



# District of Columbia Cancer Report 2011



**Acknowledgements:**

The DC Cancer Registry and the DC Comprehensive Cancer Control Program wish to express their gratitude to the following for their assistance in preparation of this report:

- DC Cancer Registry Advisory Committee
- DC Cancer Consortium

We would also like to thank the cancer registrars throughout the District who abstract and submit data to the central registry. Without you, this report would not have been possible.

**Funding:**

The DCCR wishes to acknowledge the Centers for Disease Control and Prevention (CDC) for its financial support under Cooperative Agreement #U5-8DP000846-05. The contents of this report are solely the responsibility of the authors and do not necessarily represent the official views of the CDC.

**Requested Citation:**

Vargas A, Rogers K, Pearson-Fields AS. District of Columbia Cancer Report, 2011. Washington, DC: District of Columbia Department of Health; Community Health Administration, Bureau of Cancer and Chronic Disease, 2012.

# DISTRICT OF COLUMBIA CANCER REPORT

## Table of Contents

<b>Introduction .....</b>	<b>1</b>
Cancer Registry	
Comprehensive Cancer Control Program	
Population Profile	
<b>Cancer Overview .....</b>	<b>2</b>
Cancer Risk Factors	
Early Detection	
<b>Key Points .....</b>	<b>4</b>
<b>Cancer in the District.....</b>	<b>5</b>
Incidence	
Mortality	
<b>Cancer Staging at Time of Diagnosis .....</b>	<b>9</b>
<b>District of Columbia and State Comparisons .....</b>	<b>11</b>
Mortality	
<b>Cancer Variations by Race in the top four Cancer Sites .....</b>	<b>14</b>
Incidence	
Mortality	
<b>District of Columbia and National Comparisons .....</b>	<b>16</b>
Incidence and Mortality 2004-2008	
Incidence and Mortality 2008	
<b>Selected Cancer .....</b>	<b>18</b>
Breast Cancer	
Colorectal Cancer	
Lung and Bronchus Cancer	
Prostate Cancer	
<b>Cancer Trends by Ward.....</b>	<b>26</b>
Incidence	
Mortality	
<b>Cancer Cases for all Sites .....</b>	<b>32</b>
Incidence	
Mortality	
<b>Definitions and Technical Notes.....</b>	<b>34</b>



## Introduction



The District of Columbia Central Cancer Registry (DCCR) and the Comprehensive Cancer Control Program (CCCP) are pleased to present the annual Cancer Report for the District of Columbia, monograph series, documenting cancer incidence and mortality in the District from 2004-2008.

### DC Cancer Registry

The DC Cancer Registry is a population-based cancer surveillance system that maintains a record of the occurrence of all malignant cancer cases, and certain reportable benign conditions within the District. National collection of cancer surveillance data has been Congressionally mandated since 1951. The District's reference date, the date after which all cancers diagnosed and treated are reportable, is January 1, 1996. Approximately 233,509 cancer cases are currently part of the District's cancer registry. Approximately 8,200 new cases are added annually, of these approximately 3,100 (1/3) are DC residents. The remaining cases are primarily for Maryland and Virginia residents seeking diagnosis or treatment in the District.

DCCR provides accurate, complete, and timely data on malignant neoplasms and certain benign tumors. The DC Cancer Registry:

- Serves as the foundation for a comprehensive strategy to reduce cancer incidence and mortality
- Provides an indispensable tool for health professionals in the analysis of the District's cancer burden
- Facilitates monitoring and evaluation of the clinical, epidemiological and supportive health services provided to District residents diagnosed with cancer

### DC Comprehensive Cancer Control Program

Developing a clear understanding of the District's leading cancers provides an opportunity to support medical and behavioral interventions that aim to decrease cancer incidence and mortality. The Comprehensive Cancer Control Program monitors trends in total cancers and the specific cancer sites, (e.g., breast, cervical, prostate, lung and bronchus, and colorectal) and uses the data to support community interventions to reduce the District cancer burden.

The CCCP works with its community partners to:

- Prevent cancer risk factors
- Research effective interventions
- Educate residents about early detection
- View cancer as a survivable disease
- Eradicate cancer disparities
- Navigate patients from screening to treatment
- Treat cancer patients early with high quality care

## Population Profile

The District of Columbia is made up of 8 Wards across a geographic area of approximately 61 square miles. Between the 2000 and 2010, according to the United States Censuses, the District's population increased by 5.2% (572,059 to 601,723). Increases in population was seen in all Wards, except Ward 8 which decreased by -0.3%, Wards 2 and 6 experienced the largest population increases of 16% and 12.6% respectively.



Males and females are almost evenly distributed across the District (47.2% male and 52.8% female) and within each Ward. According to the 2010 US Census, Whites make up 38.5% of the District's population, Blacks 50.7%, and Hispanic or Latino 9.1%. The distribution of racial and ethnic communities vary greatly by Ward, for example:

- **Black:** 94.9% in Ward 7 - 5.0% in Ward 3;
- **White:** 83.5% in Ward 3 - 1.8% in Ward 7;
- **Hispanic:** 20.8% in Ward 1 - 1.8% in Ward 8.

Almost three quarters (71.7%) of the District's residents are below 49 years of age. The distribution of younger residents ranges from 80.5% in Ward 1 to 64.4% in Ward 4. In contrast, only 11.4% of the District's population are 65 years of age and older. Ward 1 has the smallest population of residents 65 years of age and older (7.1%) compared to Wards 4 and 5 with 15.3% of residents 65 years and older.

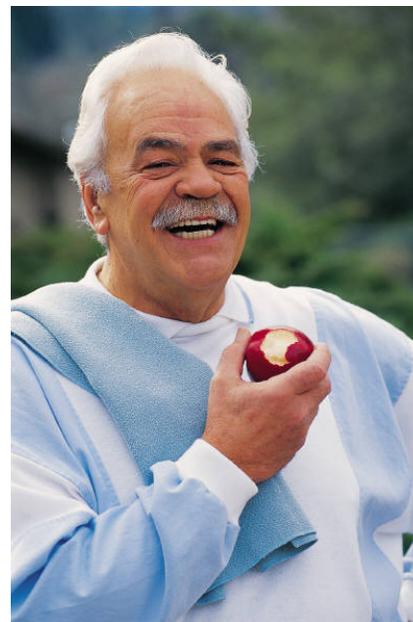
## Cancer Overview

Cancer is a leading cause of death worldwide accounting for 7.6 million deaths in 2008, according to the World Health Organization. Nationally, cancer represents the number two cause of death. Approximately 1.6 million Americans are expected to be diagnosed with cancer in 2012 and 557,190 will die from the disease.

In the District of Columbia, 2,741 new cases of cancer were diagnosed in 2008, and 1,135 Washingtonians died from the disease. Of the 5,124 deaths that occurred in the District in 2008, 1 out of every 4 was attributable to cancer. Given the life expectancy of District residents, cancer is the number one cause of premature deaths (deaths before the age of 70) - far greater than heart disease, HIV/AIDS, homicide/assault, and accidents.

## Cancer Risk Factors

There are many causes of cancer including genetic, environmental, and behavioral lifestyle choices. Of cancers causes, behavioral risk factors are the most vexing. Approximately 30% of cancer deaths might have been prevented by behavioral and dietary changes such as maintaining a health body mass index; adequate consumption of fruits and vegetables; regular physical activity; and reduction in alcohol and tobacco consumption. In fact, tobacco usage has been linked to almost one quarter of all cancer deaths and 71% of lung cancer deaths worldwide. Additionally, research has shown that overweight and obesity may be related to 14% of cancer deaths in men and 20% of cancer deaths in women. Excess weight also has been associated with national increases in cancers of the pancreas, kidney and adenocarcinoma of the esophagus, and has been adversely linked poor quality of life for cancer survivors.



Viral infections such as hepatitis B and C (HBV/HCV) and human papilloma virus (HPV) also lead to many types of cancer. More than 4 million Americans are reported to have chronic HBV and HCV which can lead to liver cancer. Approximately 15,000 Americans die from liver cancer each year. Additionally, Human papillomavirus (HPV), the most common sexually transmitted infection, is a known cause of cancers of the cervix, vulva, vagina, penis, anus, and oropharynx. Recent medical discoveries offer hope of preventing some virally-linked cancers thereby greatly reducing suffering from disease in this country.

## Early Detection

**Cancer is the number one cause of premature deaths in the District.** Detecting cancer early through regular screening is the most effective way of identifying cancer when it is most treatable. National and state-based programs that improve access to care through patient navigation and community education have greatly improved routine use of cancer screening, particularly among underserved populations. Since its inception more than 20 years ago, the National Breast and Cervical Cancer Early Detection program has provided more than 9.8 million breast and cervical examinations and diagnosed 52,694 breast cancers and 2,856 invasive cervical cancers. Recent federal expansion programs such as the Screen for Life colorectal cancer screening program have increased access to colorectal cancer screening and improved early detection and prevention of colorectal cancer for many Americans.

## Key Points

In the District of Columbia, the four most common types of cancer are lung, prostate, breast, and colorectal cancer. These cancers combined represent 54.8% of all new cancer cases and 47.8% of cancer deaths.

### Incidence

- **The District experienced a 6.5% decrease in the number of cancer cases** diagnosed from 2007 to 2008. Of the four most common types of cancer only lung and bronchus increased by 3% in the number of cancer cases.
- **Age-adjusted incidence rate decreased by 6.4%** from 2007 to 2008. Of the four most common types of cancer only lung and bronchus increased by 3%.

MOST COMMON CANCERS IN THE DISTRICT—2008	Incidence		Mortality	
	#	%	#	%
Breast (female)	419	27.9	92	16.9
Lung and Bronchus	343	22.8	292	53.8
Prostate	496	33.0	58	10.7
Colorectal	245	16.3	101	18.6
<b>Total</b>	<b>1,503</b>	<b>100</b>	<b>543</b>	<b>100</b>

### Mortality

- **Overall, there was a 2.1% decrease in the number of cancer deaths** from 2007 to 2008. Decreases were also seen in three of the top four cancer sites. Only deaths from cancer of the lung and bronchus increased by 6.6%.
- **The age-adjusted mortality rate decreased by 2.1%** from 2007 to 2008. Decreases were also seen in three of the top four cancer sites. Only lung and bronchus increased by 6.3%.

### Stage

The majority of cancers diagnosed in the District in 2008 were found in local and regional stages (60.6%) for all sites combined. Lung and bronchus cancer were the most likely to be diagnosed at advanced stage.

### Summary

Although cancer disparities persist, the District has experienced modest decreases in both cancer incidence and mortality. Additionally, efforts aimed at increasing early detection and reducing barriers to care have improved how residents utilize services resulting in a greater number of cancers being detected at earlier stages.

Map 1

## 2008 Incidence

Table 1

### Age-Adjusted Incidence Rates by Sex and Race for Cancers Diagnosed in 2008, DC residents

All sites

Race	Male and female		Male		Female	
	Rate	Count	Rate	Count	Rate	Count
All races	487.8	2,741	605.3	1,422	410.2	1,317
White	442.4	739	468.9	361	432.5	378
Black	497.8	1,799	657.9	950	396.3	849

Rates are per 100,000 persons and are age-adjusted to the 2000 U.S. standard.

All races includes White, Black and other races.

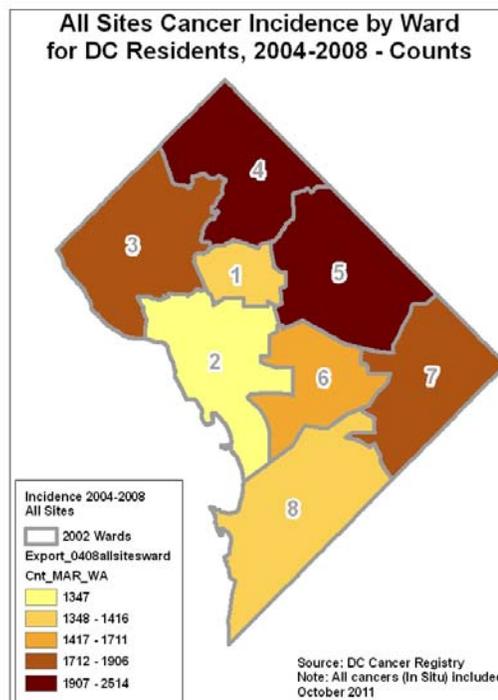


Figure 1

The age-adjusted incidence rates decreased (for both sexes, all races and all age groups combined) in 2008.

Significant decreases were seen in colorectal and prostate cancer (22.2% and 11.9% of respectively).

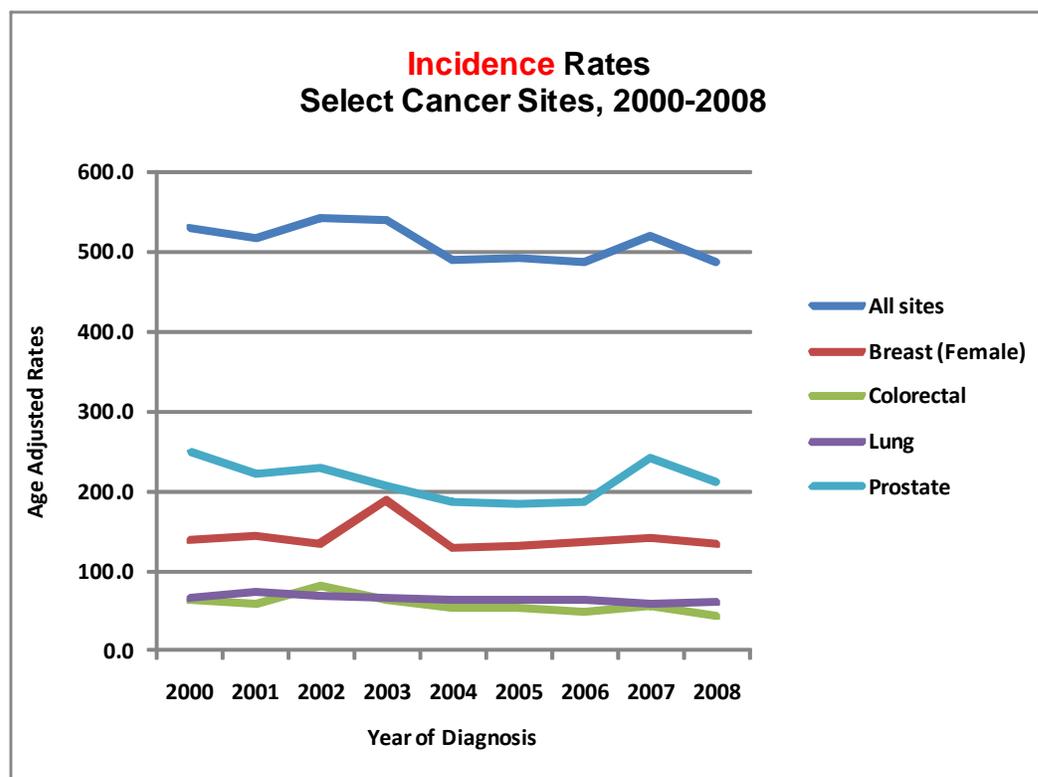


Figure 2

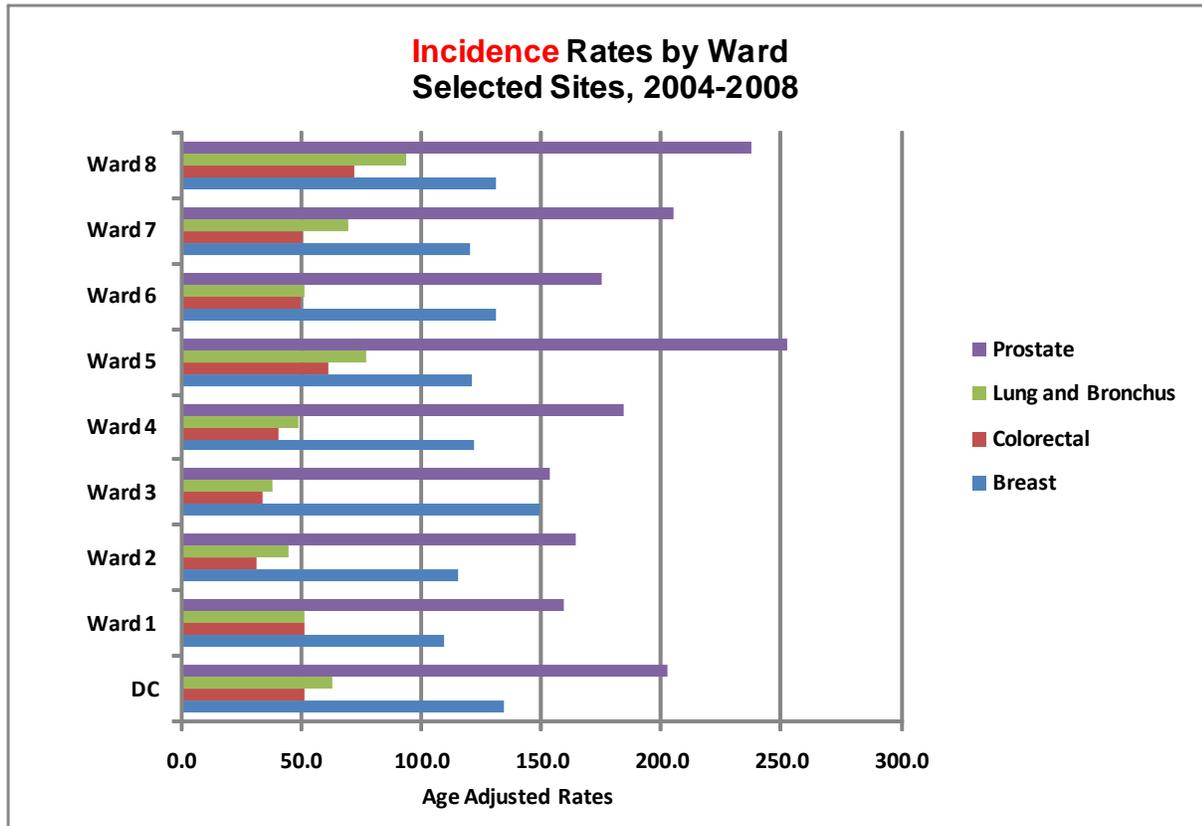
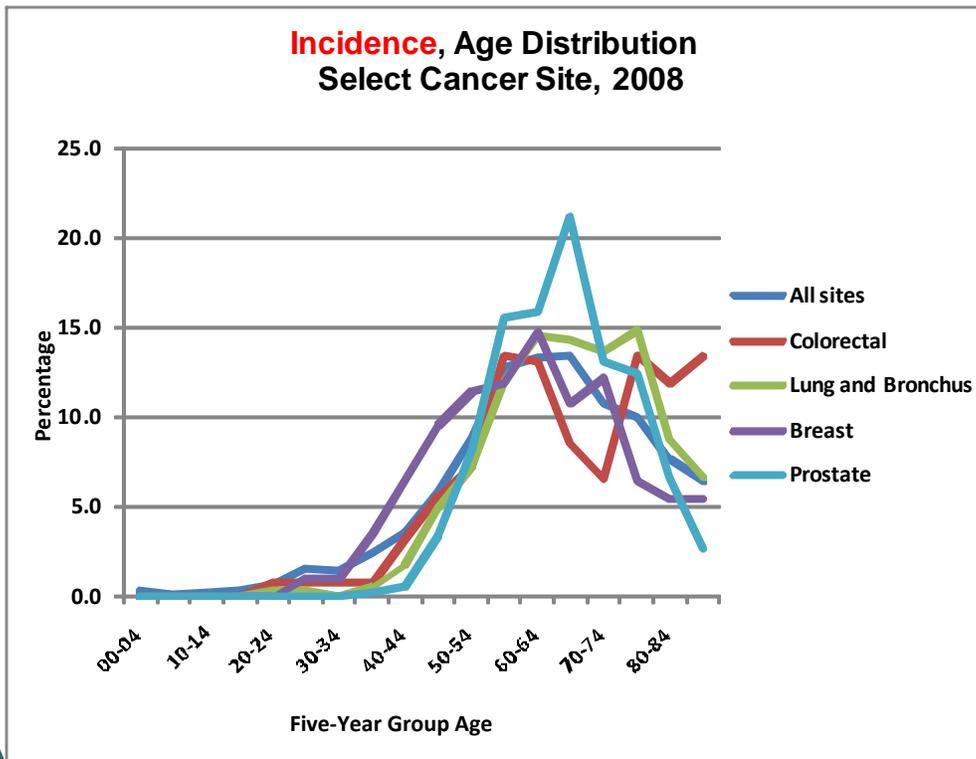


Figure 3



Prostate and breast cancer had the highest age-adjusted incidence rates in each Ward in 2004-2008.

The age when cancer is diagnosed varies according to the primary site.

- 67% of colorectal cancer cases were diagnosed in patients between 55-84 year old
- 69% of lung and bronchus cancer cases were diagnosed in patients between 55-79 year old
- 61% of breast cancer cases were diagnosed in patients between 50-74 years old
- 78% of prostate cancer cases were diagnosed in patients between 55-79 year old during 2008

Map 2

## 2008 Mortality

Table 2

### Age-Adjusted Mortality Rates by Sex and Race for Cancer Deaths Occurred in 2008, DC residents

#### All sites

Race	Male and female		Male		Female	
	Rate	Count	Rate	Count	Rate	Count
All races	202.6	1,135	270.4	594	161.9	541
White	155.2	249	208.9	144	116.3	105
Black	240.4	874	324.4	444	193.1	430

Rates are per 100,000 persons and are age-adjusted to the 2000 U.S. standard.

All races includes White, Black and other races.

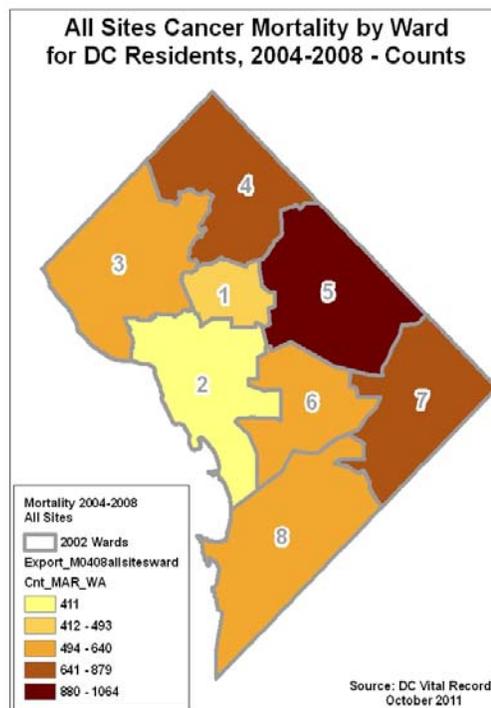


Figure 4

The age-adjusted mortality rates (for both sexes, all races and all age groups combined) experienced a decline during 2008.

Colorectal and prostate cancer had significant decrease (17.7% and 32.9% respectively).

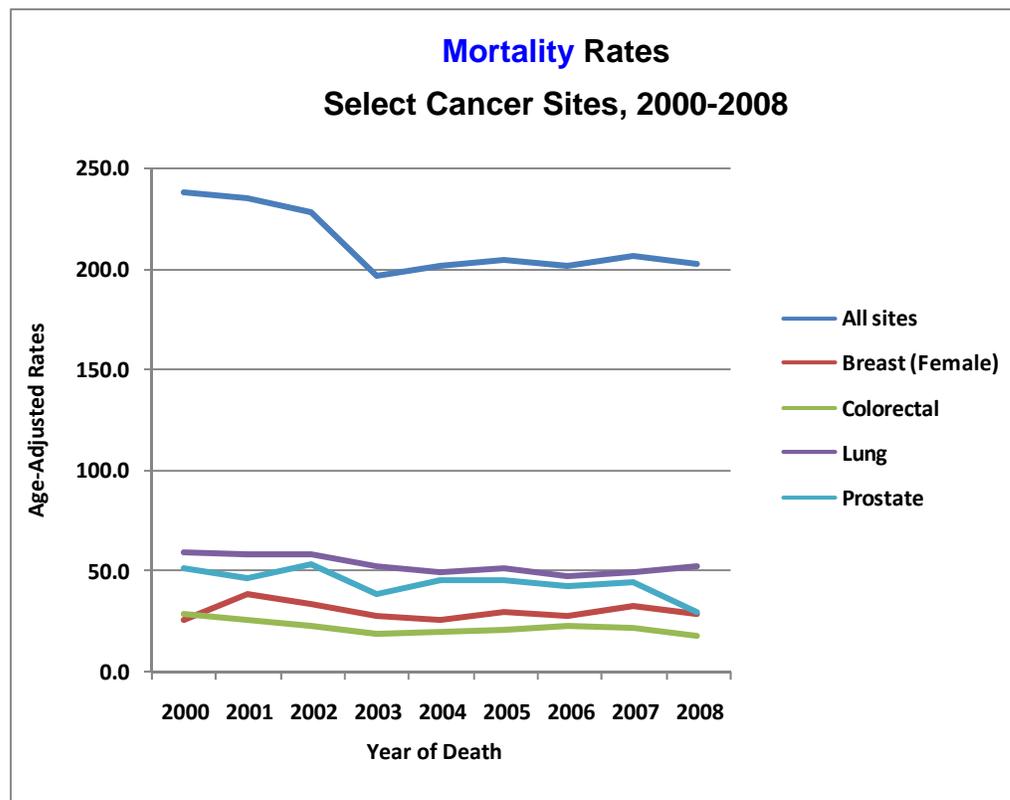


Figure 5

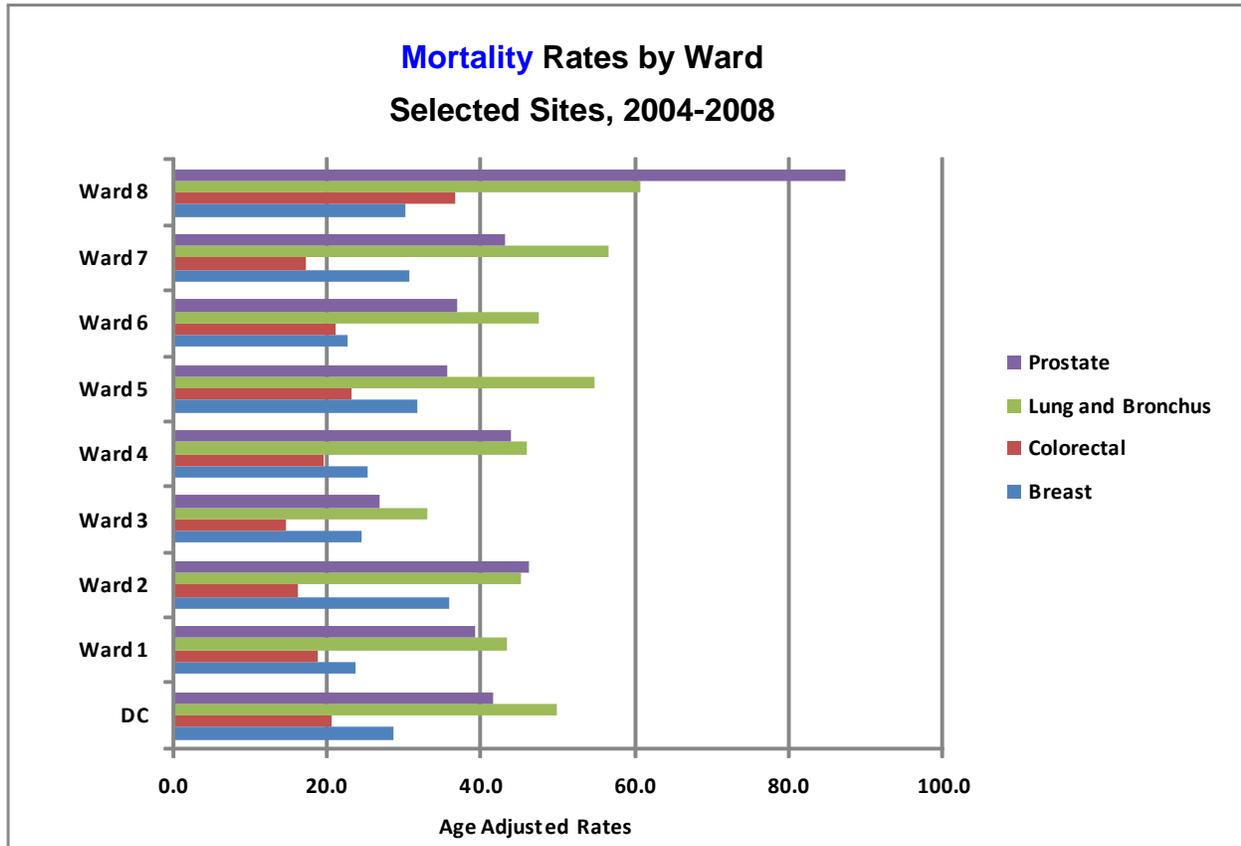
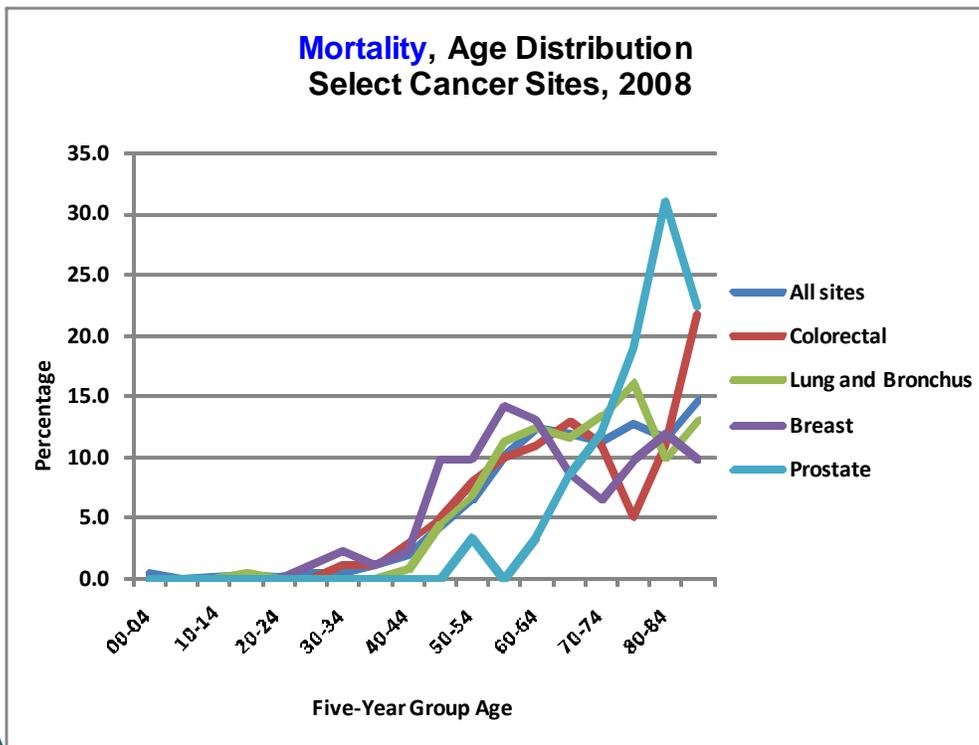


Figure 6



Lung and bronchus shows one of the highest age-adjusted mortality rates (in most cases followed by prostate) across District Wards during 2004-2008.

The age when death caused by cancer occurred varies according to the primary site.

- 72% of colorectal cancer deaths occurred in people over 60 years old
- 65% of lung and bronchus cancer deaths occurred in people between 55-79 years old
- 64% of breast cancer deaths occurred in people between 55-84 years old
- 72% of prostate cancer deaths occurred in people over 75 years of age during 2008

## Cancer Staging at Time of Diagnosis

The diagnosis of cancer at an early stage increases the likelihood of successful treatment. The National Cancer Institute Surveillance Epidemiology and End Results (SEER) provides a useful methodology to characterize how far a cancer has spread from its point of origin. In the District, the distribution of SEER stage at the time of diagnosis during 2008 shows higher incidence in local stage, with 81% of prostate cases being diagnosed at local stage. Of the top four cancer sites lung and bronchus represented the highest percentage of cases diagnosed at a distant stage 48%.

Figure 7

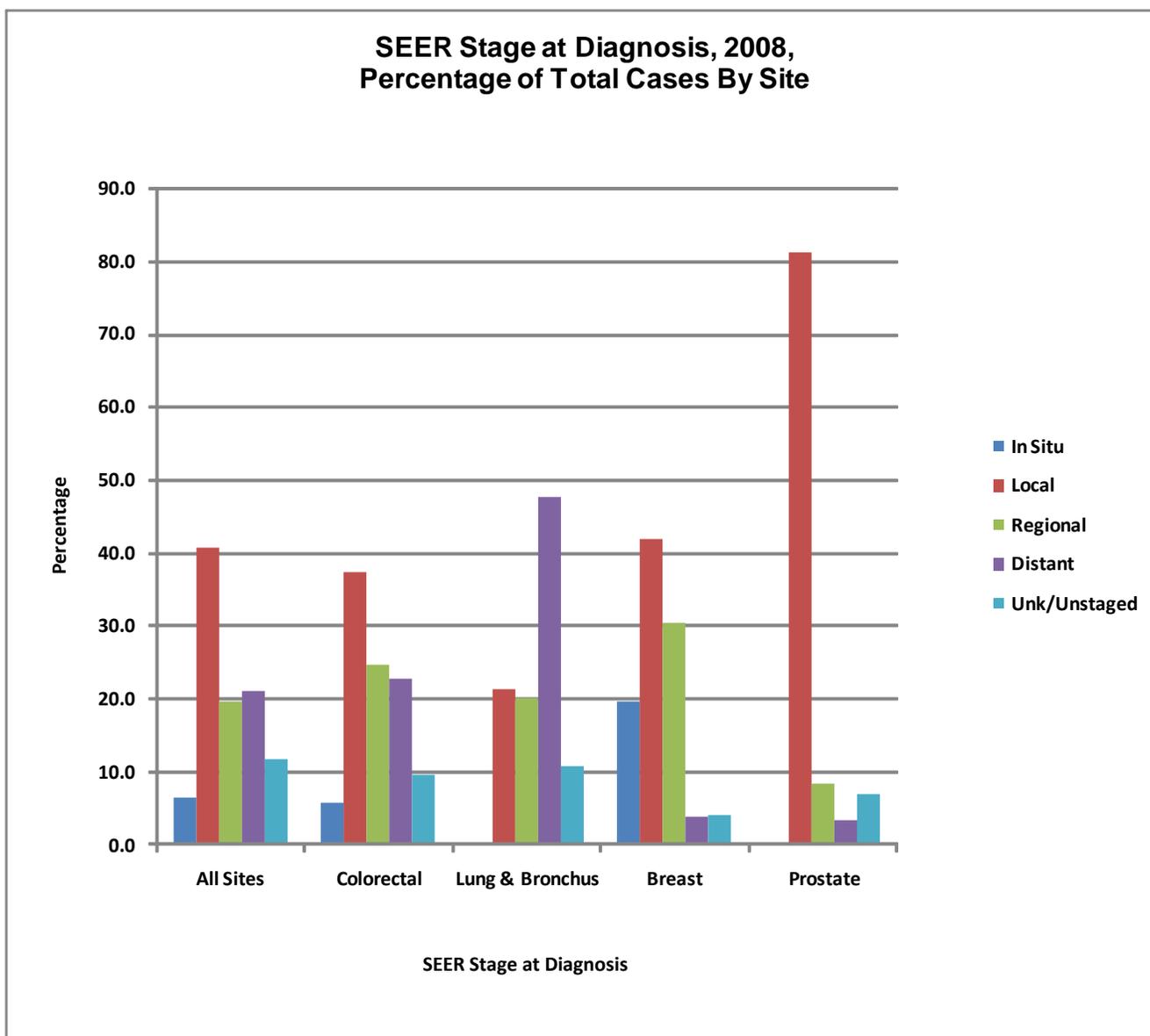
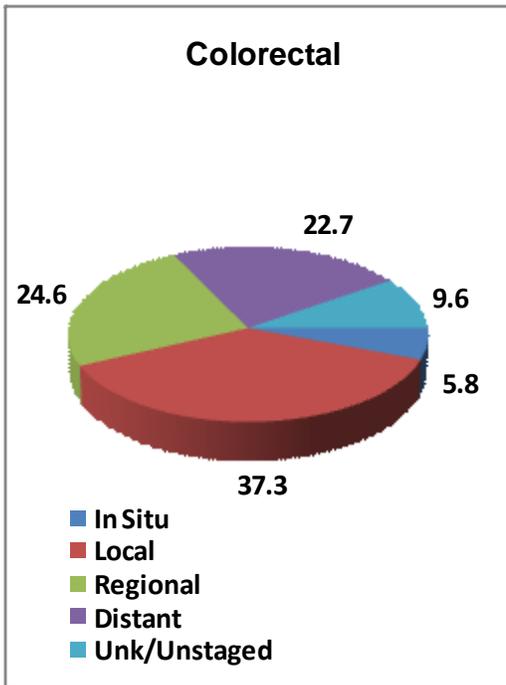


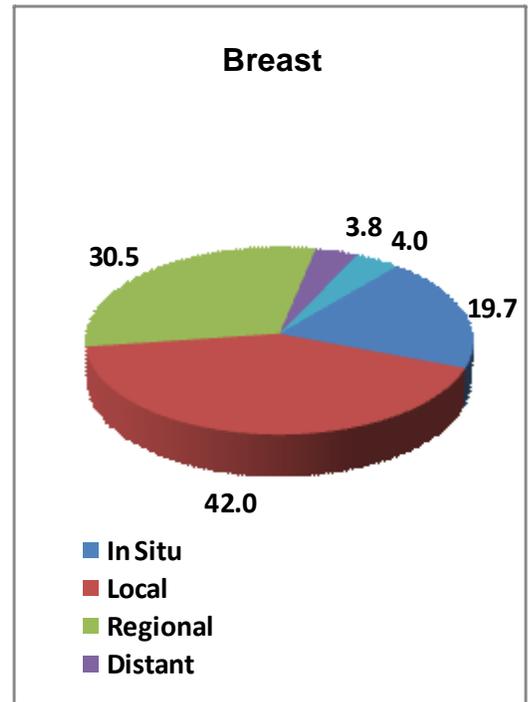
Figure 8



SEER Stage Percentage at Diagnosis

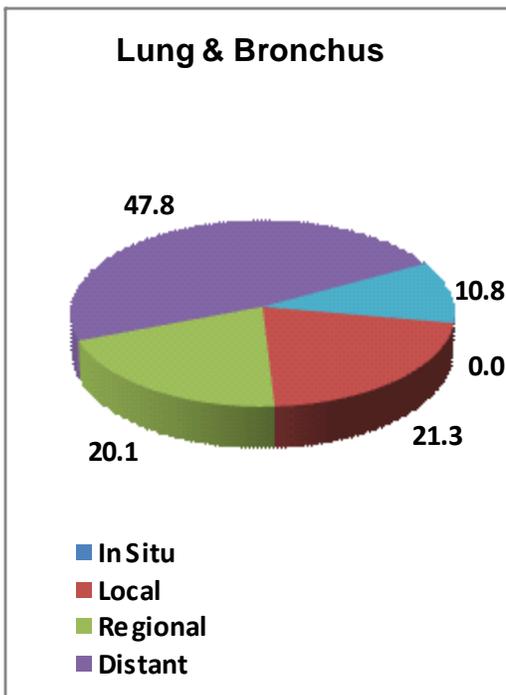
Colorectal cancer was more likely to be diagnosed at local stage (37.3%).

Figure 10



Breast cancer was also more likely to be diagnosed at local stage (42.0%).

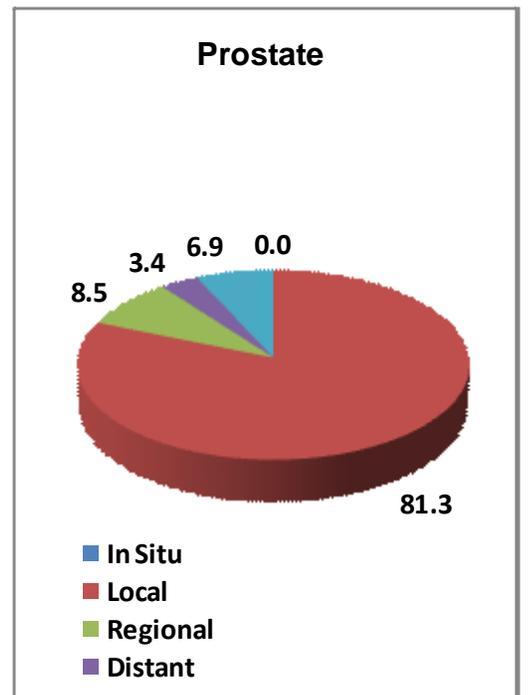
Figure 9



Of the top 4 cancers diagnosed in the District, lung and bronchus cancer was the only cancer more likely to be diagnosed in distant stage (47.8%).

Prostate cancer was the most likely to be diagnosed at local stage (81.3%).

Figure 11



## District of Columbia and State Comparisons

### Mortality 2004-2008

The District's overall cancer mortality rate is higher than the national rate. However, the District's lung and bronchus mortality rate falls below the rate for the U.S. The tables on the following pages depicts the overall and selected site cancer mortality rate in comparison to the top five U.S. States and lowest five U.S. States. Breast and prostate cancer have the highest age-adjusted mortality rates in the country for 2004-2008.

Table 3

### All Cancer Sites (Invasive)

#### Age-adjusted Cancer Death<sup>a</sup> Rates, By State, All Races, 2004-2008

##### Males and Females

##### Total U.S. Rate compared to Five Highest and Five Lowest State Rates

State	Rate	SE	Rank	PD
TOTAL U.S.	181.32	0.11		
Kentucky	213.58 <sup>b</sup>	0.99	1	17.79 <sup>c</sup>
Louisiana	208.41 <sup>b</sup>	0.98	2	14.94 <sup>c</sup>
West Virginia	207.83 <sup>b</sup>	1.37	3	14.62 <sup>c</sup>
Mississippi	206.82 <sup>b</sup>	1.19	4	14.06 <sup>c</sup>
Tennessee	202.83 <sup>b</sup>	0.8	5	11.86 <sup>c</sup>
New Mexico	160.84 <sup>b</sup>	1.28	47	-11.29 <sup>c</sup>
Arizona	156.15 <sup>b</sup>	0.7	48	-13.88 <sup>c</sup>
Colorado	156.09 <sup>b</sup>	0.88	49	-13.91 <sup>c</sup>
Hawaii	149.15 <sup>b</sup>	1.44	50	-17.74 <sup>c</sup>
Utah	131.78 <sup>b</sup>	1.18	51	-27.32 <sup>c</sup>
<b>D.C.</b>	<b>198.33<sup>b</sup></b>	<b>2.63</b>	<b>8</b>	<b>9.38<sup>c</sup></b>

**Footnotes:** [Table created by SEER Cancer Statistics.](#)

<sup>a</sup> US Mortality Files, National Center for Health Statistics, Centers for Disease Control and Prevention. Rates are per 100,000 and are age-adjusted to the 2000 US Standard Population (19 age groups - Census P25-1130).

<sup>b</sup> Difference between state rate and total U.S. rate is statistically significant ( $p \leq .0002$ ).

<sup>c</sup> Absolute percent difference between state rate and total U.S. rate is 5% or more.  
SE Standard error of the rate.

PD Percent difference between state rate and total U.S. rate.

- Statistic not shown. Rate based on less than 16 cases for the time interval.

Table 4

**Cancer of the Colon and Rectum**

**Age-adjusted Cancer Death<sup>a</sup> Rates by State,  
All Races, 2004-2008**

**Males and Females**

Total U.S. Rate compared to Five Highest and Five Lowest  
State Rates

State	Rate	SE	Rank	PD
TOTAL U.S.	17.15	0.03		
Louisiana	20.28b	0.31	1	18.27c
Mississippi	20.22b	0.37	2	17.88c
Kentucky	20.11b	0.3	3	17.29c
D.C.	20.11b	0.83	4	17.25c
West Virginia	20.08b	0.43	5	17.07c
Minnesota	15.20b	0.24	47	-11.39c
Idaho	14.78b	0.46	48	-13.79c
Arizona	14.46b	0.21	49	-15.70c
Hawaii	14.38b	0.45	50	-16.12c
Utah	12.20b	0.36	51	-28.84c

**Footnotes:** Table created by SEER Cancer Statistics.

<sup>a</sup> US Mortality Files, National Center for Health Statistics, Centers for Disease Control and Prevention. Rates are per 100,000 and are age-adjusted to the 2000 US Std Population (19 age groups - Census P25-1130).

<sup>b</sup> Difference between state rate and total U.S. rate is statistically significant ( $p \leq .0002$ ).

<sup>c</sup> Absolute percent difference between state rate and total U.S. rate is 10% or more.

SE Standard error of the rate.

PD Percent difference between state rate and total U.S. rate.

- Statistic not shown. Rate based on less than 16 cases for the time interval.

Table 5

**Cancer of the Lung and Bronchus**

**Age-adjusted Cancer Death<sup>a</sup> Rates by State,  
All Races, 2004-2008**

**Males and Females**

Total U.S. Rate compared to Five Highest and Five Lowest  
State Rates

State	Rate	SE	Rank	PD
TOTAL U.S.	51.61	0.06		
Kentucky	75.70b	0.59	1	46.67c
Arkansas	67.00b	0.65	2	29.80c
West Virginia	66.88b	0.77	3	29.58c
Tennessee	66.68b	0.46	4	29.20c
Mississippi	66.29b	0.67	5	28.44c
California	40.82b	0.16	47	-20.91c
Hawaii	38.24b	0.73	48	-25.91c
Colorado	37.93b	0.44	49	-26.50c
New Mexico	36.58b	0.61	50	-29.12c
Utah	22.55b	0.49	51	-56.32c

D.C.	48.51	1.3	36	-6.02c
------	-------	-----	----	--------

**Footnotes:** Table created by SEER Cancer Statistics.

<sup>a</sup> US Mortality Files, National Center for Health Statistics, Centers for Disease Control and Prevention. Rates are per 100,000 and are age-adjusted to the 2000 US Std Population (19 age groups - Census P25-1130).

<sup>b</sup> Difference between state rate and total U.S. rate is statistically significant ( $p \leq .0002$ ).

<sup>c</sup> Absolute percent difference between state rate and total U.S. rate is 5% or more.

SE Standard error of the rate.

PD Percent difference between state rate and total U.S. rate.

- Statistic not shown. Rate based on less than 16 cases for the time interval.

Table 6

**Female Breast (Invasive)**

Age-adjusted Cancer Death<sup>a</sup> Rates By  
State, All Races, 2004-2008

**Females**

Total U.S. Rate compared to Five Highest and Five Lowest  
State Rates

State	Rate	SE	Rank	PD
TOTAL U.S.	23.47	0.05		
D.C.	27.64	1.28	1	17.79c
Louisiana	26.81b	0.47	2	14.23c
New Jersey	26.45b	0.32	3	12.71c
Ohio	25.95b	0.27	4	10.56c
Maryland	25.57b	0.4	5	8.96
Idaho	21.19	0.75	47	-9.72
Arizona	20.97b	0.35	48	-10.66c
Montana	20.72	0.86	49	-11.71c
Colorado	20.49b	0.42	50	-12.69c
Hawaii	17.80b	0.69	51	-24.14c

**Footnotes:** Table created by SEER Cancer Statistics.

<sup>a</sup> US Mortality Files, National Center for Health Statistics, Centers for Disease Control and Prevention. Rates are per 100,000 and are age-adjusted to the 2000 US Std Population (19 age groups - Census P25-1130).

<sup>b</sup> Difference between state rate and total U.S. rate is statistically significant ( $p \leq .0002$ ).

<sup>c</sup> Absolute percent difference between state rate and total U.S. rate is 10% or more.

SE Standard error of the rate.

PD Percent difference between state rate and total U.S. rate.

- Statistic not shown. Rate based on less than 16 cases for the time interval.

Table 7

**Cancer of the Prostate**

Age-adjusted Cancer Death<sup>a</sup> Rates by State,  
All Races, 2004-2008

**Male**

Total U.S. Rate compared to Five Highest and Five Lowest  
State Rates

State	Rate	SE	Rank	PD
TOTAL U.S.	24.38	0.06		
D.C.	41.74b	2.08	1	71.21c
Mississippi	31.67b	0.79	2	29.88c
Alabama	29.88b	0.59	3	22.56c
Georgia	28.62b	0.49	4	17.39c
Louisiana	28.61b	0.62	5	17.34c
Kansas	22.16b	0.62	47	-9.1
West Virginia	21.58b	0.72	48	-11.49c
Arizona	20.57b	0.39	49	-15.64c
Florida	20.29b	0.2	50	-16.76c
Hawaii	16.81b	0.73	51	-31.06c

**Footnotes:** Table created by SEER Cancer Statistics.

<sup>a</sup> US Mortality Files, National Center for Health Statistics, Centers for Disease Control and Prevention. Rates are per 100,000 and are age-adjusted to the 2000 US Std Population (19 age groups - Census P25-1130).

<sup>b</sup> Difference between state rate and total U.S. rate is statistically significant ( $p \leq .0002$ ).

<sup>c</sup> Absolute percent difference between state rate and total U.S. rate is 10% or more.

SE Standard error of the rate.

PD Percent difference between state rate and total U.S. rate.

- Statistic not shown. Rate based on less than 16 cases for the time interval.

## Variations by Race in the Top Four Cancer Sites

Disparities in cancer incidence and mortality are experienced by District residents in similar patterns to the U.S. The incidence of breast cancer is higher among Whites (178.8 per 100,000) compared to Blacks (118.6 per 100,000), while the inverse is true of breast cancer mortality rates. Lung and bronchus incidence and mortality rates are higher among Blacks than Whites. Prostate cancer mortality is almost three times higher in Blacks than in Whites.

### DC Top Four Cancer Sites

#### Incidence Rates - 2008

Table 8

DC Age-Adjusted **Incidence** Rate for the Top 4 Cancer Sites<sup>a</sup> Both Sexes by Race

Race	Primary Site	Age-Adjusted Rate, 2008 <sup>c</sup>
All Races	All Sites	487.8
	Prostate <sup>b</sup>	212.8
	Breast <sup>b</sup>	133.5
	Lung and Bronchus	61.4
	Colon and Rectum	43.4
White	All Sites	442.4
	Breast <sup>b</sup>	178.8
	Prostate <sup>b</sup>	152.5
	Lung and Bronchus	36.8
	Colon and Rectum	33.9
Black	All Sites	497.8
	Prostate <sup>b</sup>	221.8
	Breast <sup>b</sup>	118.6
	Lung and Bronchus	74.1
	Colon and Rectum	49.3

#### Footnotes:

<sup>a</sup> Top 4 cancer sites selected based on 2008 age-adjusted rates for the race group.

<sup>b</sup> The rates for sex-specific cancer sites are calculated using the population for the specific sexes.

<sup>c</sup> Incidence data used in calculating the rates are from DC Cancer Registry. Rates are age-adjusted to the 2000 US Std Population (19 age groups - Census P25-1130).

- Statistic not shown. Rate based on less than 16 cases for the time interval. Trend based on less than 10 cases for at least one year within the time interval.

## DC Top Four Cancer Sites

### Mortality Rates - 2008

Table 9

DC Age-Adjusted **Death** Rates for the Top 4 Cancer Sites<sup>a</sup> Both Sexes by Race

Race	Primary Site	Age-Adjusted Rate, 2008 <sup>c</sup>
All Races	All Sites	202.6
	Lung and Bronchus	52.2
	Prostate <sup>b</sup>	29.9
	Breast <sup>b</sup>	28.2
	Colon and Rectum	18
White	All Sites	155.2
	Lung and Bronchus	39.3
	Breast <sup>b</sup>	17.7
	Prostate <sup>b</sup>	14.2
	Colon and Rectum	13.6
Black	All Sites	240.4
	Lung and Bronchus	61.9
	Prostate <sup>b</sup>	40.8
	Breast <sup>b</sup>	35.2
	Colon and Rectum	21

**Footnotes:**

<sup>a</sup> Top 4 cancer sites selected based on 2008 age-adjusted rates for the race group.

<sup>b</sup> The rates for sex-specific cancer sites are calculated using the population for the specific sexes.

<sup>c</sup> Mortality data used in calculating the rates are analyzed from US mortality files provided by the National Center for Health Statistics, CDC. Rates are age-adjusted to the 2000 US Std Population (19 age groups - Census P25-1130).

- Statistic not shown. Rate based on less than 16 cases for the time interval. Trend based on less than 10 cases for at least one year within the time interval.

## District of Columbia and National Comparisons

### Cancer Incidence Age-Adjusted Rates, 2004-2008, DC and National

Table 10

		Both Genders			Male			Female		
		All Races*	White	Black	All Races*	White	Black	All Races*	White	Black
All Sites	DC	495.6	463.2	506.2	609.0	524.6	638.9	422.4	426.7	423.6
	National	464.4	471.8	491.2	541.0	543.6	626.1	411.6	423.0	400.9
Colorectal	DC	50.6	39.1	56.9	58.2	46.2	65.5	45.8	34.4	51.5
	National	47.2	46.5	57.8	55.0	54.4	67.7	41.0	40.2	51.2
Lung & Bronchus	DC	62.4	43.8	73.5	85.8	55.9	104.1	47.2	35.1	54.6
	National	62.0	63.3	72.7	75.2	75.3	99.8	52.3	54.6	54.7
Breast	DC							134.2	159.6	126.6
	National							124.0	127.3	119.9
Prostate	DC				202.4	162.0	209.1			
	National				156.0	149.5	233.8			

All rates are age-adjusted per 100,000 men and women (only women in Breast and only men in Prostate) and include invasive cases only.

\* Includes White, Black and other races.

All ages included.

Source: DC Cancer Registry, National SEER17 Incidence.

### Cancer Mortality Age-Adjusted Rates, 2004-2008, DC and National

Table 11

		Both Genders			Male			Female		
		All Races*	White	Black	All Races*	White	Black	All Races*	White	Black
All Sites	DC	203.4	162.7	234.0	270.3	207.6	318.0	164.1	133.7	187.2
	National	181.3	180.0	220.8	223.0	220.0	295.3	153.2	152.8	177.7
Colorectal	DC	20.6	13.9	24.9	24.3	16.0	30.3	18.1	12.0	21.3
	National	17.1	16.6	24.3	20.7	20.1	30.5	14.5	14.0	20.4
Lung & Bronchus	DC	49.9	37.6	58.3	71.6	51.6	85.5	36.1	27.1	42.1
	National	51.6	52.1	57.0	67.4	66.9	85.4	40.1	41.2	38.8
Breast	DC							28.7	24.8	32.4
	National							23.5	22.8	32.0
Prostate	DC				41.7	27.1	51.5			
	National				24.4	22.4	54.9			

All rates are age-adjusted per 100,000 men and women (only women in Breast and only men in Prostate).

\* Includes White, Black and other races.

All ages included.

Source: DC Cancer Registry, NCHS Mortality.

**Cancer Incidence Age-Adjusted Rates, 2008,  
DC and National**

Table 12

		Both Genders			Male			Female		
		All Races*	White	Black	All Races*	White	Black	All Races*	White	Black
All Sites	DC	487.8	442.4	497.8	605.3	468.9	657.9	410.2	432.5	396.3
	National	463.4	469.3	503.2	530.8	531.0	645.0	416.3	427.1	407.4
Colorectal	DC	43.4	33.9	49.3	47.8	33.3	55.2	41.2	34.1	47.0
	National	44.3	43.4	53.4	50.4	49.2	62.9	39.2	38.6	46.4
Lung & Bronchus	DC	61.4	36.8	74.1	81.0	42.0	105.6	47.5	32.8	53.4
	National	58.8	59.3	73.4	70.2	68.7	101.2	50.3	52.7	54.8
Breast	DC							133.5	178.8	118.6
	National							127.6	129.5	125.6
Prostate	DC				212.8	152.5	221.8			
	National				153.0	146.3	244.3			

All rates are age-adjusted per 100,000 men and women (only women in Breast and only men in Prostate) and include invasive cases only.

\* Includes White, Black and other races.

All ages included.

Source: DC Cancer Registry, National SEER17 Incidence.

**Cancer Mortality Age-Adjusted Rates, 2008,  
DC and National**

Table 13

		Both Genders			Male			Female		
		All Races*	White	Black	All Races*	White	Black	All Races*	White	Black
All Sites	DC	202.6	155.2	240.4	270.4	208.9	324.4	161.9	116.3	193.1
	National	175.8	174.9	211.3	215.7	213.3	280.1	148.4	148.2	171.0
Colorectal	DC	18.0	13.6	21.0	19.3	18.4	21.6	17.1	9.3	20.4
	National	16.4	15.8	23.0	19.7	19.0	29.3	13.8	13.4	19.0
Lung & Bronchus	DC	52.2	39.3	61.9	73.2	54.9	87.7	38.6	26.7	46.4
	National	49.6	50.2	53.6	64.0	63.8	79.6	39.0	40.2	36.9
Breast	DC							28.2	17.7	35.2
	National							22.5	21.9	31.2
Prostate	DC				29.9	14.2	40.8			
	National				22.8	21.2	49.5			

All rates are age-adjusted per 100,000 men and women (only women in Breast and only men in Prostate).

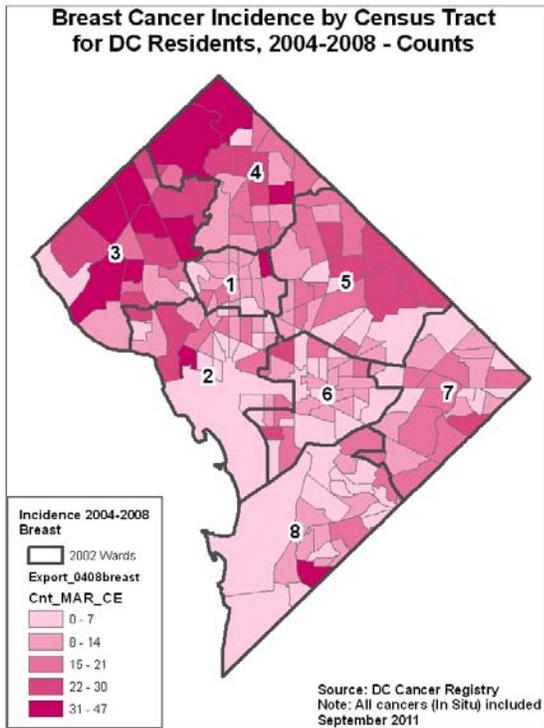
\* Includes White, Black and other races.

All ages included.

Source: DC Cancer Registry, NCHS Mortality.

# Breast Cancer

Map 3



Map 4

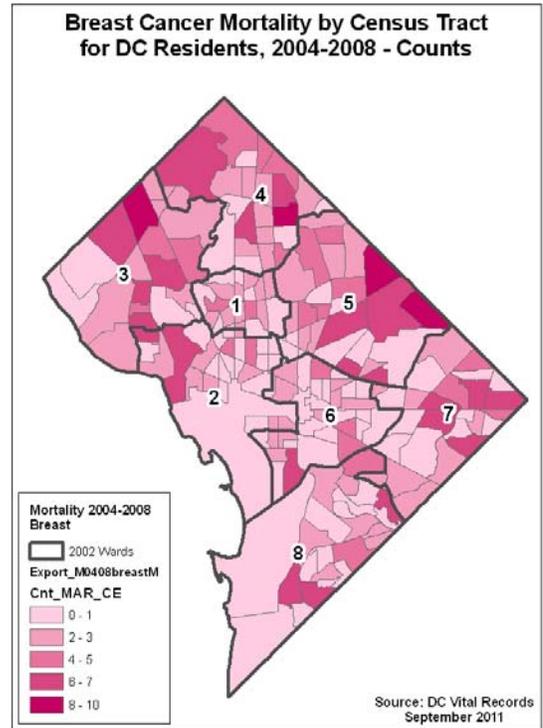
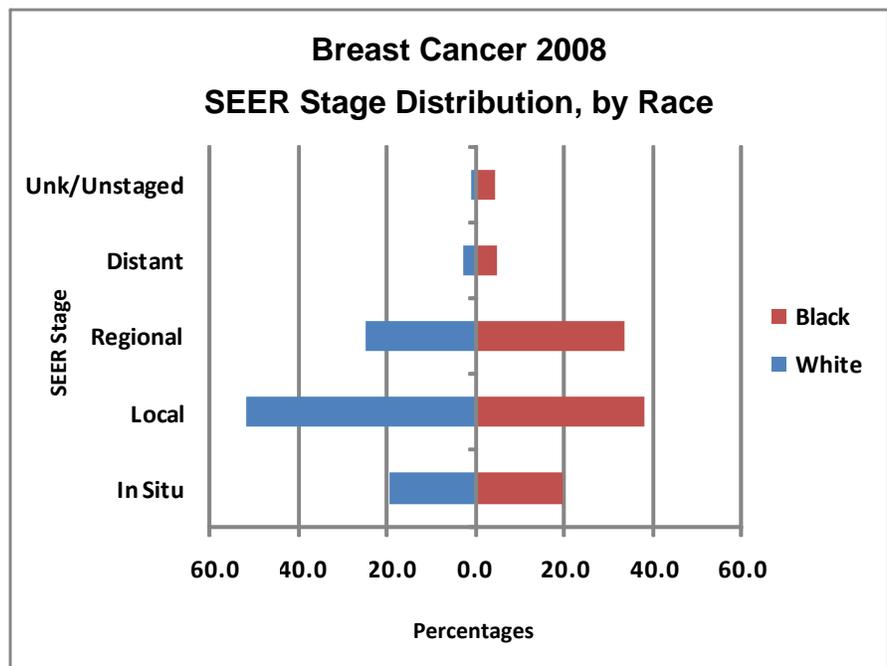


Figure 12



There was a 14% difference in local SEER stage of diagnosis between White and Black women in the District.

Black women were more likely to be diagnosed at regional and distant stages, and were less likely to be diagnosed at local stage when compared to White women.

Figure 13

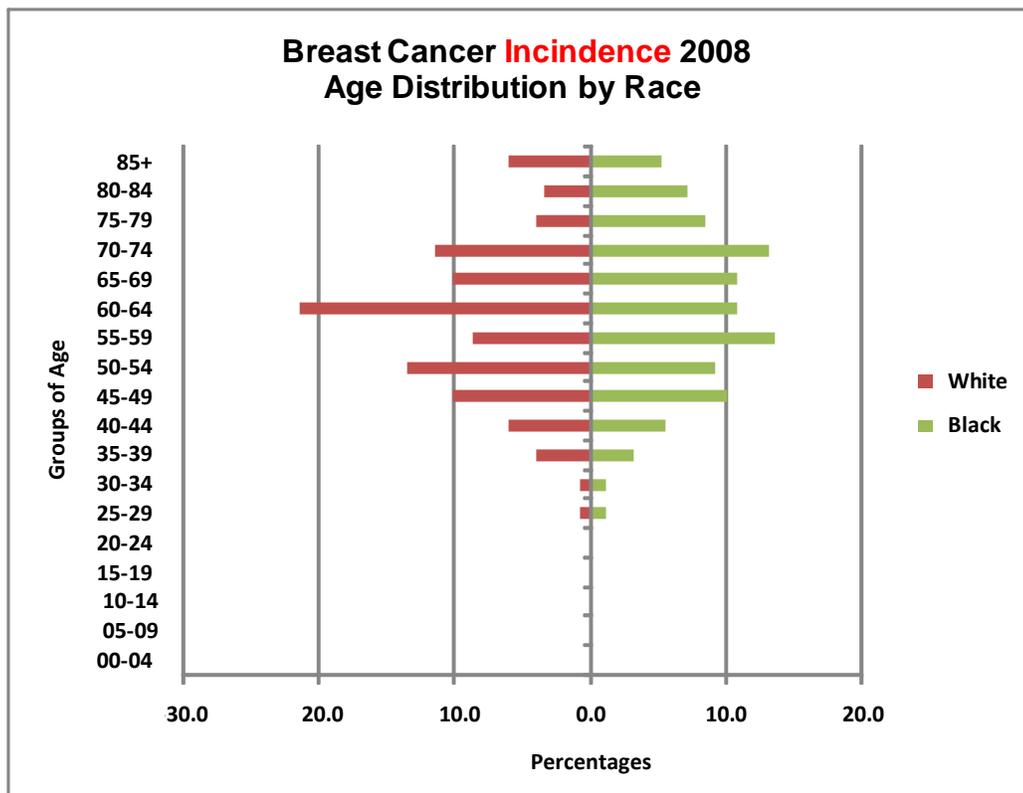
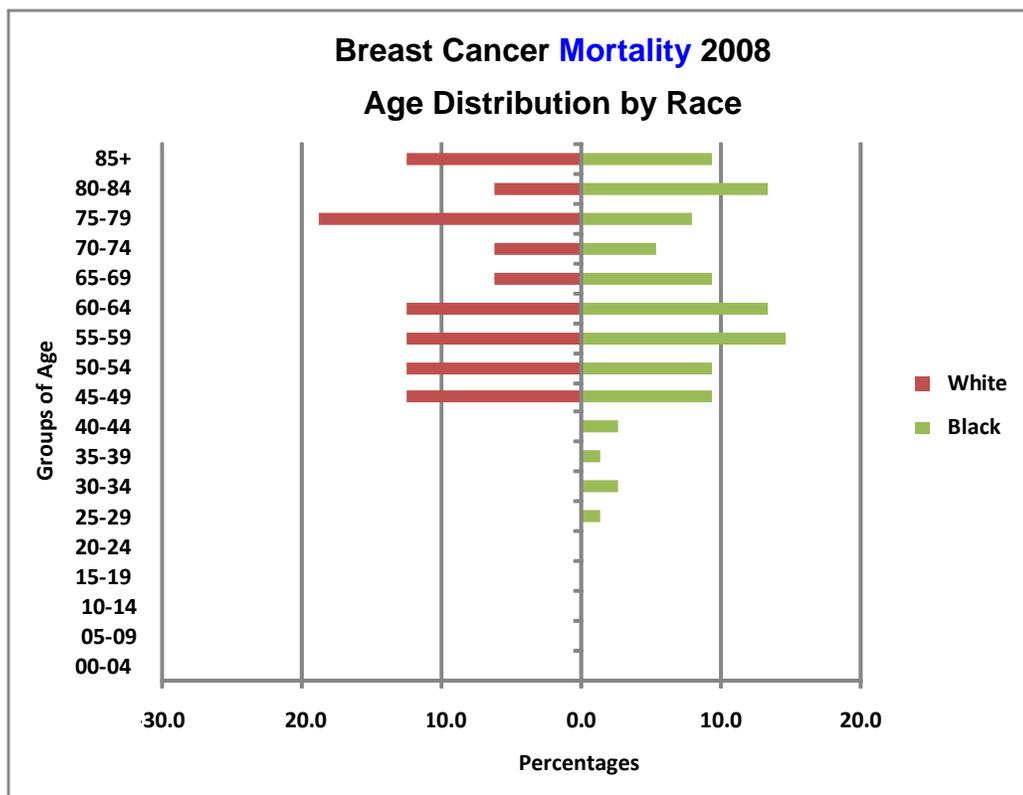
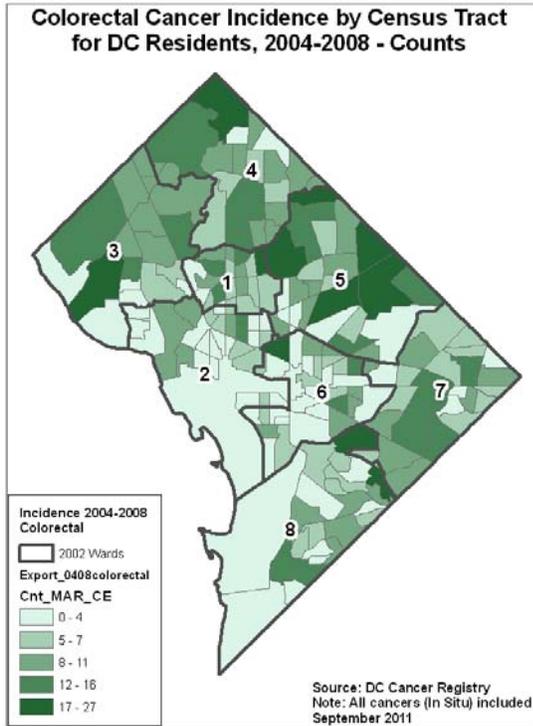


Figure 14



# Colorectal Cancer

Map 5



Map 6

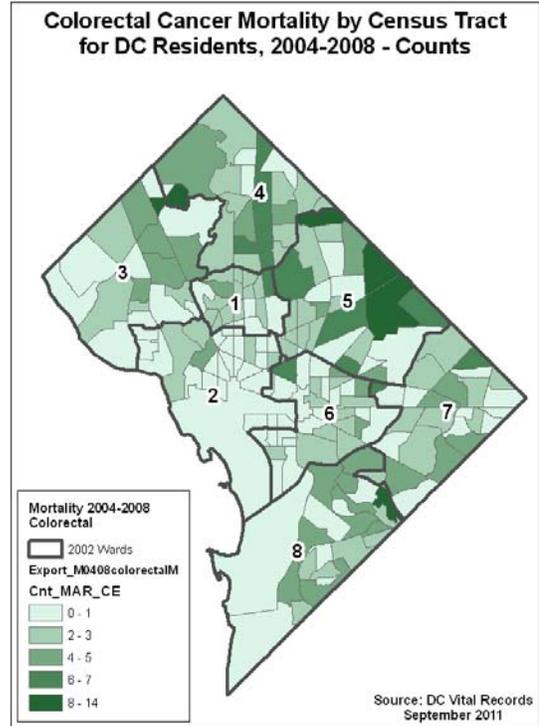


Figure 15

There was a 7.3% difference in in situ SEER stage of diagnosis between White and Black residents.

Black men and women were less likely to be diagnosed at local regional stage.

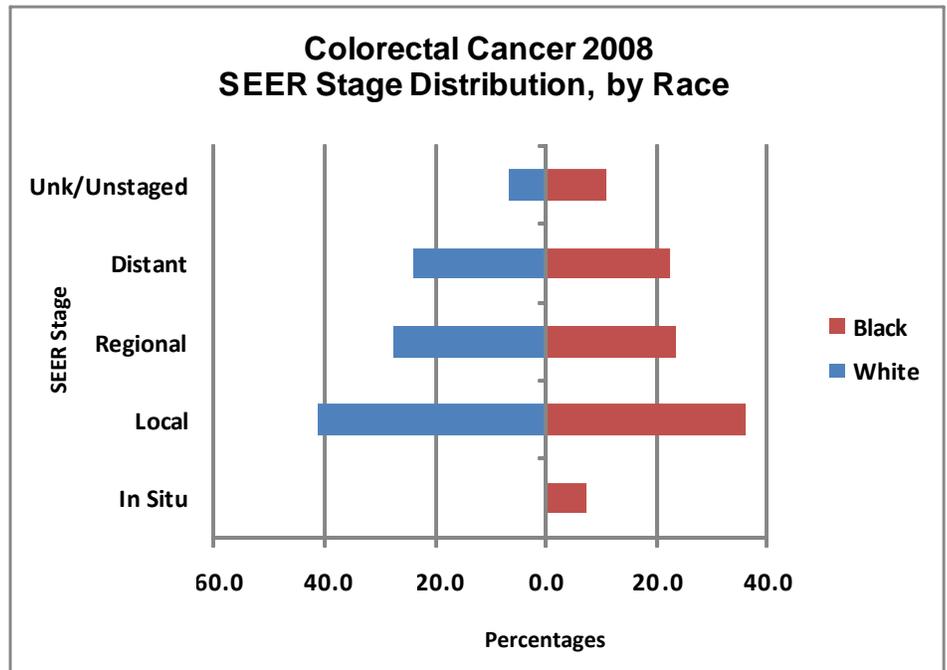


Figure 16

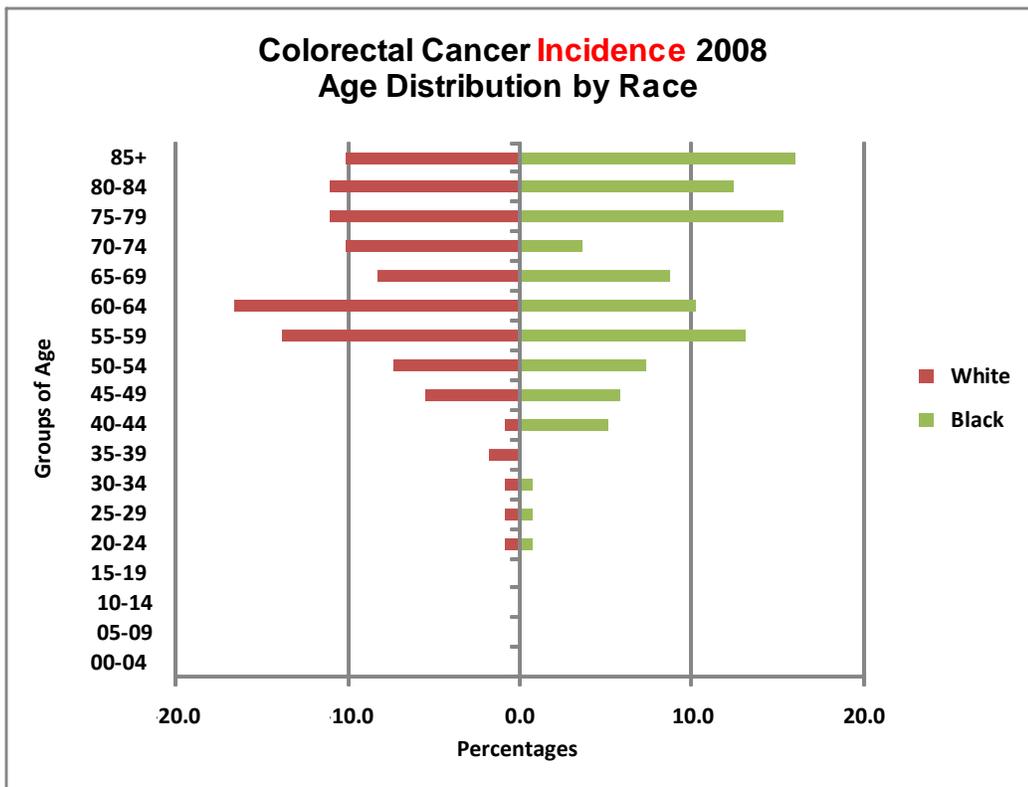
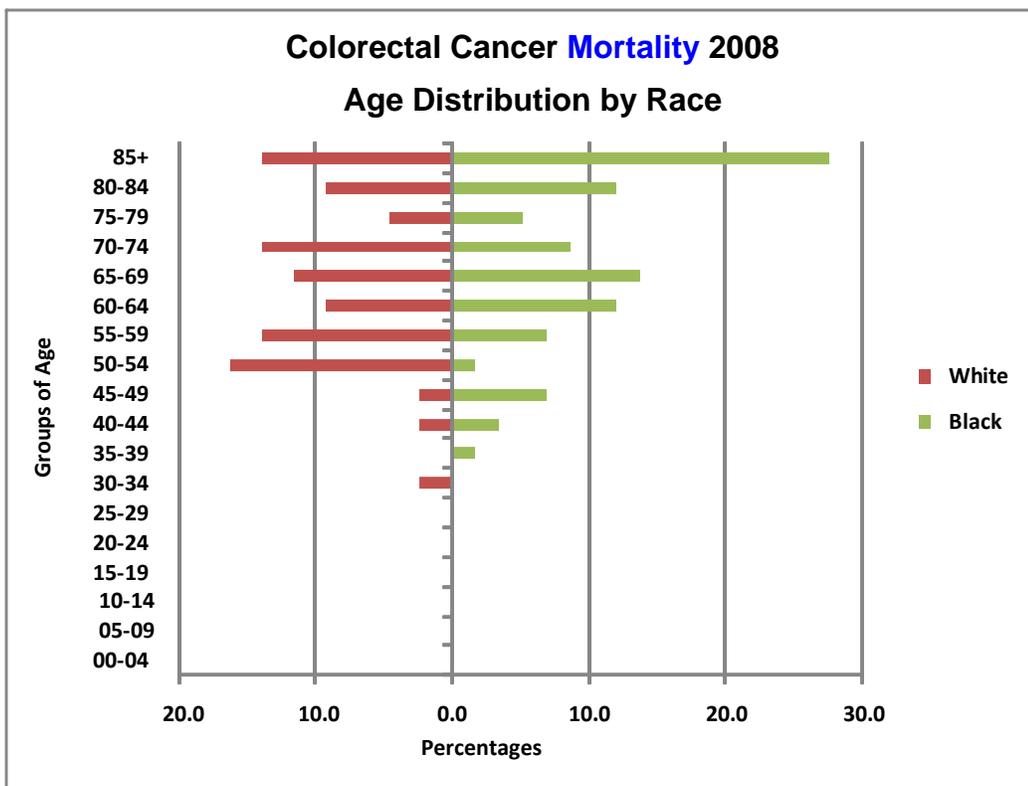


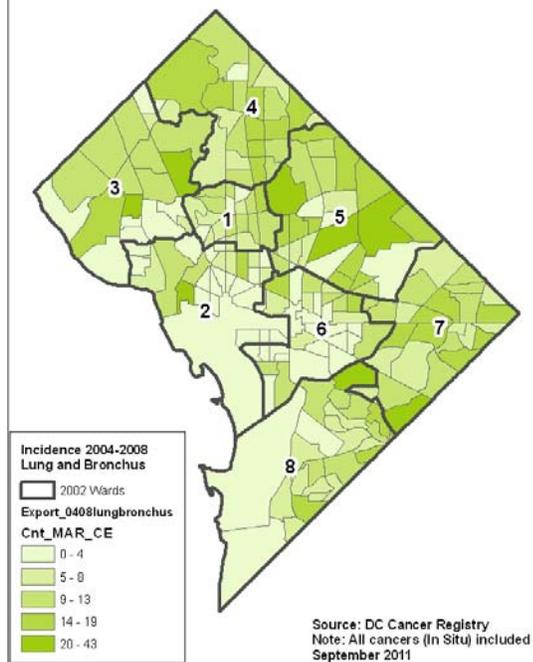
Figure 17



# Lung and Bronchus Cancer

Map 7

Lung and Bronchus Cancer Incidence by Census Tract for DC Residents, 2004-2008 - Counts



Map 8

Lung and Bronchus Cancer Mortality by Census Tract for DC Residents, 2004-2008 - Counts

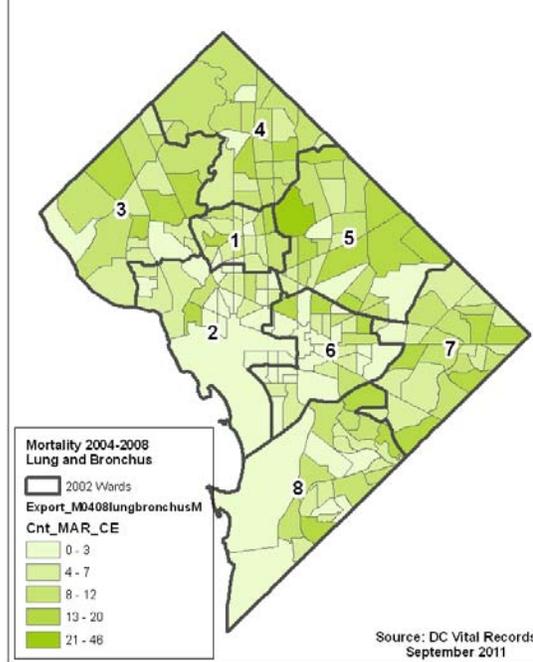


Figure 18

Among District residents, lung and bronchus cancer showed a 2% difference in regional SEER stage of diagnosis.

The majority of cases for both races were diagnosed at distant stage.

Lung and Bronchus Cancer 2008  
SEER Stage Distribution, by Race

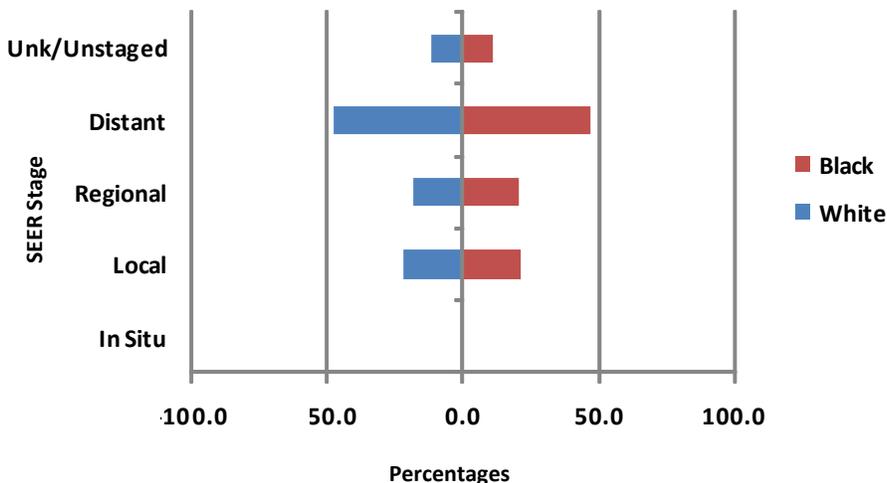


Figure 19

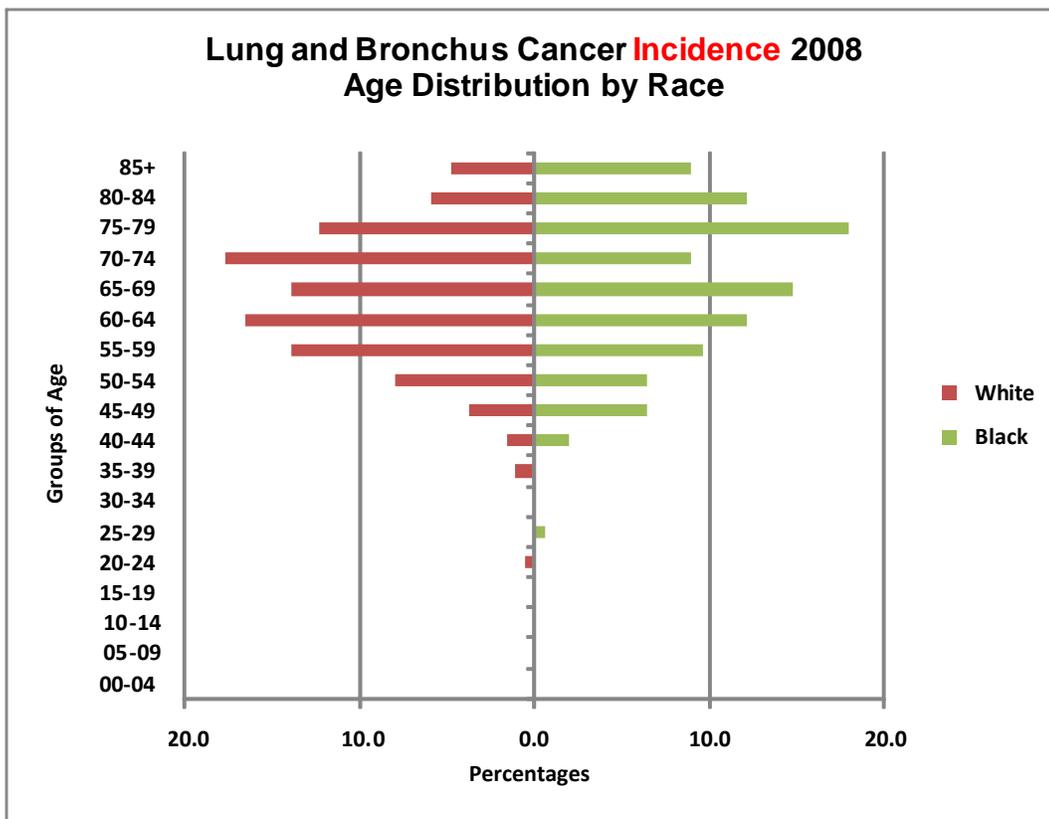
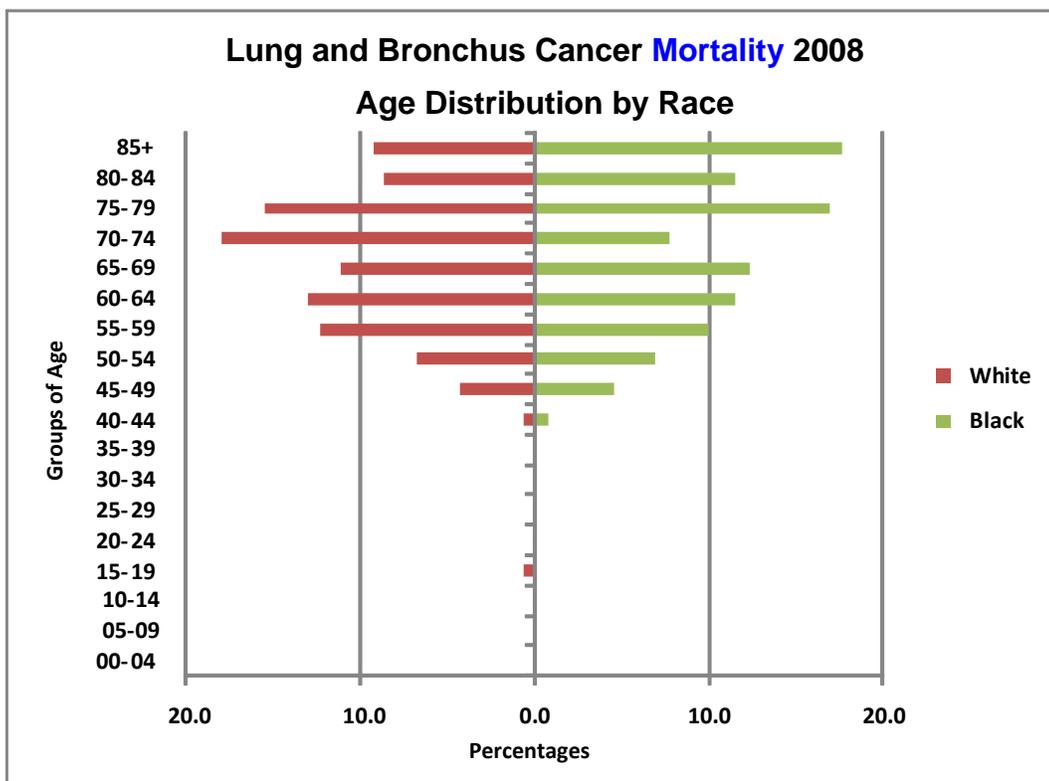


Figure 20



# Prostate Cancer

Map 9

Map 10

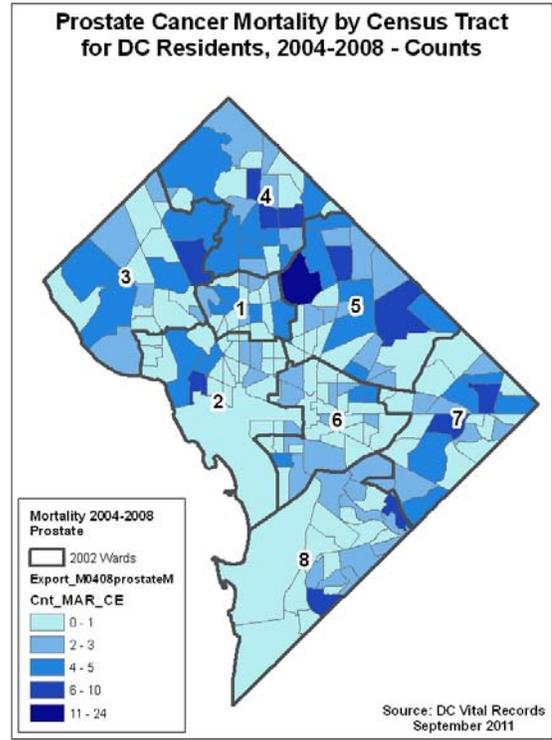
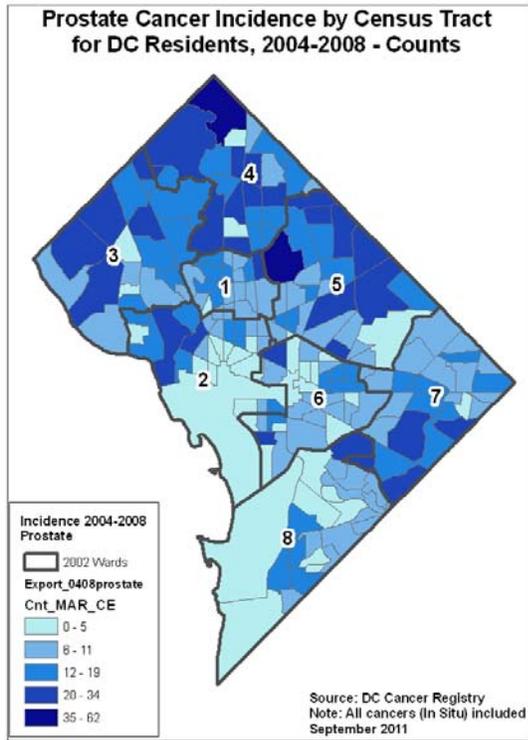


Figure 21

At the time of diagnosis, prostate cancer showed the biggest difference between races in distant SEER stage, with 2.6% difference between Whites and Blacks.

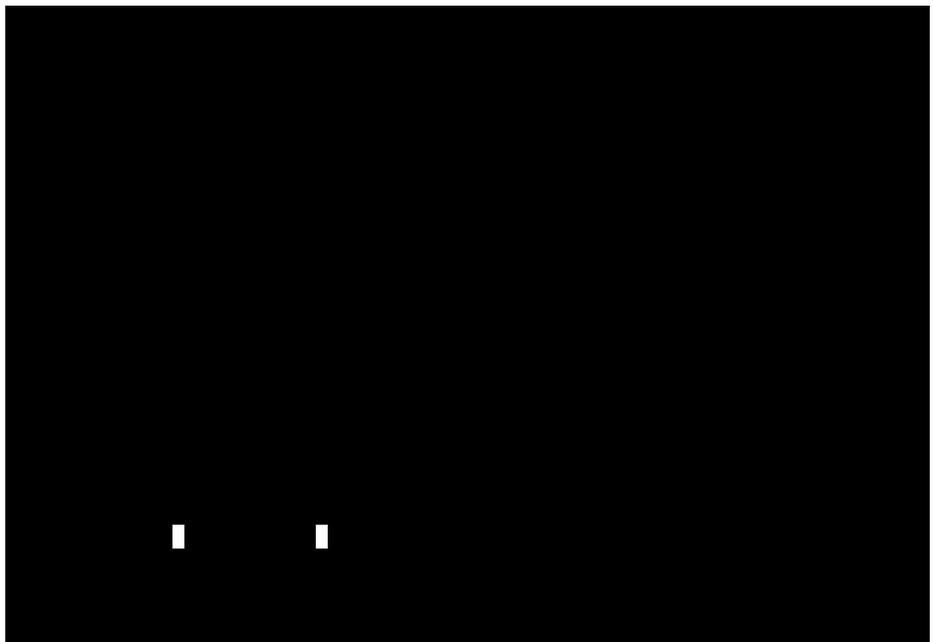


Figure 22

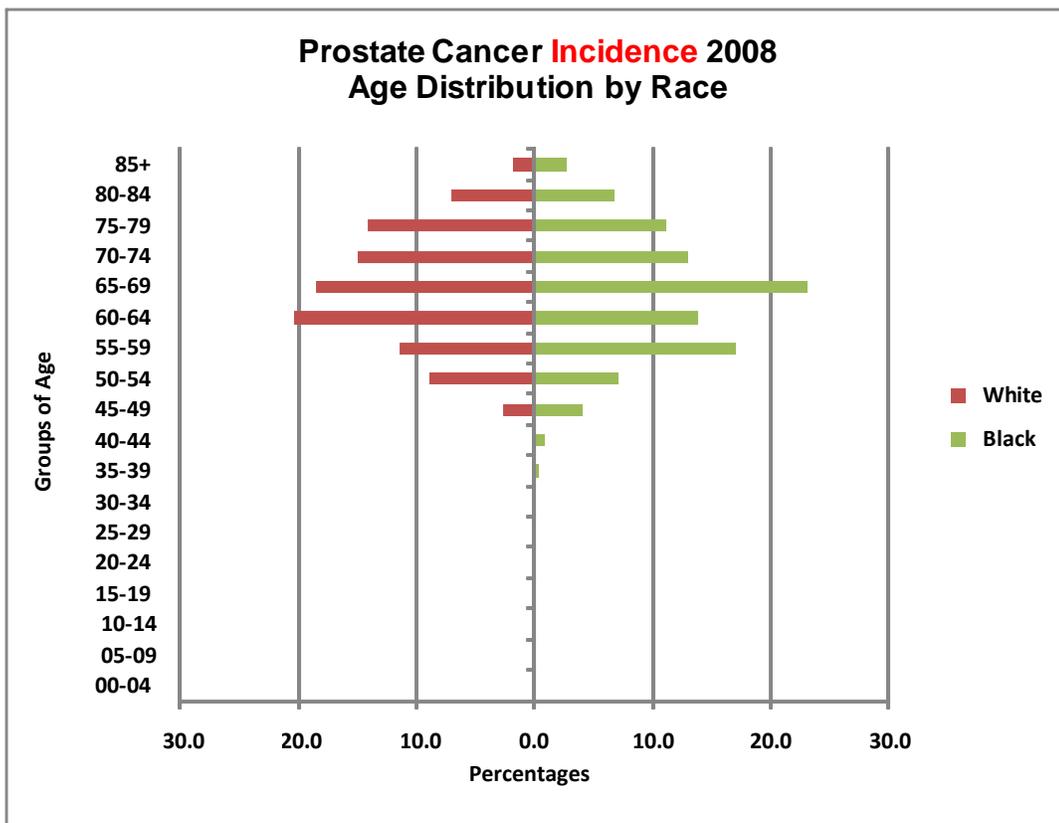
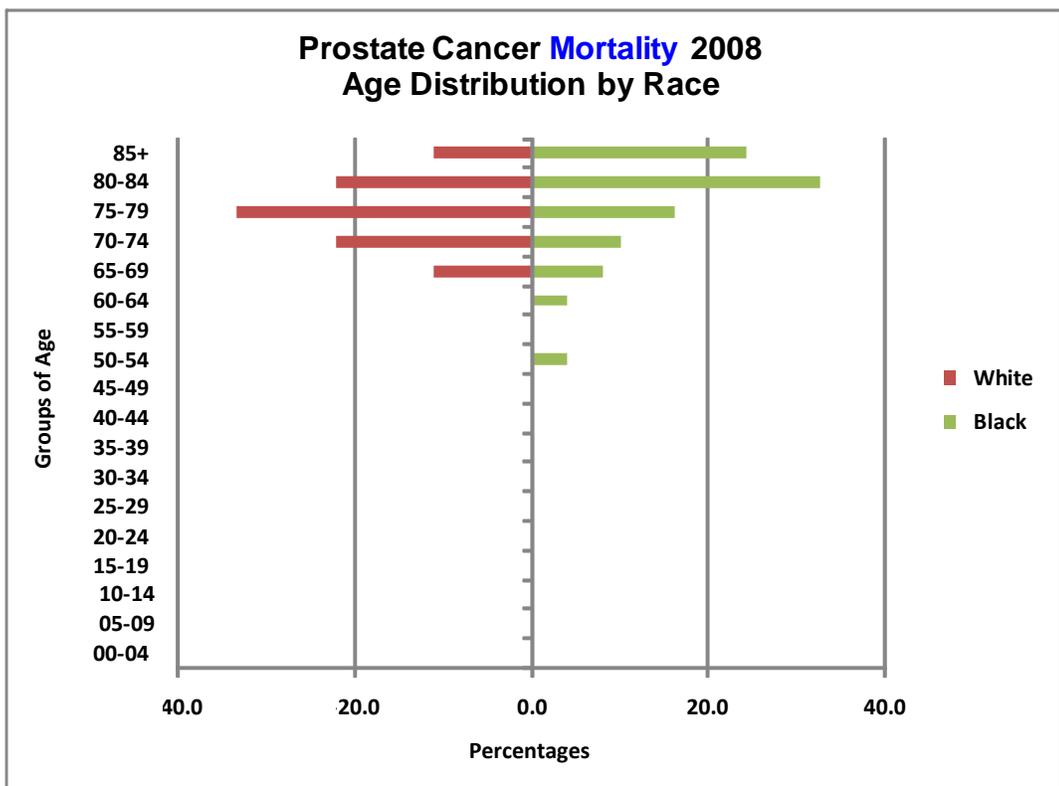


Figure 23



## Cancer Incidence Trends\* by Ward

Figure 24

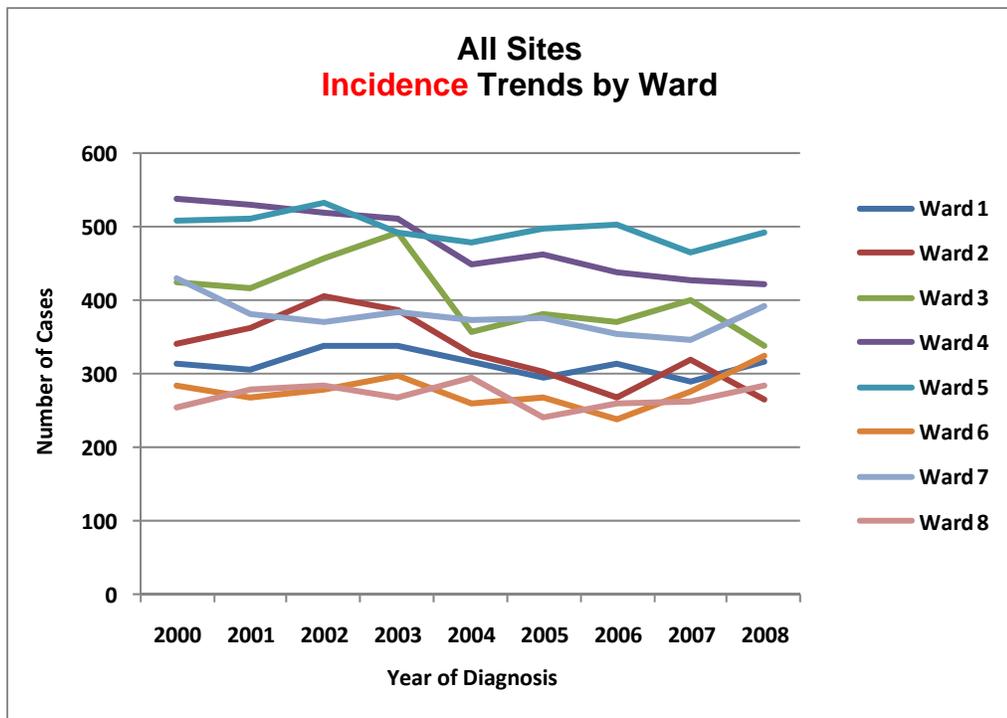


Table 14

Percentage of Change 2007-2008

Number of Cases

All Sites	08-07 % change
Ward 1	9.3
Ward 2	-16.9
Ward 3	-15.7
Ward 4	-1.2
Ward 5	6.2
Ward 6	17.8
Ward 7	13.0
Ward 8	8.4

Source: DC Cancer Registry

Figure 25

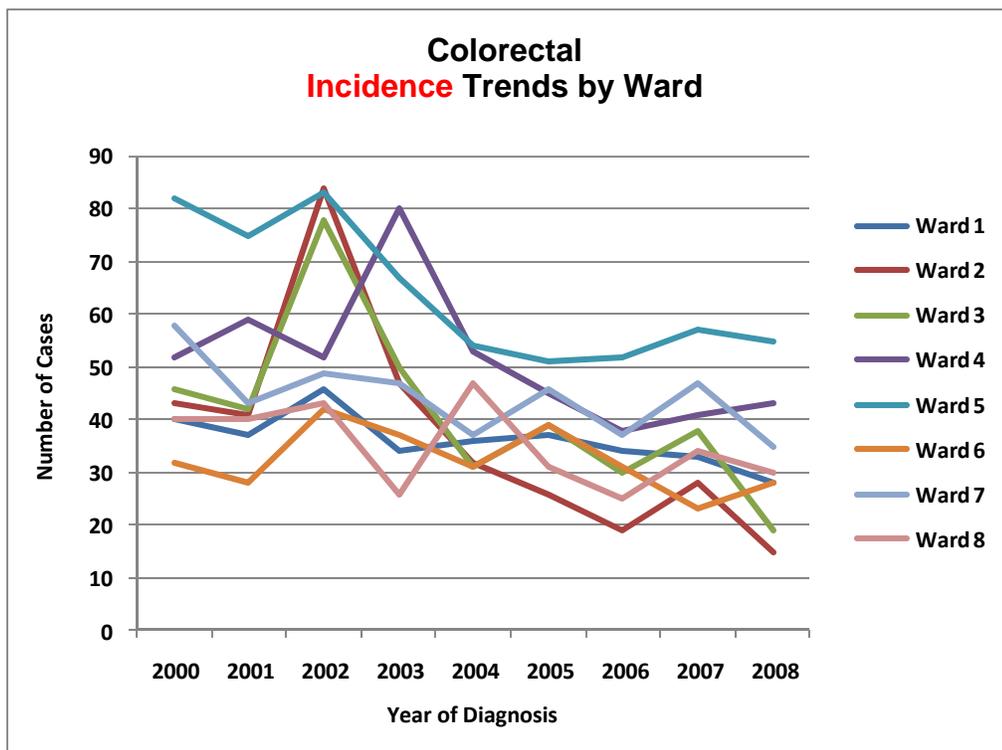


Table 15

Percentage of Change 2007-2008

Number of Cases

Colorectal	08-07 % change
Ward 1	-15.2
Ward 2	-46.4
Ward 3	-50.0
Ward 4	4.9
Ward 5	-3.5
Ward 6	21.7
Ward 7	-25.5
Ward 8	-11.8

Source: DC Cancer Registry

\*Incidence Trends reflect both invasive and In Situ Cases

Figure 26

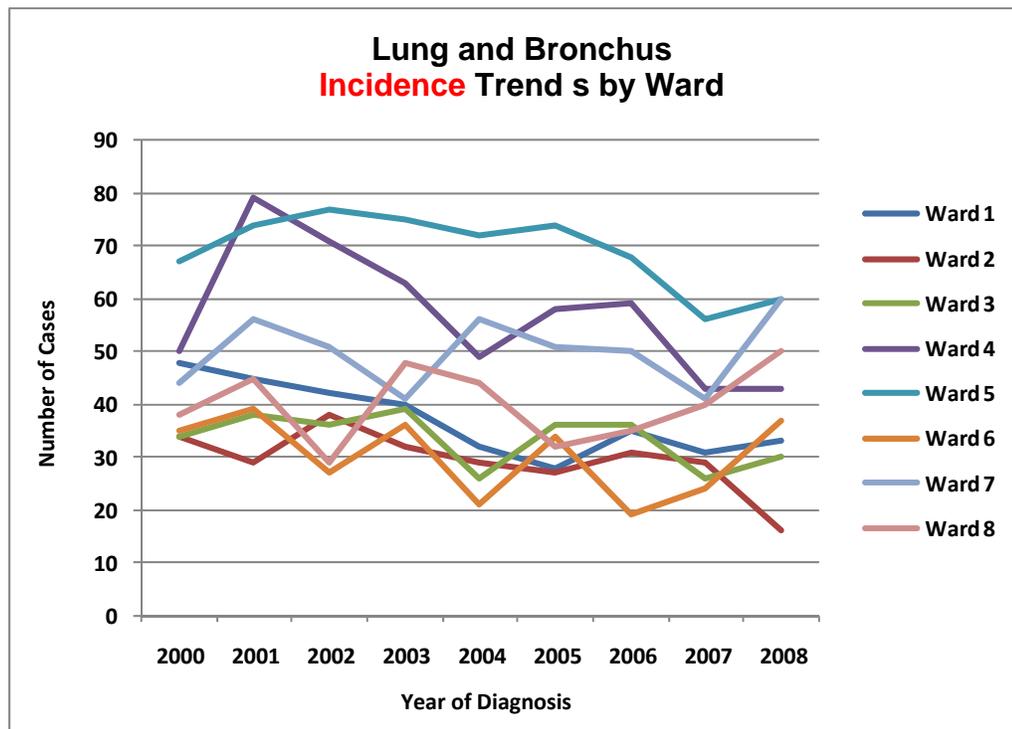


Table 16

Percentage of Change 2007-2008

Lung and Bronchus	08-07 % change
Ward 1	6.5
Ward 2	-44.8
Ward 3	15.4
Ward 4	0.0
Ward 5	7.1
Ward 6	54.2
Ward 7	46.3
Ward 8	25.0

Source: DC Cancer Registry

Figure 27

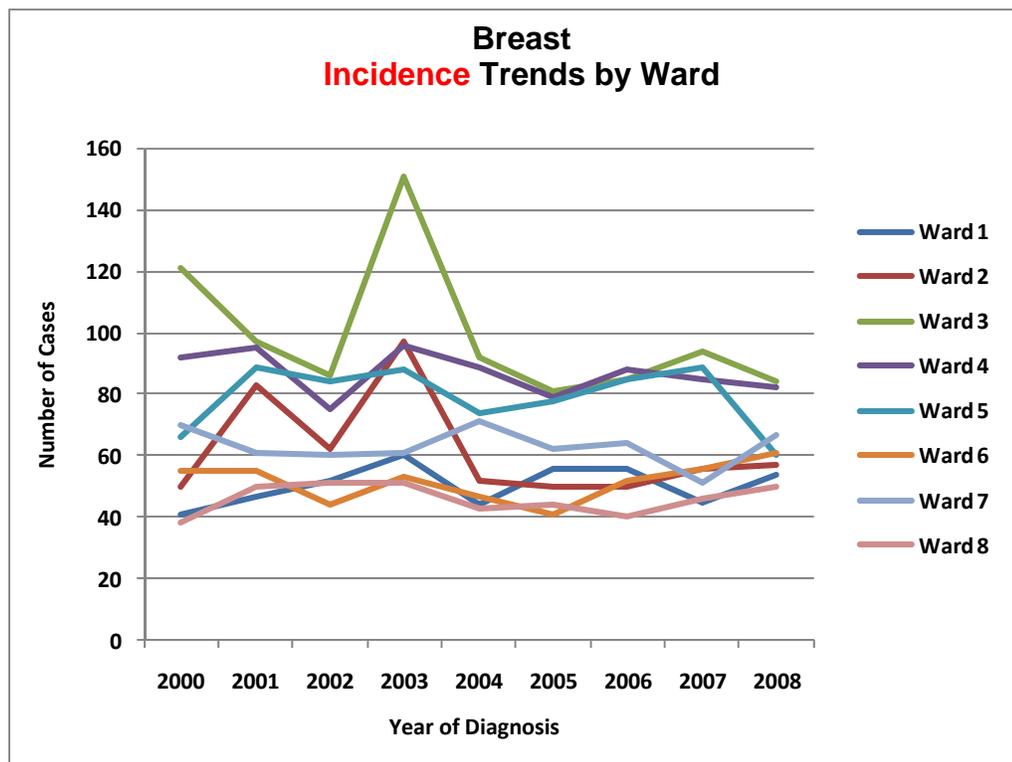


Table 17

Percentage of Change 2007-2008

Breast	08-07 % change
Ward 1	20.0
Ward 2	1.8
Ward 3	-10.6
Ward 4	-3.5
Ward 5	-32.6
Ward 6	8.9
Ward 7	31.4
Ward 8	8.7

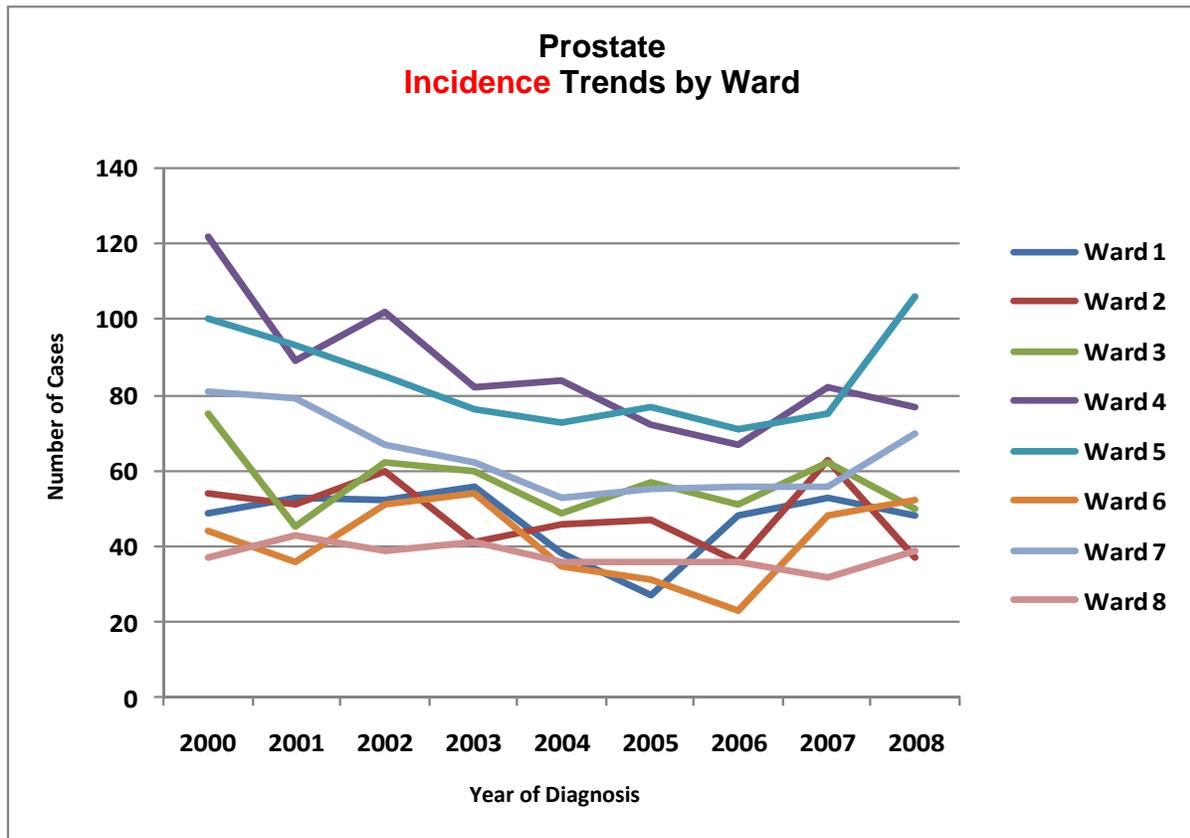
Source: DC Cancer Registry

**Table 18**  
**Percentage of Change 2007-2008**  
**Number of Cases**  
**Prostate**

	<b>08-07 % change</b>
Ward 1	-9.4
Ward 2	-41.3
Ward 3	-19.4
Ward 4	-6.1
Ward 5	41.3
Ward 6	8.3
Ward 7	25.0
Ward 8	21.9

Source: DC Cancer Registry

**Figure 28**



## Cancer Mortality Trends by Ward

**Table 19**  
**Percentage of Change 2007-2008**  
**Number of Deaths**

All Sites	08-07 % change
Ward 1	3.8
Ward 2	-35.9
Ward 3	-11.3
Ward 4	-11.2
Ward 5	11.5
Ward 6	-0.8
Ward 7	14.1
Ward 8	13.4

Source: DC Cancer Registry

Figure 29

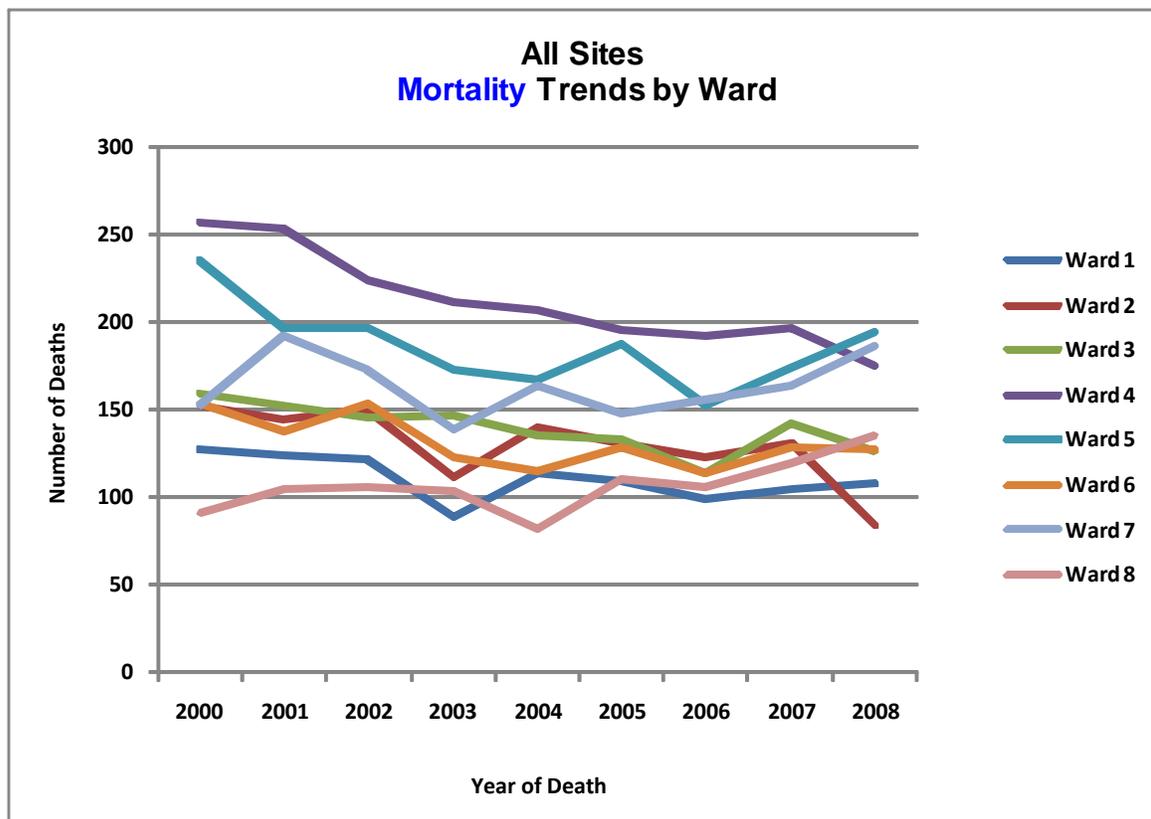


Figure 30

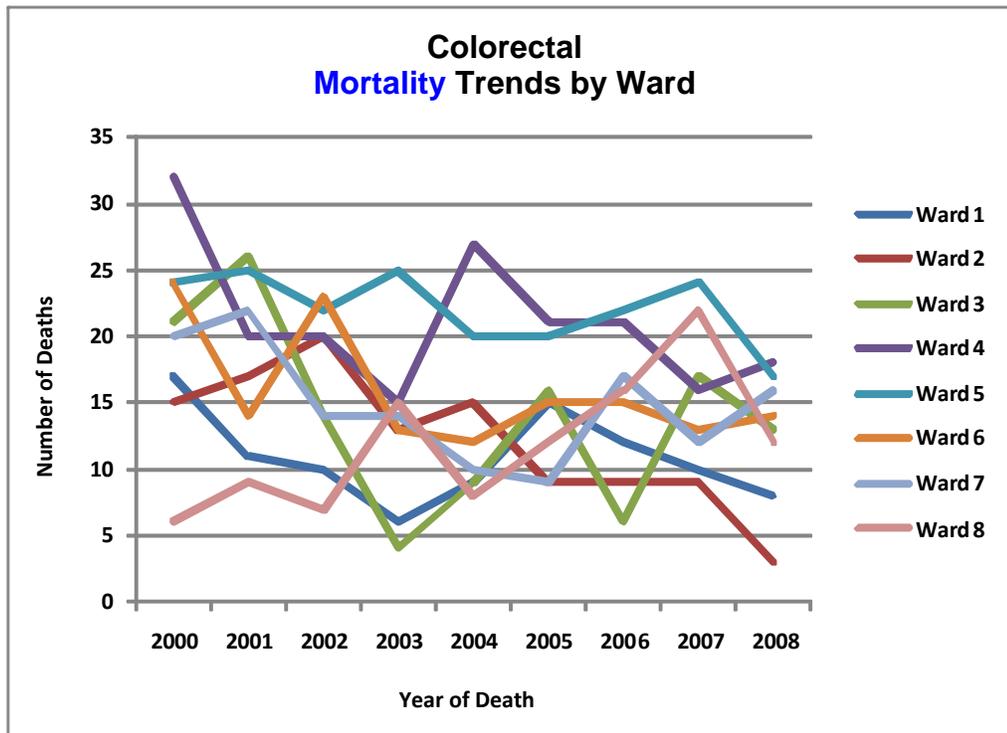


Table 20

Percentage of Change 2007-2008

Number of Deaths

Colorectal	08-07 % change
Ward 1	-20.0
Ward 2	-66.7
Ward 3	-23.5
Ward 4	12.5
Ward 5	-29.2
Ward 6	7.7
Ward 7	33.3
Ward 8	-45.5

Source: DC Cancer Registry

Figure 31

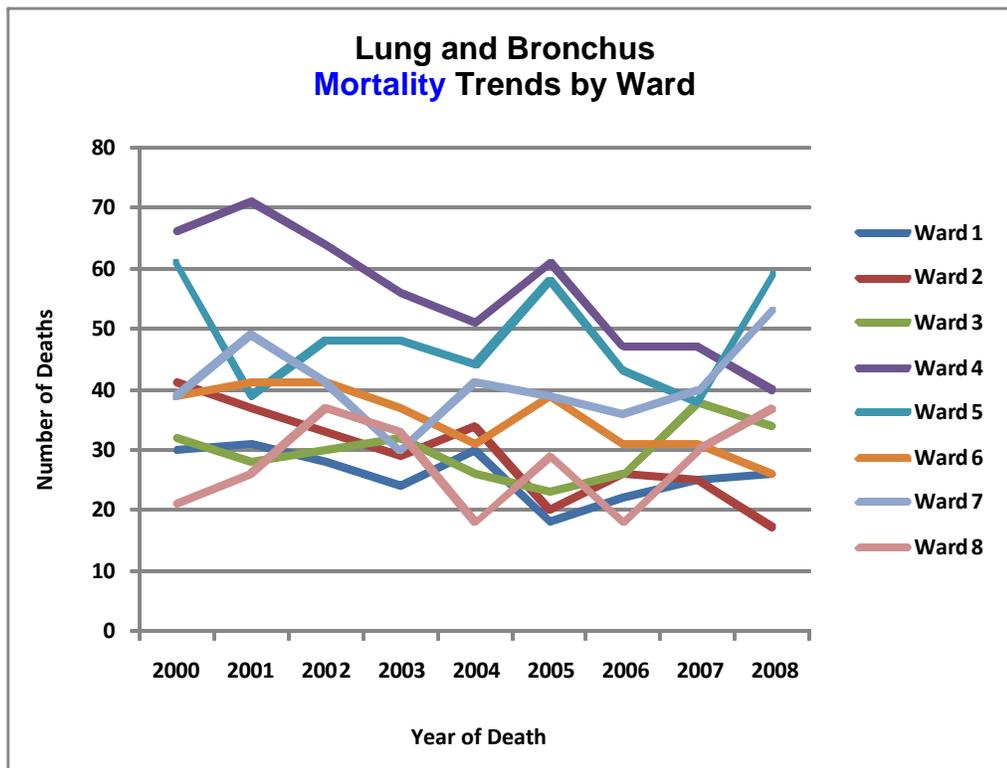


Table 21

Percentage of Change 2007-2008

Number of Deaths

Lung and Bronchus	08-07 % change
Ward 1	4.0
Ward 2	-32.0
Ward 3	-10.5
Ward 4	-14.9
Ward 5	55.3
Ward 6	-16.1
Ward 7	32.5
Ward 8	23.3

Source: DC Cancer Registry

Figure 32

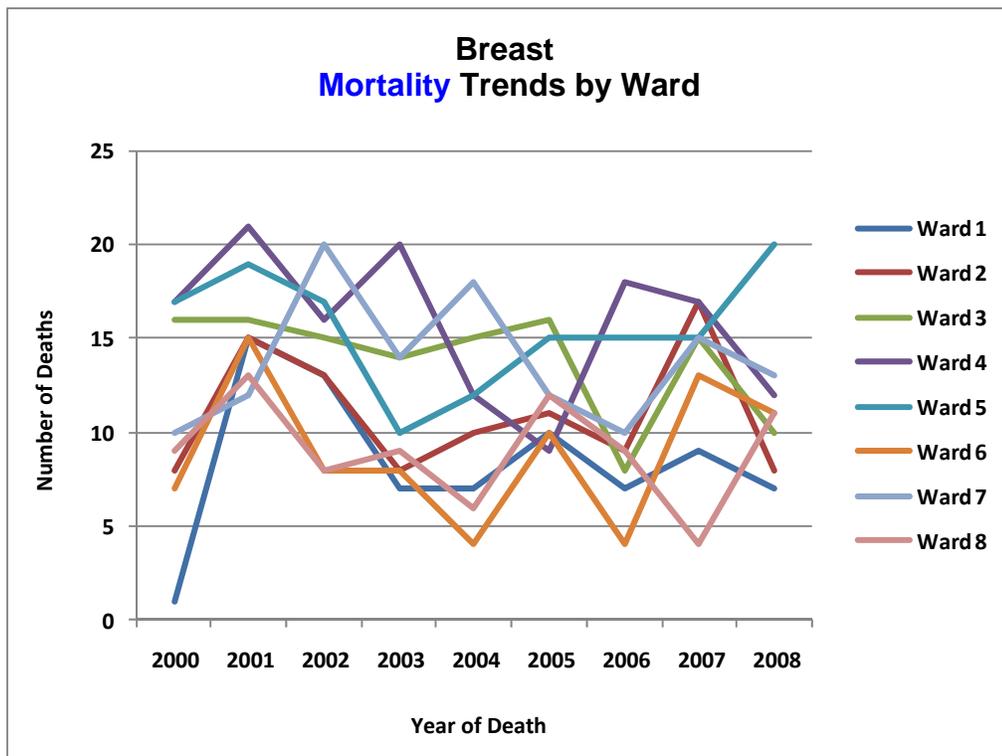


Table 22

Percentage of Change 2007-2008

Number of Deaths

Breast	08-07 % change
Ward 1	-22.2
Ward 2	-52.9
Ward 3	-33.3
Ward 4	-29.4
Ward 5	33.3
Ward 6	-15.4
Ward 7	-13.3
Ward 8	175.0

Source: DC Cancer Registry

Figure 33

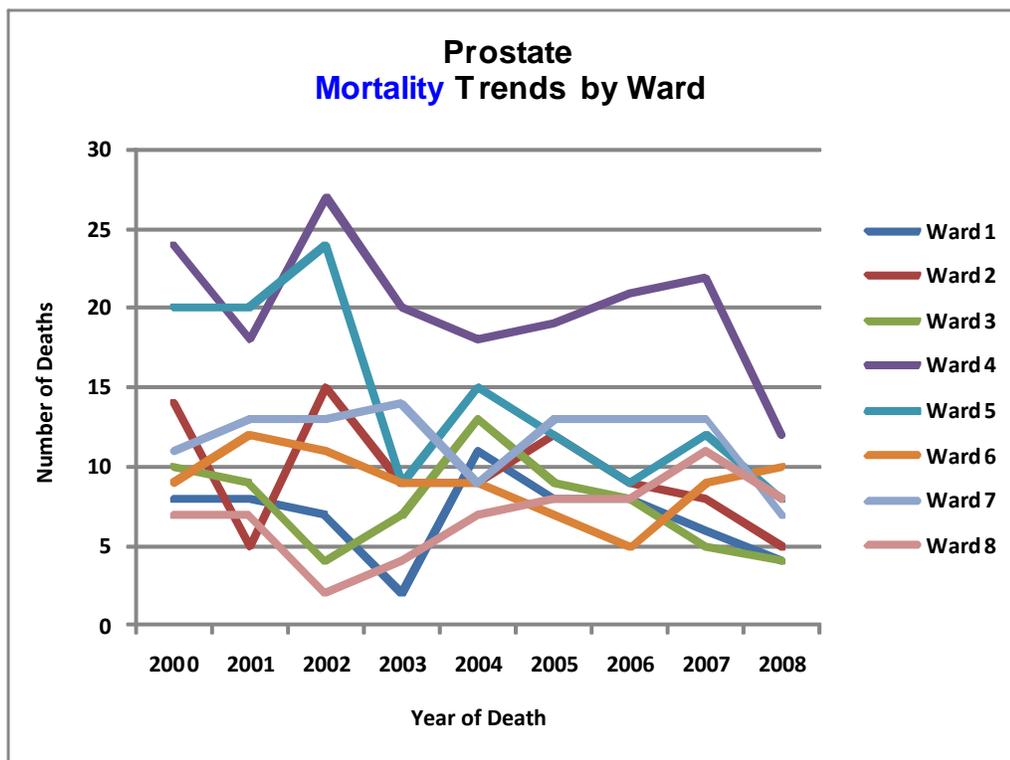


Table 23

Percentage of Change 2007-2008

Number of Deaths

Prostate	08-07 % change
Ward 1	-33.3
Ward 2	-37.5
Ward 3	-20.0
Ward 4	-45.5
Ward 5	-33.3
Ward 6	11.1
Ward 7	-46.2
Ward 8	-27.3

Source: DC Cancer Registry

Cancer Incidence by Sex, Race, SEER Stage and Site  
for DC residents, 2008—Number of Cases

Table 24

Primary Site	Percent	Total	SEX		RACE			SEER SUMMARY STAGE				
			Male	Female	White	Black	Other	In Situ	Local	Regional	Distant	Unknown
<b>Oral Cavity &amp; Pharynx</b>	<b>3.03%</b>	<b>89</b>	<b>66</b>	<b>23</b>	<b>22</b>	<b>61</b>	<b>6</b>	<b>5</b>	<b>28</b>	<b>33</b>	<b>17</b>	<b>6</b>
Lip	0.07%	2	0	~	0	~	0	0	~	0	0	0
Tongue	0.72%	21	16	5	~	15	~	~	~	7	6	~
Floor of the Mouth	0.24%	7	6	~	~	5	0	0	~	~	~	0
Gum and Other Mouth	0.51%	15	12	~	5	9	~	~	7	~	~	~
Salivary Gland	0.20%	6	~	~	~	5	0	0	~	~	~	0
Tonsil	0.72%	21	15	6	7	14	0	0	5	11	~	~
Oropharynx	0.17%	5	~	~	~	~	~	0	~	~	~	0
Nasopharynx	0.17%	5	~	~	~	~	0	0	~	~	~	~
Hypopharynx	0.24%	7	6	~	0	6	~	0	~	~	~	0
<b>Digestive System</b>	<b>18.75%</b>	<b>550</b>	<b>289</b>	<b>261</b>	<b>126</b>	<b>404</b>	<b>20</b>	<b>21</b>	<b>152</b>	<b>143</b>	<b>168</b>	<b>66</b>
Esophagus	1.19%	35	22	13	14	20	~	0	~	9	15	7
Stomach	1.70%	50	29	21	9	39	~	0	11	15	17	7
Small Intestine	0.92%	27	18	9	6	21	0	~	5	11	6	~
Colorectal	8.86%	260	114	146	58	192	10	15	97	64	59	25
Anus, Anal Canal and Anorectum	0.34%	10	5	5	5	5	0	~	~	~	~	~
Liver	1.98%	58	46	12	5	50	~	0	22	~	22	13
Gallbladder	0.27%	8	~	7	~	5	0	~	0	~	~	~
Other Billiary	0.44%	13	9	~	6	6	~	0	0	9	~	~
Pancreas	3.00%	88	45	43	20	65	~	0	11	29	41	7
Other Digestive System	0.03%	1	0	~	0	~	0	0	~	0	0	0
<b>Respiratory System</b>	<b>12.96%</b>	<b>380</b>	<b>214</b>	<b>166</b>	<b>67</b>	<b>300</b>	<b>13</b>	<b>~</b>	<b>85</b>	<b>82</b>	<b>172</b>	<b>38</b>
Nasal Cavity/Sinuses	0.20%	6	~	~	~	~	0	0	~	~	0	0
Larynx	0.89%	26	20	6	~	25	0	~	8	8	7	0
Lung and Bronchus	11.69%	343	187	156	59	271	13	0	73	69	164	37
Other Respiratory System	0.17%	5	5	0	~	~	0	0	~	~	~	~
<b>Bones and Joints</b>	<b>0.44%</b>	<b>13</b>	<b>7</b>	<b>6</b>	<b>~</b>	<b>10</b>	<b>0</b>	<b>0</b>	<b>~</b>	<b>~</b>	<b>5</b>	<b>~</b>
<b>Skin (excl. Basal &amp; Squamous)</b>	<b>3.44%</b>	<b>101</b>	<b>67</b>	<b>34</b>	<b>46</b>	<b>15</b>	<b>40</b>	<b>34</b>	<b>34</b>	<b>~</b>	<b>~</b>	<b>26</b>
<b>Soft Tissue/Heart</b>	<b>0.68%</b>	<b>20</b>	<b>16</b>	<b>~</b>	<b>8</b>	<b>10</b>	<b>~</b>	<b>0</b>	<b>11</b>	<b>~</b>	<b>~</b>	<b>~</b>
<b>Breast</b>	<b>18.00%</b>	<b>528</b>	<b>5</b>	<b>522</b>	<b>185</b>	<b>314</b>	<b>29</b>	<b>104</b>	<b>223</b>	<b>160</b>	<b>20</b>	<b>21</b>
<b>Female Genital System</b>	<b>5.56%</b>	<b>163</b>	<b>0</b>	<b>163</b>	<b>44</b>	<b>106</b>	<b>13</b>	<b>~</b>	<b>64</b>	<b>46</b>	<b>38</b>	<b>13</b>
Vulva	0.17%	5	0	5	~	~	0	~	~	~	0	0
Cervix Uteri	0.95%	28	0	28	8	19	~	0	9	12	6	~
Corpus Uteri	3.38%	99	0	99	25	64	10	~	48	30	11	9
Ovary	0.82%	24	0	24	6	17	~	0	~	~	16	~
Other Female Genital System	0.24%	7	0	7	~	~	~	0	0	0	5	~
<b>Male Genital System</b>	<b>17.56%</b>	<b>515</b>	<b>514</b>	<b>0</b>	<b>123</b>	<b>329</b>	<b>63</b>	<b>~</b>	<b>418</b>	<b>44</b>	<b>18</b>	<b>34</b>
Penis	0.10%	3	~	0	~	~	~	~	~	~	0	0
Prostate	16.95%	497	496	0	113	324	60	0	403	43	17	34
Testis	0.51%	15	15	0	9	~	~	0	14	0	~	0
<b>Urinary System</b>	<b>5.18%</b>	<b>152</b>	<b>103</b>	<b>49</b>	<b>44</b>	<b>97</b>	<b>11</b>	<b>20</b>	<b>84</b>	<b>20</b>	<b>19</b>	<b>9</b>
Kidney and Renal Pelvis	2.52%	74	46	28	16	50	8	~	43	10	16	~
Urinary Bladder	2.45%	72	55	17	26	43	~	19	38	9	~	~
Other Urinary Organs	0.20%	6	~	~	~	~	0	0	~	~	~	~
<b>Eye/Brain/Other Nervous Sys</b>	<b>2.93%</b>	<b>86</b>	<b>44</b>	<b>42</b>	<b>28</b>	<b>47</b>	<b>11</b>	<b>~</b>	<b>29</b>	<b>7</b>	<b>5</b>	<b>8</b>
Eye and Orbit	0.24%	7	6	~	~	5	0	~	~	0	~	0
Brain and Other Nervous System	2.69%	79	38	41	26	42	11	0	25	7	~	8
<b>Endocrine System</b>	<b>3.17%</b>	<b>93</b>	<b>35</b>	<b>58</b>	<b>44</b>	<b>40</b>	<b>9</b>	<b>0</b>	<b>48</b>	<b>22</b>	<b>5</b>	<b>~</b>
Thyroid	2.39%	70	18	52	35	29	6	0	46	20	~	~
Other Endocrine including Thymus	0.78%	23	17	6	9	11	#	0	#	#	#	0
<b>Lymphoma</b>	<b>2.11%</b>	<b>62</b>	<b>38</b>	<b>24</b>	<b>21</b>	<b>36</b>	<b>5</b>	<b>0</b>	<b>14</b>	<b>8</b>	<b>34</b>	<b>6</b>
<b>Plasma Cell/Hematopoietic Dz</b>	<b>3.78%</b>	<b>111</b>	<b>55</b>	<b>56</b>	<b>32</b>	<b>73</b>	<b>6</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>
<b>Other Ill Defined/Unknown</b>	<b>2.39%</b>	<b>70</b>	<b>23</b>	<b>47</b>	<b>8</b>	<b>58</b>	<b>#</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>

Source: DC Cancer Registry

~: Small number of cases not shown.

Cancer Mortality by Sex, Race and Site  
for DC residents, 2008—Number of Deaths

Table 25

Primary Site	Percent	Total	SEX		RACE		
			Male	Female	White	Black	Other
<b>Oral Cavity and Pharynx</b>	<b>2.82%</b>	<b>32</b>	<b>17</b>	<b>15</b>	<b>6</b>	<b>26</b>	<b>0</b>
Tongue	0.26%	3	0	~	~	~	0
Gum and Other Mouth	0.70%	8	5	~	~	7	0
Salivary Gland	0.62%	7	~	~	~	6	0
Tonsil	0.26%	3	~	0	~	~	0
Oropharynx	0.09%	1	0	~	0	~	0
Nasopharynx	0.26%	3	~	~	~	~	0
Hypopharynx	0.26%	3	0	~	0	~	0
Other Oral Cavity and Pharynx	0.35%	4	~	0	0	~	0
<b>Digestive System</b>	<b>25.90%</b>	<b>294</b>	<b>155</b>	<b>139</b>	<b>60</b>	<b>229</b>	<b>5</b>
Esophagus	2.91%	33	23	10	7	25	~
Stomach	2.29%	26	15	11	~	22	0
Small Intestine	0.53%	6	~	~	0	6	0
Colorectal	8.90%	101	43	58	23	76	~
Anus, Anal Canal and Anorectum	0.44%	5	~	~	~	~	0
Liver	2.82%	32	23	9	~	27	~
Gallbladder	0.35%	4	0	~	~	~	0
Other Biliary	0.35%	4	~	~	0	~	0
Pancreas	7.31%	83	44	39	20	62	~
<b>Respiratory System</b>	<b>26.96%</b>	<b>306</b>	<b>173</b>	<b>133</b>	<b>65</b>	<b>238</b>	<b>~</b>
Larynx	1.15%	13	11	~	~	11	0
Lung and Bronchus	25.73%	292	162	130	63	226	~
Other Respiratory System	0.09%	1	0	~	0	~	0
<b>Bones and Joints</b>	<b>0.09%</b>	<b>~</b>	<b>~</b>	<b>0</b>	<b>~</b>	<b>0</b>	<b>0</b>
<b>Skin excluding Basal and Squamous</b>	<b>0.44%</b>	<b>5</b>	<b>5</b>	<b>0</b>	<b>0</b>	<b>5</b>	<b>0</b>
<b>Breast</b>	<b>8.37%</b>	<b>95</b>	<b>~</b>	<b>92</b>	<b>17</b>	<b>77</b>	<b>~</b>
<b>Female Genital System</b>	<b>4.58%</b>	<b>52</b>	<b>~</b>	<b>51</b>	<b>10</b>	<b>42</b>	<b>0</b>
Cervix Uteri	0.88%	10	0	10	0	10	0
Corpus Uteri	0.53%	6	0	6	~	~	0
Ovary	2.03%	23	~	22	5	18	0
Other Female Genital Organs	1.15%	13	0	13	~	10	0
<b>Male Genital System</b>	<b>5.11%</b>	<b>58</b>	<b>58</b>	<b>0</b>	<b>9</b>	<b>49</b>	<b>0</b>
Prostate	5.11%	58	58	0	9	49	0
<b>Urinary System</b>	<b>3.88%</b>	<b>44</b>	<b>27</b>	<b>17</b>	<b>15</b>	<b>29</b>	<b>0</b>
Kidney and Renal Pelvis	1.67%	19	13	6	7	12	0
Urinary Bladder	2.20%	25	14	11	8	17	0
<b>Eye/Brain/Other Nervous System</b>	<b>2.11%</b>	<b>24</b>	<b>16</b>	<b>8</b>	<b>13</b>	<b>10</b>	<b>~</b>
Brain and Other Nervous System	2.11%	24	16	8	13	10	~
<b>Endocrine System</b>	<b>0.44%</b>	<b>5</b>	<b>~</b>	<b>~</b>	<b>~</b>	<b>~</b>	<b>0</b>
Thyroid	0.26%	3	~	~	~	~	0
Other Endocrine including Thy-mus	0.18%	2	~	~	~	0	0
<b>Lymphoma</b>	<b>2.11%</b>	<b>24</b>	<b>18</b>	<b>6</b>	<b>12</b>	<b>12</b>	<b>0</b>
<b>Plasma Cell/Hematopoietic</b>	<b>6.70%</b>	<b>76</b>	<b>48</b>	<b>28</b>	<b>17</b>	<b>59</b>	<b>0</b>
<b>Other Ill Defined/Unknown</b>	<b>10.48%</b>	<b>119</b>	<b>69</b>	<b>50</b>	<b>21</b>	<b>96</b>	<b>~</b>

Source: DC Cancer Registry

~: Small number of deaths not shown.

## Definitions and Technical Notes

**Morbidity** - Relative incidence of disease.

**Rate** - Number of cases divided by the population.

**Incidence** - Number of new cases of disease that occur in a specific time period within a specific population.

**Incidence Rate** - Number of new cases of disease that occur in a specific time period within a specific population, divided by the size of the population. Usually expressed per 100,000 population.

**Mortality** - Number of deaths that occur in a specific time period within a specific population.

**Mortality Rate** - Number of deaths that occur in a specific time period within a specific population, divided by the size of the population. Usually expressed per 100,000 population.

**Percentage of change** - Change in a rate or count between two calendar years (ignoring years in between)

$$\text{Percentage of change} = ((\text{end rate} - \text{initial rate}) / \text{initial rate}) * 100$$

**Cancer incidence rate** - Number of new cancers of a specific site/type occurring in a specified population during a year, usually expressed as the number of cancers per 100,000 population at risk.

$$\text{Incidence rate} = (\text{New cancers} / \text{Population}) \times 100,000$$

**Cancer mortality rate** - Number of deaths, with cancer as the underlying cause of death, occurring in a specified population during a year. Cancer mortality is usually expressed as the number of deaths due to cancer per 100,000 population.

$$\text{Mortality Rate} = (\text{Cancer Deaths} / \text{Population}) \times 100,000$$

**Statistics by Race/Ethnicity** - Measure of the cancer burden in racial/ethnic minorities and medically underserved populations.

**Age-adjusted Rate** - Age-adjustment is a technique used to eliminate the effect of the age distribution of the population on mortality rates. Since the frequency of case or death varies with age, a measure free of the influences of population composition is needed to make comparisons between areas or over time.

**Age-specific rate** - Rate of incidence or mortality of a specific age group, calculated per 100,000 people.

**Crude Rate** - Ratio of the number of people in which the event of interest happens in a specified time period to the size of the population who may experience this event during the same time period. There are no adjustments made when a crude rate is given.

$$\text{Crude Rate} = \text{Count} / \text{Population} * 100,000$$

**Stage** - Stage of diagnosis summarizes how far a cancer has spread when it is first discovered.

**Stage distribution** - Stage provides a measure of disease progression, detailing the degree to which the cancer has advanced. Two methods commonly used to determine stage are American Joint Committee on Cancer (AJCC) and Surveillance Epidemiology and End Results (SEER) historic. The AJCC method is more commonly used in the clinical settings, while SEER has standardized and simplified staging to ensure consistent definitions over time.

SEER describes cancers in five stages:

- **In situ cancer** is early cancer that is present only in the layer of cells in which it began.
- **Localized cancer** is cancer that is limited to the organ in which it began, without evidence of spread.
- **Regional cancer** is cancer that has spread beyond the original (primary) site to nearby lymph nodes or organs and tissues.
- **Distant cancer** is cancer that has spread from the primary site to distant organs or distant lymph nodes.
- **Unstaged cancer** is cancer for which there is not enough information to indicate a stage.

**Invasive Cancer** - Cancer that has spread beyond the layer of tissue in which it developed and is growing into surrounding, healthy tissues -- generally, the stage is either "localized", "regional", or "distant".

**Primary Tumor** - An original tumor. A tumor that did not initially arise in another site.

**Primary cancer site** - The organ of origin within the body where a given cancer occurs in an individual.

**Case counts** - Case counts are counts of reportable cancers, not patients. A patient may have more than one reported tumor.

All Counts and Rates are for **DC residents only**.

Rates are per 100,000 persons and are age-adjusted to the 2000 U.S. standard.

Age-adjusted rates **exclude in situ** cancers.

Only Black and White races are presented, due to the small number of cases or deaths in other races, same criterion applies to Hispanic.

All races includes White, Black and other races.

Information not shown for small number of cases or deaths.

Statistic (rates) not calculated for small number of cases or deaths.

Census tracts and Wards not include unknown, incomplete, incorrect addresses and PO Boxes for cancer cases or cancer deaths.

Deaths - Cancer deaths are based on information from all death certificates in the 50 states and the District of Columbia and processed by the National Vital Statistics System (NVSS) at the National Center for Health Statistics (NCHS).

Source for Incidence: District of Columbia Cancer Registry.

Source for Mortality: State Center for Health Statistics, Vital Records.

**Wards** - Political subdivisions of the District of Columbia, created for the purpose of voting and representation. Ward boundaries were first established in 1801 and are updated every ten years, based on population changes reported by the U.S. Census Bureau.

### **Age-Adjusted Rates**

DC Cancer Registry (DCCR) utilizes age-adjustment technique for incidence and mortality rates' calculation. Age-adjusted rates allow DCCR to compare its rates with populations of different age distribution or compare its rates through time.

The population utilized by DCCR in this process is US 2000 Standard. Only rates adjusted to the same standard population can be compared.

DC population utilized by DCCR in this process is produced by DC Government Office of Planning and it is produced by sex, race and ethnicity; ethnicity could be any race.

DC does not have counties instead DC is divided in wards; ward's population is produced by DC Government Office of Planning, but after Census 2010 is completed the US Census Bureau will produce DC ward's population thru the office of American Community Survey.

DC Ward's population is estimated every 10 years.

Age-adjusted rates based on small numbers of cases or deaths will exhibit a large amount of random variation. A very rough guideline is that there should be at least 25 total cases or deaths over all age groups. When fewer than 25 health events occurred over a time period, it may be considered combining years, or using indirect age-adjustment.

DC population is not big and when producing age-adjusted rates for cases or deaths by wards, sex, and race and by selected sites, generates very small sub populations, creating unstable rates, it may be considered combining years.

DC utilized 19 groups of age to produce age adjusted rates, to be able to compare with national data.

For confidentiality reasons it cannot be shown cases or deaths with small numbers.

DISTRICT OF COLUMBIA  
DEPARTMENT OF HEALTH

District of Columbia Cancer Registry  
Bureau of Cancer and Chronic Disease  
Community Health Administration  
Department of Health  
**899 North Capitol St. NE, 3rd Floor  
Washington, DC 20002**