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DATA
SUMMARY
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This data summary is one of a series in leading cause of death reports.

Cancer Deaths
California, 2005

By Sally Jew-Lochman

Highlights

- **Cancer ranked second among the leading causes of death in California in 2005.**
- **California residents aged 65 and older made up 69.4 percent of all 2005 cancer deaths.**
- **California's age-adjusted death rate for cancer significantly decreased by 8.4 percent from 2001 to 2005.**
- **Lake County (226.0) had the highest reliable cancer age-adjusted death rate, and San Benito County had the lowest (132.3) rate.**

Introduction

Cancer continued to be the second leading cause of death in California and the United States (U.S.) in 2005.[1,2] It is a group of diseases characterized by uncontrolled growth and spread of abnormal cells. The group of cancers affecting the trachea, bronchus, and lung were categorized as the top cause of cancer deaths in California and the U.S. (24.4 and 28.5 percent, respectively).[1,2]

Cancer can be 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). Available treatments for cancer include surgery, radiation, chemotherapy, hormone therapy, biological therapy, and targeted therapy.[3]

Scientific evidence suggests that many types of cancer can be prevented by not using tobacco products, being physically active, eating a healthy diet, maintaining an ideal body weight, and avoiding harmful rays from the sun. Regular screening examinations can result in the prevention of certain cancers through the discovery and removal of precancerous lesions.[3]

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 158.6 per 100,000 population.[4] Neither California (162.8) nor the U.S. (183.8) met this objective in 2005.[1,2]

This report presents data on California resident deaths due to cancer focusing on 2005. The analyses include a presentation of crude and age-specific death

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[1] State of California, Department of Public Health. Death Records, 2005.
[2] National Center for Health Statistics. Deaths: Preliminary Data for 2005. URL: http://www.cdc.gov/nchs/products/pubs/pubd/hestats/prelimdeaths05/prelimdeaths05.htm Accessed March 10, 2008.
[3] American Cancer Society, Inc. *Cancer Facts and Figures 2008*. Atlanta: American Cancer Society, 2008.
[4] U.S. Department of Health and Human Services. *Healthy People 2010 Midcourse Review*. Washington, DC: U.S. Government Printing Office, December 2006.

A brief overview of data limitations and qualifications is provided at the end of this report.

rates and comparisons of age-adjusted death rates by sex, age, race/ethnicity, and county. Crude rates reflect mortality risk of a current or real population, age-specific rates are the most useful method for comparing risk among age groups, and age-adjusted rates allow comparison among groups and over time while controlling for differences in the age structures of comparison groups.

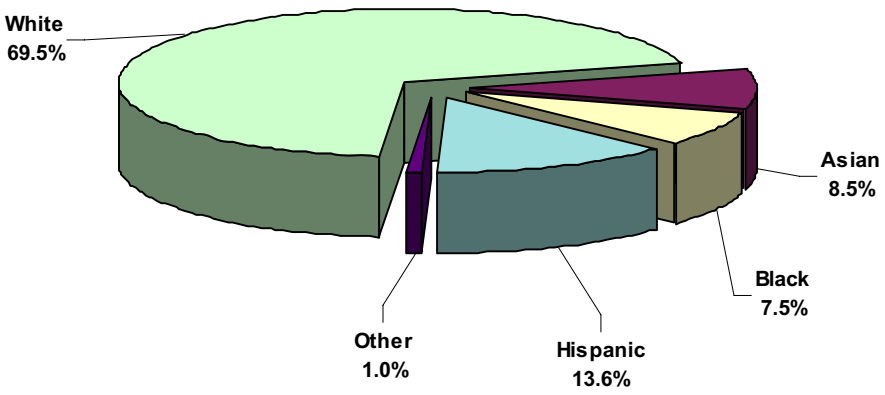
The data used in this report were extracted from vital statistics records with deaths attributed to these diseases as defined by the International Classification of Diseases, Tenth Revision (ICD-10) codes C00 to C97 in accordance with the National Center for Health Statistics (NCHS).[5]

Cancer Deaths

Table 1 (pages 11 to 12) shows the number of cancer deaths for 2005 among California residents by race/ethnicity, age, and sex. There were a total of 54,613 deaths consisting of 26,755 females (49.0 percent) and 27,858 males (51.0 percent). Californians aged 65 and older accounted for 69.4 percent of all 2005 cancer deaths. The largest proportion of deaths occurred in the 75 to 84 age group (30.1 percent).

Figure 1 shows that Whites had the highest percentage of deaths with 69.5 percent followed by Hispanics with 13.6 percent, Asians with 8.5 percent, Blacks with 7.5 percent, and Other with 1.0 percent. Other includes American Indians (0.3 percent), Pacific Islanders (0.3 percent), and Two or More Races (0.4 percent). Totals may not add to 100 percent due to rounding.

FIGURE 1
CANCER DEATHS
BY RACE/ETHNICITY[1]
CALIFORNIA, 2005



Note: Other includes American Indian, Pacific Islander, and Two or More Races.

[1]Calculated using death data for California residents only.

Source: State of California, Department of Public Health. Death Records.

[5]Centers for Disease Control and Prevention. Instructions for Classifying the Underlying Cause of Death, 2008. *NCHS Instruction Manual*, Part 2a. National Center for Health Statistics. Hyattsville, Maryland. January 2008.

See the Methodological Approach section in this report for explanations 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 in 2005 of 147.8 deaths per 100,000 population was lower than the U.S. rate of 188.7.[2] Whites had the highest rate (231.2) followed by Blacks (180.6), Asians (109.3), Pacific Islanders (108.3), American Indians (79.1), Hispanics (57.5), and Two or More Races (27.4). The differences in reliable crude rates among all race/ethnic groups were significant except between Asians and Pacific Islanders.

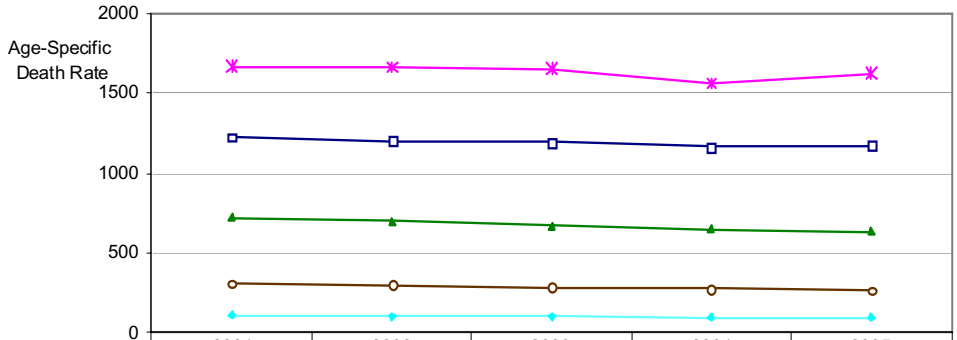
Crude death rates show the actual rate of dying in a given population, but because of the differing age compositions of various populations, crude rates do not provide a statistically valid method of comparing sex or race/ethnic groups, geographic reporting areas, or multiple reporting periods.

Cancer Age-Specific Death Rates

Table 1 (pages 11 to 12) displays 2005 age-specific death rates for California residents by sex and race/ethnicity. In general, deaths due to cancer increased with age ranging from a low of 2.0 deaths per 100,000 residents aged 5 to 14 years to a high of 1,623.7 deaths per 100,000 for residents 85 and older. Overall, females had significantly higher age-specific death rates than males in the 35 to 54 age groups while males had significantly higher rates than females in the 55 and older age groups.

Figure 2 shows the 2001 to 2005 reliable age-specific death rates for California residents with the five highest rates. The rates decreased over the five-year period in all age

FIGURE 2
CANCER AGE-SPECIFIC DEATH RATES
ALL RACE/ETHNIC GROUPS[1,2]
CALIFORNIA, 2001-2005



	2001	2002	2003	2004	2005
45-54	110.6	105.3	103.9	98.5	95.9
55-64	308.2	300.5	288.4	276.8	267.3
65-74	720.0	697.3	669.6	648.2	637.2
75-84	1,222.6	1,199.3	1,190.0	1,161.9	1,171.8
85+	1,666.6	1,659.4	1,651.8	1,558.8	1,623.7

[1]Calculated using death data for California residents only.
[2]Age-specific rates were calculated using current population data (July 2007); therefore, rates may differ from prior reports.

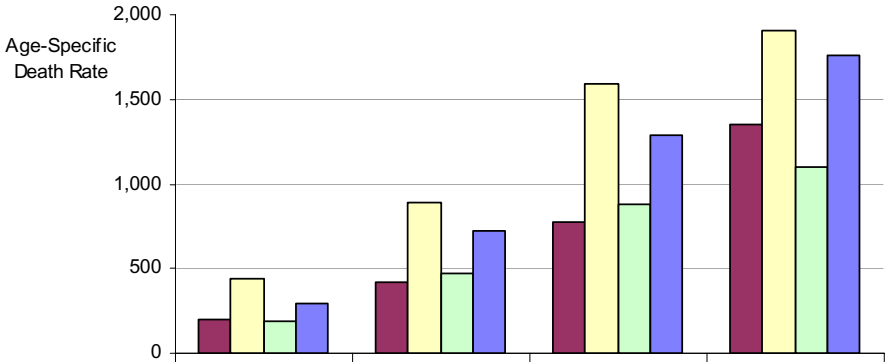
Source: State of California, Department of Public Health. Death Records.

See the CHS Vital Statistics Query System (VSQ) at http://www.applications.dhs.ca.gov/vsq/default.asp to create customized statistical tables.

groups displayed. The largest decreases (13.3 percent) occurred in the 45 to 54 and 55 to 64 age groups, followed by the 65 to 74 age group (11.5 percent), the 75 to 84 age group (4.2 percent), and the 85 and older group (2.6 percent). The decreases in rates were statistically significant in all age groups except in the 85 and older group.

Figure 3 shows the reliable age-specific death rates for 2005 by race/ethnicity for residents 55 and older. Blacks had the highest death rates in the 55 to 64, 65 to 74, 75 to 84, and 85 and older age groups (436.2, 891.6, 1,591.8, and 1,907.6, respectively). Hispanics had the lowest death rates in the 55 to 64 and 85 and older age groups (193.3 and 1,102.2, respectively) while Asians had the lowest rates in the 65 to 74 and 75 to 84 age groups (422.9 and 771.5, respectively).

FIGURE 3
CANCER AGE-SPECIFIC DEATH RATES
BY RACE/ETHNICITY AND AGE GROUP[1]
CALIFORNIA, 2005



	55-64	65-74	75-84	85+
Asian	202.0	422.9	771.5	1,348.3
Black	436.2	891.6	1,591.8	1,907.6
Hispanic	193.3	467.8	879.8	1,102.2
White	293.1	718.7	1,291.3	1,764.3

Note: Rates for American Indian, Pacific Islander, and Two or More Races are not shown individually due to unreliable rates.
[1]Calculated using death data for California residents.

Source: State of California, Department of Public Health. Death Records.

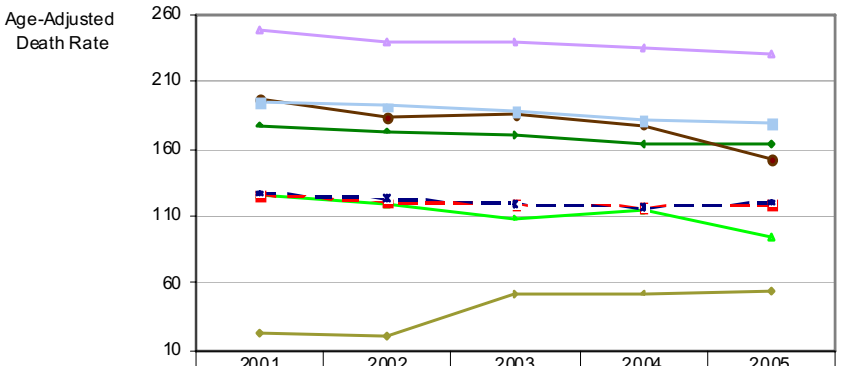
Cancer Age-Adjusted Death Rates

Table 1 (pages 11 to 12) displays 2005 cancer age-adjusted death rates by sex and race/ethnicity. California's 2005 age-adjusted death rate was 162.8 deaths per 100,000 population. Blacks had the highest age-adjusted death rate (230.5) followed by Whites (179.2), Pacific Islanders (152.8), Hispanics (120.4), Asians (118.4), American Indians (94.2), and Two or More races (55.0). Reliable death rates were significantly different between all race/ethnic groups except between Whites and Pacific Islanders and between Hispanics and Asians.

Read more about crude and age-adjusted death rates on the National Center for Health Statistics site found at http://www.cdc.gov/nchs

Figure 4 shows the overall age-adjusted cancer death rates significantly decreased by 8.4 percent, from 177.7 deaths per 100,000 population in 2001 to 162.8 deaths per 100,000 population in 2005. Decreases occurred in all race/ethnic groups except in the Two or More Races category where there was a significant increase in the death rate, though this may be due to under reporting of this race/ethnic group in 2001 and 2002. The decreases in rates seen in all race/ethnic groups were significant except among Pacific Islanders.

FIGURE 4
CANCER AGE-ADJUSTED DEATH RATES
BY RACE/ETHNICITY[1,2]
CALIFORNIA, 2001-2005



	2001	2002	2003	2004	2005
Total	177.7	173.2	169.6	163.6	162.8
American Indian	125.2	118.6	108.7	113.6	94.2
Asian	125.8	120.3	119.0	116.8	118.4
Black	248.0	239.5	238.7	234.0	230.5
Hispanic	126.8	122.8	119.2	116.1	120.4
Pacific Islander	197.1	183.2	185.6	177.8	152.8
White	194.3	191.5	187.3	180.6	179.2
2+ Races	22.3	20.2	51.5	52.9	55.0

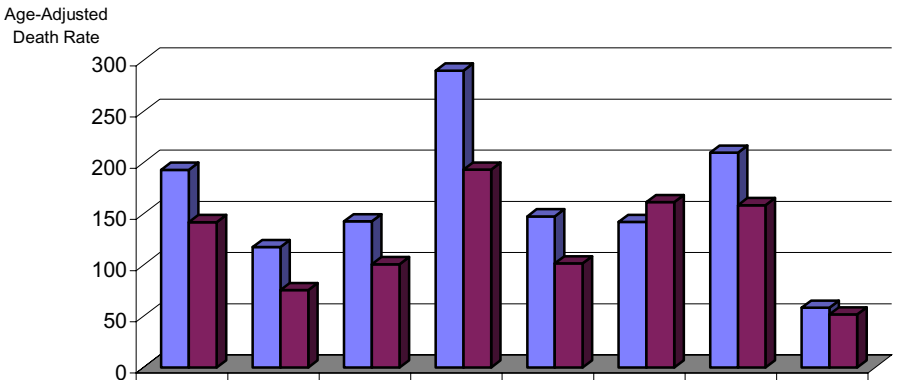
[1]Calculated using death data for California residents only.
[2]Age-adjusted rates were calculated using current population data (July 2007); therefore, rates may differ from prior reports.

Source: State of California, Department of Public Health. Death Records.

Figure 5 (page 6) shows the 2005 age-adjusted death rates by sex and race/ethnicity. Overall, the death rate for males (193.2) was higher than for females (142.0). This characteristic also held true among American Indians, Asians, Blacks, Hispanics, Whites, and Two or More Races. Pacific Islander females (161.5) had higher age-adjusted death rates than their male counterparts (142.2). The differences in rates between genders were significant in all race/ethnic groups except among the Pacific Islander and Two or More Races categories.

Additional CHS data and reports can be found at: http://www.dhs.ca.gov/ohir/reports

FIGURE 5
CANCER AGE-ADJUSTED DEATH RATES
BY SEX AND RACE/ETHNICITY[1]
CALIFORNIA, 2005



	Total	American Indian	Asian	Black	Hispanic	Pacific Islander	White	2+ Races
Male	193.2	117.6	142.9	290.0	147.7	142.2	209.9	58.4
Female	142.0	75.5	100.9	193.3	101.7	161.5	158.5	51.8

[1]Calculated using death data for California residents only.

Source: State of California, Department of Public Health. Death Records.

Cancer Rates for California Counties

Table 2 (page 13) shows the three-year average numbers of cancer deaths during 2003 to 2005 with crude and age-adjusted death rates for California and its 58 counties. County crude and age-adjusted cancer death rates were calculated using 2004 mid-year population denominators and are presented as rates per 100,000 population.

Reliable age-adjusted rates ranged from a high of 226.0 deaths in Lake County to a low of 132.3 deaths in San Benito County. Nineteen counties had age-adjusted rates that were significantly different from the state rate; fourteen county rates were higher and five were lower than the state rate of 165.1. Twelve out of the fourteen counties that met the HP2010 target age-adjusted rate of no more than 158.6 deaths per 100,000 population had reliable rates. **Figure 6** (page 14) shows a thematic map of the 2003-2005 age-adjusted death rates for all California counties.

Please refer to the Data Limitations and Qualifications section for language regarding significance testing between the county and state age-adjusted rates.

Cancer Deaths for City Health Jurisdictions

Table 3 shows the 2003 to 2005 average numbers of cancer deaths and crude death rates for California's three city health jurisdictions. Long Beach had the highest average number of deaths (662.7) followed by Pasadena (252.7) and Berkeley (154.0). Pasadena had the highest crude death rate at 175.5 deaths per 100,000 population followed by Berkeley with 147.8 and Long Beach with 136.0.

TABLE 3
CANCER DEATHS
AMONG THE CITY HEALTH JURISDICTIONS[1]
CALIFORNIA, 2003-2005

CITY HEALTH JURISDICTION	NUMBER OF DEATHS (Average)	2004 POPULATION	CRUDE DEATH RATE
BERKELEY	154.0	104,193	147.8
LONG BEACH	662.7	487,079	136.0
PASADENA	252.7	143,995	175.5

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

Sources: State of California, Department of Public Health. Death Records. State of California, Department of Finance, E-4 Population Estimates for Cities, Counties and the State, 2001-2007, with 2000 DRU Benchmark, May 2007.

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

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 sex or race/ethnic groups, geographic areas 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.[6] 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. In

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

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 that geographic area within 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 (rounded to the nearest hundredth) 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.[7]

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.[8] 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.

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[7] van Belle G. *Statistical Rules of Thumb, Rule 2.5.* Wiley Publishing. March 2002.

[8] Keppel 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.

Beginning in 1999 cause of death has been reported using ICD-10.[9] 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.

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.[10] This problem could contribute to understatements 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. 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. standard population was used for calculating age-adjustments in accordance with statistical policy implemented by NCHS.[11] Age-adjusted death rates are not comparable when rates are calculated with different population standards, e.g., the 1940 standard population. Age-adjusted rates for city health jurisdictions were not calculated. Caution should be exercised when comparing the crude rates of the three city health jurisdictions with the crude rates of the 58 California counties. 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).

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

[10] 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. September 1999.

[11] Anderson 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.

A more complete explanation of age-adjustment methodology is available in the "Healthy People 2010 Statistical Notes" publication.[12] 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] Klein RJ, Schoenborn CA. Age Adjustment using the 2000 Projected U.S. Population. *Healthy People 2010 Statistical Notes,* No. 20. National Center for Health Statistics. Hyattsville, Maryland. January 2001.

[13] Springborn, R. *Vital Statistics of California, 2004.* Center for Health Statistics, Department of Health Services (now Department of Public Health), State of California. June 2007.

[14] Shippen S. *County Health Status Profiles 2007.* Center for Health Statistics, Department of Health Services (now Department of Public Health), State of California. December 2007.

TABLE 1 (Page 1 of 2)
CANCER DEATHS
BY RACE/ETHNICITY, AGE, AND SEX
CALIFORNIA, 2005
(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	12	5	7	543,197	277,034	266,163	2.2 *	1.8 *	2.6 *	1.0	3.5	0.2	3.4	0.7	4.6
1 to 4	52	35	17	2,162,671	1,103,176	1,059,495	2.4	3.2	1.6 *	1.8	3.1	2.1	4.2	0.8	2.4
5 to 14	114	58	56	5,563,406	2,844,855	2,718,551	2.0	2.0	2.1	1.7	2.4	1.5	2.6	1.5	2.6
15 to 24	267	164	103	5,344,828	2,764,795	2,580,033	5.0	5.9	4.0	4.4	5.6	5.0	6.8	3.2	4.8
25 to 34	441	246	195	5,002,559	2,580,156	2,422,403	8.8	9.5	8.0	8.0	9.6	8.3	10.7	6.9	9.2
35 to 44	1,562	684	878	5,746,279	2,928,529	2,817,750	27.2	23.4	31.2	25.8	28.5	21.6	25.1	29.1	33.2
45 to 54	4,936	2,361	2575	5,147,574	2,558,524	2,589,050	95.9	92.3	99.5	93.2	98.6	88.6	96.0	95.6	103.3
55 to 64	9,323	4,865	4,458	3,487,509	1,689,518	1,797,991	267.3	288.0	247.9	261.9	272.8	279.9	296.0	240.7	255.2
65 to 74	12,953	6,923	6,030	2,032,694	940,470	1,092,224	637.2	736.1	552.1	626.3	648.2	718.8	753.5	538.1	566.0
75 to 84	16,422	8,548	7,874	1,401,490	581,188	820,302	1,171.8	1,470.8	959.9	1,153.8	1,189.7	1,439.6	1,502.0	938.7	981.1
85 & Older	8,528	3,968	4,560	525,229	177,444	347,785	1,623.7	2,236.2	1,311.2	1,589.2	1,658.1	2,166.6	2,305.8	1,273.1	1,349.2
Unknown	3	1	2												
Total	54,613	27,858	26,755	36,957,436	18,445,689	18,511,747	147.8	151.0	144.5	146.5	149.0	149.3	152.8	142.8	146.3
Age-Adjusted							162.8	193.2	142.0	161.5	164.2	190.9	195.5	140.3	143.7
AMERICAN INDIAN															
Under 1	0	0	0	769	395	374	-	-	-	-	-	-	-	-	-
1 to 4	0	0	0	3,764	1,940	1,824	-	-	-	-	-	-	-	-	-
5 to 14	0	0	0	31,941	16,295	15,646	-	-	-	-	-	-	-	-	-
15 to 24	1	1	0	35,705	18,333	17,372	2.8 *	5.5 *	-	0.0	8.3	0.0	16.1	-	-
25 to 34	2	2	0	29,521	14,806	14,715	6.8 *	13.5 *	-	0.0	16.2	0.0	32.2	-	-
35 to 44	12	6	6	34,616	17,113	17,503	34.7 *	35.1 *	34.3 *	15.1	54.3	7.0	63.1	6.9	61.7
45 to 54	18	11	7	35,130	16,695	18,435	51.2 *	65.9 *	38.0 *	27.6	74.9	27.0	104.8	9.8	66.1
55 to 64	32	20	12	23,631	11,229	12,402	135.4	178.1	96.8 *	88.5	182.3	100.0	256.2	42.0	151.5
65 to 74	51	28	23	11,544	5,471	6,073	441.8	511.8	378.7	320.5	563.0	322.2	701.4	223.9	533.5
75 to 84	42	22	20	5,883	2,497	3,386	713.9	881.1	590.7	498.0	929.8	512.9	1,249.2	331.8	849.5
85 & Older	12	7	5	2,540	937	1,603	472.4 *	747.1 *	311.9 *	205.1	739.7	193.6	1,300.5	38.5	585.3
Unknown	0	0	0												
Total	170	97	73	215,044	105,711	109,333	79.1	91.8	66.8	67.2	90.9	73.5	110.0	51.5	82.1
Age-Adjusted							94.2	117.6	75.5	79.5	108.8	93.0	142.2	57.7	93.2
ASIAN															
Under 1	0	0	0	49,237	25,114	24,123	-	-	-	-	-	-	-	-	-
1 to 4	5	2	3	196,209	100,294	95,915	2.5 *	2.0 *	3.1 *	0.3	4.8	0.0	4.8	0.0	6.7
5 to 14	8	3	5	510,921	263,092	247,829	1.6 *	1.1 *	2.0 *	0.5	2.7	0.0	2.4	0.2	3.8
15 to 24	29	17	12	600,459	308,166	292,293	4.8	5.5 *	4.1 *	3.1	6.6	2.9	8.1	1.8	6.4
25 to 34	57	32	25	670,404	325,288	345,116	8.5	9.8	7.2	6.3	10.7	6.4	13.2	4.4	10.1
35 to 44	191	86	105	707,330	335,157	372,173	27.0	25.7	28.2	23.2	30.8	20.2	31.1	22.8	33.6
45 to 54	511	227	284	637,063	294,728	342,335	80.2	77.0	83.0	73.3	87.2	67.0	87.0	73.3	92.6
55 to 64	848	419	429	419,901	193,246	226,655	202.0	216.8	189.3	188.4	215.5	196.1	237.6	171.4	207.2
65 to 74	1,103	582	521	260,846	113,982	146,864	422.9	510.6	354.7	397.9	447.8	469.1	552.1	324.3	385.2
75 to 84	1,258	714	544	163,066	68,137	94,929	771.5	1,047.9	573.1	728.8	814.1	971.0	1,124.8	524.9	621.2
85 & Older	651	317	334	48,284	18,635	29,649	1,348.3	1,701.1	1,126.5	1,244.7	1,451.8	1,513.8	1,888.4	1,005.7	1,247.3
Unknown	0	0	0												
Total	4,661	2,399	2,262	4,263,720	2,045,839	2,217,881	109.3	117.3	102.0	106.2	112.5	112.6	122.0	97.8	106.2
Age-Adjusted							118.4	142.9	100.9	115.0	121.9	137.1	148.8	96.7	105.1
BLACK															
Under 1	1	0	1	25,199	12,843	12,356	4.0 *	-	8.1 *	0.0	11.7	-	-	0.0	24.0
1 to 4	3	3	0	106,784	54,437	52,347	2.8 *	5.5 *	-	0.0	6.0	0.0	11.7	-	-
5 to 14	3	1	2	360,722	183,297	177,425	0.8 *	0.5 *	1.1 *	0.0	1.8	0.0	1.6	0.0	2.7
15 to 24	20	13	7	378,701	195,916	182,785	5.3	6.6 *	3.8 *	3.0	7.6	3.0	10.2	1.0	6.7
25 to 34	37	26	11	305,865	150,542	155,323	12.1	17.3	7.1 *	8.2	16.0	10.6	23.9	2.9	11.3
35 to 44	149	59	90	362,335	178,384	183,951	41.1	33.1	48.9	34.5	47.7	24.6	41.5	38.8	59.0
45 to 54	547	231	316	317,604	153,768	163,836	172.2	150.2	192.9	157.8	186.7	130.9	169.6	171.6	214.1
55 to 64	859	462	397	196,909	91,007	105,902	436.2	507.7	374.9	407.1	465.4	461.4	553.9	338.0	411.8
65 to 74	1,044	580	464	117,087	53,068	64,019	891.6	1,092.9	724.8	837.6	945.7	1,004.0	1,181.9	658.8	790.7
75 to 84	982	528	454	61,691	23,969	37,722	1,591.8	2,202.8	1,203.5	1,492.2	1,691.4	2,014.9	2,390.7	1,092.8	1,314.3
85 & Older	427	191	236	22,384	6,516	15,868	1,907.6	2,931.2	1,487.3	1,726.7	2,088.6	2,515.5	3,347.0	1,297.5	1,677.0
Unknown	1	1	0												
Total	4,073	2,095	1,978	2,255,281	1,103,747	1,151,534	180.6	189.8	171.8	175.1	186.1	181.7	197.9	164.2	179.3
Age-Adjusted							230.5	290.0	193.3	223.3	237.8	276.8	303.1	184.7	201.9
HISPANIC															
Under 1	7	3	4	279,284	142,428	136,856	2.5 *	2.1 *	2.9 *	0.6	4.4	0.0	4.5	0.1	5.8
1 to 4	26	18	8	1,089,780	555,829	533,951	2.4	3.2 *	1.5 *	1.5	3.3	1.7	4.7	0.5	2.5
5 to 14	59	30	29	2,650,982	1,350,760	1,300,222	2.2	2.2	2.2	1.7	2.8	1.4	3.0	1.4	3.0
15 to 24	114	66	48	2,148,302	1,115,705	1,032,597	5.3	5.9	4.6	4.3	6.3	4.5	7.3	3.3	6.0
25 to 34	170	96	74	2,079,681	1,114,291	965,390	8.2	8.6	7.7	6.9	9.4	6.9	10.3	5.9	9.4
35 to 44	436	189	247	2,001,344	1,059,515	941,829	21.8	17.8	26.2	19.7	23.8	15.3	20.4	23.0	29.5
45 to 54	1,008	483	525	1,324,898	667,089	657,809	76.1	72.4	79.8	71.4	80.8	65.9	78.9	73.0	86.6
55 to 64	1,332	722	610	689,035	330,377	358,658	193.3	218.5	170.1	182.9	203.7	202.6	234.5	156.6	183.6
65 to 74	1,737	948	789	371,279	166,361	204,918	467.8	569.8	385.0	445.8	489.8	533.6	606.1	358.2	411.9
75 to 84	1,815	968	847	206,295	85,200	121,095	879.8	1,136.2	699.5	839.3	920.3	1,064.6	1,207.7	652.3	746.6
85 & Older	716	362	354	64,960	22,556	42,404	1,102.2	1,604.9	834.8	1,021.5	1,183.0	1,439.6	1,770.2	747.9	921.8
Unknown	1	0	1												
Total	7,421	3,885	3,536	12,905,840	6,610,111	6,295,729	57.5	58.8	56.2	56.2	58.8	56.9	60.6	54.3	58.0
Age-Adjusted							120.4	147.7	101.7	117.6	123.3	142.7	152.8	98.3	105.2

Note: Rates are per 100,000 population. ICD-10 codes C00-C97.
Year 2000 U.S. Standard Population is used for age-adjusted rates.
Hispanic includes any race category. American Indian, Asian, Black, Pacific Islander, White, and Two or More Races exclude Hispanic ethnicity.

Source: State of California, Department of Finance. Race/Ethnic Population with Age and Sex Detail, 2000-2050, July 2007.
State of California, Department of Public Health. Death Records.

* Death rate unreliable, relative standard error is greater than or equal to 23 percent.
\- Percentages, rates, and confidence limits are not calculated for zero events.

TABLE 1 (Page 2 of 2)
CANCER DEATHS
BY RACE/ETHNICITY, AGE, AND SEX
CALIFORNIA, 2005
(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	12	5	7	543,197	277,034	266,163	2.2 *	1.8 *	2.6 *	1.0	3.5	0.2	3.4	0.7	4.6
1 to 4	52	35	17	2,162,671	1,103,176	1,059,495	2.4	3.2	1.6 *	1.8	3.1	2.1	4.2	0.8	2.4
5 to 14	114	58	56	5,563,406	2,844,855	2,718,551	2.0	2.0	2.1	1.7	2.4	1.5	2.6	1.5	2.6
15 to 24	267	164	103	5,344,828	2,764,795	2,580,033	5.0	5.9	4.0	4.4	5.6	5.0	6.8	3.2	4.8
25 to 34	441	246	195	5,002,559	2,580,156	2,422,403	8.8	9.5	8.0	8.0	9.6	8.3	10.7	6.9	9.2
35 to 44	1,562	684	878	5,746,279	2,928,529	2,817,750	27.2	23.4	31.2	25.8	28.5	21.6	25.1	29.1	33.2
45 to 54	4,936	2,361	2,575	5,147,574	2,558,524	2,589,050	95.9	92.3	99.5	93.2	98.6	88.6	96.0	95.6	103.3
55 to 64	9,323	4,865	4,458	3,487,509	1,689,518	1,797,991	267.3	288.0	247.9	261.9	272.8	279.9	296.0	240.7	255.2
65 to 74	12,953	6,923	6,030	2,032,694	940,470	1,092,224	637.2	736.1	552.1	626.3	648.2	718.8	753.5	538.1	566.0
75 to 84	16,422	8,548	7,874	1,401,490	581,188	820,302	1,171.8	1,470.8	959.9	1,153.8	1,189.7	1,439.6	1,502.0	938.7	981.1
85 & Older	8,528	3,968	4,560	525,229	177,444	347,785	1,623.7	2,236.2	1,311.2	1,589.2	1,658.1	2,166.6	2,305.8	1,273.1	1,349.2
Unknown	3	1	2												
Total	54,613	27,858	26,755	36,957,436	18,445,689	18,511,747	147.8	151.0	144.5	146.5	149.0	149.3	152.8	142.8	146.3
Age-Adjusted							162.8	193.2	142.0	161.5	164.2	190.9	195.5	140.3	143.7
PACIFIC ISLANDER															
Under 1	0	0	0	1,445	735	710	-	-	-	-	-	-	-	-	-
1 to 4	1	1	0	5,827	2,971	2,856	17.2 *	33.7 *	-	0.0	50.8	0.0	99.6	-	-
5 to 14	0	0	0	20,001	10,317	9,684	-	-	-	-	-	-	-	-	-
15 to 24	2	1	1	22,032	11,319	10,713	9.1 *	8.8 *	9.3 *	0.0	21.7	0.0	26.2	0.0	27.6
25 to 34	2	1	1	22,470	11,074	11,396	8.9 *	9.0 *	8.8 *	0.0	21.2	0.0	26.7	0.0	26.0
35 to 44	10	2	8	21,876	10,649	11,227	45.7 *	18.8 *	71.3 *	17.4	74.0	0.0	44.8	21.9	120.6
45 to 54	25	10	15	16,455	8,084	8,371	151.9	123.7 *	179.2 *	92.4	211.5	47.0	200.4	88.5	269.9
55 to 64	43	23	20	10,057	4,903	5,154	427.6	469.1	388.0	299.8	555.4	277.4	660.8	218.0	558.1
65 to 74	26	13	13	5,721	2,727	2,994	454.5	476.7 *	434.2 *	279.8	629.2	217.6	735.9	198.2	670.2
75 to 84	29	12	17	2,580	1,176	1,404	1,124.0	1,020.4 *	1,210.8 *	714.9	1,533.1	443.1	1,597.8	635.2	1,786.4
85 & Older	2	0	2	826	342	484	242.1 *	-	413.2 *	0.0	577.7	-	-	0.0	985.9
Unknown	0	0	0												
Total	140	63	77	129,290	64,297	64,993	108.3	98.0	118.5	90.3	126.2	73.8	122.2	92.0	144.9
Age-Adjusted							152.8	142.2	161.5	126.0	179.6	104.9	179.5	123.6	199.3
WHITE															
Under 1	4	2	2	151,110	77,067	74,043	2.6 *	2.6 *	2.7 *	0.1	5.2	0.0	6.2	0.0	6.4
1 to 4	15	10	5	623,971	318,134	305,837	2.4 *	3.1 *	1.6 *	1.2	3.6	1.2	5.1	0.2	3.1
5 to 14	41	23	18	1,817,035	933,830	883,205	2.3	2.5	2.0 *	1.6	2.9	1.5	3.5	1.1	3.0
15 to 24	98	63	35	2,028,198	1,049,934	978,264	4.8	6.0	3.6	3.9	5.8	4.5	7.5	2.4	4.8
25 to 34	169	87	82	1,814,390	925,536	888,854	9.3	9.4	9.2	7.9	10.7	7.4	11.4	7.2	11.2
35 to 44	744	332	412	2,544,695	1,292,034	1,252,661	29.2	25.7	32.9	27.1	31.3	22.9	28.5	29.7	36.1
45 to 54	2,805	1,388	1,417	2,750,632	1,386,760	1,363,872	102.0	100.1	103.9	98.2	105.8	94.8	105.4	98.5	109.3
55 to 64	6,174	3,199	2,975	2,106,739	1,039,368	1,067,371	293.1	307.8	278.7	285.7	300.4	297.1	318.4	268.7	288.7
65 to 74	8,940	4,746	4,194	1,243,912	588,425	655,487	718.7	806.6	639.8	703.8	733.6	783.6	829.5	620.5	659.2
75 to 84	12,240	6,278	5,962	947,877	394,001	553,876	1,291.3	1,593.4	1,076.4	1,268.4	1,314.2	1,554.0	1,632.8	1,049.1	1,103.7
85 & Older	6,703	3,086	3,617	379,918	126,136	253,782	1,764.3	2,446.6	1,425.2	1,722.1	1,806.6	2,360.2	2,532.9	1,378.8	1,471.7
Unknown	1	0	1												
Total	37,934	19,214	18,720	16,408,477	8,131,225	8,277,252	231.2	236.3	226.2	228.9	233.5	233.0	239.6	222.9	229.4
Age-Adjusted							179.2	209.9	158.5	177.4	181.0	206.9	212.8	156.2	160.8
TWO OR MORE RACES															
Under 1	0	0	0	36,153	18,452	17,701	-	-	-	-	-	-	-	-	-
1 to 4	2	1	1	136,336	69,571	66,765	1.5 *	1.4 *	1.5 *	0.0	3.5	0.0	4.3	0.0	4.4
5 to 14	3	1	2	171,804	87,264	84,540	1.7 *	1.1 *	2.4 *	0.0	3.7	0.0	3.4	0.0	5.6
15 to 24	3	3	0	131,431	65,422	66,009	2.3 *	4.6 *	-	0.0	4.9	0.0	9.8	-	-
25 to 34	4	2	2	80,228	38,619	41,609	5.0 *	5.2 *	4.8 *	0.1	9.9	0.0	12.4	0.0	11.5
35 to 44	20	10	10	74,083	35,677	38,406	27.0	28.0 *	26.0 *	15.2	38.8	10.7	45.4	9.9	42.2
45 to 54	22	11	11	65,792	31,400	34,392	33.4	35.0 *	32.0 *	19.5	47.4	14.3	55.7	13.1	50.9
55 to 64	35	20	15	41,237	19,388	21,849	84.9	103.2	68.7 *	56.8	113.0	57.9	148.4	33.9	103.4
65 to 74	52	26	26	22,305	10,436	11,869	233.1	249.1	219.1	169.8	296.5	153.4	344.9	134.9	303.3
75 to 84	56	26	30	14,098	6,208	7,890	397.2	418.8	380.2	293.2	501.3	257.8	579.8	244.2	516.3
85 & Older	17	5	12	6,317	2,322	3,995	269.1 *	215.3 *	300.4 *	141.2	397.0	26.6	404.1	130.4	470.3
Unknown	0	0	0												
Total	214	105	109	779,784	384,759	395,025	27.4	27.3	27.6	23.8	31.1	22.1	32.5	22.4	32.8
Age-Adjusted							55.0	58.4	51.8	47.5	62.6	46.9	70.0	41.9	61.7

Note: Rates are per 100,000 population. ICD-10 codes C00-C97.
Year 2000 U.S. Standard Population is used for age-adjusted rates.
Hispanic includes any race category. American Indian, Asian, Black, Pacific Islander, White, and Two or More Races exclude Hispanic ethnicity.

Source: State of California, Department of Finance. Race/Ethnic Population with Age and Sex Detail, 2000-2050, July 2007.
State of California, Department of Public Health. Death Records.

* Death rate unreliable, relative standard error is greater than or equal to 23 percent.
\- Percentages, rates, and confidence limits are not calculated for zero events.

TABLE 2
CANCER DEATHS
CALIFORNIA, 2003-2005
(By Place of Residence)

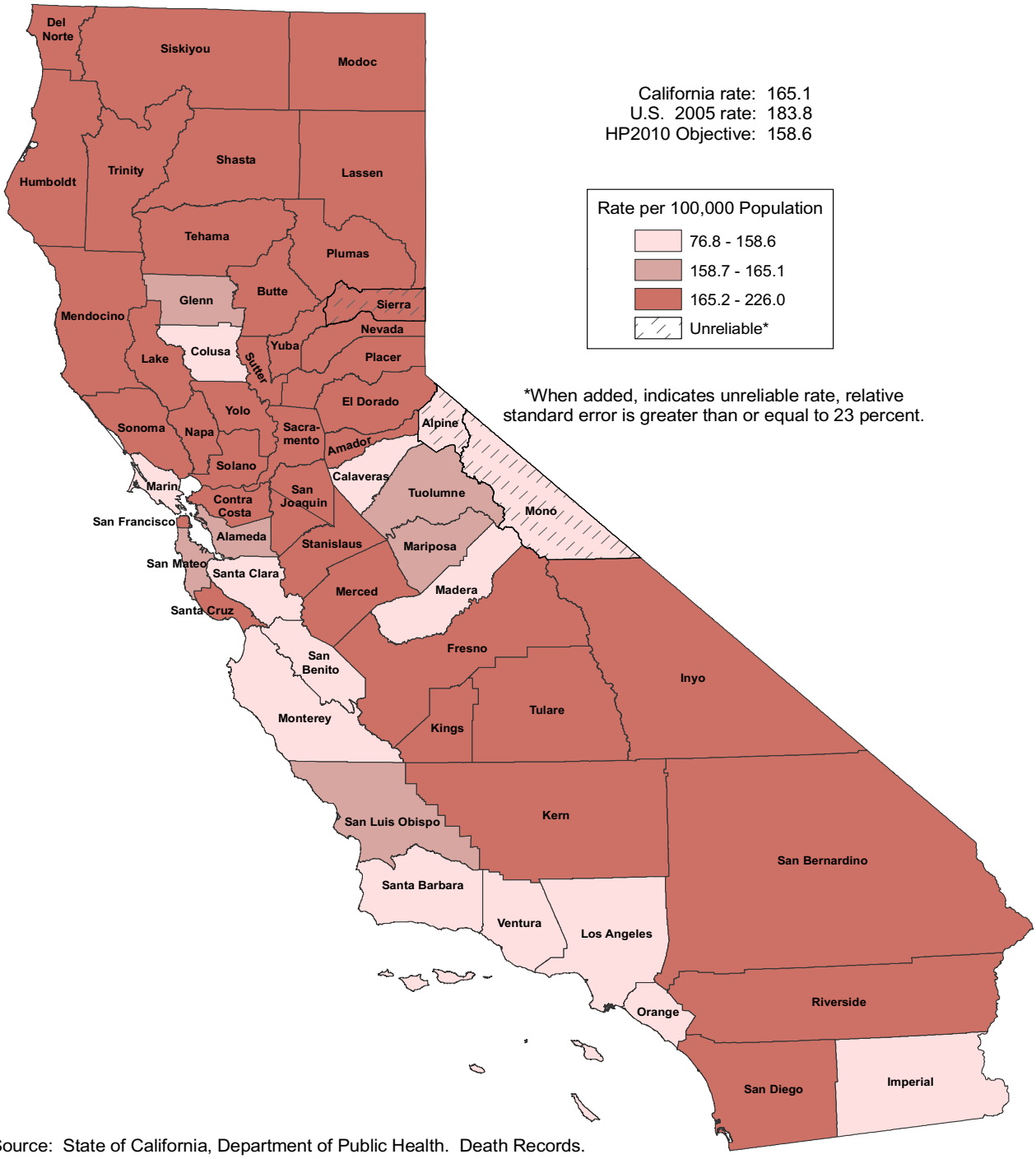
COUNTY	2003-2005 DEATHS (AVERAGE)	PERCENT	2004 POPULATION	CRUDE RATE	AGE-ADJUSTED RATE	95% CONFIDENCE LIMITS	
						LOWER	UPPER
HEALTHLY PEOPLE 2010 NATIONAL OBJECTIVE:					158.6		
CALIFORNIA	54,209.3	100.0	36,525,947	148.4	165.1	163.7	166.5
ALAMEDA	2,225.7	4.1	1,497,316	148.6	164.0	157.1	170.9
ALPINE[2]	1.3	a	1,304	102.2 *	111.5 *	0.0	304.6
AMADOR	101.3	0.2	37,507	270.2	183.2	147.3	219.0
BUTTE	457.3	0.8	213,143	214.6	182.3	165.4	199.2
CALAVERAS[2]	93.7	0.2	44,243	211.7	139.4	110.5	168.4
COLUSA2	28.0	0.1	20,927	133.8	150.1	94.4	205.9
CONTRA COSTA	1,660.3	3.1	1,014,992	163.6	166.9	158.8	175.0
DEL NORTE[1]	65.3	0.1	29,162	224.0	224.4	169.8	278.9
EL DORADO	313.0	0.6	172,320	181.6	166.5	147.8	185.2
FRESNO	1,162.7	2.1	874,745	132.9	168.3	158.6	178.0
GLENN	46.0	0.1	28,115	163.6	159.5	113.3	205.7
HUMBOLDT[1]	267.3	0.5	130,859	204.3	204.3	179.6	228.9
IMPERIAL[2]	206.0	0.4	159,844	128.9	155.9	134.5	177.4
INYO	50.3	0.1	18,923	266.0	185.0	133.0	236.9
KERN[1]	1,075.7	2.0	744,489	144.5	198.8	186.8	210.8
KINGS	169.3	0.3	143,970	117.6	187.3	158.5	216.2
LAKE[1]	202.3	0.4	62,994	321.2	226.0	194.3	257.8
LASSEN	50.7	0.1	35,626	142.2	176.7	127.3	226.1
LOS ANGELES[1,2]	13,655.3	25.2	10,152,410	134.5	154.8	152.2	157.4
MADERA[2]	199.0	0.4	139,398	142.8	156.9	135.0	178.8
MARIN[2]	486.7	0.9	251,812	193.3	154.7	140.8	168.7
MARIPOSA	41.7	0.1	18,066	230.6	160.1	110.9	209.3
MENDOCINO	197.3	0.4	89,966	219.3	190.1	163.4	216.9
MERCED	303.7	0.6	237,550	127.8	172.4	152.9	191.9
MODOC	24.0	a	10,178	235.8	173.5	103.5	243.5
MONO[2]	9.7	a	13,727	70.4 *	76.8 *	25.5	128.2
MONTEREY[1,2]	540.0	1.0	423,137	127.6	148.1	135.6	160.6
NAPA[1]	317.7	0.6	132,753	239.3	197.6	175.6	219.5
NEVADA	235.0	0.4	98,436	238.7	173.1	150.5	195.6
ORANGE[1,2]	4,030.0	7.4	3,038,670	132.6	153.5	148.7	158.2
PLACER	582.3	1.1	302,199	192.7	171.8	157.8	185.8
PLUMAS	65.7	0.1	21,478	305.7	208.6	156.6	260.6
RIVERSIDE[1]	3,056.0	5.6	1,845,185	165.6	183.2	176.7	189.7
SACRAMENTO[1]	2,228.3	4.1	1,357,367	164.2	181.9	174.3	189.5
SAN BENITO[2]	56.3	0.1	57,307	98.3	132.3	97.2	167.4
SAN BERNARDINO[1]	2,557.3	4.7	1,922,467	133.0	185.2	177.9	192.5
SAN DIEGO	4,670.0	8.6	3,031,055	154.1	170.6	165.6	175.5
SAN FRANCISCO	1,478.7	2.7	793,564	186.3	165.6	157.1	174.1
SAN JOAQUIN[1]	973.0	1.8	645,560	150.7	183.8	172.2	195.4
SAN LUIS OBISPO	499.3	0.9	259,709	192.3	158.8	144.8	172.8
SAN MATEO	1,221.3	2.3	720,229	169.6	160.3	151.3	169.4
SANTA BARBARA[1,2]	623.3	1.1	416,662	149.6	144.1	132.7	155.4
SANTA CLARA[1,2]	2,183.0	4.0	1,747,295	124.9	139.2	133.3	145.1
SANTA CRUZ	387.0	0.7	259,942	148.9	171.7	154.2	189.2
SHASTA[1]	428.0	0.8	177,465	241.2	204.0	184.6	223.4
SIERRA	10.3	a	3,716	278.1 *	180.8 *	67.6	293.9
SISKIYOU	130.3	0.2	45,644	285.5	200.9	165.7	236.0
SOLANO[1]	650.7	1.2	418,097	155.6	182.8	168.6	197.0
SONOMA[1]	920.7	1.7	477,419	192.8	180.9	169.1	192.7
STANISLAUS[1]	767.7	1.4	499,864	153.6	186.2	173.0	199.4
SUTTER	144.0	0.3	87,881	163.9	170.8	142.8	198.8
TEHAMA	138.0	0.3	59,942	230.2	193.9	161.4	226.4
TRINITY	37.3	0.1	13,961	267.4	185.3	125.0	245.6
TULARE	549.3	1.0	406,003	135.3	174.9	160.2	189.6
TUOLUMNE	136.0	0.3	57,186	237.8	159.6	132.3	187.0
VENTURA[2]	1,116.3	2.1	808,735	138.0	155.1	146.0	164.3
YOLO	259.3	0.5	186,751	138.9	178.9	157.0	200.9
YUBA[1]	123.3	0.2	66,682	185.0	224.6	184.6	264.6

Note : Rates are per 100,000 population. ICD-10 codes C00-C97.
Year 2000 U.S. Standard Population is used for age-adjusted rates.

Source : State of California, Department of Finance. Race/Ethnic Population with Age and Sex Detail, 2000-2050, July 2007.
State of California, Department of Health Services, Death Records.

[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.
* Death rate unreliable, relative standard error is greater than or equal to 23 percent.

FIGURE 6
CANCER DEATHS
AGE-ADJUSTED DEATH RATES
CALIFORNIA, 2003-2005



Source: State of California, Department of Public Health. Death Records.