Cancer Facts & Figures for African Americans 2009-2010

American Cancer Society®

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Acknowledgments

The production of this report would not have been possible without the efforts of: Jeanine Bade; Sherry Bailey; Priti Bandi, MS; Linda Blount, MPH; Otis Brawley, MD; Sheila Buchert; Vilma Cokkinides, PhD, MSPH; Ronit Elk, PhD; Ted Gansler, MD, MBA; Yongping Hao, PhD; Joseph Hill; Debbie Kirkland, BA; Kelly Green Kahn, MPA; Hope Landrine, PhD; Brenda McNeal; Taylor Murray; Dearell Niemeyer, MPH; Barbara Powe, PhD, RN; Erin Reidy, MA; Cheri Richard, MS; Mona Shah, MPH; Robert Smith, PhD; Kristen Sullivan, MS, MPH; Michael Thun, MD, MS; and Elizabeth Ward, PhD.

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This publication attempts to summarize current scientific information. Except when specified, it does not represent the official policy of the American Cancer Society.

Suggested citation: American Cancer Society. *Cancer Facts & Figures for African Americans 2009-2010.* Atlanta: American Cancer Society, 2009.

National Home Office: American Cancer Society, Inc., 250 Williams Street, NW, Atlanta, GA 30303-1002, (404) 320-3333

Cancer Statistics

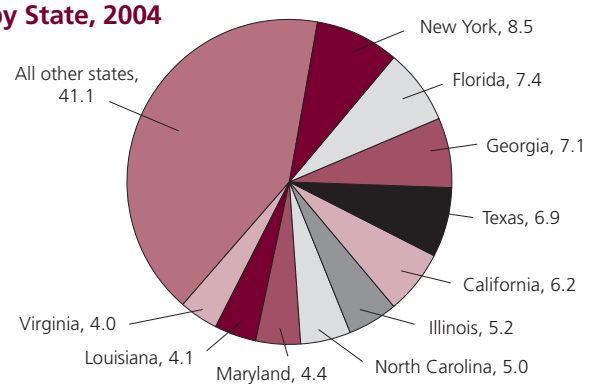
Introduction

The Census Bureau estimates that in 2010 there will be approximately 40.5 million African Americans living in the US, comprising 13 percent of the US population. The African American population is not equally dispersed throughout the country, but is concentrated in New York, the South, California, and Illinois (Figure 1). In 2004, about 1 out of every 4 African Americans resided in New York, Florida, or Georgia and approximately 2.6 million were born outside the US. Ninety-six percent of foreign-born African Americans were either born in Latin America (66%) or Africa (30%). It is important to note that the African American population is not homogenous. Although historically the concept of race was erroneously thought to reflect biologic differences, it is now understood to be primarily a social construct.

African Americans have the highest death rate and shortest survival of any racial and ethnic group in the US for most cancers. The causes of these inequalities are complex and are thought to reflect social and economic disparities more than biologic differences associated with race. These include inequalities in work, wealth, income, education, housing and overall standard of living, barriers to high-quality health care, and racial discrimination.

Although the overall racial disparity in cancer death rates is decreasing, in 2005, the death rate for all cancers combined continued to be 33% higher in African American men and 16% higher in African American women than in white men and women, respectively. Furthermore, African Americans bear a

Figure 1. African American Population* (%) in the US by State, 2004



*Data limited to household population and exclude those living in institutions, college dormitories, and other group quarters. Percentages do not sum to 100 due to rounding.

Source: US Census Bureau, 2004 American Community Survey, Selected Population Profiles, S0201.

Table 1. Leading Causes of Death among African Americans and Whites, 2005

All ages	No. of Deaths (%)				Death Rate*	
Cause of death	**African American**		**White**		**African American**	**White**
Heart diseases	74,150	(25.3)	564,769	(26.9)	272.7	206.9
Cancer	63,161	(21.6)	482,127	(23.0)	224.1	182.7
Cerebrovascular diseases	17,537	(6.0)	121,868	(5.8)	65.5	44.4
Accidents (unintentional injuries)	13,647	(4.7)	100,354	(4.8)	38.8	40.0
Diabetes	12,970	(4.4)	59,755	(2.8)	47.2	22.4
All causes	292,761	(100.0)	2,097,892	(100.0)	1020.8	783.0

Children ages 1-14	No. of Deaths (%)				Death Rate*	
Cause of death	**African American**		**White**		**African American**	**White**
Accidents	828	(31.4)	3,047	(37.5)	8.9	6.9
Homicide	291	(11.0)	385	(4.7)	3.1	0.9
Cancer	236	(8.9)	1,080	(13.3)	2.6	2.5
Congenital anomalies (birth defects)	194	(7.3)	670	(8.3)	2.1	1.5
Heart diseases	122	(4.6)	252	(3.1)	1.3	0.6
All causes	2,640	(100.0)	8,118	(100.0)	28.3	18.3

*Rates are per 100,000 and age adjusted to the 2000 US standard population.

Source: National Center for Health Statistics, Centers for Disease Control and Prevention, 2008.

disproportionately high burden from other diseases as well (Table 1). Life expectancy is lower for African Americans than whites among men (69.5 vs. 75.7 years) and women (76.3 vs. 80.8 years).[2]

How many African Americans alive today have ever had cancer?

The National Cancer Institute estimates that approximately 876,500 African Americans with a history of cancer were alive in January 2005. Some of these individuals were cancer-free, while others still had evidence of cancer and may have been undergoing treatment.

How many new cases and deaths are expected to occur among African Americans in 2009?

About 150,090 new cancer cases are expected to be diagnosed among African Americans in 2009. The most commonly diagnosed cancers among African American men are prostate (34%), lung (16%), and colon and rectum (10%). Among African American women, the most common cancers are breast (25%), lung (12%), and colon and rectum (11%) (Figure 2).

About 63,360 African Americans are expected to die from cancer in 2009. Figure 2 shows the expected number of cancer deaths from the 10 leading sites of cancer death among African American men and women. Lung cancer accounts for the largest number of cancer deaths among both men (31%) and women (23%), followed by prostate cancer in men (12%) and breast cancer in women (19%). For both men and women, cancer of the colon and rectum and pancreas are expected to rank third and fourth, respectively, as the leading sites for cancer deaths.

How do death rates vary by state?

Table 2 shows variations by state in the death rates for all cancers combined and selected cancer sites. For all cancers combined, the highest death rates among

Figure 2. Leading Sites of New Cancer Cases* and Deaths among African Americans, 2009 Estimates

Cases		Deaths	
Male	**Female**	**Male**	**Female**
Prostate 27,130 (34%)	Breast 19,540 (25%)	Lung & bronchus 9,820 (31%)	Lung & bronchus 7,080 (23%)
Lung & bronchus 12,600 (16%)	Lung & bronchus 9,730 (12%)	Prostate 3,690 (12%)	Breast 6,020 (19%)
Colon & rectum 7,980 (10%)	Colon & rectum 8,540 (11%)	Colon & rectum 3,460 (11%)	Colon & rectum 3,660 (12%)
Kidney 3,590 (5%)	Uterine corpus 3,780 (5%)	Pancreas 1,810 (6%)	Pancreas 2,100 (7%)
Non-Hodgkin lymphoma 2,920 (4%)	Pancreas 2,490 (3%)	Liver & intrahepatic bile duct 1,610 (5%)	Ovary 1,330 (4%)
Oral cavity & pharynx 2,550 (3%)	Kidney 2,480 (3%)	Stomach 1,110 (3%)	Uterine corpus 1,240 (4%)
Pancreas 2,390 (3%)	Thyroid 2,360 (3%)	Leukemia 970 (3%)	Myeloma 910 (3%)
Liver & intrahepatic bile duct 2,240 (3%)	Non-Hodgkin lymphoma 2,310 (3%)	Esophagus 880 (3%)	Leukemia 860 (3%)
Urinary bladder 2,180 (3%)	Uterine cervix 1,990 (3%)	Oral cavity & pharynx 880 (3%)	Liver & intrahepatic bile duct 770 (2%)
Myeloma 1,990 (3%)	Myeloma 1,900 (2%)	Myeloma 870 (3%)	Stomach 740 (2%)
All sites 79,280 (100%)	All sites 70,810 (100%)	All sites 32,020 (100%)	All sites 31,340 (100%)

*Excludes basal and squamous cell skin cancers and in situ carcinoma except urinary bladder.

Note: Percentages may not total 100% due to rounding.

Table 2. Death Rates* for Selected Cancers in African American Males and Females by State, 2001-2005

	All Cancers		Lung and Bronchus		Colon and Rectum		Prostate	Breast	Uterine Cervix
	Male	Female	Male	Female	Male	Female	Male	Female	Female
Alabama	344.4	178.9	102.5	33.1	34.2	20.8	73.9	32.5	5.8
Alaska	311.3	125.8	†	†	†	†	†	†	†
Arizona	232.2	169.9	67.4	40.4	27.1	19.7	38.7	35.1	†
Arkansas	354.0	191.4	116.8	34.5	34.8	24.8	67.9	33.6	6.8
California	294.1	192.6	81.6	42.7	29.6	23.0	57.7	33.8	3.5
Colorado	255.0	162.0	76.1	36.4	24.7	20.6	50.9	23.3	†
Connecticut	258.2	165.9	67.0	33.3	24.5	20.0	48.8	27.2	†
Delaware	304.0	191.7	94.1	50.3	32.5	21.1	53.8	28.7	†
Dist. of Columbia	336.6	191.0	94.9	41.6	33.0	22.1	56.6	34.9	4.7
Florida	277.4	166.1	75.3	29.3	28.6	20.3	59.5	29.9	5.0
Georgia	315.6	174.0	93.1	31.0	30.1	22.7	65.5	30.5	4.5
Hawaii	133.1	†	†	†	†	†	†	†	†
Illinois	334.0	213.9	99.9	50.0	36.7	25.4	61.6	38.4	6.2
Indiana	341.7	209.1	107.7	53.5	35.2	23.6	60.1	34.7	3.5
Iowa	337.6	201.6	111.0	58.4	38.5	†	57.9	32.9	†
Kansas	353.2	204.7	103.7	45.2	36.3	26.4	68.9	36.0	†
Kentucky	349.3	214.2	118.7	58.5	33.2	30.3	61.4	35.3	5.6
Louisiana	370.1	207.0	119.4	42.4	36.9	25.1	60.0	40.9	5.5
Maryland	299.4	185.9	88.3	42.8	32.1	22.6	58.2	33.1	4.0
Massachusetts	267.8	164.3	71.6	35.0	23.6	18.9	50.3	26.8	†
Michigan	309.0	195.0	97.1	47.7	31.8	21.8	49.1	34.7	4.4
Minnesota	297.1	175.3	75.9	44.8	21.3	20.6	56.3	28.7	†
Mississippi	351.9	189.6	112.9	36.8	33.0	25.5	72.1	36.2	6.7
Missouri	348.6	204.9	112.7	51.4	32.8	23.6	51.3	37.0	5.2
Nebraska	326.3	192.9	122.5	50.6	39.1	21.2	46.8	37.6	†
Nevada	246.4	178.5	64.4	40.9	28.1	20.2	49.2	28.5	†
New Jersey	296.2	188.6	82.2	41.1	30.8	22.7	57.7	33.1	5.0
New Mexico	260.6	136.6	67.9	†	†	†	61.5	†	†
New York	240.6	156.7	61.4	30.0	26.3	18.4	50.5	29.3	4.3
North Carolina	327.0	179.6	98.2	34.1	30.0	21.3	67.3	33.7	4.1
Ohio	335.7	203.6	105.0	50.2	34.6	23.7	57.1	35.6	3.7
Oklahoma	328.0	191.5	105.8	44.8	41.9	23.5	56.1	37.1	†
Oregon	297.4	172.8	86.1	39.4	†	†	65.9	24.9	†
Pennsylvania	327.5	208.4	101.7	52.3	31.3	22.6	58.0	35.9	4.4
Rhode Island	290.5	155.1	74.3	41.0	†	†	64.0	†	†
South Carolina	338.3	176.8	95.6	30.3	33.4	21.1	68.1	32.1	4.9
Tennessee	355.9	208.8	116.2	47.2	38.7	26.5	64.6	36.8	6.3
Texas	331.5	198.1	107.3	44.1	35.7	24.0	54.4	35.7	5.8
Utah	220.0	158.4	†	†	†	†	†	†	†
Virginia	335.2	189.3	99.6	40.2	33.4	22.6	63.7	35.9	3.5
Washington	260.9	173.8	81.2	40.1	22.8	22.0	46.3	26.0	†
West Virginia	297.1	205.1	71.2	48.5	35.5	29.9	60.2	34.9	†
Wisconsin	349.4	194.8	119.0	56.6	32.4	18.4	51.6	27.3	4.7
United States	313.0	186.7	93.1	39.9	31.8	22.4	59.4	33.5	4.7

*Rates are per 100,000 and age adjusted to the 2000 US standard population. †Rates are suppressed when they are based on fewer than 25 deaths.

Note: Idaho, Maine, Montana, New Hampshire, North Dakota, South Dakota, Vermont, and Wyoming are not included in the table because fewer than 25 cancer deaths occurred in these states among both African American men and women during 2001-2005.

Source: US Mortality Data 1969-2005, National Center for Health Statistics, Centers for Disease Control and Prevention, 2008.

African American men are found in Louisiana, Tennessee, and Arkansas. Among African American women, the highest death rates are reported in Kentucky, Illinois, and Indiana. Lung cancer is the leading cause of cancer death in both men and women. Lung cancer death rates are highest in the South (men) and Midwest (women) (Figure 3).

How has the occurrence of cancer changed over time?

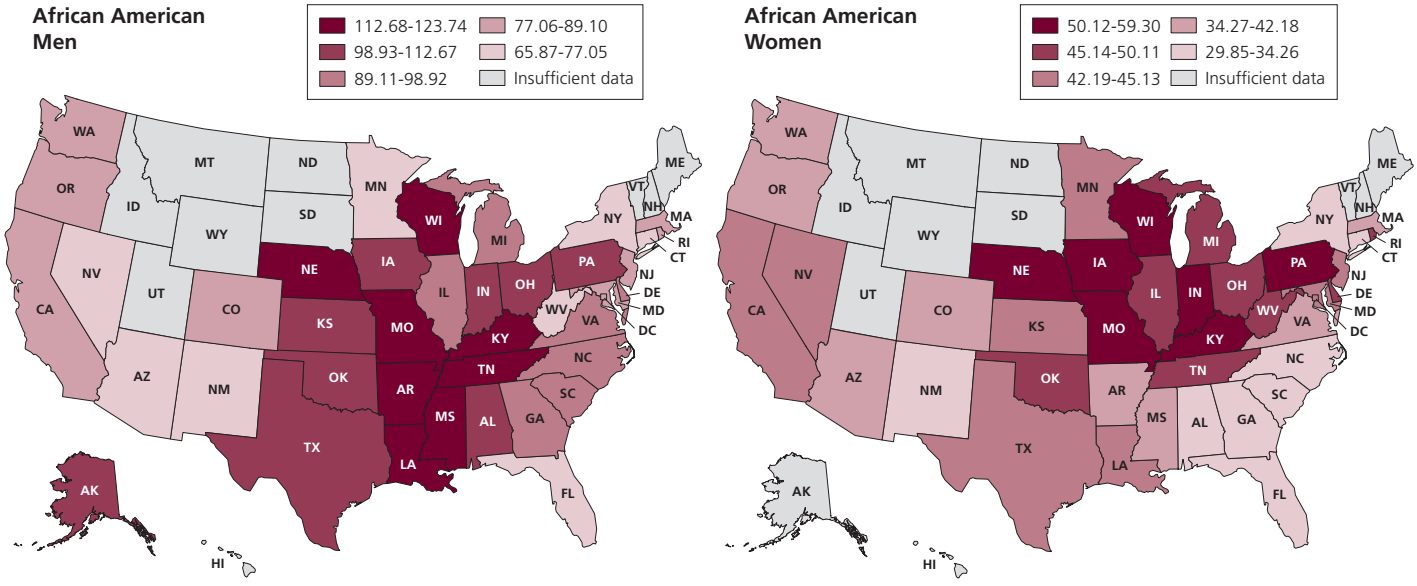
In African Americans, incidence rates for all cancers combined increased from the mid-1970s to the early 1990s, with a larger increase in men than in women. Since the early 1990s, however, rates decreased in African American men and stabilized in African American women.

Death rates among African Americans for all cancers combined have been decreasing since 1991 after increasing from 1975 to 1991. The decline was larger in men (2.5% per year since 1995) than in women (1.3% per year since 1997). Similar trends were observed among whites from 1991-2005, with a greater reduction in the rate among men than women.

In men, the death rate for all cancers combined continued to be substantially higher among African Americans than whites during 1975-2005 (Figure 4). Similar trends were seen among women, although the gap is much smaller. The racial difference in overall cancer death rates is due largely to cancers of the breast and colon and rectum in women and cancers of the prostate, lung and bronchus, and colon and rectum in men. In recent years, death rates for lung cancer and prostate cancer have decreased faster in African American men than white men. There have also been more rapid declines for other smoking-related cancers in African American men.[3] These decreases have contributed to the recent narrowing of the disparity in overall cancer mortality between African American and white men. In contrast to lung and prostate cancer, the disparity gap has widened for colorectal cancer in both men and women and for breast cancer in women.

For certain cancers, the racial disparity reflects higher incidence rates in African Americans than whites; for virtually all sites, it reflects poorer survival due to later stage at diagnosis and less access to appropriate and timely treatment.

Figure 3. Lung Cancer Death Rates* among African American Men and Women, by State, 2001-2005

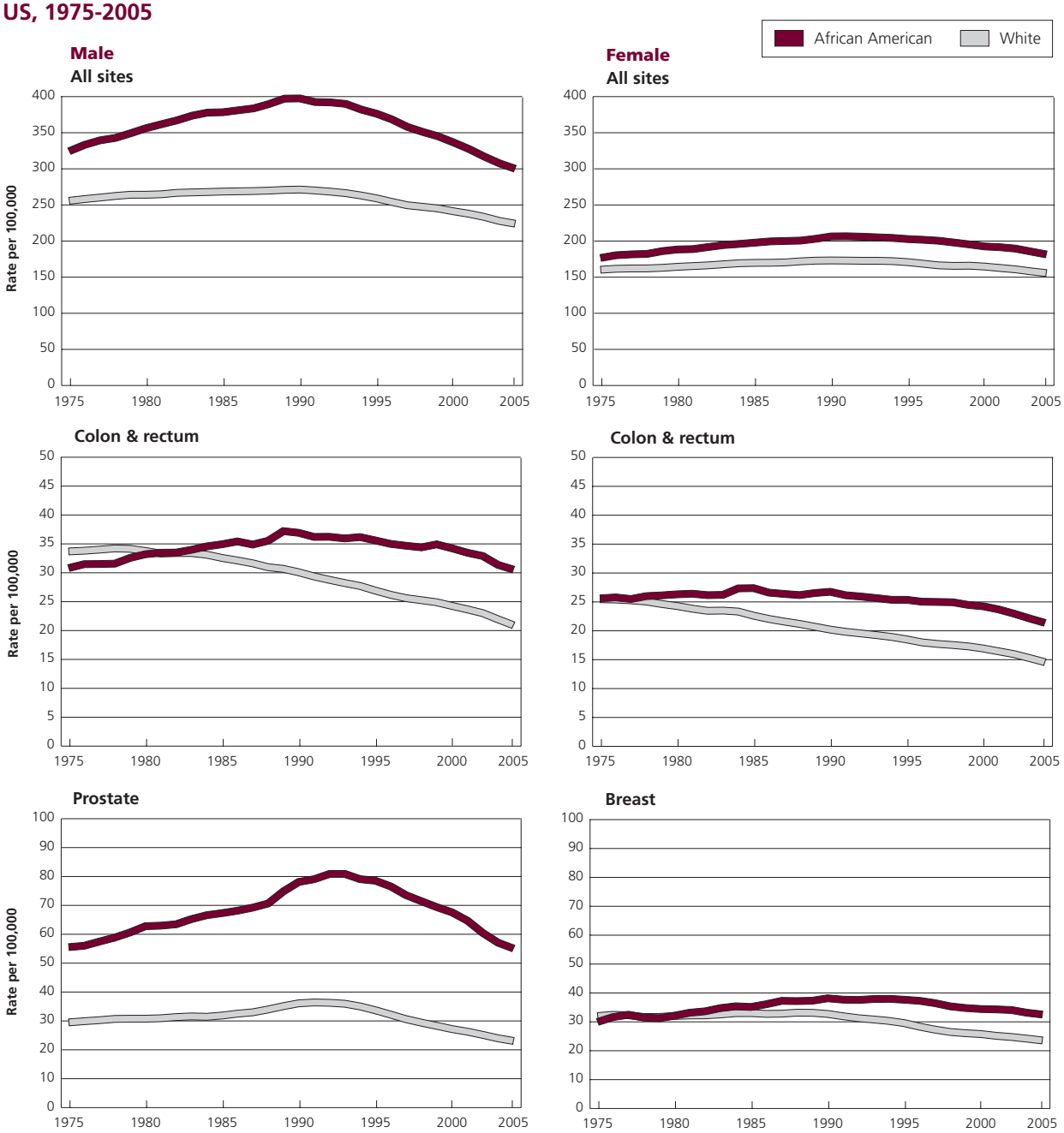


*Per 100,000 and age adjusted to the 2000 US Standard Population. **Note:** Rates are suppressed when they are based on fewer than 20 deaths (insufficient data).
Source: National Center for Health Statistics, Centers for Disease Control and Prevention, 2008.

Stage Distribution and Cancer Survival

Five-year relative survival rates indicate the likelihood of surviving 5 years from the time of diagnosis, taking into account deaths from other causes, and are commonly used to monitor progress in the early detection and treatment of cancer. The overall 5-year relative survival rate among African Americans has improved from approximately 27% during 1960-1963 to 58% during 1996-2004.[4] However, African Americans continue to be less likely than whites to survive 5 years at each stage of diagnosis for most cancer sites (Figure 5). Much of this difference is believed to be due to barriers that prevent

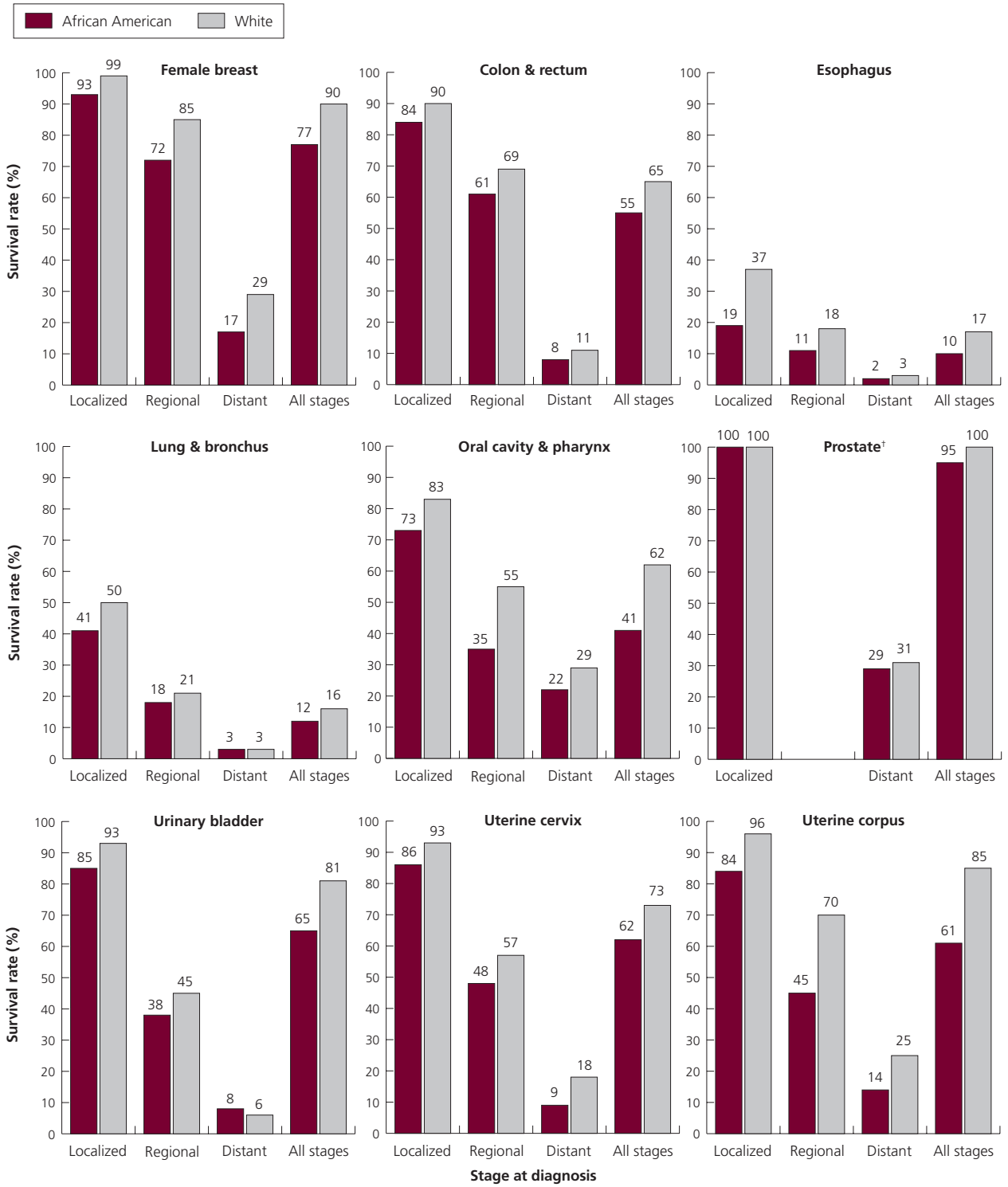
Figure 4. Trends in Death Rates* for Selected Cancer Sites among African Americans and Whites, US, 1975-2005



*Rates are per 100,000 population and age adjusted to the 2000 US standard population and are 2-year moving averages.

Source: National Center for Health Statistics, Centers for Disease Control and Prevention, 2008.

Figure 5. Five-Year Relative Survival Rates* for Selected Cancers by Race and Stage, US, 1996-2004



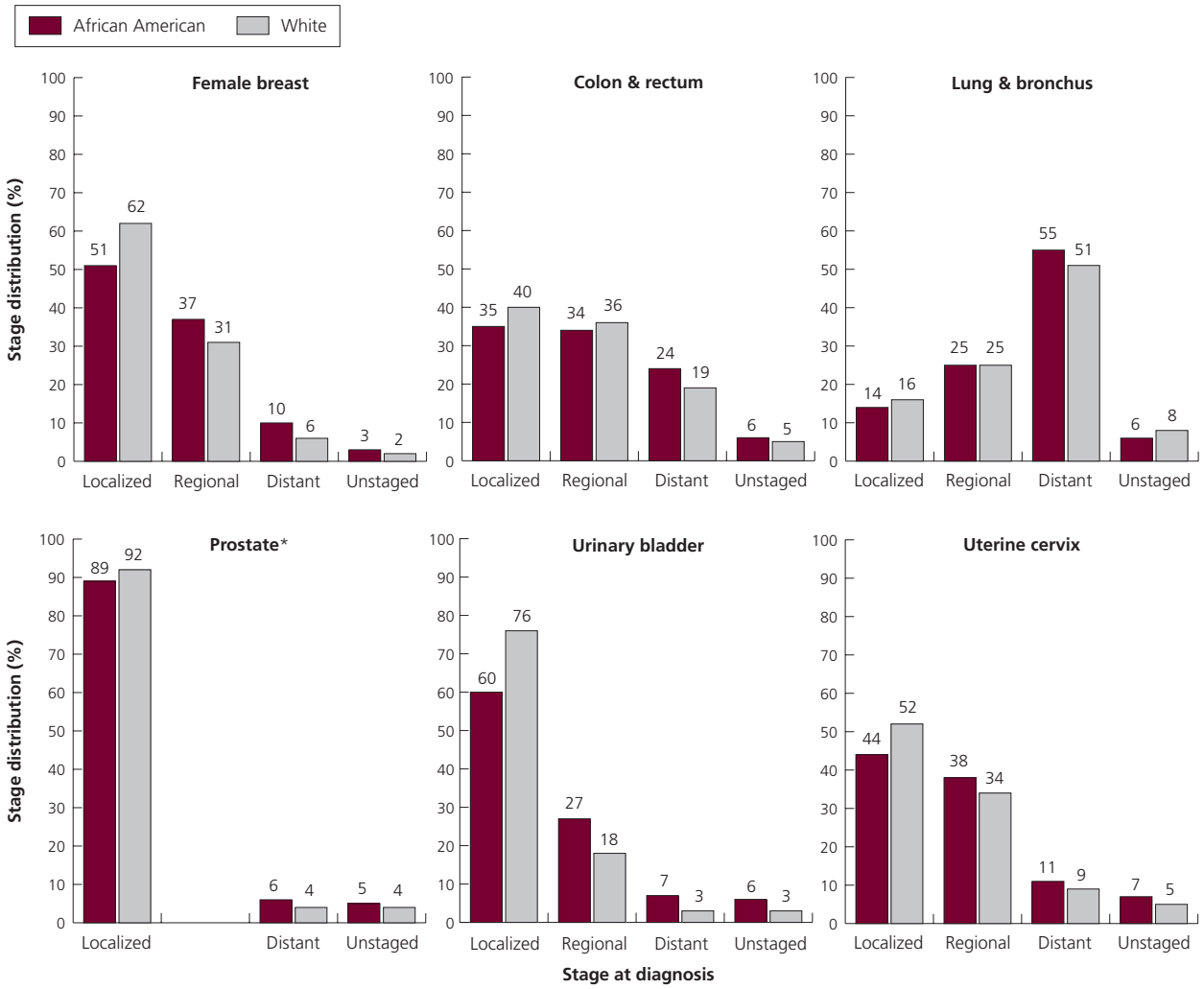
*Survival rates are based on patients diagnosed between 1996-2004 and followed through 2005. †The rate for localized stage represents localized and regional stages combined. **Local:** An invasive cancer confined entirely to the organ of origin. **Regional:** A malignant cancer that either 1) has extended beyond the limits of the organ of origin directly into surrounding organs or tissues; 2) involves regional lymph nodes by way of lymphatic system; or 3) has both regional extension and involvement of regional lymph nodes. **Distant:** A malignant cancer that has spread to parts of the body remote from the primary tumor either by direct extension or by discontinuous metastasis to distant organs, tissues, or via the lymphatic system to distant lymph nodes.

Source: Surveillance, Epidemiology, and End Results (SEER) Program, 17 SEER Registries, 1973-2005, Division of Cancer Control and Population Sciences, National Cancer Institute, 2008.

timely and high-quality medical care, which result in a later stage at diagnosis, when the disease has spread to regional or distant tissues (Figure 6), and disparities in treatment.[5-9] Identifying and understanding these factors has become an active and important area of research.

Although 5-year relative survival rates for all cancers combined are useful in monitoring trends over time and survival differences between groups, they are not useful for predicting individual prognosis because many important factors that influence individual survival are not reflected in the estimate. Five-year relative survival rates for specific cancers and factors that influence survival are discussed in the next section.

Figure 6. Stage Distribution for Selected Cancers in African Americans and Whites, US, 1996-2004



Percentages may not exactly total 100% due to rounding.

*The percentage of prostate cancers diagnosed at the localized stage represents localized and regional stages combined.

Source: Surveillance, Epidemiology, and End Results (SEER) Program, 17 SEER Registries, 1973-2005, Division of Cancer Control and Population Sciences, National Cancer Institute, 2008.

Selected Cancers

Female Breast

New Cases

Breast cancer is the most commonly diagnosed cancer among African American women. An estimated 19,540 new cases of breast cancer are expected to occur among African American women in 2009. The overall incidence rate of breast cancer is 10% lower in African American women than in white women. Among younger women (under age 40), however, the incidence is higher in African Americans than in whites. Breast cancer incidence rates increased rapidly among African American women during the 1980s, largely due to increased detection as the use of mammography screening increased (Figure 7). Incidence rates stabilized among African American women aged 50 and older during 1995-2005, while rates decreased by 0.7% per year among women under age 50 from 1991-2005.[4]

At this time, there is no guaranteed way to prevent breast cancer, which is why regular mammograms are so important. A woman's best overall preventive health strategy is to reduce her known risk factors as much as possible by avoiding weight gain and obesity, engaging in regular physical activity, and minimizing alcohol intake.[10] Women should consider the increased risk of breast cancer associated with menopausal hormone therapy (MHT) use when evaluating treatment options for menopausal symptoms. More information about breast cancer is available in the American Cancer Society publication *Breast Cancer Facts & Figures*, available online at www.cancer.org.

Deaths

Breast cancer is the second most common cause of cancer death among African American women, surpassed only by lung cancer. An estimated 6,020 deaths from breast cancer are expected to occur among African American women in 2009. Breast cancer death rates among African American women increased 1.5% annually from 1975-1992 and declined thereafter (Figure 8). This decrease was larger in women under 50 (1.9% per year) than in women aged 50 and older (1.2%).[4] The steady decline in overall female breast cancer mortality since the early 1990s has been attributed to improvements in both early detection and treatment.[11,12] However, the decrease in breast cancer death rates has been smaller in African American than white women (Figure 4).

During the early 1980s, breast cancer death rates for white and African American women were approximately equal, yet in the period 2001-2005, African American women had a 37% higher death rate than white women. This difference accounts for more than one-third (37%) of the overall cancer mortality disparity between African American and white women. The higher breast cancer mortality rate among African American women compared to white women occurs despite a lower incidence rate. Factors that contribute to the higher death rates among African American women include differences in access to and utilization of early detection and treatment and differences in tumor characteristics.

Survival

The 5-year relative survival rate for breast cancer diagnosed in 1996-2004 among African American women was 77%, compared to 90% among whites (Figure 5). This difference can be attributed to both later stage at detection and poorer stage-specific survival among African American women. Only about half (51%) of breast cancers diagnosed among African American women are diagnosed at a local stage, compared to 62% among white women (Figure 6). Within each stage, 5-year survival is also lower among African American women.

Studies have documented unequal receipt of prompt, high-quality treatment for African American women compared to white women.[6, 13-15] There is also evidence that aggressive tumor characteristics are more common in African American than white women.[16-18] Other studies suggest factors associated with socioeconomic status may influence the biologic behavior of breast cancer.[19-21] Thomson and colleagues, studying an all white Scottish population, suggest that poor women with breast cancers are more likely to be diagnosed with estrogen receptor-negative tumors.[22] Poverty likely influences disease pathology and genetic markers of disease through lifelong dietary and reproductive habits.

Cervix

New cases

An estimated 1,990 cases of invasive cervical cancer are expected to be diagnosed among African American women in 2009. Incidence rates have decreased steadily over the past several decades in both African American and white women; however, incidence rates of cervical cancer remain 32% higher in African American women (Table 3). As Pap screening has become more common, most cervical abnormalities are detected at a preinvasive stage rather than as invasive cancer.

In 2006, the Food and Drug Administration (FDA) approved Gardasil – the first vaccine developed to prevent cervical cancer – for use in females aged 9 to 26 years.[23] Another vaccine (Cervarix) has been approved for use in 67 countries around the world and is currently awaiting approval by the FDA for use in the US. Women will need to continue getting Pap tests, because these vaccines target only the most common strains of human papillomavirus (HPV), the virus that causes cervical cancer, and because the vaccines do not provide protection for women who may already be infected with HPV.

Deaths

An estimated 700 deaths from cervical cancer are expected in 2009. Although mortality rates have declined steadily over the past several decades due to the prevention and early detection of cancer as a result of screening (Figure 8), African American women are more than twice as likely to die from cervical cancer as white women (Table 4).

Survival

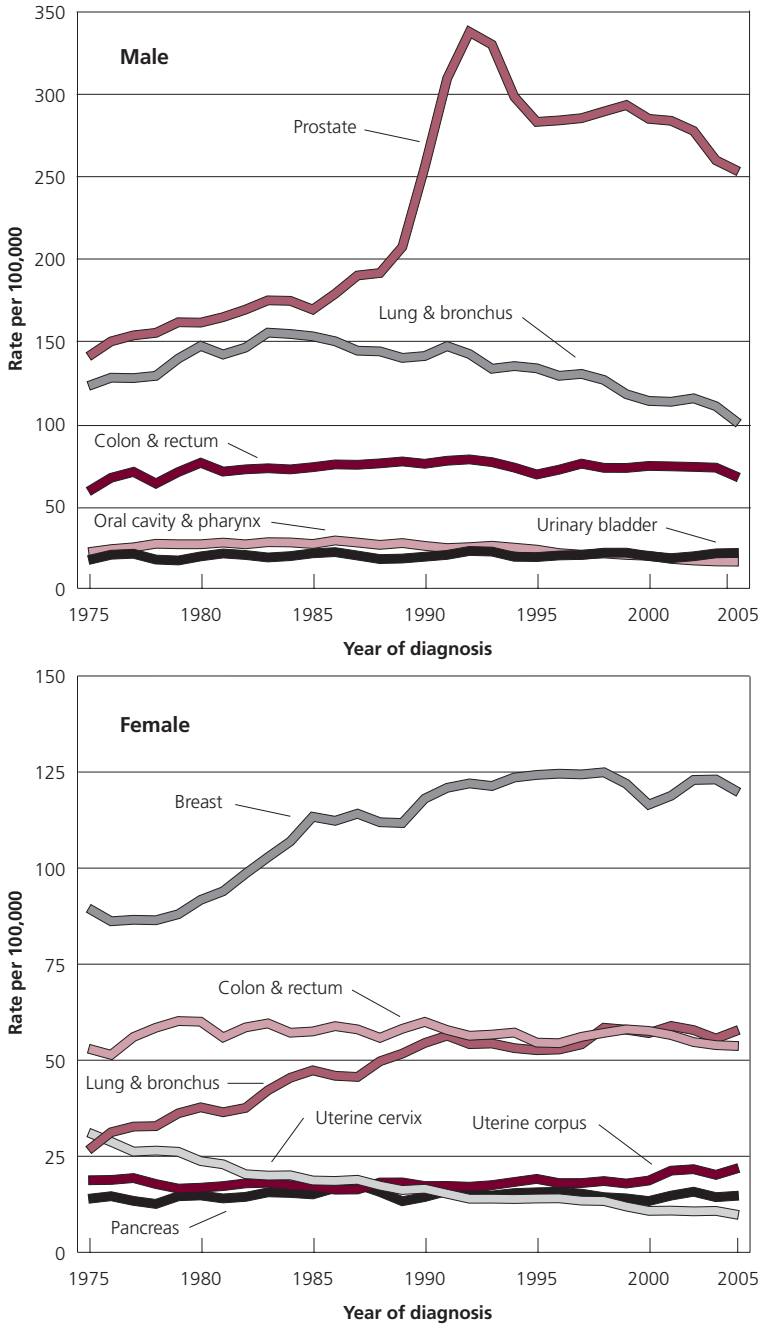
The overall 5-year relative survival for cervical cancer among African American women is 62%, compared to 73% among white women (Figure 5). African American women are more likely to be diagnosed with regional- or distant-stage disease for which survival is poorer (Figure 6). However, nearly all cases of cervical cancer can be prevented if a woman is screened regularly.

Colon and Rectum

New Cases

An estimated 16,520 cases of colorectal cancer are expected to occur among African Americans in 2009.

Figure 7. Age-Adjusted Incidence Rates* for Selected Cancers, African American Males and Females, US, 1975-2005



*Rates are delay adjusted and age adjusted to the 2000 US standard population and are 2-year moving averages.

Source: Surveillance, Epidemiology, and End Results (SEER) Program, 9 SEER Registries, 1973-2005, Division of Cancer Control and Population Sciences, National Cancer Institute, 2008.

Table 3. Comparison of Cancer Incidence Rates between African Americans and Whites, US, 2001-2005

Males Cancer	African American Rate*	White Rate*	Absolute Difference†	Rate Ratio‡	Females Cancer	African American Rate*	White Rate*	Absolute Difference†	Rate Ratio‡
Kaposi sarcoma	2.6	1.1	1.5	2.35	Myeloma	9.8	4.1	5.6	2.36
Myeloma	14.4	6.6	7.8	2.19	Stomach	8.9	4.7	4.3	1.91
Small intestine	3.9	2.1	1.7	1.80	Small intestine	2.7	1.5	1.2	1.80
Stomach	17.4	10.0	7.4	1.74	Esophagus	3.0	1.9	1.1	1.55
Larynx	10.9	6.3	4.6	1.73	Larynx	2.0	1.4	0.6	1.46
Liver & intrahepatic bile duct	13.2	8.2	5.0	1.60	Pancreas	14.3	10.0	4.3	1.43
Prostate	248.5	156.7	91.8	1.59	Liver & intrahepatic bile duct	4.0	2.9	1.1	1.37
Lung & bronchus	107.6	79.3	28.3	1.36	Uterine cervix	10.8	8.2	2.6	1.32
Pancreas	16.2	13.0	3.2	1.25	Colon & rectum	54.5	43.2	11.4	1.26
Esophagus	10.0	8.0	2.0	1.24	Soft tissue (including heart)	2.9	2.7	0.2	1.08
Colon & rectum	71.2	58.9	12.3	1.21	Kidney & renal pelvis	10.1	9.5	0.6	1.06
Kidney & renal pelvis	21.3	18.8	2.5	1.13	Lung & bronchus	54.6	54.9	-0.3	0.99
Oral cavity & pharynx	17.2	15.7	1.5	1.10	Oral cavity & pharynx	5.9	6.1	-0.2	0.97
Soft tissue (including heart)	3.7	3.8	-0.1	0.97	Breast	117.6	130.6	-13.1	0.90
Hodgkin lymphoma	2.9	3.3	-0.4	0.87	Hodgkin lymphoma	2.3	2.7	-0.4	0.84
Leukemia	13.0	16.7	-3.7	0.78	Uterine corpus	20.3	24.3	-4.1	0.83
Non-Hodgkin lymphoma	18.4	24.3	-6.0	0.76	Leukemia	8.0	9.9	-1.9	0.81
Brain & other nervous system	4.7	8.4	-3.7	0.56	Vulva	1.9	2.3	-0.4	0.81
Mesothelioma	1.2	2.2	-1.0	0.54	Urinary bladder	7.7	10.0	-2.3	0.77
Thyroid	2.7	4.9	-2.3	0.54	Ovary	10.1	14.1	-4.0	0.72
Urinary bladder	20.4	40.6	-20.2	0.50	Non-Hodgkin lymphoma	12.2	17.1	-4.9	0.71
Testis	1.4	6.3	-5.0	0.22	Brain & other nervous system	3.6	6.0	-2.4	0.60
Melanoma of the skin	1.1	28.5	-27.4	0.04	Thyroid	8.0	14.1	-6.1	0.57
					Melanoma of the skin	0.9	18.5	-17.6	0.05
All sites	651.5	551.4	100.1	1.18	**All sites**	398.9	423.6	-24.7	0.94

*Rates are per 100,000 and age adjusted to the 2000 US standard population. †Absolute difference: rate in African Americans minus rate in whites. ‡Rate ratio is the rate in African Americans divided by the rate in whites based on 2 decimal places.

Source: Surveillance, Epidemiology, and End Results (SEER) Program, 17 SEER Registries 2000-2005, Division of Cancer Control and Population Sciences, National Cancer Institute, 2008.

Colorectal cancer is the third most common cancer in both African American men and women. Incidence rates have been slowly decreasing among African American men during 1989-2005 and in African American women from 1980-2005 (Figure 7). Nevertheless, incidence rates among African American men and women remain higher than those among whites.

Modifiable factors that increase risk for colorectal cancer include physical inactivity, obesity, and high consumption of red or processed meats.[24,25] Major non-modifiable risk factors include a family history of colorectal cancer and a personal history of colorectal cancer, colorectal polyps, or chronic inflammatory bowel disease. Studies consistently report that regular physical activity is associated with lower risk of colon cancer.[24,26] Based on these studies and other health benefits of regular physical activity, the American Cancer Society recommends engaging in at least moderate activity for 30 minutes or more on 5 or more days per week. Forty-five to 60 minutes of intentional physical activity is preferable. Screening tests that detect and remove adenomatous polyps are the most reliable method of preventing colorectal cancer.

Deaths

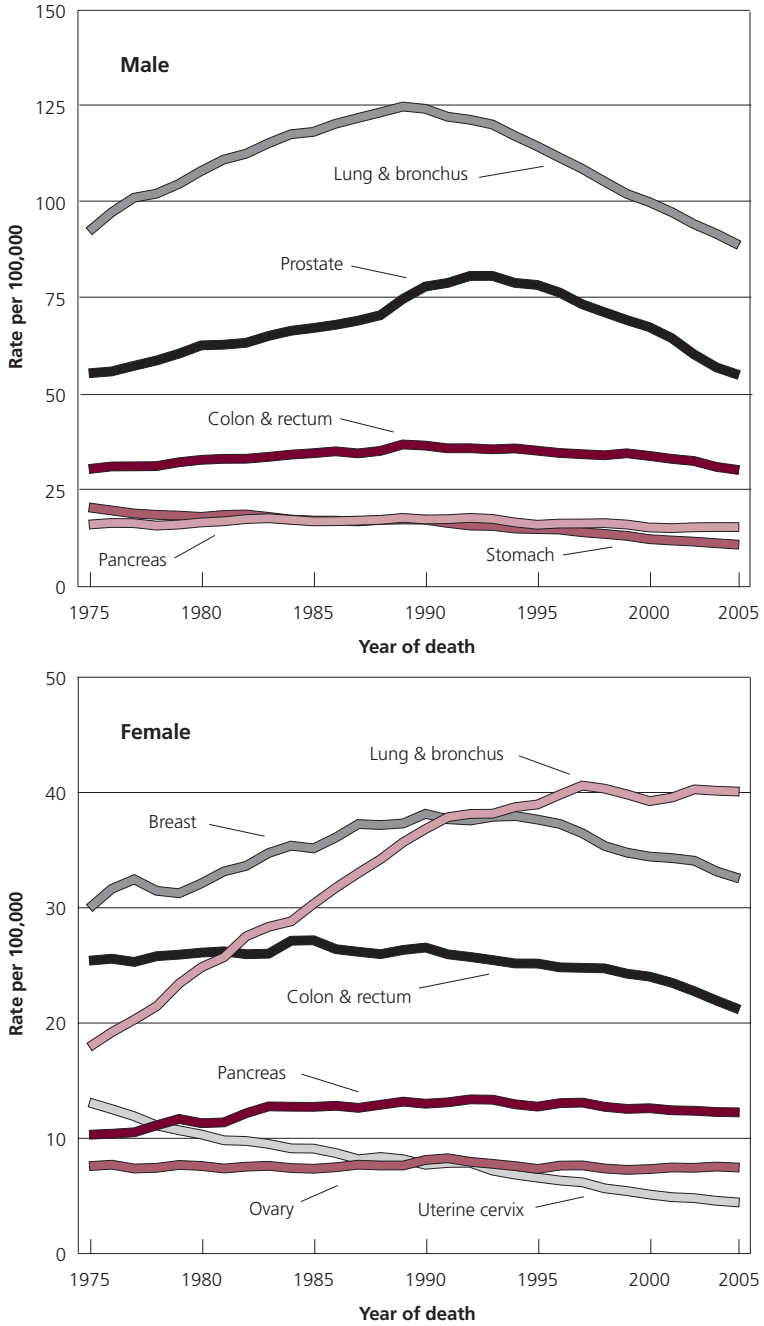
An estimated 7,120 deaths from colorectal cancer are expected to occur among African Americans in 2009. Colorectal cancer is the third leading cause of cancer death in both African American men and women. Death rates from colorectal cancer began to decline in 1985 among African American women, with a steeper decline occurring from 2001 to 2005 (3.5% per year). Among African American men, the decline began slowly in 1990; more recently (2000-2005) the decrease averaged 2.5% per year. The decrease in both men and women reflects declining incidence rates and improvements in early detection and treatment.

Since the early 1980s, there has been an increasing divergence in colorectal cancer mortality rates between whites and African Americans due to slower declines in African Americans (Figure 4). Before 1980, colorectal cancer mortality rates were lower in African American men than white men and similar among women of both races; however, since that time, mortality rates have been higher in African Americans. Higher death rates from colorectal cancer account for about one-fourth (28%) of the current disparity in overall cancer death rates between African American and white women and 14% of the disparity between African American and white men.

Survival

The 5-year relative survival rate for colorectal cancer among African Americans improved from 46% in 1975-1977 to 56% in 1996-2004; however, this improvement was smaller than that in whites (51% to 66% over the same period).[4] Some of the disparity in survival is due to later stage at diagnosis among African Americans – 35% of colorectal cancers in African Americans are diagnosed at a localized stage compared to 40% in whites (Figure 6). However, lower 5-year relative survival rates are also seen in African Americans within each stage at diagnosis (Figure 5), presumably reflecting disparities in access to and receipt of high-quality treatment and differences in tumor biology.[27] Several studies document that African Americans with colorectal cancer are less likely than white patients to receive recommended surgical treatment and adjuvant therapy.[28]

Figure 8. Age-Adjusted Mortality Rates* for Selected Cancers, African American Males and Females, US, 1975-2005



*Rates are age adjusted to the 2000 US standard population and are 2-year moving averages.
Source: US Mortality Data, 1969-2005, National Center for Health Statistics, Centers for Disease Control and Prevention, 2008.

Lung and Bronchus

New Cases

An estimated 22,330 cases of lung cancer are expected to occur among African Americans in 2009, accounting for about 15% of the cancer diagnoses in this group. Cancer of the lung is the second most common cancer in both African American men and women. The average incidence rate for cancers of the lung and bronchus during 2001-2005 was 36% higher in African American men than in white men, whereas incidence rates are comparable between African American and white women (Table 3). After increasing for many decades, the rate of lung cancer among African American men has been decreasing since the mid-1980s (Figure 7). The

Table 4. Comparison of Cancer Death Rates between African Americans and Whites, US, 2001-2005

Males Cancer	African American Rate*	White Rate*	Absolute Difference†	Rate Ratio‡	Females Cancer	African American Rate*	White Rate*	Absolute Difference†	Rate Ratio‡
Prostate	59.4	24.6	34.8	2.41	Stomach	5.5	2.5	3.0	2.17
Stomach	11.5	5.0	6.5	2.29	Myeloma	6.0	2.8	3.2	2.17
Larynx	4.8	2.1	2.7	2.26	Uterine cervix	4.7	2.3	2.4	2.06
Myeloma	8.3	4.3	4.0	1.92	Uterine corpus	7.1	3.9	3.2	1.83
Breast	0.6	0.3	0.3	1.90	Larynx	0.8	0.5	0.3	1.73
Oral cavity & pharynx	6.7	3.8	2.9	1.77	Small intestine	0.5	0.3	0.2	1.72
Small intestine	0.7	0.4	0.3	1.71	Esophagus	2.8	1.6	1.2	1.72
Liver & intrahepatic bile duct	10.3	6.7	3.7	1.55	Colon & rectum	22.4	15.3	7.1	1.46
Colon & rectum	31.8	22.1	9.7	1.44	Breast	33.5	24.4	9.1	1.37
Lung & bronchus	93.1	71.3	21.7	1.30	Liver & intrahepatic bile duct	3.9	2.9	1.1	1.37
Pancreas	15.4	12.1	3.3	1.28	Pancreas	12.4	9.1	3.3	1.37
Esophagus	9.8	7.8	2.0	1.26	Urinary bladder	2.8	2.3	0.5	1.24
Soft tissue (including heart)	1.5	1.4	0.0	1.02	Soft tissue (including heart)	1.4	1.1	0.2	1.21
Kidney & renal pelvis	6.1	6.2	-0.1	0.98	Thyroid	0.5	0.5	0.1	1.15
Hodgkin lymphoma	0.5	0.6	0.0	0.93	Oral cavity & pharynx	1.6	1.5	0.2	1.11
Leukemia	8.6	10.2	-1.7	0.84	Kidney & renal pelvis	2.7	2.8	-0.1	0.98
Thyroid	0.4	0.5	-0.1	0.74	Lung & bronchus	39.9	42.0	-2.1	0.95
Urinary bladder	5.4	7.9	-2.5	0.68	Leukemia	5.2	5.7	-0.5	0.91
Non-Hodgkin lymphoma	6.4	9.7	-3.2	0.67	Hodgkin lymphoma	0.3	0.4	-0.1	0.82
Brain & other nervous system	3.2	5.7	-2.5	0.56	Ovary	7.5	9.2	-1.7	0.81
Melanoma of the skin	0.5	4.4	-3.9	0.10	Non-Hodgkin lymphoma	4.2	6.2	-2.0	0.68
					Brain & other nervous system	2.1	3.9	-1.8	0.55
					Melanoma of the skin	0.4	2.0	-1.6	0.20
All sites	313.0	230.7	82.3	1.36	All sites	186.7	159.2	27.5	1.17

*Rates are per 100,000 and age adjusted to the 2000 US standard population. †Absolute difference: rate in African Americans minus rate in whites. ‡Rate ratio: rate in African Americans divided by the rate in whites based on 2 decimal places.

Source: Surveillance, Epidemiology, and End Results (SEER) Program, 17 SEER Registries 2000-2005, Division of Cancer Control and Population Sciences, National Cancer Institute, 2008.

incidence rate of lung cancer among African American women has been stable since 1990.

Deaths

An estimated 16,900 deaths from lung cancer are expected to occur among African Americans in 2009. Lung cancer kills more African Americans than any other cancer. Among males, the average annual death rate for cancers of the lung and bronchus between 2001-2005 was 30% higher in African Americans compared to whites (Table 4). Lung cancer death rates in men began to decline in 1989, with a more substantial decrease during the past decade (2.8% per year during 1994-2005). The death rate in women continues to increase, though at a much slower rate since 1992 (0.3% per year). The decline in men and the slower rate of increase among women are the result of decreases in smoking prevalence over the previous 40 years.

Survival

The 5-year relative survival rate for lung cancer is lower in African Americans than in whites: 12% and 16%, respectively (Figure 5). When lung cancer is detected at a localized stage, the 5-year relative survival rate among African Americans is 41%; however, only 14% of lung cancer cases are detected at this early stage because symptoms generally do not appear until the disease is advanced. Studies have shown that when lung cancer is diagnosed early, African Americans are less likely than whites to receive surgery, the treatment with the best chance for cure, even after accounting for socioeconomic factors.[29] However, a study within the military health care system, where access to medical care is universal, found no disparity in lung cancer treatment or survival between African Americans and whites.[30]

Table 5. Probability of Developing Invasive Cancers Over Selected Age Intervals among African Americans by Sex, US, 2003-2005*

		Birth to 39 (%)	40 to 59 (%)	60 to 69 (%)	70 and Older (%)	Birth to Death (%)
All sites†	Male	1.10 (1 in 91)	11.07 (1 in 9)	19.59 (1 in 5)	37.79 (1 in 3)	40.47 (1 in 2)
	Female	1.71 (1 in 58)	8.63 (1 in 12)	10.01 (1 in 10)	23.82 (1 in 4)	32.33 (1 in 3)
Prostate	Male	0.02 (1 in 4142)	4.21 (1 in 24)	9.75 (1 in10)	16.10 (1 in 6)	18.25 (1 in 5)
Breast	Female	0.53 (1 in 189)	3.56 (1 in 28)	2.96 (1 in 34)	5.44 (1 in 18)	9.91 (1 in 10)
Lung & bronchus	Male	0.04 (1 in 2725)	1.70 (1 in 59)	3.20 (1 in 31)	7.04 (1 in 14)	7.75 (1 in 13)
	Female	0.04 (1 in 2685)	1.06 (1 in 94)	1.81 (1 in 55)	4.17 (1 in 24)	5.45 (1 in 18)
Colon & rectum	Male	0.08 (1 in 1314)	1.13 (1 in 88)	1.87 (1 in 53)	4.72 (1 in 21)	5.01 (1 in 20)
	Female	0.08 (1 in 1277)	1.00 (1 in 100)	1.50 (1 in 67)	4.24 (1 in 24)	5.19 (1 in 19)
Uterine corpus	Female	0.05 (1 in 1866)	0.45 (1 in 223)	0.82 (1 in 122)	1.15 (1 in 87)	1.96 (1 in 51)
Urinary bladder‡	Male	0.02 (1 in 6626)	0.25 (1 in 400)	0.54 (1 in 187)	1.63 (1 in 61)	1.53 (1 in 66)
	Female	0.01 (1 in 19455)	0.09 (1 in 1090)	0.19 (1 in 527)	0.78 (1 in 129)	0.79 (1 in 126)
Non-Hodgkin lymphoma	Male	0.17 (1 in 600)	0.48 (1 in 209)	0.39 (1 in 253)	0.79 (1 in 126)	1.32 (1 in 76)
	Female	0.10 (1 in 1004)	0.29 (1 in 343)	0.32 (1 in 310)	0.69 (1 in 144)	1.13 (1 in 89)
Stomach	Male	0.02 (1 in 5347)	0.23 (1 in 433)	0.46 (1 in 218)	1.30 (1 in 77)	1.28 (1 in 78)
	Female	0.02 (1 in 6213)	0.12 (1 in 829)	0.19 (1 in 531)	0.88 (1 in 114)	0.90 (1 in 111)
Leukemia	Male	0.13 (1 in 795)	0.19 (1 in 520)	0.29 (1 in 347)	0.80 (1 in 126)	0.95 (1 in 105)
	Female	0.09 (1 in 1161)	0.13 (1 in 763)	0.17 (1 in 590)	0.58 (1 in 172)	0.76 (1 in 132)
Uterine cervix	Female	0.14 (1 in 701)	0.34 (1 in 297)	0.20 (1 in 490)	0.34 (1 in 291)	0.87 (1 in 115)

*For people free of cancer at beginning of age interval. †All Sites excludes basal and squamous cell skin cancers and in situ cancers except urinary bladder. ‡Includes invasive and in situ cancer cases.

Source: DevCan: Probability of Developing or Dying of Cancer Software, Version 6.3.0. Statistical Research and Applications Branch, National Cancer Institute, 2008. http://srab.cancer.gov/devcan.

Prostate

New Cases

An estimated 27,130 cases of prostate cancer are expected to occur among African American men in 2009, accounting for 34% of all cancers diagnosed in African American men. Between 2001-2005, the average annual prostate cancer incidence rate was 59% higher in African American men than in white men (Table 3). Incidence rates of prostate cancer in African American men increased sharply between 1989 and 1992, but have since been declining (Figure 7). The dramatic, but short-term increase in prostate cancer incidence rates was likely due to earlier diagnosis through increased use of the prostate-specific antigen (PSA) blood test. However, the reasons for the historically higher incidence rates among African American men compared to whites are less clear.

Deaths

Prostate cancer is the second leading cause of cancer deaths in African American men. It is estimated that 3,690 deaths from prostate cancer will occur in African American men in 2009. African American men have the highest mortality rate for prostate cancer of any racial or ethnic group in the US. The death rate for prostate cancer is 2.4 times higher in African American men than in white men (Table 4). This difference accounts for about 40% of the overall cancer mortality disparity between African American and white men. After a long period of increase, prostate cancer death rates in African American men peaked in 1993. Rates declined steadily thereafter and in 2000, began to decrease sharply at a rate of 5% per year. Some of the decreases in prostate cancer mortality may be due to improved surgical and radiologic treatment, dissemination of hormonal therapy for advanced-stage disease, and early detection.[31-35] However, the precise impact of each of these factors is difficult to estimate.

Survival

The overall 5-year relative survival rate for prostate cancer among African Americans is 95%, compared to nearly 100% among whites (Figure 5). Eighty-nine percent of all prostate cancers among African Americans are diagnosed at the local and regional stages, compared to 92% in whites; the 5-year relative survival rate for African Americans whose tumors are diagnosed at these early stages approaches 100%. Among African American men, 5-year survival rates drop to 29% when the cancer has spread to distant sites.

Table 6. Lifetime Probability of Developing or Dying from Invasive Cancers by Race and Sex, US, 2003-2005*

		Developing		Dying	
		African American (%)	White (%)	African American (%)	White (%)
All sites†	Male	40.47 (1 in 2)	43.98 (1 in 2)	23.54 (1 in 4)	23.35 (1 in 4)
	Female	32.33 (1 in 3)	38.30 (1 in 3)	19.30 (1 in 5)	19.87 (1 in 5)
Prostate	Male	18.25 (1 in 5)	15.25 (1 in 7)	4.43 (1 in 23)	2.65 (1 in 38)
Breast	Female	9.91 (1 in 10)	12.52 (1 in 8)	3.22 (1 in 31)	2.85 (1 in 35)
Lung & bronchus	Male	7.75 (1 in 13)	7.86 (1 in 13)	6.99 (1 in 14)	7.17 (1 in 14)
	Female	5.45 (1 in 18)	6.52 (1 in 15)	4.18 (1 in 24)	5.21 (1 in 19)
Colon & rectum	Male	5.01 (1 in 20)	5.53 (1 in 18)	2.40 (1 in 42)	2.22 (1 in 45)
	Female	5.19 (1 in 19)	5.06 (1 in 20)	2.42 (1 in 41)	2.04 (1 in 49)
Uterine corpus	Female	1.96 (1 in 51)	2.59 (1 in 39)	0.75 (1 in 133)	0.49 (1 in 204)
Urinary bladder‡	Male	1.53 (1 in 66)	4.09 (1 in 24)	0.42 (1 in 239)	0.86 (1 in 117)
	Female	0.79 (1 in 126)	1.26 (1 in 79)	0.32 (1 in 312)	0.33 (1 in 307)
Non-Hodgkin lymphoma	Male	1.32 (1 in 76)	2.33 (1 in 43)	0.46 (1 in 219)	0.96 (1 in 104)
	Female	1.13 (1 in 89)	1.99 (1 in 50)	0.43 (1 in 235)	0.79 (1 in 126)
Stomach	Male	1.28 (1 in 78)	0.99 (1 in 101)	0.85 (1 in 117)	0.49 (1 in 204)
	Female	0.90 (1 in 111)	0.59 (1 in 171)	0.59 (1 in 171)	0.33 (1 in 307)
Leukemia	Male	0.95 (1 in 105)	1.57(1 in 64)	0.64 (1 in 156)	1.03 (1 in 97)
	Female	0.76 (1 in 132)	1.11 (1 in 90)	0.55 (1 in 183)	0.73 (1 in 136)
Uterine cervix	Female	0.87 (1 in 115)	0.66 (1 in 151)	0.41 (1 in 241)	0.21 (1 in 470)

*For those free of cancer at beginning of age interval. †All sites excludes basal and squamous cell skin cancers and in situ cancers except urinary bladder. ‡Includes invasive and in situ cancer cases.

Source: DevCan: Probability of Developing or Dying of Cancer Software, Version 6.3.0. Statistical Research and Applications Branch, National Cancer Institute, 2008. http://srab.cancer.gov/devcan.

Risk Factor Statistics

Socioeconomic Status

Factors associated with socioeconomic status (SES) contribute to substantial differences in cancer incidence and mortality within, as well as among, racial and ethnic groups.[36] For example, for all cancer sites combined, mortality rates among both African American and white men with 12 or fewer years of education are more than twice those in men with higher levels of education (Table 7). Similarly, death rates for each of the 4 major cancer sites are higher in African American men and women with fewer years of education than in those with more years of education. Furthermore, from 1993 to 2001 death rates decreased faster among those with more years of education compared to those with less education in both African Americans and whites for multiple cancer sites.[37] Still, among individuals with the same level of education, death rates are higher in African Americans than in whites for the four major cancer sites with the exception of lung cancer in women with 12 or fewer years of education (Table 7).

No single factor (such as education or income) fully captures all of the important characteristics that may influence the association between SES and health, but for most cancers, risk is inversely related to SES, regardless of which measure is used. Compared with 8% of whites, 24% of African Americans live below the federal poverty threshold.[38] In addition, 21% of African Americans are uninsured, while only 11% of whites lack health insurance.

SES is highly correlated with cancer risk and outcomes across the continuum from prevention to palliative care. Persons with lower SES are more likely to engage

Table 7. Cancer Death Rates* by Educational Attainment, Race, and Sex, US, 2001

	Men		Women	
	African American	Non-Hispanic White	African American	Non-Hispanic White
All sites				
≤12 years of education	214.4	163.8	148.1	128.8
>12 years of education	90.1	73.0	103.3	73.0
RR (95% CI)	2.38 (2.33-2.43)	2.24 (2.23-2.26)	1.43 (1.41-1.46)	1.76 (1.75-1.78)
Lung				
≤12 years of education	73.2	61.0	30.8	37.1
>12 years of education	25.8	18.1	17.9	14.2
RR (95% CI)	2.84 (2.69-3.00)	3.36 (3.30-3.43)	1.72 (1.61-1.84)	2.6 (2.53-2.67)
Colorectal				
≤12 years of education	20.6	14.2	14.1	9.4
> 12 years of education	11.3	7.9	10.8	5.4
RR (95% CI)	1.81 (1.63-2.02)	1.81 (1.73-1.89)	1.31 (1.18-1.45)	1.72 (1.63-1.82)
Prostate				
≤12 years of education	10.5	3.3	NA	NA
>12 years of education	4.8	2.2	NA	NA
RR (95% CI)	2.17 (1.82-2.58)	1.47 (1.34-1.62)		
Breast				
≤12 years of education	NA	NA	36.1	25.2
>12 years of education	NA	NA	31.1	18.5
RR (95% CI)			1.16 (1.10-1.22)	1.36 (1.32-1.40)

*Rates are for individuals 25-64 years at death, per 100,000, and age adjusted to the 2000 US standard population. RR=relative risk; CI=confidence interval; NA=not applicable.

Source: Albano JD, Ward E, Jemal A,et al. Cancer Mortality in the United States by Education Level and Race. *JNCI*. 2007;99:1-11.

in behaviors that increase cancer risk, such as tobacco use and physical inactivity, in part because of marketing strategies that target these populations and in part because of environmental and community factors, such as fewer opportunities for physical activity and less access to fresh fruits and vegetables. Lower socioeconomic status is also associated with financial, structural, and personal barriers to health care, including lack of or inadequate health insurance, reduced access to recommended preventive care and treatment services, and lower literacy levels. Individuals with no health insurance and those with Medicaid insurance are more likely to be diagnosed with advanced cancer.[9]

Tobacco Use

Smoking is the most preventable cause of premature death in the US and is responsible for about 30% of all cancer deaths.[39,40] Cigarette smoking causes most cancers of the lung, lip, oral cavity, pharynx, esophagus, and larynx and contributes to cancers of the nasopharynx, nasal cavity and paranasal sinuses, pancreas, uterine cervix, kidney, bladder, stomach, and acute myeloid leukemia.[41] Both incidence and death rates for lung cancer are higher among African American men than among white men, due in part to differences in historical smoking behaviors. For most of the past 4 decades, the rate of adult smoking has been higher in African American men than in white men, though in recent years the rates have converged.

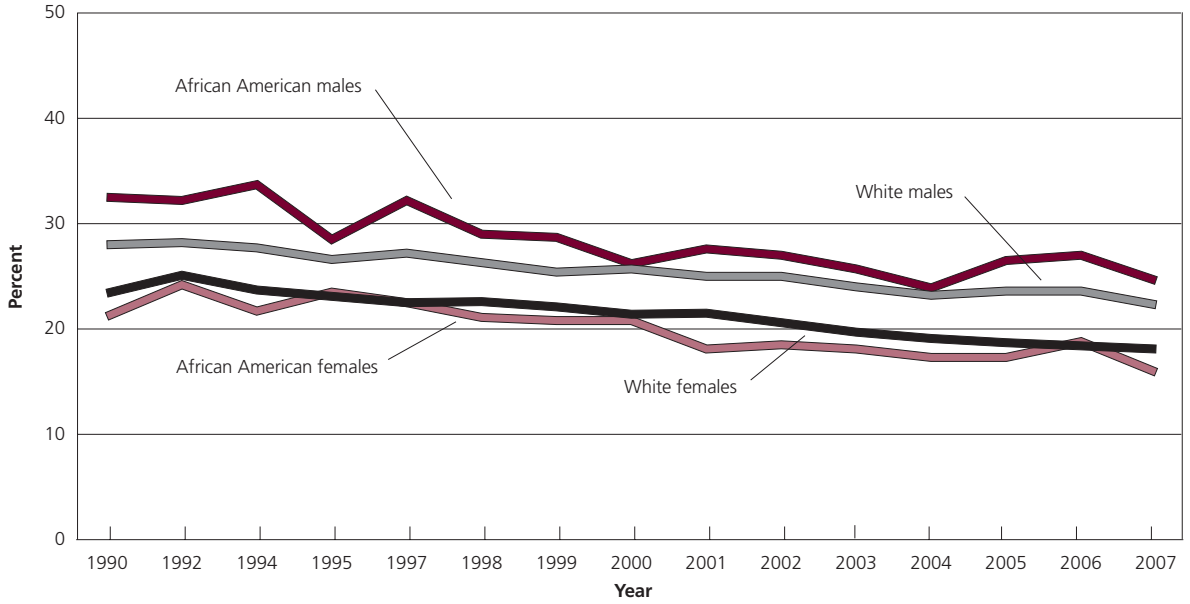
Adult Cigarette Smoking

In 2007, the prevalence of current cigarette smoking among adults was slightly higher among African American men (24.8%) than white men (23.1%), but lower among African American women (15.8%), compared to white women (19.8%) (Figure 9). In both groups the prevalence is much higher than the Healthy People 2010 goal of 12%.[42]

Youth Tobacco Use

For more than a decade, African American high school students have had a lower prevalence of cigarette smoking than other racial and ethnic groups. According to the Youth Risk Behavior Surveillance Survey, the prevalence of current cigarette smoking among African American high school students peaked in 1997 in boys and 1999 in girls and generally has been decreasing since (Figure 10). As of 2007, 14.9% of African American boys and 8.4% of African American girls smoke cigarettes.[43]

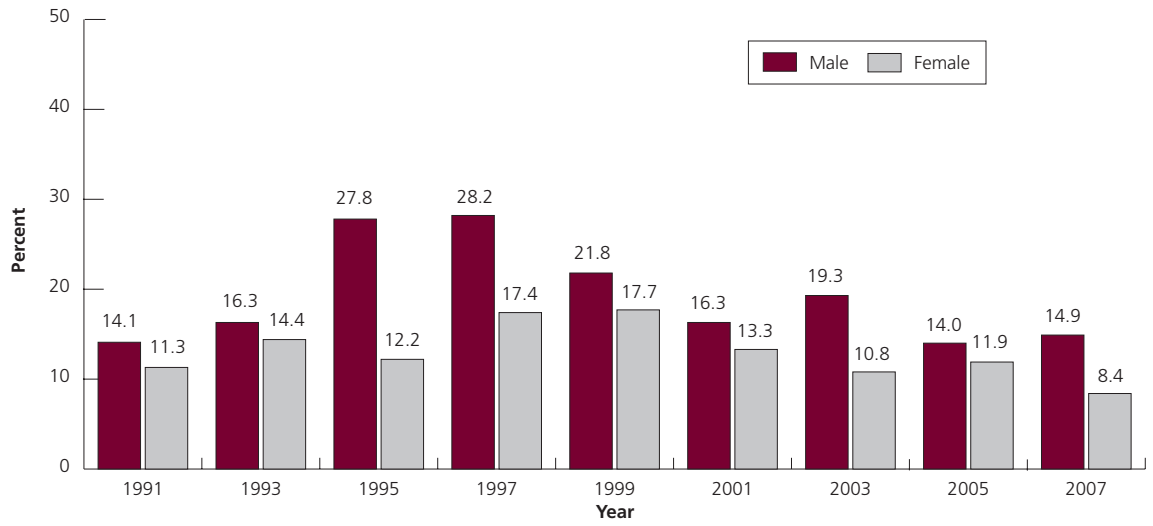
Figure 9. Trends in the Percentage of Current Cigarette Smokers*, Adults 18+ Years, US, 1990-2007†



*Persons who reported having smoked more than 100 cigarettes and who reported now smoking every day or on some days. †Data prior to 1997 are not strictly comparable with data for later years due to the 1997 questionnaire redesign.

Sources: Data for 1990-2006: National Center for Health Statistics, *Health, United States, 2007. With Chartbook on Trends in the Health of Americans*. Hyattsville, Maryland: 2007. Data for 2007: National Health Interview Survey Public Use Data File, 2007, National Center for Health Statistics, Centers for Disease Control and Prevention, 2008.

Figure 10. Trends in the Percentage of Current Cigarette Smokers*, Non-Hispanic African American High School Students, US, 1991-2005



*Smoked cigarettes on one or more of the 30 days preceding the survey.

Sources: Youth Risk Behavior Surveillance Survey, 1991-2007. National Center for Chronic Disease and Health Promotion, Centers for Disease Control and Prevention. *MMWR*. 2008;57(25);689-691.

Overweight, Obesity, and Physical Activity

Overweight and Obesity

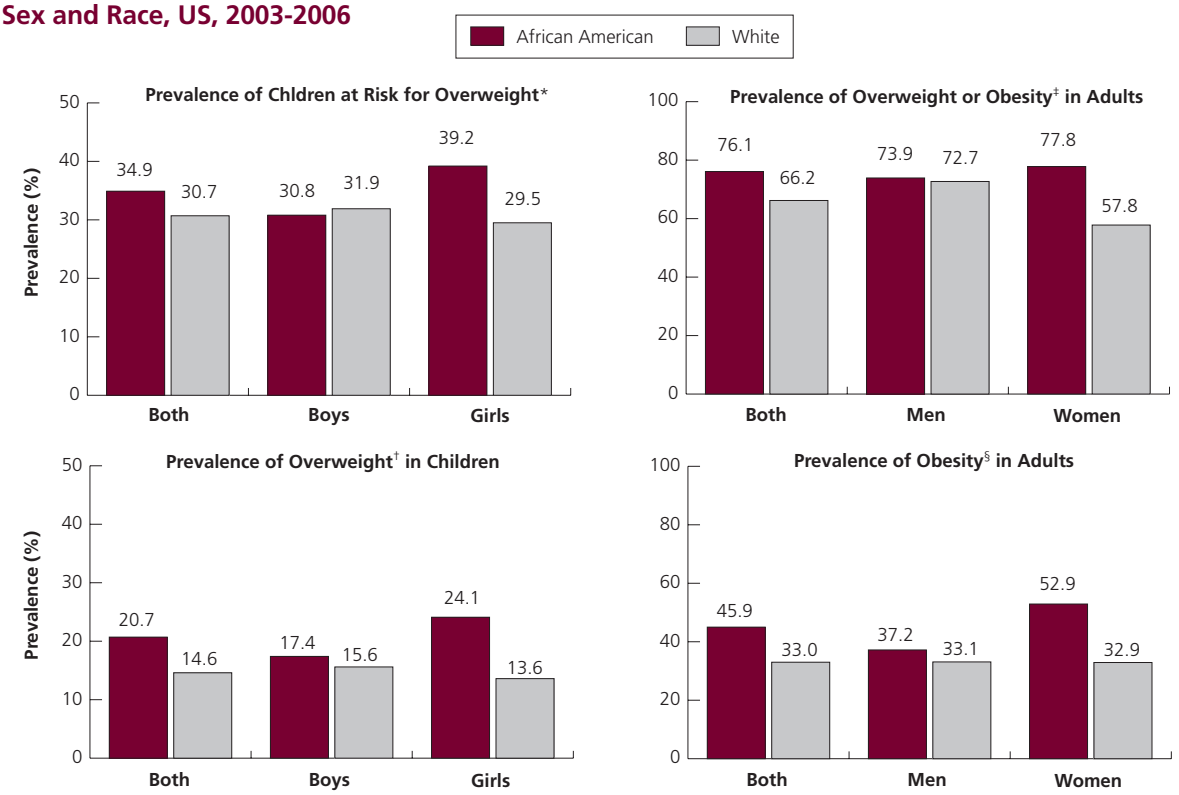
Obesity is the fastest growing health problem in the US. In addition to diabetes, heart disease, and stroke, obesity increases the risk of many cancers, including cancers of the breast (among postmenopausal women), colorectum, endometrium, esophagus, and kidney. It is also believed that obesity increases the risk for cancers of the pancreas, gallbladder, thyroid, ovary, and cervix and for multiple myeloma, Hodgkin disease, and aggressive prostate cancer. According to the definition of obese (BMI $\geq$30 kg/m^2), 46% of African American adults are considered obese and 76% of African American adults are considered overweight (BMI $\geq$25 kg/m^2) or obese (Figure 11). Overweight and obesity are more common among African American women and girls than white women and girls, while there is little difference among men and boys (Figure 11). The proportion of US adults who are overweight has increased greatly since 1980. This trend in adult obesity is moving away from the Healthy People 2010 goal of an obesity prevalence of only 15%.

Physical Activity

Studies have shown that regular physical activity is associated with lower risk of several types of cancer, including cancers of the breast, colon, prostate, and endometrium.[44-46] The American Cancer Society recommends that adults engage in at least 30 minutes of moderate-to-vigorous physical activity, above usual activities, on 5 or more days of the week and 45 to 60 minutes of intentional physical activity is preferable.[10]

Data from the 2006 National Health Interview Survey (NHIS) show that about one-half of African American adults report no leisure-time physical activity, with African American women more likely than men to

Figure 11. Prevalence of Obesity and Overweight in Children (2-19 Years) and Adults (20+ Years) by Sex and Race, US, 2003-2006



*BMI for Age ≥85th percentile. †BMI for Age ≥95th percentile. ‡BMI ≥ 25 kg/m². §BMI ≥30 kg/m².

Note: Overweight and obesity definitions are consistent with 2007 recommendations from the Expert Committee on the Assessment, Prevention and Treatment of Child and Adolescent Overweight and Obesity.

Source: National Health and Nutrition Examination Survey 2003-2006 (children) and 2005-2006 (adults). National Center for Health Statistics, Centers for Disease Control and Prevention. Data for children were previously published in Ogden CL, Carroll MD, McDowell MA, et al. High body mass index for age among US children and adolescents, 2003-2006. *JAMA* 2008:299(20):2401-2405.

be physically inactive (52.7% vs. 43.5%, respectively). While the level is low for both sexes, African American men were more likely than African American women to report regular, leisure-time physical activity (31.6% vs. 19.8%, respectively). It is important to note that these estimates do not include physical activity that occurs at the workplace.

Table 8. Leisure-Time Physical Activity (%) in Adults (18+ Years), by Race and Sex, US, 2006

	African American, Non-Hispanic	White, Non-Hispanic
Inactive*		
Total	48.6	35.2
Male	43.5	34.9
Female	52.7	35.3
Some leisure-time physical activity†		
Total	26.3	31.1
Male	24.9	30.1
Female	27.5	32.1
Regular leisure-time physical activity‡		
Total	25.0	33.7
Male	31.6	35.0
Female	19.8	32.6

Note: Leisure-time physical activity does not include physical activity that occurs at the workplace. Estimates are age adjusted to the 2000 US standard population. *No physical activity of at least 10 minutes. †At least one session of light/moderate or vigorous physical activity of at least 10 minutes duration. ‡Three or more sessions per week of vigorous activity lasting at least 20 minutes or 5 or more sessions per week of light/moderate activity lasting at least 30 minutes.

Source: National Health Interview Survey Public Use Data Tape 2006, National Center for Chronic Disease Prevention and Health Promotion, Centers for Disease Control and Prevention, 2008.

Use of Screening Tests

Screening tests are used to detect some cancers at stages when they are still highly curable. In fact, for cancers of the cervix and colorectum, early detection tests can lead to the prevention of cancer through the identification and removal of precancerous lesions. Screening can also detect cancer at an earlier stage, improve the chances of cure, extend life, and reduce the extent of treatment needed, thereby improving the quality of life for cancer survivors.

Breast and Cervical Cancer Screening

The American Cancer Society recommends that women aged 40 and older get an annual mammogram and an annual clinical breast examination by a health care professional (close to and preferably before the scheduled mammogram). In 2003, the American Cancer Society withdrew the recommendation that all women perform breast self-exams (BSE) monthly because research has shown that BSE offers little additional advantage over heightened breast awareness. The Society still recommends that health care providers inform women about the potential benefits and limitations of BSE, and instruct those who wish to perform it in the technique. All women should become familiar with both the appearance and feel of their breasts and report any changes to their physician promptly. Women aged 20 to 39 years should have a clinical breast examination by a health care professional every three years.

Several recent studies have shown that magnetic resonance imaging (MRI) is more sensitive than mammography in detecting tumors in women with an inherited susceptibility to breast cancer.[47-49] Annual screening using MRI in addition to mammography is recommended for women at high lifetime risk of the disease. (See page 26 for the American Cancer Society's screening guidelines for the early detection of breast cancer.)

In 2005, the proportion of African American women aged 40 and older who reported receiving a mammogram within the past two years was 64.9% (Table 9). Only 49.9% of African American women reported having a mammogram within the past year.

The American Cancer Society recommends that all women begin cervical cancer screening about three years after they begin having vaginal intercourse, but no later than age 21. (See screening guidelines, page 26.) In 2005, the rate of Pap testing within the previous 3 years was similar among African American (80.2%) and white women (81.4%).

The Centers for Disease Control and Prevention's National Breast and Cervical Cancer Early Detection Program (NBCCEDP) was begun in 1990 to improve access to breast cancer screening and diagnostic services for low-income women. This program, now available in all 50 states, the District of Columbia, 4 US territories, and 13 American Indian/Alaska Native tribal organizations, helps low-income, uninsured, and underinsured women gain access to breast and cervical cancer screening and diagnostic services. However, in 2006, only 15% of eligible women received a screening mammogram and only 6% of eligible women were screened for cervical cancer.[50] The American Cancer Society is committed to helping increase funding for NBCCEDP to reach to more eligible women. (See page 23 for more information on the NBCCEDP.)

Colon and Rectum Screening

The American Cancer Society recommends that both men and women should choose one of the several available screening methods beginning at age 50. (See screening guidelines, page 26.)

The use of colorectal screening tests among African Americans has increased over the past several years. In 1987, only 18% of African American women and 15% of African American men reported having had a recent colorectal screening test.[51] By 2005, the prevalence of a recent screening for colorectal cancer among African Americans had increased to 40% (Table 9).

Prostate Testing

The American Cancer Society recommends that health care providers discuss the potential benefits and limitations of prostate cancer early detection testing with men and offer the PSA blood test and the digital rectal examination (DRE) annually. Men at high risk of

developing prostate cancer (African Americans or men with a close relative diagnosed with prostate cancer before age 65) should have this discussion with their provider beginning at age 45. Men at even higher risk (because they have several close relatives diagnosed with prostate cancer at an early age) should have this discussion with their provider at age 40. (See screening guidelines on page 26.)

The use of the prostate-specific antigen (PSA) blood test to test for prostate cancer is lower in African American males, compared to white males aged 50 and older (33.5% vs. 42.9%, respectively) (Table 9).

Table 9. Use of Cancer Screening Tests, 2005

	Non-Hispanic African American (%)	Non-Hispanic White (%)
Breast cancer (women 40 and older)		
Mammogram		
(within the past year)	49.9	52.9
(within the past 2 years)	64.9	68.1
Cervical cancer (women 18 and older)		
Pap test*	80.2	81.4
Colon & rectum cancer (adults 50 and older)		
Endoscopy†	36.9	45.8
Fecal occult blood test (FOBT)‡	10.3	12.6
FOBT or endoscopy§	40.1	49.5
Prostate cancer (men 50 and older)		
Prostate specific antigen (PSA) test¶	33.5	42.9

Percentages are age adjusted to the 2000 US standard population.

*Pap test within the past 3 years. †Flexible sigmoidoscopy within 5 years or colonoscopy within 10 years. ‡Home FOBT within the past year. §Home FOBT within the past year, sigmoidoscopy within the past 5 years, or colonoscopy within the past 10 years. ¶PSA test within the past year for men who had not been diagnosed with prostate cancer.

Source: National Health Interview Survey, Public Use Data File, 2005. National Center for Health Statistics, Centers for Disease Control and Prevention, 2006.

Advocacy, Research, and Programs to Reduce Cancer Disparities

The American Cancer Society continues to work toward the 2015 goal of eliminating disparities in cancer morbidity and mortality through advocacy, research, education, and service. This section provides highlights and information on some of these efforts.

The American Cancer Society's Focus on Cancer Disparities

In 2006, the American Cancer Society embarked on an ambitious journey to define its role in the fight against inequities in cancer prevention services, access to care, incidence, and mortality. This effort built on a long history of research and programs designed to understand the causes and effects of cancer disparities, to describe the impact they have on US populations, and to implement and advocate for evidence-based strategies to reduce or eliminate these inequities. The Office of Health Disparities was formed in 2007 to lead the Society's strategic focus on cancer with four overarching goals:

1. Increase trust and credibility of the American Cancer Society among the disadvantaged segment of the population.
2. Ensure effective disparities-reducing practices through the provision of strategic guidance and resources.
3. Enhance and strengthen our capacity to enable community-based outreach in diverse and low-income communities.
4. Diversify our volunteer, staff, leadership, and donor base through all levels of the organization.

As this work has evolved, the need has been recognized to shift from the traditional definition of cancer health disparities as "differences in the cancer burden" to the concept of health equity. There will always be differences in the cancer experience among and between populations, but differences that are determined by social and economic circumstances or political barriers are health inequalities.

Health equity is the state of a population's health that occurs when there are no inequalities in access to and receipt of health information, prevention and treatment services, and end of life care. Of all population groups in the US, African Americans experience the greatest inequalities in overall cancer incidence and mortality. The American Cancer Society is committed to implementing evidence-based programs and policies, engaging communities, and building the necessary partnerships to promote health equity in the African American population and other underserved populations.

Advocacy

The Society has been able to greatly expand its advocacy work to support its legislative agenda through a partnership with its nonprofit, nonpartisan advocacy organization, American Cancer Society Cancer Action Network℠ (ACS CAN). ACS CAN works to encourage elected officials and candidates to make cancer a top national priority. To learn more about ACS CAN, visit www.acscan.org.

Working independently and collaboratively with lawmakers at the local, state, and federal level, the Society and ACS CAN are able to help create, change, and influence public policies that can have a significant impact on reducing cancer disparities in this country. Specifically, ACS CAN is committed to reducing cancer incidence and mortality rates on all fronts by advocating for access to care – including prevention, early detection, and treatment services; research funding; patients' rights; and other issues critical to eliminating pain and suffering from cancer.

A high priority for the Society and ACS CAN, at both the state and federal level, is fighting to increase funding for the National Breast and Cervical Cancer Early Detection Program (NBCCEDP), run by the Centers for Disease Control and Prevention (CDC). This successful program provides community-based breast and cervical cancer screening to low-income, uninsured, and underinsured women. Medical assistance and treatment for women who are diagnosed with cancer through the NBCCEDP are available through Medicaid. The program is currently implemented in all 50 states, the District of Columbia, 4 US territories, and 13 American Indian/Alaska Native organizations. About 50% of the women screened are from racial/ethnic minority groups. Unfortunately, for

the first time since the program was established, fewer women were screened in 2007 due to cuts in funding.

The Society and ACS CAN are also advocating for a national screening, treatment, and outreach program to increase colorectal cancer screening rates in low-income, medically underserved populations. The Colorectal Cancer Prevention, Early Detection, and Treatment Act (H.R. 1738) would have a direct impact on reducing colon cancer deaths by screening more uninsured individuals for colorectal cancer and providing them with treatment when needed.

The Society and ACS CAN continue to work with Congress to secure additional funding for the Patient Navigator program. This landmark legislation provides community-based grants to fund patient navigators who are skilled in providing culturally relevant information, tailored outreach and education, and interventions that will improve access to care, health outcomes, and quality of life in medically underserved communities. In 2008, the first rounds of Patient Navigator grants were awarded.

The Society and ACS CAN also lead the fight to increase the investment the nation has made in biomedical and cancer research at the National Institutes of Health. These efforts include increased funding for cancer research at the National Center on Minority Health and Health Disparities and the National Cancer Institute, which houses the Center to Reduce Cancer Health Disparities.

What research is currently addressing African Americans and cancer?

Since 1999, the American Cancer Society has funded 106 studies totaling $87 million devoted to the poor and medically underserved. Forty-two percent of this research focuses on the African American population, encompassing the cancer continuum from prevention to survivorship. In addition, the Society's internal research departments focus substantial resources on disparities research. Specific examples of ongoing intramural and extramual research include:

- Studying the effectiveness of a series of interventions, including letters, reminders, phone calls, and face-to-face outreach, to improve colorectal and breast cancer screening rates among African Americans
- Examining racial differences in the type and quality of prostate cancer treatment and evaluating potential causes for these differences
- Researching treatment delays and the types of treatment received among African American breast cancer patients and exploring reasons for the less frequent treatment among African American in an effort to improve breast cancer outcomes
- Investigating whether African Americans and whites who are diagnosed with colon cancer make changes in health behaviors (diet, physical activity, and dietary supplement use) and what effect these changes may have on colorectal recurrence
- Monitoring disparities in the cancer burden, including differences in screening, stage at diagnosis, treatment, and survival
- Examining the role of segregated neighborhoods in cancer screening and physical activity among national samples of African Americans and Latinos
- Exploring evidence-based strategies to increase colorectal cancer screening among African Americans

What resources are available for African Americans?

Body & Soul – A Celebration of Healthy Eating and Living: This wellness program was developed for African Americans through collaboration between the National Cancer Institute and churches. The program encourages participants to eat 5-9 servings of fruits and vegetables every day for better health. Body & Soul works by combining pastoral leadership, educational activities, and peer counseling in a church environment that supports healthy eating.

***Beating Breast Cancer: A Guide For African Americans*:** This 28-minute made-for-television DVD and guidebook for African American women aged 40+ was developed through a collaboration led by the award-winning production firm Conrad & Associates, which includes the African Methodist Episcopal Church, the National Medical Association, and the American Cancer Society. It is designed to raise awareness of breast cancer – prevention, early detection, and treatment – as well as support self-empowerment. It is hosted by Emmy Award-winning African American actress Lynn Whitfield and features real-life stories of cancer survivors and their physicians.

Let's Talk About It®: This is a free community-based program developed by the American Cancer Society and 100 Black Men of America, Inc., to increase

awareness and knowledge of prostate cancer among African American men and their loved ones. This program provides communities easy, step-by-step ways to organize prostate cancer awareness events to empower African American men and their loved ones to reduce their risk of prostate cancer and make informed decisions about detecting and treating the disease.

Look Good…Feel Better®: This program provides cosmetic offerings to women to help restore their appearance and self-image during chemotherapy and radiation treatments.

What other programs/organizations support the elimination of health disparities among African Americans?

National Breast and Cervical Cancer Early Detection Program (NBCCEDP): Run by the Centers for Disease Control and Prevention (CDC), this program helps low-income, uninsured, and underinsured women gain access to breast and cervical cancer screening and diagnostic services. Each state Department of Health will have information on how to contact the nearest screening center. For additional information, visit www.cdc.gov/cancer/nbccedp.

Racial and Ethnic Approaches to Community Health Across the US (REACH US): The aim of this CDC initiative is to eliminate disparities in health status experienced by racial and ethnic minority populations. Cancers of the breast and cervix are priority areas. For additional information, visit www.cdc.gov/reach/.

University of Texas, MD Anderson Cancer Center: The Center for Research on Minority Health is a comprehensive investigative, educational, and outreach unit that focuses on decreasing the incidence and prevalence of morbidity and mortality in ethnic minorities and medically underserved populations. For additional information, visit www.mdanderson.org/departments/CRMH.

Intercultural Cancer Council (ICC): ICC promotes policies, programs, partnerships, and research to eliminate the unequal burden of cancer among racial and ethnic minorities and medically underserved populations in the US and its associated territories. For additional information, visit www.iccnetwork.org.

Cancer Prevention and Control Research Network (CPCRN): The CPCRN is a subgroup of the CDC's Prevention Research Centers and is comprised of 8 funded academic research institutions. The network's mission is the acceleration of evidence-based cancer prevention and control, particularly in underserved and minority communities, by advancing cancer research and influencing public health and primary care practice. The CPCRN is actively engaged in enhancing large-scale efforts to reach underserved populations and reduce their cancer burden. For additional information, visit www.cpcrn.org.

National Medical Association (NMA): The NMA is the largest and oldest national organization representing African American physicians and their patients in the US and is committed to the elimination of health disparities and the promotion of healthy lifestyles among African Americans and other underserved populations. The American Cancer Society and the National Medical Association have joined together to develop and distribute culturally relevant consumer and professional materials that focus on the prevention, early detection, and treatment of breast, prostate, and colorectal cancers, as well as nutrition and physical activity. The collaboration will target faculty and alumni of historically black colleges and universities, NMA society members, community-based organization leaders in the African American and Hispanic/Latino communities, and large African American and Hispanic/Latino church congregations. For additional information, visit www.nmanet.org.

National African American Tobacco Education Network (NAATEN): NAATEN is a collaboration of national, state, and community-based organizations serving the African American community. The network's goal is to eliminate tobacco use in the African American community by serving as a leader and unified voice on a national level and engaging African American organizations in the prevention and reduction of tobacco use. For additional information, visit www.healthedcouncil.org/neaten.

American Legacy Foundation®: The American Legacy Foundation is dedicated to building a world where young people reject tobacco and anyone can quit. The foundation develops programs that address the health effects of tobacco use, with a focus on vulnerable populations – youth, low-income Americans, the less educated, and racial, ethnic, and cultural minorities. For additional information, visit www.americanlegacy.org.

Sources of Statistics

New Cancer Cases. The method for estimating new cancer cases in the current year is a spatio-temporal model based on incidence data from 1995-2005 from 41 states that met the North American Association of Central Cancer Registries' (NAACCR) high-quality data standard for incidence, covering about 86% of the US population. It considers geographic variations in socio-demographic and lifestyle factors, medical settings, and cancer screening behaviors as predictors of incidence. Additionally, this method accounts for expected delays in case reporting, which affects incidence data for the most recent 2-3 years. For more information see Pickle L, Hao Y, Jemal A, et al. *CA Cancer J Clin*. 2007;57:30-42.[52]

Incidence Rates. Incidence rates are defined as the number of people per 100,000 who develop disease during a given period of time. For this publication, incidence rates were calculated using data on cancer cases collected by SEER and population data collected by the US Census Bureau. When referenced as such, US SEER incidence rates were previously made available on the SEER Web site, www.seer.cancer.gov, and within the *SEER Cancer Statistics Review 1975-2005*.[4] When not referenced otherwise, US SEER incidence rates are based on American Cancer Society analysis of the SEER Public Use Dataset, 1973-2005, April 2008 submission, using SEER*Stat 6.4.4, a statistical software package from the National Cancer Institute. All incidence rates in this publication are age adjusted to the 2000 US standard population. Where noted, incidence rates adjusted for reporting delay are used.

Cancer Deaths. The estimated number of US cancer deaths in 2009 is calculated by fitting the numbers of cancer deaths from 1969-2005 to a statistical forecasting model. Data on the number of deaths are obtained from the National Center for Health Statistics (NCHS) at the Centers for Disease Control and Prevention (CDC).

Mortality Rates. Mortality rates or death rates are defined as the number of people per 100,000 who die from a disease during a one-year interval. Death rates used in this publication were previously made available by SEER on its Web site, www.seer.cancer.gov and within the *SEER Cancer Statistics Review 1975-2005*.[4] Death rates were calculated using data on cancer deaths compiled by the NCHS and population data collected by the US Census Bureau. All death rates in this publication were age adjusted to the 2000 US standard population.

Survival. Five-year relative survival rates are presented in this report for cancer patients diagnosed between 1996-2004 and followed through 2005. Relative survival rates are used to adjust for normal life expectancy (and events such as death from heart disease, accidents, and diseases of old age). These rates are calculated by dividing observed 5-year survival rates for cancer patients by observed 5-year survival rates for people in the general population who are similar to the patient group with respect to age, gender, race, and calendar year of observation. Five-year survival statistics presented in this publication were originally published in the *SEER Cancer Statistics Review, 1975-2005*.[4]

Probability of Developing Cancer. Probabilities of developing breast cancer were calculated using DevCan 6.3.0 (Probability of Developing Cancer Software) developed by the National Cancer Institute. These probabilities reflect the average experience of people in the US and do not take into account individual behaviors and risk factors. For example, the estimate of 1 African American man in 13 developing lung cancer in a lifetime underestimates the risk for smokers and overestimates the risk for nonsmokers.

National Health and Nutrition Examination Survey (NHANES). The NHANES is a survey of the NCHS and is designed to provide national prevalence estimates on the health and nutritional status of adults and children. Data are gathered through in-person interviews and direct physical exams in mobile examination centers. For more information, visit the NHANES Web sites at www.cdc.gov/nchs/nhanes.htm.

National Health Interview Survey (NHIS). The NHIS is a survey of the NCHS. The survey is designed to provide national prevalence estimates on personal, socioeconomic, demographic, and health characteristics, such as cigarette smoking and physical activity. Data are gathered through a computer-assisted personal interview of adults aged 18 and older. The NHIS is an annual survey that has been conducted by NCHS since 1957. For more information, visit the NHIS Web site at www.cdc.gov/nchs/nhis.htm.

Youth Risk Behavior Surveillance System (YRBSS). The YRBSS is a survey of the NCCDPHP. The survey is designed to provide national, state, and local prevalence estimates on health risk behaviors, such as tobacco use, unhealthy dietary behaviors, and physical inactivity among youth and young adults who attend public and private high schools. Data are gathered through a self-administered questionnaire completed during a required subject or class period. The YRBSS is a biennial survey that began in 1991. The state and local surveys are of variable data quality, and caution should be used in comparing data among them. For more information, visit the YRBSS Web site at www.cdc.gov/HealthyYouth/yrbs/index.htm.

Factor That Influences Cancer Rates

Age Adjustment to the Year 2000 Standard. Epidemiologists use a statistical method called "age adjustment" to compare groups of people with different age compositions. This is especially important when examining cancer rates since cancer is generally a disease of older people. For example, without adjusting for age, it would be inaccurate to compare the cancer rates of the state of Florida, which has a large elderly population, to that of Alaska, which has a younger population. Without adjusting for age, it would appear that the cancer rates for Florida are much higher than Alaska. However, once the ages are adjusted, it appears their rates are similar.

Screening Guidelines

for the Early Detection of Cancer in Asymptomatic People

Site	Recommendation
Breast	• Yearly mammograms are recommended starting at age 40. The age at which screening should be stopped should be individualized by considering the potential risks and benefits of screening in the context of overall health status and longevity. • Clinical breast exam should be part of a periodic health exam about every three years for women in their 20s and 30s and every year for women 40 and older. • Women should know how their breasts normally feel and report any breast change promptly to their health care providers. Breast self-exam is an option for women starting in their 20s. • Screening MRI is recommended for women with an approximately 20%-25% or greater lifetime risk of breast cancer, including women with a strong family history of breast or ovarian cancer and women who were treated for Hodgkin disease.
Colon & rectum	Beginning at age 50, men and women should begin screening with one of the examination schedules below: Tests that detect adenomatous polyps and cancer: • A flexible sigmoidoscopy every five years, or • A colonoscopy every 10 years, or • A double-contrast barium enema every five years, or • Computed tomographic colonography every five years Tests that primarily detect cancer: • Annual guaiac-based fecal occult blood test with high test sensitivity for cancer, or • Annual fecal immunochemical test with high test sensitivity for cancer, or • Stool DNA test with high sensitivity for cancer, interval uncertain Individuals with a personal or family history of colorectal cancer or adenomas, inflammatory bowel disease, or high-risk genetic syndromes should continue to follow the most recent recommendations for individuals at increased or high risk.
Prostate	Health care providers should discuss the potential benefits and limitations of prostate cancer early detection testing with men and offer the PSA blood test and the digital rectal examination annually, beginning at age 50, to men who are at average risk of prostate cancer, and who have a life expectancy of at least 10 years.* Men at high risk (African American men and men with a strong family history of one or more first-degree relatives diagnosed with prostate cancer at an early age) should have this discussion with their provider at age 45.
Uterus	**Cervix:** Screening should begin approximately three years after a woman begins having vaginal intercourse, but no later than 21 years of age. Screening should be done every year with regular Pap tests or every two years using liquid-based tests. At or after age 30, women who have had three normal test results in a row may get screened every two to three years. Alternatively, cervical cancer screening with HPV DNA testing and conventional or liquid-based cytology could be performed every three years. However, doctors may suggest a woman get screened more often if she has certain risk factors, such as HIV infection or a weak immune system. Women aged 70 and older who have had three or more consecutive normal Pap tests in the past 10 years may choose to stop cervical cancer screening. Screening after total hysterectomy (with removal of the cervix) is not necessary unless the surgery was done as a treatment for cervical cancer. **Endometrium:** The American Cancer Society recommends that at the time of menopause all women should be informed about the risks and symptoms of endometrial cancer and strongly encouraged to report any unexpected bleeding or spotting to their physicians. Annual screening for endometrial cancer with endometrial biopsy beginning at age 35 should be offered to women with or at risk for hereditary nonpolyposis colon cancer (HNPCC).
Cancer-related checkup	For individuals undergoing periodic health examinations, a cancer-related checkup should include health counseling and, depending on a person's age and gender, might include examinations for cancers of the thyroid, oral cavity, skin, lymph nodes, testes, and ovaries, as well as for some nonmalignant diseases.

*Information should be provided to men regarding the benefits and limitations of testing so that an informed decision concerning testing can be made with the clinician's assistance.

American Cancer Society guidelines for early cancer detection are assessed annually in order to identify whether there is new scientific evidence sufficient to warrant a reevaluation of current recommendations. If evidence is sufficiently compelling to consider a change or clarification in a current guideline or the development of a new guideline, a formal procedure is initiated. Guidelines are formally evaluated every five years regardless of whether new evidence suggests a change in the existing recommendations. There are nine steps in this procedure, and these "guidelines for guideline development" were formally established to provide a specific methodology for science and expert judgment to form the underpinnings of specific statements and recommendations from the Society. These procedures constitute a deliberate process to ensure that all Society recommendations have the same methodological and evidence-based process at their core. This process also employs a system for rating strength and consistency of evidence that is similar to that employed by the Agency for Health Care Research and Quality (AHCRQ) and the US Preventive Services Task Force (USPSTF).

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