

California



Cancer Facts & Figures

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

2010



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Introduction

Welcome to the 2010 edition of California Cancer Facts & Figures. Each year we examine and evaluate changes in cancer statistics, such as incidence and mortality rates. We find inspiration and motivation in the positive trends and identify challenges and opportunities for improvement when trends are less favorable. The long-term trends in particular are cause for celebration of our progress in the fight against cancer.

Since 1988, we have seen the overall incidence rates decrease by 11%, and mortality rates have decreased by 21%. Incidence rates in California have decreased among all ethnicities and continue to rank as some of the lowest in the country. The State's cancer incidence rates for Asian Pacific Islanders, African Americans, non-Hispanic whites, and Hispanics were three to nine percent lower than the national average.

Mortality from the most common cancers among men and women has reached the lowest rate in history. A dramatic decline in prostate cancer (36%), breast cancer (31%), and colorectal cancer (34%) from just over two decades ago is particularly encouraging. In fact, five-year relative survival rates for localized cancers is 100% for prostate cancer, followed closely by 98% for female breast cancer, and nearly 90% for colorectal cancer.

Each year in recognition of our state's great diversity, California Cancer Facts & Figures highlights different populations. Last year, the focus was on Asian American, Native Hawaiian, and other Pacific Islanders. This year, we highlight Lesbian, Gay, Bisexual, and Transgender populations. We would like to extend special thanks to Kay Coleman, Chair of the Division's Lesbian, Gay, Bisexual and Transgender Team, for her tremendous effort to research and draft the report on The Lesbian, Gay, Bisexual and Transgendered Population.

This year's issue also highlights the actions everyone can take to reduce their risk of cancer. Two-thirds of cancer deaths are caused by lifestyle factors such as physical activity, nutrition, and tobacco use. Prevention is the best defense against cancer, and the American Cancer Society is dedicated to encouraging healthy habits by providing education and support to inspire better choices and to ultimately save lives.

Sincerely,

Charles G. Smith, Esq.
Chair of the Board

George A. Fisher, MD, PhD
President of the Division

David F. Veneziano
Chief Executive Officer

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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?

Over 1,222,500 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. The term, "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 2010, about 133,955 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 15 new cases every hour of every day.

How many people will die?

In 2010, about 54,655 people will die of the disease – about 150 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 2007.

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. In 2010, more than three out of five cancer patients will be alive five years after diagnosis and treatment.

Almost 85,731 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 64% 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 over 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 90 to 97% 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 your life and the lives of people you love.

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 2002-2006, 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 three and five percent lower than the nation. Hispanics in California had nearly 9% 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 are California Cancer Registry cancer data almost two 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 percent complete, and the last 10 percent are the hardest to complete.

Underreporting of Cancer by Veterans Administration (VA) Hospitals

Veteran's Health Administration (VHA) hospitals in California did not report cancer cases to the California Cancer Registry from 2005 through 2007. Although there is no way to know how many unreported cancer cases were diagnosed in these facilities, historically VHA-reported cases have accounted for approximately four percent of all new male cancers reported to the CCR. Therefore, rates of new cancer diagnoses (incidence rates) for 2005-2007 in this publication are based upon case counts that the CCR believes to be underestimates of the true counts. This lack of reporting affects the interpretation of cancer statistics presented in this publication.

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

Expected Numbers of New Cases, Deaths, and Existing Cases of Common Cancers in California, 2010

		New Cases		Deaths		Existing Cases	
Male	Prostate	20,120	30%	3,035	11%	222,400	41%
	Lung	7,825	12%	6,985	25%	17,200	3%
	Colon & Rectum	7,200	11%	2,585	9%	55,500	10%
	Leukemia & Lymphoma	5,675	8%	2,535	9%	46,000	8%
	Urinary Bladder	4,420	7%	935	3%	38,800	7%
	All Cancers Combined	67,270	100%	27,855	100%	543,500	100%
Female	Breast	22,385	34%	4,195	16%	283,700	42%
	Lung	6,855	10%	6,150	23%	20,300	3%
	Colon & Rectum	6,960	10%	2,490	9%	57,500	8%
	Uterus & Cervix	5,585	8%	1,220	5%	94,000	14%
	Leukemia & Lymphoma	4,435	7%	2,035	8%	40,600	6%
	All Cancers Combined	66,685	100%	26,800	100%	679,000	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.

Existing cases estimates in this report reflect a new method of estimating those counts. The old method used prevalence rates from 1994. Because of the improvements in diagnostic techniques and cancer treatment since 1994, we believe the new method more accurately estimates the true number of existing cancer cases in California. 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 11% from 1988 to 2007.
- ◆ Over the same period, cancer mortality rates declined by 21%. 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, pancreas, 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 7%, but the mortality rate has decreased by 31%.
- ◆ The prostate cancer incidence rate increased by 70% from 1988 to 1992, but since then has declined to 1990 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/>

Expected New Cancer Cases & Deaths in California – 2010

Site	Expected New Cases			Expected Deaths		
	Total*	Male	Female	Total*	Male	Female
All Sites	133,955	67,270	66,685	54,655	27,855	26,800
Oral Cavity and Pharynx	3,315	2,240	1,080	870	575	295
Digestive System	26,075	14,025	12,050	14,310	7,930	6,380
Esophagus	1,195	910	280	1,170	895	275
Stomach	2,565	1,540	1,030	1,525	880	645
Small Intestine	535	275	260	115	60	55
Colon excluding Rectum	10,010	4,885	5,130	4,170	2,085	2,085
Rectum and Rectosigmoid	4,150	2,315	1,830	910	500	405
Anus, Canal and Anorectum	565	220	345	80	35	45
Liver	2,270	1,660	610	1,855	1,320	535
Intrahepatic Bile Duct	190	90	100	470	245	225
Gallbladder	360	105	260	220	60	160
Other Biliary	595	305	290	140	75	65
Pancreas	3,340	1,645	1,695	3,465	1,715	1,755
Retroperitoneum	120	60	60	25	15	10
Respiratory System	16,005	8,875	7,130	13,535	7,295	6,240
Nasal Cavity, Middle Ear	225	130	90	45	25	20
Larynx	840	680	160	315	255	60
Lung and Bronchus	14,680	7,825	6,855	13,135	6,985	6,150
Pleura	265	195	70	25	20	5
Bones and Joints	295	170	125	135	80	55
Soft Tissue including Heart	1,060	590	470	450	225	225
Melanomas of the Skin	5,475	3,230	2,245	855	555	300
Other Non-Epithelial Skin	660	420	245	300	210	90
Breast	22,545	160	22,385	4,225	30	4,195
Female Genital System	8,405	0	8,405	2,870	0	2,870
Cervix Uteri	1,430	0	1,430	445	0	445
Corpus Uteri	4,070	0	4,070	305	0	305
Uterus, NOS	85	0	85	470	0	470
Ovary	2,235	0	2,235	1,525	0	1,525
Vagina	120	0	120	35	0	35
Vulva	345	0	345	65	0	65
Male Genital System	21,240	21,240	0	3,110	3,110	0
Prostate	20,120	20,120	0	3,035	3,035	0
Testis	990	990	0	55	55	0
Penis	110	110	0	25	25	0
Urinary System	10,335	7,200	3,135	2,675	1,790	885
Urinary Bladder	5,865	4,420	1,445	1,370	935	435
Kidney and Renal Pelvis	4,325	2,735	1,590	1,210	785	425
Ureter	180	105	75	35	20	15
Eye and Orbit	275	145	130	30	15	15
Brain and Other Nervous System	2,040	1,150	890	1,465	820	645
Thyroid Gland	3,715	845	2,870	200	85	115
Other Endocrine, Thymus	240	135	105	115	60	55
Hodgkins Disease	915	520	395	145	80	65
Non-Hodgkins Lymphomas	5,685	3,170	2,515	2,160	1,175	985
Multiple Myeloma	1,420	860	560	1,070	575	495
Leukemias	3,510	1,985	1,525	2,260	1,280	985
Lymphocytic Leukemia	1,735	1,040	695	675	380	295
Acute Lymphocytic Leukemia	660	365	295	215	125	90
Chronic Lymphocytic Leukemia	945	580	365	420	230	190
Myeloid and Monocytic Leukemia	1,525	840	685	1,110	635	480
Acute Myeloid Leukemia	1,100	585	515	915	510	400
Acute Monocytic Leukemia	100	50	50	10	5	5
Chronic Myeloid Leukemia	410	255	155	110	65	45
Ill Defined/Unknown	3,085	1,505	1,585	3,930	2,085	1,845

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

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

Expected New Cancer Cases by County – 2010

County	Colon &					Uterus &			NHL*	Melanoma	Oral	Leukemia	Pancreas	Myeloma
	All Breast	Prostate	Lung	Rectum	Bladder	Cervix								
Alameda	5,665	990	965	645	610	215	225	235	185	150	125	130	65	
Alpine	0	.	.	.	.	.	.	.	.	.	.	.	.
Amador	250	35	50	30	25	15	10	15	15	10	5	5	0	
Butte	1,095	175	185	150	85	60	35	40	50	30	35	25	15	
Calaveras	285	45	50	35	30	10	10	10	10	10	10	5	5	
Colusa	70	10	5	15	5	5	5	0	5	0	5	0	0	
Contra Costa	4,420	745	685	520	470	195	155	210	180	95	95	100	45	
Del Norte	150	25	25	25	10	5	5	5	5	0	5	5	0	
El Dorado	910	130	160	105	90	50	30	45	65	20	20	25	10	
Fresno	3,035	400	505	355	315	105	95	125	105	70	105	80	35	
Glenn	125	20	25	20	15	5	5	0	5	5	5	0	0	
Humboldt	630	100	85	60	60	25	35	25	35	15	20	10	5	
Imperial	445	60	50	50	70	20	20	20	10	10	10	5	10	
Inyo	100	15	25	20	10	5	5	0	5	0	0	0	0	
Kern	2,410	390	270	310	270	95	95	100	75	60	55	70	25	
Kings	385	55	45	40	40	20	15	25	5	15	10	5	5	
Lake	420	45	70	75	40	30	15	10	15	15	5	15	0	
Lassen	65	5	10	5	5	0	0	5	0	0	5	5	0	
Los Angeles	34,335	5,670	4,720	3,410	3,765	1,410	1,570	1,465	1,120	705	920	805	395	
Madera	515	65	90	65	50	20	25	20	20	15	5	10	5	
Marin	1,465	270	285	140	140	60	45	55	90	45	35	25	10	
Mariposa	115	15	15	20	10	5	5	5	5	5	0	5	0	
Mendocino	440	70	55	55	45	40	20	15	25	15	5	10	5	
Merced	735	120	80	105	80	30	40	20	15	15	20	25	5	
Modoc	55	10	10	5	5	0	0	0	5	0	0	0	0	
Mono	35	10	10	0	5	0	0	0	5	0	0	0	0	
Monterey	1,450	225	265	165	120	75	45	75	50	45	30	35	10	
Napa	720	90	125	100	75	25	25	25	40	15	15	20	5	
Nevada	605	110	95	75	45	40	20	20	40	15	10	15	5	
Orange	11,000	1,860	1,480	1,155	1,145	480	420	485	660	260	280	235	100	
Placer	1,715	290	280	210	150	85	55	70	100	30	40	40	25	
Plumas	105	20	25	20	5	0	5	5	5	5	0	0	0	
Riverside	7,580	1,155	1,225	875	765	360	275	295	425	180	170	205	70	
Sacramento	5,580	925	815	745	545	225	240	210	190	130	120	130	45	
San Benito	200	30	30	20	25	5	0	10	5	10	5	5	0	
San Bernardino	6,050	955	885	680	650	240	250	250	230	140	175	140	65	
San Diego	11,750	1,970	1,725	1,350	1,070	460	445	500	645	320	310	280	130	
San Francisco	3,610	515	535	420	395	145	135	165	95	90	90	105	40	
San Joaquin	2,330	365	335	315	220	105	95	95	85	65	45	60	25	
San Luis Obispo	1,105	170	165	135	115	40	50	50	60	25	30	25	5	
San Mateo	3,260	530	555	365	320	160	130	155	140	85	65	90	25	
Santa Barbara	1,640	260	225	170	145	85	70	85	100	40	45	40	20	
Santa Clara	6,395	1,155	990	655	610	240	240	275	235	145	175	160	80	
Santa Cruz	980	145	180	100	70	55	40	35	35	25	30	25	5	
Shasta	975	135	165	140	75	55	35	35	55	40	15	30	15	
Sierra	15	.	.	.	.	.	.	.	.	.	.	.	.
Siskiyou	255	40	50	40	25	15	15	10	10	10	5	5	0	
Solano	1,765	285	285	215	185	65	85	60	60	50	40	35	25	
Sonoma	2,240	390	395	225	230	110	80	80	110	60	45	50	30	
Stanislaus	1,770	255	230	245	195	85	65	80	50	40	40	50	15	
Sutter	350	60	45	45	30	15	15	20	15	10	10	5	10	
Tehama	365	55	60	60	40	15	15	15	15	10	10	10	0	
Trinity	65	5	10	15	5	5	5	0	0	0	0	0	0	
Tulare	1,250	175	150	160	145	55	55	60	40	35	35	25	15	
Tuolumne	415	85	55	55	40	10	15	20	10	15	15	10	5	
Ventura	3,185	535	460	330	325	155	130	135	170	75	80	65	35	
Yolo	680	115	80	90	60	25	35	30	35	15	15	15	5	
Yuba	265	30	30	55	30	10	5	15	10	5	5	10	5	

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/>

Expected Cancer Deaths by County – 2010

County	Colon &											Uterus &	
	All	Lung	Rectum	Breast	Prostate	Pancreas	NHL*	Leukemia	Stomach	Ovary	Bladder	Cervix	Myeloma
Alameda	2,160	495	220	185	110	155	85	80	70	55	40	45	45
Alpine	0	.	.	.	.	.	.	.	.	.	.	.	.
Amador	95	25	10	5	5	0	10	0	0	0	0	0	5
Butte	525	155	40	35	30	30	15	25	15	20	10	5	10
Calaveras	110	30	10	5	10	10	5	5	0	5	0	0	5
Colusa	25	5	0	0	0	0	0	0	0	0	0	0	0
Contra Costa	1,720	405	175	145	95	120	80	75	35	45	50	30	35
Del Norte	55	20	5	5	0	5	0	0	0	0	0	0	0
El Dorado	315	80	25	25	20	20	10	15	5	10	10	5	10
Fresno	1,210	280	100	95	65	65	50	55	30	40	20	25	20
Glenn	50	15	5	0	0	5	5	0	0	0	0	0	0
Humboldt	285	80	25	25	10	10	10	10	5	5	10	10	0
Imperial	215	45	20	15	10	10	5	10	10	0	5	5	5
Inyo	45	20	5	0	0	0	0	0	0	0	5	0	0
Kern	1,050	270	95	75	65	70	35	45	25	20	30	15	15
Kings	175	45	20	5	10	5	10	10	5	0	5	5	5
Lake	185	60	15	5	10	10	5	5	5	5	5	5	0
Lassen	35	10	0	5	0	5	5	0	0	0	0	0	0
Los Angeles	13,560	2,985	1,325	1,125	755	875	525	550	505	425	335	375	255
Madera	210	50	20	15	20	10	5	10	5	5	5	5	5
Marin	470	100	35	40	20	25	15	20	15	15	15	10	10
Mariposa	50	15	5	5	5	0	0	0	0	0	0	0	0
Mendocino	170	45	20	15	10	10	5	5	5	5	5	5	0
Merced	315	90	25	30	15	20	10	15	10	5	5	5	10
Modoc	20	5	5	5	0	0	0	0	0	0	0	0	0
Mono	10	.	.	.	.	.	.	.	.	.	.	.	.
Monterey	515	125	45	35	30	35	20	35	15	15	15	10	10
Napa	290	90	20	20	15	20	5	10	5	10	10	5	5
Nevada	225	60	20	15	15	15	5	5	5	5	10	5	5
Orange	4,185	1,015	385	305	215	260	160	170	135	135	125	95	95
Placer	625	165	50	45	40	35	20	40	10	20	15	10	20
Plumas	50	15	5	5	0	0	5	0	0	0	0	0	0
Riverside	3,095	765	275	250	185	230	110	125	65	80	75	70	65
Sacramento	2,235	610	205	160	105	140	80	85	45	45	50	45	50
San Benito	65	15	5	5	0	0	5	5	5	0	5	5	5
San Bernardino	2,610	640	250	220	160	155	105	100	65	70	60	70	55
San Diego	4,815	1,130	435	350	280	285	195	205	105	125	130	90	90
San Francisco	1,415	340	130	100	60	90	65	40	55	30	30	30	35
San Joaquin	1,015	270	90	75	50	60	35	50	25	25	20	25	20
San Luis Obispo	495	135	30	35	30	35	15	20	10	25	15	5	10
San Mateo	1,185	285	130	95	70	75	50	45	25	40	30	20	20
Santa Barbara	665	155	55	55	45	50	30	30	20	15	15	15	10
Santa Clara	2,270	525	200	170	110	155	105	85	70	60	50	40	50
Santa Cruz	375	80	40	35	20	25	15	15	10	10	10	5	5
Shasta	440	135	30	25	20	25	20	20	5	10	10	10	5
Sierra	5	.	.	.	.	.	.	.	.	.	.	.	.
Siskiyou	125	35	15	10	5	5	5	5	0	0	5	5	5
Solano	670	170	65	55	30	40	30	25	15	15	15	15	15
Sonoma	935	230	85	75	55	60	30	45	20	30	35	15	20
Stanislaus	765	205	85	55	45	45	20	35	15	15	25	10	10
Sutter	135	40	10	10	5	5	10	5	0	5	5	0	5
Tehama	145	50	10	10	10	10	5	5	5	5	0	0	0
Trinity	40	15	5	0	0	0	0	5	0	0	0	0	0
Tulare	535	145	45	35	30	30	20	35	15	15	5	15	5
Tuolumne	150	35	10	10	10	10	5	10	5	0	5	0	0
Ventura	1,125	260	105	75	70	75	45	50	30	35	35	25	25
Yolo	260	75	25	15	15	15	10	5	5	10	5	5	5
Yuba	120	50	5	10	5	5	5	5	0	0	0	0	5

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 23 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 18 women will be diagnosed with breast cancer between the ages of 65 and 84.

Causes of Death

Cancer is the second leading cause of death in California, causing more than 50,000 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.

Leading Causes of Death in California, 2007

Cause	Deaths	Percent
Heart Disease	62,220	27%
Cancer	54,918	24%
Cerebrovascular Disease	13,724	6%
Chronic Lower Respiratory Disease	12,497	5%
Accidents	11,426	5%
Alzheimer's Disease	8,495	4%
Diabetes	7,395	3%
Influenza and Pneumonia	6,522	3%
Cirrhosis	4,052	2%
Intentional Self-Harm	3,543	2%
All Deaths	233,467	100%

Probability of Being Diagnosed With Certain Cancers Over Selected Age Intervals¹, California, 2005-2007

		Birth to 19	25 to 44	45 to 64	65 to 84	Birth to Death
		One in:	One in:	One in:	One in:	One in:
All Sites	Male	276	119	8	3	2
	Female	318	38	9	5	3
Breast	Female	*	105	23	18	9
Colon and Rectum	Male	*	728	85	44	24
	Female	*	822	112	42	25
Lung and Bronchus	Male	*	1,996	90	25	20
	Female	*	1,988	110	32	22
Prostate	Male	*	1,756	24	9	7

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

Causes of Cancer

Approximately one-third of cancer deaths are caused by smoking and another one-third by diet and obesity. Effective prevention of many cancers is controllable by following the American Cancer Society guidelines on the next page. While the successful treatment of cancer is cause for celebration, individual efforts to live a healthy life are extremely important.

Risk Factors for Cancer Deaths in the United States

Risk Factor	Percent
Tobacco	30%
Diet/Obesity	30%
Inactivity	5%
Occupation	5%
Family history of cancer	5%
Viruses and other biologic agents	5%
Perinatal factors/growth	5%
Reproductive factors	3%
Alcohol	3%
Socioeconomic status	3%
Environmental pollution	2%
Ionizing/ultraviolet radiation	2%
Prescription drugs	1%
Salt/other food additives/contaminants	1%
Total	100%

Source: Adapted from the Harvard Report on Cancer Prevention, 1996.

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 associated with poorer prognosis.

Five -Year Relative Survival by Stage at Diagnosis in California, 1988-2007

Cancer Type	All Stages	Localized	Regional	Distant
Female Breast	88%	98%	80%	21%
Cervix Uteri	72%	92%	56%	17%
Uterus	86%	96%	69%	20%
Ovary	46%	91%	75%	29%
Prostate	98%	100%	96%	33%
Testis	94%	99%	95%	71%
Oral & Pharynx	60%	81%	51%	30%
Colon & Rectum	64%	91%	67%	10%
Pancreas	5%	19%	7%	2%
Lung & Bronchus	16%	52%	21%	3%
Melanoma	90%	96%	95%	14%
Hodgkin Lymphoma	82%	--	--	--
NHL*	58%	--	--	--
Leukemia	48%	--	--	--
Childhood (0-19)	73%	--	--	--
Adult (20+)	43%	--	--	--

*NHL: Non-Hodgkin Lymphoma Note: Follow-up is through December 2009 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 web site at <http://www.ccrca.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 fifteen most populous counties listed in the table account for 80 percent of California's population. The numbers are actual cases reported to the CCR for 2007, while pages 4 and 5 show the expected number of cancers in 2010.

Percent of Cancer Cases Diagnosed at Early Stage, California and Selected Counties, 2007

	Non-Hispanic White		African American		Hispanic		Asian/Pacific Islander	
	Total Cases	Percent Early	Total Cases	Percent Early	Total Cases	Percent Early	Total Cases	Percent Early
Breast - Females								
California	17,782	72	1,774	64	4,513	63	3,174	72
Alameda	687	73	156	65	121	62	271	72
Contra Costa	656	74	85	62	89	66	114	81
Fresno	328	72	36	69	131	66	24	71
Kern	324	69	20	55	84	46	.	.
Los Angeles	3,482	72	798	65	1,578	64	1,003	71
Orange	1,595	71	26	65	328	64	288	67
Riverside	975	73	91	66	262	65	63	78
Sacramento	784	70	100	69	112	62	107	66
San Bernardino	667	68	105	61	311	69	60	77
San Diego	1,733	72	101	60	373	58	233	75
San Francisco	324	76	47	62	55	62	232	77
San Joaquin	252	71	34	59	88	64	47	66
San Mateo	432	76	20	80	82	68	154	77
Santa Clara	861	74	27	52	201	63	338	67
Ventura	500	75	.	.	113	65	45	71
Prostate - Males								
California	13,340	81	1,699	80	3,044	78	1,528	80
Alameda	496	86	169	83	93	82	113	88
Contra Costa	470	85	69	86	71	73	43	86
Fresno	320	84	21	81	116	78	24	88
Kern	172	83	19	89	63	71	.	.
Los Angeles	2,315	78	699	77	1,020	77	483	78
Orange	1,091	77	29	76	177	79	98	74
Riverside	868	85	85	76	236	81	30	73
Sacramento	555	84	92	86	80	79	40	73
San Bernardino	513	79	117	80	200	74	44	73
San Diego	1,227	78	79	78	236	83	100	72
San Francisco	275	87	57	79	45	82	147	83
San Joaquin	202	80	35	66	54	81	26	81
San Mateo	378	86	34	97	49	86	78	83
Santa Clara	654	85	34	85	113	82	177	85
Ventura	345	67	.	.	72	75	24	75
Invasive Cervix - Females								
California	558	48	77	38	561	51	205	44
Alameda	15	53	.	.	.	.	.	.
Contra Costa	.	.	.	.	.	.	.	.
Fresno	.	.	.	.	21	43	.	.
Kern	.	.	.	.	.	.	.	.
Los Angeles	131	44	35	34	214	50	72	44
Orange	35	51	.	.	43	47	23	57
Riverside	34	50	.	.	36	61	.	.
Sacramento	35	51	.	.	16	63	.	.
San Bernardino	29	41	.	.	34	53	.	.
San Diego	49	45	.	.	53	47	.	.
San Francisco	.	.	.	.	.	.	.	.
San Joaquin	.	.	.	.	.	.	.	.
San Mateo	.	.	.	.	.	.	.	.
Santa Clara	23	57	.	.	21	48	18	44
Ventura	.	.	.	.	.	.	.	.

Source: California Cancer Registry, California Department of Public Health. Data not shown if fewer than 15 cases were reported.

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

Stage at Diagnosis continued

Percent of Cancer Cases Diagnosed at Early Stage, California and Selected Counties, 2007

	Non-Hispanic White		African American		Hispanic		Asian/Pacific Islander	
	Total Cases	Percent Early	Total Cases	Percent Early	Total Cases	Percent Early	Total Cases	Percent Early
Colon & Rectum - Males								
California	4,759	45	483	42	1,321	43	911	45
Alameda	161	43	44	39	38	34	52	44
Contra Costa	178	41	19	37	15	47	20	30
Fresno	110	45	.	.	51	45	.	.
Kern	103	56	.	.	43	35	.	.
Los Angeles	984	48	219	42	491	42	323	45
Orange	418	50	.	.	82	43	103	50
Riverside	286	47	26	54	78	41	.	.
Sacramento	191	35	21	29	24	29	32	34
San Bernardino	233	44	35	37	87	48	.	.
San Diego	387	43	31	35	91	41	53	36
San Francisco	106	48	20	25	16	44	86	44
San Joaquin	83	46	.	.	26	35	.	.
San Mateo	109	39	.	.	17	71	35	54
Santa Clara	170	45	.	.	56	52	80	50
Ventura	107	46	.	.	25	28	.	.
Colon & Rectum - Females								
California	4,543	44	569	39	1,144	41	919	40
Alameda	188	41	46	35	23	39	60	43
Contra Costa	182	34	19	21	21	33	24	38
Fresno	97	38	.	.	28	36	.	.
Kern	85	48	.	.	22	32	.	.
Los Angeles	913	47	282	44	475	44	291	40
Orange	405	47	.	.	69	38	103	38
Riverside	271	46	25	28	70	34	17	53
Sacramento	194	38	31	23	30	33	31	19
San Bernardino	194	49	37	43	67	40	19	26
San Diego	379	43	21	43	71	45	61	44
San Francisco	75	52	19	26	15	27	78	41
San Joaquin	63	52	.	.	18	44	.	.
San Mateo	100	47	.	.	21	43	40	45
Santa Clara	175	44	.	.	42	45	97	45
Ventura	150	51	.	.	27	59	.	.
Melanoma of the Skin - Males								
California	4,806	88	.	.	187	75	24	46
Alameda	131	85	.	.	.	.	.	.
Contra Costa	174	90	.	.	.	.	.	.
Fresno	66	82	.	.	.	.	.	.
Kern	61	89	.	.	.	.	.	.
Los Angeles	984	89	.	.	61	70	.	.
Orange	465	88	.	.	17	59	.	.
Riverside	329	85	.	.	16	81	.	.
Sacramento	153	88	.	.	.	.	.	.
San Bernardino	167	84	.	.	.	.	.	.
San Diego	650	90	.	.	20	85	.	.
San Francisco	96	89	.	.	.	.	.	.
San Joaquin	54	81	.	.	.	.	.	.
San Mateo	117	92	.	.	.	.	.	.
Santa Clara	179	89	.	.	.	.	.	.
Ventura	132	90	.	.	.	.	.	.
Melanoma of the Skin - Females								
California	3,209	91	16	56	249	87	37	73
Alameda	102	92	.	.	.	.	.	.
Contra Costa	106	92	.	.	.	.	.	.
Fresno	58	95	.	.	.	.	.	.
Kern	40	95	.	.	.	.	.	.
Los Angeles	600	93	.	.	64	88	.	.
Orange	308	87	.	.	26	81	.	.
Riverside	226	89	.	.	.	.	.	.
Sacramento	123	93	.	.	.	.	.	.
San Bernardino	116	95	.	.	15	73	.	.
San Diego	446	93	.	.	27	93	.	.
San Francisco	70	90	.	.	.	.	.	.
San Joaquin	44	89	.	.	.	.	.	.
San Mateo	73	93	.	.	.	.	.	.
Santa Clara	128	91	.	.	.	.	.	.
Ventura	113	96	.	.	.	.	.	.

Source: California Cancer Registry, California Department of Public Health. Data not shown if fewer than 15 cases were reported.

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

American Cancer Society Guidelines

Nutrition, Physical Activity, and Cancer Prevention

Accumulating evidence indicates that for the majority of individuals who don't smoke, consuming a mostly plant-based diet (including five or more servings of vegetables and fruit), being physically active, and maintaining a healthy weight are the most important means to reduce cancer risk. Besides smoking, the most important risk factor to control is a combination of diet and physical activity. 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 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 percent of children and 12 percent 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. Maintain a healthful weight throughout life:
 - Balance caloric intake with physical activity.
 - Avoid excessive weight gain throughout the lifecycle.
 - Achieve and maintain a healthy weight if currently overweight or obese.
3. Adopt a physically active lifestyle.
 - Adults should engage in at least 30 minutes of moderate to vigorous physical activity beyond the activities of daily living, on five or more days of

the week. Forty-five to 60 minutes of intentional physical activity are preferable to reduce breast and colon cancer risk.

- Children and teens should engage in at least 60 minutes per day of moderate to vigorous physical activity at least five days per week.
4. Talk to your doctor about cancer screening tests.
 5. Consume a healthful diet:
 - Choose foods and beverages in amounts that help maintain a healthful weight.
 - Eat five or more servings of a variety of fruits and vegetables each day.
 - Choose whole grains instead of processed (refined) grains and sugars.
 - Limit consumption of processed and red meats.
 6. 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.
 7. 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.

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+	Every 3 years, ages 20-39 Annual, starting at age 40
		Mammography	Annual, starting at age 40
		Breast self-examination	Optional, monthly, starting at age 20
Colon and Rectum	Men & Women (average risk), age 50+	Tests that find polyps and cancer:	
		Flexible sigmoidoscopy*	Every five years
		Colonoscopy	Every ten years
		Double contrast barium enema*	Every five years
		CT colonography (virtual colonoscopy)*	Every five years
		Tests that mainly find cancer:	
		Fecal occult blood test (FOBT)*, **	Every year
Fecal immunochemical test (FIT)*, **	Every year		
Stool DNA test (sDNA)*	Interval uncertain		
Prostate	Men, age 50+	Prostate-specific antigen (PSA) blood test and digital rectal exam (DRE)	At this time, there is insufficient evidence to recommend for or against routine prostate cancer screening for average-risk men.¥
Cervix	Women, age 21+	Pap test and pelvic examination	Begin screening about 3 years after start of vaginal intercourse (no later than 21 years of age) on an annual basis with conventional cytology smear. Every 2 years with liquid-based cytology. After age 30, if 3 consecutive normal tests, screening may be every 2-3 years.
Cancer-related check up	Men & Women, age 20+	Examinations every 3 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.
 ¥ The Society, along with other major scientific and medical organizations, does not recommend routine screening for prostate cancer. Rather, the American Cancer Society recommends that health care professionals discuss the potential benefits and limitations of prostate cancer early detection testing with men and offer the PSA blood test and the digital rectal examination (DRE) annually, beginning at age 50, to men who are at average risk of prostate cancer and who have a life expectancy of at least 10 years. Men at high risk, including African American men and men who have a close relative who had prostate cancer before age 65, should have this discussion with their health care professional beginning at age 45.

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 over 98%. (Breast cancer survival by stage at diagnosis can be found on page 7.)

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 70% of female breast cancers diagnosed in California in 2007 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 (see next page).

Breast cancer mortality in California has declined by more than 31% 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 childbearing, 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 23%.

Although 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 2007, breast cancer

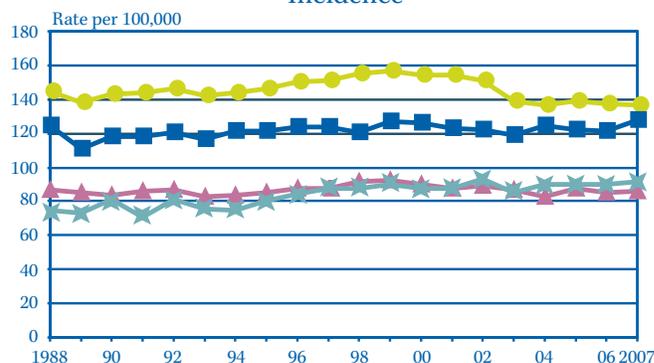
mortality declined by 16% among African American women, 22% among Hispanic women, and 30% among non-Hispanic white women. Mortality rates among Asian/Pacific Islander women also decreased but not significantly despite the increase in incidence. These trends may in part be attributed to earlier diagnosis due to more effective cancer screening.

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.

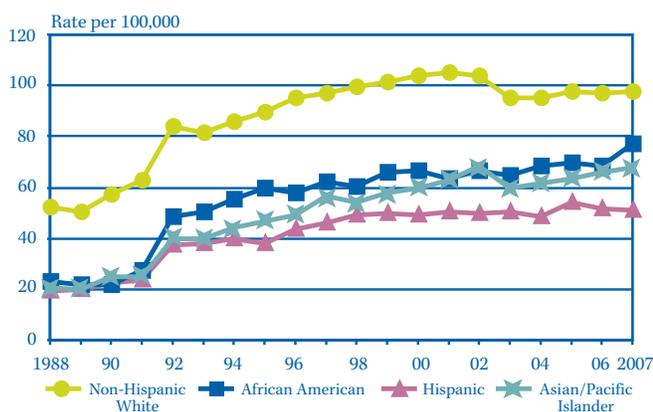
Nationally, breast cancer incidence has been decreasing since the late 1990s, with a dramatic decrease between 2002 and 2003, particularly in the 50-69 year age

Trends in Female Breast Cancer by Race/Ethnicity in California, 1988-2007

Incidence

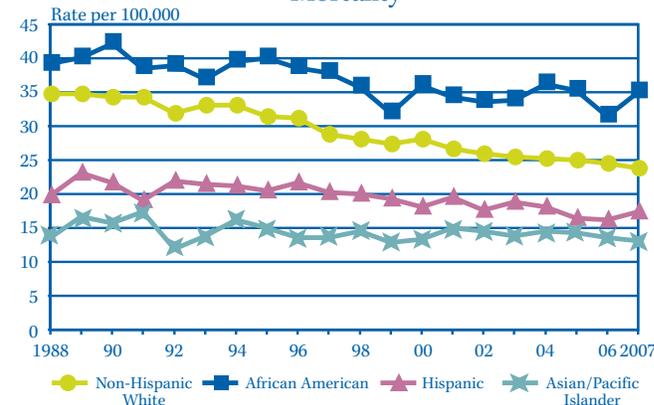


Trends in Early-Stage Female Breast Cancer Incidence by Race/Ethnicity in California, 1988-2007



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.

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.

groups. This may be due to the reduced use of hormone replacement therapy.

For reasons that are not completely understood, being well-educated and financially well-off are associated with a higher risk of developing breast cancer. In each racial/ethnic group in California, breast cancer incidence increases with socioeconomic status (SES). 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.

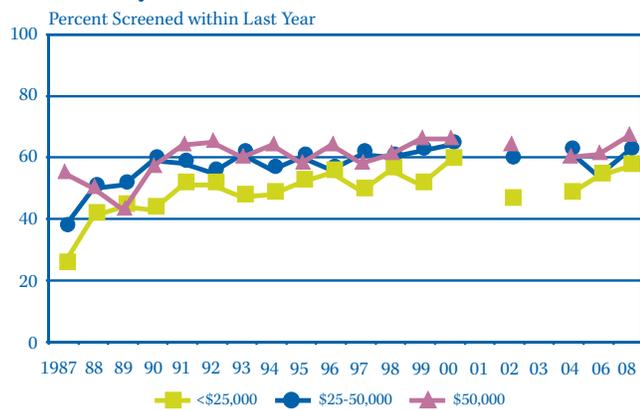
In 2002-2006, the invasive female breast cancer incidence rate in California as compared to the nation excluding California was 4% lower among Asian/Pacific Islanders, 2% higher among African Americans, 7% lower among Hispanics, and 8% higher among non-Hispanic whites. (For more information on the U.S. cancer rate refer to page 1.)

Roughly 130 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.

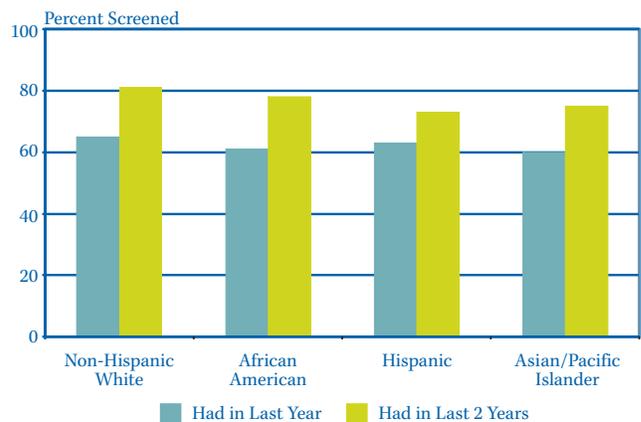
Mammography Use Among Females Ages 40 and Older by Income in California, 1987-2008



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 in 2001.
 Prepared by the California Department of Public Health, Cancer Surveillance Section.

In 2008, 64% 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. Non-Hispanic white women were most likely to have been recently screened (65%), while screening among Hispanic, non-Hispanic black, and Asian women were (63%, 60%, and 60% respectively).

Mammography Use Among Females Ages 40 and Older by Race/Ethnicity, 2008



Note: Data 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.

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 and treatment for medically uninsured women in California. The Society helps women learn about breast cancer screening and the importance of mammography through a variety of community health education programs and by partnering with EWC in their *Tailored Health Education* outreach. With a wide variety of materials, many available in languages other than English; the toll free number (1-800-227-2345), which can also provide language appropriate services; and its Web site (www.cancer.org), the Society provides answers to questions about the nature of breast cancer, its causes, and risk factors. In 2008, the Society's *Reach to Recovery*® program reached 1,334 newly diagnosed women, *Look Good...Feel Better*® helped 4,528 women, and provided over 2,500 wigs mostly to women undergoing cancer treatment. Breast cancer patients and their caregivers also participated in our educational program series, *I Can Cope*®, as well as support groups offered in local communities.

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 twice as high as non-Hispanic white women, African American, and Asian/Pacific Islander women. Cervical cancer is a major problem among many of the groups recently immigrating to California (see page 23).

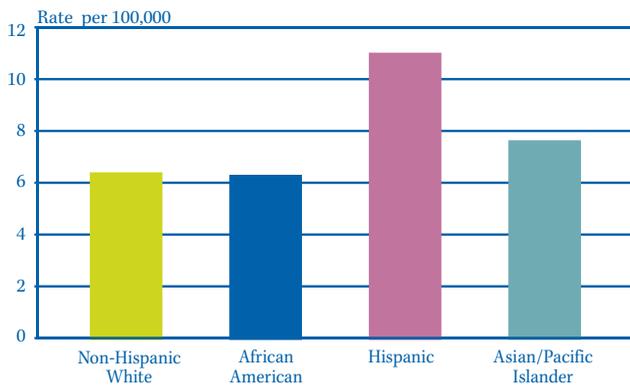
The American Cancer Society recommends that all women begin screening about three years after the start of vaginal intercourse but no later than 21 years of age. Screening should occur on an annual basis with conventional Pap tests, or every two years using liquid-based Pap tests. At or after age 30, women with three consecutive normal tests may be screened every two to three years.

The Federal Food and Drug Administration has approved a vaccine for the prevention of HPV infection. It will not treat an existing infection. **Studies show the vaccine has the potential to prevent up to 70% of the more than 1,500 invasive cervical cancer cases and over 440 cervical cancer deaths in California each year.**

The American Cancer Society recommends:

- Routine HPV vaccination for females aged 11 to 12 years
- HPV vaccination for females aged 13 to 18 years to catch up missed vaccines or to complete the series
- Females as young as age nine can receive HPV vaccination

Invasive Cervical Cancer Incidence by Race/Ethnicity in California, 2007



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.

Hispanic and Asian women are at greater risk of developing cervical cancer and are also less likely to receive routine screening, when compared to African American and non-Hispanic white women. In 2006, the percent of women ages 18 and older in California who reported having a Pap smear in the previous three years was 88% for African Americans, 88% for non-Hispanic white women, 84% for Hispanics, and 84% for Asians.

Colon and Rectum Cancer

Colon and rectum cancer is the third most common cancer in California among both men and women and 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 rates for colon and rectum cancer is 63%, compared to 88% and 94% for breast and prostate cancers respectively. The poorer prognosis is related to more late stage detection. Colon and rectum cancer risk has declined steadily in California over the last 20 years. Colon and rectum cancer incidence rates declined significantly for Asian/Pacific Islanders, African Americans, and non-Hispanic whites by 12.9%, 19.5%, and 27.9% respectively. However, colon and rectum

New Cases, Percent of Early Stage at Diagnosis, and Deaths for Three Common Cancers, California, 2007*

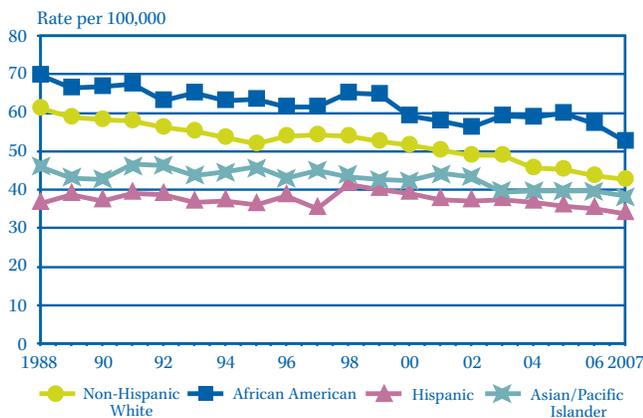
Cancer Type	Total New Cases Diagnosed	Percent Early Stage	Total Deaths
Female Breast	27,492	70%	4,206
Prostate	20,418	82%	3,043
Colon and Rectum	14,799	46%	5,050

Note: Deaths include persons who may have been diagnosed in previous years.
Source: California Cancer Registry, California Department of Public Health.

cancer rates for Hispanics have remained stable over the 20-year period. Mortality rates decreased by 34% for all races combined. Among new cases, more of the decline in colon and rectum cancer rates has been among late-stage tumors.

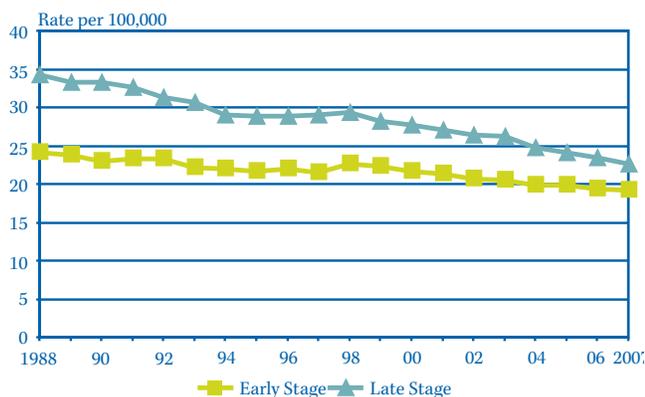
The reasons for declining colon and rectum cancer rates are not clearly understood. It has been suggested that increased use of endoscopic screening (sigmoidoscopy or colonoscopy) has resulted in the removal of benign polyps that would have progressed to cancer. Among the other possible contributors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

Trends in Invasive Colon and Rectum Cancer Incidence by Race/Ethnicity in California, 1988-2007*



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.

Trends in Colon and Rectum Cancer Incidence by Stage at Diagnosis in California, 1988-2007*



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.

In 2002-2006, the invasive colon and rectum cancer incidence rate in California, as compared to the nation excluding California, was 2% lower among Asian/Pacific Islanders, 6% lower among African Americans, 17% lower among Hispanics, and 11% lower among non-Hispanic whites. (For more information on the U.S. cancer rate refer to page 1.)

Colon and Rectum Cancer Screening

Survival from colon and rectum cancer is nearly 90% 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).

In 2004, about 44% of colon and rectum cancers diagnosed in California were early-stage, compared to about 75% for prostate, and 66% for breast cancer. The American Cancer Society recommends that both men and women begin routine screening for this cancer at age 50. (For more information on stage at diagnosis and screening guidelines for this cancer, refer to pages 9 and 26.)

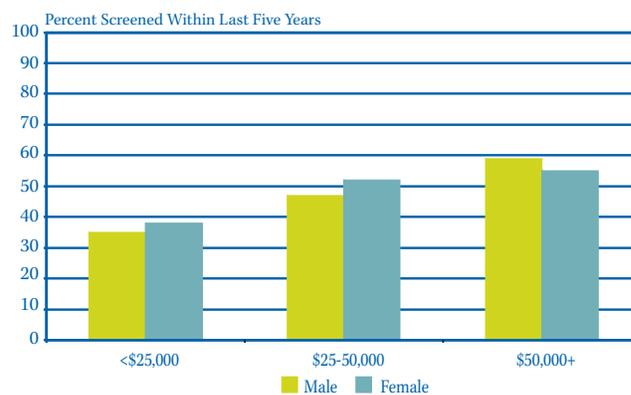
In 2008, only 38% of California adults ages 50 and over reported having had sigmoidoscopy or colonoscopy within the past five years. The proportion screened was even lower among persons in poverty (31%), and among Hispanics (37%).

In 2008, 38% 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 (27%, 24%, and 23% respectively).

In March 2008, new consensus guidelines for colon and rectal cancer screening were developed in collaboration with the American Cancer Society and a consortium of major gastroenterology and radiology organizations. These guidelines focus on preventing colon and rectum cancer as well as early detection of cancer.

The new recommendations add two screening methods to the list of options: stool DNA testing and CT colonography (also referred to as “virtual colonoscopy”). According to these new guidelines, some tests that are typically more invasive offer the best chance of preventing cancer because they can find colon growths (polyps) that can be removed before they become cancerous. Other tests are less likely to find polyps, but can still detect most cancers.

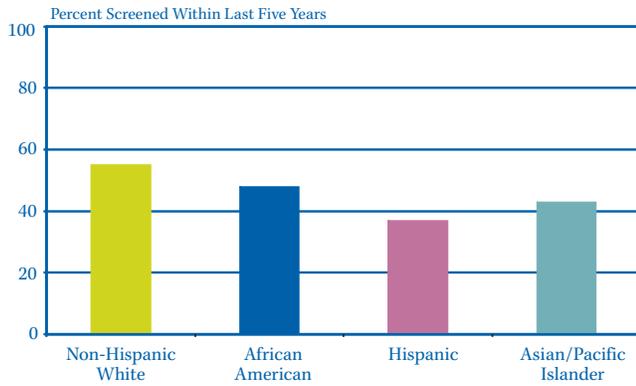
Sigmoidoscopy/Colonoscopy Use Among Persons Ages 50 and Older by Annual Household Income in California, 2008



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.

*Veterans Health Administration hospitals did not report cancer cases to the California Cancer Registry (CCR) in 2005. Therefore, case counts and incidence rates for adult males in 2005 are underestimated and should be interpreted with caution (see page 1 or <http://www.ccrca.org/VAtchnotes.html>)

Sigmoidoscopy/Colonoscopy Use Among Persons Ages 50 and Older by Race/Ethnicity in California, 2008



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.

American Cancer Society Colon and Rectum Cancer Activities

The American Cancer Society has an aggressive, multipronged 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.

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 2009, C4 held its first Annual Lobby Day at the State Capitol to increase awareness among the State Legislators the importance of adequate screening resources for all Californians.

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 2.5% higher in 2007 than in 1988, depending on

race/ethnicity. 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 over 45% more likely to develop this disease than non-Hispanic white men, over 60% more likely than Hispanic men, and nearly three times more likely than Asian/Pacific Islanders. Unlike breast cancer, prostate cancer tends to be diagnosed late in life. Nearly 65% 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 (see page 7), especially when diagnosed early. Prostate cancer mortality in California decreased by 36% after 1988,

Trends in Prostate Cancer by Race/Ethnicity in California, 1988-2007*



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.

*Veterans Health Administration hospitals did not report cancer cases to the California Cancer Registry (CCR) in 2005. Therefore, case counts and incidence rates for adult males in 2005 are underestimated and should be interpreted with caution (see page 1 or <http://www.ccrca.org/VATechnotes.html>)

with declines among men in each racial/ethnic group. Nonetheless, it remains the second leading cause of cancer-related mortality among men.

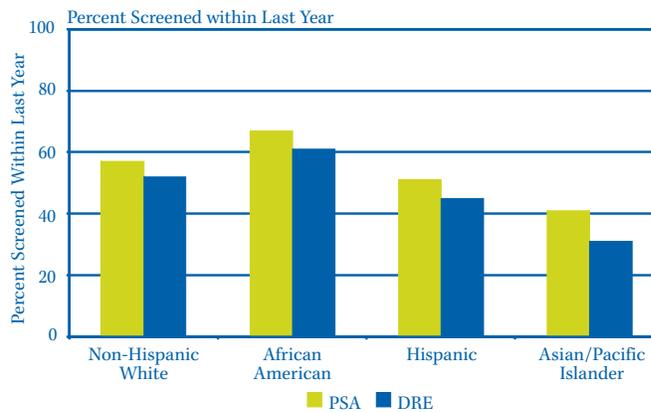
In 2002-2006, the prostate cancer incidence rate in California as compared to the nation excluding California, was 13% lower among Asian/Pacific Islanders, 14% lower among African Americans, 7% lower among Hispanics, and 6% lower among non-Hispanic white men. (For more information on the U.S. cancer rate refer to page 1.)

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 (see page 11). To assist men in making

PSA and DRE Testing Among Men Ages 50 and Older by Race/Ethnicity in California, 2008

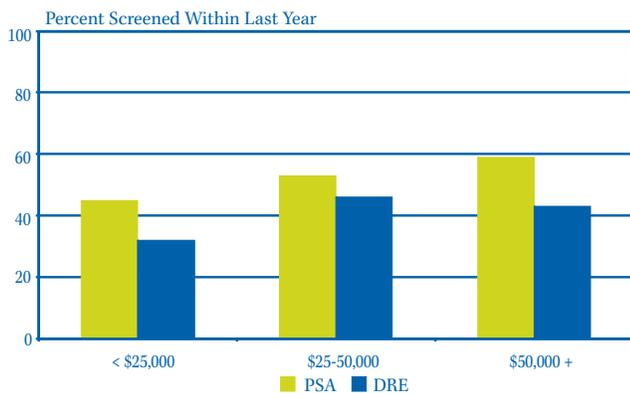


Note: Data are weighted to the 2000 California population.
Source: California Behavioral Risk Factor Survey.
Prepared by the California Department of Public Health, Cancer Surveillance Section.

informed decisions about testing, physicians should inform their patients of the potential risks and benefits of early detection and treatment.

In 2008, 75% of Californian men aged 50 and over reported having had at least one PSA test while 84% reported having had 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. (For information on stage at diagnosis by race/ethnicity, refer to page 8.)

PSA and DRE Testing Among Men Ages 50 and Older by Annual Household Income in California, 2008



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.

American Cancer Society Prostate Cancer Activities

In 2008, 1,548 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. The Society is a strong supporter of and participant in the California Prostate Cancer Coalition, formed to advocate for prostate cancer as a statewide public health issue.

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 both *in situ* and invasive melanoma of the skin have increased in the past 16 years for all racial/ethnic groups, a statistically significant increase for Hispanics and non-Hispanic whites. (For information on survival and stage at diagnosis, refer to pages 7 and 8.)

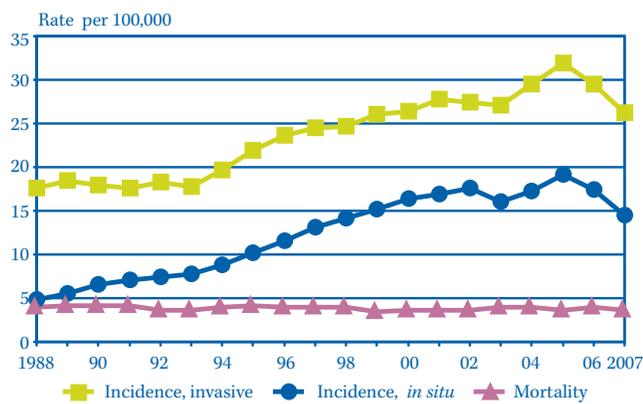
To reduce your risk of skin cancer:

- Reduce sun exposure between 10:00 AM and 4:00 PM.
- Wear tightly woven, loose-fitting clothing that covers as much of the body as possible and a wide-brimmed hat (at least 4 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.
- Protect children from over-exposure to the sun. Place play equipment in the shade.

The State of California runs the *California Skin Cancer Prevention Program*, targeting children under 15 years of age, their parents and other care providers for children, and outdoor workers. The program's mission is to:

- Increase public awareness regarding the dangers of over exposure to sunlight;
- Increase individual and organization-wide practice of sun-safety behaviors; and

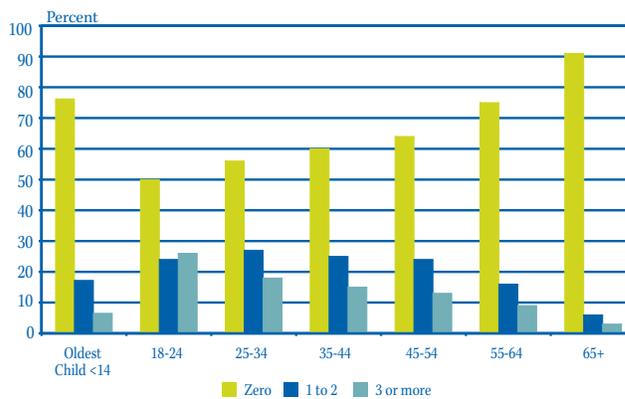
Trends in Melanoma Incidence and Mortality Among Non-Hispanic Whites in California, 1988-2007*



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.

*Veterans Health Administration hospitals did not report cancer cases to the California Cancer Registry (CCR) in 2005. Therefore, case counts and incidence rates for adult males in 2005 are underestimated and should be interpreted with caution (see page 1 or <http://www.ccrca.org/VAtchnotes.html>)

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.

- Decrease future incidents (new cases) of skin cancer among California residents.

For more information, go to www.AvoidSkinCancer.com.

Skin Cancer Screening Guidelines

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.

Tobacco-Related Cancers

About 85% of lung cancer is caused by cigarette smoking. Lung cancer alone kills over 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. (Source: *Cancer Prevention and Early Detection 2005*)

Lung cancer incidence rates in California decreased by 29% from 1988 to 2007, while rates in the nation excluding California dropped by only 7% between 1988 and 2006. 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.

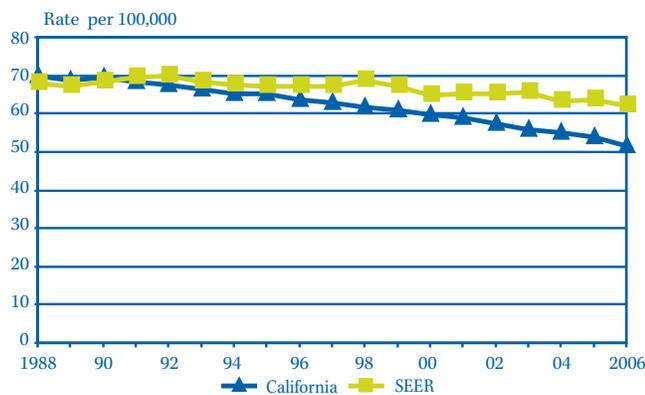
Smoking Trends

Smoking rates among California adults declined steadily among both men and women from 1989 to 2005. In 2007, 14% of California adults smoked and in 2008 13% 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.

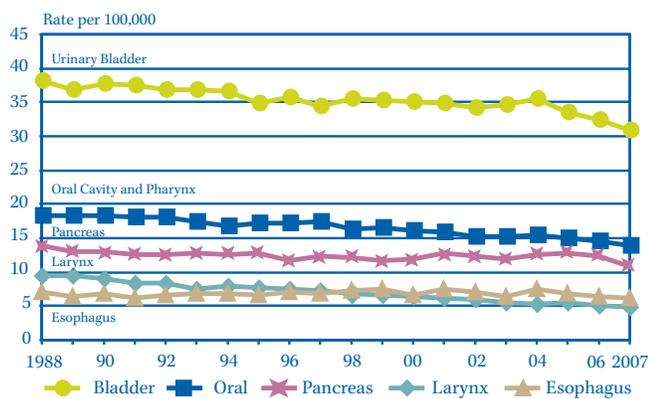
In California, 18-24 year olds are smoking at an increasing rate and are now recognized as the fastest growing age group using tobacco. Tobacco companies are targeting them in earnest as the “smokers of the future.” The smoking rate for 18-24 year olds was 17% in 2008.

Trends in Lung Cancer Incidence in California and SEER Areas Other than California, 1988-2006



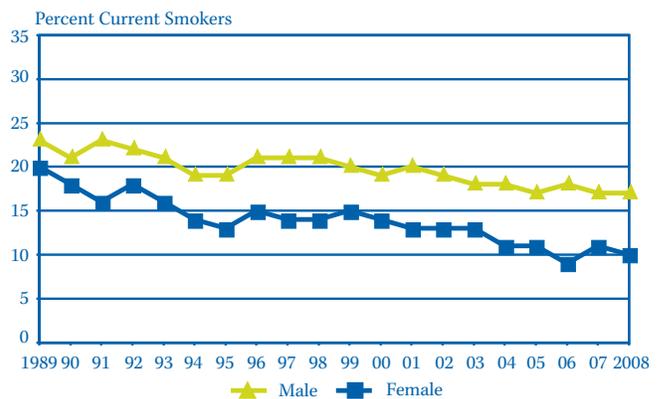
Note: Rates are age-adjusted to the 2000 US population.
Source: California Cancer Registry, California Department of Public Health.
Prepared by the California Department of Public Health, Cancer Surveillance Section.

Trends in the Incidence of Smoking-Related Cancers Other than Lung Among Men in California, 1988-2007*



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.

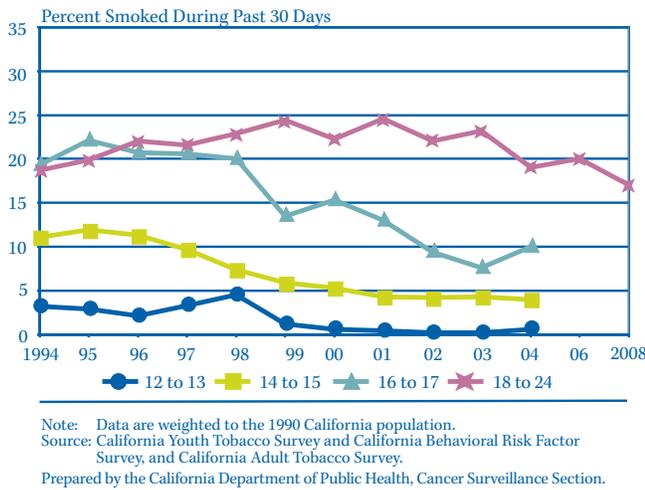
Trends in Adult Smoking by Sex in California, 1989-2008



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.

*Veterans Health Administration hospitals did not report cancer cases to the California Cancer Registry (CCR) in 2005. Therefore, case counts and incidence rates for adult males in 2005 are underestimated and should be interpreted with caution (see page 1 or <http://www.ccrca.org/VAtchnotes.html>)

Trends in Smoking Among Youth Ages 12-24 in California, 1994-2008



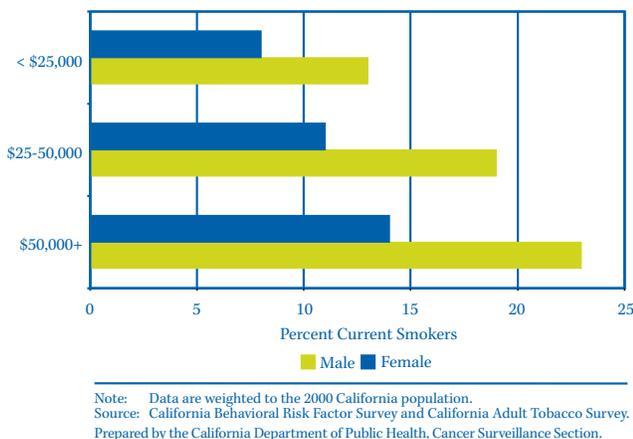
Kicking the Habit

In 2007, 55% 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

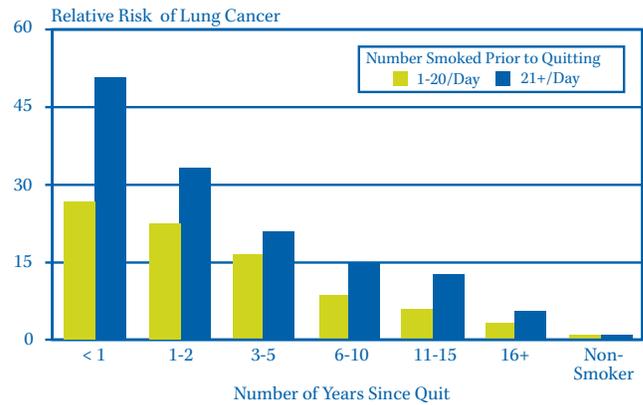
In 2007, the U.S. Surgeon General's report on environmental tobacco smoke (ETS) found that there is no risk-free level of secondhand smoke exposure. Even brief exposure can be dangerous. Each year, about 3,400 non-smoking adults in the U.S. die of lung cancer as a result of breathing secondhand smoke. ETS can be particularly harmful to children. In 2008,

Adult Smoking by Annual Household Income and Sex in California, 2008



65.8% of California households with children five years old or younger completely prohibited smoking in the home.

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.

American Cancer Society Tobacco Control Activities

The Society has long been a leader in preventing tobacco use and in assisting people to stop their use of tobacco products. Our advocacy efforts to increase tobacco taxes, promote clean air legislation, and decrease access to tobacco products have helped California become one of the most progressive states in the country for tobacco control. Teenagers can participate in *I Care and I Count*, a leadership-building awareness and advocacy program with a tobacco control component. The Society provides important tobacco cessation support through its *Freshstart*® program and referral to the California Smokers Helpline (800 NOBUTTS) and the American Cancer Society's *Quitline*®.

Cancer and the Environment

In response to public concerns and evolving science, the California Division 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 where appropriate. A team of experts was established in 2001 to assist in the development of science-based approaches related to environmental issues. Some of the topics that the team has reviewed are cancer clusters; arsenic in drinking water; asbestos; integrated pest management policies for schools and day care sites; diesel exhaust emissions; air pollution; biomonitoring; environmental justice; built environment; and carcinogens in consumer products. The Team seeks updates on the science from experts and state agencies, including the California Department of Public Health, the Cal-EPA's Office of Environmental Health Hazard Assessment and the California Air Resources Board, conducts trainings for volunteers and staff, and supports relevant regulations and legislation.

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 (see page 7). 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 (see page 10). 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.

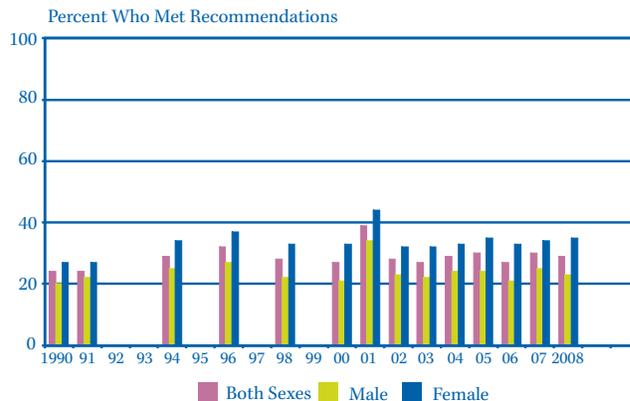
Healthy eating means consuming at least five servings of fruits and vegetables each day for children, adults, and teen girls, and at least seven servings a day for teen boys. Surveys conducted in 2000 among 12-17 year olds, and in 2001 among children ages 9-11 and adults, found that only a minority of 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 2008. Women were more likely than men to consume five or more servings (35% compared to 23%).

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.

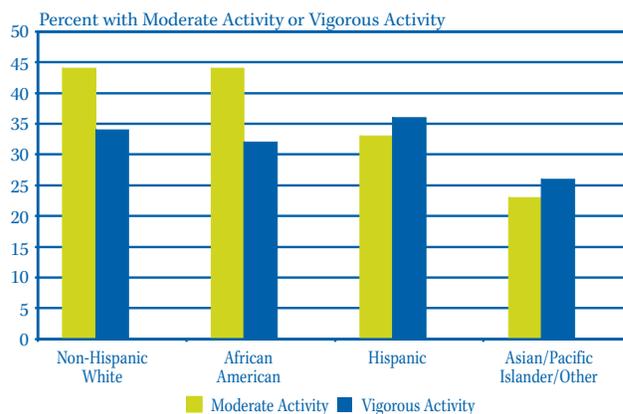
California is far from reaching this goal. In 2008, 39% of California adults reported being engaged in moderate physical activity for 30 minutes or more at least five times a week.

Percent of California Adults Who Eat “Five A Day,” by Sex, 1990-2008*



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.

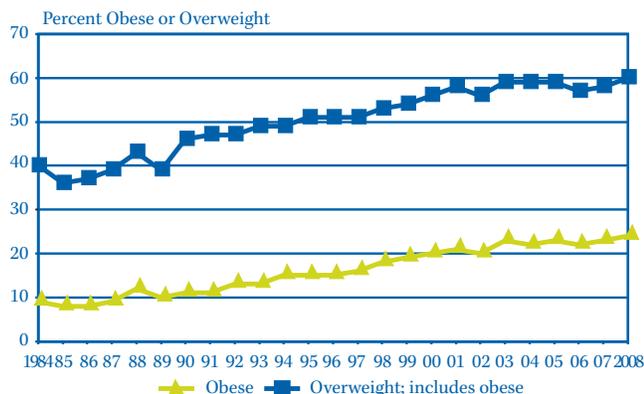
Physical Activity Among Adults in California, 2008



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.

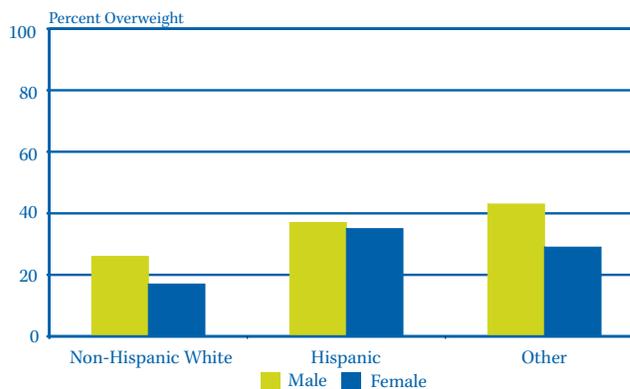
The proportion of adults who are overweight in California is reaching alarming proportions. Body weight status is based on the body mass index (BMI). Self-reported weight and height are used to calculate the BMI. A person with a BMI greater than or equal to 30 is defined as obese and a person with a BMI greater than or equal to 25 but less than 30 is defined as overweight. Based on self-reported weight and height, 60.3% of California adults were considered overweight or obese in 2008, compared to 40% in 1984, and nearly one out of every five (23%) California adults was obese.

Trends in Adult Obesity and Adult Overweight in California, 1984-2008



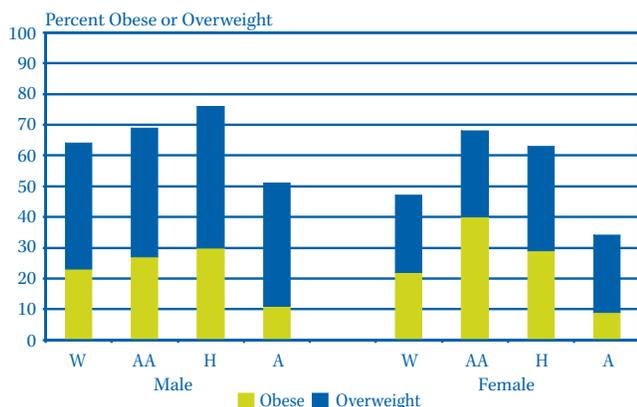
Note: Data are weighted to the 2000 California population.
 Source: California Behavioral Risk Factor Survey.
 Prepared by the California Department of Public Health, Cancer Surveillance Section.

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.

Adult Obesity and Adult Overweight by Race/Ethnicity and Sex in California, 2008



Note: W=non-Hispanic white, AA=African American, H=Hispanic, A=Asian/Other. 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.

American Cancer Society Nutrition Education and Physical Activity Promotion

The Society partners with the Department of Public Health's Network for a Healthy California to promote many prevention programs, including some of the programs mentioned in this section. Teenagers can participate in *I Care and I Count*, a leadership building, awareness and advocacy program with a nutrition and physical activity component. In addition, the Society and its partners actively promote the *Coordinated School Health* model in 51 California school districts to emphasize the connection between school health and academic performance. *Active for Lifesm* is a motivating 10-week program designed to promote physical activity in the workplace while boosting office morale and encouraging teamwork. *Meeting Well* can be used to help plan healthy meetings and events and offers healthy vending machine options and snack suggestions. *Body and Soul* is a dynamic 14-16 week nutrition education program for the faith-based community designed to increase fruit and vegetable consumption. Communities and individuals can also participate in the *Great American Health Challenge*, a year-round program, which encourages individuals to make a commitment to take the following actions to reduce their cancer risk, or detect cancer when it is treatable: Check, Nourish, Move, Quit (smoking).

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.

Select Cancer Demographics

California's Diverse Populations

Five Most Common Cancers and Number of New Cases by Sex and Detailed Race/Ethnicity, California, 2003-2007

	Males					Females				
	Rank					Rank				
	1	2	3	4	5	1	2	3	4	5
African American	Prostate 8,640	Lung 3,387	C&R 2,504	Kidney 903	Bladder 788	Breast 6,752	Lung 2,904	C&R 2,690	Uterus 1,062	Pancreas 750
American Indian	Prostate 264	Lung 147	C&R 106	Liver 70	Kidney 67	Breast 301	Lung 156	C&R 118	Uterus 85	Kidney 48
Cambodian	Liver 54	Lung 52	C&R 42	Prostate 34	NHL 20	Breast 76	C&R 55	Lung 32	Cervix 29	Liver 23
Chinese	Prostate 1,871	Lung 1,304	C&R 1,105	Liver 635	Stomach 389	Breast 2,383	C&R 1,124	Lung 930	Uterus 422	Thyroid 351
Filipino	Prostate 2,169	Lung 1,203	C&R 862	Liver 356	NHL 351	Breast 3,245	C&R 879	Lung 738	Uterus 662	Thyroid 599
Hawaiian	Prostate 56	C&R 30	Lung 21	Liver 11	Stomach 9	Breast 80	Lung 19	Uterus 18	C&R 17	Ovary 8
Hispanic	Prostate 15,285	C&R 5,874	Lung 4,463	NHL 3,032	Kidney 2,703	Breast 16,791	C&R 5,037	Lung 3,575	Uterus 3,421	Thyroid 3,047
Japanese	Prostate 796	C&R 555	Lung 405	Stomach 208	Bladder 185	Breast 1,171	C&R 599	Lung 416	Uterus 212	Stomach 180
Korean	C&R 404	Stomach 365	Prostate 349	Lung 323	Liver 259	Breast 713	C&R 352	Stomach 263	Lung 187	Thyroid 141
Laotian	Liver 49	Lung 47	C&R 31	Oral 23	NHL 17	Breast 38	C&R 26	Lung 21	Cervix 19	Liver 19
Pacific Islander	Prostate 177	Lung 87	C&R 58	Bladder 29	Liver 28	Breast 240	Uterus 114	Lung 58	C&R 53	Cervix 36
South Asian	Prostate 491	C&R 162	Lung 122	NHL 98	Bladder 90	Breast 660	C&R 123	Thyroid 103	Uterus 103	Ovary 83
Vietnamese	Lung 577	Liver 564	Prostate 466	C&R 375	Stomach 191	Breast 792	C&R 372	Lung 312	Thyroid 210	Liver 159
Non-Hispanic White	Prostate 68,071	Lung 31,065	C&R 23,731	Bladder 18,423	Melanoma 16,750	Breast 72,696	Lung 30,761	C&R 23,048	Uterus 12,829	Melanoma 11,189

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

The US Census Bureau estimates California's population to be 36.5 million. Of these, 15.6 million are non-Hispanic whites; 2.8 million are African Americans; 13.2 million are Hispanics; 5 million are Asians; 689,000 are American Indians and Alaskan Natives; and 262,000 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.

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

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.

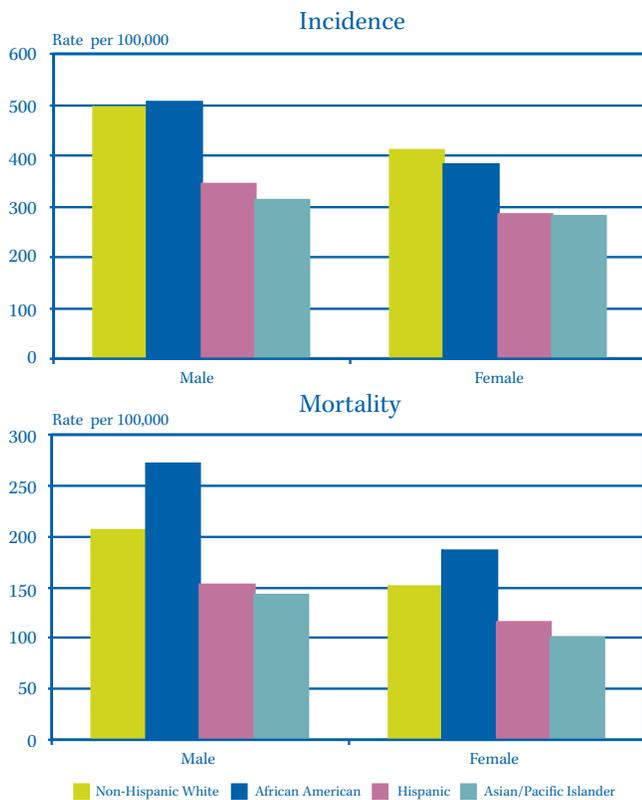
The risk of developing cancer varies considerably by race/ethnicity. African American males have the highest overall cancer rate, followed by non-Hispanic white males. Among females, non-Hispanic white women are the most likely to be diagnosed with cancer, but African American women are more likely to 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. Asian/Pacific Islander and 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.

Results from the 2005 California Health Interview Survey show that more than 6.35 million children and non elderly adults in California were uninsured for all or part of 2005. 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.

Cancer by Race/Ethnicity and Sex in California, 2007*



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

Racial/Ethnic Differences in Cancer Risk in California, 2005

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.

Non-Hispanic black 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 non-Hispanic black women are more likely to die of cancer. Non-Hispanic blacks have substantially higher rates of cancers of the stomach, liver, and larynx, myeloma, and Kaposi Sarcoma than non-Hispanic whites.

In general, cancer rates are about 30% lower among persons of Asian/Pacific Islander origin and persons of Hispanic ethnicity than among non-Hispanic white Californians. However, as with non-Hispanic blacks, both of these groups have substantially higher rates of stomach and liver cancer. Hispanics also have higher rates of Acute Lymphocytic Leukemia, Kaposi Sarcoma, and cervical cancer than non-Hispanic whites. Cancer is the second leading cause of death among Hispanics, non-Hispanic blacks, and non-Hispanic whites. Among Asian Pacific Islanders, cancer is the leading cause of death.

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 are more likely to be uninsured.

The following are a few examples 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.

*Veterans Health Administration hospitals did not report cancer cases to the California Cancer Registry (CCR) in 2005. Therefore, case counts and incidence rates for adult males in 2005 are underestimated and should be interpreted with caution (see page 1 or <http://www.ccrca.org/VAtechnotes.html>)

Comparison of Age-Adjusted Cancer Incidence Rates Among Other Racial/Ethnic Groups to Non-Hispanic Whites, 2003-2007

Difference	Asian/Pacific Islander	Hispanic	Non-Hispanic Black
Lower (At least 50% lower than the incidence rate among non-Hispanic whites)	Melanoma of the Skin Urinary Bladder Chronic Lymphocytic Leukemia Testis Esophagus Larynx Brain and ONS* Kaposi Sarcoma Hodgkin Lymphoma	Melanoma of the Skin Urinary Bladder Chronic Lymphocytic Leukemia Oral Cavity and Pharynx Lung and Bronchus	Melanoma of the Skin Testis
Higher (At least 50% higher than the incidence rate among non-Hispanic whites)	Stomach Liver and IBD**	Stomach Liver and IBD** Cervix Acute Lymphocytic Leukemia	Stomach Liver and IBD** Kaposi Sarcoma Myeloma

Source: California Cancer Registry, April 2009. Prepared by the California Department of Public Health, Cancer Surveillance Section

*ONS: Other Nervous System

**IBD: Intrahepatic Bile Duct

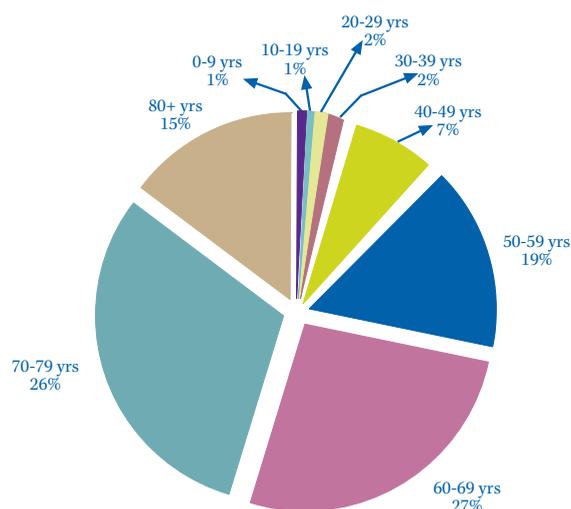
Common Cancers by Age and Sex

Cancer risk varies considerably by age, with less than two percent of all cancers occurring before the age of 19, and about 55% occurring after age 65. In fact, nearly half of all cancers occur between ages 55-74, and more cancers occur after age 85 than before age 35.

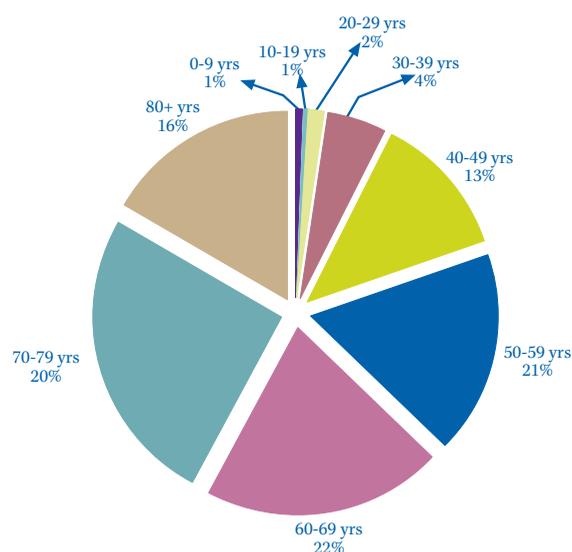
Cancers occurring before the age of 20 are typically nonepithelial in origin, with the most common types being leukemias, tumors of the brain and central nervous system, and lymphomas. Melanoma is a common cancer among both young adult males and females.

Percent of New Cancers Diagnosed by Age and Sex, California, 2007*

Male



Female



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

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 of all ages, 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.

Childhood Cancer

More than 1,500 children and young adults under the age of 20 are diagnosed with cancer each year in California. Of these, over 1,100 are under the age of 15. Although accidents kill about three times more children than cancer, an estimated one of every 340 children will develop some form of cancer before they are 20 years old.

Number of Children and Young Adults Diagnosed with Cancer by Age at Diagnosis and Race/Ethnicity in California, 2007

	0-4	5-9	10-14	15-19	Total
Non Hispanic White	197	101	128	228	654
African American	28	20	16	28	92
Hispanic	294	154	181	230	859
Asian/Pacific Islander	66	25	24	55	170

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

In 2002-2006, the cancer incidence rate among children less than 15 years old in California compared to the nation excluding California, had an overall increase of 9%. Among non-Hispanic whites incidence rates were 1% higher, 7% lower among African Americans, 11% higher among Hispanics, and 2% lower among Asian/Pacific Islanders. (For more information on the U.S. cancer rate refer to page 1.)

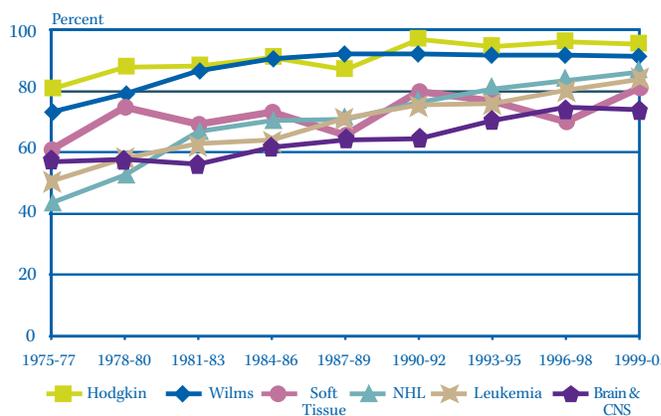
Cancer Incidence Among Children Ages 0-14 by Race/Ethnicity in California, 2007

	Cases	Rate
Non Hispanic White	426	17.3
African American	64	11.9
Hispanic	629	16
Asian/Pacific Islander	115	13.3

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

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.

Trends in Five-Year Relative Survival Among Children Ages 0-14 by Year of Diagnosis



Note: Based on follow-up through 2006.
Source: SEER Cancer Statistics Review, 1975-2006. National Cancer Institute, 2007.
Prepared by the California Department of Public Health, Cancer Surveillance Section.

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 2008, the *Young Cancer Survivor Scholarship Program* awarded 71 college-bound or enrolled 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 either *California's Great America* in Santa Clara (Northern California) or *Seaworld* in San Diego (Southern California). In 2008, over 300 California children currently in treatment participated in this day of fun with their family members. The Society also has a number of overnight camps for cancer young cancer patients and survivors. In 2008, 215 young cancer patients attend such camps across California. Including *Relay For Life*®, American Cancer Society's signature event, the Society offers many 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.

Major Cancer Sites

	Risk Reduction	Early Detection (ED) & 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

Major Cancer Sites, continued

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

American Cancer Society, California Division

The American Cancer Society Commitment

In 2010, an estimated 133,955 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, 41% of funds raised went directly to patient support; prevention and risk reduction; and detection and treatment in California. In the last year alone, over \$12,726,500 million was awarded to California researchers. Without the support of individual and corporate donors, the American Cancer Society could not accomplish the Vision 2015 goals of reducing cancer incidence by 25%, reducing cancer mortality by 50%, and measurably improving 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 volunteer Board of Directors comprised of community leaders, healthcare providers, and concerned citizens. In total, more than 250,000 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 2008, over 1,600 new volunteers were trained to help provide patient and caregiver support services in their local communities, making a total of nearly 3,000 patient and caregiver services volunteers available statewide. 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 Survivor Network*sm; and help coordinate and participate in the many fundraising events the American Cancer Society holds each year.

Positive Impact in California Communities

In 2008, the American Cancer Society's free information, programs, and services directly reached 81,114 individuals cancer patients and survivors with information, direct services, and attendance at survivorship events.

- 40,625 callers from California received free support and patient-related information from American Cancer Society Cancer Information Specialists staffing the 24/7, toll-free hotline. Additionally, more than 1.9 million California-originated visits were made to www.cancer.org for the latest cancer information.
- 10,421 cancer patients received free transportation assistance from the Society for a total of 41,871 rides.
- 1,334 newly diagnosed breast cancer patients were touched by a Reach to Recovery volunteer, our one-on-one volunteer support program for women with breast cancer.
- 4,528 women participated in Look Good...Feel Better, a program created to help individuals with cancer look good, improve their self-esteem, and manage their treatment and recovery with greater confidence.
- 34,390 cancer survivors were reached and were celebrated at Relay For Life[®] events in California.

American Cancer Society Advocacy Activities

For nearly a half century, the American Cancer Society has worked to pass laws that help cancer patients and reduce cancer incidence and mortality in California.

At the state level, the Division's Sacramento-based Government Relations Office works with state legislators and their staff to support the Society's policy agenda. Furthermore, Society's grassroots volunteers, including our Legislative Ambassadors, participate in advocacy events and generate calls, emails and letters to legislators in support of critical cancer legislation. Legislation and policy tracking and analysis; lobbying strategy and coordination; advocacy training and mobilization of a statewide network of grassroots volunteers; media advocacy and campaign management are just some of the advocacy activities directed by Government Relations staff.

At the federal level, Division's Government Relations staff works with the American Cancer Society Cancer Action Network (ACS CAN), the nonprofit, nonpartisan advocacy affiliate of the American Cancer Society in Washington, DC. Together, we work with Members of Congress to hold them accountable for their words and their actions. Top federal legislative priorities include increasing funding for the National Institutes of Health, the National Cancer Institute and the Centers for Disease Control and Prevention; fighting to provide access to care for all; and

health care reform. In 2009, a ten-year campaign to grant the federal Food and Drug Administration the authority to regulate tobacco products culminated in victory when President Barack Obama signed the legislation on June 22, 2009.

Advocacy is also a priority at the local level as American Cancer Society advocacy field staff works with elected city and county officials, volunteers and allied groups to secure local cancer-related policies. Examples of local advocacy efforts include: smoke-free beaches, parks, housing and entrance ways, retail tobacco licensing ordinances, Colon Cancer Free Zones, and nutrition and physical activity requirements for schools.

At the heart of the American Cancer Society's advocacy movement is a cadre of Legislative Ambassadors, volunteers who have taken on leadership roles in the area of advocacy. They are instrumental in ensuring the voices of constituents are heard by federal, state, and local officials. Along with the new volunteers they recruit to join in the cause, Legislative Ambassadors are responsible for building a groundswell of support on cancer issues.

ACS CAN

ACS CAN hosts candidate forums and produces and distributes voter education guides to publicize candidates' positions on cancer-related issues. ACS CAN is a 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 bills 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's local, state and federal legislative efforts, visit www.acscan.org or call 1.800.252.6066.

Because of the American Cancer Society's Advocacy Efforts, California has:

- Required insurance coverage for breast reconstruction, prostheses, and screening mammography
- Prohibited smoking in enclosed workplaces, restaurants, bars, playgrounds, tot lots and in cars when a minor is present
- Required insurance coverage for treatment in a cancer clinical trial and off-label use of cancer drugs
- Established the California Cancer Registry and the state breast cancer early detection, treatment and research programs
- Required insurance coverage for cancer screening tests
- Improved access to pain management for cancer patients
- The strongest school food nutrition standards in the nation
- Become the first state in the nation to require restaurants to post nutritional information.

The Research Program of the American Cancer Society

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 \$3.4 billion to cancer research.

As the nation's largest private source of funds for scientists 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.

Major Developments in Cancer Research 2008: One More Step Toward Personalized Medicine: Genetic and Protein Signatures

Imagine... one day each of us will carry a chip designating our own individual DNA and protein codes, from which physicians will be able to predict what types of drugs and interventions will best eradicate specific types of cancers, as well as provide prognoses of survivorship and health. Today, new approaches studying multiple molecular events instead of focusing on a single gene or protein are improving our understanding of how cancer develops as a result of multiple defects, while providing additional insight as to why patients who seem to have similar cancers respond differently to the same anticancer treatment. American Cancer Society researchers are using advanced technologies to identify groups of gene or protein expression patterns associated with specific tumor traits known as genetic signatures. This shift in thinking to a "systems approach" is allowing us to move toward the use of target-specific therapies that detect, treat, and may even prevent cancer based on an individual's body chemistry.

Clinically relevant tests based on signatures are likely to affect patient management and drug development in the future. Society researchers are participating in virtually every aspect of the development of these new signature markers. A comprehensive molecular understanding of how our genes and proteins can predict tumor traits, along with increasingly sophisticated technologies applied to an ever-growing range of cancers, is transforming cancer from a death sentence into a chronic, manageable disease. The continuous contributions made by these noted scientists and others funded by the Society exemplify how crucial the Society's research investment is to solving the cancer puzzle and accomplishing the Society's mission.

Extramural and Intramural Expenditures: Funding in Selected Priority Areas*: FY 2008

Areas of Research	\$ Awarded
Society Priority Areas	
Breast	35,583,000
Colon/rectum	26,084,000
Lung	20,463,000
Disparities+	17,896,000
Extramural	15,481,000
Targeted	13,880,000
Non targeted	1,601,000
Intramural	2,415,000
Cancer Continuum	
Prevention	27,508,000
<i>Prevention (uncategorized)</i>	15,459,000
<i>Nutrition</i>	6,819,000
<i>Tobacco Control</i>	5,230,000
Treatment	25,697,000
Cause/Etiology	25,113,000
<i>Tobacco/Smoking</i>	2,624,000
Detection	11,875,000
Quality of Life	5,055,000
Survivorship	3,921,000
End of Life	3,000,000
Major Organ Sites	
Prostate	15,850,000
Brain and nervous system	12,977,000
Leukemia	11,604,000
Melanoma	10,369,000
Lymphoma	6,773,000
Ovary	6,210,000
Pancreas	4,420,000
Other Research Areas	
Psychosocial and behavioral	18,309,000
Epidemiology	12,575,000
Health Policy/health services	6,821,000
Childhood cancer	4,194,000
Environmental carcinogenesis	3,793,000

* Not mutually exclusive categories; e.g. a grant that is both prevention and detection is counted twice, as is a grant that studies both breast and prostate cancers. A grant emphasizing nutrition in breast and prostate cancer is counted in full in all three places. Dollar amounts are rounded off to the nearest \$1,000.

+ Disparities include medically underserved and special populations, such as the elderly and disabled.

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 of major administrative responsibilities and thereby enabling them to devote their work to cancer research.

Research Professors:

- Inder Verma, PhD, Salk Institute for Biological Studies, La Jolla
- Douglas Hanahan, PhD, University of California, San Francisco
- Lewis L. Lanier, PhD, University of California, San Francisco
- Cynthia J. Kenyon, PhD, University of California, San Francisco

Clinical Research Professors:

- Patricia A. Ganz, MD, University of California, Los Angeles
- Dennis J. Slamon, MD, PhD, University of California, Los Angeles

Frank and Else Schilling American Cancer Society Professorships:

- Ronald Levy, MD, Stanford University
- Christine Guthrie, PhD, University of California, San Francisco

California Division Early Detection Professorship:

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

Nobel Prize Winners

The Society is proud of the 42 investigators that we supported before they went on to win the Nobel prize, considered the highest accolade any scientist can receive.

The American Cancer Society has Been Involved in Many of the Major Cancer Research Breakthroughs of the Century:

- 80% 5-year survival rates for many childhood leukemias
- Pap smear crusade to detect cervical cancer
- Mammography to screen for breast cancer
- Lumpectomy + radiation for treatment of breast cancer
- PSA test for prostate cancer screening
- 5-FU (chemotherapy) for colon cancer
- Identification of smoking as cause for lung cancer
- Creation of recombinant DNA and gene cloning
- Discovery of cancer-causing oncogenes and tumor suppressor genes
- Discovery of genes for inherited breast and colon cancer
- Use of tamoxifen to reduce risk of second or first breast cancer
- Development of monoclonal antibodies to treat breast cancer (Herceptin) and lymphoma (Rituxan)
- Use of small molecule inhibitors to target genes that are at the root of cancer such as Gleevec for treatment of chronic myeloid leukemia

Contemporary Cancer Research is Poised to Make Great Advances in the Coming Decade in the Areas of:

- Targeted drugs designed to attack the altered genes that are at the root of cancer, e.g., anti-telomerase, pro-apoptosis, anti-angiogenesis, oncogene inhibitors.
- Immunotherapy-therapeutic vaccines and monoclonal antibodies, anti-body-guided therapy of drugs or radioactive compounds attached to anti-tumor antibodies
- Chemoprevention- selective estrogen receptor modulators (SERM), anti-inflammatory drugs (celecoxib), antioxidants (selenium, vitamin E, omega-3 oils)
- Gene therapy
- Gene-environment interactions leading to increased susceptibility to cancer
- Intensity-modulated radiation therapy (IMRT), using a radiation gun that focuses pinpoint, varying intensity X-rays or proton beams on tumors that previously were not considered good targets for radiation therapy (prostate, nasopharyngeal)
- Imaging techniques to detect cancer at its earliest stages and to monitor the effectiveness of therapy
- Pharmacogenomics to identify the genetic signatures of patients to reduce toxicity and optimize therapy
- Tumor genomic profiling for better management of the disease and determination of the most effective therapy
- Proteomic techniques for early detection of cancer in blood samples

Summary of Research Grants and Fellowships

In effect during the fiscal year ending August 31, 2009.

#		Total Amount	#		Total Amount
1	California Institute of Technology	\$90,000	1	Sidney Kimmel Cancer Center	\$720,000
1	California Pacific Medical Center	\$720,000	17	Stanford University	\$5,413,500
1	Cedars-Sinai Medical Center	\$300,000	2	The Burham Institute	\$288,000
2	City of Hope & Beckam Research Center	\$2,088,000	8	The Scripps Research Institute	\$2,215,000
1	Claremont Graduate University	\$699,000	15	University of California, Berkeley	\$4,426,000
1	Kaiser Foundation Research Institute	\$535,000	7	University of California, Davis	\$4,085,000
1	La Jolla Institute for Allergy and Immunology	\$139,500	2	University of California, Irvine	\$1,020,000
1	Loma Linda University	\$94,000	21	University of California, Los Angeles	\$9,516,000
1	Loyola Marymount University	\$710,000	13	University of California, San Diego	\$7,476,500
2	Ludwig Institute for Cancer Research, San Diego	\$276,000	31	University of California, San Francisco	\$13,123,000
8	Salk Institute for Biological Studies	\$3,438,000	2	University of California, Santa Cruz	\$1,315,000
3	San Diego State University	\$2,842,000	7	University of Southern California	\$3,769,000
			149	Total	\$65,298,500

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

Expanding Access to Care Through Advocacy

We are making progress in the fight against cancer, yet millions of Americans aren't benefiting. Holes in the current health care system directly contribute to needless cancer suffering and death. Unless they are repaired, the American Cancer Society will not achieve its 2015 goals to reduce cancer incidence and mortality. Comprehensive health care reform is necessary to ensure that Americans have access to quality, affordable care.

Too Many Lack Access to Care

Nearly 46 million people in America lack health insurance. Not only are the uninsured twice as likely to be diagnosed with late-stage cancer as someone with insurance, they are also more likely to die. Even having insurance is no guarantee. Too many insured cancer patients find their policies don't provide adequate care. Out-of-pocket costs pile up quickly, leaving many families deeply in debt.

- One in three families with a member undergoing cancer treatment report that the individual has been uninsured at some point since their diagnosis.
- 15% of those surveyed say they or a family member have put off a cancer screening test in the past year because of cost.
- One in four cancer patients delay or avoid treatment because of medical costs, reducing their chances of survival.
- Among those who do seek medical attention, more than 37% skip treatment, or cut pills due to costs.
- Four in ten families say that paying for high cancer treatment costs has been difficult in the past two years.
- One in five cancer patients report having used up all or most of their savings in paying medical bills.
- 14% of those polled said they were unable to pay for other basic necessities due to health care costs.^a

Too many lives are lost for lack of access. Too many families are losing their life savings in trying to save their lives.

Our Pledge

It is a fundamental principle of the American Cancer Society that everyone should have meaningful public or private health insurance that is *adequate*, *available*, *affordable*, and *administratively simple*.

Adequate:

- Timely access and coverage of the continuum of quality, evidence-based health care services, including prevention and early detection, diagnosis, and treatment
- Supportive services should be available as appropriate, including access to clinical trials, chronic disease management, and palliative care

- Coverage with sufficient annual and lifetime benefits to cover catastrophic expenditures

Available:

- Coverage will be available regardless of health status, or claims history
- Policies are renewable
- Coverage is continuous

Affordable:

- Costs, including premiums, deductibles, co-pays, and total out-of-pocket expenditure limits, are not excessive and are based on the family's or individual's ability to pay
- Premium pricing is not based on health status or claims experience

Administratively simple:

- Clear, up-front explanations of covered benefits, financial liability, billing procedures; processes for filing claims, grievances, and appeals are easily understood and timely; and required forms are readily comprehensible by consumers, providers and regulators
- Consumers can reasonably compare and contrast the different health insurance plans available and can navigate health insurance transactions and transitions

American Cancer Society Access to Care Activities

The Society is educating the public about the severity of the health care crisis and its impact on real people touched by cancer, as well as promoting its principles of meaningful health insurance—availability, adequacy, affordability and administrative simplicity. Through one-on-one conversations, Society volunteers are also documenting access problems faced by cancer patients in order to bring real-life examples to our elected officials and facilitate policy solutions. To advocate for access to cancer care based on the cancer burden in communities throughout the state, the Society is working with the California Dialogue on Cancer and local coalitions to organize Access to Cancer Care Forums. These forums and coalitions are helping to assess and eliminate barriers to cancer care in these communities. In the legislative arena, the Society is utilizing its principles of meaningful health insurance to assess health care reform proposals and engage in legislative advocacy to improve access to care in California and throughout the country.

The Lesbian, Gay, Bisexual, and Transgender Populations

While the National Cancer Institute has listed sexual orientation as one of the specific demographic variables where a disparate cancer burden may exist, there is a dearth of research on the cancer health disparities of Lesbian, Gay, Bisexual, and Transgendered (LGBT) populations. Beginning with Kinsey et al. in 1948, research has shown that sexual orientation ranges along a continuum, from exclusive attraction to the opposite sex to exclusive attraction to the same sex.¹ Several studies have revealed that some people engage in same-sex behavior and have same-sex attractions, but do not identify as gay, lesbian or bisexual, which increases the difficulty of quantification. The LGB population is estimated at 7.5% of the total U.S. population, which equates to 2.8 million LGBs living in California in 2008.

Transgender is an umbrella term used to describe people whose gender identity (sense of themselves as male or female) or gender expression differs from that associated with their birth sex. Transsexuals are transgender people who live or wish to live full time as members of the gender opposite to their birth sex, and usually seek medical interventions such as hormones and surgery to make their bodies as congruent as possible with the gender identity that they feel on the inside.²

LGBT CANCER FACTS

Social Barriers

- Past negative experiences and discrimination in health care settings lead some members of the LGBT community to avoid seeking health care services, often missing regular screenings that may detect many cancers at an early stage.
- A higher likelihood of being uninsured and without access to health care benefits from spousal insurance coverage contributes to fewer routine screenings by LGBTs.

Lung Cancer Risk:

- Compared to the general California population, lesbians and bisexual women are 1.5 to 2 times more likely to smoke, and gay men are 2.0 to 2.5 times more likely to smoke, which puts them at a significantly higher risk for lung cancer.³
- LGBs continue to be targeted by tobacco companies,⁴ and school-based surveys show that 59% of LGBT youth use tobacco compared to 35% of non-LGBT teens.⁵

Breast, Cervical, and Other Gynecological Cancer Risk:

- Lesbians and other women who have sex with women (WSW) are at increased risk for breast cancer due to the aggregation of risk factors: Lesbians are 4.7 times more likely to be nulliparous or to give birth after age 30 if using alternative insemination; and WSW are more likely to be overweight/obese, and to use alcohol than heterosexual women.^{6,7}
- Hormone replacement therapy, which is used by some lesbians, WSW, and transsexuals, increases breast cancer risk.
- Lesbians are 2.3 times more likely to have never had a Pap test and less likely to report having an annual Pap test or a pelvic exam in the past 3 years.^{8,9}
- Cytological abnormalities, including human papillomavirus (HPV) infection, have been found among “exclusively lesbian” women, and those who reported no prior sex with men still had a 10% prevalence of cervical cytological abnormalities.¹⁰
- A higher prevalence of nulliparity and obesity also puts lesbians at greater risk for ovarian, uterine, and endometrial cancers.¹¹

Anal Cancer

- About 35 in every 100,000 gay men and men who have sex with men (MSM) develop anal cancer compared to less than one in every 100,000 heterosexual men.¹²

- Some studies have found that anal HPV is present in 65% of HIV-negative MSM and in 95% of MSM who are HIV-positive.¹³
- Caused by the same types of HPV that cause cervical cancer in women, anal cancer can be prevented with early detection and regular anal pap smears.

Liver Cancer

- There is an increased risk of liver cancer due to greater than average hepatitis B infection rate among MSM.
- End-stage liver disease (ESLD) from viral hepatitis co-infection is now a leading cause of death among people living with HIV.¹⁴

Specific Cancer Facts for Transgender Males and Females

While there are no studies of cancer risks in transsexuals, postmenopausal women with estrogen and testosterone levels in the top 20% of the distribution have a 2-to 3-fold higher risk of invasive breast cancer than women in the bottom 20%.¹⁵

- Transsexual men (FTM) who have never been pregnant, who were pregnant after age 30, or who have used HRT may be at an increased risk for breast cancer.
- Transsexuals and their health care providers need to be vigilant in examining and screening for cancer in the whole body regardless of gender identity.

RECOMMENDATIONS FOR LGBT CANCER RESEARCH AND SERVICES

- The increased cancer risks for LGBT populations reveal a need for the collection of sexual orientation/behavior data as a routine demographic variable in national, state and local health surveys as well as chronic disease surveillance systems in order to provide accurate incidence, prevalence, and mortality data. In doing so, these data should inform future policies, programs, and services specifically for LGBT populations.
- Health care providers need to create an environment where LGBT patients feel safe and respected when discussing all matters that are pertinent to their health, including their sexual orientation and sexual behavior, to accurately assess their health and cancer risks as well as to recommend appropriate interventions and clinical screening programs. Furthermore, health campaigns and cancer prevention programs must be targeted to the LGBT populations to address their social and behavioral risks and assure that their unique health needs are met.

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5 Ryan H, Wortley PM, Easton A, Pederson L, Greenwood G. Smoking among lesbians, gays, and bisexuals: a review of the literature. *American Journal of Preventative Medicine*. 2001;21(2):142-149.

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10 Marrazzo JM. Genital human papillomavirus infection in women who have sex with women: a concern for patients and providers. *AIDS Patient Care STDS*. 2000;14(8):447-451.

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California Department of Public Health 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 American Cancer Society produces California 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.

California Dialogue on Cancer

The California Dialogue on Cancer (CDOC) is a statewide coalition of leaders in various areas of cancer control concerned with the burden of cancer on Californians. 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 March 2003 to develop the California Comprehensive Cancer Control (CCC) Plan. The development, adoption, and implementation of the CCC Plan continues to assist CDPH in addressing existing gaps in cancer control, particularly those relating to disparities in cancer burden among ethnic minorities and the medically underserved.

CDOC's subcommittees, or implementation teams, focus their efforts on the following four areas: Prevention; Disparities, Access to Care, and Early Detection; Research, Surveillance, & Evaluation; and Treatment and Survivorship. Issues related to access to care continue to be the main priority for the coalition in 2009. 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 upcoming year. CDOC has also played an instrumental role in supporting and establishing the California Colorectal Cancer Coalition (C4) and, in conjunction with the CDPH Cancer Surveillance and Research Branch, has effectively secured resources for additional program components including the Skin Cancer Prevention Program, the Colorectal Cancer Program, and the California Ovarian Cancer Awareness Program (COCAP).

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 *Nutrition Network for Healthy, Active Families Campaign* and the *Skin Cancer Prevention Program* in 1998.

Breast and Cervical Detection

The largest public cancer screening program in the nation, CDPH provides free breast and cervical cancer screening, and diagnostic and treatment services to low-income women with no or limited health insurance. Ten regional cancer detection partnerships assist in outreach and education to women, quality assurance, and provider education. Over 2,000 doctors and clinics provide clinical services. To determine eligibility for free screening, women can call 1-800-511-2300. Calls are accepted in English, Spanish, Mandarin, Cantonese, Vietnamese, and Korean.

Surveillance of Health-Related Behaviors

The CDPH Survey Research Group (SRG) has collected information on health-related behaviors since 1984. More than 4,200 telephone surveys are conducted each year with a random sample of California adults to determine how many people are following cancer prevention and screening recommendations. These data are used by other programs to assess need, target interventions, and measure success. SRG also has ongoing surveys of teens, women, and smoking behavior.

California Cancer Registry

CCR is a collaborative effort among the California Department of Public Health's Cancer Surveillance and Research Branch (CSRB), the Public Health Institute, regional cancer registries, health care providers, cancer registrars, and cancer researchers throughout California and the nation. CSRB 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.

Cancer Reporting in California

- 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

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

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 CCR. 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.surveypresearchgroup.com/>.

CCR Acknowledgement and Disclaimer

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Regional Cancer Registries

Region 1/8:	Northern California Cancer Center 2201 Walnut Avenue, Suite 300, Fremont, CA 94538, (510) 608-5000, FAX (510) 608-5095
Counties:	Region 1: Santa Clara Region (Monterey, San Benito, Santa Clara and Santa Cruz Counties). Region 8: Bay Area Region (Alameda, Contra Costa, Marin, San Francisco and San Mateo Counties).
Region 2:	Cancer Registry of Central California 1625 East Shaw Ave., Suite 155, Fresno, CA 93710, (559) 244-4550, FAX (559) 221-1821
Counties:	Central Region (Fresno, Kern, Kings, Madera, Mariposa, Merced, Stanislaus, Tulare and Tuolumne Counties).
Region 3:	Cancer Surveillance Program 1825 Bell Street, Suite 102, Sacramento, CA 95825 (916) 779-0300, FAX (916) 779-0204
Counties:	Sacramento Region (Alpine, Amador, Calaveras, El Dorado, Nevada, Placer, Sacramento, San Joaquin, Sierra, Solano, Sutter, Yolo and Yuba Counties).
Region 4:	Tri-Counties Cancer Surveillance Program 1825 Bell Street, Suite 102, Sacramento, CA 95825 (916) 779-0300, FAX (916) 779-0204
Counties:	Tri-County Region (San Luis Obispo, Santa Barbara and Ventura Counties).
Region 5:	Desert Sierra Cancer Surveillance Program 11368 Mt. View Ave., Suite C, Loma Linda, CA 92354 (909) 558-6170, FAX (909) 558-6178
Counties:	Inland Empire Region (Inyo, Mono, Riverside and San Bernardino Counties).
Region 6:	Cancer Registry of Northern California 25 Jan Court, Suite 130, Chico, CA 95928, (530) 345-2483, FAX (530) 345-3214
Counties:	North Region (Butte, Colusa, Del Norte, Glenn, Humboldt, Lake, Lassen, Mendocino, Modoc, Napa, Plumas, Shasta, Siskiyou, Sonoma, Tehama and Trinity Counties).
Region 7/10:	Cancer Surveillance Program of Orange County and San Diego Imperial Organization for Cancer Control 1825 Bell Street, Suite 102, Sacramento, CA 95825 (916) 779-0300, FAX (916) 779-0204
Counties:	Region 7: San Diego Region (Imperial and San Diego Counties). Region 10: Orange County.
Region 9:	Cancer Surveillance Program University of Southern California 1540 Alcazar St., CHP-204, Los Angeles, CA 90089 (323) 442-2300, FAX (323) 442-2301
Counties:	Los Angeles County.



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