

Colorectal Cancer

A RHODE ISLAND CANCER CONTROL PROGRAM BRIEF

I. Background

When cancer starts in the colon or rectum, it is called colorectal cancer. Colorectal cancer affects men and women of all racial and ethnic groups, and is most often found in people ages 50+.

In Rhode Island and the U.S. overall, annual counts of colorectal cancer cases and deaths (and related age-adjusted incidence and mortality rates) have dropped greatly in the past 25 years, due to improved screening and treatment.

Sources: RI Cancer Registry; Centers for Disease Control and Prevention

II. Cases¹ and Deaths in Context

Rhode Island: 1987-91 ←Δ→ 2006-10

Cases

	1987-91	% Change	2006-10
All cancers	24,584	+24%	30,586
<u>Colon-rectum</u>	<u>3,884</u>	-27%	<u>2,818</u>
Lung-bronchus	3,679	+19%	4,391
Female Breast	3,726	+15%	4,267
Prostate	2,487	+63%	4,045
Urinary Bladder	1,289	+34%	1,732

Deaths

	1987-91	% Change	2006-10
All causes of death	47,947	<+1%	48,125
All cancers	11,932	-6%	11,176
<u>Colon-rectum</u>	<u>1,560</u>	-37%	<u>987</u>
Lung-bronchus	3,097	+2%	3,183
Female Breast	1,103	-33%	743
Prostate	671	-24%	512
Urinary Bladder	274	+21%	332

1. Includes all invasive cases and in situ cases of the urinary bladder
Sources: RI Cancer Registry; National Center for Health Statistics

III. Age-Adjusted¹ Rates

Colorectal Cancer: 1987-91 ←Δ→ 2006-10

Incidence Rates

	1987-91	% Change	2006-10
<u>Rhode Island</u>	<u>71.1</u>	-36%	<u>45.6</u>
United States	61.2	-28%	44.3

Mortality Rates

	1987-91	% Change	2006-10
<u>Rhode Island</u>	<u>28.8</u>	-47%	<u>15.4</u>
United States	25.0	-34%	16.4

1. Age-adjustment permits meaningful comparison of rates across populations with very different age structures.

Sources: RI Cancer Registry; National Cancer Institute's SEER System; National Center for Health Statistics

IV. Cases¹ by Race and Ethnicity

Rhode Island:	1987-91	2006-10	2010 Pop.
Race			
White	3,818	2,675	856,869
Black	66	89	60,189
Native American	0	4	6,058
Asian & Pacific Islander ²	8	34	31,011
Other & Unknown	3	37	98,440
Ethnicity			
Hispanic	16	82	130,655
Not Hispanic	3,785	2,705	921,912
Unknown	94	52	n/a

1. Includes all invasive cases

2. "Asian & Pacific Islander" includes Asian Indians and Pakistanis.

Source: RI Cancer Registry

V. Control Strategy: Screening

Screening is used to detect precancerous polyps (abnormal growths) so that they may be removed before becoming cancerous, and also to detect cancers at earlier stages of disease, when treatment is more effective. Among several screening tests for colorectal cancer, colonoscopy at least once every 10 years starting at age 50 (45 for persons of African ancestry) is preferred.

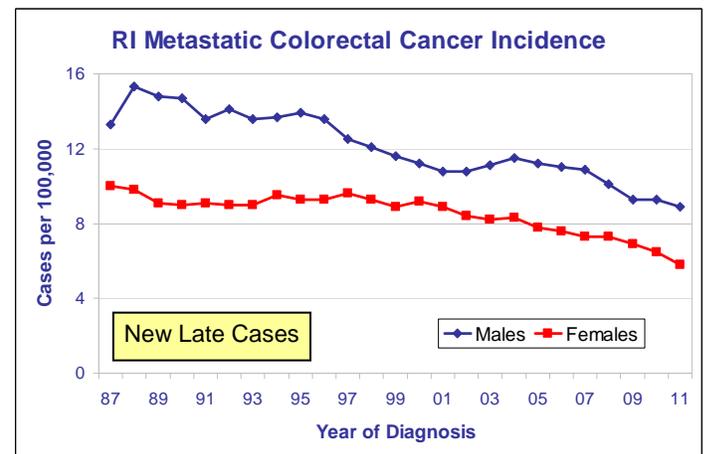
Source: Centers for Disease Control and Prevention

VI. Percent ever screened¹

Location / Year	1997	2004	2010
<u>Rhode Island</u>	<u>42.6</u>	<u>61.7</u>	<u>74.5</u>
United States	41.0	53.5	65.2

1. % of persons ages 50+ who ever had colonoscopy or sigmoidoscopy.
Source: Behavioral Risk Factor Surveillance System

VII. Late Stage Cancer Rates¹

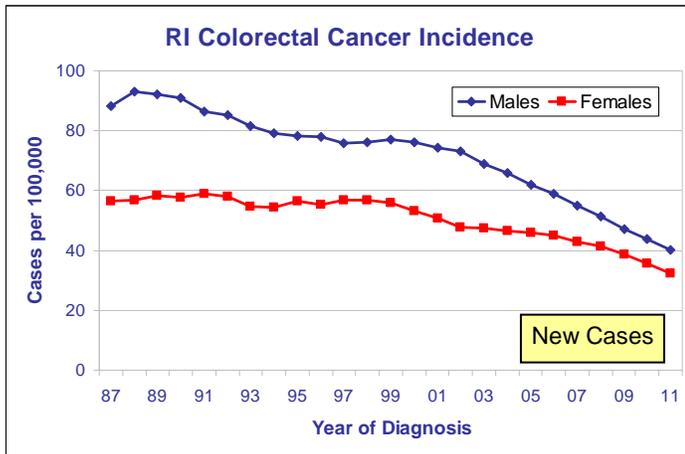


1. Age-adjusted metastatic cases per 100,000 people

Source: RI Cancer Registry

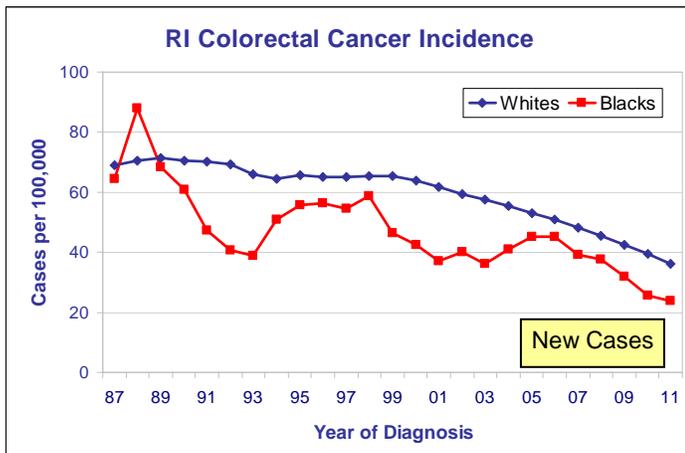
VIII. Rate¹ Trends

Incidence Rates by Sex



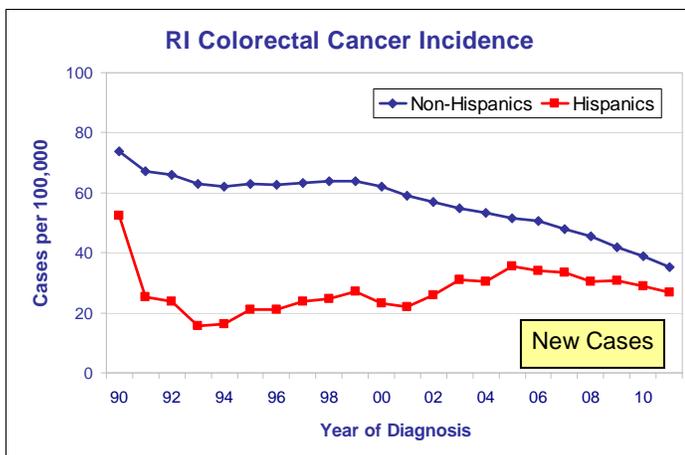
1. Age-adjusted invasive cases per 100,000 people
Source: RI Cancer Registry

Incidence Rates by Race



1. Age-adjusted invasive cases per 100,000 people
Source: RI Cancer Registry

Incidence Rates by Ethnicity



1. Age-adjusted invasive cases per 100,000 people
Source: RI Cancer Registry

IX. From the 2013-2018 RI Cancer Plan

Goal

- Increase early detection of colorectal cancer among Rhode Islanders.

Objective

1. By 2018, increase the percentage of adults ages 50 and older who have ever had a sigmoidoscopy or colonoscopy to 87% (Baseline: 75%, Behavioral Risk Factor Surveillance System 2012).

Strategies

- Promote a public awareness campaign on colon cancer screening.
- Promote low- or no-cost colorectal cancer screening programs available to uninsured and underinsured populations.
- Educate state policymakers on the health and economic benefits of prevention and early detection of colorectal cancer.
- Develop patient navigator services within the Federally Qualified Health Centers and primary care clinics to increase awareness and use of colorectal cancer screening.
- Promote healthcare provider use of current screening guidelines, particularly for those with a higher risk of colorectal cancer.
- Encourage state funding for colorectal cancer screening and treatment programs to provide care to the medically underserved populations.
- Work with Rhode Island-based health insurers to address disparities in health insurance coverage in regards to screening versus diagnostic procedures for all preventive cancer screening services.



For more information see:

www.health.ri.gov/programs/comprehensivecancercontrol

www.cdc.gov/cancer/colorectal/

This Brief was developed by the Rhode Island Cancer Registry at the request of the Rhode Island Cancer Control Program and the Partnership to Reduce Cancer in Rhode Island, with the support of Cooperative Agreement Number DP12-1205 (National Program of Cancer Registries) from the Centers for Disease Control and Prevention. (5/15/2014)

Lung Cancer

A RHODE ISLAND CANCER CONTROL PROGRAM BRIEF

I. Background

Lung cancer¹ is the leading cause of cancer death in Rhode Island and the U.S. overall. Currently, it is the most common cancer to be diagnosed in Rhode Island, and second most common to be diagnosed in the U.S. Annual counts of new lung cancers and deaths have increased over the past 25 years in Rhode Island (19% and 2%, respectively), despite great strides in prevention.

In the United States, tobacco use is the leading cause of lung cancer, followed in importance by exposure to radon gas indoors.

1. Cancer of the lung and bronchus

Sources: RI Cancer Registry; Centers for Disease Control and Prevention

II. Cases¹ and Deaths in Context

Rhode Island: 1987-91 ←Δ→ 2006-10

Cases

	1987-91	% Change	2006-10
All cancers	24,584	+24%	30,586
Colon-rectum	3,884	-27%	2,818
Lung-bronchus	3,679	+19%	4,391
Female Breast	3,726	+15%	4,267
Prostate	2,487	+63%	4,045
Urinary Bladder	1,289	+34%	1,732

Deaths

	1987-91	% Change	2006-10
All causes of death	47,947	<+1%	48,125
All cancers	11,932	-6%	11,176
Colon-rectum	1,560	-37%	987
Lung-bronchus	3,097	+2%	3,183
Female Breast	1,103	-33%	743
Prostate	671	-24%	512
Urinary Bladder	274	+21%	332

1. Includes all invasive cases and in situ cases of the urinary bladder

Sources: RI Cancer Registry; National Center for Health Statistics

III. Age-Adjusted¹ Rates

Lung Cancer: 1987-91 ←Δ→ 2006-10

Incidence Rates

	1987-91	% Change	2006-10
Rhode Island	68.5	+5%	72.2
United States	68.2	-12%	60.0

Mortality Rates

	1987-91	% Change	2006-10
Rhode Island	57.2	-10%	51.4
United States	57.8	-14%	49.5

1. Age-adjustment permits meaningful comparison of rates across populations with very different age structures.

Sources: RI Cancer Registry; National Cancer Institute's SEER System; National Center for Health Statistics

IV. Cases¹ by Race and Ethnicity

Rhode Island:	1987-91	2006-10	2010 Pop.
Race			
White	3,598	4,224	856,869
Black	83	144	60,189
Native American	1	5	6,058
Asian & Pacific Islander ²	9	21	31,011
Other & Unknown	1	23	98,440
Ethnicity			
Hispanic	18	69	130,655
Not Hispanic	3,617	4,298	921,912
Unknown	57	50	n/a

1. Includes all invasive cases

2. "Asian & Pacific Islander" includes Asian Indians and Pakistanis.

Source: RI Cancer Registry

V. Control Strategy 1: Prevention

Preventing exposure to tobacco smoke and to naturally-occurring radon gas would prevent most cancers of the lung and bronchus in Rhode Island and the U.S. overall.

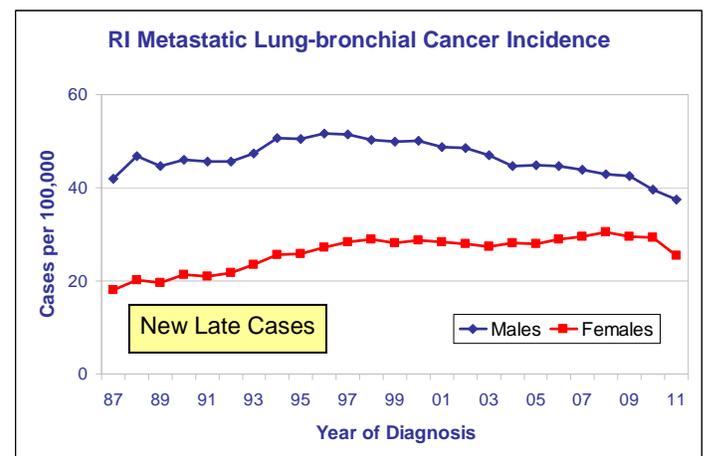
Source: Centers for Disease Control and Prevention

VI. Control Strategy 2: Screening

Screening long-term smokers with low-dose computed tomography may be used to detect cancers at earlier stages of disease, when treatment is more effective.

Source: Centers for Disease Control and Prevention

VII. Late Stage Cancer Rates¹

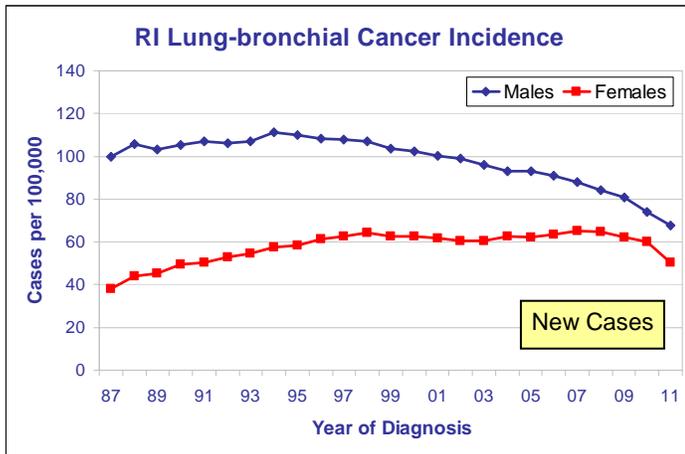


1. Age-adjusted metastatic cases per 100,000 people

Source: RI Cancer Registry

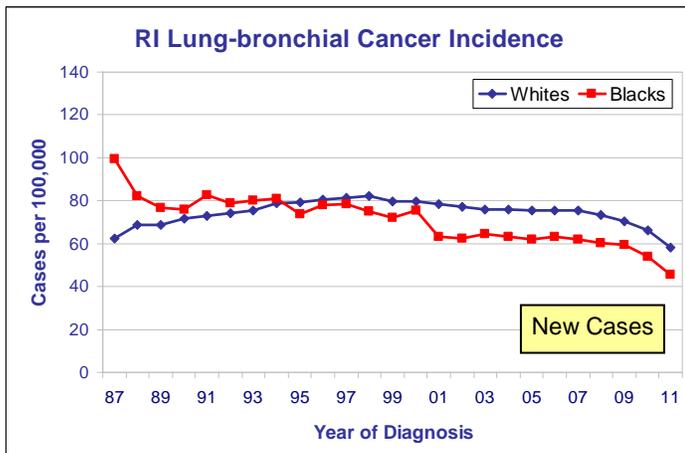
VIII. Rate¹ Trends

Incidence Rates by Sex



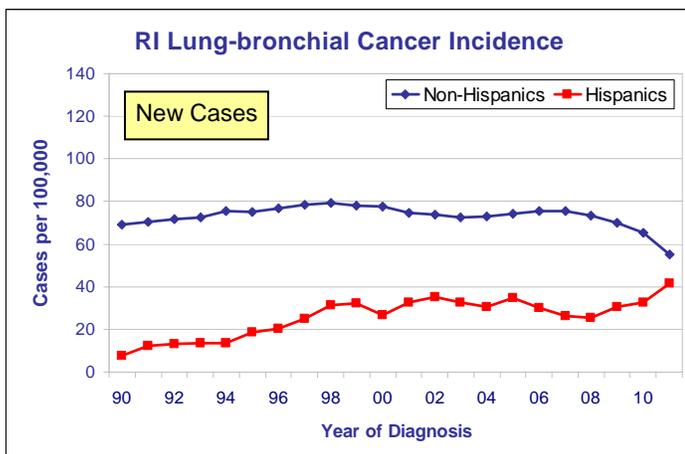
1. Age-adjusted invasive cases per 100,000 people
Source: RI Cancer Registry

Incidence Rates by Race



1. Age-adjusted invasive cases per 100,000 people
Source: RI Cancer Registry

Incidence Rates by Ethnicity



1. Age-adjusted invasive cases per 100,000 people
Source: RI Cancer Registry

IX. From the 2013-2018 RI Cancer Plan

Goals

- Reduce tobacco use and tobacco-related cancers, disabilities, and deaths by implementing evidence-based policy, systems, and environmental changes.
- Protect all Rhode Islanders from cancer-related environmental exposures at home and in the workplace.

Objectives

1. By 2018, decrease the proportion of the population reporting exposure to secondhand smoke in their homes to 5.65 (Baseline: 10.6, National Adult Tobacco Survey, 2010).
2. By 2018, decrease the prevalence of smoking among adults to 12% (Baseline: 20.2%, Behavioral Risk Factor Surveillance System, 2011).
3. By 2018, decrease the rate of youth initiation of tobacco use to 2.2% (Baseline: 4.2%, National Survey on Drug Use and Health, 2011).
4. By 2018, decrease the ratio of low-income and higher-income adults who smoke to 1.5:1 (Baseline: 2.25:1).
5. By 2018, reduce unhealthy radon exposure by increasing the percentage of homes with unacceptable radon levels greater than or equal to 4.0 picoCuries per Liter (pCi/L) that receive mitigation to 80% (Baseline: 65%, Rhode Island Department of Health Radon Database 2010).



For more information see:

www.health.ri.gov/programs/comprehensivecancercontrol

www.cdc.gov/cancer/colorectal/

This Brief was developed by the Rhode Island Cancer Registry at the request of the Rhode Island Cancer Control Program and the Partnership to Reduce Cancer in Rhode Island, with the support of Cooperative Agreement Number DP12-1205 (National Program of Cancer Registries) from the Centers for Disease Control and Prevention. (5/15/2014)

Female Breast Cancer

A RHODE ISLAND CANCER CONTROL PROGRAM BRIEF

I. Background

Breast cancer is the most common cancer among Rhode Island women and women in the U.S. overall. (Men may get breast cancer as well, but the risk is quite low.) Women who get regular screening mammograms can lower their risk of dying from breast cancer substantially.

Sources: RI Cancer Registry; Centers for Disease Control and Prevention

II. Cases¹ and Deaths in Context

Rhode Island: 1987-91 ←Δ→ 2006-10

Cases

All cancers	24,584	+24%	30,586
Colon-rectum	3,884	-27%	2,818
Lung-bronchus	3,679	+19%	4,391
Female Breast	3,726	+15%	4,267
Prostate	2,487	+63%	4,045
Urinary Bladder	1,289	+34%	1,732

Deaths

All causes of death	47,947	<+1%	48,125
All cancers	11,932	-6%	11,176
Colon-rectum	1,560	-37%	987
Lung-bronchus	3,097	+2%	3,183
Female Breast	1,103	-33%	743
Prostate	671	-24%	512
Urinary Bladder	274	+21%	332

1. Includes all invasive cases and in situ cases of the urinary bladder
Sources: RI Cancer Registry; National Center for Health Statistics

III. Age-Adjusted¹ Rates

Female Breast Cancer: 1987-91 ←Δ→ 2006-10

Incidence Rates

Rhode Island	130.0	+1%	131.1
United States	131.8	-3%	127.6

Mortality Rates

Rhode Island	37.3	-44%	20.8
United States	33.0	-32%	22.6

1. Age-adjustment permits meaningful comparison of rates across populations with very different age structures.
Sources: RI Cancer Registry; National Cancer Institute's SEER System; National Center for Health Statistics

IV. Cases¹ by Race and Ethnicity

Rhode Island:	1987-91	2006-10	2010 Pop.
Race			
White	3,652	4,073	856,869
Black	76	159	60,189
Native American	0	2	6,058
Asian & Pacific Islander ²	7	34	31,011
Other & Unknown	6	17	98,440
Ethnicity			
Hispanic	17	133	130,655
Not Hispanic	3,601	4,124	921,912
Unknown	123	27	n/a

1. Includes all invasive cases
2. "Asian & Pacific Islander" includes Asian Indians and Pakistanis.
Source: RI Cancer Registry

V. Control Strategy: Screening

Mammography is used to detect cancers at earlier stages of disease, when treatment is more effective. Women should have mammograms every two years from age 50 to 74 years. Some women should have mammograms before the age of 50, on the advice of a health professional.

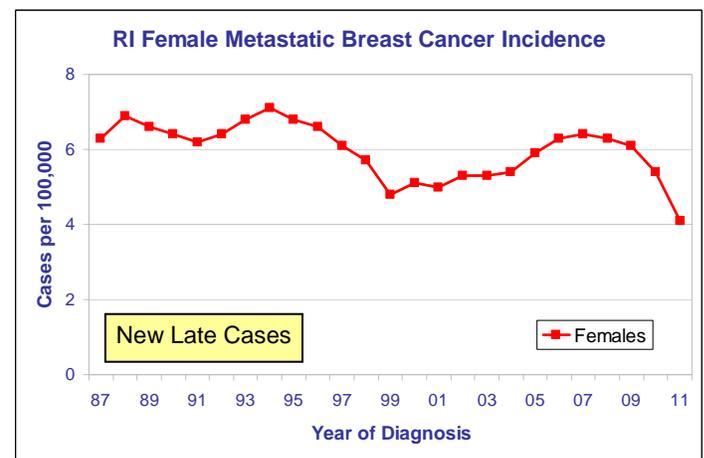
Source: Centers for Disease Control and Prevention

VI. Percent Screened per Guidelines¹

Location / Year	1995	2002	2010
Rhode Island	71.4	88.1	83.6
United States	70.3	79.7	77.9

1. % of women ages 50+ who had a mammogram in the past 2 years.
Source: Behavioral Risk Factor Surveillance System

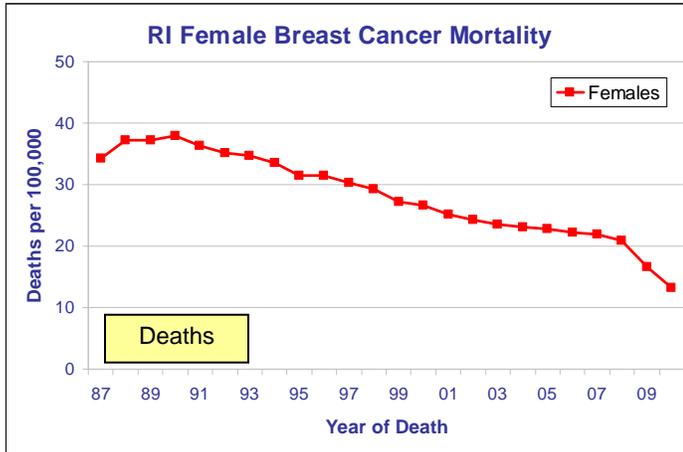
VII. Late Stage Cancer Rates¹



1. Age-adjusted metastatic cases per 100,000 people
Source: RI Cancer Registry

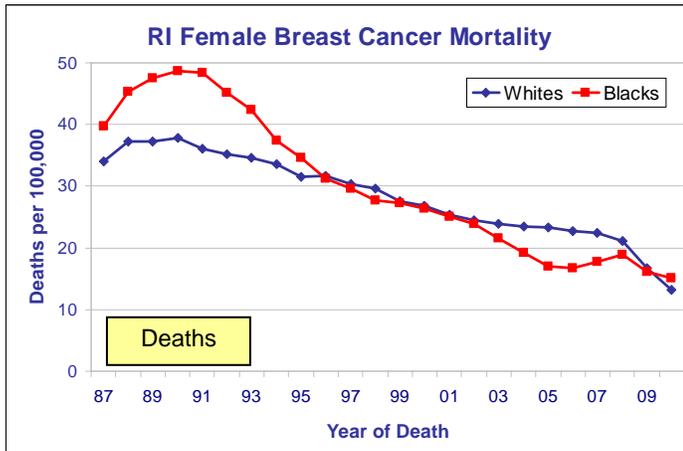
VIII. Rate¹ Trends

Death Rates



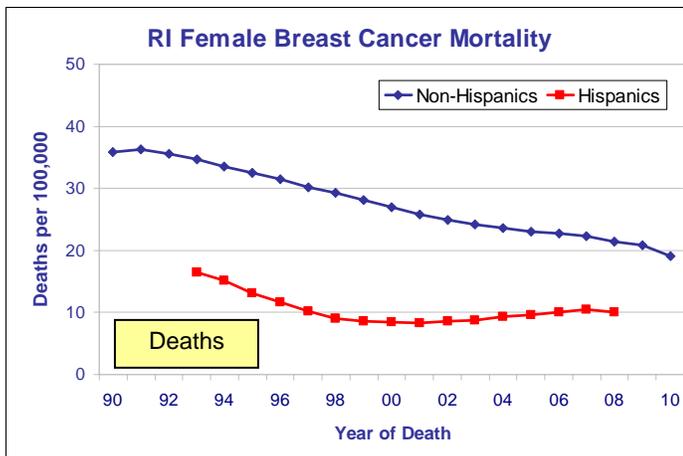
1. Age-adjusted invasive cases per 100,000 people
Source: National Center for Health Statistics

Death Rates by Race



1. Age-adjusted invasive cases per 100,000 people
Source: National Center for Health Statistics

Death Rates by Ethnicity



1. Age-adjusted invasive cases per 100,000 people
Source: National Center for Health Statistics

IX. From the 2013-2018 RI Cancer Plan

Goal

- Increase early detection of breast cancer among Rhode Islanders.

Objective

1. By 2018, increase the percentage of women ages 50 through 74 who have had a mammogram in the past two years to 94% (Baseline: 88%, Behavioral Risk Factor Surveillance System 2010).

Strategies

- Educate women one-on-one and in group settings about the benefits of mammograms and ways to overcome barriers to screening.
- Use small media, such as videos, letters, brochures, and newsletters, to inform and motivate women to have a mammogram.
- Support and promote community-based events that encourage increases in breast cancer screening.
- Reduce structural barriers to screening by providing transportation, adjusting appointment hours, and providing screening in various settings.
- Support the state's Women's Cancer Screening Program, which provides routine screening and treatment for uninsured and underinsured women.
- Work with Rhode Island-based health insurers to address disparities in health insurance coverage in regards to screening versus diagnostic procedures for all preventive cancer screening services.



For more information see:

www.health.ri.gov/programs/comprehensivecancercontrol

www.cdc.gov/cancer/colorectal/

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Prostate Cancer

A RHODE ISLAND CANCER CONTROL PROGRAM BRIEF

I. Background

Prostate cancer is the most common cancer among Rhode Island men and men in the U.S. overall. The incidence of prostate cancer is higher among men of African ancestry. Screening for prostate cancer is controversial, as the effectiveness of early treatment in preventing death has not been demonstrated.

Sources: RI Cancer Registry; Centers for Disease Control and Prevention

II. Cases¹ and Deaths in Context

Rhode Island: 1987-91 ←Δ→ 2006-10

Cases

	1987-91	% Change	2006-10
All cancers	24,584	+24%	30,586
Colon-rectum	3,884	-27%	2,818
Lung-bronchus	3,679	+19%	4,391
Female Breast	3,726	+15%	4,267
Prostate	2,487	+63%	4,045
Urinary Bladder	1,289	+34%	1,732

Deaths

	1987-91	% Change	2006-10
All causes of death	47,947	<+1%	48,125
All cancers	11,932	-6%	11,176
Colon-rectum	1,560	-37%	987
Lung-bronchus	3,097	+2%	3,183
Female Breast	1,103	-33%	743
Prostate	671	-24%	512
Urinary Bladder	274	+21%	332

1. Includes all invasive cases and in situ cases of the urinary bladder
Sources: RI Cancer Registry; National Center for Health Statistics

III. Age-Adjusted¹ Rates

Prostate Cancer: 1987-91 ←Δ→ 2006-10

Incidence Rates

Rhode Island	43.8	+51%	66.3
United States	64.5	+12%	72.5

Mortality Rates

Rhode Island	12.2	-37%	7.7
United States	13.5	-33%	9.0

1. Age-adjustment permits meaningful comparison of rates across populations with very different age structures.
Sources: RI Cancer Registry; National Cancer Institute's SEER System; National Center for Health Statistics

IV. Cases¹ by Race and Ethnicity

Rhode Island:	1987-91	2006-10	2010 Pop.
Race			
White	2,435	3,571	856,869
Black	54	192	60,189
Native American	1	3	6,058
Asian & Pacific Islander ²	0	24	31,011
Other & Unknown	2	278	98,440
Ethnicity			
Hispanic	13	155	130,655
Not Hispanic	2,392	3,620	921,912
Unknown	87	293	n/a

1. Includes all invasive cases
2. "Asian & Pacific Islander" includes Asian Indians and Pakistanis.
Source: RI Cancer Registry

V. Control Strategy: Screening?

Combining the digital rectal examination with the PSA (Prostatic Specific Antigen) test in men ages 50 and over¹ is effective in detecting prostate cancer early, but clinical trials have not shown that screening prevents deaths.

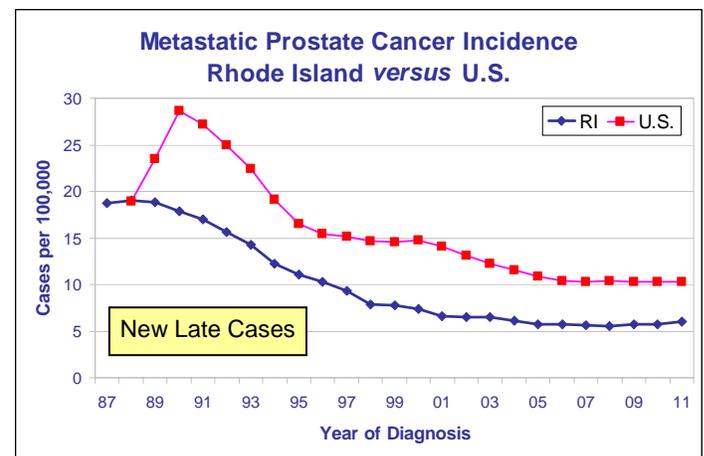
1. Ages 45 and over for men with a first-degree relative diagnosed with prostate cancer before age 65, and all men of African descent
Source: Centers for Disease Control and Prevention

VI. Percent Screened with PSA Test¹

Location / Year	2002	2006	2010
Rhode Island	59.1	61.0	58.1
United States	53.8	53.5	53.2

1. % of men ages 40+ who had a PSA test in the past 2 years.
Source: Behavioral Risk Factor Surveillance System

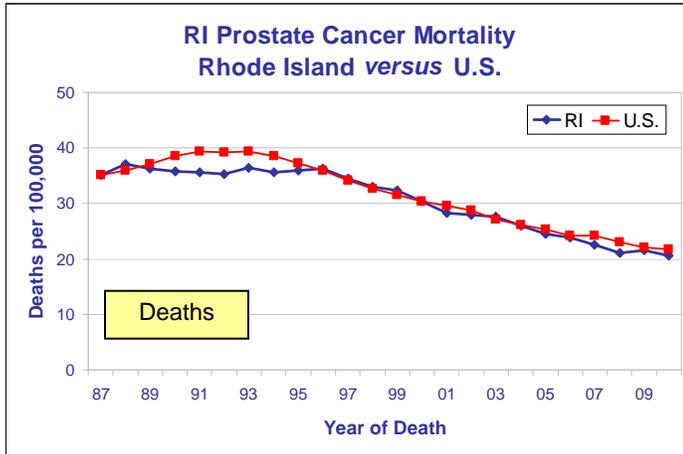
VII. Late Stage Cancer Rates¹



1. Age-adjusted metastatic cases per 100,000 people
Source: RI Cancer Registry; National Cancer Institute, SEER System

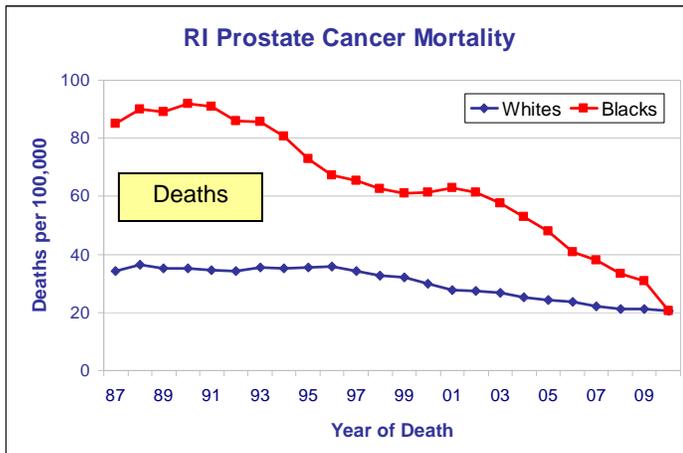
VIII. Rate¹ Trends

Death Rates (Rhode Island vs. U.S.)



1. Age-adjusted deaths per 100,000 people
Source: National Center for Health Statistics

Death Rates by Race



1. Age-adjusted deaths per 100,000 people
Source: National Center for Health Statistics



For more information see:

www.health.ri.gov/programs/comprehensivecancercontrol

www.cdc.gov/cancer/colorectal/

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Bladder Cancer

A RHODE ISLAND CANCER CONTROL PROGRAM BRIEF

I. Background

Cancer of the urinary bladder ("bladder cancer") is the fifth most common cancer to be diagnosed in Rhode Island, and the sixth most common to be diagnosed in the U.S. Annual counts of new bladder cancers and deaths have increased over the past 25 years in Rhode Island (34% and 21%, respectively), despite significant reductions in risk factors, reflective of past trends in smoking and the long incubation period of this cancer. In the U.S., tobacco use is the leading cause of bladder cancer, followed in importance by occupational and environmental exposures.

Sources: RI Cancer Registry; National Cancer Institute's SEER System

II. Cases¹ and Deaths in Context

Rhode Island: 1987-91 ←Δ→ 2006-10

Cases

	1987-91	% Change	2006-10
All cancers	24,584	+24%	30,586
Colon-rectum	3,884	-27%	2,818
Lung-bronchus	3,679	+19%	4,391
Female Breast	3,726	+15%	4,267
Prostate	2,487	+63%	4,045
<u>Urinary Bladder</u>	<u>1,289</u>	+34%	<u>1,732</u>

Deaths

	1987-91	% Change	2006-10
All causes of death	47,947	<+1%	48,125
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Colon-rectum	1,560	-37%	987
Lung-bronchus	3,097	+2%	3,183
Female Breast	1,103	-33%	743
Prostate	671	-24%	512
<u>Urinary Bladder</u>	<u>274</u>	+21%	<u>332</u>

1. Includes all invasive cases and in situ cases of the urinary bladder
Sources: RI Cancer Registry; National Center for Health Statistics

III. Age-Adjusted¹ Rates

Bladder Cancer: 1987-91 ←Δ→ 2006-10

Incidence Rates

	1987-91	% Change	2006-10
<u>Rhode Island</u>	<u>23.8</u>	+18%	<u>28.1</u>
United States	21.1	+1%	21.3

Mortality Rates

	1987-91	% Change	2006-10
<u>Rhode Island</u>	<u>5.0</u>	+2%	<u>5.1</u>
United States	4.4	+0%	4.4

1. Age-adjustment permits meaningful comparison of rates across populations with very different age structures.

Sources: RI Cancer Registry; National Cancer Institute's SEER System; National Center for Health Statistics

IV. Cases¹ by Race and Ethnicity

Rhode Island:	1987-91	2006-10	2010 Pop.
Race			
White	1,279	1,666	856,869
Black	12	35	60,189
Native American	1	3	6,058
Asian & Pacific Islander ²	0	9	31,011
Other & Unknown	3	29	98,440
Ethnicity			
Hispanic	4	20	130,655
Not Hispanic	1,248	1,684	921,912
Unknown	43	38	n/a

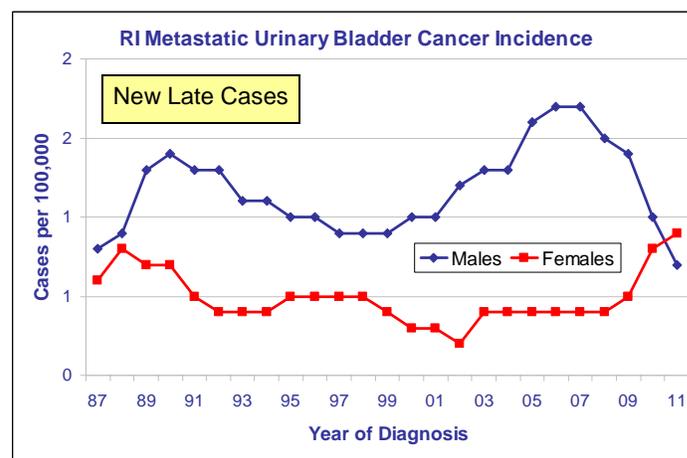
1. Includes all invasive cases and all *in situ* cases, per convention
2. "Asian & Pacific Islander" includes Asian Indians and Pakistanis.
Source: RI Cancer Registry

V. Control Strategy: Prevention

Preventing exposure to tobacco smoke, to occupational exposures such as o-toluidine or aniline, and to naturally-occurring arsenic compounds in some drinking water supply systems would prevent many if not most cases of bladder cancer in Rhode Island and in the U.S. overall.

Source: Centers for Disease Control and Prevention

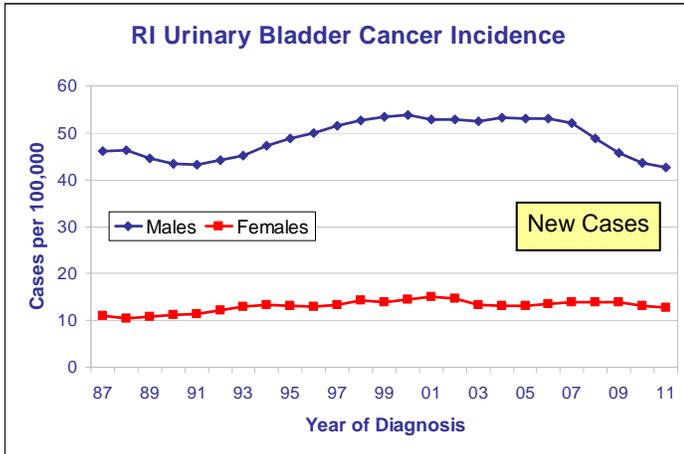
VI. Late Stage Cancer Rates¹



1. Age-adjusted metastatic cases per 100,000 people
Source: RI Cancer Registry; National Cancer Institute, SEER System

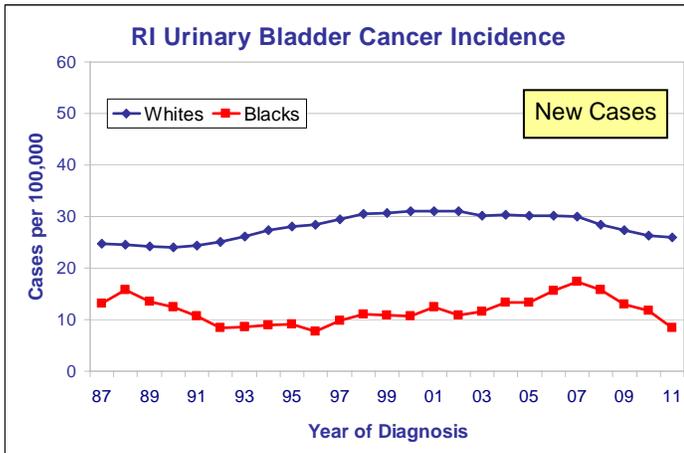
VII. Rate¹ Trends

Incidence Rates by Sex



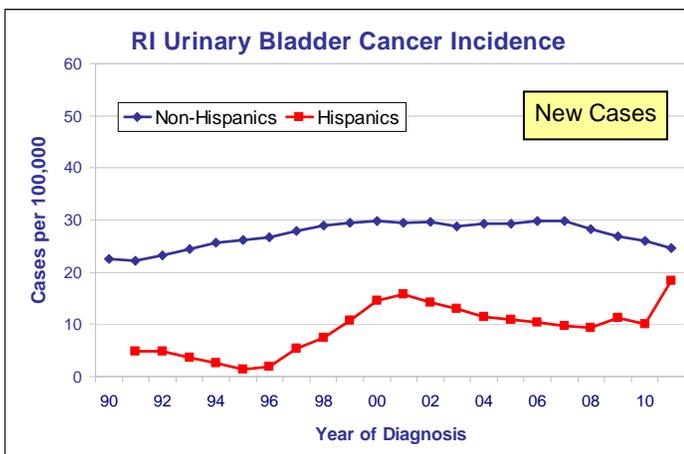
1. Age-adjusted invasive cases per 100,000 people
Source: RI Cancer Registry

Incidence Rates by Race



1. Age-adjusted invasive cases per 100,000 people
Source: RI Cancer Registry

Incidence Rates by Ethnicity



1. Age-adjusted invasive cases per 100,000 people
Source: RI Cancer Registry



For more information see:

www.health.ri.gov/programs/comprehensivecancercontrol

www.cdc.gov/cancer/colorectal/

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