



Center for Health Statistics



November
2006

DATA
SUMMARY
No.
DS06-11000

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

Highlights

- In 2004 cancer was the second leading cause of death in California and in the U.S.
- Approximately 86.1 percent of all cancer deaths in California were among people aged 55 and older in 2004.
- California's age-adjusted death rate of 160.6 in 2004 decreased significantly from 179.6 in 2000.
- Among the major race/ethnic groups, Blacks had the highest age-adjusted death rate at 218.6.

Cancer Deaths California, 2004

By Carol Lau

Introduction

Cancer continued to be the second leading cause of death in California and the United States (U.S.) in 2004.^{1,2} Cancer is a group of diseases characterized by uncontrolled growth and spread of abnormal cells. Cancer is caused by both external factors (tobacco, chemicals, radiation, and infectious organisms) and internal factors (inherited mutations, hormones, immune conditions, and mutations that occur from metabolism).³ Available treatments for cancer to date are chemotherapy, hormones, surgery, radiation and immunotherapy. Studies show that people can reduce the risk of developing cancer by not inhaling tobacco products, having a regular exercise routine, avoiding harmful rays from the sun and adopting a healthy diet.

Due to the prevalence of cancer deaths in this country, the U.S. Public Health Service established a health objective for Healthy People 2010 (HP2010) seeking to reduce the number of cancer deaths to an age-adjusted rate of no more than 159.9 per 100,000 population. The rate for the HP2010 cancer death objective changed from 159.9 to 158.6 per 100,000 population as a result of a midcourse review.⁴ California with an age-adjusted death rate of 160.6 in 2004 did not meet this objective.

This report presents data on California's cancer deaths focusing on 2004 with data tables displaying the number of cancer deaths by race/ethnicity, age, and sex. The report also provides analysis of crude and age-adjusted death rates for California residents with data that were extracted from vital statistics records with deaths attributed to cancer as defined by the International Classification of Diseases, Tenth Revision (ICD-10) codes C00-C97 in accordance with the National Center for Health Statistics (NCHS) Reports.⁵

¹State of California, Department of Health Services. Death Records, 2004.

²National Center for Health Statistics. Deaths: Preliminary Data for 2004, National Vital Statistics Reports. DHHS Publication No. (PHS) 2006-1120, PRS 06-0130, Vol. 54, No. 19. June 2006.

³American Cancer Society, Inc. Cancer Facts and Figures 2006. Atlanta: American Cancer Society; 2006. URL: <http://www.cancer.gov> Accessed September, 2006.

⁴United States Department of Health and Human Services. Healthy People 2010 Objectives (Second Edition, in Two Volumes). Washington, D.C., January 2001. Revised Midcourse Review.

⁵National Center for Health Statistics. Vital Statistics, Instructions for Classifying the Underlying Cause of Death. NCHS Instruction Manual, Part 2A. Hyattsville, Maryland: Public Health Services, 2005.

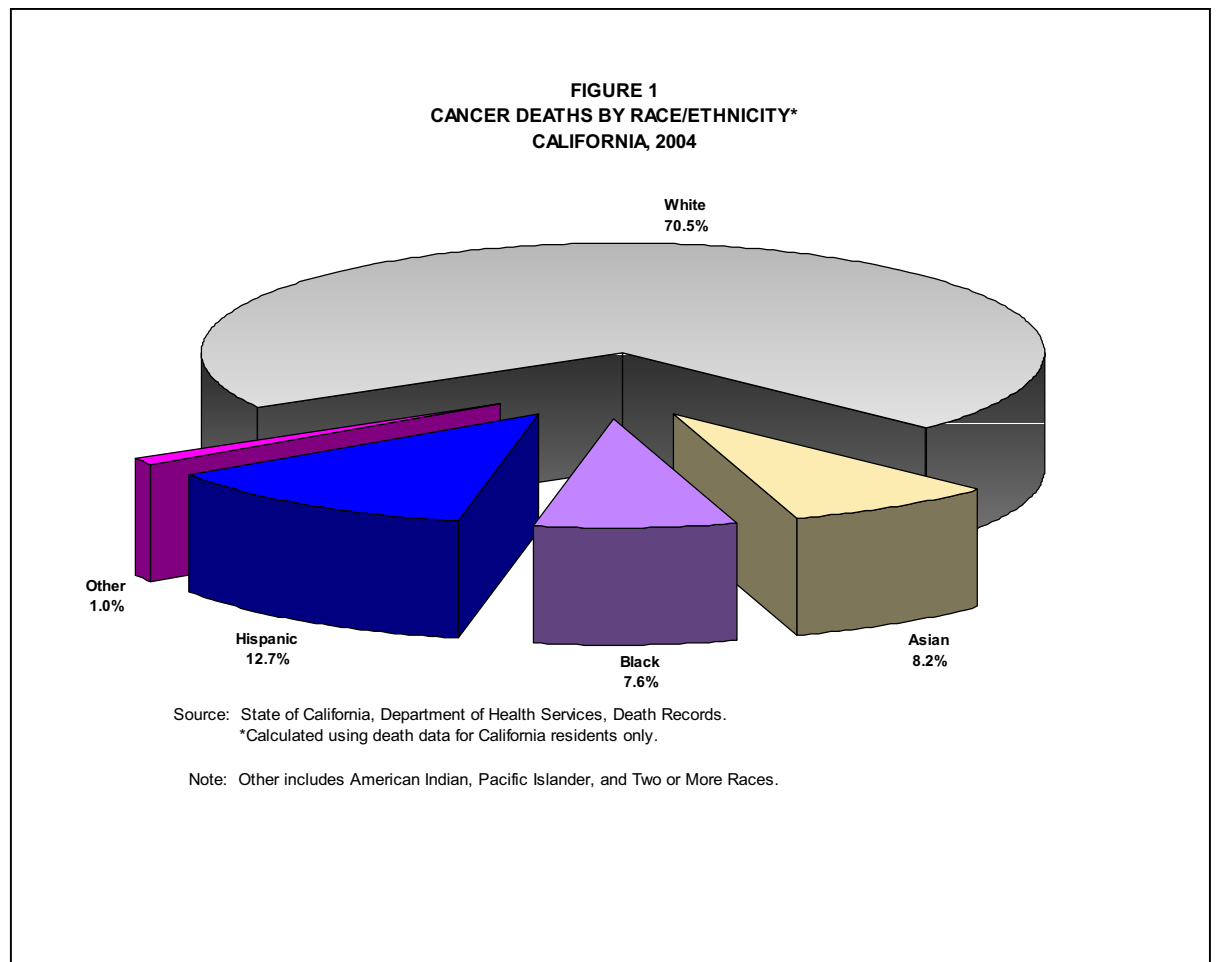
A description of [methods](#) and a brief overview of [data](#) [limitations](#) and [qualifications](#) are provided at the end of this report.

Cancer Deaths

Table 1 (pages 11 to 12) displays California's cancer death data by race/ethnicity, age group, and sex for 2004. Cancer deaths occur most often in the population aged 55 and older (86.1 percent). Of these cancer deaths (46,219), decedents aged 55 to 64 made up 19.9 percent, those aged 65 to 74 were 28.1 percent, age group 75 to 84 was 35.0 percent, and those aged 85 and older were 17.1 percent.

Cancer deaths were higher for California male residents than for female residents. The number of total deaths attributed to cancer in 2004 were 53,708 of which 27,370 were male (51 percent) and 26,338 were female (49 percent).

As shown in **Figure 1**, Whites had the highest percentage (70.5) of the total cancer deaths followed by Hispanics (12.7 percent), Asians (8.2 percent), and Blacks (7.6 percent). The combined total of the three remaining race/ethnic groups (American Indians, Pacific Islanders, and Two or More Races) displayed as "Other" comprised 1.0 percent of the cancer deaths in 2004.



See the [Methodological Approach](#) section later in this report for an explanation of crude, age-specific, and age-adjusted death rates.

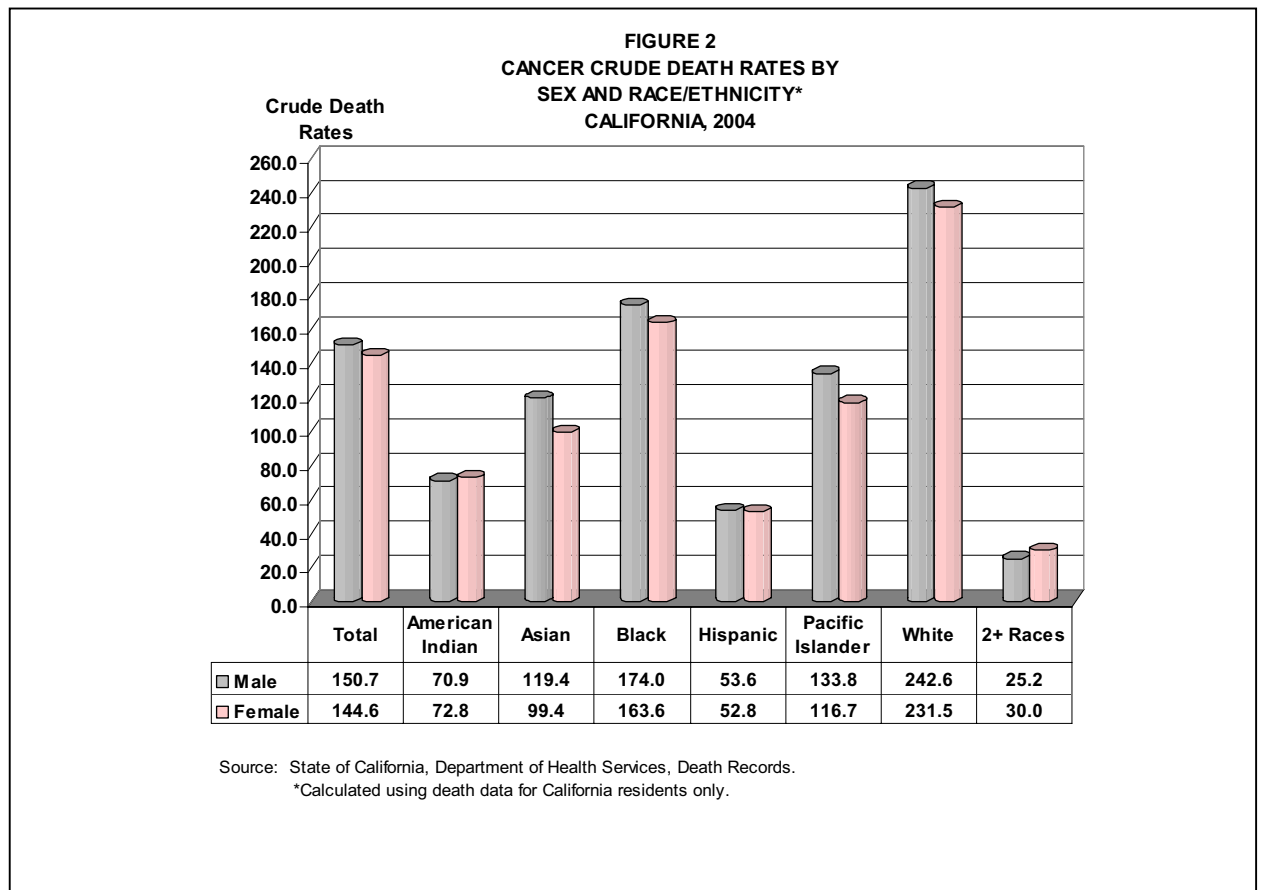
Cancer Crude Death Rates

As shown in **Table 1** (pages 11 to 12), California's cancer crude death rate was 147.6 per 100,000 population in 2004. This rate decreased 5.2 percent compared with the crude death rate of 155.7 in 2000.⁶ The percentage difference was statistically significant.

In 2004 Whites had the highest crude death rate (237.0) followed by Blacks (168.7), Pacific Islanders (125.2), Asians (109.0), American Indians (71.9), Hispanics (53.2), and Two or More Races (27.6).

Figure 2 shows California male residents had a crude death rate of 150.7 per 100,000 population, and females had a crude death rate of 144.6. The difference in crude death rates between male and female residents was statistically significant.

A comparison of reliable crude death rates among males of the race/ethnic groups in 2004 shows Whites had the highest rate (242.6) followed by Blacks (174.0), Pacific Islanders (133.8), Asians (119.4), American Indians (70.9), Hispanics (53.6), and Two or More Races (25.2). Among females, Whites also had the highest reliable crude death rate (231.5) followed by Blacks (163.6), Pacific Islanders (116.7), Asians (99.4), American Indians (72.8), Hispanics (52.8), and Two or More Races (30.0).



⁶Wilson, C. Suicide Deaths, California 2000-2003. Center for Health Statistics, California Department of Health Services. August 2005.

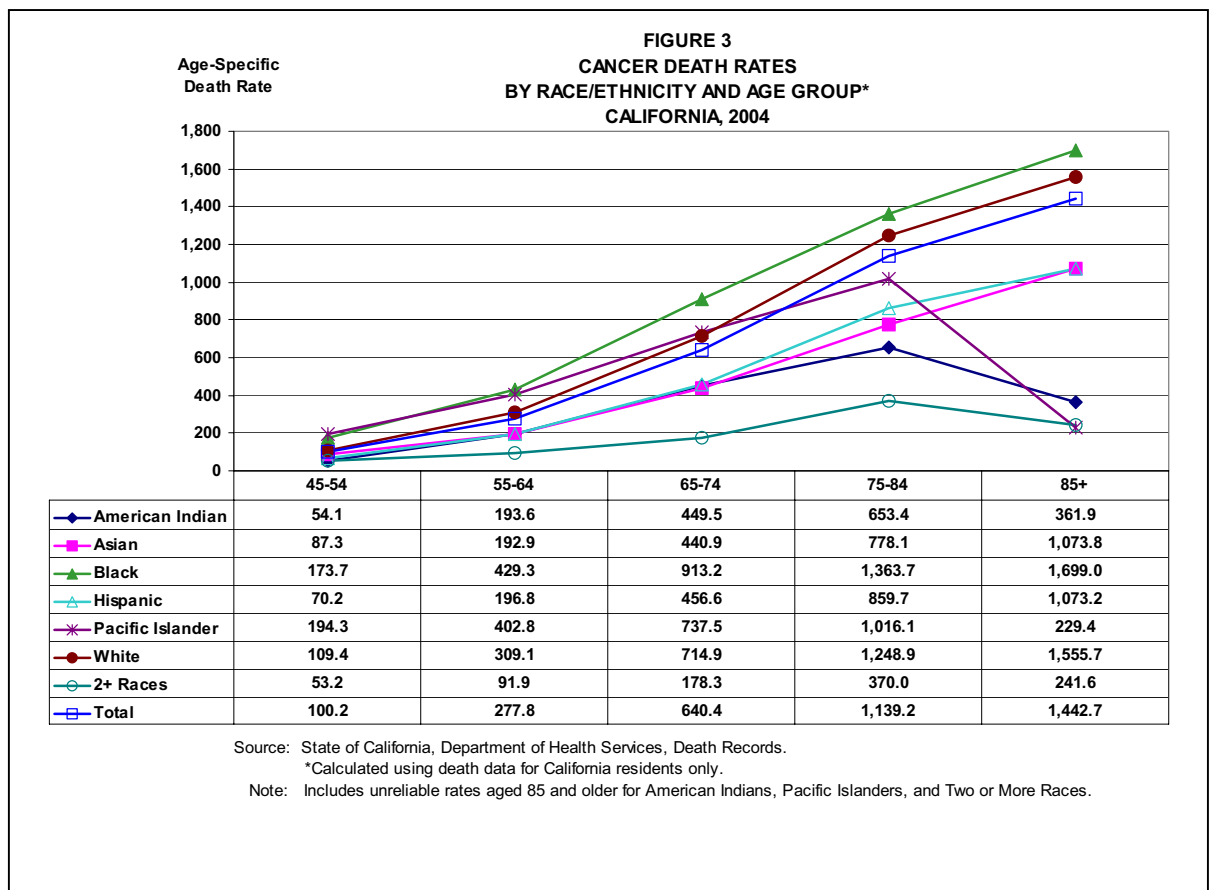
See the Vital Statistics Query System (VSQ) at our website www.dhs.ca.gov/vsq to create your own vital statistics tables.

Cancer Age-Specific Death Rates

As shown in **Table 1** (pages 11 to 12) California residents aged 55 and older are more likely to die from cancer than any other age group (86.1 percent of all cancer deaths). The lowest reliable rate occurred in the 1 to 4 age group (2.9 deaths per 100,000 population) while the highest rate occurred in the 85 and older age group (1,442.7).

California males had higher reliable age-specific rates in age groups 1 to 24 and 55 and older compared with females who had higher rates in age groups 25 to 54. The lowest reliable rate for males (3.2) occurred in the 5 to 14 age group while the lowest rate for females (2.4) occurred in the 1 to 4 age group.

Among the specific age groups shown in **Figure 3**, Blacks had the highest reliable rates for those aged 55 and older; Pacific Islanders were highest in the 45 to 54 age group; Hispanics had the lowest reliable rate in the 85 and older group; and Two or More Races were lowest in the 45 through 84 age groups. Many rates were unreliable due to the small number of deaths in the younger age groups. Not shown in **Figure 3** but found in **Table 1**, Blacks had the highest reliable rate (12.6) for the 25 to 34 age group compared with the other major race/ethnic groups while the White rate (4.9) was highest in the 15 to 24 age group and the Asian rate (4.4) was highest in the 5 to 14 age group.

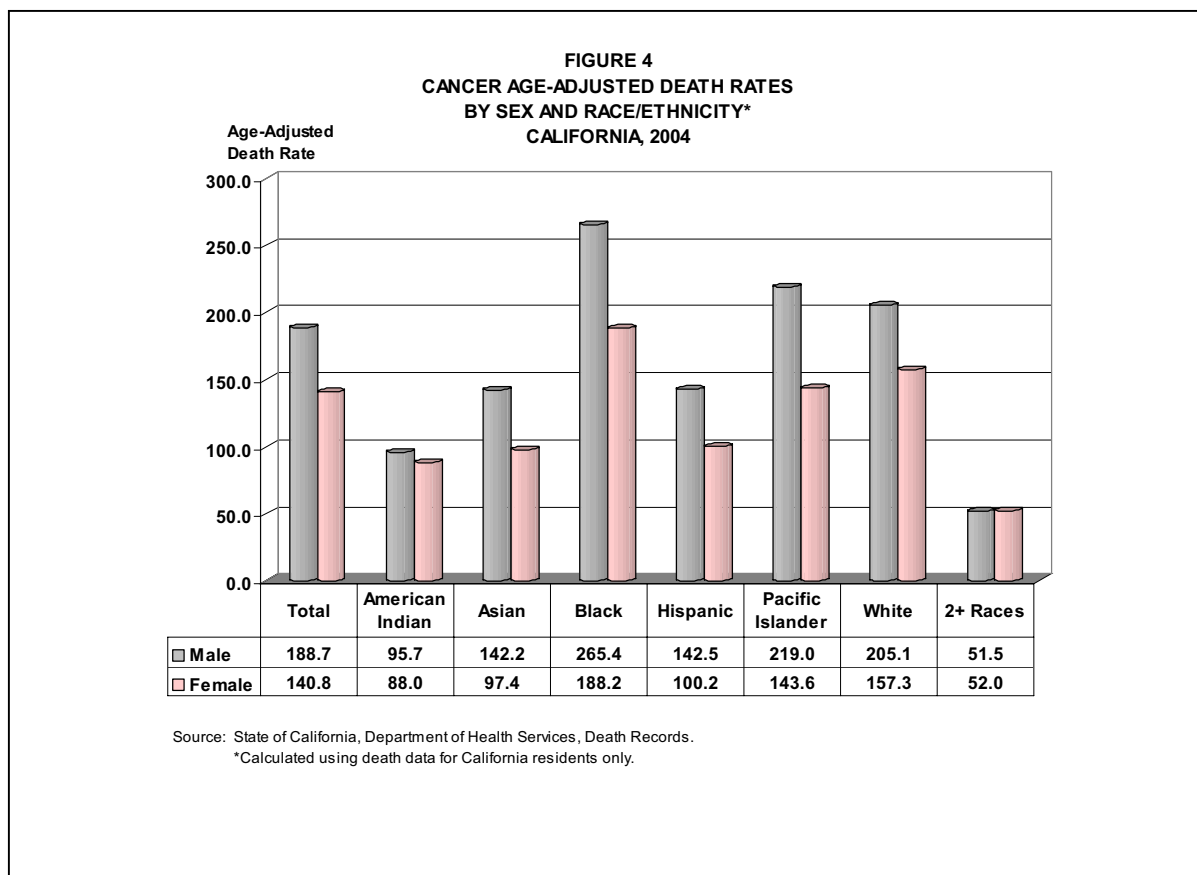


You can read more about crude and age-adjusted death rates on the National Center for Health Statistics website at www.cdc.gov/nchs

Cancer Age-Adjusted Death Rates

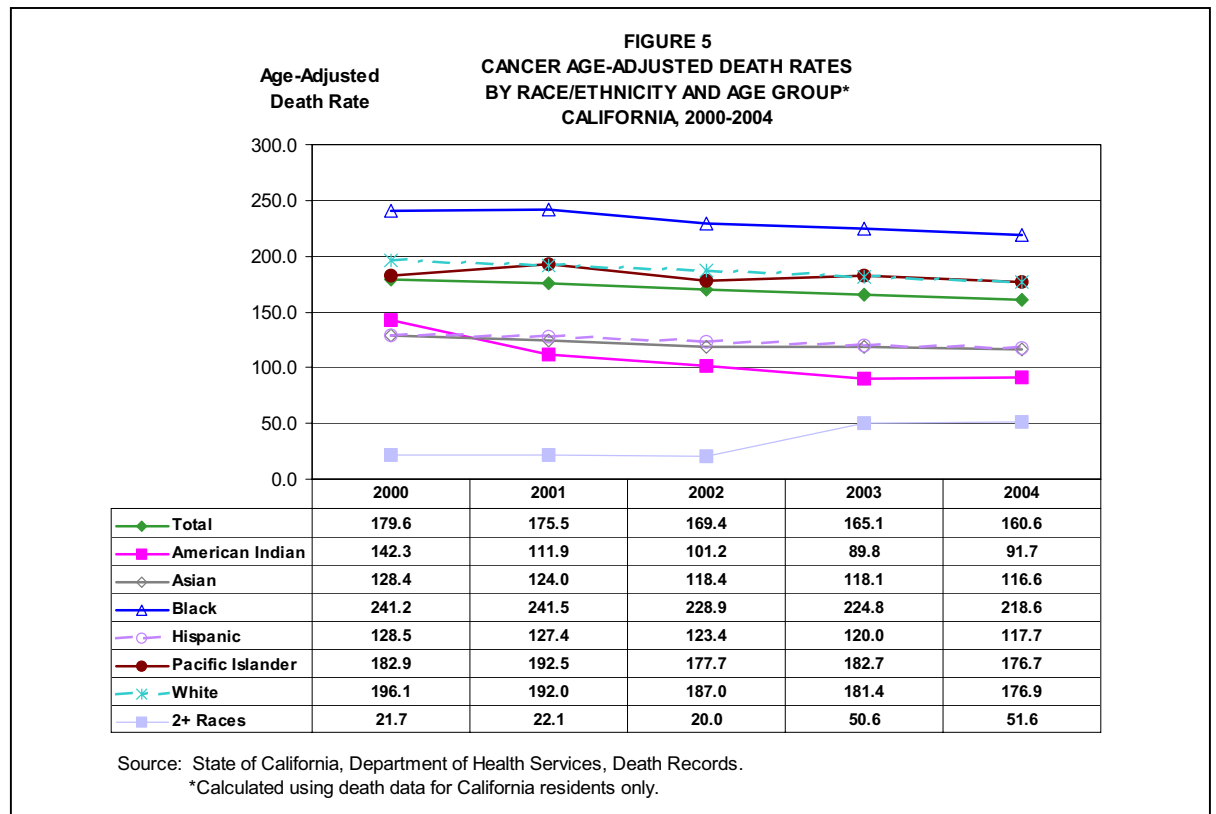
As shown in **Table 1** (pages 11 to 12), California's 2004 age-adjusted death rate was 160.6 per 100,000 population. Among the race/ethnic groups, Blacks had the highest age-adjusted death rate (218.6) followed by Whites (176.9), Pacific Islanders (176.7), Hispanics (117.7), Asians (116.6), American Indians (91.7), and Two or More Races (51.6). Differences in age-adjusted death rates among all race/ethnic groups were significant except for Whites compared with Pacific Islanders and Hispanics compared with Asians.

Figure 4 shows 2004 age-adjusted death rates by race/ethnicity and sex. Males consistently had higher rates than their female counterparts with the exception of Two or More Races. Among males, the age-adjusted death rate was highest among Blacks (265.4) followed by Pacific Islanders (219.0), Whites (205.1), Hispanics (142.5), Asians (142.2), American Indians (95.7), and Two or More Races (51.5). Among females, Blacks also had the highest age-adjusted death rate (188.2) followed by Whites (157.3), Pacific Islanders (143.6), Hispanics (100.2), Asians (97.4), American Indians (88.0), and Two or More Races (52.0). Male rates were significantly higher than female rates for Asians, Blacks, Hispanics, Pacific Islanders, and Whites.



For more data, see DHS Office of Health Information and Research, Home Page at www.dhs.ca.gov/ohir/

Figure 5 displays cancer age-adjusted death rates by race/ethnicity from 2000 to 2004.⁶ Overall the rate for each year declined during this period resulting in a significant 10.6 percent decrease from a rate of 179.6 per 100,000 population in 2000 to 160.6 in 2004. Significant differences were also noted in declining age-adjusted rates when comparing these two years for American Indians (35.6 percent), Whites (9.8), Blacks (9.4 percent), Asians (9.4 percent), and Hispanics (8.4 percent). The rate (3.4 percent) of decline for Pacific Islanders was not significant. In contrast, the rate for Two or More Races significantly increased by 138 percent from 21.7 in 2000 to 51.6 in 2004; however, this dramatic increase may be due in large part to improved reporting for this race category.



Cancer Death Data for California Counties

Table 2 (page 13) displays the 2002 to 2004 average cancer deaths, crude and age-adjusted death rates for California and its 58 counties. The three counties with the highest average number of cancer deaths were Los Angeles County at 13,517.0 or 25.0 percent of all cancer deaths in California, San Diego County with 4,643.3 deaths or 8.6 percent, and Orange County with 4,018.0 deaths or 7.4 percent.

Among the 55 counties with reliable crude death rates, Plumas County had the highest rate of 310.0 deaths per 100,000 population, which was 3.1 times higher than the lowest rate of 98.9 in San Benito County. Yuba County had the highest reliable age-adjusted death rate of 226.4 and was 1.7 times higher than the lowest rate of 136.6 for San Benito County. Eighteen counties had rates significantly different than the State rate; 15 of the counties had higher rates than the State rate of 161.9 and 3 had lower rates.

The HP2010 National Health Objective to reduce cancer deaths to an age-adjusted rate of no more than 158.6 deaths per 100,000 population was met by 13 counties (11 with reliable age-adjusted death rates).

Figure 6 (page 14) shows a thematic map of the 2002 to 2004 age-adjusted death rates for California counties. The Jenks natural breaks classification was used to determine the interval breaks for the counties.

Please refer to the data limitations and qualification section for information regarding significance testing between the county and State age-adjusted rates.

Cancer Deaths among the Three City Health Jurisdictions

Table 3 shows the three-year average (2002 to 2004) 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 (661.7), followed by Pasadena (258.3), and Berkeley (150.3).

The crude death rates were 181.7 per 100,000 population for Pasadena, 144.3 for Berkeley, and 137.6 for Long Beach.

CITY HEALTH JURISDICTION	NUMBER OF DEATHS (Average)	2003 POPULATION	CRUDE DEATH RATE
BERKELEY	150.3	104,195	144.3
LONG BEACH	661.7	481,015	137.6
PASADENA	258.3	142,214	181.7

Note : Rates are per 100,000 population.
*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, 2001-2006, with 2000 DRU Benchmark, May 2006.
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 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. The weighted average 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.

Age-adjusted rates are presented when the single summary measure is needed, but data analysts should inspect age-specific rates first.⁷ Age-specific rates provide insights to important age-related mortality trends that can be masked by age-adjusted rates. For example, a shift in the number of deaths from one age group to another could produce very little change in the age-adjusted rate, but may warrant further investigation.

⁷Choi BCK, de Guia NA, and Walsh P. Look before you leap: Stratify before you standardize. American Journal of Epidemiology, 149: 1087-1096. 1999.

In addition, analysis of age-specific rates can reveal that populations being compared do not show a consistent relationship (e.g., the trend is not in the same direction for all age-specific rates) in which case the analysis of age-specific rates is recommended over age-adjusted rates.

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 NCHS.⁵ Deaths by place of residence means that the data include only those deaths occurring among residents of California, regardless of the place of death.

The term “significant” within the text indicates statistical significance based on the difference between two independent rates ($p < .05$). Significant difference between the county and State age-adjusted death rates was determined by comparing the 95 percent confidence intervals (CI) of the two rates, which are based on the rate, standard deviation, and standard error. Rates were considered to be significantly different from each other when their CIs did not overlap. If the upper limit of the county CI fell below the lower limit of the State CI, the county rate was deemed to be significantly lower. If the lower limit of the county CI exceeded the higher limit of the State CI, the county rate was deemed to be significantly higher. Significant differences of overlapping CIs were not addressed in this report. Overlapping CIs require a more precise statistical measure to determine significant and non-significant differences in rates because CIs may overlap as much as 29 percent and still be significantly different.⁸

The county or State age-adjusted mortality rates that equaled or surpassed the HP2010 objective target rate were noted as achieved, regardless of rate reliability. Readers are cautioned that measuring progress toward target attainment for a HP2010 objective using only one data point is not recommended. HP2010 guidelines recommend using absolute differences between the target rate and the most recent data point as well as a progress quotient to measure relative changes over time in monitoring progress toward achieving the objective target rate.⁹ See the guidelines for HP2010 objectives on the NCHS website at <http://www.cdc.gov/nchs/hphome.htm>

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. To assist the reader, the 95 percent CIs 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 (*). The CIs represent the range of values likely to contain the “true” value 95 percent of the time.

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 numbers 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.

⁸van Belle G. Statistical Rules of Thumb, Rule 2.5. Wiley Publishing. March 2002

⁹Keppel KG, et al. Measuring Progress in Healthy People 2010. Healthy People 2010 Statistical Notes, No. 25. National Center for Health Statistics. Hyattsville, Maryland. September 2004.

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

To meet the U.S. Office of Management and Budget minimum standards for race and ethnicity data collection and reporting, the report presents the following race/ethnic groups: American Indian, Asian, Black, Hispanic, Pacific Islander, White, and Two or More Races. Hispanic origin of decedents is determined first and includes any race group. Second, decedents of the Two or More Races group are determined and are not reported in single race groups. In order to remain consistent with the population data obtained from the Department of Finance, the single race groups are defined as follows: the "American Indian" race group includes Aleut, American Indian, and Eskimo; the "Asian" race group includes Asian Indian, Asian (specified/unspecified), Cambodian, Chinese, Filipino, Hmong, Japanese, Korean, Laotian, Thai, and Vietnamese; the "Pacific Islander" race group includes Guamanian, Hawaiian, Samoan, and Other Pacific Islander; the "White" race group includes White, Other (specified), Not Stated, and Unknown.

Caution should be exercised in the interpretation of mortality data by race/ethnicity. Misclassification of race/ethnicity on death certificates may contribute to death rates that may be understated among American Indians, Asians, Hispanics, and Pacific Islanders.¹¹ This problem could contribute to understatement of rates for the Two or More Races group as well. All race groups may not be individually displayed on the tables due to unreliable rates, but the State totals do include their data.

Beginning in 2000 federal race/ethnicity reporting guidelines changed to allow reporting of more than one race on death certificates. California initiated use of the new guidelines on January 1, 2000, and collects up to three races. California's population estimates recently added the multirace (Two or More Races) group. To be consistent with the population groups, current reports tabulate race of decedent using all races mentioned on the death certificate. Therefore, prior reports depicting race group statistics based on single race are not comparable with current reports.

The 2000 U.S. population standard was used for calculating age-adjustments in accordance with statistical policy implemented by NCHS.¹² Age-adjusted death rates are not comparable when rates are calculated with different population standards, e.g., the 1940 standard population. Additionally, population data used to calculate city crude rates in **Table 3** (page 7) differ from population data used to calculate county crude rates in **Table 2** (page 13). Caution should be exercised when comparing the crude rates of the three city health jurisdictions with the crude rates of the 58 California counties. Age-adjusted rates for city health jurisdictions were not calculated.

A more complete explanation of age-adjustment methodology is available in the "Healthy People 2010 Statistical Notes" publication.¹³ Detailed information on data quality and limitations is presented in the appendix of the annual report, "Vital Statistics of California."¹⁴ Formulas used to calculate death rates are included in the technical notes of the "County Health Status Profiles" report.¹⁵

¹¹Rosenberg 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.

¹²Anderson RN, Rosenberg HM. Age Standardization of Death Rates: Implementation of the Year 2000 Standard. National Vital Statistics Reports; Vol. 47, No. 3. National Center for Health Statistics. Hyattsville, Maryland. 1998.

¹³Klein 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.

¹⁴Ficenec S, Bindra K, Vital Statistics of California, 2003. Center for Health Statistics, California Department of Health Services, April 2004.

¹⁵Shippen S. County Health Status Profiles 2006. Center for Health Statistics, California Department of Health Services, April 2006.

This Data Summary was prepared by Carol Lau, Office of Health Information and Research, Department of Health Services, 1616 Capitol Avenue, Suite 74.165, MS 5103, P.O. Box 997410, Sacramento, CA 95899-7410, telephone (916) 650-6893, fax (916) 650-6889, clau@dhs.ca.gov.

TABLE 1
CANCER DEATHS
BY RACE/ETHNICITY, AGE, AND SEX
CALIFORNIA, 2004
(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	15	6	9	534,769	272,800	261,969	2.8 *	2.2 *	3.4 *	1.4	4.2	0.4	4.0	1.2	5.7
1 to 4	59	35	24	2,047,621	1,045,813	1,001,808	2.9	3.3	2.4	2.1	3.6	2.2	4.5	1.4	3.4
5 to 14	162	88	74	5,369,098	2,750,853	2,618,245	3.0	3.2	2.8	2.6	3.5	2.5	3.9	2.2	3.5
15 to 24	231	149	82	5,294,261	2,757,217	2,537,044	4.4	5.4	3.2	3.8	4.9	4.5	6.3	2.5	3.9
25 to 34	469	220	249	5,231,086	2,701,183	2,529,903	9.0	8.1	9.8	8.2	9.8	7.1	9.2	8.6	11.1
35 to 44	1,611	731	880	5,672,590	2,883,426	2,789,164	28.4	25.4	31.6	27.0	29.8	23.5	27.2	29.5	33.6
45 to 54	4,942	2,379	2,563	4,931,148	2,440,823	2,490,325	100.2	97.5	102.9	97.4	103.0	93.6	101.4	98.9	106.9
55 to 64	9,177	4,795	4,382	3,303,083	1,594,612	1,708,471	277.8	300.7	256.5	272.1	283.5	292.2	309.2	248.9	264.1
65 to 74	12,972	6,897	6,075	2,025,575	936,610	1,088,965	640.4	736.4	557.9	629.4	651.4	719.0	753.8	543.8	571.9
75 to 84	16,182	8,457	7,725	1,420,413	590,956	829,457	1,139.2	1,431.1	931.3	1,121.7	1,156.8	1,400.6	1,461.6	910.6	952.1
85 & Older	7,888	3,613	4,275	546,767	187,361	359,406	1,442.7	1,928.4	1,189.5	1,410.8	1,474.5	1,865.5	1,991.2	1,153.8	1,225.1
Unknown	0	0	0												
Total	53,708	27,370	26,338	36,376,411	18,161,654	18,214,757	147.6	150.7	144.6	146.4	148.9	148.9	152.5	142.9	146.3
Age-Adjusted							160.6	188.7	140.8	159.2	161.9	186.5	191.0	139.1	142.5
AMERICAN INDIAN															
Under 1	0	0	0	3,420	1,749	1,671	0.0 *	0.0 *	0.0 *	-	-	-	-	-	-
1 to 4	0	0	0	10,132	5,219	4,913	0.0 *	0.0 *	0.0 *	-	-	-	-	-	-
5 to 14	0	0	0	44,098	22,317	21,781	0.0 *	0.0 *	0.0 *	-	-	-	-	-	-
15 to 24	1	1	0	45,586	23,211	22,375	2.2 *	4.3 *	0.0 *	0.0	6.5	0.0	12.8	-	-
25 to 34	2	0	2	36,784	18,309	18,475	5.4 *	0.0 *	10.8 *	0.0	13.0	-	-	0.0	25.8
35 to 44	5	3	2	43,965	21,368	22,597	11.4 *	14.0 *	8.9 *	1.4	21.3	0.0	29.9	0.0	21.1
45 to 54	23	14	9	42,504	20,200	22,304	54.1	69.3 *	40.4 *	32.0	76.2	33.0	105.6	14.0	66.7
55 to 64	52	25	27	26,857	12,754	14,103	193.6	196.0	191.4	141.0	246.2	119.2	272.9	119.2	263.7
65 to 74	58	30	28	12,903	5,996	6,907	449.5	500.3	405.4	333.8	565.2	321.3	679.4	255.2	555.5
75 to 84	44	17	27	6,734	2,840	3,894	653.4	598.6 *	693.4	460.3	846.5	314.0	883.1	431.8	954.9
85 & Older	14	6	8	3,868	1,435	2,433	361.9 *	418.1 *	328.8 *	172.3	551.5	83.6	752.7	101.0	556.7
Unknown	0	0	0												
Total	199	96	103	276,851	135,398	141,453	71.9	70.9	72.8	61.9	81.9	56.7	85.1	58.8	86.9
Age-Adjusted							91.7	95.7	88.0	78.4	104.9	75.5	115.9	70.4	105.6
ASIAN															
Under 1	1	1	0	48,115	24,552	23,563	2.1 *	4.1 *	0.0 *	0.0	6.2	0.0	12.1	-	-
1 to 4	5	4	1	188,290	96,379	91,911	2.7 *	4.2 *	1.1 *	0.3	5.0	0.1	8.2	0.0	3.2
5 to 14	22	13	9	498,432	257,125	241,307	4.4	5.1 *	3.7 *	2.6	6.3	2.3	7.8	1.3	6.2
15 to 24	23	17	6	567,146	291,640	275,506	4.1	5.8 *	2.2 *	2.4	5.7	3.1	8.6	0.4	3.9
25 to 34	57	22	35	618,710	302,916	315,794	9.2	7.3	11.1	6.8	11.6	4.2	10.3	7.4	14.8
35 to 44	194	96	98	671,272	321,320	349,952	28.9	29.9	28.0	24.8	33.0	23.9	35.9	22.5	33.5
45 to 54	532	241	291	609,567	284,594	324,973	87.3	84.7	89.5	79.9	94.7	74.0	95.4	79.3	99.8
55 to 64	743	403	340	385,197	179,303	205,894	192.9	224.8	165.1	179.0	206.8	202.8	246.7	147.6	182.7
65 to 74	1,083	597	486	245,629	107,974	137,655	440.9	552.9	353.1	414.6	467.2	508.6	597.3	321.7	384.4
75 to 84	1,199	653	546	154,086	64,809	89,277	778.1	1,007.6	611.6	734.1	822.2	930.3	1,084.9	560.3	662.9
85 & Older	543	282	261	50,569	20,013	30,556	1,073.8	1,409.1	854.2	983.5	1,164.1	1,244.6	1,573.5	750.5	957.8
Unknown	0	0	0												
Total	4,402	2,329	2,073	4,037,013	1,950,625	2,086,388	109.0	119.4	99.4	105.8	112.3	114.5	124.2	95.1	103.6
Age-Adjusted							116.6	142.2	97.4	113.1	120.1	136.4	148.1	93.2	101.6
BLACK															
Under 1	1	0	1	32,707	16,671	16,036	3.1 *	0.0 *	6.2 *	0.0	9.1	-	-	0.0	18.5
1 to 4	2	2	0	122,652	62,561	60,091	1.6 *	3.2 *	0.0 *	0.0	3.9	0.0	7.6	-	-
5 to 14	15	7	8	408,879	208,120	200,759	3.7 *	3.4 *	4.0 *	1.8	5.5	0.9	5.9	1.2	6.7
15 to 24	18	8	10	395,238	205,416	189,822	4.6 *	3.9 *	5.3 *	2.5	6.7	1.2	6.6	2.0	8.5
25 to 34	41	15	26	326,490	160,606	165,884	12.6	9.3 *	15.7	8.7	16.4	4.6	14.1	9.6	21.7
35 to 44	171	58	113	399,615	199,186	200,429	42.8	29.1	56.4	36.4	49.2	21.6	36.6	46.0	66.8
45 to 54	572	289	283	329,298	160,793	168,505	173.7	179.7	167.9	159.5	187.9	159.0	200.5	148.4	187.5
55 to 64	855	439	416	199,142	92,418	106,724	429.3	475.0	389.8	400.6	458.1	430.6	519.5	352.3	427.2
65 to 74	1,107	616	491	121,222	55,208	66,014	913.2	1,115.8	743.8	859.4	967.0	1,027.7	1,203.9	678.0	809.6
75 to 84	883	459	424	64,749	25,309	39,440	1,363.7	1,813.6	1,075.1	1,273.8	1,453.7	1,647.7	1,979.5	972.7	1,177.4
85 & Older	426	184	242	25,074	7,615	17,459	1,699.0	2,416.3	1,386.1	1,537.6	1,860.3	2,067.1	2,765.4	1,211.5	1,560.7
Unknown	0	0	0												
Total	4,091	2,077	2,014	2,425,066	1,193,903	1,231,163	168.7	174.0	163.6	163.5	173.9	166.5	181.4	156.4	170.7
Age-Adjusted							218.6	265.4	188.2	211.8	225.5	253.4	277.3	179.9	196.5
HISPANIC															
Under 1	9	3	6	273,401	139,443	133,958	3.3 *	2.2 *	4.5 *	1.1	5.4	0.0	4.6	0.9	8.1
1 to 4	25	13	12	1,003,339	512,381	490,958	2.5	2.5 *	2.4 *	1.5	3.5	1.2	3.9	1.1	3.8
5 to 14	73	39	34	2,503,684	1,279,931	1,223,753	2.9	3.0	2.8	2.2	3.6	2.1	4.0	1.8	3.7
15 to 24	96	68	28	2,275,634	1,199,542	1,076,092	4.2	5.7	2.6	3.4	5.1	4.3	7.0	1.6	3.6
25 to 34	184	92	92	2,332,753	1,244,497	1,088,256	7.9	7.4	8.5	6.7	9.0	5.9	8.9	6.7	10.2
35 to 44	414	188	226	1,954,969	1,014,652	940,317	21.2	18.5	24.0	19.1	23.2	15.9	21.2	20.9	27.2
45 to 54	863	394	469	1,228,904	607,654	621,250	70.2	64.8	75.5	65.5	74.9	58.4	71.2	68.7	82.3
55 to 64	1,253	640	613	636,784	298,857	337,927	196.8	214.1	181.4	185.9	207.7	197.6	230.7	167.0	195.8
65 to 74	1,632	881	751	357,389	157,978	199,411	456.6	557.7	376.6	434.5	478.8	520.8	594.5	349.7	403.5
75 to 84	1,640	921	719	190,758	78,695	112,063	859.7	1,170.3	641.6	818.1	901.3	1,094.8	1,245.9	594.7	688.5
85 & Older	627	272	355	58,423	20,677	37,746	1,073.2	1,315.5	940.5	989.2	1,157.2	1,159.1	1,471.8	842.7	1,038.3
Unknown	0	0	0												
Total	6,816	3,511	3,305	12,816,038	6,554,307	6,261,731	53.2	53.6	52.8	51.9	54.4	51.8	55.3	51.0	54.6
Age-Adjusted							117.7	142.5	100.2	114.7	120.7	137.4	147.7	96.7	103.8

Note: Rates are per 100,000 population. ICD-10 codes C00-C97.

Year 2000 U.S. Standard Population is used

TABLE 1 (Continued)
CANCER DEATHS
BY RACE/ETHNICITY, AGE, AND SEX
CALIFORNIA, 2004
(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	15	6	9	534,769	272,800	261,969	2.8 *	2.2 *	3.4 *	1.4	4.2	0.4	4.0	1.2	5.7	
1 to 4	59	35	24	2,047,621	1,045,813	1,001,808	2.9	3.3	2.4	2.1	3.6	2.2	4.5	1.4	3.4	
5 to 14	162	88	74	5,369,098	2,750,853	2,618,245	3.0	3.2	2.8	2.6	3.5	2.5	3.9	2.2	3.5	
15 to 24	231	149	82	5,294,261	2,757,217	2,537,044	4.4	5.4	3.2	3.8	4.9	4.5	6.3	2.5	3.9	
25 to 34	469	220	249	5,231,086	2,701,183	2,529,903	9.0	8.1	9.8	8.2	9.8	7.1	9.2	8.6	11.1	
35 to 44	1,611	731	880	5,672,590	2,883,426	2,789,164	28.4	25.4	31.6	27.0	29.8	23.5	27.2	29.5	33.6	
45 to 54	4,942	2,379	2,563	4,931,148	2,440,823	2,490,325	100.2	97.5	102.9	97.4	103.0	93.6	101.4	98.9	106.9	
55 to 64	9,177	4,795	4,382	3,303,083	1,594,612	1,708,471	277.8	300.7	256.5	272.1	283.5	292.2	309.2	248.9	264.1	
65 to 74	12,972	6,897	6,075	2,025,575	936,610	1,088,965	640.4	736.4	557.9	629.4	651.4	719.0	753.8	543.8	571.9	
75 to 84	16,182	8,457	7,725	1,420,413	590,956	829,457	1,139.2	1,431.1	931.3	1,121.7	1,156.8	1,400.6	1,461.6	910.6	952.1	
85 & Older	7,888	3,613	4,275	546,767	187,361	359,406	1,442.7	1,928.4	1,189.5	1,410.8	1,474.5	1,865.5	1,991.2	1,153.8	1,225.1	
Unknown	0	0	0													
Total	53,708	27,370	26,338	36,376,411	18,161,654	18,214,757	147.6	150.7	144.6	146.4	148.9	148.9	152.5	142.9	146.3	
Age-Adjusted							160.6	188.7	140.8	159.2	161.9	186.5	191.0	139.1	142.5	
PACIFIC ISLANDER																
Under 1	0	0	0	1,651	840	811	0.0 +	0.0 +	0.0 +	-	-	-	-	-	-	
1 to 4	1	1	0	5,973	3,062	2,911	16.7 *	32.7 *	0.0 +	0.0	49.6	0.0	96.7	-	-	
5 to 14	1	0	1	20,060	10,247	9,813	5.0 *	0.0 +	10.2 *	0.0	14.8	-	-	0.0	30.2	
15 to 24	1	0	1	21,713	11,142	10,571	4.6 *	0.0 +	9.5 *	0.0	13.6	-	-	0.0	28.0	
25 to 34	4	3	1	21,154	10,412	10,742	18.9 *	28.8 *	9.3 *	0.4	37.4	0.0	61.4	0.0	27.6	
35 to 44	17	6	11	21,764	10,687	11,077	78.1 *	56.1 *	99.3 *	41.0	115.2	11.2	101.1	40.6	158.0	
45 to 54	31	14	17	15,953	7,886	8,067	194.3	177.5 *	210.7 *	125.9	262.7	84.5	270.5	110.6	310.9	
55 to 64	38	18	20	9,434	4,586	4,848	402.8	392.5 *	412.5	274.7	530.9	211.2	573.8	231.7	593.3	
65 to 74	39	20	19	5,288	2,517	2,771	737.5	794.6	685.7	506.0	969.0	446.3	1,142.8	377.4	994.0	
75 to 84	24	20	4	2,362	1,053	1,309	1,016.1	1,899.3	305.6 *	609.6	1,422.6	1,066.9	2,731.8	6.1	605.0	
85 & Older	2	2	0	872	370	502	229.4 *	540.5 *	0.0 +	0.0	547.2	0.0	1,289.7	-	-	
Unknown	0	0	0													
Total	158	84	74	126,224	62,802	63,422	125.2	133.8	116.7	105.7	144.7	105.2	162.4	90.1	143.3	
Age-Adjusted							176.7	219.0	143.6	147.6	205.9	168.6	269.5	109.9	177.3	
WHITE																
Under 1	4	2	2	164,750	84,066	80,684	2.4 *	2.4 *	2.5 *	0.0	4.8	0.0	5.7	0.0	5.9	
1 to 4	24	15	9	617,372	315,162	302,210	3.9	4.8 *	3.0 *	2.3	5.4	2.4	7.2	1.0	4.9	
5 to 14	47	27	20	1,722,936	886,271	836,665	2.7	3.0	2.4	1.9	3.5	1.9	4.2	1.3	3.4	
15 to 24	91	54	37	1,856,335	960,424	895,911	4.9	5.6	4.1	3.9	5.9	4.1	7.1	2.8	5.5	
25 to 34	178	87	91	1,808,165	922,586	885,579	9.8	9.4	10.3	8.4	11.3	7.4	11.4	8.2	12.4	
35 to 44	794	373	421	2,502,123	1,278,269	1,223,854	31.7	29.2	34.4	29.5	33.9	26.2	32.1	31.1	37.7	
45 to 54	2,886	1,415	1,471	2,639,194	1,328,451	1,310,743	109.4	106.5	112.2	105.4	113.3	101.0	112.1	106.5	118.0	
55 to 64	6,199	3,249	2,950	2,005,398	987,820	1,017,578	309.1	328.9	289.9	301.4	316.8	317.6	340.2	279.4	300.4	
65 to 74	9,013	4,736	4,277	1,260,712	596,472	664,240	714.9	794.0	643.9	700.2	729.7	771.4	816.6	624.6	663.2	
75 to 84	12,342	6,363	5,979	988,209	412,295	575,914	1,248.9	1,543.3	1,038.2	1,226.9	1,271.0	1,505.4	1,581.2	1,011.9	1,064.5	
85 & Older	6,263	2,862	3,401	402,581	135,267	267,314	1,555.7	2,115.8	1,272.3	1,517.2	1,594.2	2,038.3	2,193.3	1,229.5	1,315.0	
Unknown	0	0	0													
Total	37,841	19,183	18,658	15,967,775	7,907,083	8,060,692	237.0	242.6	231.5	234.6	239.4	239.2	246.0	228.1	234.8	
Age-Adjusted							176.9	205.1	157.3	175.1	178.7	202.1	208.0	155.0	159.6	
TWO OR MORE RACES																
Under 1	0	0	0	10,725	5,479	5,246	0.0 +	0.0 +	0.0 +	-	-	-	-	-	-	
1 to 4	2	0	2	99,863	51,049	48,814	2.0 *	0.0 +	4.1 *	0.0	4.8	-	-	0.0	9.8	
5 to 14	4	2	2	171,009	86,842	84,167	2.3 *	2.3 *	2.4 *	0.0	4.6	0.0	5.5	0.0	5.7	
15 to 24	1	1	0	132,609	65,842	66,767	0.8 *	1.5 *	0.0 +	0.0	2.2	0.0	4.5	-	-	
25 to 34	3	1	2	87,030	41,857	45,173	3.4 *	2.4 *	4.4 *	0.0	7.3	0.0	7.1	0.0	10.6	
35 to 44	16	7	9	78,882	37,944	40,938	20.3 *	18.4 *	22.0 *	10.3	30.2	4.8	32.1	7.6	36.3	
45 to 54	35	12	23	65,728	31,245	34,483	53.2	38.4 *	66.7	35.6	70.9	16.7	60.1	39.4	94.0	
55 to 64	37	21	16	40,271	18,874	21,397	91.9	111.3	74.8 *	62.3	121.5	63.7	158.9	38.1	111.4	
65 to 74	40	17	23	22,432	10,465	11,967	178.3	162.4 *	192.2	123.1	233.6	85.2	239.7	113.6	270.7	
75 to 84	50	24	26	13,515	5,955	7,560	370.0	403.0	343.9	267.4	472.5	241.8	564.3	211.7	476.1	
85 & Older	13	5	8	5,380	1,984	3,396	241.6 *	252.0 *	235.6 *	110.3	373.0	31.1	472.9	72.3	398.8	
Unknown	0	0	0													
Total	201	90	111	727,444	357,536	369,908	27.6	25.2	30.0	23.8	31.5	20.0	30.4	24.4	35.6	
Age-Adjusted							51.6	51.5	52.0	44.3	59.0	40.4	62.5	42.1	62.0	

Note : Rates are per 100,000 population. ICD-10 codes C00-C97.

Year 2000 U.S. Standard Population is used for age-adjusted rates.

American Indian, Asian, Black, Pacific Islander, White and Two or More Races exclude Hispanic ethnicity.

Hispanic includes any race category.

Deaths reported under Two or More Races are not duplicated in single race/ethnic groups.

* 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.

Source : State of California, Department of Finance; Population Projections with Age, Sex, and Race/Ethnic Detail, 2000-2050, May 2004.

State of California, Department of Health Services, Death Records.

TABLE 2
CANCER DEATHS
CALIFORNIA, 2002-2004
(By Place of Residence)

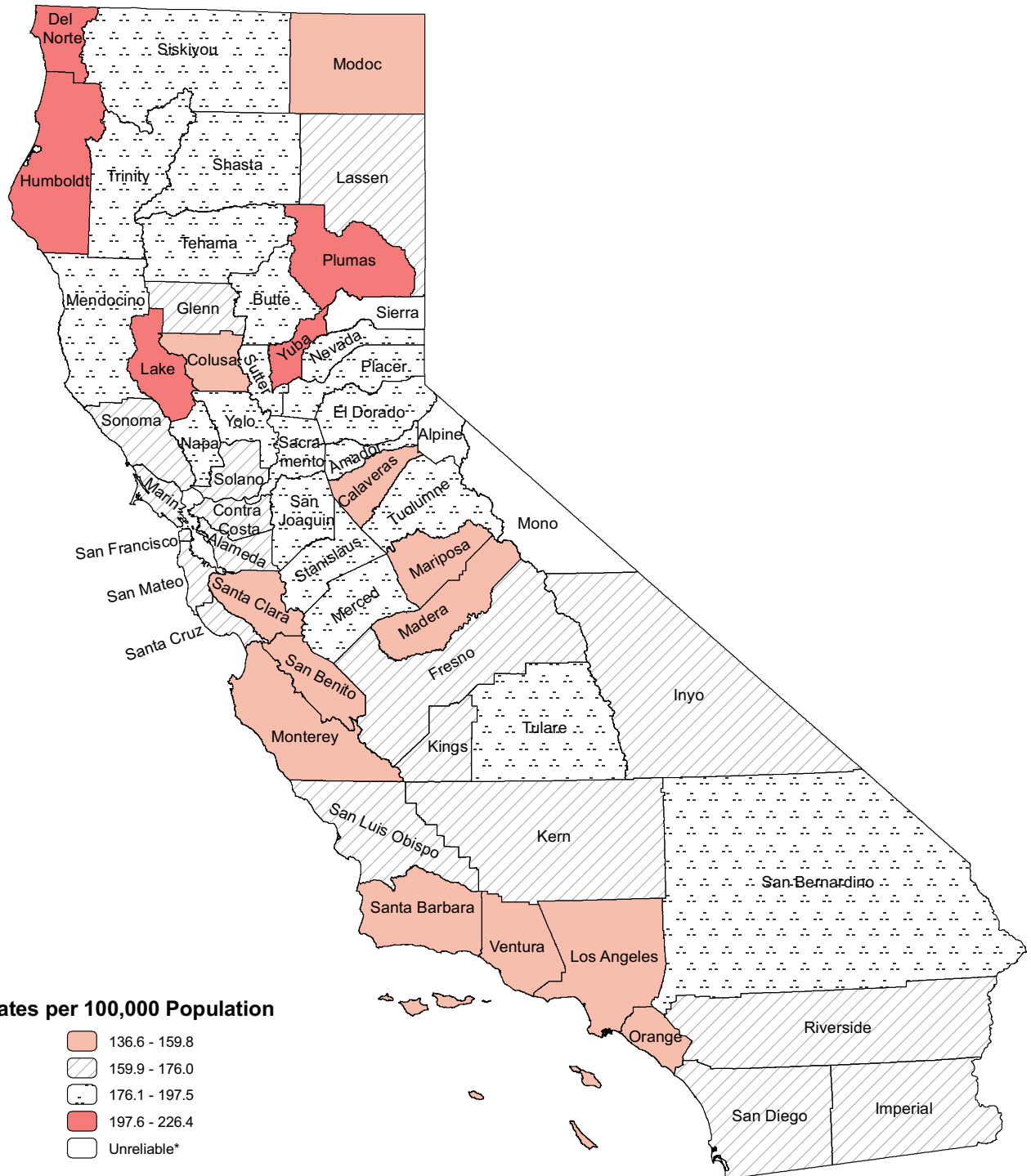
COUNTY	2002-2004 DEATHS (AVERAGE)	PERCENT	2003 POPULATION	CRUDE RATE	AGE-ADJUSTED RATE	95% CONFIDENCE LIMITS	
						LOWER	UPPER
CALIFORNIA	53,980.3	100.0	35,934,967	150.2	164.1	162.7	165.5
ALAMEDA	2,252.0	4.2	1,495,367	150.6	172.3	165.1	179.5
ALPINE ²	1.7	a	1,268	131.4 *	136.7 *	0.0	348.4
AMADOR	101.7	0.2	37,074	274.2	194.8	156.7	232.9
BUTTE	470.7	0.9	212,473	221.5	181.1	164.6	197.6
CALAVERAS ²	95.7	0.2	43,566	219.6	153.0	121.7	184.3
COLUSA ²	27.7	0.1	20,026	138.2	154.6	96.9	212.3
CONTRA COSTA ¹	1,686.0	3.1	1,003,704	168.0	174.3	165.9	182.7
DEL NORTE ¹	63.7	0.1	28,192	225.8	220.7	166.3	275.0
EL DORADO	314.3	0.6	168,227	186.9	178.6	158.6	198.6
FRESNO	1,158.0	2.1	855,469	135.4	167.6	157.9	177.3
GLENN	49.0	0.1	27,626	177.4	169.4	121.7	217.0
HUMBOLDT ¹	277.7	0.5	129,515	214.4	210.2	185.3	235.0
IMPERIAL	206.3	0.4	153,673	134.3	166.9	143.9	190.0
INYO	48.0	0.1	18,617	257.8	169.6	120.4	218.9
KERN	1,066.7	2.0	717,332	148.7	171.4	161.0	181.7
KINGS	161.0	0.3	138,763	116.0	174.2	146.8	201.5
LAKE ¹	192.7	0.4	62,359	309.0	219.8	188.5	251.2
LASSEN	49.7	0.1	34,633	143.4	168.3	121.2	215.4
LOS ANGELES ^{1,2}	13,517.0	25.0	10,047,236	134.5	149.2	146.7	151.8
MADERA ²	195.0	0.4	133,965	145.6	152.1	130.7	173.6
MARIN	487.3	0.9	250,252	194.7	161.6	147.1	176.0
MARIPOSA	40.0	0.1	17,886	223.6	159.8	109.9	209.6
MENDOCINO ¹	198.7	0.4	89,156	222.8	197.5	169.8	225.2
MERCED	307.0	0.6	230,696	133.1	177.7	157.7	197.8
MODOC ²	20.0	a	9,541	209.6	149.8	83.5	216.2
MONO ²	10.3	a	13,443	76.9 *	105.8 *	33.1	178.4
MONTEREY ²	543.7	1.0	118,842	129.8	155.7	142.6	168.9
NAPA ¹	315.3	0.6	430,920	240.9	191.2	169.7	212.6
NEVADA	235.7	0.4	96,923	243.1	181.5	158.1	204.9
ORANGE ^{1,2}	4,018.0	7.4	3,001,146	133.9	157.7	152.8	162.6
PLACER ¹	575.3	1.1	285,336	201.6	181.9	167.0	196.8
PLUMAS	65.7	0.1	21,181	310.0	203.5	153.3	253.6
RIVERSIDE	2,997.3	5.6	1,758,719	170.4	170.3	164.2	176.4
SACRAMENTO ¹	2,226.0	4.1	1,331,563	167.2	183.9	176.2	191.5
SAN BENITO ²	56.0	0.1	56,605	98.9	136.6	100.3	173.0
SAN BERNARDINO ¹	2,520.3	4.7	1,869,219	134.8	185.9	178.6	193.2
SAN DIEGO ¹	4,643.3	8.6	2,989,178	155.3	173.4	168.4	178.4
SAN FRANCISCO	1,459.0	2.7	786,980	185.4	166.4	157.8	174.9
SAN JOAQUIN ¹	984.7	1.8	625,702	157.4	193.2	181.1	205.3
SAN LUIS OBISPO	499.3	0.9	257,452	194.0	164.6	150.1	179.1
SAN MATEO	1,228.3	2.3	712,772	172.3	164.6	155.4	173.9
SANTA BARBARA ²	656.7	1.2	412,069	159.4	158.1	146.0	170.3
SANTA CLARA ^{1,2}	2,134.0	4.0	1,723,819	123.8	143.6	137.4	149.7
SANTA CRUZ	384.0	0.7	259,220	148.1	163.5	146.9	180.2
SHASTA ¹	430.3	0.8	175,421	245.3	190.6	172.3	209.0
SIERRA	11.3	a	3,563	318.1 *	218.1 *	87.8	348.3
SISKIYOU	120.7	0.2	45,081	267.7	183.5	150.4	216.7
SOLANO	633.7	1.2	416,406	152.2	164.9	151.9	177.8
SONOMA	914.0	1.7	473,274	193.1	176.0	164.4	187.5
STANISLAUS ¹	768.0	1.4	489,491	156.9	184.0	171.0	197.1
SUTTER	152.0	0.3	84,978	178.9	184.1	154.8	213.4
TEHAMA	138.0	0.3	58,665	235.2	179.8	149.1	210.4
TRINITY	38.3	0.1	13,579	282.3	189.2	128.9	249.5
TULARE ¹	554.7	1.0	392,989	141.1	186.8	171.2	202.4
TUOLUMNE	151.0	0.3	57,120	264.4	189.3	158.8	219.8
VENTURA ²	1,147.0	2.1	799,114	143.5	156.3	147.2	165.4
YOLO	254.0	0.5	183,602	138.3	179.2	157.0	201.4
YUBA ¹	127.0	0.2	63,979	198.5	226.4	186.9	266.0

Note : Rates are per 100,000 population. ICD-10 codes C00-C97.
Year 2000 U.S. Standard Population is used for age-adjusted rates.
* Death rate unreliable, relative standard error is greater than or equal to 23 percent.

¹ County age-adjusted rate is significantly different from the state age-adjusted rate.
² Met or surpassed HP2010 target rate.
a Represents a percentage of more than zero but less than 0.05.

Source: State of California, Department of Finance; 2003 Population: Population Projections by Age, Race/Ethnicity and Sex, May 2004.
State of California, Department of Health Services, Death Records.

Figure 6
Cancer Deaths
Age-Adjusted Death Rates
California Counties, 2002-2004



* Rate not reliable, relative standard error is greater than or equal to 23 percent.