



Cancer Incidence in Rutland: Understanding the Risk

Overview



- How cancer statistics are created and what they mean.
- Rutland County compared to State and U.S.
- What increases risk for developing cancer.
- Accessing cancer data.



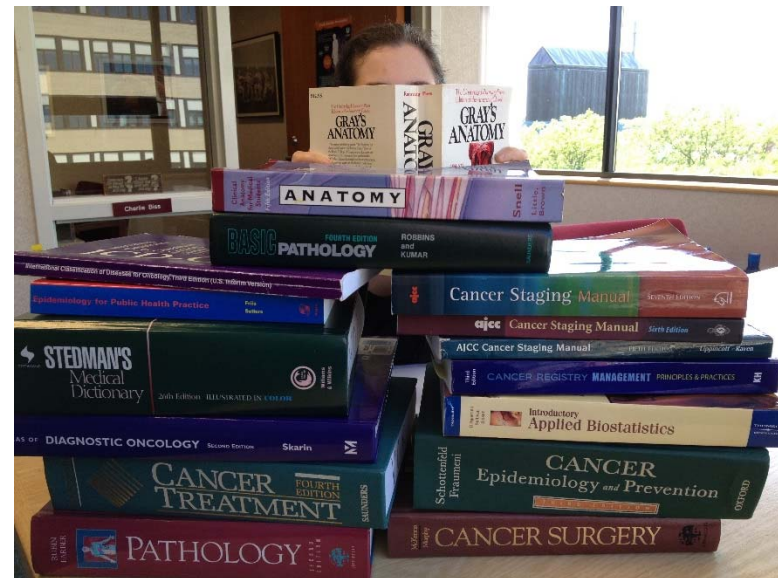
About Cancer Data

Keep in mind...

- The numbers we present are meant to describe and enhance understanding of a subject.
- Context is necessary in order to understand the numbers
 - What is the nature of the disease?
 - What is the nature of the population at risk?
 - Is there a common thread?
- Numbers are not the be-all end-all
 - They're just one tool, really.

What are data?

- Rates
 - ▣ Incidence and Mortality
- Statistical Significance
- Where do data come from?
 - ▣ Where to find data
 - ▣ Who collects data?
 - ▣ How do they collect it?



Where do numbers come from?

- Different agencies collect data
 - ▣ Primary and Secondary Reporting
 - Komen's *Vermont-New Hampshire Community Profile** used National Cancer Institute Data.
- When were the data collected?
- How representative are the data?
 - ▣ Sample.
 - ▣ Census.
- What is a 'statistic'?
 - ▣ Using a subset of the population (a sample) to understand and/or describe it.

**Community Profile Report*, Susan G. Komen for the Cure and Vermont-New Hampshire Affiliate, 2009.
<http://www.komenvtnh.org/assets/grants-documents/community-profile.pdf>

Sources of Cancer Data



- ❑ Cancer Registry
- ❑ Death Certificates
- ❑ Surveys
- ❑ Research Studies

Rates

- Frequency of a disease over a time period divided by the unit size of the population during that same time period.
- Incidence rates measure occurrence.

$$= \frac{\text{\# of NEW cases diagnosed during a period of time}}{\text{\# of the population at risk}} \times 100,000$$

- Usually expressed in the form of per some number of the population i.e. per 100,000

$$= \frac{450 \text{ new cases of pertussis}}{2,134,000 \text{ people at risk during time period}} \times 100,000$$

- = 0.000211 X 100,000 people
- = 21.1 cases of pertussis per 100,000 people – Gives more context.

Incidence and Prevalence

- **Incidence:** Number of NEW cases during a given period in a specified population.
 - ▣ Useful measure to help assess the risk of disease.
- **Prevalence:** Number of EXISTING cases during a given period in a specified population.

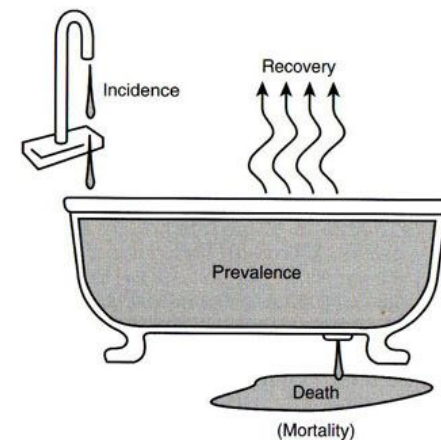


Figure 6-1 The epidemiologist's bathtub

What is significance?

- A *statistically significant difference* indicates that there is statistical evidence that there is a difference that is unlikely to have occurred by chance alone.

- Lower ▼
- Higher ▲
- Not Different (or Similar)

Small Numbers

- Small numbers (samples) = unreliable
 - ▣ If you chose 20 people at random and asked whether they have breast cancer...
 - Would it be accurate?
 - Would it represent the entire at risk population?
 - ▣ What about 50? 100? 200,000? One million people?
- Small geographic areas
 - ▣ Towns
 - ▣ Neighborhoods
 - ▣ Vermont is small in some areas
 - Numbers are calculated over several years



Cancer Incidence and Mortality

Vermont's Cancer Landscape

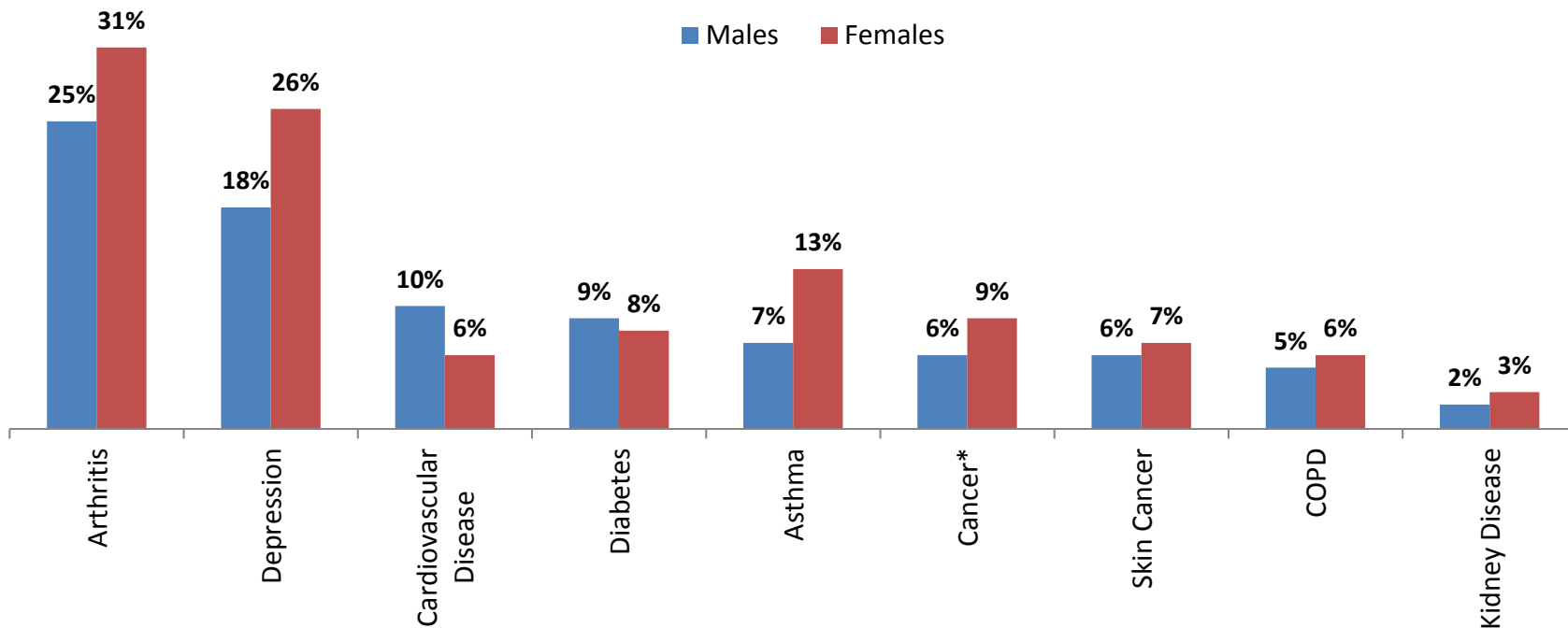
- Small, Mainly Rural (~626,000 pop.)
- Aging Population
 - ▣ 2nd oldest state
- 93.3% White Non-Hispanic
- Cancer Incidence
 - ▣ 461.2 per 100,000
 - ▣ ~3,600 cases per year
 - ▣ Statistically higher than U.S.
- Cancer Mortality
 - ▣ 166.1 per 100,000
 - ▣ ~1,300 deaths per year
 - ▣ Leading cause of death in Vermont
- Vermont Adults Living with Cancer
 - ▣ 8% or about 40,000



Data Sources:
Annual Estimates of Resident Population, U.S. Census Bureau, June 2017
Vermont Cancer Registry 2010-2014
Vermont Vital Statistics 2010-2014
Vermont BRFSS 2016

Chronic Disease Prevalence

Chronic Disease Prevalence, Adult (18+) Males and Females, 2016



* Excluding skin cancers.

Data Source: Behavioral Risk Factor Surveillance System, 2016

3 > 4 > 50



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

3 > 4 > 50

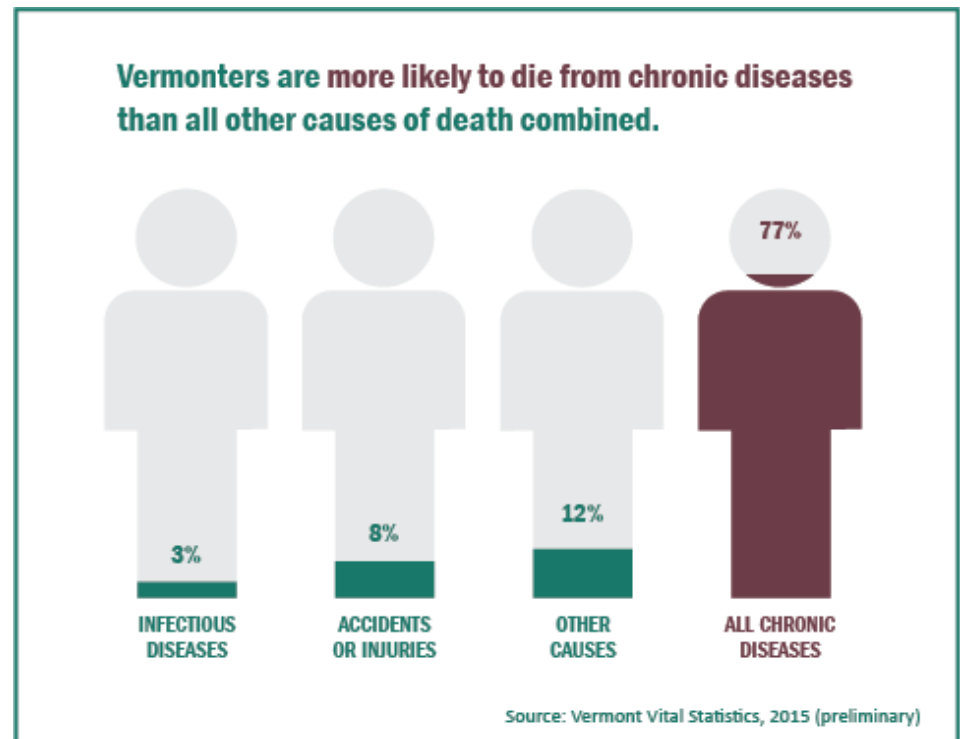
3 BEHAVIORS

Lack of physical activity, poor diet, and tobacco use lead...

4 CHRONIC DISEASES

Cancer, heart disease and stroke, type 2 diabetes, and lung disease result in more than...

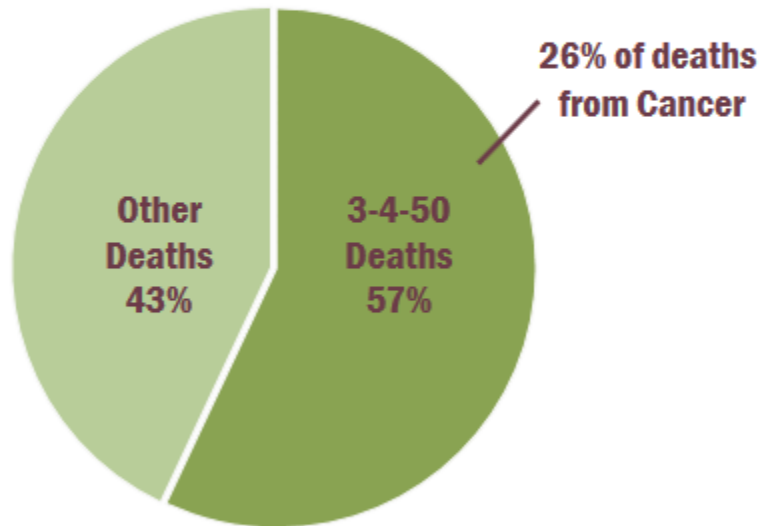
50% OF ALL DEATHS IN VERMONT



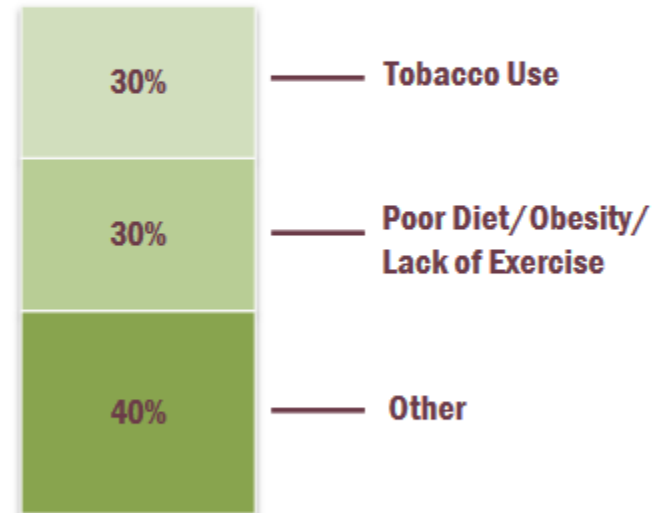
<http://www.healthvermont.gov/3-4-50>

3 > 4 > 50

3-4-50 Deaths Account for Majority of All Deaths



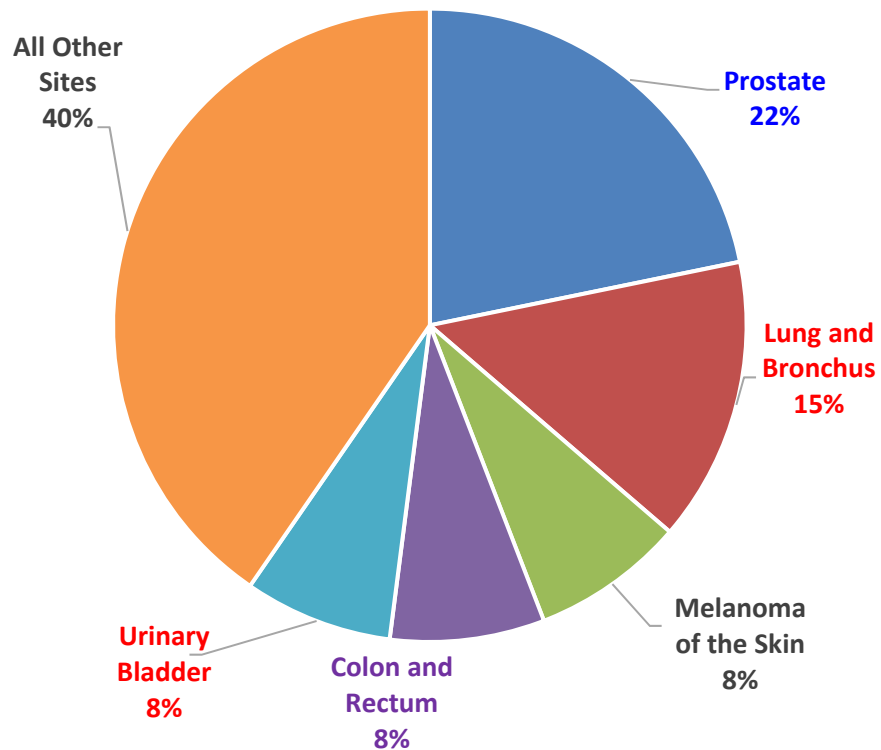
3 Behaviors are Leading Causes of Cancer



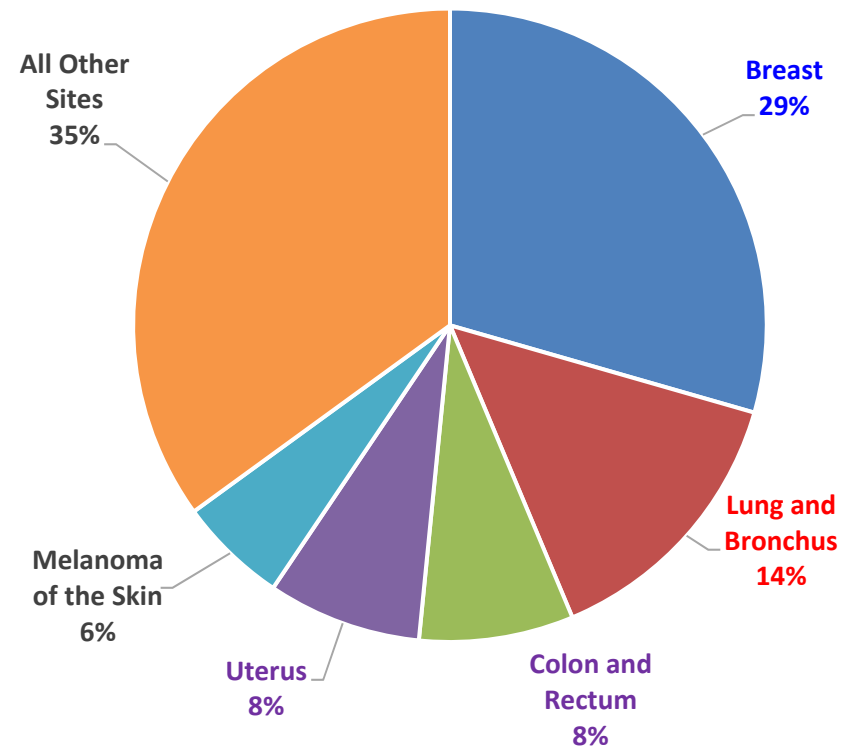
Data Sources: 2014 Vermont Vital Statistics (Provisional)
Cancer Causes Control. 2012 April; 23(4): 601-608. doi:10.1007/s10552-012-9924-y.

Leading Cancer Sites

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



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

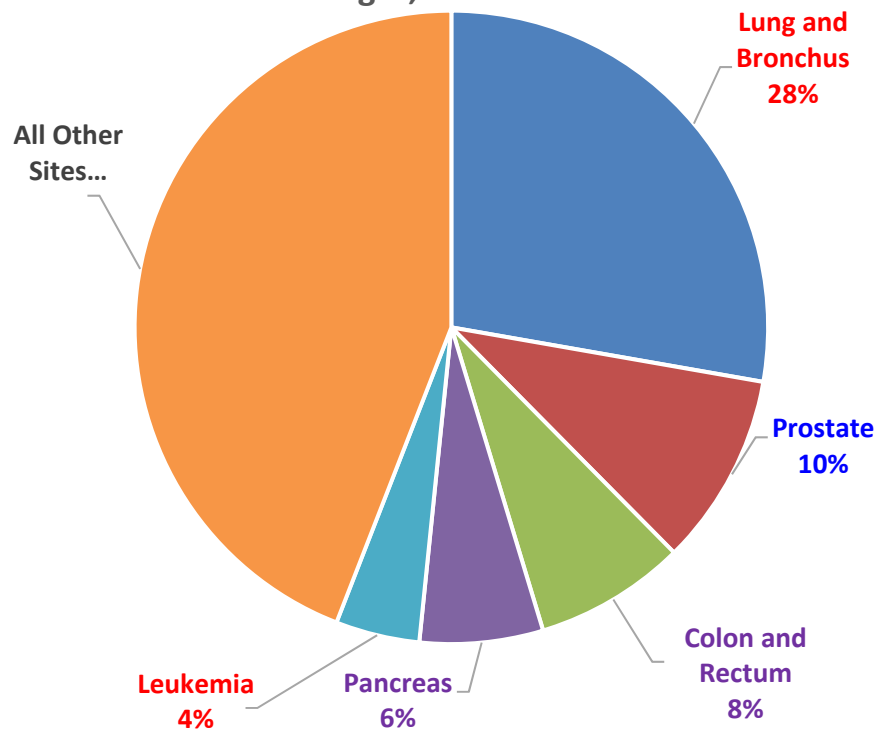


Note: Tobacco Associated **Red** - Obesity Associated **Blue** - Both **Purple**

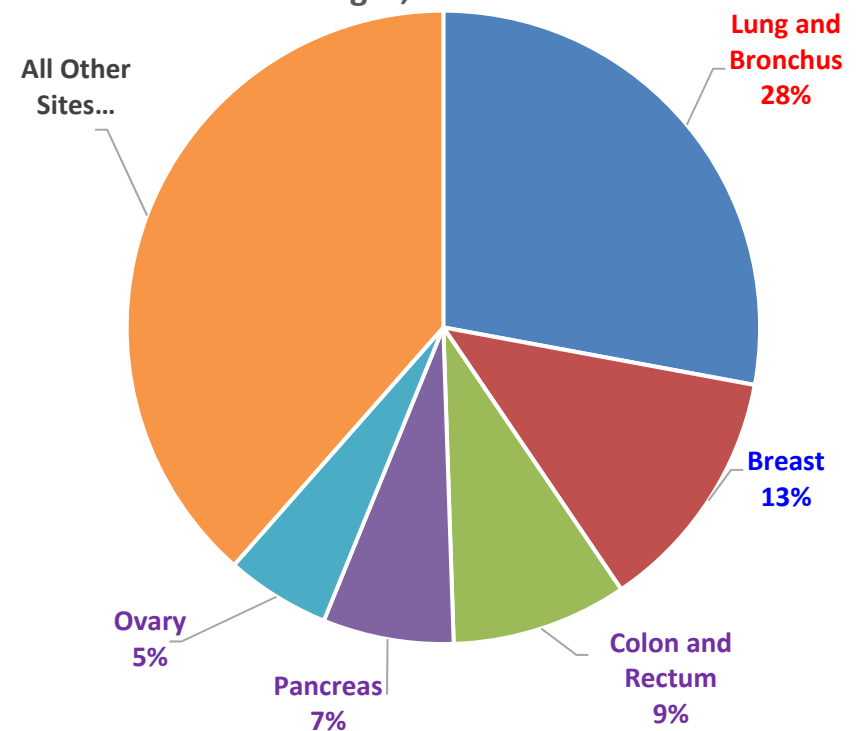
Data Sources: Vermont Cancer Registry, 2010-2014

Leading Cancer Cause of Death

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



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

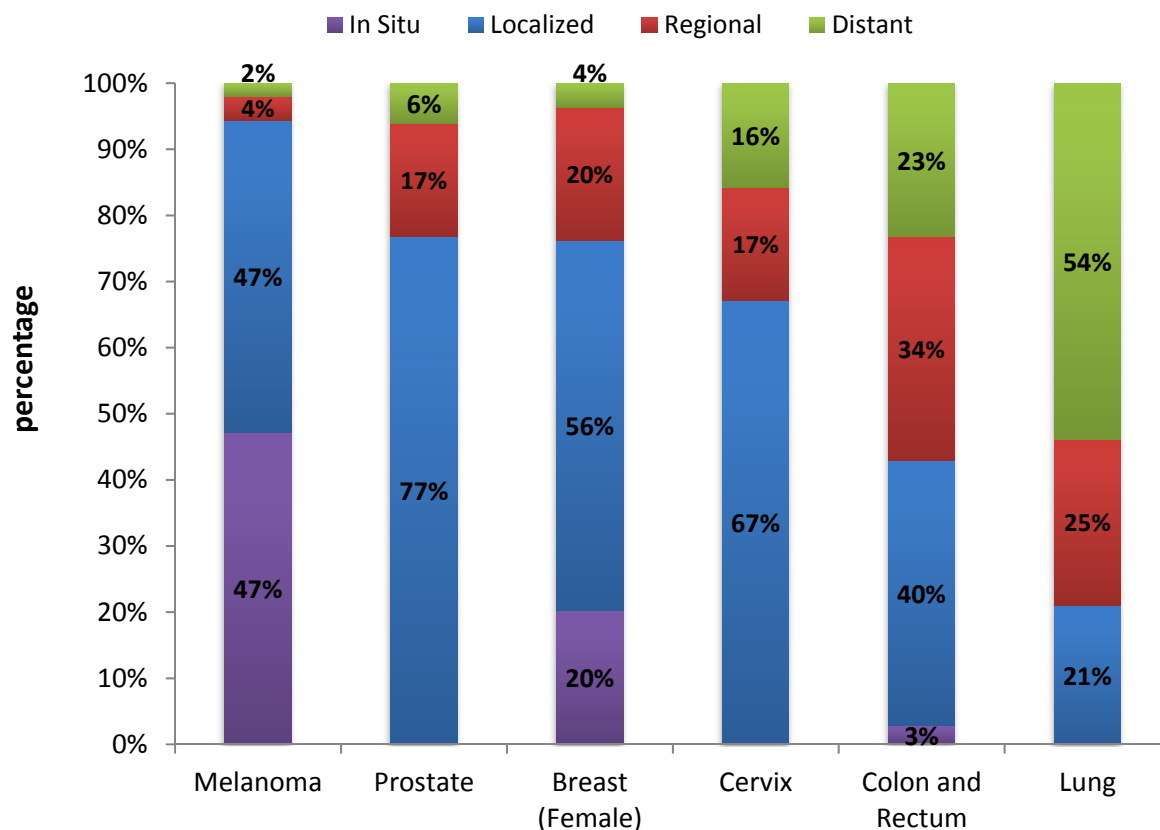


Note: Tobacco Associated **Red** - Obesity Associated **Blue** - Both **Purple**

Cancer Stage at Diagnosis

Cancer Stage at Diagnosis

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



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

Data Source: Vermont Cancer Registry, 2010-2014.

Survival

- Five Year Age-Standardized Relative Survival Ratios (RSR) for Cancers Diagnosed 2007-2013, All Sites, All races.
 - ▣ VT Males and Females: 66.0 ▲ (U.S. 64.3)
 - ▣ VT Males: 65.4 ▲ (U.S. 64.1)
 - ▣ VT Females: 66.2 ▲ (U.S. 64.0)

Note: Five Year Age-Standardized Relative Survival Ratios (RSR) for Cancers Diagnosed 2007-2013 Complete Method, Follow-Up Through 2013 by Registry, All Races, All Sites.

Data Source: Cancer in North America: 2010-2014, Vol. Four: Cancer Survival in the United States and Canada, 2007-2013, NAACCR.

Cancer Screening Guide

These are general guidelines for adults.

Talk with your medical provider about what screening tests you need based on your specific family and health history.

Guidelines are based on current U.S. Preventive Services Task Force (USPSTF)* recommendations.

	Cancer Type	Age				
		21–29 years	30–39 years	40–49 years	50–65 years	66+ years
Women	Breast			Ask your medical provider about your risk.	Mammogram every 2 years (until age 74)	
	Cervical	Pap test every 3 years	Pap test every 3 years or Pap test with HPV test every 5 years			
Men & Women	Colorectal				Colonoscopy every 10 years or Stool test every 1 to 3 years or Sigmoidoscopy every 5 years (or 10 years with annual stool test) or CT Colonography every 5 years (until age 75)	
	Lung				Annual imaging screening for current or former smokers** (ages 55–80)	
	Skin	Routine screening (whole body skin examination) is not recommended for all adults. Ask your medical provider about your risk.				
Men	Prostate	Prostate-Specific Antigen (PSA) screening is not recommended. Ask your medical provider about your risk.				

10/2016

* This is a summary of the current U.S. Preventive Services Task Force (USPSTF) recommendations for preventive cancer screenings. The USPSTF is an independent group of national experts in prevention and evidence-based medicine. The recommendations apply to people with **no signs or symptoms** of these diseases. More information can be found at: www.uspreventiveservicestaskforce.org

Other national organizations may have other recommendations for screening. Talk with your medical provider about what screening tests you need based on your specific family and health history.

** Current heavy smokers or those who have quit within the past 15 years are eligible. History of heavy smoking = 2 packs of cigarettes a day for 15 years, or 1 pack of cigarettes a day for 30 years, or ½ pack of cigarettes a day for 60 years.



Breast Cancer

Breast Cancer Statistics - Female

□ Incidence:

- 533 Vermont cases per year.

- VT: 130.2 per 100,000 ▲ (U.S. 123.5 per 100,000)

- **54 Rutland County cases per year.**

- **Rutland County: 123.4 per 100,000**

□ Late Stage (regional and distant, age 50+):

- VT: 94.4 per 100,000 ▼ (U.S. 105.5 per 100,000)

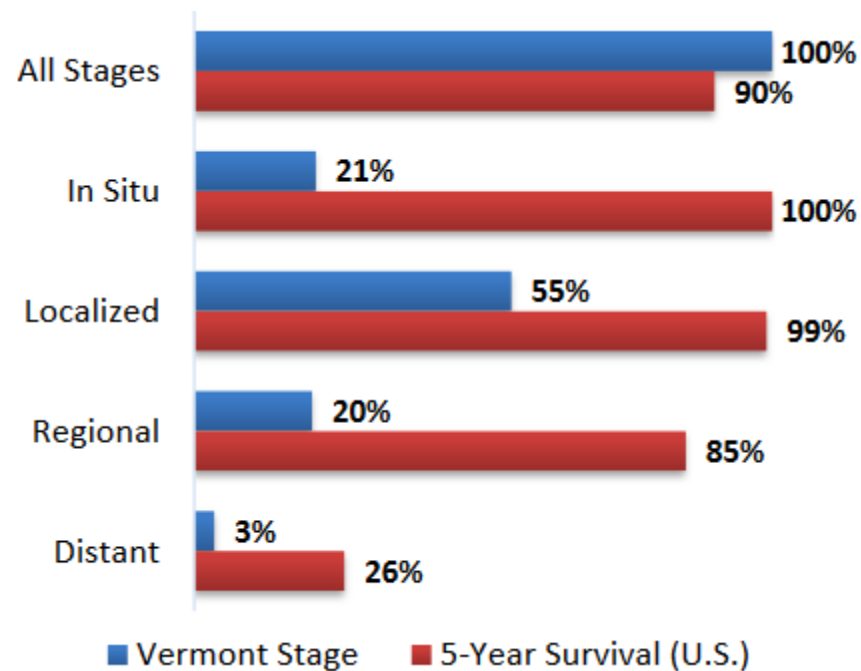
- **Rutland County: 111.6 per 100,000**

Note: Incidence rates exclude in situ carcinomas.

Data Source: Vermont Cancer Registry, 2010-2014; National Program of Cancer Registries (NPCR) and the Surveillance, Epidemiology, and End Results (SEER) Program - Incidence State Restricted Access Data File (1999-2014); Cancer Statistics Review, 1975-2014.

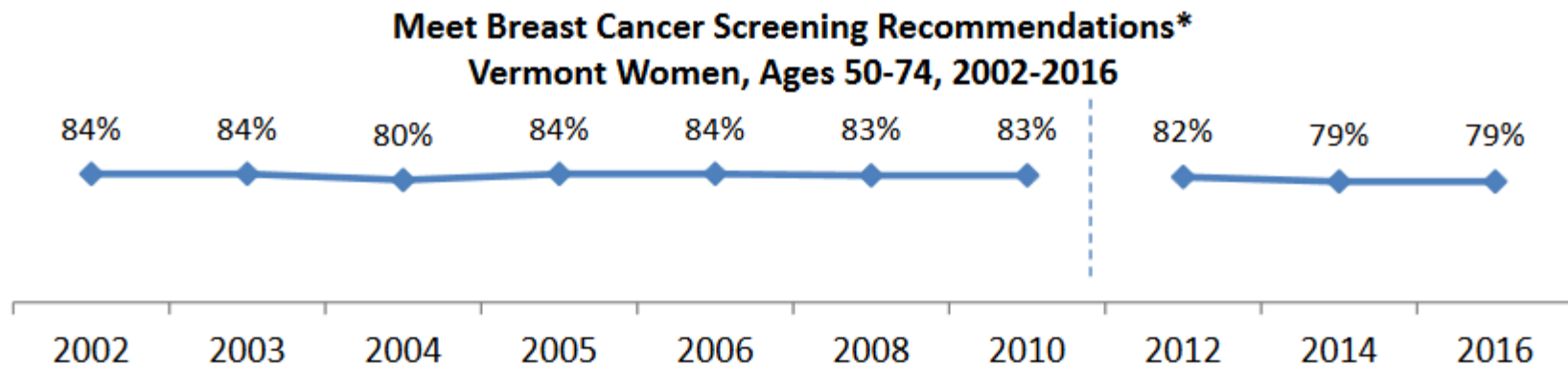
Breast Cancer Stage and Survival

Distribution of Breast Cancer (Vermont, 2009-2013) and 5-year Relative Survival (U.S., 2006-2012) by Stage



Data Source: Vermont Cancer Registry, 2010-2013; Cancer Statistics Review, 1975-2013.

Breast Cancer Screening Trend



*All data on this page is age adjusted to the U.S. 2000 population, except that broken down by age.
[Note: This measure is a Healthy Vermonters 2020 goal.]

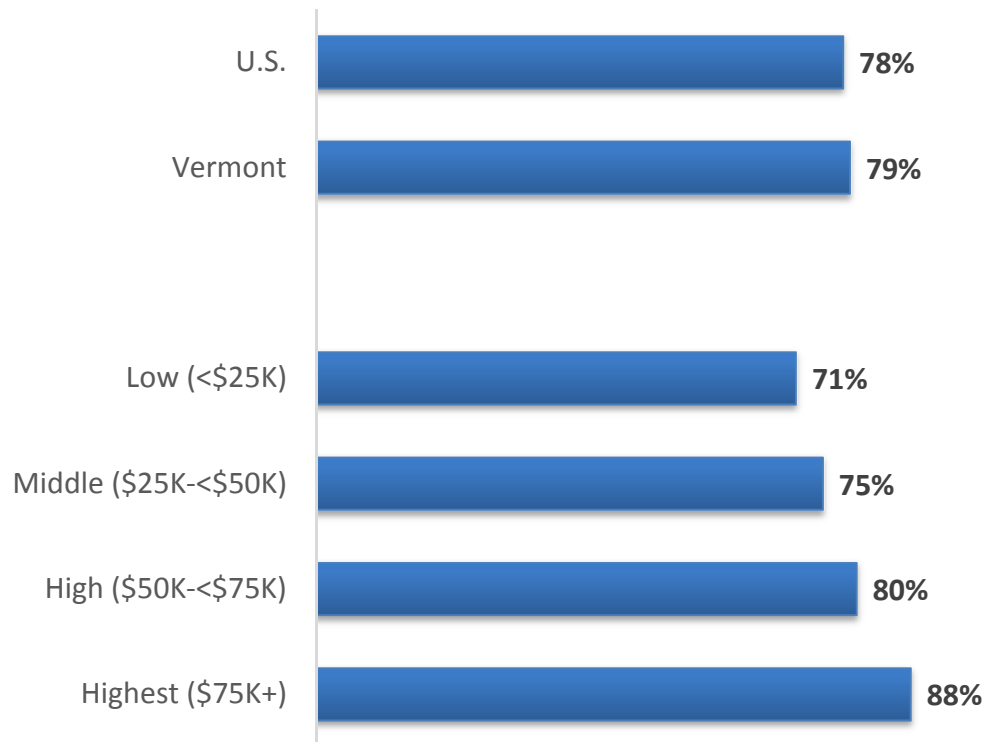
Data Source: Behavioral Risk Factor Surveillance System, 2002-2016.

Note: The Behavioral Risk Factor Surveillance System (BRFSS) survey methodology changed in 2011.

As a result, caution must be used when comparing data from 2011 to prior years.

Breast Cancer Screening - Disparities

Meet breast cancer screening recommendations, Vermont Women, age 50-74, 2016



Data Source: Behavioral Risk Factor Surveillance System, 2016.



Prostate Cancer

Prostate Cancer Statistics

□ Incidence:

- 399 Vermont cases per year.
- VT: 98.7 per 100,000 ▼ (U.S. 114.8 per 100,000)
- **41 Rutland County cases per year.**
- **Rutland County: 91.9 per 100,000 (▼ than U.S.)**

□ Late Stage (regional and distant, age 50+):

- VT: 76.7 per 100,000 ▲ (U.S. 67.8 per 100,000)
- **Rutland County: 50.8 per 100,000.**

Data Source: Vermont Cancer Registry, 2010-2014; National Program of Cancer Registries (NPCR) and the Surveillance, Epidemiology, and End Results (SEER) Program - Incidence State Restricted Access Data File (1999-2014); Cancer Statistics Review, 1975-2014.



Lung Cancer

Lung Cancer Statistics – Males

□ Incidence:

- 266 Vermont male cases per year.
- VT: 72.0 per 100,000 (U.S. 72.6 per 100,000)
- **30 Rutland County cases per year.**
- **Rutland County: 73.7 per 100,000**

□ Late Stage (regional and distant, age 55+):

- VT: 227.5 per 100,000 (U.S. 224.6 per 100,000)
- **Rutland County: 240.1 per 100,000**

Data Source: Vermont Cancer Registry, 2010-2014; National Program of Cancer Registries (NPCR) and the Surveillance, Epidemiology, and End Results (SEER) Program - Incidence State Restricted Access Data File (1999-2014); Cancer Statistics Review, 1975-2014.

Lung Cancer Statistics - Females

□ Incidence:

- 257 Vermont female cases per year.
- VT: 59.9 per 100,000 ▲ (U.S. 52.6 per 100,000)
- **32 Rutland County cases per year.**
- **Rutland County: 69.3 per 100,000 (▲ than U.S.)**

□ Late Stage (regional and distant, age 55+):

- VT: 172.4 per 100,000 ▲ (U.S. 150.9 per 100,000)
- **Rutland County: 227.8 per 100,000 ▲**

Data Source: Vermont Cancer Registry, 2010-2014; National Program of Cancer Registries (NPCR) and the Surveillance, Epidemiology, and End Results (SEER) Program - Incidence State Restricted Access Data File (1999-2014); Cancer Statistics Review, 1975-2014.



Colorectal Cancer

Colorectal Cancer Statistics – Males

□ Incidence:

- 144 Vermont male cases per year.
- VT: 39.4 per 100,000 ▼ (U.S. 45.8 per 100,000)
- **16 Rutland County cases per year.**
- **Rutland County: 41.7 per 100,000**

□ Late Stage (regional and distant, age 50+):

- VT: 65.9 per 100,000 ▼ (U.S. 77.7 per 100,000)
- **Rutland County: 80.6 per 100,000**

Data Source: Vermont Cancer Registry, 2010-2014; National Program of Cancer Registries (NPCR) and the Surveillance, Epidemiology, and End Results (SEER) Program - Incidence State Restricted Access Data File (1999-2014); Cancer Statistics Review, 1975-2014.

Colorectal Cancer Statistics - Females

□ Incidence:

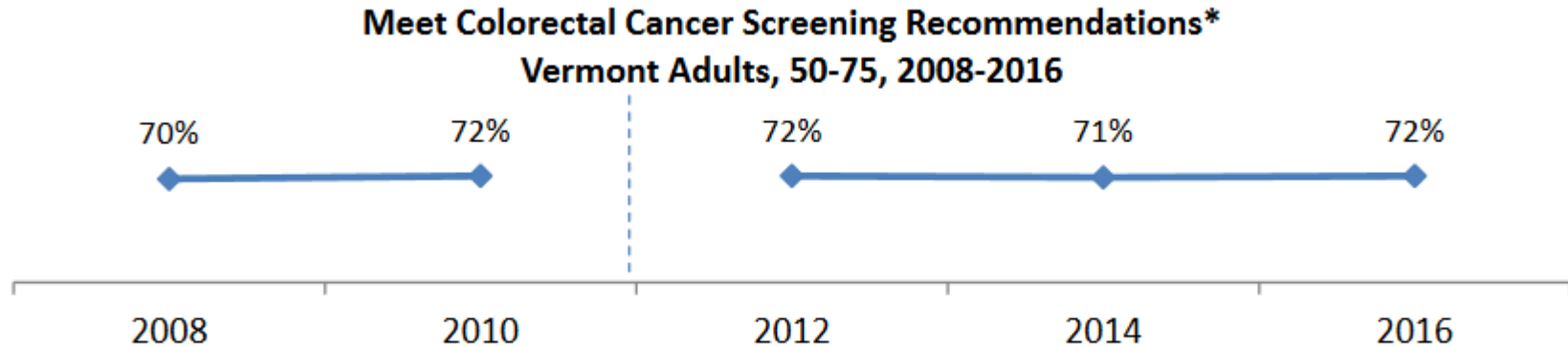
- 143 Vermont female cases per year.
- VT: 33.1 per 100,000 (U.S. 34.8 per 100,000)
- **17 Rutland County cases per year.**
- **Rutland County: 36.2 per 100,000**

□ Late Stage (regional and distant, age 50+):

- VT: 59.9 per 100,000 (U.S. 57.9 per 100,000)
- **Rutland County: 51.6 per 100,000**

Data Source: Vermont Cancer Registry, 2010-2014; National Program of Cancer Registries (NPCR) and the Surveillance, Epidemiology, and End Results (SEER) Program - Incidence State Restricted Access Data File (1999-2014); Cancer Statistics Review, 1975-2014.

Colorectal Screening Trend in Vermont



*All data on this page is age adjusted to the U.S. 2000 population, except that broken down by age.
[Note: This measure is a Healthy Vermonters 2020 goal.]

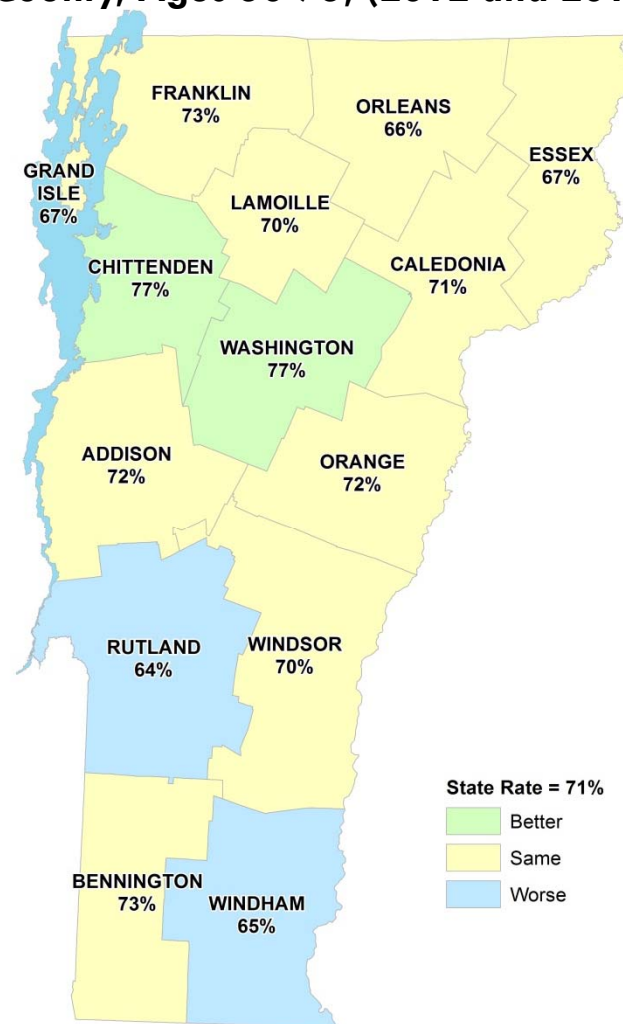
Source: BRFSS, 2008-2016

Note: All rates are age adjusted to the 2000 U.S. standard population. The Behavioral Risk Factor Surveillance System (BRFSS) survey methodology changed in 2011. As a result, caution must be used when comparing data from 2011 to prior years.

Colorectal Screening Rates by County

- Residents of **Rutland County** were less likely to have been screened for colorectal cancer.

Colorectal Cancer Screening Rates by County, Ages 50-75, (2012 and 2014)



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

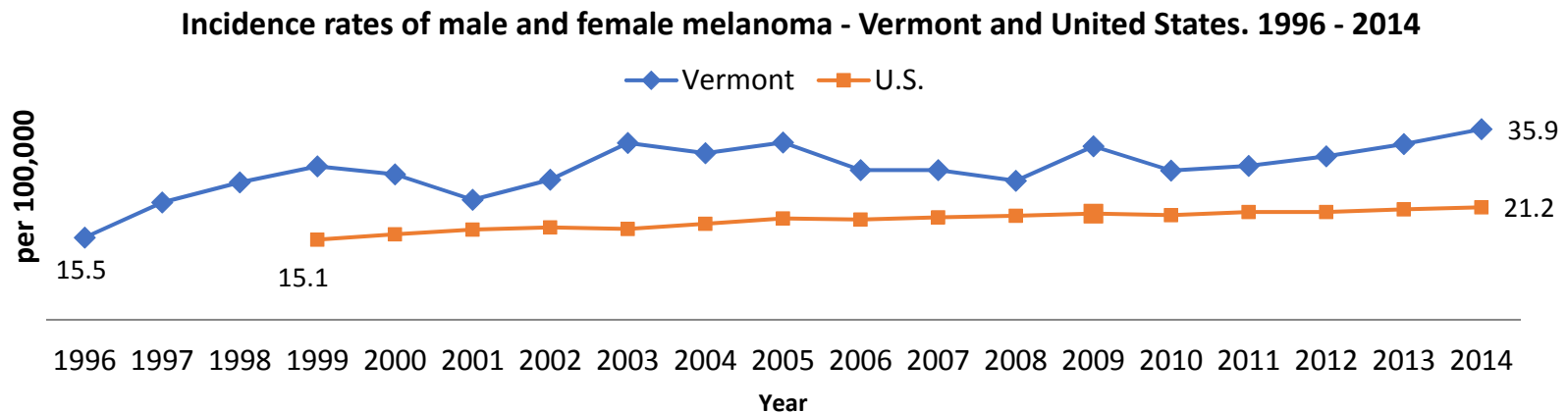
Data Source: BRFSS, Statewide 2014, Counties 2012 and 2014



Melanoma

Melanoma Statistics – Trend

- Third most commonly diagnosed cancer among cancers that affect both sexes.
- Vermont males and females have significantly higher rates of melanoma (31.5 per 100,000) compared to the U.S. rates (20.7 per 100,000).
- The incidence of melanoma has increased significantly in both Vermont and the U.S.



Data Source: Vermont Cancer Registry, 1996-2014; National Program of Cancer Registries (NPCR) and the Surveillance, Epidemiology, and End Results (SEER) Program - Incidence State Restricted Access Data File (1999-2014).

Melanoma Statistics - Males

- **Incidence Rankings by State:** Vermont is #2.

- **Incidence:**
 - ▣ 143 Vermont male cases per year.
 - ▣ VT: 39.6 per 100,000 ▲ (U.S. 26.6 per 100,000)
 - ▣ **11 Rutland County cases per year.**
 - ▣ **Rutland County: 29.2 per 100,000**

Data Source: Vermont Cancer Registry, 2010-2014; National Program of Cancer Registries (NPCR) and the Surveillance, Epidemiology, and End Results (SEER) Program - Incidence State Restricted Access Data File (1999-2014); Cancer Statistics Review, 1975-2014. CDC, USCS, 2014, Available at: www.cdc.gov/uscs

Melanoma Statistics – Females

- **Incidence Rankings by State:** Vermont is #5.

- **Incidence:**
 - ▣ 94 Vermont female cases per year.
 - ▣ VT: 25.2 per 100,000 ▲ (U.S. 16.4 per 100,000)
 - ▣ **7 Rutland County cases per year.**
 - ▣ **Rutland County: 15.9 per 100,000 ▼**

Data Source: Vermont Cancer Registry, 2010-2014; National Program of Cancer Registries (NPCR) and the Surveillance, Epidemiology, and End Results (SEER) Program - Incidence State Restricted Access Data File (1999-2014); Cancer Statistics Review, 1975-2014. CDC, USCS, 2014, Available at: www.cdc.gov/uscs



Cervical Cancer

Cervical Cancer Statistics

□ Incidence:

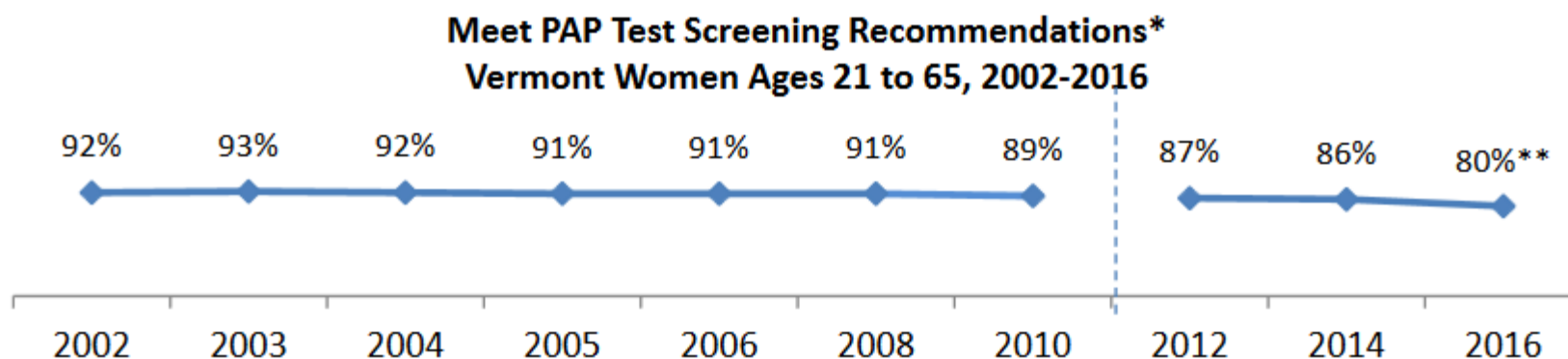
- 16 Vermont cases per year.
- VT: 4.6 per 100,000 ▼ (U.S. 7.5 per 100,000)
- **2 Rutland County cases per year.**
- **Rutland County: 6.3 per 100,000**

□ Late Stage (regional and distant, age 20+):

- VT: 1.8 per 100,000 ▼ (U.S. 5.1 per 100,000)
- **Rutland County: -- Not Available**

Data Source: Vermont Cancer Registry, 2010-2014; National Program of Cancer Registries (NPCR) and the Surveillance, Epidemiology, and End Results (SEER) Program - Incidence State Restricted Access Data File (1999-2014); Cancer Statistics Review, 1975-2014.

Cervical Cancer Screening Trend



*All data on this page is age adjusted to the U.S. 2000 population, except that broken down by age.

[Note: This measure is a Healthy Vermonters 2020 goal.]

**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.

Source: Behavioral Risk Factor Surveillance System, 2002-2016.

Note: The Behavioral Risk Factor Surveillance System (BRFSS) survey methodology changed in 2011. As a result, caution must be used when comparing data from 2011 to prior years. Due to a difference in how the cervical cancer questions were asked in 2016, comparisons over time cannot be made.



Cancer Risk

Risk for Developing Cancer

- "Cancer" is a group of more than 100 diseases characterized by uncontrolled growth and spread of abnormal cells.
 - ▣ Cancer can start in any cell in the body.
 - ▣ The cells start out as normal and then change.
 - ▣ Injuries to the cell affect how it grows, works, reproduces, and dies.
 - ▣ Cells grow and divide out of control instead of dying when they should.

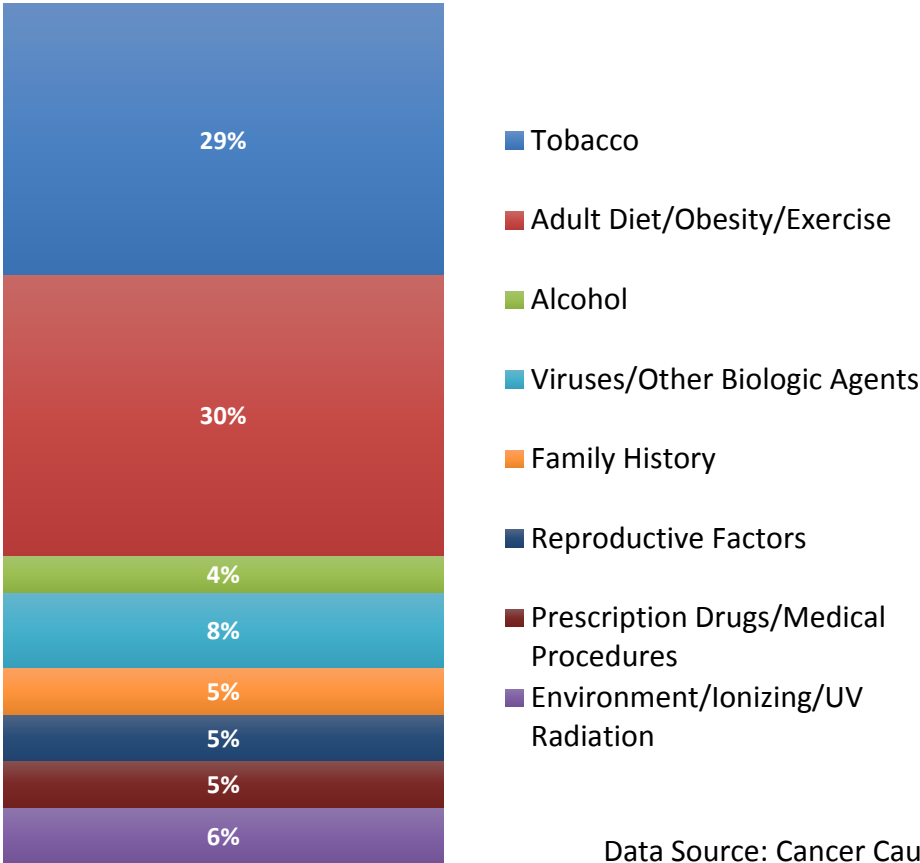
- **Latency** is the time that passes between being exposed to something that can cause disease (such as radiation or a virus) and having symptoms.

Risk for Developing Cancer

- A **risk factor** is a condition, an activity, or an exposure that increases a person's chance of developing cancer.
 - ▣ People with known risk factors may never develop cancer.
 - ▣ Many people who develop cancer have none of the known risk factors.
- Cancer develops gradually as a result of a complex mix of factors related to lifestyle choices, environment and genetics.
 - ▣ Nearly **two-thirds** of cancer deaths in the U.S. can be linked to tobacco use, poor diet, obesity, and lack of exercise.

Cancer Risk

Estimated Percentage of Cancer Attributable by Risk Factor



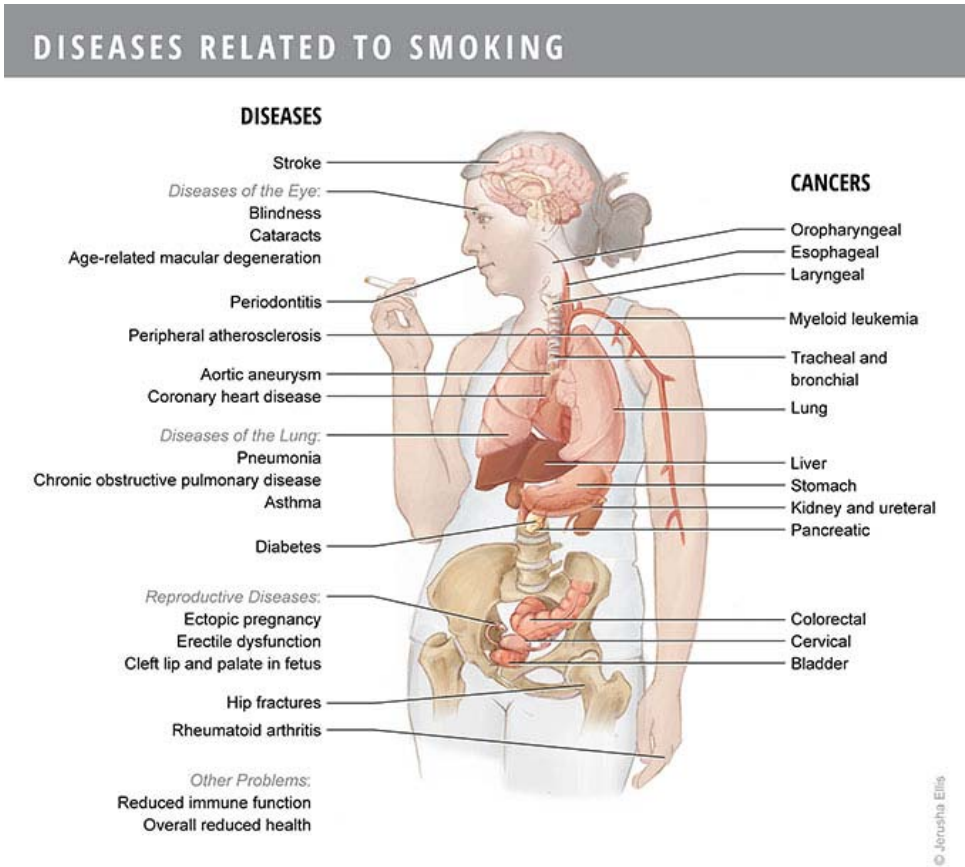
Data Source: Cancer Causes Control. 2012 April; 23(4): 601–608. doi:10.1007/s10552-012-9924-y.



Tobacco Associated Cancers

Tobacco Associated Diseases

- Tobacco use causes more than 480,000 U.S. deaths each year.
- Smoking (and secondhand smoking) can cause cancer almost anywhere in the body but also contributes to many other diseases including:
 - ▣ Heart Disease
 - ▣ Respiratory Illness
 - ▣ Stroke
 - ▣ Diabetes
 - ▣ Reproductive Health
 - ▣ Dental Health
 - ▣ Preterm birth, low birth weight, still birth, birth defects, SIDS



Data Source: Centers for Disease Control and Prevention.

Tobacco Associated Cancers

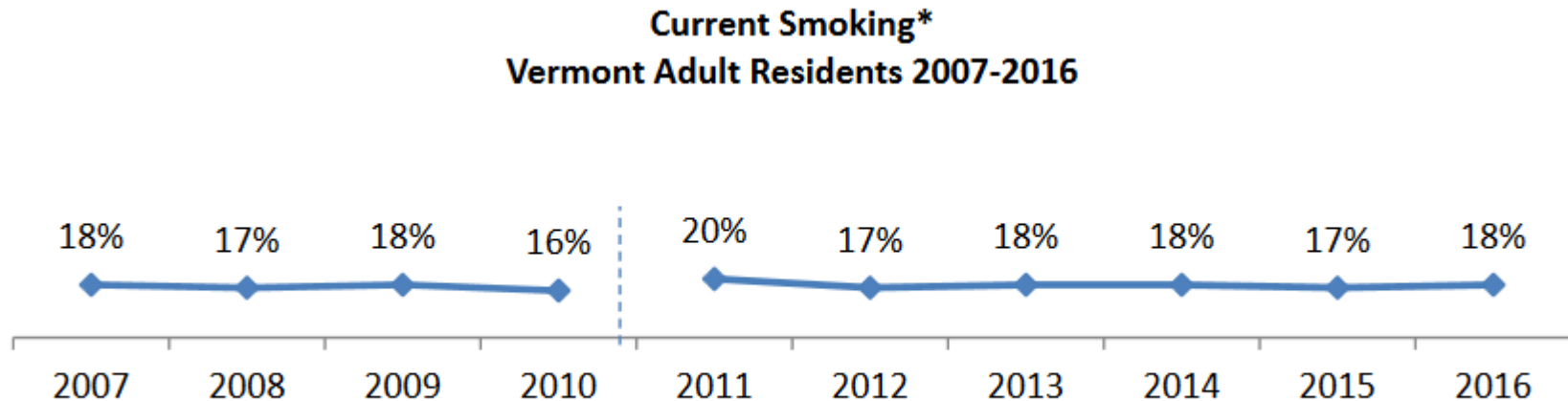
- Tobacco use increases the risk for many types of cancer, particularly lung cancer.
- Tobacco also increases the risk for cancers of the mouth, lips, nose and sinuses, larynx (voice box), pharynx (throat), esophagus, stomach, colon and rectum, pancreas, cervix, uterus, ovary, bladder, kidney, and acute myeloid leukemia.
- **Incidence:**
 - VT: 190.7 per 100,000
 - **Rutland County: 206.8 per 100,000**

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

Data Source: VCR, 2010-2014

Cancer Related Risk Factors – Smoking

- Eighteen percent of Vermonters reported being current smokers in 2016; this is similar to the national rate (17%) in 2016.
- In 2012 and 2014 **Rutland County** had similar smoking rates (21%) to the state as a whole.



*All data on this page are age adjusted to the U.S. 2000 population, except that broken down by age.
[Note: This measure is a Healthy Vermonters 2020 goal.]

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

Data Source: BRFSS, VT: Statewide 2007-2016, County 2012 and 2014

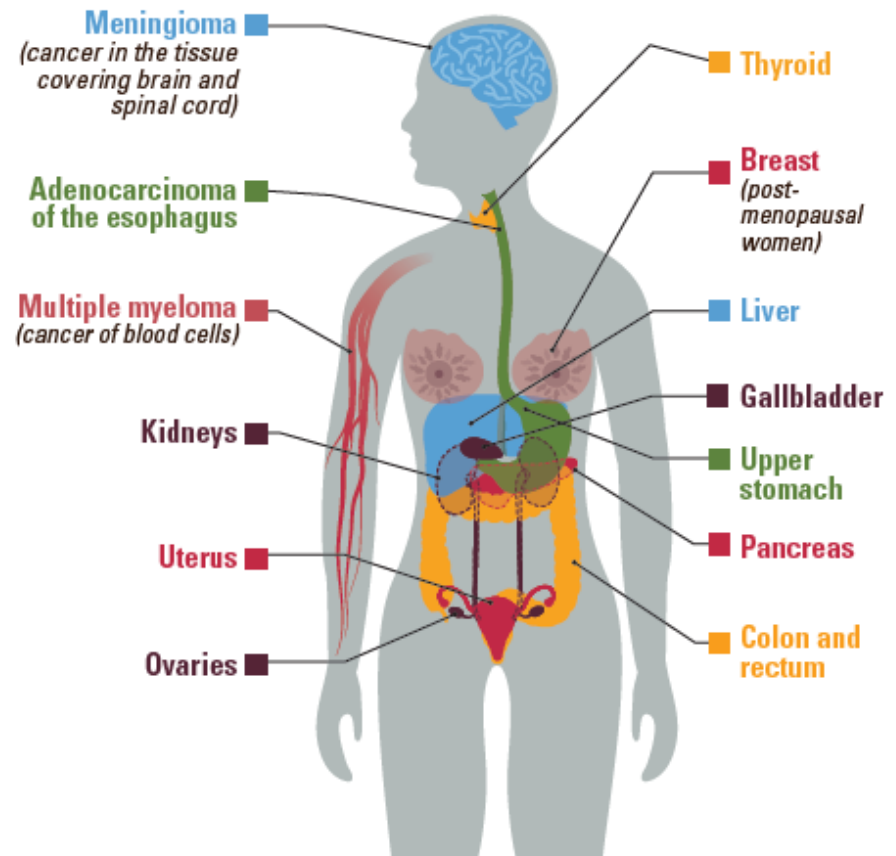


Obesity Associated Cancers

Obesity Associated Diseases

- Obesity is associated with poorer mental health outcomes, reduced quality of life, and the leading causes of death in the U.S. and worldwide.
- Contributes to diabetes, heart disease, stroke, and cancer.
- Associated with an increased risk of at least 13 different types of cancer.
- *These cancers make up 40% of all cancers diagnosed.*

13 cancers are associated with overweight and obesity

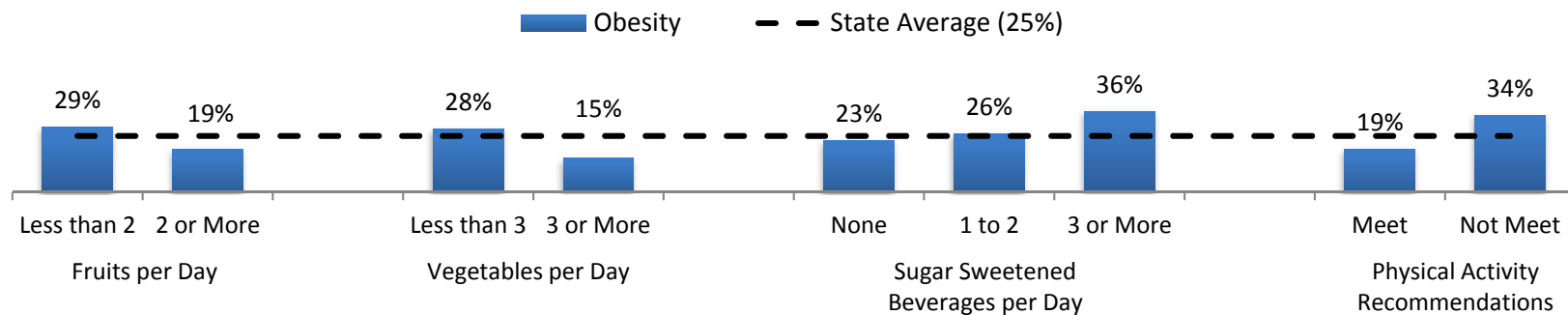


Data Source: Centers for Disease Control and Prevention.
<https://www.cdc.gov/vitalsigns/obesity-cancer/>

Obesity Associated Cancers

- Nutritional factors such as fruit and vegetable consumption and drinking sugar sweetened beverages can contribute to weight and body mass index.
- Participation in physical activity also can influence body weight and obesity.
- Several studies have demonstrated that weight loss reduces the risk of developing chronic diseases including diabetes and cardiovascular disease as well as some cancers.

Obesity by Nutritional Factors and Physical Activity, Age 18+, 2013



Obesity Associated Cancers

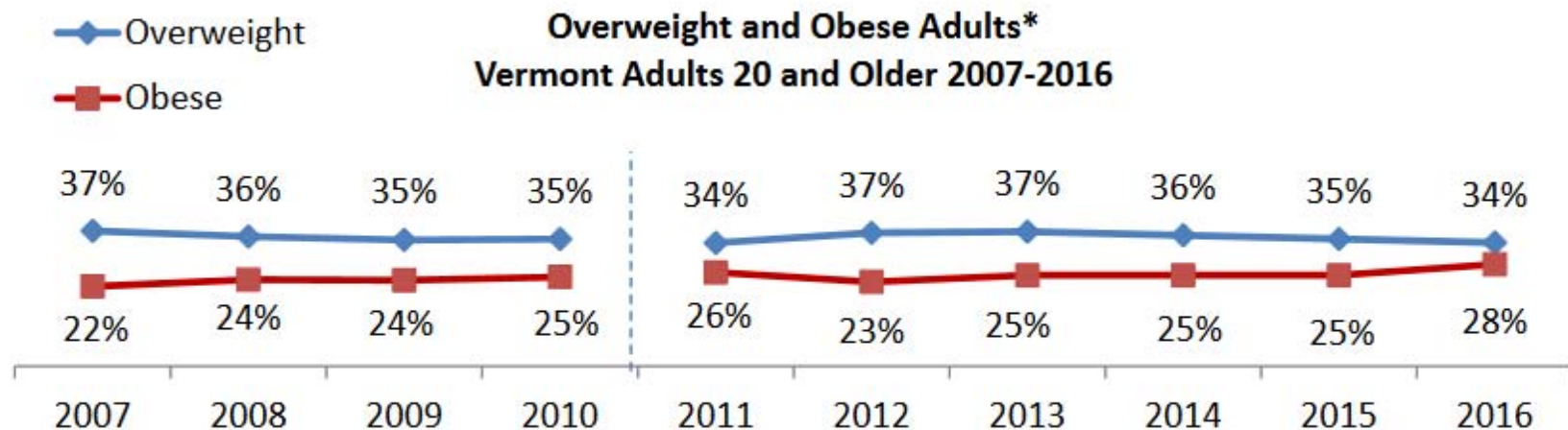
- Excess weight has been identified as a risk factor for cancers of the breast (postmenopausal), colon and rectum, uterus, esophagus, kidney, pancreas, thyroid, and gallbladder; and may also increase the risk for cancers of the ovary, cervix, liver, non-Hodgkin lymphoma, myeloma, and prostate (advanced stage).
- Also increase risk for meningioma (usually noncancerous tumor that arises from the membranes surrounding the brain and spinal cord).
- **Incidence:**
 - VT: 201.5 per 100,000
 - **Rutland County: 205.5 per 100,000**

Notes: All rates are age adjusted to the 2000 U.S. standard population. Rates do not include meningioma (brain and CNS).

Data Source: VCR, 2010-2014, CDC, Vital Signs, October 2017

Cancer Related Risk Factors – Obesity

- In 2016, more than a quarter (28%) of Vermont adults reported being obese, with an additional 34% were overweight.
- In 2012 and 2014 **Rutland County** had similar obesity rates (21%) to the state as a whole.



*All data on this page are age adjusted to the U.S. 2000 population, except that broken down by age.
[Note: This measure is a Healthy Vermonters 2020 goal.]

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

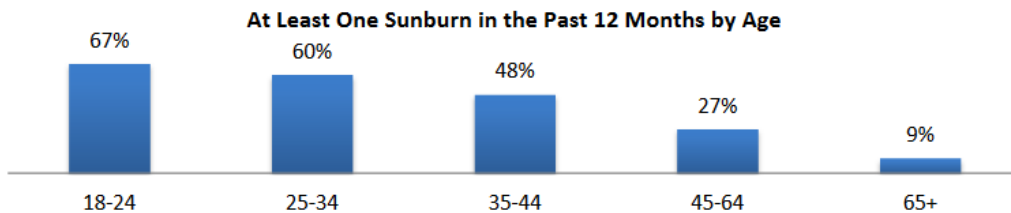
Data Source: BRFSS, VT: Statewide 2007-2016, County 2012 and 2014



UV Exposure

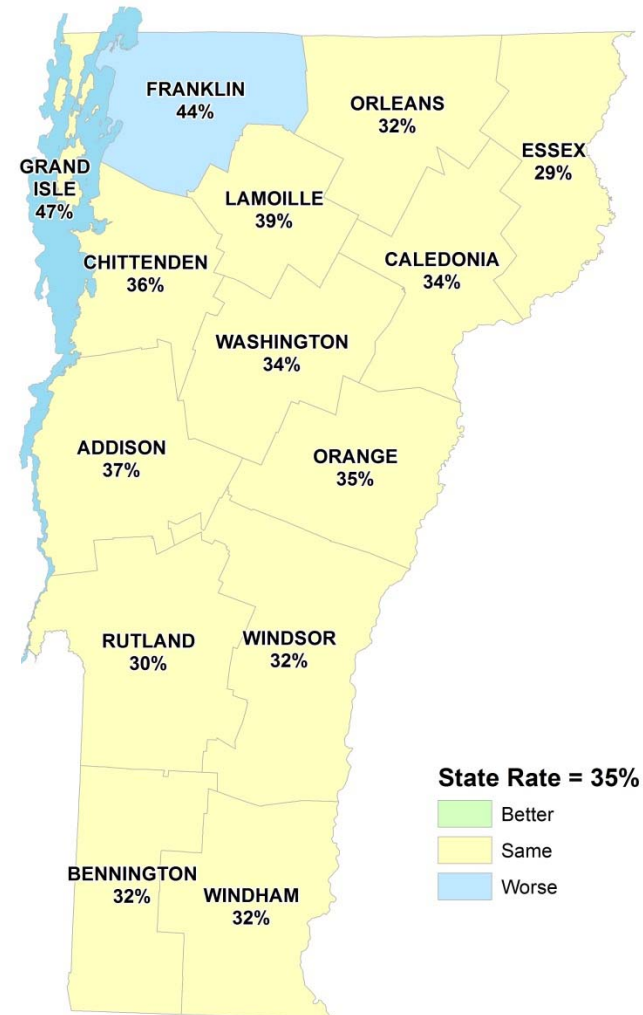
Cancer Related Risk Factors – Sun Exposure

- Among Vermont adults, 35% reported having one or more sunburns in the past year.
- Sunburn rates in **Rutland County** were similar to the state.

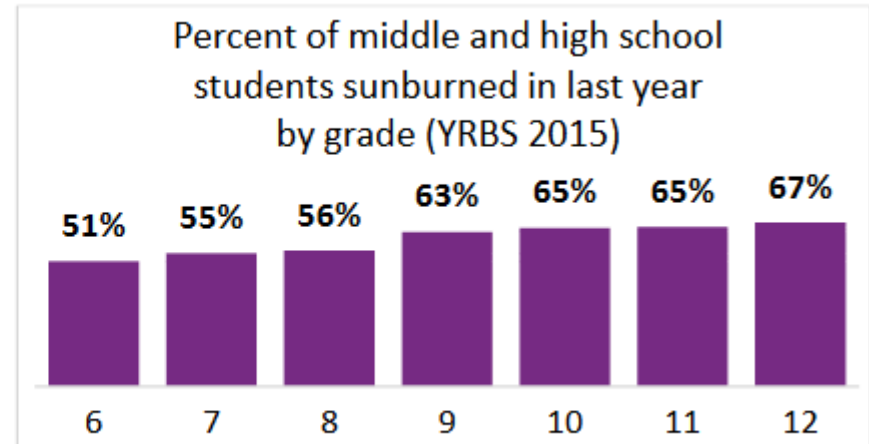
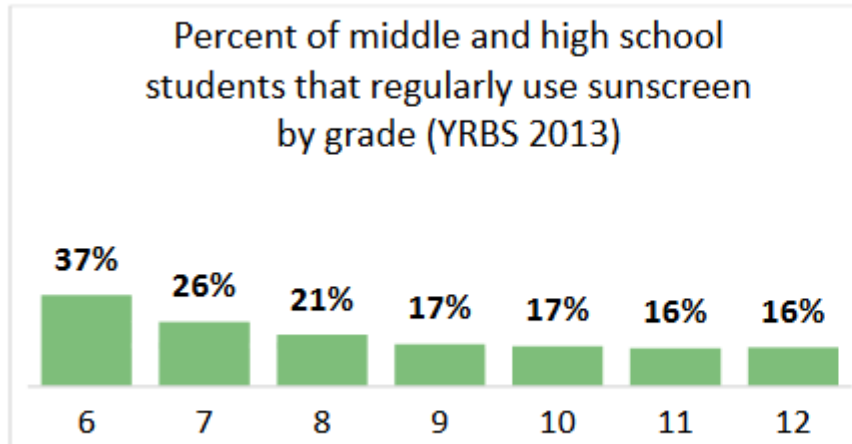


Data Source: BRFSS, 2013

Sunburn Rate by County, Age 18+, 2013



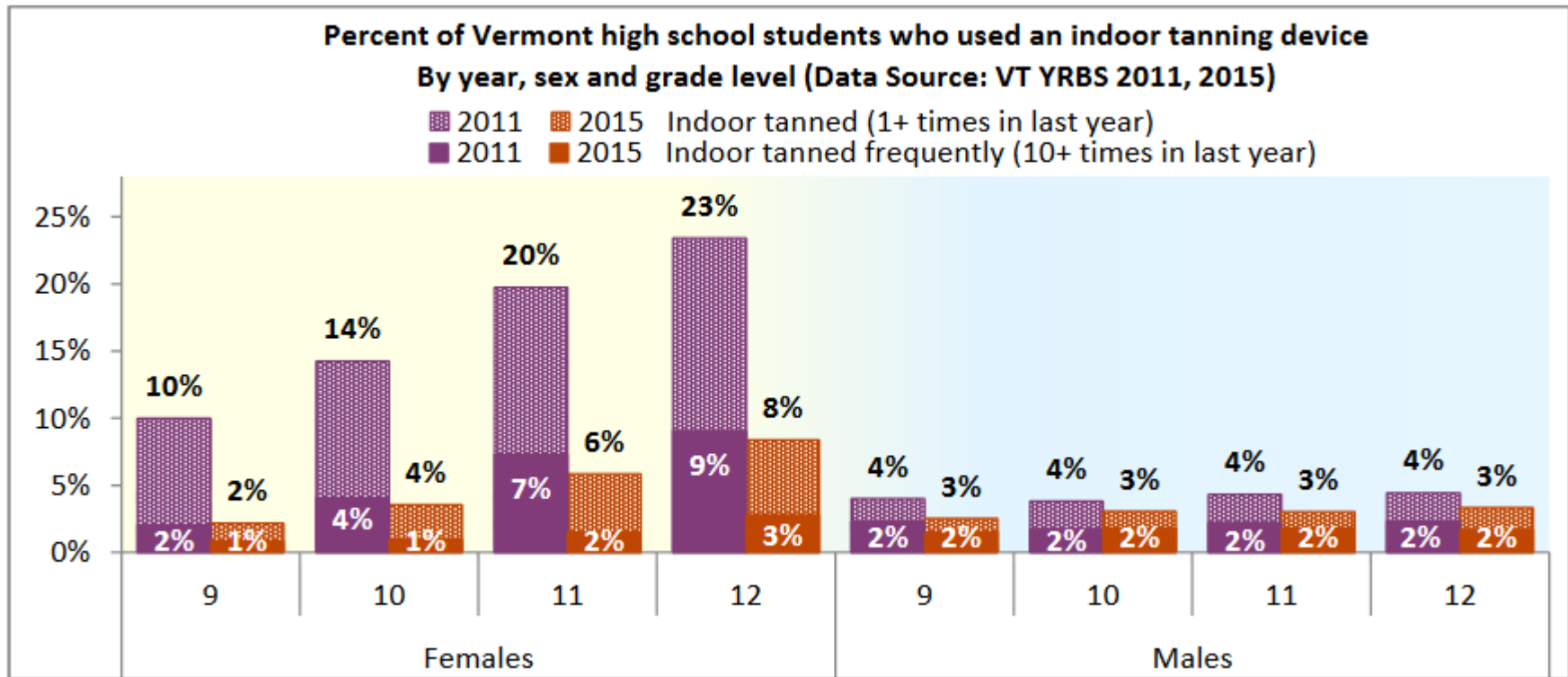
Cancer Related Risk Factors – Youth UV Exposure



- Only 16% percent of Vermont high school students, and 27% of Vermont middle school students, reported regularly using sunscreen in the past year.
- 65% of Vermont high school students, and 54% of Vermont middle school students, reported having had at least one sunburn in the last year.

Data Source: Youth Risk Behavior Survey (YRBS), 2013 and 2015.

Changes in indoor tanning among VT youth – 2001 to 2015



Data Source: Youth Risk Behavior Survey (YRBS), 2011 and 2015.



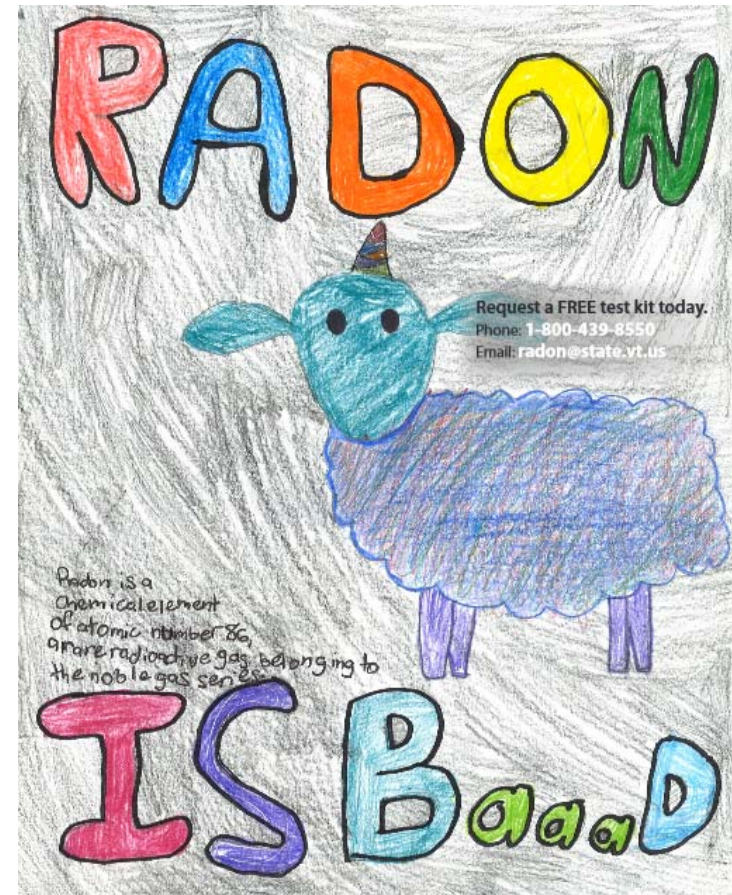
Water and Radon

Water and Radon Testing

- Environmental agents are estimated to account for roughly four percent of cancer cases.
- The Vermont Department of Health does make some recommendations for water and radon testing.

Radon

- ❑ Radon is a naturally occurring radioactive gas that is present in soil, air, and water.
- ❑ Radon increases a person's risk of developing lung cancer.
- ❑ Unless you test for it, there is no way of knowing if radon is present in your home.
- ❑ Testing is free!
 - ❑ Radon@vermont.gov or 1-800-439-8550.



Water

- If you pay a bill for your water your water comes from a **public water supply**.
 - Public water supplies must be tested regularly for bacteria, nonorganic chemicals, naturally occurring radioactivity, and naturally occurring compounds.
 - Public water supply test results for a specific system can be obtained from the water company upon request.
- For **private water systems** the health department recommends periodic testing by homeowners:
 - ▣ Coliform bacteria (Kit A) once a year.
 - ▣ Inorganic chemicals, including arsenic (Kit C) every five years.
 - ▣ Mineral radioactivity (Kit RA) every five years.
 - ▣ **Request a test kit by phone at 1-800-660-9997.**



Accessing Cancer Data

Accessing Data – Vermont Department of Health

CANCER SURVEILLANCE AND REPORTING

The Center for Health Statistics conducts surveillance of cancer among Vermonters and creates data products to assist in making data driven decisions for cancer prevention and control.

- > [Cancer in Vermont](#)
- > [3-4-50: Prevent Chronic Disease](#)
- > [Cancer Data and Statistics – Reports](#)

<http://healthvermont.gov/cancer>
> [Cancer Data and Statistics](#)

OVERVIEW

SEARCH		
TITLE	DATE	TYPE
> AGE ADJUSTED INCIDENCE AND MORTALITY RATES	07/10/2017	PDF ↓
> CANCER DATA PAGES	12/01/2015	PDF ↓

RISK FACTORS AND ASSOCIATED CANCERS

SEARCH		
TITLE	DATE	TYPE
> 3-4-50 BRIEF: CANCER IN VERMONT	04/10/2017	PDF ↓
> SUNSCREEN USE AND SUNBURN AMONG VERMONT YOUTH	09/26/2016	PDF ↓
> YOUTH INDOOR TANNING: DATA BRIEF	06/01/2016	PDF ↓
> CANCER DATA PAGES CHAPTER: CANCER-RELATED RISK FACTORS AND PREVENTATIVE BEHAVIORS	12/01/2015	PDF ↓

Accessing Data – County Cancer Fact Sheets

Cancer Related Risk Factors and Preventative Behaviors

Rutland County rates for adult obesity and youth tanning in the past 12 months are worse than Vermont overall. The percentages of males and females ages 13-17 who have received the full HPV vaccine series are lower in Rutland County than Vermont overall. The adult smoking rate in Rutland County is similar to Vermont overall.

	Percent		Goal Type ^G
	Rutland	Vermont	
Smoke Cigarettes, Currently (Adults)*	21	18	HV, SCP
Obesity (Ages 20+) ^{xD}	33	25	HV, SCP
Tanning, Past 12 Months (Youth, Grades 9-12)	15	10	SCP
Completed 3 dose HPV vaccination series (Females, Ages 13-17)	35	46	SCP
Completed 3 dose HPV vaccination series (Males, Ages 13-17)	20	30	SCP

Data Sources: Smoking, Obesity: BRFSS; County: 2013-2014, State: 2014. Youth Tanning: YRBS, 2011. HPV vaccination: IMR, 2014.

Cancer Incidence by Risk Factor: Newly Diagnosed Cases per Year

The incidence rate for tobacco associated cancers is worse in Rutland County than Vermont overall. Other risk factor associated cancer incidence rates in Rutland County are similar to the Vermont rates.

	Rate per 100,000 People		Goal Type ^G
	Rutland	Vermont	
Tobacco Associated Cancers* ¹	236.0	213.5	SCP
Obesity Associated Cancers* ²	212.6	204.8	SCP
Melanoma (UV Associated Cancer)* ³	23.9	29.0	SCP
HPV Associated Cancers* ⁴	12.3	10.4	SCP

Data Source: VCR, 2008-2012.

Note: Excludes basal cell and squamous cell skin cancers and in situ carcinomas, except urinary bladder.

¹Tobacco use increases the risk of cancers of the lung and bronchus, mouth, lips, nose and sinuses, larynx (voice box), pharynx (throat), esophagus, stomach, colon and rectum, pancreas, cervix, uterus, ovary, bladder, kidney, and acute myeloid leukemia.

²Excess weight increases the risk of cancers of the breast (postmenopausal), colon and rectum, uterus, esophagus, kidney, pancreas, thyroid and gallbladder. Excess weight may increase the risk of cancers of the ovary, cervix, liver, non-Hodgkin lymphoma, myeloma and prostate (advanced stage).

³Ultraviolet radiation (UV) exposure increases the risk of melanoma.

⁴Infection with the HPV virus increases the risk of cancers of the cervix, vulva, vagina, penis, anus, mouth and throat.

Rutland County Cancer Fact Sheet- Published February 2016

Cancer Screening

The Rutland County colorectal cancer screening rate is worse than Vermont overall. Other screening rates are similar to state rates.

	Percent		Goal Type ^G
	Rutland	Vermont	
Breast Cancer Screening (Females, Ages 50-74) ^{xD}	75	79	HV, SCP
Cervical Cancer Screening (Females, Ages 21-65) ^{xD}	87	86	HV, SCP
Colorectal Cancer Screening (Males and Females, Ages 50-75) ^{xD}	64	71	HV, SCP

Data Source: BRFSS; County: 2012 and 2014, State: 2014.

Cancer Diagnosis: Advanced Stage^D

Rutland County has similar advanced stage diagnosis rates for cancers of the breast, lung and bronchus, and colon and rectum, compared to Vermont overall.

	Rate per 100,000 People		Goal Type ^G
	Rutland	Vermont	
Breast* (Females, Ages 50+)	112.9	96.5	SCP
Colorectal* (Males and Females, Ages 50+)	72.8	62.4	SCP
Lung* (Males and Females, Ages 55+)	251.9	210.0	SCP

Data Source: VCR, 2008-2012.

Note: The number of advanced stage cervical cancers is too small to report by county.

Cancer Survivors (Prevalence)^D: Ever Diagnosed with Cancer

There are approximately 3,500 adult cancer survivors living in Rutland County.

Data Source: BRFSS, 2012-2014.

Note: Cancer prevalence excludes those whose only cancer was a skin cancer.

Cancer Mortality: Deaths Due to Cancer

The cancer death rate in Rutland County is similar to the Vermont rate.

	Rate per 100,000 People		Goal Type ^G
	Rutland	Vermont	
Overall Cancer Deaths*	181.7	173.4	HV

Data Source: Vital Statistics, 2008-2012 –preliminary.

■ Indicates statistically worse or ■ indicates statistically better than Vermont.

Accessing Data – Environmental Public Health Tracking

ENVIRONMENTAL PUBLIC HEALTH TRACKING



The Vermont Environmental Public Health Tracking Program brings together environmental and public health data in one place. The Vermont Tracking portal provides data in maps, charts, and tables as a part of the State's continuing effort to help Vermonters better understand the relationship between their environment and their health.

Check out the [list of topics and data measures](#) found on the Tracking portal.




<http://healthvermont.gov/tracking>

WHAT'S NEW WITH VERMONT TRACKING?

Accessing Data – Vermont Cancer Incidence Maps

Lung and Bronchus Cancer SIRs 2004-2013

Source: Vermont Cancer Registry

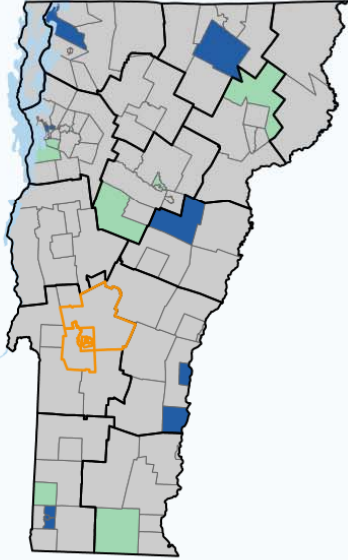


Standardized Incidence Ratio (SIR) = Observed Cases/Expected Cases

Area	Observed Cases	Expected Cases	SIR	Statistically Compared to State
● Rutland City - Downtown	48	30.5	1.57	Statistically Higher
○ Rutland City - NE	44	43.9	1.00	Not Different
○ Rutland City - NW	31	25.0	1.24	Not Different
○ Rutland City - South	74	56.0	1.32	Not Different
○ Rutland County Central	61	61.6	0.99	Not Different
○ Rutland County NE	58	58.6	0.99	Not Different

Clear ✕ Filter ✕

SIRs by Area

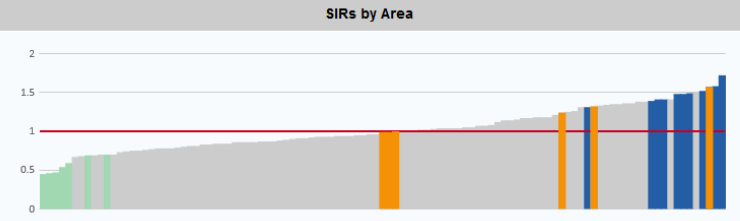


Statewide

State	SIR	Observed Cases
● VERMONT	1.00	20,050

*Data not shown in areas with fewer than 6 observed cases. Statistical comparisons to state based on multiple comparisons correction.

SIRs by Area



- Sub-County Geographic Areas
- Statistically Lower
- Statistically Higher
- Not Different
- < 6 cases
- Vermont Counties
- Vermont Towns (Click to see town boundaries)

State Cancer Plan - 2020



<http://www.healthvermont.gov/wellness/reports/cancer>

Wrap Up

- ❑ There are many types of cancer statistics and data sources.
- ❑ Rutland County compares similarly to Vermont for cancer risk factors and cancer diagnosis.
- ❑ Excess weight and tobacco use contribute to more cancers than environmental pollutants do.
- ❑ Data for Rutland County are available at healthvermont.gov.

Any Questions?

Contact information for questions or for a copy of this presentation:

Jennifer Kachajian, MA, MPH

Public Health Analyst

Jennifer.Kachajian@vermont.gov

(802) 651-1977

Allison Verbyla, MPH

Public Health Analyst

Allison.Verbyla@vermont.gov

(802) 951-1211



"And it was so typically brilliant of you to have invited an epidemiologist."

