



Cancer Data Pages: Cancer Incidence

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).

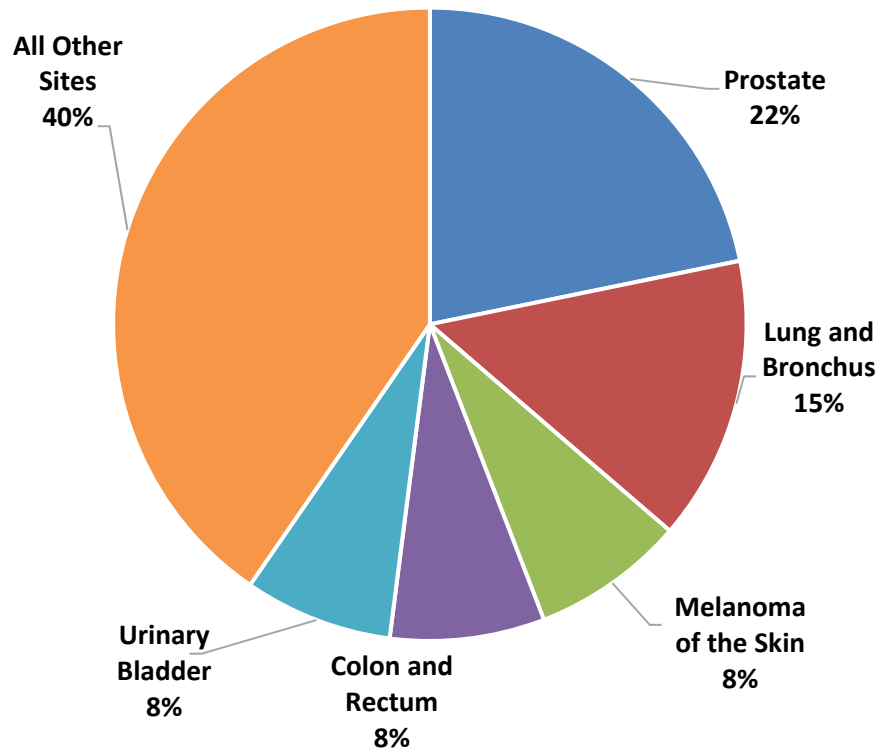
Note: Throughout this report, data comparisons presented as “higher,” “lower,” “larger,” “smaller,” “better,” “worse,” or as “significantly different” are all considered statistically significant differences.

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.

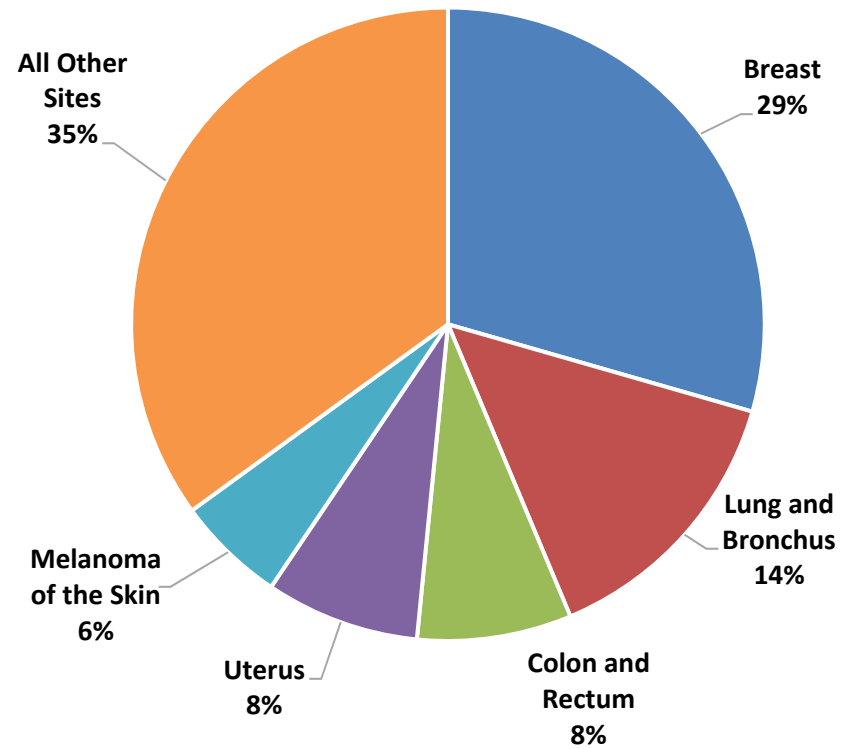
Cancer Incidence

Cancer Incidence by Sex

Leading Cancer Sites, Vermont Males, All Ages, 2010-2014



Leading Cancer Sites, Vermont Females, All Ages, 2010-2014



Cancer Incidence

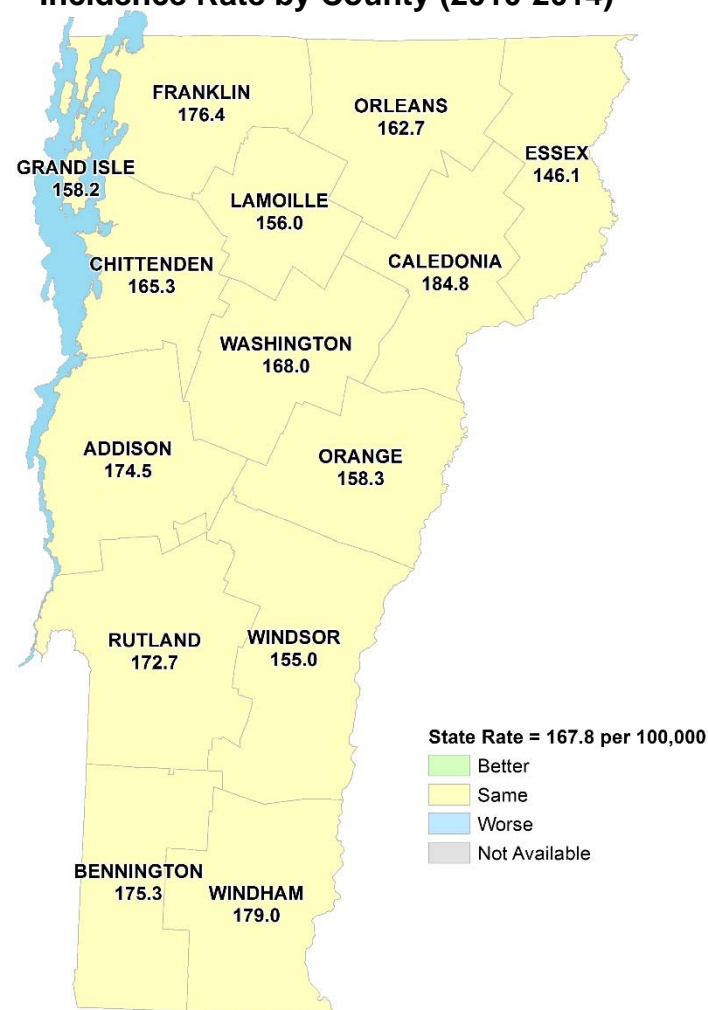
Obesity-Associated Cancers

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.

Cancer Incidence

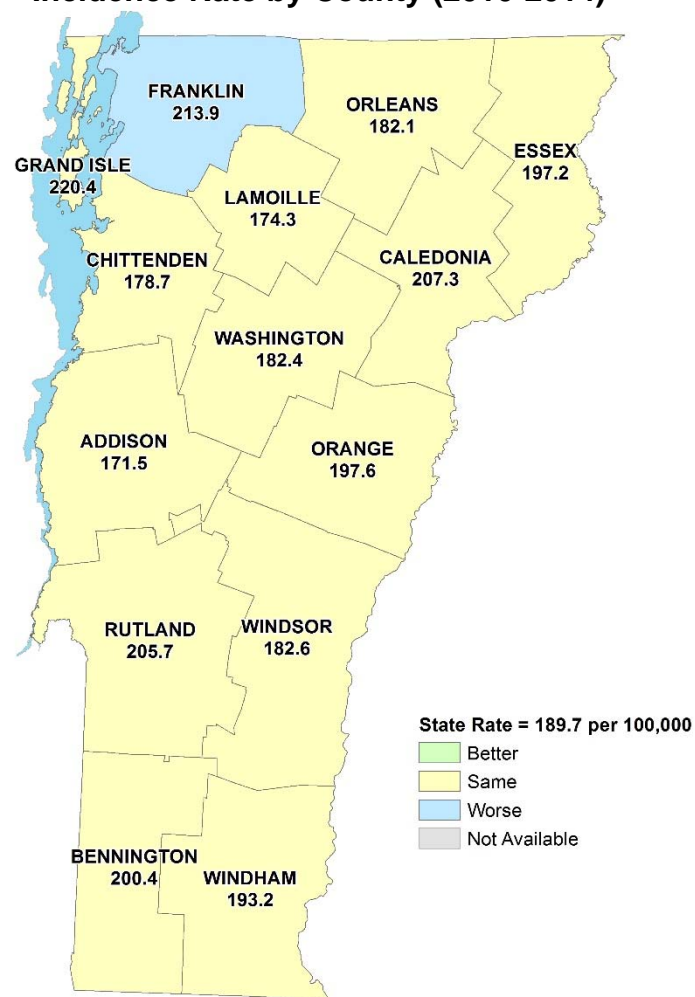
Tobacco-Associated Cancers

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.

Cancer Incidence

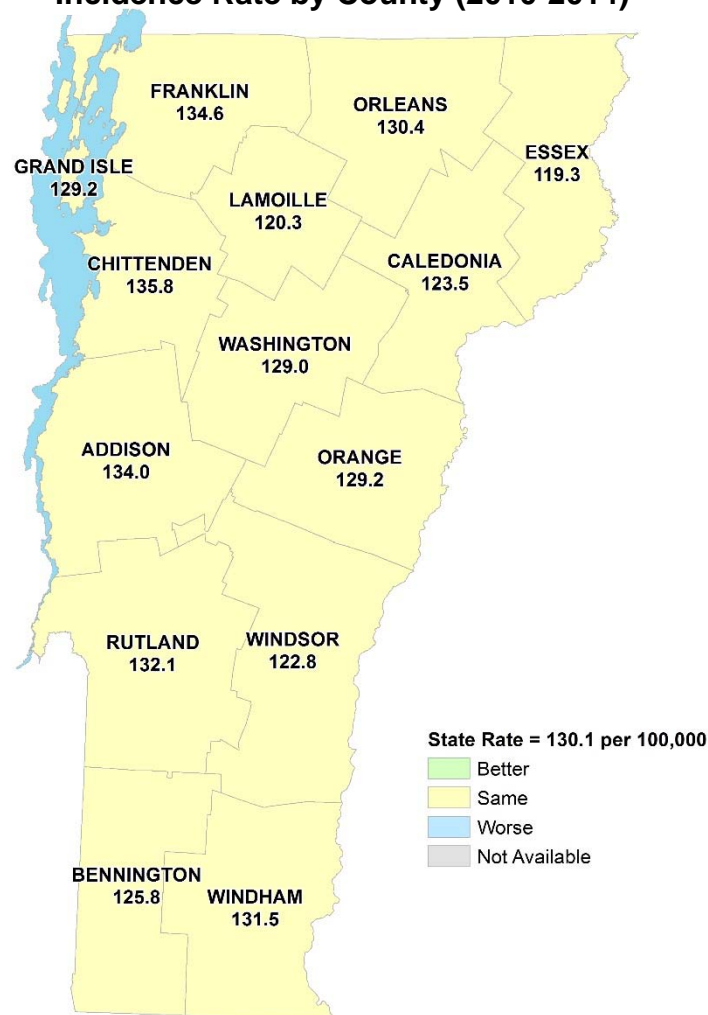
Alcohol-Associated Cancers

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.

Cancer Incidence

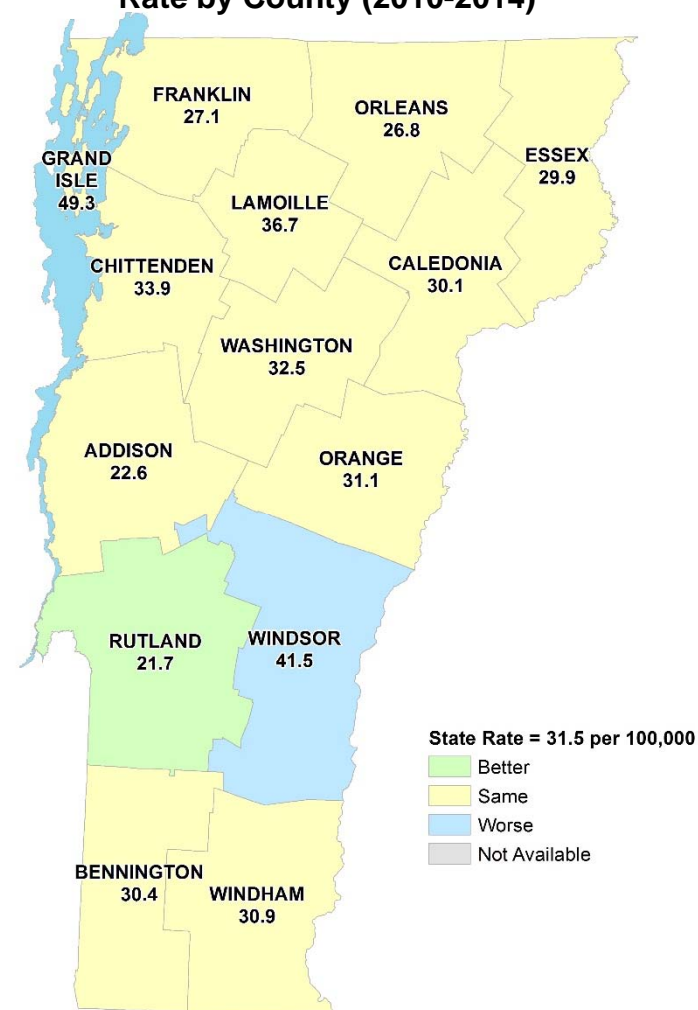
Melanoma, UV-Associated Cancer

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.

Cancer Incidence

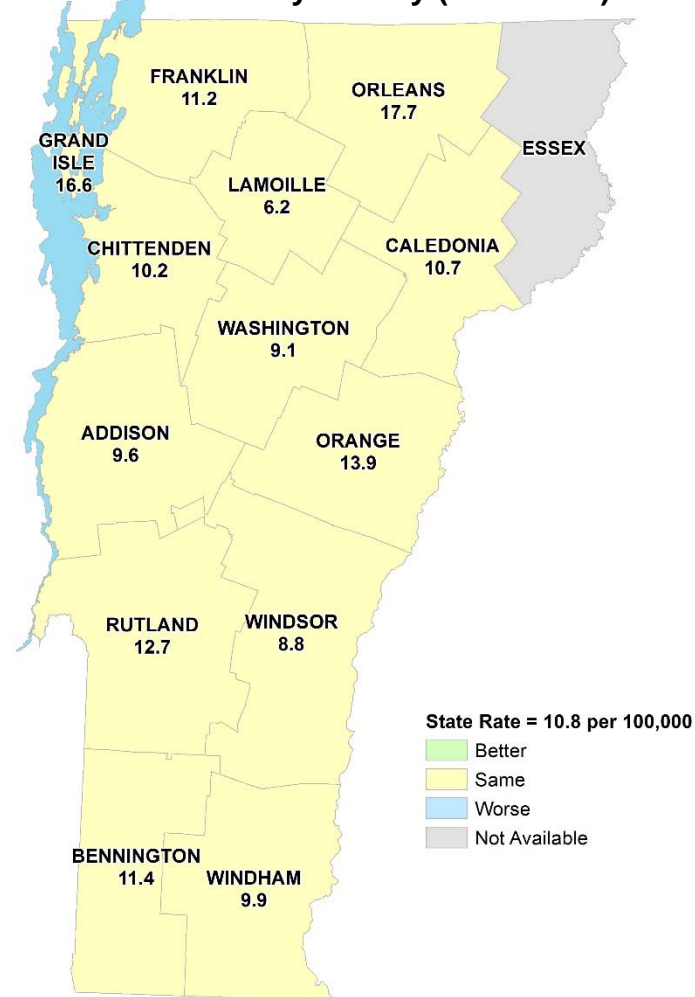
HPV-Associated Cancers

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).

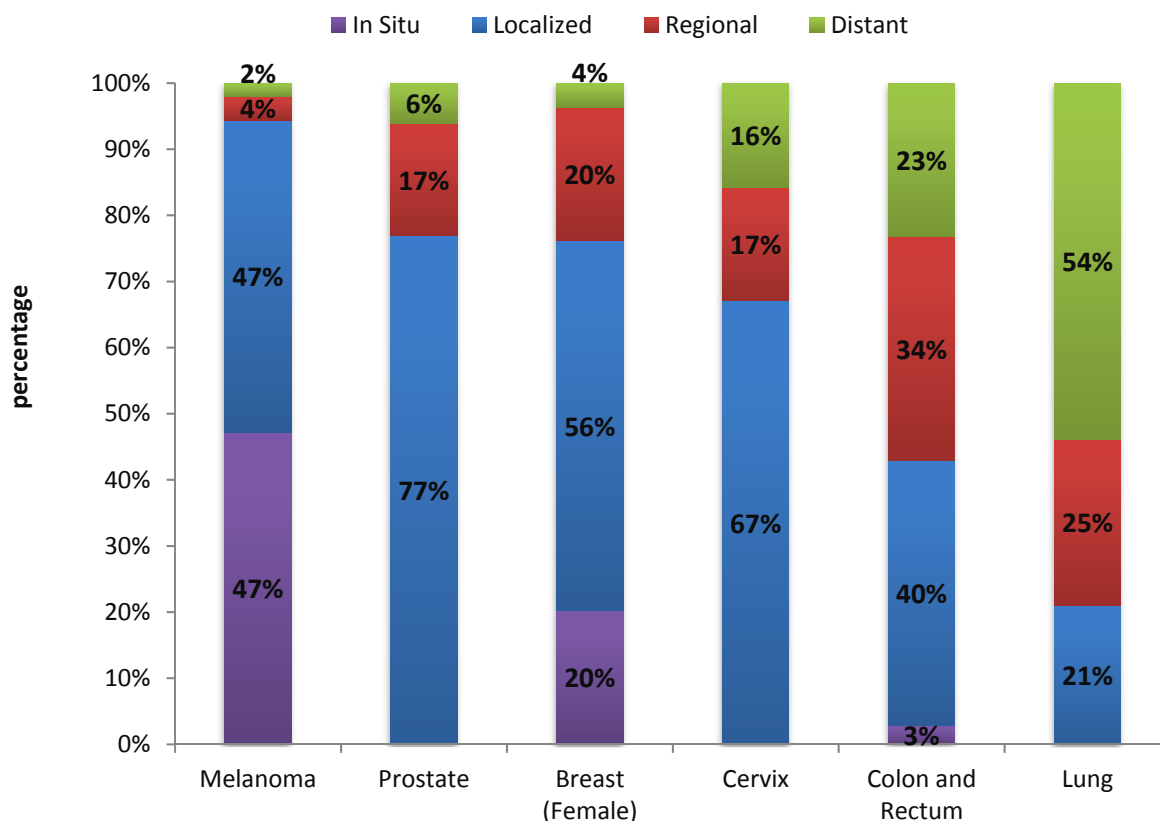
**HPV-Associated Cancers
Incidence Rate by County (2010-2014)**



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

Cancers by Stage at Diagnosis

Cancer Stage at Diagnosis
 % of total cases of cancer, by type, according to stage at diagnosis, 2010-2014



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

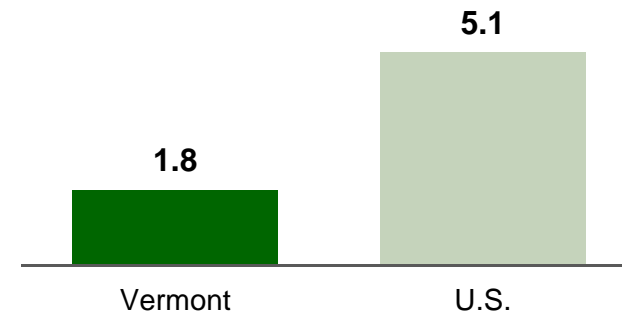
Advanced Stage Diagnosis – Cervical Cancer

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.

Cancer Incidence

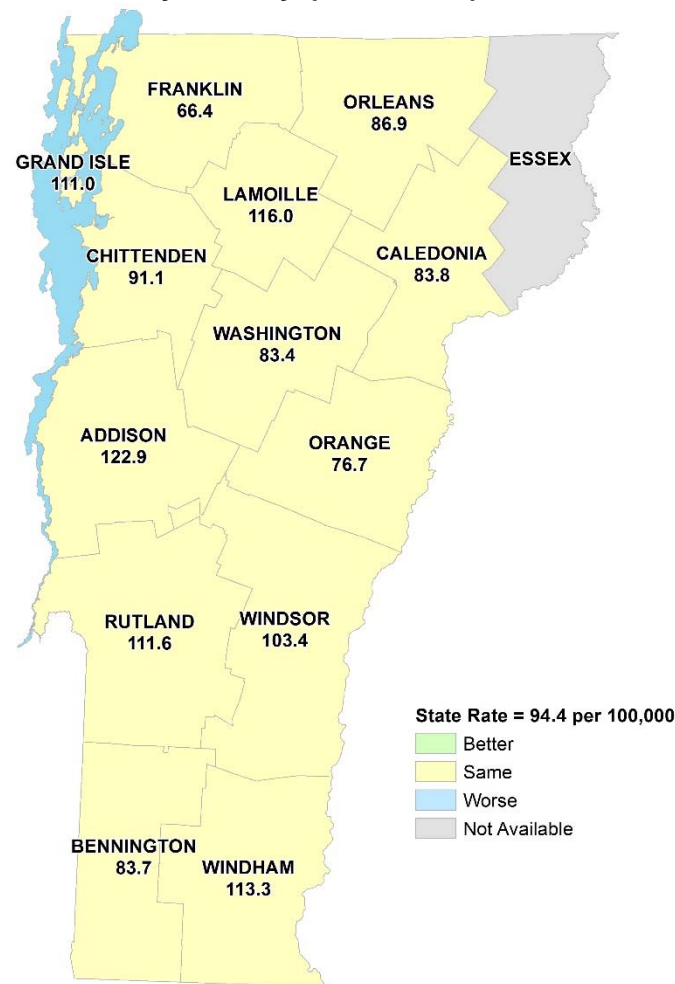
Advanced Stage Diagnosis – Breast Cancer

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.

Cancer Incidence

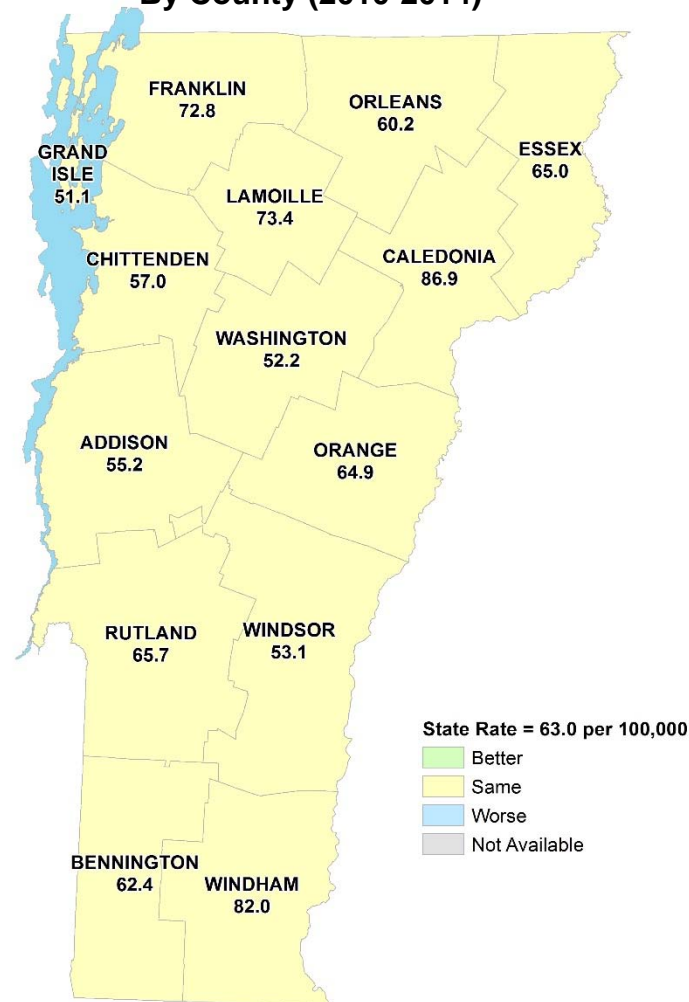
Advanced Stage Diagnosis – Colorectal Cancer

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.

Cancer Incidence

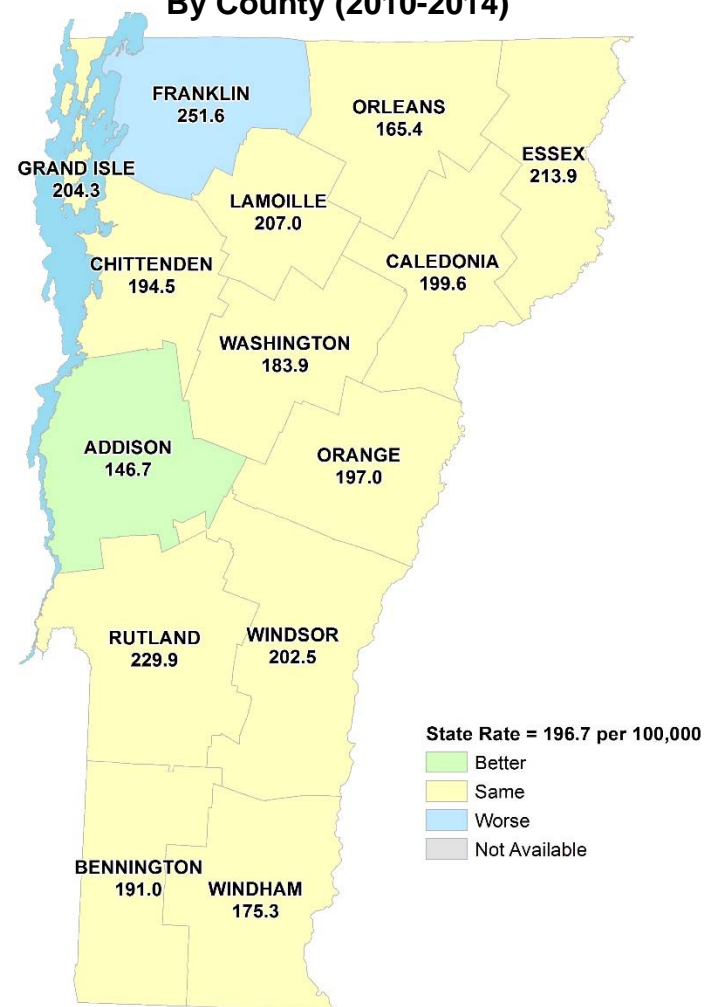
Advanced Stage Diagnosis – Lung Cancer

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.

Cancer Incidence

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.