Racial Differences in Cancer

A Comparison of Black and White Adults in the United States

Approximately 177,000 blacks aged 20 and older will be diagnosed with cancer in 2005—an annual rate of 722 new cases diagnosed per 100,000 black adults, excluding basal and squamous cell skin cancers and carcinomas in situ. In contrast, the rate among white adults is 665 new cases per 100,000. The higher cancer incidence in blacks is driven specifically by the higher rate in black men. Cancer incidence is slightly lower in black women than white women.

Cancer mortality is also higher in blacks than whites, with rates of 237 and 190 per 100,000 blacks and whites, respectively. Cancer death rates have declined over the past decade; however, black males have an age-adjusted mortality rate 36% higher than white males. Mortality rates are lower in females than males, and black females have a higher mortality rate than white females.

Five-year relative survival is lower in blacks than whites, 53% compared with 64%, respectively. Part of this disparity is because blacks are less likely to be diagnosed in the more survivable local stage. Among women, 40% of blacks and 50% of whites are diagnosed in the local stage. Among men, early diagnosis occurs in 54% and 58% of blacks and whites, respectively.

Analyses of specific cancers also reveal racial disparities. Blacks experience higher incidence and mortality, and lower five-year survival, with respect to four of the five cancers addressed in this report: cancers of the prostate, colon and rectum, lung and bronchus, and uterine cervix. Although the incidence of breast cancer is lower among black women than white women, black females have higher mortality and lower five-year survival. The greatest racial disparity is observed for prostate cancer: blacks are 63% more likely to be diagnosed (380 cases vs. 233 cases per 100,000 population, respectively), and they are over twice as likely to die of prostate cancer (61 and 25 deaths per 100,000 population, respectively). Lung cancer disproportionately affects black males, with 51% higher incidence (ages 20 and older) and 31% higher mortality (all ages) than observed in white men.

This issue of Pfizer Facts, a collaboration between the National Medical Association (NMA), the Special Populations Network of Region 2 NMA and Thomas Jefferson University, and Pfizer, presents new analyses of national databases to gain insight into the burden of cancer among black adults, with comparisons to the white adult population. The report addresses cancer morbidity and mortality, coexisting conditions experienced by cancer patients and survivors, cost of care, behavioral risk factors and prevention. We present analyses of the Surveillance, Epidemiology, and End Results (SEER) Program, the National Health Interview Survey (NHIS), the Behavioral Risk Factor Surveillance System (BRFSS), the Medical Expenditure Panel Survey (MEPS), and the Compressed Mortality File (CMF). We hope that the information presented in this report will encourage discussion and debate, and ultimately lead to the development and implementation of effective interventions.

Edith P. Mitchell, MD, FACP
Clinical Professor of Medicine
Division of Medical Oncology
Jefferson Medical College
Thomas Jefferson University

Robin P. Hertz, PhD
Senior Director

Margaret McDonald, PhD
Director

Population Studies
US Outcomes Research
Pfizer Global Pharmaceuticals

Table of contents

About the analyses

Measuring the burden of cancer among black and white United States adults presents challenges, requiring analyses of multiple national data sources for morbidity, mortality and healthcare spending information. The most current available data from these sources are used in the analyses; consequently, overlapping years, and in some instances, different years of data are used.

The data sources analyzed to produce a comprehensive healthcare profile of cancer among black and white adults ages 20 and older are listed below.

Morbidity and mortality

- Surveillance, Epidemiology, and End Results (SEER) Program, 1992–2001: Analyzed for cancer incidence, survival and treatment rates.

- National Health Interview Survey (NHIS) 1999–2003: Prevalence of cancer and concurrent medical conditions.

- Compressed Mortality File (CMF) 1990–2002, Centers for Disease Control and Prevention: Death rates.

Healthcare expenses

- Medical Expenditure Panel Survey (MEPS), 1998–2002: Direct medical spending for cancer treatment.

Prevention, screening, demographic characteristics and environmental issues

- Behavioral Risk Factor Surveillance System (BRFSS), 2002: Prevalence estimates of screening tests for selected cancers.

- NHIS, 2003: Behavioral risk factor prevalence, demographic characteristics and environmental issues.

- Current Population Survey (CPS), 2004. Bureau of Labor Statistics: Employment data.

To address sample size limitations inherent when analyzing cancer data, particularly when examining cancer by subsets within the population (e.g. race, age groups) multiple years of data are combined for some analyses to increase sample sizes needed for reliable estimates. Even so, because of the low incidence of male breast cancer among male adults (1.7 cases per 100,000 adult male population), the sample sizes are inadequate to yield reliable estimates for male breast cancer; therefore, all breast cancer analyses in this report are limited to women. On the other hand, basal and squamous cell skin cancers are typically excluded from analyses of malignant neoplasms because of their high incidence and cure rates. These cancers, and carcinomas in situ, are excluded from the category "total cancers" in this report. When analyzing prevalence of chronic conditions among black and white adults with and without a history of cancer, again, sample size limitations prevent further reporting of chronic conditions by years since cancer diagnosis.

Total cancer

Incidence

Black adults have a higher incidence of cancer than white adults, with 722 new cases compared with 665 new cases (excluding basal and squamous cell cancer and carcinomas in situ) per 100,000 population aged 20 and older, respectively, expected in 2005. This racial difference is attributable to the excess cancer rate in black men. Prior to age 45, cancer rates are similar among men of both racial groups; after this point, however, divergence occurs and rates for black men increase considerably. The greatest disparity occurs between ages 70 to 74 when cancer rates are 3,638 and 2,900 per 100,000 black and white men, respectively.

Among women aged 20 and older, blacks have a slightly lower incidence of cancer than whites, 559 vs. 595 new cases per 100,000 black and white women. This disparity is greater in older women.

Regardless of race, the burden of cancer is greater in men than women. There are 772 and 575 new cases per 100,000 men and women, respectively, aged 20 and older.

## Incidence rates for total cancers in men by race and age
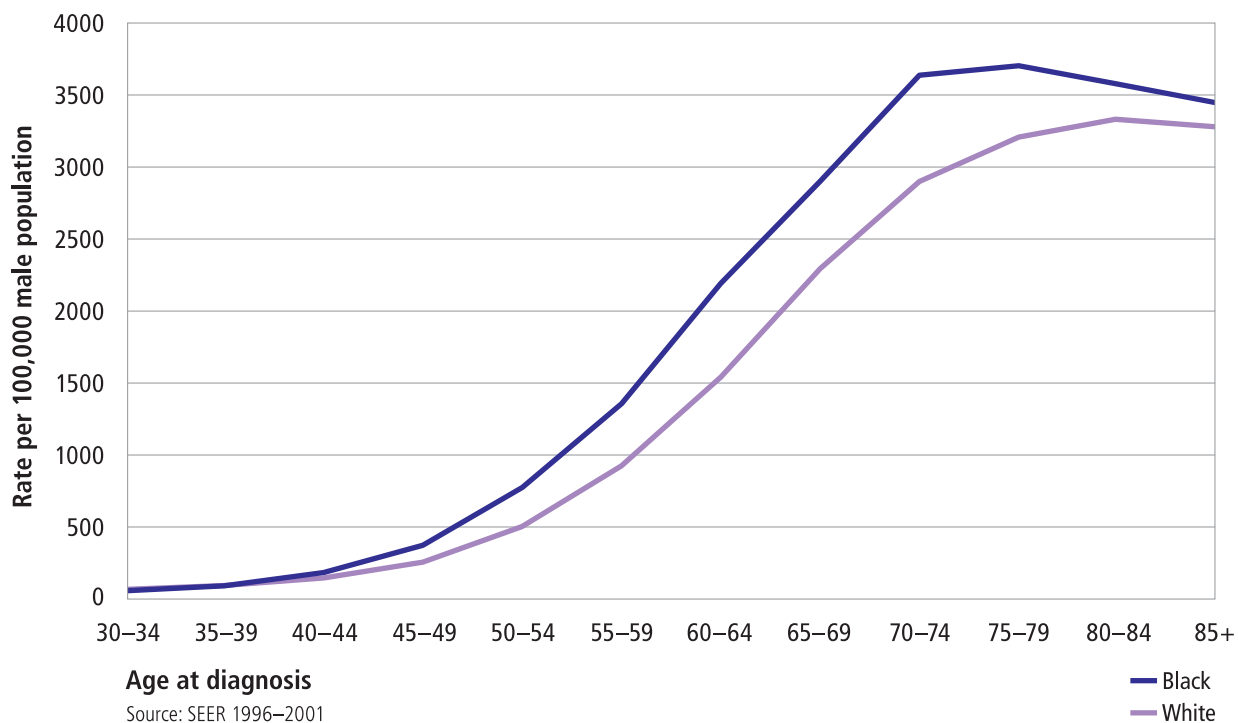
Age at diagnosis

Source: SEER 1996–2001

Note: Graphs may not begin at age 20 due to sample size limitations. This applies to all graphs that present age-specific data.

Note: Excludes basal and squamous skin cancers and carcinomas in situ. This exclusion applies to all analyses.

— Black
— White

## Incidence rates for total cancers in women by race and age
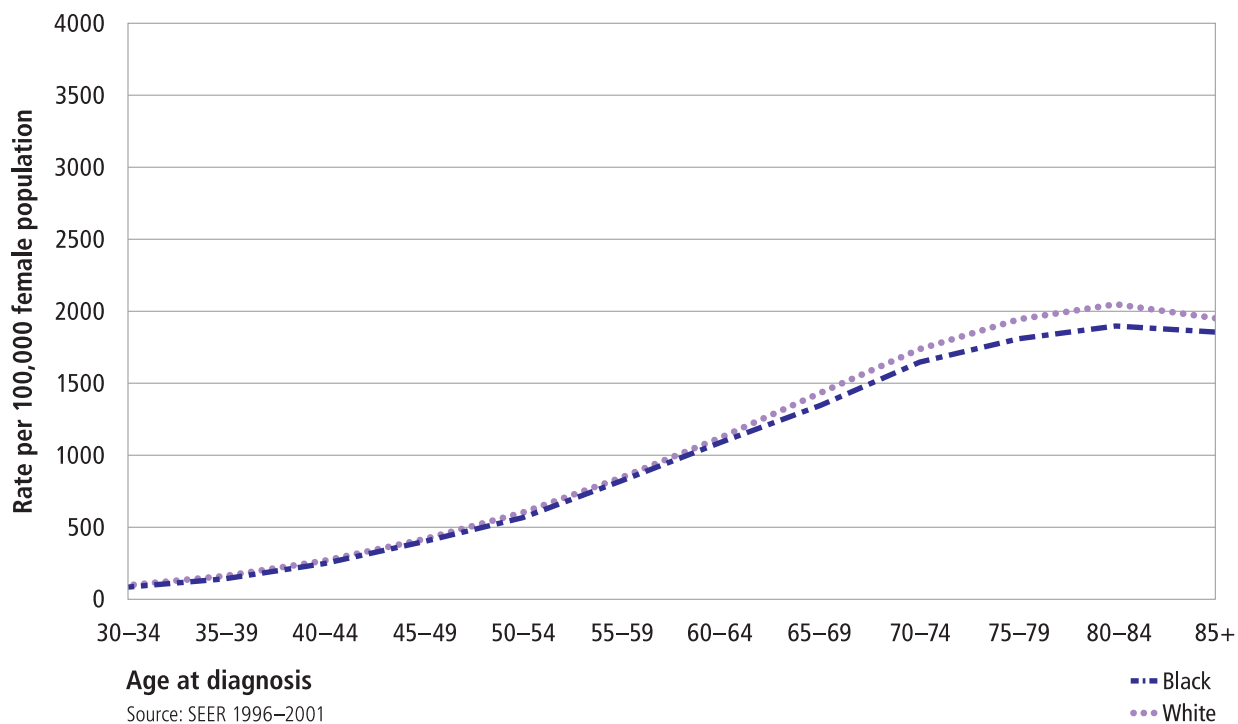
Age at diagnosis

Source: SEER 1996–2001

-·- Black
··· White

Mortality

Cancer is the second leading cause of death in the United States. The overall death rate from cancer is on the decline for both blacks and whites, and is decreasing for the most incident cancers among males and females (prostate, breast, lung, and colorectal cancers). However, blacks continue to have higher cancer mortality rates than whites. In 2002, the mortality rate among black males was 36% higher than among white males (317 vs. 234 deaths per 100,000), and the rate among black females was 17% higher than that among white females (189 vs. 161 per 100,000).

Age-adjusted total cancer mortality rates by race and gender

Source: CDC 1990–2002
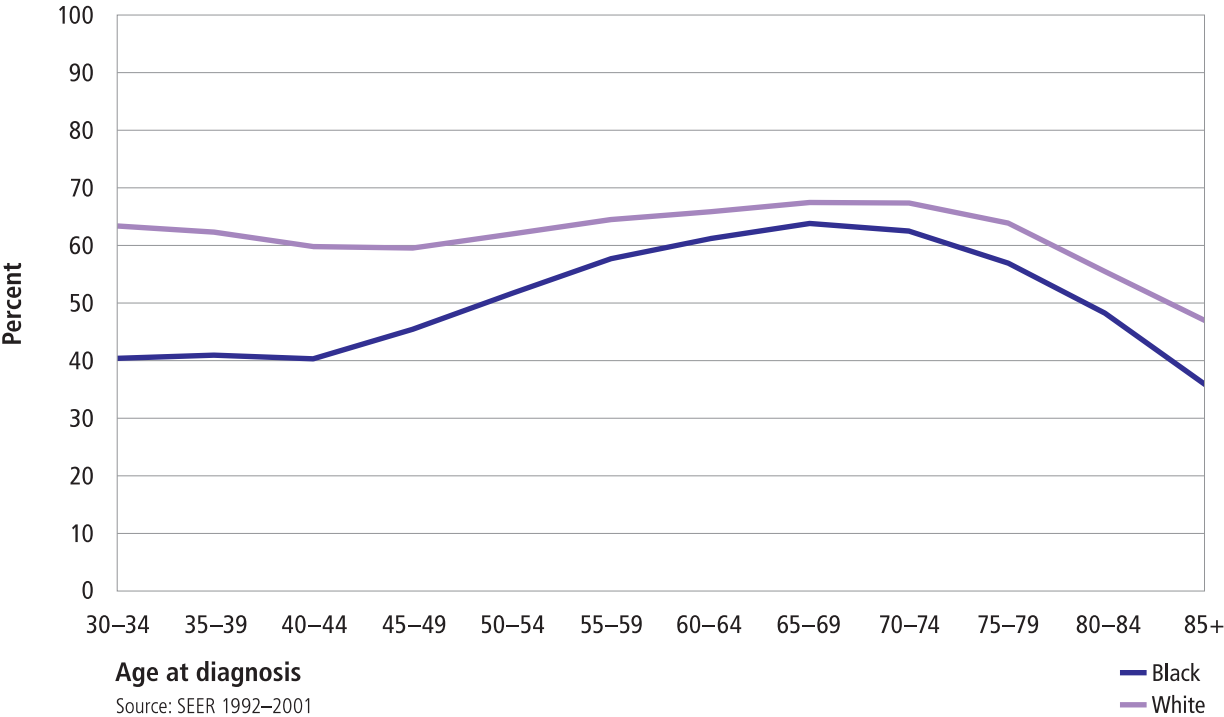Age-adjusted to the 2000 US standard population.
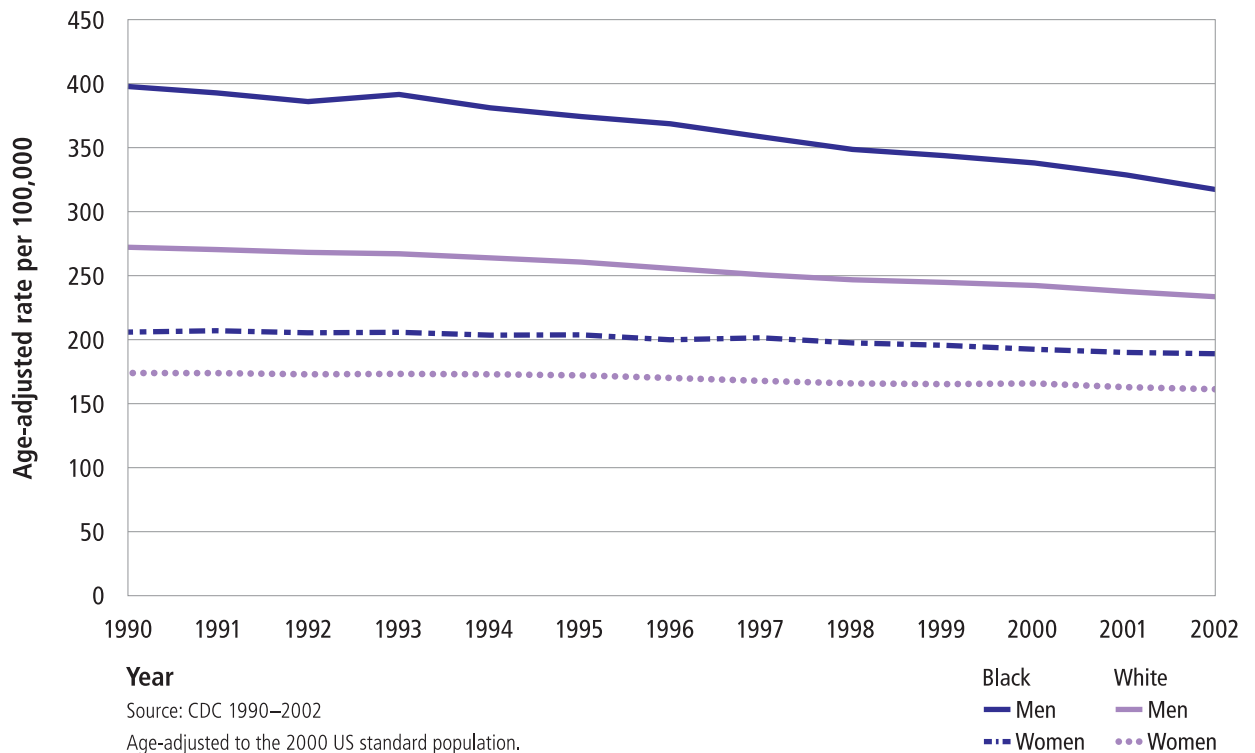
Survival

Survival rates vary according to the specific type of cancer, as well as by race and gender. By convention, five-year survival rates are considered, although living beyond five years of diagnosis does not equate to being cured. Another convention is reporting "five-year relative survival," the likelihood or chance of cancer patients surviving at least five years after diagnosis, relative to the expected likelihood of cancer-free persons (matched on age, sex, race, and year of observation) surviving at least five years.

Black adults have a lower five-year relative survival rate for cancer than whites, 53% vs. 64%. The disparity in relative survival is higher among women (51% vs. 64%) than among men (56% vs. 64%).

Age-specific relative survival curves differ for men and women. For men, relative survival rate disparity is greatest prior to age 35 and begins to narrow at age 50. The likelihood of survival increases dramatically between ages 40 to 49 among black men, and slightly at ages 50 to 54 among white men. Relative survival declines at ages 70 to 74 in black men and 75 to 79 in white men. Among women, however, the disparity as well as the decline in relative survival rates is consistent by age.

Five-year relative survival for total cancers in men by race and age

Age at diagnosis

Source: SEER 1992–2001

—— Black
—— White

Five-year relative survival for total cancers in women by race and age

Age at diagnosis

Source: SEER 1992–2001
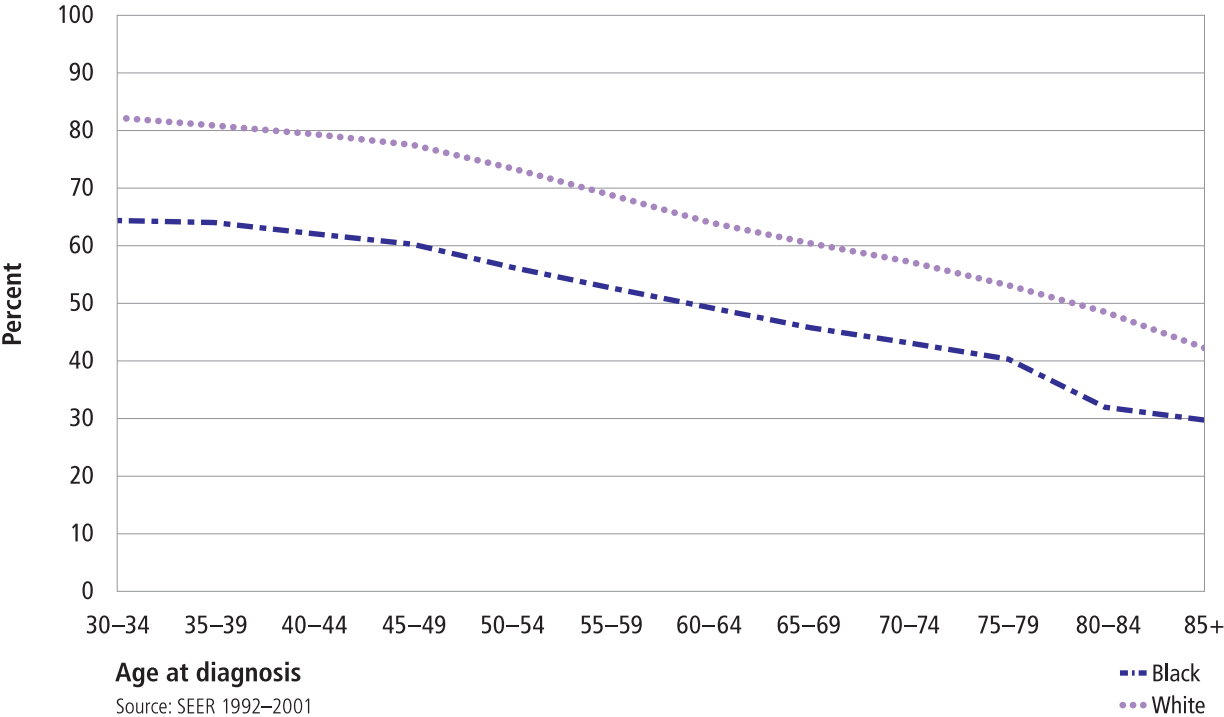
-■-■ Black
••••• White

A lower percentage of cancer cases in blacks is diagnosed in the local stage, 48%, vs. 54% for whites. The racial disparity is wider for women (40% vs. 50%) than for men (54% vs. 58%).

Diagnosis of cancer in the local stage is associated with higher survival rates. Among black men, five-year relative survival rates decline from 92% to 31% to 16% for those diagnosed in the local, regional, and distant stages, respectively. The corresponding rates among black women are 83%, 50%, and 15%. Five-year relative survival rates among blacks are lower than those among whites regardless of stage of diagnosis.

Five-year relative survival by stage at diagnosis for total cancers in adults 20 years and older by race and gender

| Gender | Race | Stage at diagnosis | | | | | | All stages |
| | | Local | | Regional | | Distant | | |
		Diagnosed %	Survival %	Diagnosed %	Survival %	Diagnosed %	Survival %	Survival %
Men	Black	54	92	20	31	26	16	56
	White	58	95	20	43	22	20	64
Women	Black	40	83	33	50	27	15	51
	White	50	92	28	61	22	21	64
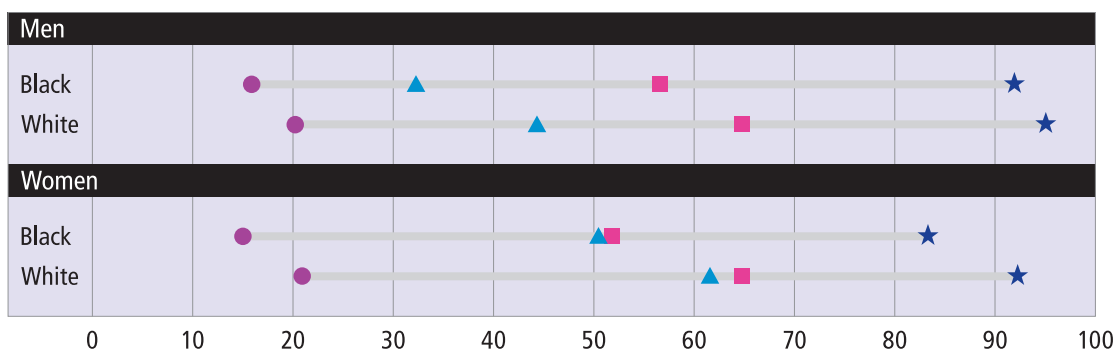
Percent of population

Source: SEER 1992–2001

Five-year relative survival among cancer patients 20 years of age and older, diagnosed from 1992–2000, and followed through 2001.

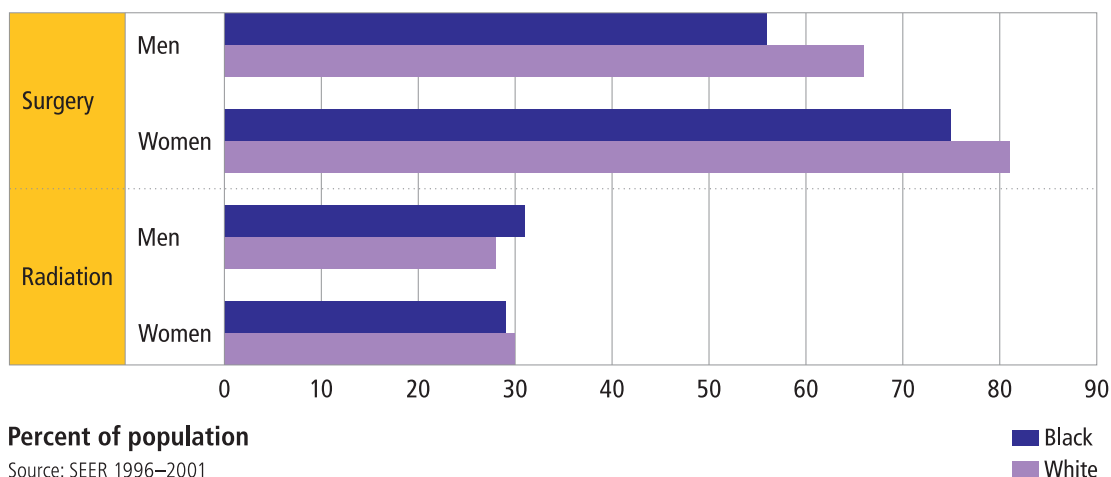"All stages" includes local, regional, distant and unstaged cancers.

★ Local
▲ Regional
● Distant
■ All stages

Treatment

Cancer treatment decisions, such as surgery and radiation, depend on many factors, including the specific cancer site and the stage at which the cancer is diagnosed. Differences in cancer stage at diagnosis among blacks and whites may contribute towards differences in surgery and radiation treatment rates. In this report, graphs showing total surgery and radiation rates by race and gender include all stages of diagnosed cancer.

Surgical treatment for cancer varies by race and gender. Among adults aged 20 and older, 56% and 75% of black men and women, respectively, undergo surgery, compared with 66% and 81% of white men and women. Radiation treatment, regardless of race or gender, is similar: 31% and 29% of black men and women receive radiation compared with 28% and 30% of white men and women.

Surgery and radiation treatment rates for total cancers in adults 20 years and older by race and gender

Percent of population
Source: SEER 1996–2001
Treatment rates include all stages of cancer. This applies to all treatment analyses.
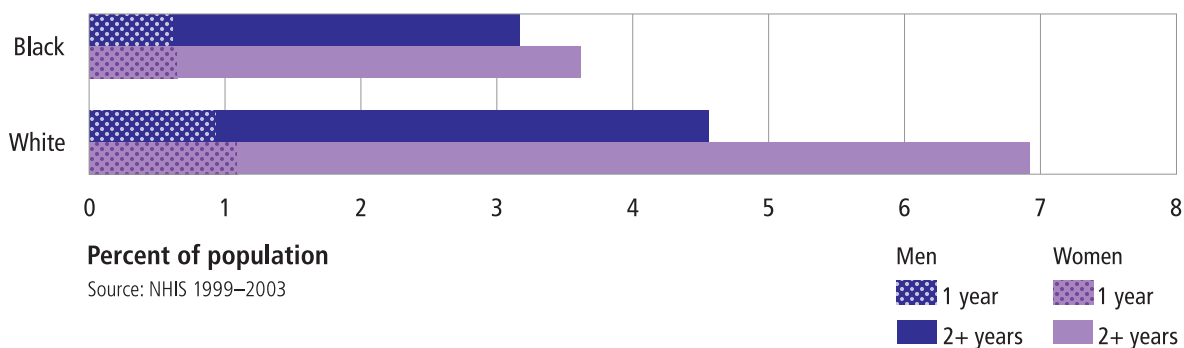
■ Black
■ White

Prevalence

Prevalence, the percentage of the population with a history of cancer, is a function of both new cases of cancer and survivability of cancer. The prevalence of total cancers among adults aged 20 and older is lower among blacks than whites. Three percent of black men and 4% of black women, compared with 5% and 7% of white men and women report a history of cancer (excluding basal and squamous cell skin cancer).

Of the estimated 1.3 million black men and 2 million black women who have ever been diagnosed with cancer, 20% and 18% were diagnosed in the past year. Of the estimated 17 million white men and 27 million white women who have ever been diagnosed with cancer, 21% and 16% were diagnosed in the past year.

Age-adjusted prevalence of total cancers in adults aged 20 and older by race, gender and years since diagnosis

Percent of population
Source: NHIS 1999–2003

Men   Women
1 year   1 year
2+ years   2+ years

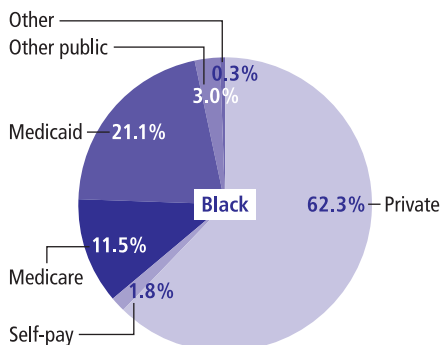# Source of payment for cancer treatment

Cancer-attributable spending

An estimated 527,000 black adults aged 40 and older with a history of cancer spend $4.36 billion (B) a year on cancer treatment; $25.06B is spent annually to treat an estimated 7.46 million white adults aged 40 and older. With changes in therapies for some cancers since the most current time period for which the Medical Expenditure Panel Survey (MEPS) data are available, and with the exclusion from MEPS of costs associated with long-term care, this high economic burden represents an underestimate of direct expenditures associated with cancer care. Direct spending is a function of per person spending associated with the specific cancer and the number of persons seeking treatment for that cancer. (Spending for other non-epithelial cancers of the skin and for primary and secondary malignant neoplasms with unspecified sites are excluded from this section.)

Among middle-aged blacks and whites, private insurers pay for 62% and 72% of annual cancer-related healthcare expenses, respectively. In this same age group, Medicaid incurs 21% of total expenses associated with cancers among blacks, and 4% of cancer expenses among whites.

Medicare is the largest payer of cancer-related expenses for older blacks and whites, incurring 52% and 68% of total expenditures, respectively. Among older blacks, Medicaid and other public payers incur 15% and 11% of total cancer expenses, compared with 1% and 6% among older white adults.

Racial differences in cancer

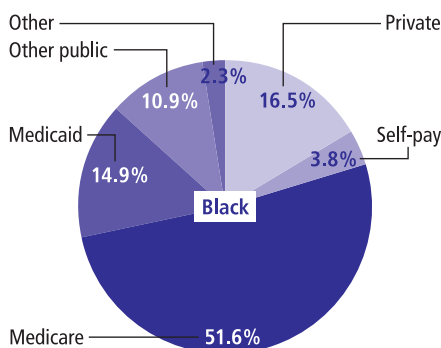## Annual direct medical spending for cancer treatment by race and payment source, age 40–64

Other
Other public
Medicaid — 21.1%
0.3%
3.0%
Black 62.3% — Private
11.5%
Medicare
1.8%
Self-pay

Other
Other public
Medicaid
1.4%
3.5%
3.7%
Medicare — 10.9%
8.4%
White 72.2% — Private
Self-pay

Total annual spending: ..... $3.26 billion	
Private	$2.03B
Self-pay	$0.06B
Medicare	$0.38B
Medicaid	$0.69B
Other public	$0.10B
Other	$0.01B
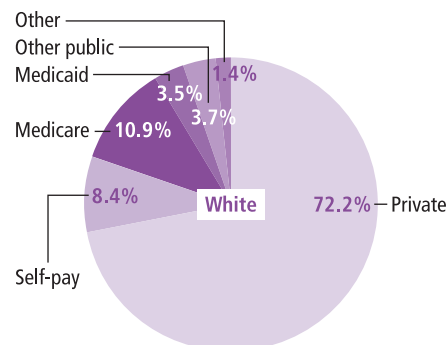
Total annual spending: ... $11.50 billion	
Private	$8.30B
Self-pay	$0.96B
Medicare	$1.25B
Medicaid	$0.40B
Other public	$0.42B
Other	$0.16B

Annual direct medical spending for cancer treatment by race and payment source, age 65 and older

Other
Other public
2.3%
10.9%
Private 16.5%
Medicaid
14.9%
Self-pay 3.8%
Black
Medicare — 51.6%

Other
Other public
Medicaid
2.7%
0.9%
5.6%
Private 18.1%
Self-pay 4.8%
White
Medicare — 68.0%

Total annual spending: ...... $1.10 billion	
Private	$0.18B
Self-pay	$0.04B
Medicare	$0.57B
Medicaid	$0.16B
Other public	$0.12B
Other	$0.03B
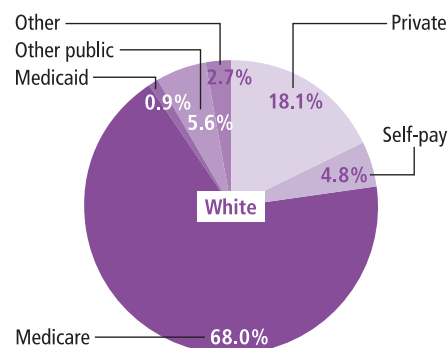
Total annual spending: ... $13.56 billion	
Private	$2.46B
Self-pay	$0.65B
Medicare	$9.21B
Medicaid	$0.12B
Other public	$0.75B
Other	$0.37B

Source: MEPS 1998–2002 annual average

Direct medical spending adjusted to year 2002 dollars.

Note: Percents and spending may not add to totals because of rounding.
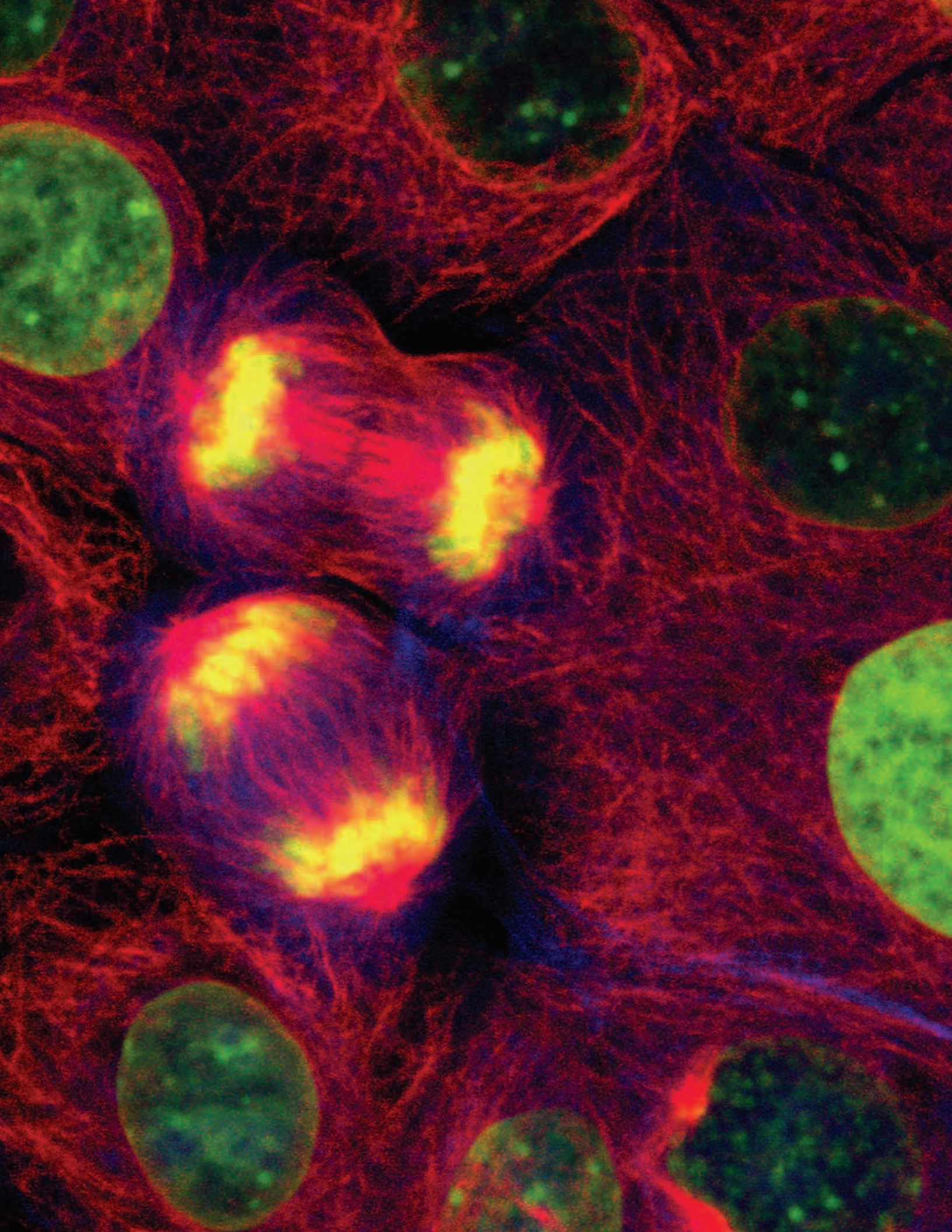
Selected cancers

Breast

Black women have lower incidence and prevalence rates of breast cancer than white women, but they have a higher mortality rate and a lower survival rate. In 2002, the mortality rate for breast cancer was 34 for blacks and 25 for whites per 100,000 population of all ages, respectively. The five-year relative survival rate was 74% for black women and 88% for white women.

Breast cancer incidence varies by age and peaks between ages 75 to 79 for both blacks and whites (420 per 100,000 black women compared with 523 per 100,000 white women). The age-adjusted prevalence is twice as high in white women as in black women (2.4% vs. 1.2%).

Breast cancer incidence rates by race and age

Age at diagnosis
Source: SEER 1996–2001
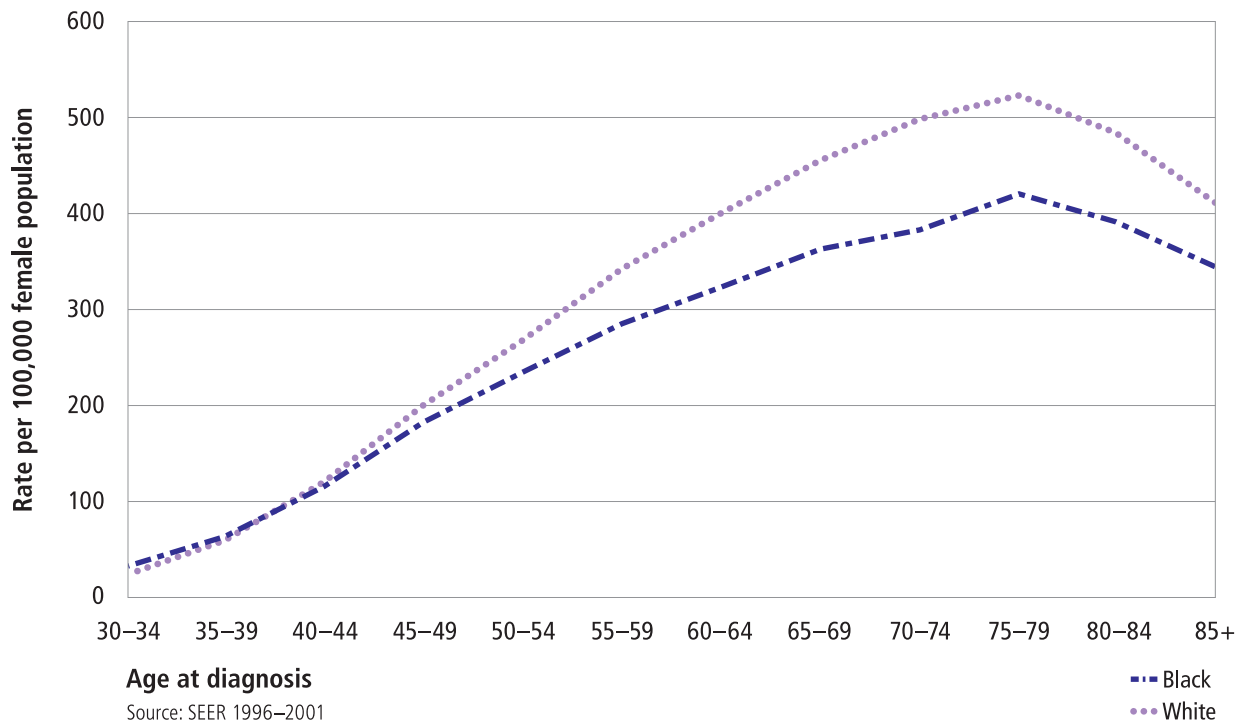
- - Black
•• White

From 1990 to 2002, breast cancer mortality declined for both black and white females, but the drop was less for black females, leading to a growing racial disparity (34 deaths per 100,000 black females compared with 25 deaths per 100,000 white females in 2002, a rate 36% higher in 2002 compared with 14% higher in 1990).

Age-adjusted breast cancer mortality rate by race

Year

Source: CDC 1990–2002

Age-adjusted to the 2000 US standard population.
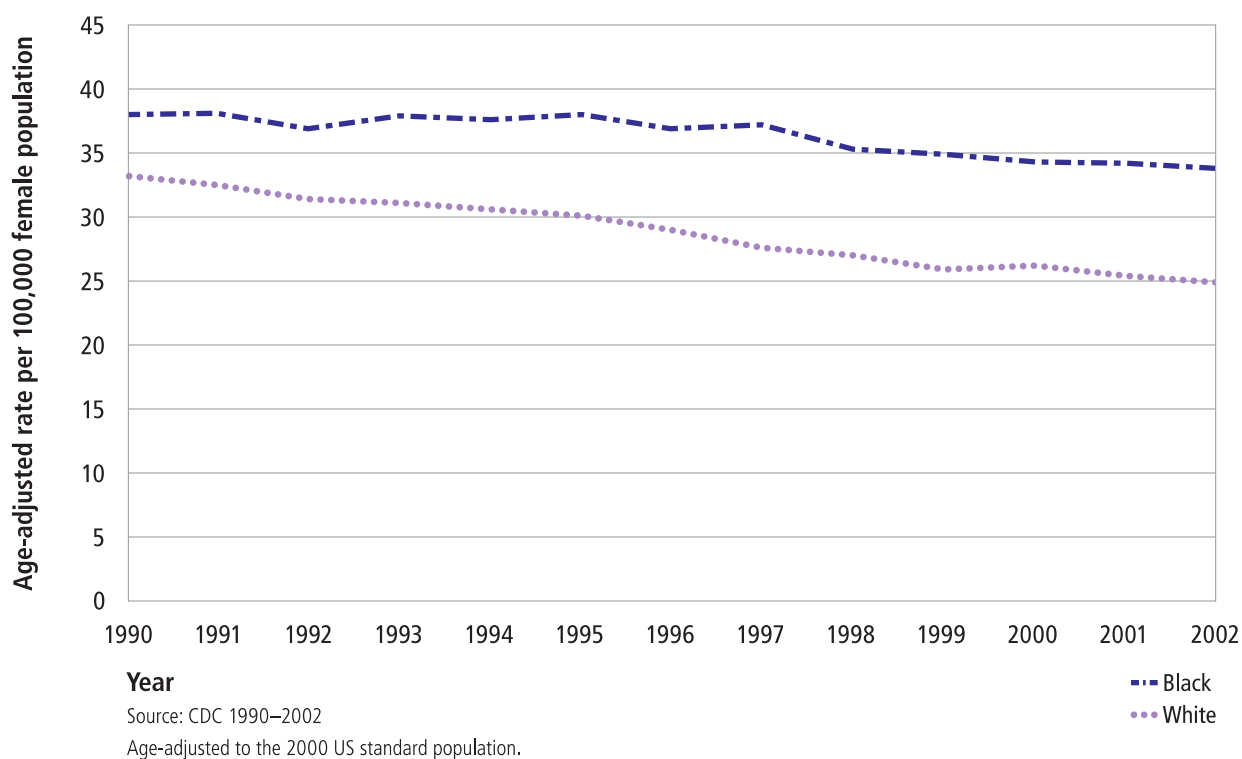
▪–▪ Black

•••White

The five-year relative survival rate for breast cancer in black women ranges from 73% to 81% for all five-year age groups between 40 and 79. This is about 10 percentage points lower than the survival rates for white women in the same age groups.

Five-year relative survival in women with breast cancer by race and age

Age at diagnosis

Source: SEER 1992–2001
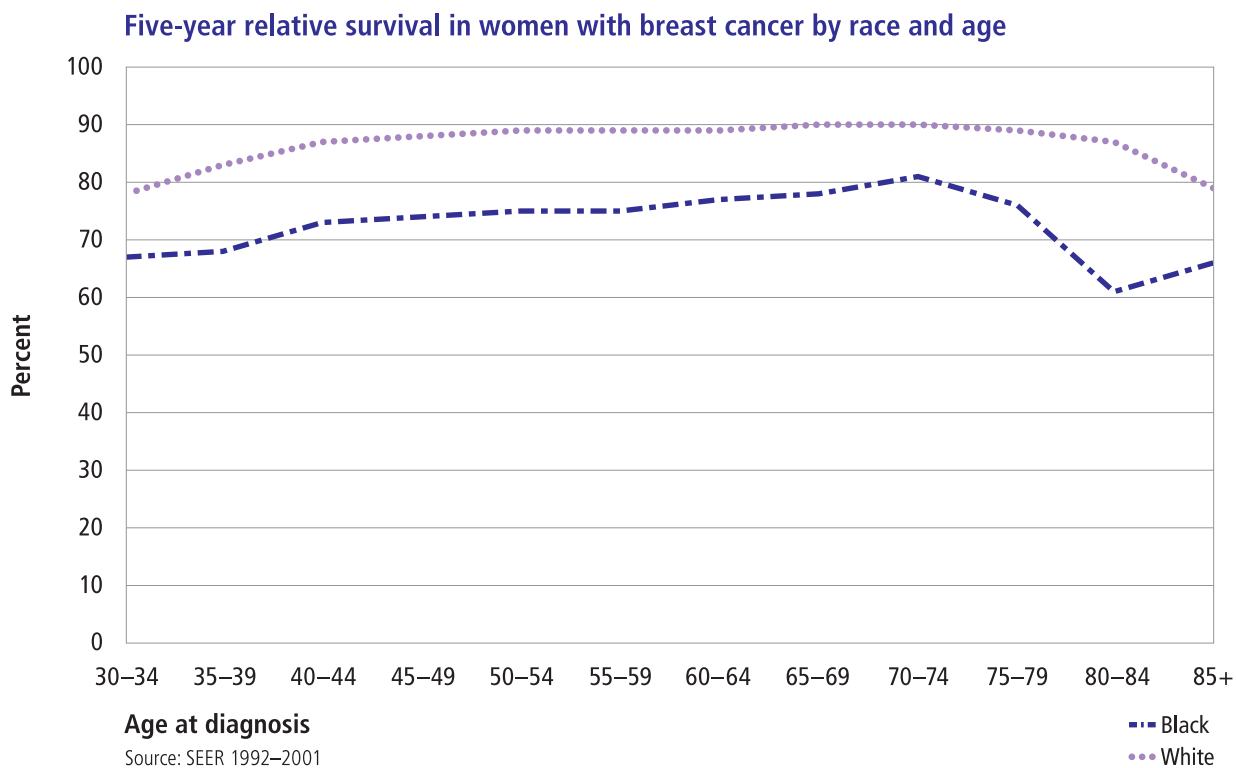
▪–▪ Black
●●● White

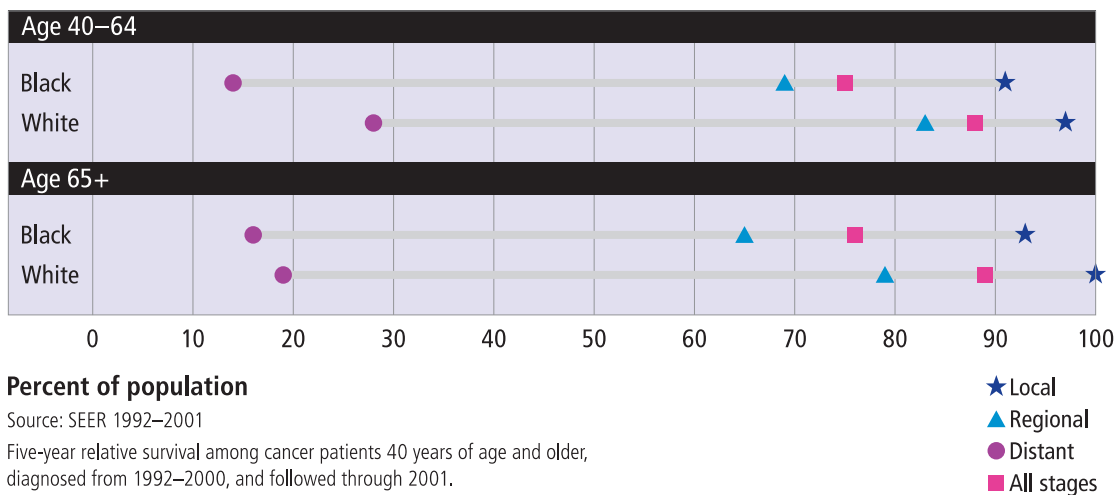Breast cancer in black women is less likely to be diagnosed in the local stage compared with white women (54% vs. 65%), contributing to higher mortality. The disparity in relative five-year survival rate is seen for each stage at diagnosis, regardless of age. Overall five-year relative survival for women 40 to 64 years of age is 75% among blacks, 88% among whites; survival remains essentially unchanged among black and white women aged 65 and older, 76% and 89%, respectively. Among middle-aged black women, five-year relative survival decreases from 91% to 69% to 14%, if diagnosed in the local, regional, or distant stage, respectively; for middle-aged white women, relative survival decreases from 97% to 83% to 28%, respectively.

Five-year relative survival by stage at diagnosis in women with breast cancer by race and age

| | | Stage at diagnosis | | | | | | |
| | | Local | | Regional | | Distant | | All stages |
Age	Race	Diagnosed %	Survival %	Diagnosed %	Survival %	Diagnosed %	Survival %	Survival %
40–64	Black	54	91	38	69	9	14	75
	White	62	97	33	83	5	28	88
65+	Black	60	93	30	65	10	16	76
	White	69	100	25	79	6	19	89

Percent of population

Source: SEER 1992–2001

Five-year relative survival among cancer patients 40 years of age and older, diagnosed from 1992–2000, and followed through 2001.

"All stages" includes local, regional, distant and unstaged cancers.

★ Local
▲ Regional
● Distant
■ All stages

Surgical treatment rates for breast cancer are similar among black and white women, with rates greater than 94%. Black women, regardless of age group, have lower radiation treatment rates than white women: 44% and 53% of middle-aged black and white women receive radiation, and 33% and 40% of black and white women aged 65 and older receive radiation therapy.

Surgery and radiation treatment rates for breast cancer by race and age

Percent of population

Source: SEER 1996–2001
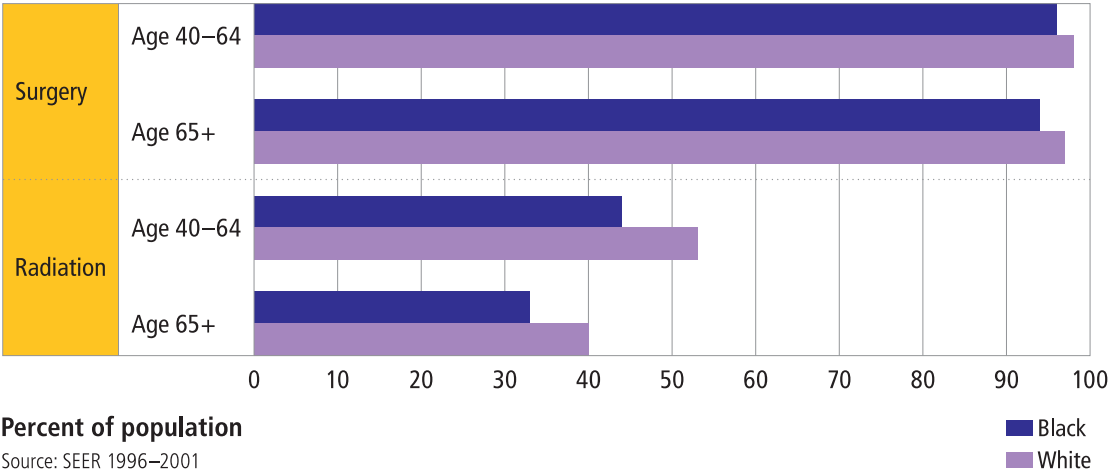
■ Black
■ White

Annual screening rates for breast cancer are similar for black and white women. While the percent of women aged 40 and older who received a clinical breast exam in the last year is about the same for blacks (69%) and whites (68%), a higher percentage of black women have never received one (12% vs. 7%). This disparity persists for Medicare-eligible women (16% vs. 13%).

Most recent screening tests for breast cancer by age

Percent of population

Source: BRFSS 2002

	Black	White
	<1 year	<1 year
	>1<2 years	>1<2 years
	>2<5 years	>2<5 years
	5+ years	5+ years
	Never	Never
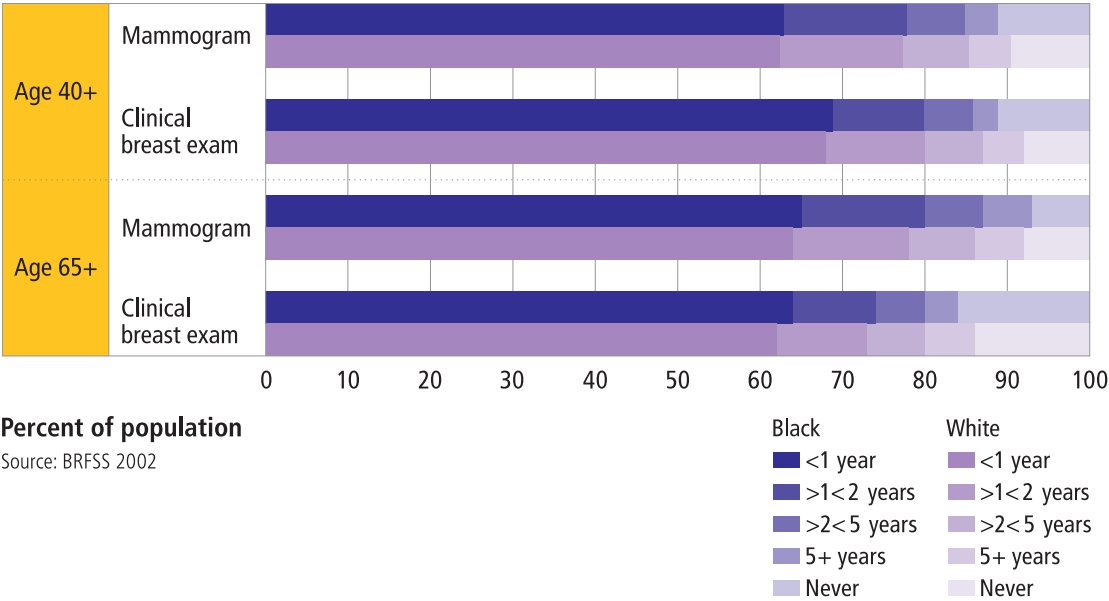
Prostate

Both the incidence and prevalence rates (age-adjusted) of prostate cancer are higher for blacks than whites. The mortality rate is higher and the relative five-year survival rate is lower for blacks.

Prior to age 40, incidence rates are similar but begin to diverge between ages 40 to 44. This disparity increases and peaks between ages 70 to 74 for both blacks and whites. At age 75, rates begin to decline for both black and white men, although incidence continues to be greater in black men.

The prevalence of prostate cancer is much higher for older than younger men. The prevalence rate for blacks is higher than for whites among men aged 65 and older (10% vs. 9%).

Prostate cancer incidence rates by race and age

Age at diagnosis

Source: SEER 1996–2001
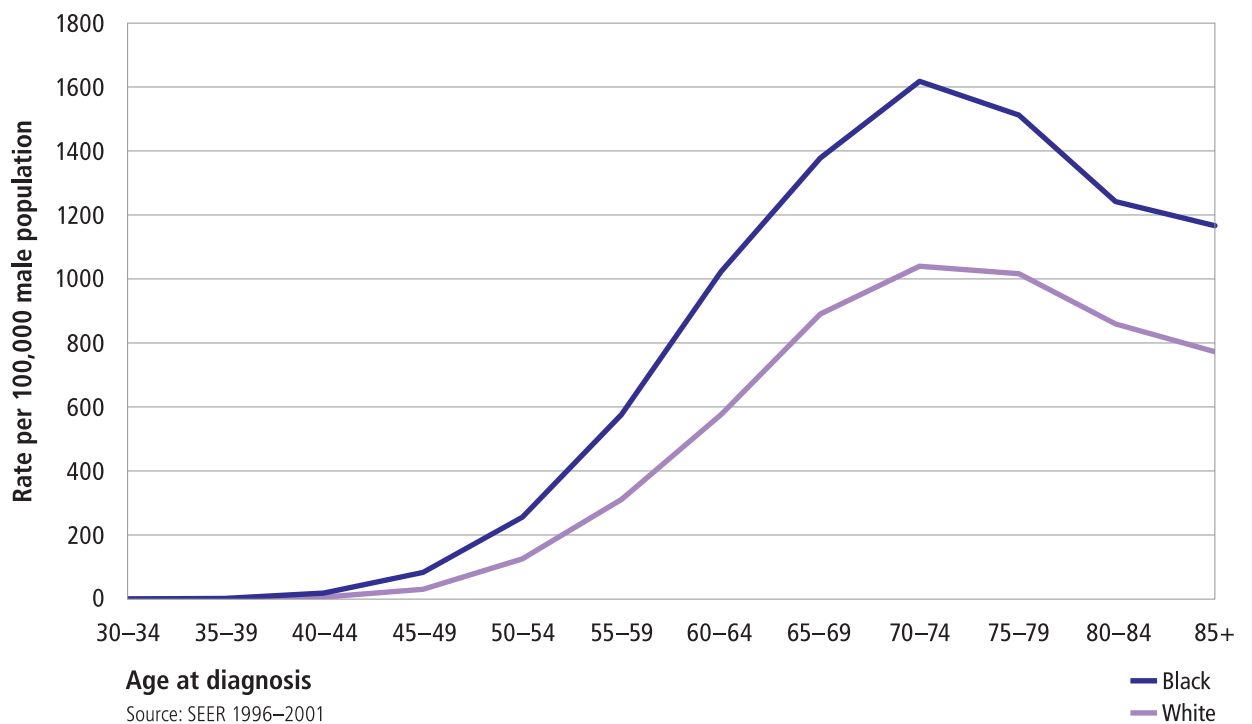
Black
White

Although the mortality rate for prostate cancer has been declining for both blacks and whites, mortality is nearly two and one-half times higher for blacks than whites (61 deaths per 100,000 black males vs. 25 deaths per 100,000 white males in 2002).

Age-adjusted prostate cancer mortality rate by race

Year

Source: CDC 1990–2002
Age-adjusted to the 2000 US standard population.
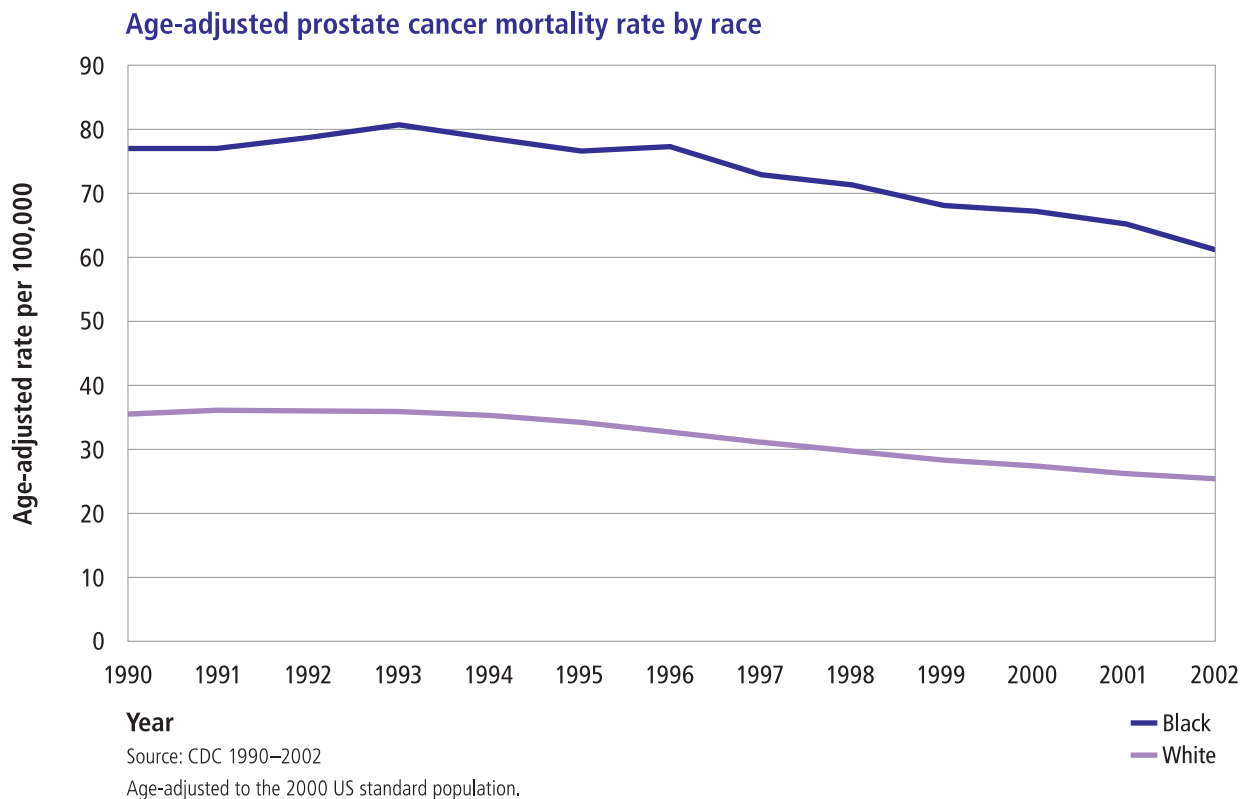
Black
White

The five-year relative survival rate for prostate cancer is greater than 90% for blacks and whites diagnosed before age 80. Most prostate cancer is diagnosed in the local/regional stage (91% for blacks and 94% for whites), but blacks are 50% more likely than whites to be diagnosed in the less survivable distant stage (9% vs. 6%).

Five-year relative survival in men with prostate cancer by race and age

Age at diagnosis
Source: SEER 1992–2001
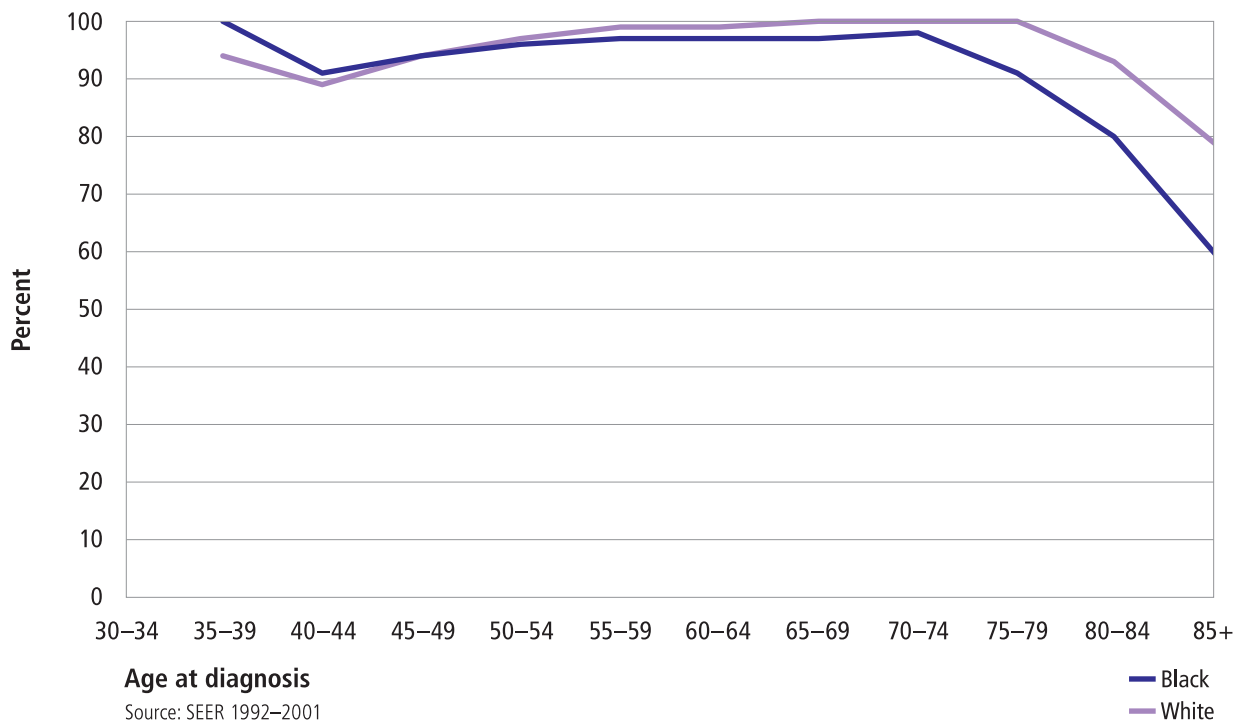
Black
White

Middle-aged black and white men have similar five-year relative survival rates for prostate cancer, regardless of stage at diagnosis. Among older men with prostate cancer, overall relative survival is lower among blacks (94%) than whites (99%).
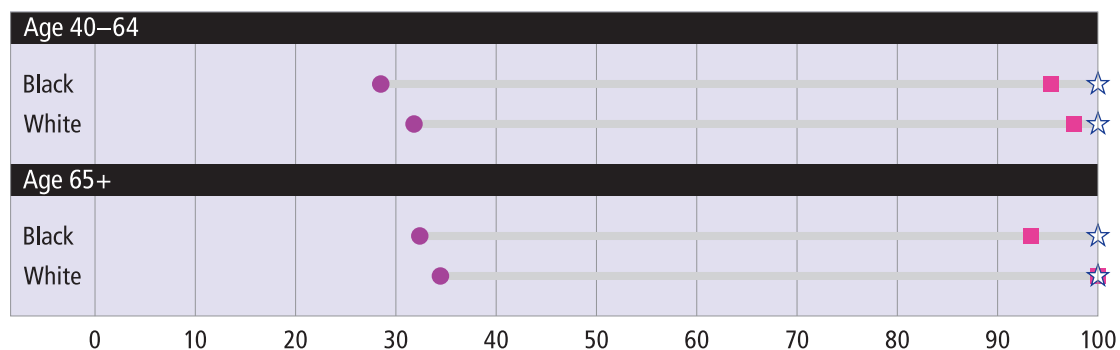
Five-year relative survival by stage at diagnosis in men with prostate cancer by race and age

| | | Stage at diagnosis | | | | |
| | | Local/Regional | | Distant | | All stages |
Age	Race	Diagnosed %	Survival %	Diagnosed %	Survival %	Survival %
40–64	Black	94	100	6	29	96
	White	96	100	4	32	98
65+	Black	89	100	11	33	94
	White	93	100	7	35	100

Percent of population

Source: SEER 1992–2001

Five-year relative survival among cancer patients 40 years of age and older, diagnosed from 1992–2000, and followed through 2001.

Local and regional stage at diagnosis are combined for prostate cancer.

"All stages" includes local/regional, distant and unstaged cancers.

☆ Local/Regional
● Distant
■ All stages

Among older adults, those aged 65 and older, blacks are less likely than whites to undergo surgery (46% vs. 50%) or receive radiation therapy (36% vs. 38%). For adults aged 40 to 64, blacks are less likely than whites to have surgery (71% vs. 80%), but more likely to have radiation therapy (34% vs. 28%).

Surgery and radiation treatment rates for prostate cancer by race and age

Percent of population

Source: SEER 1996–2001
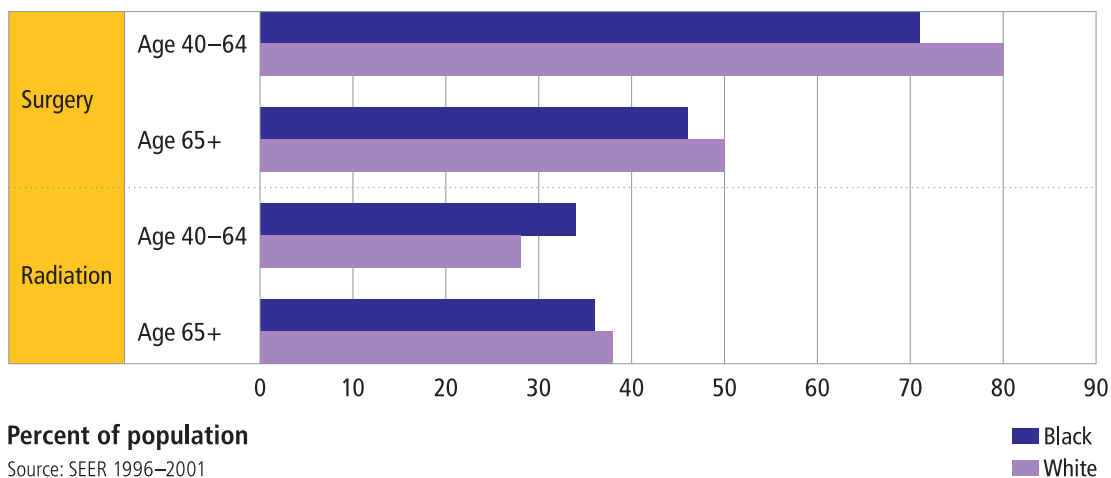
■ Black
■ White

There are two screening tests commonly used for prostate cancer, digital rectal examination (DRE) and prostate-specific antigen (PSA) screening. Blacks are 50% more likely never to have received a DRE (21% vs. 14% for ages 50 and older, and 18% vs. 12% for ages 65 and older), but they are equally likely to have received a DRE in the last year as whites (54% for both blacks and whites 50 and older, and 60% for both blacks and whites 65 and older).

Blacks are also more likely never to have received a PSA test, and are less likely to have received a PSA test in the last year. These disparities are driven primarily by older adults: For adults 65 and older, 24% of blacks and 15% of whites have never received a PSA, and 58% of blacks and 66% of whites have received a PSA in the past year.

Most recent screening tests for prostate cancer by age

Percent of population

Source: BRFSS 2002

	Black	White
	<1 year	<1 year
	>1<2 years	>1<2 years
	>2<5 years	>2<5 years
	5+ years	5+ years
	Never	Never
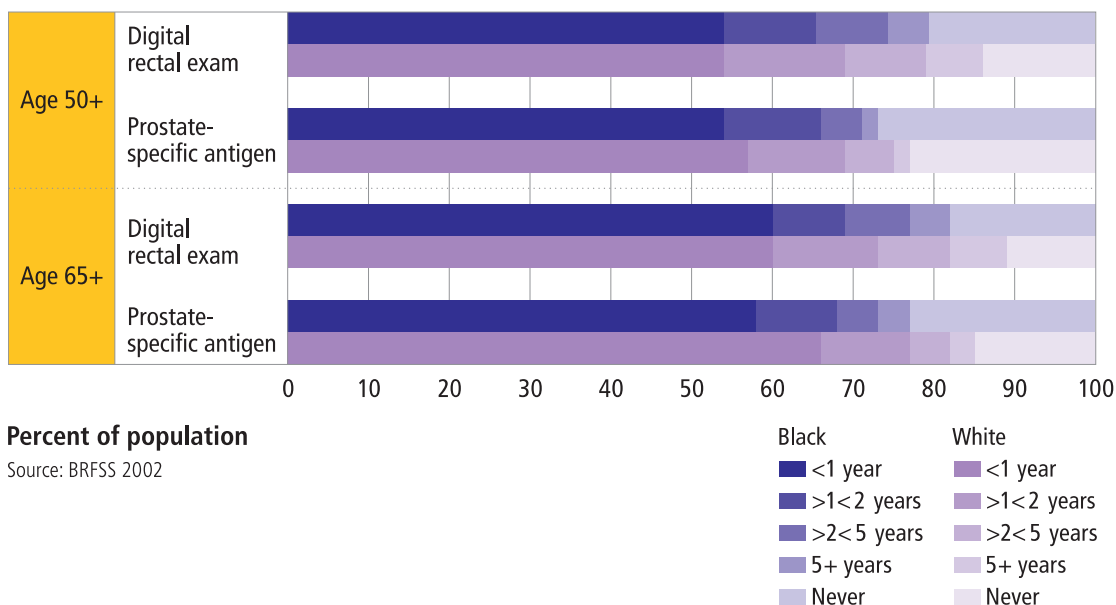
Lung and bronchus

Blacks have a higher incidence of lung and bronchus cancer than whites, driven by a large disparity across all ages for men. Blacks also have a higher mortality rate and a lower five-year relative survival rate than whites, and these disparities are more evident for males than females.

Lung cancer incidence is 51% higher in black men than white men (167 vs. 110 new cases per 100,000 men), and black men tend to be diagnosed at an earlier age (median age 66 vs. 70). Although the overall incidence does not differ strongly between black and white women (76 vs. 72 new cases per 100,000 women), black women tend to be diagnosed at an earlier age (median age 66 vs. 71), similar to men. Black women are twice as likely to be diagnosed before the age of 50 as white women (11% vs. 5%).

Although black men are more likely to develop lung cancer than white men, fewer than half as many black men are living with lung cancer (prevalence rate 0.13% vs. 0.30%). The prevalence for women is about the same for blacks and whites (0.21% vs. 0.20%).

Lung and bronchus cancer incidence rates in men by race and age

Rate per 100,000 male population

Age at diagnosis
Source: SEER 1996–2001

Black
White

Lung and bronchus cancer incidence rates in women by race and age

Rate per 100,000 female population

Age at diagnosis
Source: SEER 1996–2001
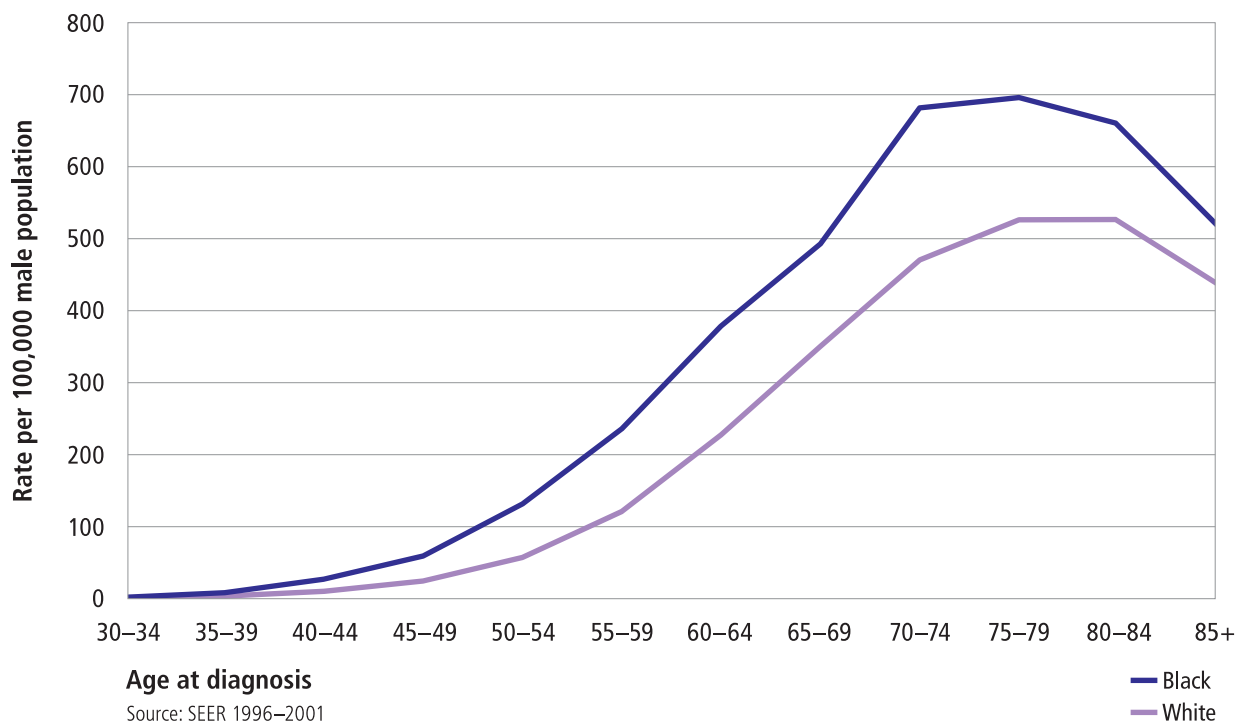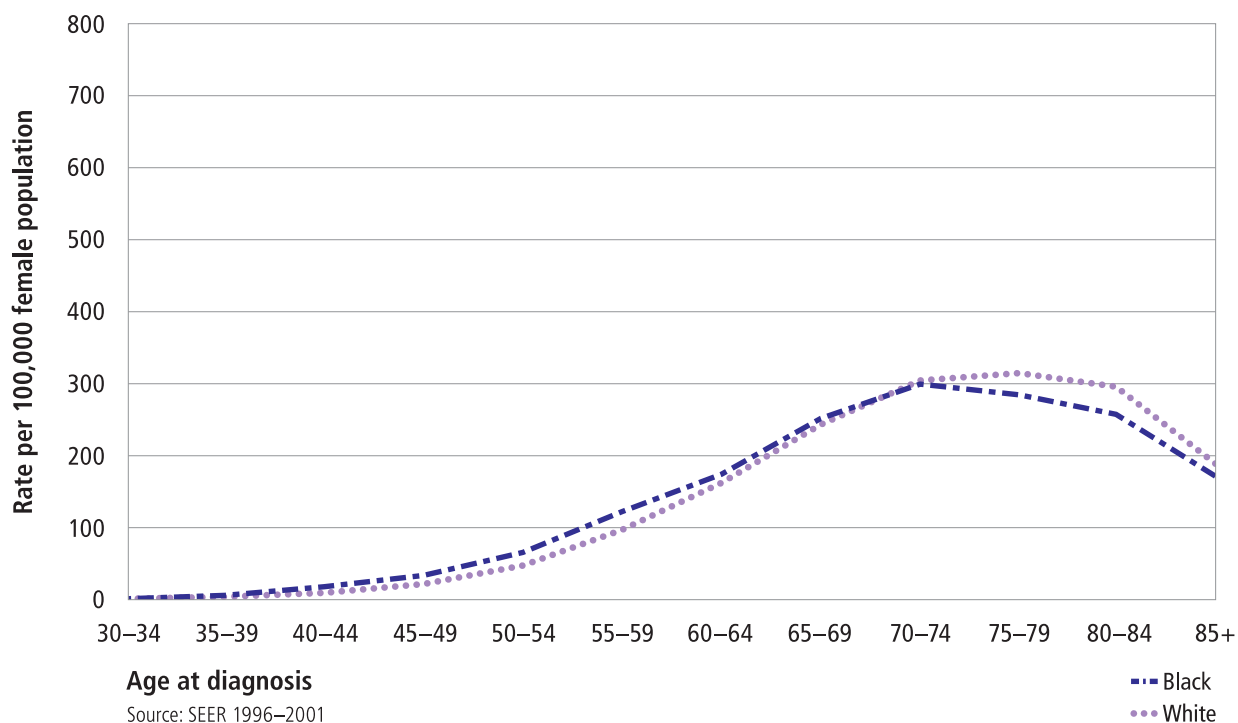
Black
White

Lung cancer mortality rates have declined over time for males, but a large disparity persists between blacks and whites (97 deaths vs. 74 deaths per 100,000 males in 2002). In contrast, the mortality rate has increased slightly since 1990 for females, with little difference between blacks and whites (41 deaths vs. 43 deaths per 100,000 females in 2002).

Age-adjusted lung and bronchus cancer mortality rates by race and gender

Year

Source: CDC 1990–2002

Age-adjusted to the 2000 US standard population.
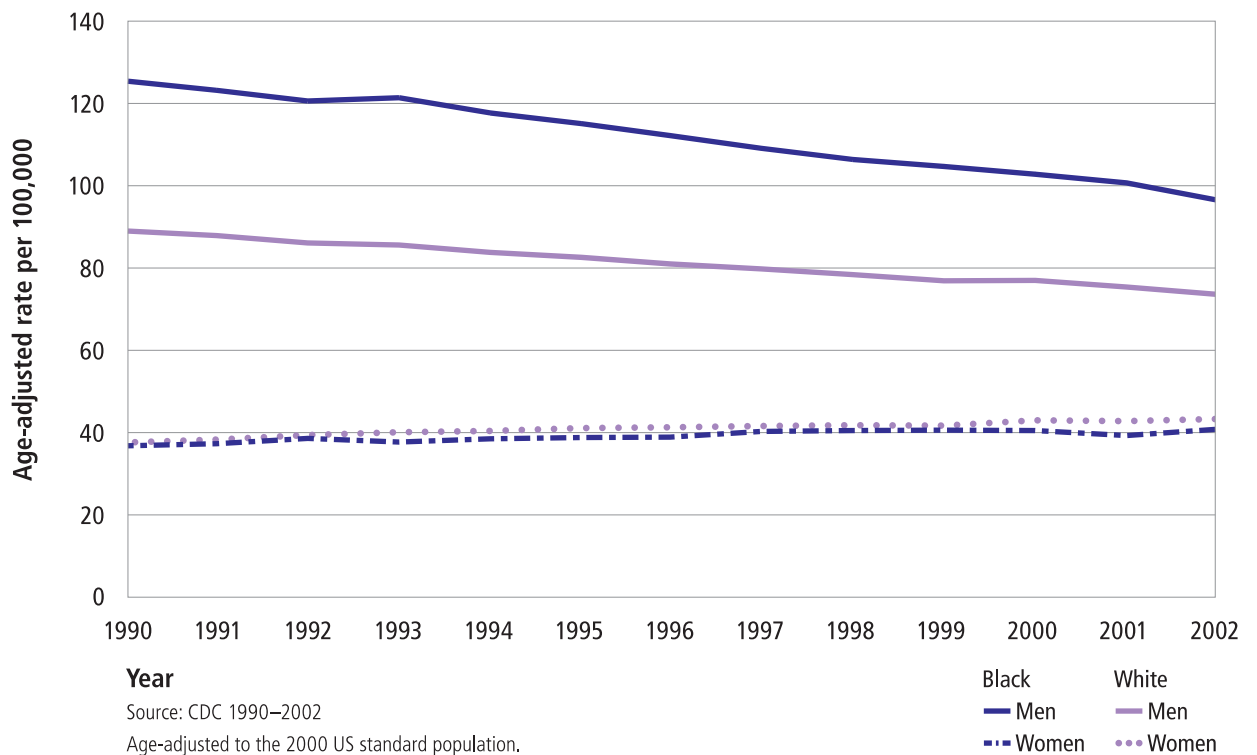
	Black	White
Men	—	—
Women	▪-▪	•••

Five-year relative survival for lung cancer is low for both races and genders: 11% black men vs. 13% white men; 15% black women vs. 17% white women.

Five-year relative survival in men with lung and bronchus cancer by race and age

Source: SEER 1992–2001

Five-year relative survival in women with lung and bronchus cancer by race and age

Age at diagnosis
Source: SEER 1992–2001
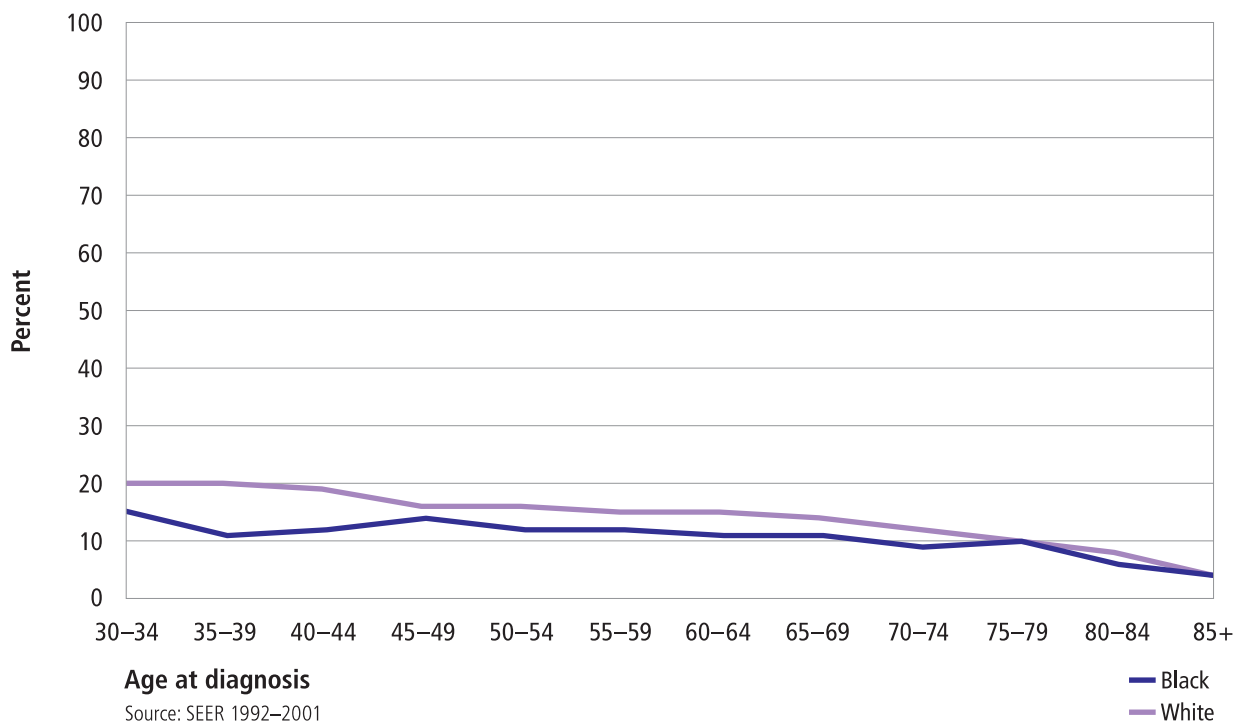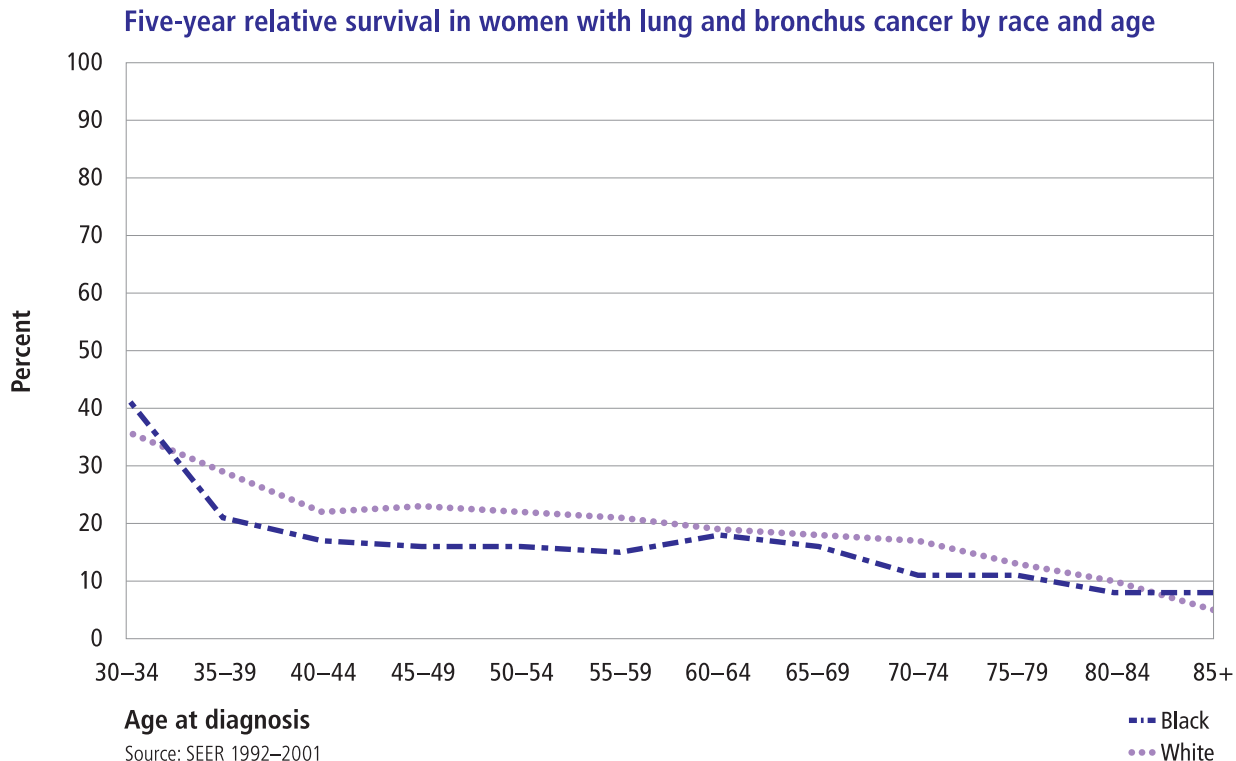
• • Black
• • White

Early diagnosis of lung cancer results in the highest five-year relative survival rates regardless of race or age. Black adults, however, are less likely to be diagnosed early: 15% vs. 18% are diagnosed in the local stage. Survival is higher among middle-aged adults diagnosed in the local stage compared with older adults, although the racial disparity is greater among the middle-aged. Five-year survival rates among middle-aged black men and women are 44% and 52% compared with 55% and 64% among middle-aged white men and women.

Older black and white women with a local stage diagnosis have higher five-year relative survival rates (45% and 47%) than their male counterparts (36% and 40%).

Five-year relative survival by stage at diagnosis in adults with lung and bronchus cancer by race, gender and age

			Stage at diagnosis						
			Local		Regional		Distant		All stages
Age	Gender	Race	Diagnosed %	Survival %	Diagnosed %	Survival %	Diagnosed %	Survival %	Survival %
40–64	Men	Black	11	44	39	15	50	2	12
		White	13	55	38	19	49	2	15
	Women	Black	16	52	39	20	45	2	16
		White	18	64	36	23	46	3	21
65+	Men	Black	17	36	43	9	40	1	10
		White	18	40	42	12	40	1	12
	Women	Black	17	45	44	10	39	2	12
		White	21	47	41	14	38	2	15
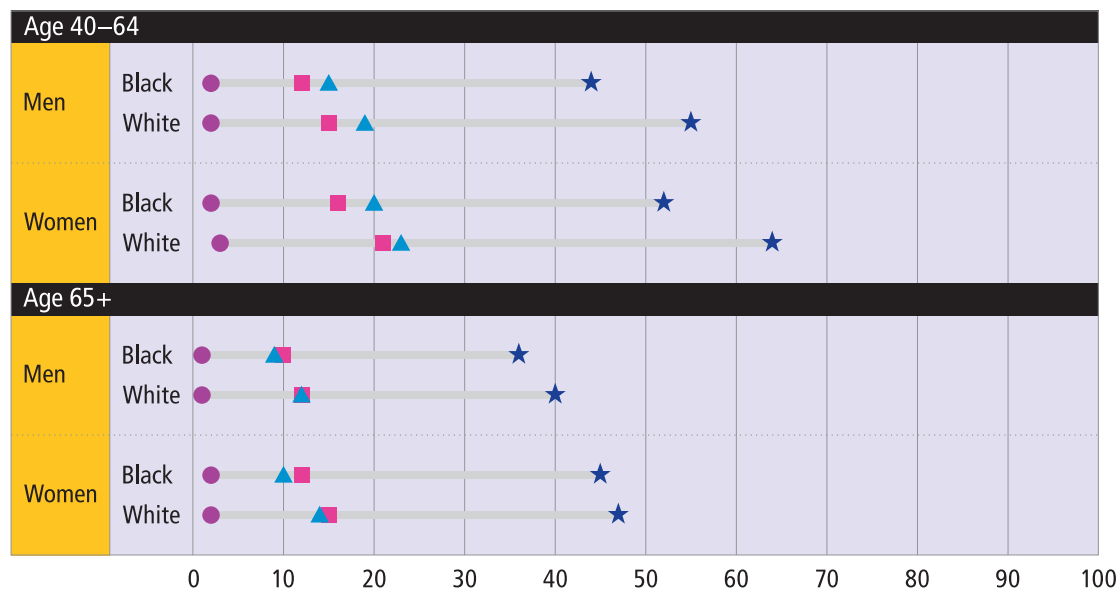
Percent of population

Source: SEER 1992–2001

Five-year relative survival among cancer patients 40 years of age and older, diagnosed from 1992–2000, and followed through 2001.

"All stages" includes local, regional, distant and unstaged cancers.

★ Local
▲ Regional
● Distant
■ All stages

For both races, radiation treatment is slightly more common than surgery. Among both genders, blacks are less likely to have surgery than whites regardless of age group (34% vs. 40% for middle-aged men, 28% vs. 34% for older men; 43% vs. 47% for middle-aged women, 32% vs. 36% for older women). Blacks and whites are about equally likely to have radiation therapy.

Surgery and radiation treatment rates for lung and bronchus cancer in men by race and age

Percent of population
Source: SEER 1996–2001
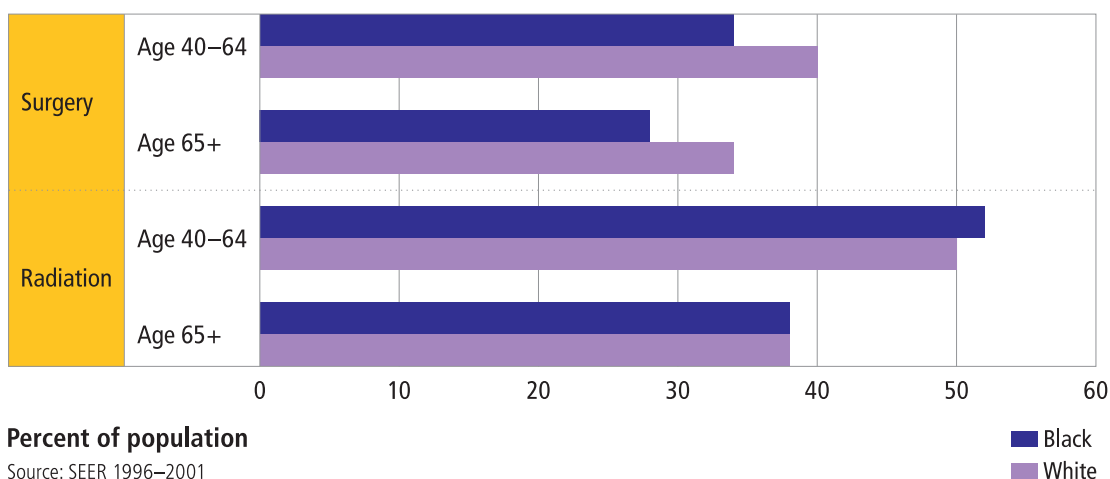
Black
White

Surgery and radiation treatment rates for lung and bronchus cancer in women by race and age

Percent of population
Source: SEER 1996–2001
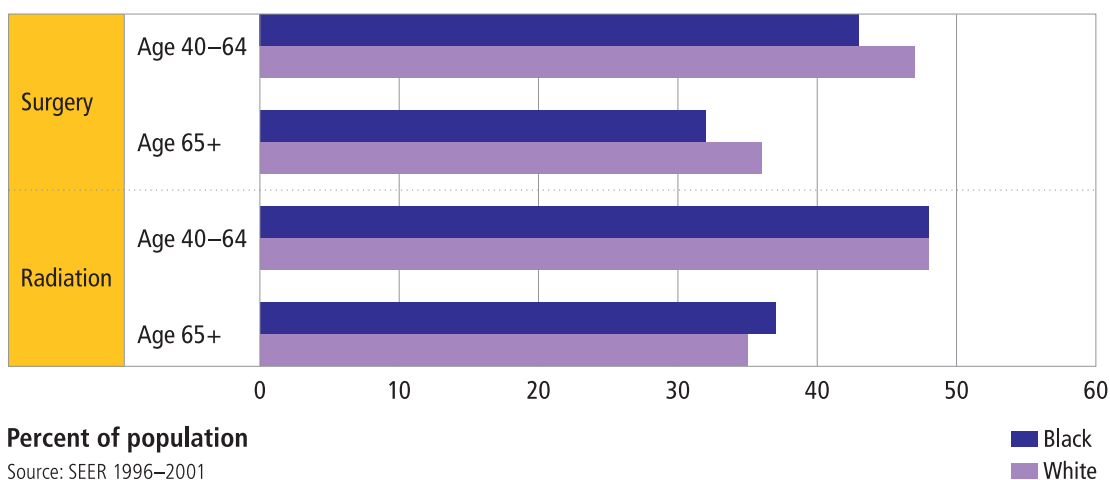
Black
White

Colon and rectum

For both men and women, blacks have a higher incidence of colorectal cancer than whites (101 vs. 89 per 100,000 men, and 79 vs. 64 per 100,000 women). On average, blacks are likely to develop colorectal cancer at a younger age than whites (median age 65 vs. 70 in men; 69 vs. 75 in women).

The prevalence of colorectal cancer, however, is lower among blacks (0.36% vs. 0.69% in men, and 0.39% vs. 0.63% in women), reflecting a much higher mortality rate among blacks.

Colon and rectum cancer incidence rates in men by race and age

Age at diagnosis
Source: SEER 1996–2001

Black
White

Colon and rectum cancer incidence rates in women by race and age

Age at diagnosis
Source: SEER 1996–2001
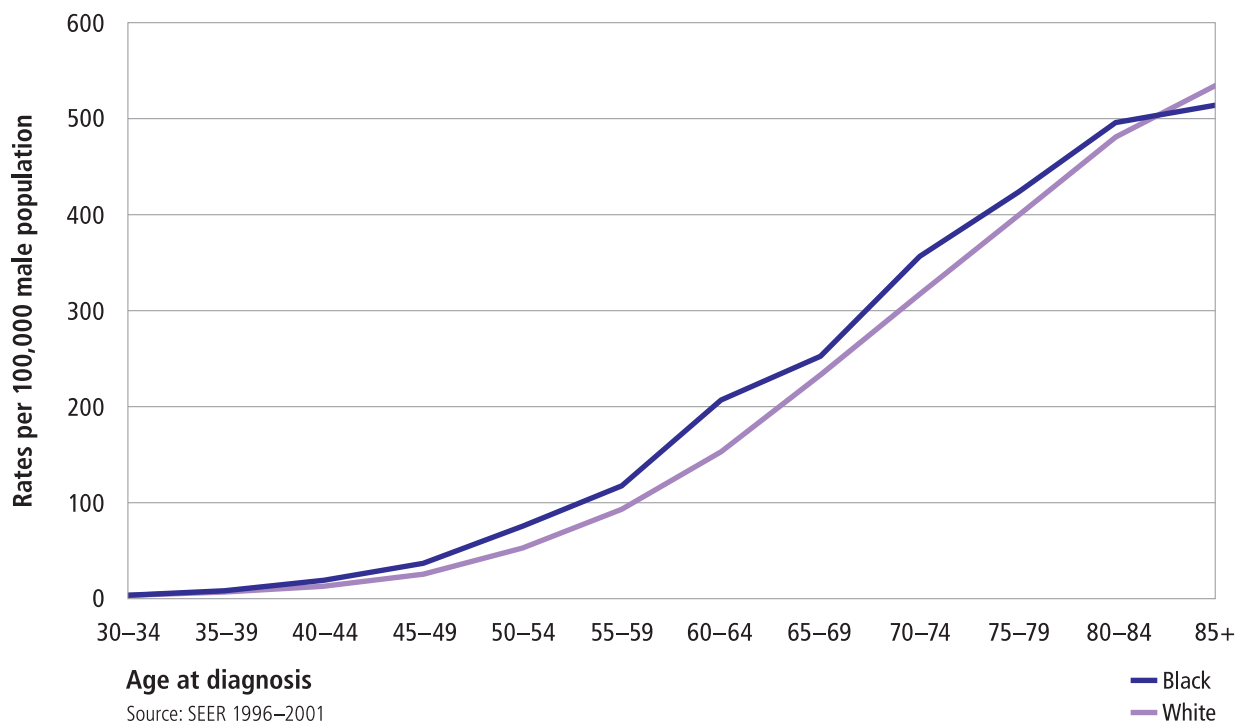
Black
White

Colorectal cancer mortality rates have been declining for both blacks and whites, but the decrease has been less steep for blacks, and a large disparity remains. In 2002, the mortality rates were 40% higher for blacks than whites (33 vs. 23 deaths per 100,000 males, and 23 vs. 16 deaths per 100,000 females). In contrast, in 1990, mortality rates were 24% higher for black males (37 vs. 30 deaths per 100,000 males) and 31% higher for black females (26 vs. 20 deaths per 100,000 females).

Age-adjusted colon and rectum cancer mortality rates by race and gender

Year
Source: CDC 1990–2002
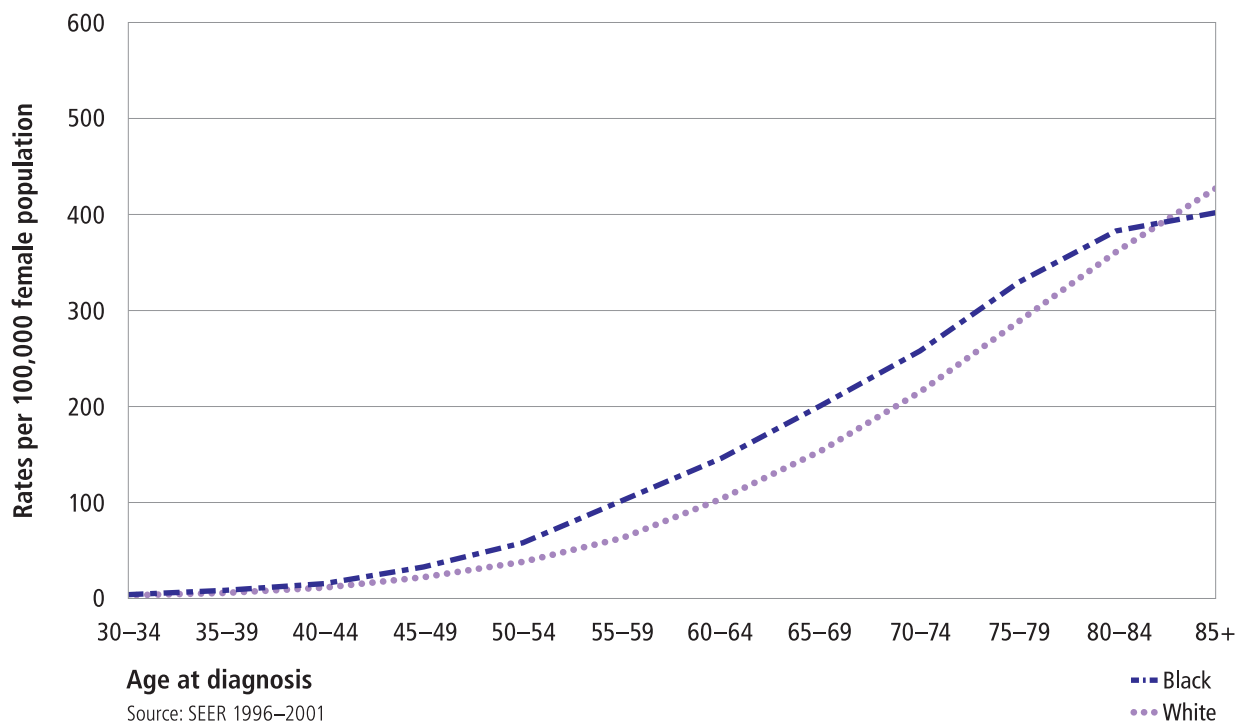Age-adjusted to the 2000 US standard population.

Black: Men, Women
White: Men, Women
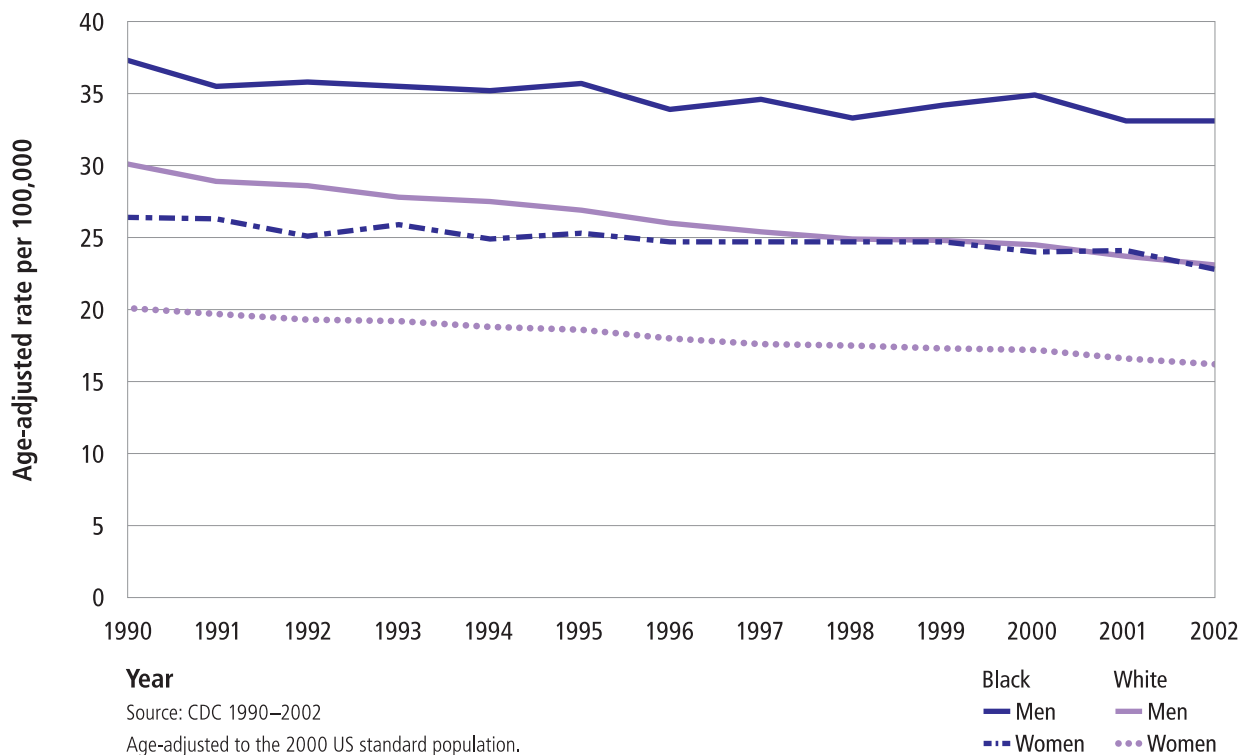
The five-year relative survival for colorectal cancer is lower for blacks than whites regardless of age at diagnosis and stage at diagnosis. The overall relative survival rates are 54% and 53% for black men and women, compared with 63% for both white men and women. A lower percentage of colorectal cancer in blacks is diagnosed in the local stage compared with whites (37% vs. 41% in men, and 37% vs. 39% in women).

Five-year relative survival in men with colon and rectum cancer by race and age

Age at diagnosis

Source: SEER 1992–2001

— Black
— White

Five-year relative survival in women with colon and rectum cancer by race and age

Age at diagnosis

Source: SEER 1992–2001

-·- Black
···· White

Five-year relative survival by stage at diagnosis in adults with colon and rectum cancer by race, gender and age

Age	Gender	Race	Stage at diagnosis						All stages
			Local		Regional		Distant		
			Diagnosed %	Survival %	Diagnosed %	Survival %	Diagnosed %	Survival %	Survival %
40–64	Men	Black	35	88	38	63	27	10	57
		White	39	93	39	68	22	11	64
	Women	Black	37	88	37	61	26	7	56
		White	38	93	41	70	21	12	65
65+	Men	Black	39	82	36	56	25	6	52
		White	42	91	38	66	19	7	63
	Women	Black	38	81	38	57	24	6	51
		White	40	89	41	66	19	8	62

Percent of population

Source: SEER 1992–2001

Five-year relative survival among cancer patients 40 years of age and older, diagnosed from 1992–2000, and followed through 2001.

"All stages" includes local, regional, distant and unstaged cancers.

★ Local
▲ Regional
● Distant
■ All stages
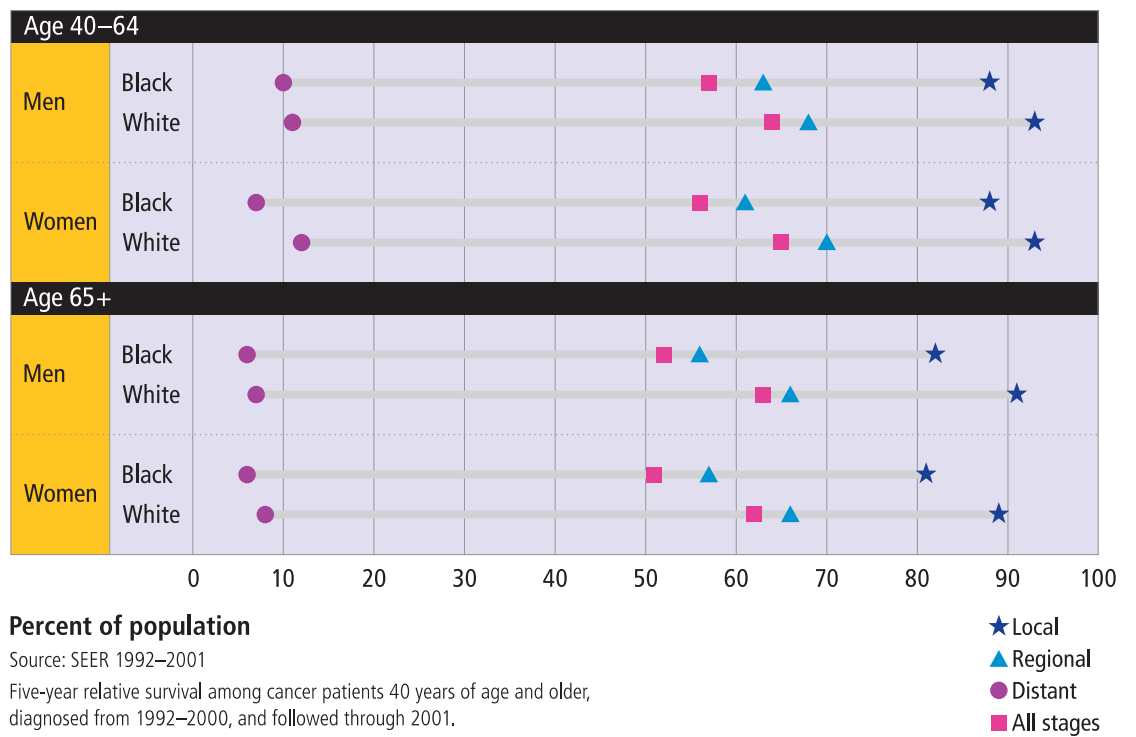
Screening for colorectal cancer presents real challenges for both races. Among men aged 50 and older, blacks are more likely than whites never to have received a fecal occult blood test (FOBT) (64% vs. 53%), or a sigmoidoscopy or colonoscopy (57% vs. 48%).

The disparity is also evident for men aged 65 and older in spite of Medicare coverage. While FOBT is covered annually, only 26% and 28% of black and white men aged 65 and older received FOBT in the last year, and 55% and 46% have never had an FOBT. Similarly, 50% of Medicare-eligible black men and 38% of Medicare-eligible white men have never had either a sigmoidoscopy or colonoscopy.

Most recent screening tests in men for colon and rectum cancer by race and age

Percent of population

Source: BRFSS 2002
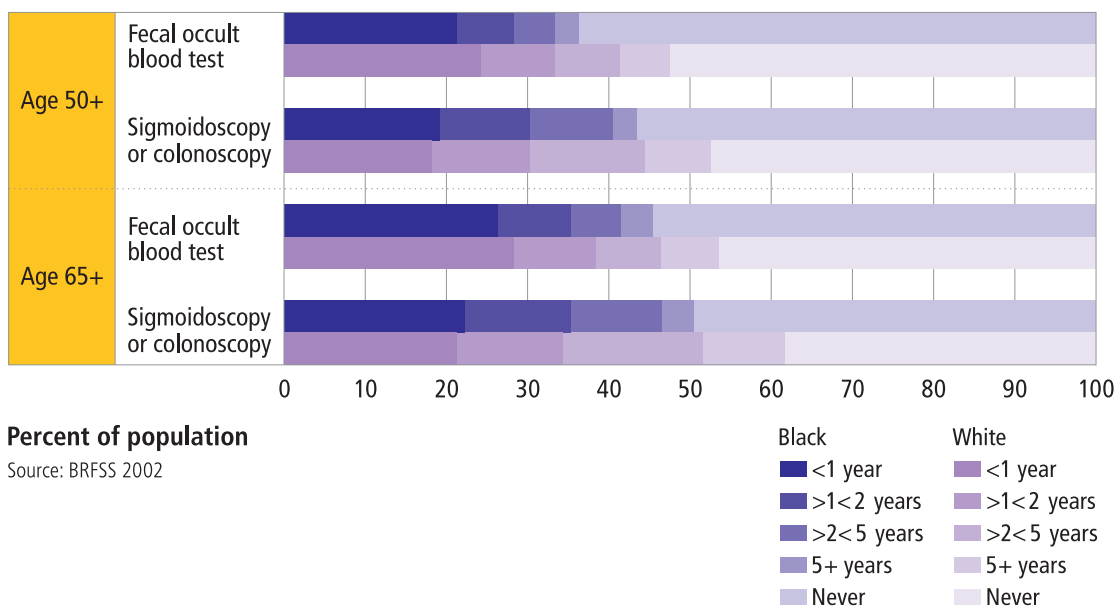
Black	White
<1 year	<1 year
>1<2 years	>1<2 years
>2<5 years	>2<5 years
5+ years	5+ years
Never	Never

Screening for colorectal cancer is also low among women. Only 21% of black women and 22% of white women 50 and older received a FOBT in the past year. Similar to men, Medicare-eligible women of both races are not necessarily availing themselves of their benefits. Of women aged 65 and older, only 22% and 25% received an FOBT in the last year. Although covered by Medicare, 52% of older black women and 42% of older white women have never been screened for colorectal cancer using sigmoidoscopy or colonoscopy.

Most recent screening tests in women for colon and rectum cancer by race and age

Percent of population
Source: BRFSS 2002

Black
■ <1 year
■ >1<2 years
■ >2<5 years
■ 5+ years
■ Never
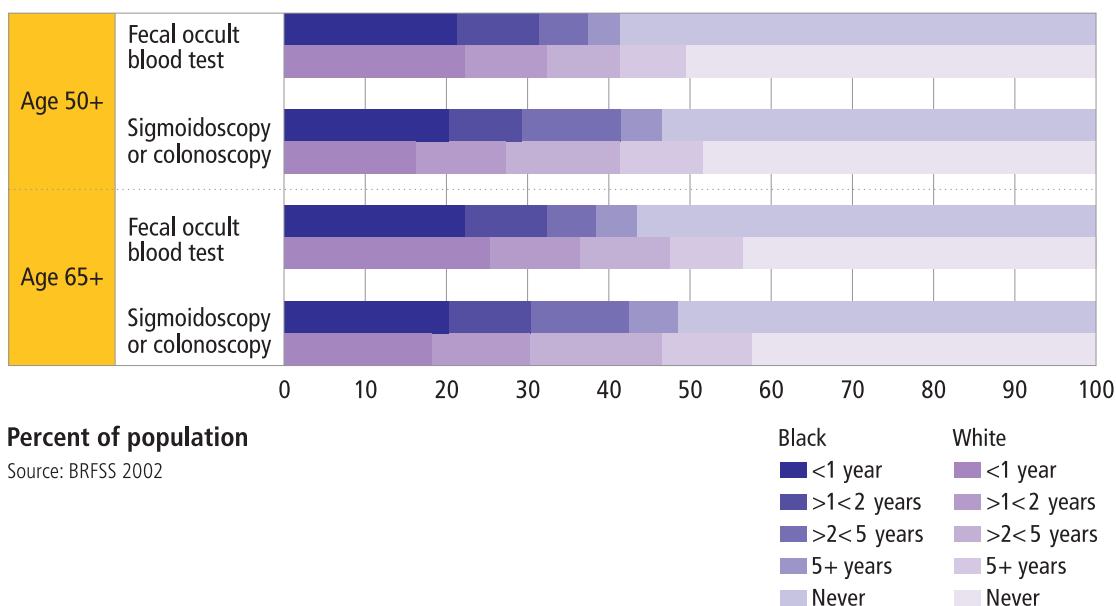
White
■ <1 year
■ >1<2 years
■ >2<5 years
■ 5+ years
■ Never

While surgery is performed in more than 90% of colorectal cancer cases, blacks are slightly less likely than whites to have surgery. Blacks are also less likely to receive radiation therapy, which occurs in fewer than 20% of cases.

Surgery and radiation treatment rates for colon and rectum cancer in men by race and age

Percent of population
Source: SEER 1996–2001
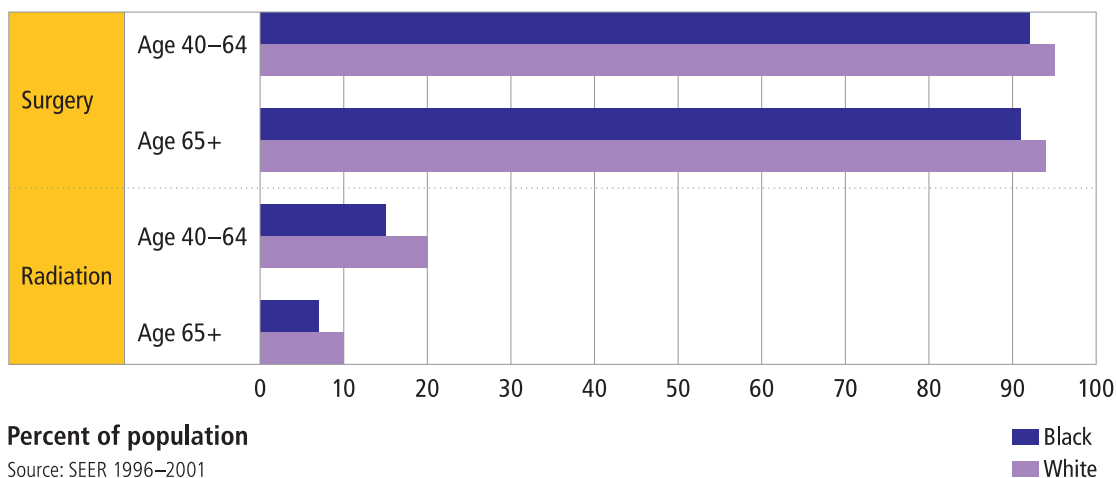
Black
White

Surgery and radiation treatment rates for colon and rectum cancer in women by race and age

Percent of population
Source: SEER 1996–2001
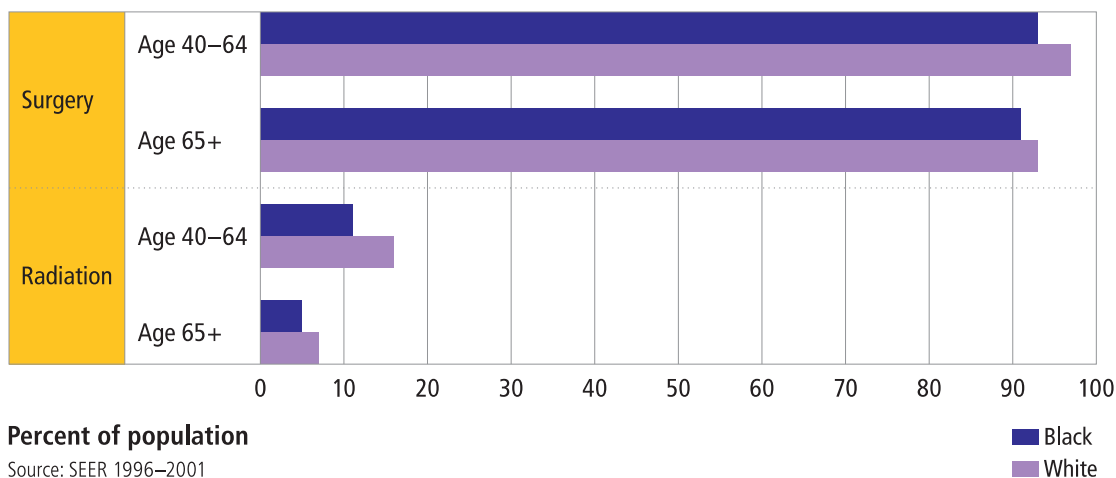
Black
White

Uterine cervix

Black women have a higher incidence of cervical cancer than white women, but a lower prevalence. Age-adjusted mortality is higher in blacks, and five-year relative survival rate is lower.

Cervical cancer affects women of all ages, but the incidence among black women increases with age, unlike among whites. Overall, among women aged 20 and older, the incidence of cervical cancer is 34% higher in blacks than whites (17.0 cases vs. 12.7 cases per 100,000 women). However, the disparity in incidence widens to 50% in women between the ages of 55 to 59 (22.0 cases in blacks vs. 14.7 cases in whites per 100,000 women), and is more than two-fold in women 65 and older (30.3 cases vs. 13.1 cases per 100,000 women).

Uterine cervix cancer incidence rates by race and age

Rate per 100,000 female population

Age at diagnosis

Source: SEER 1996–2001
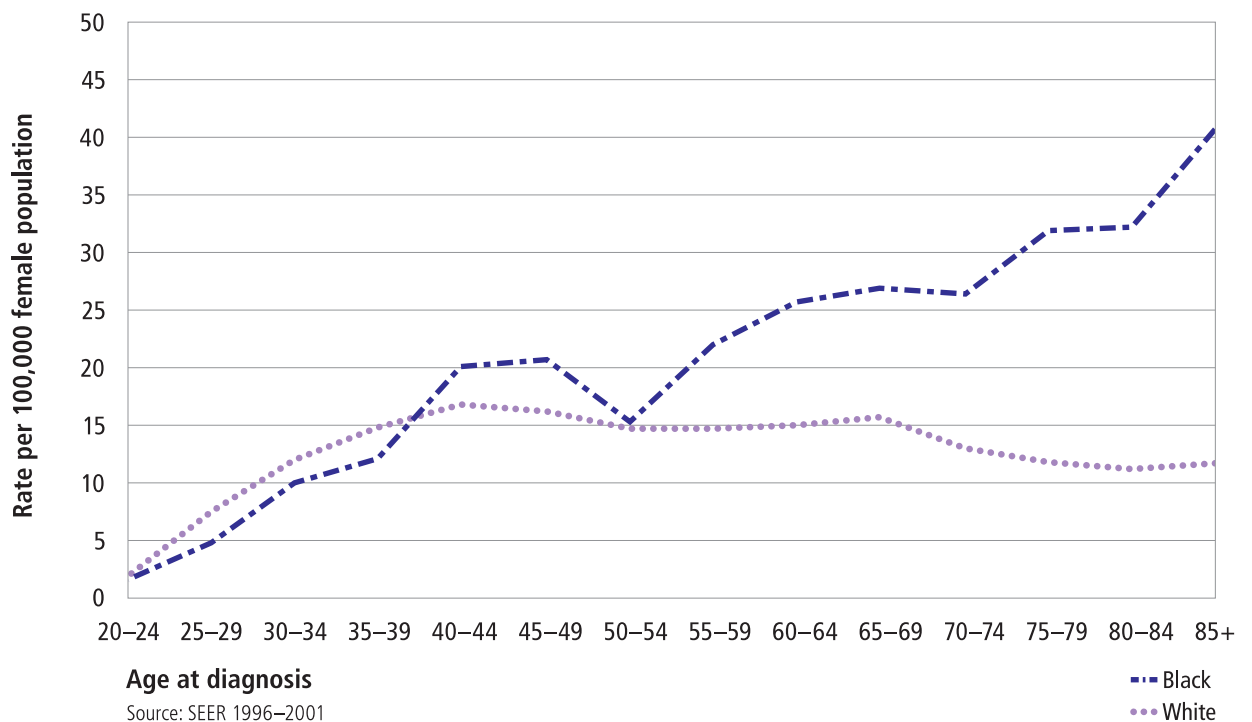
-∎-∎ Black
•••• White

Cervical cancer mortality is much higher among black females compared with white females. Although mortality rates declined over time for both blacks and whites, the disparity remains strong. In 1990, there were 8 and 3 deaths per 100,000 black and white females, respectively. In 2002, the rate declined to 5 and 2 deaths, respectively.

Age-adjusted uterine cervix cancer mortality rate by race

Source: CDC 1990–2002
Age-adjusted to the 2000 US standard population.
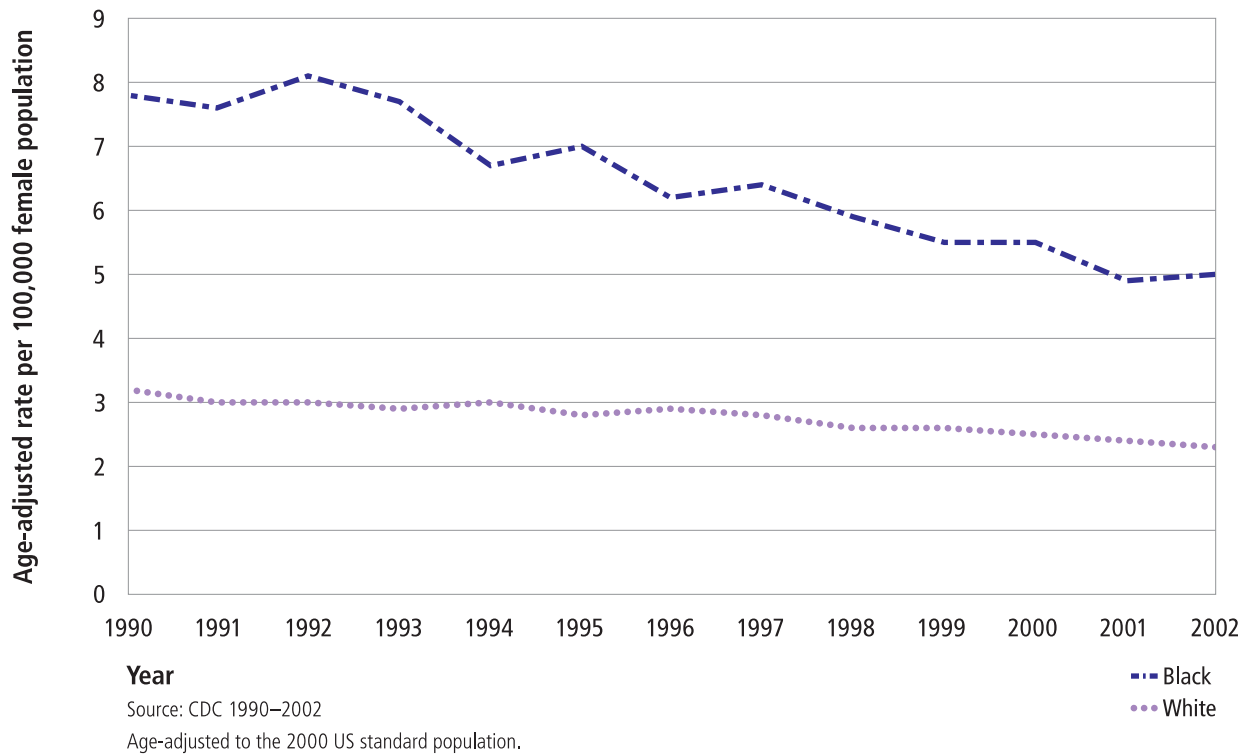
Overall, black women have a lower five-year relative survival rate for cervical cancer than whites (61% vs. 71%). The disparity is strongest for women under 50. For black women under the age of 65, the five-year relative survival at each stage of diagnosis is lower than the corresponding rate among whites. Blacks are less likely than whites to be diagnosed in the local stage (49% vs. 58%).

Five-year relative survival in women with uterine cervix cancer by race and age

Age at diagnosis

Source: SEER 1992–2001

▪–▪ Black

•••• White
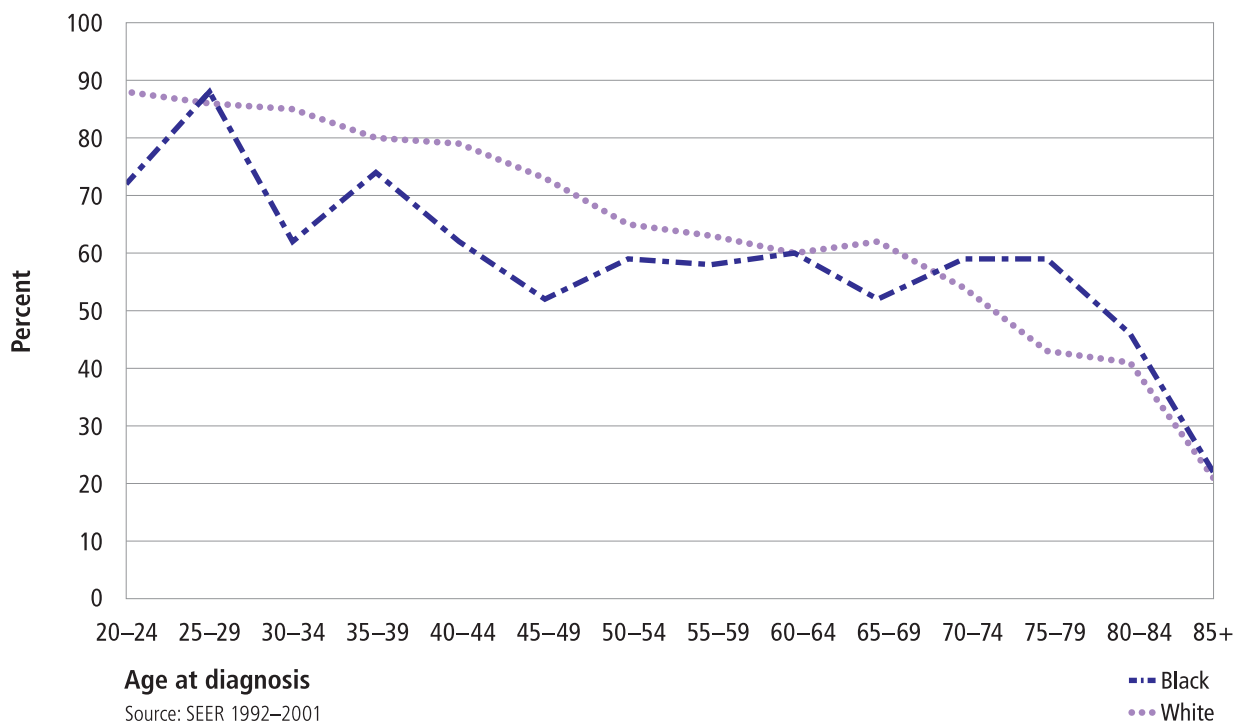
Five-year relative survival by stage at diagnosis in women with uterine cervix cancer by race and age

| | | Stage at diagnosis | | | | | | |
| | | Local | | Regional | | Distant | | All stages |
Age	Race	Diagnosed %	Survival %	Diagnosed %	Survival %	Diagnosed %	Survival %	Survival %
20–39	Black	66	91	28	43	6	19	73
	White	75	94	21	56	4	23	83
40–64	Black	47	85	42	45	11	1	58
	White	53	92	36	55	10	18	70
65+	Black	35	93	48	39	18	5	52
	White	37	83	47	42	16	10	51
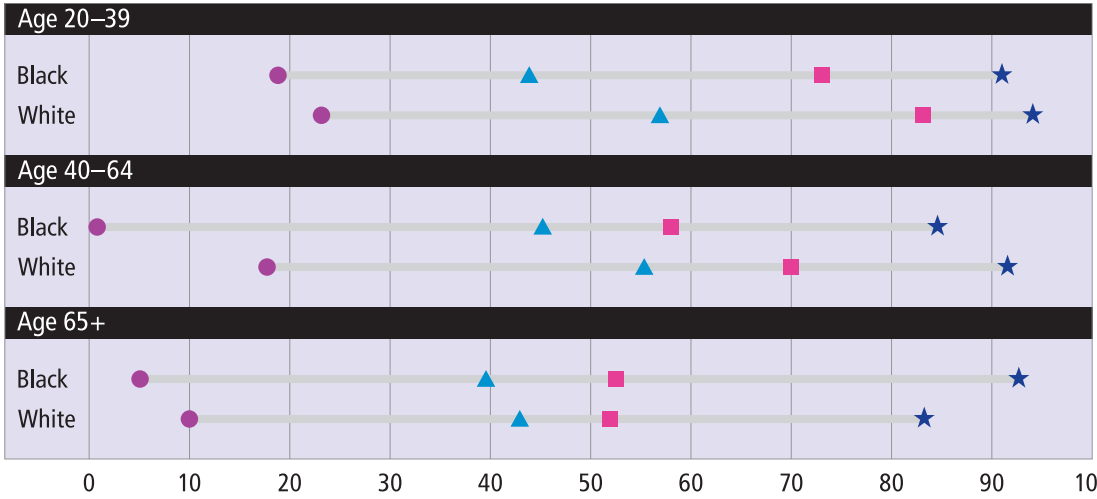
Percent of population

Source: SEER 1992–2001

Five-year relative survival among cancer patients 40 years of age and older, diagnosed from 1992–2000, and followed through 2001.

"All stages" includes local, regional, distant and unstaged cancers.

★ Local
▲ Regional
● Distant
■ All stages

Black women are less likely than white women to receive surgery for cervical cancer, regardless of age at diagnosis (74% vs. 81% for women aged 40 to 64, and 52% vs. 60% for women aged 65 and older). Middle-aged black women are more likely to receive radiation therapy than white women (59% vs. 50%), but the rates are similar for older women (61% vs. 60%).

Surgery and radiation treatment rates for uterine cervix cancer by race and age

Percent of population
Source: SEER 1996–2001
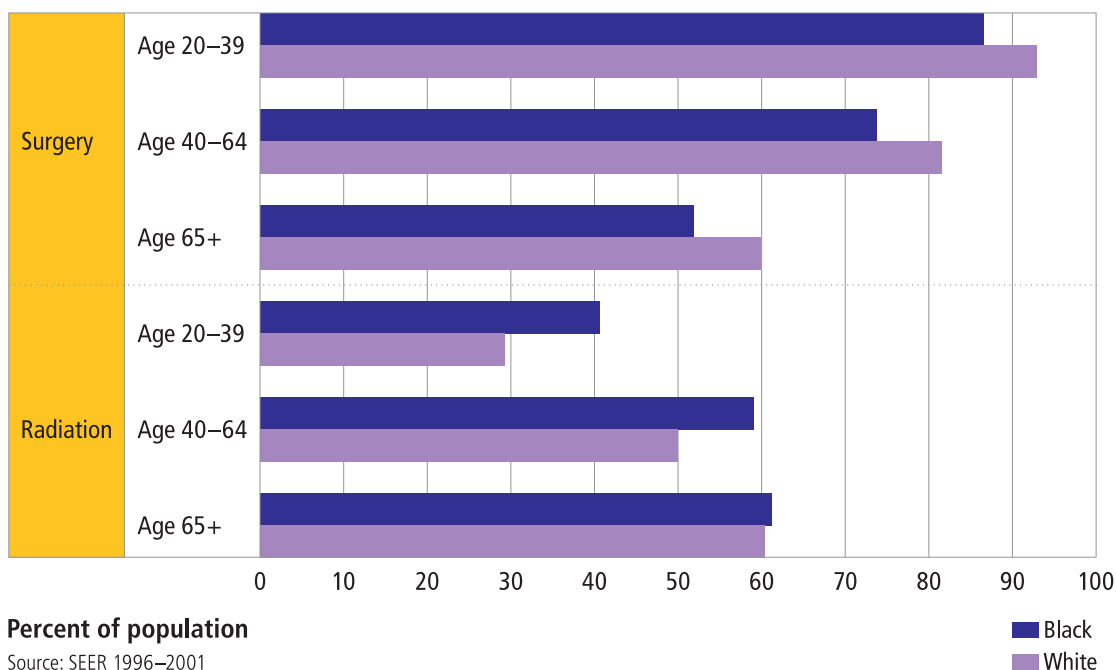
Black
White

Among women 20 years and older, blacks are more likely than whites to have received a Pap test to screen for cervical cancer in the last year (74% vs. 70%). Among Medicare-eligible women, 55% of blacks and 51% of whites availed themselves of a Pap test in the past year. Nine percent and 7% of black and white women aged 65 and older have never had a Pap test.

Most recent Pap test by race and age

Percent of population
Source: BRFSS 2002

Black
■ <1 year
■ >1<2 years
■ >2<5 years
■ 5+ years
■ Never

White
■ <1 year
■ >1<2 years
■ >2<5 years
■ 5+ years
■ Never
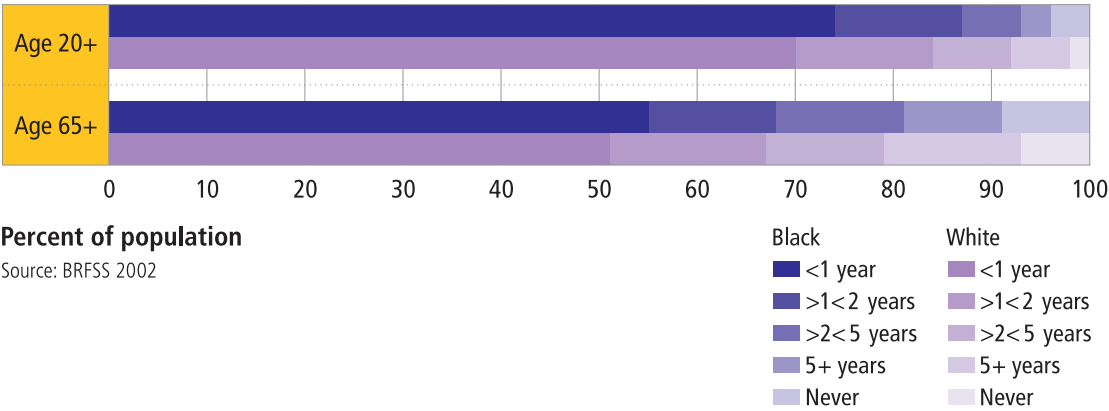
Concurrent medical conditions

Regardless of race, middle-aged and older adults, including those with a cancer history, are frequently burdened by a variety of chronic diseases. Some pre-existing concurrent conditions may impact cancer treatment decisions and affect patient response to treatment. The concurrent medical conditions selected for comparisons are conditions with particularly high diagnosed prevalence or costs in the US population.

One consideration in comparing populations with and without cancer history is their similarity with respect to age. Among middle-aged men, the mean age for blacks and whites with cancer history is 55; for those who are cancer free, the mean age is 50 for blacks, and 51 for whites. Among middle-aged women, the mean age for blacks and whites with cancer history is 52 and 53 respectively; for those who are cancer free, the mean age is 50 for both races.

Blacks have a higher prevalence of hypertension and diabetes than whites, regardless of cancer status, age, or gender. Among middle-aged men with a history of cancer, the prevalence of hypertension is 36% higher in blacks than whites (57% vs. 42%), and the prevalence of diabetes is 70% higher (17% vs. 10%). The disparity in hypertension prevalence is even greater among middle-aged women with cancer (53% vs. 31%; 70% higher for black women compared with white women), while the diabetes disparity is about the same (16% vs. 9%; 70% higher for black women compared with white women).

Concurrent medical conditions in men aged 40 to 64 years by race and cancer status

Percent of population

Source: NHIS 1999–2003

■ Blacks with cancer history
■ Whites with cancer history
■ Cancer-free
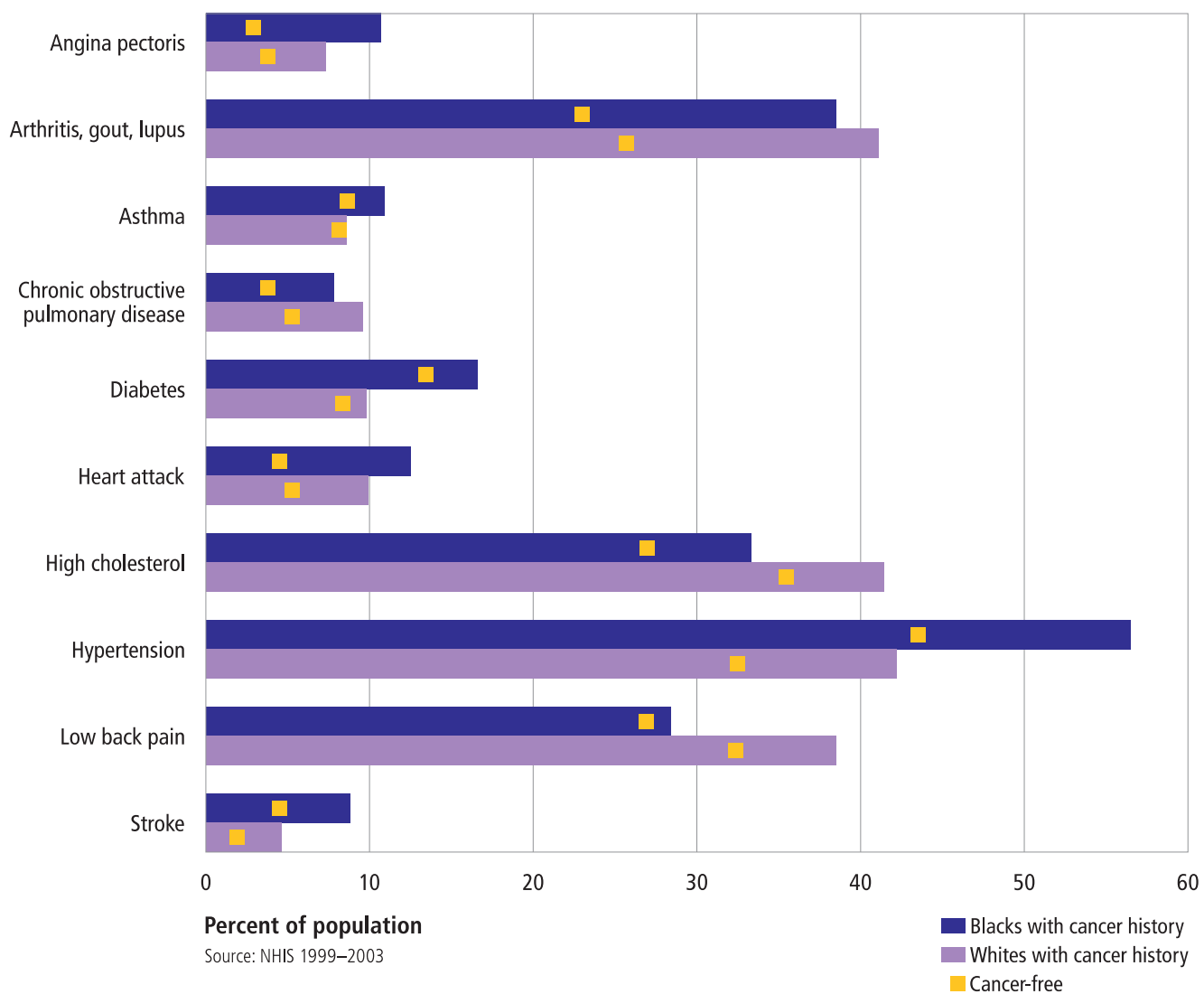
Concurrent medical conditions in men aged 40 to 64 years by race and cancer status

| Condition | Prevalence % | | | |
| | Cancer history | | Cancer-free | |
	Black	White	Black	White
Angina pectoris	10.7	7.3	2.9	3.8
Arthritis, gout, lupus	38.5	41.1	23.1	25.8
Asthma	10.9	8.6	8.7	8.2
Chronic obstructive pulmonary disease	7.8	9.6	3.8	5.3
Diabetes	16.6	9.8	13.5	8.4
Heart attack	12.5	9.9	4.5	5.3
High cholesterol	33.3	41.4	27.1	35.6
Hypertension	56.5	42.2	43.7	32.6
Low back pain	28.4	38.5	27.0	32.5
Stroke	8.8	4.6	4.5	1.9

Source: NHIS 1999–2003
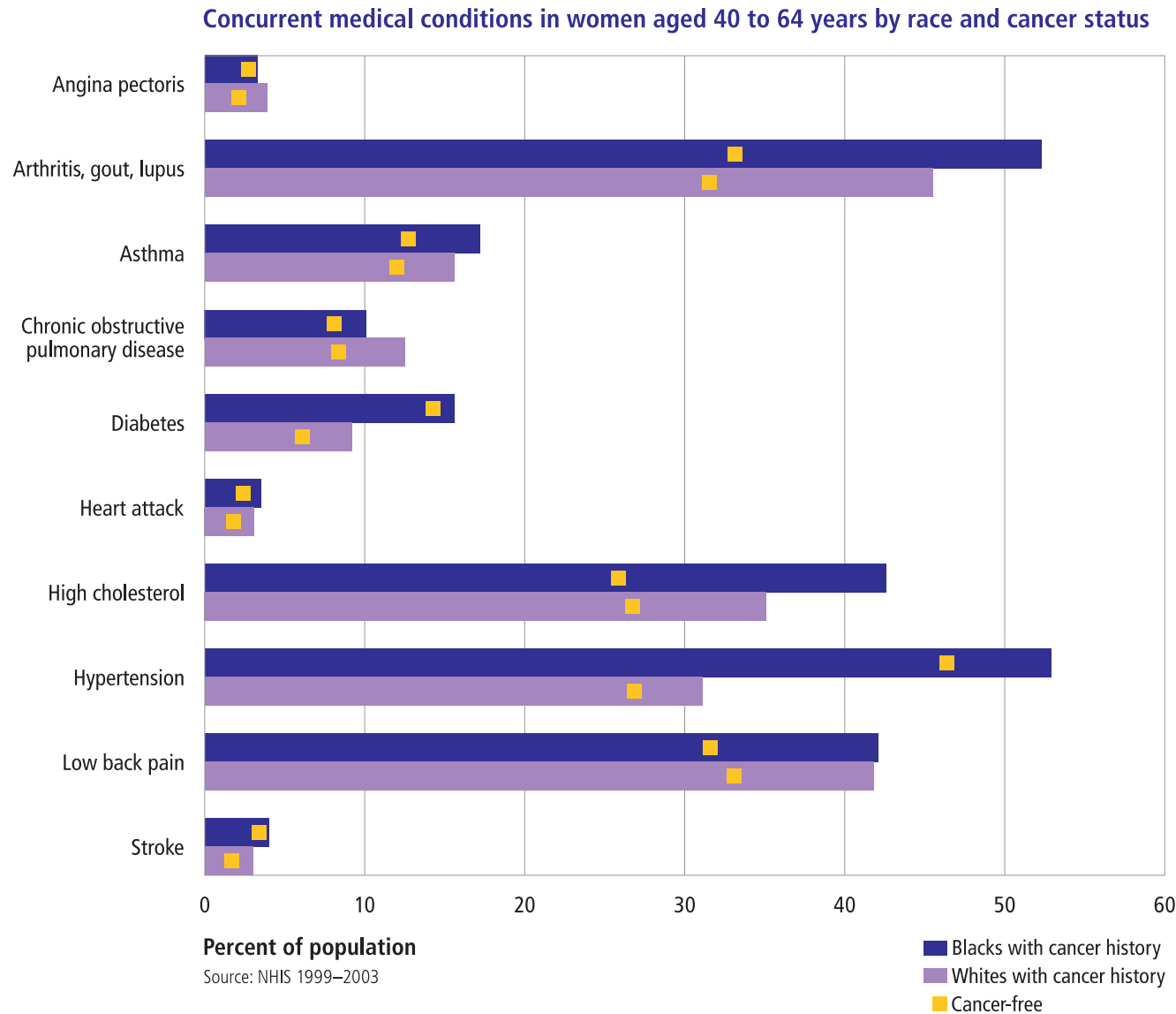
Concurrent medical conditions in women aged 40 to 64 years by race and cancer status

Percent of population

Source: NHIS 1999–2003

■ Blacks with cancer history
■ Whites with cancer history
■ Cancer-free

Concurrent medical conditions in women aged 40 to 64 years by race and cancer status

Condition	Prevalence %			
	Cancer history		Cancer-free	
	Black	White	Black	White
Angina pectoris	3.3	3.9	2.8	2.1
Arthritis, gout, lupus	52.3	45.5	33.6	31.9
Asthma	17.2	15.6	12.9	12.2
Chronic obstructive pulmonary disease	10.1	12.5	8.3	8.5
Diabetes	15.6	9.2	14.4	6.1
Heart attack	3.5	3.1	2.4	1.7
High cholesterol	42.6	35.1	26.0	26.6
Hypertension	52.9	31.1	46.7	26.8
Low back pain	42.1	41.8	31.9	33.3
Stroke	4.0	3.0	3.4	1.7

Source: NHIS 1999–2003

Among older men with a history of cancer, blacks are less likely than whites to have had a heart attack or angina, but more likely to have had a stroke. Some of these findings may be partly attributable to differing survival rates between races for cardiovascular and cerebrovascular disease. Among older women with history of cancer, blacks are more likely than whites to have high cholesterol or to have had a prior heart attack, but less likely to report having had lower back pain.

Concurrent medical conditions in men aged 65 years and older by race and cancer status
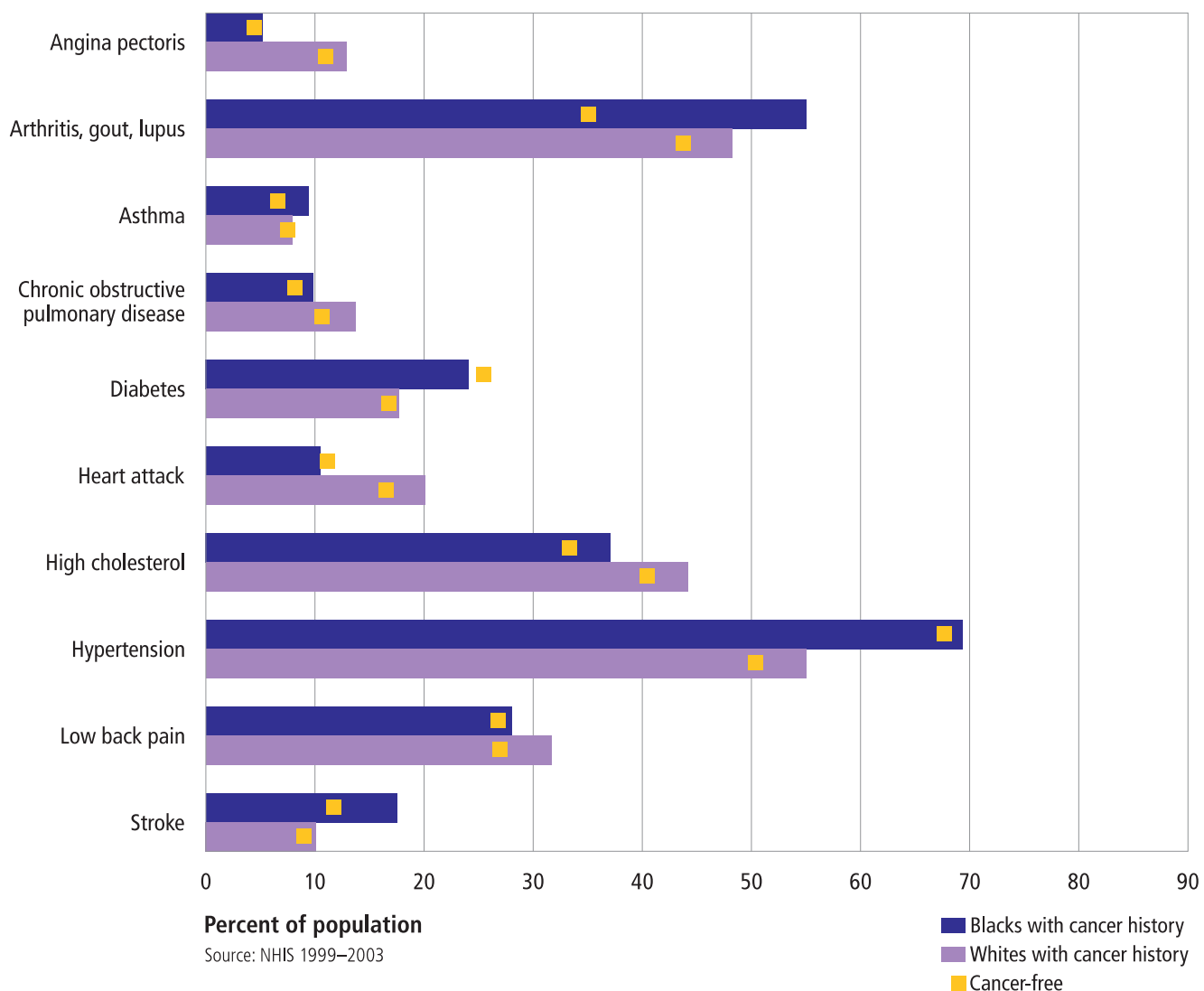
Percent of population

Source: NHIS 1999–2003

Blacks with cancer history
Whites with cancer history
Cancer-free

Concurrent medical conditions in men aged 65 years and older by race and cancer status

Condition	Prevalence %			
	Cancer history		Cancer-free	
	Black	White	Black	White
Angina pectoris	5.2	12.9	4.5	11.2
Arthritis, gout, lupus	55.0	48.2	35.3	44.1
Asthma	9.4	7.9	6.5	7.4
Chronic obstructive pulmonary disease	9.8	13.7	8.3	10.8
Diabetes	24.1	17.7	25.8	17.0
Heart attack	10.5	20.1	11.4	16.9
High cholesterol	37.1	44.2	33.3	40.3
Hypertension	69.3	55.0	68.1	50.7
Low back pain	28.0	31.7	26.5	26.4
Stroke	17.5	10.1	12.0	9.3

Source: NHIS 1999–2003

Concurrent medical conditions in women aged 65 years and older by race and cancer status

Percent of population

■ Blacks with cancer history
■ Whites with cancer history
■ Cancer-free
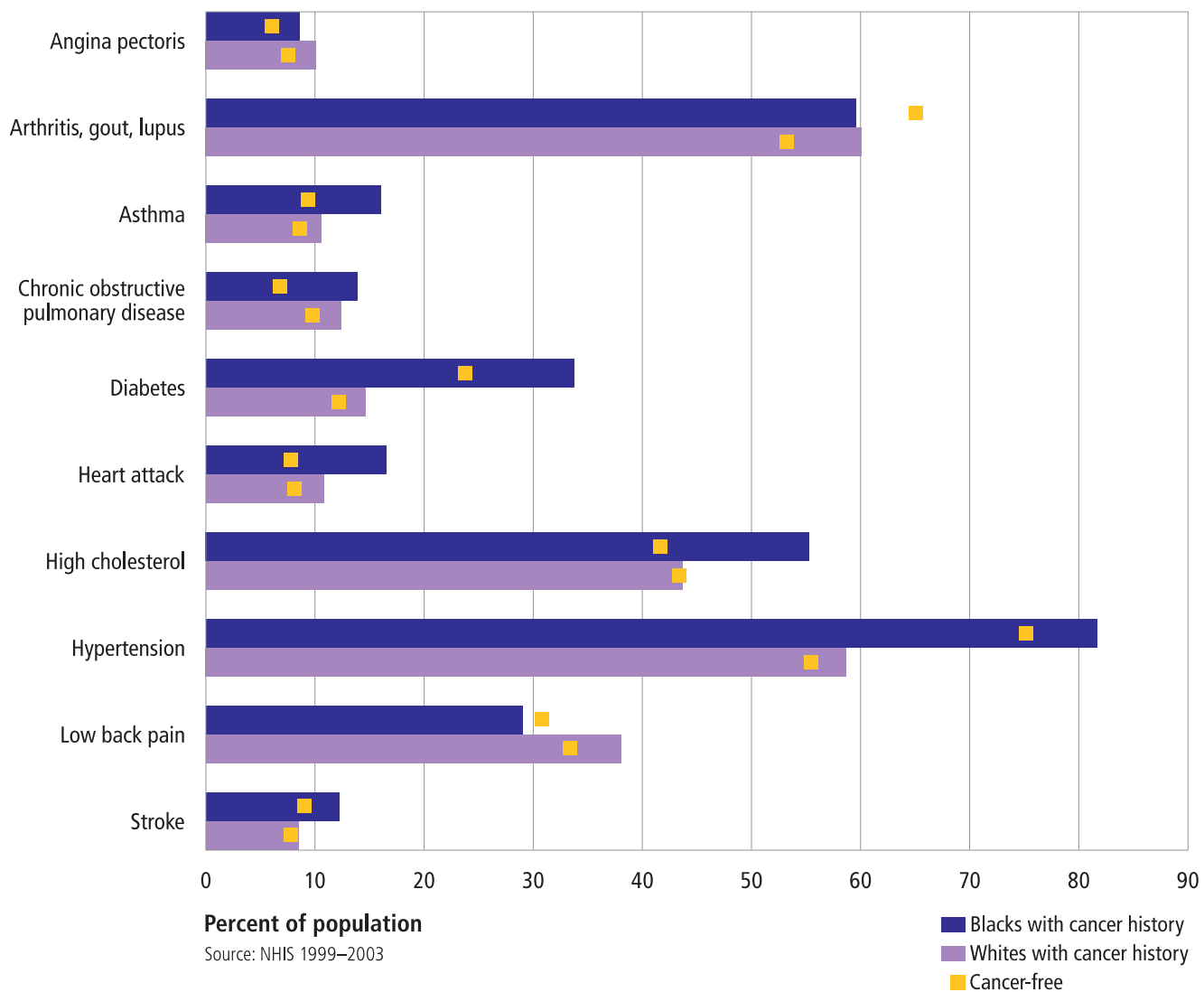
Concurrent medical conditions in women aged 65 years and older by race and cancer status

| Condition	Prevalence %			
	Cancer history		Cancer-free	
	Black	White	Black	White
Angina pectoris	8.6	10.1	6.2	7.7
Arthritis, gout, lupus	59.6	60.1	66.3	54.0
Asthma	16.0	10.6	9.3	8.6
Chronic obstructive pulmonary disease	13.9	12.4	6.9	9.9
Diabetes	33.7	14.6	24.0	12.2
Heart attack	16.5	10.8	7.9	8.2
High cholesterol	55.3	43.7	41.9	43.3
Hypertension	81.7	58.7	75.8	55.9
Low back pain	29.0	38.0	30.7	33.1
Stroke	12.2	8.5	9.2	8.0

Source: NHIS 1999–2003

Behavioral risk factors

Smoking is a well-known risk factor for some cancers, including cancer of the lung, pharynx, esophagus, bladder, kidney and stomach. For both men and women, and across age groups, blacks are less likely to report a history of smoking than whites (37% vs. 49% overall).

A different pattern emerges when looking only at men with cancer history, however. Black men with a history of cancer are more likely to have smoked than white men with cancer history (75% vs. 65%). Black women, regardless of cancer status, are less likely to have smoked than white women (38% vs. 55% for those with cancer history, and 30% vs. 43% for those who are cancer-free).

Percent of adults who have ever smoked by race, gender and cancer status

Percent of population
Source: NHIS 2003

■ Blacks with cancer history
■ Whites with cancer history
■ Cancer-free
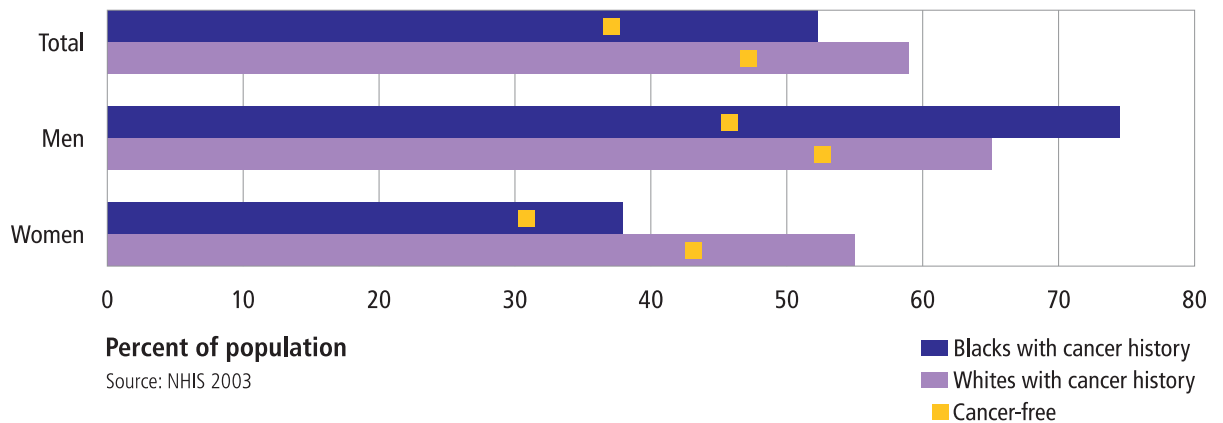
Percent of adults who have ever smoked by race, age and cancer status

Percent of population
Source: NHIS 2003

■ Blacks with cancer history
■ Whites with cancer history
■ Cancer-free
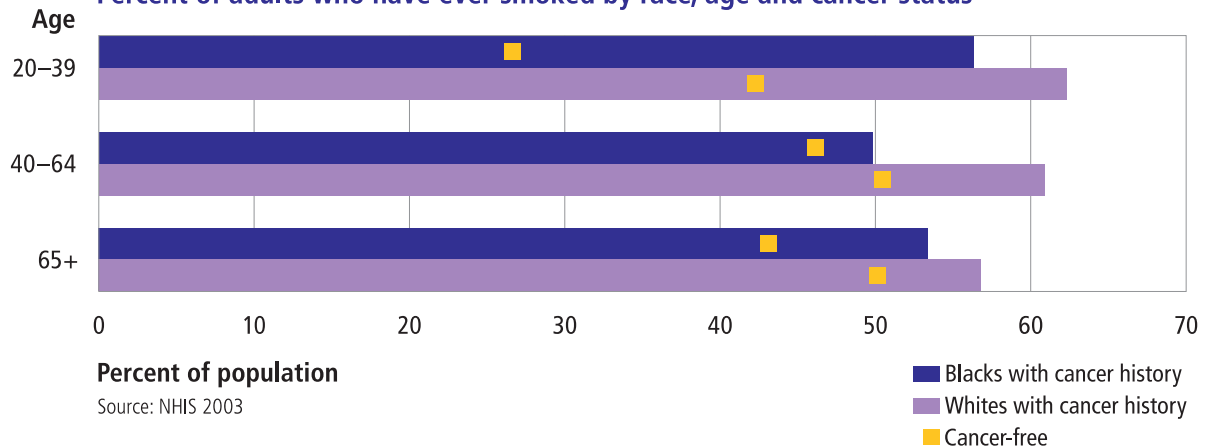
Having a history of cancer does not necessarily result in current avoidance of smoking. Twenty-three percent and 19% of blacks and whites with cancer history currently smoke compared with 22% and 23% of black and white cancer-free adults. Most striking is the fact that black and white adults aged 20 to 39 with cancer history are much more likely to be current smokers, 41% and 49%, respectively, than their same-age counterparts who are cancer-free, 20% and 29%. Older blacks with a history of cancer are twice as likely to currently smoke as older whites with cancer history, 16% vs. 8%.

Percent of adults who are current smokers by race, gender and cancer status

Percent of population
Source: NHIS 2003

Blacks with cancer history
Whites with cancer history
Cancer-free
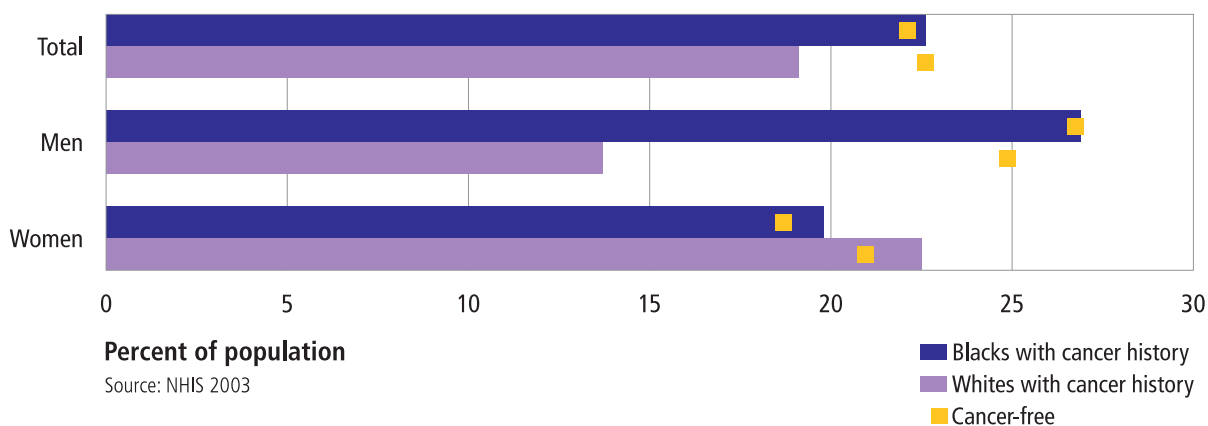
Percent of adults who are current smokers by race, age and cancer status

Age

Percent of population
Source: NHIS 2003

Blacks with cancer history
Whites with cancer history
Cancer-free
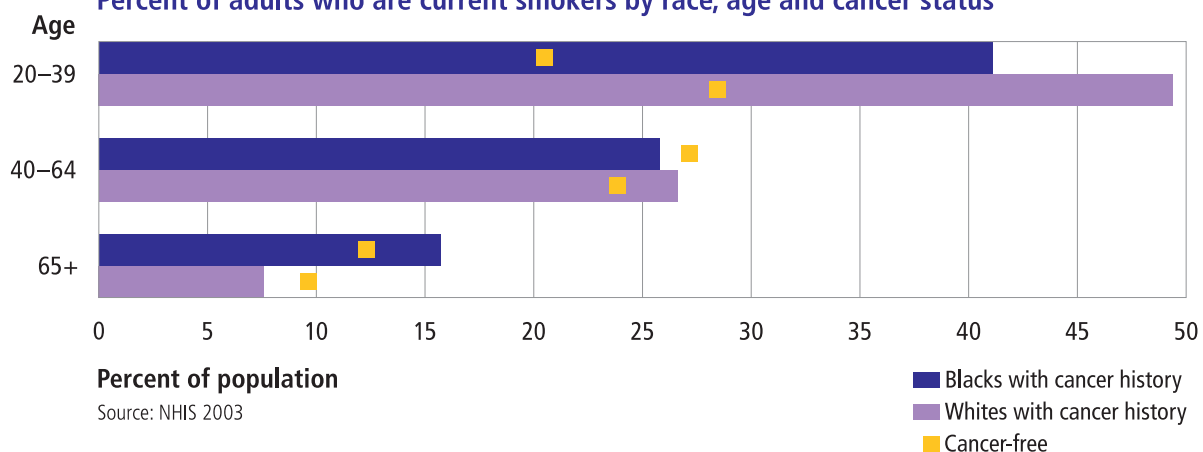
Lack of physical activity is another lifestyle factor that may increase risk for certain cancers, including colorectal and breast cancer. Although a substantial number of persons in both races report that they do not exercise regularly, black men and women are much less likely to engage in vigorous or moderate exercise than white men and women.

Percent of adults who report lack of exercise by race, gender and cancer status

Percent of population
Source: NHIS 2003

■ Blacks with cancer history
■ Whites with cancer history
■ Cancer-free
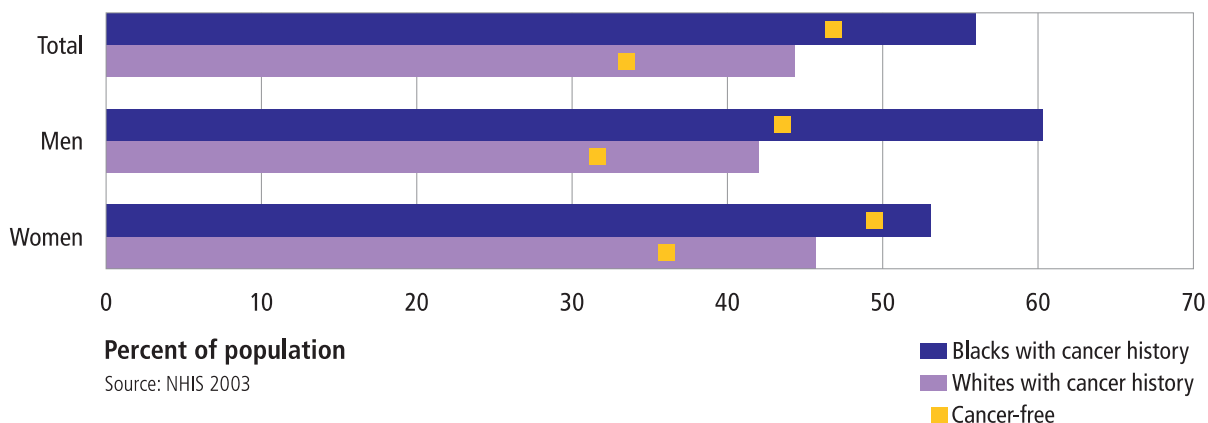
Percent of adults who report lack of exercise by race, age and cancer status

Percent of population
Source: NHIS 2003

■ Blacks with cancer history
■ Whites with cancer history
■ Cancer-free

Obesity may increase the risk of pancreatic cancer, and breast cancer in post-menopausal women.

Overall, and by gender, blacks with and without cancer are much more likely to be obese than their white counterparts. Among women with cancer history, 47% of blacks and 22% of whites are obese.

Prevalence of obesity by race, gender and cancer status

Percent of population
Source: NHIS 2003

Blacks with cancer history
Whites with cancer history
Cancer-free
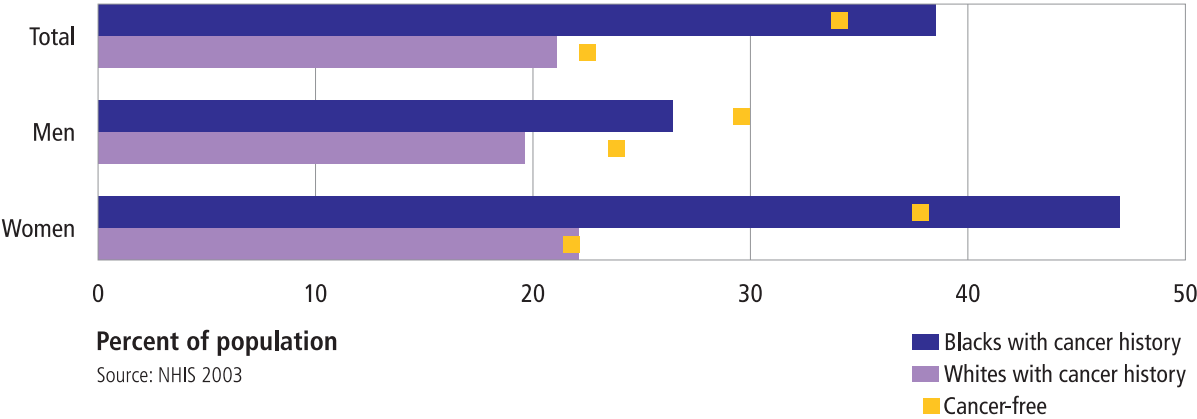
Prevalence of obesity by race, age and cancer status

Percent of population
Source: NHIS 2003

Blacks with cancer history
Whites with cancer history
Cancer-free
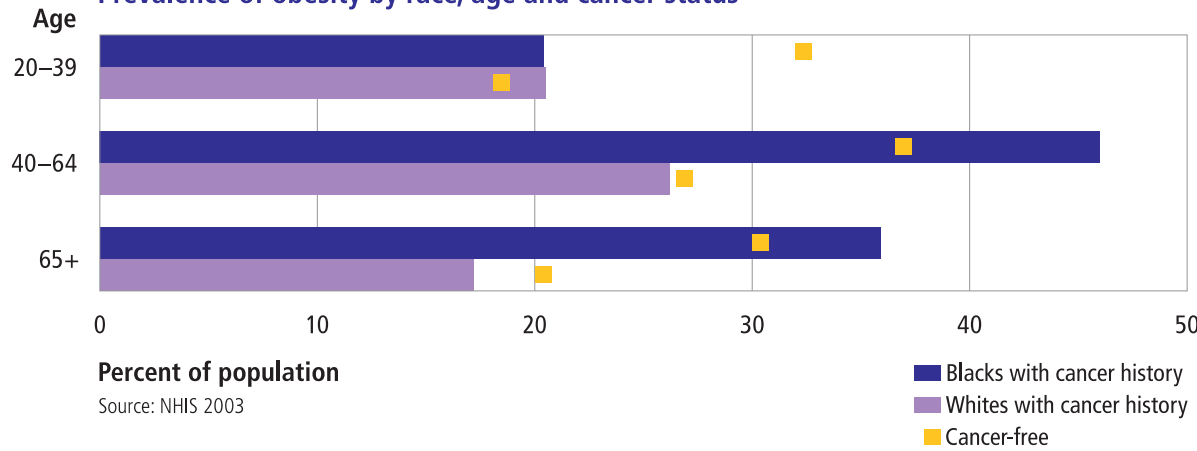
Demographic characteristics and environmental issues

This section presents information on demographic characteristics and healthcare environment issues regardless of cancer history, in an effort to understand how these factors may impact disparities in the burden of cancer between black and white adults.

Twenty percent of black adults and 11% of white adults have less than a high school education; this gap is smallest among the youngest age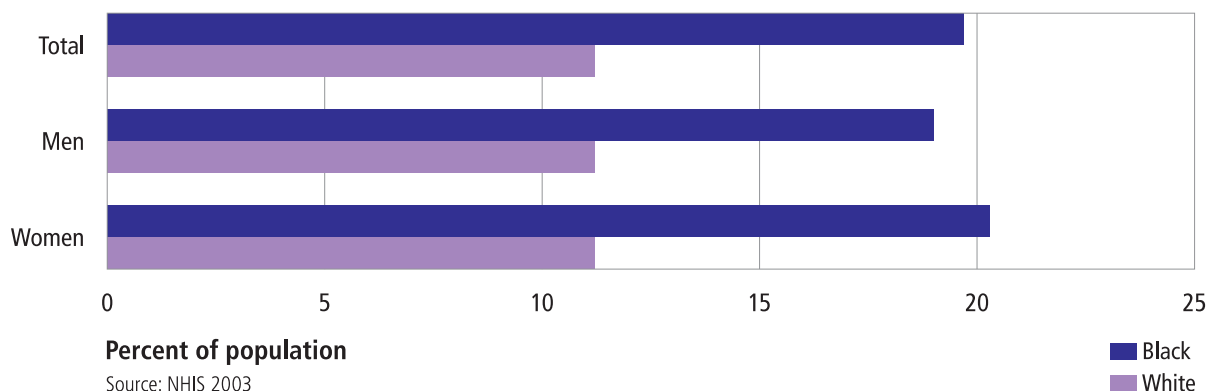 group, 12% and 8%, respectively. The unemployment rate for adults aged 20 and older is higher among blacks than whites, 10% vs. 5%. Among those aged 20 to 24, the black unemployment rate is more than twice the white unemployment rate, 21% vs. 9%. Thirty-one percent of black adults and 16% of white adults report an annual household income of less than $20,000. Blacks report a lower rate than whites of being married or partnered, 46% vs. 68%.

Percent of adults with less than a high school education by race and gender

Percent of population
Source: NHIS 2003

■ Black
■ White

Percent of adults with less than a high school education by race and age

Age

Percent of population

Source: NHIS 2003

■ Black
■ White

Percent of adults who are unemployed by race and age

Age

Source: CPS 2004 (BLS)

— Black
— White
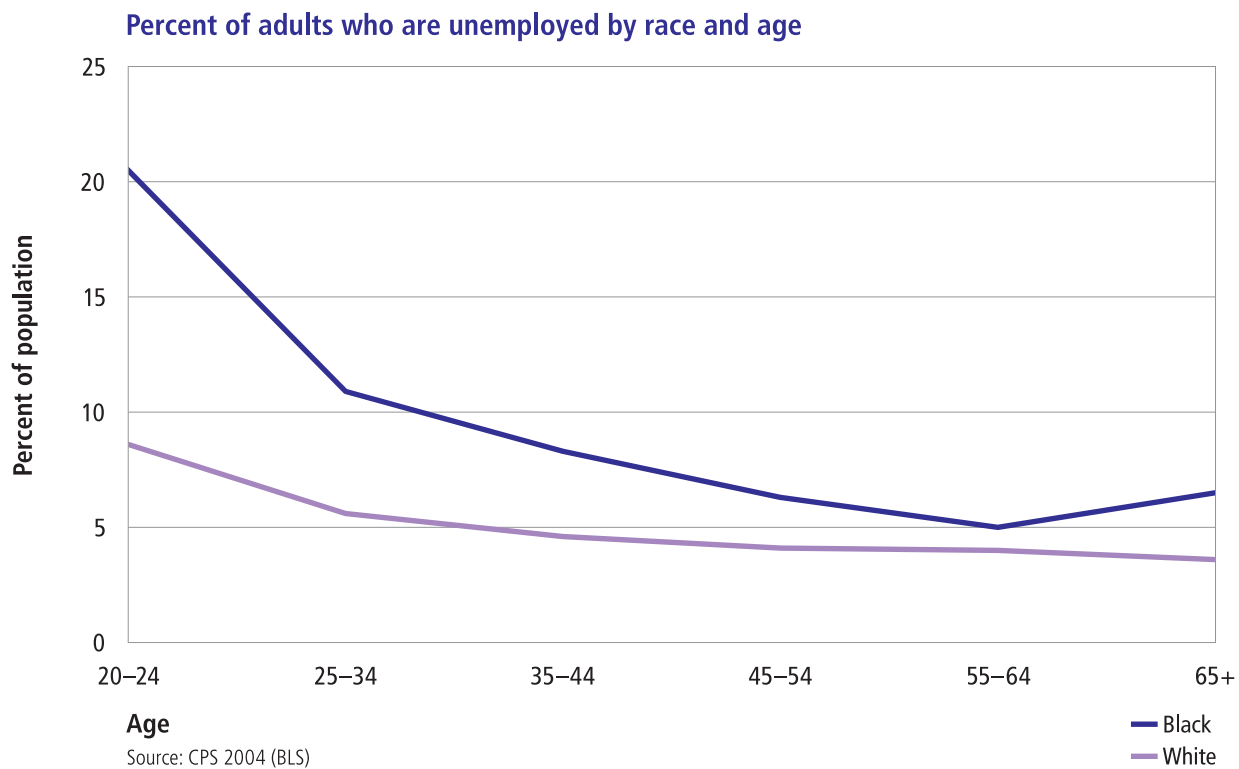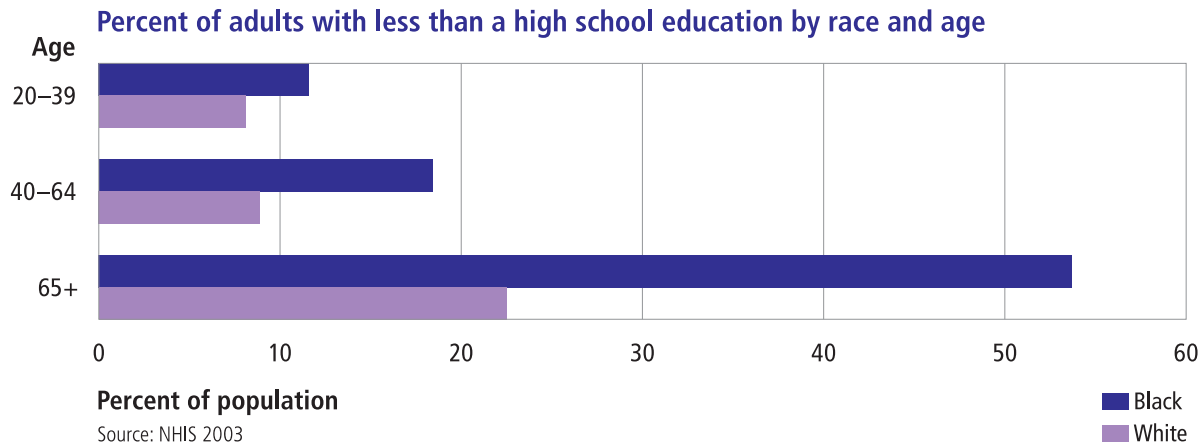
Percent of adults with an annual household income less than $20,000 by race and gender

Percent of population
Source: NHIS 2003

■ Black
■ White
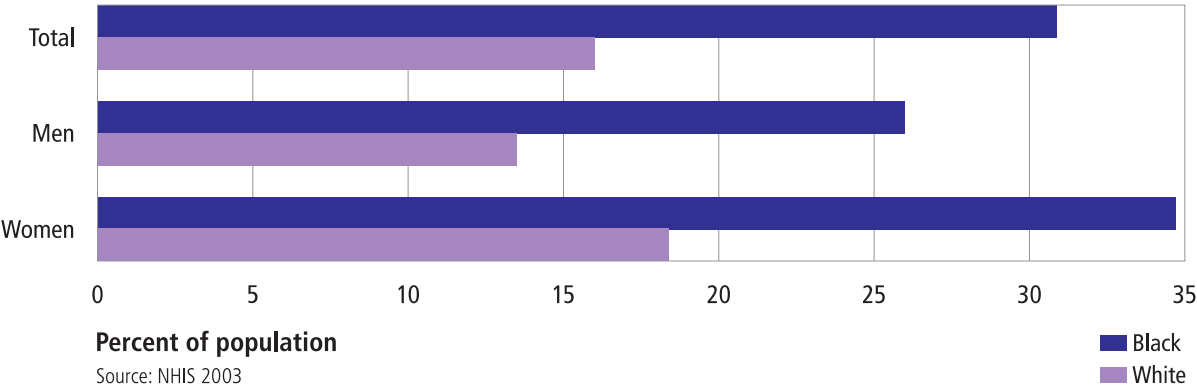
Percent of adults with an annual household income less than $20,000 by race and age

Percent of population
Source: NHIS 2003
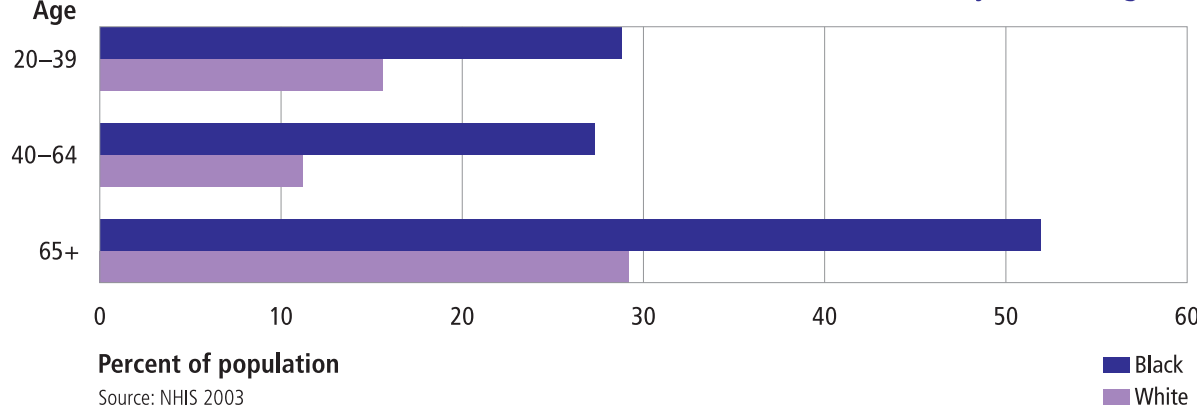
■ Black
■ White

Percent of adults who are married or partnered by race and gender

Percent of population
Source: NHIS 2003
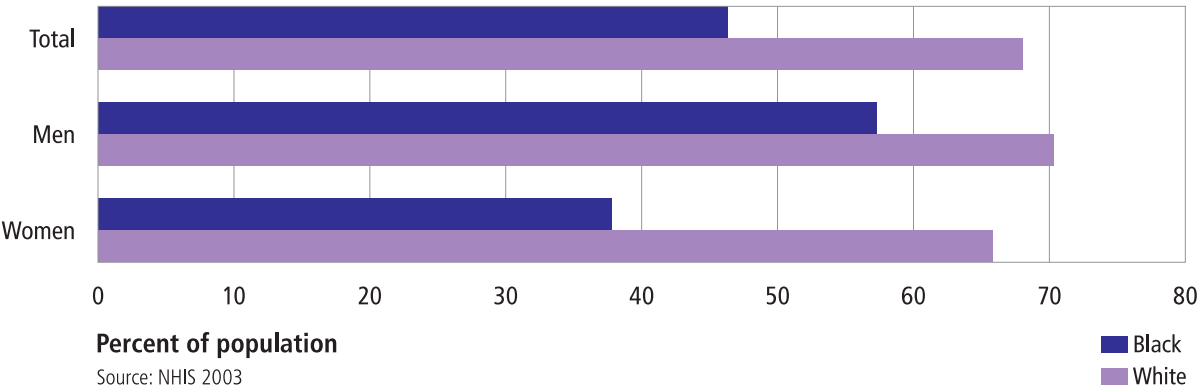
■ Black
■ White

Percent of adults who are married or partnered by race and age

Percent of population
Source: NHIS 2003
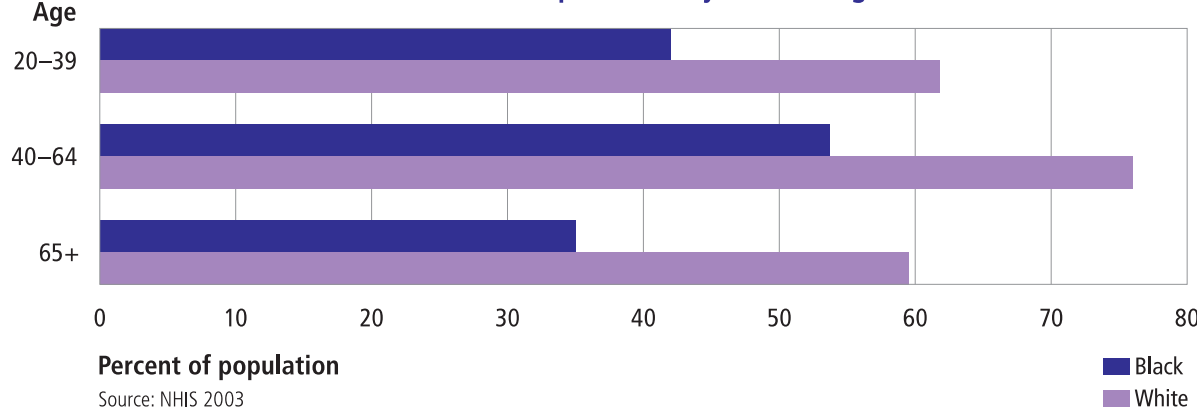
■ Black
■ White

Nineteen percent of black men and 9% of black women have no usual source of care. Regardless of race, men are less likely than women to have a usual source of care, as are adults aged 20 through 39.

Blacks overall, by gender and across all age groups, are more likely than whites to report that their usual place of care is a clinic, hospital emergency room, or hospital outpatient facility, rather than a doctor's office. Twenty-one percent of blacks and 14% of whites report that their usual place of care is a clinic, hospital emergency room, or hospital outpatient facility. Sixty-four percent of blacks and 74% of whites report that their usual place of care is a doctor's office. Regardless of race, men are less likely than women to have been seen by a doctor in the past year. Twenty-five percent of black men and 22% of white men have not been to a doctor in the past year, compared with 13% and 10% of black and white women, respectively.

Percent of adults with no usual place of care by race and gender
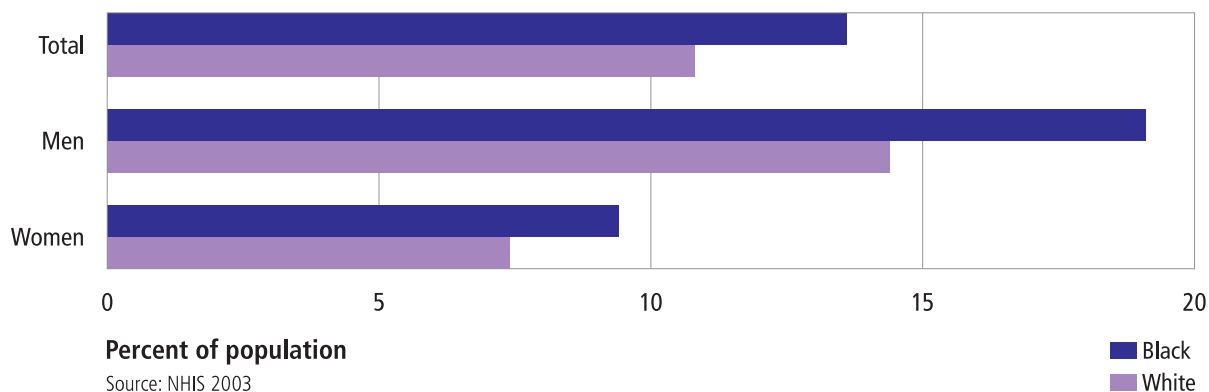
Percent of population
Source: NHIS 2003

Black
White

Percent of adults with no usual place of care by race and age

Percent of population
Source: NHIS 2003

Black
White

Percent of adults using clinics, emergency rooms or outpatient facilities as usual place of care by race and gender

Percent of population

Source: NHIS 2003

■ Black
■ White

Percent of adults using clinics, emergency rooms or outpatient facilities as usual place of care by race and age

Percent of population

Source: NHIS 2003
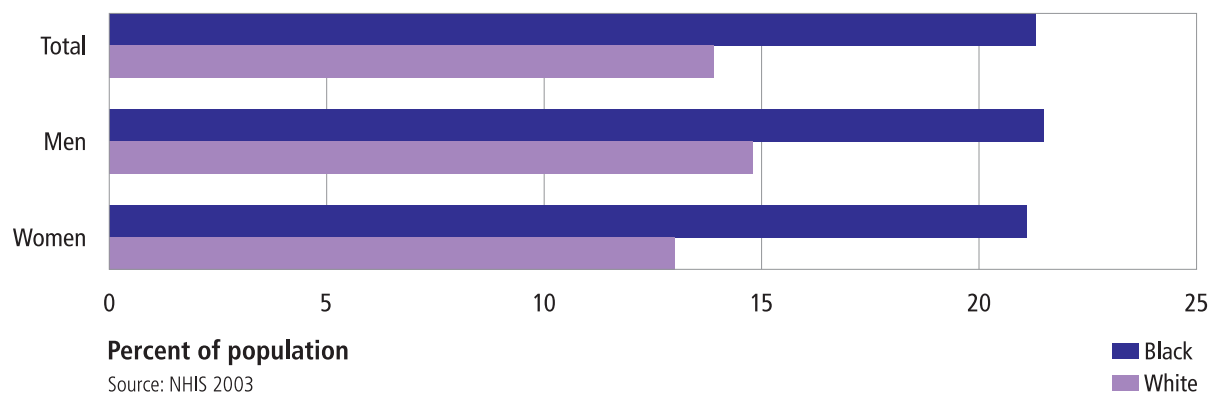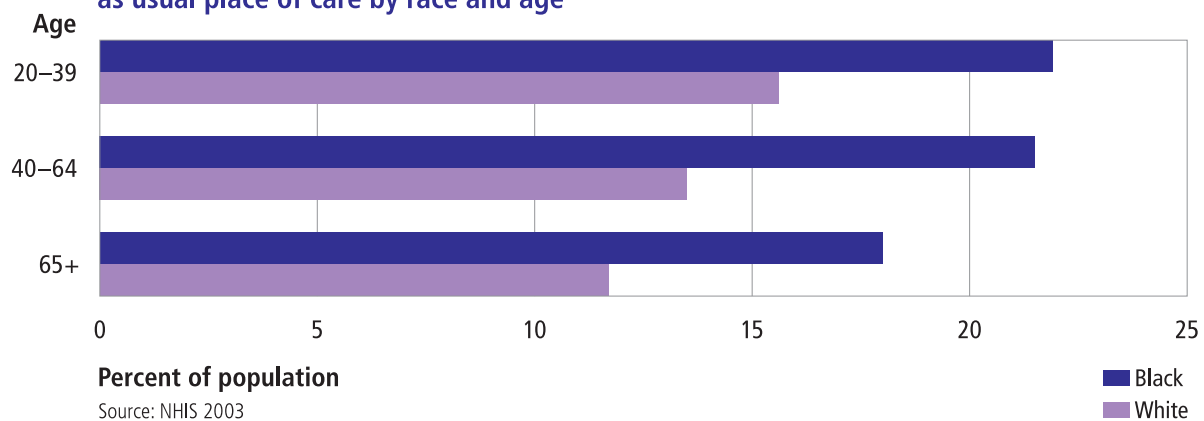
■ Black
■ White

Blacks are almost twice as likely as whites to lack health insurance coverage, 20% vs. 12%. The disparity in coverage between blacks and whites exists for younger as well as middle-aged adults, and the lack of coverage is particularly high among blacks aged 20 through 39 (26%).

Percent of adults with no health insurance by race and gender

Percent of population
Source: NHIS 2003
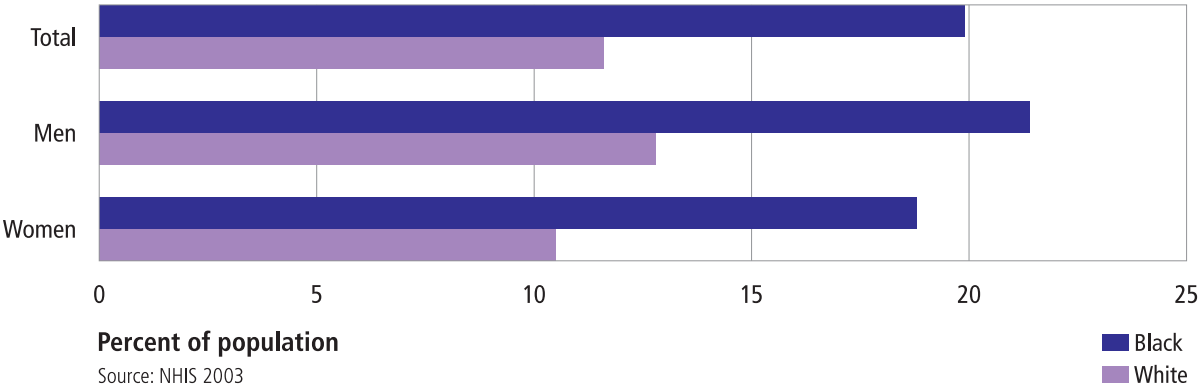
Black
White

Percent of adults with no health insurance by race and age

Percent of population
Source: NHIS 2003
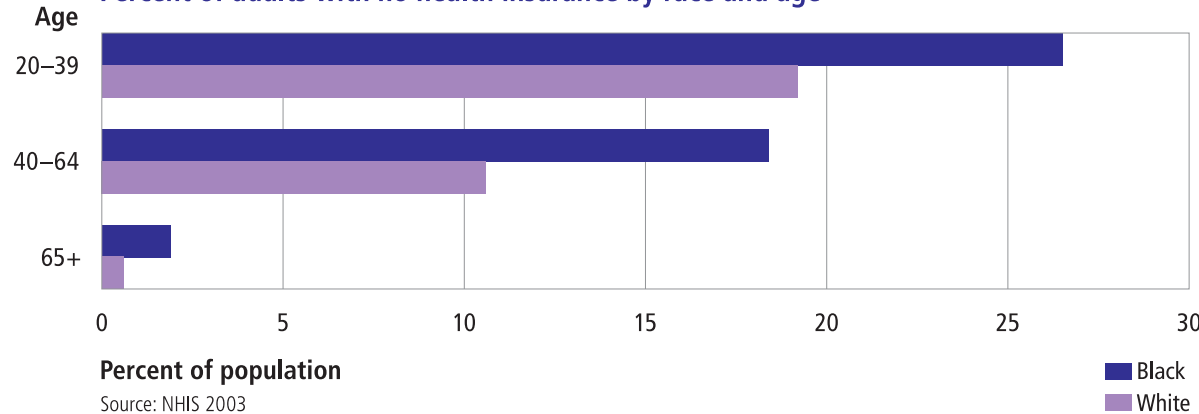
Black
White

Blacks are less likely than whites to have private health insurance, 56% vs. 76%. The percentage of blacks with Medicaid coverage (a means-tested program) is three-fold greater than that of whites, 13% vs. 4%.

Fifty-six percent of blacks and 73% of whites aged 20 to 39 have private health insurance; coverage increases slightly to 60% and 79%, respectively, among adults 40 to 64. Blacks 65 and older are more likely than whites to be covered solely by Medicare, 38% vs. 20%, and are more likely to have dual eligibility coverage (i.e., Medicare and Medicaid), 15% vs. 4%. Only 28% of blacks 65 and older supplement Medicare with private insurance, compared with 63% of older white adults.

Health insurance coverage by race, age 40–64

No coverage
Other insurance
18.4%
13.5%   **Black**   59.7% — Private only
8.4%
Medicaid only

No coverage
Other insurance
10.6%
8.3%
2.5%
White
78.6% — Private only
Medicaid only
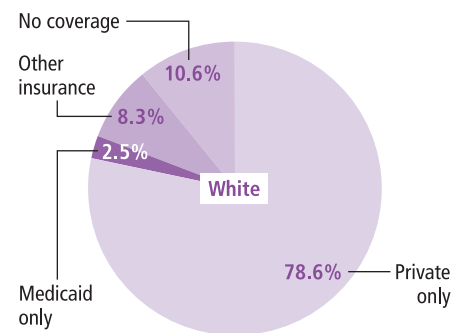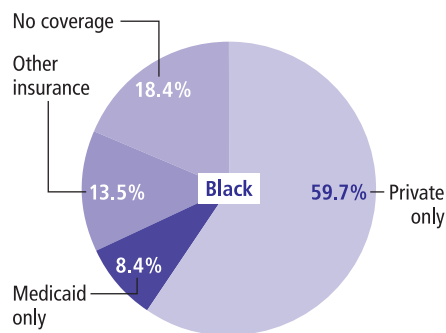
Health insurance coverage by race, age 65 and older

No coverage
Other insurance   Medicare only
1.9%
16.8%
37.5%
15.2%   **Black**
Medicare and Medicaid   28.5% — Medicare and Private

No coverage
Other insurance   Medicare only
0.6%
12.8%   20.4%
3.6%
White
62.6%
Medicare and Medicaid   Medicare and Private
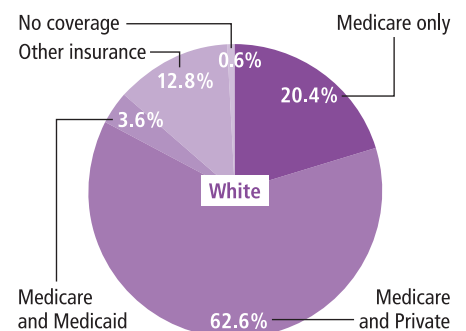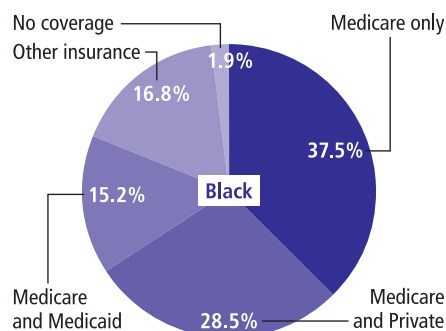
Source: NHIS 2003

Among persons with private health insurance, blacks are more likely than whites to be enrolled in health maintenance organizations (HMO), 50% vs. 33%.
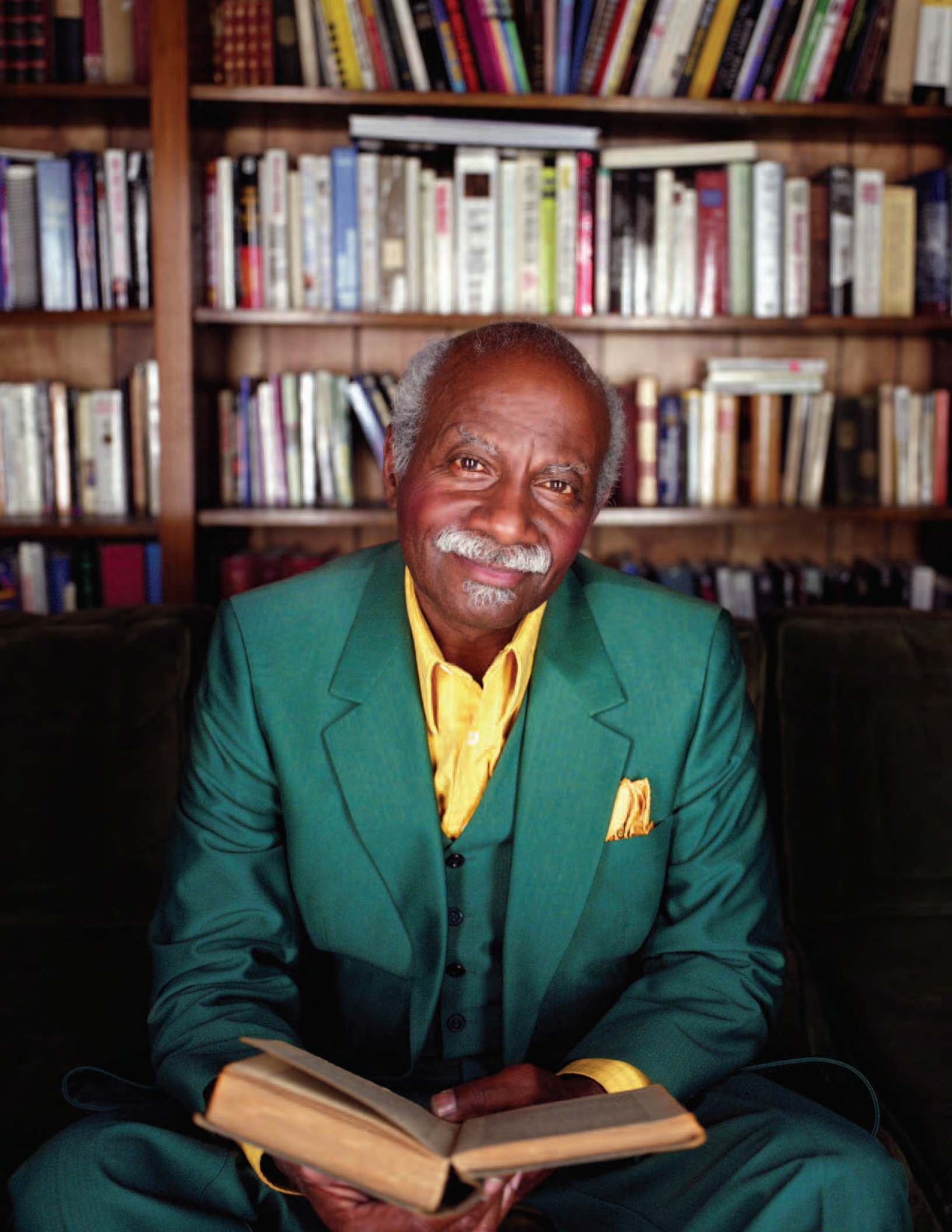
Appendix I: Methods

Data Sources

Surveillance, Epidemiology, and End Results (SEER) Program, 1992–2001

US Department of Health and Human Services
US National Institutes of Health
National Cancer Institute

The SEER Program of the National Cancer Institute is an authoritative source of information on cancer incidence and survival in the United States. The SEER Program began collecting data on cancer cases in 1973 and currently collects and publishes cancer incidence and survival data from 14 population-based cancer registries and three supplemental registries covering approximately 26% of the US population. The population-based data include stage of cancer at the time of diagnosis and survival rates within each stage. Information on more than 3 million in situ and invasive cancer cases is included in the SEER database and neoplasms are coded using the International Classification of Diseases for Oncology (ICD-O). The population covered by SEER is comparable to the general US population with regard to measures of poverty and education. Approximately 170,000 new cases are added each year within the SEER coverage areas. Adults aged 20 and older were selected for these analyses, and SEER incidence rates were age-adjusted to the 2000 US standard population aged 20 and older.

National Health Interview Survey (NHIS), 1999–2003

US Department of Health and Human Services
Centers for Disease Control and Prevention
National Center for Health Statistics

NHIS is a nationally representative interview survey based on a sample of the civilian non-institutionalized US population, including approximately 30,000 persons over the age of 20. Surveys in the series have been conducted annually since 1957, with the last major restructuring occurring in 1997. The survey consists of personal interviews in a population-based national sample. Adults aged 20 and older were selected for these analyses. Approximately 36,000 adults are sampled annually.

Compressed Mortality File (CMF), 1990–2002

US Department of Health and Human Services
Centers for Disease Control and Prevention (CDC)
National Center for Health Statistics

CMF is a county-level national mortality and population database. Counts and rates of death can be obtained by place of residence (US, state, and county), age (16 groups), race (white, black, American Indian/Alaskan Native, Asian/Pacific Islander and other), gender, year, and underlying cause of death. Death rates shown in this fact book reflect the total population and are age-adjusted to the 2000 US standard population. Diagnostic classifications for malignant neoplasms were based on the International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM) codes 140 through 208 for years 1990 through 1998, and ICD-10-CM codes C00 through C97 for years 1999 through 2002.

CDC WONDER On-line mortality database http://wonder.cdc.gov/
Accessed: March 8, 2005.

Medical Expenditure Panel Survey (MEPS), 1998–2002
US Department of Health and Human Services
Public Health Service
Agency for Healthcare Research and Quality (AHRQ)

MEPS, conducted by the Agency for Healthcare Research and Quality (AHRQ) and the National Center for Health Statistics (NCHS), collects data on healthcare use, expenditures, sources of payment, and insurance coverage. MEPS combines household-reported information with information obtained from providers, primarily on expenditures by source of payment. Provider data are obtained through a supplemental follow-back survey of hospital events, physician office visits, and home healthcare. Payment information for prescription medications is obtained directly from pharmacies. MEPS panel participants comprise a national probability sample representative of the US civilian non-institutionalized population, selected from households interviewed in the National Health Interview Survey (NHIS). The total number of adults aged 20 years and older that participated in the surveys from 1998 through 2002 is 57,660. Direct medical expenses reported in this fact book are adjusted to year 2002 dollars. Because MEPS does not distinguish between primary and secondary diagnoses at an associated event, there is a possibility of double-counting expenses when the event has more than one condition coded. As a result, when spending estimates are totaled over all conditions, some expenses will be double-counted.

Behavioral Risk Factor Surveillance System (BRFSS), 2002
US Department of Health and Human Services
Centers for Disease Control and Prevention (CDC)

The BRFSS is an ongoing system of surveys conducted by state health departments in cooperation with the CDC. The methods used are generally comparable from state to state and from year to year, allowing states to compare their risk factor prevalence with national data and monitor the effects of interventions over time. The national probability sample interviews are conducted by telephone and interview questions cover selected health issues and preventive health measures. In order to provide adequate sample sizes for smaller geographically defined populations of interest, some states are sampled disproportionately.

Current Population Survey (CPS), 2004
US Department of Labor
Bureau of Labor Statistics (BLS)

The Current Population Survey (CPS), a monthly survey conducted by the Bureau of the Census for the Bureau of Labor Statistics, is the primary source of information on the labor force characteristics of the US population. The sample of about 50,000 households is scientifically selected to represent the civilian non-institutionalized population. Members of sampled households 16 years of age and older are interviewed to obtain information on their employment status. Statistics derived from the CPS include employment, unemployment rate, earnings, hours of work, and related indicators. This report includes unemployment data for the first quarter of 2004 among adults 20 years of age and older.

Definitions

Disease and risk factor definitions

Behavioral risk factors

Ever-smoked: A person has "ever-smoked" if he/she smoked 100 or more cigarettes in his/her lifetime.

Current smoker: A current smoker is defined as someone who has smoked 100 or more cigarettes in his/her lifetime and smokes every day or some days.

Obesity: A person was classified as obese if his/her body mass index (BMI) (weight in kilograms divided by height in meters squared), based on self-reported measurements, was greater than or equal to 30.

Lack of exercise: A person was classified as lacking exercise if he/she responded "never" to the questions "How often do you do VIGOROUS activities for at least 10 minutes that cause heavy sweating or large increases in breathing or heart rate?" and "How often do you do LIGHT OR MODERATE activities for at least 10 minutes that cause only light sweating or a slight to moderate increase in breathing or heart rate?"

Cancer stages

The extent of cancer spread at the time of diagnosis:

In situ: Refers to a pre-invasive cancer, confined to the site of origin.

Local: An invasive malignant cancer confined entirely to the organ where the cancer began.

Regional: Refers to a cancer that has spread to the body area adjacent to the primary tumor.

Distant: Refers to cancer that has spread from the original (primary) tumor to distant organs or distant lymph nodes; also known as distant metastasis.

All stages: Refers to local, regional, and distant as well as unstaged cancers.

Concurrent medical conditions and cancers (from NHIS)

These were self-reported in response to the following questions:

For concurrent medical conditions—"Have you ever been told by a doctor or other health professional that you have X?" with two exceptions:

Low back pain: Persons who reported having had low back pain in the past three months.

Chronic obstructive pulmonary disease: Persons who reported being told by a doctor or other health professional that they had emphysema or chronic bronchitis.

For cancers—"Have you ever been told by a doctor or other health professional that you had cancer or a malignancy of any kind?"

Other definitions

Disease or condition rates

Age-adjusted incidence: The incidence percentage adjusted for differences in the age distribution between the population of interest and a standard population.

Incidence: The number of new cases of a disease in a given time period among the population at risk of the disease.

Prevalence percentage: Persons diagnosed with the disease or condition as a percentage of the population. Prevalence by years since diagnosis calculated as prevalence by current age (years) minus age at diagnosis (years).

Relative survival rate: The ratio of the observed survival rate for the patient group to the expected survival rate for persons in the general population similar to the patient group with respect to age, sex, race, and calendar year of observation. The relative survival rate is an estimate of the chance of surviving the effects of cancer.

Source of payment

The payer source for medical care and health services reported in the Medical Expenditure Panel Survey:

Private: Private insurance.

Medicaid: A jointly funded federal and state program that pays for medical and health related services for eligible individuals and families with low incomes.

Medicare: The national health insurance program for adults 65 years of age and older, and other eligible adults who are disabled or have end-stage renal disease.

Other insurance: Primarily Workers' Compensation and other insurance, such as home-owners'.

Other public insurance: Department of Veterans Affairs, Department of Defense, Tricare, Indian Health Service, and other federal, state, and local government, and other public insurance types.

Self-pay: Co-pays and other out-of-pocket expenses.

Agency for Healthcare Research and Quality (AHRQ) clinical classification codes for cancer and equivalent codes from the International Classification of Diseases, 9th Revision, Clinical Modification (ICD-9-CM)

Cancer site	AHRQ Clinical Classification Code	ICD-9-CM
Breast	24	174–175, 233.0, V10.3
Colon and rectum	14, 15	153–154, 159.0, 230.3–230.6, V10.05, V10.06
Lung and bronchus	19	162.2, 162.3, 162.4, 162.5, 162.8, 162.9, 231.2, V10.11
Prostate	29	185, 233.4, V10.46
Uterine cervix	26	180, 233.1, 795.0, V10.41
All sites (excluding non-melanoma skin)	11–22, 24–45	140–172, 174–208, 230–231, 233–239, 795.0–795.1, V10 (excluding V10.83), V58.0–V58.1, V66.1–V66.2, V67.1–V67.2, V71.1

Appendix II: Incidence and prevalence of selected cancers in black and white adults

Incidence rates per 100,000 at risk

Cancer		Black	White
Total	Total	721.5	665.2
	Men	965.8	774.3
	Women	558.9	594.8
	Age 20–39	65.0	77.7
	Age 40–64	617.9	550.3
	Age 65+	2,317.7	2,236.5
Breast	Total	168.6	197.5
	Women	168.6	197.5
	Age 20–39	28.7	24.9
	Age 40–64	203.4	240.0
	Age 65+	381.0	477.7
Colon and rectum	Total	87.6	74.9
	Men	101.0	88.9
	Women	78.7	64.3
	Age 20–39	3.9	3.2
	Age 40–64	61.4	46.0
	Age 65+	316.5	303.6
Lung and bronchus	Total	112.8	88.0
	Men	166.8	110.3
	Women	76.3	72.2
	Age 20–39	2.5	1.5
	Age 40–64	90.8	59.5
	Age 65+	394.3	346.3
Prostate	Total	379.9	233.2
	Men	379.9	233.2
	Age 20–39	0.4	0.2
	Age 40–64	266.8	150.3
	Age 65+	1,438.2	942.3
Uterine cervix	Total	17.0	12.7
	Women	17.0	12.7
	Age 20–39	7.4	9.5
	Age 40–64	20.2	15.7
	Age 65+	30.2	12.9

Source: SEER 1996–2001

Note: Total incidence rates are age- and sex-adjusted.
Gender-specific incidence rates are age-adjusted.
Total cancer excludes basal and squamous cell skin
cancer and carcinomas in situ.

Prevalence rates (percent)

Cancer		Black	White
Total	**Total**	3.44	5.82
	Men	3.21	4.59
	Women	3.66	6.95
	Age 20–39	0.90	1.81
	Age 40–64	3.11	5.30
	Age 65+	10.29	16.43
Breast	**Total**	1.23	2.41
	Women	1.23	2.41
	Age 20–39	0.20	0.16
	Age 40–64	1.34	2.42
	Age 65+	3.01	6.90
Colon and rectum	**Total**	0.47	0.60
	Men	0.45	0.63
	Women	0.49	0.57
	Age 20–39	0.02	0.03
	Age 40–64	0.35	0.37
	Age 65+	1.82	2.55
Lung and bronchus	**Total**	0.17	0.25
	Men	0.13	0.30
	Women	0.21	0.20
	Age 20–39	0.01	0.01
	Age 40–64	0.19	0.21
	Age 65+	0.52	0.89
Prostate	**Total**	1.85	1.56
	Men	1.85	1.56
	Age 20–39	——	——
	Age 40–64	0.89	0.66
	Age 65+	9.77	8.55
Uterine cervix	**Total**	0.49	1.35
	Women	0.49	1.35
	Age 20–39	0.44	1.59
	Age 40–64	0.62	1.36
	Age 65+	0.30	0.85

Source: NHIS 1999–2003

Note: Total prevalence rates are age- and sex-adjusted.
Gender-specific prevalence rates are age-adjusted.
Total cancer excludes basal and squamous cell skin
cancer and carcinomas in situ.
—— Insufficient sample size for reliable estimates.

Appendix III: Prevalence of concurrent medical conditions in adults with cancer

Men

Concurrent medical conditions	Prevalence (%)					
	Age 40 to 64			Age 65 +		
	Black	White	p-value	Black	White	p-value
Angina	10.7	7.3	0.592	5.2	12.9	0.001
Arthritis	38.5	41.1	0.827	55.0	48.2	0.321
Asthma	10.9	8.6	0.734	9.4	7.9	0.534
Chronic obstructive pulmonary disease	7.8	9.6	0.651	9.8	13.7	0.183
Diabetes	16.6	9.8	0.137	24.1	17.7	0.116
Heart attack	12.5	9.9	0.534	10.5	20.1	0.001
High cholesterol	33.3	41.4	0.444	37.1	44.2	0.357
Hypertension	56.5	42.2	0.065	69.3	55.0	0.002
Lower back pain	28.4	38.5	0.098	28.0	31.7	0.358
Stroke	8.8	4.6	0.148	17.5	10.1	0.034

Women

Concurrent medical conditions	Prevalence (%)					
	Age 40 to 64			Age 65 +		
	Black	White	p-value	Black	White	p-value
Angina	3.3	3.9	0.650	8.6	10.1	0.484
Arthritis	52.3	45.5	0.336	59.6	60.1	0.937
Asthma	17.2	15.6	0.581	16.0	10.6	0.170
Chronic obstructive pulmonary disease	10.1	12.5	0.327	13.9	12.4	0.632
Diabetes	15.6	9.2	0.031	33.7	14.6	0.000
Heart attack	3.5	3.1	0.753	16.5	10.8	0.120
High cholesterol	42.6	35.1	0.284	55.3	43.7	0.127
Hypertension	52.9	31.1	0.000	81.7	58.7	0.000
Lower back pain	42.1	41.8	0.956	29.0	38.0	0.028
Stroke	4.0	3.0	0.443	12.2	8.5	0.217

Source: NHIS 1999–2003

Appendix IV: Screening guidelines* for selected cancers

Cancer site	Screening examination	Recommendation
Breast	Mammography	Annually, age 40 and older
	Clinical breast examination	Every 3 years, ages 20–39 Annually, age 40 and older
Colon and rectum†	Fecal occult blood test (FOBT) or Fecal immunochemical test (FIT)	Annually, age 50 and older
	Flexible sigmoidoscopy	Every 5 years
	Yearly FOBT or FIT plus flexible sigmoidoscopy every 5 years	
	Colonoscopy	Every 10 years
Prostate	Digital rectal exam (DRE) and Prostate-specific antigen (PSA)	Annually, age 50 and older (for men with at least 10-year life expectancy). Men at high risk should begin testing at age 45, those at highest risk should begin at age 40.
Uterine cervix	Pap test (conventional or liquid-based)	Annually (if conventional test, every 2 years if liquid-based test) beginning 3 years after women begin having vaginal intercourse, or no later than age 21.
		Every 2–3 years, women aged 30 to 69 with 3 consecutive normal Pap test results
		Discontinuation, women 70 and older with 3 consecutive normal Pap test results and no abnormal Pap tests in last 10 years

*American Cancer Society 2005 guidelines are presented for those cancers with screening results shown in the Selected Cancers section of this report. The complete list of cancer screening guidelines can be found in: The American Cancer Society. Cancer Facts & Figures 2005. Atlanta, GA: American Cancer Society; 2005.

The guidelines are also available at: http://www.cancer.org/docroot/PED/content/PED_2_3X_ACS_Cancer_Detection_Guidelines_36.asp

† Adults should begin colorectal cancer screening earlier and/or undergo screening more often if they have any of the following colorectal cancer risk factors.

• a personal history of colorectal cancer or adenomatous polyps

• a strong family history of colorectal cancer or polyps (cancer or polyps in a first-degree relative younger than 60 or in two first-degree relatives of any age) Note: a first-degree relative is defined as a parent, sibling, or child.

• a personal history of chronic inflammatory bowel disease

• a family history of a hereditary colorectal cancer syndrome (familial adenomatous polyposis or hereditary non-polyposis colon cancer)

This issue of Pfizer Facts, a collaboration between the National Medical Association (NMA) and Pfizer, presents new analyses of national databases to gain insight into the burden of cancer among black adults, with comparisons to the white adult population.

About Pfizer: Pfizer Inc discovers, develops, manufactures, and markets leading prescription medicines for humans and animals and many of the world's best-known consumer brands.

About NMA: The National Medical Association is the nation's oldest and largest organization representing the interest of more than 30,000 physicians of African descent and the patients they serve. For additional information, visit www.nmanet.org.

Pfizer

U.S. Pharmaceuticals

PG006038
© 2005 Pfizer Inc.
All rights reserved.

Printed in USA
July 2005