

California



Cancer Facts & Figures

A sourcebook for planning and implementing programs for cancer prevention and control

2013



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Welcome to *California Cancer Facts & Figures 2013*. This new edition represents the continued collaboration between the American Cancer Society, Inc. California Division and the California Cancer Registry of the California Department of Public Health. *California Cancer Facts & Figures 2013* contains the most recent data available regarding cancer incidence and mortality, as well as expected cancer cases and deaths in the year ahead.

This year's edition includes a section addressing the Affordable Care Act, as well as the usual informative sections addressing common cancer sites, related American Cancer Society activities, and Society guidelines for nutrition and physical fitness.

Between 1988 and 2010, we have seen overall cancer incidence rates decrease by nine percent and between 1988 and 2009, cancer mortality rates decreased by 23%. It is sobering to note that, in 2013, it is estimated that nearly 144,800 Californians will be diagnosed with cancer. This is equivalent to more than 16 new cases every hour of every day. An estimated 55,485 people will die of the disease in the year ahead, which works out to 152 people each day.

Armed with the awareness of the importance of prevention and early detection and our wide array of programs and services, we are, as always, effectively and efficiently working to help everyone stay well, get well, find cures, and fight back. We hope that you will find this 2013 edition of *California Cancer Facts & Figures* informative, and that it will inspire you to join us in working to create a world with less cancer and more birthdays.

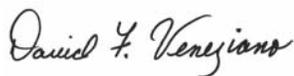
Sincerely,



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Chair of the Board



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California Basic Cancer Data

What is cancer?

Cancer is a large group of diseases characterized by uncontrolled growth and spread of abnormal cells. If the spread is not controlled or checked, it results in death. However, many cancers can be cured if detected and treated promptly, and many others can be prevented by lifestyle changes, especially avoidance of tobacco.

Cancer strikes at any age. In California, it kills more children from birth to age 14 than any other disease. Among adults, it occurs more frequently with advancing age.

How many people alive today have ever had cancer?

More than 1,342,000 Californians who are alive today have a history of cancer. Most of these prevalent cases (persons who were ever diagnosed with cancer) can be considered cured, while others still have evidence of cancer. "Cured" usually means that a patient has no evidence of disease and has the same life expectancy as a person who has never had cancer.

How many new cases will there be this year?

In 2013, nearly 144,800 Californians will be diagnosed with cancer. (This estimate does not include non-melanoma skin cancer and carcinoma *in situ* for sites other than bladder.) This is equivalent to more than 16 new cases every hour of every day.

How many people will die?

In 2013, nearly 55,485 people will die of the disease – about 152 people each day. Of every four deaths in California, one is from cancer. Cancer is the second leading cause of death, accounting for 24% of all deaths in 2009.

How many people survive?

In the early 1900s, few cancer patients had any hope of long-term survival. In the 1930s, less than one in five was alive five years after treatment, in the 1940s it was one in four, and in the 1960s it was one in three. Today, more than three out of five cancer patients will be alive five years after diagnosis and treatment.

Almost 99,919 Californians who get cancer this year will be alive five years after diagnosis. When normal life expectancy is taken into consideration (factors such as dying of heart disease, accidents, and diseases of old age), a "relative" five-year survival rate of 69% is seen for all cancers combined. The relative survival rate is commonly used to measure progress in the early detection and treatment of cancer and estimates the proportion of potentially curable cancer patients.

Could more people be saved?

Cancers caused by tobacco and heavy use of alcohol can be prevented. The American Cancer Society estimates that more than 16,397 lives will be lost to cancer in California because of tobacco use. About 1,700 cancer deaths were related to excessive alcohol use, frequently in combination with tobacco use.

Early diagnosis saves lives by identifying cancers when they are most curable. Five-year relative survival rates for common cancers such as breast, prostate, colon and rectum, cervix, and melanoma of the skin, are 93 to 100% if they are discovered before having spread beyond the organ where the cancer began. Following American Cancer Society cancer detection guidelines and encouraging others to do so can save lives.

How do cancer incidence rates in California compare to the rest of the United States?

Cancer rates for the U.S. are estimated by the Surveillance, Epidemiology, and End Results (SEER) Program. The SEER Program registers cancer patients in geographic areas covering about 26% of the U.S. population, including all of California.

In 2005-2009, the overall cancer incidence rate in California was lower compared to the nation excluding California. California cancer incidence rates for Asian/Pacific Islanders, African Americans, and non-Hispanic whites were between two and three percent lower than the nation. Hispanics in California had a nearly five percent lower incidence rate than other Hispanics in the nation. Some of the differences in rates may reflect difference in classifying the race/ethnicity of cancer cases between California and SEER.

Why is California Cancer Registry (CCR) data several years behind?

All cancer registries which publish high quality data have a substantial lag period before the data for a given year are complete. A number of circumstances are involved in the delay before a cancer case is reported to the CCR. Complete information on the case and on the first course of treatment may not be available until six months after the initial diagnosis. Another factor is the increasing number of cancer patients who are diagnosed and treated in doctors' offices without ever being admitted to a hospital; more effort is required to find these cases. The strict quality control procedures needed to produce complete and accurate data are labor intensive, and the CCR has limited resources.

The vast majority of cases are reported to the CCR within 12 months of the diagnosis date, but the data cannot be published until case reporting is estimated to be at least 95% complete, and the last 10% are the hardest to complete.

Table 1. Expected Numbers of New Cases, Deaths, and Existing Cases of Common Cancers in California, 2013

Male						
	New Cases		Deaths		Existing Cases	
Prostate	20,430	28%	3,085	11%	251,400	41%
Lung	8,680	12%	6,975	25%	17,900	3%
Colon & Rectum	7,270	10%	2,635	9%	59,600	10%
Leukemia & Lymphoma	6,415	9%	2,530	9%	52,900	9%
Urinary Bladder	4,990	7%	935	3%	40,600	7%
All Cancers Combined	73,535	100%	28,335	100%	607,800	100%
Female						
	New Cases		Deaths		Existing Cases	
Breast	22,850	32%	4,340	16%	306,500	42%
Lung	8,090	11%	6,070	22%	20,700	3%
Colon & Rectum	6,845	10%	2,500	9%	60,300	8%
Uterus & Cervix	6,250	9%	1,225	5%	95,700	13%
Leukemia & Lymphoma	5,005	7%	2,010	7%	46,100	6%
All Cancers Combined	71,275	100%	27,150	100%	734,400	100%

Source: California Cancer Registry, California Department of Public Health.
 Excludes non-melanoma skin cancers and *in situ* cancers, except bladder.
 Deaths include persons who may have been diagnosed in previous years.
 These projections are offered as a rough guide, and should not be regarded as definitive.
 For more information please visit the California Cancer Registry web site at <http://www.ccrca.org/>

California Statistics

- Cancer incidence rates in California declined by 9% from 1988 to 2010.
- Cancer mortality rates declined by 23% between 1988 and 2009. Mortality rates declined for all four major racial/ethnic groups in the state.
- Tobacco-related cancers continue to decline, including cancers of the lung and bronchus, larynx, oral cavity, stomach, and bladder. California has experienced a much larger decrease in lung cancer incidence rates than the U.S. in large part due to the success of the California tobacco control initiative.
- The female breast cancer incidence rate in California has decreased by 6%, but the mortality rate has decreased by 30%.
- The prostate cancer incidence rate increased by 72% from 1988 to 1992, but since then has declined to 1988 levels. The mortality rate has declined by 36% since 1988.
- Colon and rectum cancer incidence and mortality rates are declining sharply in most racial/ethnic groups.
- Cancer incidence in California is about the same or somewhat lower than elsewhere in the U.S. for most types of cancer.
- Despite these improvements, nearly one out of every two Californians born today will develop cancer at some point in their lives, and it is likely that one in five will die of the disease.

Source: California Cancer Registry, California Department of Public Health.

Cancer incidence rates are calculated using two components: the numerator (the number of newly diagnosed cancer cases) and the denominator (the number of people in the population). The California Cancer Registry continuously updates cancer case counts as new information is received. This may result in the addition of new cases upon receipt of new reports or the removal of cases as duplicates are identified. At the same time, population counts are continuously revised by state and federal officials to reflect updated information on population growth. These changes will affect cancer rates, and may result in the revision of a previously published cancer rate. These revised rates impact previously published estimates of fluctuations in cancer rates over time. For more information please visit the California Cancer Registry web site at <http://www.ccrca.org/>

Table 2. Expected New Cancer Cases and Deaths in California, 2013

Site	Expected New Cases			Expected Deaths		
	Total*	Male	Female	Total*	Male	Female
All Sites	144,810	73,535	71,275	55,485	28,335	27,150
Oral Cavity and Pharynx	3,745	2,570	1,175	870	590	285
Digestive System	28,120	15,435	12,685	14,830	8,210	6,620
Esophagus	1,390	1,065	325	1,235	945	290
Stomach	2,790	1,695	1,095	1,500	870	630
Small Intestine	640	345	295	140	65	75
Colon excluding Rectum	9,805	4,820	4,985	4,190	2,100	2,095
Rectum and Rectosigmoid	4,315	2,450	1,860	935	535	405
Anus, Canal and Anorectum	675	270	405	85	30	55
Liver and Intrahepatic Bile Duct	3,195	2,305	890	2,545	1,665	880
Gallbladder	390	110	280	220	65	155
Other Biliary	705	395	310	140	70	70
Pancreas	3,930	1,960	1,970	3,630	1,795	1,840
Retroperitoneum	130	70	60	25	15	10
Respiratory System	17,850	9,505	8,345	13,465	7,285	6,180
Nasal Cavity, Middle Ear	225	125	95	60	40	20
Larynx	855	705	150	300	235	60
Lung and Bronchus	16,770	8,680	8,090	13,045	6,975	6,070
Pleura	10	10	5	25	20	10
Bones and Joints	325	185	140	150	90	60
Soft Tissue including heart	1,205	670	530	455	255	200
Melanomas of the Skin	7,225	4,335	2,885	920	610	310
Other Non-Epithelial Skin	600	415	185	340	250	85
Breast	23,035	185	22,850	4,365	25	4,340
Female Genital System	9,150	0	9,150	2,985	0	2,985
Cervix Uteri	1,410	0	1,410	435	0	435
Corpus Uteri and Uterus, NOS	4,840	0	4,840	790	0	790
Ovary	2,275	0	2,275	1,560	0	1,560
Vagina	135	0	135	45	0	45
Vulva	395	0	395	105	0	105
Male Genital System	21,630	21,630	0	3,175	3,175	0
Prostate	20,430	20,430	0	3,085	3,085	0
Testis	1,070	1,070	0	60	60	0
Penis	125	125	0	30	30	0
Urinary System	11,605	8,265	3,340	2,645	1,785	860
Urinary Bladder	6,490	4,990	1,500	1,325	935	390
Kidney and Renal Pelvis	4,885	3,050	1,830	1,240	800	440
Ureter	170	100	65	35	20	15
Eye and Orbit	290	155	130	40	15	25
Brain and Other Nervous System	2,185	1,215	970	1,545	875	670
Thyroid Gland	4,835	1,025	3,810	210	85	125
Other Endocrine, Thymus	265	140	125	110	55	55
Hodgkins Disease	915	525	390	130	70	60
Non-Hodgkins Lymphomas	6,500	3,605	2,895	2,090	1,160	930
Multiple Myeloma	1,955	1,095	860	1,060	610	455
Leukemias	4,005	2,285	1,720	2,320	1,300	1,020
Lymphocytic Leukemia	1,950	1,175	775	675	390	290
Acute Lymphocytic Leukemia	535	315	220	205	115	95
Chronic Lymphocytic Leukemia	1,300	780	520	420	245	175
Myeloid and Monocytic Leukemia	1,950	1,075	875	1,205	670	535
Acute Myeloid Leukemia	1,295	695	600	1,000	550	455
Acute Monocytic Leukemia	100	60	40	15	10	5
Chronic Myeloid Leukemia	510	295	215	100	65	40
Ill Defined/Unknown	3,175	1,600	1,570	3,810	2,000	1,810

Source: California Cancer Registry, California Department of Public Health. Excludes non-melanoma skin cancers and carcinoma *in situ*, except bladder.

Deaths include persons who may have been diagnosed in previous years. These projections are offered as a rough guide, and should not be regarded as definitive.

* Male and female cases and deaths do not sum up to the total because of rounding of numbers.

** NOS: Not Otherwise Specified

Table 3. Expected New Cancer Cases by County, 2013

County	All	Breast	Prostate	Lung	Colon & Rectum	Bladder	Uterus & Cervix	NHL*	Melanoma	Oral	Leukemia	Pancreas	Myeloma
Alameda	6,035	975	890	700	550	245	285	315	240	140	135	170	95
Alpine	5	—	—	—	—	—	—	—	—	—	—	—	—
Amador	255	40	35	35	25	15	5	5	15	5	5	5	5
Butte	1,265	205	165	170	105	70	35	50	65	30	40	30	15
Calaveras	290	40	55	40	25	15	10	15	25	10	5	5	0
Colusa	90	15	10	15	10	0	5	0	5	0	5	0	0
Contra Costa	4,870	790	635	510	500	220	190	235	295	120	125	135	70
Del Norte	140	20	15	25	10	5	5	5	5	5	5	10	0
El Dorado	1,050	165	155	115	90	55	30	35	75	30	30	20	10
Fresno	3,160	490	360	390	300	120	115	130	95	85	105	95	45
Glenn	120	15	15	15	10	10	5	5	5	5	5	0	5
Humboldt	620	85	80	80	70	40	25	30	40	15	15	15	5
Imperial	540	70	75	60	45	15	20	25	10	10	10	15	10
Inyo	105	15	25	15	5	5	5	5	5	0	5	0	0
Kern	2,235	380	255	345	260	120	110	100	85	90	65	70	35
Kings	435	55	50	55	40	20	15	20	15	15	10	15	5
Lake	420	55	50	65	45	20	10	15	25	10	10	10	5
Lassen	115	10	20	20	10	5	5	0	5	5	5	5	0
Los Angeles	37,095	5,845	4,905	3,755	3,810	1,530	1,735	1,710	1,245	855	1,110	1,000	515
Madera	570	85	80	80	55	25	25	20	25	15	15	20	5
Marin	1,585	250	270	145	140	70	50	80	160	45	35	35	20
Mariposa	110	15	20	15	10	5	5	5	5	0	5	5	0
Mendocino	495	70	70	60	50	30	20	20	30	10	10	15	5
Merced	845	130	100	125	70	35	40	40	25	25	25	30	15
Modoc	45	10	5	5	5	0	0	0	5	0	0	0	0
Mono	30	5	5	5	0	0	0	0	5	0	0	0	0
Monterey	1,535	240	225	155	105	60	55	80	65	30	45	40	25
Napa	810	100	120	95	80	35	25	40	50	20	25	25	10
Nevada	590	95	85	70	40	35	20	25	40	15	15	20	15
Orange	11,980	1,965	1,630	1,325	1,060	515	460	545	725	320	370	300	150
Placer	1,835	310	265	215	175	85	65	65	130	35	40	45	25
Plumas	115	15	25	10	10	5	5	5	5	5	5	0	0
Riverside	8,015	1,250	1,150	950	845	415	320	320	400	210	195	220	95
Sacramento	5,925	975	850	710	590	270	245	230	275	160	140	170	65
San Benito	200	25	45	20	15	10	5	10	10	5	5	5	0
San Bernardino	6,675	990	1,070	790	680	270	310	280	275	165	165	170	90
San Diego	11,910	2,035	1,435	1,410	1,125	540	495	560	820	345	315	320	150
San Francisco	3,870	545	480	460	405	140	140	175	170	110	90	115	65
San Joaquin	2,655	360	410	360	235	95	105	110	90	70	65	65	35
San Luis Obispo	1,390	215	200	135	120	65	45	60	125	35	40	30	15
San Mateo	3,545	595	580	380	325	155	145	165	195	80	90	95	45
Santa Barbara	1,870	300	255	195	155	85	60	85	145	45	50	50	25
Santa Clara	7,120	1,105	1,225	655	665	310	295	350	335	170	190	190	95
Santa Cruz	1,175	185	220	95	90	55	45	45	85	30	30	25	15
Shasta	1,170	150	180	150	80	55	35	50	75	40	40	30	20
Sierra	20	5	0	0	0	0	0	0	0	0	0	0	0
Siskiyou	290	35	40	45	25	15	15	10	10	5	10	10	5
Solano	1,995	305	315	235	185	75	80	80	95	55	50	45	30
Sonoma	2,545	420	360	285	230	125	90	95	230	70	65	60	35
Stanislaus	1,775	280	205	285	215	75	80	80	65	55	50	50	20
Sutter	380	60	50	55	30	20	15	10	25	10	10	5	5
Tehama	335	35	40	55	25	20	15	15	25	10	10	10	5
Trinity	90	15	10	20	5	5	0	5	5	0	0	0	0
Tulare	1,370	200	165	195	145	50	65	55	40	30	45	40	20
Tuolumne	395	50	50	60	35	25	5	25	25	15	15	10	5
Ventura	3,475	545	520	340	330	150	145	160	240	80	80	75	35
Yolo	715	130	100	70	60	40	25	35	35	20	20	15	10
Yuba	300	45	40	50	25	15	15	10	15	10	5	10	0

Source: California Cancer Registry, California Department of Public Health.
 Excludes non-melanoma skin cancers and carcinoma *in situ*, except bladder.
 Only the total number of expected cases is shown for counties with 15 or fewer expected cases.
 These projections are offered as a rough guide, and should not be regarded as definitive.

* NHL: Non-Hodgkin Lymphoma

For more information please visit the California Cancer Registry web site at <http://www.ccrca.org/>

Table 4. Expected Cancer Deaths by County, 2013

County	All	Lung	Colon & Rectum	Breast	Prostate	Pancreas	NHL*	Leukemia	Stomach	Ovary	Bladder	Uterus & Cervix	Myeloma
Alameda	2,185	515	210	165	135	135	75	90	65	65	40	35	50
Alpine	0	—	—	—	—	—	—	—	—	—	—	—	—
Amador	95	25	5	10	5	10	5	5	0	5	0	5	0
Butte	485	125	40	40	35	30	20	20	10	15	15	5	10
Calaveras	115	40	10	10	5	5	5	5	0	0	0	0	0
Colusa	25	10	5	0	0	0	0	0	0	0	0	0	0
Contra Costa	1,680	385	170	125	85	125	70	75	40	55	40	25	30
Del Norte	65	20	5	5	5	5	5	0	0	0	0	0	0
El Dorado	345	80	30	25	20	35	15	15	5	5	5	5	5
Fresno	1,240	300	110	85	65	90	45	55	30	35	30	30	25
Glenn	55	20	5	0	5	5	5	5	0	0	0	0	0
Humboldt	275	70	25	25	15	15	10	5	5	5	10	10	5
Imperial	190	40	10	15	20	10	5	10	10	5	5	5	5
Inyo	30	5	5	5	0	0	0	0	0	0	0	0	0
Kern	1,075	290	85	80	60	60	35	40	20	30	25	25	20
Kings	155	35	15	15	10	10	5	5	5	5	5	5	5
Lake	170	55	10	10	10	10	5	5	5	0	5	5	0
Lassen	40	10	5	0	0	5	0	0	0	0	0	0	0
Los Angeles	13,795	2,945	1,370	1,145	765	910	515	620	495	410	315	385	270
Madera	205	50	25	10	10	15	5	5	5	5	5	5	0
Marin	450	95	50	35	30	35	20	20	5	15	10	10	10
Mariposa	45	15	0	5	5	0	0	0	0	0	0	0	0
Mendocino	190	50	15	20	10	15	10	5	5	5	5	0	5
Merced	320	90	30	20	15	20	10	10	10	10	5	5	5
Modoc	25	5	5	0	0	0	0	0	0	0	0	0	0
Mono	10	—	—	—	—	—	—	—	—	—	—	—	—
Monterey	525	110	35	40	35	35	25	30	15	15	10	10	10
Napa	315	75	35	15	20	20	10	15	5	10	10	5	5
Nevada	215	50	20	20	10	15	10	10	5	5	5	5	0
Orange	4,250	985	360	340	240	285	155	180	125	125	120	90	75
Placer	670	165	55	50	35	40	30	30	15	20	20	10	20
Plumas	45	10	5	5	5	5	0	0	0	0	0	0	0
Riverside	3,275	820	330	265	195	215	115	130	80	100	80	70	60
Sacramento	2,280	605	195	170	120	150	85	90	50	45	55	45	35
San Benito	75	15	5	10	0	5	5	0	0	0	0	0	0
San Bernardino	2,710	615	250	230	140	175	110	90	60	70	75	65	55
San Diego	4,735	1,110	410	390	285	315	185	210	100	135	110	95	100
San Francisco	1,370	330	120	90	60	95	50	55	50	40	35	25	15
San Joaquin	1,005	275	80	70	50	60	30	45	25	25	25	25	20
San Luis Obispo	505	130	45	35	25	35	15	20	10	10	15	10	15
San Mateo	1,180	265	110	90	55	85	55	50	35	35	40	25	15
Santa Barbara	665	155	45	50	45	45	25	25	15	15	15	15	15
Santa Clara	2,290	470	225	185	100	145	100	100	65	65	50	50	45
Santa Cruz	400	90	35	30	20	25	20	15	10	15	15	5	10
Shasta	460	140	35	20	30	30	15	20	5	10	10	5	10
Sierra	10	—	—	—	—	—	—	—	—	—	—	—	—
Siskiyou	125	35	10	10	10	10	5	5	0	0	5	0	0
Solano	700	180	65	50	40	45	25	20	15	15	15	15	15
Sonoma	960	230	85	80	55	60	40	40	20	25	25	20	25
Stanislaus	755	200	70	65	40	50	30	40	15	15	15	15	15
Sutter	150	55	15	10	10	5	5	5	5	5	5	0	5
Tehama	145	40	15	10	10	10	5	5	5	5	0	0	5
Trinity	50	15	5	0	0	5	0	0	0	0	0	5	0
Tulare	575	155	45	35	25	30	20	30	15	15	15	15	10
Tuolumne	140	45	15	10	10	5	5	5	5	5	0	0	0
Ventura	1,250	290	125	100	75	75	35	45	25	40	20	35	25
Yolo	270	65	25	25	15	15	5	10	5	10	10	5	5
Yuba	115	40	10	5	5	5	5	5	0	5	5	0	0

Source: California Cancer Registry, California Department of Public Health.

Deaths include persons who may have been diagnosed in previous years.

These projections are offered as a rough guide, and should not be regarded as definitive.

Only the total number of expected deaths is shown for counties with 15 or fewer expected deaths.

* NHL: Non-Hodgkin Lymphoma

For more information please visit the California Cancer Registry web site at <http://www.ccrca.org/>

Cancer Risk

Lifetime risk is the probability of an event occurring during a person's life, from birth to his or her eventual death. Cancer statistics provide two types of risk: the probability of developing cancer and the probability of dying of cancer from birth (lifetime risk) or conditional at a specific age.

Lifetime risk of developing cancer is a frequently misinterpreted statistic. The often-cited one in eight statistic for female breast cancer represents a newborn's likelihood of eventually being diagnosed with invasive breast cancer during her lifetime. This statistic does not apply to women of all ages.

The risk of developing breast cancer in the next one or two decades of life may be considerably lower than the risk perceived by most women. For example, the probability of being diagnosed with breast cancer over any 20-year period is much lower than commonly believed – one out of 21 women will be diagnosed with breast cancer from ages 45 through 64 if cancer-free at age 45. For women cancer-free at 65, one out of 14 women will be diagnosed with breast cancer between the ages of 65 and 84.

Causes of Cancer

Exactly why one individual develops cancer and another person with very similar life experiences does not is beyond current scientific understanding. Just as there are many different cancers, there are many factors that contribute to an individual's risk of developing cancer, and it is extremely difficult to point to any one factor as the cause. We know that timing and duration of cancer-causing exposures impact one's risk, and exposures to the developing child during the prenatal period or the first years of life may be especially harmful. Although science has demonstrated that exposure to certain substances or circumstances will increase an individual's chance of getting cancer, cancer is never a certain outcome of any particular exposure.

For example, a family history of cancer means that a person may be more likely to develop cancer than someone without such a history. However, heredity appears to be the dominant cause of only about 5% of cancers. Exposure to tobacco smoke is known to significantly increase cancer risk, and is associated with an estimated 30% of all cancers, including 80% of lung cancers. As many as 40% of all cancers are thought to be associated with combinations of poor diet, inactivity, elevated body weight, excessive alcohol consumption, and high salt intake – collectively referred to as unhealthy lifestyle factors.

Exposure to other environmental substances has been variously estimated to be associated with from 2% to 15% of all cancers. Included in this category are exposures to certain viruses and bacteria, exposures to known workplace carcinogens, and exposures to radiation from sunlight, radon, or medical imaging, which sometimes involve many relatively small doses that accumulate over a long time. There is concern that an increase in radiation exposures among the general population due to growth in the use of diagnostic radiation imaging and losses in the ozone layer may give rise to more cancers of certain types than have been seen in the past. Long-term exposures to some consumer products and environmental pollutants, both natural and man-made, may similarly increase the risk of cancer through routes that have not yet been well studied. Although their roles in cancer development remain uncertain, such substances, including some pesticides, plasticizers and nano-materials, may cause subtle hormonal or other physiological alterations that could contribute to the development of cancer in later life.

Reducing your chances of developing cancer requires adopting a healthy lifestyle, reducing exposures to known carcinogens, and, if you have a family history of cancer, talking to your doctor on a regular basis. See the American Cancer Society guidelines on nutrition, physical activity and cancer prevention for a list of things you can do today to improve your chances of never getting cancer and of enjoying many future birthdays.

Table 5. Probability of Being Diagnosed with Certain Cancers Over Selected Age Intervals¹, California, 2005–2009

Current Age	Birth		25		45		65	
	20	Eventually	45	Eventually	65	Eventually	85	Eventually
All Sites								
Male	1:270	1:2	1:64	1:2	1:7	1:2	1:2	1:2
Female	1:306	1:2	1:35	1:2	1:8	1:2	1:4	1:3
Breast								
Female	*	1:8	1:97	1:8	1:21	1:8	1:14	1:12
Colon and Rectum								
Male	*	1:19	1:699	1:19	1:77	1:19	1:28	1:21
Female	*	1:21	1:737	1:20	1:100	1:21	1:35	1:23
Lung and Bronchus								
Male	*	1:15	1: 1,921	1:15	1:81	1:14	1:19	1:15
Female	*	1:17	1: 1,757	1:17	1:95	1:17	1:24	1:19
Prostate								
Male	*	1:7	1: 1,727	1:6	1:22	1:6	1:8	1:7

¹ Assuming person is cancer-free at the beginning of the age interval. * Probability is extremely small.

Source: California Cancer Registry, California Department of Public Health. Prepared by the California Department of Public Health, Cancer Surveillance Section.

Causes of Death

Cancer is the second leading cause of death in California, causing more than 55,000 deaths each year. Smoking, poor diet, and obesity are key risk factors for cancer as well as other diseases, such as heart disease, cerebrovascular disease, chronic lung disease, and diabetes. Following American Cancer Society guidelines for cancer prevention will also lower your risk for other diseases.

Survival by Stage at Diagnosis

Five-year relative survival has improved for many cancers in the past several decades. Relative survival estimates the probability that an individual will not die from a given cancer during the specified time following diagnosis, after adjustment for the expected mortality from other causes.

One of the strongest predictors of survival is the degree to which the cancer has spread when discovered. This is referred to as the stage at diagnosis. Generally, the earlier the stage, the better the prognosis. The following terminology is often used to summarize stage at diagnosis:

In Situ

The tumor is at the earliest stage and has not extended through the first layer of cells (the basement membrane) in the area in which it is growing.

Localized

The tumor has broken through the basement membrane, but is still confined to the organ in which it is growing.

Regional

The tumor has spread to lymph nodes or adjacent tissues.

Distant

The tumor has spread to other parts of the body (metastasized).

An invasive tumor has spread beyond the layer of tissue in which it developed and is growing into surrounding, healthy tissues. Diagnosis at early stage is a tumor diagnosed at *in situ* or localized stage. It is an indication of screening and early detection. Diagnosis at late stage is a tumor diagnosed at regional or distant stage and is associated with poorer prognosis.

Table 6. Leading Causes of Death in California, 2009

Cause	Deaths	Percent	Cause	Deaths	Percent
Heart Disease	58,801	25%	Diabetes	6,961	3%
Cancer	55,753	24%	Influenza and Pneumonia	6,350	3%
Cerebrovascular Disease	13,410	6%	Cirrhosis	4,256	2%
Chronic Lower Respiratory Disease	12,905	6%	Intentional Self-Harm	3,760	2%
Accidents	10,608	5%	All Deaths	231,764	100%
Alzheimer's Disease	9,882	4%			

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

Table 7. Five-Year Relative Survival by Stage at Diagnosis in California, 2001–2010

Cancer Type	All Stages	Localized	Regional	Distant	Cancer Type	All Stages	Localized	Regional	Distant
Female Breast	92%	100%	86%	26%	Pancreas	6%	24%	9%	3%
Cervix Uteri	71%	93%	59%	19%	Lung & Bronchus	17%	56%	27%	4%
Uterus	85%	97%	70%	18%	Melanoma	92%	99%	62%	16%
Ovary	47%	92%	76%	29%	Hodgkin Lymphoma	84%	90%	91%	74%
Prostate	100%	100%	100%	29%	NHL*	68%	82%	71%	59%
Testis	94%	99%	95%	72%	Leukemia**	53%	—	—	53%
Oral & Pharynx	65%	85%	61%	36%	Childhood (0-19 years)	78%	—	—	78%
Colon & Rectum	68%	94%	72%	13%	Adult (20+ years)	48%	—	—	48%

*NHL: Non-Hodgkin Lymphoma **All leukemias are staged as distant disease; thus survival cannot be calculated for other stages.

Note: Follow-up is through December 2010. Cancers that were unstaged at time of diagnosis are excluded.

Source: California Cancer Registry, California Department of Public Health. Prepared by the California Department of Public Health, Cancer Surveillance Section.

For more information please visit the California Cancer Registry website at <http://ccrcal.org/>

Stage at Diagnosis

The percent of cancers diagnosed at an early stage (*in situ* or localized) is an indication of screening and early detection for the cancers listed below. The 15 most populous counties listed in the table account for 80% of California's population. The numbers are actual cases reported to the CCR for 2010, while pages 4 and 5 show the expected number of cancers in 2013.

Table 8. Three Common Cancers: New Cases and Percent Early Stage at Diagnosis, California, 2010

Cancer Site	Total New Cases Diagnosed	Percent Early Stage
Female Breast	28,575	70%
Prostate	21,014	74.6%
Colorectal	14,707	43.4%

Source: California Cancer Registry, California Department of Public Health.
Prepared by the California Department of Public Health, Cancer Surveillance Section.

Table 9. Percent of Cancer Cases Diagnosed at Early Stage, California and Selected Counties, 2010

	Non-Hispanic White		African American		Hispanic		Asian/Pacific Islander	
	Total Cases	% Early	Total Cases	% Early	Total Cases	% Early	Total Cases	% Early
Breast – Females								
California	17,810	73	1,757	65	4,849	64	3,673	75
Alameda	645	75	162	67	128	58	258	72
Contra Costa	687	72	72	65	99	64	117	83
Fresno	383	77	29	66	173	73	41	66
Kern	311	74	16	75	96	70	23	74
Los Angeles	3,389	70	788	63	1,629	63	1,129	73
Orange	1,571	72	35	60	364	66	396	74
Riverside	952	72	71	59	313	61	77	86
Sacramento	853	72	109	66	118	64	132	70
San Bernardino	608	68	118	59	327	64	82	71
San Diego	1,738	74	90	63	415	66	258	76
San Francisco	347	76	42	74	41	76	245	80
San Joaquin	243	70	32	44	76	68	49	71
San Mateo	440	76	21	81	94	71	201	80
Santa Clara	805	77	38	68	186	71	374	74
Ventura	493	70	—	—	121	61	45	76
Prostate – Males								
California	12,644	76	1,899	76	3,358	71	1,558	76
Alameda	477	83	176	87	92	80	95	89
Contra Costa	385	87	72	78	74	81	52	85
Fresno	218	76	29	76	94	76	16	75
Kern	185	72	27	63	54	69	—	—
Los Angeles	2,338	66	765	71	1,148	60	452	68
Orange	1,130	72	40	73	204	72	101	72
Riverside	648	81	94	77	216	80	31	77
Sacramento	541	80	109	80	83	81	65	69
San Bernardino	544	74	124	77	254	77	44	70
San Diego	1,066	76	124	80	198	72	106	79
San Francisco	223	84	52	77	47	66	146	79
San Joaquin	232	83	31	81	64	84	27	74
San Mateo	357	81	28	79	69	84	93	82
Santa Clara	717	83	46	85	167	87	204	85
Ventura	345	72	—	—	96	63	—	—

Source: California Cancer Registry, California Department of Public Health.
Prepared by the California Department of Public Health, Cancer Surveillance Section. — Data not shown if fewer than 15 cases were reported.

Table 9. Percent of Cancer Cases Diagnosed at Early Stage, California and Selected Counties, 2010 (continued)

	Non-Hispanic White		African American		Hispanic		Asian/Pacific Islander	
	Total Cases	% Early	Total Cases	% Early	Total Cases	% Early	Total Cases	% Early
Invasive Cervix – Females								
California	545	46	91	37	528	52	192	43
Alameda	—	—	—	—	—	—	17	29
Contra Costa	28	57	—	—	—	—	—	—
Fresno	—	—	—	—	—	—	—	—
Kern	18	50	—	—	15	47	—	—
Los Angeles	86	48	43	37	228	50	69	45
Orange	43	51	—	—	33	36	22	45
Riverside	29	48	—	—	29	76	—	—
Sacramento	25	48	—	—	—	—	—	—
San Bernardino	33	45	—	—	38	45	—	—
San Diego	52	54	—	—	33	36	22	50
San Francisco	—	—	—	—	—	—	—	—
San Joaquin	—	—	—	—	—	—	—	—
San Mateo	—	—	—	—	—	—	—	—
Santa Clara	—	—	—	—	16	50	15	60
Ventura	—	—	—	—	—	—	—	—
Colon & Rectum – Males								
California	4,548	44	569	44	1,404	43	949	43
Alameda	132	32	46	41	41	54	57	49
Contra Costa	186	41	31	45	22	64	26	35
Fresno	76	49	—	—	45	38	—	—
Kern	111	43	—	—	42	43	—	—
Los Angeles	936	43	255	46	494	41	339	44
Orange	340	44	—	—	80	41	99	45
Riverside	295	44	26	38	97	43	15	33
Sacramento	193	47	30	50	41	49	30	30
San Bernardino	231	54	42	38	97	44	18	39
San Diego	399	47	25	36	83	43	64	41
San Francisco	97	40	—	—	—	—	91	46
San Joaquin	73	45	—	—	27	63	—	—
San Mateo	111	41	—	—	23	57	38	50
Santa Clara	190	45	—	—	49	51	83	35
Ventura	119	48	—	—	30	37	—	—
Colon & Rectum – Females								
California	4,173	42	540	39	1,248	45	910	41
Alameda	127	39	46	33	29	41	59	36
Contra Costa	174	40	23	57	30	47	25	68
Fresno	95	42	—	—	53	40	—	—
Kern	83	35	—	—	21	67	—	—
Los Angeles	835	43	255	41	451	45	315	44
Orange	366	44	—	—	60	37	98	48
Riverside	249	49	21	29	73	51	—	—
Sacramento	193	43	36	25	29	45	30	40
San Bernardino	152	46	29	38	93	46	—	—
San Diego	346	37	23	26	101	41	57	42
San Francisco	80	44	—	—	25	44	89	28
San Joaquin	70	53	—	—	25	44	16	63
San Mateo	102	41	—	—	—	—	33	30
Santa Clara	195	44	17	35	56	43	83	37
Ventura	106	44	—	—	23	61	—	—

Major Cancer Sites

Table 10. Risk Reduction, Early Detection and Warning Signs, and Treatment

	Risk Reduction	Early Detection (ED) and Warning Signs (WS)*	Treatment
Core Cancers			
Breast	Follow American Cancer Society nutrition and physical activity guidelines, maintain normal weight, exercise three times per week or more. Chemoprevention for high-risk women may be considered.	ED: Mammography, annual clinical breast examinations, breast self-examinations (optional) WS: Breast lump or a thickening, bleeding from nipple, skin irritation, retraction	Surgery (breast conserving therapy with radiation, or mastectomy with or without radiation) plus chemotherapy and/or hormone therapy, depending on tumor size, spread to lymph nodes, and/or prognostic features
Colon and Rectum	Removal of polyps, follow the American Cancer Society nutrition and physical activity guidelines. Recent studies suggest certain drugs may reduce risk.	ED: Fecal occult blood test (FOBT), flexible sigmoidoscopy, colonoscopy, double-contrast barium enema WS: Rectal bleeding, change in bowel habits, blood in the stools	Surgery plus radiation therapy and/or chemotherapy for later stages
Prostate	Follow American Cancer Society nutrition and physical activity guidelines. Clinical trials are underway to determine if vitamin E and selenium can reduce risk.	ED: Digital rectal examination, Prostate specific antigen (PSA) WS: In most cases, there are no symptoms associated with early prostate cancer. For more advanced disease: urination difficulties, nagging pain in the back, hips or pelvis	Surgery, radiation therapy, hormone manipulation, or watchful waiting, depending on stage
Lung and Bronchus	Avoid tobacco products in all forms, avoid secondhand smoke, follow workplace safety practices.	ED: Early detection tests are in clinical trial. WS: Nagging cough, coughing up blood, unresolved pneumonia	Non-small cell: Surgery plus radiation therapy and/or chemotherapy for later stages Small-cell: Chemotherapy plus radiation therapy, and sometimes surgery, depending on prognostic factors
Other Cancers			
Bladder (Urinary)	Avoid use of tobacco products, use workplace safety precautions if working in high-risk industry	ED: Health-related checkups may identify early signs and symptoms. WS: Blood in urine	Surgery plus radiation therapy, immunotherapy, and/or chemotherapy for later stages
Brain	None known	ED: Health-related checkups may identify early signs and symptoms. WS: Headaches, convulsions, personality changes, visual problems, unexplained vomiting	Surgery, radiation therapy, and/or chemotherapy depending on tumor location. Drugs are available to alleviate symptoms related to brain or other nervous system tumors.
Cervix Uteri	Safe sex practices, avoid use of tobacco products	ED: Pap smear and pelvic examination WS: Abnormal vaginal bleeding	Surgery and/or radiation therapy, plus chemotherapy for later stages

*Early cancer in most cases has no symptoms or warning signs. Early detection guidelines should be followed.

Table 10. Risk Reduction, Early Detection and Warning Signs, and Treatment

	Risk Reduction	Early Detection (ED) and Warning Signs (WS)*	Treatment
Other Cancers			
Endometrium (Uterine Cancer)	When considering estrogen replacement therapy, benefits and risks must be weighed by patient and physician	ED: No screening examinations available for women without symptoms who are at average risk for endometrial cancer WS: Unusual bleeding, spotting, or abnormal discharge; especially if after menopause, pelvic pain or mass, unexplained weight loss	Surgery plus radiation therapy, chemotherapy, or hormone therapy for later stages
Hodgkin Disease	None known	ED: Health-related checkups may identify early signs and symptoms. WS: Night sweats, itching, unexplained fever, lymph node enlargement	Chemotherapy and/or radiation therapy with bone marrow transplant for recurrent disease
Leukemia	Reduce exposure to radiation and hazardous chemicals, avoid cigarette smoking	ED: Health-related checkups may identify early signs and symptoms. WS: Fatigue, pallor, repeated infection, easy bruising, nose bleeds	Chemotherapy, plus stem cell transplant depending on prognostic factors, Gleevec (imatinib mesylate) for treatment of chronic myeloid leukemia
Lymphoma (Non-Hodgkin)	None known	ED: Health-related checkups may identify early signs and symptoms. WS: Lymph node enlargement, fever	Chemotherapy and/or radiation therapy, plus stem cell transplant for advanced disease
Melanoma (Skin)	Protect against sun exposure, especially in childhood, use protective clothing and sunscreens, and avoid tanning beds	ED: Skin examinations by an experienced physician, monthly self-exams WS: A change in a mole or a sore that does not heal	Surgery, immunotherapy for later stages
Oral	Avoid tobacco products in all forms, limit alcohol use, eat a diet high in fresh fruits and vegetables	ED: Regular oral exams WS: Sore in mouth that does not heal, color change in an area of the mouth	Surgery and/or radiation therapy, chemotherapy for later stages
Ovary	Following American Cancer Society nutrition guidelines may be helpful.	ED: Health-related checkups may identify early signs and symptoms. WS: Often “silent,” abdominal symptoms, pain	Surgery, plus chemotherapy and sometimes radiation therapy for later stages
Pancreas	Following American Cancer Society nutrition guidelines may be helpful; avoid use of tobacco products	ED: Health-related checkups may identify early signs and symptoms. WS: Vague abdominal symptoms, pain, and jaundice	Surgery, radiation therapy, and/or chemotherapy depending on stage
Stomach	Avoid food high in nitrates, avoid use of tobacco products, eat a diet high in fresh fruits and vegetables	ED: Health-related checkups may identify early signs and symptoms. WS: Indigestion	Surgery plus chemotherapy and radiation therapy for later stages
Testis	None known	ED: Testicular self-examination in young males has been suggested. WS: Testicular mass or enlargement	Surgery plus radiation therapy and chemotherapy for later stages

*Early cancer in most cases has no symptoms or warning signs. Early detection guidelines should be followed.

Select Cancer Demographics

California's Diverse Populations

The U.S. Census Bureau estimates California's population to be more than 37.2 million. Of these, 57.6% are whites; 6.2% are African Americans; 37.6% are Hispanics; 13.0% are Asians; 1.0% are American Indians and Alaskan Natives; and 0.4% are Native Hawaiians and Other Pacific Islanders. This great diversity is further enhanced due to the fact that the Asian/Pacific Islander and Hispanic populations are composed of numerous nationalities, many of whom are recent immigrants (<http://2010.census.gov/2010census/popmap/ipmtext.php?fl=06>).

Prostate cancer is a common cancer for males in most ethnic groups, but lung cancer is the most common among Laotian, and Vietnamese males. Breast cancer is the number one cancer among women of all racial/ethnic groups.

In general, the types of cancers that commonly develop are similar regardless of race/ethnicity. In most racial/ethnic groups in California, prostate, lung and bronchus, and colon and rectum cancer are among the top four cancers for males, while breast, lung and bronchus, and colon and rectum cancer are among the top four cancers for females. Cancer is the second leading cause of death for all racial/ethnic groups combined.

The risk of developing cancer varies considerably by race/ethnicity. African American males have the highest overall cancer rate, followed by non-Hispanic white males. Among females, non-Hispanic white women are the most likely to be diagnosed with cancer, but African American women are more likely to die of the disease. Cancer rates are considerably lower among persons of Asian/Pacific Islander origin and persons of Hispanic ethnicity than among other Californians. However, both groups have substantially higher rates of certain cancers, such as liver and stomach cancer. Hispanic women are also more likely to develop and die from cervical cancer. Research indicates that cancer rates in populations immigrating to the U.S. tend to increase over time.

The reasons for racial/ethnic differences in cancer risk are not well understood. It is likely that they result from a complex combination of dietary, lifestyle, environmental, occupational, and genetic factors. Higher mortality rates among some populations are due in part to poverty, which may increase the risk of developing certain cancers and limit access to and utilization of preventive measures and screening. Poor health among persons in poverty may also limit treatment options and decrease cancer survival.

According to the 2009 California Health Interview Survey, more than seven million Californians, including both non-elderly adults and children, were uninsured for all or part of 2009. Insurance status varied by race/ethnicity. Our challenge is to help improve the plight of those at risk, to identify the apparent protective cultural practices which explain lower incidence and mortality in some groups, and to assist other groups to adopt protective practices.

Racial/Ethnic Differences in Cancer Risk in California, 2010

The risk of developing cancer varies considerably by race/ethnicity. The reasons for these differences are not well understood. It is likely that they result from a combination of dietary, lifestyle, socioeconomic, environmental, and genetic factors. Research into racial/ethnic differences in cancer risk may help us understand some of the underlying causes of cancer.

African American males have the highest overall cancer incidence and mortality rates. Among females, non-Hispanic white women are the most likely to be diagnosed with cancer, but African American women are more likely to die of cancer. African Americans have substantially higher rates of cancers of the stomach, small intestine, liver, larynx, prostate, myeloma, and Kaposi Sarcoma than non-Hispanic whites.

In general, cancer rates are about 30-40% lower among persons of Asian/Pacific Islander origin and persons of Hispanic ethnicity than among non-Hispanic white Californians. However, as with African Americans, both of these groups have substantially higher rates of stomach and liver cancer. Hispanics also have higher rates of acute lymphocytic leukemia, gallbladder, penile, and cervical cancer than non-Hispanic whites. Cancer is the leading cause of death among Hispanics and Asian/Pacific Islanders and is the second leading cause of death among non-Hispanic whites and African Americans in California.

Lesbian, Gay, Bisexual, and Transgender (LGBT) Differences in Cancer Risk

The Lesbian, Gay, Bisexual, and Transgender (LGBT) population is at greater risk of cancer due to a variety of unique social factors and a history of discrimination. Past negative experiences with health care providers may cause some members of the LGBT community to wait too long before seeking health care services. As a result, they may not undergo regular screening tests and may be diagnosed with cancer at a later stage, when the disease is more difficult to treat. Compounding the problem is fact that LGBT individuals are more likely to be uninsured.

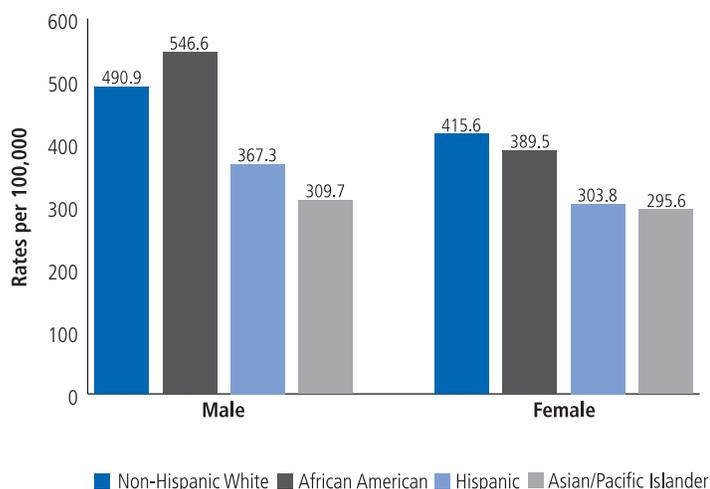
The following are a few examples of challenges affecting LGBT community cancer risk: 1) In a large, nationwide study, lesbians reported having fewer mammograms and pelvic exams than the heterosexual population; 2) another study reported less frequent Pap tests among lesbians; and 3) when compared with the general population, gay men are more likely to smoke, which puts them at a much higher risk of lung and other tobacco-related cancers. The *2010 California Cancer Facts and Figures* dedicated a page of data and information related to cancer in the LGBT population.

Table 11. Five Most Common Cancers and Number of New Cases by Sex and Detailed Race/Ethnicity, California, 2006–2010

	Males					Females				
	1	2	3	4	5	1	2	3	4	5
African American	Prostate 9,923	Lung 3,496	C&R 2,739	Kidney 1,137	Bladder 905	Breast 7,278	Lung 2,931	C&R 2,818	Uterus 1,319	Pancreas 784
American Indian	Prostate 341	Lung 172	C&R 158	Liver 112	Kidney 90	Breast 432	Lung 181	C&R 149	Uterus 119	Kidney 70
Kampuchean	C&R 69	Liver 57	Lung 46	Prostate 32	NHL&Oral 21	Breast 66	C&R 60	Lung 42	Liver 33	Cervix 26
Chinese	Prostate 1,996	Lung 1,394	C&R 1,215	Liver 720	Bladder 436	Breast 2,854	C&R 1,220	Lung 1,012	Uterus 544	Thyroid 464
Filipino	Prostate 2,342	Lung 1,272	C&R 1,034	Liver 419	NHL 410	Breast 3,838	C&R 1,053	Lung 926	Uterus 868	Thyroid 807
Hawaiian	Prostate 76	Lung 37	C&R 36	NHL 16	Bladder 16	Breast 101	Lung 28	C&R 27	Uterus 27	Thyroid 14
Hispanic	Prostate 17,308	C&R 6,798	Lung 4,782	NHL 3,528	Kidney 3,477	Breast 19,344	C&R 5,635	Uterus 4,106	Lung 4,052	Thyroid 4,003
Japanese	Prostate 700	C&R 538	Lung 391	Bladder 203	Stomach 188	Breast 1,279	C&R 571	Lung 442	Uterus 226	Pancreas 179
Korean	C&R 447	Prostate 420	Stomach 356	Lung 339	Liver 252	Breast 829	C&R 415	Stomach 262	Lung 242	Thyroid 188
Laotian	Lung 56	Liver 49	C&R 30	Prostate 21	NHL&Oral 20	Breast 50	C&R 30	Liver 27	Lung 18	Thyroid 15
Pacific Islander	Prostate 104	Lung 71	C&R 39	Liver 26	Oral 21	Breast 190	Uterus 83	Lung 45	C&R 38	Ovary 29
South Asian	Prostate 554	C&R 179	Lung 147	NHL 117	Bladder 100	Breast 774	C&R 151	Uterus 135	Thyroid 133	Ovary 90
Vietnamese	Lung 678	Liver 623	C&R 523	Prostate 517	Stomach 182	Breast 973	C&R 405	Lung 345	Thyroid 251	Liver 202
Non-Hispanic White	Prostate 69,893	Lung 31,208	C&R 23,527	Bladder 19,109	Melanoma 19,099	Breast 74,789	Lung 30,516	C&R 22,289	Uterus 13,991	Melanoma 12,352

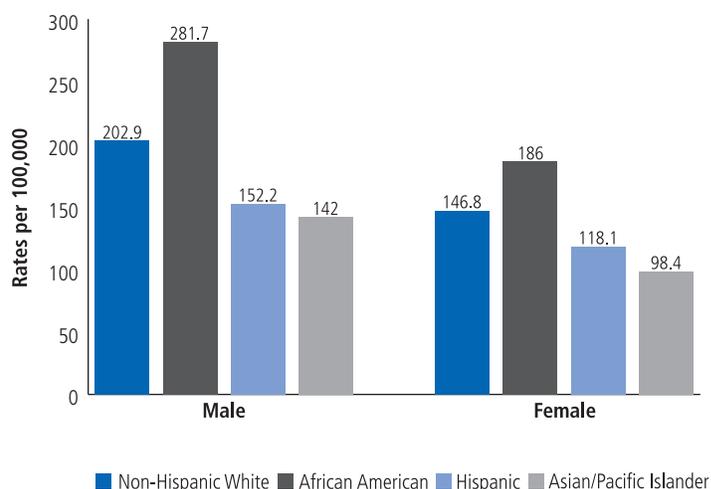
Source: California Cancer Registry, California Department of Public Health. Note: C&R = colon & rectum; NHL = Non-Hodgkin lymphoma

Figure 1. Cancer Incidence by Race/Ethnicity and Sex in California, 2010



Note: Rates are age-adjusted to the 2000 U.S. population.
Source: California Cancer Registry, California Department of Public Health.
Prepared by the California Department of Public Health, Cancer Surveillance Section.

Figure 2. Cancer Mortality by Race/Ethnicity and Sex in California, 2009



Note: Rates are age-adjusted to the 2000 U.S. population.
Source: California Cancer Registry, California Department of Public Health.
Prepared by the California Department of Public Health, Cancer Surveillance Section.

Common Cancers by Age and Sex

Cancer risk varies considerably by age, with only two percent of all cancers occurring before the age of 19, and about 68% occurring after age 60. In fact, nearly half of all cancers occur between ages 60-80, and more cancers occur after age 80 than before age 40.

Cancers occurring before the age of 20 are typically nonepithelial in origin, with the most common types being leukemias, tumors of the brain and central nervous system, and lymphomas. Melanoma is a common cancer among both young adult males and females.

Kaposi sarcoma is no longer among the top five cancers for males aged 35-44, due to recent dramatic decreases in this AIDS-related cancer. The introduction of highly active anti-retroviral therapy (HAART) has resulted in a decrease in AIDS-related cancer incidence and improved survival.

Breast cancer is the most common cancer among adult women after age 30, while prostate cancer is the most common among males after age 45. Lung and bronchus cancer is the second most common cancer among both men and women after age 45, followed closely by colon and rectum cancer. Bladder cancer is common among elderly men, while cancer of the uterus is common among elderly women.

Table 12. Comparison of Age-Adjusted Cancer Incidence Rates Among Other Racial/Ethnic Groups to Non-Hispanic Whites, 2006–2010

Difference	Asian/Pacific Islander	Hispanic	African American
Lower (At least 50 percent lower than the incidence rate among non-Hispanic whites)	Esophagus Small Intestine Anus, Anal Canal, and Anorectum Larynx Trachea, Mediastinum, and Other Respiratory Organs Melanoma of the Skin Vagina Vulva Testis Urinary Bladder Eye and Orbit Brain and ONS* Hodgkin Lymphoma Chronic Lymphocytic Leukemia Acute Monocytic Leukemia Mesothelioma Kaposi Sarcoma	Oral Cavity and Pharynx Anus, Anal Canal, and Anorectum Lung and Bronchus Melanoma of the Skin Urinary Bladder Ureter Chronic Lymphocytic Leukemia	Retroperitoneum Peritoneum, Omentum, and Mesentery Melanoma of the Skin Testis Eye and Orbit Acute Monocytic Leukemia Mesothelioma
Higher (At least 50 percent higher than the incidence rate among non-Hispanic whites)	Stomach Liver and IBD** Gallbladder	Stomach Liver and IBD** Gallbladder Cervix Penis Acute Lymphocytic Leukemia	Stomach Small Intestine Liver and IBD** Larynx Prostate Myeloma Kaposi Sarcoma

Source: California Cancer Registry, California Department of Public Health. Prepared by the California Department of Public Health, Cancer Surveillance Section.
*ONS: Other Nervous System **IBD: Intrahepatic Bile Duct

Figure 3. Percent of New Cancers Diagnosed by Age and Sex, California, 2010, Male

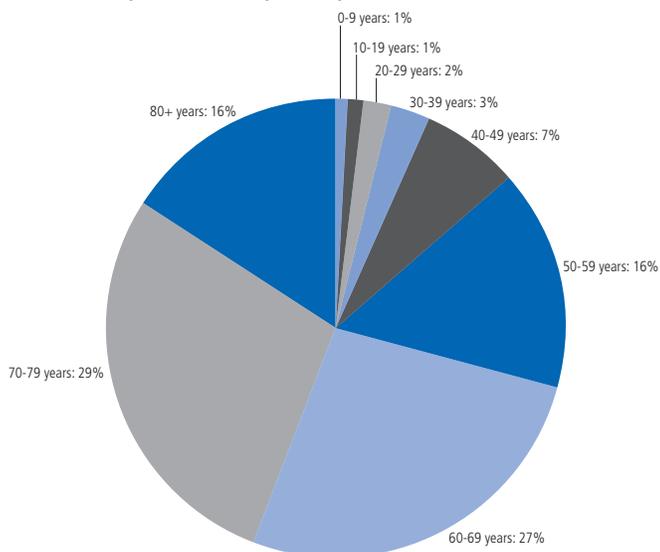
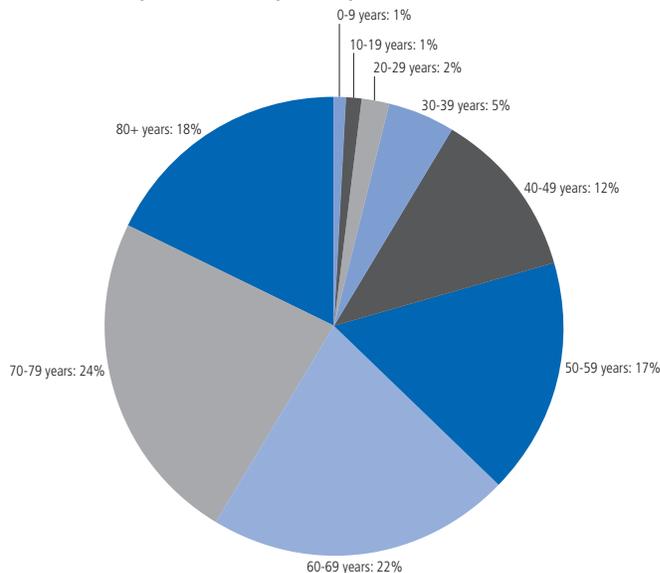


Figure 4. Percent of New Cancers Diagnosed by Age and Sex, California, 2010, Female



Childhood Cancer

More than 1,600 children and young adults under the age of 20 are diagnosed with cancer in California each year. Of these, more than 1,000 are under the age of 15. Although accidents kill about three times more children than cancer, an estimated one of every 285 children will develop some form of cancer before they are 20 years old.

In 2005-2009, the cancer incidence rate among children less than 15 years old in California compared to the nation was 2% higher among non-Hispanic whites, 1% lower among African Americans, 16% higher among Hispanics, and 5% lower among Asian/Pacific Islanders.

Progress in the treatment of childhood cancer over the last 30 years has been impressive. The majority of children with cancer now grow to adulthood and lead productive lives. Children with cancer must be treated at institutions that provide the intensive treatment, supportive care, and psychosocial services required to achieve these successful outcomes. Clinical trials are available to help improve outcomes for all children with cancer and must be considered in the evaluation of each child at the time of diagnosis.

American Cancer Society Childhood Cancer Activities

The California Division offers support programs, information, transportation, and a variety of quality of life programs that help meet the needs of children with cancer and their families. In 2012, the Young Cancer Survivor Scholarship Program awarded 40 college-bound young cancer survivors scholarships for college tuition and related costs for up to four years. Local Society offices may offer a variety of activities for children diagnosed with cancer and their family members. For example, Courageous Kids Day, always on Mother's Day, gives pediatric cancer patients and their families a free day at California's Great America in Northern California. In 2012, more than 460 California children currently in treatment participated in this day of fun with 2,442 family members. The Society also has a number of overnight camps for young cancer patients and survivors. In 2012, more than 350 young cancer patients and their siblings attended such camps across California, while 115 attended a week-long day camp in Long Beach. The American Cancer Society offers opportunities for children with cancer and their families to enjoy time together for a day of fun at an amusement park, to spend a week among friends and families who face similar challenges and achievements, or to participate in a community celebration of the strength and courage of those affected by cancer.

Table 13. Number of Children and Young Adults Diagnosed with Cancer by Age at Diagnosis and Race/Ethnicity in California, 2010

Race/Ethnicity	0-4 Years	5-9 Years	10-14 Years	15-19 Years	Total
Non-Hispanic White	159	89	95	204	547
African American	25	16	22	31	94
Hispanic	247	129	168	266	810
Asian/Pacific Islander	55	30	26	42	153

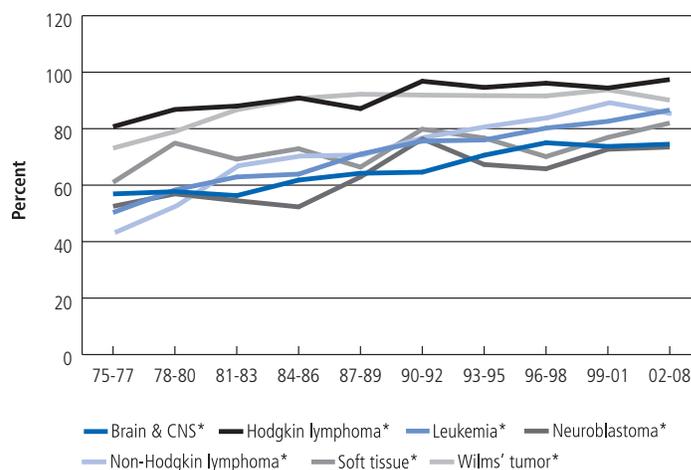
Source: California Cancer Registry, California Department of Public Health. Prepared by the California Department of Public Health, Cancer Surveillance Section.

Table 14. Cancer Incidence Among Children Ages 0-14 by Race/Ethnicity in California, 2010

Race/Ethnicity	Cases	Rate
Non-Hispanic White	343	14.4
African American	63	12.4
Hispanic	544	13.4
Asian/Pacific Islander	111	12.0

Rates are per 100,000 and age-adjusted to the 2000 U.S. population.
Source: California Cancer Registry, California Department of Public Health.
Prepared by the California Department of Public Health, Cancer Surveillance Section.

Figure 5. Trends in Five-Year Relative Survival Among Children Ages 0-14 by Year of Diagnosis, 1975-2008



Note: Based on follow-up through 2009.
Source: SEER Cancer Statistics Review, 1975-2009. National Cancer Institute, 2012.
*The difference between 1975-1977 and 2002-2008 is statistically significant ($p < .05$).
Prepared by the California Department of Public Health, Cancer Surveillance Section.

American Cancer Society Guidelines

Nutrition, Physical Activity, and Cancer Prevention

Accumulating evidence indicates that for the majority of individuals who don't smoke, maintaining a healthy weight by being physically active and consuming a healthy diet are the most important means to reduce cancer risk. Scientific evidence suggests that about one-third of cancer deaths are due to nutrition and physical activity factors, including excess weight.

The number of overweight and obese adults is increasing among men and women and people of all ages, races, and educational backgrounds. According to the National Center for Health Statistics, almost two-thirds of adults are so overweight that it poses a risk to their health. In children, overweight and obesity rates have doubled over the last two decades: 14% of children and 12% of teens are obese. Overweight and obese children are at increased risk for becoming obese adults, which could increase future cancer rates.

Nutrition and physical activity directly affect cancer risk. Physical activity reduces the risk of breast, colon, and, possibly, endometrial and prostate cancers. Eating a diet high in fruits and vegetables is associated with lower risk of cancers of the mouth and pharynx, esophagus, lung, stomach, colon and rectum.

The American Cancer Society is committed to improving the ability of all population groups to eat a healthy diet and be physically active because of proven health benefits and the corresponding reduction in cancer risk. Introducing a healthy diet and a physically active lifestyle at any time from childhood to old age can promote health and reduce cancer risk. The American Cancer Society guidelines include a recommendation for community action to ensure access to healthy foods and safe environments for physical activity. The guidelines are as follows:

1. Don't smoke! Don't use any tobacco products.
2. Achieve and maintain a healthy weight.
 - Be as lean as possible throughout life without being underweight.
 - Avoid excessive weight gain throughout the lifecycle.
3. Adopt a physically active lifestyle.
 - Adults should engage in at least 150 minutes of moderate intensity or 75 minutes of vigorous physical activity each week, or an equivalent combination, preferably spread throughout the week.
 - Children and adolescents should engage in at least one hour of moderate or vigorous activity each day, with vigorous intensity activity occurring at least three days each week.
 - Limit sedentary behavior such as sitting, lying down and watching television and other forms of screen-based entertainment.
 - Engaging in some physical activity above usual activities, no matter what one's level of activity, can have many health benefits.

4. Consume a healthy diet.
 - Choose foods and beverages in amounts that help maintain a healthful weight.
 - Limit consumption of processed and red meats.
 - Eat at least two and a half cups of a variety of fruits and vegetables each day.
 - Choose whole grains instead of processed (refined) grains and sugars.
5. If you drink alcoholic beverages, limit your consumption. Women should have no more than one drink per day and men should have no more than two drinks per day.
6. Protect your skin.
7. Know yourself, your family history, and your risks.
8. Have regular check-ups and cancer screening tests.
9. Recommendation for Community Action—communities should work together to:
 - Create a healthy environment where everyone has access to healthy food choices and safe places to be active.
 - Increase access to healthy foods in schools, worksites, and communities.
 - Provide safe, enjoyable, and accessible environments for physical activities in schools and for transportation and recreation in communities.

Social, economic and cultural factors strongly influence individual choices and attitudes about diet and physical activity. While individuals must ultimately take responsibility for adopting a healthy lifestyle, social and community actions are critical for fostering healthy behaviors and removing the substantial barriers that make it difficult to follow diet and activity recommendations.

The American Cancer Society recognizes that efforts to reduce cancer risk depend heavily on the promotion of healthy eating and physical activity, and the prevention of obesity. Prevention activities can be significantly increased through continued and sustained efforts that employ multiple strategies, including the development of public and private partnerships as well as collaborations at national, state and local levels.

Table 15. American Cancer Society Recommendations for the Early Detection of Cancer in Average-Risk, Asymptomatic People

Cancer Site	Population	Test or Procedure	Frequency
Breast	Women, age 20+	Clinical breast examination+ Mammography Breast self-examination	Every 3 years, ages 20-39 Annual, starting at age 40 Optional, monthly, starting at age 20
Colon and Rectum	Men & Women (average risk), age 50+	Tests that find polyps and cancer: Flexible sigmoidoscopy* Colonoscopy Double contrast barium enema* CT colonography (virtual colonoscopy)* Tests that mainly find cancer: Fecal occult blood test (gFOBT)*,** Fecal immunochemical test (FIT)*,** Stool DNA test (sDNA)***	Every five years Every 10 years Every five years Every five years Every year Every year Interval uncertain
Prostate	Men, age 50+	Prostate-specific antigen (PSA) blood test and digital rectal exam (DRE), after a discussion of risks and benefits with their healthcare provider. †	Men who choose to be tested who have a PSA of less than 2.5 ng/ml, may only need to be retested every two years. Screening should be done yearly for men whose PSA level is 2.5 ng/ml or higher.
Cervix	Women, age 21+	Cervical cancer screening should begin at age 21. Women under age 21 should not be tested. Women between ages 21 and 29 should have a Pap test every three years. HPV testing should not be used in this age group unless it is needed after an abnormal Pap test result. Women between the ages of 30 and 65 should have a Pap test plus an HPV test every five years. This is the preferred approach, but it is also OK to have a Pap test alone every three years. Women over age 65 who have had regular cervical cancer testing with normal results should not be tested for cervical cancer. Women with a history of a serious cervical pre-cancer should continue to be tested for at least 20 years after that diagnosis, even if testing continues past age 65. A woman who has been vaccinated against HPV should still follow the screening recommendations for her age group.	
Cancer-related check up	Men and Women, age 20+	Examinations every three years from ages 20 to 39 years and annually after age 40. The cancer-related check-up should include examination for cancers of the thyroid, testicles, ovaries, lymph nodes, oral cavity, and skin, as well as health counseling about tobacco, sun exposure, diet and nutrition, risk factors, sexual practices, and environmental and occupational exposures.	

+ Beginning at age 40, annual clinical breast examination should be performed prior to mammography.

* Colonoscopy should be done if test results are positive.

** For FOBT or FIT used as a screening test, the take-home multiple sample method should be used. A FOBT or FIT done during a digital rectal exam in the doctor's office is not adequate for screening.

*** This test is no longer available.

† The American Cancer Society recommends that a discussion about screening should take place at age 50 for men who are at average risk of prostate cancer, or at age 45 for men at high risk (i.e., African Americans and men who have a first-degree relative – father, brother, or son – diagnosed with prostate cancer at an age younger than 65).

Cancer Types and Screening Guidelines

Breast Cancer

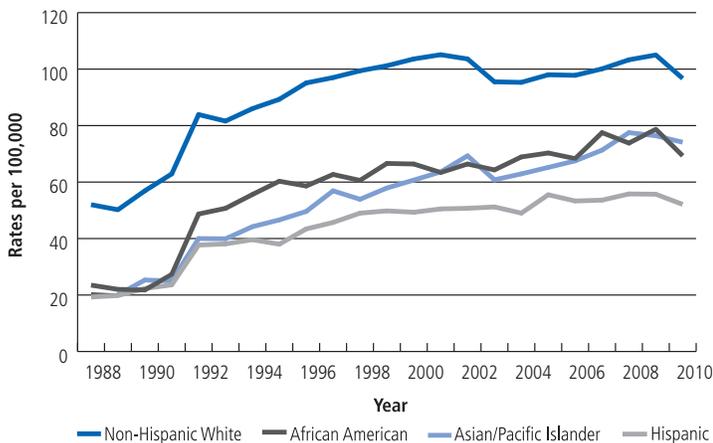
Breast cancer is the most common cancer among women in California, regardless of race/ethnicity. Survival is excellent when diagnosed early. If confined to the breast when discovered, five-year survival is 100%.

Breast cancer incidence in California has been fairly stable since 1988. More cancers are being diagnosed at an early stage, and the rate of late-stage disease has declined. About 71% of female breast cancers diagnosed in California in 2010 were found at an early stage. This shift to earlier stage diagnoses reflects, in part, the successful efforts of the American Cancer Society and other organizations to increase the number of women who receive regular breast cancer screening.

Breast cancer mortality in California has declined by 30% due to the combined effects of better treatment and earlier diagnosis. While this is very good news for California women, breast cancer incidence rates may begin to rise in the next decade as the large number of women born after World War II reach the age in which breast cancer becomes more common. This group of women may be at higher risk of breast cancer than their mothers due to earlier menarche, smaller family size, delayed child-bearing, and other factors. This effect may already be seen in women of Asian/Pacific Islander ancestry. Since 1988, the breast cancer incidence rate among this group of women has increased by 31%.

Breast cancer mortality has been declining among non-Hispanic white women for some time. Declines are now statistically significant for African American and Hispanic women as well. From 1988 to 2010, breast cancer mortality has declined for all race/ethnic groups. These trends may in part be attributed to earlier diagnosis due to more effective cancer screening.

Figure 6. Trends in Early-Stage Female Breast Cancer Incidence by Race/Ethnicity in California, 1988–2010

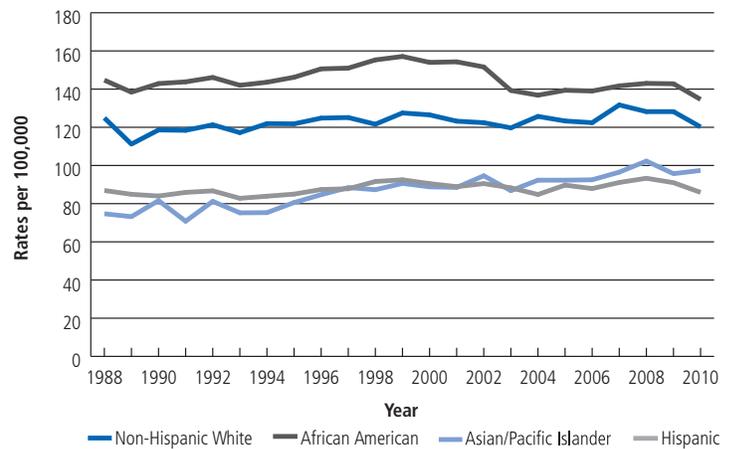


Note: Rates are age-adjusted to the 2000 U.S. population. Early-stage cancers are *in situ* or less than 2 cm in size with no lymph nodes involved.
Source: California Cancer Registry, California Department of Public Health.
Prepared by the California Department of Public Health, Cancer Surveillance Section.

Asian women, who commonly have low breast cancer incidence rates in their native countries, experience increasing rates upon migrating and assimilating into the United States. Research in Los Angeles County has found that breast cancer rates among Japanese Americans are twice those of Chinese and Korean women and are quickly approaching rates of non-Hispanic whites. This increase can be explained in part by the fact that the Japanese were the first large Asian population to migrate to Los Angeles County and to adopt the Western lifestyle. Breast cancer incidence rates may continue to increase in the future as more Asian subgroups adopt more Westernized lifestyles.

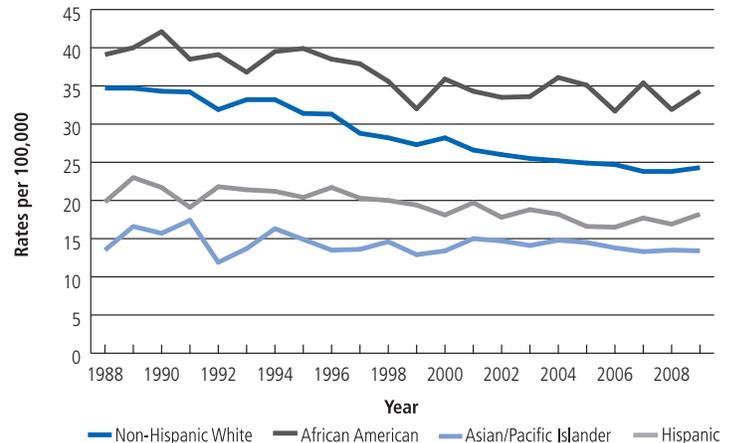
Nationally, breast cancer incidence has been decreasing since the late 1990s, with a dramatic decrease between 2002 and 2003, particularly in the 50-69 year age groups. This may be due to the reduced use of hormone replacement therapy.

Figure 7. Trends in Female Breast Cancer by Race/Ethnicity in California, 1988–2010, Incidence



Note: Rates are age-adjusted to the 2000 U.S. population.
Source: California Cancer Registry, California Department of Public Health.
Prepared by the California Department of Public Health, Cancer Surveillance Section.

Figure 8. Trends in Female Breast Cancer by Race/Ethnicity in California, 1988–2009, Mortality



Note: Rates are age-adjusted to the 2000 U.S. population.
Source: California Cancer Registry, California Department of Public Health.
Prepared by the California Department of Public Health, Cancer Surveillance Section.

For reasons that are not completely understood, being well-educated and financially well-off are associated with a higher risk of developing breast cancer. Non-Hispanic white women in the highest SES category are at highest risk. Some geographic variation in breast cancer rates within California may be related to these factors.

In 2005-2009, the invasive female breast cancer incidence rate in California as compared to the nation excluding California was the same among Asian/Pacific Islanders, 4% higher among African Americans, 5% lower among Hispanics, and 9% higher among non-Hispanic whites.

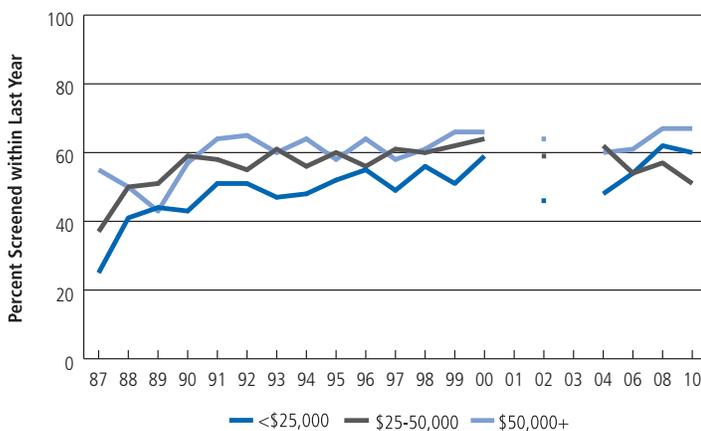
Roughly 185 men are diagnosed with breast cancer each year in California and about 30 die of the disease annually. Breast cancer in men is clinically very similar to the disease in women, but the prognosis is often poorer because men tend to be diagnosed at a later stage.

Breast Cancer Screening

Early detection is the best defense against breast cancer. A breast health program of clinical breast examination by a health provider every three years should begin at age 20, with annual mammograms and clinical breast examinations starting at age 40. Women at increased risk (e.g., family history, genetic tendency, past breast cancer) should talk with their doctors about the benefits and limitations of starting mammography screening earlier, having additional tests (e.g., breast ultrasound and MRI), and/or having more frequent exams. Breast self-examinations are optional.

In 2010, 61% of women of screening age reported that they had a mammogram in the past year, compared to only 39% in 1987. However, a recent trend in mammography rates reflect as much as a 4% decline nationwide. Poor women have shown the largest increase in mammography use, especially in recent years. African American women were most likely to have been recently screened (67%), while screening among Hispanic, non-Hispanic white, and Asian women were 56%, 63%, and 55%, respectively.

Figure 9. Mammography Use Among Females Ages 40 and Older by Income in California, 1987–2010

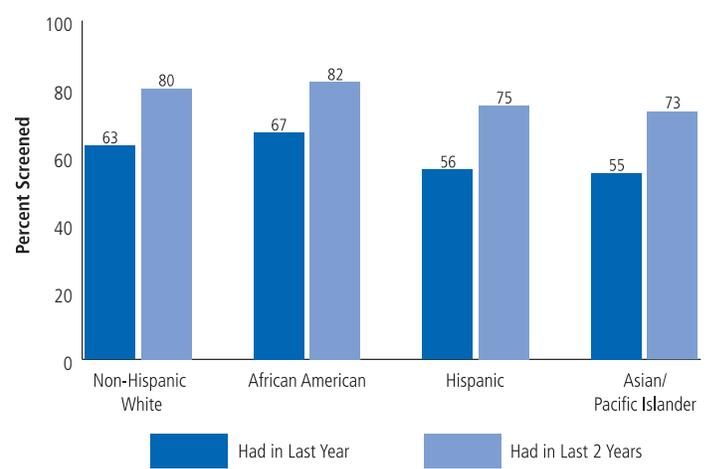


Note: Data are weighted to the 1990 California population.
 Source: California Behavioral Risk Factor Survey.
 Income categories are based on annual household income. Data were not collected 2001, 2002, 2005, 2007, and 2009.
 Prepared by the California Department of Public Health, Cancer Surveillance Section.

American Cancer Society Breast Cancer Activities

The American Cancer Society is a leading advocate for the early detection of breast cancer. The Society is especially focused on advocacy efforts that will increase funding for the state's Every Woman Counts program, which provides breast cancer screening for medically uninsured women in California. For those diagnosed with breast cancer, free treatment is available from the Breast and Cervical Cancer Treatment Program. The Society helps women learn about breast cancer screening and the importance of mammography through a variety of community health education programs and awareness campaigns with a wide variety of materials, many available in languages other than English; our toll free number (1-800-227-2345) which is available 24 hours a day, 365 days a year and is able to provide language appropriate services; and our website (cancer.org), the Society provides answers to questions about the nature of breast cancer, its causes, and risk factors. In 2010, the Society's Reach to Recovery® program helped 781 newly diagnosed women, and Look Good...Feel Better® reached 4,664 women undergoing cancer treatment. Breast cancer patients and their caregivers also participated in our educational program series, I Can Cope®, to help them in their cancer journey.

Figure 10. Mammography Use Among Females Ages 40 and Older by Race/Ethnicity in California, 2010



Note: Rates are age-adjusted to the 1990 California population.
 Source: California Behavioral Risk Factor Survey.
 Prepared by the California Department of Public Health, Cancer Surveillance Section.

Cervical Cancer

In general, the risk of developing cancer is much lower for persons of Hispanic and Asian/Pacific Islander origin than for non-Hispanic whites and African Americans. However, this is not true for cervical cancer. Hispanic women have the highest risk of developing cervical cancer, about one and a half times higher than non-Hispanic white and Asian/Pacific Islander women. Cervical cancer is one of the top ten cancers diagnosed among many of the groups recently immigrating to California.

American Cancer Society recommends that all women begin cervical cancer screening at 21 years of age. For women age 21-29, screening should be with a Pap test every three years. For women aged 30 to 65, screening should be a Pap test combined with an human papillomavirus (HPV) test every five years, or a Pap test every three years.

Changes in the cervix are often caused by infection with HPV. In fact, almost all – more than 99% – cervical cancers are related to HPV. Of these, about 70% are caused by HPV types 16 or 18. Nearly all cervical cancers are related to HPV, but most genital HPV infections do not cause cervical cancer.

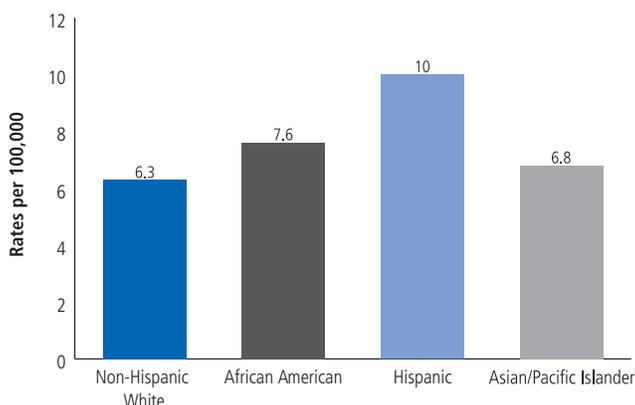
The Federal Food and Drug Administration has approved two vaccines for the prevention of HPV infection. However, these vaccines will not treat an existing infection. Studies show these vaccines have the potential to prevent up to 70% of the more than 1,300 invasive cervical cancer cases and more than 430 cervical cancer deaths in California each year.

The American Cancer Society recommends:

- Routine HPV vaccination for females aged 11-12 years
- HPV vaccination for females aged 13-18 years to catch up on missed vaccines or to complete the series

Women ages 19-26 should talk to their doctor or nurse about whether to get the vaccine based on their risk of previous HPV exposure and potential benefit from the vaccine.

Figure 11. Invasive Cervical Cancer by Race/Ethnicity in California, 2010



Note: Rates are age-adjusted to the 2000 U.S. population.
Source: California Cancer Registry, California Department of Public Health.
Prepared by the California Department of Public Health, Cancer Surveillance Section.

Colon and Rectum Cancer

Colon and rectum cancer is the third most common cancer in California among both men and women and it is the third most common cause of cancer-related death for each gender. Although it is less common than either breast or prostate cancer, colon and rectum cancer has a poorer prognosis. The five-year survival rate for colon and rectum cancer is 68%, compared to 92% and 100% for breast and prostate cancers respectively. The poorer prognosis is related to detection at a later stage. Colon and rectum cancer risk has declined steadily in California over the last 23 years. Colon and rectum cancer incidence rates declined substantially for all four major racial/ethnic groups since 1988. Incidence rates of colon and rectum cancer decreased 32% among non-Hispanic whites, 21% among African Americans, 17% among Asian/Pacific Islanders and 8% among Hispanics. Mortality rates decreased by 36% for all races combined. Among new cases, more of the decline in colon and rectum cancer rates has been among late-stage tumors.

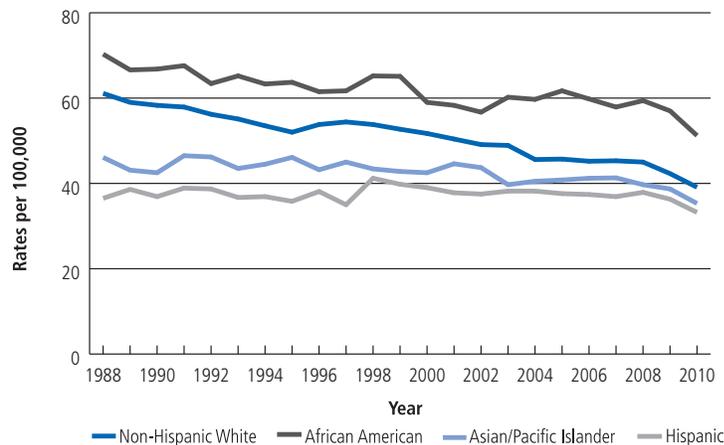
The reasons for declining colon and rectum cancer rates are not clearly understood. It has been suggested that increased use of endoscopic screening (sigmoidoscopy or colonoscopy) has resulted in the removal of benign polyps that would have progressed to cancer. Among the other possible contributors to declining rates are the increased use of aspirin to prevent heart disease, and dietary changes including increased calcium intake.

In 2005-2009, the invasive colon and rectum cancer incidence rate in California, as compared to the nation excluding California, was 8% higher among Asian/Pacific Islanders, 2% higher among African Americans, 7% lower among Hispanics, and 6% lower among non-Hispanic whites.

Colon and Rectum Cancer Screening

Survival from colon and rectum cancer is 94% when the cancer is diagnosed before it has extended beyond the intestinal wall. Colon and rectum cancers are harder to detect when asymptomatic than breast and prostate cancers, and are less likely to be diagnosed at an early stage (*in situ* or localized).

Figure 12. Trends in Invasive Colon and Rectum Cancer Incidence by Race/Ethnicity in California, 1988–2010



Note: Rates are age-adjusted to the 2000 U.S. population.
Source: California Cancer Registry, California Department of Public Health.
Prepared by the California Department of Public Health, Cancer Surveillance Section.

In 2010, about 43% of colon and rectum cancers diagnosed in California were early-stage, compared to about 80% for prostate, and 65% for breast cancer. The American Cancer Society recommends that both men and women begin routine screening for this cancer at age 50.

In 2010, only 51% of California adults ages 50 and over reported having had sigmoidoscopy or colonoscopy within the past five years. The proportion screened was even lower among persons in poverty (35% male, 42% female), and among Hispanics (38% male and female).

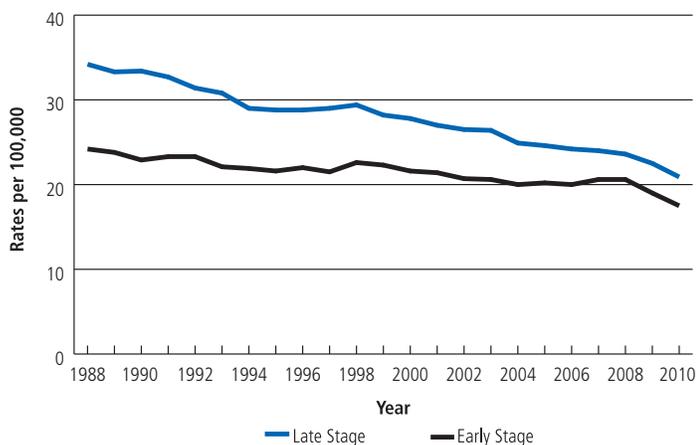
In 2010, 37% of Californians over age 50 reported having a fecal occult blood test using a home kit in the past five years. Individuals with low incomes, Hispanics, and Asian/Pacific Islanders were less likely to have had the exam (29%, 26%, and 30% respectively).

American Cancer Society guidelines for colon and rectal cancer screening were developed in collaboration with a consortium of major gastroenterology and radiology organizations. These guidelines focus on preventing colon and rectum cancer as well as early detection of cancer.

American Cancer Society Colon and Rectum Cancer Activities

The American Cancer Society has an aggressive, multi-pronged initiative to reduce incidence and mortality from colon and rectum cancer: Educating men and women ages 50 and over that they need to get tested; encouraging physicians and other health care providers to recommend screening to their eligible patients; and working with health plans and health insurers who set policy and control payment for screening procedures. The legislative advocacy campaign targets activities to increase funding to support research into the causes, cures, and care of colon and rectum cancer and addresses legislation for programs to provide coverage for screening.

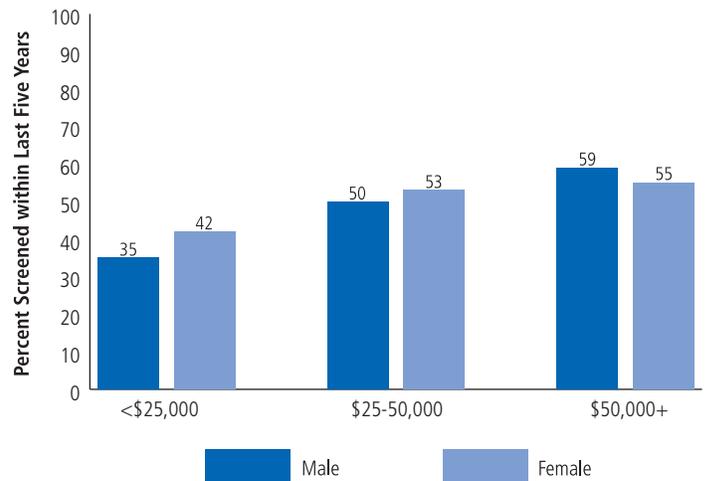
Figure 13. Trends in Colon and Rectum Cancer Incidence by Stage at Diagnosis in California, 1988–2010



Note: Rates are age-adjusted to the 2000 U.S. population. Early-stage cancers are *in situ* or localized (i.e., have not extended beyond the colon or rectum). Late-stage tumors have spread further.
Source: California Cancer Registry, California Department of Public Health.
Prepared by the California Department of Public Health, Cancer Surveillance Section.

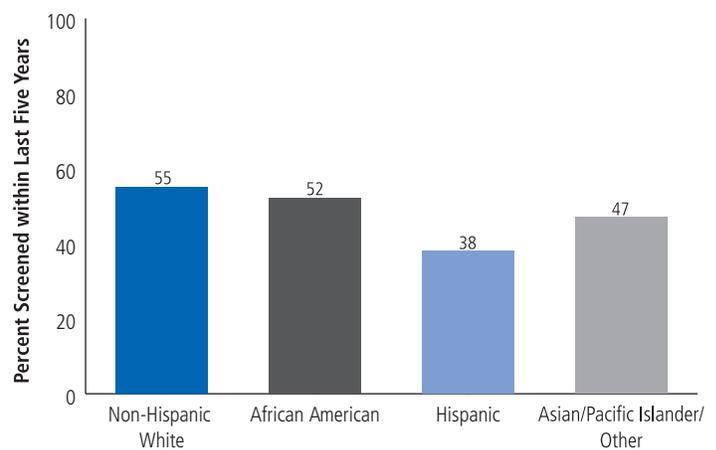
The Society is also a strong supporter and participant in the statewide California Colorectal Cancer Coalition (C4), whose mission is to save lives and reduce suffering from colorectal cancer. C4 has provided colorectal cancer education to Californians through community forums. In Spring 2012, C4 held its Annual Lobby Day at the State Capitol to increase awareness among the State Legislators about the importance of adequate screening resources for all Californians.

Figure 14. Sigmoidoscopy/Colonoscopy Use Among Person Ages 50 and Older by Annual Household Income in California, 2010



Note: Data are weighted to the 2000 California population.
Source: California Behavioral Risk Factor Survey.
Prepared by the California Department of Public Health, Cancer Surveillance Section.

Figure 15. Sigmoidoscopy/Colonoscopy Use Among Persons Ages 50 and Older by Race/Ethnicity in California, 2010



Note: Rates are age-adjusted to the 2000 U.S. population.
Source: California Behavioral Risk Factor Survey.
Prepared by the California Department of Public Health, Cancer Surveillance Section.

Prostate Cancer

Prostate cancer is the most common cancer among men in almost all racial/ethnic groups in California. The number of prostate cancers diagnosed each year rose dramatically in the early 1990s when the prostate-specific antigen (PSA) test began to be widely used to detect this cancer. Incidence rates peaked in 1992-93 and were approximately 3% lower in 2010 than in 1988. These trends are consistent with the rapid introduction of a new, sensitive screening method.

African American men are at especially high risk for prostate cancer. They are approximately 45% more likely to develop this disease than non-Hispanic white men, 58% more likely than Hispanic men, and 94% more likely than Asian/Pacific Islanders. Unlike breast cancer, prostate cancer tends to be diagnosed late in life. Nearly 60% of prostate cancers are diagnosed among men ages 65 and older.

Very little is known about the causes of prostate cancer. Large international differences in prostate cancer risk indicate that lifestyle factors such as diet may be involved, and it is likely that diet interacts with hormonal status in complex ways.

The survival rate for prostate cancer is quite high, especially when diagnosed early. Prostate cancer mortality in California decreased by 36% after 1988, with declines among men in each racial/ethnic group. Nonetheless, it remains the second leading cause of cancer-related mortality among men.

In 2005-2009, the prostate cancer incidence rate in California as compared to the nation excluding California, was 15% lower among Asian/Pacific Islanders, 10% lower among African Americans, 4% lower among Hispanics, and 6% lower among non-Hispanic white men.

Prostate Cancer Screening

Unlike breast cancer, clinical trials have not clearly demonstrated a decrease in mortality following screening for prostate cancer, and many uncertainties remain surrounding the early detection of this disease. One of the reasons for this is that unlike many other cancers, prostate cancer often grows very slowly. Because of this, many undiagnosed prostate cancers never become life-threatening. Although early diagnosis and treatment may help some men live longer, it may have no impact on the lifespan of other men. Since testing for early detection of prostate cancer became common around 1990, the prostate cancer death rate has dropped, but it has not been conclusively proven that this is a direct result of screening. In addition, prostate cancer treatment can affect a man's quality of life. Studies are underway which may resolve this issue.

The American Cancer Society recommends that health care providers offer the PSA blood test and digital rectal examination annually, beginning at age 50, to men who have at least a ten-year life expectancy. Men in high-risk groups, such as African Americans or those with brothers or fathers who have had prostate cancer, should begin screening at age 45. To assist men in making informed decisions about testing, physicians should inform their patients of the potential risks and benefits of early detection and treatment.

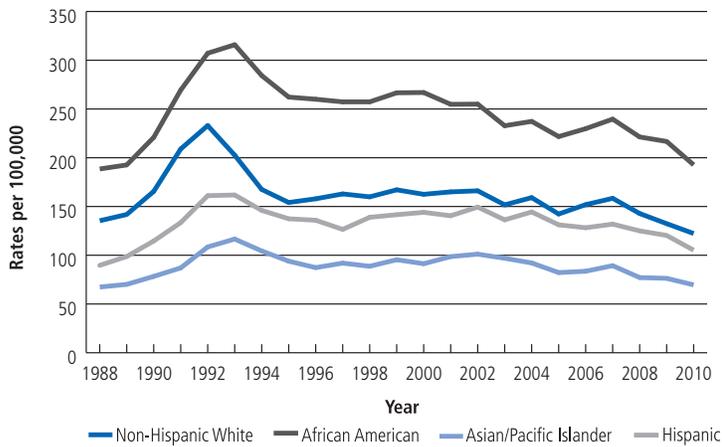
In 2010, 73% of Californian men aged 50 and over reported having had at least one PSA test, while 82% reported having at least one digital rectal exam (DRE) test. Non-Hispanic white and African American men were more likely than Hispanic and Asian men to have been tested in the last year. Men from households above poverty level were more likely to have had a prostate cancer screening test than men from households below poverty.

American Cancer Society Prostate Cancer Activities

The American Cancer Society recommends that men have a chance to make an informed decision with their health care provider about whether to be screened for prostate cancer. The decision should be made after getting information about the uncertainties, risks, and potential benefits of prostate cancer screening. Men should not be screened unless they have received this information. After this discussion, those men who want to be screened should be tested with the prostate specific antigen (PSA) blood test. The digital rectal exam (DRE) may also be done as a part of screening. Additional information about prostate cancer and the information one needs to help make an informed decision around screening can be found at www.cancer.org/prostatemd.

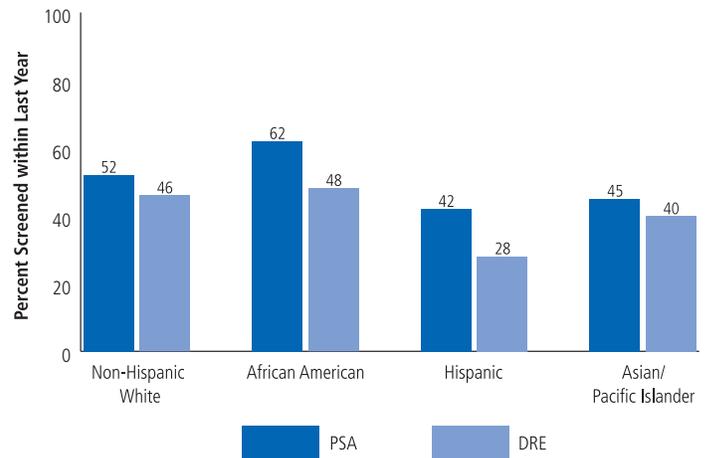
In 2011, 1,036 men participated in the Man To Man® program, the Society's support group program for men and their loved ones to share information available about prostate cancer, treatment, and offers education and support other prostate cancer patients and their partners. Lets Talk About It®, a collaboration of the American Cancer Society and the 100 Black Men of America, is aimed at educating African American men about prostate cancer. These programs provide men with opportunities to share experiences, learn more about the disease, and gain skills to meet individual needs following diagnosis and treatment. The Society also supports legislative activities to improve the availability of treatment for low-income prostate cancer patients and research to help fight the disease.

Figure 16. Trends in Prostate Cancer by Race/Ethnicity in California, 1988–2010, Incidence



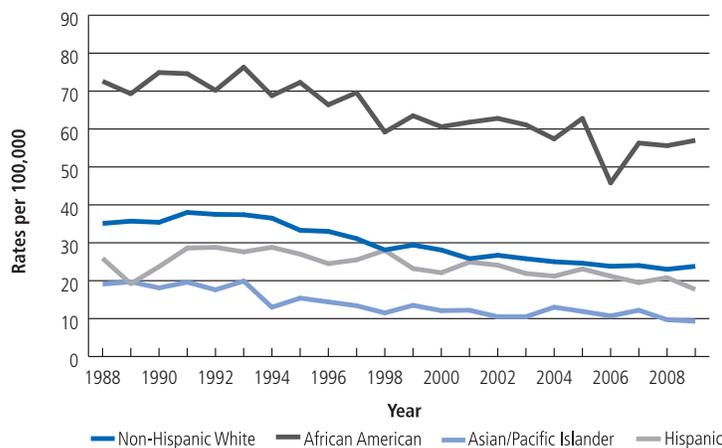
Note: Rates are age-adjusted to the 2000 U.S. population.
 Source: California Cancer Registry, California Department of Public Health.
 Prepared by the California Department of Public Health, Cancer Surveillance Section.

Figure 18. PSA and DRE Testing Among Men Ages 50 and Older by Race/Ethnicity in California, 2010



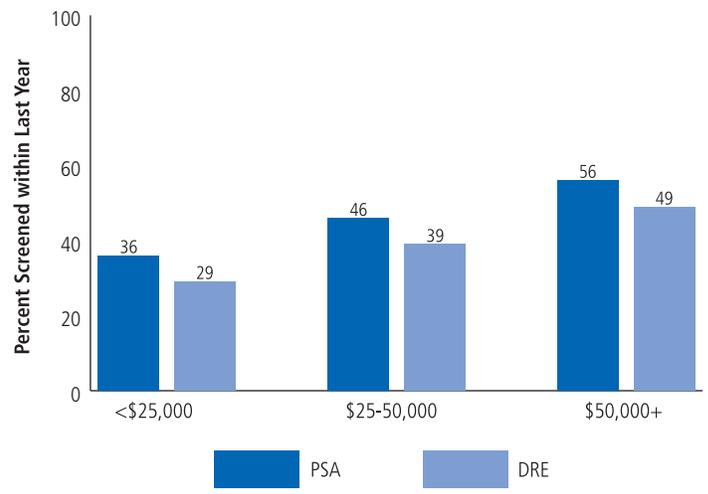
Note: Rates are age-adjusted to the 2000 U.S. population.
 Source: California Cancer Registry, California Department of Public Health.
 Prepared by the California Department of Public Health, Cancer Surveillance Section.

Figure 17. Trends in Prostate Cancer by Race/Ethnicity in California, 1988–2009, Mortality



Note: Rates are age-adjusted to the 2000 U.S. population.
 Source: California Cancer Registry, California Department of Public Health.
 Prepared by the California Department of Public Health, Cancer Surveillance Section.

Figure 19. PSA and DRE Testing Among Men Ages 50 and Older by Annual Household Income in California, 2010



Note: Rates are age-adjusted to the 2000 U.S. population.
 Source: California Cancer Registry, California Department of Public Health.
 Prepared by the California Department of Public Health, Cancer Surveillance Section.

Skin Cancer and Sun Avoidance

Skin cancer of all kinds is associated with exposure to the sun. Childhood sunburns can increase the risk of developing skin cancer as an adult. Even a suntan is harmful. Sunburns and tanning hurt the skin and serve as outward signs of internal skin damage. Malignant melanoma is the most serious type of skin cancer. It often appears on parts of the body not regularly exposed to sunlight. While light-skinned people have a greater risk of getting melanoma, this disease is increasing among people of color. In California, incidence rates of *in situ* melanoma of the skin have increased in the past 23 years for all racial/ethnic groups, a statistically significant increase for Hispanics and non-Hispanic whites. Incidence rates of invasive melanoma of the skin have also increased for non-Hispanic whites, decreased for Hispanics, and remained relatively stable for African Americans and Asian/Pacific Islanders.

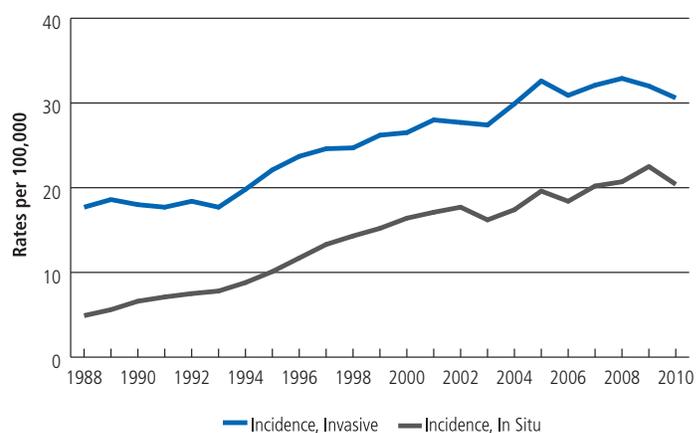
To reduce your risk of skin cancer:

- Reduce sun exposure between 10:00 a.m. and 4:00 p.m.
- Reduce/eliminate exposure to tanning beds and sunlamps.
- Wear tightly woven, loose-fitting clothing that covers as much of the body as possible, sunglasses and a wide-brimmed hat (at least four inches) that produces a shadow that covers the eyes, nose, face, ears, and neck.
- Liberally apply sunscreen with SPF 15 or greater and broad-spectrum (UVA and UVB) protection 15 minutes before going outdoors and every two hours once outdoors or more often if sweating or swimming.
- Protect children from over-exposure to the sun. Place play equipment in the shade. Babies younger than six months should be kept out of direct sunlight and protected from the sun using hats and protective clothing.

The American Cancer Society recommends a cancer-related checkup by a physician, including skin examination, during a periodic health examination for people ages 20 and older. Everyone should know their own pattern of moles, blemishes, freckles, and other marks on the skin so they can notice changes during monthly self-examinations. Key warning signs of non-melanoma skin cancers are new growth, a spot that is getting larger, or a visible sore that does not heal within three months.

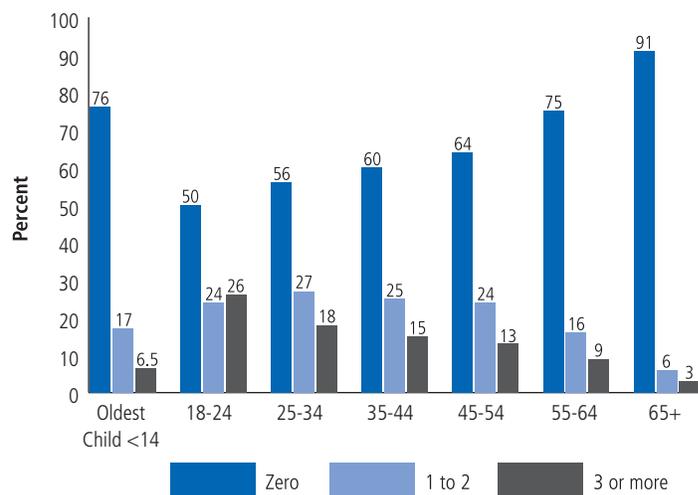
For melanoma, the most important warning sign is a change in the size, shape, or color of a mole or signs that its border is becoming more ragged. Other symptoms include scaling, bleeding, or change in the appearance of a bump or nodule; the spread of pigmentation beyond its borders; or a change in sensation, itchiness, or pain. People who notice these kinds of signs should see their doctor immediately.

Figure 20. Trends in Melanoma Incidence and Mortality Among Non-Hispanic Whites in California, 1988–2010



Note: Rates are age-adjusted to the 2000 U.S. population.
Source: California Cancer Registry, California Department of Public Health, July 2012.
Prepared by the California Department of Public Health, Cancer Surveillance Section.

Figure 21. Number of Sunburns in Past 12 Months in California, 2004



Note: Data are weighted to the 2000 California population. Children data from 2003 California Behavioral Risk Factor Survey.
Source: California Behavioral Risk Factor Survey.
Prepared by the California Department of Public Health, Cancer Surveillance Section.

Tobacco-Related Cancers

About 85% of lung cancer is caused by cigarette smoking. Lung cancer alone kills more than 13,000 Californians each year, more than prostate, breast, and colon and rectum cancers combined. However, many other cancers are caused by tobacco as well. Overall, one out of every three cancer deaths is due to tobacco.

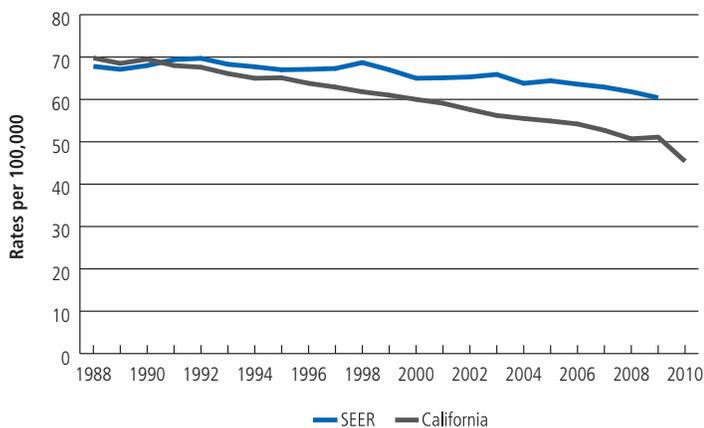
Besides lung cancer, tobacco use also increases risk of cancers of the mouth, nasal cavities, larynx, pharynx, esophagus, stomach, liver, pancreas, kidney, bladder, uterine cervix, and of myeloid leukemia.

Lung cancer incidence rates in California decreased by 30% from 1988 to 2010, while rates in the nation excluding California dropped by only 11% between 1988 and 2009. Rates for other smoking-related cancers are declining as well. These achievements are due, in large part, to the success of California tobacco control initiatives.

Cigar smoking increases your risk of death from several cancers including cancer of the lung, oral cavity (lip, tongue, mouth, throat), esophagus (the tube connecting the mouth to the stomach), and larynx (voice box). Studies have shown that male cigar smokers are four to 10 times more likely to die from oral and laryngeal cancers than nonsmokers. Cigar smokers may spend up to an hour smoking a single large cigar that can contain as much tobacco as a pack of cigarettes. Smoking more cigars each day or inhaling cigar smoke leads to more exposure and higher risks. Studies have shown your risk of death is higher if you smoke three or more cigars than if you smoke two or fewer cigars a day.

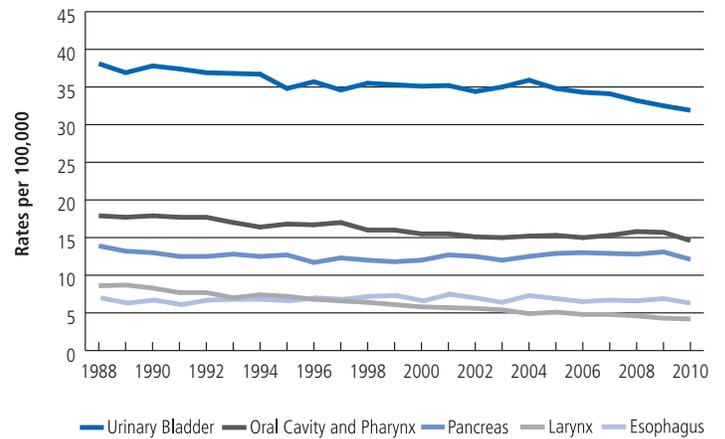
The most serious health effect of spit tobacco is an increased risk of cancer of the mouth and pharynx and of leukoplakia. Oral cancer occurs several times more frequently among snuff dippers compared with non-tobacco users. The risk of cancer of the cheek and gums may increase nearly 50-fold among long-term snuff users.

Figure 22. Trends in Lung Cancer Incidence in California and SEER Areas Other than California, 1988–2010



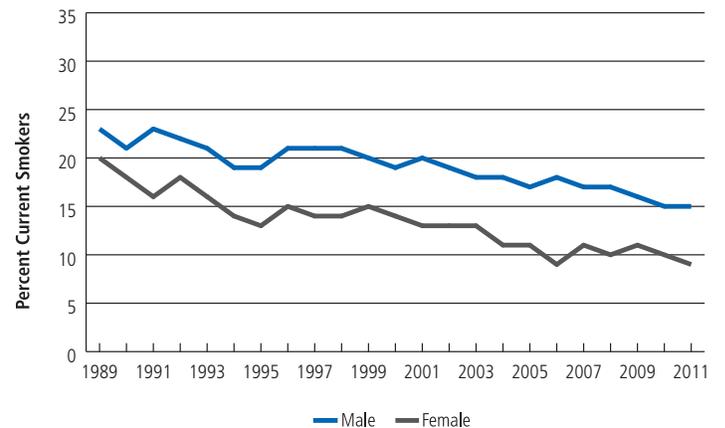
Note: Rates are age-adjusted to the 2000 U.S. population.
Source: California Cancer Registry, California Department of Public Health.
Prepared by the California Department of Public Health, Cancer Surveillance Section.

Figure 23. Trends in the Incidence of Smoking-Related Cancers Other than Lung Among Men in California, 1988–2010



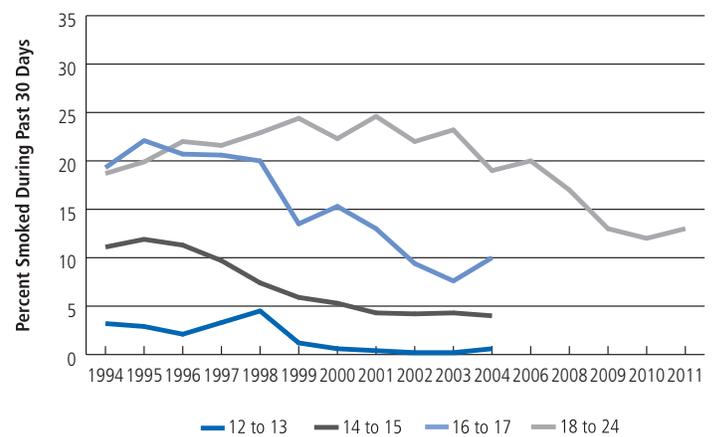
Note: Rates are age-adjusted to the 2000 U.S. population.
Source: California Cancer Registry, California Department of Public Health.
Prepared by the California Department of Public Health, Cancer Surveillance Section.

Figure 24. Trends in Adult Smoking by Sex in California, 1989–2010



Note: Data are weighted to the 2000 California population.
Source: California Behavioral Risk Factor Survey and California Adult Tobacco Survey.
Prepared by the California Department of Public Health, Cancer Surveillance Section.

Figure 25. Trends in Smoking Among Youth Ages 12-24 in California, 1994–2004, Ages 18-24, 1994–2011



Note: Data are weighted to the 1990 California population.
Source: California Youth Tobacco Survey and California Behavioral Risk Factor Survey, and California Adult Tobacco Survey.
Prepared by the California Department of Public Health, Cancer Surveillance Section.

Smoking Trends

Smoking rates among California adults declined steadily among both men and women from 1989 to 2010. In 2009, 13% of California adults smoked and in 2012, 12% still smoked.

Overall smoking rates have declined for middle school and high school students. In California during 2004, 3.9% of middle school students and 13.2% of high school students reported smoking during the last 30 days. The smoking prevalence in California is lower than what is experienced by the rest of the U.S.

In California, 18-24 year olds were smoking at an increasing rate and were recognized as the fastest growing age group using tobacco. Tobacco companies have been targeting them in earnest as the “smokers of the future.” The smoking rate for 18-24 year olds was 17% in 2008. However in 2009, the rate was 13% and in 2010, it was 12% in this age group. The highest rate of smoking was 16% among 25-34 year olds.

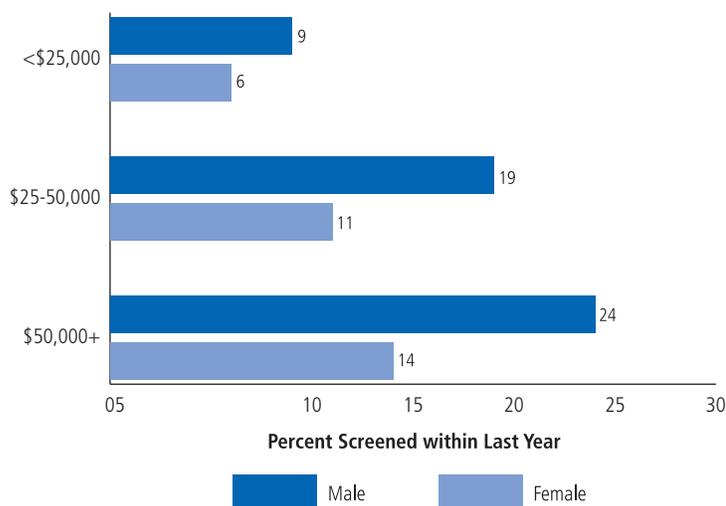
Kicking the Habit

In 2010, 56% of adult smokers in California reported that they tried to quit in the last year. Nicotine, the drug in tobacco, causes addiction with pharmacologic and behavioral processes similar to those that determine addiction to cocaine and heroin. Because of this, quitting can be a difficult challenge but nonetheless, millions of Californians have kicked the habit. For those who do quit, the risk of lung cancer decreases over time. After 15 years, the risk is only slightly higher than among persons who have never smoked, even among those who smoked more than a pack a day.

Secondhand Smoke

In 2007, the U.S. Surgeon General’s report on environmental tobacco smoke (ETS) found that there is no risk-free level of secondhand smoke exposure. Even brief exposure can be dangerous. Each year, about 3,400 non-smoking adults in the U.S. die of lung cancer as a result of breathing secondhand smoke. ETS can be particularly harmful to children. In 2010, 81.1% of California households with children five years old or younger completely prohibited smoking in the home.

Figure 26. Adult Smoking by Annual Household Income and Sex in California, 2011



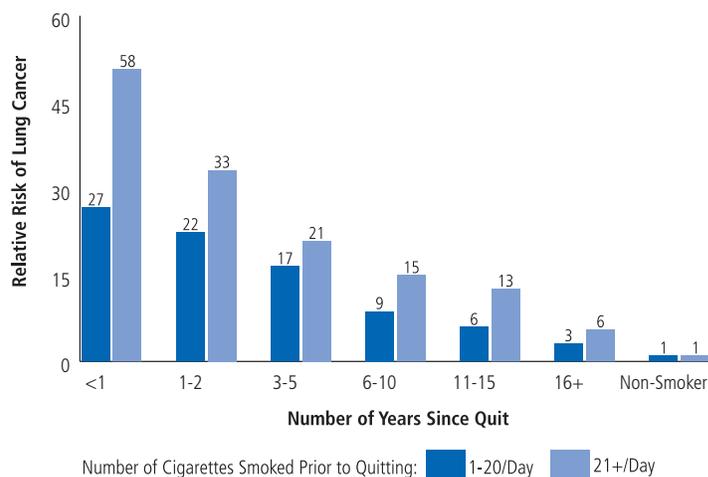
Note: Data are weighted to the 2000 California population
 Source: California Behavioral Risk Factor Survey and California Adult Tobacco Survey.
 Prepared by the California Department of Public Health, Cancer Surveillance Section.

American Cancer Society Tobacco Control Activities

With the passage of Proposition 99 in 1988, California became a leader in the tobacco control movement by placing a \$0.25 per pack tax on cigarettes. The income from this tobacco tax was, in part, used to support an aggressive and comprehensive tobacco control campaign, leading to the denormalization of tobacco use and meaningful and long-lasting social change. From nearly 24% in 1988, smoking prevalence in California has dropped to less than 12% in 2010, a rate second only to Utah. Over the same period, the reduction in tobacco use has saved an estimated \$86 billion dollars and over a million lives in California. California was also the first state to adopt a law banning smoking in most indoor workplaces, but after nearly 20 years since it was signed into law, it needs to be updated and strengthened.

Today California faces an uncertain trajectory in tobacco control. There are still 3.6 million smokers in the state, and smoking remains the number one preventable cause of disease and death. Over the 24 years since Proposition 99, resources for tobacco control continue to decline due to reductions in tobacco consumption and related tax revenues, and decreased purchasing power due to inflation. In 2006 and 2012, tobacco companies spent well over \$100 million in California fighting increases in the state tobacco tax, leaving the state 33rd in tobacco taxes nationwide. California currently spends only 15% of what the Centers for Disease Control and Prevention recommends for a comprehensive tobacco control program. The Society and its advocacy affiliate American Cancer Society Cancer Action Network (ACS CAN) are dedicated to maintaining leadership roles in securing the next generation of tobacco control policies and reinvigorating that state’s tobacco control efforts to reduce cancer incidence and save lives.

Figure 27. Effect of Smoking Cessation on Lung Cancer Risk Among Men



Source: Cancer Rates and Risks, 4th Edition, National Cancer Institute, 1996.
 Prepared by the California Department of Public Health, Cancer Surveillance Section.

Cancer and the Environment

In addition to the Society's traditional role in primary prevention, the American Cancer Society and its advocacy affiliate, the American Cancer Society Cancer Action NetworkSM, address a variety of risk factors in the human environment. Among the Society's prevention goals are to promote clearer understanding of the risk of chemicals in the environment and strategies for minimizing associated human impacts. In the scientific evaluation of human health risk from chemicals, the Society maintains that cancer risk should continue as one of the priority measures; priority should be given to evaluating chemicals in widespread commercial use; for new chemicals or compounds, human health risk should be evaluated before widespread public exposure to those substances; regulation and management of toxic chemicals in the United States needs to be strengthened; and testing and research need to be accelerated for both the health impacts of chemicals and ways to reduce public harm.

In response to public concerns and evolving science, the American Cancer Society in California is actively monitoring environmental issues related to cancer causation, reaching out to environmental organizations to share information and consider collaborations, and engaging in education and advocacy efforts. A team of volunteer experts and concerned citizens was established in 2001 to assist in the development of science-based approaches related to environmental issues. The team has reviewed and recommended the Society's responses to issues such as cancer clusters, asbestos, integrated pest management policies for schools and day care sites, diesel exhaust emissions, air pollution, environmental justice, healthy communities, medical radiation, and carcinogens in consumer products. The California team also analyzes and considers actions on relevant state regulations and legislation, and works with state agencies on implementation of new laws. Working with subject experts, the team conducts trainings for volunteers and staff and provides guidance when local environmental concerns emerge.

Nutrition, Obesity, Physical Activity, and Cancer

The American Cancer Society recently published a study in the *New England Journal of Medicine* linking obesity with cancer. The researchers document the association between Body Mass Index and death from most forms of cancer, concluding that 90,000 cancer deaths nationwide are related to weight. The study proves that poor diet, obesity, and lack of physical activity are critical pieces to the cancer puzzle, which is frightening considering a nationwide survey in 2002 found that only one percent of Californians identified maintaining a healthful weight as a way to decrease cancer risk.

Poor diet, obesity, and physical inactivity may be responsible for one out of every three cancer deaths – just as many as smoking. American Cancer Society guidelines on diet, nutrition, and cancer prevention emphasize maintaining a healthy weight throughout life, adopting a physically active lifestyle, and eating a healthy diet, including fruits and vegetables, whole grains, and limited red meats and other high fat foods. Helping Californians of all ages achieve healthy eating habits and enjoy a physically active lifestyle is critical to reducing the rate of new cancer by one-quarter by 2015.

Healthy eating means consuming at least five servings of fruits and vegetables each day for children, adults, and teen girls, and at least seven servings a day for teen boys. Surveys conducted in 2000 among 12-17 year olds, and in 2001 among children ages 9-11 and adults, found that only a minority of Californians met these recommendations (California Teen Eating, Exercise and Nutrition Survey, 2000; California Children's Healthy Eating and Exercise Practices Survey, 2001).

Twenty-nine percent of California adults ate five or more servings of fruits and vegetables in 2010. Women were more likely than men to consume five or more servings (32% compared to 25%).

Along with healthy eating, regular physical activity is one of the best ways to prevent chronic disease. The American Cancer Society recommends moderate physical activity for 30 minutes or more for adults and at least 60 minutes for children and adolescents on five or more days of the week.

California is far from reaching this goal. In 2010, 39% of California adults reported being engaged in moderate physical activity for 30 minutes or more at least five times a week.

The proportion of adults who are overweight in California is reaching alarming proportions. Body weight status is based on the body mass index (BMI). Self-reported weight and height are used to calculate the BMI. A person with a BMI greater than or equal to 30 is defined as obese and a person with a BMI greater than or equal to 25 but less than 30 is defined as overweight. Based on self-reported weight and height, 59.8% of California adults were considered overweight or obese in 2010, compared to 40% in 1984, and nearly one out of every five (24%) California adults was obese.

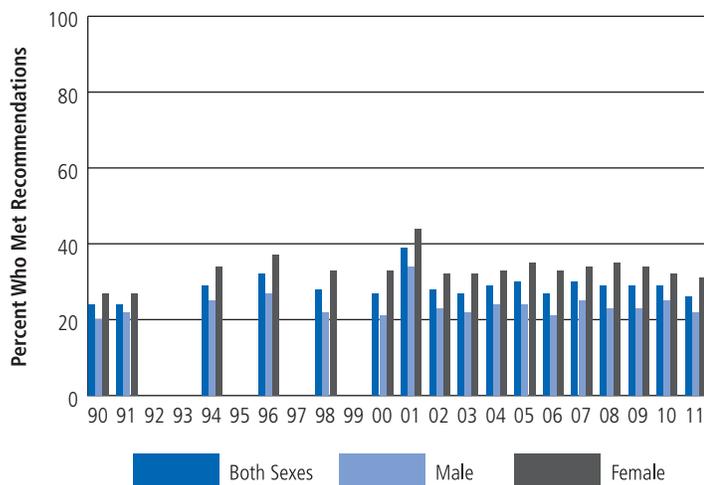
In general, men are more likely to be overweight than women, however, women are just as likely to be obese. Excess weight (overweight) and obesity are associated with a wide range of negative health effects and increased risk for major chronic diseases, including cancer.

Using new guidelines released by the Centers for Disease Control and Prevention, the percentage of teenagers ages 12-17 who are overweight is about 29%, nearly one out of every three. Although this is lower than among adults, it is alarmingly high, especially among Hispanic males.

American Cancer Society Wellness Promotion

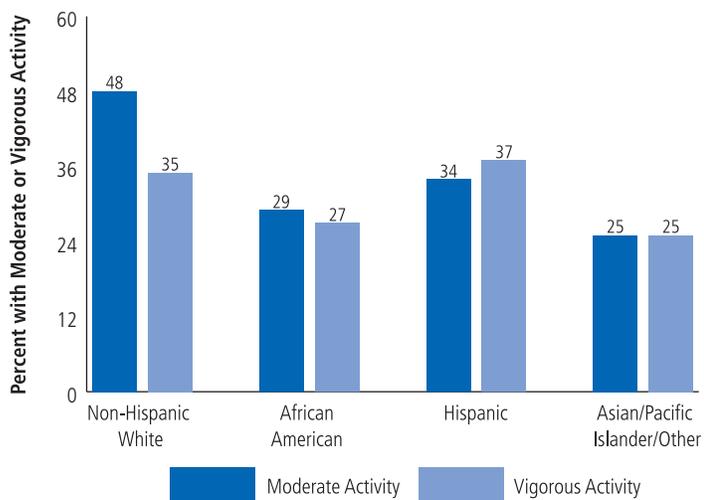
The Society partners with organizations throughout California to promote wellness. The Society is working with 30 school districts and six county offices of education to affect policy and practice changes to promote better nutrition, increase physical activity, and reduce obesity. In worksites, the Society promotes Active For LifeSM, a motivating 10-week program designed to promote physical activity in the workplace while boosting office morale and encouraging teamwork. Meeting WellTM can be used to help plan healthy meetings and events and offers healthy vending machine options and snack suggestions. Freshstart[®] is a smoking cessation program designed to help employees plan a successful quit attempt by providing essential information, skills for coping with cravings, and group support.

Figure 28. Percent of California Adults Who Eat “Five a Day,” by Sex, 1990–2011



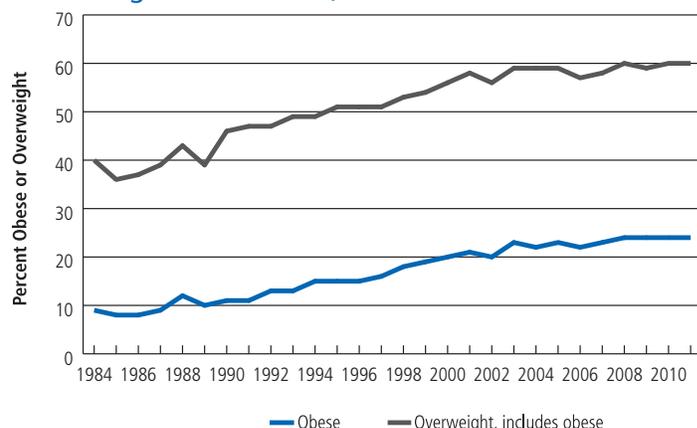
Note: Data are weighted to the 2000 California population.
 Source: California Behavioral Risk Factor Survey.
 *2001 included more types of fruits and vegetables.
 Prepared by the California Department of Public Health, Cancer Surveillance Section.

Figure 29. Physical Activity Among Adults in California, 2010



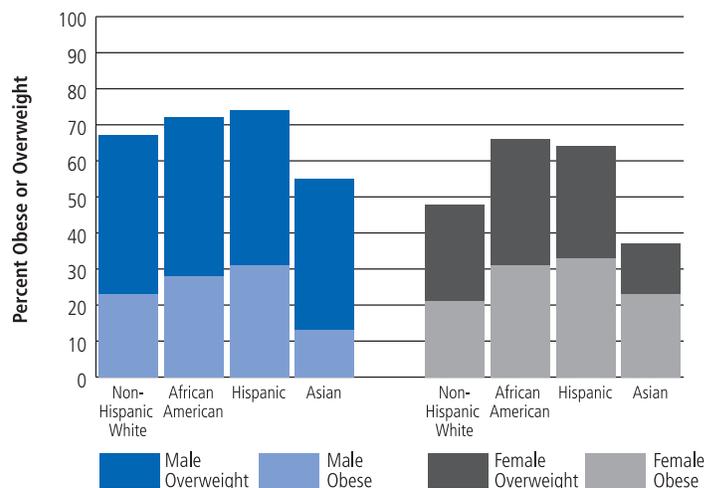
Note: Data are age-adjusted to the 2000 California population.
 Source: California Behavioral Risk Factor Survey.
 Prepared by the California Department of Public Health, Cancer Surveillance Section.

Figure 30. Trends in Adult Obesity and Adult Overweight in California, 1984–2011



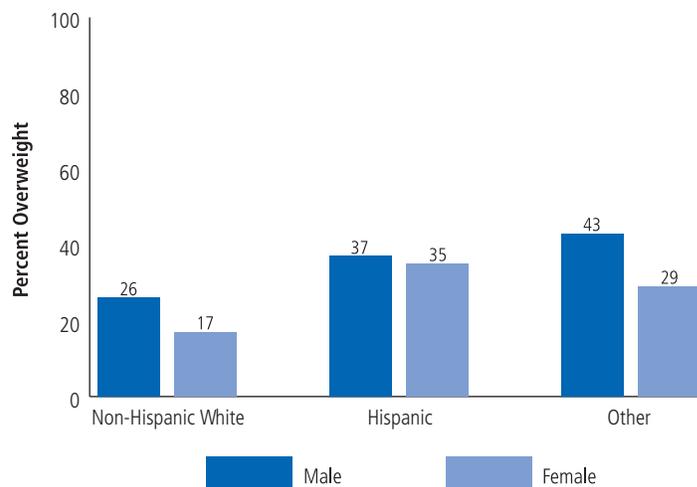
Note: Data are weighted to the 2000 California population.
 Source: California Behavioral Risk Factor Survey.
 Prepared by the California Department of Public Health, Cancer Surveillance Section.

Figure 31. Adult Obesity and Adult Overweight by Race/Ethnicity and Sex in California, 2010



Note: Data are age-adjusted to the 2000 California population.
 Source: California Behavioral Risk Factor Survey.
 Prepared by the California Department of Public Health, Cancer Surveillance Section.

Figure 32. Overweight Among Youth Ages 12-17 by Race/Ethnicity and Sex in California, 2004



Note: Data are weighted to the 1990 California population. Overweight is based on Year 2000 Guidelines for Youth.
 Source: California Youth Tobacco Survey.
 Prepared by the California Department of Public Health, Cancer Surveillance Section.

American Cancer Society, California Division

Our Commitment

In 2013, an estimated 144,800 Californians will be diagnosed with cancer. A cancer diagnosis brings major changes to cancer patients and their loved ones, and the American Cancer Society provides help at every point, from linking new patients with survivors, to providing valuable information about the latest clinical trials, to providing transportation for patients to and from medical appointments. The American Cancer Society is committed to providing comprehensive support 24 hours a day, seven days a week.

Financial Support

The generosity of our donors enables us to fight cancer on many fronts. Donations fund research, education, advocacy, and patient services. In the last fiscal year, 40% of funds raised went directly to patient support, prevention and risk reduction, and detection and treatment in California. Beginning in fiscal year 2011, 42 grants totaling \$14,878,000 were awarded to California researchers. Without the support of individual and corporate donors, the American Cancer Society could not accomplish our mission of eliminating cancer as a major health problem and helping to improve the quality of life of cancer patients and their families.

Volunteer Engagement

The American Cancer Society would not be what it is today without the dedication and inspiration of its many volunteers. The California Division is led by a volunteer Board of Directors comprised of community leaders, healthcare providers, and concerned citizens. In total, more than 332,800 people volunteer with the California Division of the American Cancer Society to help raise funds, provide office support, and provide patient services to assist cancer patients and their caregivers. In fiscal year 2011, more than 2,400 volunteers helped provide patient and caregiver support services in their local communities. Our volunteers come from every walk of life and represent nearly every occupation, age, and ethnic group.

In California, volunteers are essential to nearly every American Cancer Society program and are primarily responsible for our continued success. They provide transportation for patients who need help getting to and from medical appointments via Road to Recovery; help cancer patients undergoing radiation and chemotherapy with cosmetic techniques and advice via Look Good... Feel Better; provide inspiration as cancer survivors on the Cancer Survivors NetworkSM, and help coordinate and participate in the many fundraising events the American Cancer Society holds each year.

Communities

In 2011, the California Division of the American Cancer Society reached 57,740 individuals with patient-related information and services, including 26,892 patients diagnosed within the past year.

- 28,501 callers received free patient-related information and support from American Cancer Society Cancer Information Specialists staffing the 24/7 toll-free information line; 20,492 others were referred to the American Cancer Society by their health care provider.
- 11,446 cancer patients in California received free transportation assistance from the Society for a total of more than 447,000 rides.
- 614 breast cancer patients were visited by a Reach to Recovery volunteer, our one-on-one volunteer support program for women with breast cancer.
- 4,604 patients attended Look Good...Feel Better sessions to learn how to deal with appearance-related side effects of treatment.
- 32,332 cancer survivors were honored at Relay For Life® events and 3,480 survivors attended Making Strides Against Breast Cancer® events in California.
- 15,433 patients in California received a Personal Health Manager information and organizer toolkit.

American Cancer Society Cancer Action Network in California

As of September 1, 2012, the Society's state and local government relations and advocacy program in California became part of the nationwide nonpartisan advocacy affiliate organization, the American Cancer Society Cancer Action Network (ACS CAN). Although they are separate organizations, the Society and ACS CAN have a shared mission of eliminating death and suffering from cancer. California focused advocacy efforts continue to be directed out of the Sacramento office, established nearly 50 years ago.

What is ACS CAN?

ACS CAN is the nation's leading advocate for public policies that are helping to defeat cancer.

Why ACS CAN?

Defeating cancer is as much a matter of public policy as it is scientific discovery. Lawmakers play a critical role in determining how much progress our country makes toward defeating cancer. ACS CAN gives a voice to cancer patients, survivors, and their families as they encourage lawmakers at all levels of government to join the fight to make cancer a national priority. ACS CAN's work has resulted in enormous progress through increased funding for cancer research and prevention programs, stronger tobacco control policies nationwide, and improved access to the full range of cancer care for people diagnosed with the disease and their families. In California, organized legislative advocacy efforts resulted in the establishment of the California Cancer Registry and the breast and cervical cancer screening and treatment programs, and passage of critical cancer control laws that require insurance coverage for cancer screening tests and certain treatments. By focusing local, state and national attention on the cancer fight, raising funds, educating voters, and rallying others to the join the fight, ACS CAN unites and empowers people with cancer and their families to help save lives.

What does ACS CAN do?

ACS CAN advocates, through its dedicated and passionate volunteers and staff. ACS CAN's work helps advance the Society's mission to defeat cancer by helping to protect and increase public investment in groundbreaking medical research, and by improving access nationwide to the latest prevention and early detection measures, treatments, and follow-up care that are proven to save lives. Like the Society, ACS CAN follows the science when supporting evidence-based policy and legislative solutions designed to eliminate cancer as a major health problem. ACS CAN utilizes its expert lobbying, policy, grassroots, and communications capacity to amplify the voices of patients in support of laws and policies that save lives from cancer. Additionally, ACS CAN's voter education program called Cancer Votes ensures candidates for public office are aware of the impact cancer has on the people they represent and why they should make the fight against the disease a priority once they are in office.

What does ACS CAN not do?

ACS CAN does not endorse candidates or political parties, and it is not a political action committee (PAC). The organization does educate voters by serving as a trusted source of information about candidate positions on cancer-related concerns and on key issue campaigns across the country that impact those affected by cancer. Like cancer itself, ACS CAN is nonpartisan.

What issues does ACS CAN work on and why?

Cancer research funding

A strong and sustained federal investment in cancer research funding will yield scientific breakthroughs that save lives.

Strong smoke-free laws and higher tobacco taxes

These measures are proven to reduce tobacco use, the largest preventable cause of disease and premature death in the United States.

Lifesaving screening programs

Programs that increase access to proven cancer screenings, especially among medically underserved populations, save lives and are good for the economy.

Access to quality, affordable health care

More than 300,000 people in the United States die from cancer each year because they lack access to affordable, adequate, quality care and treatment, and millions of others are forced to skip lifesaving care or spend their savings to pay for it.

Nutrition and physical activity

An estimated one out of every three cancer deaths in the United States is linked to excess body weight, poor nutrition, or physical inactivity.

Volunteer Legislative Ambassadors

At the heart of the American Cancer Society Cancer Action Network's advocacy movement is a cadre of Volunteer Legislative Ambassadors who have taken on leadership roles. In California, there are over 650 Volunteer Legislative Ambassadors. They are instrumental in ensuring the voices of constituents are heard by federal, state, and local officials. Volunteer Legislative Ambassadors are responsible for building a groundswell of support on cancer issues. They recruit new Legislative Ambassadors, generate support for federal and state legislative priorities, and also advocate for local ordinances and initiatives.

In 2011 and 2012, Volunteer Legislative Ambassadors focused on the campaign to try to pass Proposition 29, the ballot initiative that would have raised the state tobacco tax by one dollar per pack in California. Volunteer Legislative Ambassadors collected 115,000 signatures to qualify the initiative for the ballot, recruited 40,000 campaign supporters, did presentations in 689 venues, reached over 20,000 Californians outside of the American Cancer Society family, and made over 385,000 phone calls to voters during the final weeks leading up to the election.

Volunteer Legislative Ambassadors fuel the community-based grassroots movement that gives ordinary people extraordinary power to fight cancer in the legislative arena. Members are kept informed of legislative activity in Sacramento and Washington DC and receive information on which pieces of legislation are moving and when contacts with legislators are needed. For more information on ACS CAN, Legislative Ambassadors, or updated information on the American Cancer Society Cancer Action Network's local, state and federal legislative efforts, visit www.acscan.org/California.

Table 16. Summary of Research Grants and Fellowships: In effect during fiscal year ending August 31, 2012

# Grants	Institution	Total
2	California Institute of Technology	\$300,000
1	California Pacific Medical Center	\$720,000
2	Cedars-Sinai Medical Center	\$1,840,000
1	Children's Hospital of Los Angeles	\$720,000
8	City of Hope & Beckman Research Center	\$6,636,700
1	Claremont Graduate University	\$699,000
11	Salk Institute for Biological Studies	\$2,516,000
2	San Diego State University	\$1,560,000
2	Sanford Burnham Institute for Medical Research	\$870,000
12	Stanford University	\$3,973,000
4	The Scripps Research Institute	\$1,731,000
8	University of California, Berkeley	\$3,061,000
4	University of California, Davis	\$2,210,000
9	University of California, Irvine	\$4,320,000
11	University of California, Los Angeles	\$6,252,000
13	University of California, San Diego	\$6,191,000
30	University of California, San Francisco	\$11,426,066
1	University of California, Santa Cruz	\$720,000
11	University of Southern California	\$7,425,687
133	Total Grants	\$63,171,453

Note: These awards represent multiple-year funding for grants that maybe carried out for three or four years.

American Cancer Society Research Program

The American Cancer Society is the largest non-profit non-government funder of cancer research in the United States. Since our research program began in 1946, the American Cancer Society has devoted more than \$3.6 billion to cancer research.

As the nation's largest private source of funds for scientist studying cancer, the American Cancer Society focuses its funding on investigator-initiated, peer-reviewed proposals. This process ensures that scientists propose projects that they believe are ready to be tackled with the available knowledge and techniques, rather than working on projects designed by administrators who are far removed from the front lines of research. This intellectual freedom encourages discovery in areas where scientist believe we are most likely to solve the problems of cancer.

Nobel Prize Winners

The Society is proud of the 46 investigators that we supported before they went on to win the Nobel prize, considered the highest accolade any scientist can receive.

Cancer Prevention Study-3

The American Cancer Society's Epidemiology Research Program is continuing recruitment of its next generation large-scale study, Cancer Prevention Study-3 (CPS-3), through December 2013. CPS-3 builds on a 60 year legacy of conducting epidemiologic studies that have led to over 600 scientific publications examining lifestyle, behavioral, environmental, and genetic risk factors for cancer. Among the many scientific contributions from the Cancer Prevention Studies, key findings include uncovering the link between smoking and lung cancer, daily aspirin use and lower risk of colon cancer, obesity and higher risk of various cancers, and sitting time and higher risk of premature death.

The Cancer Prevention Studies are a cornerstone of the American Cancer Society's research program and focus on identifying risk factors for cancer and how to prevent it. The Cancer Prevention Study-II continues to provide important insights into cancer risk factors, but the study population is aging. Thus, the American Cancer Society launched the next generation study, CPS-3, to continue its important epidemiologic research. The goal of CPS-3 is to enroll at least 300,000 men and women between the ages of 30 and 65 years who have never been diagnosed with cancer, with at least 25% of study volunteers representing racially/ethnically diverse populations. At enrollment, study volunteers will provide a small blood sample, waist circumference measurement, and complete a comprehensive survey on lifestyle, medical, family history, occupation, and other factors. They will then be followed through mailed surveys at home every few years for the next few decades.

CPS-3 is a critical research initiative for the next generation of cancer prevention researches because it will position Society researchers to further examine the interplay between lifestyle, environmental, behavioral, and genetic risk factors for cancer in diverse populations. The changing landscape of lifestyle and environment, such as the rapid rise in obesity or technologic advancements leading to a dramatic increase in sedentary behavior, and how these changes may impact cancer risk needs to be examined. And California, having already enrolled more than 16,000 study volunteers, plays a critical role in this recruitment effort because of the size and diversity of the population.

For more information about CPS-3 and how you can participate, please visit cancer.org/cps3, email us at cps3@cancer.org, or call us toll free at 1-888-604-5888.

American Cancer Society Research Leadership

Society Professorships

The Society's Professorships are among the most prestigious individual awards given to researchers. The highly competitive, peer-reviewed programs select some of the nation's most gifted scientists, freeing them from major administrative responsibilities and thereby enabling them to devote their work to cancer research.

Research Professors

Christine Guthrie, PhD, University of California, San Francisco
Iswar K. Hariharan, MD, PhD, University of California, Berkeley
Cynthia J. Kenyon, PhD, University of California, San Francisco
Kevin Shannon, MD, University of California, San Francisco

Clinical Research Professor

Christine A. Miasowski, RN, PhD, FAAN

Special Initiative Ovarian Professorship

Beth Y. Karlan, MD, Cedars-Sinai Medical Center, Los Angeles

Relentlessly Pursuing Answers

The list below includes some of the top scientists funded by the American Cancer Society who are working to find the answers that will save more lives.

Seeking new cures for childhood cancer:

- Elana Evans, PhD, at UCLA, developed a method of communication and training materials for parents and children to teach them how to communicate effectively with each other about the child's symptoms. This improved communication resulted in better understanding and better treatment of the symptoms, and enhanced the quality of life of the patients and their families.
- Tricia Z. King, PhD, at Georgia State University in Atlanta, aims to identify the markers that predict which long-term survivors of childhood brain tumors will go on to function well in later life, and which will require assistance. The findings will be critical in helping the growing numbers of long-term brain tumor survivors to live independently, and determining what degree of community and health care involvement will be required.
- Maciej Lesniak, MD, at the University of Chicago (Illinois), is working to re-engineer a virus that causes the common cold, empowering it to attack the cells within fast growing brain tumors.
- Steve Lessnick, MD, PhD, at the Huntsman Cancer Center in Salt Lake City, Utah, is exploring specific cell processes involved in Ewing's sarcoma, seeking better treatments for this disease.
- Mollie Meffert, MD, PhD, at Johns Hopkins University School of Medicine in Baltimore, Maryland, is studying a signaling pathway involved in brain cancer that explores how focused treatments can destroy tumor cells while minimizing negative effects on brain function.

- Kevin Shannon, MD, at the University of California at San Francisco, is exploring genetic changes in cells that occur in leukemia patients, re-creating these genetic reactions in the lab to seek out newly targeted therapies.
- Kimberly Stegmaier, MD, at the Dana-Farber Cancer Institute in Boston, Massachusetts, has drawn on insights from a larger study of lung cancer to develop a promising new method for treating acute myeloid leukemia (AML).

Seeking answers to end breast cancer:

- Mary-Claire King, PhD, at the University of Washington, has ongoing work investigating BRCA1, BRCA2, and other breast cancer genes. This work continues to promote understanding of the underlying biology of the disease, in turn driving advances that can be translated to the clinic. King and others are harnessing knowledge of breast cancer genetics to develop a number of breast cancer screens, tests, and therapeutic procedures.
- Ryan Jensen, PhD, and Stephen Kowalczykowski, PhD, at the University of California- Davis, successfully purified the BRCA2 protein – an accomplishment that eluded other investigators for more than 15 years. This triumph will allow scientists to better understand how the BRCA2 protein functions, laying the groundwork for new breast cancer therapies.
- Stacey Fedewa, MPH, American Cancer Society Health Services Researcher, has conducted research suggesting that African American and Hispanic patients are at significantly greater risk for delays in breast cancer treatment, which may be a contributing factor in persistent racial disparities in breast cancer outcomes.
- Lauren Teras, PhD, American Cancer Society Senior Epidemiologist, using data from the Society's Cancer Prevention Study II (CPS-II), found that weight loss during a 10-year period did not appear to influence the risk of postmenopausal breast cancer. However, her research did reveal that weight loss of 10 or more pounds that was maintained over at least five years might reduce breast cancer risk among postmenopausal women.

Finding answers to critical questions about lung cancer:

- Dan Kadrmaz, PhD, a Society-funded scientist, is investigating the use of imaging technologies to more accurately detect early stage lung tumors.
- Andrew Tsourkas, PhD, Society grant recipient, is working with nanosensors to aid in early diagnosis of lung cancer.
- Steve Hecht, PhD, Society Research Professor, is exploring natural ways to expunge cancer-causing carcinogens from our systems. Preliminary research suggests that compounds found in foods such as vegetables, fruits, whole grains, and seeds can counteract tobacco carcinogens and potentially prevent certain types of lung cancer.
- Tony Hunter, PhD, Society Research Professor, and associate John Brognard, PhD, have uncovered a protein (DAPK3) critical to chemo-resistance. Restoring normal DAPK3 expression in tumor cells increases their sensitivity to chemotherapy, improving the patient's odds of recovery.
- Waun Ki Hong, MD, Society Research Professor, has shown that the replacement of a tumor suppressing protein, p53, when combined with radiation therapy, leads to tumor regression.
- Charles Cleeland, PhD, Society grantee, focuses his work on helping improve the quality of life for lung cancer patients un-

dergoing chemotherapy, radiation therapy, and/or surgery. He has discovered that the overexpression of certain inflammatory genes increases the severity of painful symptoms. Therefore, by targeting these genes we may be able to ameliorate many unpleasant side effects of therapy and provide a more tolerable treatment experience.

Finding answers to colon cancer, the third-deadliest cancer in the U.S.:

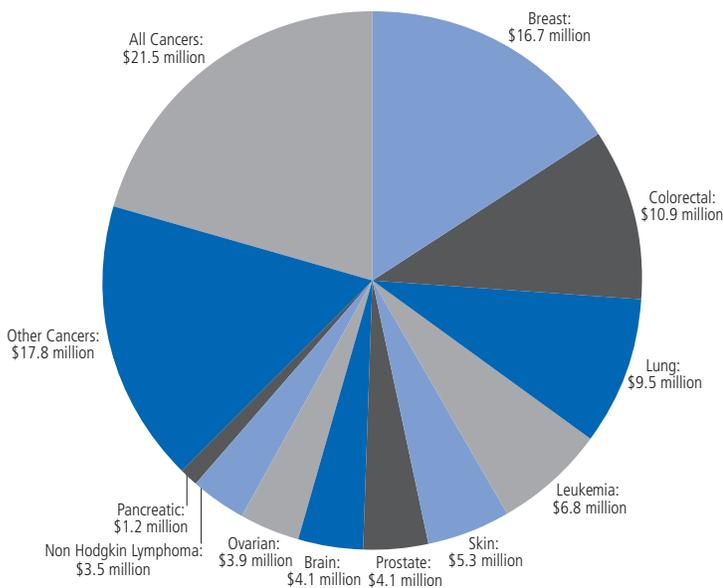
- Annette E. Maxwell, DrPH, Society grantee, found that small, community-based, multicomponent interventions significantly increased colon cancer screening among Filipino Americans.
- Ahmedin Jemal, DVM, PhD, American Cancer Society epidemiologist led a study that showed progress in reducing colon cancer mortality in the U.S. varied significantly across states, with rates in the Northeast showing the most progress and those in the South showing the least progress. The decrease in mortality rates by state correlated strongly with uptake of screening.
- Kevin Stein, PhD, managing director of the American Cancer Society Behavioral Research Center, is currently collaborating with Scottish researchers to determine if individuals change their diet, physical activity, and tobacco use after a diagnosis of colon cancer, and whether there are any factors that predict such changes. This may contribute to interventions that promote positive lifestyle changes in colon cancer patients, improving their health and overall quality of life.

For decades, the Society has supported pioneering research to find answers to determine weight, diet, and exercise affect cancer risk, and our relentless pursuit of those answers continues today:

- Marji McCullough, ScD, RD, a Society epidemiologist, examined data on 112,000 nonsmoking men and women who had participated in the American Cancer Society Cancer Prevention Study II to determine how following Society nutrition and physical activity guidelines affects death rates from cancer. She found that individuals who adhered closely to the Society's nutrition and physical activity guidelines reduced their risk of dying of cancer by 25-30%.
- Marian Stern, PhD, recipient of Society funding, studied DNA changes and found that certain individuals may be particularly susceptible to DNA damage from eating red meat. Her research may lead to ways to identify people at high risk so they can take steps to reduce their cancer risk.
- Alpa Patel, PhD, Society researcher, findings suggest that reducing the risk of cancer and heart disease is more than a matter of how much you exercise. Dr. Patel studied data on 123,000 participants in the American Cancer Society Cancer Prevention Study II who had no history of cancer, heart attack, stroke, or lung disease. She found a strong relationship between the amount of leisure time spent sitting and the risk of death, especially in women, that was independent of levels of physical activity. Women who reported more than six hours per day of sitting were 37% more likely to die during the time period studied than those who sat fewer than three hours a day.
- Reid Hayward, PhD, Society grantee, reported that cancer patients who followed a moderate-intensity, individualized exercise program after cancer therapy maintained or improved cardiovascular and pulmonary function while also reducing cancer-related fatigue and depression.

- Eric J. Jacobs, PhD, Society researcher, has demonstrated a link between waistline and risk of cancer death. Dr. Jacobs found that men and women with very large waists – 47 inches or larger in men and 42 inches or larger in women – have twice the risk of death from cancer, heart disease, and respiratory disease compared with those with the smallest waists – 35 inches or smaller in men and 30 inches or smaller in women. This holds true even for men and women who were not overweight. So inches may be as important as pounds.
- Tom Baranowski, PhD, Society-funded researcher, has endeavored to identify approaches that encourage long-term increases in the consumption of fruits and vegetables. In one of his studies, Dr. Baranowski designed an intervention that awarded a special badge to Boy Scouts who adopted healthier eating habits. The study showed that participants adopted a diet higher in fruit juice and low-fat vegetables immediately after the intervention, but that the diet was not maintained six months later. This study shows that behavior change is possible, but underscores the need for alternative strategies to sustain long-term changes in diet.

Figure 33. Funding by Selected Cancer Types, FY 2011
Total Awarded: \$105.3 million



Skin cancer includes approximately \$4.4 million in melanoma research. Other cancer types includes anal, bladder, blood, cervical, endometrial, esophageal, female genital system, gastrointestinal tract, head and neck, heart, Hodgkin lymphoma, kaposi's sarcoma, kidney, liver, myeloma, nasal cavity and paranasal sinus, nervous system, oral cavity and lip, ovarian, parathyroid, pituitary, retinoblastoma, rhabdomyosarcoma, sarcoma, stomach, testicular, thyroid, vaginal, and vulva cancer research. The \$21.5 million for All Cancers includes institutional research grants, health professional training grants and fundamental cancer research (i.e., fluids, secretions, blood components, cell lines etc.).

Public Policy Priorities

American Cancer Society Cancer Action Network

As the advocacy affiliate of the American Cancer Society, the American Cancer Society Cancer Action Network (ACS CAN) works to encourage elected officials and candidates to make cancer a top national priority. ACS CAN utilizes its expert capacity in lobbying, policy development, grassroots mobilization, and communications to amplify the voices of patients, survivors, and caregivers in support of laws and policies that save lives from cancer. In 2012-2013, policy priorities include:

Tobacco Control

ACS CAN is working at the federal, state and local levels to promote policies that reduce tobacco use and save lives. At the federal level, efforts are focused on implementation of the Family Smoking Prevention and Tobacco Control Act, the historic law passed in 2009 that gave the U.S. Food and Drug Administration the authority to regulate tobacco products. ACS CAN is also working at the federal level to broaden cessation coverage in public and private insurance plans. At the state level, California is working to revive its decades-old legacy of tobacco control leadership. Key strategies include a tobacco tax increase, a substantial increase in funding for state tobacco control efforts, expansion of smoke-free policies and improve access to effective smoking cessation.

Cancer Research

The American Cancer Society is the largest private funder of cancer research, contributing approximately \$150 million per year to scientists conducting promising research projects across the country. The federal investment in cancer research is \$5 billion per year, far exceeding that of the Society or any other organization. Sustaining the federal investment, which funds research projects and creates jobs in cancer centers and medical facilities across the country, is critical to making continued progress in the fight against cancer. ACS CAN, along with a coalition of more than 40 national cancer advocacy groups called One Voice Against Cancer, is advocating for robust federal funding for research at the National Institutes of Health and the National Cancer Institute, as well as the cancer control programs of the Centers for Disease Control and Prevention (CDC). In these difficult budgetary times, it is more important than ever that elected officials make cancer a national priority.

Prevention, Early Detection and Screening

About half of all cancer deaths could be prevented through proven prevention and early detection strategies. ACS CAN supports policies and programs at all levels of government, including the CDC's National Breast and Cervical Cancer Early Detection Program, which helps women prevent cancer and detect it at its earliest, most treatable stages. In California, the Every Woman Counts program provides free breast cancer screening for medically uninsured women. For those diagnosed with breast cancer, free treatment is available from the Breast and Cervical Cancer Treatment Program. ACS CAN is working to protect funding for those programs, as well as funding for the historic Prevention and Public Health Fund, which will save lives by reducing tobacco use, addressing the causes of obesity and increasing access to proven cancer screenings nationwide.

Affordable Care Act Implementation

The Affordable Care Act (ACA) is helping to ensure that people with cancer and their families have access to quality, affordable health care by banning pre-existing condition exclusions, eliminating arbitrary dollar limits on coverage, and prohibiting sharp increases in premiums when a person is diagnosed with a serious condition such as cancer. These provisions are preventing cancer patients and survivors from having to skip lifesaving care or go deep into debt to pay for it. California has been a national leader in implementing and improving upon the opportunities set out by the federal law. ACS CAN in California will continue to work to fully maximize the benefits for its residents, and fulfill the promise of ACA.

ACS CAN is committed to ensuring that the law's patient protections are strongly implemented and made accessible through provisions designed to improve health care quality and delivery, including:

Health Benefit Exchanges:

ACS CAN is working in all 50 states to implement strong health benefit exchanges that serve as a marketplace where consumers can compare quality health plans and choose the one that is best for them and their families. California was the first state in the nation to create its health benefit exchange. The California Health Benefit Exchange received federal funds to support start-up, planning and development activities through July 2013. The Exchange expects to be ready to enroll millions of Californians in affordable coverage starting in 2014.

Health Care Delivery Reform:

ACA supports the development of three key reforms that could improve the quality of care delivered to cancer patients: accountable care organizations (ACOs), patient-centered medical homes (PCMHs), and bundled payments. ACS CAN is monitoring the development of these new models in Medicare, Medicaid, and private health plans to ensure that they meet the needs of cancer patients and their families.

Health Care Workforce:

ACA recognizes that essential to improving health care quality is maintaining a flexible and well-trained workforce. Deepening shortages among physicians and nurses, combined with an increasingly older population, make it critical for ACS CAN to advocate for policies that enhance access to primary care providers, oncologists, oncology nurses, and other cancer care professionals that are critical to delivering coordinated, patient-centered care to cancer patients and their families. In California, the health care system must adapt to meet the needs of the state's diverse population. Programs to train, recruit, and retain people of color in the medical and allied health professions will help to build a culturally competent and diversified health care workforce.

Quality of Life

ACS CAN and the American Cancer Society are working together to emphasize the need for patient-centered care that focuses not only on treating disease but also on managing the physical and psychological side effects of treatment. ACS CAN is working to build congressional interest around legislative proposals that broaden access to palliative care, which provides patients at any state of diagnosis with an extra layer of support provided by a team of doctors, nurses and specialists working to address the stress, pain, and other symptoms associated with cancer treatment. ACS CAN also is working to strengthen federal and state pain policies to ensure that patients and survivors can access the pain medications and care they need.

Reducing Obesity

ACS CAN supports evidence-based policies at the federal, state, and local levels to promote healthy eating and physical activity and reduce overweight and obesity. These include nutrition standards for all foods offered in schools or marketed to youth; physical education and physical activity requirements for schools; increased access to healthy foods and opportunities for physical activity in communities; and tools and services that support consumers in making healthy choices and managing their weight. Because of the tremendous influence that the surrounding environment has on access to healthy foods and safe opportunities to be physically active, ACS CAN in California supports healthy community strategies that will help to reduce cancer risks and address environmental concerns.

The Patient Protection and Affordable Care Act Implementation

The American Cancer Society is proud to have been a leader in the effort to pass the Patient Protection and Affordable Care Act (ACA), signed into law by President Barack Obama on March 23, 2010. Throughout the national discussion on the need for meaningful health care reform, the fundamental principles guiding the American Cancer Society position are that everyone should have public or private health insurance that is adequate, available, affordable and administratively simple.

As the ACA is implemented, the Society and its affiliate American Cancer Society Cancer Action Network (ACS CAN) continue to use the "cancer lens" to identify those priorities that have the biggest impact on cancer patients, survivors and their families; to remain a "visible leader" in communicating those priorities effectively to our stakeholders and to the public; and to translate them into reality through the state and federal legislative and regulatory processes

U.S. Supreme Court Upholds Patient Protection & Affordable Care Act

On June 28, 2012, the U.S. Supreme Court issued its decision on whether or not the ACA is constitutional. The Supreme Court answered these two questions:

1. May Congress require most Americans to have health insurance coverage or pay an annual penalty (individual mandate)?

In a five to four decision, the Supreme Court held that although the law uses the word "penalty" as the consequence for not having health insurance, this requirement is something that Congress is permitted to create under its taxing powers in the Constitution.

The ACA's individual mandate penalty does not apply to certain individuals, including those who have health insurance coverage for at least nine months of the year, people for whom annual health insurance premiums would exceed 8% of household income, people with incomes below the tax filing threshold, members of American Indian tribes, and people who receive financial hardship waivers. The 2015 penalty for not having health insurance coverage in 2014 will be \$95 or 1% of taxable household income, whichever is greater.

2. May Congress require states to expand their Medicaid programs to include all adults with incomes at or below 133% of the federal poverty level?

The Supreme Court ruled that it is constitutional for Congress to ask states to expand access to state Medicaid programs; however, Congress may not withhold all Medicaid funds from a state for choosing not to expand access. The result of this decision is that it is now optional for states to expand access to their Medicaid programs, rather than being mandatory. California has already taken steps to expand access to Medicaid (Medi-Cal in California), through the Low Income Health Program (LIHP).

The Affordable Care Act is Already Helping Californians

- 435,000 young adults gained health insurance coverage (as of December 2011).
- Medicare recipients saved \$310,980,672 on their prescription drugs, and 2,988,548 received free preventive services such as mammograms and colonoscopies.
- 1,877,186 residents with private insurance coverage benefited from \$73,905,280 in rebates from insurance companies in 2012, due to the requirement that 80-85% of premium be spent on quality health care or provide consumers with a rebate or reduce premiums.
- 12,092,000 residents no longer have to worry about going without treatment because of lifetime limits on their coverage; insurance companies are banned from imposing lifetime dollar limits on health benefits, and in 2014, will be prohibited from imposing annual limits.
- More than 400,000 low-income adults now have coverage through the Low-Income Health Program (LIHP) that will serve as a bridge to Medi-Cal and the California Health Benefit Exchange on January 1, 2014. (Source: CA Dept. of Health Care Services, Low Income Health Program, August 2012)

Source: www.healthcare.gov

California First in Nation to Implement Pre-Existing Condition Insurance Plan (PCIP)

One of the first elements of the ACA to take effect in California was the Pre-Existing Condition Insurance Plan (PCIP) which was supported by the American Cancer Society in 2010.

PCIP fills a void in the health insurance market for individuals who have been uninsured for six months or more, and have a pre-existing medical condition, such as cancer. It is a temporary federally-funded high risk pool that will continue until January 1, 2014, when insurers will be prohibited from denying health insurance coverage to individuals with pre-existing conditions.

The ACA provision that prohibits insurers from denying health insurance coverage to children because of a pre-existing condition has already been implemented.

More than 9,608 residents with pre-existing conditions have gained access to PCIP as of May 31, 2012.

California is First in the Nation to Establish Health Benefit Exchange

California was the first state to pass legislation in 2010, supported by the American Cancer Society, to create a Health Benefit Exchange as required by the Affordable Care Act. The Exchange will be a new insurance marketplace in which individuals and small businesses will be able to buy competitively priced health insurance. The Exchange is overseen by a five-member board appointed by the Governor and Legislature.

The state is moving rapidly to set up the Exchange and will launch a major advertising campaign in 2013, to educate and inform Californians about coverage options and how to enroll.

The Exchange plans to begin pre-enrollment in October 2013.

Nearly two million Californians are expected to purchase insurance through the Exchange within the first few years including those who are now uninsured because pre-existing conditions have disqualified them for coverage. Certain individuals and families will be eligible for federal tax subsidies and credits to help them buy health insurance coverage through the Exchange.

When fully implemented, the California Health Benefit Exchange will increase competition among insurance plans; provide consumers and businesses with tools to compare benefits, pricing and quality; offer high quality benefits; and give small businesses and individuals the same purchasing power that large businesses enjoy.

California Expands Medi-Cal

The ACA will significantly expand access to Medi-Cal in 2014, to millions of low income adults who do not currently qualify. California is leading the country in the early implementation of Medicaid coverage expansion through county-based programs utilizing federal funding. Californians enrolled in these Low-Income Health Programs (LIHPs) are connected to a "medical home" to obtain primary and preventive care. The LIHPs serve as a bridge to ensure patients are getting access to health care now, and will be ready to transition to full Medi-Cal coverage or the California Health Benefit Exchange in 2014.

ACS CAN Continues to Lead the Fight for Coverage and Care

ACS CAN is the leading, non-partisan voice whose only goal is to significantly improve access to health care for cancer patients, survivors and their families. It is important to get the facts about health care reforms and how they might impact you. To learn more about the Affordable Care Act, its provisions and implementation time-line, visit <http://www.acscan.org/action/ca/campaigns/accesstocare> or www.HealthCare.gov.

California's Cancer Control Activities

Cancer Surveillance

Cancer rates among Californians are monitored by the Cancer Surveillance Section, CDPH, through the California Cancer Registry (CCR), which collects information on all cancers diagnosed in California since 1988. To date, the CCR has collected detailed information on over two million cases of cancer, with over 130,000 new cases added annually. The database includes information on demographics, cancer type, extent of disease at diagnosis, treatment, and survival. With this high quality data, leading cancer researchers are able to advance scientific knowledge about the causes, treatment, cures, and prevention of cancer.

The CCR in conjunction with the American Cancer Society produces *California Cancer Facts and Figures*. Additionally, through annual and special-topic reports, the CCR keeps health professionals, policy-makers, cancer advocates, and researchers informed about the status of cancer in California. CCR data is the cornerstone of cancer research in California.

Tobacco Control

The strongest anti-tobacco legislation in the nation was passed by citizens of California in 1988 – the Tobacco Tax and Health Promotion Act (Proposition 99). Since then, CDPH has used funds from Proposition 99 taxes on tobacco products to launch an award-winning anti-smoking media campaign, to fund local prevention programs, and to monitor smoking prevalence and other use of tobacco products throughout the state. Lung cancer mortality rates are now falling faster in California than elsewhere in the U.S.

Cancer Prevention

The Cancer Prevention and Nutrition Section was established in 1986 to develop technical capacity in CDPH for implementing large-scale dietary improvement measures. Its activities include the development and implementation of the *5 a Day—for Better Health!* Campaign in 1988, *California Dietary Practices Surveys* starting in 1989, and the *Network for Healthy California*.

Comprehensive Cancer Control

The California Dialogue on Cancer (CDOC) is a coalition of cancer control leaders from throughout the state, including members of state and local government, members of the public, non-profit organizations, medical professionals, researchers, and cancer survivors, caregivers, and advocates. The members of CDOC share the vision of reducing the cancer burden on the residents of California.

CDOC was created to provide guidance and coordination for comprehensive cancer control activities in California while minimizing duplication of efforts by the California Department of Public Health (CDPH), the California Division of the American Cancer Society, and other organizations engaged in cancer prevention and control activities. CDOC originally convened in 2003 to develop the California Comprehensive Cancer Control (CCC) Plan. The CCC Plan has since been revised by CDOC with updated goals and measurable objectives that aim to improve cancer outcomes, minimize disparities and support continued cancer control efforts through 2015.

CDOC's subcommittees or implementation teams, conduct activities that align directly with the goals and objectives of the CCC Plan. Currently, CDOC's implementation teams focus their efforts on the following areas: Advocacy; Disparities, Access to Care and Early Detection; Prevention; and Treatment and Survivorship. Issues related to access to care have been the main priority for the coalition over the past few years. The coalition's Access to Care team has successfully convened community forums and initiated the formation of local coalitions/regional cancer care alliances throughout the state and looks to continue and enhance these efforts in the coming years. CDOC has also played an instrumental role in supporting and establishing the California Colorectal Cancer Coalition (C4).

Breast and Cervical Detection

Every Woman Counts (EWC) provides free clinical breast exams, mammograms, pelvic exams, and Pap tests to California's underserved women. EWC was a CDPH program but has recently moved and is part of the Department of Health Care Service's Cancer Detection and Treatment Branch (CDTB). The mission of the EWC is to save lives by preventing and reducing the devastating effects of cancer for Californians through education, early detection, diagnosis and treatment, and integrated preventive services, with special emphasis on the underserved. Regional cancer detection partnerships assist in outreach and education to women, quality assurance, and provider education. To determine eligibility for free screening, women can call 1-800-511-2300. Calls are accepted in English, Spanish, Mandarin, Cantonese, Vietnamese, and Korean.

Table 17. Cancer Reporting in California

Year	Milestone
1947	California Tumor Registry established in selected large hospitals
1960	Alameda County Cancer Registry established as the first population-based cancer registry in California
1969	San Francisco Bay Area Registry included in National Cancer Institute's (NCI) Third National Cancer Survey
1972	Cancer Surveillance Program (CSP) of Los Angeles County established
1973	San Francisco Bay Area Registry included in NCI's Surveillance, Epidemiology, and End Results (SEER) Program
1983	Cancer Surveillance Program of Orange County established
1985	California Cancer Reporting Law signed into effect (CCR established)
1988	Population-based cancer reporting initiated statewide
1992	CSP of Los Angeles County included in SEER Program
1997	50 years of cancer reporting in California
2000	Published ten years of complete statewide cancer reporting
2001	Greater California Registry included in SEER Program
2007	20 years of statewide population-based cancer reporting
2009	Published 20 years of complete statewide cancer reporting

Source: California Cancer Registry, California Department of Public Health

California Cancer Registry

California Cancer Registry is a collaborative effort among the California Department of Public Health's Chronic Disease Surveillance and Research Branch (CDSRB); Institute for Population Health Improvement, UC Davis Health System; regional cancer registries; health care providers; cancer registrars; and cancer researchers throughout California and the nation. CDSRB collects, analyzes, and disseminates information on cancer incidence and mortality. The statewide population-based cancer surveillance system monitors the incidence and mortality of specific cancers over time and analyzes differential cancer risks cancer by geographic region, age, race/ethnicity, sex, and other social characteristics of the population. It gathers cancer incidence data through CCR, and conducts and collaborates with other researchers on special cancer research projects concerning the etiology, treatment, risk factors, and prevention of specific cancers. In addition, the system is designed to monitor patient survival with respect to the type of cancer, extent of disease, therapy, demographics, and other parameters of prognostic importance. In general, data generated from CCR are utilized to:

- Monitor the amount of cancer and cancer incidence trends by geographic area and time in order to detect potential cancer problems of public health significance in occupational settings and the environment, and to assist in their investigation.
- Provide information to stimulate the development and targeting of resources to benefit local communities, cancer patients, and their families.
- Promote high quality research into epidemiology and clinical medicine by enabling population-based studies to be performed to provide better information for cancer control.
- Inform health professionals and educate citizens regarding specific health risks, early detection, and treatment for cancers known to be elevated in their communities.
- Respond to public concerns and questions about cancer.

In California, legislation declaring mandatory cancer reporting became effective in 1985. Beginning in January 1988, under the Statewide Cancer Reporting Law (Section 103885 of the Health and Safety Code), CCR has covered the entire population of California through the regional population-based registries.

Regional Cancer Registries

Region 1/8: Cancer Prevention Institute of California 2201 Walnut Avenue, Suite 300, Fremont, CA 94538 / 510.608.5000; Fax: 510.608.5095
Counties: Monterey, San Benito, Santa Clara and Santa Cruz, Alameda, Contra Costa, Marin, San Francisco and San Mateo

Region 2: Cancer Registry of Central California 1680 W. Shaw Avenue, Fresno, CA 93711 / 530.345.2483; Fax: 530.345.3214
Counties: Fresno, Kern, Kings, Madera, Mariposa, Merced, Stanislaus, Tulare and Tuolumne

Region 3: Sacramento and Sierra Cancer Registry 1825 Bell Street, Suite 102, Sacramento, CA 95825 / 916.779.0300; Fax: 916.564.9300
Counties: Alpine, Amador, Calaveras, El Dorado, Nevada, Placer, Sacramento, San Joaquin, Sierra, Solano, Sutter, Yolo and Yuba

Region 4: Central Coast Cancer Registry 1825 Bell Street, Suite 102, Sacramento, CA 95825 / 916.779.0300; Fax: 916.564.9300
Counties: San Luis Obispo, Santa Barbara and Ventura

Region 5: Desert Sierra Cancer Surveillance Program 11306 Mountain View Ave., Suite B100, Loma Linda, CA 92354 / 909.558.6174; Fax: 909.558.6178
Counties: Inyo, Mono, Riverside and San Bernardino

Region 6: Cancer Registry of Northern California 25 Jan Court, Suite 130, Chico, CA 95928 / 530.345.2483; Fax: 530.345.3214
Counties: Butte, Colusa, Del Norte, Glenn, Humboldt, Lake, Lassen, Mendocino, Modoc, Napa, Plumas, Shasta, Siskiyou, Sonoma, Tehama and Trinity

Region 7: Cancer Registry of San Diego & Imperial Counties 1825 Bell Street, Suite 102, Sacramento, CA 95825 / 916.779.0300; Fax: 916.564.9300
Counties: Imperial and San Diego

Region 9: Cancer Surveillance Program—University of Southern California Soto Street Building, Suite 305, 2001 North Soto Street, MC 9238, Los Angeles, CA 90089-9238 / 323.442.2300; Fax: 323.442.2301, County: Los Angeles

Region 10: Orange County Cancer Registry 1825 Bell Street, Suite 102, Sacramento, CA 95825 / 916.779.0300; Fax: 916.564.9300 County: Orange

Data Sources

Expected Cases and Deaths

Expected cases and deaths were estimated by the California Cancer Registry (CCR), California Department of Public Health (CDPH). These estimates will differ from those published by the National American Cancer Society, which are based on rates from the Surveillance, Epidemiology, and End Results (SEER) program.

Cancer Incidence and Mortality

Where not otherwise specified, cancer incidence data is from the most current data on the CCR. The CCR is a legally mandated, statewide, population-based cancer registry, implemented in 1988. Cancer mortality data is from the CDPH Center for Health Statistics and is based on the underlying cause of death.

California Behavioral Risk Factor Survey (BRFS), California Adult Tobacco Survey (CATS)

These surveys are conducted by the Survey Research Group (SRG), which is part of the CDSRB. They are a collaboration between the Centers for Disease Control and Prevention, the Public Health Institute, and the CDPH. To monitor key health behaviors, approximately 8,500 randomly selected adults and 2,400 youth ages 12-17 are interviewed by telephone annually. Not all questions are asked each year; the most recent data available is presented. For more information on these and other SRG surveys, visit the SRG website at <http://www.surveymethods.com/>.

CCR Acknowledgement and Disclaimer

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Regions & Counties



Border Sierra
2655 Camino Del Rio North, Ste 100
San Diego, CA 92108
(619) 299-4200

Greater Bay Area / Redwood Empire
601 Montgomery St, Ste 650
San Francisco, CA 94111
(415) 394-7100

Great Valley
1545 River Park Dr, Ste 100
Sacramento, CA 95815
(916) 446-7933

Los Angeles
3333 Wilshire Blvd, Ste 900
Los Angeles, CA 90010-1110
(213) 386-7660

Orange County
1940 E Deere Ave, Ste 100
Santa Ana, CA 92705
(949) 261-9446

Silicon Coastal
747 Camden Ave, Ste B
Campbell, CA 95008
(408) 871-1062



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Sacramento, CA 95899-7377
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