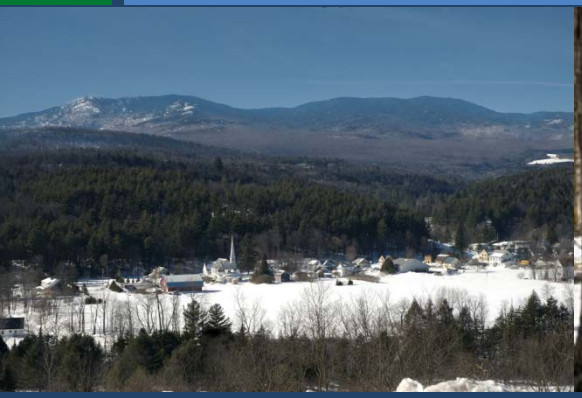
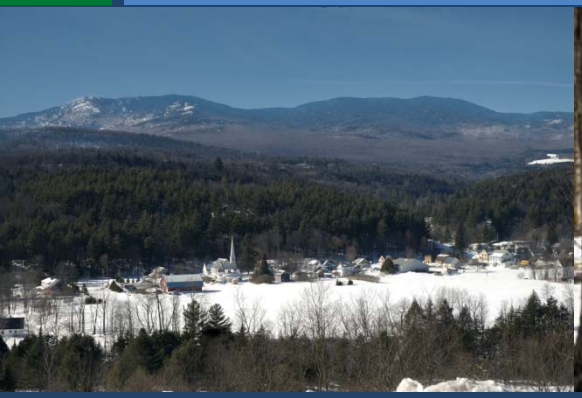



Cancer Data Pages

VERMONT
DEPARTMENT OF HEALTH

April 2018

Cancer Data Pages




Cancer Data Pages: Cancer-Related Risk Factors and Preventative Behaviors

VERMONT
DEPARTMENT OF HEALTH

April 2018

Introduction

Cancer is a group of more than 100 different diseases that often develop gradually as the result of a complex mix of lifestyle, environment, and genetic factors. People are at higher risk for certain cancers due to factors related to personal behaviors such as: tobacco use, alcohol use, diet, physical inactivity, and overexposure to sunlight. Vaccination with the HPV vaccine prior to exposure to the virus can decrease the risk of certain cancers. Cancer becomes more survivable when found and treated early, which can be accomplished through the use of available cancer screening tests including those for lung, breast, cervical, and colorectal cancers.

The purpose of this report is to present cancer-related data from the Behavioral Risk Factor Surveillance System (BRFSS), the Youth Risk Behavior Survey (YRBS), and the National Immunization Survey (NIS) about cancer-related risk factors.

Note: *Throughout this report, data comparisons presented as "higher," "lower," "larger," "smaller," "better," "worse," or as "significantly different" are all considered statistically significant differences.*

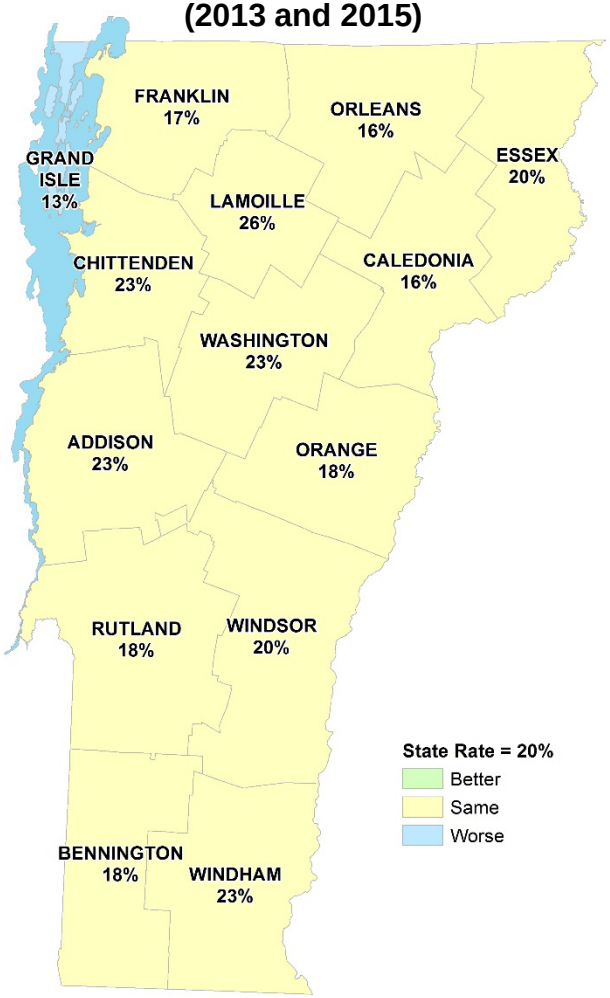
Confidence intervals were used for statistical comparisons between groups. A confidence interval represents the range in which a parameter estimate would fall which is calculated based on the observed data. For this analysis, we used a 95% confidence interval, meaning that we are 95% confident that the 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, do not overlap we consider the estimates to be significantly different from one another.

Eating at Least Five Servings of Fruits and Vegetables

20% of Vermonters (2015) eat at least five servings of fruits and vegetables a day. This is higher than the national rate of 17% (2015).

Vermonters living in Grand Isle County had lower rates of eating five or more servings of fruits and vegetables daily (13%) than the state as a whole (2013 and 2015). All other counties had similar rates of appropriate fruit and vegetable consumption (2013 and 2015).

Percent of Adults Eating at Least Five Servings of Fruits and Vegetables Daily by County (2013 and 2015)



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

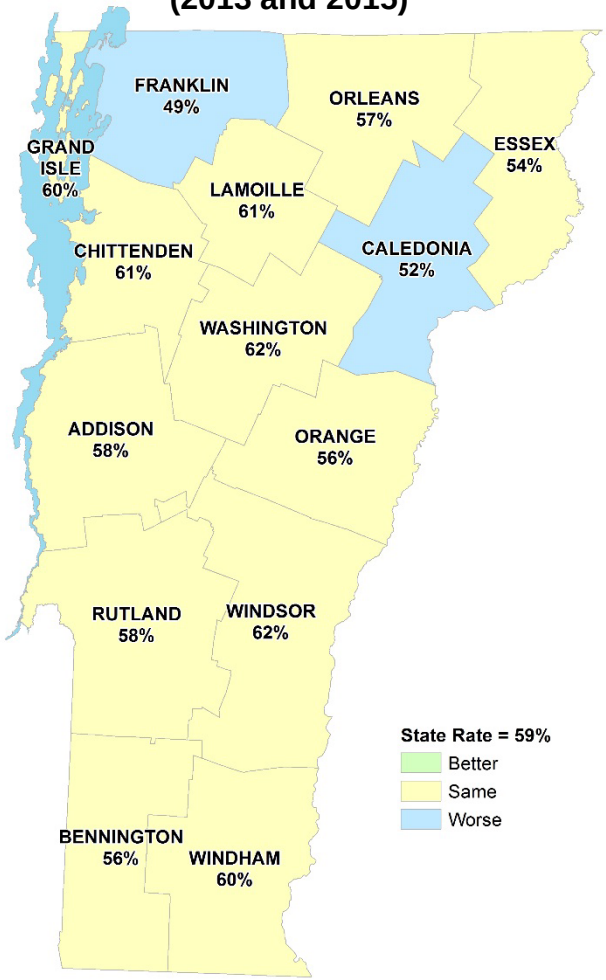
Physical Activity

In 2008 the U.S. Department of Health and Human Services released the physical activity guidelines for Americans. These included both aerobic and muscle-strengthening guidelines for adults. The aerobic guidelines are: a minimum of 2.5 hours of moderate aerobic activity (i.e., brisk walking) weekly, or a minimum of 1.25 hours of vigorous aerobic activity (i.e., running) weekly.

In Vermont, 59% of the population met the recommended aerobic physical activity guidelines (2015). The U.S. had a lower percentage of the population (51%) that engaged in adequate aerobic physical activity (2015).

Within Vermont, people who lived in Caledonia and Franklin Counties were less likely to report meeting aerobic physical activity guidelines (52% and 49% respectively) than the state as a whole (2013 and 2015). All other counties were similar to the state rate (2013 and 2015).

Percent of Adults that Met the Aerobic Physical Activity Guidelines by County (2013 and 2015)



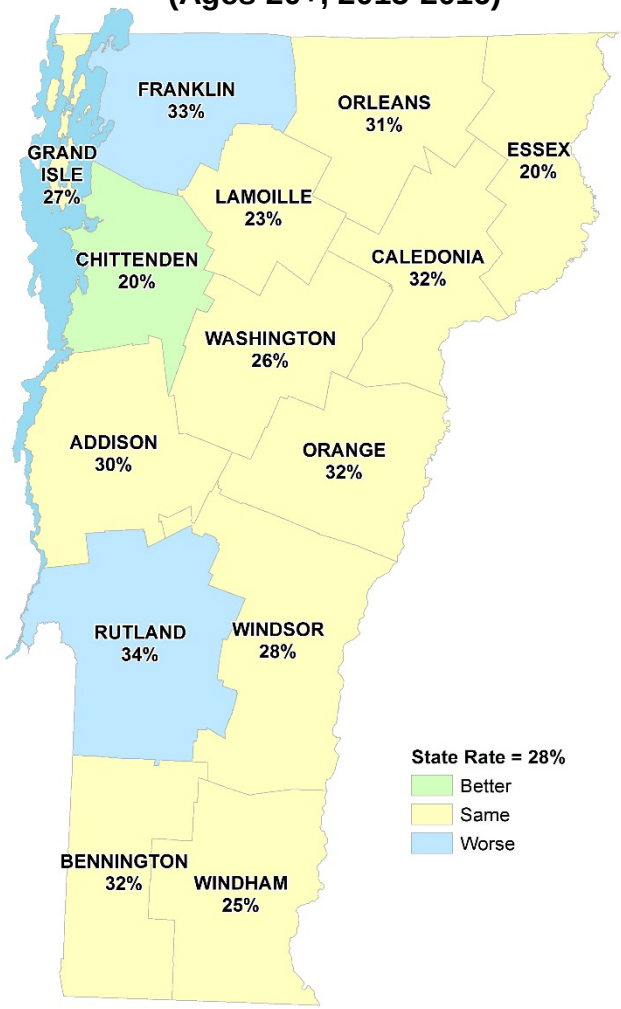
Note: All rates are age adjusted to the 2000 U.S. standard population.

Obesity

In the United States, 30% of adults 20 and older are obese (2016). In Vermont the rate is 28%, which is lower than the national rate (2016).

While most Vermont counties have obesity rates that are similar to the state as a whole, Chittenden County had a lower obesity rate of 20% and Rutland and Franklin Counties had a higher obesity rate of 34% and 33%, respectively (2015-2016).

Percent of Adults that are Obese by County (Ages 20+, 2015-2016)



Notes: All rates are age adjusted to the 2000 U.S. standard population.
Obesity rates include adults, age 20 and over, with a Body Mass Index (BMI) classified as obese (BMI of 30+)

Smoking

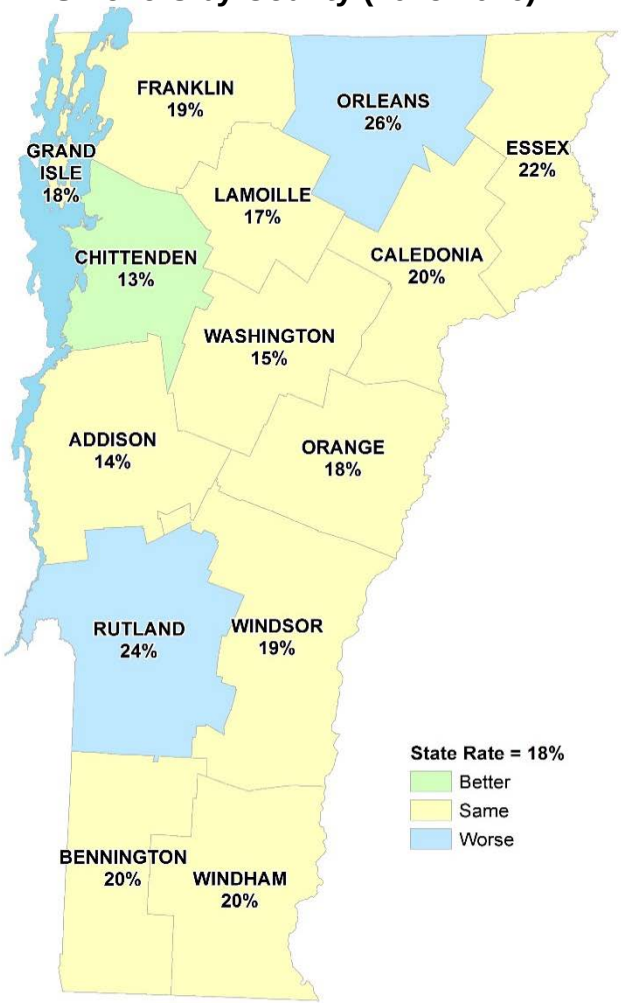
Eighteen percent of Vermonters reported being current smokers; this is similar to the national rate of 17% (2016).

Within Vermont, Chittenden County had a lower smoking rate (13%) than the state, while Rutland and Orleans Counties had a higher smoking rate (24% and 26%, respectively) than the state (2015-2016). The remaining counties had similar smoking rates to the state as a whole (2015-2016).

Among current smokers in Vermont, 49% reported quitting for at least one day in the past 12 months (2016). This was less than the national quit attempt rate of 59% (2016).

Most Vermont counties had a similar rate of smokers who quit for at least one day in the past 12 months (2015-2016). Grand Isle County had too few cases to report (2015-2016).

Percent of Adults that are Current Cigarette Smokers by County (2015-2016)



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

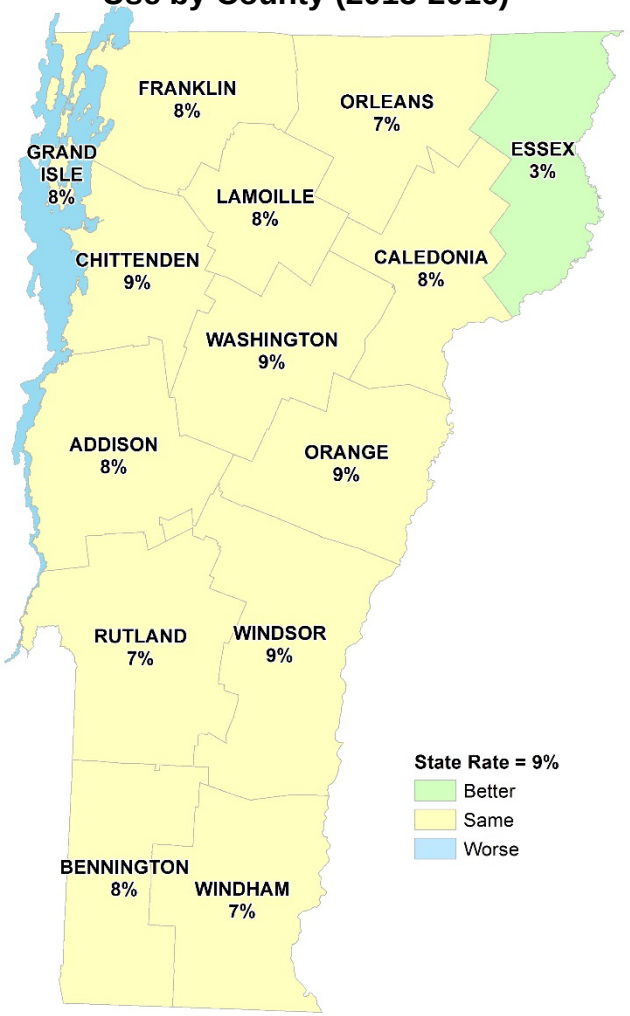
Heavy Alcohol Use

Heavy alcohol use is defined as: an average of more than two drinks per day for men, and an average of more than one drink per day for women. One drink is equivalent to a 12-ounce beer, a 5-ounce glass of wine, or a drink with one shot of liquor.

In Vermont, 9% of the adult population reported heavy drinking (2016).This rate was higher than the 6% rate of heavy drinking reported nationwide (2016).

Most Vermont counties had a similar rate of heavy drinking when compared to the state overall (2015-2016). The exception was Essex County, which had lower reported heavy alcohol use in comparison to the state (3%, 2015-2016).

Percent of Adults Reporting Heavy Alcohol Use by County (2015-2016)

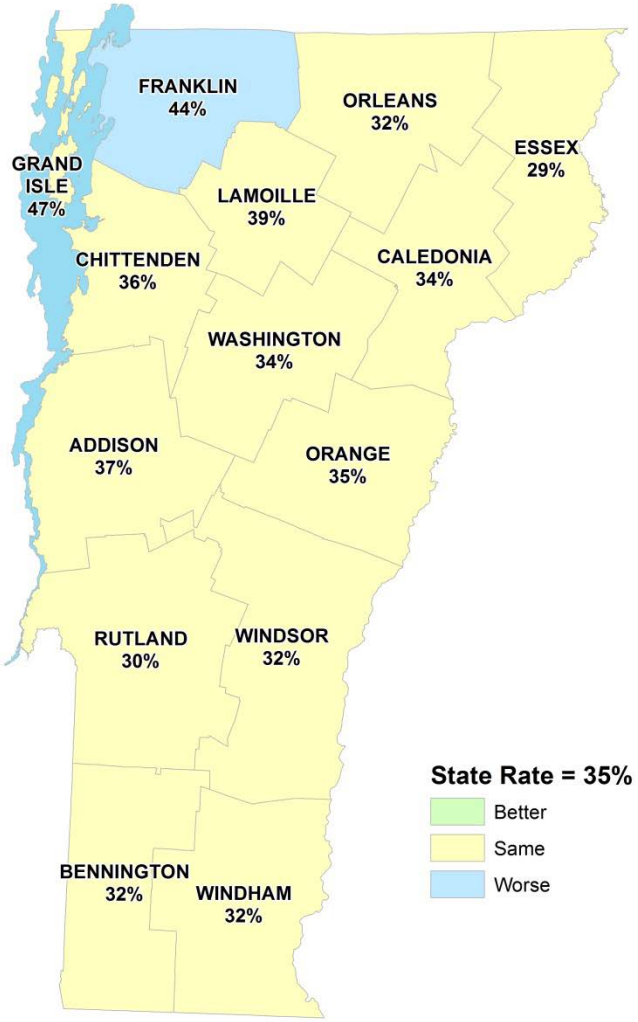


Sun Exposure

Among Vermont adults, 35% reported having one or more sunburns in the past year (2013).

Sunburn rates were similar to the state in all counties except Franklin County, which had a higher rate of sunburn (44%) than the state overall (2013).

Percent of Adults Reporting One or More Sunburns in the Past Year by County (2013)



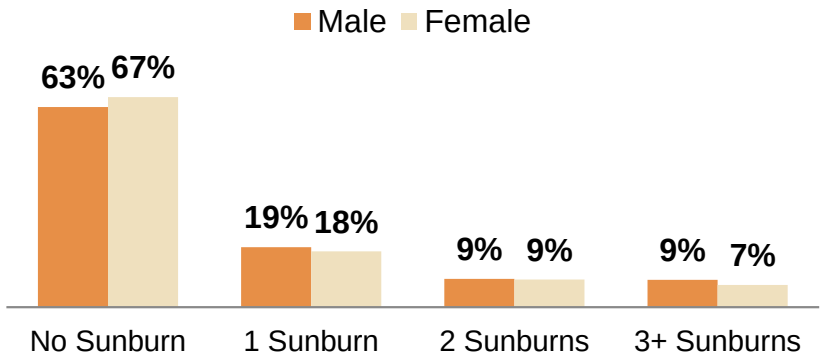
Sun Exposure

Men and women were equally likely to have reported having zero, one, two, or three or more sunburns in the past year (2013).

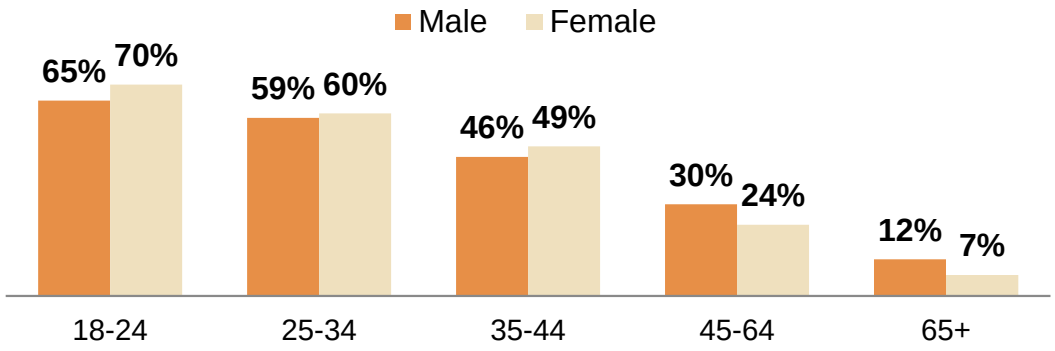
Vermonters aged 18-34 were more likely to have reported at least one sunburn in the last year than those aged 35 and older (2013). The percentage of Vermonters reporting one or more sunburns decreased with increasing age group, starting at age 25 (data not shown, 2013). Among those 18-44 men and women were equally likely to report at least one sunburn in the past year (2013). Among those 45 and older, men were more likely than women to report at least one sunburn in the past year (2013).

There were no differences in the percentage of Vermonters reporting one or more sunburns in the last year by education level (among those over 25 years of age) or relation to 250% of the Federal Poverty Level (data not shown, 2013).

Sunburn in the past 12 Months: Adults Aged 18+ (2013)



Percent of Adults Reporting at Least One Sunburn in past 12 Months by Age and Sex (2013)

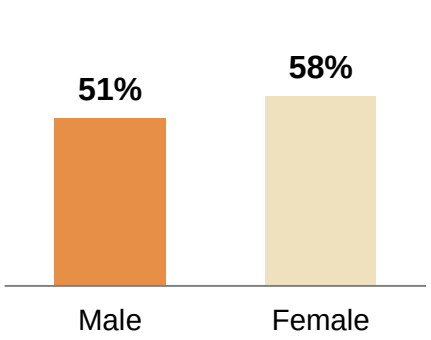


Sun Exposure

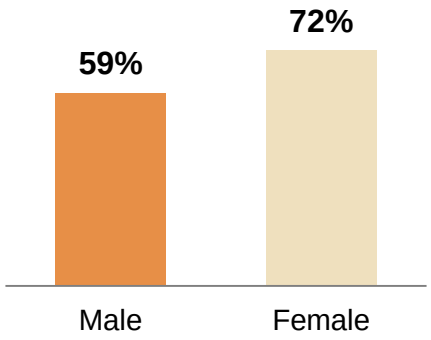
Male youths in grades 6-12 were less likely to have reported having one, two, or three or more sunburns in the past year compared to female youths (2015).

Fifty-four percent of middle school students in grades 6-8 reported having a sunburn in the past year compared to sixty-five percent of high school students in grades 9-12 (2015). In general as age increases so does the likelihood of reporting at least one sunburn in the past year; however, this difference is not statistically significant for each sequential grade.

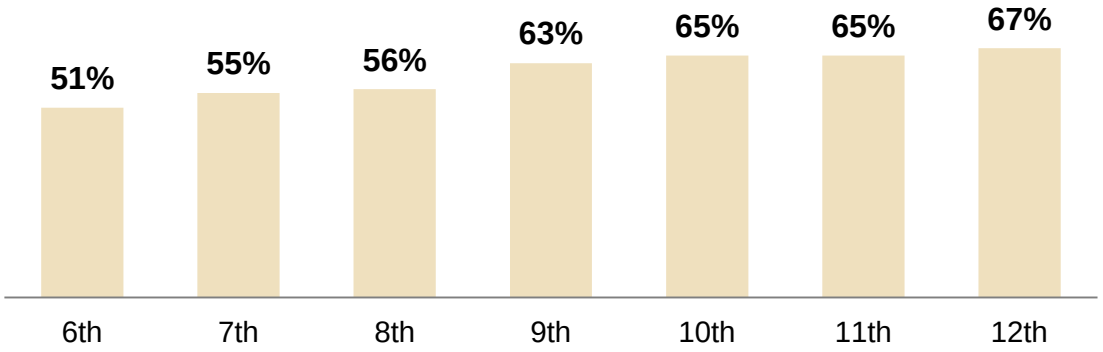
Sunburn in the Past 12 Months: Youth Grade 6-8 (2015)



Sunburn in the Past 12 Months: Youth Grade 9-12 (2015)



Sunburn in the Past 12 Months: Youth Grade 6-12 (2015)

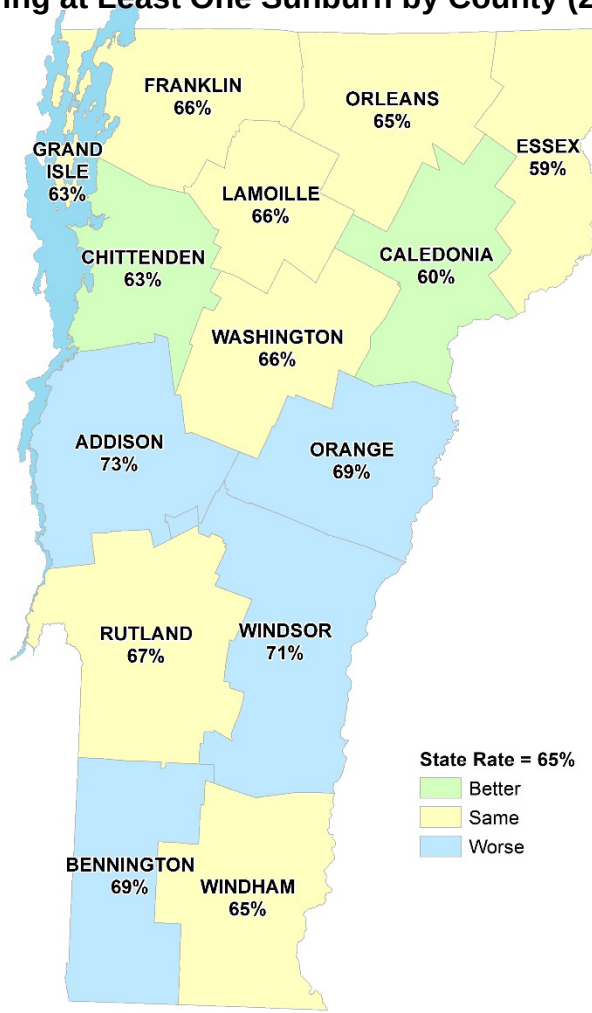


Sun Exposure

Statewide 65% of Vermont high school students reported having at least one sunburn in the past 12 months (2015).

Sunburn rates were higher in Addison, Bennington, Orange, and Windsor Counties (73%, 69%, 69%, and 71%, respectively) than the state overall (2015). Rates of sunburn were lower than the state overall in Caledonia and Chittenden Counties (60% and 63% respectively, 2015).

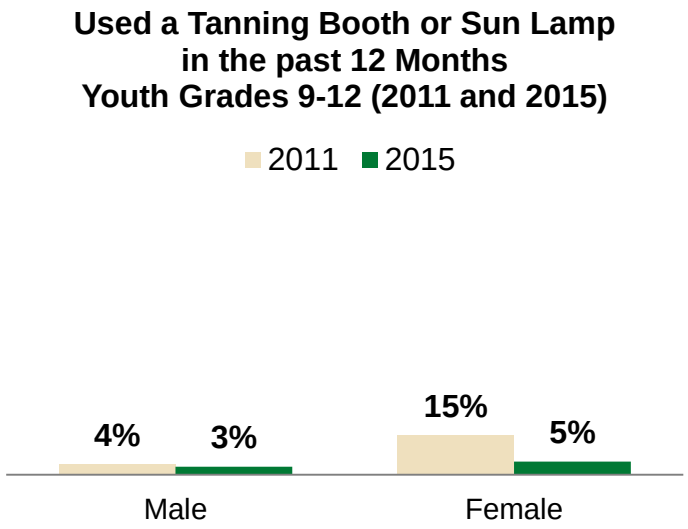
Percent of Adolescents (Grades 9-12) Reporting Having at Least One Sunburn by County (2015)

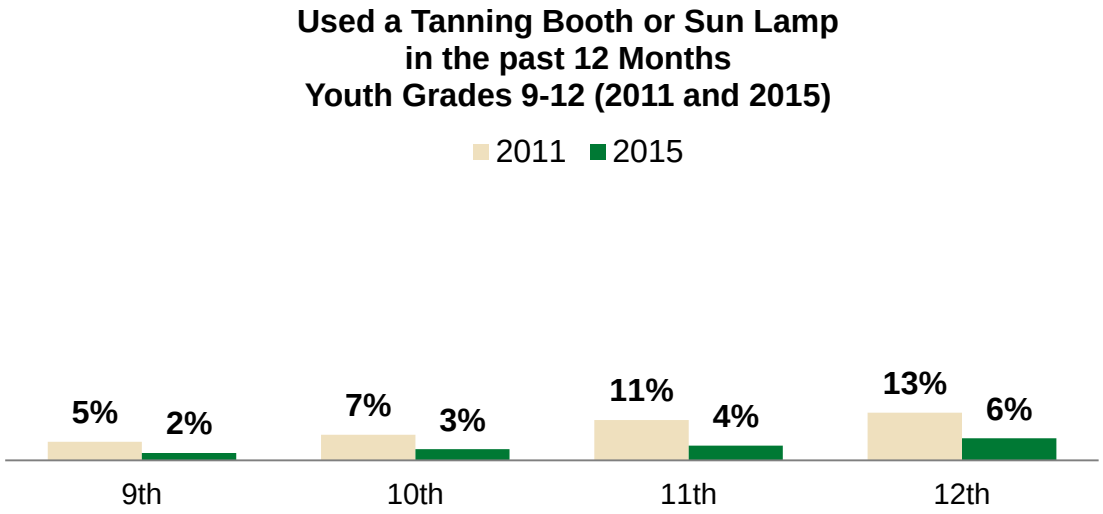


Sun Exposure

Statewide 4% of Vermont high school students reported using a tanning booth or sun lamp in the past year (2015). This is a decrease in the rate in comparison to 2011 (9%), most likely due to recent legislation restricting the age of tanning booth use.

Females in Grades 9-12 were more likely to have reported using a tanning booth or sun lamp (5%) compared to male high school students (3%, 2015). The use of indoor tanning devices increased significantly with each grade level (2015).





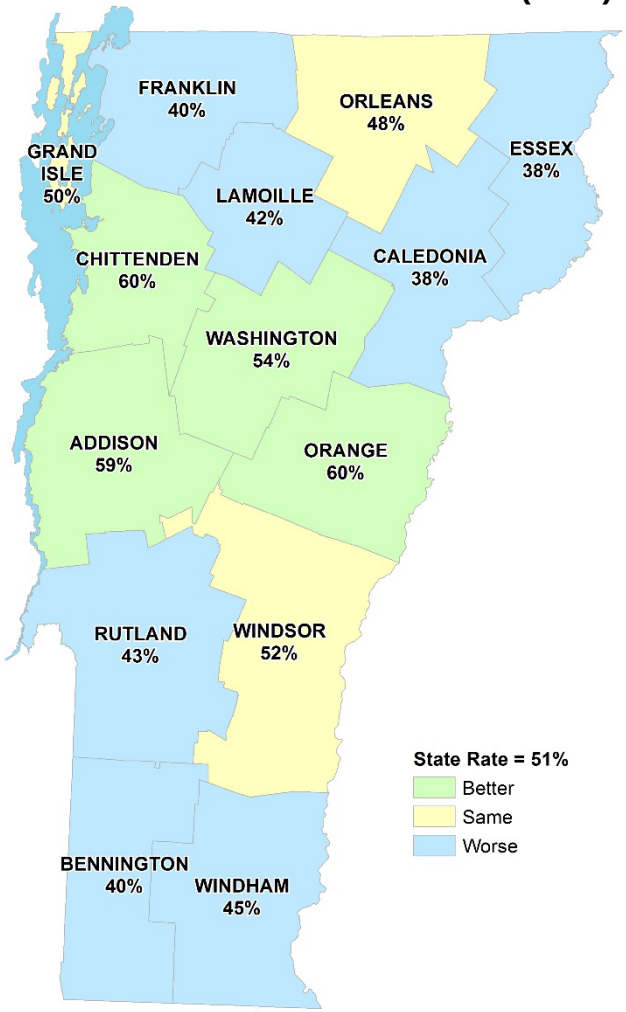
Data Source: YRBS, 2015

HPV Vaccination - Males

Among Vermont adolescent males ages 13-17 51% have completed the full HPV vaccine series (2016).

Rates of full HPV series vaccination among male adolescents ages 13-17 were higher than the state overall in Addison (59%), Chittenden (60%), Washington (54%), and Orange (60%) Counties (2016). Rates of full HPV series vaccination among male adolescents ages 13-17 were lower than the state overall in Franklin (40%), Caledonia (38%), Essex (38%), Rutland (43%), Bennington (40%), Lamoille (42%), and Windham (45%) counties (2016).

Percent of Adolescent Males (Ages 13-17) Who Are Current on HPV Vaccinations (2016)



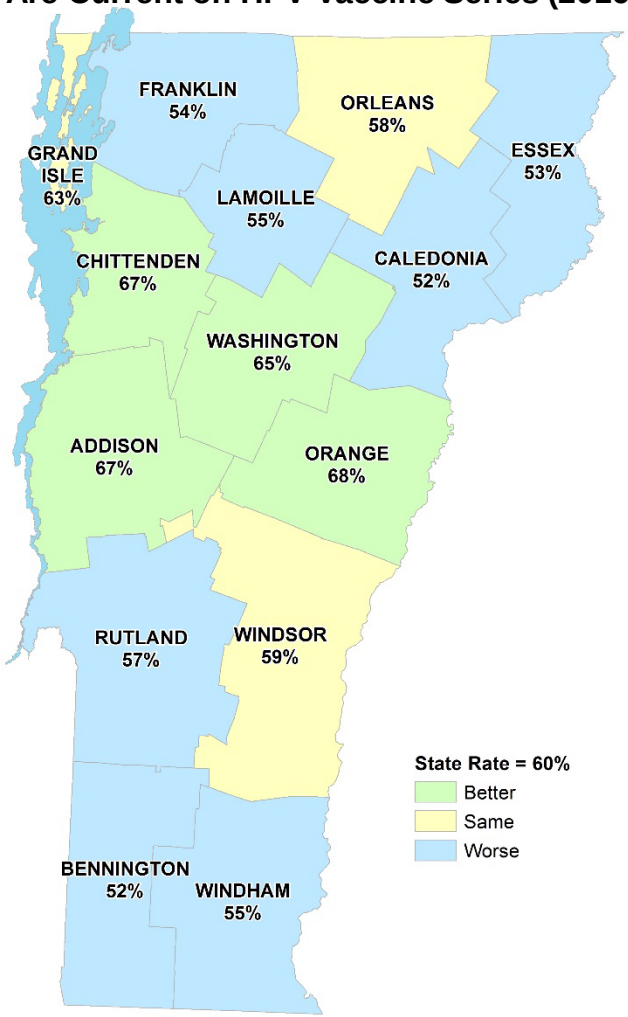
Notes: Adolescents included were born January 1998 through February 2004. Excludes adolescents with no reported immunizations in at least 10 years.

HPV Vaccination - Females

Among Vermont adolescent females ages 13-17 60% have completed the full HPV vaccine series (2016).

Rates of full HPV series vaccination among female adolescents ages 13-17 were higher than the state overall in Orange (68%), Washington (65%), Addison (67%), and Chittenden (67%) counties (2016). Rates of full HPV series vaccination among female adolescents ages 13-17 were lower than the state overall in Rutland (57%), Franklin (54%), Essex (53%) Caledonia (52%), Lamoille (55%), Windham (55%), and Bennington (52%) counties (2016).

Percent of Adolescent Females (Ages 13-17) Who Are Current on HPV Vaccine Series (2016)



Notes: Adolescents included were born January 1998 through February 2004. Excludes adolescents with no reported immunizations in at least 10 years.

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.

Youth Risk Behavior Survey (YRBS): Every two years since 1993, the Department of Health's Division of Alcohol and Drug Abuse Program, and the Department of Education's Coordinated School Health Programs have sponsored the YRBS. The YRBS measures the prevalence of behaviors that contribute to the leading causes of death, disease, and injury among youth. The YRBS is part of a larger effort to help communities increase the “resiliency” of young people by reducing high risk behaviors and promoting healthy behaviors.

Vermont Immunization Registry (IMR): A confidential system for maintaining immunization records for all Vermont residents and those who seek medical care in Vermont. It was designed, developed, and is operated by the Vermont Department of Health, and was first made available to providers in July, 2004. It receives immunization data from medical providers, hospitals, health insurers, and increasingly, from pharmacies and nursing homes. The advantage of using the IMR for immunization data is that unlike survey information, it is much more comprehensive, and is not subject to selection bias. As is the case with any large database, the IMR has its limitations. It can be very difficult to keep up with the residences of all these individuals, resulting in a larger population base in the registry than actually live in the state of Vermont. As a result, our denominator can be too large, and this is especially true for older age groups.

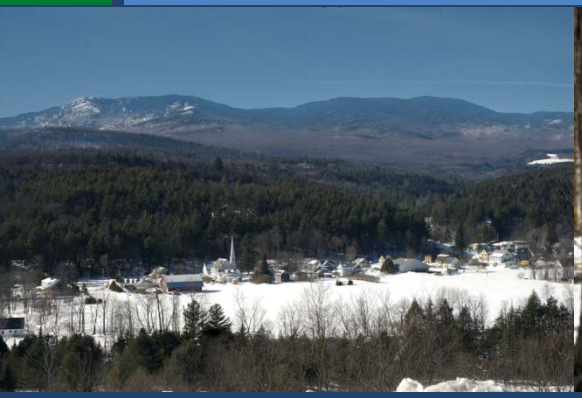
Education: Comparisons among those with different levels of education are always limited to those aged 25 and older since many adults under age 25 are in the process of obtaining additional education.

Federal poverty level (FPL) is a federal measure calculated from both annual household income and family size. FPL is used to determine eligibility for government assistance programs. People living below 250% FPL, for example, are still considered low income, often lacking sufficient income to meet basic needs.

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.

Acknowledgement: This publication was supported by Grant/Cooperative Agreement Number NU58DP006322 from the Centers for Disease Control and Prevention. Its contents are solely the responsibility of the authors and do not necessarily represent the official views of the Centers for Disease Control and Prevention.




Cancer Data Pages: Cancer Incidence

VERMONT
DEPARTMENT OF HEALTH

April 2018

Introduction

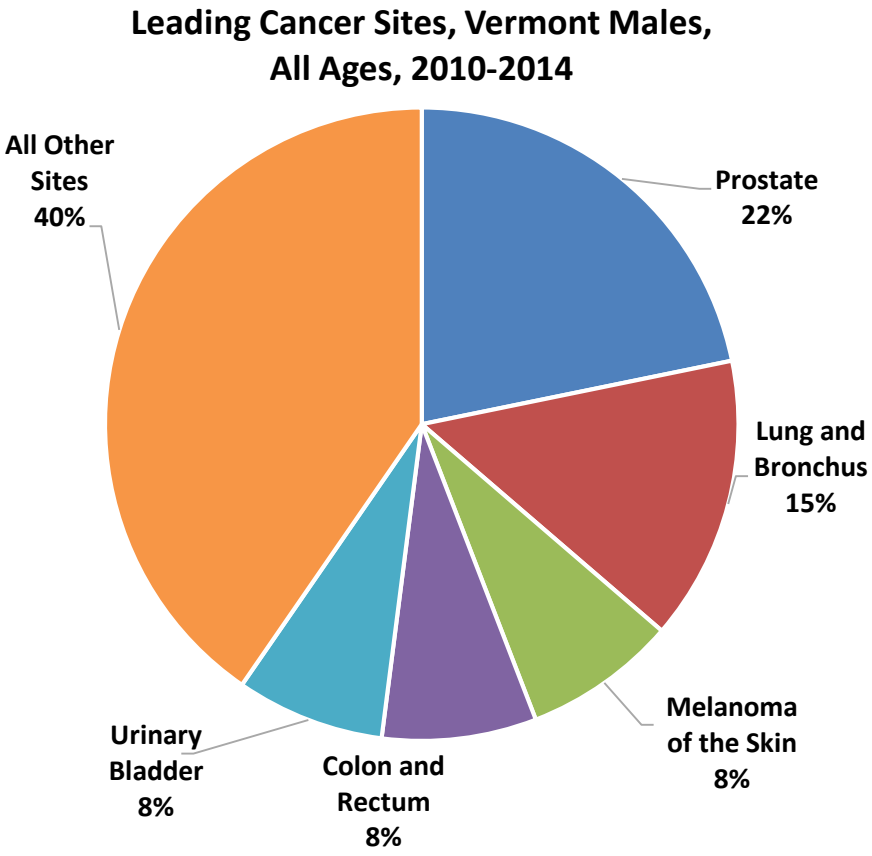
Cancer is a group of more than 100 different diseases that often develop gradually as the result of a complex mix of lifestyle, environment, and genetic factors. People are at higher risk for certain cancers due to factors related to personal behaviors such as: tobacco use, alcohol use, diet, physical inactivity, and overexposure to sunlight. Vaccination with the HPV vaccine prior to exposure to the virus can decrease the risk of certain cancers. Cancer becomes more survivable when found and treated early, which can be accomplished through the use of available cancer screening tests including those for lung, breast, cervical, and colorectal cancers.

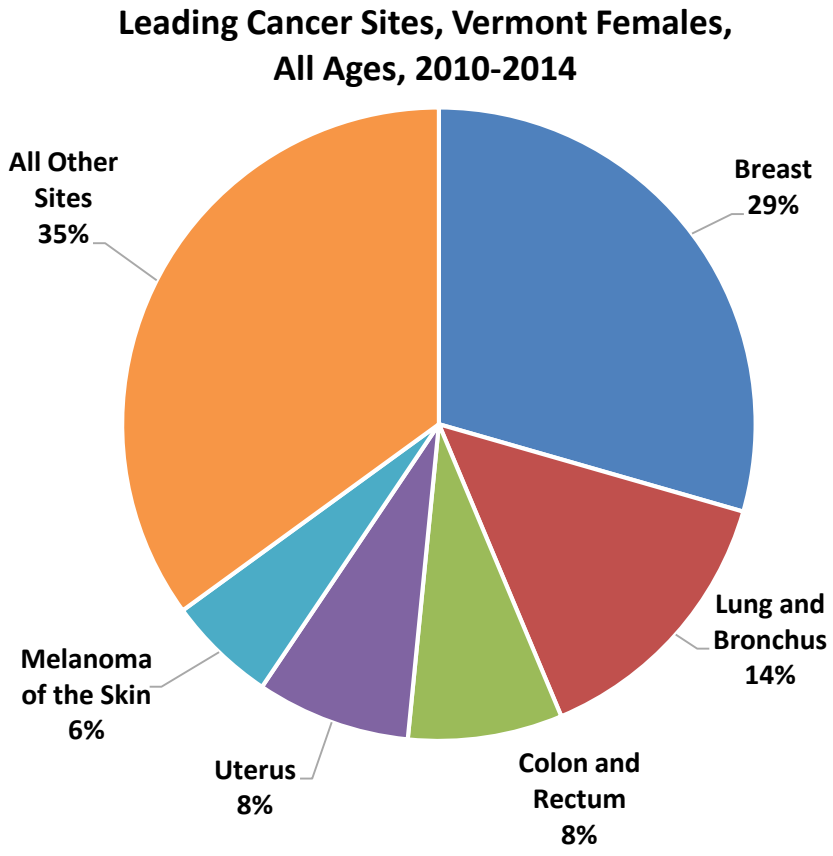
The purpose of this report is to present cancer incidence and staging data from the Vermont Cancer Registry (VCR).

Note: *Throughout this report, data comparisons presented as "higher," "lower," "larger," "smaller," "better," "worse," or as "significantly different" are all considered statistically significant differences.*

Confidence intervals were used for statistical comparisons between groups. A confidence interval represents the range in which a parameter estimate would 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 do not overlap we consider the estimates to be significantly different from one another.

Cancer Incidence by Sex





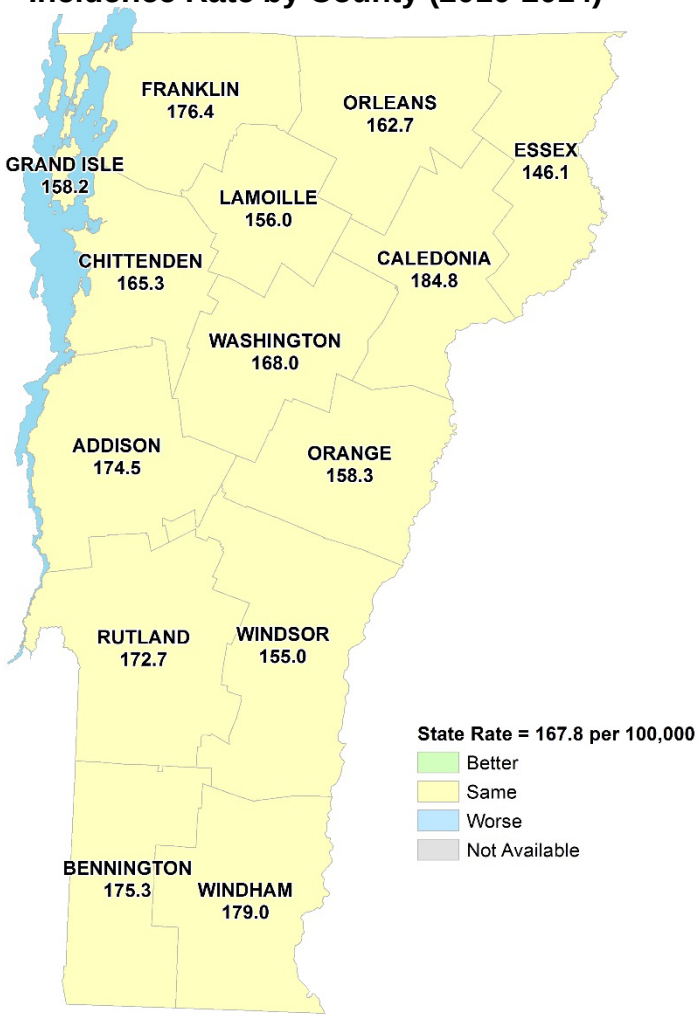
Obesity-Associated Cancers

Excess weight increases the risk of cancers of the esophagus, stomach, colon and rectum, liver, gallbladder, pancreas, bone marrow, breast (postmenopausal), uterus, ovary, kidney, membranes surrounding the brain and spinal cord (meninges), and thyroid.

Nationally, the incidence rate of these obesity-associated cancers was 170.8 per 100,000 (2010-2014). This rate was similar to the Vermont obesity-associated cancer rate of 167.8 per 100,000 (2010-2014).

All Vermont counties had similar obesity-associated cancer rates compared to the state rate (2010-2014).

Obesity-Associated Cancers
Incidence Rate by County (2010-2014)



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

Data Source:
VT: VCR 2010-2014, US: NPCR & SEER 1999-2014

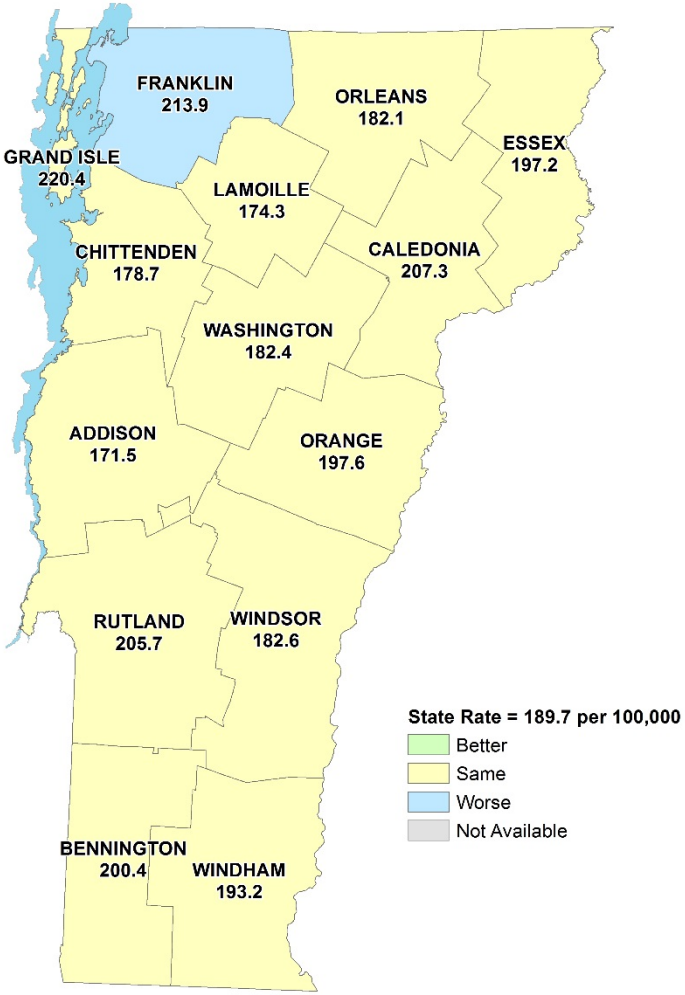
Tobacco-Associated Cancers

Tobacco use increases the risk for many types of cancer, particularly lung cancer. Tobacco also increases the risk for cancers of the lip, oral cavity, throat, esophagus, stomach, colon and rectum, liver, pancreas, larynx (voice box), trachea, cervix, kidney, bladder, and acute myeloid leukemia.

In Vermont the rate of the tobacco-associated cancers was 189.7 per 100,000 (2010-2014). This rate was similar to the national rate of 187.0 (2010-2014).

Most Vermont counties had tobacco-associated cancer rates similar to the state rate (2010-2014). There is one exception: Franklin County had a higher rate of tobacco-associated cancers (2010-2014).

Tobacco-Associated Cancers
Incidence Rate by County (2010-2014)



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

Data Source:
VT: VCR 2010-2014, US: NPCR & SEER 1999-2014

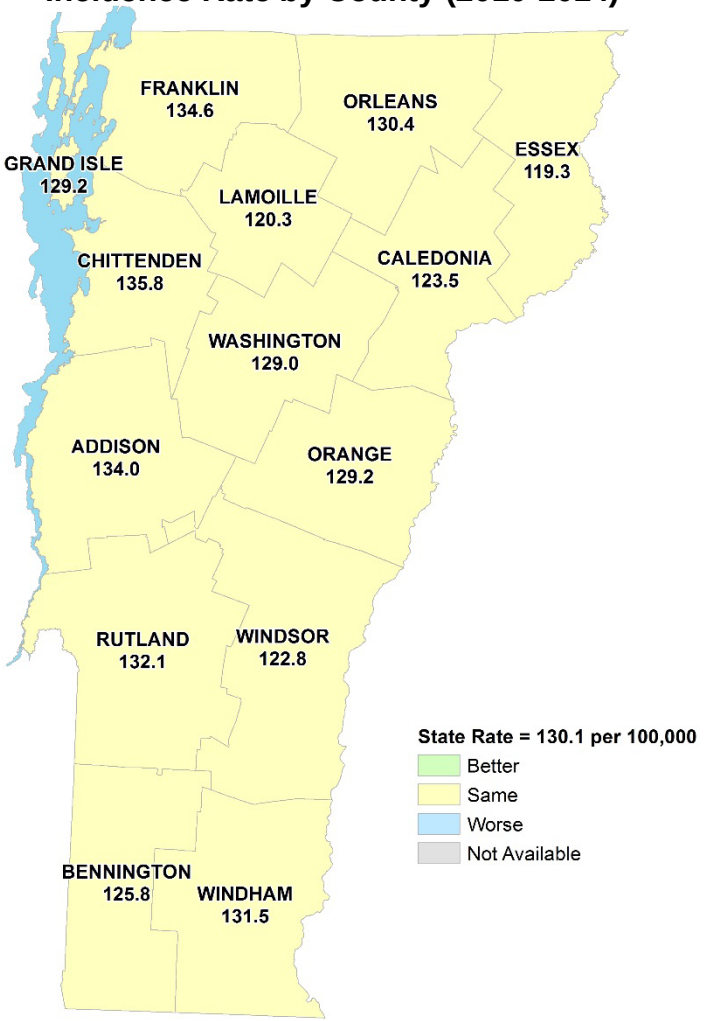
Alcohol-Associated Cancers

Consumption of alcohol increases the risk of head and neck, esophageal, colorectal, liver, laryngeal, and female breast cancers.

In Vermont the combined incidence rate of alcohol-associated cancers was 130.1 per 100,000 (2010-2014). This rate was similar to the national rate of 131.0 (2010-2014).

All Vermont counties had similar alcohol-associated cancer rates compared to the state rate (2010-2014).

Alcohol-Associated Cancers
Incidence Rate by County (2010-2014)



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

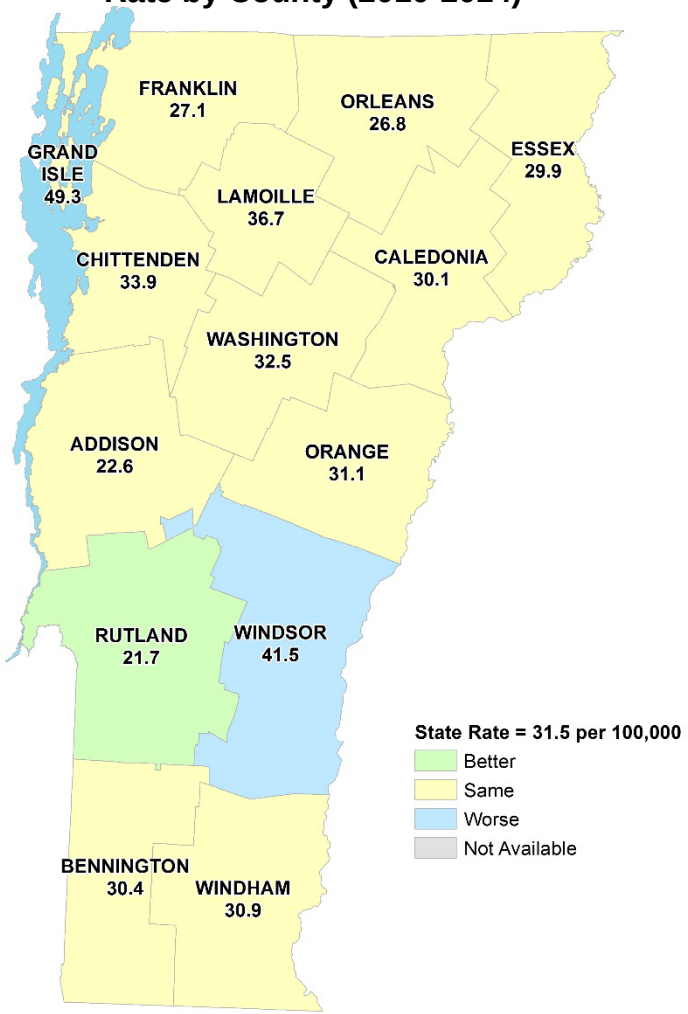
Melanoma, UV-Associated Cancer

Although risk factors such as fair-skin or family history of melanoma contribute to risk for developing melanoma, most skin cancers are strongly associated with ultraviolet radiation (UV) exposure. As much as 90 percent of melanomas are estimated to be caused by UV exposure, the most preventable risk factor. Melanoma is the most dangerous form of skin cancer because of its likelihood of spreading if not diagnosed at an early stage.

In Vermont the rate of invasive melanoma was 31.5 per 100,000 persons (2010-2014). This rate was higher than the national rate of 20.7 (2010-2014).

Most Vermont counties had invasive melanoma incidence rates similar to the state rate (2010-2014). Rutland County had a lower rate than the state overall (2010-2014). Windsor County had a higher rate compared to the state rate (2010-2014).

Melanoma, UV-Associated Cancer, Incidence Rate by County (2010-2014)



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

Data Source:
VT: VCR 2010-2014, US: NPCR & SEER 1999-2014

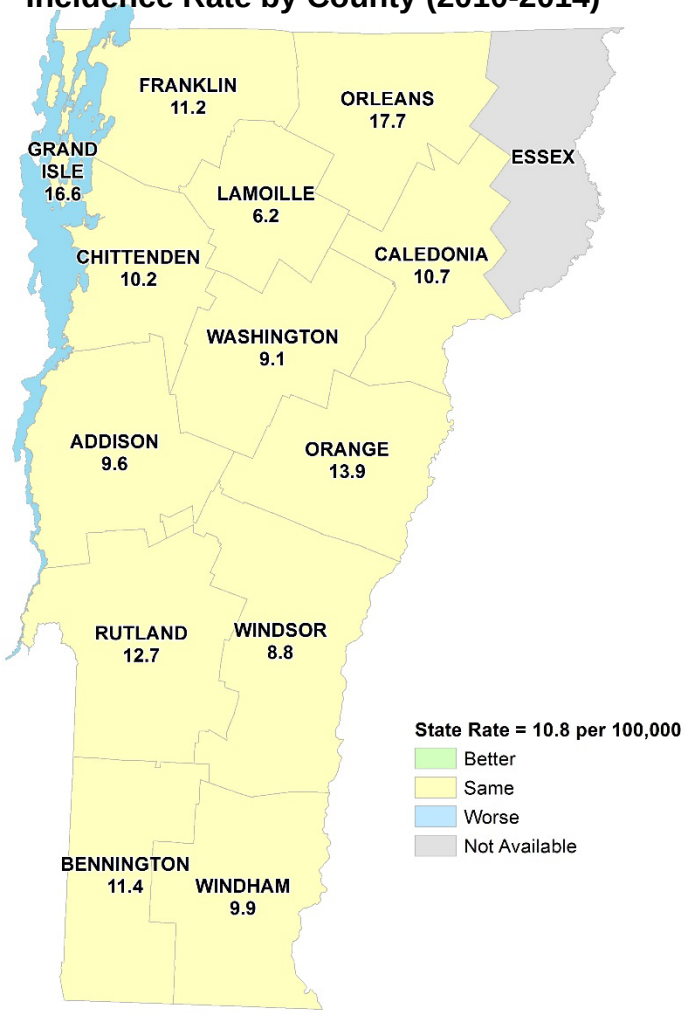
HPV-Associated Cancers

Infection with the HPV virus increases the risk of cancers of the mouth and throat, cervix, vulva, vagina, penis, and anus.

In Vermont the incidence rate of HPV-associated cancers was 10.8 per 100,000 (2010-2014). This rate was similar to the national rate of 11.9 (2010-2014).

Most Vermont counties had HPV-associated cancer incidence rates similar to the state rate (2010-2014). The exception was Essex County which had too few cases to report (2010-2014).

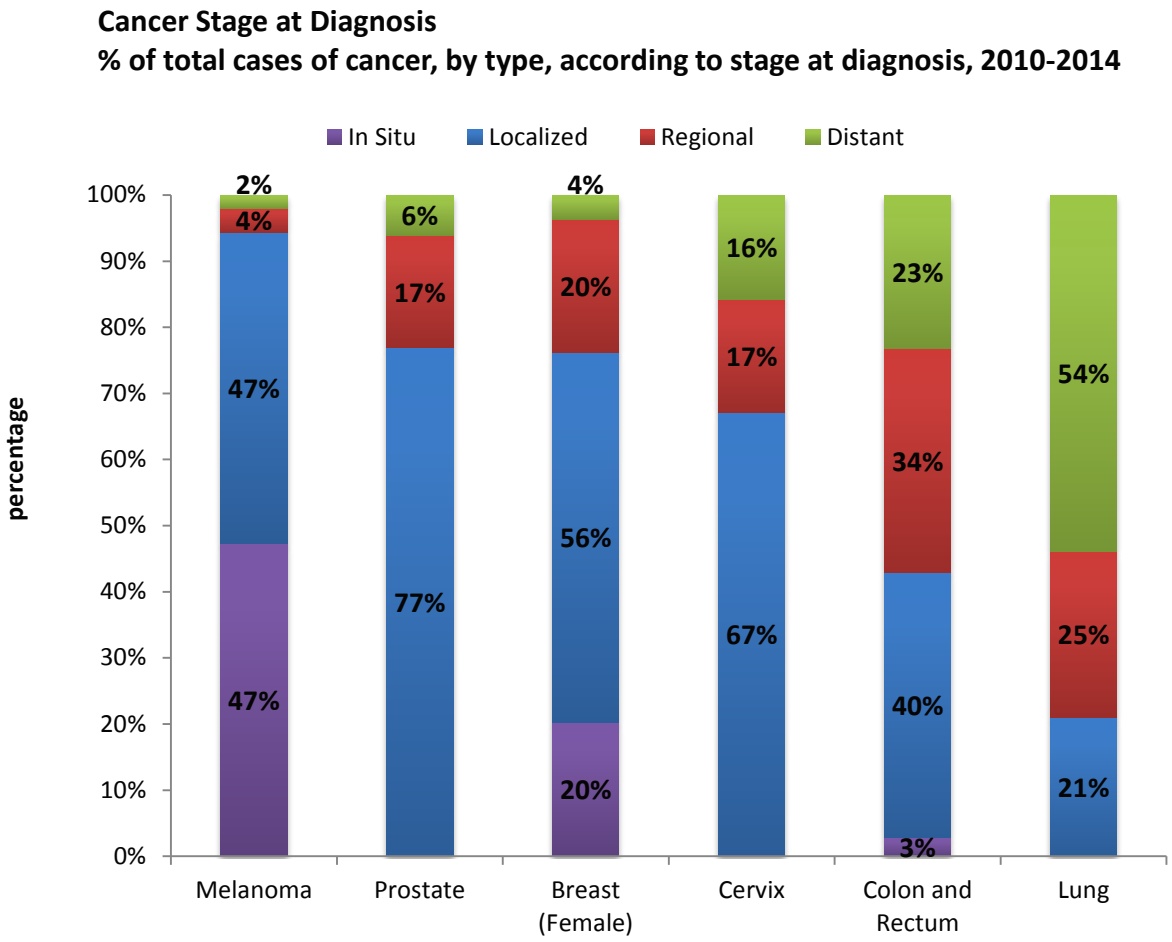
HPV-Associated Cancers
Incidence Rate by County (2010-2014)



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

Data Source:
VT: VCR 2010-2014, US: NPCR & SEER 1999-2014

Cancers by Stage at Diagnosis



Note: Cervical cancers diagnosed as in situ are not reported to the Cancer Registry and are therefore not included in this chart.

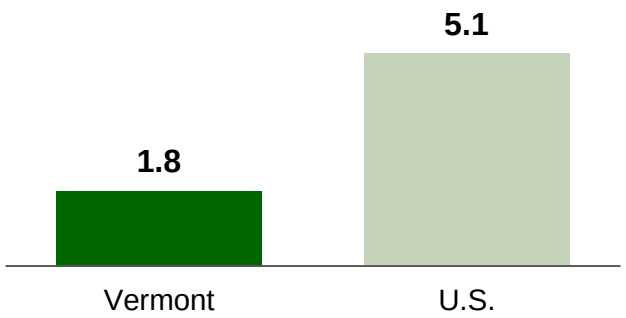
Advanced Stage Diagnosis – Cervical Cancer

Cancer becomes more survivable when found and treated early. Screening tests for certain cancers typically find tumors at an earlier stage than when symptoms appear. The result of more widespread use of screening is generally lower advanced (regional/distant) stage incidence rates.

In Vermont the incidence rate of advanced stage cervical cancer, among women 20 and older, was 1.8 per 100,000 women (2010-2014). This rate was lower than the national late stage cervical cancer rate of 5.1 (2010-2014).

Due to the low number of cases of advanced stage cervical cancer in Vermont, comparisons cannot be made between counties.

Advanced Stage Cervical Cancer Incidence Rate (Ages 20+, 2010-2014)



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

Data Source:
VT: VCR, 2010-2014, US: NPCR & SEER, 1999-2014

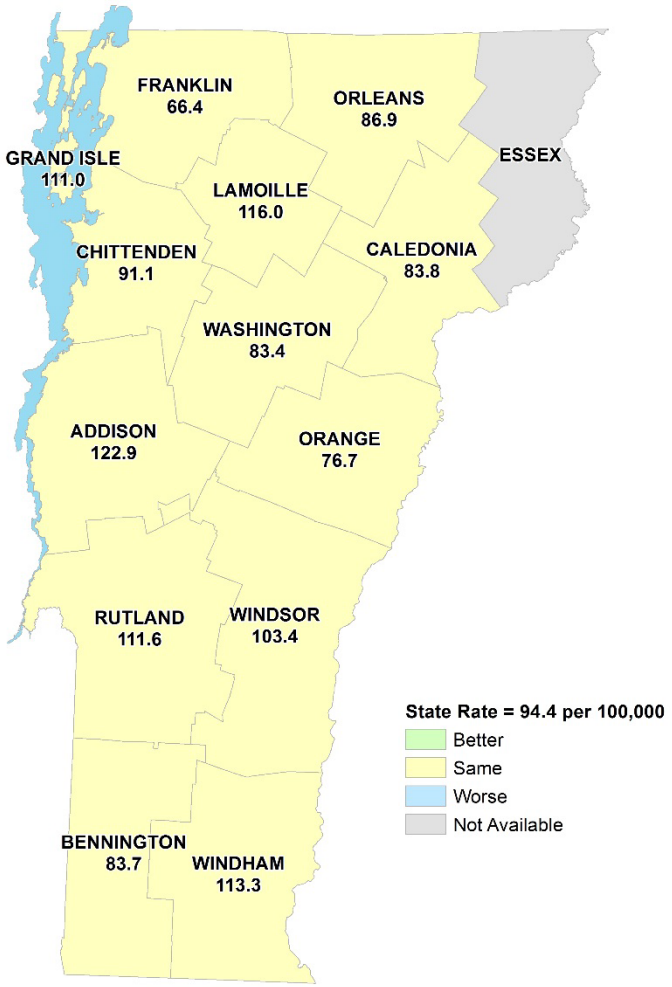
Advanced Stage Diagnosis – Breast Cancer

Cancer becomes more survivable when found and treated early. Screening tests for certain cancers typically find tumors at an earlier stage than when symptoms appear. The result of more widespread use of screening is generally lower advanced (regional/distant) stage incidence rates.

In Vermont the incidence rate of advanced stage breast cancer in women 50 and older was 94.4 per 100,000 (2010-2014). This rate was lower than the national rate of 105.5 (2010-2014).

Most Vermont counties had advanced stage breast cancer rates similar to the state rate (2010-2014). The exception was Essex County, which had too few incident cases to report (2010-2014).

Advanced Stage Breast Cancer Diagnosis (Female, Age 50+) By County (2010-2014)



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

Data Source:
VT: VCR 2010-2014, US: NPCR & SEER 1999-2014

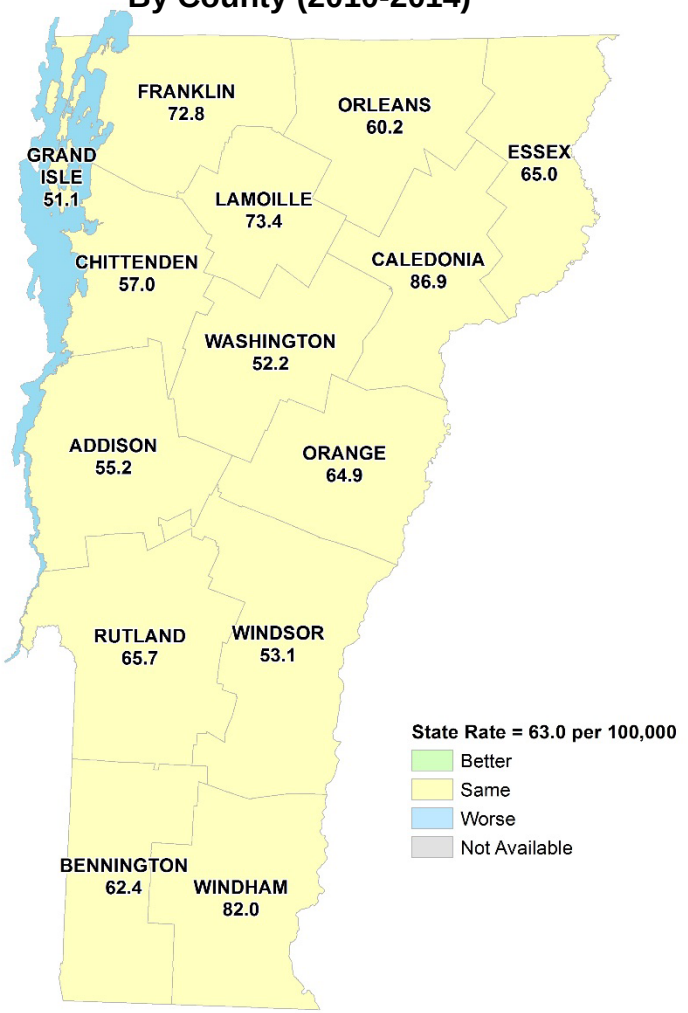
Advanced Stage Diagnosis – Colorectal Cancer

Cancer becomes more survivable when found and treated early. Screening tests for certain cancers typically find tumors at an earlier stage than when symptoms appear. The result of more widespread use of screening is generally lower advanced (regional/distant) stage incidence rates.

In Vermont the incidence rate of advanced stage colorectal cancer, among those 50 and older, was 63.0 per 100,000 (2010-2014). This rate was similar to the national rate of 66.9 (2010-2014).

All Vermont counties had advanced stage colorectal cancer rates similar to the state rate (2010-2014).

Advanced Stage Colorectal Cancer Diagnosis (Age 50+) By County (2010-2014)



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

Data Source:
VT: VCR 2010-2014, US: NPCR & SEER 1999-2014

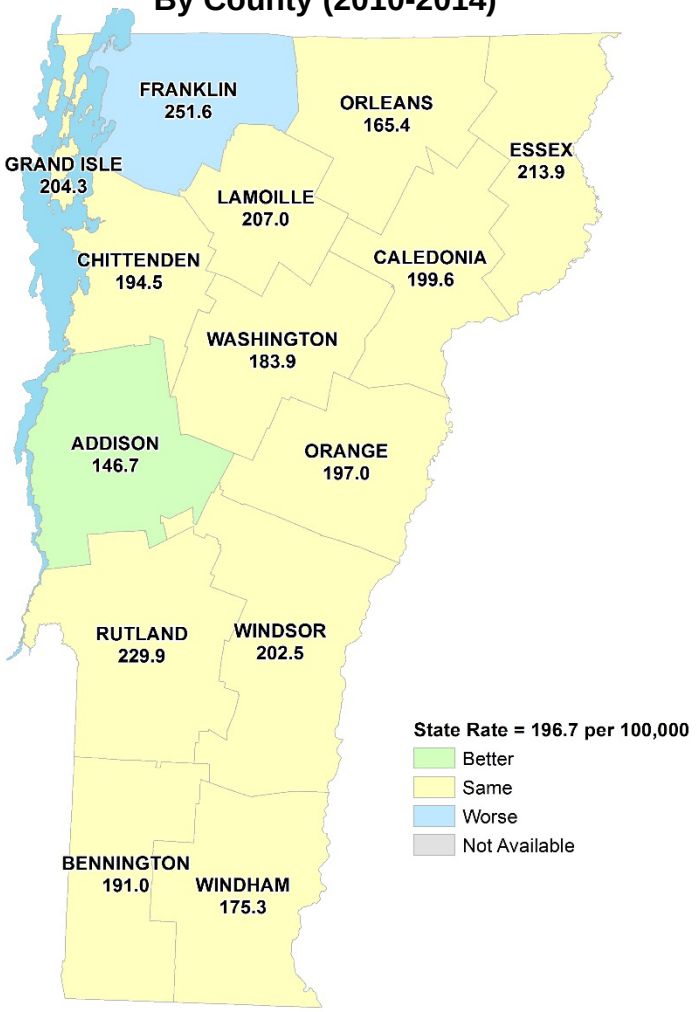
Advanced Stage Diagnosis – Lung Cancer

Cancer becomes more survivable when found and treated early. Screening tests for certain cancers typically find tumors at an earlier stage than when symptoms appear. The result of more widespread use of screening is generally lower advanced (regional/distant) stage incidence rates.

In Vermont the incidence rate of advanced stage lung cancer, among those 55 and older, was 196.7 per 100,000 persons (2010-2014). This rate was higher than the national rate of 182.9 (2010-2014).

Most Vermont counties had similar advanced stage lung cancer rates compared to the state rate (2010-2014). One exception was Franklin County which had a greater advanced stage lung cancer diagnosis rate in comparison to the state (2010-2014). The other exception was Addison County, which had a lower advanced stage lung cancer diagnosis rate in comparison to the state (2010-2014).

Advanced Stage Lung Cancer Diagnosis (Age 55+)
By County (2010-2014)



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

Data Source:
VT: VCR 2010-2014, US: NPCR & SEER 1999-2014

Data Notes

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.

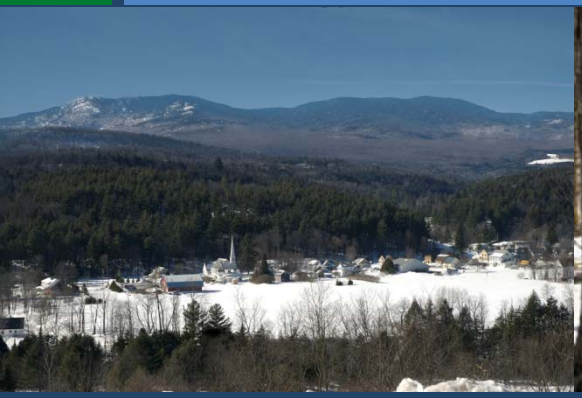
NPCR and SEER Incidence 1999-2014 Database (NPCR & SEER): The U.S. incidence rates are based on the National Program of Cancer Registries (NPCR) and the Surveillance, Epidemiology, and End Results (SEER) Program Incidence State Restricted Access Data File (1999-2014). A reporting delay by Department of Veterans Affairs (VA) has resulted in incomplete reporting of VA hospital cases in 2011 through 2014.

Data Not Available: Indicates that the number of cases in this group is too small for estimates to be reliable. Rates based on 5 or fewer deaths are not individually calculated.

Age Adjustment: Rates are age adjusted to the 2000 U.S. standard population.

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.

Acknowledgement: This publication was supported by Grant/Cooperative Agreement Number NU58DP006322 from the Centers for Disease Control and Prevention. Its contents are solely the responsibility of the authors and do not necessarily represent the official views of the Centers for Disease Control and Prevention.




Cancer Data Pages: Cancer Screening

VERMONT
DEPARTMENT OF HEALTH

April 2018

Introduction

Cancer is a group of more than 100 different diseases that often develop gradually as the result of a complex mix of lifestyle, environment, and genetic factors. People are at higher risk for certain cancers due to factors related to personal behaviors such as: tobacco use, alcohol use, diet, physical inactivity, and overexposure to sunlight. Vaccination with the HPV vaccine prior to exposure to the virus can decrease the risk of certain cancers. Cancer becomes more survivable when found and treated early, which can be accomplished through the use of available cancer screening tests including those for lung, breast, cervical, and colorectal cancers.

The purpose of this report is to present cancer-related data from the Behavioral Risk Factor Surveillance System (BRFSS) about cancer screening and associated disparities.

Note: *Throughout this report, data comparisons presented as "higher," "lower," "larger," "smaller," "better," "worse," or as "significantly different" are all considered statistically significant differences.*

Confidence intervals were used for statistical comparisons between groups. A confidence interval represents the range in which a parameter estimate would 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, do not overlap we consider the estimates to be significantly different from one another.

Cancer Screening

Screening provides an opportunity to find and treat cancers early, leading to a decrease in overall cancer mortality. Lung, cervical, breast, and colorectal cancers all have established screening guidelines,[1] where the benefits of screening have been determined to outweigh any potential harms.

The following guideline definitions describe how screening data were analyzed in the following slides.

- Cervical Cancer Screening: The method for calculating screening rates was based on 2012 U.S. Preventative Services Task Force (USPSTF) recommendations.* These calculations include women aged 21-65 years who had a Pap test in the past 3 years and did not have a hysterectomy.**
- Breast Cancer Screening: The method for calculating screening rates was based on 2009 USPSTF recommendations. These calculations include women aged 50-74 years who had a mammogram in the past 2 years.
- Colorectal Cancer Screening: The method for calculating screening rates was based on 2008 USPSTF recommendations. These calculations include men and women aged 50-75 years who had either a fecal occult blood test (FOBT) within one year; a sigmoidoscopy within 5 years *AND* a FOBT within 3 years; or a colonoscopy within 10 years.
- Lung Cancer Screening: The 2013 USPSTF guidelines recommend annual low-dose computed tomography for those aged 55-80 with a 30+ pack-year history of smoking (and smoke currently or within the last 15 years). However, there is currently no way to measure the percentage of these individuals that receive annual screening for lung cancer using the BRFSS.

**Please see Data Notes at the end of this section, page 56, for more details.*
***Usually women who have had a hysterectomy are excluded from cervical cancer screening calculations. In 2016, women 45-65 were not asked whether they've had a hysterectomy, and as such the proportion meeting Pap test screening recommendations is underestimated.*

[1]U.S. Preventative Services Task Force, Accessed 12.18.17
https://www.uspreventiveservicestaskforce.org/BrowseRec/Index

Cervical Cancer Screening

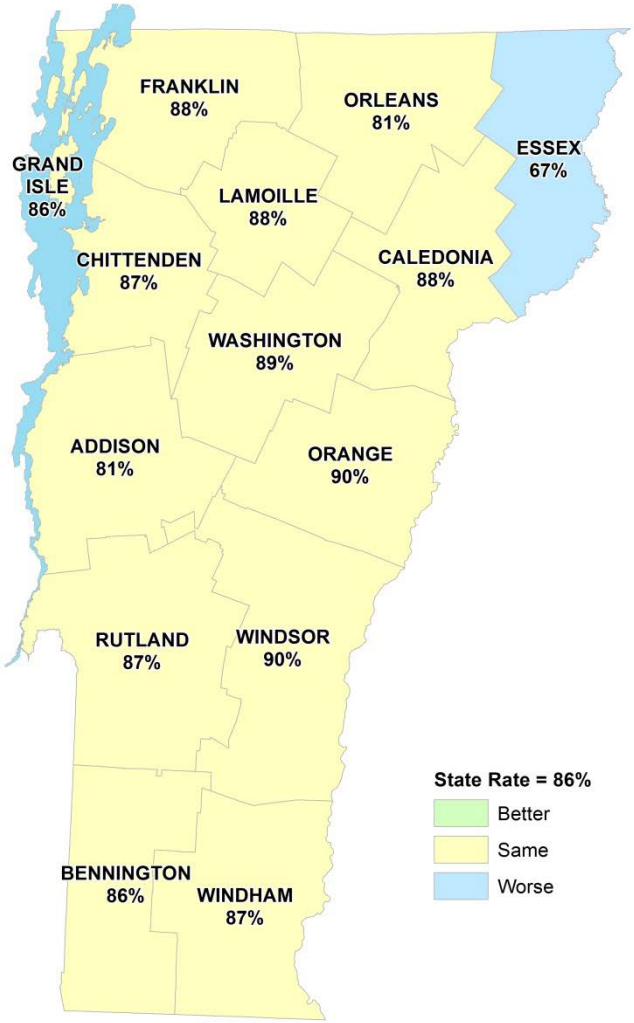
National, Statewide, and County Rates

Nationally, the 3 year Pap test rate among women aged 21-65 was 82%, which was lower than the 86% screening rate in Vermont (2014).

Most Vermont counties had similar cervical cancer screening rates (2012 and 2014). The exception was Essex County, where the screening rate (67%) was lower than Vermont overall (2012 and 2014).

Due to a difference in how the cervical cancer questions were asked in 2016**, 2014 and 2016 data could not be combined.

3 Year Pap Screening Rates by County (Women Age 21-65; 2012 and 2014)



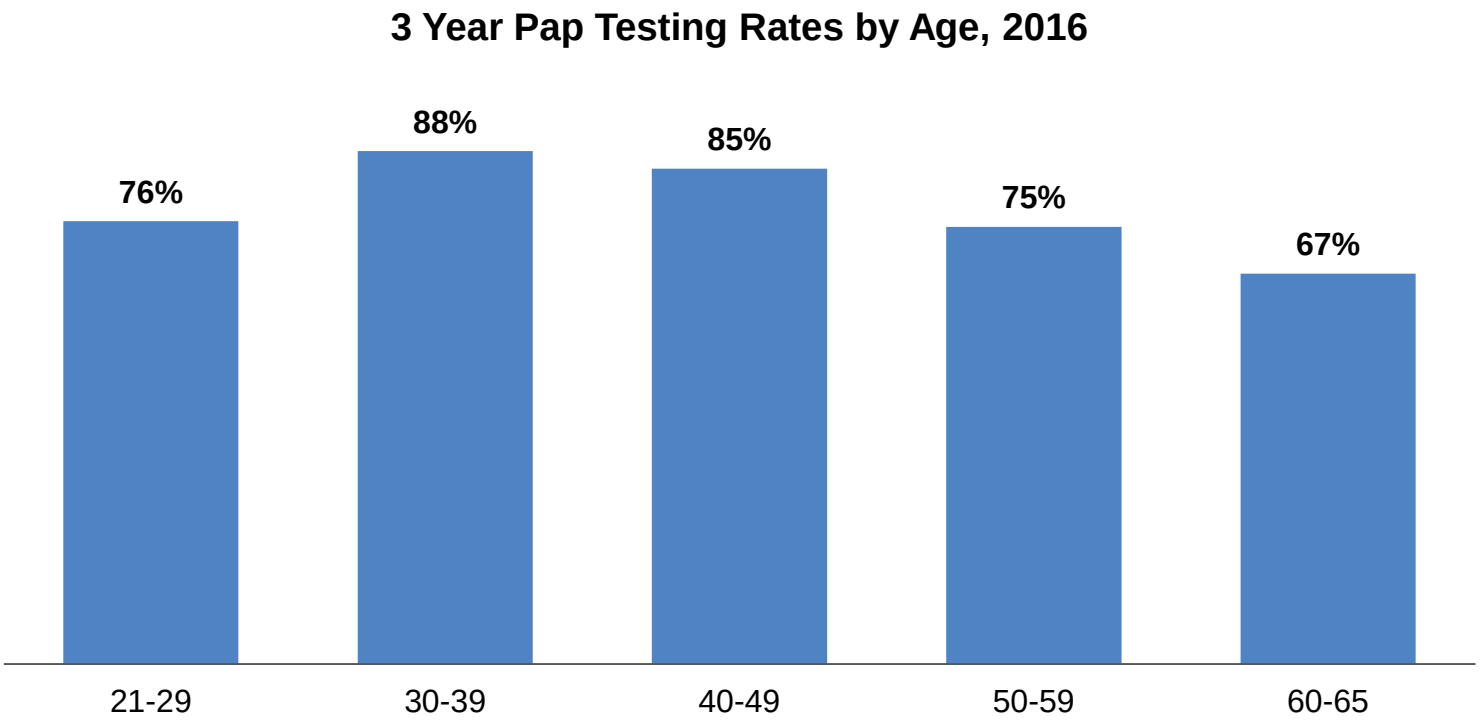
Note: All rates are age adjusted to the 2000 U.S. standard population.
**Usually women who have had a hysterectomy are excluded from cervical cancer screening calculations. In 2016, women 45-65 were not asked whether they've had a hysterectomy, and as such the proportion meeting Pap test screening recommendations is underestimated.

Data Source: BRFSS
VT: Statewide 2014, Counties 2012 and 2014, US: 2014

Age

A smaller percentage of Vermont women aged 50-59 and 60-65 received a Pap test in the past three years, compared to those aged 30-49 (2016). All other age groups within the USPSTF recommended screening age range were screened at similar rates (2016).

Due to a difference in how the cervical cancer questions were asked in 2016**, comparisons over time cannot be made.



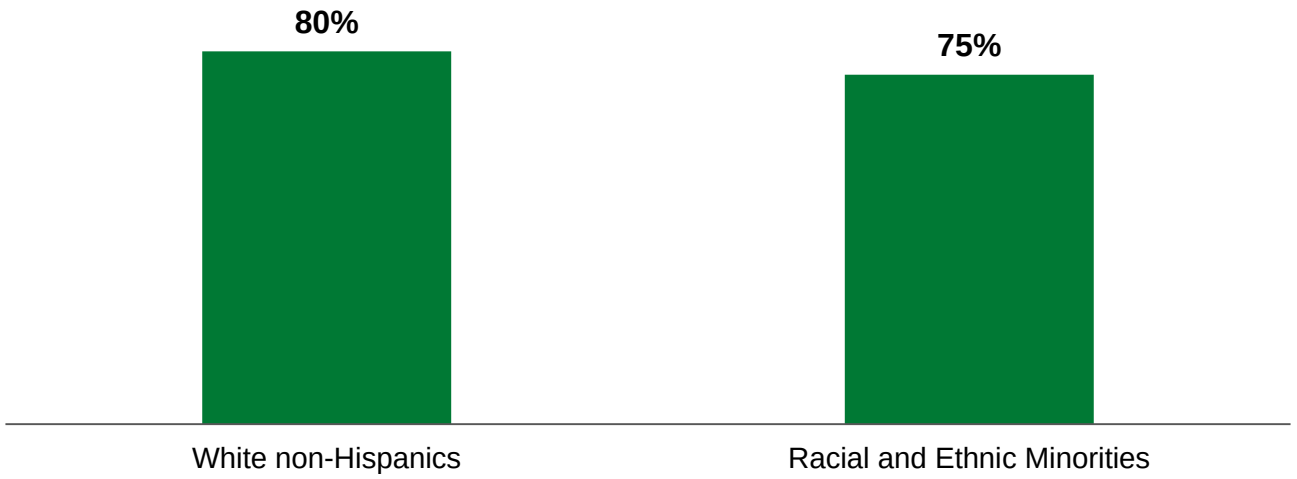
**Usually women who have had a hysterectomy are excluded from cervical cancer screening calculations. In 2016, women 45-65 were not asked whether they've had a hysterectomy, and as such the proportion meeting Pap test screening recommendations is underestimated.

Racial and Ethnic Minorities

In Vermont, the Pap testing rate among racial and ethnic minorities (75%, 2016) was similar to the rate for white non-Hispanics (80%, 2016).

Due to a difference in how the cervical cancer questions were asked in 2016**, comparisons over time cannot be made.

Pap Testing: Women Aged 21-65 By Race and Ethnicity, 2016



Note: All rates are age adjusted to the 2000 U.S. standard population.
**Usually women who have had a hysterectomy are excluded from cervical cancer screening calculations. In 2016, women 45-65 were not asked whether they've had a hysterectomy, and as such the proportion meeting Pap test screening recommendations is underestimated.

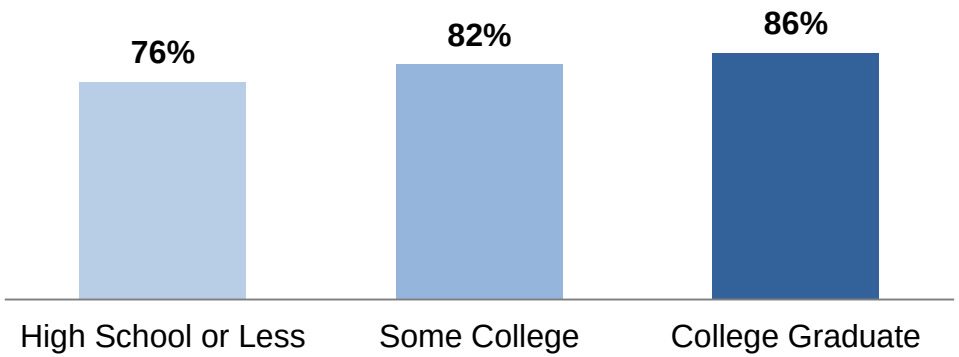
Education and Federal Poverty Level

In Vermont, the 3 year Pap test rate for women aged 25-65 was lower among those with a high school education or less than among those that completed college (2016).

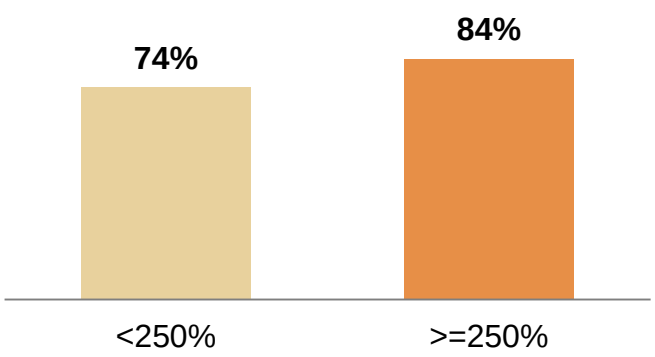
Vermont women aged 21-65 were less likely to have reported being screened if they were below 250% of the federal poverty level, compared to those at or above 250% of the federal poverty level (2016).

Due to a difference in how the cervical cancer questions were asked in 2016**, comparisons over time cannot be made.

Pap Testing: Women Aged 25-65 by Educational Attainment (2016)



Pap Testing: Women Aged 21-65 by Federal Poverty Level (2016)



Notes: All rates are age adjusted to the 2000 U.S. standard population.
Federal poverty level (FPL) is a federal measure calculated from both annual household income and family size. FPL is used to determine eligibility for government assistance programs. People living below 250% FPL, for example, are still considered low income, often lacking sufficient income to meet basic needs.
**Usually women who have had a hysterectomy are excluded from cervical cancer screening calculations. In 2016, women 45-65 were not asked whether they've had a hysterectomy, and as such the proportion meeting Pap test screening recommendations is underestimated.

Health Care Access

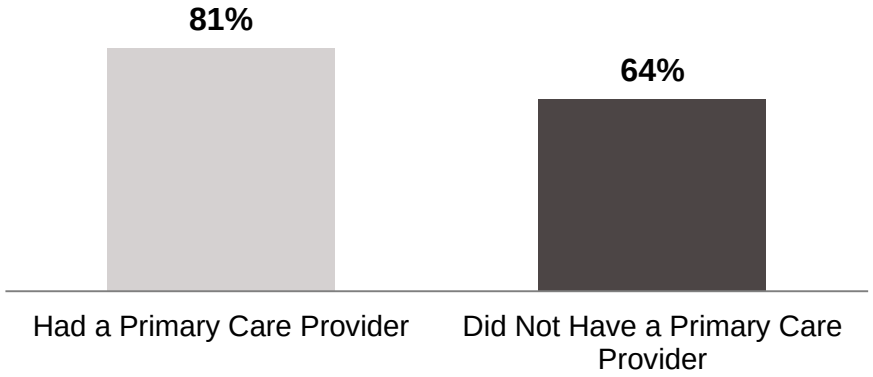
Vermont women aged 21-64 were equally as likely to report having Pap testing if they did not have health insurance than if they had health insurance (2016).

A smaller proportion of Vermont women (aged 21-65) who lacked a primary care provider were Pap tested compared to those who had a primary care provider (2016).

Due to a difference in how the cervical cancer questions were asked in 2016**, comparisons over time cannot be made.

Pap Testing: Women Aged 21-64 by Health Insurance Status (2016)

Pap Testing: Women Aged 21-65 by Primary Care Provider (2016)



Note: All rates are age adjusted to the 2000 U.S. standard population.
**Usually women who have had a hysterectomy are excluded from cervical cancer screening calculations. In 2016, women 45-65 were not asked whether they've had a hysterectomy, and as such the proportion meeting Pap test screening recommendations is underestimated.

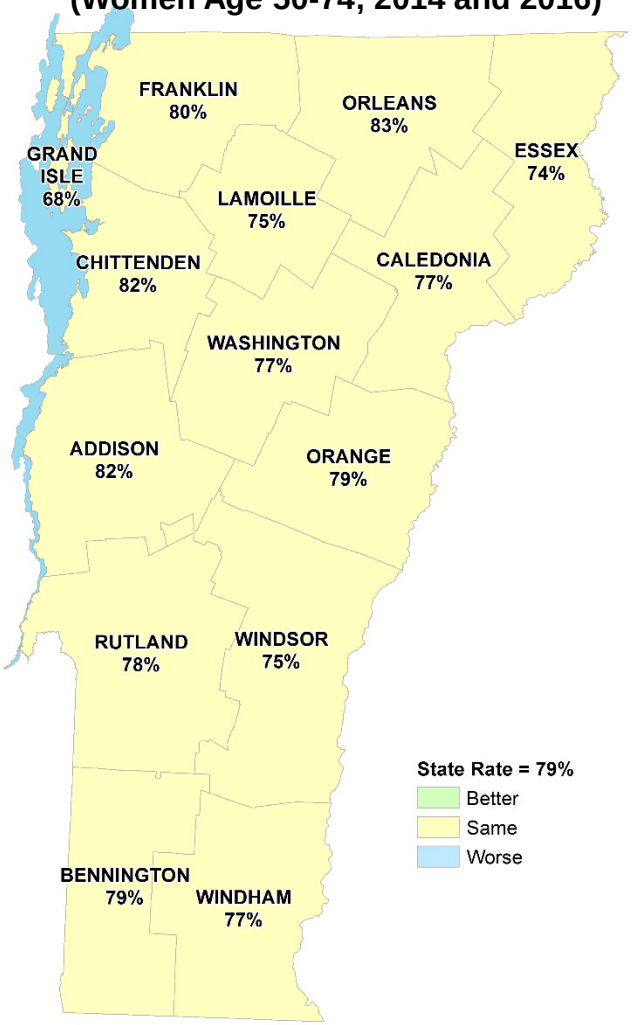
Breast Cancer Screening

National, Statewide, and County Rates

Nationally, the breast cancer screening rate among women aged 50-74 years was 78% (2016). Vermont's screening rate was similar to the national rate (79%, 2016).

Compared to the overall screening rate in Vermont, breast cancer screening rates by county were similar (2014 and 2016).

Breast Cancer Screening Rates by County (Women Age 50-74; 2014 and 2016)

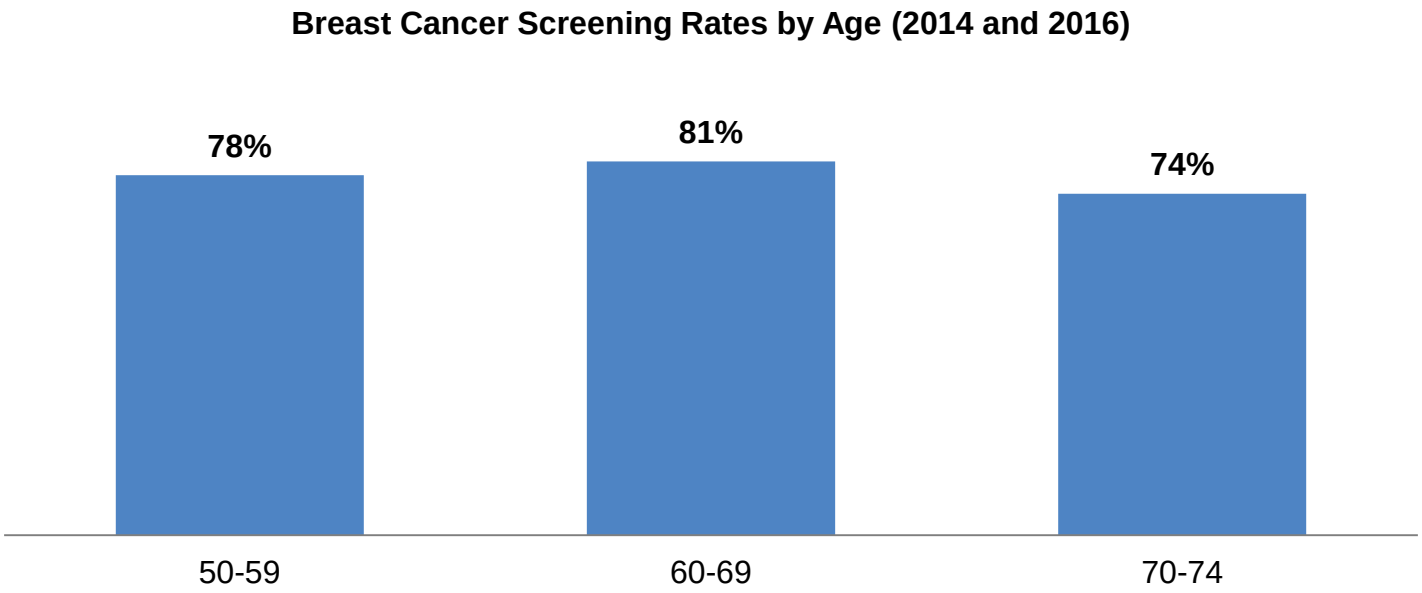


Note: All rates are age adjusted to the 2000 U.S. standard population.

Data Source: BRFSS
VT: Statewide 2016, Counties 2014 and 2016, US: 2016

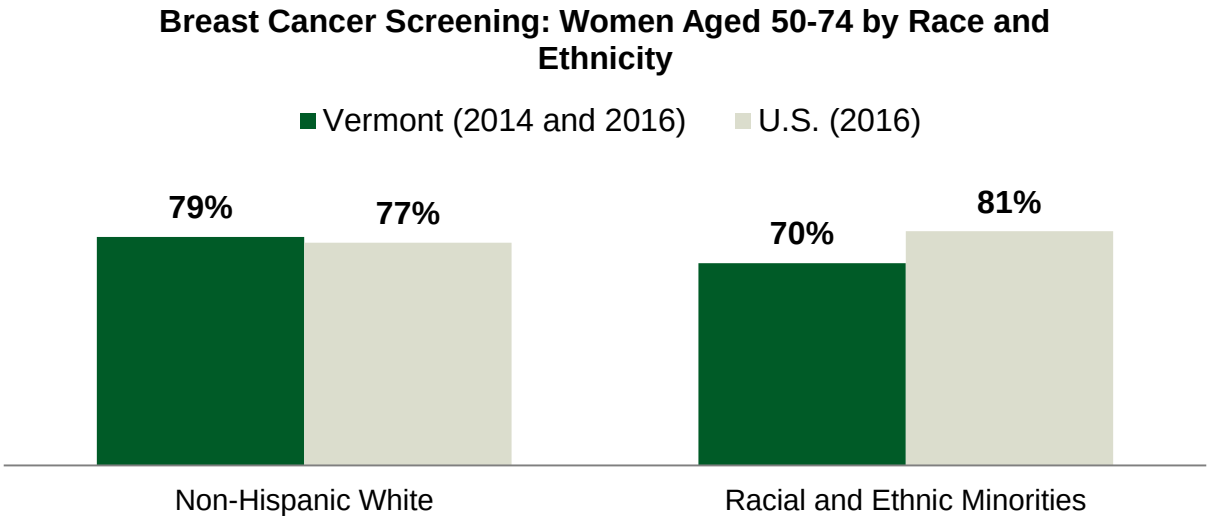
Age

There were no differences in breast cancer screening rates between Vermont women of different age groups within the USPSTF recommended screening age range (2014 and 2016).



Racial and Ethnic Minorities

Racial and ethnic minorities in Vermont had a lower breast cancer screening rate (70%, 2014 and 2016) compared to racial and ethnic minorities nationally (81%, 2016). White non-Hispanics in Vermont, however, had a similar screening rate (79%, 2014 and 2016) compared to white non-Hispanics nationally (77%, 2016).



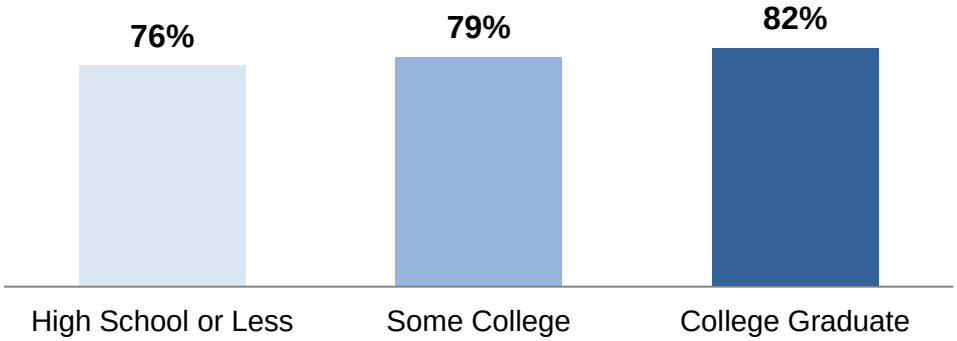
Note: All rates are age adjusted to the 2000 U.S. standard population.

Education and Federal Poverty Level

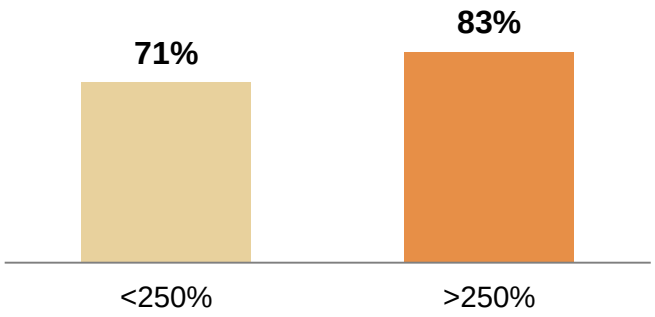
Women with a college degree were more likely to have met breast cancer screening guidelines in comparison to women with a high school diploma or less (2014 and 2016).

The breast cancer screening rate was lower among those below 250% of the federal poverty level compared to those at or above 250% of the federal poverty level (2016).

Breast Cancer Screening: Women Aged 50-74 by Educational Attainment (2014 and 2016)



Breast Cancer Screening: Women Aged 50-74 by Federal Poverty Level (2014 and 2016)



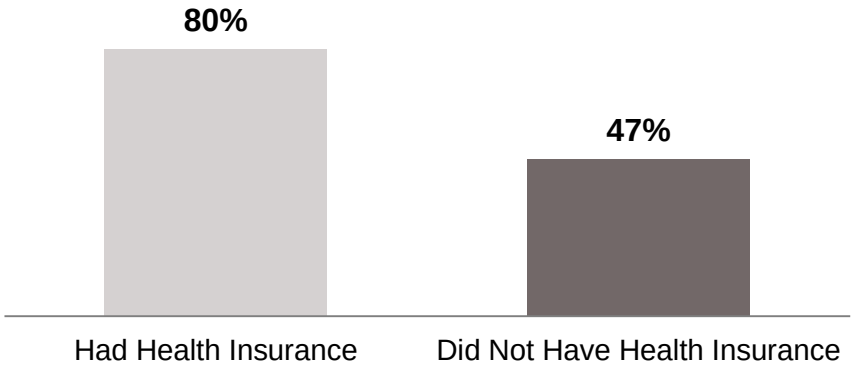
Notes: All rates are age adjusted to the 2000 U.S. standard population.
Federal poverty level (FPL) is a federal measure calculated from both annual household income and family size. FPL is used to determine eligibility for government assistance programs. People living below 250% FPL, for example, are still considered low income, often lacking sufficient income to meet basic needs.

Health Care Access

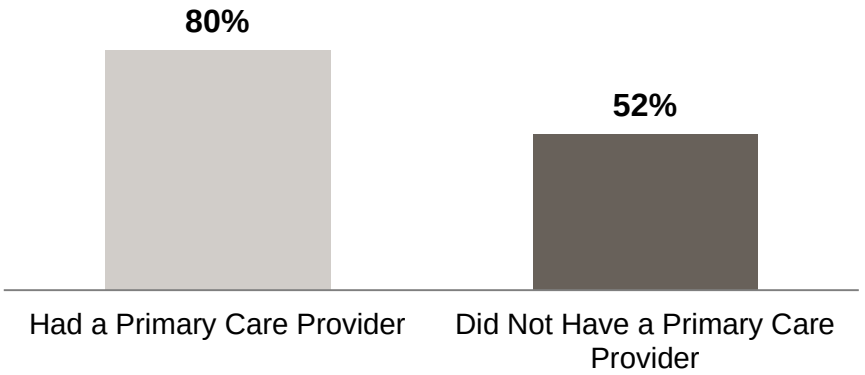
Vermont women aged 50-64 were less likely to have reported being screened for breast cancer if they did not have health insurance than those who had health insurance (2014 and 2016).

Similarly, Vermont women aged 50-74 were less likely to have reported being screened for breast cancer if they did not have a primary care provider compared to those with a primary care provider (2014 and 2016).

Breast Cancer Screening: Women Aged 50-64 by Health Insurance Status (2014 and 2016)



Breast Cancer Screening: Women Aged 50-74 by Primary Care Provider (2014 and 2016)



Note: Rates for screening by primary care provider are age adjusted to the 2000 U.S. standard population.

Colorectal Cancer Screening

Note: Data for colorectal cancer screening are presented among those who met the screening guidelines overall and by the specific screening test types (i.e. colonoscopy and fecal occult blood test (FOBT)).

National, Statewide, and County Rates

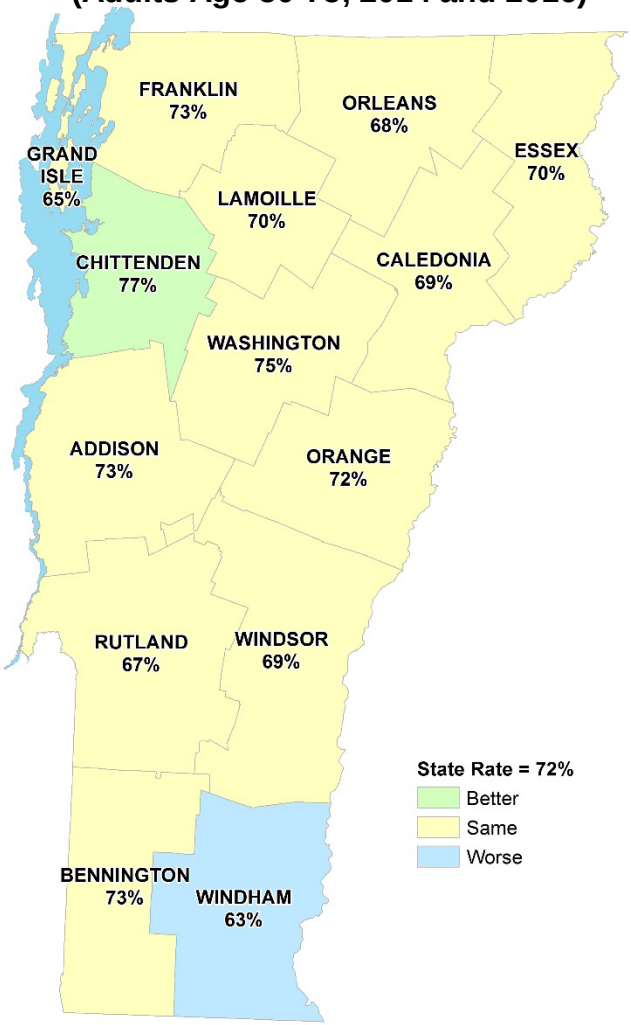
Nationally, the colorectal cancer screening rate among men and women aged 50-75 years is 67% (2016). Vermont had a higher screening rate of 72% (2016).

When broken down by the specific colorectal cancer screening tests, of the Vermont men and women aged 50-75, 5% had a FOBT in the past year, less than 1% had a sigmoidoscopy in the past five years *and* a FOBT in the past three years, and 70% had a colonoscopy in the past 10 years (2016). This is different compared to the breakdown by type of screening nationally, where 11% had a FOBT in the past year, less than 1% had a sigmoidoscopy in the past five years *and* a FOBT in the past three years, and 63% had a colonoscopy in the past 10 years (2016).

People who lived in Windham County were less likely to have been screened for colorectal cancer (63%) than the state as a whole (2014 and 2016). However, people in Chittenden County were more likely to have been screened for colorectal cancer (77%) than the state overall (2014 and 2016). All other counties were similar to the state rate (2014 and 2016).

Colorectal cancer screening test type by county cannot be analyzed as the numbers are too small for accurate evaluation.

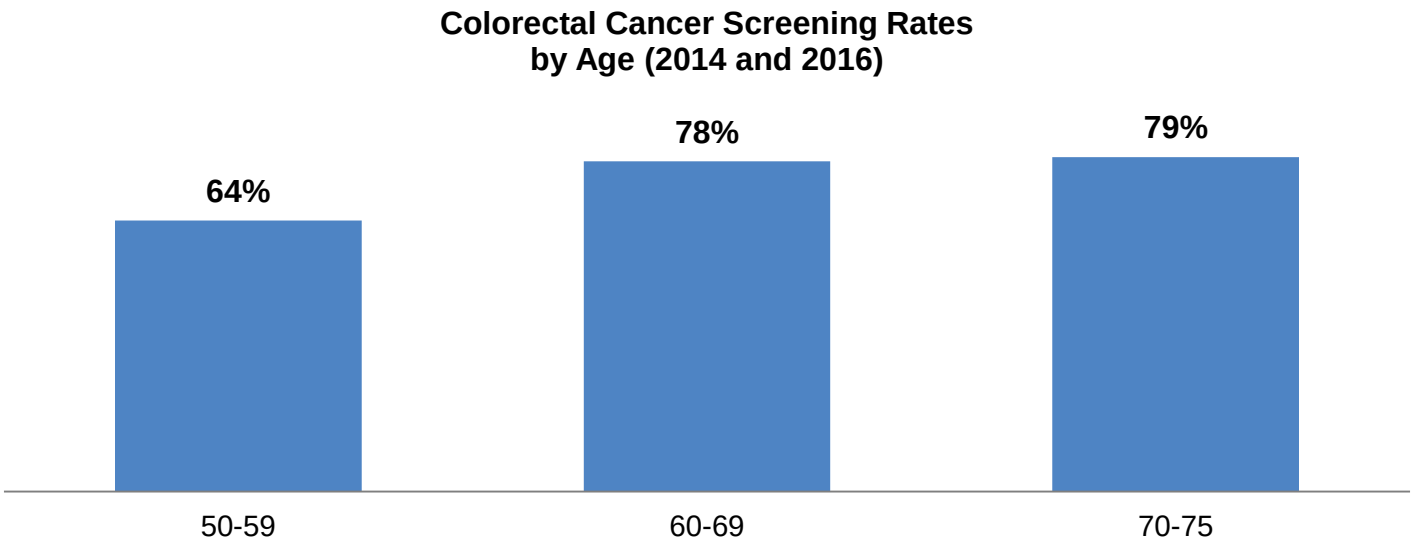
Colorectal Cancer Screening Rates by County (Adults Age 50-75; 2014 and 2016)



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

Age

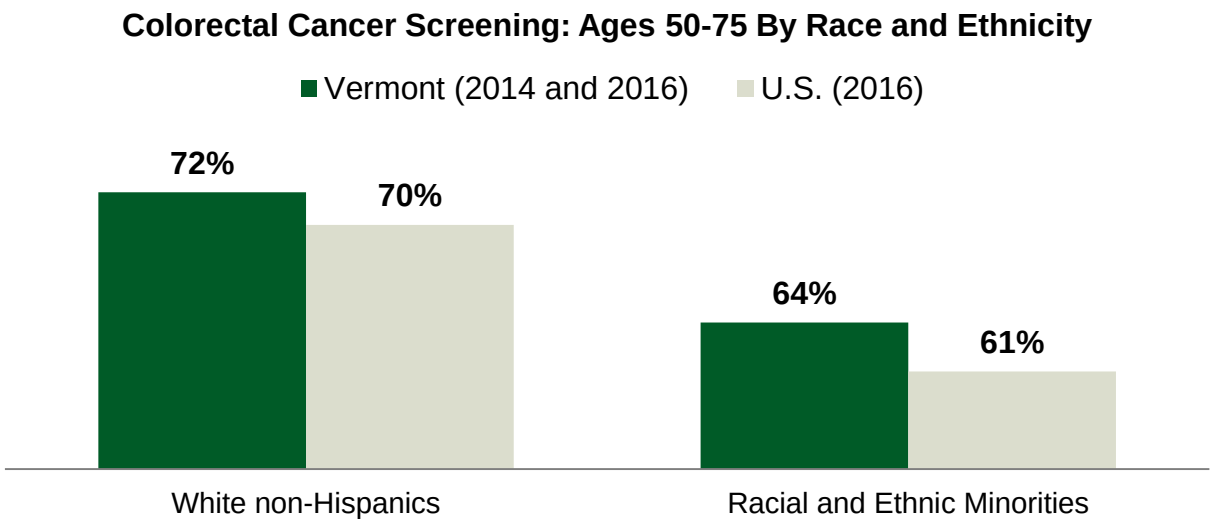
A smaller percentage of Vermont men and women aged 50-59 were screened for colorectal cancer compared to those aged 60-75 (2014 and 2016). The USPSTF recommends colorectal cancer screening for all men and women aged 50-75.



Racial and Ethnic Minorities

Racial and ethnic minorities in Vermont had a similar colorectal cancer screening rate (64%, 2014 and 2016) compared to the U.S. (61%, 2016). White non-Hispanics in Vermont had a higher screening rate (72%, 2014 and 2016) compared to the national rate (70%, 2016).

In Vermont, colorectal cancer screening rates were similar among racial and ethnic minorities (64%, 2014 and 2016) and white non-Hispanics (72%, 2014 and 2016).



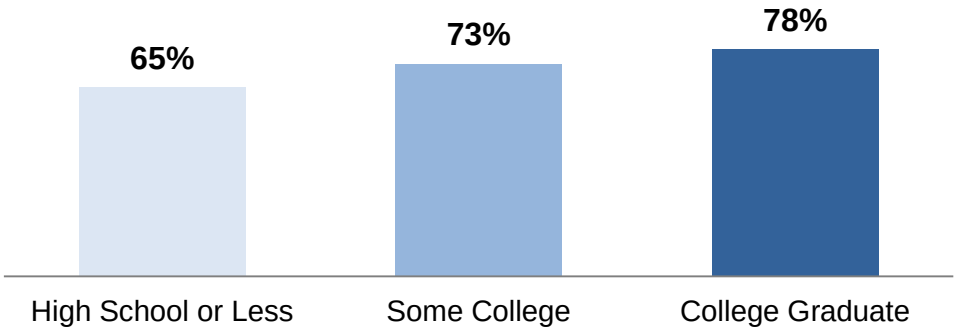
Note: All rates are age adjusted to the 2000 U.S. standard population.

Education and Federal Poverty Level

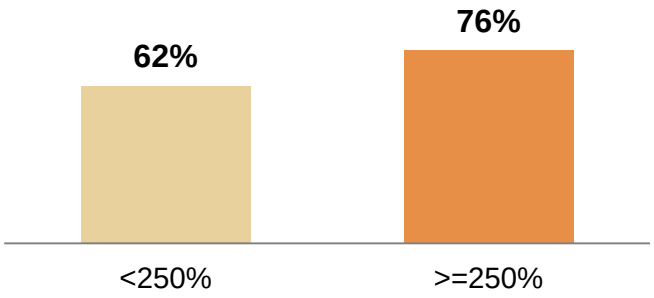
For adults aged 50-75, as education increases, so does the likelihood of colorectal cancer screening (2014 and 2016).

The colorectal cancer screening rate was also lower among those at less than 250% of the federal poverty level compared to those at or above 250% of the federal poverty level (2014 and 2016).

Colorectal Cancer Screening: Ages 50-75 by Educational Attainment (2014 and 2016)



Colorectal Cancer Screening: Ages 50-75 by Poverty Level (2014 and 2016)



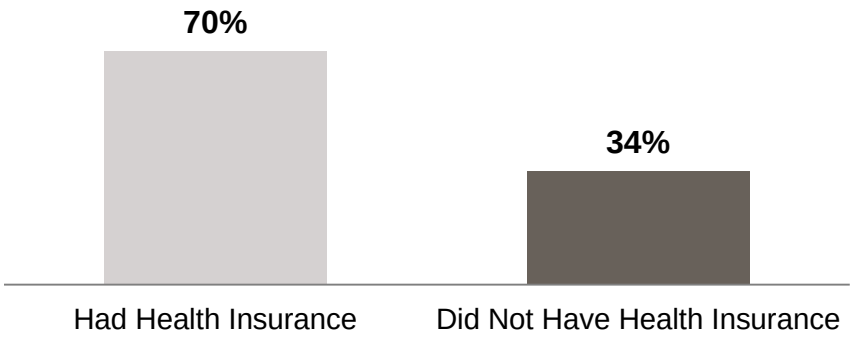
Notes: All rates are age adjusted to the 2000 U.S. standard population.
Federal poverty level (FPL) is a federal measure calculated from both annual household income and family size. FPL is used to determine eligibility for government assistance programs. People living below 250% FPL, for example, are still considered low income, often lacking sufficient income to meet basic needs.

Health Care Access

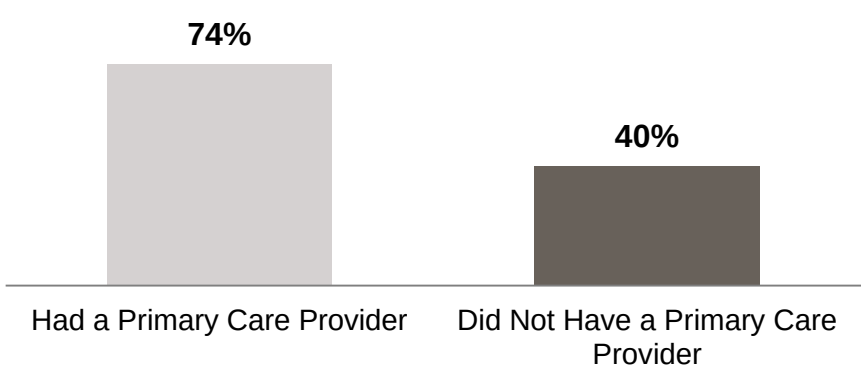
Among Vermonters aged 50-64, the colorectal cancer screening rate was lower among those without health insurance than those with health insurance (2014 and 2016).

The colorectal cancer screening rate was also lower among those aged 50-75 that did not have a primary care provider, compared to those that did (2014 and 2016).

Colorectal Cancer Screening: Ages 50-64 by Health Insurance Status (2014 and 2016)



Colorectal Cancer Screening: Ages 50-75 by Primary Care Provider (2014 and 2016)



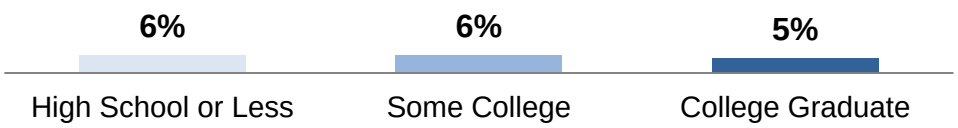
Note: Rates for screening by primary care provider are age adjusted to the 2000 U.S. standard population.

Annual Fecal Occult Blood Test by Education and Federal Poverty Level

Fecal occult blood test (FOBT) screening rates were similar among people with various educational backgrounds (2014 and 2016).

FOBT screening rates were higher among people below 250% of the federal poverty level as compared to those at or above 250% of the federal poverty level (2014 and 2016).

FOBT in Past Year: Ages 50-75 by Educational Attainment (2014 and 2016)



FOBT in Past Year: Ages 50-75 by Federal Poverty Level (2014 and 2016)

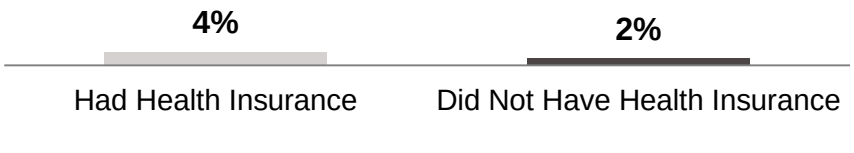
Notes: All rates are age adjusted to the 2000 U.S. standard population.
Federal poverty level (FPL) is a federal measure calculated from both annual household income and family size. FPL is used to determine eligibility for government assistance programs. People living below 250% FPL, for example, are still considered low income, often lacking sufficient income to meet basic needs.

Annual Fecal Occult Blood Test by Health Care Access

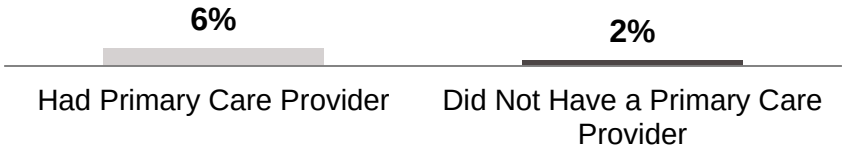
The percentage of Vermonters under age 64 who had a fecal occult blood test (FOBT) in the past year was similar between those insured and those uninsured (2014 and 2016).

Vermonters aged 50-75 were more likely to have reported having a fecal occult blood test (FOBT) in the past year if they had a primary care provider than if they did not (2014 and 2016).

FOBT in Past Year: Ages 50-64 by Health Insurance Status (2014 and 2016)



FOBT in Past Year: Ages 50-75 by Primary Care Provider (2014 and 2016)



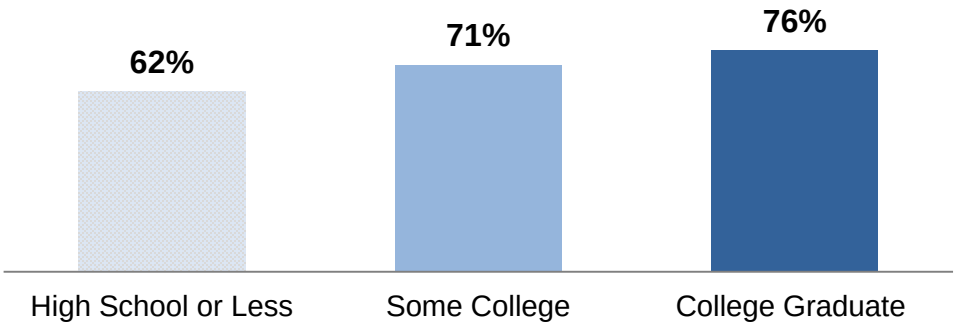
Note: Rates for screening by primary care provider are age adjusted to the 2000 U.S. standard population.

Colonoscopy in Past 10 Years by Education and Federal Poverty Level

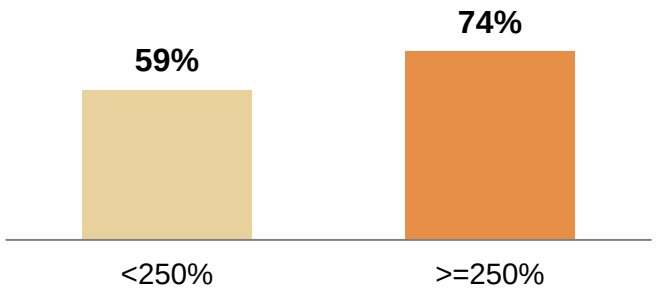
A smaller percentage of Vermonters with a high school diploma or less education reported having a colonoscopy in the past 10 years compared to those with some college or a college degree (2014 and 2016).

Those below 250% of the federal poverty level were less likely to have reported having had a colonoscopy in the past 10 years, compared to those at or above 250% of the federal poverty level (2014 and 2016).

Colonoscopy in Past 10 Years: Ages 50-75 by Educational Attainment (2014 and 2016)



Colonoscopy in Past 10 Years: Ages 50-75 by Federal Poverty Level (2014 and 2016)



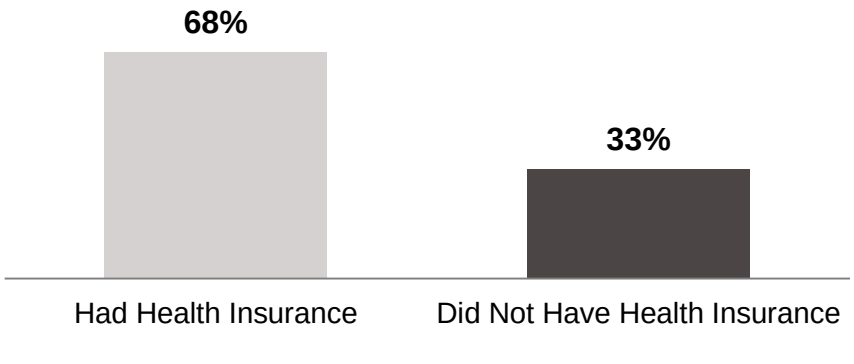
Notes: All rates are age adjusted to the 2000 U.S. standard population.
Federal poverty level (FPL) is a federal measure calculated from both annual household income and family size. FPL is used to determine eligibility for government assistance programs. People living below 250% FPL, for example, are still considered low income, often lacking sufficient income to meet basic needs.

Colonoscopy in Past 10 Years by Health Care Access

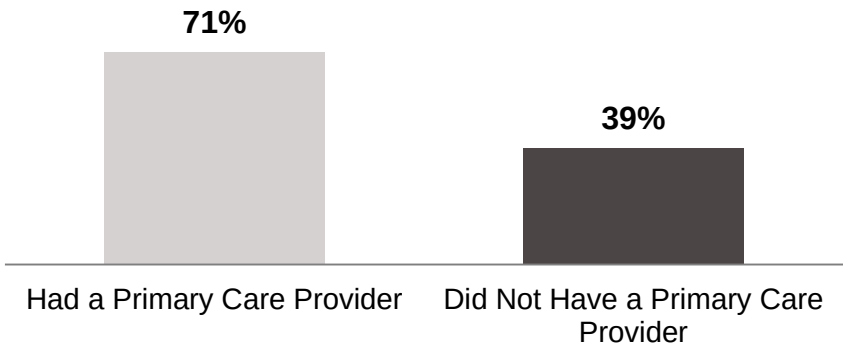
Vermonters aged 50-64 were more than twice as likely to have reported having a colonoscopy in the past 10 years if they had health insurance than if they did not have health insurance (2014 and 2016).

Similarly, Vermonters aged 50-75 were more likely to have reported having a colonoscopy in the past 10 years if they had a primary care provider than if they did not (2014 and 2016).

Colonoscopy in Past 10 Years: Ages 50-64 by Health Insurance Status (2014 and 2016)



Colonoscopy in Past 10 Years: Ages 50-75 by Primary Care Provider (2014 and 2016)



Note: Rates for screening by primary care provider are age adjusted to the 2000 U.S. standard population.

Data Notes

**** Note on Cervical Cancer Guidelines:*** Analyses within this report about cervical cancer screening do not capture the alternate choice of co-testing, which includes an HPV and a Pap test every five years for women aged 30 to 65 years.

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.

Health Insurance: Comparisons between those with and without health insurance are always limited to those below age 65 since all Americans above age 65 are eligible for health insurance via Medicare.

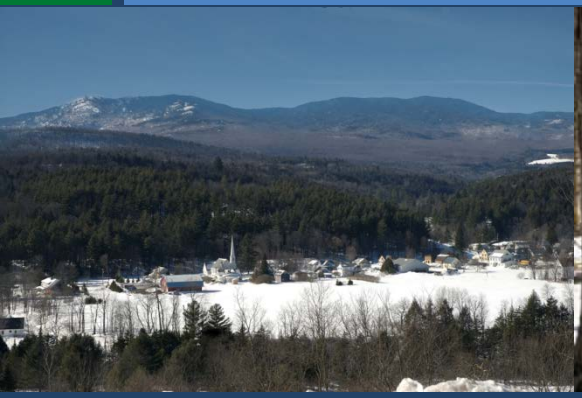
Education: Comparisons among those with different levels of education are always limited to those aged 25 and older since many adults under age 25 are in the process of obtaining additional education.

Federal poverty level (FPL) is a federal measure calculated from both annual household income and family size. FPL is used to determine eligibility for government assistance programs. People living below 250% FPL, for example, are still considered low income, often lacking sufficient income to meet basic needs.

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.

Acknowledgement: This publication was supported by Grant/Cooperative Agreement Number NU58DP006322 from the Centers for Disease Control and Prevention. Its contents are solely the responsibility of the authors and do not necessarily represent the official views of the Centers for Disease Control and Prevention.




Cancer Data Pages: Cancer Prevalence and Health of Survivors

VERMONT
DEPARTMENT OF HEALTH

April 2018

Introduction

Cancer is a group of more than 100 different diseases that often develop gradually as the result of a complex mix of lifestyle, environment, and genetic factors. People are at higher risk for certain cancers due to factors related to personal behaviors such as: tobacco use, alcohol use, diet, physical inactivity, and overexposure to sunlight. Vaccination with the HPV vaccine prior to exposure to the virus can decrease the risk of certain cancers. Cancer becomes more survivable when found and treated early, which can be accomplished through the use of available cancer screening tests including those for lung, breast, cervical, and colorectal cancers.

The purpose of this report is to present cancer-related data from the Behavioral Risk Factor Surveillance System (BRFSS) about survivorship, quality of life, associated disparities, known cancer-related risk factors, and co-morbidities.

Note: *Throughout this report, data comparisons presented as "higher," "lower," "larger," "smaller," "better," "worse," or as "significantly different" are all considered statistically significant differences.*

Confidence intervals were used for statistical comparisons between groups. A confidence interval represents the range in which a parameter estimate would 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, do not overlap we consider the estimates to be significantly different from one another.

Cancer Survivor Demographics

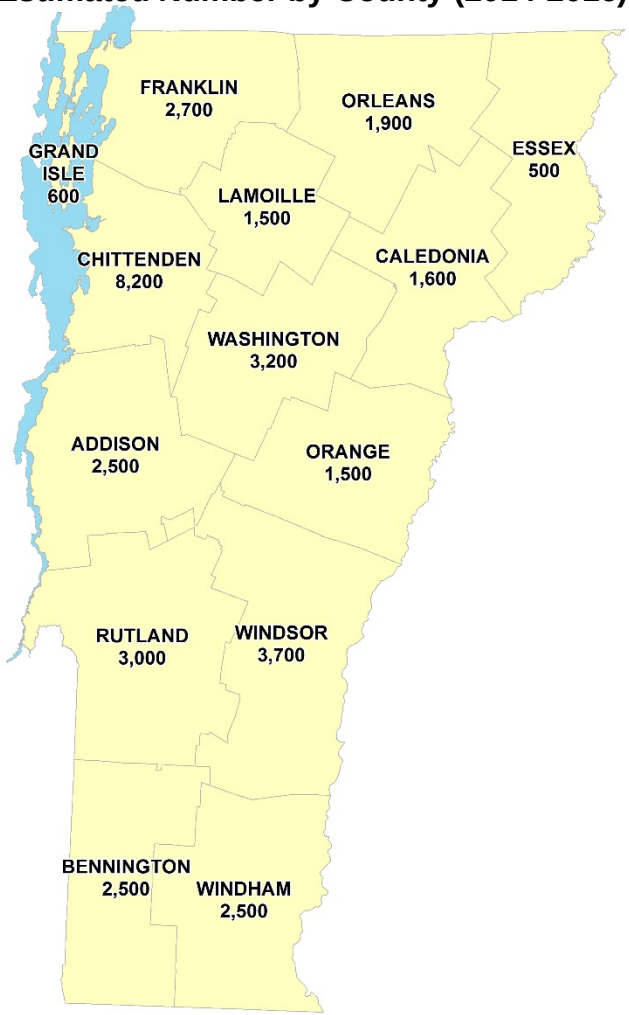
Note: The definition, in this report, for both "cancer survivor" and "prevalence" includes those who have ever been diagnosed with cancer, excluding those whose only form of cancer was skin cancer.

Statewide and County Rates

In this report, a cancer survivor is defined as someone who has been diagnosed with cancer (other than skin cancer), from the time of diagnosis through the rest of his or her life. In this report, “cancer prevalence” and “survivorship” are used interchangeably, as the Behavioral Risk Factor Surveillance System (BRFSS) data represents both definitions.

There are approximately 39,000 adult Vermonters, 8% of the adult population, who report they have ever been diagnosed with cancer (2016).

Adult Cancer Survivors (Prevalence)
Estimated Number by County (2014-2016)



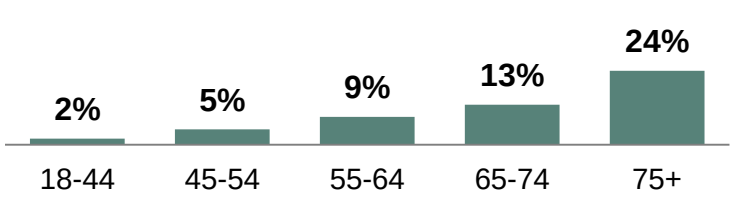
Note: The number in each county, shown in the map, is the average number of cancer survivors (using data from 2014-2016).

Sex and Age

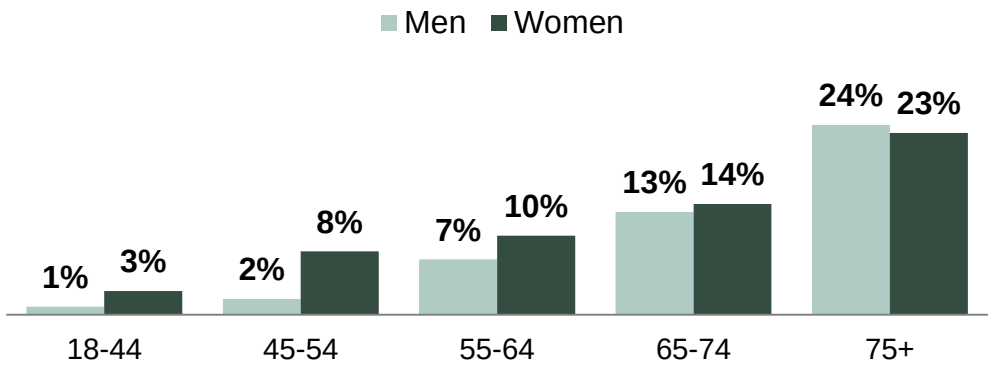
Cancer survivorship (prevalence) increases with age. With each increase in age group, there was an increase in the percentage of Vermonters that reported ever having been diagnosed with cancer (2014-2016).

When broken down by age and sex, some interesting differences can be seen. A higher percentage of women reported being a cancer survivor than men among those aged 18-44, 45-54, and 55-64 years (2014-2016). A similar percentage of men and women, however, reported being a cancer survivor among those aged 65-74 and 75 years and over (2014-2016).

Cancer Survivorship (Men and Women) by Age (2014-2016)



Cancer Survivorship by Age and Sex (2014-2016)



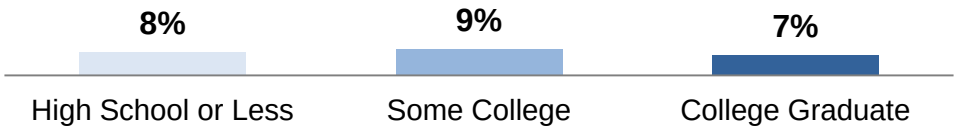
Education, Federal Poverty Level, and Racial and Ethnic Minorities

Vermont adults diagnosed with cancer (aged 25 and older) were more likely to have not completed college than to have completed their degree (2014-2016).

There was no difference in the percentage of cancer survivors (aged 18 and older) when comparing those above and below 250% of the federal poverty level (2015-2016).

Racial and ethnic minorities were less likely to have reported being cancer survivors compared to adult white non-Hispanics in VT (data not shown, 2014-2016).

Cancer Survivorship: Ages 25+
By Educational Attainment (2014-2016)



Cancer Survivorship: Ages 18+ by
Federal Poverty Level (2015-2016)

Note: Federal poverty level (FPL) is a federal measure calculated from both annual household income and family size. FPL is used to determine eligibility for government assistance programs. People living below 250% FPL, for example, are still considered low income, often lacking sufficient income to meet basic needs.

Health Disparities between Cancer Survivors and Those Never Diagnosed with Cancer

In this section, comparisons are made between Vermont adults with and without cancer for a variety of risk factors, health measures, and other chronic diseases. Due to the nature of the BRFSS survey methodology, any differences do not indicate a cause-and-effect relationship. It is not possible to know if the risk factor, health status, or other chronic disease preceded the cancer diagnosis or whether the factor in question caused or was a result of having cancer.

For example, the obesity rate is compared for Vermont adults with and without cancer. A higher percentage of people with cancer reported being obese compared to people without cancer. There is an association between obesity and cancer. We are unable to tell whether people surveyed were obese at the time of cancer diagnosis or developed obesity after being diagnosed with cancer. Therefore, we are unable to determine if the obesity caused the cancer, the cancer caused the obesity, or even if there is any causal relationship between these two things.

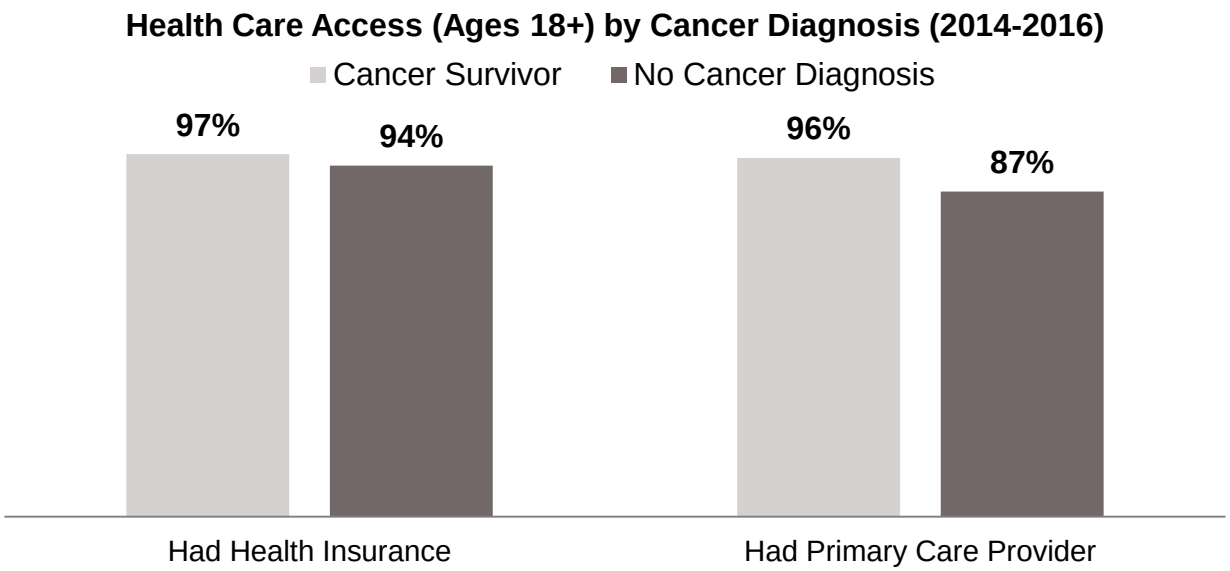
Phrases such as “more likely,” “twice as likely,” and “three times as likely” are used to describe the strength of an association. For example, cancer survivors were more likely to have reported being diagnosed with cardiovascular disease than those without cancer. This means that, among people with cancer, the rate of cardiovascular disease is higher than the rate of cardiovascular disease among people without cancer. A cause-and-effect relationship cannot be determined.

Note: The definition, in this report, for both cancer survivor and prevalence includes those who have ever been diagnosed with cancer, excluding those whose only form of cancer was skin cancer.

Health Care Access

Adult Vermont cancer survivors (under age 65) were more likely to report having health insurance compared to those never diagnosed with cancer (2014-2016).

Cancer survivors were more likely to report having a primary care provider than those never diagnosed with cancer (2014-2016). However, when broken down by race and ethnicity, racial and ethnic minorities diagnosed with cancer were equally as likely to report having a primary care provider than those never diagnosed with cancer (data not shown, 2014-2016).

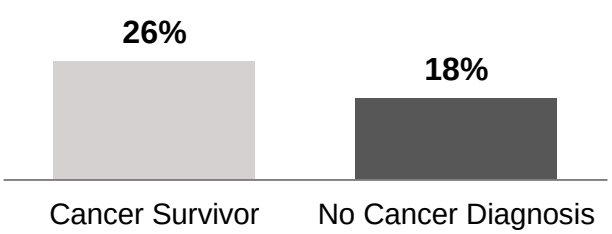


Tobacco and Quit Attempts

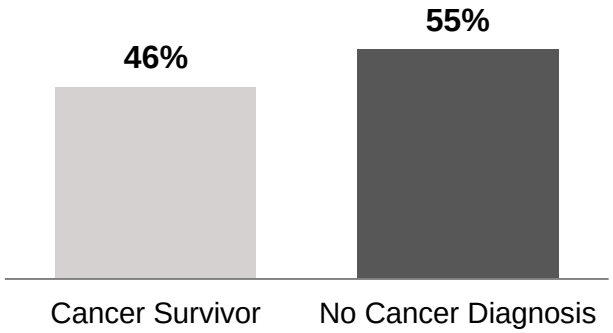
In cancer survivors, smoking increases the risk of a tobacco-associated second primary cancer. Smoking has also been shown to increase cancer-specific mortality and all-cause mortality among cancer survivors.

Adult cancer survivors in Vermont reported being current smokers at a higher rate (26%) than those Vermont adults who never had a cancer diagnosis (18%, 2014-2016). A similar percentage of cancer survivors who smoke reported recently trying to quit (55%) as those smokers never diagnosed with cancer (46%, 2014-2016).

Smoking Rate (Ages 18+) by Cancer Diagnosis (2014-2016)



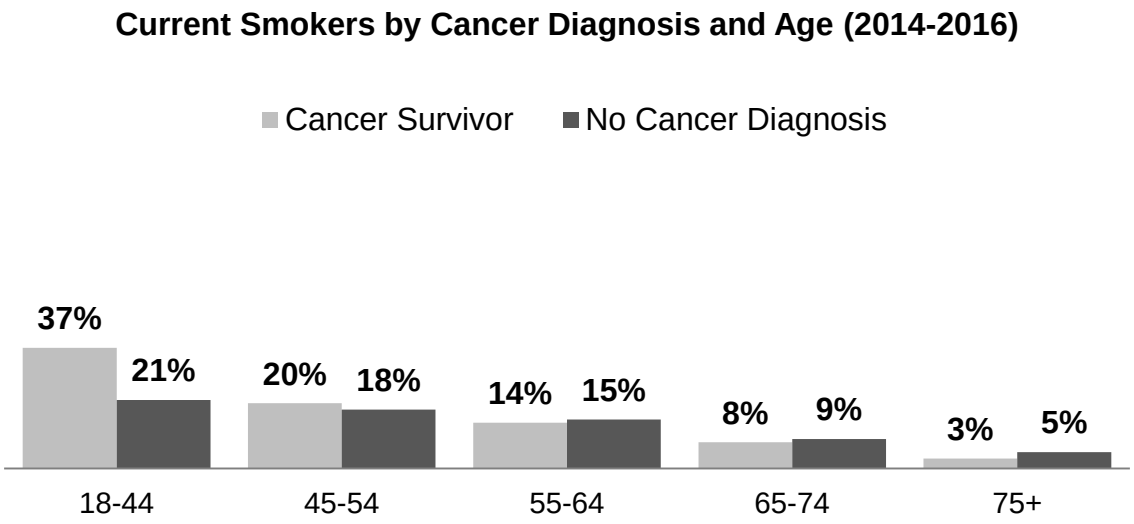
Percent of Smokers Who Made a Recent Quit Attempt (Ages 18+) by Cancer Diagnosis (2014-2016)



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

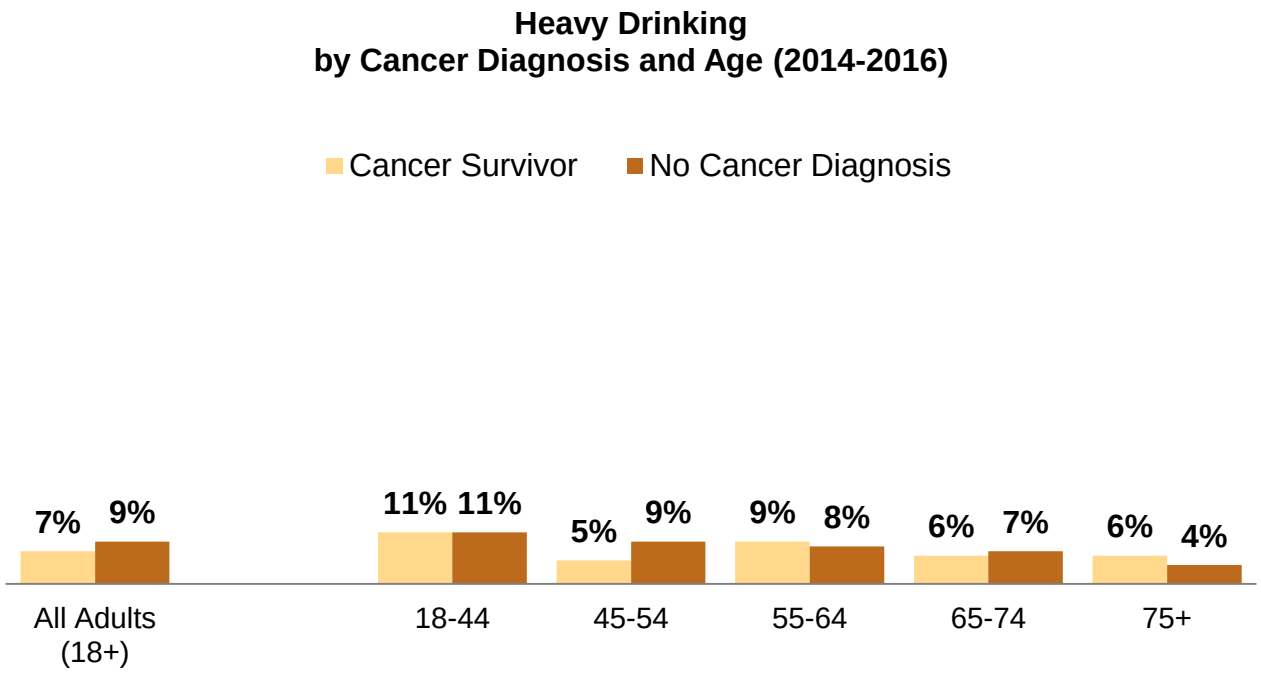
Tobacco by Age

When broken down by age group, the only age group with a difference in smoking status between cancer survivors and those never diagnosed with cancer were those aged 18-44, where cancer survivors had a higher prevalence of smoking than those without a cancer diagnosis (2014-2016).



Heavy Drinking by Age

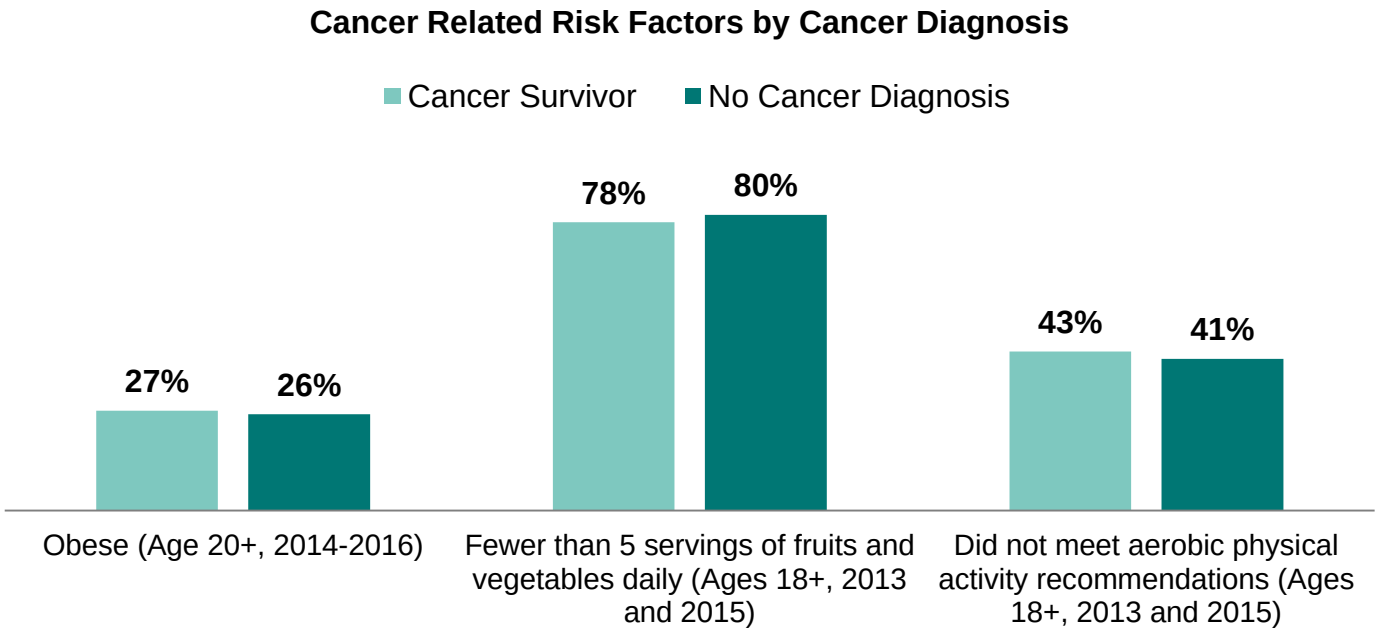
Adult cancer survivors in Vermont are no more likely to drink heavily (defined as an average of more than two drinks per day for men and more than one drink per day for women) than those never diagnosed with cancer at any age (2014-2016).



Obesity, Poor Nutrition and Lack of Physical Activity

Among Vermonters 20 years of age and older, the percentage of cancer survivors that reported being obese (27%) is similar to those never diagnosed with cancer (26%) (2014-2016).

There were no differences between adult Vermont cancer survivors and those never diagnosed with cancer in the percentage eating fewer than five servings of fruits and vegetables daily (2013 and 2015). There was also no difference in the percentage failing to meet aerobic physical activity recommendations (2013 and 2015).

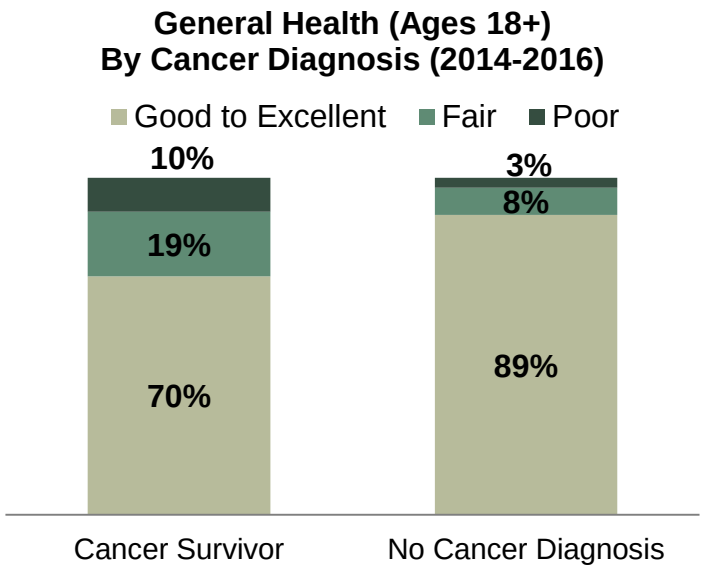


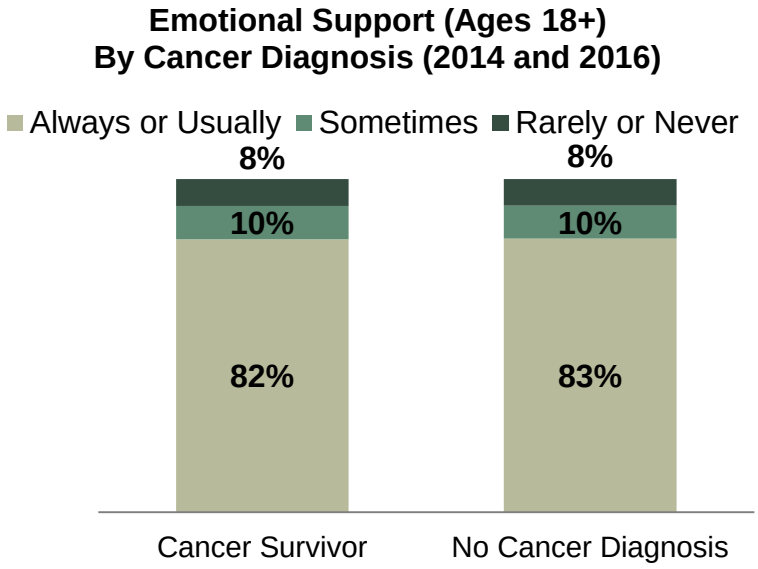
Notes: All rates are age adjusted to the 2000 U.S. standard population.
Obesity rates include adults, age 20 and over, with a Body Mass Index (BMI) classified as obese (BMI of 30+)

Quality of Life

A smaller percentage of adult Vermont cancer survivors reported their general health as good to excellent (70%), compared to Vermont adults who had never been diagnosed with cancer (89%, 2014-2016). In addition, adult cancer survivors reported their general health as poor or fair at a higher rate (10% poor, 19% fair) than adults who had never been diagnosed with cancer (3% poor, 8% fair, 2014-2016).

Adult Vermont cancer survivors reported always or usually receiving emotional or social support at a similar rate (82%) compared to Vermont adults who had never been diagnosed with cancer (83%, 2014 and 2016). Cancer survivors and those never diagnosed with cancer also reported receiving emotional support sometimes, rarely, or never at similar rates (2014 and 2016).

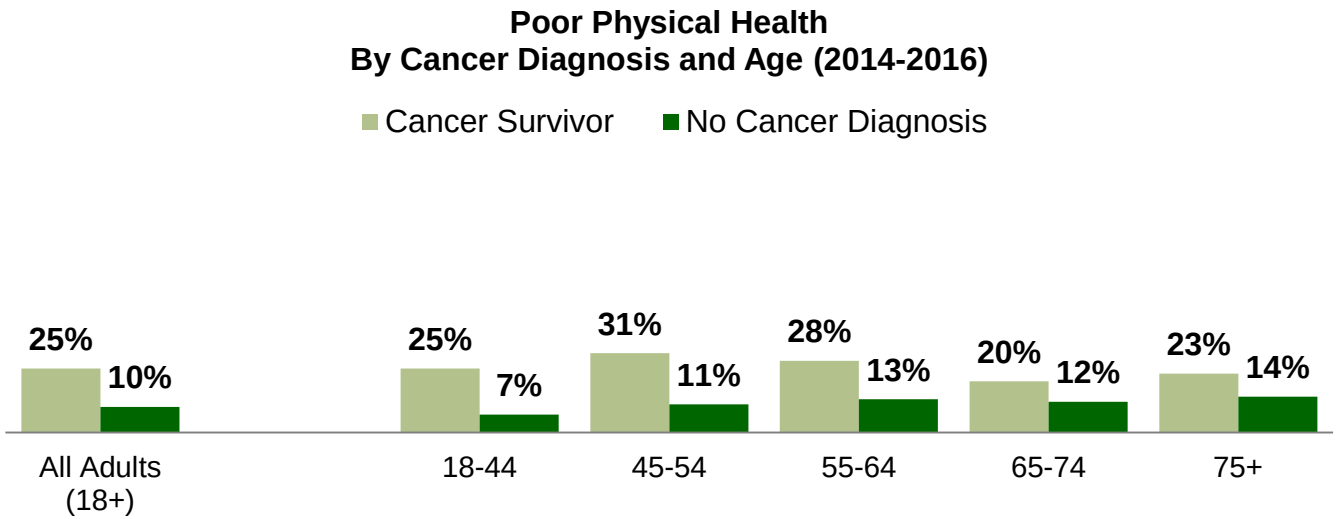




Quality of Life: Physical Health by Age

Overall, a larger percentage of Vermont cancer survivors experienced poor physical health on at least 14 days of the last month than did those Vermonters never diagnosed with cancer (2014-2016).

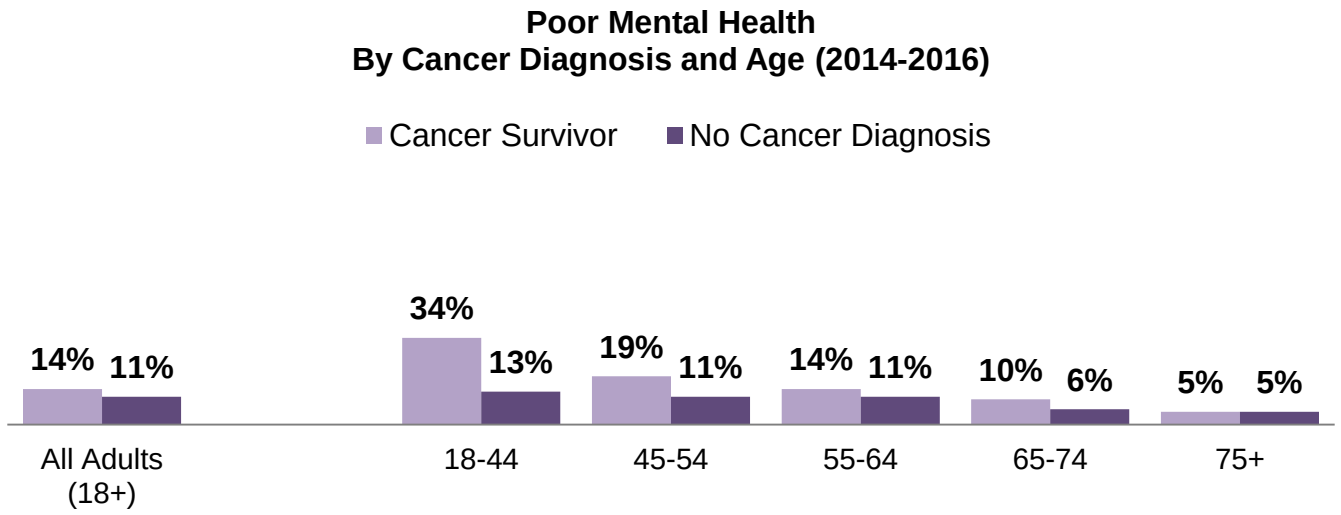
When broken down by age, a larger percentage of Vermont cancer survivors in all age groups reported having poor physical health on at least 14 days of the previous month than those never diagnosed with cancer (2014-2016). Vermonters aged 18-44 who had ever been diagnosed with cancer were more than twice as likely to have reported poor physical health in at least 14 days of the past month than those never diagnosed with cancer (2014-2016).



Quality of Life: Mental Health by Age

A higher percentage of cancer survivors reported poor mental health on 14 or more days during the past month than did individuals never diagnosed with cancer (2014-2016).

When broken down by age, a greater percentage of Vermont cancer survivors ages 18-54 and 65-74 reported having poor mental health on at least 14 days of the previous month than those never diagnosed with cancer (2014-2016).

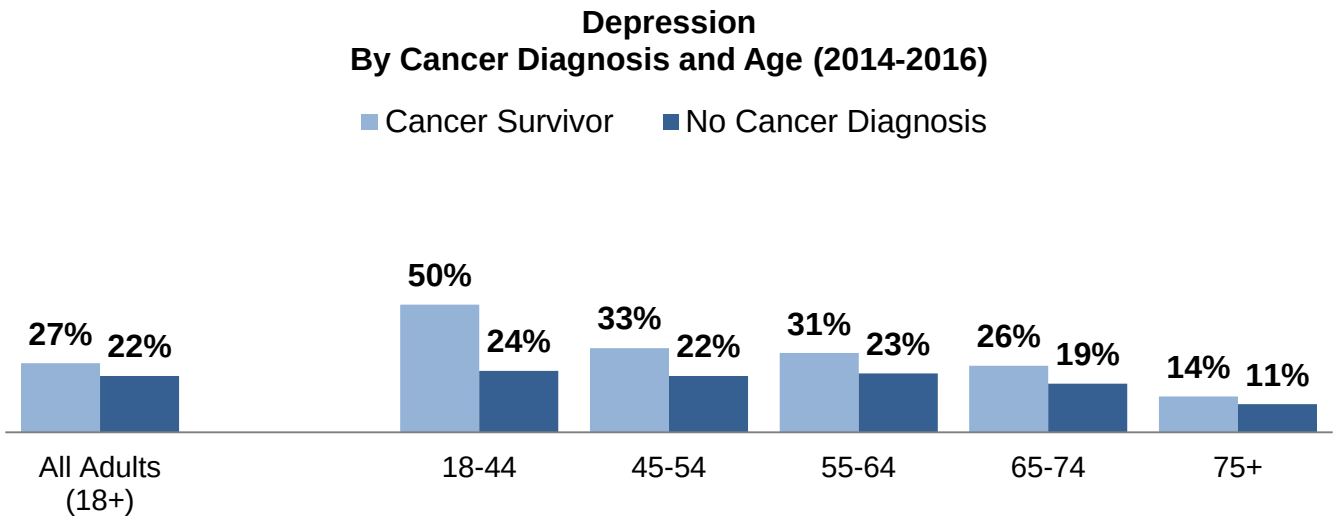


Quality of Life: Depression by Age

A higher percentage of adult Vermont cancer survivors reported having been diagnosed with depression compared to adult Vermonters who have never had a diagnosis of cancer (2014-2016).

When broken down by age, a larger percentage of Vermont cancer survivors ages 18-44, 45-54, 55-64 and 65-74 reported having ever been diagnosed with depression than those never diagnosed with cancer (2014-2016).

Among those 75 and older there were no differences in the rates of depression between cancer survivors and those never diagnosed with cancer (2014-2016).

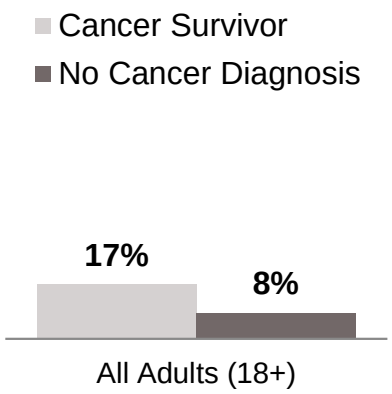


Quality of Life: Cognitive Decline

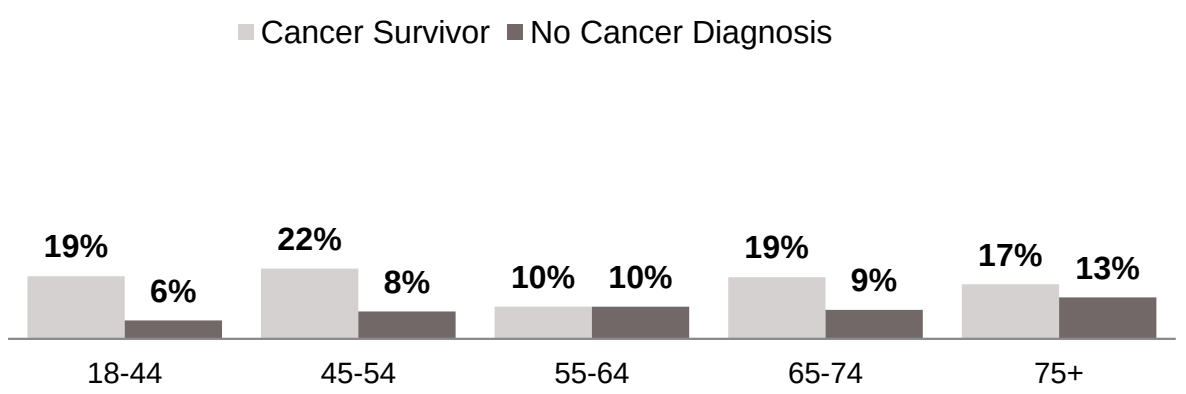
Vermonters were asked “In the past 12 months, have you experienced confusion or memory loss that is happening more often or is getting worse?” Those who were cancer survivors were more than twice as likely to report experiencing cognitive decline than those who were never diagnosed with cancer (2013).

When divided into age groups those cancer survivors aged 18-44 reported cognitive decline at more than three times the rate of those never diagnosed with cancer (2013). Among those aged 45-54 and 65-74, cancer survivors were more likely to report cognitive decline than those never diagnosed with cancer (2013). Among those aged 55-64 and those 75 and older, cancer survivors and those never diagnosed with cancer were equally likely to report cognitive decline (2013).

Cognitive Impairment By Cancer Diagnosis (2013)



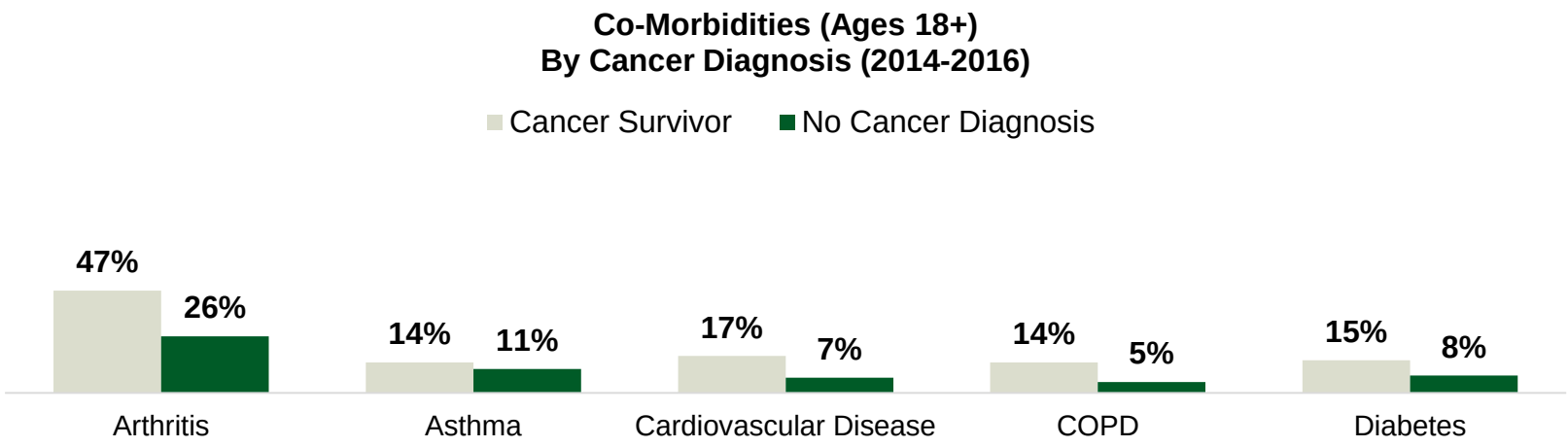
Cognitive Impairment By Cancer Diagnosis and Age (2013)



Co-Morbidities

Some adult Vermont cancer survivors reported being diagnosed with additional chronic disease (co-morbidities).

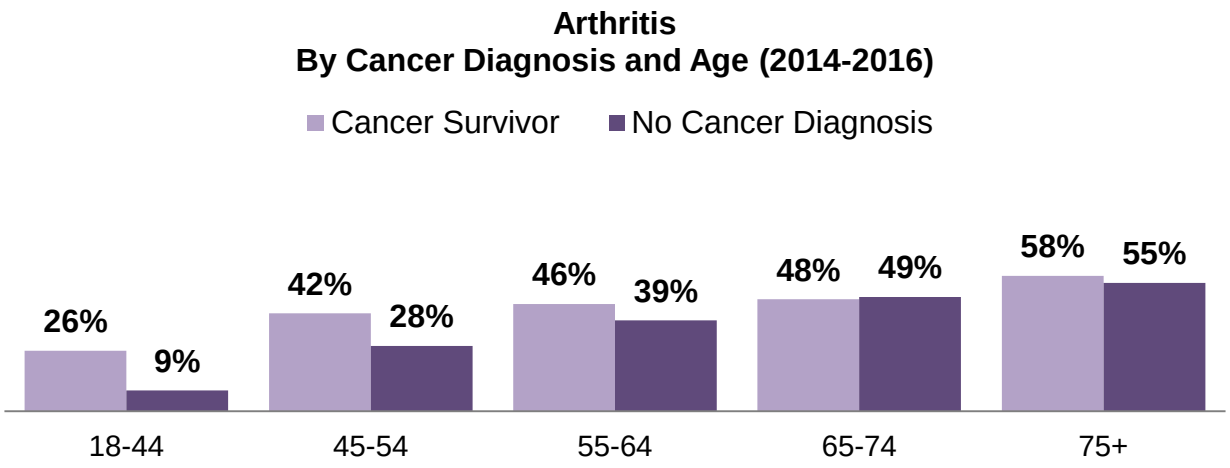
Among adult Vermont cancer survivors arthritis, asthma, cardiovascular disease, chronic obstructive pulmonary disease (COPD), and diabetes were all reported at higher rates than among those adult Vermonters never diagnosed with cancer (2014-2016).



Arthritis by Age

Cancer survivors aged 18-44 and 45-54 were more likely to have reported an arthritis diagnosis than those aged 18-44 and 45-54 who never had a cancer diagnosis (2014-2016).

However, among Vermonters 54-64, 65-74, and 75 and older, rates of arthritis were similar between cancer survivors and those never diagnosed with cancer (2014-2016).

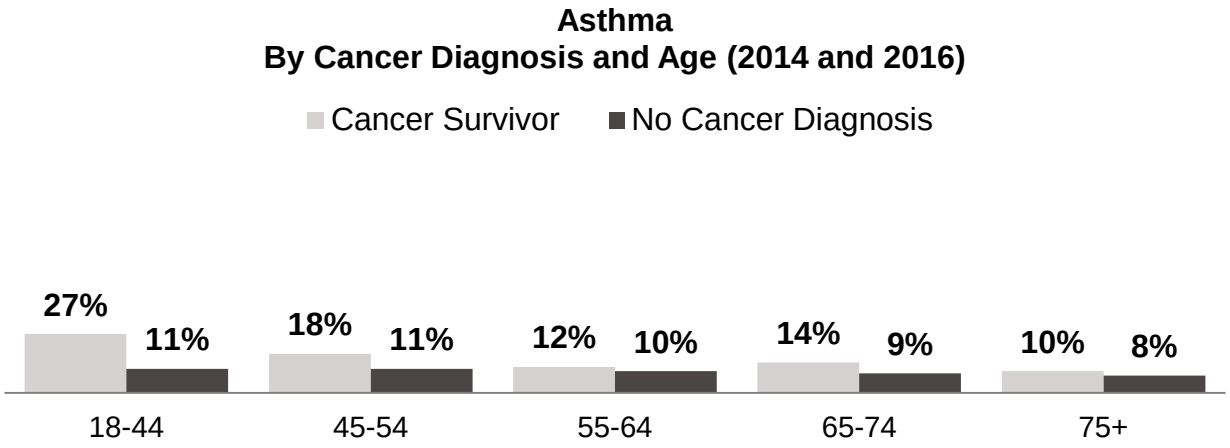


Asthma by Age

Vermonters aged 18-44 were more likely to have reported having asthma if they had been diagnosed with cancer than those not diagnosed with cancer (2014-2016).

Vermonters ages 45-54, 55-64, 65-74, and 75 and older were no more likely to have reported having asthma if they had been diagnosed with cancer than those not diagnosed with cancer (2014-2016).

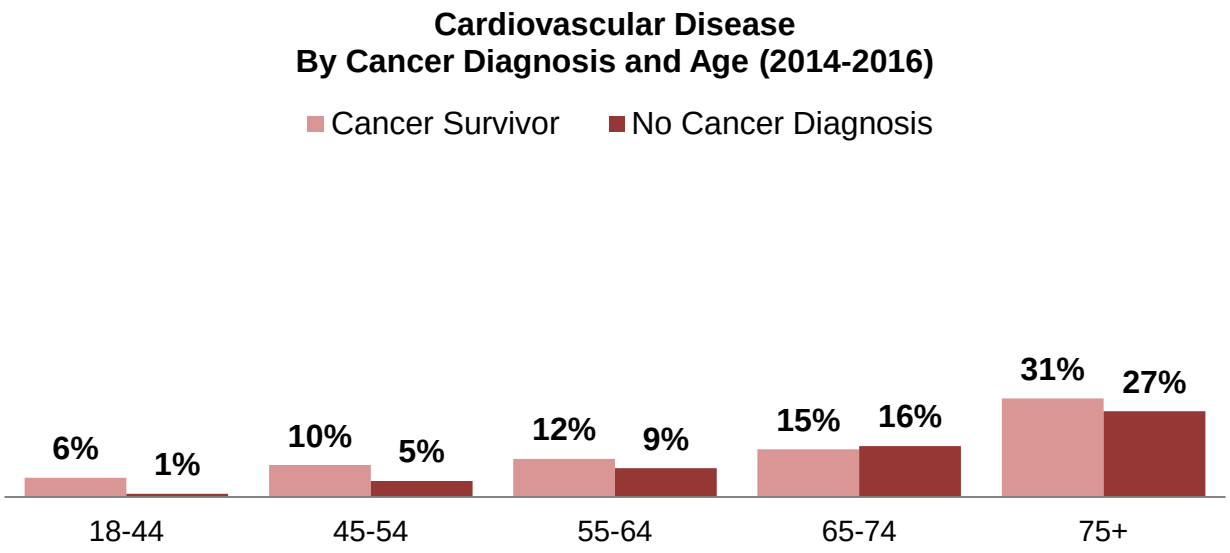
Vermont adult cancer survivors who are a racial or ethnic minority reported having asthma at a higher rate than White Non-Hispanic cancer survivors (data not shown, 2014-2016).



Cardiovascular Disease by Age

Cancer survivors aged 18-54 were more likely to have reported being diagnosed with cardiovascular disease than those aged 18-54 who never had a cancer diagnosis (2014-2016).

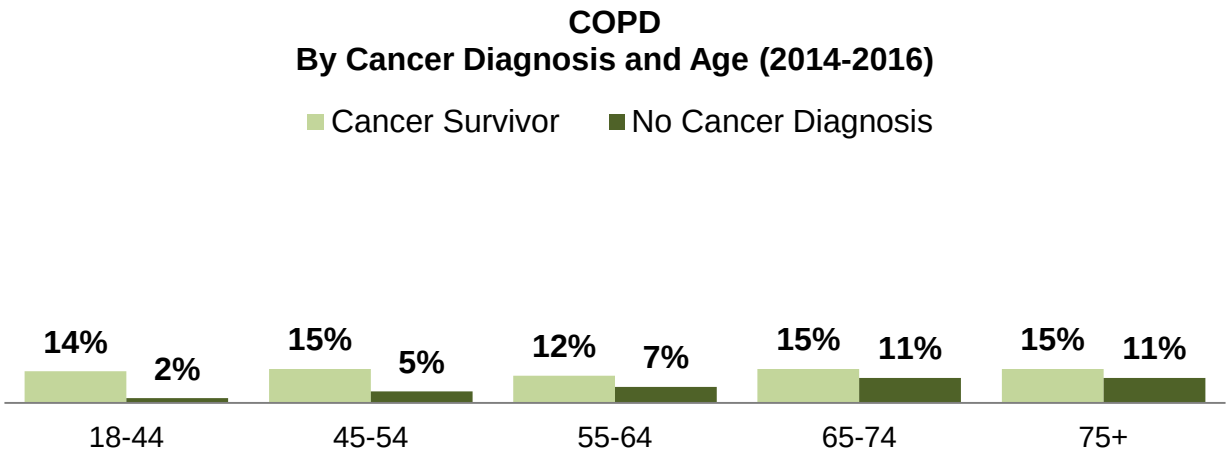
However, among Vermonters 55 and older, there were no differences in the rates of cardiovascular disease between cancer survivors and those never diagnosed with cancer (2014-2016).



Chronic Obstructive Pulmonary Disease (COPD) by Age

Vermont cancer survivors aged 18-44, 45-54, and 55-64 were more likely to have reported diagnosis of COPD than those not diagnosed with cancer (2014-2016). Vermont cancer survivors age 18-44 were more than twice as likely to have reported a diagnosis of COPD (14%) than those not diagnosed with cancer (2%, 2014-2016).

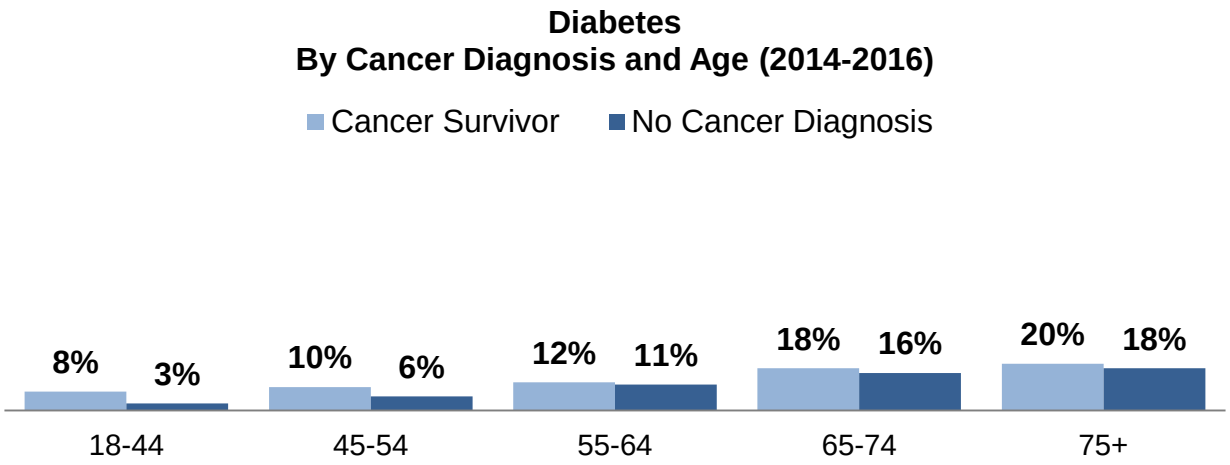
There was no difference among Vermonters ages 65-74, or 75 and older in the prevalence of COPD between cancer survivors and those never diagnosed with cancer (2014-2016).



Diabetes by Age

Vermont adult cancer survivors ages 18-44 were more likely to report a previous diagnosis of diabetes (8%) in comparison to Vermont adults ages 18-44 who have never had a cancer diagnosis (3%, 2014-2016).

There were no differences among Vermonters ages 45-54, 55-64, 65-74, and 75 and older in the prevalence of diabetes between cancer survivors and those never diagnosed with cancer (2014-2016).



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.

Health Insurance: Comparisons between those with and without health insurance are always limited to those below age 65 since all Americans above age 65 are eligible for health insurance via Medicare.

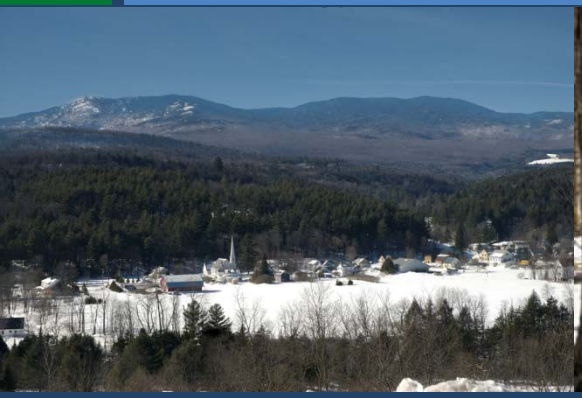
Education: Comparisons among those with different levels of education are always limited to those aged 25 and older since many adults under age 25 are in the process of obtaining additional education.

Federal poverty level (FPL) is a federal measure calculated from both annual household income and family size. FPL is used to determine eligibility for government assistance programs. People living below 250% FPL, for example, are still considered low income, often lacking sufficient income to meet basic needs.

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.

Acknowledgement: This publication was supported by Grant/Cooperative Agreement Number NU58DP006322 from the Centers for Disease Control and Prevention. Its contents are solely the responsibility of the authors and do not necessarily represent the official views of the Centers for Disease Control and Prevention.




Cancer Data Pages: Cancer Mortality

VERMONT
DEPARTMENT OF HEALTH

April 2018

Introduction

Cancer is a group of more than 100 different diseases that often develop gradually as the result of a complex mix of lifestyle, environment, and genetic factors. People are at higher risk for certain cancers due to factors related to personal behaviors such as: tobacco use, alcohol use, diet, physical inactivity, and overexposure to sunlight. Vaccination with the HPV vaccine prior to exposure to the virus can decrease the risk of certain cancers. Cancer becomes more survivable when found and treated early, which can be accomplished through the use of available cancer screening tests including those for lung, breast, cervical, and colorectal cancers.

The purpose of this report is to present cancer mortality data from the Vermont Vital Statistics System.

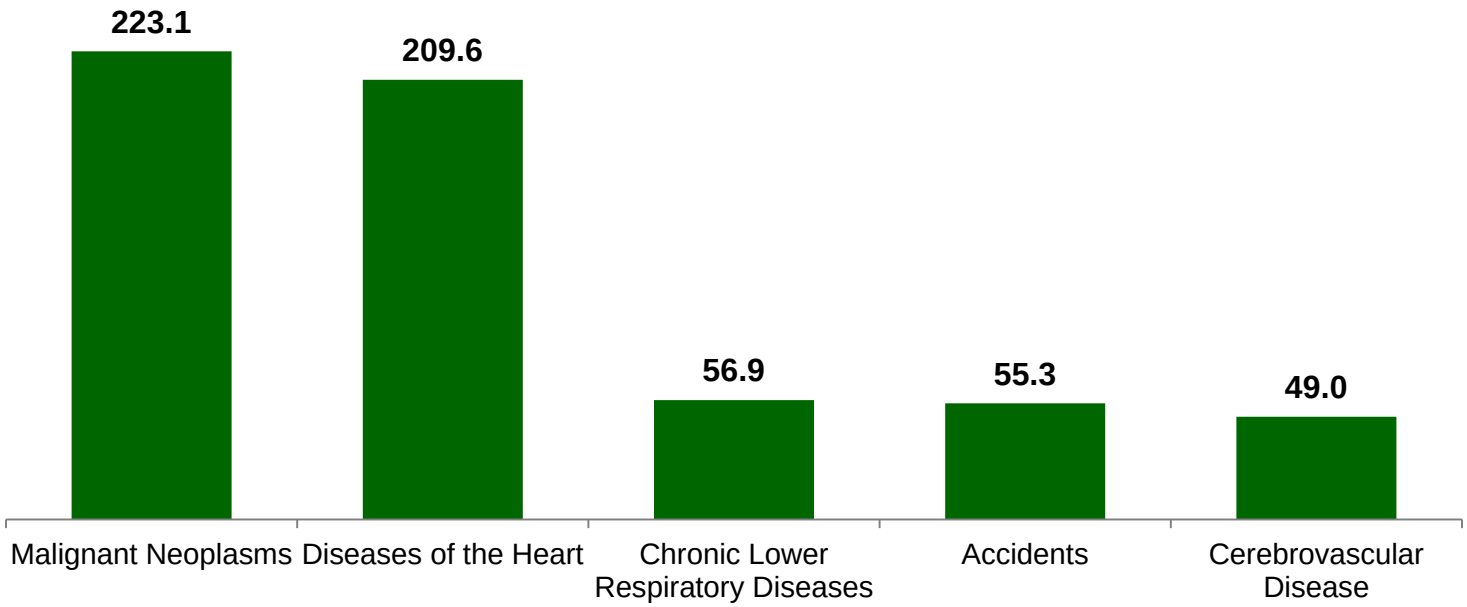
Note: *Throughout this report, data comparisons presented as "higher," "lower," "larger," "smaller," "better," "worse," or as "significantly different" are all considered statistically significant differences.*

Confidence intervals were used for statistical comparisons between groups. A confidence interval represents the range in which a parameter estimate would 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, do not overlap we consider the estimates to be significantly different from one another.

Leading Causes of Death

From the 1960's through 2006 the two leading causes of death in Vermont were heart disease and cancer (malignant neoplasms), respectively. In 2007 cancer took over as the leading cause of death among Vermonters. Cancer remains the leading cause of death in Vermont with an age-adjusted mortality rate of 223.1 per 100,000 persons (2015).

Leading Causes of Death in Vermont (2015)



Note: All rates are age adjusted to the 2000 U.S. standard population and are per 100,000 persons.

Leading Causes of Cancer Death – VT vs. U.S.

The Vermont lung cancer mortality rate among males and females combined was higher than the national rate (2010-2014).

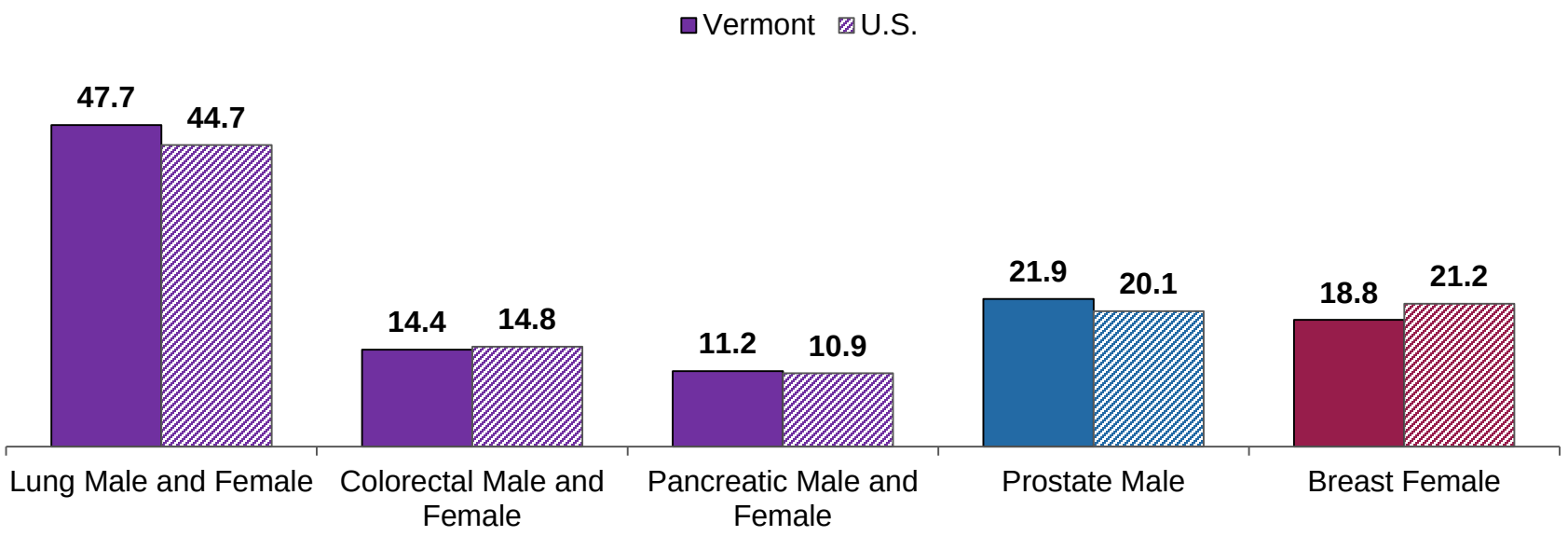
The Vermont colorectal cancer mortality rate among males and female combined was similar to the national rate (2010-2014).

The Vermont pancreatic cancer mortality rate among males and female combined was similar to the national rate (2010-2014).

The Vermont male prostate cancer mortality rate was similar to the national rate (2010-2014)

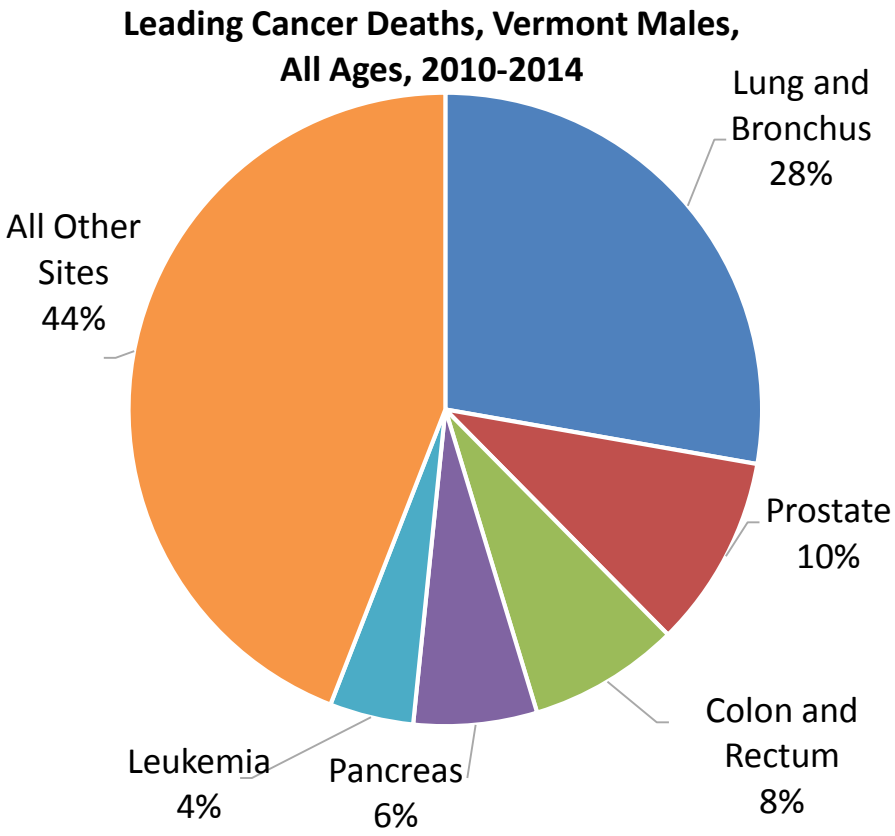
The Vermont female breast cancer mortality rate was lower than the national rate (2010-2014).

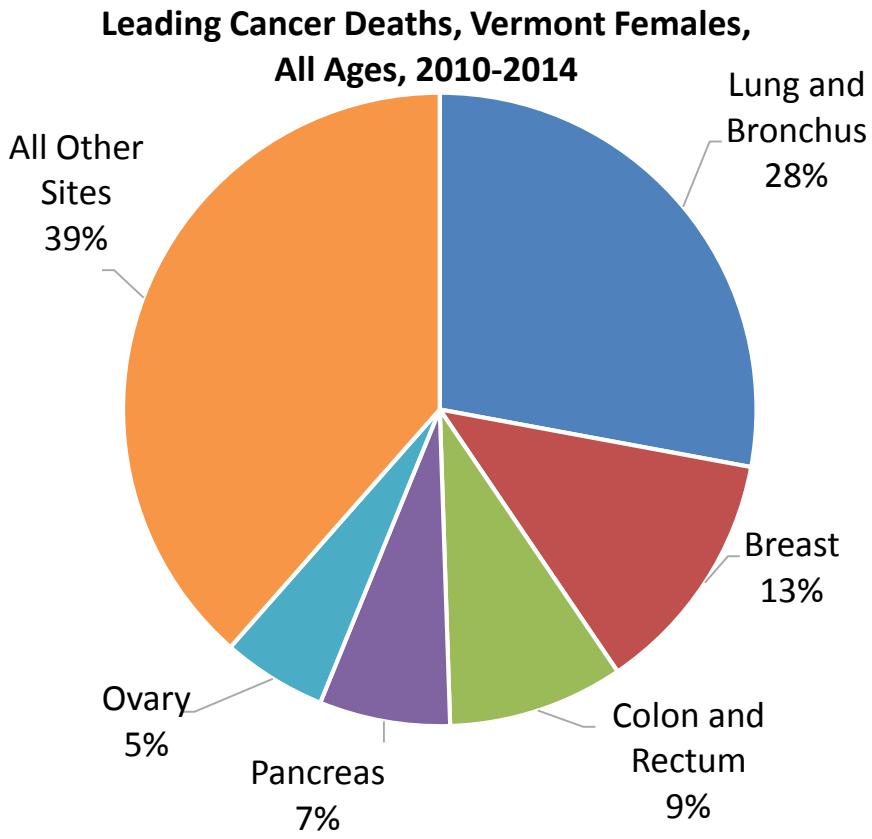
Leading Causes of Cancer Death
Mortality Rates by Cancer Type (2010-2014)



Note: All rates are age adjusted to the 2000 U.S. standard population and are per 100,000 persons.

Cancer Mortality by Sex





Data Notes

Vital Statistics: The Vermont Department of Health vital statistics system tracks the following vital events that occur in Vermont: births, deaths, marriages, divorces and dissolutions, fetal deaths, and abortions. The Department of Health also receives abstracts for Vermont resident births and deaths that occur in other states which allows the Department to do statistical analyses of vital events involving Vermont residents, including those events which occurred outside of the state. The Vermont and the U.S. mortality rates are based on the Vermont Vital Statistics System, Vermont Department of Health (1994-2014) and the SEER Program Mortality - Aggregated Total U.S. (1990-2014). Mortality data were coded using the International Classification of Disease Tenth Revision (ICD-10) coding system. Vermont deaths include Vermont residents only.

Age adjustment: All rates are age adjusted to the 2000 U.S. standard population and exclude basal cell and squamous cell skin cancers.

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