

Cancer Prevalence in California Counties

ACKNOWLEDGEMENTS AND DISCLAIMER

The collection of cancer data used in this study was supported by California Department of Public Health as part of the statewide cancer reporting program mandated by the California Health and Safety Code Section 103885; the National Cancer Institute’s Surveillance, Epidemiology and End Results Program under contracts awarded to the Cancer Prevention Institute of California, the University of Southern California, and the Public Health Institute; and the Centers for Disease Control and Prevention’s National Program of Cancer Registries, under agreement awarded to the California Department of Public Health. The ideas and opinions expressed herein are those of the author(s) and endorsement by the State of California, Department of Public Health, the National Cancer Institute, the Centers for Disease Control and Prevention, or their Contractors and Subcontractors is not intended nor should be inferred.

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Suggested citation:

Chen YW, Maguire FB, Morris CR, Parikh-Patel A, Kizer KW. Cancer Prevalence in California Counties. Sacramento, CA: California Cancer Reporting and Epidemiologic Surveillance Program, Institute for Population Health Improvement, University of California Davis, January 2017.

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Introduction

Cancer is the term commonly used to refer to a large number of different clinical conditions which are collectively characterized by an abnormal or uncontrolled division of cells in different organs or parts of the body that, as a result of the unusual cell growth, harms the body and may lead to death. Some types of cancer occur commonly (e.g., breast, colon, and prostate cancer), while others occur rarely (e.g., sarcomas, thymomas, and pheochromocytomas). In the aggregate, cancer has become a primary reason for people to seek health care and is a leading cause of death in the United States. In many states, including California beginning in 2014, cancer is the leading cause of death and one of the overall most expensive health care conditions to treat. Therefore, knowing the extent of cancer in the population – i.e., its prevalence - is important.

For this report, cancer prevalence is defined as the number of people in a population on a given date who have ever had a diagnosis of cancer. This includes new and pre-existing cases whether or not the persons are disease-free or currently living with cancer. It is an important indicator of population health since it reflects both the number of people with active disease (cancer) and the number of persons who have survived having had the disease (i.e., cancer survivors), which together provides an estimate of the overall burden of cancer on the population. Such information is important for health services planning and resource allocation purposes, among other reasons.

The prevalence of cancer, or the total number of persons living with cancer in the population, is a function of both disease incidence and mortality. A low incidence or a high mortality can contribute to a low prevalence, while a high incidence or a low mortality can contribute to a high prevalence. Low cancer mortality may be a consequence of early detection and effective medical treatments that result in longer survivorship. Incidence also can be influenced by, among other things, the prevalence of cancer risk factors and cancer screening programs.

Local health officers should find the findings of this report helpful for informing monitoring and screening efforts and for planning survivorship care. Survivorship care is important because many cancer survivors have to deal with long-term consequences of treatment, as well as psychological concerns (e.g., the fear of recurrence).

Overall cancer deaths in the U.S. and California have declined since the early 1990's due to improvements in screening and early detection, reduced risk factors (especially the reduced use of tobacco), and development of more effective treatments resulting in improved survival.¹ The number of people living beyond a cancer diagnosis in the United States was approximately 14.5 million in 2014, and is expected to rise to almost 19 million by 2024.¹ This increasing cancer

survivorship has contributed to the escalating costs of cancer care in recent decades. The estimated adjusted annual direct medical spending on cancer care in the U.S. doubled between 1990 and 2010, rising to an estimated \$125 billion.² This figure is projected to reach at least \$158 billion by 2020, and may rise to \$207 billion.³ The increased societal burden of cancer underscores the need for accurate statistics on cancer prevalence.

This report provides cancer prevalence information for California on January 1, 2013, based on data collected by the California Cancer Registry (CCR). Limited duration prevalence for childhood and adolescent cancer groups and complete prevalence both by age group and region/county for twenty-one common cancer sites are presented; these include: female breast, prostate, colon and rectum, melanoma of the skin, thyroid, corpus and uterus, urinary bladder, non-Hodgkin lymphoma, lung and bronchus, kidney and renal pelvis, leukemia, cervix uteri, oral cavity and pharynx, testis, ovary, Hodgkin lymphoma, brain and central nervous system (CNS), stomach, liver and intrahepatic bile duct (IBD), larynx, and pancreas. The CCR is California's population-based cancer surveillance system. Since it was established in 1988, CCR has collected information on tumor characteristics, diagnosis, treatment and patient demographics for more than four million patients diagnosed with cancer in the state. To the best of our knowledge, this report is the first comprehensive analysis of cancer prevalence in California.

Methods

Different cancer prevalence breakdowns are used in this report to describe the burden of cancer. *Overall prevalence* by cancer site shows how prevalent each of the cancer sites is. Prevalence of childhood and adolescent cancer describes survivorship for children and adolescents diagnosed with each type of cancer. Age group prevalence differences are shown in the prevalence by site and age groups. Prevalence at the California county level provides information about the burden of cancer in different parts of the state.

Limited-duration prevalence for childhood and adolescent International Classification of Childhood Cancer (ICCC) groups was calculated for the period January 1, 1988, to January 1, 2013. It was calculated using the counting method implemented in the SEER*Stat software. This method calculates the number of people alive at the prevalence date that had a diagnosis of the disease within a certain time period, which for this report is the full history of the registry up to January 1, 2013 (i.e., 1988-2013). The limited-duration prevalence method includes a correction for people lost to follow-up. For each individual lost to follow-up, a probability of being alive at the prevalence date is estimated from an appropriate survival function.

Complete prevalence was calculated as of January 1, 2013, for twenty-one common cancer sites. Complete prevalence is an estimate of the number of persons alive on a specified date

that had been diagnosed with the given cancer, no matter how long ago that diagnosis was made. It is calculated by applying the completeness index method to limited-duration prevalence. The completeness index method is implemented in the COMPREV software. To create a completeness index from date of diagnosis January 1, 1988, to January 1, 2013, we selected the mode of “Multi-Select by Groups|Completeness Index Only |Default Parameters Only” and chose the combination of sites and sex. After the index was created, we merged back the index to our 25 year limited duration prevalence created by SEER*Stat by site, sex, and age at prevalence. The final step entailed calculating the complete prevalence by dividing the completeness index into the limited duration prevalence.

Unless otherwise specified, prevalence calculations include only the first malignant tumor per person; in situ cancers and second-or-later primary cancers are not included. That is, a person will not contribute more than one tumor diagnosis to a single prevalence estimate. However, different tumors for an individual may contribute to separate statistics shown in the results. For example, if a person has a breast cancer diagnosis in 1988 and a lung cancer diagnosis in 2000, the breast cancer would contribute to the “All sites” and “Breast” estimates and the lung cancer would contribute to the “Lung” estimate.

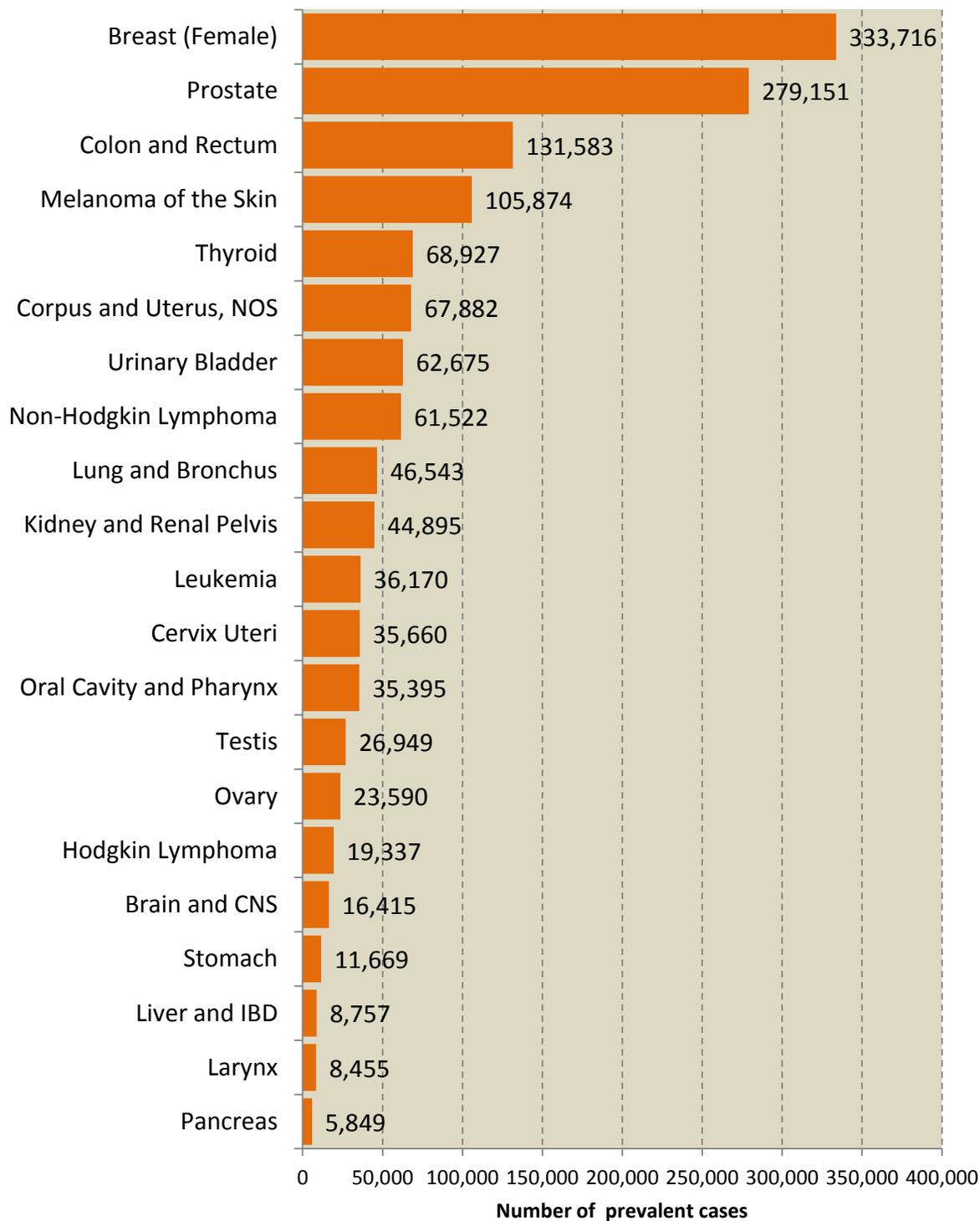
CCR data has more than 95% completed follow up. For those lost cases, we used an observed survival method to compute the survival using cohorts matched by age (<60, 60-69, 70+), sex, race, and site.

Results

Complete Prevalence Counts by Cancer Site

The complete cancer prevalence of twenty-one common cancer sites at prevalence date January 1, 2013, is shown in Figure 1. The numbers shown to the right of each bar are the total number of prevalent cases for each cancer site. More than 1.4 million children and adults with a history of one of these cancers were alive in California on January 1, 2013. Female breast, prostate, and colorectal cancers were the three most prevalent cancers. Female breast cancer and prostate cancer are the most commonly occurring cancers among women and men, respectively.^{4,5} Colorectal is the third most commonly occurring cancer for both sexes.⁴ High prevalence reflects the high incidence and relatively good survivorship of these cancers. Lung and bronchus cancer is the second most common cancer in both men and women but is the ninth most prevalent. The lower prevalence for this cancer reflects the currently high relative lethality of the condition and the fact that it is the leading cancer killer in both men and women.⁴

Figure 1: Estimated Complete Prevalence Counts by Cancer Site, All Races Combined, California, January 1, 2013



Limited-Duration Prevalence for Childhood and Adolescent Cancer, Age under 20 at Diagnosis

The twenty-five year limited-duration prevalence of cancers according to the International Classification of Childhood Cancer (ICCC) is shown in Figure 2 for people who were diagnosed under the age of twenty during 1988 to 2013. Childhood and adolescent cancers are categorized differently than adult cancers; they are categorized according to the ICCC which includes thirteen site groups. This classification is based on the form and structure of the tumor (commonly referred to as tumor morphology) and primary site, with an emphasis on morphology. Adult cancers are also categorized based on morphology and primary site, but the emphasis is on primary site (e.g., breast, lung, etc.). Limited-duration prevalence is used because the software COMPREV (<https://surveillance.cancer.gov/comprev/>) does not have a completeness index for ICCC groups.

More than 30,000 people with a history of a childhood or adolescent cancer diagnosis between 1988 and 2013 were alive in California on January 1, 2013. Lymphoid leukemias, lymphomas and reticuloendothelial neoplasms, and central nervous system (CNS) and miscellaneous intracranial and intraspinal neoplasms had the greatest prevalence. These three cancer groups commonly occur in children and adolescents. They are the three most common cancers in children ages 0 to 14 and the second, third, and fourth most common in adolescents ages 15 to 19.⁶ All three of these cancer groups have relatively high five-year survival rates (over 70%),⁶ which helps explain the high prevalence.

Children and adolescents diagnosed with cancer may experience treatment-related side effects or complications many years after their diagnosis and treatment. Prevalence information identifies the number of people alive who may experience late effects of treatment such as increased risk of a second cancer, heart or lung problems, and infertility.⁷ It is important that survivors of pediatric cancers be monitored for late effects long after their initial treatment. The Children's Oncology Group has developed long-term follow-up guidelines for managing late effects in childhood cancer survivors that are intended to identify late effects, provide timely intervention, increase quality of life, and decrease complication-related health care costs.⁸

Figure 2: 25 Year Limited-Duration Prevalence (1988-2013) by ICCC* group, Age under 20 at Diagnosis



* International Classification of Childhood Cancer

Complete Prevalence by Cancer Site and Age Group

The complete prevalence by cancer site and age group is shown in Figure 3. The total prevalence counts, from greatest to least, are shown in the second column, while the age group prevalence counts are shown in the subsequent columns with numbers indicating the top five most prevalent cancers on January 1, 2013 in each age group. The most prevalent cancers change with age group. Female breast cancer had the greatest prevalence for ages 20 to 49 years and 50 to 64 years, but it was the second most prevalent cancer after prostate cancer for ages 65 to 74 years and 75 years and older. Thyroid cancer was the second most prevalent cancer for ages 20 to 49 years and the fifth most prevalent cancer for ages 50 to 64, but it was not one of the five most prevalent cancers for the other age groups. Prostate cancer was the second most prevalent cancer for ages 50 to 64 years. Melanoma of the skin was the third most prevalent cancer for ages 20 to 49 years and 50 to 64 years, while colorectal cancer was the third most prevalent for ages 65 to 74 years and 75 years and older. Testicular cancer and Hodgkin Lymphoma were the fourth and fifth most prevalent cancers in the 20 to 49 year age group but were not one of the top five most prevalent cancers for the other age groups. Urinary bladder cancer was the fourth most prevalent in the 75 year and older age group but was not among the five most prevalent cancers for the other age groups. Uterine cancer was the fifth most prevalent cancer in people 65 years and older but was not among the five most prevalent cancers for the other age groups.

When comparing the cancer prevalence across age groups, the population size of the age group must be considered. People ages 20 to 49 comprised 58% of the population, while persons age 75 and older comprised 7% of the population. Cancer prevalence, expressed as a percentage of the population, increased across the age groups, increasing from 0.95% for people ages 20 to 49 years to 23.74% for people 75 years and older. This increase with age group likely reflects the increasing incidence of most cancers with age. Among the cancers listed in Figure 3, three have prevalence decreases in the older age groups. Cancers of the testis, brain and CNS, and Hodgkin lymphoma show decreasing prevalence in people ages 65 to 74 years and in people age 75 years and older; these cancers are more common in younger people.

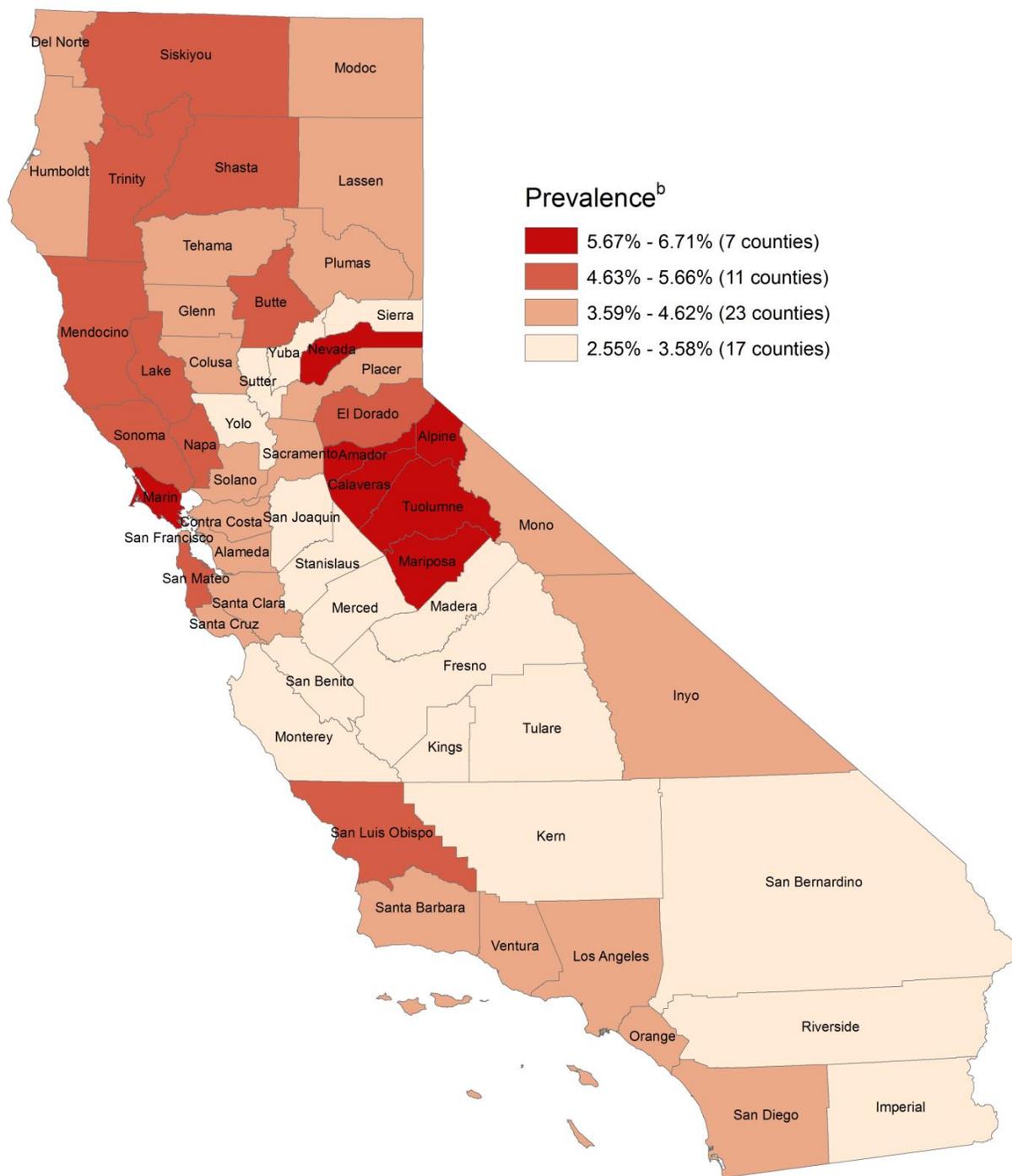
Figure 3. Estimated Complete Prevalence on January 1, 2013 by Site and Age Group, California

Sites	Total	20-49 years	50-64 years	65-74 years	75+ years
Breast (Female)	333,709	27,984	105,532	90,999	109,194
Prostate	279,144	1,667	51,143	97,420	128,914
Colon and Rectum	131,561	7,129	31,786	33,087	59,559
Melanoma of the Skin	105,694	16,308	35,135	25,124	29,127
Thyroid	68,615	21,707	26,036	12,019	8,853
Corpus and Uterus, NOS	67,878	4,029	19,079	18,226	26,544
Urinary Bladder	62,648	1,618	10,516	17,115	33,399
Non-Hodgkin Lymphoma	60,768	9,108	17,848	15,205	18,607
Lung and Bronchus	46,515	1,441	9,523	15,099	20,452
Kidney and Renal Pelvis	44,062	5,687	13,416	12,093	12,866
Leukemia	30,938	9,358	7,669	6,303	7,608
Cervix Uteri	35,653	7,206	12,865	7,173	8,409
Oral Cavity and Pharynx	35,255	3,961	12,423	9,294	9,577
Testis	26,646	12,997	10,113	2,496	1,040
Ovary	23,410	4,037	8,224	5,491	5,658
Hodgkin Lymphoma	18,796	9,524	6,366	1,834	1,072
Brain and CNS	14,208	7,579	4,526	1,420	683
Stomach	11,663	911	2,904	3,082	4,766
Liver and IBD	8,470	665	3,778	2,411	1,616
Larynx	8,452	242	1,907	2,595	3,708
Pancreas	5,838	555	1,776	1,669	1,838
Prevalence Counts (% of total)	1,419,923 (100%)	153,713 (11%)	392,565 (28%)	380,155 (27%)	493,490 (35%)
Population (% of total)	27,886,409 (100%)	16,211,839 (58%)	6,978,596 (25%)	2,617,255 (9%)	2,078,719 (7%)
Prevalence = (count/pop)*100	5.09%	0.95%	5.63%	15.00%	23.74%

County Socioeconomic Status

Socioeconomic status (SES) is a measure of a person's economic and social position based on income, education, and occupation. Quinn Yang is an SES index based on census data that provides neighborhood SES quintiles at the block group level.⁹ Designations are based on block group measures of education, poverty, employment, home value, household income, proportion of people with a blue collar job, and median rent. The lowest SES block groups are given a designation of 1 while the highest SES block groups are given a designation of 5. Because SES has been shown to be associated with many health outcomes and, given the differences in SES among California counties, it may be useful to take SES into account when interpreting variations in prevalence between counties. Figure 4 uses Quinn Yang quintiles to show the percentage of block groups in each county that have the highest SES values (4 or 5). This can be used in conjunction with the county prevalence information of selected cancers to better understand the geographic variations.

Figure 5. Complete Cancer^a Prevalence by County, California, January 1, 2013



^aTwenty-one common cancer sites included

^bPrevalence calculated by dividing the count of cancer cases by the population and multiplying by 100.

Because of low counts, the following counties were combined: Del Norte-Humboldt, Colusa-Glenn-Tehama, Sierra-Yuba, Siskiyou-Trinity, Lassen-Modoc-Plumas, Alpine-Amador-Calaveras, Mariposa-Tuolumne, Inyo-Mono.

Complete Prevalence by Region and County for Selected Cancers

Figures 6 through 27 show the complete prevalence by region and county for the twenty-one common cancer sites detailed in this report. In each figure, the first column lists the regions and counties within each region in descending order of population size. The second column shows the prevalence count in each region and county. The third column shows the average population for years 2012 and 2013 for each region and county. The fourth column is the prevalence for each region and county calculated by dividing the count by the population and multiplying that by 100. The color scale shows five group sizes for population and three or four group sizes for prevalence. Because the prevalence takes into account the population sizes, comparisons between regions and counties can be made.

All Sites Combined

Figures 5 and 6 show the complete prevalence by region and county for twenty-one common cancer sites (female breast, prostate, colon and rectum, melanoma of the skin, thyroid, corpus and uterus, urinary bladder, non-Hodgkin lymphoma, lung and bronchus, kidney and renal pelvis, leukemia, cervix uteri, oral cavity and pharynx, testis, ovary, Hodgkin lymphoma, brain and CNS, stomach, liver and intrahepatic bile duct (IBD), larynx, and pancreas). Overall, 1,431,476 people with a history of cancer of one of these twenty-one sites were alive in California on January 1, 2013. The counties with the highest prevalence were Marin, Nevada, Alpine-Amador-Calaveras, and Mariposa-Tuolumne. The counties with the lowest prevalence were Riverside, San Bernardino, all Central Valley counties, Imperial, Yolo, Sutter, Sierra-Yuba, Monterey, and San Benito.

All Sites Combined

Figure 6. Estimated Complete Prevalence by Region and County, California, January 1, 2013

County	Prevalence Count (a)	Total Population (b)	Prevalence (a/b)*100
Los Angeles-Orange	537,455	14,354,350	3.74%
Los Angeles	359,972	9,984,389	3.61%
Orange	124,120	3,099,869	4.00%
Ventura	34,898	837,019	4.17%
Santa Barbara	18,465	433,073	4.26%
Bay Area	317,484	7,389,323	4.30%
Santa Clara	72,887	1,849,043	3.94%
Alameda	58,880	1,566,434	3.76%
Contra Costa	48,046	1,086,241	4.42%
San Francisco	37,609	832,438	4.52%
San Mateo	35,866	743,037	4.83%
Sonoma	23,246	492,821	4.72%
Solano	17,331	422,570	4.10%
Marin	16,809	257,110	6.54%
Napa	6,810	139,629	4.88%
Inland Empire	131,618	4,361,625	3.02%
Riverside	70,690	2,278,703	3.10%
San Bernardino	60,928	2,082,922	2.93%
Central Valley	119,283	4,056,058	2.94%
Fresno	28,673	951,436	3.01%
Kern	23,448	859,821	2.73%
San Joaquin	21,844	702,777	3.11%
Stanislaus	17,113	523,479	3.27%
Tulare	12,063	452,603	2.67%
Merced	7,148	262,440	2.72%
Madera	5,143	152,323	3.38%
Kings	3,851	151,179	2.55%
San Diego-Imperial	127,631	3,370,391	3.79%
San Diego	123,058	3,193,705	3.85%
Imperial	4,573	176,686	2.59%
Sacramento Region	94,045	2,303,129	4.08%
Sacramento	55,622	1,455,103	3.82%
Placer	16,228	364,373	4.45%
Yolo	6,914	204,224	3.39%
El Dorado	9,321	181,185	5.14%
Nevada	5,960	98,244	6.07%
Northern California	50,603	1,116,541	4.53%
Butte	10,363	221,561	4.68%
Shasta	9,259	178,682	5.18%
Del Norte-Humboldt	7,189	162,609	4.42%
Colusa-Glenn-Tehama	4,729	112,474	4.20%
Sutter	3,239	95,012	3.41%
Mendocino	4,298	87,292	4.92%
Sierra-Yuba	2,585	76,226	3.39%
Lake	3,190	63,923	4.99%
Siskiyou-Trinity	3,109	57,498	5.41%
Lassen-Modoc-Plumas	2,642	61,264	4.31%
Central Coast	42,159	1,028,218	4.10%
Monterey	15,037	427,457	3.52%
Santa Cruz	11,963	267,975	4.46%
San Luis Obispo	13,248	275,541	4.81%
San Benito	1,911	57,245	3.34%
High Sierra	11,198	187,005	5.99%
Alpine-Amador-Calaveras	4,948	82,539	5.99%
Mariposa-Tuolumne	4,818	71,792	6.71%
Inyo-Mono	1,432	32,674	4.38%
California	1,431,476	38,166,640	3.75%

Prevalence

2.55%-3.58%	3.59%-4.62%	4.63%-5.66%	5.67%-6.71%
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Population Size

32,674-99,999	100,000-499,999	500,000-999,999	1,000,000-3,999,999	4,000,000-9,999,999	10,000,000-14,354,350
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Breast (Female)

The complete prevalence by region and county for female breast cancer is shown in Figure 7. Overall, 333,716 women with a history of breast cancer were alive in California on January 1, 2013. The counties with the highest prevalence were Marin, Nevada, Mariposa-Tuolumne-Inyo-Mono, and Alpine-Amador-Calaveras. For the most part, these counties also had high age-adjusted incidence rates. Mariposa-Tuolumne, Marin, Nevada, and Alpine-Amador-Calaveras were among the eleven highest incident rate counties in California for 2003 to 2012, ranking 1st (Mariposa-Tuolumne), 3rd (Marin), 9th (Nevada), and 11th (Alpine-Amador-Calaveras).¹⁰ Inyo-Mono had a lower incidence and ranked 27th in the state (see Appendix Table A1).

The low prevalence counties all had low age-adjusted incidence rates except for Yolo county which had the seventh highest incidence rate for 2003 to 2012.¹⁰ This discrepancy could represent a new trend of higher incidence in this county or poor survivorship. For female breast cancer the median age at diagnosis is 62 years, and the five-year relative survival for all stages is 91.2%.^{5,11}

Breast (Female)

Figure 7. Estimated Complete Prevalence by Region and County, California, January 1, 2013

County	Prevalence Count (a)	Total Population (b)	Prevalence (a/b)*100
Los Angeles-Orange	126,093	7,262,935	1.74%
Los Angeles	83,879	5,059,459	1.66%
Orange	29,634	1,566,314	1.89%
Ventura	8,242	421,708	1.95%
Santa Barbara	4,338	215,454	2.01%
Bay Area	76,280	3,723,446	2.05%
Santa Clara	17,310	919,466	1.88%
Alameda	14,396	798,294	1.80%
Contra Costa	11,847	555,876	2.13%
San Mateo	8,988	377,215	2.38%
San Francisco	8,226	408,743	2.01%
Sonoma	5,771	250,747	2.30%
Marin	4,158	131,361	3.17%
Solano	3,950	211,711	1.87%
Napa	1,634	70,033	2.33%
Inland Empire	29,247	2,189,153	1.34%
Riverside	15,868	1,143,345	1.39%
San Bernardino	13,379	1,045,808	1.28%
Central Valley	26,602	2,012,218	1.32%
Fresno	6,506	476,153	1.37%
Kern	4,995	418,579	1.19%
San Joaquin	5,045	352,871	1.43%
Stanislaus	3,928	264,282	1.49%
Tulare	2,686	225,470	1.19%
Merced	1,545	129,855	1.19%
Madera	1,107	78,196	1.42%
Kings	790	66,812	1.18%
San Diego-Imperial	29,856	1,674,307	1.78%
San Diego	28,888	1,588,313	1.82%
Imperial	968	85,994	1.13%
Sacramento Region	22,368	1,174,326	1.90%
Sacramento	13,346	742,739	1.80%
Placer	3,804	186,465	2.04%
El Dorado	2,120	90,564	2.34%
Yolo	1,665	104,800	1.59%
Nevada	1,433	49,758	2.88%
Northern California	11,334	553,966	2.05%
Butte	2,466	111,648	2.21%
Shasta	2,036	91,017	2.24%
Del Norte-Humboldt	1,580	79,692	1.98%
Colusa_Glenn-Tehama	1,016	55,872	1.82%
Mendocino	950	43,751	2.17%
Sutter	789	47,681	1.65%
Lake	680	31,943	2.13%
Siskiyou-Trinity	674	28,677	2.35%
Sierra-Yuba	583	37,665	1.55%
Lassen-Modoc-Plumas	560	26,020	2.15%
Central Coast	9,315	505,770	1.84%
Monterey	3,305	207,766	1.59%
San Luis Obispo	2,931	134,810	2.17%
Santa Cruz	2,685	134,629	1.99%
San Benito	394	28,565	1.38%
High Sierra	2,621	90,216	2.91%
Mariposa-Tuolumne-Inyo-Mono	1,473	50,279	2.93%
Alpine-Amador-Calaveras	1,148	39,937	2.87%
California	333,716	19,186,337	1.74%

Prevalence

1.13%-1.63%	1.64%-2.14%	2.15%-2.65%	2.66%-3.17%
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Population Size

15,774-49,999	50,000-249,999	250,000-499,999	500,000-1,999,999	2,000,000-4,999,999	5,000,000-7,262,935
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Prostate

The complete prevalence by region and county for prostate cancer is shown in Figure 8. Overall, 279,151 men with a history of prostate cancer were alive in California on January 1, 2013. The counties with the highest prevalence were Marin, Nevada, and Alpine-Amador-Calaveras. Marin county had the highest age-adjusted incidence in the state for 2003 to 2012 (173.29 per 100,000) which can explain the high prevalence.¹⁰ Alpine-Amador-Calaveras and Nevada had lower incidence rates for 2003 to 2012, ranking 21st and 27th in the state, respectively¹⁰ (see Appendix Table A2). The high incidence in Marin could be a result of more screening with prostate-specific antigen (PSA) or other factors. Screening with PSA results in more diagnoses but the routine use of this test on men at average risk of the disease is not recommended because of concerns about over-diagnosis and treatment of slow-growing cancers that are unlikely to cause harm.⁵ The high prevalence and low incidence in Alpine-Amador-Calaveras and Nevada could indicate good survivorship and possibly a more recent decreased use of screening.

Most of the low prevalence counties also had low incidence rates from 2003 to 2012, except San Joaquin and San Bernardino which had the 14th and 17th highest incidence rates in the state¹⁰ (see Appendix Table A2). This discrepancy could represent newer trends of higher incidence in these counties or poor survivorship. For prostate cancer the median age at diagnosis is 66 years, and the five-year relative survival for all stages is close to 100%.^{5,12}

Prostate

Figure 8. Estimated Complete Prevalence by Region and County, California, January 1, 2013

County	Prevalence Count (a)	Total Population (b)	Prevalence (a/b)*100
Los Angeles-Orange	103,135	7,091,415	1.45%
Los Angeles	70,173	4,924,930	1.42%
Orange	22,739	1,533,555	1.48%
Ventura	6,721	415,311	1.62%
Santa Barbara	3,502	217,619	1.61%
Bay Area	62,858	3,665,877	1.71%
Santa Clara	14,571	929,577	1.57%
Alameda	11,598	768,140	1.51%
Contra Costa	10,094	530,365	1.90%
San Mateo	6,886	365,822	1.88%
San Francisco	6,729	423,695	1.59%
Sonoma	4,162	242,074	1.72%
Marin	3,965	125,749	3.15%
Solano	3,454	210,859	1.64%
Napa	1,399	69,596	2.01%
Inland Empire	26,522	2,172,472	1.22%
Riverside	14,761	1,135,358	1.30%
San Bernardino	11,761	1,037,114	1.13%
Central Valley	22,688	2,043,840	1.11%
Fresno	5,495	475,283	1.16%
San Joaquin	4,506	349,906	1.29%
Kern	4,310	441,242	0.98%
Stanislaus	2,924	259,197	1.13%
Tulare	2,284	227,133	1.01%
Merced	1,342	132,585	1.01%
Madera	1,110	74,127	1.50%
Kings	717	84,367	0.85%
San Diego-Imperial	23,707	1,696,084	1.40%
San Diego	22,785	1,605,392	1.42%
Imperial	922	90,692	1.02%
Sacramento Region	18,375	1,128,803	1.63%
Sacramento	10,570	712,364	1.48%
Placer	3,292	177,908	1.85%
El Dorado	2,015	90,621	2.22%
Nevada	1,310	48,486	2.70%
Yolo	1,188	99,424	1.19%
Northern California	10,167	562,575	1.81%
Butte	2,133	109,913	1.94%
Shasta	2,047	87,665	2.34%
Del Norte-Humboldt	1,320	82,917	1.59%
Colusa_Glenn-Tehama	949	56,602	1.68%
Mendocino	853	43,541	1.96%
Siskiyou-Trinity	677	28,821	2.35%
Lake	626	31,980	1.96%
Lassen-Modoc-Plumas	597	35,244	1.69%
Sutter	526	47,331	1.11%
Sierra-Yuba	439	38,561	1.14%
Central Coast	9,168	522,448	1.75%
Monterey	3,184	219,691	1.45%
San Luis Obispo	2,853	140,731	2.03%
Santa Cruz	2,713	133,346	2.03%
San Benito	418	28,680	1.46%
High Sierra	2,531	96,789	2.61%
Mariposa-Tuolumne-Inyo-Mono	1,377	54,187	2.54%
Alpine-Amador-Calaveras	1,154	42,602	2.71%
California	279,151	18,980,303	1.47%

Prevalence

0.85%-1.42% 1.43%-1.99% 2.00%-2.57% 2.58%-3.15%

Population Size

16,900-49,999 50,000-249,999 250,000-499,999 500,000-1,999,999 2,000,000-4,999,999 5,000,000-7,091,415

Colon and Rectum

The complete prevalence by region and county for colon and rectum cancer is shown in Figure 9. Overall, 131,583 people with a history of colon and rectum cancer were alive in California on January 1, 2013. The counties with the highest prevalence were Marin, Nevada, Lake, Siskiyou-Trinity, Alpine-Amador-Calaveras, and Mariposa-Tuolumne. Lake County had the second highest age-adjusted incidence in the state for 2003 to 2012 (47.1 per 100,000), which may explain the high prevalence. However, the other high prevalence counties all had lower incidence rates, with Mariposa-Tuolumne ranked 16th, Alpine-Amador-Calaveras 25th, Marin 28th, Nevada 41st, and Siskiyou-Trinity 43rd (see Appendix Table A3).¹⁰ The high prevalence but low incidence may reflect good survivorship in these counties and possibly effective screening and early detection, which can prevent colorectal cancer by detecting and removing precancerous polyps.⁵

Some of the low prevalence counties had fairly high incidence rates for 2003 to 2012. San Bernardino and Merced had the 7th and 13th highest age-adjusted incidence rates in the state, respectively, for 2003 to 2012, but they had low prevalence rates (see Appendix Table A3).¹⁰ A high incidence and low prevalence could represent newer trends of higher incidence or poor survivorship. A high incidence and poor survivorship could also result from little screening and more people being diagnosed at advanced stages. The median age at diagnosis for colorectal cancer is 68 years, and the five-year relative survival for all stages is 67.6%.^{5,13}

Colon and Rectum

Figure 9. Estimated Complete Prevalence by Region and County, California, January 1, 2013

County	Prevalence Count (a)	Total Population (b)	Prevalence (a/b)*100
Los Angeles-Orange	50,279	14,354,350	0.35%
Los Angeles	34,724	9,984,389	0.35%
Orange	11,128	3,099,869	0.36%
Ventura	2,978	837,019	0.36%
Santa Barbara	1,449	433,073	0.33%
Bay Area	29,323	7,389,323	0.40%
Santa Clara	6,649	1,849,043	0.36%
Alameda	5,479	1,566,434	0.35%
Contra Costa	4,416	1,086,241	0.41%
San Francisco	3,900	832,438	0.47%
San Mateo	3,254	743,037	0.44%
Sonoma	2,089	492,821	0.42%
Solano	1,578	422,570	0.37%
Marin	1,349	257,110	0.52%
Napa	609	139,629	0.44%
Inland Empire	12,298	4,361,625	0.28%
Riverside	6,526	2,278,703	0.29%
San Bernardino	5,772	2,082,922	0.28%
Central Valley	11,447	4,056,058	0.28%
Fresno	2,710	951,436	0.28%
Kern	2,250	859,821	0.26%
San Joaquin	2,087	702,777	0.30%
Stanislaus	1,707	523,479	0.33%
Tulare	1,158	452,603	0.26%
Merced	692	262,440	0.26%
Madera	496	152,323	0.33%
Kings	347	151,179	0.23%
San Diego-Imperial	10,953	3,370,391	0.32%
San Diego	10,509	3,193,705	0.33%
Imperial	444	176,686	0.25%
Sacramento Region	8,268	2,303,129	0.36%
Sacramento	5,102	1,455,103	0.35%
Placer	1,325	364,373	0.36%
El Dorado	759	181,185	0.42%
Yolo	586	204,224	0.29%
Nevada	496	98,244	0.50%
Northern California	4,619	1,116,541	0.41%
Butte	931	221,561	0.42%
Shasta	786	178,682	0.44%
Del Norte-Humboldt	657	162,609	0.40%
Colusa_Glenn-Tehama	463	112,474	0.41%
Mendocino	400	87,292	0.46%
Lake	314	63,923	0.49%
Sutter	308	95,012	0.32%
Siskiyou-Trinity	280	57,498	0.49%
Sierra-Yuba	254	76,226	0.33%
Lassen-Modoc-Plumas	226	61,264	0.37%
Central Coast	3,415	1,028,218	0.33%
Monterey	1,241	427,457	0.29%
San Luis Obispo	1,083	275,541	0.39%
Santa Cruz	919	267,975	0.34%
San Benito	172	57,245	0.30%
High Sierra	981	187,005	0.52%
Alpine-Amador-Calaveras	466	82,539	0.56%
Mariposa-Tuolumne	391	71,792	0.54%
Inyo-Mono	124	32,674	0.38%
California	131,583	38,166,640	0.34%

Prevalence

0.23%-0.30% 0.31%-0.39% 0.40%-0.47% 0.48%-0.56%

Population Size

32,674-99,999 100,000-499,999 500,000-999,999 1,000,000-3,999,999 4,000,000-9,999,999 10,000,000-14,354,350

Melanoma of the Skin

The complete prevalence by region and county for melanoma of the skin is shown in Figure 10. Overall, 105,874 people with a history of melanoma of the skin were alive in California on January 1, 2013. The counties with the highest prevalence were Marin, Nevada, San Luis Obispo, and Mariposa-Tuolumne. All four of these high prevalence counties also had high incidence rates for 2003 to 2012. San Luis Obispo and Marin counties had the highest age-adjusted incidence rates in the state for 2003 to 2012 (42.3 per 100,000 and 41.67 per 100,000, respectively). Mariposa-Tuolumne and Nevada counties had the 8th and 9th highest age-adjusted incidence rates in the state for 2003 to 2012 (30.6 per 100,000 and 29.96 per 100,000, respectively) (see Appendix Table A4).¹⁰

The counties with the lowest prevalence of melanoma - Los Angeles, Alameda, San Bernardino, Fresno, Kern, San Joaquin, Tulare, Merced, Kings, and Imperial - all had low age-adjusted incidence rates for 2003 to 2012 (16.94 per 100,000 or lower).¹⁰ These incidence rates were among the eleven lowest incidence rates in the state for that time period (see Appendix Table A4). For melanoma of the skin, the prevalence and incidence are very closely associated. The five-year relative survival for melanoma of the skin for all stages is 92%.⁵

Melanoma of the Skin

Figure 10. Estimated Complete Prevalence by Region and County, California, January 1, 2013

County	Prevalence Count (a)	Total Population (b)	Prevalence (a/b)*100
Los Angeles-Orange	36,790	14,354,350	0.26%
Los Angeles	19,717	9,984,389	0.20%
Orange	11,799	3,099,869	0.38%
Ventura	3,260	837,019	0.39%
Santa Barbara	2,014	433,073	0.47%
Bay Area	23,070	7,389,323	0.31%
Santa Clara	5,219	1,849,043	0.28%
Contra Costa	3,743	1,086,241	0.34%
Alameda	3,580	1,566,434	0.23%
San Mateo	2,645	743,037	0.36%
Sonoma	2,260	492,821	0.46%
San Francisco	2,154	832,438	0.26%
Marin	1,807	257,110	0.70%
Solano	1,112	422,570	0.26%
Napa	550	139,629	0.39%
Inland Empire	9,494	4,361,625	0.22%
Riverside	5,403	2,278,703	0.24%
San Bernardino	4,091	2,082,922	0.20%
Central Valley	7,564	4,056,058	0.19%
Fresno	1,805	951,436	0.19%
Kern	1,705	859,821	0.20%
Stanislaus	1,255	523,479	0.24%
San Joaquin	1,153	702,777	0.16%
Tulare	711	452,603	0.16%
Madera	373	152,323	0.24%
Merced	368	262,440	0.14%
Kings	194	151,179	0.13%
San Diego-Imperial	11,653	3,370,391	0.35%
San Diego	11,503	3,193,705	0.36%
Imperial	150	176,686	0.08%
Sacramento Region	8,152	2,303,129	0.35%
Sacramento	4,241	1,455,103	0.29%
Placer	1,712	364,373	0.47%
El Dorado	975	181,185	0.54%
Yolo	659	204,224	0.32%
Nevada	565	98,244	0.58%
Northern California	4,183	1,116,541	0.37%
Shasta	889	178,682	0.50%
Butte	778	221,561	0.35%
Del Norte-Humboldt	618	162,609	0.38%
Mendocino	382	87,292	0.44%
Colusa_Glenn-Tehama	356	112,474	0.32%
Sutter	278	95,012	0.29%
Siskiyou-Trinity	263	57,498	0.46%
Lake	240	63,923	0.38%
Lassen-Modoc-Plumas	199	61,264	0.32%
Sierra-Yuba	180	76,226	0.24%
Central Coast	4,026	1,028,218	0.39%
San Luis Obispo	1,621	275,541	0.59%
Santa Cruz	1,227	267,975	0.46%
Monterey	1,037	427,457	0.24%
San Benito	141	57,245	0.25%
High Sierra	942	187,005	0.50%
Alpine-Amador-Calaveras	381	82,539	0.46%
Mariposa-Tuolumne	419	71,792	0.58%
Inyo-Mono	142	32,674	0.43%
California	105,874	38,166,640	0.28%

Prevalence

0.08%-0.23%	0.24%-0.38%	0.39%-0.54%	0.55%-0.70%
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Population Size

32,674-99,999	100,000-499,999	500,000-999,999	1,000,000-3,999,999	4,000,000-9,999,999	10,000,000-14,354,350
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Thyroid

The complete prevalence by region and county for thyroid cancer is shown in Figure 11. Overall, 68,927 people with a history of thyroid cancer were alive in California on January 1, 2013. The counties with the highest prevalence were Orange, Ventura, Santa Barbara, San Francisco, San Mateo, Marin, Placer, El Dorado, Shasta, and Monterey. All of these counties except for San Mateo, San Francisco, and Marin had age-adjusted incidence rates for 2003 to 2012 that were among the eleven highest for the state. San Mateo had the 15th highest age-adjusted incidence rate, San Francisco the 23rd highest, and Marin the 37th highest for 2003 to 2012 (see Appendix Table A5).¹⁰ Thyroid cancer has the most rapidly rising rate in the United States, but some of this rise has been attributed to more sensitive diagnostic procedures that have resulted in some over-diagnoses of papillary thyroid tumors.¹⁴⁻¹⁶ Some of the rise, however, is attributed to increases in obesity.¹⁷ The high prevalence and lower incidence counties may reflect good survivorship and more recent decreases in risk factors.

The lowest prevalence counties - Tulare, Kings, Imperial, Mendocino, Sierra-Yuba, and Lake - all also had low age-adjusted incidence rates ranking 25th (Kings), 38th (Tulare), 42nd (Imperial), 44th (Sierra-Yuba), 45th (Lake), and 47th (Mendocino) in the state for 2003 to 2012 (see Appendix Table A5).¹⁰ Thyroid cancer is more common in younger people with a median age at diagnosis of 54 years for males and 49 years for females.⁴ The five-year relative survival for thyroid cancer for all stages is 97.7%.⁶

Thyroid

Figure 11. Estimated Complete Prevalence by Region and County, California, January 1, 2013

County	Prevalence Count (a)	Total Population (b)	Prevalence (a/b)*100
Los Angeles-Orange	28,721	14,354,350	0.20%
Los Angeles	19,337	9,984,389	0.19%
Orange	6,574	3,099,869	0.21%
Ventura	1,945	837,019	0.23%
Santa Barbara	865	433,073	0.20%
Bay Area	13,428	7,389,323	0.18%
Santa Clara	3,539	1,849,043	0.19%
Alameda	2,434	1,566,434	0.16%
Contra Costa	1,830	1,086,241	0.17%
San Francisco	1,750	832,438	0.21%
San Mateo	1,489	743,037	0.20%
Sonoma	849	492,821	0.17%
Solano	749	422,570	0.18%
Marin	557	257,110	0.22%
Napa	231	139,629	0.17%
Inland Empire	6,092	4,361,625	0.14%
Riverside	3,175	2,278,703	0.14%
San Bernardino	2,917	2,082,922	0.14%
Central Valley	6,220	4,056,058	0.15%
Fresno	1,673	951,436	0.18%
Kern	1,330	859,821	0.15%
San Joaquin	1,000	702,777	0.14%
Stanislaus	802	523,479	0.15%
Tulare	539	452,603	0.12%
Merced	389	262,440	0.15%
Madera	286	152,323	0.19%
Kings	201	151,179	0.13%
San Diego-Imperial	6,097	3,370,391	0.18%
San Diego	5,882	3,193,705	0.18%
Imperial	215	176,686	0.12%
Sacramento Region	4,299	2,303,129	0.19%
Sacramento	2,661	1,455,103	0.18%
Placer	768	364,373	0.21%
El Dorado	377	181,185	0.21%
Yolo	328	204,224	0.16%
Nevada	165	98,244	0.17%
Northern California	1,819	1,116,541	0.16%
Shasta	377	178,682	0.21%
Butte	362	221,561	0.16%
Del Norte-Humboldt	289	162,609	0.18%
Colusa_Glenn-Tehama	187	112,474	0.17%
Sutter	133	95,012	0.14%
Lassen-Modoc-Plumas	119	61,264	0.19%
Mendocino	105	87,292	0.12%
Sierra-Yuba	87	76,226	0.11%
Siskiyou-Trinity	87	57,498	0.15%
Lake	73	63,923	0.11%
Central Coast	1,937	1,028,218	0.19%
Monterey	834	427,457	0.20%
Santa Cruz	519	267,975	0.19%
San Luis Obispo	499	275,541	0.18%
San Benito	85	57,245	0.15%
High Sierra	314	187,005	0.17%
Alpine-Amador-Calaveras	135	82,539	0.16%
Mariposa-Tuolumne	122	71,792	0.17%
Inyo-Mono	57	32,674	0.17%
California	68,927	38,166,640	0.18%

Prevalence

0.11%-0.13%	0.14%-0.16%	0.17%-0.19%	0.20%-0.23%
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Population Size

32,674-99,999	100,000-499,999	500,000-999,999	1,000,000-3,999,999	4,000,000-9,999,999	10,000,000-14,354,350
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Uterine Corpus

The complete prevalence by region and county for cancer of the uterine corpus (upper part of the uterus) is shown in Figure 12. Overall, 67,882 women with a history of uterine cancer were alive in California on January 1, 2013. The counties with the highest prevalence were Marin, Napa, Nevada, Del Norte-Humboldt, Siskiyou-Trinity, Lassen-Modoc-Plumas, and Mariposa-Tuolumne-Inyo-Mono. Del Norte-Humboldt had the highest age-adjusted incidence rate in the state for 2003 to 2012, and Lassen-Modoc-Plumas had the third highest.¹⁰ Napa had the 11th highest incidence rate, Marin had the 18th highest, and the rest (Nevada, Siskiyou-Trinity, Mariposa-Tuolumne, Inyo-Mono) were ranked 27th to 42nd for this time period (see Appendix Table A6).¹⁰ The high prevalence counties do not all have high age-adjusted incidence rates. Obesity, diabetes, and hypertension are risk factors for uterine cancer.¹⁸ The high prevalence and lower incidence counties may reflect more recent decreases in risk factors and good survivorship.

The lowest prevalence counties also had low age-adjusted incidence rates for 2003 to 2012. Among the lowest prevalence counties, San Bernardino had the highest age-adjusted incidence rate, ranking 17th in the state, while the other low prevalence counties had age-adjusted incidence rates that ranked 24th to 46th (see Appendix Table A6).¹⁰ The five-year relative survival for uterine cancer for all stages is 83.4%.⁵

Uterine Corpus

Figure 12. Estimated Complete Prevalence by Region and County, California, January 1, 2013

County	Prevalence Count (a)	Total Population (b)	Prevalence (a/b)*100
Los Angeles-Orange	26,253	7,262,935	0.36%
Los Angeles	18,221	5,059,459	0.36%
Orange	5,585	1,566,314	0.36%
Ventura	1,558	421,708	0.37%
Santa Barbara	889	215,454	0.41%
Bay Area	15,511	3,723,446	0.42%
Santa Clara	3,257	919,466	0.35%
Alameda	3,098	798,294	0.39%
Contra Costa	2,396	555,876	0.43%
San Francisco	1,866	408,743	0.46%
San Mateo	1,794	377,215	0.48%
Sonoma	1,186	250,747	0.47%
Solano	845	211,711	0.40%
Marin	713	131,361	0.54%
Napa	356	70,033	0.51%
Inland Empire	5,997	2,189,153	0.27%
Riverside	3,037	1,143,345	0.27%
San Bernardino	2,960	1,045,808	0.28%
Central Valley	5,303	2,012,218	0.26%
Fresno	1,116	476,153	0.23%
Kern	1,081	418,579	0.26%
San Joaquin	989	352,871	0.28%
Stanislaus	761	264,282	0.29%
Tulare	643	225,470	0.29%
Merced	336	129,855	0.26%
Kings	191	66,812	0.29%
Madera	186	78,196	0.24%
San Diego-Imperial	5,856	1,674,307	0.35%
San Diego	5,658	1,588,313	0.36%
Imperial	198	85,994	0.23%
Sacramento Region	4,259	1,174,326	0.36%
Sacramento	2,629	742,739	0.35%
Placer	656	186,465	0.35%
El Dorado	361	90,564	0.40%
Yolo	321	104,800	0.31%
Nevada	292	49,758	0.59%
Northern California	2,524	553,966	0.46%
Butte	517	111,648	0.46%
Del Norte-Humboldt	421	79,692	0.53%
Shasta	416	91,017	0.46%
Colusa_Glenn-Tehama	235	55,872	0.42%
Mendocino	204	43,751	0.47%
Siskiyou-Trinity	167	28,677	0.58%
Lake	153	31,943	0.48%
Sutter	145	47,681	0.30%
Lassen-Modoc-Plumas	140	26,020	0.54%
Sierra-Yuba	126	37,665	0.33%
Central Coast	1,730	505,770	0.34%
Monterey	680	207,766	0.33%
San Luis Obispo	536	134,810	0.40%
Santa Cruz	458	134,629	0.34%
San Benito	56	28,565	0.20%
High Sierra	449	90,216	0.50%
Mariposa-Tuolumne-Inyo-Mono	256	50,279	0.51%
Alpine-Amador-Calaveras	193	39,937	0.48%
California	67,882	19,186,337	0.35%

Prevalence

0.20%-0.29% 0.30%-0.39% 0.40%-0.48% 0.49%-0.59%

Population Size

15,774-49,999 50,000-249,999 250,000-499,999 500,000-1,999,999 2,000,000-4,999,999 5,000,000-7,262,935

Urinary Bladder

The complete prevalence by region and county for cancer of the urinary bladder is shown in Figure 13. Overall, 62,675 people with a history of bladder cancer were alive in California on January 1, 2013. The counties with the highest prevalence were Marin, Nevada, Lake, Siskiyou-Trinity, Alpine-Amador-Calaveras, and Mariposa-Tuolumne. These counties also had high age-adjusted incidence rates for 2003 to 2012. Lake County had the highest age-adjusted incidence rate in the state for this time period, while the other counties - Siskiyou-Trinity, Mariposa-Tuolumne, Alpine-Amador-Calaveras, Marin, and Nevada - ranked 3rd through 14th in the state. (see Appendix Table A7).¹⁰ The median age at diagnosis for bladder cancer is 73 years, and the five-year relative survival for all stages is 77.5%.¹⁹ Smoking, family history, and certain exposures (e.g., paints, dyes, metals, petroleum products, arsenic) are risk factors for bladder cancer.¹⁹ Men have incidence rates approximately four times higher than women.⁴

The low prevalence counties mostly had low age-adjusted incidence rates for 2003 to 2012. Of the low prevalence counties, San Benito, Yolo, and Riverside had the highest age-adjusted incidence rates, ranking 15th, 20th, and 22nd, respectively. The other low prevalence counties had age-adjusted incidence rates that ranked 27th to 47th in the state (see Appendix Table A7).¹⁰ The counties with low prevalence and fairly high age-adjusted incidence rates may have poor survivorship or newer trends of higher incidence.

Urinary Bladder

Figure 13. Estimated Complete Prevalence by Region and County, California, January 1, 2013

County	Prevalence Count (a)	Total Population (b)	Prevalence (a/b)*100
Los Angeles-Orange	22,425	14,354,350	0.16%
Los Angeles	14,763	9,984,389	0.15%
Orange	5,169	3,099,869	0.17%
Ventura	1,556	837,019	0.19%
Santa Barbara	937	433,073	0.22%
Bay Area	13,777	7,389,323	0.19%
Santa Clara	3,038	1,849,043	0.16%
Alameda	2,343	1,566,434	0.15%
Contra Costa	2,146	1,086,241	0.20%
San Mateo	1,589	743,037	0.21%
San Francisco	1,500	832,438	0.18%
Sonoma	1,247	492,821	0.25%
Marin	845	257,110	0.33%
Solano	725	422,570	0.17%
Napa	344	139,629	0.25%
Inland Empire	5,945	4,361,625	0.14%
Riverside	3,389	2,278,703	0.15%
San Bernardino	2,556	2,082,922	0.12%
Central Valley	5,133	4,056,058	0.13%
Fresno	1,165	951,436	0.12%
Kern	974	859,821	0.11%
San Joaquin	970	702,777	0.14%
Stanislaus	807	523,479	0.15%
Tulare	507	452,603	0.11%
Merced	341	262,440	0.13%
Madera	213	152,323	0.14%
Kings	156	151,179	0.10%
San Diego-Imperial	5,498	3,370,391	0.16%
San Diego	5,347	3,193,705	0.17%
Imperial	151	176,686	0.09%
Sacramento Region	4,444	2,303,129	0.19%
Sacramento	2,459	1,455,103	0.17%
Placer	817	364,373	0.22%
El Dorado	498	181,185	0.27%
Nevada	360	98,244	0.37%
Yolo	310	204,224	0.15%
Northern California	2,848	1,116,541	0.26%
Butte	622	221,561	0.28%
Shasta	510	178,682	0.29%
Del Norte-Humboldt	375	162,609	0.23%
Colusa_Glenn-Tehama	287	112,474	0.26%
Mendocino	262	87,292	0.30%
Lake	222	63,923	0.35%
Siskiyou-Trinity	209	57,498	0.36%
Sutter	138	95,012	0.15%
Lassen-Modoc-Plumas	115	61,264	0.19%
Sierra-Yuba	108	76,226	0.14%
Central Coast	1,975	1,028,218	0.19%
Monterey	713	427,457	0.17%
San Luis Obispo	634	275,541	0.23%
Santa Cruz	544	267,975	0.20%
San Benito	84	57,245	0.15%
High Sierra	630	187,005	0.34%
Alpine-Amador-Calaveras	310	82,539	0.38%
Mariposa-Tuolumne	261	71,792	0.36%
Inyo-Mono	59	32,674	0.18%
California	62,675	38,166,640	0.16%

Prevalence

0.09%-0.15%	0.16%-0.23%	0.24%-0.30%	0.31%-0.38%
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Population Size

32,674-99,999	100,000-499,999	500,000-999,999	1,000,000-3,999,999	4,000,000-9,999,999	10,000,000-14,354,350
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Non-Hodgkin Lymphoma

The complete prevalence by region and county for non-Hodgkin lymphoma is shown in Figure 14. Overall, 61,522 people with a history of non-Hodgkin lymphoma were alive in California on January 1, 2013. The counties with the highest prevalence were Marin and Mariposa-Tuolumne. These counties had the second and third highest age-adjusted incidence rates in the state for 2003 to 2012,¹⁰ which can explain the high prevalence. The county with the highest age-adjusted incidence rate in the state for 2003 to 2012 was San Benito (see Appendix Table A8).¹⁰ However, San Benito is in the second lowest prevalence group (0.17%). The high incidence and low prevalence in San Benito may represent poor survivorship. Non-Hodgkin lymphoma is more common in older white men and in people with a weakened immune system.²⁰ The median age at diagnosis is 66 years, and the five-year relative survival for all stages is 69.9%.^{5,20}

Some of the low prevalence counties had fairly high age-adjusted incidence rates which could represent poor survivorship or newer trends of higher incidence. Sierra-Yuba and Yolo had the 17th and 21st highest age-adjusted incidence rates, respectively, in the state for 2003 to 2012, but were in the lowest prevalence group (see Appendix Table A8).¹⁰ The other low prevalence counties had low age-adjusted incidence rates.

Non-Hodgkin Lymphoma

Figure 14. Estimated Complete Prevalence by Region and County, California, January 1, 2013

County	Prevalence Count (a)	Total Population (b)	Prevalence (a/b)*100
Los Angeles-Orange	22,900	14,354,350	0.16%
Los Angeles	15,257	9,984,389	0.15%
Orange	5,314	3,099,869	0.17%
Ventura	1,543	837,019	0.18%
Santa Barbara	786	433,073	0.18%
Bay Area	14,678	7,389,323	0.20%
Santa Clara	3,438	1,849,043	0.19%
Alameda	2,725	1,566,434	0.17%
Contra Costa	2,153	1,086,241	0.20%
San Francisco	1,837	832,438	0.22%
San Mateo	1,699	743,037	0.23%
Sonoma	1,026	492,821	0.21%
Solano	754	422,570	0.18%
Marin	751	257,110	0.29%
Napa	295	139,629	0.21%
Inland Empire	5,186	4,361,625	0.12%
Riverside	2,792	2,278,703	0.12%
San Bernardino	2,394	2,082,922	0.11%
Central Valley	4,966	4,056,058	0.12%
Fresno	1,240	951,436	0.13%
Kern	910	859,821	0.11%
San Joaquin	900	702,777	0.13%
Stanislaus	743	523,479	0.14%
Tulare	500	452,603	0.11%
Merced	304	262,440	0.12%
Madera	192	152,323	0.13%
Kings	177	151,179	0.12%
San Diego-Imperial	5,429	3,370,391	0.16%
San Diego	5,226	3,193,705	0.16%
Imperial	203	176,686	0.11%
Sacramento Region	3,860	2,303,129	0.17%
Sacramento	2,280	1,455,103	0.16%
Placer	674	364,373	0.18%
El Dorado	385	181,185	0.21%
Yolo	313	204,224	0.15%
Nevada	208	98,244	0.21%
Northern California	2,183	1,116,541	0.20%
Butte	439	221,561	0.20%
Shasta	386	178,682	0.22%
Del Norte-Humboldt	356	162,609	0.22%
Colusa_Glenn-Tehama	200	112,474	0.18%
Mendocino	186	87,292	0.21%
Sutter	149	95,012	0.16%
Lake	120	63,923	0.19%
Siskiyou-Trinity	118	57,498	0.21%
Sierra-Yuba	116	76,226	0.15%
Lassen-Modoc-Plumas	113	61,264	0.18%
Central Coast	1,870	1,028,218	0.18%
Monterey	699	427,457	0.16%
San Luis Obispo	555	275,541	0.20%
Santa Cruz	517	267,975	0.19%
San Benito	99	57,245	0.17%
High Sierra	450	187,005	0.24%
Mariposa-Tuolumne	206	71,792	0.29%
Alpine-Amador-Calaveras	195	82,539	0.24%
Inyo-Mono	49	32,674	0.15%
California	61,522	38,166,640	0.16%

Prevalence

0.11%-0.15%	0.16%-0.19%	0.20%-0.24%	0.25%-0.29%
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Population Size

32,674-99,999	100,000-499,999	500,000-999,999	1,000,000-3,999,999	4,000,000-9,999,999	10,000,000-14,354,350
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Lung and Bronchus

The complete prevalence by region and county for lung and bronchus cancer is shown in Figure 15. Overall, 46,543 people with a history of lung and bronchus cancer were alive in California on January 1, 2013. The counties with the highest prevalence were Lake, Siskiyou-Trinity, and Mariposa-Tuolumne. These counties also had high age-adjusted incidence rates of lung and bronchus cancer for 2003 to 2012, ranging from the highest in the state (Lake) and the fifth (Siskiyou-Trinity) and sixth highest (Mariposa-Tuolumne) (see Appendix Table A9).¹⁰

Many of the low prevalence counties had fairly high incidence rates. The Central Valley counties of Fresno, San Joaquin, Kern, Stanislaus, Merced, Madera, and Kings all had low prevalence but relatively high age-adjusted incidence rates, ranging from 13th to 24th highest in the state.¹⁰ Lung cancer is the leading cancer killer, with a five-year relative survival for all stages of 18%.⁵ The median age at diagnosis is 70 years.²¹ Counties with a low prevalence but high incidence likely have poor survivorship. Some of the other low prevalence counties had low age-adjusted incidence rates. Los Angeles, Santa Cruz, Santa Clara, and San Benito had the four lowest age-adjusted incidence rates in the state for 2003 to 2012 (see Appendix Table A9).¹⁰ Of note, the high prevalence, high incidence counties were in the lowest SES groups, while the low prevalence and low incidence counties were in the higher SES groups. Smoking is the biggest risk factor for lung cancer, and in the U.S. smoking rates are generally higher among people who have lower incomes or are living below the poverty level.^{22,23}

Lung and Bronchus

Figure 15. Estimated Complete Prevalence by Region and County, California, January 1, 2013

County	Prevalence Count (a)	Total Population (b)	Prevalence (a/b)*100
Los Angeles-Orange	16,430	14,354,350	0.11%
Los Angeles	10,684	9,984,389	0.11%
Orange	4,193	3,099,869	0.14%
Ventura	997	837,019	0.12%
Santa Barbara	556	433,073	0.13%
Bay Area	10,103	7,389,323	0.14%
Santa Clara	2,131	1,849,043	0.12%
Alameda	1,861	1,566,434	0.12%
Contra Costa	1,502	1,086,241	0.14%
San Francisco	1,383	832,438	0.17%
San Mateo	1,214	743,037	0.16%
Sonoma	717	492,821	0.15%
Solano	623	422,570	0.15%
Marin	441	257,110	0.17%
Napa	231	139,629	0.17%
Inland Empire	4,415	4,361,625	0.10%
Riverside	2,523	2,278,703	0.11%
San Bernardino	1,892	2,082,922	0.09%
Central Valley	4,106	4,056,058	0.10%
Fresno	975	951,436	0.10%
San Joaquin	818	702,777	0.12%
Kern	773	859,821	0.09%
Stanislaus	639	523,479	0.12%
Tulare	345	452,603	0.08%
Merced	265	262,440	0.10%
Madera	177	152,323	0.12%
Kings	114	151,179	0.08%
San Diego-Imperial	4,382	3,370,391	0.13%
San Diego	4,230	3,193,705	0.13%
Imperial	152	176,686	0.09%
Sacramento Region	3,367	2,303,129	0.15%
Sacramento	2,061	1,455,103	0.14%
Placer	588	364,373	0.16%
El Dorado	303	181,185	0.17%
Nevada	217	98,244	0.22%
Yolo	198	204,224	0.10%
Northern California	2,092	1,116,541	0.19%
Butte	449	221,561	0.20%
Shasta	375	178,682	0.21%
Del Norte-Humboldt	233	162,609	0.14%
Colusa_Glenn-Tehama	209	112,474	0.19%
Lake	181	63,923	0.28%
Siskiyou-Trinity	156	57,498	0.27%
Mendocino	148	87,292	0.17%
Sutter	130	95,012	0.14%
Sierra-Yuba	109	76,226	0.14%
Lassen-Modoc-Plumas	102	61,264	0.17%
Central Coast	1,210	1,028,218	0.12%
Monterey	444	427,457	0.10%
San Luis Obispo	425	275,541	0.15%
Santa Cruz	301	267,975	0.11%
San Benito	40	57,245	0.07%
High Sierra	438	187,005	0.23%
Mariposa-Tuolumne	207	71,792	0.29%
Alpine-Amador-Calaveras	191	82,539	0.23%
Inyo-Mono	40	32,674	0.12%
California	46,543	38,166,640	0.12%

Prevalence

0.07%-0.12% 0.13%-0.17% 0.18%-0.23% 0.24%-0.29%

Population Size

32,674-99,999 100,000-499,999 500,000-999,999 1,000,000-3,999,999 4,000,000-9,999,999 10,000,000-14,354,350

Kidney and Renal Pelvis

The complete prevalence by region and county for cancer of the kidney and renal pelvis is shown in Figure 16. Overall, 44,895 people with a history of kidney and renal pelvis cancer were alive in California on January 1, 2013. The counties with the highest prevalence were Alpine-Amador-Calaveras and Mariposa-Tuolumne. These counties did not have the highest age-adjusted incidence rates for 2003 to 2012. Mariposa-Tuolumne had the 11th highest age-adjusted incidence rate in the state for this time period, while Alpine-Amador-Calaveras had the 34th highest (see Appendix Table A10).¹⁰ The discrepancy could represent more recent declines in incidence rates or good survivorship. The five-year relative survival for all stages of kidney and renal pelvis cancer is 73.7%, and the median age at diagnosis is 64 years.²⁴ It is more common in men than women, and smoking and over the counter pain medicines are the main risk factors for renal cell carcinoma, the most common type of kidney and renal pelvis cancer.²⁴

Some of the low prevalence counties had low age-adjusted incidence rates for 2003 to 2012, including Santa Clara, Sutter, Los Angeles, Monterey, Orange, Sonoma, Inyo-Mono, San Francisco, Alameda, and Santa Cruz, where age-adjusted incidence rates were among the thirteen lowest in the state for that time period.¹⁰ However, some of the low prevalence counties had high age-adjusted incidence rates, including Kings, Fresno, Merced, Tulare, and Sierra-Yuba, where age-adjusted incidence rates ranged from 2nd to 10th highest in the state for that time period (see Appendix Table A10).¹⁰ A low prevalence and high incidence rate may represent poor survivorship. These low prevalence and high incidence rate counties had more of the population in the lower SES groups.

Kidney and Renal Pelvis

Figure 16. Estimated Complete Prevalence by Region and County, California, January 1, 2013

County	Prevalence Count (a)	Total Population (b)	Prevalence (a/b)*100
Los Angeles-Orange	16,242	14,354,350	0.11%
Los Angeles	11,218	9,984,389	0.11%
Orange	3,370	3,099,869	0.11%
Ventura	1,079	837,019	0.13%
Santa Barbara	575	433,073	0.13%
Bay Area	9,107	7,389,323	0.12%
Santa Clara	2,156	1,849,043	0.12%
Alameda	1,653	1,566,434	0.11%
Contra Costa	1,436	1,086,241	0.13%
San Mateo	1,067	743,037	0.14%
San Francisco	1,015	832,438	0.12%
Solano	613	422,570	0.15%
Sonoma	581	492,821	0.12%
Marin	358	257,110	0.14%
Napa	228	139,629	0.16%
Inland Empire	4,538	4,361,625	0.10%
Riverside	2,359	2,278,703	0.10%
San Bernardino	2,179	2,082,922	0.10%
Central Valley	4,658	4,056,058	0.11%
Fresno	1,169	951,436	0.12%
Kern	910	859,821	0.11%
San Joaquin	770	702,777	0.11%
Stanislaus	660	523,479	0.13%
Tulare	503	452,603	0.11%
Merced	301	262,440	0.11%
Madera	181	152,323	0.12%
Kings	164	151,179	0.11%
San Diego-Imperial	4,288	3,370,391	0.13%
San Diego	4,044	3,193,705	0.13%
Imperial	244	176,686	0.14%
Sacramento Region	2,939	2,303,129	0.13%
Sacramento	1,811	1,455,103	0.12%
Placer	473	364,373	0.13%
El Dorado	277	181,185	0.15%
Yolo	213	204,224	0.10%
Nevada	165	98,244	0.17%
Northern California	1,601	1,116,541	0.14%
Butte	317	221,561	0.14%
Shasta	279	178,682	0.16%
Del Norte-Humboldt	212	162,609	0.13%
Colusa_Glenn-Tehama	153	112,474	0.14%
Mendocino	142	87,292	0.16%
Sutter	114	95,012	0.12%
Siskiyou-Trinity	102	57,498	0.18%
Lassen-Modoc-Plumas	101	61,264	0.16%
Lake	99	63,923	0.15%
Sierra-Yuba	82	76,226	0.11%
Central Coast	1,176	1,028,218	0.11%
Monterey	461	427,457	0.11%
San Luis Obispo	356	275,541	0.13%
Santa Cruz	289	267,975	0.11%
San Benito	70	57,245	0.12%
High Sierra	346	187,005	0.19%
Alpine-Amador-Calaveras	157	82,539	0.19%
Mariposa-Tuolumne	151	71,792	0.21%
Inyo-Mono	38	32,674	0.12%
California	44,895	38,166,640	0.12%

Prevalence

0.10%-0.12% 0.13%-0.15% 0.16%-0.17% 0.18%-0.21%

Population Size

32,674-99,999 100,000-499,999 500,000-999,999 1,000,000-3,999,999 4,000,000-9,999,999 10,000,000-14,354,350

Leukemia

The complete prevalence by region and county for leukemia is shown in Figure 17. Overall, 36,170 people with a history of leukemia were alive in California on January 1, 2013. The counties with the highest prevalence were Marin, Napa, and Mariposa-Tuolumne. These counties also had high age-adjusted incidence rates for 2003 to 2012. Napa and Mariposa-Tuolumne had the first and second highest age-adjusted incidence rates in the state for that time period, while Marin had the eighth highest (see Appendix Table A11).¹⁰

Many of the counties with a low prevalence also had low age-adjusted incidence rates for 2003 to 2012, including Imperial, San Bernardino, Monterey, Riverside, Kern, San Joaquin, Alameda, Stanislaus, Sacramento, and Inyo-Mono, which ranked 35th to 47th in the state.¹⁰ However, some counties had low prevalence but fairly high age-adjusted incidence rates, including Sierra-Yuba, Sutter, Kings, Fresno, Tulare, and Madera, which had the 11th through 25th highest age-adjusted incidence rates in the state (see Appendix Table A11).¹⁰ Having a low prevalence but high incidence rate may represent newer trends of higher incidence rates or poor survivorship in these counties. The five-year relative survival rate for leukemia is 58.1%.⁵ Leukemia occurs most often in adults over the age of 55 years, but it is also the most common cancer in children under the age of 15.²⁵

Leukemia

Figure 17. Estimated Complete Prevalence by Region and County, California, January 1, 2013

County	Prevalence Count (a)	Total Population (b)	Prevalence (a/b)*100
Los Angeles-Orange	14,106	14,354,350	0.10%
Los Angeles	9,614	9,984,389	0.10%
Orange	3,143	3,099,869	0.10%
Ventura	850	837,019	0.10%
Santa Barbara	499	433,073	0.12%
Bay Area	7,599	7,389,323	0.10%
Santa Clara	1,880	1,849,043	0.10%
Alameda	1,404	1,566,434	0.09%
Contra Costa	1,106	1,086,241	0.10%
San Mateo	882	743,037	0.12%
San Francisco	810	832,438	0.10%
Sonoma	485	492,821	0.10%
Solano	445	422,570	0.11%
Marin	385	257,110	0.15%
Napa	202	139,629	0.14%
Inland Empire	3,428	4,361,625	0.08%
Riverside	1,740	2,278,703	0.08%
San Bernardino	1,688	2,082,922	0.08%
Central Valley	3,319	4,056,058	0.08%
Fresno	855	951,436	0.09%
Kern	650	859,821	0.08%
San Joaquin	531	702,777	0.08%
Stanislaus	414	523,479	0.08%
Tulare	373	452,603	0.08%
Merced	244	262,440	0.09%
Madera	131	152,323	0.09%
Kings	121	151,179	0.08%
San Diego-Imperial	3,145	3,370,391	0.09%
San Diego	3,020	3,193,705	0.09%
Imperial	125	176,686	0.07%
Sacramento Region	2,068	2,303,129	0.09%
Sacramento	1,161	1,455,103	0.08%
Placer	354	364,373	0.10%
El Dorado	238	181,185	0.13%
Yolo	193	204,224	0.09%
Nevada	122	98,244	0.12%
Northern California	1,215	1,116,541	0.11%
Butte	266	221,561	0.12%
Shasta	191	178,682	0.11%
Del Norte-Humboldt	183	162,609	0.11%
Colusa_Glenn-Tehama	146	112,474	0.13%
Mendocino	91	87,292	0.10%
Sutter	86	95,012	0.09%
Siskiyou-Trinity	67	57,498	0.12%
Sierra-Yuba	65	76,226	0.09%
Lake	61	63,923	0.10%
Lassen-Modoc-Plumas	59	61,264	0.10%
Central Coast	1,063	1,028,218	0.10%
Monterey	376	427,457	0.09%
San Luis Obispo	332	275,541	0.12%
Santa Cruz	300	267,975	0.11%
San Benito	55	57,245	0.10%
High Sierra	227	187,005	0.12%
Mariposa-Tuolumne	110	71,792	0.15%
Alpine-Amador-Calaveras	88	82,539	0.11%
Inyo-Mono	29	32,674	0.09%
California	36,170	38,166,640	0.09%

Prevalence

0.07%-0.08%	0.09%-0.10%	0.11%-0.12%	0.13%-0.15%
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Population Size

32,674-99,999	100,000-499,999	500,000-999,999	1,000,000-3,999,999	4,000,000-9,999,999	10,000,000-14,354,350
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Cervix Uteri

The complete prevalence by region and county for cervical cancer is shown in Figure 18. Overall, 35,660 women with a history of cervical cancer were alive in California on January 1, 2013. The counties with the highest prevalence were Los Angeles, San Francisco, Madera, Mendocino, and Mariposa-Tuolumne-Inyo-Mono. Madera, Mendocino, and Los Angeles had high age-adjusted incidence rates for 2003 to 2012. Madera had the highest age-adjusted incidence rate in the state followed by Mendocino (4th) and Los Angeles (7th).¹⁰ San Francisco had a high prevalence but low age-adjusted incidence (36th),¹⁰ which may reflect good survivorship (see Appendix Table A12).

Some of the counties with low prevalence also had low age-adjusted incidence rates. Placer and San Luis Obispo had low prevalence and were 41st and 44th in the state, respectively, for age-adjusted incidence rates for 2003 to 2012.¹⁰ Some counties had low prevalence but high age-adjusted incidence rates, including Lassen-Modoc-Plumas, Riverside, and Sutter, which had the 14th, 17th, and 20th, respectively, highest age-adjusted incidence rates in the state for that time period (see Appendix Table A12).¹⁰ Low prevalence and high incidence can represent poor survivorship in these areas. A good screening test (Pap smear) exists which can detect cervical cancer early and even identify precancerous changes that can be removed before they become cancer.^{5,26} Counties with high prevalence but low incidence could have better screening efforts that result in earlier detection and better survival. Counties with low prevalence but high incidence may have poor screening, resulting in diagnosis at later stages when survival is poor. The five-year relative survival for all stages of cervical cancer is 70.2%.⁵ The biggest risk factor for cervical cancer is infection with human papillomavirus (HPV).^{5,26} An effective vaccine against HPV exists and is recommended for preteens beginning at age 11 or 12 years.⁵

Cervix Uteri

Figure 18. Estimated Complete Prevalence by Region and County, California, January 1, 2013

County	Prevalence Count (a)	Total Population (b)	Prevalence (a/b)*100
Los Angeles-Orange	15,742	7,262,935	0.22%
Los Angeles	11,859	5,059,459	0.23%
Orange	2,808	1,566,314	0.18%
Ventura	696	421,708	0.17%
Santa Barbara	379	215,454	0.18%
Bay Area	6,532	3,723,446	0.18%
Santa Clara	1,686	919,466	0.18%
Alameda	1,273	798,294	0.16%
San Francisco	953	408,743	0.23%
Contra Costa	777	555,876	0.14%
San Mateo	705	377,215	0.19%
Sonoma	432	250,747	0.17%
Solano	375	211,711	0.18%
Marin	207	131,361	0.16%
Napa	124	70,033	0.18%
Inland Empire	3,141	2,189,153	0.14%
San Bernardino	1,647	1,045,808	0.16%
Riverside	1,494	1,143,345	0.13%
Central Valley	3,460	2,012,218	0.17%
Fresno	799	476,153	0.17%
Kern	782	418,579	0.19%
San Joaquin	503	352,871	0.14%
Tulare	445	225,470	0.20%
Stanislaus	413	264,282	0.16%
Merced	204	129,855	0.16%
Madera	185	78,196	0.24%
Kings	129	66,812	0.19%
San Diego-Imperial	2,866	1,674,307	0.17%
San Diego	2,712	1,588,313	0.17%
Imperial	154	85,994	0.18%
Sacramento Region	2,003	1,174,326	0.17%
Sacramento	1,393	742,739	0.19%
Placer	223	186,465	0.12%
Yolo	164	104,800	0.16%
El Dorado	153	90,564	0.17%
Nevada	70	49,758	0.14%
Northern California	932	553,966	0.17%
Butte	160	111,648	0.14%
Shasta	155	91,017	0.17%
Del Norte-Humboldt	142	79,692	0.18%
Mendocino	114	43,751	0.26%
Colusa_Glenn-Tehama	106	55,872	0.19%
Sierra-Yuba	64	37,665	0.17%
Lake	64	31,943	0.20%
Sutter	49	47,681	0.10%
Siskiyou-Trinity	45	28,677	0.16%
Lassen-Modoc-Plumas	33	26,020	0.13%
Central Coast	796	505,770	0.16%
Monterey	381	207,766	0.18%
Santa Cruz	202	134,629	0.15%
San Luis Obispo	163	134,810	0.12%
San Benito	50	28,565	0.18%
High Sierra	188	90,216	0.21%
Mariposa-Tuolumne-Inyo-Mono	111	50,279	0.22%
Alpine-Amador-Calaveras	77	39,937	0.19%
California	35,660	19,186,337	0.19%

Prevalence
 0.10%-0.13% 0.14%-0.17% 0.18%-0.21% 0.22%-0.26%

Population Size
 15,774-49,999 50,000-249,999 250,000-499,999 500,000-1,999,999 2,000,000-4,999,999 5,000,000-7,262,935

Oral Cavity and Pharynx

The complete prevalence by region and county for cancer of the oral cavity and pharynx (oropharyngeal cancer) is shown in Figure 19. Overall, 35,395 people with a history of oropharyngeal cancer were alive in California on January 1, 2013. The counties with the highest prevalence were Marin and Mariposa-Tuolumne. These counties had the 2nd and 3rd highest age-adjusted incidence rates in the state for 2003 to 2012 (see Appendix Table A13).¹⁰

Stanislaus, Riverside, San Bernardino, Fresno, Sutter, Monterey, Imperial, Merced, Santa Clara, San Benito, Madera, Los Angeles, Tulare, Inyo-Mono all had low prevalence and low age-adjusted incidence rates for 2003 to 2012, ranging from 36th to 47th in the state.¹⁰ Sierra-Yuba, Kings, and Kern all had low prevalence but fairly high age-adjusted incidence rates (Sierra-Yuba 12th, Kings 16th, Kern 17th),¹⁰ which could represent poor survivorship (see Appendix Table A13). Primary risk factors for oropharyngeal cancer include tobacco use, frequent alcohol consumption, and infection with human papillomavirus (HPV).²⁷ The five-year relative survival for all stages of oropharyngeal cancer is 66.5%.⁵

Oral Cavity and Pharynx

Figure 19. Estimated Complete Prevalence by Region and County, California, January 1, 2013

County	Prevalence Count (a)	Total Population (b)	Prevalence (a/b)*100
Los Angeles-Orange	12,228	14,354,350	0.09%
Los Angeles	7,892	9,984,389	0.08%
Orange	3,086	3,099,869	0.10%
Ventura	797	837,019	0.10%
Santa Barbara	453	433,073	0.10%
Bay Area	8,192	7,389,323	0.11%
Santa Clara	1,717	1,849,043	0.09%
Alameda	1,523	1,566,434	0.10%
Contra Costa	1,167	1,086,241	0.11%
San Francisco	1,107	832,438	0.13%
San Mateo	932	743,037	0.13%
Sonoma	653	492,821	0.13%
Marin	459	257,110	0.18%
Solano	454	422,570	0.11%
Napa	180	139,629	0.13%
Inland Empire	3,240	4,361,625	0.07%
Riverside	1,756	2,278,703	0.08%
San Bernardino	1,484	2,082,922	0.07%
Central Valley	3,034	4,056,058	0.07%
Kern	679	859,821	0.08%
Fresno	677	951,436	0.07%
San Joaquin	558	702,777	0.08%
Stanislaus	420	523,479	0.08%
Tulare	289	452,603	0.06%
Merced	166	262,440	0.06%
Kings	128	151,179	0.08%
Madera	117	152,323	0.08%
San Diego-Imperial	3,494	3,370,391	0.10%
San Diego	3,375	3,193,705	0.11%
Imperial	119	176,686	0.07%
Sacramento Region	2,465	2,303,129	0.11%
Sacramento	1,452	1,455,103	0.10%
Placer	418	364,373	0.11%
El Dorado	276	181,185	0.15%
Yolo	174	204,224	0.09%
Nevada	145	98,244	0.15%
Northern California	1,399	1,116,541	0.13%
Shasta	264	178,682	0.15%
Butte	246	221,561	0.11%
Del Norte-Humboldt	206	162,609	0.13%
Colusa_Glenn-Tehama	152	112,474	0.14%
Mendocino	134	87,292	0.15%
Lake	88	63,923	0.14%
Sutter	87	95,012	0.09%
Siskiyou-Trinity	83	57,498	0.14%
Lassen-Modoc-Plumas	70	61,264	0.11%
Sierra-Yuba	69	76,226	0.09%
Central Coast	1,051	1,028,218	0.10%
San Luis Obispo	357	275,541	0.13%
Monterey	347	427,457	0.08%
Santa Cruz	299	267,975	0.11%
San Benito	48	57,245	0.08%
High Sierra	292	187,005	0.16%
Mariposa-Tuolumne	142	71,792	0.20%
Alpine-Amador-Calaveras	125	82,539	0.15%
Inyo-Mono	25	32,674	0.08%
California	35,395	38,166,640	0.09%

Prevalence

0.06%-0.09% 0.10%-0.12% 0.13%-0.16% 0.17%-0.20%

Population Size

32,674-99,999 100,000-499,999 500,000-999,999 1,000,000-3,999,999 4,000,000-9,999,999 10,000,000-14,354,350

Testis

The complete prevalence by region and county for testicular cancer is shown in Figure 20. Overall, 26,949 men with a history of testicular cancer were alive in California on January 1, 2013. The counties with the highest prevalence were Marin, Santa Cruz, San Luis Obispo, and Alpine-Amador-Calaveras. All of these counties had high age-adjusted incidence rates for 2003 to 2012, ranking 2nd (Alpine-Amador-Calaveras), 5th (Santa Cruz), 7th (San Luis Obispo), and 12th (Marin) in the state (see Appendix Table A14).¹⁰

Kern, Imperial, Riverside, San Joaquin, Sutter, San Bernardino, Fresno, Tulare, Merced, Madera, and Lassen-Modoc-Plumas all had low prevalence and low age-adjusted incidence rates for 2003 to 2012, ranging from 25th to 45th in the state.¹⁰ The median age at diagnosis for testicular cancer is 33 years, and it is the most frequently diagnosed cancer among men aged 20 to 34.²⁸ It is more common in white men and in men who have had an undescended testicle, abnormal development of the testicles, or a family history of testicular cancer.²⁹ The five-year relative survival for all stages of testicular cancer is 94.4%.⁵

Testis

Figure 20. Estimated Complete Prevalence by Region and County, California, January 1, 2013

County	Prevalence Count (a)	Total Population (b)	Prevalence (a/b)*100
Los Angeles-Orange	10,124	7,091,415	0.14%
Los Angeles	6,664	4,924,930	0.14%
Orange	2,435	1,533,555	0.16%
Ventura	680	415,311	0.16%
Santa Barbara	345	217,619	0.16%
Bay Area	5,707	3,665,877	0.16%
Santa Clara	1,417	929,577	0.15%
Alameda	1,098	768,140	0.14%
Contra Costa	766	530,365	0.14%
San Francisco	761	423,695	0.18%
San Mateo	625	365,822	0.17%
Sonoma	369	242,074	0.15%
Solano	290	210,859	0.14%
Marin	282	125,749	0.22%
Napa	99	69,596	0.14%
Inland Empire	2,472	2,172,472	0.11%
San Bernardino	1,281	1,037,114	0.12%
Riverside	1,191	1,135,358	0.10%
Central Valley	2,397	2,043,840	0.12%
Fresno	568	475,283	0.12%
Kern	516	441,242	0.12%
San Joaquin	409	349,906	0.12%
Stanislaus	357	259,197	0.14%
Tulare	230	227,133	0.10%
Merced	139	132,585	0.10%
Kings	106	84,367	0.13%
Madera	72	74,127	0.10%
San Diego-Imperial	2,576	1,696,084	0.15%
San Diego	2,482	1,605,392	0.15%
Imperial	94	90,692	0.10%
Sacramento Region	1,723	1,128,803	0.15%
Sacramento	1,075	712,364	0.15%
Placer	257	177,908	0.14%
El Dorado	159	90,621	0.18%
Yolo	144	99,424	0.14%
Nevada	88	48,486	0.18%
Northern California	903	562,575	0.16%
Butte	194	109,913	0.18%
Shasta	161	87,665	0.18%
Del Norte-Humboldt	152	82,917	0.18%
Colusa_Glenn-Tehama	82	56,602	0.14%
Mendocino	72	43,541	0.17%
Sierra-Yuba	62	38,561	0.16%
Sutter	59	47,331	0.12%
Siskiyou-Trinity	45	28,821	0.16%
Lake	42	31,980	0.13%
Lassen-Modoc-Plumas	34	35,244	0.10%
Central Coast	873	522,448	0.17%
Santa Cruz	286	133,346	0.21%
Monterey	277	219,691	0.13%
San Luis Obispo	266	140,731	0.19%
San Benito	44	28,680	0.15%
High Sierra	174	96,789	0.18%
Mariposa-Tuolumne-Inyo-Mono	88	54,187	0.16%
Alpine-Amador-Calaveras	86	42,602	0.20%
California	26,949	18,980,303	0.14%

Prevalence

0.10%-0.12%	0.13%-0.15%	0.16%-0.18%	0.19%-0.22%
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Population Size

16,900-49,999	50,000-249,999	250,000-499,999	500,000-1,999,999	2,000,000-4,999,999	5,000,000-7,091,415
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Ovary

The complete prevalence by region and county for ovarian cancer is shown in Figure 21. Overall, 23,590 women with a history of ovarian cancer were alive in California on January 1, 2013. The counties with the highest prevalence were Marin, Nevada, Lake, and Mariposa-Tuolumne-Inyo-Mono. These counties had high age-adjusted incidence rates for 2003 to 2012, ranking 1st (Nevada), 3rd (Marin), 9th (Mariposa-Tuolumne), and 16th (Lake) in the state (see Appendix Table A15).¹⁰

Fresno, Riverside, Kern, Stanislaus, Merced, San Joaquin, Kings, Imperial, and Madera all had low prevalence and low age-adjusted incidence rates for 2003 to 2012, ranging from 26th to 46th in the state.¹⁰ Tulare had a low prevalence but a fairly high age-adjusted incidence rate (14th),¹⁰ which could indicate poor survivorship. Women with a family history of the disease, especially in a first degree relative, are at increased risk of ovarian cancer.³⁰ The median age at diagnosis for ovarian cancer is 63 years, and the five-year relative survival for all stages is 49.4%.^{5,30}

Ovary

Figure 21. Estimated Complete Prevalence by Region and County, California, January 1, 2013

County	Prevalence Count (a)	Total Population (b)	Prevalence (a/b)*100
Los Angeles-Orange	9,416	7,262,935	0.13%
Los Angeles	6,425	5,059,459	0.13%
Orange	2,089	1,566,314	0.13%
Ventura	597	421,708	0.14%
Santa Barbara	305	215,454	0.14%
Bay Area	5,287	3,723,446	0.14%
Santa Clara	1,205	919,466	0.13%
Alameda	1,027	798,294	0.13%
Contra Costa	744	555,876	0.13%
San Francisco	635	408,743	0.16%
San Mateo	618	377,215	0.16%
Sonoma	392	250,747	0.16%
Solano	288	211,711	0.14%
Marin	260	131,361	0.20%
Napa	118	70,033	0.17%
Inland Empire	2,157	2,189,153	0.10%
San Bernardino	1,127	1,045,808	0.11%
Riverside	1,030	1,143,345	0.09%
Central Valley	1,818	2,012,218	0.09%
Fresno	450	476,153	0.09%
Kern	360	418,579	0.09%
San Joaquin	314	352,871	0.09%
Stanislaus	271	264,282	0.10%
Tulare	213	225,470	0.09%
Merced	109	129,855	0.08%
Madera	57	78,196	0.07%
Kings	44	66,812	0.07%
San Diego-Imperial	1,932	1,674,307	0.12%
San Diego	1,867	1,588,313	0.12%
Imperial	65	85,994	0.08%
Sacramento Region	1,378	1,174,326	0.12%
Sacramento	783	742,739	0.11%
Placer	242	186,465	0.13%
El Dorado	129	90,564	0.14%
Yolo	115	104,800	0.11%
Nevada	109	49,758	0.22%
Northern California	741	553,966	0.13%
Butte	133	111,648	0.12%
Shasta	122	91,017	0.13%
Del Norte-Humboldt	114	79,692	0.14%
Mendocino	77	43,751	0.18%
Colusa_Glenn-Tehama	70	55,872	0.13%
Lake	69	31,943	0.22%
Sutter	51	47,681	0.11%
Siskiyou-Trinity	39	28,677	0.14%
Lassen-Modoc-Plumas	38	26,020	0.15%
Sierra-Yuba	28	37,665	0.07%
Central Coast	681	505,770	0.13%
Monterey	250	207,766	0.12%
San Luis Obispo	203	134,810	0.15%
Santa Cruz	188	134,629	0.14%
San Benito	40	28,565	0.14%
High Sierra	180	90,216	0.20%
Mariposa-Tuolumne-Inyo-Mono	109	50,279	0.22%
Alpine-Amador-Calaveras	71	39,937	0.18%
California	23,590	19,186,337	0.12%

Prevalence

0.07%-0.10%	0.11%-0.14%	0.15%-0.17%	0.18%-0.22%
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Population Size

15,774-49,999	50,000-249,999	250,000-499,999	500,000-1,999,999	2,000,000-4,999,999	5,000,000-7,262,935
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Hodgkin Lymphoma

The complete prevalence by region and county for Hodgkin lymphoma is shown in Figure 22. Overall, 19,337 people with a history of Hodgkin lymphoma were alive in California on January 1, 2013. The counties with the highest prevalence were San Francisco, Solano, Napa, Del Norte-Humboldt, Mendocino, Siskiyou-Trinity, and Santa Cruz. These counties had high age-adjusted incidence rates for 2003 to 2012, ranking 1st (Siskiyou-Trinity), 4th (Solano), 5th (San Francisco), 7th (Mendocino), 10th (Santa Cruz), 11th (Del Norte-Humboldt), and 16th (Napa) in the state (see Appendix Table A16).¹⁰

San Bernardino, Riverside, Kern, Tulare, Madera, Kings, and Imperial had low prevalence and low age-adjusted incidence rates for 2003 to 2012, ranging from 24th to 44th in the state.¹⁰ San Joaquin and Fresno had low prevalence but fairly high age-adjusted incidence rates (13th and 18th, respectively),¹⁰ which may indicate poor survivorship in these counties. The median age at diagnosis for Hodgkin lymphoma is 39 years, and the five-year relative survival for all stages is 84.9%.^{5,31} Hodgkin lymphoma is more common in men and in people with a family history of Hodgkin lymphoma or past infection with Epstein-Barr virus.³¹

Hodgkin Lymphoma

Figure 22. Estimated Complete Prevalence by Region and County, California, January 1, 2013

County	Prevalence Count (a)	Total Population (b)	Prevalence (a/b)*100
Los Angeles-Orange	7,304	14,354,350	0.05%
Los Angeles	5,059	9,984,389	0.05%
Orange	1,543	3,099,869	0.05%
Ventura	483	837,019	0.06%
Santa Barbara	219	433,073	0.05%
Bay Area	4,352	7,389,323	0.06%
Santa Clara	1,035	1,849,043	0.06%
Alameda	857	1,566,434	0.05%
San Francisco	595	832,438	0.07%
Contra Costa	570	1,086,241	0.05%
San Mateo	452	743,037	0.06%
Solano	293	422,570	0.07%
Sonoma	284	492,821	0.06%
Marin	167	257,110	0.06%
Napa	99	139,629	0.07%
Inland Empire	1,748	4,361,625	0.04%
San Bernardino	914	2,082,922	0.04%
Riverside	834	2,278,703	0.04%
Central Valley	1,648	4,056,058	0.04%
Fresno	379	951,436	0.04%
San Joaquin	298	702,777	0.04%
Kern	287	859,821	0.03%
Stanislaus	254	523,479	0.05%
Tulare	185	452,603	0.04%
Merced	127	262,440	0.05%
Madera	65	152,323	0.04%
Kings	53	151,179	0.04%
San Diego-Imperial	1,757	3,370,391	0.05%
San Diego	1,696	3,193,705	0.05%
Imperial	61	176,686	0.03%
Sacramento Region	1,221	2,303,129	0.05%
Sacramento	762	1,455,103	0.05%
Placer	186	364,373	0.05%
Yolo	111	204,224	0.05%
El Dorado	108	181,185	0.06%
Nevada	54	98,244	0.05%
Northern California	632	1,116,541	0.06%
Shasta	115	178,682	0.06%
Butte	114	221,561	0.05%
Del Norte-Humboldt	109	162,609	0.07%
Mendocino	61	87,292	0.07%
Colusa-Glenn-Tehama	55	112,474	0.05%
Siskiyou-Trinity	41	57,498	0.07%
Lassen-Modoc-Plumas	37	61,264	0.06%
Sierra-Yuba	37	76,226	0.05%
Sutter	32	95,012	0.03%
Lake	31	63,923	0.05%
Central Coast	570	1,028,218	0.06%
Monterey	205	427,457	0.05%
Santa Cruz	176	267,975	0.07%
San Luis Obispo	161	275,541	0.06%
San Benito	28	57,245	0.05%
High Sierra	105	187,005	0.06%
Mariposa-Tuolumne-Inyo-Mono	63	104,466	0.06%
Alpine-Amador-Calaveras	42	82,539	0.05%
California	19,337	38,166,640	0.05%

Prevalence

0.03%-0.04%	0.05%-0.06%	0.07%
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Population Size

32,674-99,999	100,000-499,999	500,000-999,999	1,000,000-3,999,999	4,000,000-9,999,999	10,000,000-14,354,350
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Brain and CNS

The complete prevalence by region and county for brain and central nervous system (CNS) cancer is shown in Figure 23. Overall, 16,415 people with a history of brain and CNS cancer were alive in California on January 1, 2013. The counties with the highest prevalence were Sonoma, Marin, El Dorado, Colusa-Glenn-Tehama, Mendocino, Sierra-Yuba, Lassen-Modoc-Plumas, and Alpine-Amador-Calaveras. These counties had high age-adjusted incidence rates for 2003 to 2012, ranking 1st (Marin), 2nd (Sonoma), 9th (Sierra-Yuba), 12th (Lassen-Modoc-Plumas), 13th (Colusa-Glenn-Tehama), and 15th (El Dorado) in the state.¹⁰ Mendocino and Alpine-Amador-Calaveras had high prevalence but low age-adjusted incidence rates for 2003 to 2012, ranking 41st and 42nd in the state, respectively (see Appendix Table A17).¹⁰ This could reflect good survivorship in these areas.

Riverside, Tulare, Madera, and Imperial had low prevalence and low age-adjusted incidence rates for 2003 to 2012, ranging from 34th to 46th in the state.¹⁰ The cause of most adult brain and spinal cord tumors is unknown.³² The median age at diagnosis for CNS cancer is 58 years, and the five-year relative survival for all stages is 33.8%.³²

Brain and Central Nervous System

Figure 23. Estimated Complete Prevalence by Region and County, California, January 1, 2013

County	Prevalence Count (a)	Total Population (b)	Prevalence (a/b)*100
Los Angeles-Orange	5,946	14,354,350	0.04%
Los Angeles	3,971	9,984,389	0.04%
Orange	1,430	3,099,869	0.05%
Ventura	375	837,019	0.04%
Santa Barbara	170	433,073	0.04%
Bay Area	3,700	7,389,323	0.05%
Santa Clara	875	1,849,043	0.05%
Alameda	711	1,566,434	0.05%
Contra Costa	535	1,086,241	0.05%
San Francisco	454	832,438	0.05%
San Mateo	385	743,037	0.05%
Sonoma	313	492,821	0.06%
Solano	199	422,570	0.05%
Marin	160	257,110	0.06%
Napa	68	139,629	0.05%
Inland Empire	1,516	4,361,625	0.03%
San Bernardino	763	2,082,922	0.04%
Riverside	753	2,278,703	0.03%
Central Valley	1,614	4,056,058	0.04%
Fresno	367	951,436	0.04%
Kern	331	859,821	0.04%
San Joaquin	318	702,777	0.05%
Stanislaus	227	523,479	0.04%
Tulare	147	452,603	0.03%
Merced	120	262,440	0.05%
Kings	58	151,179	0.04%
Madera	46	152,323	0.03%
San Diego-Imperial	1,422	3,370,391	0.04%
San Diego	1,364	3,193,705	0.04%
Imperial	58	176,686	0.03%
Sacramento Region	1,076	2,303,129	0.05%
Sacramento	649	1,455,103	0.04%
Placer	199	364,373	0.05%
El Dorado	103	181,185	0.06%
Yolo	76	204,224	0.04%
Nevada	49	98,244	0.05%
Northern California	554	1,116,541	0.05%
Shasta-Siskiyou-Trinity	129	279,059	0.05%
Butte	81	178,682	0.05%
Del Norte-Humboldt	77	162,609	0.05%
Colusa-Glenn-Tehama	63	112,474	0.06%
Mendocino	51	87,292	0.06%
Sutter	45	95,012	0.05%
Sierra-Yuba	43	76,226	0.06%
Lake	28	63,923	0.04%
Lassen-Modoc-Plumas	37	61,264	0.06%
Central Coast	491	1,028,218	0.05%
Monterey-San Benito	234	484,702	0.05%
San Luis Obispo	134	275,541	0.05%
Santa Cruz	123	267,975	0.05%
High Sierra	96	187,005	0.05%
Mariposa-Tuolumne-Inyo-Mono	49	104,466	0.05%
Alpine-Amador-Calaveras	47	82,539	0.06%
California	16,415	38,166,640	0.04%

Prevalence

0.03%	0.04%	0.05%	0.06%
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Population Size

32,674-99,999	100,000-499,999	500,000-999,999	1,000,000-3,999,999	4,000,000-9,999,999	10,000,000-14,354,350
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Stomach

The complete prevalence by region and county for stomach cancer is shown in Figure 24. Overall, 11,669 people with a history of stomach cancer were alive in California on January 1, 2013. San Francisco had the highest prevalence, followed by Los Angeles, San Mateo, and Marin. San Francisco, Los Angeles, and San Mateo had high age-adjusted incidence rates in 2003 to 2012, ranking 2nd, 3rd, and 6th in the state, respectively.¹⁰ Marin, however, ranked 38th in the state for age-adjusted incidence during this time period (see Appendix Table A18).¹⁰ The high prevalence but low incidence in Marin could indicate good survivorship.

Sonoma, Riverside, San Bernardino, Fresno, San Joaquin, Stanislaus, Tulare, Merced, Kings, Madera, San Diego, Imperial, Placer-Nevada, Yolo, El Dorado, Shasta-Siskiyou-Trinity, Colusa-Glenn-Tehama-Mendocino-Lake, Butte-Lassen-Modoc-Plumas, Sutter-Sierra-Yuba, Del Norte-Humboldt, San Luis Obispo, Santa Cruz, and Alpine-Amador-Calaveras-Inyo-Mono all had low prevalence. Of these low prevalence counties, Imperial, San Joaquin, Kings, Fresno, and San Bernardino had high age-adjusted incidence rates for 2003 to 2012, ranking 1st (Imperial), 7th (San Joaquin), 8th (Kings), 10th (Fresno), and 11th (San Bernardino) in the state (see Appendix Table A18).¹⁰ Low prevalence but high incidence may reflect poor survivorship. Dietary factors (e.g., high intake of smoked foods, low intake of fruits and vegetables), stomach disease, smoking, and family history are risk factors for stomach cancer.³³ Stomach cancer is more common in men, and the median age at diagnosis is 69 years.³³ The five-year relative survival for all stages combined is 30.4%.³³

Stomach

Figure 24. Estimated Complete Prevalence by Region and County, California, January 1, 2013

County	Prevalence Count (a)	Total Population (b)	Prevalence (a/b)*100
Los Angeles-Orange	5,601	14,354,350	0.04%
Los Angeles	4,200	9,984,389	0.04%
Orange	1,063	3,099,869	0.03%
Ventura	214	837,019	0.03%
Santa Barbara	124	433,073	0.03%
Bay Area	2,520	7,389,323	0.03%
Santa Clara	638	1,849,043	0.03%
Alameda	479	1,566,434	0.03%
San Francisco	449	832,438	0.05%
San Mateo	309	743,037	0.04%
Contra Costa	293	1,086,241	0.03%
Sonoma	114	492,821	0.02%
Solano	106	422,570	0.03%
Marin	91	257,110	0.04%
Napa	41	139,629	0.03%
Inland Empire	813	4,361,625	0.02%
Riverside	413	2,278,703	0.02%
San Bernardino	400	2,082,922	0.02%
Central Valley	911	4,056,058	0.02%
Kern	247	951,436	0.03%
Fresno	178	859,821	0.02%
San Joaquin	172	702,777	0.02%
Stanislaus	111	523,479	0.02%
Tulare	89	452,603	0.02%
Merced	42	262,440	0.02%
Kings	37	152,323	0.02%
Madera	35	151,179	0.02%
San Diego-Imperial	735	3,370,391	0.02%
San Diego	694	3,193,705	0.02%
Imperial	41	176,686	0.02%
Sacramento Region	560	2,303,129	0.02%
Sacramento	368	1,455,103	0.03%
Placer-Nevada	106	462,617	0.02%
Yolo	47	204,224	0.02%
El Dorado	39	181,185	0.02%
Northern California	228	1,116,541	0.02%
Shasta-Siskiyou-Trinity	55	279,059	0.02%
Colusa-Glenn-Tehama-Mendocino-Lake	52	263,689	0.02%
Butte-Lassen-Modoc-Plumas	46	239,946	0.02%
Sutter-Sierra-Yuba	40	171,238	0.02%
Del Norte-Humboldt	35	162,609	0.02%
Central Coast	248	1,028,218	0.02%
Monterey-San Benito	137	484,702	0.03%
San Luis Obispo	59	275,541	0.02%
Santa Cruz	52	267,975	0.02%
High Sierra	53	187,005	0.03%
Mariposa-Tuolumne	27	82,539	0.03%
Alpine-Amador-Calaveras-Inyo-Mono	26	104,466	0.02%
California	11,669	38,166,640	0.03%

Prevalence			
0.02%	0.03%	0.04%	0.05%

Population Size					
32,674-99,999	100,000-499,999	500,000-999,999	1,000,000-3,999,999	4,000,000-9,999,999	10,000,000-14,354,350

Liver and Intrahepatic Bile Duct

The complete prevalence by region and county for liver and intrahepatic bile duct (IBD) cancer is shown in Figure 25. Overall, 8,757 people with a history of liver and IBD cancer were alive in California on January 1, 2013. San Francisco had the highest prevalence, followed by Santa Clara, Alameda, San Mateo, Sonoma, Nevada, and Santa Cruz. Of these high prevalence counties, San Francisco, Santa Clara, Alameda, and San Mateo had high age-adjusted incidence rates in 2003 to 2012, ranking 1st, 2nd, 6th, and 12th in the state, respectively.¹⁰ Sonoma, Santa Cruz, and Nevada had fairly low age-adjusted incidence rates, ranking 27th, 33rd, and 39th in the state, respectively, for that time period (see Appendix Table A19).¹⁰ High prevalence but low incidence in these three counties may represent good survivorship.

Most counties had a low prevalence (0.01%-0.02%) of liver and IBD cancer, and many of these low prevalence counties also had low age-adjusted incidence rates for 2003 to 2012 (San Luis Obispo-32nd, Riverside-37th, Marin-40th, Ventura-42nd, Placer-43rd, El Dorado-45th).¹⁰ Fresno, Kings, Sacramento, Los Angeles, San Joaquin, and Lake had low prevalence but high age-adjusted incidence rates from 2003 to 2012, ranking 3rd (Imperial), 4th (Fresno), 5th (Kings), 8th (Sacramento), 9th (Los Angeles), 10th (San Joaquin), and 11th (Lake) in the state.¹⁰ Low prevalence but high incidence can indicate poor survivorship. Liver cancer is more common in men and in people with a history of hepatitis or cirrhosis.³⁴ The median age at diagnosis is 63 years, and the five-year relative survival for all stages is 17.5%.³⁴

Liver and Intrahepatic Bile Duct

Figure 25. Estimated Complete Prevalence by Region and County, California, January 1, 2013

County	Prevalence Count (a)	Total Population (b)	Prevalence (a/b)*100
Los Angeles-Orange	3,285	14,354,350	0.02%
Los Angeles	2,380	9,984,389	0.02%
Orange	681	3,099,869	0.02%
Ventura	138	837,019	0.02%
Santa Barbara	86	433,073	0.02%
Bay Area	2,395	7,389,323	0.03%
Santa Clara	624	1,849,043	0.03%
San Francisco	497	832,438	0.06%
Alameda	433	1,566,434	0.03%
San Mateo	257	743,037	0.03%
Contra Costa	251	1,086,241	0.02%
Sonoma	139	492,821	0.03%
Solano	98	422,570	0.02%
Marin	63	257,110	0.02%
Napa	33	139,629	0.02%
Inland Empire	664	4,361,625	0.02%
San Bernardino	372	2,082,922	0.02%
Riverside	292	2,278,703	0.01%
Central Valley	646	4,056,058	0.02%
Fresno	172	951,436	0.02%
San Joaquin	129	702,777	0.02%
Kern	109	859,821	0.01%
Stanislaus	76	523,479	0.01%
Tulare	64	452,603	0.01%
Merced	40	262,440	0.02%
Madera	29	152,323	0.02%
Kings	27	151,179	0.02%
San Diego-Imperial	747	3,370,391	0.02%
San Diego	710	3,193,705	0.02%
Imperial	37	176,686	0.02%
Sacramento Region	505	2,303,129	0.02%
Sacramento	336	1,455,103	0.02%
Placer	70	364,373	0.02%
El Dorado	41	204,224	0.02%
Yolo	32	181,185	0.02%
Nevada	26	98,244	0.03%
Northern California	233	1,116,541	0.02%
Colusa-Glenn-Tehama-Mendocino-Lake	61	263,689	0.02%
Butte-Lassen-Modoc-Plumas	60	282,825	0.02%
Shasta-Siskiyou-Trinity	42	236,180	0.02%
Del Norte-Humboldt	35	162,609	0.02%
Sutter-Sierra-Yuba	35	171,238	0.02%
Central Coast	237	1,028,218	0.02%
Monterey-San Benito	107	484,702	0.02%
Santa Cruz	71	267,975	0.03%
San Luis Obispo	59	275,541	0.02%
High Sierra	45	187,005	0.02%
Mariposa-Tuolumne-Inyo-Mono-Alpine-Amador-Calaveras	45	187,005	0.02%
California	8,757	38,166,640	0.02%

Prevalence

0.01%-0.02% 0.03%-0.04% 0.05%-0.06%

Population Size

32,674-99,999 100,000-499,999 500,000-999,999 1,000,000-3,999,999 4,000,000-9,999,999 10,000,000-14,354,350

Larynx

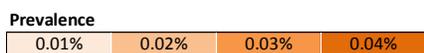
The complete prevalence by region and county for cancer of the larynx is shown in Figure 26. Overall, 8,455 people with a history of cancer of the larynx were alive in California on January 1, 2013. Mendocino-Lake had the highest prevalence, followed by San Francisco, San Mateo, Sonoma, Solano, Marin, Napa, El Dorado, Nevada, Butte-Lassen-Modoc-Plumas, Shasta-Siskiyou-Trinity, Del Norte-Humboldt, Sutter-Sierra-Yuba, Colusa-Glenn-Tehama, Mariposa-Tuolumne-Inyo-Mono, and Alpine-Amador-Calaveras. Among these high prevalence counties, Lake, Colusa-Glenn-Tehama, Del Norte-Humboldt, and Mendocino all had high age-adjusted incidence rates in 2003 to 2012, ranging from 1st (Lake) to 10th (Mendocino).¹⁰ Some of these high prevalence counties had low age-adjusted incidence rates in 2003 to 2012, including San Mateo (30th), Nevada (32nd), El Dorado (35th), and Marin (44th), which may indicate good survivorship (see Appendix Table A20).¹⁰

Fresno and Monterey-San Benito were the only counties in the lowest prevalence category. These counties also had low age-adjusted incidence rates from 2003 to 2012 (33rd and 45th, respectively).¹⁰ Tobacco products and alcohol are risk factors for laryngeal cancer.³⁵ The median age at diagnosis is 65 years, and the five-year relative survival for all stages is 60.7%.³⁵

Larynx

Figure 26. Estimated Complete Prevalence by Region and County, California, January 1, 2013

County	Prevalence Count (a)	Total Population (b)	Prevalence (a/b)*100
Los Angeles-Orange	3,247	14,354,350	0.02%
Los Angeles	2,288	9,984,389	0.02%
Orange	673	3,099,869	0.02%
Ventura	182	837,019	0.02%
Santa Barbara	104	433,073	0.02%
Bay Area	1,679	7,389,323	0.02%
Santa Clara	325	1,849,043	0.02%
Alameda	323	1,566,434	0.02%
Contra Costa	221	1,086,241	0.02%
San Francisco	220	832,438	0.03%
San Mateo	214	743,037	0.03%
Sonoma	144	492,821	0.03%
Solano	120	422,570	0.03%
Marin	75	257,110	0.03%
Napa	37	139,629	0.03%
Inland Empire	906	4,361,625	0.02%
Riverside	492	2,278,703	0.02%
San Bernardino	414	2,082,922	0.02%
Central Valley	760	4,056,058	0.02%
Kern	160	859,821	0.02%
San Joaquin	157	702,777	0.02%
Fresno	140	951,436	0.01%
Stanislaus	115	523,479	0.02%
Tulare-Kings	100	603,782	0.02%
Merced	55	262,440	0.02%
Madera	33	152,323	0.02%
San Diego-Imperial	734	3,370,391	0.02%
San Diego	702	3,193,705	0.02%
Imperial	32	176,686	0.02%
Sacramento Region	525	2,303,129	0.02%
Sacramento	333	1,455,103	0.02%
Placer	60	364,373	0.02%
El Dorado	50	181,185	0.03%
Yolo	48	204,224	0.02%
Nevada	34	98,244	0.03%
Northern California	351	1,116,541	0.03%
Butte-Lassen-Modoc-Plumas	82	282,825	0.03%
Shasta-Siskiyou-Trinity	80	236,180	0.03%
Mendocino-Lake	57	151,215	0.04%
Del Norte-Humboldt	51	162,609	0.03%
Sutter-Sierra-Yuba	48	171,238	0.03%
Colusa-Glenn-Tehama	33	112,474	0.03%
Central Coast	190	1,028,218	0.02%
Monterey-San Benito	69	484,702	0.01%
Santa Cruz	64	267,975	0.02%
San Luis Obispo	57	275,541	0.02%
High Sierra	63	187,005	0.03%
Mariposa-Tuolumne-Inyo-Mono	35	104,466	0.03%
Alpine-Amador-Calaveras	28	82,539	0.03%
California	8,455	38,166,640	0.02%



Pancreas

The complete prevalence by region and county for cancer of the pancreas is shown in Figure 27. Overall, 5,849 people with a history of cancer of the pancreas were alive in California on January 1, 2013. Mariposa-Tuolumne had the highest prevalence, followed by El Dorado and Nevada. These counties had high age-adjusted incidence rates for 2003 to 2012, ranking 2nd (El Dorado), 6th (Nevada), and 13th (Mariposa-Tuolumne).¹⁰ Lake and Napa counties had high age-adjusted incidence rates for 2003 to 2012 (1st and 5th in the state, respectively), but were in lower prevalence groups (0.02%), which may indicate poor survivorship (see Appendix Table A21).¹⁰

Los Angeles, Riverside, San Bernardino, Fresno, San Joaquin, Kern, Tulare-Kings, Stanislaus, Merced, San Diego-Imperial, Sutter-Sierra-Yuba-Butte-Lassen-Modoc-Plumas, San Luis Obispo had low prevalence. Most of these counties also had low age-adjusted incidence rates for 2003 to 2012, except for Butte, Merced, and San Joaquin, which ranked 3rd, 4th, and 16th in the state, respectively (see Appendix Table A21).¹⁰ A low prevalence but high incidence can indicate poor survivorship. Pancreatic cancer has a very poor survival, with a five-year relative survival for all stages of only 7.6%.⁵ The median age at diagnosis is 70 years, and risk factors include smoking, being overweight, and having a history of diabetes or chronic pancreatitis.³⁶

Pancreas

Figure 27. Estimated Complete Prevalence by Region and County, California, January 1, 2013

County	Prevalence Count (a)	Total Population (b)	Prevalence (a/b)*100
Los Angeles-Orange	2,203	14,354,350	0.02%
Los Angeles	1,488	9,984,389	0.01%
Orange	507	3,099,869	0.02%
Ventura	136	837,019	0.02%
Santa Barbara	72	433,073	0.02%
Bay Area	1,350	7,389,323	0.02%
Santa Clara	307	1,849,043	0.02%
Alameda	246	1,566,434	0.02%
Contra Costa	205	1,086,241	0.02%
San Francisco	194	832,438	0.02%
San Mateo	145	743,037	0.02%
Sonoma	95	492,821	0.02%
Solano	67	422,570	0.02%
Marin	62	257,110	0.02%
Napa	29	139,629	0.02%
Inland Empire	497	4,361,625	0.01%
Riverside	274	2,278,703	0.01%
San Bernardino	223	2,082,922	0.01%
Central Valley	520	4,056,058	0.01%
Fresno	126	951,436	0.01%
San Joaquin	90	702,777	0.01%
Kern	85	859,821	0.01%
Tulare-Kings	82	603,782	0.01%
Stanislaus	69	523,479	0.01%
Merced	36	262,440	0.01%
San Diego-Imperial	467	3,370,391	0.01%
San Diego-Imperial	467	3,370,391	0.01%
Sacramento Region	411	2,303,129	0.02%
Sacramento-Yolo	261	1,659,327	0.02%
Placer	77	364,373	0.02%
El Dorado	46	181,185	0.03%
Nevada	27	98,244	0.03%
Northern California	178	1,116,541	0.02%
Sutter-Sierra-Yuba-Butte-Lassen-Modoc-Plumas	64	454,063	0.01%
Colusa-Glenn-Tehama-Mendocino-Lake	45	263,689	0.02%
Shasta-Siskiyou-Trinity	40	236,180	0.02%
Del Norte-Humboldt	29	162,609	0.02%
Central Coast	170	1,028,218	0.02%
Monterey-San Benito	84	484,702	0.02%
Santa Cruz	45	267,975	0.02%
San Luis Obispo	41	275,541	0.01%
High Sierra	53	187,005	0.03%
Mariposa-Tuolumne	27	71,792	0.04%
Alpine-Amador-Calaveras-Inyo-Mono	26	115,213	0.02%
California	5,849	38,166,640	0.02%

Prevalence

0.01%	0.02%	0.03%	0.04%
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Population Size

32,674-99,999	100,000-499,999	500,000-999,999	1,000,000-3,999,999	4,000,000-9,999,999	10,000,000-14,354,350
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Conclusion

This report provides an estimate of the burden of cancer in California. More than 1.4 million people with a history of one of the twenty-one cancers described in this report were alive on January 1, 2013. As detailed in this report, there are differences in cancer prevalence by cancer site, age group, and county. Geographic differences may be due to regional and county variations in risk factors or the availability of high quality cancer care. Disparities in access to quality cancer care can result in differences in screening and treatment, which can affect survivorship.

Because cancer prevalence is a function of both incidence and mortality, prevalence data need to be interpreted carefully when pursuing interventions to lower the population burden of cancer. For many cancer sites, differences in prevalence are not directly related to differences in incidence but instead to differences in survivorship. Local health officers, can use the prevalence estimates calculated in this report, in conjunction with incidence data, to inform the assessment of cancer care in their counties. Findings may direct local resources towards improvements in cancer prevention and care programs such as increased screening and early detection efforts, cancer education classes, programs to decrease risk factors such as smoking, support groups, and addressing barriers to treatment such as transportation to treatment and lodging during treatment.

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Appendix A

Table A1. Invasive Cancer Incidence Rates for Female Breast, 2003 - 2012

County	Population at Risk	Cases	Age-adjusted Rate
Mariposa - Tuolumne	353404	786	146.22
Placer	1691072	2950	143.57
Marin	1262843	2492	142.86
Sonoma	2411753	4060	138.16
Butte	1098658	1808	136.86
San Mateo	3587812	5750	135.71
Yolo	994849	1205	134.15
Contra Costa	5245888	7904	133.77
Nevada	494169	978	132.76
Ventura	4065648	5708	132.28
Alpine - Amador - Calaveras	404796	825	131.45
Napa	669875	1084	131.13
El Dorado	886389	1460	130.5
San Diego	15053408	20231	129.94
Santa Barbara	2071864	2871	129.7
San Luis Obispo	1288381	2055	129.38
Sacramento	7087050	9441	129.23
Solano	2054468	2833	129.16
Santa Cruz	1290029	1757	126.79
Shasta	898261	1474	126.54
Orange	15031636	19670	125.42
Alameda	7547419	9832	123.4
Santa Clara	8621572	10986	123.11
Del Norte - Humboldt	790146	1124	120.09
San Francisco	3885374	5386	119.99
Mendocino	438847	678	119.53
Inyo - Mono	156192	235	118.13
Riverside	10335856	12176	117.14
Colusa - Glenn - Tehama	549664	747	117.11
Los Angeles	49649378	58023	116.91
Stanislaus	2559720	2896	116.58
San Joaquin	3353281	3686	114.23
Sierra - Yuba	360489	402	113.47
Siskiyou - Trinity	290323	484	112.65
Kern	3874899	3890	112.58
Fresno	4510240	4654	112.46
San Bernardino	9965409	10028	112.22
Monterey	1990369	2201	112.1
San Benito	273656	282	108.14
Kings	641970	584	107.85
Lake	319922	483	107.76
Merced	1235326	1142	107.26
Lassen - Modoc - Plumas	273073	390	106.32
Sutter	460820	519	106.01
Tulare	2116965	1956	105.21
Madera	752878	768	103.02
Imperial	796374	745	97.97
STATE	183692415	231639	122.19

Table A2. Invasive Cancer Incidence Rates for Prostate, 2003 - 2012

County	Population at Risk	Cases	Age-adjusted Rate
Marin	1224264	2739	173.29
Santa Cruz	1282788	2060	173.2
San Benito	276476	376	171.46
Monterey	2117475	2692	162.22
Napa	668006	1224	160.6
Contra Costa	5001174	7807	158.86
San Luis Obispo	1355401	2366	155.29
Solano	2058544	2887	143.22
Shasta	866232	1628	149.19
San Mateo	3473681	5231	148.9
Santa Clara	8723646	10999	148.05
Butte	1074587	1762	146.18
El Dorado	885390	1592	146.08
San Joaquin	3337470	3867	144.56
Placer	1616095	2656	143.69
Alameda	7268767	9279	143.42
San Bernardino	9889934	10162	143.02
Inyo - Mono	166994	286	142.24
Sacramento	6810295	8315	140.21
Ventura	4020639	5060	139.4
Alpine - Amador - Calaveras	439035	952	139.27
Riverside	10271524	12745	138.52
Del Norte - Humboldt	819994	1161	137.21
Sonoma	2335440	3440	136.58
San Diego	15154896	17799	136.36
Los Angeles	48321199	53461	135.64
Nevada	483088	997	135.5
Santa Barbara	2086240	2594	133.63
Mariposa - Tuolumne	386675	771	133.45
Madera	700115	889	133.44
Fresno	4502635	4562	132.95
Orange	14745479	17194	132.91
Colusa - Glenn - Tehama	554760	818	132.72
Siskiyou - Trinity	290935	588	130.45
Imperial	853421	854	129.68
Yolo	947564	947	127.35
Kings	844401	639	127.03
Mendocino	437483	660	126.5
Kern	4119412	3684	123.93
Tulare	2123395	1897	123
Stanislaus	2507903	2509	122.73
Merced	1250865	1076	122.72
Lassen - Modoc - Plumas	372610	495	121.39
Sierra - Yuba	366689	387	118.8
San Francisco	3993664	4867	118.71
Lake	319612	521	115.85
Sutter	455610	449	105.34
STATE	181802502	219944	138.68

Note: All rates are per 100,000 and age-adjusted to the 2000 U.S. Standard Population; Rates generated on Dec 1, 2016; Based on December 2015 Extract.

Table A3. Invasive Cancer Incidence Rates for Colon and Rectum, 2003 - 2012

County	Population at Risk	Cases	Age-adjusted Rate
Del Norte - Humboldt	1610140	840	48.05
Lake	639534	415	47.1
Napa	1337881	760	46.58
Stanislaus	5067623	2093	46.47
Colusa - Glenn - Tehama	1104424	577	45.7
San Francisco	7879038	4086	45.45
San Bernardino	19855343	6976	45.43
Sonoma	4747193	2468	45.41
Contra Costa	10247062	4845	45.23
Solano	4113012	1771	44.72
Sierra - Yuba	727178	293	44.69
Sacramento	13897345	5779	43.89
Merced	2486191	844	43.86
Los Angeles	97970577	38909	43.86
Madera	1452993	583	43.4
Mariposa - Tuolumne	740079	470	42.9
Mendocino	876330	460	42.8
Riverside	20607380	8345	42.59
Kern	7994311	2687	42.57
Ventura	8086287	3331	42.56
Alameda	14816186	5949	42.21
San Mateo	7061493	3292	42.01
Kings	1486371	437	41.97
Butte	2173245	1095	41.86
Alpine - Amador - Calaveras	843831	521	41.7
San Joaquin	6690751	2445	41.59
El Dorado	1771779	852	41.55
Marin	2487107	1348	41.17
Santa Clara	17345218	6644	41
San Diego	30208304	11719	40.66
Orange	29777115	11578	40.62
Tulare	4240360	1373	40.4
Fresno	9012875	3055	39.87
Lassen - Modoc - Plumas	645683	299	39.63
Shasta	1764493	890	39.44
Inyo - Mono	323186	153	39.18
Imperial	1649795	559	38.92
San Benito	550132	180	38.92
Placer	3307167	1502	38.77
Yolo	1942413	618	38.24
Nevada	977257	540	38.22
San Luis Obispo	2643782	1200	38
Siskiyou - Trinity	581258	321	37.75
Sutter	916430	335	36.91
Santa Cruz	2572817	925	36.4
Santa Barbara	4158104	1567	36.32
Monterey	4107844	1269	34.3
STATE	365494917	147198	42.47

Table A4. Invasive Cancer Incidence Rates for Melanoma of the Skin, 2003 - 2012

County	Population at Risk	Cases	Age-adjusted Rate
San Luis Obispo	2643782	1286	42.3
Marin	2487107	1327	41.67
Santa Barbara	4158104	1446	34.34
Placer	3307167	1277	34
Shasta	1764493	714	33.29
Sonoma	4747193	1740	32.69
El Dorado	1771779	653	31.57
Mariposa - Tuolumne	740079	321	30.6
Nevada	977257	405	29.96
Santa Cruz	2572817	735	28.64
Mendocino	876330	306	28.45
Napa	1337881	441	28.24
San Diego	30208304	8277	28.15
Ventura	8086287	2229	27.85
Orange	29777115	7943	27.34
Siskiyou - Trinity	581258	208	25.74
Alpine - Amador - Calaveras	843831	298	25.25
Contra Costa	10247062	2662	24.87
Butte	2173245	605	24.28
Del Norte - Humboldt	1610140	423	24.03
Lake	639534	196	23.43
Yolo	1942413	379	22.53
San Mateo	7061493	1731	22.18
Colusa - Glenn - Tehama	1104424	268	22.14
Inyo - Mono	323186	86	22
Riverside	20607380	4264	21.74
Sutter	916430	185	20.57
Madera	1452993	277	20.04
Lassen - Modoc - Plumas	645683	155	20.03
Sacramento	13897345	2640	19.69
Santa Clara	17345218	3191	19.18
Monterey	4107844	720	19.12
Sierra - Yuba	727178	127	18.88
Stanislaus	5067623	867	18.86
Solano	4113012	769	18.82
San Benito	550132	88	17.55
San Bernardino	19855343	2806	16.94
Kern	7994311	1112	16.89
San Francisco	7879038	1483	16.37
Tulare	4240360	545	15.56
Alameda	14816186	2196	14.98
Fresno	9012875	1160	14.78
San Joaquin	6690751	861	14.34
Los Angeles	97970577	12766	14
Kings	1486371	150	13.58
Merced	2486191	255	12.9
Imperial	1649795	134	9.25
STATE	365494917	72707	20.58

Note: All rates are per 100,000 and age-adjusted to the 2000 U.S. Standard Population; Rates generated on Dec 1, 2016; Based on December 2015 Extract.

Table A5. Invasive Cancer Incidence Rates for Thyroid, 2003 - 2012

County	Population at Risk	Cases	Age-adjusted Rate
Placer	3307167	492	14.22
Ventura	8086287	1066	13.1
Fresno	9012875	1049	12.88
Orange	29777115	3647	12.19
Monterey	4107844	474	12.09
El Dorado	1771779	218	11.78
Shasta	1764493	219	11.54
Kern	7994311	821	11.31
Los Angeles	97970577	10685	11.15
Santa Cruz	2572817	293	11.14
Santa Barbara	4158104	449	11.03
Merced	2486191	238	10.98
Madera	1452993	154	10.95
San Diego	30208304	3278	10.91
San Mateo	7061493	809	10.63
Sacramento	13897345	1449	10.54
Santa Clara	17345218	1840	10.48
Stanislaus	5067623	497	10.46
San Luis Obispo	2643782	286	10.37
Yolo	1942413	184	10.3
Colusa - Glenn - Tehama	1104424	111	9.97
Sutter	916430	87	9.73
San Francisco	7879038	862	9.65
Riverside	20607380	1896	9.64
Kings	1486371	133	9.61
San Joaquin	6690751	593	9.57
Alpine - Amador - Calaveras	843831	86	9.42
Nevada	977257	99	9.35
San Benito	550132	47	9.19
Butte	2173245	200	9.14
Del Norte - Humboldt	1610140	154	9.12
Solano	4113012	376	9.03
Lassen - Modoc - Plumas	645683	68	9.01
San Bernardino	19855343	1636	8.97
Sonoma	4747193	446	8.9
Contra Costa	10247062	952	8.9
Marin	2487107	248	8.58
Tulare	4240360	309	8.42
Inyo - Mono	323186	32	8.26
Alameda	14816186	1254	8.21
Napa	1337881	118	8.2
Imperial	1649795	117	7.69
Mariposa - Tuolumne	740079	63	7.29
Sierra - Yuba	727178	50	7.23
Lake	639534	50	6.86
Siskiyou - Trinity	581258	51	6.82
Mendocino	876330	58	6.01
STATE	365494917	38244	10.55

Table A6. Invasive Cancer Incidence Rates for Uterine Corpus, 2003 - 2012

County	Population at Risk	Cases	Age-adjusted Rate
Del Norte - Humboldt	790146	271	27.83
Solano	2054468	589	25.96
Lassen - Modoc - Plumas	273073	96	25.69
San Francisco	3885374	1139	24.99
Alameda	7547419	2010	24.96
San Mateo	3587812	1072	24.71
Sonoma	2411753	748	24.26
Contra Costa	5245888	1459	24.14
Sacramento	7087050	1790	23.96
Butte	1098658	319	23.49
Napa	669875	200	23.29
Mendocino	438847	139	23.27
Los Angeles	49649378	11636	23.19
Santa Clara	8621572	2033	22.63
Ventura	4065648	996	22.6
San Diego	15053408	3587	22.56
San Bernardino	9965409	2033	22.38
Marin	1262843	414	22.23
Lake	319922	96	22.02
Yolo	994849	196	21.86
Santa Barbara	2071864	489	21.64
Colusa - Glenn - Tehama	549664	137	21.41
Sierra - Yuba	360489	77	21.35
San Benito	273656	54	21.35
Orange	15031636	3371	21.18
Tulare	2116965	397	21.08
Nevada	494169	156	20.94
Placer	1691072	442	20.89
San Joaquin	3353281	680	20.59
Merced	1235326	220	20.54
Shasta	898261	245	20.53
Siskiyou - Trinity	290323	94	20.38
Riverside	10335856	2131	20.32
San Luis Obispo	1288381	333	20.19
Monterey	1990369	397	20.11
Stanislaus	2559720	509	20.06
Mariposa - Tuolumne	353404	114	19.97
Kern	3874899	692	19.76
Santa Cruz	1290029	281	19.74
Imperial	796374	147	19.3
El Dorado	886389	224	19.05
Inyo - Mono	156192	36	18.21
Sutter	460820	91	18.1
Madera	752878	130	17.5
Fresno	4510240	714	17.11
Kings	641970	92	16.97
Alpine - Amador - Calaveras	404796	108	16.57
STATE	183692415	43184	22.42

Note: All rates are per 100,000 and age-adjusted to the 2000 U.S. Standard Population; Rates generated on Dec 1, 2016; Based on December 2015 Extract.

Table A7. Invasive and in situ Cancer Incidence Rates for Urinary Bladder, 2003 - 2012

County	Population at Risk	Cases	Age-adjusted Rate
Lake	639534	262	29.08
Mendocino	876330	309	27.86
Siskiyou - Trinity	581258	237	27.7
Butte	2173245	704	26.49
Shasta	1764493	583	25.53
Mariposa - Tuolumne	740079	280	24.9
Alpine - Amador - Calaveras	843831	322	24.63
El Dorado	1771779	499	24.62
Del Norte - Humboldt	1610140	419	24.26
Sonoma	4747193	1301	24.2
Colusa - Glenn - Tehama	1104424	297	23.94
Marin	2487107	771	23.72
Napa	1337881	392	23.21
Nevada	977257	340	23.07
San Benito	550132	101	22.62
Placer	3307167	873	22.39
Santa Cruz	2572817	540	21.96
Contra Costa	10247062	2210	21.04
Santa Barbara	4158104	909	20.83
Yolo	1942413	329	20.65
Inyo - Mono	323186	80	20.43
Riverside	20607380	3955	20.36
Ventura	8086287	1535	20.03
Monterey	4107844	718	19.97
San Mateo	7061493	1562	19.96
Sacramento	13897345	2556	19.85
Merced	2486191	371	19.71
Stanislaus	5067623	861	19.63
San Luis Obispo	2643782	624	19.55
San Diego	30208304	5497	19.33
Lassen - Modoc - Plumas	645683	142	19.24
San Bernardino	19855343	2792	19.11
San Joaquin	6690751	1090	19.04
Solano	4113012	725	19.03
Kern	7994311	1129	18.81
Sierra - Yuba	727178	120	18.57
Orange	29777115	5122	18.55
Kings	1486371	180	18.16
Santa Clara	17345218	2823	18
Tulare	4240360	597	17.98
Los Angeles	97970577	15074	17.48
Fresno	9012875	1275	17.05
Madera	1452993	226	16.94
Alameda	14816186	2278	16.65
Sutter	916430	148	16.3
San Francisco	7879038	1440	16.01
Imperial	1649795	166	12.06
STATE	365494917	64764	19.1

Table A8. Invasive Cancer Incidence Rates for Non-Hodgkin Lymphoma, 2003 - 2012

County	Population at Risk	Cases	Age-adjusted Rate
San Benito	550132	102	22.29
Marin	2487107	693	21.92
Mariposa - Tuolumne	740079	241	21.89
San Mateo	7061493	1687	21.85
Santa Cruz	2572817	532	21.18
Butte	2173245	540	21.13
Del Norte - Humboldt	1610140	367	21.02
Santa Clara	17345218	3406	20.98
San Francisco	7879038	1848	20.89
Contra Costa	10247062	2196	20.64
Colusa - Glenn - Tehama	1104424	250	20.39
Napa	1337881	328	20.38
Solano	4113012	803	20.05
Sonoma	4747193	1061	20.03
Monterey	4107844	740	20
San Diego	30208304	5770	19.91
Sierra - Yuba	727178	129	19.9
Ventura	8086287	1569	19.84
Mendocino	876330	210	19.63
Placer	3307167	746	19.57
Yolo	1942413	326	19.49
Santa Barbara	4158104	834	19.46
Orange	29777115	5524	19.44
San Luis Obispo	2643782	601	19.43
Sutter	916430	178	19.34
Alameda	14816186	2770	19.23
Kings	1486371	211	18.97
Merced	2486191	369	18.79
Shasta	1764493	409	18.53
Los Angeles	97970577	16547	18.46
Alpine - Amador - Calaveras	843831	231	18.42
Sacramento	13897345	2410	18.18
Fresno	9012875	1403	18.15
El Dorado	1771779	377	18.09
Stanislaus	5067623	822	18.09
Nevada	977257	256	17.85
Kern	7994311	1124	17.43
Lake	639534	148	17.35
San Bernardino	19855343	2735	17.15
Lassen - Modoc - Plumas	645683	130	17
Tulare	4240360	587	17
Riverside	20607380	3300	16.79
San Joaquin	6690751	985	16.58
Siskiyou - Trinity	581258	145	16.4
Imperial	1649795	237	16.37
Madera	1452993	222	16.25
Inyo - Mono	323186	64	16.21
STATE	365494917	66163	18.99

Note: All rates are per 100,000 and age-adjusted to the 2000 U.S. Standard Population; Rates generated on Dec 1, 2016; Based on December 2015 Extract.

Table A9. Invasive Cancer Incidence Rates for Lung and Brouchus, 2003 - 2012

County	Population at Risk	Cases	Age-adjusted Rate
Lake	639534	748	83.06
Sierra - Yuba	727178	523	80.64
Colusa - Glenn - Tehama	1104424	934	73.49
Shasta	1764493	1682	73.13
Siskiyou - Trinity	581258	639	72.05
Mariposa - Tuolumne	740079	783	69.6
Butte	2173245	1778	68.05
Del Norte - Humboldt	1610140	1152	65.64
Solano	4113012	2415	63.05
Napa	1337881	1015	62.69
Sutter	916430	573	62.68
Sacramento	13897345	8009	62.15
Stanislaus	5067623	2742	62.04
San Joaquin	6690751	3506	61.46
Merced	2486191	1154	60.77
Kern	7994311	3734	60.75
Mendocino	876330	645	58.23
Alpine - Amador - Calaveras	843831	770	58.19
Lassen - Modoc - Plumas	645683	435	55.97
San Bernardino	19855343	8148	55.02
Madera	1452993	736	54.35
Kings	1486371	557	54.31
Sonoma	4747193	2879	54.07
Fresno	9012875	4025	53.9
El Dorado	1771779	1100	53.88
Placer	3307167	2098	53.84
San Luis Obispo	2643782	1700	53.82
Yolo	1942413	841	53.18
San Diego	30208304	14966	53.14
Contra Costa	10247062	5490	53.07
Riverside	20607380	10351	52.93
Tulare	4240360	1768	52.71
San Francisco	7879038	4659	52.17
Inyo - Mono	323186	201	51.88
Nevada	977257	750	50.86
Alameda	14816186	6944	50.64
San Mateo	7061493	3799	48.94
Imperial	1649795	684	48.34
Orange	29777115	13247	48.14
Monterey	4107844	1710	47.6
Ventura	8086287	3542	46.84
Santa Barbara	4158104	1978	46.23
Marin	2487107	1449	45.24
Los Angeles	97970577	38500	44.59
Santa Cruz	2572817	1068	44.51
Santa Clara	17345218	6899	44.19
San Benito	550132	177	41.37
STATE	365494917	173503	51.2

Table A10. Invasive Cancer Incidence Rates for Kidney and Renal Pelvis, 2003 - 2012

County	Population at Risk	Cases	Age-adjusted Rate
Napa	1337881	293	18.31
Kings	1486371	204	18.19
Imperial	1649795	264	18.05
Solano	4113012	691	16.75
Fresno	9012875	1291	16.61
Merced	2486191	331	16.44
Tulare	4240360	563	16.08
Siskiyou - Trinity	581258	137	15.95
Stanislaus	5067623	729	15.79
Sierra - Yuba	727178	104	15.77
Mariposa - Tuolumne	740079	178	15.75
Kern	7994311	1040	15.64
San Joaquin	6690751	921	15.32
Sacramento	13897345	2027	15.17
Del Norte - Humboldt	1610140	266	14.89
Madera	1452993	206	14.86
Colusa - Glenn - Tehama	1104424	185	14.82
San Diego	30208304	4251	14.7
Santa Barbara	4158104	608	14.63
San Bernardino	19855343	2404	14.6
Lake	639534	125	14.57
Mendocino	876330	159	14.49
Shasta	1764493	323	14.43
Yolo	1942413	238	14.31
El Dorado	1771779	300	14.15
San Mateo	7061493	1089	14.07
Lassen - Modoc - Plumas	645683	107	14.06
Butte	2173245	355	14.04
San Benito	550132	70	13.97
Ventura	8086287	1109	13.93
Contra Costa	10247062	1488	13.79
Riverside	20607380	2731	13.77
Placer	3307167	530	13.55
Alpine - Amador - Calaveras	843831	180	13.53
Santa Clara	17345218	2198	13.25
Sutter	916430	123	13.07
Los Angeles	97970577	11721	12.98
San Luis Obispo	2643782	405	12.85
Nevada	977257	183	12.74
Monterey	4107844	475	12.57
Orange	29777115	3455	12.03
Sonoma	4747193	652	12.03
Inyo - Mono	323186	48	11.93
San Francisco	7879038	1044	11.87
Alameda	14816186	1712	11.85
Marin	2487107	380	11.47
Santa Cruz	2572817	292	11.13
STATE	365494917	48185	13.68

Note: All rates are per 100,000 and age-adjusted to the 2000 U.S. Standard Population; Rates generated on Dec 1, 2016; Based on December 2015 Extract.

Table A11. Invasive Cancer Incidence Rates for Leukemia, 2003 - 2012

County	Population at Risk	Cases	Age-adjusted Rate
Napa	1337881	270	17.42
Mariposa - Tuolumne	740079	175	16.87
Colusa - Glenn - Tehama	1104424	191	15.87
Butte	2173245	382	15.2
El Dorado	1771779	311	15.07
San Benito	550132	69	14.76
San Luis Obispo	2643782	454	14.66
Marin	2487107	453	14.63
Santa Barbara	4158104	595	14.09
Shasta	1764493	306	14.02
Sierra - Yuba	727178	89	14.01
Santa Cruz	2572817	344	13.98
Del Norte - Humboldt	1610140	243	13.97
Placer	3307167	504	13.51
Solano	4113012	521	13.42
Sutter	916430	119	13.14
Santa Clara	17345218	2120	13.13
Kings	1486371	156	13.13
Contra Costa	10247062	1372	13.09
Fresno	9012875	1053	13.06
Yolo	1942413	220	13.01
San Diego	30208304	3770	13.01
Tulare	4240360	472	12.97
Siskiyou - Trinity	581258	103	12.92
Madera	1452993	177	12.89
Sonoma	4747193	670	12.85
Lake	639534	104	12.79
San Mateo	7061493	966	12.76
Orange	29777115	3637	12.73
Mendocino	876330	127	12.53
Los Angeles	97970577	11204	12.38
Merced	2486191	257	12.36
Ventura	8086287	961	12.25
Nevada	977257	159	12.16
Imperial	1649795	177	12.03
San Bernardino	19855343	1983	12.02
San Francisco	7879038	1012	11.9
Monterey	4107844	448	11.8
Riverside	20607380	2340	11.77
Kern	7994311	805	11.71
San Joaquin	6690751	709	11.68
Alpine - Amador - Calaveras	843831	133	11.57
Alameda	14816186	1622	11.5
Stanislaus	5067623	525	11.35
Lassen - Modoc - Plumas	645683	84	11.34
Sacramento	13897345	1508	11.34
Inyo - Mono	323186	41	10.52
STATE	365494917	43941	12.6

Table A12. Invasive Cancer Incidence Rates for Cervix Uteri, 2003 - 2012

County	Population at Risk	Cases	Age-adjusted Rate
Madera	752878	91	12.58
Siskiyou - Trinity	290323	37	12.53
Kings	641970	59	10.52
Mendocino	438847	45	10.24
Imperial	796374	74	10.11
Tulare	2116965	181	9.83
Los Angeles	49649378	4760	9.63
Kern	3874899	339	9.61
San Bernardino	9965409	859	9.29
Del Norte - Humboldt	790146	68	8.89
Fresno	4510240	354	8.65
Merced	1235326	94	8.61
Sacramento	7087050	605	8.58
Lassen - Modoc - Plumas	273073	21	8.45
Lake	319922	28	8.41
Colusa - Glenn - Tehama	549664	47	8.26
Riverside	10335856	806	8.21
Sierra - Yuba	360489	29	8.19
Mariposa - Tuolumne	353404	31	8.07
Sutter	460820	35	7.71
Solano	2054468	164	7.68
Monterey	1990369	143	7.67
Ventura	4065648	310	7.67
Yolo	994849	69	7.61
San Diego	15053408	1144	7.58
Stanislaus	2559720	181	7.48
Napa	669875	52	7.41
San Joaquin	3353281	235	7.41
Alpine - Amador - Calaveras	404796	35	7.37
Santa Cruz	1290029	94	7.32
Butte	1098658	75	7.27
Orange	15031636	1058	6.91
Santa Clara	8621572	597	6.7
Shasta	898261	59	6.54
Sonoma	2411753	162	6.35
San Francisco	3885374	280	6.35
El Dorado	886389	60	6.29
Santa Barbara	2071864	126	6.26
San Mateo	3587812	246	6.21
Alameda	7547419	485	6.18
Placer	1691072	104	5.83
Contra Costa	5245888	312	5.66
Marin	1262843	79	5.39
San Luis Obispo	1288381	72	5.35
San Benito	273656	~	~
Inyo - Mono	156192	~	~
Nevada	494169	29	4.8
STATE	183692415	14754	8.03

Note: All rates are per 100,000 and age-adjusted to the 2000 U.S. Standard Population; Rates generated on Dec 1, 2016; Based on December 2015 Extract.

Table A13. Invasive Cancer Incidence Rates for Oral Cavity and Pharynx, 2003 - 2012

County	Population at Risk	Cases	Age-adjusted Rate
Shasta	1764493	323	14.36
Mariposa - Tuolumne	740079	152	13.85
Marin	2487107	454	13.61
San Francisco	7879038	1129	12.65
Colusa - Glenn - Tehama	1104424	162	12.62
Mendocino	876330	141	12.51
Sonoma	4747193	688	12.42
El Dorado	1771779	272	12.27
Lake	639534	108	12.21
Butte	2173245	314	12.17
Siskiyou - Trinity	581258	105	11.96
Sierra - Yuba	727178	83	11.86
Napa	1337881	188	11.8
Solano	4113012	493	11.8
San Diego	30208304	3413	11.6
Kings	1486371	134	11.51
Kern	7994311	767	11.47
Del Norte - Humboldt	1610140	210	11.37
Alpine - Amador - Calaveras	843831	144	11.26
Sacramento	13897345	1523	11.2
Santa Cruz	2572817	298	11.05
San Luis Obispo	2643782	352	11
Yolo	1942413	183	10.83
San Joaquin	6690751	648	10.72
San Mateo	7061493	851	10.72
Nevada	977257	154	10.69
Santa Barbara	4158104	459	10.65
Orange	29777115	3086	10.58
Placer	3307167	411	10.53
Lassen - Modoc - Plumas	645683	83	10.53
Stanislaus	5067623	483	10.39
Riverside	20607380	2062	10.35
Ventura	8086287	822	10.26
Alameda	14816186	1502	10.15
Contra Costa	10247062	1124	10.14
San Bernardino	19855343	1670	9.89
Fresno	9012875	761	9.69
Sutter	916430	90	9.66
Monterey	4107844	367	9.66
Imperial	1649795	141	9.62
Merced	2486191	193	9.47
Santa Clara	17345218	1595	9.43
San Benito	550132	47	9.29
Madera	1452993	131	9.25
Los Angeles	97970577	8373	9.12
Tulare	4240360	325	9.11
Inyo - Mono	323186	36	8.85
STATE	365494917	37050	10.35

Table A14. Invasive Cancer Incidence Rates for Testis, 2003 - 2012

County	Population at Risk	Cases	Age-adjusted Rate
Mendocino	437483	36	9.26
Alpine - Amador - Calaveras	439035	32	8.97
Nevada	483088	35	8.5
Mariposa - Tuolumne	386675	28	8.19
Santa Cruz	1282788	107	8.11
San Benito	276476	19	7.33
San Luis Obispo	1355401	92	7.29
Shasta	866232	54	7.24
Butte	1074587	74	7.03
Del Norte - Humboldt	819994	57	6.92
El Dorado	885390	53	6.75
Marin	1224264	76	6.73
Sierra - Yuba	366689	24	6.63
Placer	1616095	100	6.58
Ventura	4020639	258	6.44
San Diego	15154896	1049	6.42
Monterey	2117475	146	6.41
Siskiyou - Trinity	290935	15	6.12
Stanislaus	2507903	145	5.91
Lake	319612	16	5.88
Contra Costa	5001174	277	5.77
San Mateo	3473681	204	5.75
Santa Barbara	2086240	124	5.75
Sacramento	6810295	393	5.71
Kern	4119412	244	5.68
Yolo	947564	53	5.63
Sonoma	2335440	126	5.61
Orange	14745479	854	5.6
Imperial	853421	50	5.56
Santa Clara	8723646	520	5.55
Riverside	10271524	551	5.53
San Joaquin	3337470	181	5.47
Kings	844401	52	5.36
Sutter	455610	24	5.26
Napa	668006	34	5.25
San Bernardino	9889934	526	5.23
Fresno	4502635	233	5.18
Los Angeles	48321199	2631	5.1
San Francisco	3993664	254	5.1
Alameda	7268767	372	4.78
Tulare	2123395	97	4.62
Merced	1250865	55	4.4
Madera	700115	28	4.28
Solano	2058544	89	4.25
Lassen - Modoc - Plumas	372610	18	4.17
Colusa - Glenn - Tehama	554760	17	3.37
Inyo - Mono	166994	~	~
STATE	181802502	10425	5.54

Note: All rates are per 100,000 and age-adjusted to the 2000 U.S. Standard Population; Rates generated on Dec 1, 2016; Based on December 2015 Extract.

Table A15. Invasive Cancer Incidence Rates for Ovary, 2003 - 2012

County	Population at Risk	Cases	Age-adjusted Rate
Nevada	494224	108	15.31
Placer	1690872	307	14.65
Marin	1263306	254	14.22
Sonoma	2412463	420	14.08
Butte	1098953	185	14
Solano	2055428	300	13.95
Napa	670186	116	13.59
El Dorado	886352	153	13.46
Mariposa - Tuolumne	353442	72	13.45
Alpine - Amador - Calaveras	404861	79	13.42
Alameda	7550673	1057	13.26
Del Norte - Humboldt	790197	125	13.23
Mendocino	438942	78	13.22
Tulare	2117794	248	13.15
San Mateo	3589922	561	13.07
Lake	319882	62	13.04
Orange	15038209	2038	12.97
Ventura	4067179	557	12.9
Los Angeles	49678941	6415	12.86
San Luis Obispo	1288233	209	12.83
San Bernardino	9969085	1137	12.82
Shasta	898249	148	12.68
Contra Costa	5248376	748	12.67
Santa Cruz	1290361	173	12.59
San Diego	15060874	1978	12.54
Fresno	4511888	523	12.43
San Francisco	3887453	566	12.41
Santa Barbara	2072859	279	12.35
Santa Clara	8626602	1087	12.18
Sutter	460981	59	12.14
Yolo	995251	109	11.94
Riverside	10340078	1247	11.93
Kern	3876173	400	11.67
Inyo - Mono	156230	24	11.48
Stanislaus	2560494	285	11.47
Monterey	1991270	228	11.37
Merced	1235715	123	11.34
Colusa - Glenn - Tehama	549624	72	11.21
Sacramento	7088316	806	10.93
San Joaquin	3354735	345	10.69
Kings	642162	58	10.61
Lassen - Modoc - Plumas	273039	37	9.72
Imperial	797454	75	9.71
San Benito	273679	26	9.65
Siskiyou - Trinity	290332	45	9.41
Madera	753177	69	9.4
Sierra - Yuba	360491	30	8.95
STATE	183775007	24021	12.6

Table A16. Invasive Cancer Incidence Rates for Hodgkin Lymphoma, 2003 - 2012

County	Population at Risk	Cases	Age-adjusted Rate
Siskiyou - Trinity	581217	22	3.87
Shasta	1764581	62	3.59
El Dorado	1771753	59	3.54
Solano	4113568	142	3.49
San Francisco	7882653	271	3.08
Lake	639527	22	3.07
Mendocino	876475	27	3.02
Nevada	977375	29	2.93
Sacramento	13898252	400	2.87
Santa Cruz	2572971	72	2.79
Del Norte - Humboldt	1610244	47	2.78
Stanislaus	5068730	136	2.77
San Joaquin	6691608	176	2.77
Placer	3307221	88	2.74
Ventura	8087756	215	2.71
Napa	1338322	37	2.69
San Mateo	7064882	191	2.68
Fresno	9013743	229	2.66
San Diego	30219158	803	2.6
San Benito	550170	~	~
Santa Clara	17353490	437	2.53
Yolo	1943094	50	2.53
Mariposa - Tuolumne	740101	18	2.5
Madera	1452985	35	2.5
Marin	2487557	59	2.49
Imperial	1650904	41	2.46
Alameda	14819767	372	2.45
Los Angeles	98007955	2397	2.44
Butte	2173630	56	2.43
Santa Barbara	4158749	106	2.43
San Luis Obispo	2643455	67	2.41
Tulare	4240885	96	2.41
Lassen - Modoc - Plumas	645767	17	2.38
Contra Costa	10249027	240	2.38
Orange	29784086	695	2.35
Sonoma	4747576	114	2.35
Kings	1486399	34	2.31
San Bernardino	19860103	437	2.3
Monterey	4108255	92	2.3
Riverside	20612241	454	2.25
Merced	2486399	52	2.21
Sierra - Yuba	727225	15	2.2
Colusa - Glenn - Tehama	1104432	24	2.17
Kern	7995686	158	2.11
Alpine - Amador - Calaveras	843965	18	2.05
Inyo - Mono	323098	~	~
Sutter	916412	~	~
STATE	365593449	9146	2.5

Note: All rates are per 100,000 and age-adjusted to the 2000 U.S. Standard Population; Rates generated on Dec 1, 2016; Based on December 2015 Extract.

Table A17. Invasive Cancer Incidence Rates for Brain and CNS, 2003 - 2012

County	Population at Risk	Cases	Age-adjusted Rate
Marin	2487557	229	7.8
Sonoma	4747576	397	7.78
Mariposa - Tuolumne	740101	72	7.51
Placer	3307221	270	7.48
Kings	1486399	94	7.43
Santa Cruz	2572971	190	7.4
San Luis Obispo	2643455	212	7.39
Nevada	977375	89	7.37
Sierra - Yuba	727225	53	7.29
Sutter	916412	65	7.27
Butte	2173630	165	7.07
Lassen - Modoc - Plumas	645767	48	7.02
Colusa - Glenn - Tehama	1104432	83	6.9
Lake	639527	52	6.83
El Dorado	1771753	133	6.75
Del Norte - Humboldt	1610244	114	6.74
San Diego	30219158	1986	6.72
Stanislaus	5068730	323	6.72
San Benito	550170	34	6.64
Ventura	8087756	534	6.64
Shasta	1764581	141	6.61
Siskiyou - Trinity	581217	50	6.58
Santa Barbara	4158749	274	6.57
Contra Costa	10249027	697	6.56
Sacramento	13898252	890	6.54
Orange	29784086	1898	6.52
Solano	4113568	262	6.51
Kern	7995686	461	6.44
San Mateo	7064882	483	6.38
Napa	1338322	99	6.38
Santa Clara	17353490	1066	6.32
Monterey	4108255	249	6.32
San Joaquin	6691608	388	6.19
Riverside	20612241	1240	6.19
San Francisco	7882653	509	6.11
Fresno	9013743	499	6.06
San Bernardino	19860103	1053	5.95
Yolo	1943094	104	5.94
Tulare	4240885	222	5.87
Alameda	14819767	841	5.77
Mendocino	876475	59	5.77
Alpine - Amador - Calaveras	843965	63	5.7
Merced	2486399	124	5.61
Imperial	1650904	85	5.55
Los Angeles	98007955	5152	5.54
Madera	1452985	73	5.26
Inyo - Mono	323098	17	4.78
STATE	365593449	22142	6.2

Table A18. Invasive Cancer Incidence Rates for Stomach, 2003 - 2012

County	Population at Risk	Cases	Age-adjusted Rate
Imperial	1650904	151	10.63
San Francisco	7882653	926	10.36
Los Angeles	98007955	9030	10.22
Alameda	14819767	1229	8.79
Santa Clara	17353490	1354	8.47
San Mateo	7064882	641	8.22
San Joaquin	6691608	473	8.18
Kings	1486399	86	8.15
Orange	29784086	2225	7.9
Fresno	9013743	601	7.82
San Bernardino	19860103	1153	7.48
Colusa - Glenn - Tehama	1104432	92	7.45
Santa Barbara	4158749	314	7.32
Madera	1452985	97	7.2
Solano	4113568	280	7.19
Kern	7995686	456	7.18
Tulare	4240885	247	7.16
Lake	639527	61	7.16
Sacramento	13898252	928	7.12
Merced	2486399	138	7.1
San Benito	550170	33	7.03
Monterey	4108255	260	7
Stanislaus	5068730	312	6.99
Yolo	1943094	112	6.96
Sierra - Yuba	727225	44	6.95
Napa	1338322	107	6.84
Contra Costa	10249027	703	6.65
Santa Cruz	2572971	157	6.56
Ventura	8087756	509	6.51
Riverside	20612241	1278	6.49
San Diego	30219158	1857	6.48
Del Norte - Humboldt	1610244	113	6.38
Placer	3307221	233	6.12
Sutter	916412	55	6.05
Sonoma	4747576	320	6.01
Butte	2173630	152	6.01
El Dorado	1771753	121	5.81
Marin	2487557	175	5.5
Siskiyou - Trinity	581217	46	5.28
San Luis Obispo	2643455	157	5.11
Mariposa - Tuolumne	740101	58	5.09
Mendocino	876475	55	5.08
Lassen - Modoc - Plumas	645767	38	5.05
Alpine - Amador - Calaveras	843965	62	4.89
Shasta	1764581	109	4.87
Nevada	977375	67	4.43
Inyo - Mono	323098	~	~
STATE	365593449	27626	8.01

Note: All rates are per 100,000 and age-adjusted to the 2000 U.S. Standard Population; Rates generated on Dec 1, 2016; Based on December 2015 Extract.

Table A19. Invasive Cancer Incidence Rates for Liver and IBD, 2003 - 2012

County	Population at Risk	Cases	Age-adjusted Rate
San Francisco	7882653	1521	16.96
Santa Clara	17353490	1815	10.93
Imperial	1650904	156	10.38
Fresno	9013743	788	9.96
Kings	1486399	111	9.85
Alameda	14819767	1438	9.78
Monterey	4108255	371	9.69
Sacramento	13898252	1332	9.66
Los Angeles	98007955	8713	9.6
San Joaquin	6691608	588	9.57
Lake	639527	88	9.48
San Mateo	7064882	755	9.42
Madera	1452985	133	9.28
Mendocino	876475	108	9.28
San Bernardino	19860103	1498	9.06
San Diego	30219158	2656	8.99
Solano	4113568	362	8.68
San Benito	550170	43	8.53
Del Norte - Humboldt	1610244	166	8.43
Yolo	1943094	144	8.31
Lassen - Modoc - Plumas	645767	64	8.28
Sierra - Yuba	727225	58	8.27
Merced	2486399	171	8.15
Napa	1338322	134	8.12
Orange	29784086	2328	8.02
Kern	7995686	538	7.92
Sonoma	4747576	441	7.76
Contra Costa	10249027	855	7.74
Tulare	4240885	277	7.66
Santa Barbara	4158749	321	7.45
Stanislaus	5068730	338	7.26
San Luis Obispo	2643455	230	7.25
Santa Cruz	2572971	205	7.14
Alpine - Amador - Calaveras	843965	93	7.13
Mariposa - Tuolumne	740101	82	7.12
Butte	2173630	182	7.08
Riverside	20612241	1379	6.89
Shasta	1764581	156	6.8
Nevada	977375	99	6.5
Marin	2487557	222	6.48
Sutter	916412	59	6.25
Ventura	8087756	502	6.13
Placer	3307221	241	6.05
Colusa - Glenn - Tehama	1104432	77	6.05
El Dorado	1771753	134	5.84
Inyo - Mono	323098	24	5.82
Siskiyou - Trinity	581217	48	5.36
STATE	365593449	32044	8.94

Table A20. Invasive Cancer Incidence Rates for Larynx, 2003 - 2012

County	Population at Risk	Cases	Age-adjusted Rate
Lake	639527	46	5.07
Sierra - Yuba	727225	27	4.05
Colusa - Glenn - Tehama	1104432	50	3.85
Del Norte - Humboldt	1610244	67	3.53
Kern	7995686	217	3.36
Butte	2173630	81	3.18
Stanislaus	5068730	141	3.14
Merced	2486399	62	3.11
Shasta	1764581	72	3.09
Mendocino	876475	35	3.07
Imperial	1650904	43	2.95
San Bernardino	19860103	464	2.92
Sacramento	13898252	384	2.91
Lassen - Modoc - Plumas	645767	23	2.9
San Joaquin	6691608	172	2.9
Solano	4113568	119	2.89
Yolo	1943094	45	2.88
Kings	1486399	32	2.86
Santa Cruz	2572971	73	2.83
San Benito	550170	~	~
Riverside	20612241	554	2.81
Napa	1338322	46	2.8
Mariposa - Tuolumne	740101	31	2.76
Alpine - Amador - Calaveras	843965	36	2.61
Los Angeles	98007955	2290	2.55
San Francisco	7882653	225	2.53
San Diego	30219158	726	2.51
Sonoma	4747576	139	2.47
Tulare	4240885	84	2.4
San Mateo	7064882	184	2.36
Contra Costa	10249027	248	2.34
Nevada	977375	36	2.32
Fresno	9013743	181	2.32
Alameda	14819767	317	2.26
El Dorado	1771753	50	2.25
Orange	29784086	636	2.22
Madera	1452985	32	2.21
Ventura	8087756	172	2.21
Siskiyou - Trinity	581217	20	2.21
Santa Barbara	4158749	91	2.14
Sutter	916412	20	2.13
Placer	3307221	84	2.12
Santa Clara	17353490	322	2.02
Marin	2487557	64	2
Monterey	4108255	68	1.87
San Luis Obispo	2643455	55	1.67
Inyo - Mono	323098	~	~
STATE	365593449	8883	2.54

Note: All rates are per 100,000 and age-adjusted to the 2000 U.S. Standard Population; Rates generated on Dec 1, 2016; Based on December 2015 Extract.

Table A21. Invasive Cancer Incidence Rates for Pancreas, 2003 - 2012

County	Population at Risk	Cases	Age-adjusted Rate
Lake	639527	123	13.95
El Dorado	1771753	276	13.34
Butte	2173630	342	13.01
Merced	2486399	248	12.99
Napa	1338322	212	12.88
Nevada	977375	186	12.8
Sacramento	13898252	1650	12.66
Solano	4113568	497	12.58
San Francisco	7882653	1131	12.54
Santa Barbara	4158749	532	12.37
Sonoma	4747576	676	12.34
Monterey	4108255	448	12.22
Mariposa - Tuolumne	740101	136	12.1
Alameda	14819767	1675	12.04
Santa Cruz	2572971	294	11.96
San Joaquin	6691608	693	11.89
Contra Costa	10249027	1256	11.86
Placer	3307221	465	11.86
Mendocino	876475	133	11.81
San Mateo	7064882	929	11.77
Shasta	1764581	265	11.74
Santa Clara	17353490	1842	11.63
Stanislaus	5068730	522	11.63
Sierra - Yuba	727225	78	11.6
Tulare	4240885	393	11.56
Marin	2487557	378	11.56
San Diego	30219158	3293	11.51
San Benito	550170	51	11.49
Madera	1452985	155	11.49
Colusa - Glenn - Tehama	1104432	148	11.47
San Bernardino	19860103	1724	11.38
Fresno	9013743	855	11.29
Los Angeles	98007955	9832	11.24
Riverside	20612241	2196	11.22
Kings	1486399	118	11.18
Orange	29784086	3125	11.16
Kern	7995686	686	10.97
Yolo	1943094	174	10.95
Lassen - Modoc - Plumas	645767	85	10.9
Ventura	8087756	839	10.82
San Luis Obispo	2643455	346	10.69
Siskiyou - Trinity	581217	93	10.6
Alpine - Amador - Calaveras	843965	143	10.58
Del Norte - Humboldt	1610244	193	10.57
Sutter	916412	93	10.11
Imperial	1650904	134	9.6
Inyo - Mono	323098	33	8.65
STATE	365593449	39696	11.55

Note: All rates are per 100,000 and age-adjusted to the 2000 U.S. Standard Population Rates generated on Dec 1, 2016; Based on December 2015 Extract.

