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This Data Summary is one of a series of leading cause of death reports.

Highlights

- **Cancer is the second leading cause of death in California and in the United States.**
- **Of all cancer deaths in California, 86 percent were among people age 55 and older.**
- **Among California residents, Whites had 72.6 percent of all cancer deaths in 2002.**
- **Among the major race/ethnic groups, Blacks had the highest age-adjusted cancer death rate (238.0 deaths per 100,000 population).**

Cancer Deaths California, 2002

By Cheryl Wilson

Introduction

Each year in the United States (U.S.), more than one million people will develop cancer. Although cancer can occur at any age, approximately 77 percent of all cancers are diagnosed in people age 55 and older. Among Americans, the risk of developing cancer in one's lifetime is about 1 in 2 for men and 1 in 3 for women.[1] In 2001 there were 9.8 million cancer survivors in the United States. It is expected that the number of people who survive cancer will increase as the population ages and as improvements in cancer detection and treatment are made.[2]

In California and in the U.S., cancer is the second leading cause of death, following heart disease.[3,4] In 2002 there were 53,926 cancer deaths among California residents, an increase of 0.2 percent from the 53,810 deaths reported in 2001.[3,5] Preliminary data shows that in 2002 the number of cancer deaths in the U.S. increased slightly (0.9 percent) from 553,768 deaths in 2001 to 558,847 deaths in 2002.[4,6]

Due to the prevalence of cancer deaths in this country, the United States Public Health Service established a health objective for Healthy People 2010 seeking to reduce the number of cancer deaths to an age-adjusted rate of no more than 159.9 per 100,000 population.[7]

This report presents data on California's cancer deaths for 2002 and provides analysis of crude and age-adjusted death rates for California residents by sex, age, and race/ethnicity. The cancer data included in this report are extracted

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[1] American Cancer Society, Inc., Cancer Reference Information. *Detailed Guide: Cancer (General Information) Who Gets Cancer?* URL: http://www.cancer.org. Accessed July 12, 2004.
[2] Centers for Disease Control: Cancer Prevention and Control, *Cancer Survivorship – United States, 1977- 2001*. URL: http://www.cancer.org. Accessed July 14, 2004.
[3] State of California, Department of Health Services. Death Records, 2002.
[4] National Center for Health Statistics. Deaths: Preliminary Data for 2002, *National Vital Statistics Reports,* DHHS Publication No. (PHS) 2004-1120, PRS 04-0164, February 2004.
[5] Wilson, C. *Cancer Deaths, California 2001*. Center for Health Statistics, State of California, Department of Health Services. November 2003.
[6] National Center for Health Statistics. Deaths: Final Data for 2001, *National Vital Statistics Reports,* DHHS Publication No. (PHS) 2003-1120, PRS 03-0436, September 2003.
[7] U.S. Department of Health and Human Services. *Healthy People 2010 Objectives* (Second Edition, in Two Volumes). Washington, D.C., January 2001.

A description of methods and a brief overview of data limitations and qualifications are provided at the end of this report.

from vital statistics records with death attributed to all cancers as defined by the International Classification of Diseases, Tenth Revision (ICD-10) codes C00-C97 in accordance with the National Center for Health Statistics reports.[8]

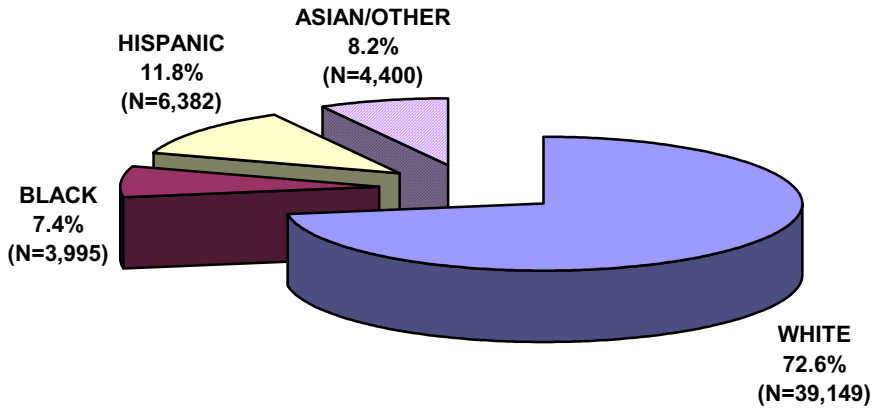
Cancer Deaths

Table 1 (page 9) displays California's 2002 cancer death data by race/ethnicity, age group, and sex. During this year, California's male residents had 50.9 percent of the total cancer deaths and females had 49.1 percent.

In 2002 California residents age 55 and older accounted for 86.0 percent of all cancer deaths, an increase of .7 percent from the previous year's figure of 85.5 percent.[5] Males age 55 and older had 86.9 percent of all male cancer deaths, and females age 55 and older had 85.0 percent of all female cancer deaths. In 2001 the percentage of cancer deaths among males and females in the age group 55 and older were 86.5 and 84.5 respectively.[5]

As shown in **Figure 1** Whites had the highest number of cancer deaths, 39,149 or 72.6 percent, followed by Hispanics with 6,382 or 11.8 percent, Asian/Other with 4,400 or 8.2 percent, and Blacks with 3,995 or 7.4 percent.

FIGURE 1
CANCER DEATHS
BY RACE/ETHNICITY*
CALIFORNIA 2002
(N=53,926)



Source: State of California, Department of Health Services, Death Records.
***Calculated using death data for California residents only.**

Table 1 (page 9) shows that for each of the race/ethnic groups listed, the total number of cancer deaths was higher for males than for females.

[8]National Center for Health Statistics. *Vital Statistics, Instructions for Classifying the Underlying Cause of Death ICD-10, 2004*. NCHS Instruction Manual, Part 2A. Hyattsville, Maryland: Public Health Service, 2004.

See the Methodological Approach Section later in this report for an explanation of crude, age-specific, and age-adjusted death rates.

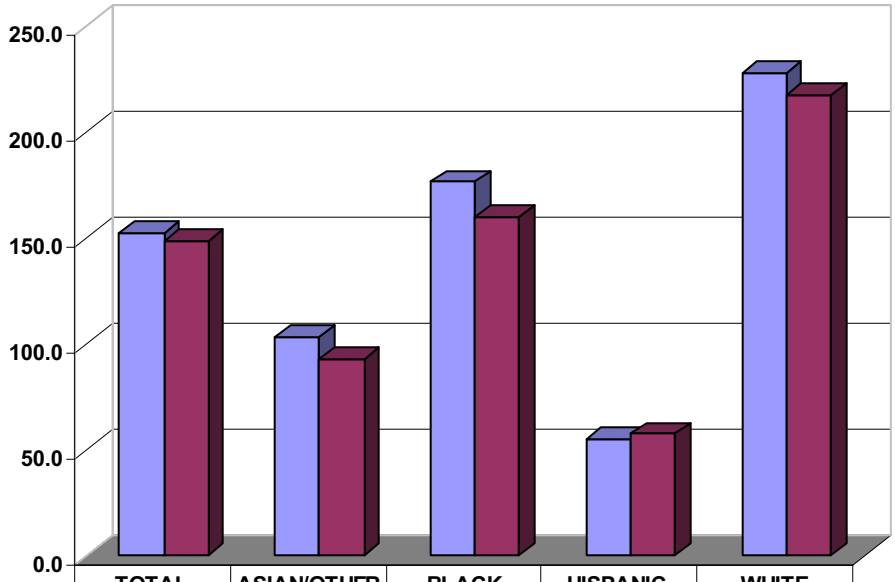
Cancer Crude Death Rates

As shown in **Table 1** (page 9), California's 2002 cancer crude death rate was 150.6 per 100,000 population, a decrease of 1.4 percent from the 2001 rate of 152.7.[5]

In 2002 Whites had the highest crude death rate (222.8), followed by Blacks (168.3), Asian/Other (97.7), and Hispanics (56.2). The crude death rates for Blacks, Hispanics, Whites, and Asian/Other were lower than those reported for 2001.[5]

Figure 2 (page 3) shows California's male residents had a crude death rate of 152.7 per 100,000 population and female residents had a rate of 148.5. Among males, Whites had the highest crude death rate (228.0), followed by Blacks (176.5), Asian/Other (103.0), and Hispanics (55.1). For females, similar patterns occurred among the race/ethnic groups in that Whites had the highest crude death rate (217.6), followed by Blacks (160.3), Asian/Other (92.6), and Hispanics (57.5).

FIGURE 2
CANCER CRUDE DEATH RATES
BY SEX AND RACE/ETHNICITY*
CALIFORNIA, 2002



	TOTAL	ASIAN/OTHER	BLACK	HISPANIC	WHITE
MALE	152.7	103.0	176.5	55.1	228.0
FEMALE	148.5	92.6	160.3	57.5	217.6

Source: State of California, Department of Health Services, Death Records.
***Calculated using death data for California residents only.**

See the Vital Statistics Query System (VSQ) at our Web site www.dhs.ca.gov/hisp/Applications/vsq/vsq.cfm to create your own vital statistics tables.

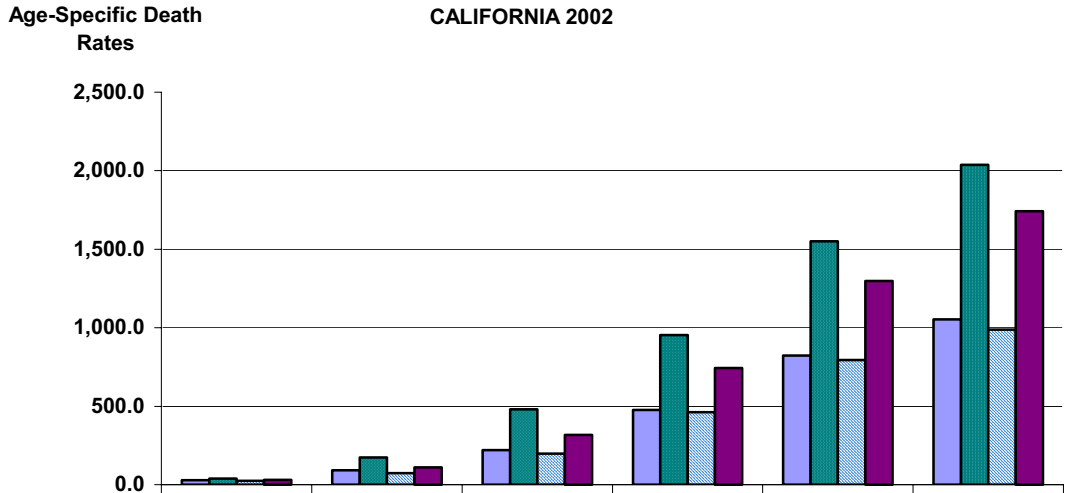
Cancer Age-Specific Death Rates

Table 1 (page 9) shows that among California residents, age-specific death rates increased with the age of the decedent beginning with the age group 1 to 4. The lowest reliable rate occurred in the 1 to 4 age group (2.8 deaths per 100,000 population) and the highest rate occurred in the 85 and older age group (1,595.5).

Among males and females in California, males had higher reliable age-specific death rates in the 5 to 14, 15 to 24, and 55 and older age groups, whereas females had higher reliable rates in the 1 to 4 and 25 to 54 age groups. The lowest reliable rate for males occurred in the 1 to 4 age group and for females in the 5 to 14 age group.

As shown in **Figure 3**, age-specific death rates increased dramatically after age 34 for all race/ethnic groups. Among the reliable age-specific death rates, Blacks had the highest rates for all age groups 35 and older, and Whites had the next highest rates in the 35 and older age groups. Asian/Other had the lowest reliable rate in the 15 to 24 age group, and Hispanics had the lowest rates in the 1 to 4 and the 35 and older age groups.

FIGURE 3
CANCER AGE-SPECIFIC DEATH RATES
BY RACE/ETHNICITY AND AGE*
CALIFORNIA 2002



	35-44	45-54	55-64	65-74	75-84	85+
ASIAN/OTHER	27.7	92.0	220.5	476.1	822.2	1,052.5
BLACK	38.9	173.6	480.2	954.3	1,549.8	2,037.5
HISPANIC	24.3	74.3	197.8	461.7	795.1	988.8
WHITE	30.9	110.7	317.6	743.1	1,298.0	1,741.7

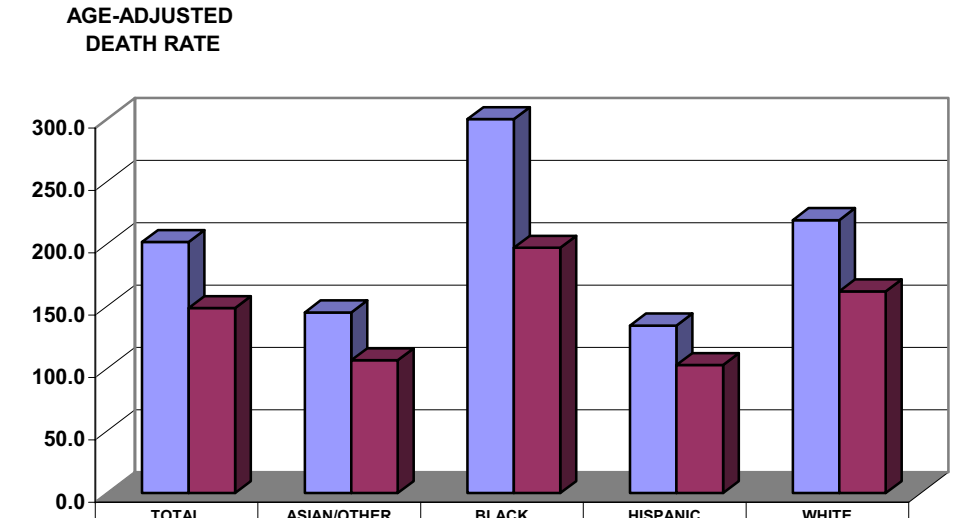
Source: State of California, Department of Health Services, Death Records.
*** Calculated using death data for California residents only.**

You can read more about crude and age-adjusted death rates on the National Center for Health Statistics Web site at www.cdc.gov/nchs

Cancer Age-Adjusted Death Rates

As shown in **Table 1** (page 9), California's age-adjusted death rate was 169.6 per 100,000 population in 2002, a decrease of 2.2 percent from the 2001 age-adjusted death rate of 173.4. The rate difference between 2001 and 2002 was statistically significant. California did not meet the Healthy People 2010 National Health Objective of reducing the number of cancer deaths to an age-adjusted rate of no more than 159.9 per 100,000 population in 2001 or 2002.[5,9]

FIGURE 4
CANCER AGE-ADJUSTED DEATH RATES
BY SEX AND RACE/ETHNICITY*
CALIFORNIA, 2002



	TOTAL	ASIAN/OTHER	BLACK	HISPANIC	WHITE
MALE	201.5	144.8	302.1	134.3	219.0
FEMALE	148.4	106.5	196.8	102.6	161.8

Source: State of California, Department of Health Services, Death Records.
***Calculated using death data for California residents only.**

Figure 4 (page 5) shows age-adjusted cancer death rates among California residents by race/ethnicity and sex. In 2002 the age-adjusted death rate among males in California was significantly higher than the rate for females. The male age-adjusted death rate of 201.5 was 1.4 times higher than the female rate of 148.4.

Among the major race/ethnic groups, Blacks had the highest age-adjusted death rate (238.0 deaths per 100,000 population), followed by Whites (184.4), Asian/Other (123.1), and Hispanics (115.3). The differences in age-adjusted death rates between the major race/ethnic groups were statistically significant. Similar patterns also occurred among males and females. Among males, Blacks had the highest age-adjusted death rate (302.1), followed by White males (219.0), Asian/Other males (144.8), and Hispanic males (134.3). Among females, Blacks had the highest rate (196.8), followed by Whites (161.8), Asian/Other (106.5), and Hispanics (102.6). The differences between males and females within the major race/ethnic groups in 2002 were statistically significant.

[9] Klein RJ, Schoenborn, CA. *Healthy People 2010 Statistical Notes: Age Adjustment using the 2000 Projected U.S. Population.* National Center for Health Statistics, DHHS Publication, No. 20, January 2001.

Cancer Death Rates for California Counties

Table 2 (page 10) shows the number of cancer deaths averaged over a three-year period from 2000 to 2002 with crude and age-adjusted death rates for California and its 58 counties.

Los Angeles County had the highest average number of cancer deaths 13,424.3 or 25.1 percent of all cancer deaths in California. San Diego County had the next highest average number of deaths 4,658.0 or 8.7 percent and Orange County followed with 4,048.0 or 7.6 percent.

Among the 54 counties with reliable crude death rates, Lake County had the highest rate, 293.7 deaths per 100,000 population, which was 2.7 times higher than the lowest rate of 110.3 in Kings County. Yuba County had the highest reliable age-adjusted death rate of 235.1 and was 1.8 times higher than the lowest rate of 131.2 for San Benito County.

Cancer Deaths among the Three City Health Jurisdictions

Table 3 shows the three-year average (2000 to 2002) number of cancer deaths and crude death rates for California's three city health jurisdictions.

Age-adjusted death rates were not calculated for city health jurisdictions because city population data by age are not available.

Long Beach had the highest average number of deaths (655.7), followed by Pasadena (266.7), and Berkeley (150.7). The crude death rates were 197.1 per 100,000 population for Pasadena, 145.5 for Berkeley, and 140.6 for Long Beach.

TABLE 3
CANCER DEATHS
AMONG THE CITY HEALTH JURISDICTIONS*
CALIFORNIA, 2000-2002

CITY HEALTH JURISDICTION	AVERAGE NUMBER OF DEATHS	2001 POPULATION	CRUDE DEATH RATE
BERKELEY	150.7	103,600	145.5
LONG BEACH	655.7	466,500	140.6
PASADENA	266.7	135,300	197.1

Note: Rates are per 100,000 population; ICD-10 codes C00-C97.
***Calculated using death data for California residents only.**

Source: State of California, Department of Finance, E-4 Population Estimates for Cities, Counties and the State, 2001-2003 with 2000 DRU Benchmark. State of California, Department of Health Services, Death Records.

Methodological Approach

The methods used to analyze vital statistics data are important. Analyzing only the number of deaths has its disadvantages and can be misleading

For more data, see DHS Center for Health Statistics, Home Page at www.dhs.ca.gov/org/hisp/chs/default htm

because the population at risk is not taken into consideration. Crude death rates show the actual rate of dying in a given population, but because of the differing age compositions of various populations, crude rates do not provide a statistically valid method for comparing geographic areas and/or multiple reporting periods. Age-specific death rates are the number of deaths per 100,000 population in a specific age group and are used along with standard population proportions to develop a weighted average rate. This rate is referred to as an age-adjusted death rate and removes the effect of different age structures of the populations whose rates are being compared. Age-adjusted death rates therefore provide the preferred method for comparing different race/ethnic groups, sexes, and geographic areas and for measuring death rates over time. The year 2000 population standard is used as the basis for age-adjustments in this report.

Data Limitations and Qualifications

The cancer death data presented in this report are based on the vital statistics records with ICD-10 codes C00-C97 as defined by the National Center for Health Statistics.[4] Deaths by place of residence means that the data include only those deaths occurring among residents of California and its counties, regardless of the place of death.

The term "significant" within the text indicates statistically significant based on the difference between two independent rates ($p < .05$).

As with any vital statistics data, caution needs to be exercised when analyzing small numbers, including the rates derived from them. Death rates calculated from a small number of deaths and/or population tend to be unreliable and subject to significant variation from one year to the next. To assist the reader, 95 percent confidence intervals are provided in the data tables as a tool for measuring the reliability of death rates. Rates with a relative standard error (coefficient of variation) greater than or equal to 23 percent are indicated with an asterisk (*).

Beginning in 1999 cause of death is reported using ICD-10.[10] Cause of death for 1979 through 1998 was coded using the International Classification of Diseases, Ninth Revision (ICD-9). Depending on the specific cause of death, the number of deaths and death rates are not comparable between ICD-9 and ICD-10. Therefore, our analyses do not combine both ICD-9 and ICD-10 data.

The four race/ethnic groups presented in the table are mutually exclusive. White, Black, and Asian/Other exclude Hispanic ethnicity, while Hispanic includes any race/ethnic group. In order to remain consistent with the population data obtained from the Department of Finance, the "White race/ethnic group" includes: White, Other (specified), Not Stated, and Unknown, and "Asian/Other race/ethnic group" includes: Aleut, American Indian, Asian Indian, Asian (specified/unspecified), Cambodian, Chinese, Eskimo, Filipino, Guamanian, Hawaiian, Hmong, Japanese, Korean, Laotian, Other Pacific Islander, Samoan, Thai, and Vietnamese. In addition, caution should be exercised in the interpretation of mortality data by race/ethnicity. Misclassification of race/ethnicity on the death certificate may contribute to death rates that may be underestimated among Hispanics and Asian/Other.[11]

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[10] World Health Organization. *International Statistical Classification of Diseases and Related Health Problems. Tenth Revision*. Geneva: World Health Organization, 1992.

[11] Rosenberg HM, et al. Quality of Death Rates by Race and Hispanic Origin: A Summary of Current Research, 1999. *Vital and Health Statistics,* Series 2, No. 128, National Center for Health Statistics, DHHS Pub. No. (PHS) 99-1328, September 1999.

Beginning in 2000, federal race/ethnicity reporting guidelines changed to allow the reporting of up to three races on death certificates. The race/ethnic groups in this report were tabulated based on the first listed race on those certificates where more than one race was listed. Race groups for 2000 and later years are therefore not strictly compatible with prior years and trends should be viewed with caution.

Effective with 1999 mortality data, the standard population for calculating age-adjustments was changed from the 1940 population standard to the year 2000 population standard in accordance with new statistical policy implemented by the National Center for Health Statistics. The new population standard affects measurement of mortality trends and group comparisons. Of particular note are the effects on race comparison of mortality.[12] Age-adjusted rates presented in this report are not comparable to rates calculated with different population standards.

In addition, the population data used to calculate the crude rates in **Table 3** (page 6) differ from the population data used to calculate the crude rates in **Table 2** (page 10). Consequently, caution should be exercised when comparing the crude rates among the three city health jurisdictions with the rates among the 58 California counties. Age-adjusted rates for city health jurisdictions were not calculated.

For a more complete explanation of the age-adjustment methodology used in this report, see the "Healthy People 2010 Statistical Notes" publication.[7] Detailed information on data quality and limitations is presented in the appendix of the annual report, "Vital Statistics of California."[13] Formulas used to calculate death rates are included in the technical notes of the "County Health Status Profiles" report.[14]

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[12]Anderson RN, Rosenberg HM. Age Standardization of Death Rates: Implementation of the Year 2000 Standard. National Vital Statistics Reports; Vol 47, No. 3. Hyattsville, Maryland: National Center for Health Statistics, 1998.
[13]Ficenec S, Bindra K, Christensen J. *Vital Statistics of California, 2001*. Center for Health Statistics, California Department of Health Services, April 2004.
[14]Shippen S, Wilson C. *County Health Status Profiles 2004*. Center for Health Statistics, California Department of Health Services, April 2004.

TABLE 1
CANCER DEATHS BY RACE/ETHNICITY, AGE, AND SEX
CALIFORNIA, 2002
(By Place of Residence)

AGE GROUPS	DEATHS			POPULATION			RATES			95% CONFIDENCE LIMITS					
										TOTAL		MALE		FEMALE	
	TOTAL	MALE	FEMALE	TOTAL	MALE	FEMALE	TOTAL	MALE	FEMALE	LOWER	UPPER	LOWER	UPPER	LOWER	UPPER
TOTAL															
UNDER 1	19	11	8	565,286	289,063	276,223	3.4	3.8 *	2.9 *	1.8	4.9	1.6	6.1	0.9	4.9
1 - 4	63	31	32	2,259,315	1,155,699	1,103,616	2.8	2.7	2.9	2.1	3.5	1.7	3.6	1.9	3.9
5 - 14	167	97	70	5,779,949	2,962,038	2,817,911	2.9	3.3	2.5	2.5	3.3	2.6	3.9	1.9	3.1
15 - 24	220	140	80	4,878,693	2,531,467	2,347,226	4.5	5.5	3.4	3.9	5.1	4.6	6.4	2.7	4.2
25 - 34	443	225	218	4,876,792	2,566,475	2,310,317	9.1	8.8	9.4	8.2	9.9	7.6	9.9	8.2	10.7
35 - 44	1,671	691	980	5,762,850	2,962,675	2,800,175	29.0	23.3	35.0	27.6	30.4	21.6	25.1	32.8	37.2
45 - 54	4,982	2,397	2,585	4,794,731	2,387,728	2,407,003	103.9	100.4	107.4	101.0	106.8	96.4	104.4	103.3	111.5
55 - 64	8,919	4,759	4,160	3,041,927	1,484,478	1,557,449	293.2	320.6	267.1	287.1	299.3	311.5	329.7	259.0	275.2
65 - 74	13,500	7,246	6,254	1,998,910	931,513	1,067,397	675.4	777.9	585.9	664.0	686.8	760.0	795.8	571.4	600.4
75 - 84	16,228	8,352	7,876	1,360,295	557,358	802,937	1,193.0	1,498.5	980.9	1,174.6	1,211.3	1,466.4	1,530.6	959.2	1,002.6
85 & OLDER	7,714	3,510	4,204	483,490	155,701	327,789	1,595.5	2,254.3	1,282.5	1,559.9	1,631.1	2,179.7	2,328.9	1,243.8	1,321.3
UNKNOWN	0	0	0												
TOTAL	53,926	27,459	26,467	35,802,238	17,984,195	17,818,043	150.6	152.7	148.5	149.4	151.9	150.9	154.5	146.8	150.3
AGE-ADJUSTED							169.6	201.5	148.4	168.2	171.1	199.0	203.9	146.6	150.1
ASIAN/OTHER															
UNDER 1	2	2	0	71,070	36,363	34,707	2.8 *	5.5 *	0.0 +	0.0	6.7	0.0	13.1	-	-
1 - 4	9	5	4	282,531	144,555	137,976	3.2 *	3.5 *	2.9 *	1.1	5.3	0.4	6.5	0.1	5.7
5 - 14	21	15	6	704,536	362,486	342,050	3.0	4.1 *	1.8 *	1.7	4.3	2.0	6.2	0.4	3.2
15 - 24	21	14	7	647,043	331,690	315,353	3.2	4.2 *	2.2 *	1.9	4.6	2.0	6.4	0.6	3.9
25 - 34	60	33	27	679,965	344,174	335,791	8.8	9.6	8.0	6.6	11.1	6.3	12.9	5.0	11.1
35 - 44	199	93	106	719,105	350,905	368,200	27.7	26.5	28.8	23.8	31.5	21.1	31.9	23.3	34.3
45 - 54	571	260	311	620,977	294,261	326,716	92.0	88.4	95.2	84.4	99.5	77.6	99.1	84.6	105.8
55 - 64	794	428	366	360,153	170,641	189,512	220.5	250.8	193.1	205.1	235.8	227.1	274.6	173.3	212.9
65 - 74	1,109	556	553	232,917	104,165	128,752	476.1	533.8	429.5	448.1	504.2	489.4	578.1	393.7	465.3
75 - 84	1,146	633	513	139,375	58,899	80,476	822.2	1,074.7	637.5	774.6	869.8	991.0	1,158.4	582.3	692.6
85 & OLDER	468	245	223	44,465	18,527	25,938	1,052.5	1,322.4	859.7	957.2	1,147.9	1,156.8	1,488.0	746.9	972.6
UNKNOWN	0	0	0												
TOTAL	4,400	2,284	2116	4,502,137	2,216,666	2,285,471	97.7	103.0	92.6	94.8	100.6	98.8	107.3	88.6	96.5
AGE-ADJUSTED							123.1	144.8	106.5	119.4	126.7	138.7	150.9	101.9	111.0
BLACK															
UNDER 1	5	2	3	37,035	18,947	18,088	13.5 *	10.6 *	16.6 *	1.7	25.3	0.0	25.2	0.0	35.4
1 - 4	3	3	0	148,422	75,963	72,459	2.0 *	3.9 *	0.0 +	0.0	4.3	0.0	8.4	-	-
5 - 14	8	4	4	412,599	209,510	203,089	1.9 *	1.9 *	2.0 *	0.6	3.3	0.0	3.8	0.0	3.9
15 - 24	14	7	7	370,840	196,122	174,718	3.8 *	3.6 *	4.0 *	1.8	5.8	0.9	6.2	1.0	7.0
25 - 34	30	13	17	340,450	181,068	159,382	8.8	7.2 *	10.7 *	5.7	12.0	3.3	11.1	5.6	15.7
35 - 44	149	49	100	382,583	187,179	195,404	38.9	26.2	51.2	32.7	45.2	18.8	33.5	41.1	61.2
45 - 54	543	263	280	312,810	147,562	165,248	173.6	178.2	169.4	159.0	188.2	156.7	199.8	149.6	189.3
55 - 64	859	488	371	178,888	82,569	96,319	480.2	591.0	385.2	448.1	512.3	538.6	643.5	346.0	424.4
65 - 74	1,038	568	470	108,774	48,191	60,583	954.3	1,178.6	775.8	896.2	1,012.3	1,081.7	1,275.6	705.7	845.9
75 - 84	967	513	454	62,397	24,072	38,325	1,549.8	2,131.1	1,184.6	1,452.1	1,647.4	1,946.7	2,315.5	1,075.6	1,293.6
85 & OLDER	379	167	212	18,601	5,543	13,058	2,037.5	3,012.8	1,623.5	1,832.4	2,242.7	2,555.9	3,469.8	1,405.0	1,842.1
UNKNOWN	0	0	0												
TOTAL	3,995	2,077	1,918	2,373,399	1,176,726	1,196,673	168.3	176.5	160.3	163.1	173.5	168.9	184.1	153.1	167.5
AGE-ADJUSTED							238.0	302.1	196.8	230.5	245.6	288.3	315.9	187.9	205.7
HISPANIC															
UNDER 1	7	5	2	276,097	141,109	134,988	2.5 *	3.5 *	1.5 *	0.7	4.4	0.4	6.6	0.0	3.5
1 - 4	27	13	14	1,083,387	553,994	529,393	2.5	2.3 *	2.6 *	1.6	3.4	1.1	3.6	1.3	4.0
5 - 14	75	39	36	2,502,767	1,279,414	1,223,353	3.0	3.0	2.9	2.3	3.7	2.1	4.0	2.0	3.9
15 - 24	102	69	33	1,717,001	889,356	827,645	5.9	7.8	4.0	4.8	7.1	5.9	9.6	2.6	5.3
25 - 34	156	83	73	1,748,261	960,276	787,985	8.9	8.6	9.3	7.5	10.3	6.8	10.5	7.1	11.4
35 - 44	426	175	251	1,756,084	951,727	804,357	24.3	18.4	31.2	22.0	26.6	15.7	21.1	27.3	35.1
45 - 54	828	394	434	1,113,871	570,189	543,682	74.3	69.1	79.8	69.3	79.4	62.3	75.9	72.3	87.3
55 - 64	1,127	586	541	569,723	279,445	290,278	197.8	209.7	186.4	186.3	209.4	192.7	226.7	170.7	202.1
65 - 74	1,578	833	745	341,805	157,826	183,979	461.7	527.8	404.9	438.9	484.4	492.0	563.6	375.9	434.0
75 - 84	1,458	777	681	183,377	76,439	106,938	795.1	1,016.5	636.8	754.3	835.9	945.0	1,088.0	589.0	684.6
85 & OLDER	598	263	335	60,479	19,997	40,482	988.8	1,315.2	827.5	909.5	1,068.0	1,156.2	1,474.2	738.9	916.1
UNKNOWN	0	0	0												
TOTAL	6,382	3,237	3,145	11,352,852	5,879,772	5,473,080	56.2	55.1	57.5	54.8	57.6	53.2	56.9	55.5	59.5
AGE-ADJUSTED							115.3	134.3	102.6	112.4	118.3	129.3	139.3	98.9	106.3
WHITE															
UNDER 1	5	2	3	181,084	92,644	88,440	2.8 *	2.2 *	3.4 *	0.3	5.2	0.0	5.2	0.0	7.2
1 - 4	24	10	14	744,975	381,187	363,788	3.2	2.6 *	3.8 *	1.9	4.5	1.0	4.2	1.8	5.9
5 - 14	63	39	24	2,160,047	1,110,628	1,049,419	2.9	3.5	2.3	2.2	3.6	2.4	4.6	1.4	3.2
15 - 24	83	50	33	2,143,809	1,114,299	1,029,510	3.9	4.5	3.2	3.0	4.7	3.2	5.7	2.1	4.3
25 - 34	197	96	101	2,108,116	1,080,957	1,027,159	9.3	8.9	9.8	8.0	10.6	7.1	10.7	7.9	11.8
35 - 44	897	374	523	2,905,078	1,472,864	1,432,214	30.9	25.4	36.5	28.9	32.9	22.8	28.0	33.4	39.6
45 - 54	3,040	1,480	1,560	2,747,073	1,375,716	1,371,357	110.7	107.6	113.8	106.7	114.6	102.1	113.1	108.1	119.4
55 - 64	6,139	3,257	2,882	1,933,163	951,823	981,340	317.6	342.2	293.7	309.6	325.5	330.4	353.9	283.0	304.4
65 - 74	9,775	5,289	4,486	1,315,414	621,331	694,083	743.1	851.2	646.3	728.4	757.8	828.3	874.2	627.4	665.2
75 - 84	12,657	6,429	6,228	975,146	397,948	577,198	1,298.0	1,615.5	1,079.0	1,275.3	1,320.6	1,576.0	1,655.0	1,052.2	1,105.8
85 & OLDER	6,269	2,835	3,434	359,945	111,634	248,311	1,741.7	2,539.5	1,382.9	1,698.5	1,784.8	2,446.1	2,633.0	1,336.7	1,429.2
UNKNOWN	0	0	0												
TOTAL	39,149	19,861	19,288	17,573,850	8,711,031	8,862,819	222.8	228.0	217.6	220.6	225.0	224.8	231.2	214.6	220.7
AGE-ADJUSTED							184.4	219.0	161.8	182.5	186.2	216.0	222.1	159.5	164.1

Note: ICD-10 Codes C00-C97; rates are per 100,000 population.
Year 2000 U.S. standard population is used for age-adjusted rates.
White, Black, and Asian/Other exclude Hispanic ethnicity.

* Death rate unreliable, relative standard error is greater than or equal to 23 percent.
\+ Standard error indeterminate, death rate based on no (zero) deaths.
\- Confidence limit is not calculated for no (zero) deaths.

The race/ethnic groups on this table were tabulated based on the first listed race on those certificates where more than one race was listed.

Source: State of California, Department of Finance, 2002 Population Projections with Age, Sex and Race/Ethnic Detail, December, 1998.
State of California, Department of Health Services, Death Records.

TABLE 2
CANCER DEATHS
CALIFORNIA COUNTIES, 2000-2002
(By Place of Residence)

COUNTY	2000-2002 DEATHS (AVERAGE)	PERCENT	2001 POPULATION	CRUDE RATE	AGE-ADJUSTED RATE	95% CONFIDENCE LIMITS	
						LOWER	UPPER
CALIFORNIA	53,580.3	100.0	35,233,335	152.1	172.7	171.3	174.2
ALAMEDA	2,320.3	4.3	1,492,004	155.5	175.8	168.6	183.0
ALPINE	1.7	a	1,268	131.4 *	151.3 *	0.0	382.7
AMADOR	95.7	0.2	35,242	271.5	177.3	141.5	213.2
BUTTE	492.3	0.9	213,040	231.1	178.2	162.1	194.3
CALAVERAS	96.0	0.2	43,392	221.2	153.7	122.6	184.9
COLUSA	35.3	0.1	22,012	160.5	162.9	109.0	216.8
CONTRA COSTA	1,679.0	3.1	942,662	178.1	178.2	169.7	186.8
DEL NORTE	60.0	0.1	31,801	188.7	170.9	127.5	214.4
EL DORADO	306.0	0.6	168,912	181.2	174.5	154.8	194.1
FRESNO	1,159.0	2.2	825,365	140.4	170.5	160.7	180.3
GLENN	58.3	0.1	30,291	192.6	192.4	142.7	242.1
HUMBOLDT	295.7	0.6	129,211	228.8	227.0	201.0	252.9
IMPERIAL	198.3	0.4	161,177	123.1	157.9	135.9	180.0
INYO	45.0	0.1	18,510	243.1	173.3	121.5	225.2
KERN	1,009.3	1.9	694,749	145.3	173.4	162.7	184.1
KINGS	142.7	0.3	129,375	110.3	166.1	138.7	193.5
LAKE	182.3	0.3	62,080	293.7	194.0	164.8	223.2
LASSEN	45.7	0.1	36,759	124.2	140.7	99.8	181.5
LOS ANGELES	13,424.3	25.1	9,925,413	135.3	167.0	164.2	169.8
MADERA	190.0	0.4	131,052	145.0	155.2	133.1	177.3
MARIN	467.3	0.9	249,634	187.2	178.2	162.0	194.3
MARIPOSA	47.0	0.1	17,218	273.0	186.4	132.3	240.5
MENDOCINO	198.3	0.4	91,963	215.7	197.7	170.1	225.3
MERCED	296.7	0.6	219,936	134.9	176.7	156.6	196.9
MODOC	16.0	a	10,589	151.1 *	120.0 *	60.0	180.0
MONO	13.0	a	11,081	117.3 *	142.7 *	62.5	222.8
MONTEREY	544.0	1.0	409,511	132.8	164.7	150.8	178.6
NAPA	299.7	0.6	129,130	232.1	189.9	168.2	211.5
NEVADA	235.7	0.4	99,670	236.4	167.0	145.4	188.7
ORANGE	4,048.0	7.6	2,872,632	140.9	176.0	170.5	181.4
PLACER	529.0	1.0	252,688	209.3	210.9	192.9	228.9
PLUMAS	61.7	0.1	21,044	293.0	197.4	147.4	247.3
RIVERSIDE	2,829.3	5.3	1,626,134	174.0	174.0	167.6	180.5
SACRAMENTO	2,203.7	4.1	1,236,054	178.3	197.5	189.2	205.7
SAN BENITO	61.0	0.1	53,577	113.9	131.2	98.2	164.2
SAN BERNARDINO	2,491.3	4.6	1,771,707	140.6	194.0	186.4	201.7
SAN DIEGO	4,658.0	8.7	3,005,038	155.0	179.5	174.3	184.7
SAN FRANCISCO	1,468.3	2.7	794,342	184.8	154.6	146.7	162.6
SAN JOAQUIN	985.3	1.8	593,538	166.0	183.1	171.6	194.5
SAN LUIS OBISPO	487.0	0.9	262,123	185.8	165.0	150.1	179.8
SAN MATEO	1,247.7	2.3	759,313	164.3	160.0	151.1	168.9
SANTA BARBARA	665.0	1.2	417,331	159.3	164.1	151.6	176.6
SANTA CLARA	2,107.3	3.9	1,795,132	117.4	144.8	138.5	151.1
SANTA CRUZ	362.7	0.7	264,525	137.1	147.3	132.0	162.6
SHASTA	398.7	0.7	179,892	221.6	193.8	174.7	212.9
SIERRA	9.3	a	3,465	269.4 *	194.6 *	66.2	323.0
SISKIYOU	119.0	0.2	45,624	260.8	196.6	160.9	232.3
SOLANO	638.3	1.2	408,095	156.4	199.9	184.1	215.7
SONOMA	932.7	1.7	468,682	199.0	187.6	175.5	199.6
STANISLAUS	756.7	1.4	472,096	160.3	185.4	172.2	198.7
SUTTER	151.3	0.3	83,999	180.2	172.8	145.2	200.4
TEHAMA	152.7	0.3	57,642	264.9	207.2	173.9	240.5
TRINITY	31.3	0.1	13,605	230.3	174.3	112.9	235.8
TULARE	529.3	1.0	388,730	136.2	164.7	150.7	178.8
TUOLUMNE	159.0	0.3	57,497	276.5	211.0	177.6	244.3
VENTURA	1,160.0	2.2	763,586	151.9	175.1	165.0	185.3
YOLO	256.0	0.5	167,259	153.1	188.1	165.0	211.2
YUBA	126.0	0.2	64,938	194.0	235.1	194.0	276.1

Note: ICD-10 codes C00-C97; rates are per 100,000 population.
* Death rate unreliable (relative standard error is greater than or equal to 23 percent).
a Represents a percentage of more than zero but less than 0.05.
Source: State of California, Department of Finance, Race/Ethnic Population Estimates by County with Age and Sex Detail, 1970-2040, December, 1998.
State of California, Department of Health Services, Death Records.