Annual Report to the Nation on the Status of Cancer, 1975–2000, Featuring the Uses of Surveillance Data for Cancer Prevention and Control

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Background: **The American Cancer Society, the Centers for Disease Control and Prevention (CDC), the National Cancer Institute (NCI), and the North American Association of Central Cancer Registries (NAACCR) collaborate annually to update cancer rates and trends in the United States. This report updates statistics on lung, female breast, prostate, and colorectal cancers and highlights the uses of selected surveillance data to assist development of state-based cancer control plans.** ***Methods:*** **Age-adjusted incidence rates from 1996 through 2000 are from state and metropolitan area cancer registries that met NAACCR criteria for highest quality. Death rates are based on underlying cause-of-death data. Long-term trends and rates for major racial and ethnic populations are based on NCI and CDC data. Incidence trends from 1975 through 2000 were adjusted for reporting delays. State-specific screening and risk factor survey data are from the CDC and other federal and private organizations.** ***Results:*** **Cancer incidence rates for all cancer sites combined increased from the mid-1970s through 1992 and then decreased from 1992 through 1995. Observed incidence rates for all cancers combined were essentially stable from 1995 through 2000, whereas the delay-adjusted trend showed an increase that had borderline statistical significance (*P* = .05). Increases in the incidence rates of breast cancer in women and prostate cancer in men offset a long-term decrease in lung cancer in men. Death rates for all cancer sites combined decreased beginning in 1994 and stabilized from 1998 through 2000, resulting in part from recent revisions in cause-of-death codes. Death rates among men continued to decline throughout the 1990s, whereas trends in death rates among women were essentially unchanged from 1998 through 2000. Analysis of state data for the leading cancers revealed mixed progress in achieving national objectives for improving cancer screening, risk factor reduction, and decreases in mortality.** ***Conclusions:*** **Overall cancer incidence and death rates began to stabilize in the mid- to late 1990s. The recent increase in the delay-adjusted trend will require monitoring with additional years of data. Further reduction in the burden of cancer is possible but will require the continuation of strong federal, state, local, and private partnerships to increase dissemination of evidence-based cancer control programs to all segments of the population. [J Natl Cancer Inst 2003;95:1276–1299]**

The American Cancer Society (ACS), the Centers for Disease Control and Prevention (CDC), the National Cancer Institute (NCI), and the North American Association of Central Cancer Registries (NAACCR) collaborate to produce an annual report to the nation on the current status of cancer in the United States. In 1998, the initial report documented the first sustained decline in cancer death rates since national record-keeping was instituted in the 1930s *(1).* Subsequent reports confirmed this finding and provided updates *(2–5).* Last year's report focused on future cancer trends associated with an increasing cancer burden resulting from the aging and growth of the U.S. population *(5).* These demographic trends present challenges to the states and communities that must develop and implement cancer prevention and control plans that address the specific needs of their residents.

This report updates data on the four most common cancers (lung, female breast, prostate, and colon/rectal), which represent more than half of the cancer diagnoses and deaths in the U.S. population. This report also features a new section on the uses of surveillance data to plan, implement, and monitor cancer prevention and control programs for the four most common cancers.

Subjects and Methods

Cancer Cases and Deaths

Information on newly diagnosed cancer cases in the United States is based on data collected by cancer registries participating in the NCI's Surveillance, Epidemiology, and End Results (SEER[1]) Program or the CDC's National Program of Cancer Registries (NPCR) *(6,8).* All registries are members of the North American Association of Central Cancer Registries *(9).* The data

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on incidence refer to invasive but not *in situ* cancers, except where specified. Of all *in situ* cancers, only bladder cancer is included in the category of all cancer sites combined. *In situ* bladder cancer cases are also included in the invasive bladder cancer rates. Percentages and rates of *in situ* breast cancer are provided in selected results, but are not included in incidence rates for invasive disease or all cancer sites combined.

For long-term (i.e., from 1975 through 2000) cancer incidence trend analyses, we used data from the original nine SEER areas *(6),* covering 10% of the U.S. population. Estimates of recent incidence and short-term (i.e., from 1992 through 2000) trends for racial and ethnic populations are based on data from 12 SEER areas, covering 14% of the U.S. population. To analyze state data from individual states, we used 1996–2000 incidence data from 34 statewide cancer registries that met NAACCR criteria for highest quality *(9),* covering 68% of the U.S. population. All information on primary cancer site and histology was coded according to the International Classification of Diseases for Oncology, second edition *(10),* and categorized according to SEER site groups *(11).*

Cancer deaths in the United States reported from 1975 through 2000 to state vital statistics offices and consolidated into a database by CDC through the National Vital Statistics System *(12)* were coded according to the version of the International Classification of Diseases (ICD) in use in the United States at the time *(13–15).* Beginning with 1999 mortality data, ICD-10 was used to code the cause of death. Under ICD-10 rules, cancer was slightly more likely to be selected as the underlying cause of death than under previous ICD rules *(16).* A conversion algorithm allowed for comparability between versions of ICD codes, which are categorized according to SEER site groups *(11).*

Population Estimates

County level population estimates were provided by the U.S. Bureau of the Census. Population estimates for 1991–1999 were revised by using 1990 and 2000 decennial census data. The 2000 census allowed respondents to identify themselves, for the first time, as multiracial. To report long-term trends in disease rates for single-race groups, the CDC developed a method to bridge the multiracial populations into single-race categories, which were used by the U.S. Bureau of the Census, with funding from the NCI, to produce single-race census (2000) and intercensal (1991–1999) estimates for white, black, Asian/Pacific Islander (API), American Indian/Alaska Native (AI/AN), and Hispanic populations (www.seer.cancer.gov/popdata/methods.pdf).

Cancer Incidence and Death Rates

We computed age-adjusted cancer incidence and death rates, expressed per 100 000 population, by using the 2000 U.S. standard population, with the provision that no fewer than 25 events were reported in a specific race, sex, and/or cancer site category. Estimates of rates, standard errors, and 95% confidence intervals were generated by using SEER*Stat software *(17).* To reduce the variability of rates for single years of diagnosis among racial and ethnic populations other than white and black, we calculated 2-year moving average annual rates. Because of delayed reporting of cancers diagnosed in outpatient settings and other updates, long-term incidence trends from SEER are presented unadjusted and adjusted for delayed reporting, as discussed later in the "Statistical Analysis" section.

Screening and Risk Factor Data

Information on cancer risk factors and screening examinations was obtained primarily from data collected through CDC's Behavioral Risk Factor Surveillance System (BRFSS) *(18)* and was categorized according to *Healthy People 2010* objectives *(19).* For this analysis, 2001 BRFSS data were used for prevalence estimates of current cigarette smoking among respondents aged 18 years or older and for colorectal and prostate cancer screening among respondents aged 50 years or older. Colorectal cancer screening was estimated for respondents who used a home-administered fecal occult blood test (FOBT) kit within the past 2 years or who reported ever having had a sigmoidoscopy or colonoscopy. Prostate cancer screening was estimated for men who reported no history of prostate cancer and who used the prostate-specific antigen (PSA) test in the past year. Prevalence estimates of mammography screening during the past 2 years for women aged 40 years or older were derived from 2000 BRFSS data instead of 2001 BRFSS data because mammography data are now only collected every other year. Response rates for BRFSS surveys by state ranged from 28.8% to 71.8% in 2000, and from 33.3% to 81.5% in 2001 *(20,21).*

Other sources provided supplemental information on tobacco use and tobacco control measures. The prevalence of cigarette smoking within the past 30 days among adolescents (i.e., those aged 12–17 years) was derived from the National Household Survey on Drug Abuse *(22,23).* Data from the 1999 and 2000 surveys were combined to provide more stable prevalence estimates.

Historical information on annual per capita cigarette consumption by state was obtained from tobacco industry tax records *(24).* Sources of information on the average price of cigarettes, sales tax per pack, and per capita expenditure on tobacco control by state are listed elsewhere *(25).*

Statistical Analysis

In analyses of BRFSS data, proportions, standard errors, and exact 95% confidence intervals were calculated by using SAS and SUDAAN *(26–28)* and were weighted to the age, sex, and racial distribution of the state's adult population according to the sampling design. We excluded responses coded as Don't know/Not sure or Refused. Percentages were suppressed when numerator counts were fewer than 20. For the U.S. estimates, data were aggregated for all 50 states and the District of Columbia. State trends in annual per capita cigarette consumption from 1990 through 2001 were estimated by linear regression as average annual change *(26).*

The process of continually updating cancer registry databases for all years during which the registry has been in existence has been shown to affect recent estimates of observed incidence *(29).* Therefore, we used a statistical method to adjust SEER long-term trend data for reporting delays to provide a more accurate assessment of recent trends *(11,29).* Long-term incidence trends were expressed as observed incidence, unadjusted for reporting delay, and as rates adjusted for reporting delay (Table 1).

Long-term trends of both observed and delay-adjusted incidence data are described by joinpoint regression analysis, which involves fitting a series of joined straight lines on a log scale to

Table 1. SEER cancer incidence rates and trends (observed and adjusted for reporting delays) for 1996–2000 and joinpoint analyses for 1975–2000 for the four most common cancers by site, sex, and race*

		Joinpoint analyses (1975–2000)†							
		Trend 1		Trend 2		Trend 3		Trend 4	
Site	Avg. annual rate (1996–2000)	Years	APC‡	Years	APC‡	Years	APC‡	Years	APC‡
All sites	472.3	1975–1983	0.9§	1983–1992	1.8§	1992–1995	−1.8	1995–2000	0.1
(Delay-adjusted)		1975–1983	0.9§	1983–1992	1.9§	1992–1995	−1.8	1995–2000	0.6§
Male	555.8	1975–1989	1.3§	1989–1992	5.1§	1992–1995	−4.8§	1995–2000	−0.1
(Delay-adjusted		1975–1989	1.4§	1989–1992	5.2§	1992–1995	−4.8§	1995–2000	0.5
White	555.9	1975–1989	1.4§	1989–1992	4.9§	1992–1995	−5.1§	1995–2000	0.0
(Delay-adjusted)		1975–1989	1.4§	1989–1992	5.1§	1992–1995	−5.1§	1995–2000	0.7§
Black	696.8	1975–1981	2.8§	1981–1989	0.6	1989–1992	6.9§	1992–2000	−2.2§
(Delay-adjusted)		1975–1981	2.8§	1981–1989	0.7	1989–1992	6.8§	1992–2000	−1.7§
Female	417.9	1975–1979	−0.3	1979–1987	1.6§	1987–2000	0.3§		
(Delay-adjusted)		1975–1979	−0.3	1979–1987	1.5§	1987–2000	0.4§		
White	431.8	1975–1979	−0.2	1979–1987	1.7§	1987–2000	0.3§		
(Delay-adjusted)		1975–1979	−0.2	1979–1987	1.6§	1987–2000	0.6§		
Black	406.3	1975–1991	1.1§	1991–2000	−0.2				
(Delay-adjusted)		1975–1991	1.2§	1991–2000	0.2				
Lung and bronchus	62.6	1975–1982	2.5§	1982–1991	1.0§	1991–2000	−0.9§		
(Delay-adjusted)		1975–1982	2.5§	1982–1991	1.0§	1991–2000	−0.7§		
Male	80.8	1975–1982	1.5§	1982–1992	−0.5§	1992–2000	−2.2§		
(Delay-adjusted)		1975–1982	1.4§	1982–1991	−0.4	1991–2000	−1.8§		
White	79.4	1975–1981	1.5§	1981–1991	−0.3	1991–2000	−2.1§		
(Delay-adjusted)		1975–1981	1.5§	1981–1990	−0.2	1990–2000	−1.8§		
Black	120.4	1975–1984	3.1§	1984–2000	−1.6§				
(Delay-adjusted)		1975–1984	3.0§	1984–2000	−1.5§				
Female	49.6	1975–1988	4.6§	1988–1998	1.3§	1998–2000	−2.8		
(Delay-adjusted)		1975–1982	5.6§	1982–1991	3.4§	1991–2000	0.7§		
White	51.9	1975–1988	4.8§	1988–1998	1.4§	1998–2000	−2.9		
(Delay-adjusted)		1975–1982	5.6§	1982–1988	4.2§	1988–1998	1.6§	1998–2000	−1.6
Black	54.8	1975–1990	4.3§	1990–2000	0.4				
(Delay-adjusted)		1975–1990	4.2§	1990–2000	0.6				
Female breast (invasive)	135.0	1975–1980	−0.4	1980–1987	3.7§	1987–2000	0.4§		
(Delay-adjusted)		1975–1980	−0.6	1980–1986	4.1§	1986–2000	0.6§		
White	140.8	1975–1980	−0.3	1980–1987	3.8§	1987–2000	0.4§		
(Delay-adjusted)		1975–1980	−0.5	1980–1987	4.1§	1987–1993	−0.2	1993–2000	1.4§
Black	121.7	1975–1992	2.2§	1992–2000	−0.2				
(Delay-adjusted)		1975–1992	2.3§	1992–2000	0.2				
Female breast (*in situ*)	28.7	1975–1982	−0.8	1982–1986	32.3§	1986–2000	6.1§		
(Delay-adjusted)		1975–1982	−0.8	1982–1986	32.2§	1986–2000	6.1§		
White	29.6	1975–1982	−0.7	1982–1986	33.0§	1986–2000	5.9§		
(Delay-adjusted)		1975–1982	−0.7	1982–1986	32.8§	1986–2000	6.0§		
Black	25.8	1975–1981	2.9	1981–1988	18.9§	1988–2000	7.0§		
(Delay-adjusted)		1975–1981	2.9	1981–1988	18.8§	1988–2000	7.1§		
Prostate	170.1	1975–1988	2.6§	1988–1992	16.4§	1992–1995	−11.6§	1995–2000	1.6§
(Delay-adjusted)		1975–1988	2.6§	1988–1992	16.6§	1992–1995	−11.6§	1995–2000	2.3§
White	164.3	1975–1988	2.8§	1988–1992	16.2§	1992–1995	−12.6§	1995–2000	1.7§
(Delay-adjusted)		1975–1988	2.8§	1988–1992	16.5§	1992–1995	−12.4§	1995–2000	3.0§
Black	272.1	1975–1989	2.0§	1989–1992	21.5§	1992–1996	−5.4§	1996–2000	0.5
(Delay-adjusted)		1975–1989	2.0§	1989–1992	22.0§	1992–1996	−5.0§	1996–2000	2.3§
Colon and rectum	54.2	1975–1985	0.8§	1985–1995	−1.8§	1995–1998	1.1	1998–2000	−3.0§
(Delay-adjusted)		1975–1985	0.8§	1985–1995	−1.8§	1995–1998	1.2	1998–2000	−2.3
Male	64.2	1975–1986	1.1§	1986–1995	−2.1§	1995–1998	1.0	1998–2000	−3.6
(Delay-adjusted)		1975–1986	1.1§	1986–1995	−2.0§	1995–2000	−0.2		
White	64.1	1975–1986	1.1§	1986–1995	−2.3§	1995–1998	1.2	1998–2000	−4.3§
(Delay-adjusted)		1975–1986	1.1§	1986–1995	−2.3§	1995–1998	1.4	1998–2000	−3.5
Black	72.4	1975–1980	4.6	1980–2000	−0.1				
(Delay-adjusted)		1975–1980	4.5	1980–2000	0.0				
Female	46.7	1975–1985	0.3§	1985–1995	−1.9§	1995–1998	1.7	1998–2000	−3.0
(Delay-adjusted)		1975–1985	0.3	1985–1994	−1.8§	1994–2000	0.2		
White	46.2	1975–1985	0.3	1985–1993	−2.2§	1993–2000	−0.2		
(Delay-adjusted)		1975–1985	0.3	1985–1993	−2.2§	1993–2000	0.0		
Black	56.2	1975–2000	−0.1						
(Delay-adjusted)		1975–2000	0.0						

*Incidence rates and trends for 1996–2000 are based on Surveillance, Epidemiology, and End Results (SEER) Program registries covering 10% of the U.S. population, including Connecticut, Hawaii, Iowa, Utah, and New Mexico as well as the metropolitan areas of San Francisco, Detroit, Atlanta, and Seattle-Puget Sound.

†Joinpoint analyses allowed for up to three joinpoints and are based on rates per 100 000 that were age-adjusted to the 2000 U.S. standard population by 5-year age groups.

‡APC = annual percent change based on rates that were age-adjusted to the 2000 U.S. standard population by using joinpoint regression analysis.

§APC is statistically significantly different from zero (two-sided $P<.05$).

the trends in the rates. Line segments are joined at points called joinpoints. Each joinpoint denotes a statistically significant ($P = .05$) change in trend *(30)*. A maximum of three joinpoints and four line segments was allowed for each model. The annual percent change (i.e., the slope of the line segment) was used to describe and test the statistical significance of recent trends. Testing the hypothesis (two-sided P value $= .05$) that the annual percent change is equal to zero is equivalent to testing the hypothesis that the trend in incidence or death rates is neither increasing nor decreasing. Unless otherwise noted, annual percent changes for long-term incidence trends provided in the text were delay-adjusted. Information on annual percent changes for expanded racial and ethnic groups for 1992–2000 is available on the NCI Web site listed below. The evaluation of cancer control measures at the state level was descriptive rather than based on formal statistical analyses.

More detailed information, figures, and methodology pertaining to this report are available at the NCI Web site: www.seer.cancer.gov. Additional data and information on cancer incidence and mortality are available at the following Internet addresses: www.cancer.org (ACS), www.cdc.gov/cancer/npcr/index.htm and www.cdc.gov/nchs/about/major/dvs/mortdata.htm (CDC), and www.naaccr.org/cinaplus/index.html (NAACCR).

Results

General Update on Overall Trends: All Cancer Sites Combined

Cancer incidence rates for all cancer sites combined increased from the mid-1970s through 1992 and then declined from 1992 through 1995 (Fig. 1; Table 1). Observed incidence rates for all cancers combined were essentially stable from 1995 through 2000, whereas the delay-adjusted trend showed an increase that had borderline statistical significance ($P = .05$). Delay-adjusted incidence rates were higher than the observed rates for all cancers combined (Fig. 1) and for the four leading cancers (www.seer.cancer.gov). The long-term incidence rates for all cancer sites combined increased by 1.4% per year among men from 1975 through 1989, increased by 5.2% per year from 1989 through 1992, and then decreased by 4.8% per year until 1995 when rates stabilized. Recent incidence trends for white men continued to increase by 0.7% per year, whereas trends for black men continued to decrease by 1.7% per year. Recent incidence trends for API, AI/AN, and Hispanic men have declined (Fig. 2). Among women, the incidence trends for all cancers combined have increased by 1.5% per year from 1979 through 1987 and increased by 0.4% per year through 2000. There were no consistent trends in incidence rates for API, AI/AN, and Hispanic women (Fig. 2).

Death rates in the United States for all cancers combined increased by 0.5% per year through 1990, stabilized through 1994, and declined by 1.4% per year from 1994 through 1998 (Fig. 1; Table 2). In recent years (1998–2000), the decline in death rates was no longer statistically significant, resulting in part from the introduction of ICD-10 in 1999 *(16)*, and the stabilization of cancer death rates among white women (Table 2). Cancer death rates among men decreased by 1.5% per year from 1992 through 2000 (Table 2), with declines in recent trends among white, black, and API men (Fig. 2). Death rates among black women declined by 0.6% per year beginning in 1991 (Table 2; Fig. 2). Although trends in recent death rates for API women declined, trends in death rates were stable for AI/AN and Hispanic women.

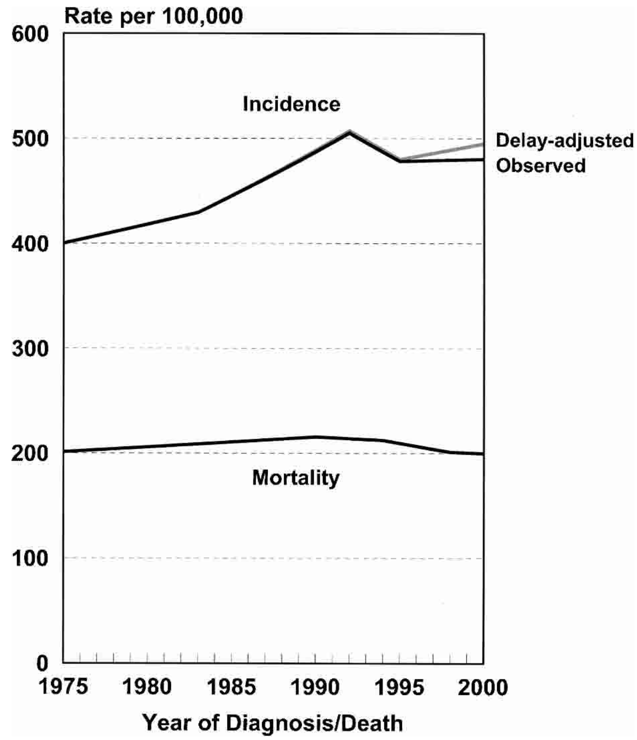

Fig. 1. Incidence and death rates for all cancer sites combined, with joinpoint analyses for 1975–2000, all races, both sexes. Long-term incidence trends are expressed as observed incidence, unadjusted for reporting delays, and as rates adjusted for reporting delays. Rates are per 100 000 persons and are age-adjusted to the 2000 U.S. standard population by 5-year age groups. Incidence data are from the National Cancer Institute's Surveillance, Epidemiology, and End Results Program for nine geographic areas and cover 10% of the U.S. population. Death data are from the Centers for Disease Control and Prevention's National Vital Statistics System and cover the entire U.S. population. Data are adapted from http://www.seer.cancer.gov/csr/1975_2000/.

Update on the Most Common Cancer Sites

For cancers of the prostate, colorectum, and lung, blacks had the highest observed incidence rates (Fig. 3; Table 1). From 1996 through 2000, observed prostate cancer incidence rates were 66% higher among black men than among white men (Table 1). From 1996 through 2000, observed breast cancer incidence rates were 16% higher among white women than among black women. Black men and women had the highest death rates of all racial and ethnic populations studied (Table 2; Fig. 2). From 1996 through 2000, for all cancer sites combined, AI/ANs had the lowest observed incidence rates and APIs had the lowest death rates of all racial and ethnic populations studied (Fig. 2) *(11)*.

Lung cancer incidence rates among men declined beginning in 1982, and declined by 1.8% per year from 1991 through 2000. Lung cancer death rates among men decreased throughout the 1990s, reflecting decreased rates of 1.7% per year since 1991 among white men and of 2.5% per year since 1993 among black men (Table 2). Lung cancer incidence rates continued to increase among women, although the rate of increase has slowed to 0.7% per year since 1991 (Table 1). Beginning in the early 1990s, the rate of increase in lung cancer death rates among

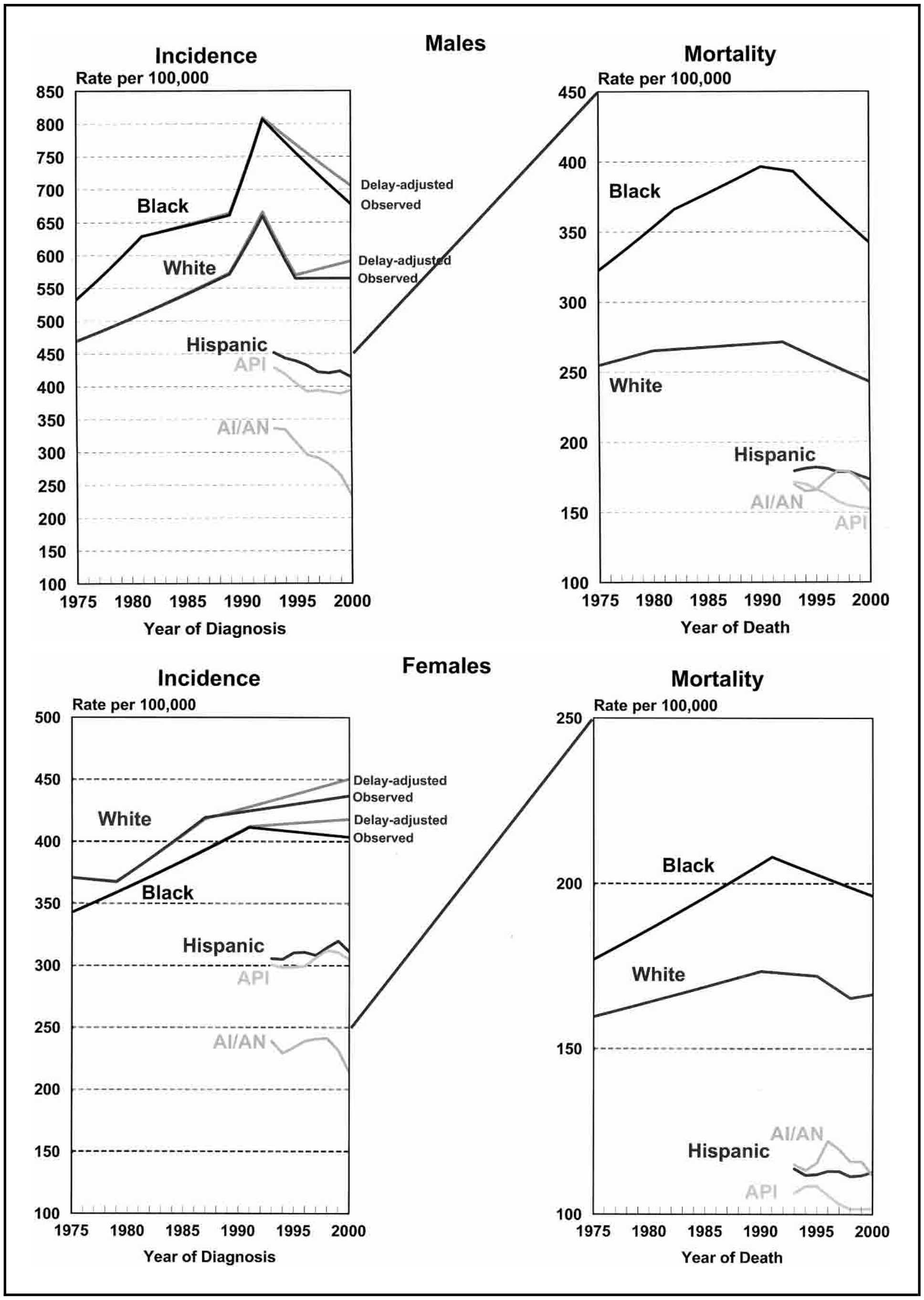

Fig. 2. Incidence and death rates for all cancer sites combined, with joinpoint analyses for all races and sexes separately for 1975–2000. Rates shown for American Indian/Alaska Native (AI/AN), Asian/Pacific Islander (API), and Hispanic are based on 2-year rates. Hispanic is not mutually exclusive from whites, blacks, Asian/Pacific Islanders, and American Indians/Alaska Natives. Incidence data for Hispanics excludes cases from Detroit and Hawaii. Mortality data for Hispanics excludes cases from Connecticut, Oklahoma, New York, and New Hampshire. Long-term incidence trends are expressed as observed incidence, unadjusted for reporting delays, and as rates adjusted for reporting delays. Rates are per 100 000 persons and are age-adjusted to the 2000 U.S. standard population by 5-year age groups. Incidence data are from the National Cancer Institute's Surveillance, Epidemiology, and End Results Program for nine geographic areas and cover 10% of the U.S. population. Death data are from the Centers for Disease Control and Prevention's National Vital Statistics System and cover the entire U.S. population. Data are adapted from http://www.seer.cancer.gov/csr/1975_2000/.

women of all races slowed, but rates still increased by 0.6% per year among white women and by 0.8% per year among black women (Table 2). Lung cancer incidence and death rates were lower among API, AI/AN, and Hispanic populations than among black and white populations (Fig. 3).

Female breast cancer incidence rates continued to increase although the rate of increase has slowed to 0.6% per year since 1986 (Table 1). *In situ* breast cancer incidence rates also continued to increase by 6.1% per year over the same period. Death rates from breast cancer decreased beginning in the early 1990s, with steeper declines reported among white women (decreases of 2.5% per year) than among black women (decreases of 1.0% per year) (Fig. 4; Table 2). Breast cancer death rates among API, AI/AN, and Hispanic women were lower than those among black and white women (Fig. 3).

Prostate cancer incidence rates decreased from 1992 to 1995 but increased by 2.3% per year beginning in 1995 (Table 1). Recent prostate cancer incidence increased by 3.0% per year among white men and by 2.3% per year among black men. Prostate cancer death rates have decreased since 1994 (Table 2).

Colorectal cancer incidence rates stabilized beginning in 1995 for all men and women (Table 1). Death rates declined beginning in the 1970s, with steeper declines reported beginning in the mid-1980s (Table 2). Declines in death rates for men began later than those for women. Larger decreases in death rates were observed among white men and women than among black men and women (Fig. 4). Colorectal cancer death rates were lower among API, AI/AN, and Hispanic populations than among black and white populations (Fig. 4).

Table 2. U.S. death rates for 1996 through 2000 and joinpoint analyses for 1975 through 2000 for the four most common cancers by site, sex, and race*

		Joinpoint analyses (1975–2000)†							
		Trend 1		Trend 2		Trend 3		Trend 4	
Site	Avg. annual rate (1996–2000)	Years	APC‡	Years	APC‡	Years	APC‡	Years	APC‡
All sites	202.3	1975–1990	0.5§	1990–1994	−0.4	1994–1998	−1.4§	1998–2000	−0.3
Male	255.5	1975–1980	0.9§	1980–1992	0.2§	1992–2000	−1.5§		
White	249.5	1975–1980	0.8§	1980–1992	0.2§	1992–2000	−1.4§		
Black	356.2	1975–1982	1.8§	1982–1990	1.0§	1990–1993	−0.3	1993–2000	−1.9§
Female	168.3	1975–1990	0.6§	1990–1995	−0.2	1995–1998	−1.3§	1998–2000	0.1
White	166.9	1975–1990	0.6§	1990–1995	−0.2	1995–1998	−1.3§	1998–2000	0.3
Black	198.6	1975–1991	1.0§	1991–2000	−0.6§				
Lung and bronchus	56.8	1975–1982	2.7§	1982–1991	1.6§	1991–2000	−0.7§		
Male	79.5	1975–1982	1.8§	1982–1991	0.4§	1991–2000	−1.8§		
White	78.1	1975–1982	1.7§	1982–1991	0.4§	1991–2000	−1.7§		
Black	107.0	1975–1981	3.1§	1981–1989	1.6§	1989–1993	−0.7	1993–2000	−2.5§
Female	40.7	1975–1983	5.9§	1983–1992	3.8§	1992–2000	0.6§		
White	41.5	1975–1983	5.9§	1983–1992	3.8§	1992–2000	0.6§		
Black	40.0	1975–1981	6.7§	1981–1991	4.0§	1991–2000	0.8§		
Female breast	27.7	1975–1990	0.4§	1990–2000	−2.3§				
White	27.2	1975–1990	0.3§	1990–2000	−2.5§				
Black	35.9	1975–1991	1.6§	1991–2000	−1.0§				
Prostate	32.9	1975–1987	0.9§	1987–1991	3.1§	1991–1994	−0.6	1994–2000	−4.0§
White	30.2	1975–1987	0.8§	1987–1991	3.1§	1991–1994	−0.8	1994–2000	−4.2§
Black	73.0	1975–1988	1.9§	1988–1993	3.2§	1993–2000	−2.6§		
Colon and rectum	21.2	1975–1984	−0.5§	1984–2000	−1.7§				
Male	25.8	1975–1979	0.6	1979–1987	−0.6§	1987–2000	−1.9§		
White	25.3	1975–1985	−0.2	1985–2000	−2.0§				
Black	34.6	1975–1990	1.2§	1990–2000	−0.6§				
Female	18.0	1975–1984	−1.0§	1984–2000	−1.8§				
White	17.5	1975–1984	−1.2§	1984–2000	−2.0§				
Black	24.6	1975–1985	0.7§	1985–2000	−0.7§				

*Death rates for 1996 through 2000 are based on death data from CDC's National Vital Statistics System, covering the entire U.S. population (http://www.cdc.gov/nchs).

†Joinpoint analyses allowed for up to three joinpoints and are based on rates per 100 000 persons that were age-adjusted to the 2000 U.S. standard population by 5-year age groups.

‡APC = annual percent change based on rates that were age-adjusted to the 2000 U.S. standard population by using joinpoint regression analysis.

§APC is statistically significantly different from zero (two-sided $P<.05$).

State Surveillance Data

Surveillance data for the four most common cancers for each state include state-specific incidence and/or death rates and selected data on screening, tobacco use, and other parameters used for cancer control. States were grouped into tertiles on the basis of selected variables and sorted alphabetically within tertiles (Tables 3–6). The first tertile includes states furthest from meeting *Healthy People 2010* objectives according to selected cancer control parameters *(19)*.

Lung Cancer and Tobacco Use

The prevalence of current smoking among adults (males and females combined) was used to determine tertiles (Table 3). The prevalence of smoking among adults ranged from 30.9% in Kentucky to 13.3% in Utah. The percentage of adolescents (aged 12–17 years) who currently smoked ranged from 22.4% in Kentucky to 8.9% in California. Per capita cigarette consumption was highest in Kentucky (152.6 packs) and lowest in California (38.0 packs), with declining consumption from 1990 through 2000 reported in 40 of 51 states. Delaware and Oklahoma reported increasing tobacco consumption. The decline in the annual per capita cigarette consumption for all states combined and for the two states (California and Massachusetts) with aggressive tobacco control campaigns *(31)* is shown in Fig. 5. Most states invested less money in tobacco control in 2001 than the CDC recommended amount of between $5 and $10 per capita *(25,31)* (Table 3). In 2001, expenditures for tobacco control were less than $1 per person in 16 states; 12 of these were in the tertile with the highest prevalence of current smoking. Lung cancer death rates were lowest in Utah, the state with the lowest adult smoking prevalence, and highest in Kentucky, the state with the highest adult smoking prevalence.

Breast Cancer

The prevalence of recent mammography screening among white women aged 40 years or older was used to determine tertiles (Table 4) and found to range from 66.2% in Idaho to 87.0% in Delaware. Recent mammography screening prevalence was lower among women with no health insurance (Table 4) than among women with insurance (data not shown). Thirty-two states had sample sizes large enough to estimate the prevalence of recent mammography screening among black women, which was found to range from 64.1% in Mississippi to 93.4% in Delaware. Small sample sizes in most states precluded us from estimating the prevalence of recent mammography screening among black women with no health insurance.

Breast cancer incidence rates from 1996 through 2000 among white women ranged from 118.7 per 100 000 women in Utah to 152.1 per 100 000 women in Hawaii. Among black women, breast cancer incidence rates ranged from 89.8 per 100 000 women in Rhode Island to 147.6 per 100 000 women in Alaska. The percentage of *in situ* breast cancers among white women

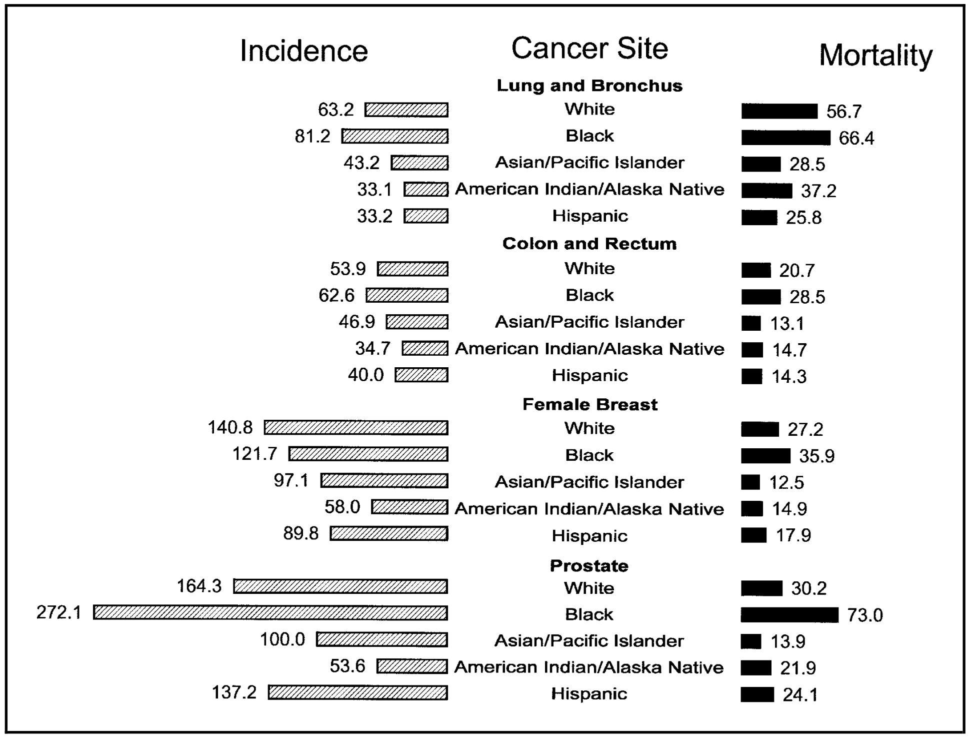

Fig. 3. Incidence and death rates for all cancer sites and races, 1996–2000. Hispanic is not mutually exclusive from whites, blacks, Asian/Pacific Islanders, and American Indians/Alaska Natives. Incidence data for Hispanics excludes cases from Detroit and Hawaii. Mortality data for Hispanics excludes cases from Connecticut, Oklahoma, New York, and New Hampshire. Rates are per 100 000 persons and are age-adjusted to the 2000 U.S. standard population 5-year age groups. Incidence data are from the National Cancer Institute's Surveillance, Epidemiology, and End Results Program for 12 geographic areas and cover 14% of the U.S. population. Death data are from the Centers for Disease Control and Prevention's National Vital Statistics System and cover the entire U.S. population. Data are adapted from http://www.seer.cancer.gov/csr/1975_2000/.

was greater than 15% in all but eight states. The percentage of regional and distant stage tumors exceeded 30% in all but three states. Breast cancer incidence rates were stable in all states, with the exception of increasing rates among white women in Minnesota and North Carolina and decreasing rates among black women in Florida.

Breast cancer death rates among white women ranged from 23.7 per 100 000 women in Arkansas to 31.2 per 100 000 women

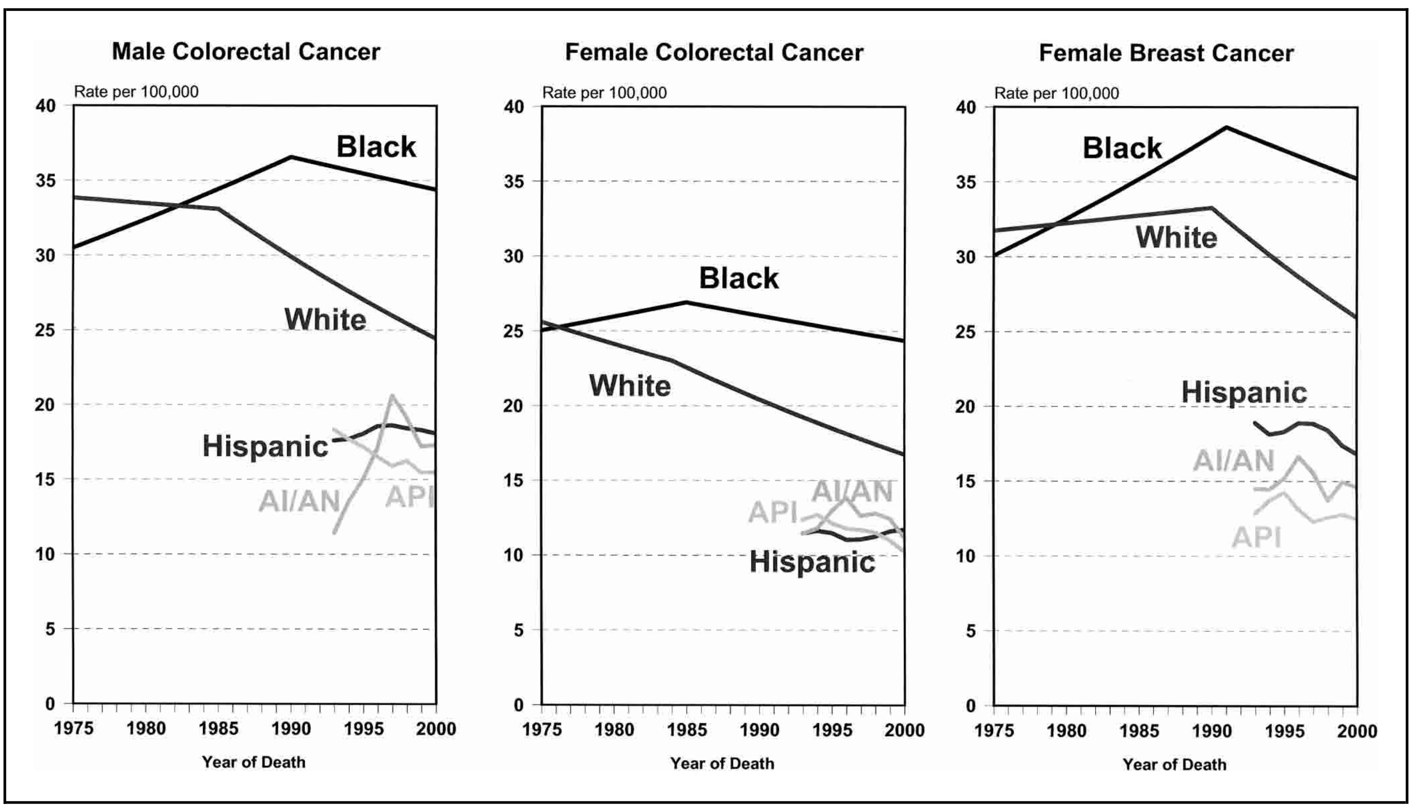

Fig. 4. Colorectal and breast cancer death rates, with joinpoint analyses for 1975 through 2000, by race. Regression lines are calculated by joinpoint regression. Rates shown for American Indian/Alaska Native (AI/AN), Asian/Pacific Islander (API), and Hispanic are based on 2-year rates. Hispanic is not mutually exclusive from whites, blacks, Asian/Pacific Islanders, and American Indians/Alaska Natives. Mortality data for Hispanics excludes cases from Connecticut, Oklahoma, New York, and New Hampshire. Rates are per 100 000 persons and are age-adjusted to the 2000 U.S. standard population by 5-year age groups. Death data are from the Centers for Disease Control and Prevention's National Vital Statistics System and cover the entire U.S. population. Data are adapted from http://www.seer.cancer.gov/csr/1975_2000/.

in New Jersey. In the 1990s, death rates from breast cancer were higher among black women than among white women. From 1992 through 2000, breast cancer death rates among white women declined in 38 states. In states with breast cancer death rates reported for black women, rates increased in Mississippi and decreased in Texas, Tennessee, Maryland, Michigan, and New York.

Prostate Cancer

Prostate cancer death rates among white men were used to determine tertiles (Table 5). The ordering of the tertiles was based on death rates, rather than PSA prevalence estimates, to conform to *Healthy People 2010* objectives *(19).* Death rates for white men ranged from 36.9 per 100 000 men in Maryland to 24.8 per 100 000 men in Hawaii. Rates for black men varied considerably more than those for white men and, in general, were more than twice as high as those for white men. Death rates decreased or were stable in all states for both white and black men.

The prevalence of self-reported use of the PSA test was estimated for men aged 50 years or older who reported no history of prostate cancer. The prevalence of PSA test use among white men ranged from 45.6% in Hawaii to 71.7% in Washington, DC. Among black men, the prevalence of the use of the PSA test ranged from 34.1% in Tennessee to 69.1% in New Jersey. The prevalence of PSA test use among black men could be estimated in 26 states.

Colorectal Cancer

The percentage of white men and women aged 50 years or older having ever had a sigmoidoscopy or colonoscopy was used to determine tertiles (Table 6). The prevalence of sigmoidoscopy or colonoscopy among white men ranged from 33.5% in Oklahoma to 63.5% in Delaware (Table 6). Among white women, the prevalence ranged from 38.3% in Kentucky to 62.1% in Minnesota (Table 6). Prevalence estimates were more variable among black men and women. The percentage of individuals screened by FOBT during the preceding 2 years was less than the percentage of individuals ever having received a sigmoidoscopy or colonoscopy. Approximately 50% of colorectal cancers were diagnosed at regional or distant stage; this percentage was more than 60% in many states.

In general, colorectal cancer incidence and death rates were higher among men than among women and were higher among black men and women than among white men and women. Five-year trends in death rates in all states were stable or declined for both men and women, with the exception of black men in Louisiana and Oklahoma.

Discussion

Cancer Trends

Overall cancer incidence rates have remained essentially stable from 1995 through 2000, after a decline in incidence from 1992 to 1995. The modest increase in the recent delay-adjusted trend will require monitoring with additional years of data. Increased incidence rates of breast cancer in women *(4,5)* and prostate cancer in men *(32–34)* offset a long-term decrease in lung cancer in men.

This report is the first to present analyses of long-term trends in cancer incidence with and without adjustment for reporting delays. Cancer registries routinely take 2–3 years to compile their current cancer statistics. An additional 1–2 years may be required to revise the incidence data on certain cancers, particularly those diagnosed in outpatient settings, such as melanoma and prostate or breast cancer. Cancer registries continue to update the estimates of incidence to include these data. Consequently, the initial data on the incidence of certain cancers may be an underestimate. Long-term reporting patterns in SEER registries have been analyzed *(29),* and it is now possible to adjust site-specific and all-cancers-combined incidence rates to correct for expected reporting delays. These modeled delay-adjusted incidence rates provide the basis for a potentially more accurate assessment of rates and trends in the most recent years for which data are available. Currently, delay-adjustment methods are available only for SEER registries because they rely on historical reporting patterns that are registry-specific. In the future, delay adjustment may be developed for and applied to data from NPCR registries.

Overall cancer death rates declined from 1994 through 1998 and then stabilized from 1998 through 2000. Trends in cancer mortality for women stabilized, whereas death rates for men continued to decline. Lung cancer death rates among women continued to increase, although at a slower rate since the early 1990s. The lung cancer death rate for men continued to decline.

The introduction of ICD-10 *(15),* beginning with 1999 mortality data, affected the recent cancer mortality trends included in this report. Changes in the rules for selecting the underlying cause of death with ICD-10 resulted in a larger net allocation (0.7%) of deaths due to cancer for 1999 and 2000 *(16).* This change in classification rules contributed to the leveling off of death rates for all cancers combined from 1998 through 2000.

The incidence and death rates we report are improved by the use of recently released intercensal population estimates for the period 1990 through 2000. Improved accuracy of population estimates did not have a major impact on cancer rates at the national level, but may have had substantial impact for smaller populations, particularly for specific race/ethnicity, age, or county subgroups.

Trends in cancer incidence and death rates among API, AI/AN, and Hispanics are more difficult to assess because of the variability in the rates in the relatively smaller populations and the potential misclassification of race and ethnicity. Incidence and death rates are generally lower among API, AI/AN, and Hispanic populations than among white and black populations, whereas short-term trends in incidence and death rates among populations tend to be similar. However, an examination of colorectal and breast cancer death rates revealed growing disparities between white and black populations. By the year 2000, death rates for whites were substantially lower than those for blacks, an indication that black men and women may not have experienced the same benefits from screening and/or treatment as white men and women. These patterns in the death rates indicate that disparities in deaths from some cancers are increasing and that methods are needed to disseminate advances in prevention, screening, and treatment to all segments of the population *(35).*

Use of Surveillance Data for Cancer Prevention and Control

We examined surveillance data that are currently available at the state level to plan, implement, and monitor cancer prevention

Table 3. Prevalence of current cigarette smoking, indices of tobacco control, and lung cancer death rates for all races combined by sex and state

State	Current smoking, %: Adult (18+, y)‖ Male and Female 2001	Adult Male 2001	Adult Female 2001	Youth (12–17, y)¶ Male and Female 1999–2000	Per capita cigarette consumption*: Pack 2001	AAC# 1990–2001	Price ($) of cigarettes per pack†, 2000	Expenditures ($) for tobacco control programs‡, 2001	Lung cancer mortality§: Rate** Male and Female 1996–2000	Rate Male 1996–2000	Rate Female 1996–2000	APC Male and Female 1992–2000	APC Male 1992–2000	APC Female 1992–2000
Alaska	26.1	26.2	25.9	16.4	65.2	−3.6††	4.40	4.01	59.5	73.7	47.6	−2.1	−2.9	−0.8
Arkansas	25.6	27.4	23.9	18.6	101.7	−1.6††	2.94	0.58	69.0	104.7	43.4	−1.0††	−2.2††	1.5††
Delaware	25.1	28.2	22.3	15.4	141.4	1.9††	2.89	4.61	64.9	89.2	47.8	−1.4	−2.2††	−0.5
Indiana	27.5	29.7	25.4	16.3	121.4	0.0	2.70	6.05	65.2	93.7	45.6	0.2	−1.0††	1.9††
Kentucky	30.9	31.7	30.1	22.4	152.6	−1.4	2.59	0.84	77.8	114.3	52.3	−0.2	−1.4††	1.5††
Louisiana	24.8	28.7	21.2	14.9	83.1	−1.0	2.95	0.37	68.3	102.6	44.4	−1.0††	−2.2††	0.9
Michigan	25.7	26.7	24.7	15.9	79.2	−3.8††	3.46	0.66	58.1	80.3	42.7	−1.0††	−2.3††	0.7
Mississippi	25.4	29.4	21.9	14.8	93.9	−0.5	2.80	12.82	69.7	111.7	40.9	1.2††	0.5	2.9††
Missouri	25.9	27.5	24.4	15.1	107.8	−0.7††	2.82	0.43	64.1	91.2	45.2	−0.4	−1.8††	1.6††
Nevada	26.9	27.8	26.0	16.4	90.5	−2.9††	3.18	0.59	65.4	79.7	54.1	−0.7	−1.7††	0.8
North Carolina	25.9	28.6	23.3	17.3	100.1	−2.3††	2.77	0.32	62.1	96.3	38.9	−0.2	−1.3††	1.8††
Ohio	27.7	29.0	26.5	15.9	100.0	−1.3††	2.79	0.13	62.1	88.0	44.4	−0.6††	−1.9††	1.0††
Oklahoma	28.8	31.2	26.6	15.0	108.1	2.6††	2.90	0.59	65.5	95.2	44.7	−0.3	−1.8††	2.2††
Pennsylvania	24.6	26.4	22.9	16.4	86.8	−1.2††	2.92	0.10	56.2	80.4	39.8	−0.6††	−1.7††	0.8††
South Carolina	26.2	28.1	24.4	15.5	96.6	−1.2††	2.78	0.78	60.7	92.9	38.3	−0.1	−1.5††	2.2††
Tennessee	24.4	26.1	22.8	17.2	103.5	−1.3††	2.82	0.24	68.9	106.2	42.8	−0.1	−1.3††	1.8††
West Virginia	28.2	28.9	27.6	19.9	109.4	1.1††	2.76	4.31	72.6	104.3	51.0	0.3	−0.2	1.1
Median 1st tertile‡‡	25.9													
Alabama	23.9	25.8	22.1	15.8	90.5	−1.3††	2.88	0.30	63.8	100.9	38.4	0.1	−0.8	1.8††
Colorada	22.4	23.8	21.1	17.2	70.4	−1.6††	2.93	3.32	41.8	55.8	32.0	−0.9††	−2.4††	1.2††
Florida	22.4	25.7	19.5	11.3	78.6	−2.0††	3.02	2.49	57.5	77.5	42.0	−1.0††	−1.7††	−0.1††
Georgia	23.7	25.8	21.8	14.2	85.9	−2.8††	2.88	2.19	61.4	94.8	39.1	−0.4	−1.7††	2.0††
Illinois	23.6	26.5	21.0	15.5	67.1	−2.7††	3.24	2.26	57.6	81.7	41.2	−0.7††	−1.8††	0.7††
Maine	24.0	27.1	21.1	16.7	81.2	−3.4††	3.53	15.47	62.0	82.6	47.9	−1.0	−2.8††	1.1
New Hampshire	24.1	25.5	22.8	15.8	136.1	0.8	3.22	3.29	57.2	75.7	44.6	−1.2††	−2.4††	0.0
New Mexico	23.9	27.9	20.1	15.8	53.7	−1.6††	2.92	1.89	39.8	52.7	30.1	−0.8	−1.8	0.8
New York	23.4	26.2	20.9	12.3	48.0	−3.5††	3.99	1.74	50.7	69.1	38.2	−1.3††	−2.5††	−0.1
Rhode Island	24.0	25.9	22.2	14.0	79.5	−1.9††	3.38	3.03	61.1	86.0	45.3	−0.3	−1.5††	1.3
South Dakota	22.4	23.3	21.5	19.0	78.1	−1.2	3.04	5.15	49.0	72.5	31.4	−0.7	−0.8	−0.7
Texas	22.5	25.2	19.9	12.6	62.1	−1.7††	3.11	0.59	57.7	82.8	39.8	−1.3††	−2.4††	0.2
Vermont	22.4	24.5	20.5	14.5	94.3	−3.6††	3.23	12.58	55.6	77.8	39.9	−1.1	−1.0	−1.2
Virginia	22.5	23.4	21.8	13.1	94.1	−1.5††	2.75	2.82	60.2	87.7	41.6	−0.8††	−2.1††	1.0††
Washington	22.6	24.5	20.6	13.4	50.2	−3.3††	3.82	3.08	56.9	72.2	45.9	−0.4	−1.9††	1.4††
Wisconsin	23.6	25.4	21.9	17.7	78.2	−1.4††	3.30	4.09	49.5	68.5	36.3	0.0	−1.1††	1.5††
Wyoming	22.2	22.5	21.9	16.3	92.9	−1.0	2.91	5.62	48.8	64.2	37.9	−0.5	−1.9	1.2
Median 2nd tertile‡‡	23.4													
Arizona	21.5	23.1	20.0	14.0	54.1	−2.9††	3.46	7.32	49.3	64.3	37.6	−1.5††	−2.8††	0.3
California	17.2	20.6	14.0	8.9	38.0	−3.1††	3.66	3.44	48.9	63.0	38.8	−1.6††	−2.3††	−0.9††
Connecticut	20.8	21.3	20.3	16.6	68.7	−1.7††	3.19	0.30	51.2	67.8	40.1	−0.5	−1.8††	0.6
District of Columbia	20.8	24.9	17.3	9.9	43.9	−3.6††	3.55	—	58.6	83.2	41.9	−1.5	−3.6††	0.5
Hawaii	20.6	24.7	16.4	12.1	42.8	−1.6††	4.05	10.82	39.7	54.3	27.4	−1.1	−1.2	−0.5

(Table continues)

Table 3 (continued). Prevalence of current cigarette smoking, indices of tobacco control, and lung cancer death rates for all races combined by sex and state

State	Current smoking, %: Adult (18+, y)‖ Male and Female 2001	Adult Male 2001	Adult Female 2001	Youth (12–17, y)¶ Male and Female 1999–2000	Per capita cigarette consumption*: Pack 2001	AAC# 1990–2001	Price ($) of cigarettes per pack†, 2000	Expenditures ($) for tobacco control programs‡, 2001	Lung cancer mortality§: Rate** Male and Female 1996–2000	Rate Male 1996–2000	Rate Female 1996–2000	APC Male and Female 1992–2000	APC Male 1992–2000	APC Female 1992–2000
Idaho	19.7	21.1	18.3	12.6	66.7	−2.1††	2.91	1.75	45.7	61.9	33.3	−0.3	−0.6	0.3
Iowa	22.2	24.2	20.4	16.9	86.5	−0.7††	2.99	3.52	52.2	76.5	35.5	−0.6	−1.4††	0.6
Kansas	22.2	22.5	21.8	13.7	78.1	−1.2††	2.94	0.83	54.5	78.4	37.7	0.1	−0.8	1.3
Maryland	21.3	24.7	18.1	14.0	58.1	−3.8††	3.45	4.05	60.9	84.1	45.2	−1.1††	−2.0††	0.2
Massachusetts	19.6	20.5	18.9	15.5	54.8	−4.0††	3.84	10.25	55.9	75.4	43.3	−0.8††	−1.7††	0.1
Minnesota	22.2	24.8	19.6	19.3	74.2	−1.0††	3.19	4.92	47.1	63.7	35.4	−0.1	−1.2††	1.3††
Montana	21.9	21.6	22.2	17.5	74.8	−0.7	2.71	4.85	53.0	70.3	40.3	0.3	−0.6	1.7
Nebraska	20.3	20.7	20.0	13.9	69.8	−1.5††	3.10	4.83	49.8	72.1	33.8	−0.4	−1.8††	1.9††
New Jersey	21.3	21.7	20.9	12.6	57.7	−3.2††	3.64	3.80	54.9	74.9	41.6	−0.9††	−2.1††	0.5
North Dakota	22.1	24.6	19.6	20.6	70.1	−0.7††	3.07	1.71	44.5	63.3	30.5	−0.4	−1.5	1.8
Oregon	20.5	21.4	19.7	15.0	68.6	−3.0††	3.46	2.71	58.4	75.3	46.3	−0.9	−1.6††	−0.1
Utah	13.3	14.6	12.1	10.1	38.7	−1.5††	3.31	2.46	25.9	36.7	17.6	0.0	−1.0	1.6
Median, 3rd tertile‡‡	20.8													

*Per capita cigarette consumption is based on data from tobacco industry tax records. APC = annual percent change. — = Data are not available.

†Price of cigarettes per pack is from Tobacco Control State Highlights.

‡Per capita expenditures for tobacco control programs *(30)*.

§Death data are from CDC's National Vital Statistics System; the data cover the entire U.S. population (http://www.cdc.gov/nchs).

‖Adult smoking prevalence estimates are for current cigarette smoking in persons 18 years of age or older and are based on CDC's Behavioral Risk Ractor Surveillance System (BRFSS) data.

¶Youth smoking prevalence estimates are based on persons aged 12–17 years and are from National Household Survey on Drug Abuse.

#AAC is average annual change in per capita cigarette consumption.

**Rates are per 100 000 and are age-adjusted to the 2000 U.S. standard population by 5-year age groups.

††Values are statistically significantly different from zero; $P<0.05$.

‡‡Tertiles are based on the percentage for all adults combined over the age of 18 years (*see* column 2) who report current cigarette smoking in the BRFSS data, 2001.

Table 4. Prevalence of mammography screening, incidence of breast cancer, and breast cancer death rates among black and white women by state*

	White								Black							
	Recent mammogram, %†		Breast cancer incidence‡				Breast cancer mortality§		Recent mammogram, %†		Breast cancer incidence‡				Breast cancer mortality§	
State	Age 40+, y 2000	No health insurance 2000	% *in situ*‖ 1996–2000	% regional/ distant‖ 1996–2000	Rate¶ 1996–2000	APC# 1996–2000	Rate¶ 1996–2000	APC# 1992–2000	Age 40+, y 2000	No health insurance 2000	% *in situ*‖ 1996–2000	% regional/ distant‖ 1996–2000	Rate¶ 1996–2000	APC# 1996–2000	Rate¶ 1996–2000	APC# 1992–2000
Alabama	73.9	55.8	—	—	—	—	24.6	−1.2	79.7	64.3	—	—	—	—	33.3	−2.0
Alaska	73.8	75.8	17.5	36.3	146.0	1.8	25.9	−3.4**	—	—	17.6	—	147.6	8.4	—	—
Arkansas	72.6	52.7	—	—	—	—	23.7	−3.2**	68.3	61.7	—	—	—	—	37.4	1.3
Colorado	74.1	40.3	16.7	32.0	137.5	1.3	24.1	−2.4**	—	—	17.9	39.1	99.3	−4.8	36.0	0.1
Idaho	66.2	44.2	15.5	34.0	129.9	2.0	26.6	−0.4	—	—	—	—	—	—	—	—
Indiana	73.3	30.0	—	—	—	—	27.7	−2.2**	69.6	—	—	—	—	—	40.0	−0.1
Kentucky	74.8	49.6	13.2	34.1	122.8	0.7	26.8	−2.0**	88.1	—	12.4	42.3	127.6	0.5	35.7	−4.4
Minnesota	72.9	75.0	14.5	32.0	137.8	2.2**	26.7	−2.4**	—	—	15.0	46.7	104.2	2.9	34.5	—
Mississippi	69.9	67.9	—	—	—	—	24.8	−1.0	64.1	57.8	—	—	—	—	37.4	2.2**
Missouri	73.9	43.3	—	—	—	—	26.3	−1.6	81.6	—	—	—	—	—	37.1	−0.2
Nebraska	75.1	52.9	14.8	31.3	130.5	1.2	25.3	−4.0**	92.1	—	14.6	47.3	121.7	−6.0	41.8	—
Oklahoma	70.3	47.9	—	—	—	—	26.7	−2.1**	69.7	—	—	—	—	—	38.8	−0.5
Texas	70.9	39.5	—	—	—	—	25.2	−2.4**	75.3	—	—	—	—	—	37.1	−1.3**
Utah	73.1	68.8	15.2	36.6	118.7	2.6	23.8	−1.8	—	—	—	—	—	—	—	—
West Virginia	74.1	55.9	13.9	32.4	119.9	0.0	27.4	−0.9	85.4	—	12.6	39.2	115.9	2.9	42.5	—
Wisconsin	75.1	—	15.2	30.7	132.1	0.9	26.5	−2.8**	80.5	—	14.9	42.0	116.1	2.7	30.7	−5.2
Wyoming	67.3	46.9	13.0	32.9	126.6	1.6	26.6	−2.7**	—	—	—	—	—	—	—	—
Median, 1st tertile††	73.3															
Georgia	77.7	66.1	—	—	—	—	25.1	−1.8**	72.6	75.4	—	—	—	—	34.2	−0.7
Illinois	75.8	53.3	16.0	33.0	134.2	0.3	29.2	−2.6**	81.1	—	13.6	43.1	121.8	−1.2	39.9	0.2
Iowa	76.5	60.0	14.0	31.3	130.6	0.4	26.4	−3.3**	—	—	9.8	42.5	128.8	−1.4	37.4	—
Kansas	76.1	60.8	—	—	—	—	25.5	−1.6	81.3	—	—	—	—	—	40.1	0.3
Louisiana	75.4	52.3	13.2	34.6	124.4	1.1	27.3	−1.4	75.7	64.2	11.9	45.1	114.2	2.8	38.2	−1.1
Montana	75.7	63.3	14.8	32.0	133.9	−1.1	24.8	−4.0**	—	—	—	—	—	—	—	—
Nevada	75.4	42.9	—	—	—	—	26.9	−2.5**	—	—	—	—	—	—	32.2	—
New Jersey	76.7	56.3	17.8	33.9	143.1	−0.3	31.2	−2.3**	75.7	—	15.9	42.7	115.7	0.9	37.2	−1.9
New Mexico	77.1	59.5	15.0	35.4	122.3	−0.2	26.1	−2.4	—	—	16.4	41.0	94.4	−5.7	40.2	—
North Dakota	76.6	—	—	—	—	—	26.6	−3.2**	—	—	—	—	—	—	—	—
Oregon	77.6	63.7	15.2	30.5	143.4	2.5	26.8	−2.3**	—	—	16.6	29.8	121.5	8.5	29.7	—
Pennsylvania	77.8	62.2	16.3	32.5	130.1	0.9	29.0	−3.2**	76.5	—	18.8	40.0	116.2	−1.3	37.7	−1.6
South Dakota	76.4	59.7	—	—	—	—	25.3	−3.8	—	—	—	—	—	—	—	—
Tennessee	75.6	63.5	—	—	—	—	26.0	−2.1**	75.4	—	—	—	—	—	37.0	−2.9**
Vermont	77.8	63.1	—	—	—	—	27.4	−2.1**	—	—	—	—	—	—	—	—
Virginia	77.7	56.4	—	—	—	—	27.1	−2.0**	78.0	—	—	—	—	—	38.2	−0.9
Washington	77.3	48.8	16.8	31.4	146.7	2.7	26.0	−3.2**	—	—	17.4	39.3	114.1	−0.7	38.6	2.6
Median, 2nd tertile††	76.6															
Arizona	82.7	63.2	15.7	31.7	123.9	0.1	25.7	−1.6	—	—	15.2	42.8	95.6	−9.3	33.2	—
California	79.8	56.9	15.3	—	140.9	0.3	27.6	−2.5**	81.0	—	14.8	—	119.4	0.3	34.9	−1.5
Connecticut	84.6	66.1	19.7	30.8	144.4	0.1	27.5	−2.3**	84.2	—	20.1	36.6	115.7	−3.2	33.1	−3.5
Delaware	87.0	25.0	—	—	—	—	29.7	−3.2**	93.4	—	—	—	—	—	39.1	0.9
District of Columbia	82.4	—	—	—	—	—	27.4	−0.4	84.8	84.9	—	—	—	—	42.6	−2.4
Florida	79.2	44.6	15.3	28.2	133.7	−0.4	25.0	−3.3**	80.3	—	13.7	42.5	103.4	−2.0**	31.9	−0.6
Hawaii	78.3	21.5	16.8	28.6	152.1	2.5	27.1	−1.5	—	—	—	—	—	—	—	—
Maine	79.5	75.7	—	—	—	—	26.5	−3.0**	—	—	—	—	—	—	—	—
Maryland	83.0	66.3	—	—	—	—	28.3	−2.6**	78.7	—	—	—	—	—	35.5	−2.2**

(Table continues)

Table 4 (continued). Prevalence of mammography screening, incidence of breast cancer, and breast cancer death rates among black and white women by state*

	White								Black							
	Recent mammogram, %†		Breast cancer incidence‡				Breast cancer mortality§		Recent mammogram, %†		Breast cancer incidence‡				Breast cancer mortality§	
State	Age 40+, y 2000	No health insurance 2000	% *in situ*‖ 1996–2000	% regional/distant‖ 1996–2000	Rate¶ 1996–2000	APC# 1996–2000	Rate¶ 1996–2000	APC# 1992–2000	Age 40+, y 2000	No health insurance 2000	% *in situ*‖ 1996–2000	% regional/distant‖ 1996–2000	Rate¶ 1996–2000	APC# 1996–2000	Rate¶ 1996–2000	APC# 1992–2000
Massachusetts	84.2	74.2	—	—	—	—	29.0	−3.8**	86.5	—	—	—	—	—	27.5	−5.3
Michigan	81.6	70.2	18.3	29.2	132.1	0.2	27.3	−2.5**	83.1	—	20.4	41.0	121.4	−0.8	36.9	−1.4**
New Hampshire	81.4	68.3	—	—	—	—	28.2	−4.1**	—	—	—	—	—	—	—	—
New York	80.7	62.1	16.7	30.0	135.5	−2.3	30.4	−3.2**	82.1	—	15.6	41.0	99.3	−4.4	32.3	−1.9**
North Carolina	78.6	52.6	16.1	31.6	124.6	1.7**	24.9	−3.0**	77.2	—	14.9	43.3	111.2	0.4	36.2	−1.5
Ohio	78.1	51.6	15.2	31.7	128.5	0.8	29.1	−2.5**	81.7	—	15.7	37.3	117.1	−1.1	38.6	−0.4
Rhode Island	84.7	70.0	17.2	31.1	135.7	0.2	29.7	−3.0**	75.2	—	10.6	28.6	89.8	−4.5	27.4	—
South Carolina	80.2	53.7	—	—	—	—	24.8	−2.2**	76.6	66.3	—	—	—	—	36.4	1.9
Median, 3rd tertile††	81.4															

*— = Statistic could not be calculated; for BRFSS estimate of mammography screening, percent was not calculated if there were 20 or fewer respondents; incidence and mortality statistics were not calculated if there were 25 or fewer cases.

†Recent mammogram is defined as having had a mammogram within the past 2 years and is based on Centers for Disease Control and Prevention's (CDC) Behavioral Risk Factor Surveillance System (BRFSS) data.

‡Incidence data are from the Surveillance, Epidemiology, and End Results Program and National Program of Cancer Registries areas reported by the North American Association of Central Cancer Registries as meeting high quality standards for 1996 through 2000.

§Death data are from CDC's National Vital Statistics System; the data cover the entire U.S. population (http: //www.cdc.gov/nchs).

‖Percent *in situ* includes all breast cancers in the denominator; percent regional/distant includes only invasive breast cancers in the denominator.

¶Rates are per 100 000 and are age-adjusted to the 2000 U.S. standard population by 5-year age groups.

#APC = annual percent change.

**Values are statistically significantly different from zero; $P<.05$.

††Tertiles are based on the percentage of white women aged 40 years or older (*see* column 2) who reported a recent mammogram in the BRFSS data, 2000.

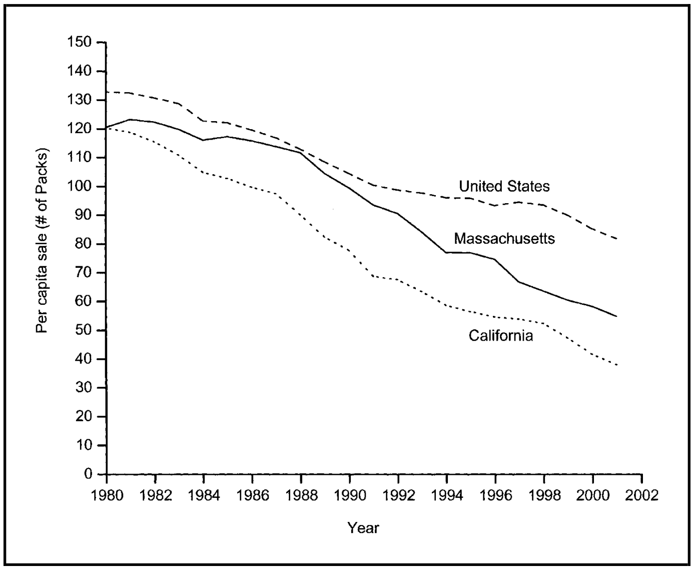

Fig. 5. Trends in annual per capita cigarette consumption for selected states and the average consumption across all states combined. Rates are annual per capita cigarette consumption expressed in cigarette pack sales. Data are from Orzechowski and Walker *(24)*.

and control programs for the four most common cancers. The parameters considered in Tables 3–6 show how specific indicators of exposure, screening, and disease burden can be used by cancer control planners to assess current cancer burden and monitor progress with respect to cancer prevention and screening. Somewhat different measures were chosen for each of the four most common cancers, depending on the extent of scientific evidence regarding causation, the ability to modify the underlying risk factors, the evidence that screening tests are effective in reducing incidence or mortality, and the interpretability of incidence and/or death rates in measuring changes in the burden of disease. We did not consider all aspects of cancer control because population-based data on cancer treatment, quality of life, end-of-life care, and dissemination of cancer control in clinical practice have become available only during the last decade and state-specific data are limited. The data pertaining to various cancer risk factors and/or screening tests in this report cannot be used to assess the efficacy of specific screening tests or to make causal judgments about the contribution of these factors to temporal trends in cancer incidence or mortality. The data presented are largely cross-sectional and consider only a subset of factors that influence disease incidence and/or death rates, especially for breast, prostate, and colorectal cancer. Judgments about the efficacy and safety of various interventions for cancer control are derived from other sources *(31,36,37)*.

Lung Cancer and Tobacco Use

Surveillance of tobacco use and the disease burden attributable to tobacco is an essential component of all cancer control programs. Cigarette smoking alone accounts for about 30% of cancer deaths in the United States *(38)* and an estimated 16% of incident cancers worldwide *(39)*. Tobacco is a systemic carcinogen that causes cancers of the lung, oral cavity, oropharynx, nasopharynx and nasal sinuses, larynx, esophagus, stomach, urinary bladder, pancreas, liver, kidney, and uterine cervix, as well as myeloid leukemia, plus an even larger number of deaths from cardiovascular and respiratory diseases *(40)*. Lung cancer accounts for 31% of deaths attributable to cigarette smoking *(38)*; therefore, lung cancer is a useful measure in cancer surveillance because current incidence and mortality patterns reflect the cumulative effects of tobacco use over the past 50 years *(41)*.

Declines in lung cancer death rates among white men since 1991 and black men since 1993 reflect reductions in tobacco use that began in the United States in the 1960s when the first Surgeon General's report on smoking and health was published *(42)*. The recent stabilization in lung cancer incidence and slowing rate of increase in death rates among white and black women suggest that a reversal in the trends among women in the United States may be occurring. Despite these encouraging observations, tobacco-attributable cancer will not continue to decrease without sustained efforts to reduce the percentage of adolescents who begin using tobacco, and to increase the percentage of adults who successfully stop using tobacco. Several community-based interventions have been effective in reducing tobacco use when used as part of a comprehensive tobacco control program *(31)*. These interventions include regulations that restrict smoking in public places and limiting tobacco product advertising and promotion to children and adolescents. Also effective are anti-tobacco advertisements and increased tobacco excise taxes and cigarette prices, which have been shown to decrease the percentage of young people who start smoking *(31)*. States, such as California and Massachusetts, which implemented substantial tobacco control programs during the 1990s, experienced some of the largest decreases in per capita tobacco consumption. Continued progress will require a sustained commitment to tobacco control. In most states, per capita funding for comprehensive tobacco control is substantially lower than the amount recommended by the CDC *(31)*.

No state has reached the objective of *Healthy People 2010* to reduce the percentage of adults who smoke to 12% *(19)*. Although Utah, with a prevalence of adults who smoked of 13.3%, and California, with a prevalence of adults who smoked of 17.2%, are close to meeting the objective, the prevalence of adults who smoked either increased or remained stable in all but one state from 1991 through 2000 *(43)*. Nationally, the prevalence of adult smoking decreased from 24.7% to 22.5% between 1997 and 2000 (www.cdc.gov/nchs/about/major/nhis/released200303.htm#8). Smoking among adults is a less sensitive indicator of trends in smoking initiation than is smoking among adolescents, but it does reflect the combined overall effect of changes in both smoking initiation and cessation.

Breast Cancer

Regular mammography screening is recommended by national cancer organizations and is a key surveillance measure, along with breast cancer incidence and mortality, for breast cancer control programs. Evidence-based guidelines from the federally supported U.S. Preventive Services Task Force recommend that women aged 40 years or older should have a mammogram every 1–2 years, with or without a clinical breast exam *(37,44)*. The ACS recommends annual mammography screening among women aged 40 years or older *(45)*. The *Healthy People 2010* objective is that at least 70% of U.S. women aged 40 years or older will have a mammogram within the previous 2 years *(19)*. Guidelines among national organizations have converged only recently, following much debate about the benefits of mammography screening, particularly for women aged 40–49 years *(44,46–58)*. According to the U.S.

Table 5. Prevalence of prostate-specific antigen testing, incidence of prostate cancer, and prostate cancer death rates among black and white men by state*

State	White: Recent PSA test, %† (Age 50+, y) 2001	White: Prostate cancer incidence‡ Rate‖ 1996–2000	White: Prostate cancer incidence‡ APC 1992–2000	White: Prostate cancer mortality§ Rate‖ 1996–2000	White: Prostate cancer mortality§ APC 1992–2000	Black: Recent PSA test, %† (Age 50+, y) 2001	Black: Prostate cancer incidence‡ Rate‖ 1996–2000	Black: Prostate cancer incidence‡ APC 1992–2000	Black: Prostate cancer mortality§ Rate‖ 1996–2000	Black: Prostate cancer mortality§ APC 1992–2000
Alabama	56.7	—	—	31.4	−0.6	49.3	—	—	82.3	−0.5
Idaho	60.8	160.9	4.6¶	32.8	−1.5	64.3	—	—	—	—
Indiana	52.5	—	—	35.2	−3.5¶	44.8	—	—	—	—
Iowa	63.9	148.6	0.7	32.1	−2.7¶	67.4	237.2	−4.0	75.4	—
Kentucky	53.5	131.0	1.8	34.3	−5.0¶	—	199.6	−1.5	—	—
Maryland	59.1	—	—	36.9	−4.1¶	59.8	—	—	—	—
Massachusetts	52.8	—	—	32.5	−2.9¶	51.1	—	—	59.6	−4.4
Minnesota	50.2	176.0	3.7	34.8	−4.4¶	—	232.9	−0.7	—	—
Missouri	57.4	—	—	32.0	−5.9¶	—	—	—	—	—
Montana	57.9	159.4	0.3	32.4	−1.8¶	62.8	—	—	—	—
New Mexico	65.1	147.1	−1.7	32.2	−3.4	63.7	195.4	2.3	—	—
Oregon	58.6	153.3	4.4	34.1	−2.3¶	54.7	215.4	7.2	72.5	—
Pennsylvania	52.1	156.5	0.4	33.7	−3.9¶	—	255.7	−3.3¶	61.3	−5.5¶
Rhode Island	62.7	174.7	2.7	32.4	−4.0¶	—	217.9	−1.8	—	—
Texas	62.8	—	—	34.0	−3.5¶	—	—	—	—	—
Utah	52.6	178.3	−0.3	32.1	−2.3¶	—	234.4	−11.3	—	—
Wisconsin	54.1	157.4	−0.1	34.1	−2.5¶	—	256.1	−1.7	88.1	—
Median, 1st tertile#				32.8	−3.4				74.0	−4.4
Alaska	62.3	172.7	3.9	30.8	−3.7	—	281.0	−2.0	—	—
California	53.6	151.4	0.0	30.5	−4.8¶	63.3	244.3	0.2	—	—
Delaware	54.5	—	—	31.0	−3.5¶	—	—	—	70.1	−2.4¶
Georgia	60.4	—	—	30.6	−4.0¶	56.9	—	—	82.9	−1.7¶
Illinois	52.5	145.2	−0.2	30.8	−2.3¶	62.5	226.9	−3.6	77.7	−0.2
Louisiana	57.0	155.3	−3.2¶	30.6	−3.7¶	46.2	221.2	−2.1	70.6	−2.0
Mississippi	57.8	—	—	30.6	−2.0	43.4	—	—	80.9	−0.5
New Jersey	61.8	186.0	0.8	31.2	−3.1¶	69.1	281.1	−0.9	74.3	−2.9¶
North Carolina	55.5	134.4	0.6	30.8	−3.2¶	47.4	214.6	−0.7	83.6	−2.4¶
North Dakota	63.0	—	—	30.4	−4.3¶	41.5	—	—	—	—
Ohio	55.4	130.7	3.0	31.1	−3.9¶	—	204.0	0.9	65.7	−2.2¶
Oklahoma	49.8	—	—	30.1	−2.7¶	67.3	—	—	74.2	—
South Carolina	61.1	—	—	30.2	−4.7¶	51.1	—	—	84.0	−0.4
Vermont	52.0	—	—	30.2	−4.8¶	—	—	—	—	—
Virginia	55.5	—	—	30.6	−3.5¶	64.0	—	—	78.4	−1.9¶
West Virginia	58.1	142.5	4.4¶	31.4	−3.5¶	—	243.7	−2.0	—	—
Wyoming	64.1	175.7	1.9	31.2	−2.3¶	—	—	—	—	—
Median, 2nd tertile#				30.6	−3.5				77.7	−2.0
Arizona	62.0	—	—	26.0	−4.6¶	—	—	—	73.4	−2.5¶
Arkansas	52.9	158.2	0.5	29.9	−3.2¶	57.2	200.0	−5.9	77.8	−0.6
Colorado	60.6	162.0	3.0	28.2	−3.8¶	—	252.7	−2.2	71.6	−1.7¶
Connecticut	58.5	145.5	−0.4	29.9	−4.0¶	64.4	232.6	−2.0	76.4	1.6
Florida	66.6	161.6	−3.7	28.3	−2.4	63.6	170.9	13.8	51.2	—
Hawaii	45.6	—	—	24.8	−9.3¶	—	—	—	—	—
Kansas	56.3	—	—	29.0	−3.8¶	—	—	—	73.0	0.5
Maine	48.1	172.8	2.3	29.8	−4.3¶	—	299.5	0.2	—	—
Michigan	62.4	156.0	1.5	29.6	−7.1¶	47.3	200.8	−5.2	84.5	−5.6
Nebraska	48.4	—	—	28.0	−3.7¶	—	—	—	68.0	—
Nevada	54.9	—	—	29.5	−4.0¶	—	—	—	62.6	−2.2¶
New Hampshire	56.0	143.6	−0.3	29.0	−4.0¶	—	231.5	1.4¶	—	—
New York	52.5	—	—	29.7	−3.7¶	—	—	—	71.4	−2.5
South Dakota	54.2	—	—	29.0	−3.7¶	—	—	—	—	—
Tennessee	52.5	165.4	2.7	30.0	−5.0¶	34.1	243.9	1.1	75.6	−2.9
Washington	52.3	—	—	28.6	−3.6¶	—	—	—	72.9	−2.6
Washington, DC	71.7	—	—	28.0	−5.5	56.8	—	—	69.2	−3.1
Median, 3rd tertile#				29.0	−4.0				72.9	−2.6

*APC = annual percent change. — = Statistic could not be calculated; for BRFSS estimate of PSA screening, percent was not calculated if there were 20 or fewer respondents; mortality statistics were not calculated if there were 25 or fewer cases.

†Recent prostate specific antigen (PSA) test is defined as a PSA test in the preceding year among men aged 50 years or older with no history of prostate cancer; prevalence estimates are based on Centers for Disease Control and Prevention's (CDC) Behavioral Risk Factor Surveillance System (BRFSS) data.

‡Incidence data are from Surveillance, Epidemiology, and End Results Program and National Program Cancer Registries areas reported by the North American Association of Central Cancer Registries as meeting high quality standards for 1996–2000.

§Death data are from CDC's National Vital Statistics System; the data cover the entire U.S. population (http: //www.cdc.gov/nchs).

¶Values are statistically significantly different from zero; $P<.05$.

‖Rates are per 100 000 persons and are age-adjusted to the 2000 U.S. standard population by 5-year age groups.

#Tertiles are based on the 5-year prostate cancer mortality rate (*see* column 5) for white males, 1996–2000.

Table 6. Prevalence of colorectal cancer screening, incidence of colorectal cancer and colorectal cancer death rates for blacks and whites by state*

	White							Black						
	Screening (age 50+, y) %†		Colorectal cancer incidence‡			Colorectal cancer mortality§		Screening (age 50+, y) %†		Colorectal cancer incidence‡			Colorectal cancer mortality§	
State	FOBT 2 y, 2001	Sig/col ever, 2001	% stage reg/distant‖ 1996–2000	Rate¶ 1996–2000	APC 1996–2000	Rate¶ 1992–2000	APC 1992–2000	FOBT 2 y, 2001	Sig/col ever, 2001	% stage reg/distant‖ 1996–2000	Rate¶ 1996–2000	APC 1996–2000	Rate 1992–2000	APC 1992–2000
Males														
Alabama	14.3	44.5	—	—	—	22.7	0.4	4.7	32.0	—	—	—	33.0	1.1
Arkansas	28.3	41.3	—	—	—	24.1	−1.4	21.5	33.4	—	—	—	34.8	−1.2
Idaho	23.1	41.6	58.3	54.3	−2.5#	23.0	−0.7	—	—	—	—	—	—	—
Illinois	29.6	42.8	58.9	71.3	0.4	27.9	−2.5#	24.3	27.2	58.4	75.8	0.7	39.4	−0.8
Iowa	31.3	44.1	56.2	75.3	−0.9	27.6	−1.3	—		—	61.4	19.9	—	—
Kansas	33.0	43.1	—	—	—	23.3	−2.6#	38.0	—	—	—	—	42.6	—
Kentucky	29.5	40.4	53.6	69.9	0.8	28.9	−1.5#	26.0	41.0	56.6	76.5	−4.0	39.6	−2.0
Louisiana	28.1	38.3	54.7	72.3	−0.5	27.6	−0.2	31.2	32.0	59.7	74.2	3.5	39.1	1.9#
Mississippi	25.7	38.5	—	—	—	24.9	1.7	43.5	44.6	—	—	—	30.8	−0.7
Missouri	32.8	43.0	—	—	—	25.6	−2.8#	—	—	—	—	—	36.3	−1.4
Montana	29.0	43.5	56.7	60.9	−1.8	24.4	−1.6	—	—	—	—	—	—	—
Nebraska	36.3	38.9	63.8	71.0	−0.8	27.7	−1.4	—	—	73.5	64.1	−4.5	—	—
Nevada	30.1	44.2	—	—	—	27.9	−0.4	—	—	—	—	—	43.3	—
Oklahoma	25.7	33.5	—	—	—	24.8	−0.2	25.2	52.2	—	—	—	43.8	3.2#
Tennessee	32.9	39.9	—	—	—	24.3	−2.0#	17.5	13.7	—	—	—	41.2	0.5
Texas	26.3	43.7	—	—	—	24.0	−1.7#	22.4	37.6	—	—	—	38.8	−1.6#
West Virginia	30.3	39.1	56.2	70.5	2.6	27.9	−0.7	—	—	61.0	92.6	−15.4#	46.1	—
Median, 1st tertile**		41.6												
Alaska	26.1	50.1	58.6	56.2	8.2	23.2	−5.0	—	—	—	—	—	—	—
California	30.3	48.6	—	60.2	−1.9#	22.3	−2.3#	23.1	56.4	—	68.7	—	30.8	−1.3
Florida	39.7	50.5	51.8	71.8	−1.1	22.8	−2.4#	41.0	41.5	57.2	72.1	−0.1	29.9	−0.9
Georgia	34.3	51.1	—	—	—	21.0	−2.4#	23.8	43.5	—	—	—	31.0	1.0
Indiana	30.9	44.8	—	—	—	27.4	−1.6#	12.7	41.0	—	—	—	41.2	−1.0
Maine	40.4	45.7	—	—	—	27.5	−2.9#	—	—	—	—	—	—	—
New Mexico	31.5	48.9	53.8	51.5	−0.6	21.6	−1.4	—	—	—	—	—	—	—
New York	35.7	50.7	50.3	74.5	−1.2	28.3	−2.5#	35.9	36.6	58.1	63.8	−5.2	30.8	−0.9
North Carolina	40.2	48.6	59.6	57.7	−0.4	23.6	−1.8#	48.6	48.8	62.3	59.8	4.3	32.0	−0.3
North Dakota	20.9	51.0	—	—	—	25.9	−3.4	—	—	—	—	—	—	—
Ohio	32.6	47.4	56.0	67.1	−1.1	28.3	−2.1#	25.5	33.7	58.5	66.9	−1.2	36.4	−1.1
Pennsylvania	32.4	51.9	57.7	75.2	−0.6	28.7	−2.2#	29.7	34.6	58.4	76.5	−1.0	38.2	−1.1
South Carolina	32.8	49.0	—	—	—	24.9	−1.4	37.4	39.8	—	—	—	34.3	−0.4
South Dakota	31.9	46.5	—	—	—	27.2	−0.7	—	—	—	—	—	—	—
Utah	18.8	48.2	52.3	49.2	2.4	18.7	−2.0	—	—	—	—	—	—	—
Washington	37.1	52.5	61.8	61.5	−0.7	22.8	−1.5#	—	—	62.3	62.4	−5.9	29.9	—
Wyoming	20.7	49.6	53.1	60.2	3.4	24.8	0.4	—	—	—	—	—	—	—
Median, 2nd tertile**		49.0												
Arizona	33.5	52.7	56.3	55.9	0.1	21.9	−2.1#	—	—	63.2	57.7	3.7	—	—
Colorado	37.7	52.8	56.4	57.6	−0.1	22.4	−1.8#	—	—	59.4	61.3	−9.3	30.2	—
Connecticut	36.7	58.0	52.4	71.5	0.0	25.6	−2.4#	29.5	39.2	53.4	70.2	−6.5	27.6	—
Delaware	30.5	63.5	—	—	—	25.4	−3.3#	28.4	55.9	—	—	—	—	—
District of Columbia	58.7	57.8	—	—	—	23.1	—	29.7	48.4	—	—	—	—	—
Hawaii	38.8	53.1	49.9	62.3	−3.3	18.8	−7.2#	—	—	—	—	—	34.2	−2.1
Maryland	45.1	55.6	—	—	—	27.4	−3.1#	38.0	55.8	—	—	—	38.5	−0.5

(Table continues)

Table 6 (continued). Prevalence of colorectal cancer screening, incidence of colorectal cancer and colorectal cancer death rates for blacks and whites by state*

	White							Black						
	Screening (age 50+, y) %†		Colorectal cancer incidence‡			Colorectal cancer mortality§		Screening (age 50+, y) %†		Colorectal cancer incidence‡			Colorectal cancer mortality§	
State	FOBT 2 y, 2001	Sig/col ever, 2001	% stage reg/distant‖ 1996–2000	Rate¶ 1996–2000	APC 1996–2000	Rate¶ 1992–2000	APC 1992–2000	FOBT 2 y, 2001	Sig/col ever, 2001	% stage reg/distant‖ 1996–2000	Rate¶ 1996–2000	APC 1996–2000	Rate 1992–2000	APC 1992–2000
Massachusetts	40.0	56.6	—	—	—	29.2	−3.0#	33.0	36.7	—	—	—	35.9	0.3
Michigan	36.9	59.0	52.6	65.3	−2.7	25.9	−2.3#	32.2	42.7	56.5	78.2	−0.7	34.5	0.6
Minnesota	30.6	61.4	59.2	61.6	1.0	23.5	−2.0#	22.8	23.3	63.0	83.5	−7.9	—	—
New Hampshire	41.3	56.8	—	—	—	28.1	−1.1	—	—	—	—	—	—	—
New Jersey	35.6	55.8	54.9	79.6	−1.4#	29.4	−3.2#	23.8	40.5	61.1	76.9	1.8	33.2	—
Oregon	36.1	53.5	61.6	57.8	1.0	22.8	−1.2	—	—	67.9	75.5	1.5	38.6	−1.9
Rhode Island	38.1	56.6	53.9	77.3	1.8	29.4	−3.1	—	—	—	—	—	28.8	3.1
Vermont	43.7	52.5	—	—	—	28.6	−1.2	—	—	—	—	—	33.8	−0.8
Virginia	35.5	54.1	—	—	—	24.0	−1.9#	33.4	29.1	—	—	—	30.8	—
Wisconsin	31.4	57.6	56.6	70.6	−1.7	25.8	−1.7#	—	—	58.7	72.0	−3.7	32.3	—
Median, 3rd tertile**		56.6												
Females														
Alaska	21.0	44.2	53.3	44.4	3.3	14.6	−4.3	—	—	—	—	—	—	—
Idaho	29.5	44.8	56.4	42.1	−0.5	15.3	−0.7	—	—	—	—	—	—	—
Illinois	31.4	42.5	59.7	50.3	−0.6	18.6	−1.6#	27.1	39.7	58.8	59.2	−2.7	28.0	−1.1
Kentucky	29.6	38.3	54.0	51.6	1.1	19.3	−1.9#	27.2	37.8	58.3	68.4	3.6	26.6	−1.5
Louisiana	30.3	44.3	55.8	46.4	0.3	17.6	−2.2#	24.3	37.6	59.9	53.4	0.8	25.3	1.2
Missouri	29.8	43.6	—	—	—	18.2	−0.9	22.3	39.8	—	—	—	27.7	1.7
Montana	30.5	43.1	55.0	43.1	−1.2	15.4	−1.9	—	—	—	—	—	—	—
Nebraska	33.4	38.6	62.9	49.5	2.1#	18.0	0.1	—	—	54.4	53.3	6.0	27.0	—
New Jersey	31.2	44.5	56.1	54.4	−1.5	19.8	−2.5#	29.8	40.8	58.5	56.5	0.0	24.6	−1.7
New Mexico	25.7	44.9	54.7	36.2	−1.3	15.3	−0.9	—	—	—	—	—	—	—
Oklahoma	25.3	42.3	—	—	—	17.7	−1.2#	22.7	51.6	—	—	—	23.7	−0.5
Pennsylvania	30.6	44.9	58.3	52.4	−1.9	19.9	−1.8#	27.1	46.3	60.6	55.0	2.2#	25.8	−1.6
South Dakota	31.1	45.1	—	—	—	20.2	1.0	—	—	—	—	—	—	—
Tennessee	27.7	42.9	—	—	—	16.9	−1.3#	17.5	36.8	—	—	—	30.1	2.1
Utah	23.4	45.5	52.1	37.9	1.5	14.9	1.3	—	—	—	—	—	—	—
West Virginia	23.6	39.4	56.8	52.0	−0.3	20.3	−0.4	22.5	44.3	60.4	61.9	−7.3	31.4	—
Wyoming	23.4	44.8	58.8	42.1	4.4	20.2	1.1	—	—	—	—	—	—	—
Median, 1st tertile**		44.2												
Alabama	11.6	48.0	—	—	—	15.2	−1.0	10.5	41.3	—	—	—	21.5	−0.9
Arkansas	25.4	48.3	—	—	—	16.9	−0.8	16.0	40.4	—	—	—	26.0	−1.9
Colorado	37.1	47.8	56.2	41.8	−0.5	15.6	−2.1#	—	—	63.8	51.1	3.8	19.9	—
Hawaii	38.7	48.4	51.5	38.8	−3.8	14.3	−3.0	—	—	—	—	—	—	—
Indiana	28.5	46.8	—	—	—	19.4	−1.4#	31.0	41.2	—	—	—	29.9	−1.1
Iowa	35.9	47.1	56.2	54.8	−0.9	19.1	−1.7	—	—	53.1	57.4	−4.1	—	—
Kansas	35.5	46.7	—	—	—	16.7	−1.1	23.9	47.7	—	—	—	23.5	—
Maryland	42.7	49.3	—	—	—	18.9	−2.4#	47.3	50.2	—	—	—	25.8	−1.0
Mississippi	20.8	46.3	—	—	—	15.5	1.6	14.6	45.3	—	—	—	24.9	2.1
Nevada	29.2	46.0	—	—	—	18.8	2.2	—	—	—	—	—	19.2	—
New Hampshire	40.9	48.9	—	—	—	19.8	−3.5#	—	—	—	—	—	—	—
New York	35.6	48.9	51.4	53.3	0.0	19.1	−2.6#	24.6	35.6	58.1	49.8	−2.3	21.5	−1.2
North Carolina	46.7	49.3	60.0	40.5	1.6	16.0	−1.9#	37.3	39.4	63.2	48.6	0.9	24.7	−1.2
Ohio	33.0	45.5	56.2	48.6	−0.5	19.7	−1.2#	32.3	41.6	57.6	51.4	2.7	25.9	−1.2

(Table continues)

Table 6 (continued). Prevalence of colorectal cancer screening, incidence of colorectal cancer and colorectal cancer death rates for blacks and whites by state*

	White							Black						
	Screening (age 50+, y) %†		Colorectal cancer incidence‡			Colorectal cancer mortality§		Screening (age 50+, y) %†		Colorectal cancer incidence‡			Colorectal cancer mortality§	
State	FOBT 2 y, 2001	Sig/col ever, 2001	% stage reg/distant‖ 1996–2000	Rate¶ 1996–2000	APC 1996–2000	Rate¶ 1992–2000	APC 1992–2000	FOBT 2 y, 2001	Sig/col ever, 2001	% stage reg/distant‖ 1996–2000	Rate¶ 1996–2000	APC 1996–2000	Rate 1992–2000	APC 1992–2000
South Carolina	33.8	48.0	—	—	—	16.7	−1.2	19.9	38.8	—	—	—	22.0	−0.6
Texas	25.9	45.9	—	—	—	15.9	−1.4#	21.6	38.5	—	—	—	26.4	−0.7
Vermont	43.4	46.4	—	—	—	21.2	1.1	—	—	—	—	—	—	—
Median, 2nd tertile**		47.8												
Arizona	37.6	52.0	56.4	39.9	−1.8#	14.7	−1.6	—	—	59.3	45.2	−1.6	23.1	—
California	35.1	52.7	—	43.6	—	15.6	−2.1#	17.8	49.9	—	54.9	−0.7	23.5	−1.9#
Connecticut	38.4	51.4	54.0	51.1	−1.2	17.2	−1.4	39.0	47.6	57.8	57.9	7.8	20.9	1.2
Delaware	29.1	55.7	—	—	1.0	17.9	−2.3	28.3	53.1	—	—	—	30.9	−0.3
District of Columbia	44.1	61.2	—	—	—	17.7	1.5	32.1	57.3	—	—	—	24.9	−1.0
Florida	37.2	50.4	53.2	52.4	−0.8	16.0	−2.2#	37.7	46.7	56.4	54.9	−4.1	22.4	−2.3#
Georgia	35.8	51.4	—	—	—	14.9	−1.9#	24.3	42.2	—	—	—	22.3	0.1
Maine	43.5	49.8	—	—	—	20.4	−1.7#	—	—	—	—	—	—	—
Massachusetts	38.5	52.0	—	—	—	19.5	−2.7#	43.3	50.7	—	—	—	22.6	−1.7
Michigan	37.8	53.7	52.5	46.2	−1.6	17.0	−2.0#	30.3	56.6	55.7	59.1	0.4	26.0	0.2
Minnesota	38.0	62.1	61.1	46.1	−0.4	16.7	−1.4	—	—	52.6	51.0	18.4	19.8	—
North Dakota	30.0	50.6	—	—	—	16.0	−1.0	—	—	—	—	—	—	—
Oregon	41.9	54.3	61.7	42.8	4.4	16.3	−1.6#	—	—	58.7	52.6	−13.6	—	—
Rhode Island	32.3	49.8	55.7	56.8	−2.7	20.0	−1.5	32.4	45.5	—	—	—	—	—
Virginia	32.5	50.9	—	—	—	17.4	−1.1	31.3	59.2	—	—	—	26.5	−1.1
Washington	44.7	52.5	63.4	43.8	−0.2	16.0	−2.0#	—	—	59.1	52.8	−2.0	20.9	—
Wisconsin	34.0	57.3	57.8	49.7	−4.5#	17.0	−1.6#	25.0	38.4	61.6	58.5	1.1	26.4	—
Median, 3rd tertile**		52.0												

*— = Statistic could not be calculated; for BRFSS estimate of FOBT and sigmoidoscopy screening, percent was not calculated if there were 20 or fewer respondents; incidence and mortality statistics were not calculated if there were 25 or fewer cases. APC = annual percent change.

†FOBT is defined as fecal occult blood test in preceding 2 years; ever sigmoidoscopy is defined as ever having had a sigmoidoscopy or colonoscopy; prevalence estimates are based on Centers for Disease Control and Prevention's (CDC) Behavioral Risk Factor Surveillance System (BRFSS) data in persons 50 years of age or older.

‡Incidence data is from Surveillance, Epidemiology, and End Results Program and National Program of Cancer Registries areas reported by the North American Association of Central Cancer Registries as meeting high quality standards for 1996 through 2000.

§Death data are from CDC's National Vital Statistics System; the data cover the entire U.S. population (http: //www.cdc.gov/nchs).

‖Percent regional/distant includes only invasive colorectal cancers in the denominator.

¶Rates are per 100 000 persons and are age-adjusted to the 2000 U.S. standard population by 5-year age groups.

#Values are statistically significantly different from zero; *P*<.05.

**Tertiles are based on the percentage of white persons aged 50 years or older (*see* column 3) reporting ever having had a sigmoidoscopy or colonoscopy in the BRFSS data, 2001.

Preventive Services Task Force, there is fair evidence that mammography reduces the risk of dying from breast cancer among women aged 40 years or older *(37).*

Decreasing breast cancer death rates and increasing breast cancer incidence rates reported during the 1990s have been attributed to, in part, increased mammography screening *(1,4,5).* The reductions in the death rate can be attributed also to the dissemination of adjuvant chemotherapy, including multi-agent chemotherapy and tamoxifen, into medical practice *(59,60).*

Some states, such as Arizona and New Jersey, have used population-based registry data to identify geographic areas with excess late-stage breast cancers for increased mammography screening *(61,62).* One reason for the excess in late-stage disease may be delayed access to care. The prevalence of recent mammography use was lowest among women who lacked health insurance and among recent immigrants *(62–64).*

The observed differences in breast cancer incidence rates among states may also reflect demographic differences and variations in modifiable risk factors, including alcohol consumption, sedentary lifestyle, obesity, and use of hormone replacement therapy *(65–70).* All of these risk factors are also related to the risk of other major chronic diseases. Therefore, cancer prevention and control plans should not only address mammography screening in specific populations, but also should devote resources to the development and dissemination of public health programs that promote and help people maintain a healthy lifestyle.

Prostate Cancer

Prostate cancer mortality in the United States has been declining since 1993. However, only a few states have met the *Healthy People 2010* objective of reducing prostate cancer death rates to below 28.7 per 100 000 men *(19).* No currently recognized risk factors account for the decline in prostate cancer mortality *(71,72),* although the decrease might reflect improvements in treatment combined with PSA-related early detection. Currently, the PSA test is widely used in most states (Table 5). The observed decrease in the incidence of late-stage prostate cancer after 1992 is consistent with the effects of introducing screening into a population with little or no screening *(73).* A study that assessed the contribution of disease stage to the mortality reduction found that part of the initial decline in the prostate cancer death rate resulted from a decrease in late-stage cancers *(74).* However, a simulation study incorporating reasonable estimates of lead time found the recent decline in prostate cancer mortality was unlikely to be solely the result of screening *(75).* Furthermore, prostate cancer death rates have declined in countries in which PSA testing is rare *(76).* Advances in treatment that might have contributed to the decline in death rates are discussed elsewhere *(77,78).*

Screening for prostate cancer by the use of PSA or digital rectal examinations (DRE) is not currently recommended as a component of cancer control. The U.S. Preventive Services Task Force has concluded that the evidence is insufficient to make a recommendation for or against routine screening using PSA testing or DRE *(79–81).* The U.S. Preventive Services Task Force cites the current lack of evidence that early detection improves health outcomes and the potential harm that can result from treatment. Recommendations vary on the approach to PSA testing in the clinical setting. The ACS recommends that physicians offer the PSA test and DRE annually to average-risk men beginning at age 50 years and to high-risk men beginning at age 45 years, and advises physicians to provide information about the benefits and risks to help patients make informed decisions *(82).* The U.S. Preventive Services Task Force does not recommend that clinicians offer screening to patients, and further states that clinicians should not order the test without discussing with the patient the potential but uncertain benefits and risks *(79).* Despite reservations about the benefits and risks of prostate cancer screening, its use is widespread. In 2001, higher proportions (75%) of men aged 50 years or older reported they had had a PSA test than the proportion of men who had had any colorectal cancer screening (63%), according to BRFSS data *(83).*

In 3–5 years, two randomized clinical trials now in progress will provide additional information about the benefits and risks of screening for prostate cancer *(84,85).* In the interim, public health agencies can play an important role in educating the medical community and the general public about the risks and benefits of prostate cancer screening. A recent publication provides guidance to physicians and their patients to make informed decisions about screening for prostate cancer *(86).*

Colorectal Cancer

Long-term declines in colorectal cancer incidence have slowed or stabilized since the mid-1990s, whereas declines in death rates have continued. Increased risk for developing colorectal cancer is associated with a sedentary lifestyle, obesity, and an unhealthy diet *(69,87,88).* The prevalence of these risk factors has increased in the general population over the last 20 years *(89).* The impact that such trends have had on colorectal cancer incidence and mortality is not well established *(90,91).* Many studies report that physical inactivity and obesity increase colorectal cancer risk *(69).* Thus, there is a continuing need to identify community interventions that effectively increase physical activity and support the maintenance of a healthy body weight. Accumulating evidence indicates a potential protective effect of non-steroidal anti-inflammatory drugs on the development and progression of colorectal cancer *(92–94).* However, these agents are not currently recommended for general application for the prevention of colorectal cancer because of unresolved questions about safety and optimal treatment regimens.

The early detection and removal of pre-cancerous colorectal polyps may have contributed to the decline in colorectal cancer incidence and mortality. Early detection of colorectal cancer could further reduce cancer deaths and disparities between blacks and whites *(95–97).* The U.S. Preventive Services Task Force and other organizations support the use of any of four screening tests: FOBT, flexible sigmoidoscopy, colonoscopy, and double contrast barium enema *(98).* Potential barriers to the use of these tests can include the limited capacity of the medical infrastructure to provide testing, the cost of screening, the lack of insurance coverage for these tests, and reluctance on the part of patients and providers to undertake the tests *(99).* Strategies for overcoming these barriers are needed if cancer control efforts are to address the disparities between male and female and black and white populations. The prevalence of screening in many states is below the *Healthy People 2010* target of 50% for both FOBT and sigmoidoscopy or colonoscopy screening *(19).*

Treatment remains an important component of any colorectal cancer control plan *(97,100–103).* Highly effective treatment protocols have been developed particularly for patients with stage III colon cancers *(97,101–103).* However, more research or demonstration of the effectiveness in community-based interventions is needed.

Limitations and Issues in Interpretation

The interpretation of data in this report and the use of selected surveillance information in developing state and community cancer prevention and control plans are affected by certain limitations in the data. Although most states have population-based cancer registries that meet standard criteria for the completeness, quality, and timeliness of their cancer incidence data *(8,9),* there are 12 state and territorial cancer registries that do not submit their data to NAACCR for evaluation or do not currently meet NAACCR criteria for highest quality.

A second limitation is that the long-term trends in cancer incidence and death rates could be evaluated only for white and black populations because data for other racial and ethnic populations were unavailable before the 1990s. Furthermore, incidence rates may be unstable for specific racial and ethnic populations and within small geographic areas, especially for uncommon cancers.

A third limitation is the uncertain comparability of the racial/ethnic designations used in previous years to that of the bridged designations from the 2000 census used this year, which converted the multiracial classification to a single race group. A fourth limitation is racial and ethnic misclassification for certain populations, particularly American Indians, Asian/Pacific Islanders, and Hispanics *(104–106).*

Limitations of data from the CDC's BRFSS have been discussed previously *(3).* Briefly, the response rates vary widely across states and the surveys rely exclusively on telephone interviews. Therefore, results may not be comparable to that of other nationally representative surveys, such as the National Health Interview Survey *(63,64).*

Future Directions and Resources for Cancer Control Planning, Implementation, and Evaluation

Opportunities to reduce the cancer burden in the United States now exist across the spectrum of primary prevention, early detection, treatment, rehabilitation, and palliative care *(107).* The greatest progress can be achieved through a combination of new research discoveries and systematic dissemination of existing knowledge into practice. For example, continued research is needed to develop effective means to prevent breast and prostate cancer. Research is also needed to develop effective interventions by which communities can facilitate regular physical activity and help people maintain a healthy body weight. The Institute of Medicine systematically reviews opportunities for dissemination of information regarding cancer prevention and early detection *(108).* Communities can act now to strengthen programs that are proven effective in reducing tobacco use and increasing per capita consumption of fruits and vegetables. Communities must extend the delivery of high quality mammography and colorectal cancer screening to the entire U.S. population.

A variety of new initiatives, coalitions, and resources have emerged to assist cancer control planners and to facilitate the application and dissemination of best practices. The National Dialogue on Cancer, a coalition of national partners, was initiated by the ACS in 1999 to serve as a national forum to bring together the leadership of public, private, and not-for-profit organizations, and to accelerate the identification and dissemination of advances in cancer prevention, early detection, treatment, rehabilitation, and palliation (http://www.ndoc.org/). One goal of the National Dialogue on Cancer is for each state to implement a collaborative cancer plan by 2005. Currently, the CDC funds 26 states to develop comprehensive cancer prevention and control plans, and 19 additional states are funded to implement their plans (http://www.cdc.gov/cancer/ncccp/partners.htm). Timely, reliable, and accessible surveillance data are important for the development, implementation, and monitoring of these plans.

Combined data from SEER and NPCR contribute to building a nationwide cancer surveillance infrastructure covering all U.S. residents *(8,109).* This infrastructure will improve our understanding of the national cancer burden and provide the basis for effective cancer control programs.

New resources are available to help cancer control planners at the state and local levels (Table 7). Most of these resources can be accessed through Cancer Control PLANET (Plan, Link, Act, Network with Evidence-based Tools), a Web portal that guides planners in their efforts to assess the cancer burden for a geographic area of interest, determine priorities, identify potential partners, select evidence-based interventions, and implement and evaluate cancer control plans (http://cancercontrolplanet.cancer.gov). Also available through PLANET are the State Cancer Profiles that provide planners with surveillance data, including incidence and mortality rates and trends, as well as information on the use of new techniques in data visualization and statistical analysis. State BRFSS data are available for selected risk factors and screening tests. Other resources are available through CDC, NCI, ACS, NAACCR, and others (Table 7). More tools may be needed to guide local and community planners.

In the future, existing collaborative efforts need to be enhanced among federal, state, and private organizations. Federal and state programs have increased insurance coverage for cancer screening. These programs are designed to promote cancer screening and enhance its use in primary cancer care and other clinical settings. Funding has been made available to incorporate cancer control and prevention activities into clinical practice and to improve the clinical systems for monitoring and improving compliance with cancer screening recommendations. Health care, public health, and other programs are working to identify populations that can benefit from cancer control interventions at the community level to reduce disparities in cancer outcomes.

Additional data regarding cancer treatment and quality of life need to be collected and disseminated at national, state, and local levels. Although inpatient data for surgery and radiation treatment from state-based cancer registries are considered reasonably complete, additional information is needed on comorbidities and treatment received in physician-office practices, ambulatory centers, and other non-hospital settings. Such information can be used to direct interventions to improve outcomes for cancer patients, including underserved populations. The Institute of Medicine encourages the use of population-based registries for quality-of-care initiatives and linkages between these registries and administrative data *(110).* The SEER–Medicare linked data have been used extensively to evaluate cancer care and illustrate the potential for national and state population-based surveillance of cancer care to identify areas requiring improvement *(111).* In addition, state population-based cancer registries are being used as a sampling frame to conduct special studies focusing on patterns and quality of care *(112,113).*

Table 7. Selected data and program resources for comprehensive cancer control planning*

Name/Web address	Partners	Content
Cancer Control PLANET (Plan, Link, Act, Network with Evidence-based Tools) (http: //cancercontrolplanet.cancer.gov)	NCI, CDC, ACS, SAMHSA	A web portal that serves as a doorway to new evidence-based tools that can help communities better understand and address their cancer burden. In the near future, PLANET will include resources on tobacco control and physical activity, sun safety, cancer screening, and dietary interventions.
State Cancer Profiles (http: //statecancerprofiles.cancer.gov) (accessible through PLANET)	NCI, CDC	A user-friendly Web site with up-to-date information on cancer occurrence, risk factor, and demographic statistics for the nation, states, and counties. The user may select from a variety of tabular and graphical formats to analyze specific cancer types and to identify geographic areas or population groups at greatest risk of developing or dying from cancer.
Guide to Community Preventive Services (http://www.thecommunityguide.org/ cancer/) (accessible through PLANET)	Task Force on Community Health Services	Provides public health decision makers with recommendations regarding population-based interventions appropriate for use by communities and health care systems, including tobacco control, physical activity, and nutrition.
Guidance for Comprehensive Cancer Control Planning (www.cdc.gov/cancer/ ncccp/guidelines/) (accessible through PLANET)	CDC	Provides flexible guidance for the development, implementation, and evaluation of Comprehensive Cancer Control Plans.
E-Tool Arrangements are underway to make the E-Tool available on www.cancerplan.org	ACS	An interactive CD-ROM that provides cancer data and information in an easily understood format that prompts the user to enter and analyze community based cancer control information. The E-Tool allows users to enter additional information and generate community-specific reports.
CINA+ Online (http://www.naaccr.org/ CINAPlus/index.html)	NAACCR	CINA+ Online is an interactive, online query system that provides cancer incidence data by year, geography, sex, race, cancer type, and age. Data are available for population-based cancer registries that meet NAACCR standards of highest quality data. Data are available for 1996–2000, and are updated annually.
Cancer Intervention and Surveillance Modeling Network (CISNET) (http://cisnet.cancer.gov/)	NCI	CISNET is a consortium of NCI-sponsored investigators whose focus is to use modeling to improve understanding of the impact of cancer control interventions (e.g., prevention, screening, treatment) on population trends in incidence and mortality. These models are used also to project future trends and to help determine optimal cancer control strategies.
National Comprehensive Cancer Control Program (http://www.cdc.gov/cancer/ ncccp/)	CDC, state, tribe, and territorial health agencies	This program facilitates an integrated and coordinated approach to cancer control and funds cooperative agreements with state tribal organizations to develop and implement cancer control programs.
National Breast and Cervical Cancer Early Detection Program (http: //www.cdc. gov/cancer/nbccedp/)	CDC, state, tribe, and territorial health agencies	This program helps low-income, uninsured, and underserved women gain access to lifesaving early detection screening programs for breast and cervical cancers.
Breast Cancer Surveillance Consortium (BSCS) (http://breastscreening. cancer.gov)	NCI, academic grantees	BSCS is a collaborative network of mammography registries with linkages to cancer registries and pathology data. This research initiative provides a key resource for evaluating the performance of mammography in clinical practice and its subsequent outcomes in the United States.
Prevention Research Centers (http://www. cdc.gov/prc/)	CDC	A network of academic centers, public health agencies, and community partners that conducts applied research and practice in chronic disease prevention and control.
Cancer Research Network (CRN) (http://healthservice.cancer.gov/hmo/)	NCI, private clinical research centers	The CRN facilitates collaborative cancer research among health care provider organizations oriented to community care with access to large, stable, and diverse patient populations.
Comprehensive Cancer Contol Leadership Institute (CCCLI) (http://www. cdc.gov/cancer/nccp/institutes.htm)	ACS, CDC, NCI, ACoS, NAACCR, NDC, Chronic Disease Directors, Intercultural Cancer Council	The CCCLI provides training and assistance to state leaders who are developing, revising, or implementing comprehensive cancer control plans.
National Colorectal Cancer Roundtable (NCCRT) (http://www.cdc.gov/cancer/ partners/fp_nccr.htm)	CDC, ACS, and other public, private, and voluntary organizations	The NCCRT is a national coalition dedicated to reducing the incidence and mortality from colorectal cancer in the United States through leadership, strategic planning, advocacy, coordination, and data gathering. The roundtable promotes colorectal cancer screening through public awareness and education, provider education, and health policy.
Center for Tobacco Cessation (CTC) (http://ctcinfo.org/)	ACS, Robert Wood Johnson Foundation	CTC is an organization focused solely on tobacco cessation issues. CTC serves as a resource for the best available science on cessation and works with national partners to expand the effective use of tobacco dependent treatment.
Partners with Tobacco Use Research Centers (Partners) and Transdiciplinary Tobacco Use Research Centers (TTURC) (http://www.partnerstturc.com/)	NCI, NIDA, Robert Wood Johnson Foundation University Research Centers	Partners and TTURC provide funding for transdisciplinary research to investigate social-environmental, behavioral, psychological, and biological factors related to tobacco use and nicotine addiction, and to help translate the results and implications of this work for policy makers, practitioners, and the public.

(Table continues)

Table 7 (continued). Selected data and program resources for comprehensive cancer control planning*

Name/Web address	Partners	Content
National Tobacco Control Program (NTCP) (http://www.cdc.gov/tobacco/ntcp_exchange/about.htm)	CDC	The program provides funding and technical support to state and territorial health departments. NTCP-funded programs are working to achieve the objectives outlined in the Office of Smoking and Health's (OSH) *Best Practices for Comprehensive Tobacco Control Programs.*
5 A Day for Better Health Program (http://www.5aday.gov/)	NCI, CDC, USDA, Produce for Better Health Association	This initiative provides messages, program, and activities to support Americans eating five to nine servings of fruits and vegetables every day for better health.

*NCI = National Cancer Institute; CDC = Centers for Disease Control and Prevention; ACS = American Cancer Society; SAMHSA = Substance Abuse and Mental Health Services Administration; NAACCR = North American Association of Central Cancer Registries; ACoS = American College of Surgeons; NDC = National Dialogue on Cancer; NIDA = National Institute on Drug Abuse; USDA = U.S. Department of Agriculture.

Conclusions

This annual report to the nation suggests that cancer incidence and death rates are levelling off after recent declines. The recent increase in the delay-adjusted incidence trend will require monitoring with additional years of data. Although considerable progress has been made in reducing the burden of cancer in the U.S. population *(1–4),* a greater effort will be required to meet national health goals, such as the *Healthy People 2010 (19)* and *ACS 2015 challenge goals (114).* Furthermore, as the population of older Americans increases, the number of people diagnosed with cancer is expected to double in the next several decades *(5).* Because more of these patients are living longer after a diagnosis of cancer, the strain on cancer control and health care resources to provide treatment and palliation services will increase.

States face the challenge of addressing the cancer burden in times of constrained state budgets. Further reductions in the burden of cancer are possible but will require the continuation of strong federal, state, local, and private partnerships to ensure full implementation of comprehensive cancer control programs throughout the United States.

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Notes

[1]*Editor's note:* SEER is a set of geographically defined, population-based, central cancer registries in the United States, operated by local nonprofit organizations under contract to the National Cancer Institute (NCI). Registry data are submitted electronically without personal identifiers to the NCI on a biannual basis, and the NCI makes the data available to the public for scientific research.

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