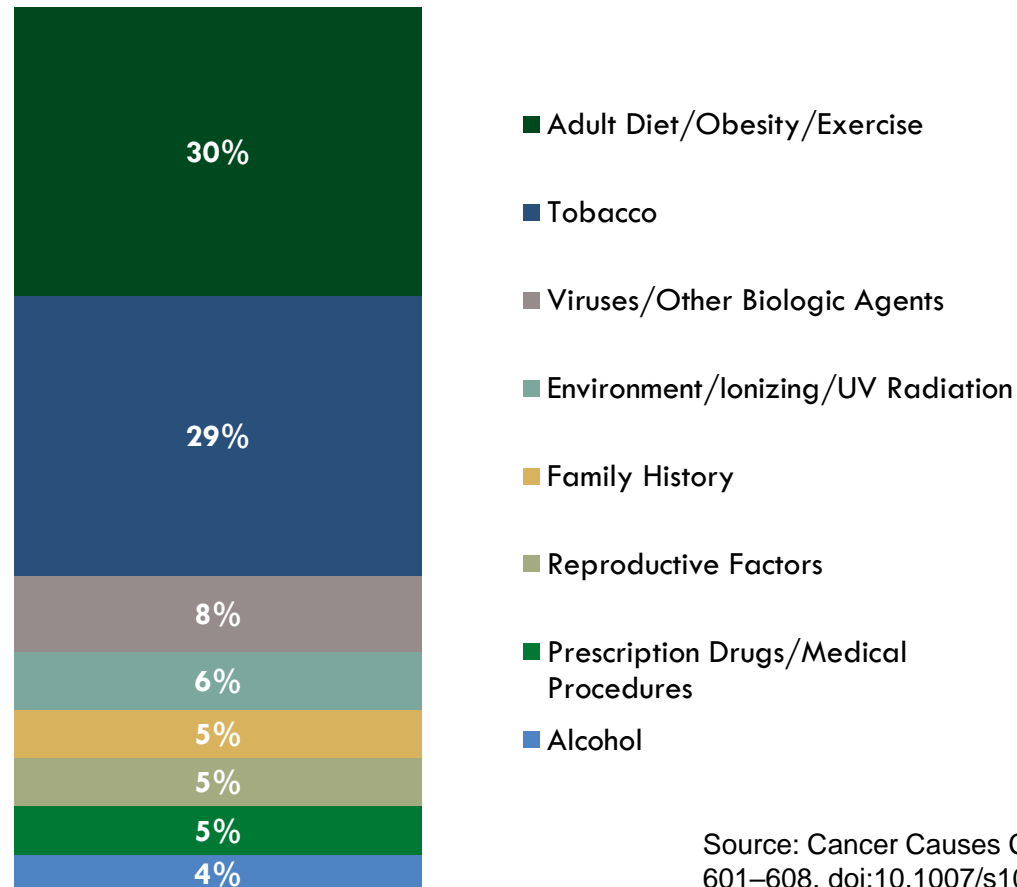
3 > 4 > 50



**3** > **4** > **50**  
*VERMONT*

# Cancer Risk

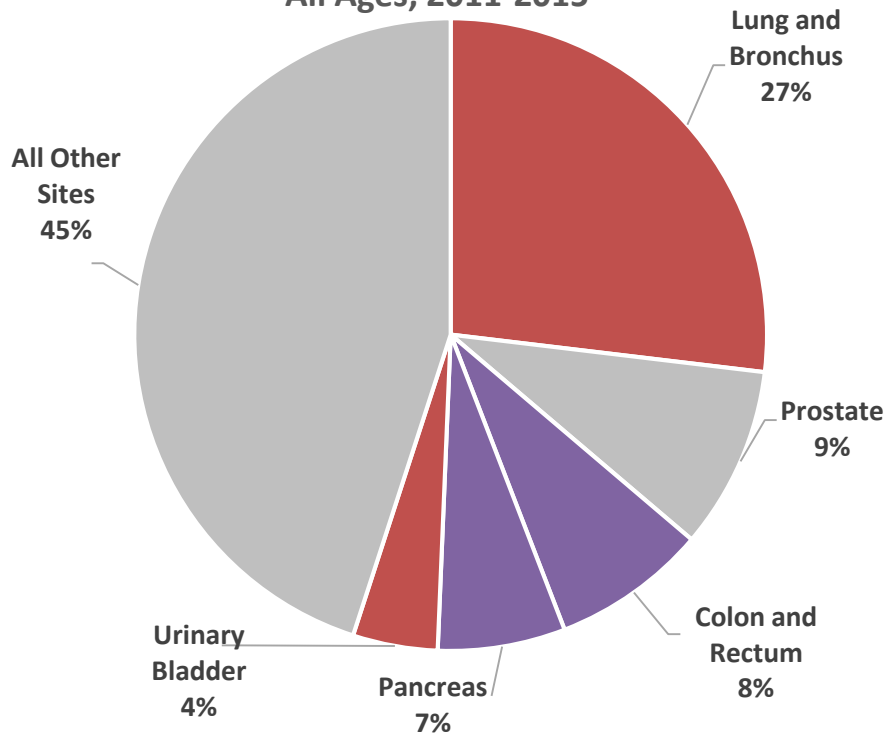
## Estimated Percentage of Cancer Attributable by Risk Factor



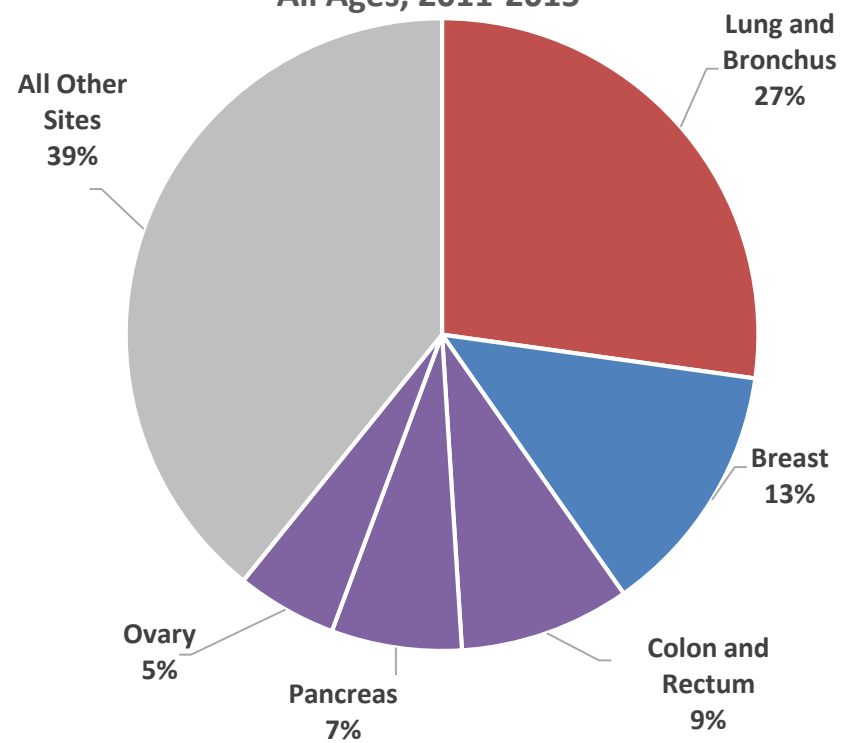
Source: Cancer Causes Control. 2012 April; 23(4): 601–608. doi:10.1007/s10552-012-9924-y.

# Leading Cancer Cause of Death

Leading Cancer Deaths, Vermont Males, All Ages, 2011-2015



Leading Cancer Deaths, Vermont Females, All Ages, 2011-2015

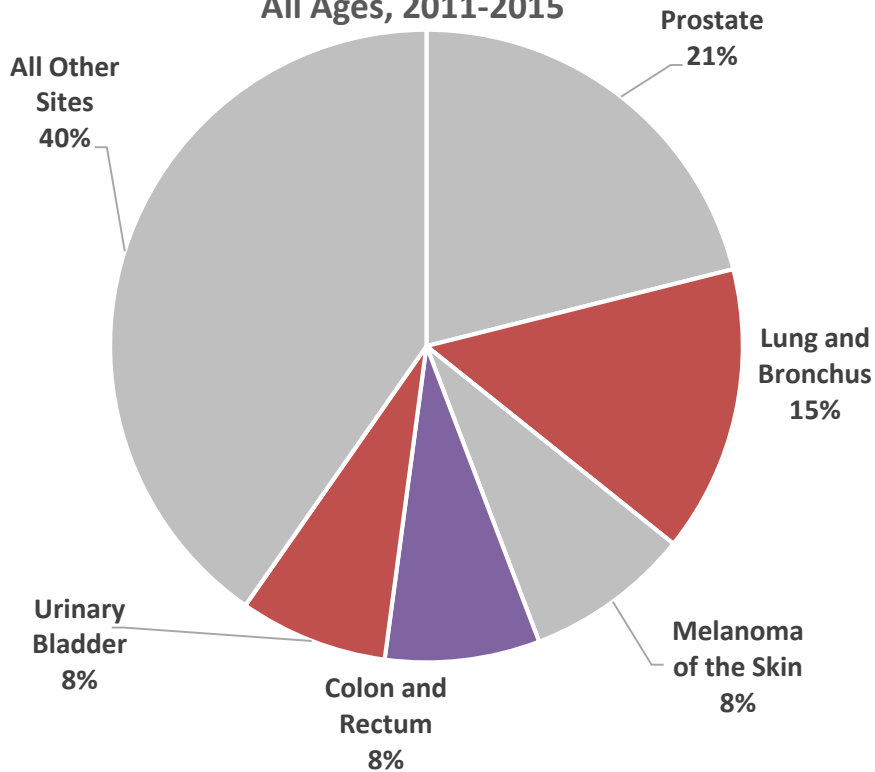


Tobacco Associated **Red**  
Obesity Associated **Blue**  
Both **Purple**

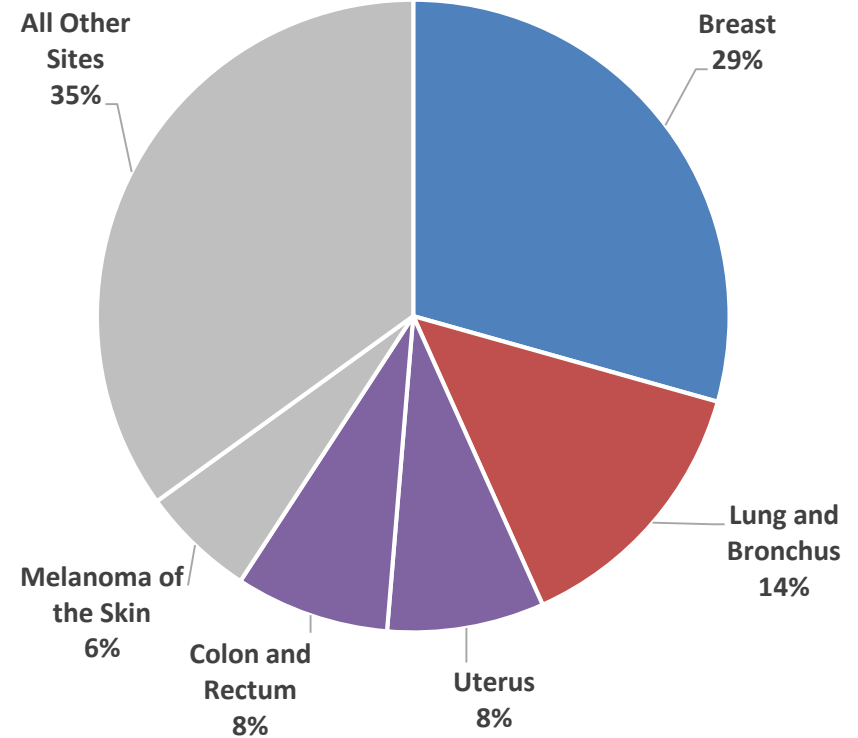


# Leading Cancer Sites

Leading Cancer Sites, Vermont Males, All Ages, 2011-2015



Leading Cancer Sites, Vermont Females, All Ages, 2011-2015

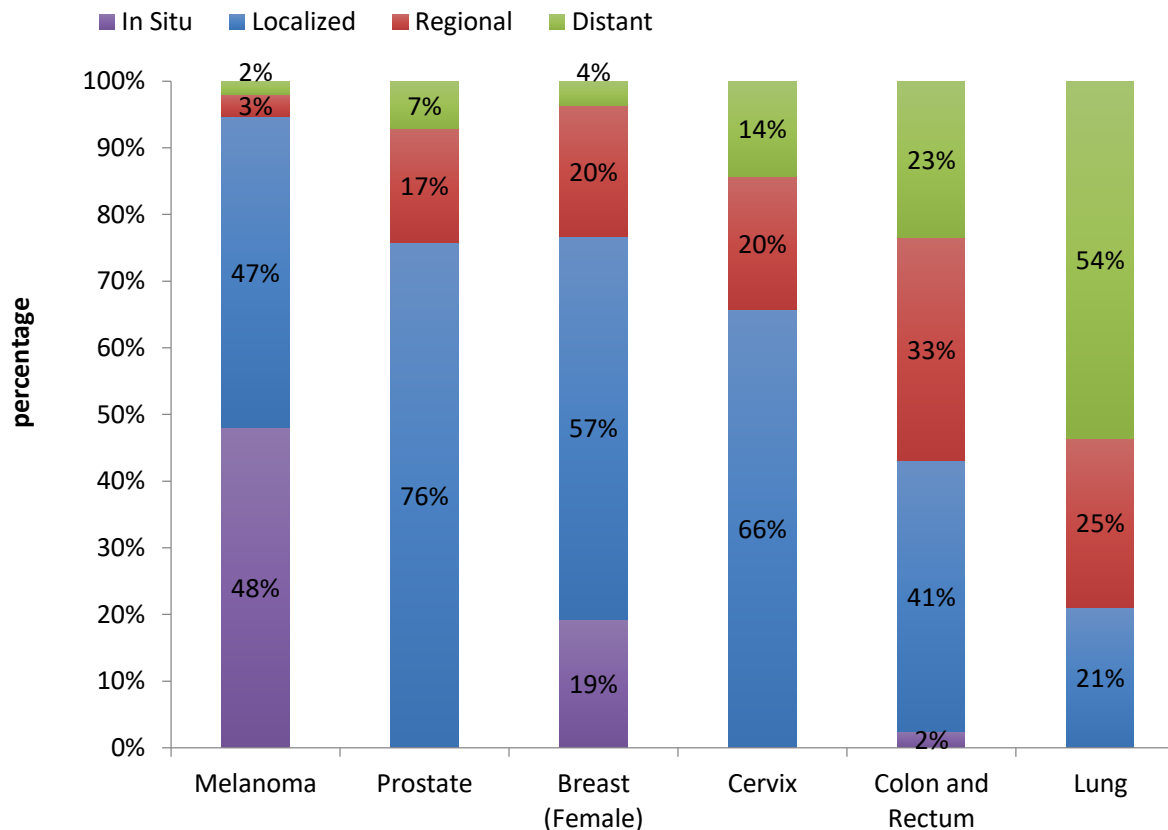


Tobacco Associated **Red**  
 Obesity Associated **Blue**  
 Both **Purple**

# Cancer Stage at Diagnosis

## Cancer Stage at Diagnosis

% of total cases of cancer, by type, according to stage at diagnosis, 2011-2015



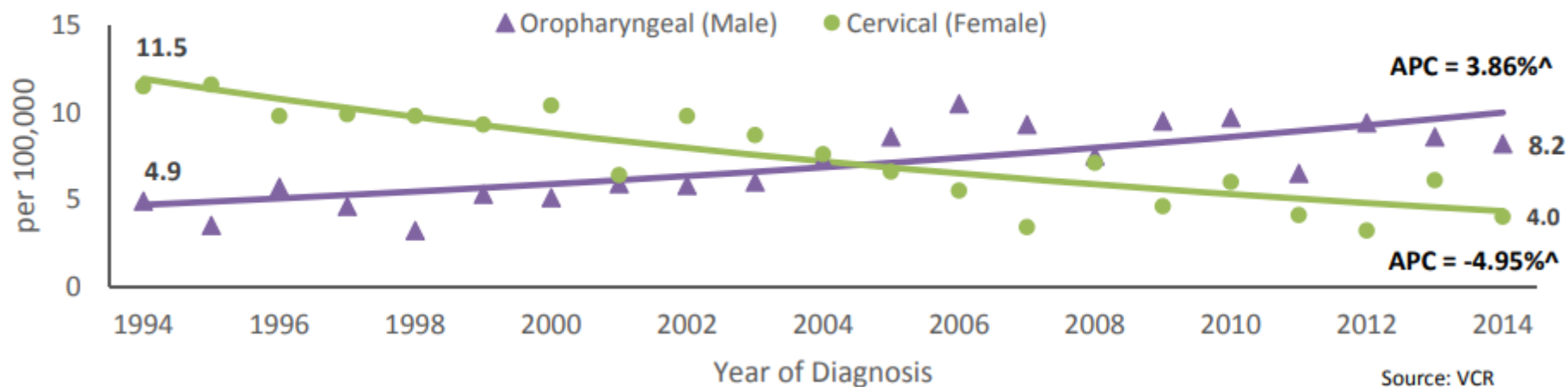
*Note:* Cervical cancers diagnosed as in situ are not reported to the Cancer Registry and are therefore not included in this chart. Stage of disease at diagnosis is SEER Summary Stage.

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# Current Cancer Trend Data

# HPV Associated Cancers

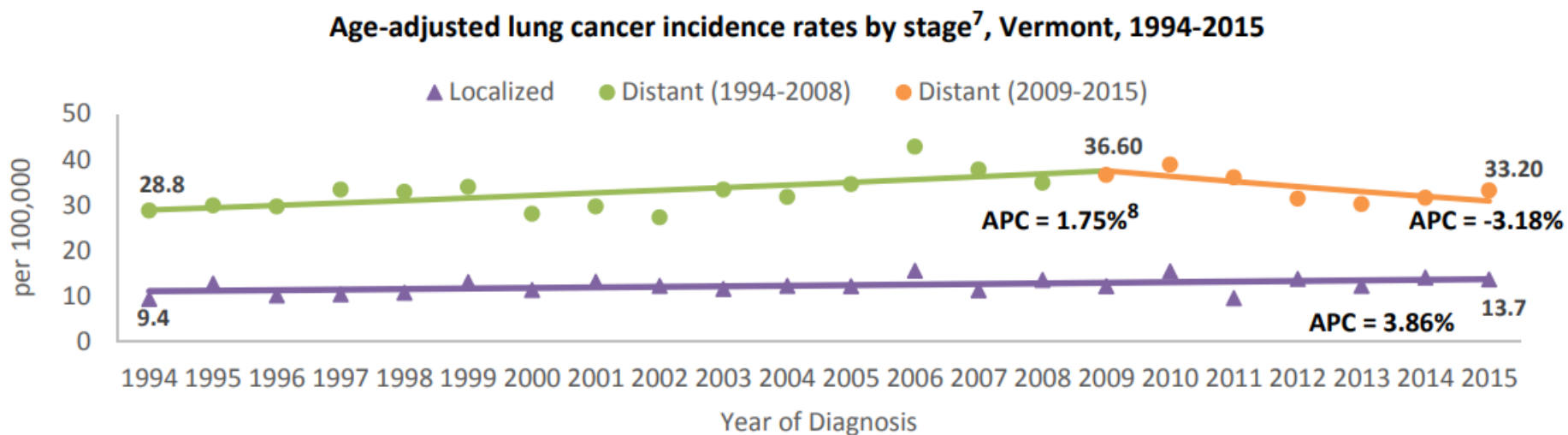
Age-adjusted incidence rates of HPV associated\* oropharyngeal (male) and cervical (female) cancers – Vermont, 1994-2014



\*For a definition of HPV associated cancers, please see Data Notes Section

^Annual Percent Change (APC) is used to measure trends in cancer rates over time where cancer rates are assumed to change at a constant percentage of the rate of the previous year. In this slide, the APC is reported when it is significantly different from zero (alpha = 0.05).

# Lung Cancer Incidence



<sup>7</sup> Stage of disease at diagnosis is SEER Summary Stage

<sup>8</sup> APC is used to measure trends in cancer rates over time where cancer rates are assumed to change at a constant percentage of the rate of the previous year. Annual Percent Change (APC) is reported when it is significantly different from zero (alpha = 0.05).

Data available online in Tobacco Associated Cancers - Data Brief

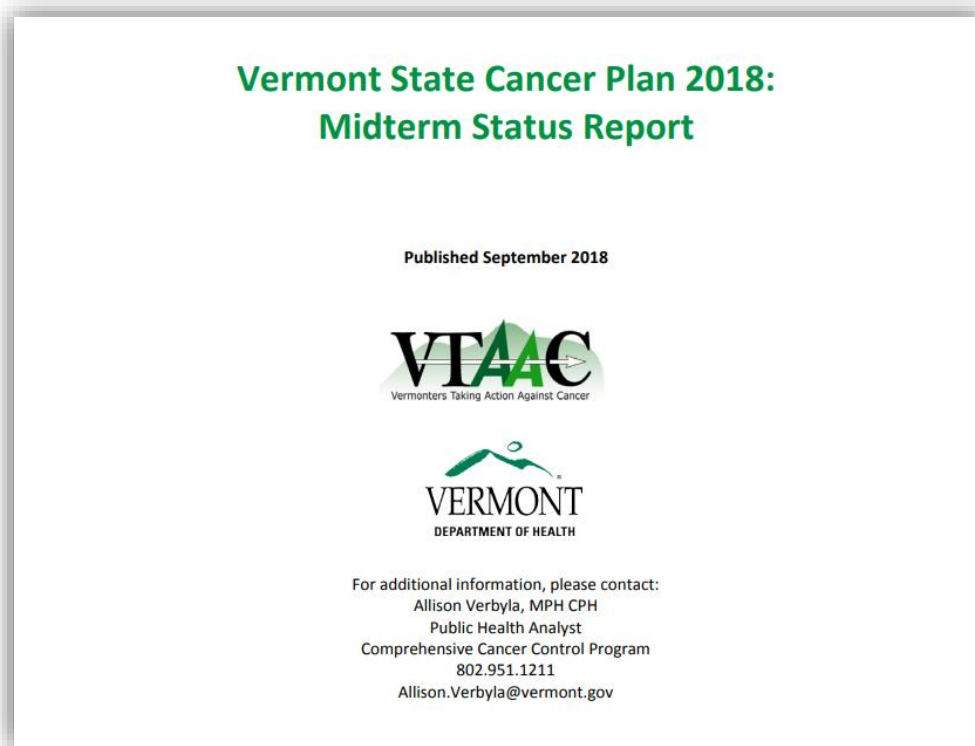
[http://www.healthvermont.gov/sites/default/files/documents/pdf/stat\\_DataBrief\\_TobaccoAssociatedCancers.pdf](http://www.healthvermont.gov/sites/default/files/documents/pdf/stat_DataBrief_TobaccoAssociatedCancers.pdf)



# Cancer Plan Status Update

# Cancer Plan Status Report

- Includes data on primary cancer prevention (healthy behaviors), secondary prevention (cancer screening), and tertiary prevention (improving survivorship).



To access, please visit:

[http://www.healthvermont.gov/sites/default/files/documents/pdf/hpdp\\_Cancer%20Plan%20Status%20report%20oct%20edit%20100818%20final.pdf](http://www.healthvermont.gov/sites/default/files/documents/pdf/hpdp_Cancer%20Plan%20Status%20report%20oct%20edit%20100818%20final.pdf)



# Communicating Cancer Data to Vermont Healthcare Professionals



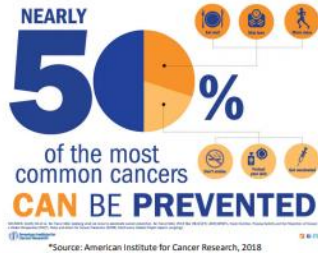
## Communicating the Burden of Cancer to Healthcare Professionals

By: Allison Verbyla MPH<sup>1</sup>, Ghazala Perveen MBBS, PHD<sup>2</sup>

<sup>1</sup>Vermont Department of Health, Burlington, VT; <sup>2</sup>Kansas Department of Health and Environment, Topeka, KA

### Background:

Cancer is a leading cause of death in Vermont.<sup>1</sup> Many behavioral risk factors such as tobacco use, poor diet, and physical inactivity greatly increase the risk of cancer.



State health departments collect data on behavioral risk factors, as well as cancer screening adherence and incidence for breast, cervical, and colorectal cancers. While public health programs routinely use this data for cancer prevention efforts, it is often not systemically communicated to healthcare professionals.

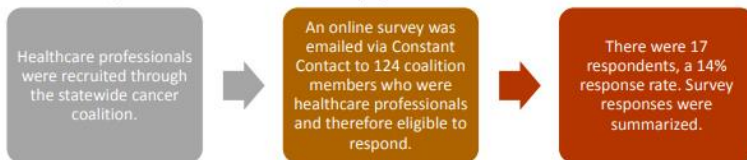
As a result, healthcare professionals may not be aware of the availability of this data. Healthcare professionals in Vermont may benefit from knowing the current rate of behavioral risk factors in the county they practice, as well as the rate of cancer screening.



**Purpose:** This study assesses healthcare professional knowledge of county-level public health data related to cancer, as well as determines a suitable way for communicating the data.

### Methods:

An online survey was conducted late March to early April 2018.



### Vermont Cancer Resources:

Kindred Connections - [vcsn.net/make-a-kindred-connection.html](http://vcsn.net/make-a-kindred-connection.html)

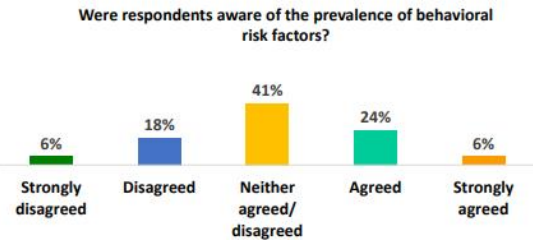
Vermonters Taking Action Against Cancer (VTAAC) - [vtaac.org](http://vtaac.org)

Vermont Department of Health Cancer Plan - [www.healthvermont.gov/wellness/reports/cancer](http://www.healthvermont.gov/wellness/reports/cancer)

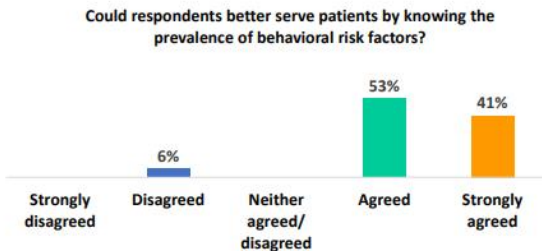
Smoking Cessation for patients and providers - [802Quits.org](http://802Quits.org)

### Results:

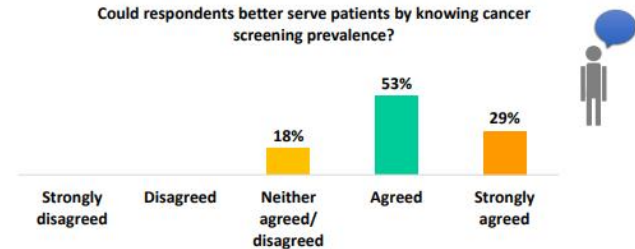
1. Less than a third of respondents were aware of the prevalence of behavioral risk factors (i.e. smoking, poor diet) in the county where they practice. Nearly half of the respondents were uncertain.



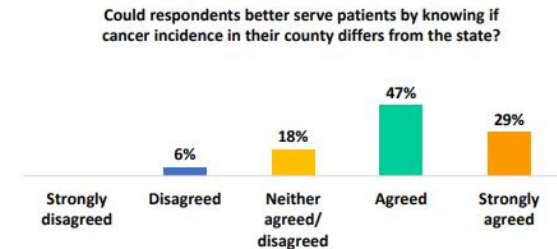
2. Nearly all respondents felt they could better serve patients by knowing the percentage of behavioral risk factors within their county.



3. Most respondents agreed they could better serve patients by knowing the percentage of their population up-to-date on cancer screening.



4. Three-quarters of respondents felt they could better serve their patients by knowing whether cancer incidence in their county differs from the state.



5. Eighty-two percent of respondents agreed the availability of infographics would be beneficial to their work.

### Conclusions:

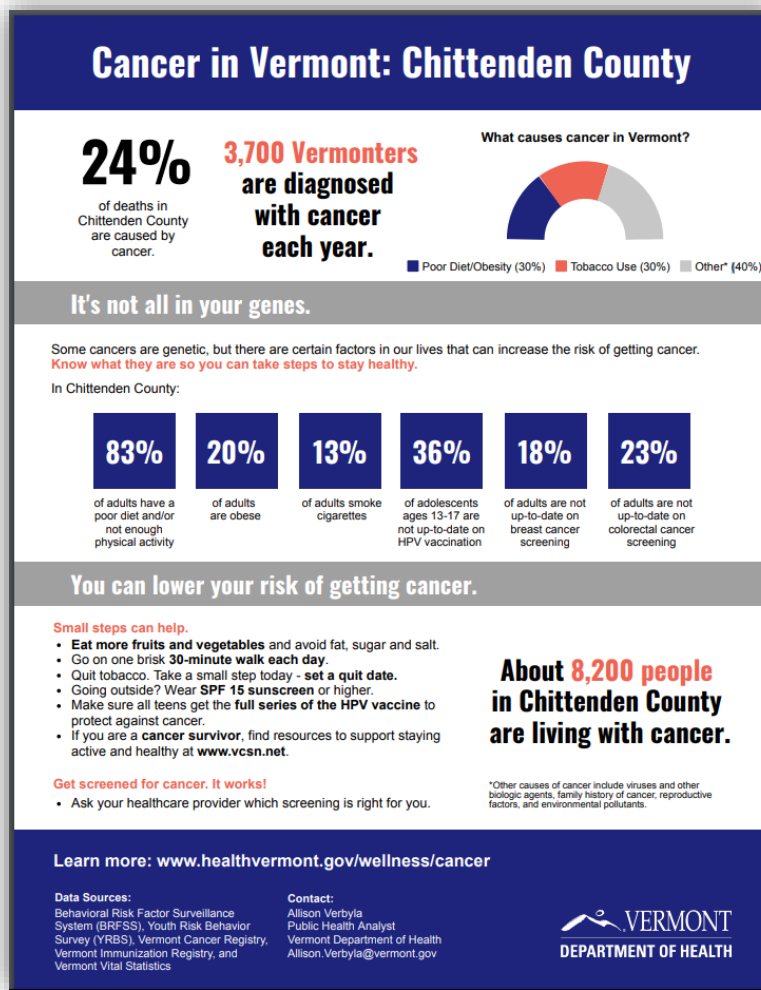
Vermont healthcare professionals were somewhat aware of county-level data related to cancer. Most respondents agreed that awareness of these data, specifically prevalence of tobacco use, poor diet, and other behavioral risk factors, would improve their work. Many healthcare professionals also agreed the availability of an infographic would be helpful in communicating these data.

### Final Thoughts: Recommendations

Increased access to these data in a user-friendly version may benefit healthcare professionals in Vermont.

\*Sources:  
\* Vermont Vital Statistics, 2018

# Cancer County Infographics



To access, please visit: <http://www.healthvermont.gov/health-statistics-vital-records/surveillance-reporting-topic/cancer> and select 'Community Data (Expand to view fact sheets and infographics).'

# Data Notes

**Behavioral Risk Factor Surveillance System (BRFSS):** Vermont tracks risk behaviors using this telephone survey of adults. The results are used to plan, support, and evaluate health promotion and disease prevention programs. Since 1990, Vermont, along with the 49 other states and three territories, has participated in the BRFSS with the Centers for Disease Control and Prevention (CDC). Over 7,000 Vermonters are randomly and anonymously selected and called annually. An adult (18 or older) in the household is asked a uniform set of questions. The results are weighted to represent the adult population of the state.

**Vermont Cancer Registry (VCR):** The Vermont Cancer Registry (VCR) is Vermont's statewide population-based cancer surveillance system. The registry collects information about all cancers (except non-melanoma skin cancers and carcinoma in situ of the cervix) and all benign brain tumors diagnosed in Vermont. All statistics exclude in situ carcinomas except urinary bladder, unless indicated otherwise. Vermont cases include Vermont residents only.

**NPCR and SEER Incidence 1999-2015 Database (NPCR & SEER):** The U.S. incidence rates are based on the National Program of Cancer Registries (NPCR) and the Surveillance, Epidemiology, and End Results (SEER) Program Incidence State Restricted Access Data File (1999-2015). A reporting delay by Department of Veterans Affairs (VA) has resulted in incomplete reporting of VA hospital cases in 2011 through 2015.

**Age Adjustment:** Measures from BRFSS and YRBS are adjusted for age only if they are Healthy Vermonters 2020 goals. Age adjustment groupings come from those determined by Healthy People 2020.

**Confidence Intervals used for statistical comparisons:** A confidence interval represents the range in which a parameter estimate could fall which is calculated based on the observed data. For this analysis, we used a 95% confidence interval, meaning that we are 95% confident that the true value of the parameter being examined falls within the specified confidence interval. Statistical significance is assessed by comparing the confidence intervals of different groups. If the confidence intervals from two groups, such as that for the state and a specific county, do not overlap we consider the estimates to be significantly different from one another.

**Preventive Behaviors:** An activity undertaken by a person in order to prevent disease in an asymptomatic stage. *Health Education Monographs*. 1974 December; 2(4): 354-386. doi: 10.1177/109019817400200405. *Cancer Causes Control*. 2012 April; 23(4): 601-608. doi:10.1007/s10552-012-9924-y.

**HPV-associated cancers:** HPV-associated cancers were coded using the International Classification of Diseases for Oncology, 3rd Edition [ICD-O-3]. Cervix (ICD-O-3 site codes C53.0-C53.9) and were limited to carcinomas (ICD-O-3 histology codes 8010-8671, 8940-8941), Vagina (ICD-O-3 site code C52.9), vulva (ICD-O-3 site codes C51.0-C51.9), penis (ICD-O-3 site codes C60.0-60.9), anus (ICD-O-3 site code C21.0-C21.9, C20.9), and oropharyngeal (ICD-O-3 site codes C01.9, C02.4, C02.8, C05.1-C05.2, C09.0-C09.1, C09.8-C09.9, C10.0-C10.9, C14.0, C14.2 and C14.8). Cancer sites were limited to squamous cell carcinomas (ICD-O-3 histology codes 8050-8084, 8120-8131).

# Contact Information

For additional information, please contact:

Allison Verbyla, MPH CPH  
Public Health Analyst II  
Vermont Department of Health  
(802) 951-1211  
Allison.Verbyla@vermont.gov



To join the statewide cancer coalition, please visit [VTAAC.org](http://VTAAC.org).