



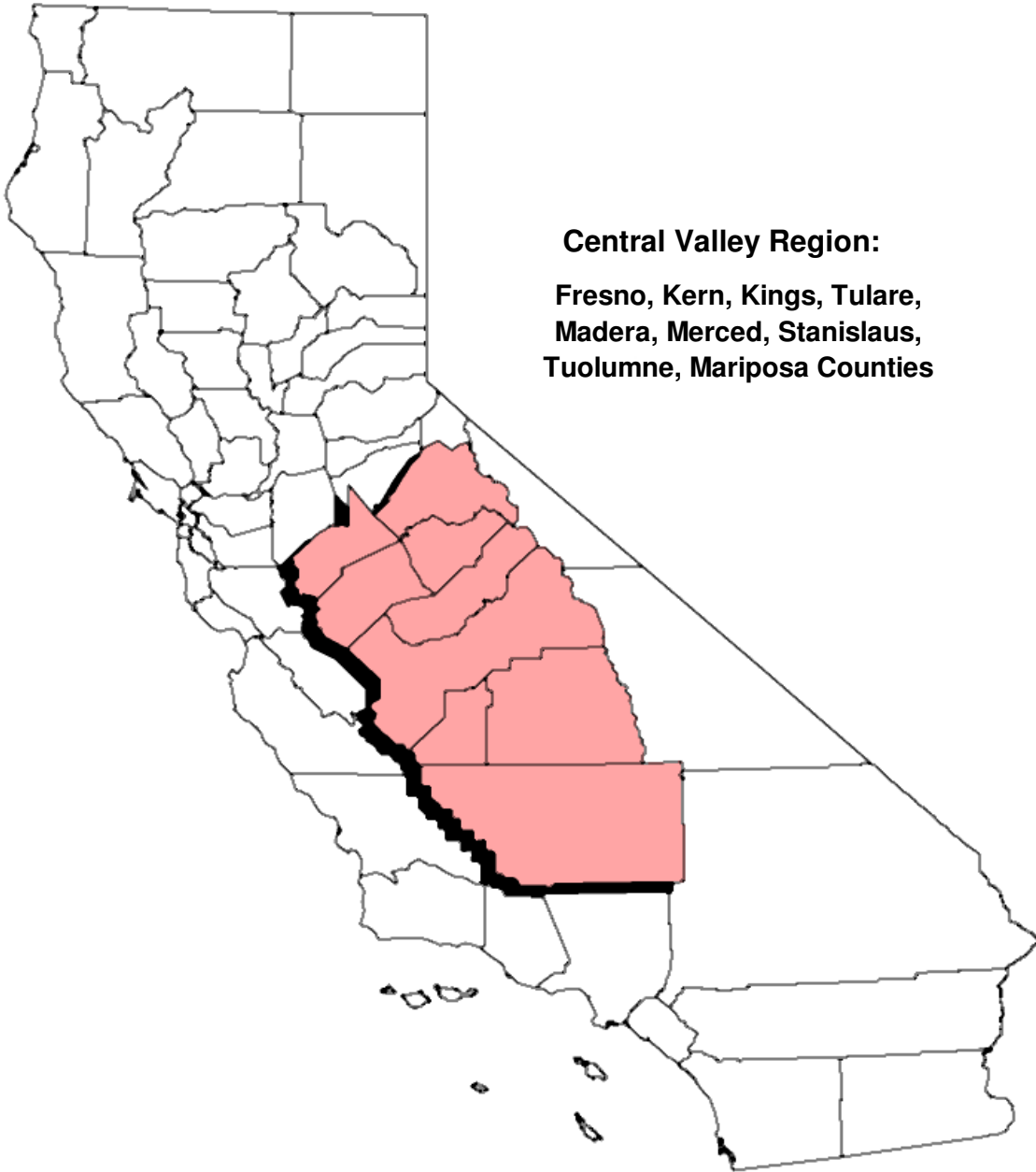
**Prepared by**

**Paul K. Mills, Ph.D., M.P.H**

**Richard C. Yang, M.P.H**

**Jennifer L. Dodge, M.P.H**

**Public Health Institute  
Cancer Registry of Central California  
1320 E. Shaw Ave., Suite 160  
Fresno, CA 93710**



**Central Valley Region:**

**Fresno, Kern, Kings, Tulare,  
Madera, Merced, Stanislaus,  
Tuolumne, Mariposa Counties**

For questions or concerns about this report or its contents, please submit correspondences to the following individual:

Paul K. Mills, Ph.D. M.P.H.  
Cancer Registry of Central California  
1320 E. Shaw Ave., Suite 160  
Fresno, CA 93710  
Phone: (559) 222-9272  
Fax: (559) 222-8960

Note: The prime contractor of the operation of the statewide California Cancer Registry is the Public Health Institute of Oakland, California. The California Health and Safety Code 210, 211.3, and 211.5 mandate the statewide cancer reporting system. Cancer incidence data presented in this report have been collected under a subcontract with the California Health Collaborative. The ideas and opinions expressed herein are those of the author and no endorsement by the State of California, Department of Health Services, the Public Health Institute or the California Health Collaborative is intended or should be inferred.

Confidentiality: Maintaining the confidentiality of persons whose cancers are reported to the California Cancer Registry through regional registries is mandated by law and is the highest priority in registry operations. Data presented in this report are not intended to be used for identification of individuals with cancer.

Copyright information: All material in this report is in the public domain and may be reproduced or copied without permission. Citation as to the source, however, is appreciated. This report was produced using SEER\*Stat software from the US National Cancer Institute.

**Suggested Citation:** Mills PK, Yang RC, Dodge JL. (2007). Cancer Incidence and Mortality in the Central Valley Region, 1988-2004. Fresno, CA: Cancer Registry of Central California.

## **ACKNOWLEDGEMENTS**

The preparation of a report such as this is a product of the efforts of hundreds of people, few of whom can be acknowledged here. First and foremost, however, are those dedicated to the identification of newly diagnosed cancer patients in the hospitals and laboratories throughout the region. Tumor registrars and physicians provide the first information concerning newly diagnosed disease in the population and it is they who provide the initial data for regional registries operations. More than fifty hospitals report to the Cancer Registry of Central California (including 8 American College of Surgeons approved hospitals) and space does not permit naming each. Their contributions are gratefully acknowledged.

The staff of the Cancer Registry of Central California (CRCC) who painstakingly collect and manage the data from throughout the region have also been instrumental in the preparation of this report. In particular, Mignon Dryden, Gerri Totoian, CTR, Linda McKenzie, CTR, Kathleen Marineau, CTR, Earlena Perea, CTR, Melissa Lewis, CTR, Yvette Zavala, CTR, Carolyn Rube, CTR, Mary Axworthy, Tiffany Wright, Mark Cruz, Ardith Cortese, and Kathy White have been valuable resources.

Staff at the California Cancer Registry (CCR) have provided support and technical expertise, which has allowed the incidence rates, presented in this report to be prepared. In particular, Mark Allen, M.S. and Dr. William Wright, Director of the CCR, have been instrumental in the preparation of this report.

Finally, the efforts of Dr. John Young, former Director of the CCR, are gratefully acknowledged. It was he who was awarded the Centers for Disease Control and Prevention grant (No. U75-CCU910677-01) which funding supported the preparation of this report.

California incidence data have been collected under subcontract 0501-8701 with the California Health Collaborative. The subcontract is supported by the California Department of Health Services as part of its statewide cancer-reporting program, mandated by Health and Safety Code Section 103885. The ideas and opinions expressed herein are those of the author, no endorsement of the State of California, Department of Health Services or the California Health Collaborative is intended or should be inferred.

## TABLE OF CONTENTS

<b>EXECUTIVE SUMMARY</b> .....	1
<b>INTRODUCTION</b> .....	2
The Central San Joaquin Valley .....	2
<b>METHODS</b> .....	4
Source of Cancer Cases/Deaths (Numerator Data) .....	4
Source of Population at Risk (Denominator Data) .....	5
Definition of Race/Ethnicity .....	5
Selection of Geographic Areas and Specific Race Groups .....	5
Format of Tables and Calculation of Rates .....	5
Cautions on Interpretation .....	6
<b>REFERENCES</b> .....	7
<b>SUMMARY OF RESULTS BY CANCER SITE</b> .....	8
<b>INCIDENCE AND MORTALITY RATES TABLES</b> .....	13
Region 2 .....	14
California .....	15
All Cancer Sites Combined .....	16
Brain and Nervous System .....	17
Breast (In Situ) .....	18
Breast (Invasive) .....	19
Cervix Uteri .....	20
Colon (Excluding Rectum) .....	21
Colon and Rectum (In Situ) .....	22
Colon and Rectum .....	23
Corpus Uteri .....	24
Esophagus .....	25
Gallbladder .....	26
Hodgkin's Disease .....	27
Kaposi's Sarcoma .....	28
Kidney and Renal Pelvis .....	29
Larynx .....	30
Leukemia .....	31
Liver .....	32
Lung and Bronchus .....	33
Melanoma of the Skin (In Situ) .....	34
Melanoma of the Skin .....	35
Mesothelioma .....	36
Multiple Myeloma .....	37
Non-Hodgkin's Lymphoma .....	38
Oral Cavity and Pharynx .....	39
Ovary Cancer .....	40
Pancreas .....	41
Prostate .....	42
Rectal .....	43
Stomach .....	44
Testis .....	45
Thyroid .....	46
Urinary Bladder .....	47
<b>APPENDICES</b> .....	48
Appendix A: Seer Site for ICD-0-2 Incidence Data .....	49
Appendix B: Hospitals in Region 2 .....	52
Appendix C: Formula for Rates and Standard Errors .....	55
Appendix D: Standard Population .....	56
Appendix E: Additional Information .....	57



EXECUTIVE SUMMARY

---

Each year more than 10,000 residents of the Central Valley are diagnosed with invasive cancer. Another 1,000 residents are diagnosed with in situ tumors of the breast, colon or skin melanoma. Approximately 4,000 deaths from cancer occur each year as well. Due to the rapid growth of the population in the Valley, these numbers will increase in the future despite the fact that rates are declining for many types of cancer.

The rate of cancer is highest in African Americans, and followed closely by non-Hispanic Whites. The rate has generally been higher in the male segment of the population. Rates tend to be lower in Hispanics and lowest in Asian/Pacific Islanders, although these ethnic groups continue to experience higher rates of certain cancers such as stomach, liver and cervix cancer.

Overall, although the absolute number of cancer cases is increasing due to population growth, both incidence and mortality rates of cancer are declining and the decline is more apparent in men than women. However, the rates of cancer are increasing for several types of cancer including liver cancer, in-situ breast cancer and in situ skin melanoma, thyroid cancer in women and testis cancer in men. Rates of cancer are declining for most smoking related cancers including oral cavity cancer, lung and bronchus cancer, and larynx cancer. The decreasing use/abuse of tobacco products over the past decade most likely explains the decrease in smoking-related cancer rates.

For two major gender-specific cancers, prostate and breast cancers are the leading form of cancer in males and females, respectively. Incidence rates are not changing over time for prostate but are decreasing for breast cancer although mortality rates appear to be slowly decreasing. As better diagnostic/screening tools become available, early treatment and better treatments are offered, we may expect these mortality rates to continue to decline and the number of cancer survivors to increase.

Overall, the rate of cancer is lower in the Central Valley than elsewhere in the state. However, this is due to the larger percentage of Hispanics who reside in the Central Valley. Hispanics experience lower rates of cancer than non-Hispanic Whites and African Americans. When examined on a race/ethnicity-specific basis, however, rates of cancer are approximately the same in the Valley as elsewhere in the state.

The American Cancer Society has targeted a 50% reduction in cancer mortality and a 25% reduction in cancer incidence by the year 2015. Here in the Central Valley of California we are about half way towards achieving these goals but continued surveillance and risk factor reductions will be critical for achieving these goals.



## INTRODUCTION

This report represents a compilation of cancer incidence and mortality rates in the Central San Joaquin Valley of California. These numbers describe the distribution of cancer, as it occurs by characteristics of race/ethnicity, sex, cancer sites, and county of residence. Cancer prevention and control programs must be designed and implemented based upon accurate, complete and timely data. Population-based cancer registries allow the collection of such data and it is hoped that public health agencies throughout the valley will find the information contained in this report useful for planning purposes.

Cancer is not one disease entity, but represents a collection of more than one hundred diseases, commonly characterized by uncontrolled cellular growth and proliferation, which invade surrounding tissues and organs. However, each type of cancer is unique with regards to its etiology, diagnosis, and treatment as well as in its preventability and control. Cancer prevention and control activities must be based upon the descriptive epidemiology of cancer in the entire population, as well as sub-segments of the population. It is the purpose of this report to present such accurate data in the hope that it will be used to measure the impact of cancer in the Central Valley.

This report presents age-adjusted cancer incidence and mortality rates for the entire region. The report is organized by race/ethnicity, cancer sites, and sex. Next, the data are arranged by county, cancer sites, and sex. Due to changes made at the central cancer registry, cancer incidence and mortality rates presented in this report may not be comparable to those published previously. Rates for individual calendar years, by cancer sites and sex, are presented graphically (where data are available) to illustrate trend of the disease. Age-adjusted cancer incidence and mortality rates for the years 2000 through 2004 have been combined to yield annual average age-adjusted incidence and mortality rates\*. This five-year period was chosen to allow adequate numbers of cases and deaths to accrue, thus insuring stable rates.

Races/ethnicities included are Non-Hispanic Whites, Non-Hispanic Blacks, Hispanics, and Asian Pacific Islanders. Where the number of cancers available was not large enough to generate incidence or mortality rates, no rates were calculated. Incidence rates for in-situ cancers of the breast, colon-rectum, and melanoma of the skin are also reported.

## THE CENTRAL SAN JOAQUIN VALLEY

The distribution of cancer in any human population reflects the demographic and ethnographic nature of the population. Cigarette and tobacco consumption patterns as well as other lifestyle practices, including but not limited to, dietary habits, fertility rates, and occupational exposure, all influence the nature and magnitude of cancer incidence. The Central Valley of California has several unique features in comparison to the rest of the state. These characteristics impact the rates of cancer, which are found in the counties that comprise the region.

The Cancer Registry of Central California (CRCC) monitors cancer incidence in the nine counties of Central California, which comprise the San Joaquin Valley. The Valley is defined by the San Joaquin River, which flows from east to west, originating on the west slope of the Sierra Nevada mountain range. It then flows past the City of Fresno, turns northward, passes through the Sacramento Delta region, and empties into the San Francisco Bay. The Valley floor is mainly a semi-arid floodplain, which is very fertile and has been farmed extensively during the last 100 years. On the west, the Valley is bordered by the Coastal Range and on the south by the Tehachapi Mountains.

Based on the latest figures from the Department of Finance, the populations of the different Valley counties have grown between 4-12% since 2000<sup>1</sup>. Currently, the Valley is estimated to have about three million people. Most of the population centers are located in Fresno, Kern, Stanislaus, Tulare, and Merced Counties. Tuolumne and Mariposa Counties are sparsely populated.

\*Age-adjusted rates have been calculated to take account for the age-structure of the various sub-groups of the population in the Valley since cancer is a highly age-dependent disease. The U.S. 2000 population was used as a standard for the age-adjustment.

In addition, Tuolumne and Mariposa Counties also have much older populations than other counties in the region. A large proportion of the population in the Valley is of Hispanic origin. In Tulare County, about 55% of the population is of Hispanic descent compared to 48% in Fresno, 42% in Kern, and 35% in Stanislaus Counties<sup>2</sup>. This has implications for rates of stomach, liver, gallbladder, and cervix cancer in the region, as these cancers are more common in Hispanics than in the rest of the population (Table I).

The large concentrations of various Asian subgroups in the Valley also have an impact on the rates of certain cancer sites. Rates of liver and cervix cancers may be affected by the 8% and 6% of Asian residents living in Fresno and Merced Counties<sup>2</sup>, respectively. Japanese-Americans have resided in the Valley for generations, as have Chinese-Americans, though not in as large numbers. Recently, Southeast Asians have settled in the Valley, particularly the Hmong who experienced elevated risk of nasopharynx, liver, stomach, pancreas, cervix cancers and non-Hodgkin's lymphoma<sup>3</sup>. African-Americans comprise a relatively small proportion of the Valley's population<sup>2</sup>, which may impact the overall rates of prostate and other types of cancer.

The population of the Valley is also much poorer than the rest of the state. All counties in the Valley, except Tuolumne, have a higher percentage of people living below the poverty line than statewide. Unemployment rates in the Valley are greater than statewide, which probably contribute to lower median family income as well. Several counties in the region are rural in nature. This may have implications for access to care and for cancer screening issues.

The fertility rates among women in the Valley are much higher than the rest of the state. The proportion of births to teenage mothers less than 18 years of age is greater in the Valley than elsewhere in California. As such, birth rates are higher in all counties, except Mariposa and Tuolumne, which have high percentages of retired population<sup>2</sup>. These patterns are relevant to rates of breast, endometrial, ovary, and cervix cancers found in the region.

Table I. Demographic characteristics of the Central Valley and California.

County	Population (2000)	Median Family Income	Percent								
			Age 65+	Hispanic	Black	Asian/PI	Below Poverty	Unemployment (2004)	Birth Rate	Fertility Rate	Mother < 18
Fresno	779,407	38,455	9.7	48.4	5.5	8.1	22.9	10.5	18.0	81.1	5.1
Kern	661,645	39,403	10.7	41.9	6.2	4.1	20.8	9.8	18.0	84.8	5.4
Kings	129,461	38,111	7.6	45.6	8.3	3.1	19.5	11.0	17.0	88.4	4.3
Madera	123,109	39,226	12.0	46.7	4.1	1.6	21.4	9.0	17.1	73.7	5.2
Mariposa	17,130	42,655	18.2	8.9	0.7	1.0	14.8	6.6	7.5	46.9	^
Merced	210,554	38,009	9.2	48.2	3.4	6.4	21.7	11.0	18.5	83.1	4.5
Stanislaus	446,997	44,703	10.3	35.3	3.1	4.9	16.0	9.1	16.4	74.4	3.7
Tulare	368,021	36,297	9.1	54.9	1.6	2.9	23.9	11.7	19.3	90.4	5.4
Tuolumne	54,501	44,327	18.5	8.4	2.1	1.0	11.4	6.8	8.2	51.5	2.4
California	33,871,648	53,025	11.0	34.6	6.7	11.2	14.2	6.2	15.1	68.8	3.1

Source: Health Data Summaries for California Counties 2004. Center for Health Statistics, Department of Health Services

A report<sup>4</sup> from the California Department of Health Services/Tobacco Control Section reveals that the consumption of cigarettes and other tobacco products has been declining steadily, sometimes more than 50%, since 1974. However, data from the California Health Interview Survey (CHIS) indicates that smoking prevalence among men in the Central Valley are still generally higher than men in the entire state (Table II). This will impact rates of lung cancer and other smoking-related cancer sites.

Table II. Percentage of Smokers, by Gender and Smoking Status, in Central Valley and California.

County	Male			Female		
	Current Smoker	Former Smoker	Never Smoked	Current Smoker	Former Smoker	Never Smoked
Fresno	26.6	31.8	41.6	10.8	15.9	73.2
Kern	24.6	31.5	44.0	20.2	20.2	59.5
Kings	26.4	28.1	45.5	15.3	15.9	68.8
Madera	21.4	29.3	49.2	11.8	18.5	69.6
Merced	28.7	26.8	44.5	16.8	20.3	62.9
Stanislaus	24.3	25.8	49.9	18.9	14.0	67.1
Tulare	22.4	23.1	54.4	16.2	14.1	69.7
Tuolumne/Mariposa	--	--	--	--	--	--
California	20.3	28.3	51.4	18.7	19.7	67.4

Source: California Health Interview Survey, 2003. UCLA Center for Health Policy Research, University of California, Los Angeles.

Because of the fertile soil and abundant water supply available from the Sierra Nevada watershed, agriculture is the dominant industry in the region. Fresno County has been the leading producer of agricultural commodities in the nation with an annual production in excess of \$4.0 billion dollars<sup>5</sup>. The most common crops include grapes, tree fruits, and cotton. The dairy industry is also extensive. Pesticide use is also extensive and approximately 30 million pounds of pesticide (active ingredients) are used annually in Fresno County alone<sup>6</sup>. These factors may impact cancer rates at various organ sites. Because many of the crops produced in the Valley require extensive manual labor, the use of seasonal and migrant workers is common. Approximately half of the 800,000 seasonal farm-workers in California work in the San Joaquin Valley and monitoring of cancer in these workers continues to pose special data collection challenges to the registry.

**METHODS**

**SOURCE OF CANCER CASES AND DEATHS (NUMERATOR DATA)**

All newly diagnosed cancer cases and deaths among residents of the Central San Joaquin Valley of California between January 1, 2000 and December 31, 2004, are included in this report. Except where otherwise noted, all cancers are invasive (have infiltrated the surrounding tissues). A “case” is defined here as a primary cancer, as distinguished from a cancer, which has metastasized from another site. Since individuals can have more than one primary cancer and each primary tumor counts as a case, the number of incident cases will be approximately three percent greater than the number of persons who were diagnosed with cancer. Cancer cases presented in this report were obtained from the January 2007 quarterly submission, submitted to the CCR on January 29, 2007. Cancer rates were generated using SEER Stat version 6.2.3. For invasive cancer incidence rates, all non-duplicative, malignant and borderline cancers were included, except urinary bladder cancer which both malignant and in situ cancers were used. In situ cancer counts and rates are presented only for breast, colorectal and melanoma.

For the purpose of incidence rate calculations, the numbers of newly diagnosed cancers have been categorized by cancer sites, races/ethnicities, and sex (2000-2004, inclusively), and by cancer site, county, and sex for all races/ethnicities combined (2000-2004). The five-year reporting period has been selected to allow adequate numbers of cases to accrue at the county level, which will permit the calculation of stable incidence/mortality rates for individual counties and across four racial groups. Primary site and histologic type were coded and reported according to the International Classification of Diseases for Oncology, Second Edition (ICD-O-2).<sup>7</sup> The sites were grouped according to conventions of the Surveillance, Epidemiology, and End Results (SEER) program of the National Cancer Institute (Appendix A). Deaths were classified according to the International Classification of Disease, Ninth Edition.<sup>8</sup>

#### **SOURCE OF POPULATION AT RISK (DENOMINATOR DATA)**

Annual mid-year population estimates by age, race/ethnicity, and sex for Non-Hispanic Whites, Non-Hispanic Blacks, Hispanics, and Asian Pacific Islanders were obtained from the California Department of Finance (DOF) Demographic Research Unit (2004). Population estimates are subject to periodic revisions, which may also change the age, race, and sex-specific population distribution for all reporting years. Therefore, the rates presented in this report may not be comparable to those reported previously.

Additionally, one of the procedures of the California Cancer Registry (CCR) is the requirement that a county must have a minimum of 200,000 population-person-years in order to calculate the age-adjusted rates and a minimum of 10 cases for reporting the rates. The selection of a minimum number of cases and the types of cancer sites presented in this reported is based on the principal desire to share cancer information with the public in as much detail as possible, and yet, still insuring protection of privacy and confidentiality.

#### **DEFINITION OF RACE/ETHNICITY**

Race/ethnicity for both cases/deaths and population estimates are grouped into the mutually exclusive categories of Non-Hispanic Whites, Non-Hispanic Blacks, Hispanics, and Asian Pacific Islanders. Hispanic ethnicity is based on information on the medical record or death certificate, and on surname. Persons with race coded as White, Black, or unknown but with a last name on the 1980 Census list of 12,497 Hispanic surnames<sup>9</sup> were categorized as Hispanic for analyses in this report. The use of surname to identify Hispanics was adopted by the CCR due to observed under-reporting of Hispanic ethnicity on the medical record and death certificate. A study by the Northern California Cancer Center documented that the use of Hispanic surname, in conjunction with medical records, resulted in increased sensitivity and accuracy of Hispanic cancer rates. Overall statewide cancer incidence and mortality rates for Hispanics based on this definition are approximately 14% and 19% higher, respectively, than those based on medical record and death certificate alone. Rates for Non-Hispanic Whites are approximately 1.4% lower<sup>10</sup>.

#### **SELECTION OF GEOGRAPHIC AREAS AND SPECIFIC RACE GROUPS**

The numbers of cases over the 5-year period (2000 to 2004) are organized by cancer sites, sex, racial groups, and counties for the Central Valley Region. Race and sex-specific counts and rates shown for the nine counties in the region were aggregated by the previously mentioned five-year period. Race and sex-specific counts are also shown for counties that meet the minimum requirement of 200,000 population-person-years or more, with average annual age-adjusted rates based on 10 or more cases or deaths.

#### **FORMAT OF TABLES AND CALCULATION OF RATES**

This report is organized into sections based on an alphabetical order of organ-specific cancer site. Incidence counts and rates are presented first and followed by deaths and mortality rates. Each section shows the tabular data for each cancer site. A standardized format for the tabular data presented within this report has been developed. For each of the 28 individual invasive cancer sites and for all invasive cancer sites combined as well as for three in-situ cancer sites, the following tabular data are presented:

1. A table displaying cancer counts and deaths for 2000-2004 with annual average age-adjusted cancer incidence and mortality rates by races/ethnicities, sites, stage at diagnosis, both sexes, and separately for males and females.

2. A table displaying cancer counts and deaths for 2000-2004 with annual average age-adjusted cancer incidence and mortality rates for all races/ethnicities combined by county, sites, stage at diagnosis, both sexes, and separately for males and females.
3. A graph displaying secular trends for the individual years from 1988-2004 with annual average age-adjusted cancer incidence/mortality rates for all races combined by sites, and separately for males and females (where data are available).

Age-adjusted rates are a weighted average of the age-specific rates, where the weights represent the age distribution of a standard population. Rates in this report are age-adjusted by the direct method<sup>11</sup> to the year 2000 US population standard. Age-adjustment allows meaningful comparisons of cancer risk to be made by controlling for differences in the age-distribution of two populations, which can profoundly affect cancer rates.

### CAUTIONS ON INTERPRETATION

Incidence and mortality data in this report are based on cases of primary cancer and cancer deaths, which were diagnosed among Central Valley residents between January 1, 2000 and December 31, 2004, and were reported to the CCR as of January 29, 2007. It is likely that additional cases and deaths will be reported for this time period.

The reliability of race-specific rates depends on the accuracy of race classification in either cases or deaths and in population estimates. Some variation in race-specific rates may reflect misclassification bias, rather than a true difference in cancer risk. Population estimates are based on self-identification at the time of the 1990 and 2000 censuses. The Census Bureau reports that the 1990 census undercounted the total population by 1.6%, the Asian population by 2.3%, the Black population by 4.4%, and the Hispanic population by five percent<sup>10</sup>.

Race/ethnicity information for cancer cases is primarily based on information contained in the patient's medical record. This information may be based on self-identification by the patient, on the assumptions of an admission clerk or other medical personnel, or by an inference using race/ethnicity of parents, birthplace, maiden name or last name. Race/ethnicity for cancer deaths, on the other hand, is based on information on the death certificate, which is often provided by next-of-kin. The reporting of race/ethnicity in either system may be influenced by the race/ethnic distribution of the local population, by local interpretation of data collection guidelines, and other factors. While the use of surname lists partially compensates for misclassification of some race/ethnic groups, it is likely that some differences in race-specific rates reflect biases of classification, rather than true differences in risk.

In comparing cancer rates among geographic areas of the Central Valley, it is important to keep in mind that a variety of factors can contribute to variation in cancer rates other than a true difference in the risk of developing cancer. Although rates are provided for all races combined, it is highly preferable, when possible, to compare county rates using the same race/ethnic group, since cancer rates vary markedly by race/ethnicity and the race/ethnic distribution can vary considerably from county to county. In addition, factors such as completeness of case identification, accuracy of population estimates, and differences in the reporting and/or recording of race/ethnicity can affect cancer rates. Although the CCR has made great efforts to standardize these factors, some differences are still likely to exist.

In addition, some variation will occur in cancer rates simply by chance. Geographic variation should, therefore, be interpreted with caution, and should be used to generate, not test, hypotheses.

Finally, statistically significant variation in rates can occur by chance alone, and additional assessment is required to separate chance occurrences from true public health problems. Statistical significance does not necessarily indicate the overall importance of the result.

REFERENCES

1. Department of Finance. (2004, May). Race/ethnic population with age and sex detail, 2000-2050. Sacramento, CA: Department of Health Services.
2. Jew-Lochman S. (2004). Health data summaries for California counties, 2004. Sacramento, CA: Department of Health Services.
3. Mills PK, & Yang R. (1997). Cancer incidence in the Hmong of Central California, United States, 1987-94. *Cancer Causes and Control*, 8, 705-712.
4. Tobacco Control Section. (2002). Smoking prevalence among California adults, 1984-2000. Sacramento, CA: Department of Health Services.
5. Prieto J. (2005). 2004 Fresno County agricultural crop and livestock report. Fresno, CA: Fresno County Department of Agriculture.
6. Department of Pesticide Regulation. (2004). Pesticides Use Reporting, 2002. Sacramento, CA: California Environmental Protection Agency.
7. Percy C, Van Holten V, & Muir C. (1990). International classification of diseases for oncology, second edition. Geneva, Switzerland: World Health Organization.
8. World Health Organization. (1977). International classification of disease, ninth edition. Geneva, Switzerland: World Health Organization.
9. California Cancer Registry. (2004). Cancer reporting in California: Abstracting and coding procedures for hospitals. California cancer reporting system standards, volume III. Sacramento, CA: Department of Health Services.
10. Stewart SL, Glaser SL, Horn-Ross PL, & West DW. (1993). SEER study of methods to classify Hispanic cancer patients (final report: contract NO1-CN-05224). Union City, CA: Northern California Cancer Center.
11. Fleis JL, Levin B, Paik MC. *Statistical Methods for Rates and Proportions*, Third Edition. New York: John Wiley and Sons, 2003.

SUMMARY OF RESULTS BY CANCER SITE

---

**All Cancer Sites Combined:** Each year in the Central Valley about 10,000 people are diagnosed with one form of cancer or another and about 4,300 people will die from cancer. However, four forms of cancer contribute to more than half of this total; breast, prostate, lung and colon cancer. Overall risk of cancer is higher in men than in women and non-Hispanic African Americans have the highest rates of cancer development followed non-Hispanic Whites (NHW). Asians have the lowest risk of cancer development. African Americans also have the highest rate of death from cancer. Between 1988 and 2004, the incidence and mortality rates of cancer have decreased. This is due primarily to decreases in tobacco use in the population. Overall, 45% of people are diagnosed with cancer while it is still localized, meaning confined to the organ of origin, while 22% have regional disease, and 24% have their cancer diagnosed only after it has metastasized to distant locations.

**Brain and Nervous System:** Approximately 170 people are diagnosed annually with cancer of the brain and nervous system in California's Central Valley. Each year the disease results in 100 deaths. Risk of brain and nervous system cancer is 25% higher in males than females and non-Hispanic whites experience the highest rates while non-Hispanic Asian/Pacific Islanders experience the lowest. Due to the small number of cases annually, incidence and mortality rates are erratic but not changing substantially overtime. Few risk factors for brain and nervous system cancer are known although exposure to ionizing radiation increases risk for disease. About 72% of brain cancers are diagnosed while still at the local stage, 20% while are at the regional stage and a very small percent are diagnosed with distant stage brain cancer. However, these figures differ by race/ethnicity and gender.

**Breast (In Situ):** Each year about 280 women in the Valley are diagnosed with in situ breast cancer. Risk is greatest in non-Hispanic White women and lowest among Hispanics and Asian/Pacific Islanders. Incidence of in situ breast cancer increased steadily through 1999 but has declined in recent years. Studies suggest this recent decline in breast cancer incidence resulted from discontinuing hormone replacement therapy in women. Age, genetics and family history of breast cancer all affect risk.

**Breast invasive:** Invasive breast cancer is the most common female cancer in the Central Valley with over 1500 newly diagnosed cases and 300 deaths annually. Breast cancer incidence rates vary greatly by ethnicity with Non-Hispanic Whites at greatest risk and Asian/Pacific Islanders at lowest risk for developing the disease. A majority of breast cancer cases are diagnosed at an early disease stage (local) regardless of race/ethnicity which is likely due to successful breast cancer screening programs. Little change in mortality was observed from 1988 to 2004 although incidence rates have declined in recent years. Studies suggest this recent decline in breast cancer incidence resulted from discontinuing hormone replacement therapy in women.

**Cervix Uteri:** While several factors have been identified to increase the risk of cervical cancer, the most influential etiologic agent is infection with human papillomavirus. Both incidence and mortality rates have been on the downward trend since 1988. Between 2000-2004, the annual average number of cervical cancer cases diagnosed among women in the Valley declined dramatically. This change may be attributed to better screening tools and/or preventive services. However, the number of deaths had remained relatively constant at about 36 deaths per year. Hispanic females experienced the highest incidence rate but non-Hispanic Black women experienced the highest mortality rate. Non-Hispanic White females experience the lowest incidence and mortality rates. Madera, Kern, and Tulare counties have the highest incidence rates of cervical cancer.

**Colon Excluding Rectum:** Within the Central Valley, approximately 800 cases of colon cancer are diagnosed each year and the disease results in nearly 350 deaths annually. Men are at 25% greater risk of developing colon cancer than women. Asian/Pacific Islander populations have the lowest risk. Most cases are diagnosed at local and regional stages. However, with the colon cancer screening programs in place, the proportion of remote stage cases should be even lower particularly among Asian/Pacific Islander populations where 27.0% of cases are diagnosed at remote disease stage. Over time, there is a slight downward trend in colon cancer incidence and mortality rates. Risk for developing colon cancer

SUMMARY OF RESULTS BY CANCER SITE

---

increases with a family history of the disease, a history of polyps and bowel disease, increasing age, a diet high in fat, heavy alcohol use and smoking.

**Colon and Rectum (In Situ):** Fifty cases of in situ colon and rectum cancer are diagnosed each year. Risk is 125% higher in men than in women. Non-Hispanic White populations observe the greatest incidence rates while essentially no cases are diagnosed in non-Hispanic Black populations. As screenable cancers, differences in screening practices by ethnicity likely affect incidence of this early stage diagnosis (in situ cancers are at the earliest stage). No appreciable change in incidence or mortality rates occurred from 1988 to 2004. In situ colon and rectum cancer risk increases with a family history of the disease, a history of polyps and bowel disease, increasing age, a diet high in fat, heavy alcohol use and smoking.

**Colon and Rectum (Invasive):** Invasive colon and rectum cancer is diagnosed in 1100 people and results in 400 deaths annually in the Central Valley. Males are at 40% greater risk of disease than females. Diagnoses are most frequent in non-Hispanic Blacks and Whites. Most cases are diagnosed at local and regional stages but the proportion of remote stage diagnoses should be lower given that colon and rectal cancers are screenable. A slight decrease in incidence was observed from 1988 through 2004 although mortality rates remained unchanged. Family history of the disease, a history of polyps and bowel disease, increasing age, a diet high in fat, heavy alcohol use and smoking all increase risk of developing invasive colon or rectum cancer.

**Corpus and Uterus:** Cancer of the corpus and uterus contributes to 256 new cases and about 45 deaths each year in the Central Valley. Non-Hispanic white females experience the greatest risk for corpus and uterine cancers. Incidence rates have declined over the last six years while mortality rates remain stable. Risk of corpus and uterine cancer increases with early age at menarche, late age at menopause, obesity, Tamoxifen use, estrogen replacement therapy, a diet high in fat, diabetes and a family history of the disease. The majority of the disease was diagnosed at the local stage among all racial groups in all Central Valley counties.

**Esophagus:** From 2000-2004, an average of 103 cases of esophageal cancer were diagnosed in the Central Valley each year. During the same time period, an average of 92 people died from disease each year. Non-Hispanic Blacks and males experienced the highest incidence and mortality rates. While incidence and mortality rates have remained relatively stable for females, both incidence and mortality rates for males have been inching up since 1988.

**Gallbladder:** Cancer of the gallbladder is a rare disease that affects women more than men. Hispanics experienced higher incidence and death rates than other racial groups. Each year an average of 28 cases of gallbladder cancer were diagnosed in the Central Valley Region between 2000-2004.

**Hodgkin's Lymphoma:** Hodgkin's lymphoma strikes about 60 people each year in the San Joaquin Valley and claims about 13 lives. Rates are higher in non-Hispanic Whites and Hispanics than other ethnic groups and are somewhat higher in males than females. Nearly all Hodgkin's lymphoma cases are nodal. Incidence rates appear to be unchanged over time in both males and females. Hodgkin's lymphoma is a disease of young aged people.

**Kaposi's Sarcoma:** Relatively few cases of Kaposi sarcoma were diagnosed in the Central Valley and the incidence rate is quite low at about 0.5/100,000. Most often these cases are diagnosed while the disease remains localized. The great majority of cases occurred in men and the rate is declining.

Effective treatment of Human Immunodeficiency Virus (HIV) infection with highly active antiretroviral drugs probably explains this decrease in Kaposi sarcoma.



SUMMARY OF RESULTS BY CANCER SITE

---

**Kidney and Renal Pelvis:** Just over 300 kidney and renal pelvic cancer cases are diagnosed each year in the Central Valley. The disease results in about 100 deaths annually. Men are at 90% greater risk of developing kidney and renal pelvic cancer than women. Incidence is similar across the different racial and ethnic groups with the exception of the Asian/Pacific Islanders who experience a much low incidence of this disease. Diagnosis occurs during the local disease stage for 60-70% of cases although regional differences are observed. Incidence rates are increasing slightly in both men and women while mortality rates remain relatively stable. Smoking, being overweight, occupational exposures including asbestos, kidney disease and male gender increase risk of developing kidney and renal pelvic cancer.

**Larynx:** Laryngeal cancer is more common in men than women. While incidence and mortality rates of laryngeal cancer in the male population of the Central Valley Region have been decreasing since 1988, the incidence rate in women has remained relatively stable. Between 2000-2004 an average of 77 people were diagnosed with cancer of the larynx (voice box) each year. During this time period, an average of 25 deaths from laryngeal cancer also occurred. Risk factors of laryngeal cancer include long-term use and abuse of tobacco and alcohol products. Overall, NH Blacks experienced higher incidence and death rates than any other racial groups. Among many racial groups in the Central Valley, laryngeal cancer was more frequently diagnosed at the local stage of disease.

**Leukemia:** Each year in the Central Valley, about 300 people are diagnosed with leukemia and about 170 people die from this disease. Risk of leukemia is about 60% higher in males than in females and risk is highest in non-Hispanic whites and lowest in Hispanics. The rate of newly diagnosed leukemia and death rates appear to be slowly declining over time. Cigarette smoking, environmental chemicals and certain genetic factors may increase risk of leukemia. Males experience slightly higher percentages of both lymphocytic as well as myeloid and monocytic leukemia than female.

**Liver:** Between 2000-2004, an average of 160 cases of liver cancer were diagnosed in the Central Valley each year. Liver cancer is one of the most rapidly fatal diseases. From 2000-2004, the disease killed an average of 118 people per year. Risk factors for liver cancer include infections with the hepatitis B (HBV) and/or hepatitis C (HCV) viruses, liver cirrhosis, and long-term consumption of foods tainted with aflatoxin. Asian Pacific Islanders have the highest incidence and mortality rates. This is probably due to the fact that Asian Pacific Islanders came from HBV and/or HCV-endemic regions. NH Whites have the lowest incidence and mortality rates. Since 1988, both incidence and mortality of the disease have increased significantly. Incidence and mortality rates are highest in Fresno and Merced Counties due to the higher proportion of Asian Pacific Islanders in those counties.

**Lung and Bronchus:** Lung and bronchus cancer is one of the leading types of cancer. Between 2000-2004, an average of 1,483 cases of lung and bronchus cancer were diagnosed each year in the Central Valley Region. An average of 1,162 people died per year during the same time period. Incidence and mortality rates of lung and bronchus cancer in male exceed those in female. Overall, NH Whites experience higher incidence and mortality rates. Among males, NH Black males have the highest incidence and mortality rates. Among females, NH White females have the highest incidence and mortality rates. While the disease has been on the decline over the past 15 years for men, lung and bronchus cancer has remained relatively stable in women. In both males and females, the disease was diagnosed at the remote stage.

**Melanoma (In Situ):** Each year nearly 300 cases of melanoma of the skin are diagnosed at the in situ stage in the Central Valley. This early stage at diagnosis infrequently results in death. Risk of disease is 60% higher in men than women and most frequent in non-Hispanic Whites. Incidence rates have declined over the past five years. Risk of developing melanoma in situ increases with fair skin, exposure to ultraviolet radiation, having many or large moles, and a family history of the disease.

SUMMARY OF RESULTS BY CANCER SITE

---

**Melanoma (Invasive):** Annually, invasive melanoma of the skin is diagnosed in 400 Central Valley residents and is responsible for 60 deaths. Men are at 60% greater risk of acquiring the disease than women. The disease infrequently affects non-Hispanic Blacks and Asian/Pacific Islanders. Over 70% of all melanomas in the region were diagnosed at the local stage. No appreciable change in incidence or mortality occurred over the observation period. Fair skin, exposure to ultraviolet radiation, having many or large moles, and a family history of the disease increases risk for invasive melanoma.

**Mesothelioma:** In the last five reporting years, an average of 25 cases of mesothelioma were diagnosed annually among residents of the Central Valley Region. During the same time period, the disease killed an average of 18 people in the valley each year. Non-specific disease symptoms and lack of screening method make mesothelioma difficult to diagnose. As a result the majority of cases are diagnosed at the remote stage. Incidence and mortality rates are highest in non-Hispanic Whites and men. Most mesothelioma cases are related to occupational or residential asbestos exposure.

**Multiple Myeloma:** There are about 110 newly diagnosed cases of multiple myeloma each year in the Central Valley and 80 myeloma associated deaths. The incidence rates of this disease are highest among African Americans and in males and peak in the older age groups. In both male and female groups, the majority of the disease is diagnosed at remote or distant stage.

**Non-Hodgkin's Lymphoma:** There are more than 400 new cases of non-Hodgkin's Lymphoma (NHL) diagnosed each year in the Central Valley and about 180 deaths from this disease. Men are at 40% higher risk of NHL compared to women and non-Hispanic whites experience the highest incidence rates. Asians have the lowest rates of NHL. Both incidence and mortality rates are stable over time. Males experience slightly higher percentages of both nodal and extranodal types of NHL than female.

**Oral Cavity and Pharynx:** From 2000-2004 an annual average of 242 cases of cancer of the oral cavity and pharynx were diagnosed in the Central Valley. During the same time period an average of about 71 people died from the disease each year. Risk is 2.5 times greater in men compared to women. Among men, non-Hispanic Blacks are at greatest disease risk and non-Hispanic Asian/Pacific Islanders are at lowest risk. Primary risk factors for developing oral cavity and pharynx cancer include tobacco use and heavy alcohol use. In males, about half of the disease were diagnosed at the remote stage.

**Ovarian Cancer:** Ovarian cancer occurs in about 170 Valley women each year and 120 women die from this disease. Risk is highest in white, non-Hispanic women and in Hispanic women while African American women experience lower risk for this disease. Although incidence rates appeared to be decreasing between 1997 and 2000, they have increased in the last three years. Mortality rate from ovarian cancer is not changing. A family history of ovarian cancer increases risk of this disease while multiple pregnancies and breast-feeding infants protect against it. Unfortunately, only about 14% of ovarian cancers are diagnosed at the local stage, while 16% are diagnosed at the regional stage, and 60% are diagnosed only after the cancer has spread to distant organs.

**Pancreas:** Approximately 250 newly diagnosed pancreatic cancer cases and 236 deaths occur annually in the Central Valley. Risk is elevated by 24% in men and incidence is similar across the four ethnic groups. Although incidence and mortality rates are erratic, no appreciable changes were observed from 1988 through 2004. Increasing age, smoking and diet high in animal products may increase risk for pancreatic cancer. In most racial groups, the disease was diagnosed more frequently in males and at the remote stage.

**Prostate Cancer:** Prostate cancer is the leading form of cancer among men in the Central Valley and each year there are 1500 men diagnosed with prostate cancer and there are more than 200 deaths. Rates are highest among African American men while Asian men experience lowest rates. There was a peak in prostate cancer incidence in the early 1990's following the introduction of Prostate Specific Antigen (PSA)

SUMMARY OF RESULTS BY CANCER SITE

---

screening tests for prostate cancer although incidence rates are currently stable. Mortality rates from prostate cancer, however, are decreasing. Besides ethnicity, the only strong risk factor for prostate cancer is a family history of the disease. About 80% of prostate cancer is diagnosed while it is still localized, another 11% after it is regionally spread and 5% only after it has spread to distant organs.

**Rectum and Rectosigmoid:** Approximately 340 cases of rectum and rectosigmoid cancer are diagnosed each year. About 75 cases result in death annually. Disease risk is 75% higher in men than women and rates are similar across the various race/ethnic groups. Screening regimens make diagnosis of this cancer at early disease stages frequent although the Asian/Pacific Islander population sees lower proportions of local diagnoses. Family history of the disease, a history of polyps and bowel disease, increasing age, a diet high in fat, heavy alcohol use and smoking all increase risk of developing rectum and rectosigmoid cancer.

**Stomach:** Between 2000-2004, an annual average of 190 cases of stomach cancer were diagnosed in the Central Valley Region. In the last five years, stomach cancer killed an average of 118 people in the valley each year. Cancer of the stomach is rare in the US but quite common in developing countries. Several risk factors have been identified for stomach cancer but the most influential is infection with *Helicobacter pylori*. As with most cancer, stomach cancer afflicts males more than women. NH Blacks appear to have the highest incidence and mortality rates, followed by Asian Pacific Islanders. More than half of the disease were diagnosed at the regional and remote stages in both genders of all racial groups.

**Testicular Cancer:** Testis cancer is a rare cancer that occurs primarily in young men. Each year there are about 80 cases of testicular cancer diagnosed in the Central Valley and few deaths. Rates are highest in White, non-Hispanic men and Hispanic men while African American and Asians have much lower rates. Unfortunately, for unknown reasons, the incidence rate of this cancer appears to be increasing over time. The only established risk factors for this disease are a history of undescended testes and a family history of the disease. About two thirds of testis cancer cases are diagnosed with local disease, another 16 % with regional disease and 14% with distant spread at the time of diagnosis.

**Thyroid:** Each year about 200 cases of thyroid cancer are diagnosed in the Central Valley although few deaths from this cancer occur. It is one of the few cancers which is more common in women than men and rates appear to be highest among non-Hispanic White (NHW) females. The rates of thyroid cancer are increasing rapidly over time, and it is unclear if this is due to some underlying biological phenomenon or to increased detection with more sophisticated diagnostic techniques. About two thirds of thyroid cancers are diagnosed while still at the local stage which translates into good survival with the disease.

**Urinary Bladder:** Urinary bladder cancer accounts for about 440 newly diagnosed cancer cases and 96 deaths annually in the Central Valley. The disease primarily occurs in men where incidence is four times greater than observed in women. Over 70% of cases are diagnosed at the local stage however these percentages vary greatly by race with the lowest percentage of local diagnoses observed in Asian/Pacific Islanders. Since 1988, incidence and mortality rates have remained relatively stable. Risk of urinary bladder cancer increases with smoking, occupational exposure to aromatic amines and male gender.

---

**INCIDENCE & MORTALITY RATE STAGE AT DIAGNOSIS TABLES  
ALL SITES COMBINED & BY MAJOR ANTOMIC SITES  
2000-2004**

---

# CANCER INCIDENCE AND MORTALITY IN THE CENTRAL VALLEY REGION, CALIFORNIA, 2000-2004

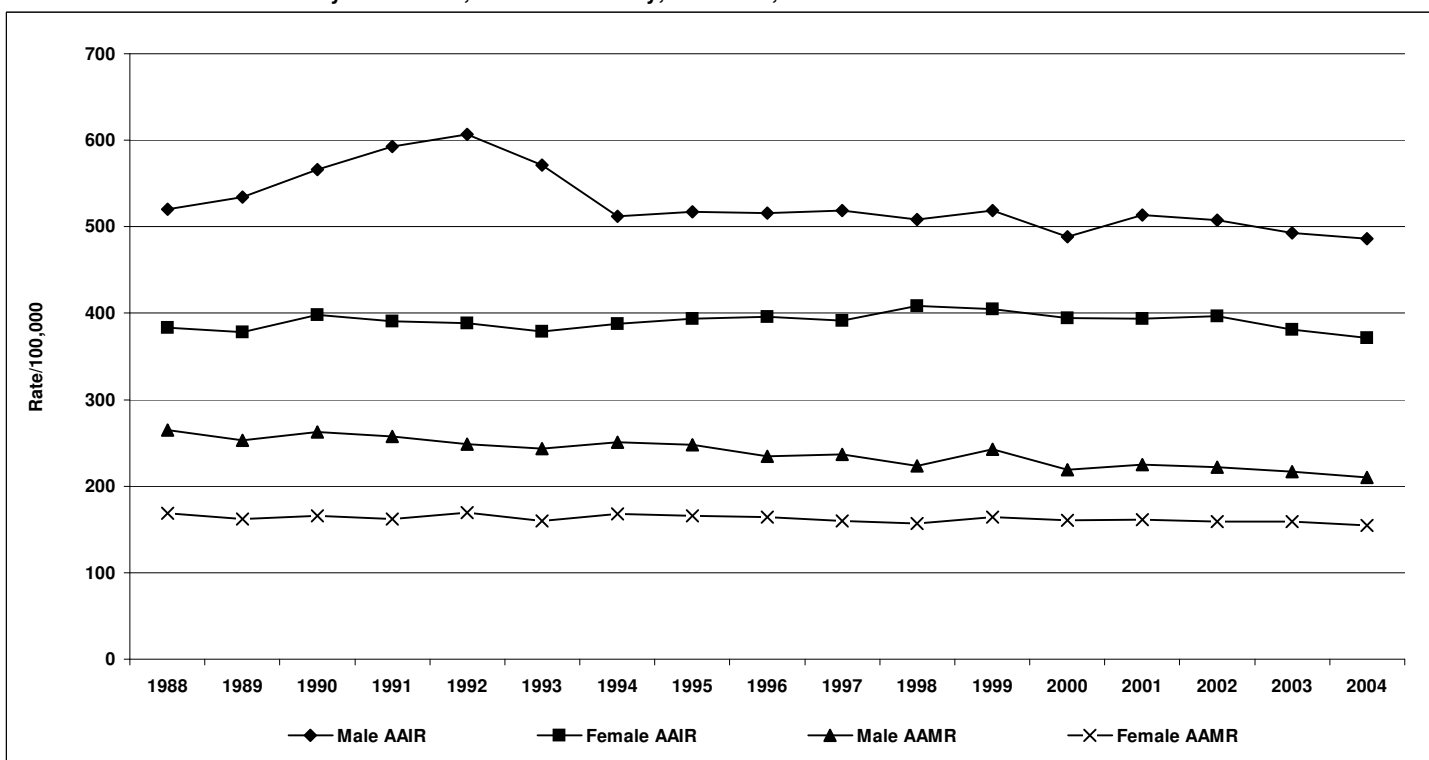
## REGION 2: CENTRAL VALLEY

**Table A.** Number of new invasive cancer cases, deaths, average annual age-adjusted incidence and mortality rates, by site/sex, all races combined, for Central Valley, California, 2000-2004.

Cancer Site	Total				Male				Female			
	Cases	AAIR	Deaths	AAMR	Cases	AAIR	Deaths	AAMR	Cases	AAIR	Deaths	AAMR
All Sites Combined	51,965	427.6	21,587	183.1	26,664	491.7	11,186	218.4	25,301	383.8	10,401	158.8
Brain and Nervous System	856	6.4	528	4.2	470	7.3	304	5.1	386	5.6	224	3.4
Breast	7,842	63.7	1,613	13.4	50	0.9	16	0.3	7,792	119.3	1,597	24.5
Cervix Uteri	655	5.0	180	1.4	^	^	^	^	655	9.9	180	2.8
Colon and Rectum	5,579	46.8	2,073	17.7	2,974	56.3	1,108	21.7	2,605	39.3	965	14.5
Colon excluding Rectum	3,897	32.9	1,681	14.4	1,968	37.9	889	17.5	1,929	29.0	792	11.9
Corpus and Uterus, NOS	1,279	10.4	223	1.9	^	^	^	^	1,279	19.6	223	3.4
Esophagus	517	4.3	460	3.9	399	7.5	362	6.9	118	1.8	98	1.5
Gallbladder	142	1.2	82	0.7	39	0.8	26	0.5	103	1.6	56	0.9
Hodgkin's Lymphoma	307	2.2	65	0.5	179	2.5	36	0.6	128	1.8	29	0.4
Kaposi Sarcoma	53	0.4	^	^	45	0.8	^	^	^	^	^	^
Kidney and Renal Pelvis	1,585	13.0	499	4.2	991	17.6	323	6.1	594	9.1	176	2.7
Larynx	385	3.2	124	1.1	311	5.6	102	2.0	74	1.1	22	0.3
Leukemia	1,497	11.7	867	7.2	846	14.6	470	9.0	651	9.4	397	5.9
Liver	799	6.5	589	4.9	562	9.7	391	7.1	237	3.6	198	3
Lung and Bronchus	7,419	62.8	5,811	49.9	4,023	76.9	3,207	62.7	3,396	52.3	2,604	40.3
Melanoma of the Skin	1,925	15.4	307	2.6	1,119	19.9	197	3.7	806	12.1	110	1.7
Mesothelioma	120	1.0	90	0.8	104	2.0	81	1.6	16	0.2	^	^
Multiple Myeloma	568	4.7	396	3.4	315	5.8	213	4.3	253	3.8	183	2.8
Non-Hodgkin's Lymphoma	2,116	17.3	845	7.2	1,165	20.7	471	9.1	951	14.4	374	5.7
Oral Cavity and Pharynx	1,213	9.9	353	3.0	844	14.7	224	4.1	369	5.6	129	2.0
Ovary	826	6.7	617	5.2	^	^	^	^	826	12.5	617	9.5
Pancreas	1,248	10.5	1,179	10.1	618	11.8	580	11.2	630	9.5	599	9.1
Prostate	7,692	65.0	1,119	9.8	7,692	145.8	1,119	24.5	^	^	^	^
Rectum and Rectosigmoid	1,682	14.0	392	3.3	1,006	18.4	219	4.1	676	10.3	173	2.6
Stomach	954	8.0	588	5.0	597	11.2	375	7.2	357	5.4	213	3.2
Testis	397	2.7	29	0.2	397	5.3	29	0.4	^	^	^	^
Thyroid	996	7.5	60	0.5	219	3.6	23	0.5	777	11.6	37	0.6
Urinary Bladder*	2,208	18.7	493	4.2	1,673	32.6	348	7.2	535	8.1	145	2.2

\* Includes in situ cases

**Figure A.** Age-adjusted incidence (AAIR) and mortality (AAMR) rates of all cancer sites combined, by year and sex, for Central Valley, California, 1988-2004.



# CANCER INCIDENCE AND MORTALITY IN THE CENTRAL VALLEY REGION, CALIFORNIA, 2000-2004

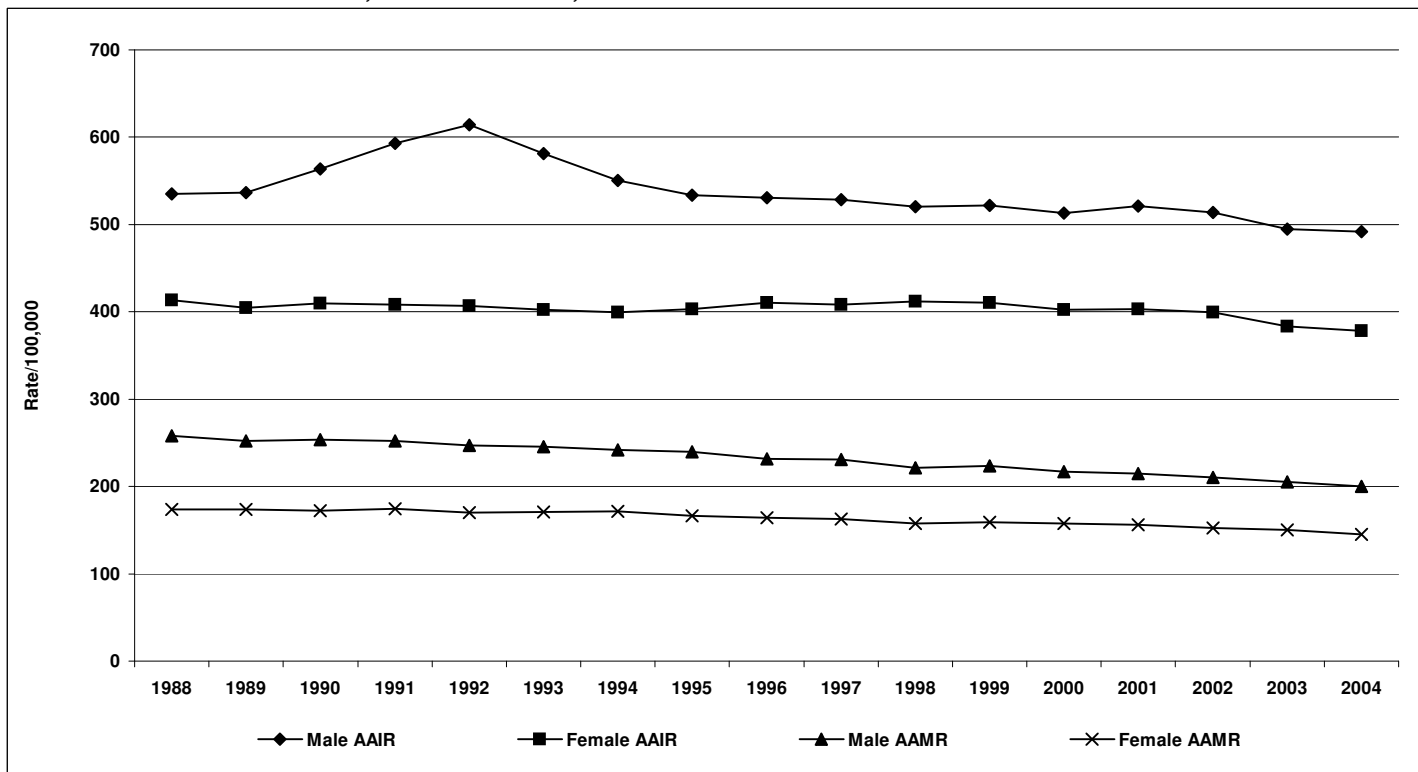
## CALIFORNIA

**Table B.** Number of new invasive cancer cases and deaths, and average annual age-adjusted incidence & mortality rates, by site and sex, all races combined, for all of California, 2000-2004.

Cancer Site	Total				Male				Female			
	Cases	AAIR	Deaths	AAMR	Cases	AAIR	Deaths	AAMR	Cases	AAIR	Deaths	AAMR
All Sites Combined	680,908	435.0	267,916	175.4	345,215	501.1	136,026	208.9	335,693	389.9	131,890	152.8
Brain and Nervous System	10,217	6.2	6,993	4.4	5,716	7.4	3,871	5.4	4,501	5.2	3,122	3.7
Breast	108,949	68.3	20,917	13.5	703	1.0	171	0.3	108,246	126.5	20,746	24.2
Cervix Uteri	7,608	8.8	2,208	2.6	^	^	^	^	7,608	8.8	2,208	2.6
Colon and Rectum	72,173	46.8	26,068	17.1	36,973	55.0	13,076	20.2	35,200	40.4	12,992	14.7
Colon excluding Rectum	51,684	33.7	21,925	14.4	25,383	38.3	10,780	16.8	26,301	30.1	11,145	12.6
Corpus and Uterus, NOS	18,534	21.7	3,340	3.9	^	^	^	^	18,534	21.7	3,340	3.9
Esophagus	6,293	4.1	5,822	3.8	4,685	6.9	4,347	6.5	1,608	1.9	1,475	1.7
Gallbladder	1,751	1.1	1,048	0.7	477	0.7	299	0.5	1,274	1.5	749	0.9
Hodgkin's Lymphoma	4,191	2.4	723	0.5	2,348	2.8	391	0.5	1,843	2.1	332	0.4
Kaposi Sarcoma	1,444	0.8	24	0.0	1,341	1.6	19	0.0	103	0.1	^	^
Kidney and Renal Pelvis	17,940	11.4	5,607	3.7	11,333	16.0	3,550	5.3	6,607	7.7	2,057	2.4
Larynx	4,623	3.0	1,566	1.0	3,743	5.4	1,231	1.8	880	1.0	335	0.4
Leukemia	18,503	11.6	10,717	6.9	10,659	15.0	6,105	9.2	7,844	9.0	4,612	5.3
Liver	10,292	6.5	7,217	4.7	7,345	10.1	4,879	7.0	2,947	3.4	2,338	2.7
Lung and Bronchus	86,631	56.9	68,713	45.5	45,793	69.1	37,235	57.0	40,838	47.9	31,478	36.9
Melanoma of the Skin	29,742	18.5	3,897	2.5	17,281	24.0	2,509	3.7	12,461	14.4	1,388	1.6
Mesothelioma	1,564	1.0	1,195	0.8	1,221	1.9	951	1.5	343	0.4	244	0.3
Multiple Myeloma	7,991	5.2	5,146	3.4	4,316	6.4	2,695	4.2	3,675	4.3	2,451	2.8
Non-Hodgkin's Lymphoma	29,336	18.6	10,980	7.2	15,995	22.4	5,992	9.1	13,341	15.5	4,988	5.7
Oral Cavity and Pharynx	16,294	10.3	4,256	2.8	11,023	15.1	2,713	4.0	5,271	6.1	1,543	1.8
Ovary	11,410	13.3	7,575	8.9	^	^	^	^	11,410	13.3	7,575	8.9
Pancreas	16,598	10.8	14,955	9.9	8,110	12.1	7,266	11.1	8,488	9.8	7,689	8.8
Prostate	106,522	157.1	15,091	25.6	106,522	157.1	15,091	25.6	^	^	^	^
Rectum and Rectosigmoid	20,489	13.1	4,143	2.7	11,590	16.7	2,296	3.5	8,899	10.3	1,847	2.1
Stomach	12,946	8.4	7,822	5.1	7,798	11.6	4,566	6.9	5,148	5.9	3,256	3.7
Testis	4,710	5.2	250	0.3	4,710	5.2	250	0.3	^	^	^	^
Thyroid	12,662	7.5	751	0.5	3,056	3.9	305	0.5	9,606	11.1	446	0.5
Urinary Bladder*	29,753	19.5	5,950	3.9	22,440	34.6	4,092	6.7	7,313	8.4	1,858	2.1

\* Includes in situ cases

**Figure B.** Age-adjusted incidence (AAIR) and mortality (AAMR) rates of all cancer sites combined, by year and sex, for all of California, 1988-2004.



# CANCER INCIDENCE AND MORTALITY IN THE CENTRAL VALLEY REGION, CALIFORNIA, 2000-2004

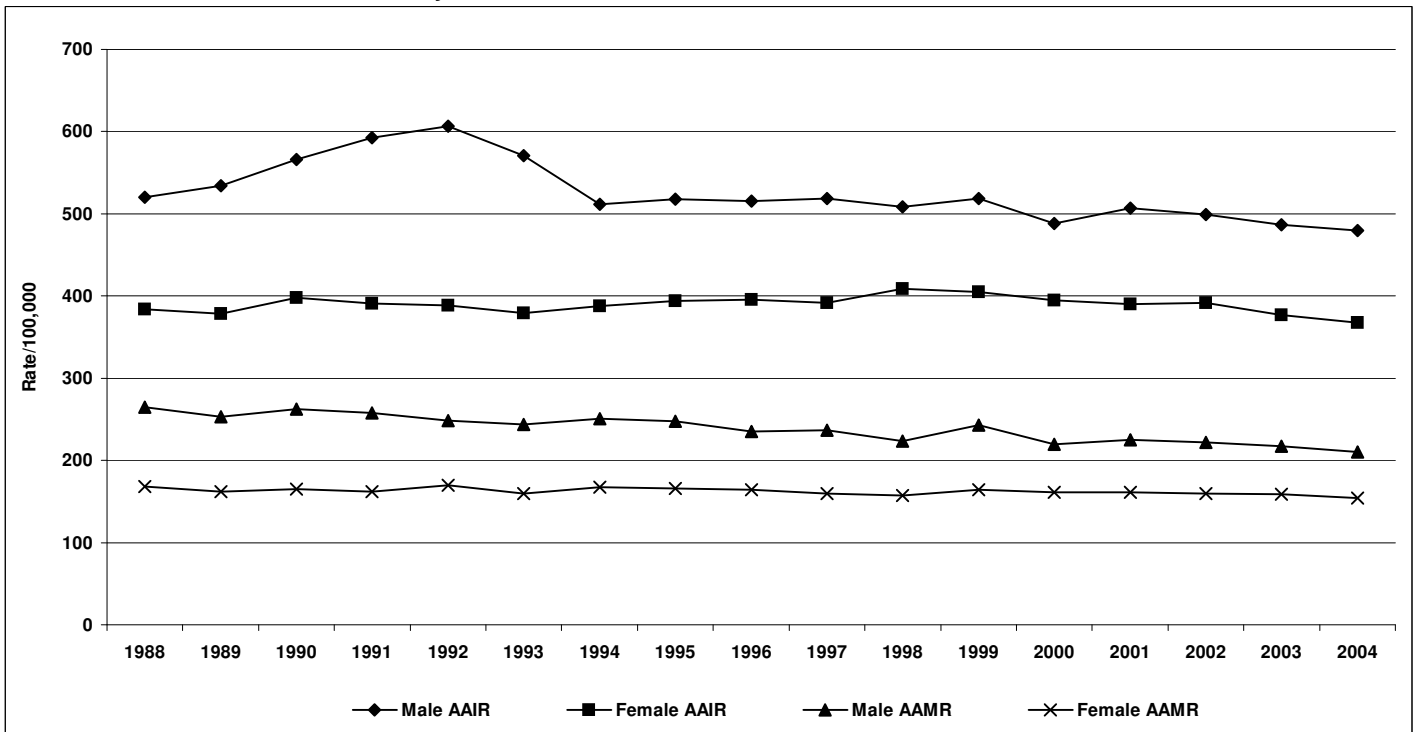
## ALL CANCER SITES COMBINED

**Table 1.** Number of new cases, deaths, percent of stage at diagnosis, annual average age-adjusted incidence and mortality rates of all cancer sites combined, by race, county, and sex, for Central Valley, California, 2000-2004.

Races / Counties	Total				Male				Female			
	Cases	AAIR	Deaths	AAMR	Cases	AAIR	Deaths	AAMR	Cases	AAIR	Deaths	AAMR
All races	52,481	497.5	21,587	183.1	26,955	497.5	11,186	218.4	25,526	387.2	10,401	158.8
NH White	37,724	530.8	16,398	197.1	19,186	530.8	8,341	234.3	18,538	419.8	8,057	172.6
NH Black	1,965	633.0	904	242.0	1,137	633.0	517	313.0	828	382.6	387	189.9
Hispanic	10,080	389.8	3,567	142.4	5,060	389.8	1,938	166.7	5,020	324.8	1,629	122.3
NH Asian/PI	1,638	326.5	718	127.2	839	326.5	390	156.9	799	244.6	328	103.7
Fresno	14,634	428.2	5,739	171.6	7,485	499.1	3,018	210.9	7,149	381.4	2,721	145.2
Kern	12,082	437.0	5,167	195.8	6,207	499.0	2,639	228.6	5,875	395.3	2,528	173.8
Kings	1,966	430.0	762	179.0	1,084	505.6	428	223.9	882	376.6	334	146.8
Madera	2,485	426.2	958	170.4	1,297	484.7	527	208.2	1,188	377.4	431	140.7
Merced	3,691	427.1	1,516	181.7	1,938	507.1	804	221.9	1,753	370.7	712	152.9
Stanislaus	8,585	423.4	3,772	191.0	4,164	467.6	1,880	224.2	4,421	395.1	1,892	169.8
Tulare	6,465	421.1	2,698	179.8	3,353	492.8	1,367	209.2	3,112	370.9	1,331	158.9
Tuolumne/Mariposa	2,573	518.7	761	199.0	1,427	597.5	401	225.7	1,146	452.4	360	178.5
Stage of Diagnosis	Local	Regional	Remote	N/A	Local	Regional	Remote	N/A	Local	Regional	Remote	N/A
All races	45.0%	21.6%	23.6%	9.8%	47.2%	18.3%	24.5%	9.9%	42.6%	25.1%	22.7%	9.6%
NH White	45.6%	21.3%	23.2%	9.9%	47.6%	18.6%	24.0%	9.9%	43.5%	24.2%	22.5%	9.9%
NH Black	41.5%	21.8%	25.8%	10.9%	43.4%	17.8%	28.0%	10.7%	38.8%	27.3%	22.8%	11.1%
Hispanic	42.4%	23.7%	25.3%	8.7%	44.8%	19.0%	26.7%	9.5%	39.9%	28.4%	23.8%	7.9%
NH Asian/PI	37.1%	24.7%	28.0%	10.3%	37.7%	20.3%	31.0%	11.0%	36.4%	29.2%	24.9%	9.5%
Fresno	45.2%	22.9%	25.3%	6.6%	47.7%	19.4%	26.0%	7.0%	42.5%	26.7%	24.5%	6.3%
Kern	44.1%	21.2%	21.5%	13.2%	45.6%	18.0%	22.4%	14.0%	42.4%	24.7%	20.5%	12.4%
Kings	43.5%	22.3%	24.8%	9.4%	43.9%	20.0%	27.4%	8.8%	43.0%	25.2%	21.8%	10.1%
Madera	46.5%	23.4%	22.6%	7.4%	49.8%	19.2%	24.4%	6.6%	43.0%	28.1%	20.7%	8.2%
Merced	43.5%	20.2%	24.3%	12.0%	45.9%	16.3%	24.6%	13.2%	40.9%	24.5%	23.9%	10.7%
Stanislaus	46.3%	20.1%	23.6%	10.0%	47.5%	17.6%	25.2%	9.8%	45.2%	22.4%	22.1%	10.3%
Tulare	44.7%	21.7%	24.7%	8.9%	48.4%	17.9%	25.1%	8.6%	40.7%	25.9%	24.2%	9.2%
Tuolumne/Mariposa	46.0%	20.6%	21.0%	12.5%	50.1%	18.6%	20.5%	10.8%	40.9%	23.0%	21.6%	14.5%

Source: Cancer Surveillance Program, Region 2, CCR, Sacramento, CA. January 2007 Quarterly Submission.  
 AAIR = Average annual age-adjusted incidence rates per 100,000 (2000 US Standard) for the five-year period.  
 AAMR = Average annual age-adjusted mortality rates per 100,000 (2000 US Standard) for the five-year period.  
 ^ = Rates based on fewer than 10 cases are not shown or not applicable for gender specific cancer sites.  
 Race/ethnicity categories are mutually exclusive; N/A = non-applicable.  
 Excludes in situ cases.

**Figure 1.** Age-adjusted incidence (AAIR) and mortality (AAMR) rates of all cancer sites combined, by year and sex, for Central Valley, California, 1988-2004.



# CANCER INCIDENCE AND MORTALITY IN THE CENTRAL VALLEY REGION, CALIFORNIA, 2000-2004

## BRAIN AND NERVOUS SYSTEM

**Table 2.** Number of new cases, deaths, percent of stage at diagnosis, annual average age-adjusted incidence and mortality rates of brain and nervous system cancer, by race, county, and sex, for Central Valley, California, 2000-2004.

Races / Counties	Total				Male				Female			
	Cases	AAIR	Deaths	AAMR	Cases	AAIR	Deaths	AAMR	Cases	AAIR	Deaths	AAMR
All races	856	6.4	528	4.2	470	7.3	304	5.1	386	5.6	224	3.4
NH White	571	7.6	399	5.1	324	9.2	218	6.0	247	6.2	181	4.3
NH Black	28	5.4	12	2.1	15	5.2	10	3.7	13	5.3	^	^
Hispanic	234	5.1	103	2.7	120	4.9	69	3.5	114	5.3	34	1.9
NH Asian/PI	19	2.8	14	2.2	^	^	^	^	10	2.7	^	^
Fresno	234	6.2	148	4.2	118	6.5	76	4.5	116	5.9	72	3.8
Kern	213	6.7	118	4.1	117	7.5	70	5.1	96	6.0	48	3.2
Kings	42	7.9	29	6.3	26	8.0	19	8.3	16	6.9	10	4.5
Madera	35	5.7	32	5.5	18	6.4	20	7.3	17	5.2	12	3.9
Merced	53	5.4	26	2.8	31	6.7	15	3.6	22	4.2	11	2.2
Stanislaus	156	7.1	103	5.0	79	7.6	53	5.6	77	6.6	50	4.5
Tulare	91	5.5	45	2.9	57	7.3	31	4.1	34	3.9	14	1.7
Tuolumne/Mariposa	32	7.2	25	7.4	24	10.5	19	10.6	^	^	^	^
Stage of Diagnosis	Local	Regional	Remote	N/A	Local	Regional	Remote	N/A	Local	Regional	Remote	N/A
All races	71.8%	19.6%	1.9%	6.7%	76.6%	18.5%	^	3.8%	66.1%	21.0%	2.8%	10.1%
NH White	72.3%	19.3%	^	7.4%	77.2%	19.1%	^	3.1%	66.0%	19.4%	^	13.0%
NH Black	78.6%	^	^	^	73.3%	^	^	^	84.6%	^	^	^
Hispanic	70.5%	21.4%	^	5.6%	77.5%	16.7%	^	^	63.2%	26.3%	^	^
NH Asian/PI	68.4%	^	^	^	^	^	^	^	^	^	^	^
Fresno	73.1%	19.2%	^	5.1%	78.8%	18.6%	^	^	67.2%	19.8%	^	9.5%
Kern	73.7%	16.9%	^	8.0%	79.5%	12.0%	^	^	66.7%	22.9%	^	^
Kings	66.7%	26.2%	^	^	65.4%	^	^	^	68.8%	^	^	^
Madera	57.1%	37.1%	^	^	^	^	^	^	70.6%	^	^	^
Merced	77.4%	^	^	^	77.4%	^	^	^	77.3%	^	^	^
Stanislaus	66.0%	20.5%	^	12.2%	73.4%	21.5%	^	^	58.4%	19.5%	^	19.5%
Tulare	75.8%	18.7%	^	^	78.9%	19.3%	^	^	70.6%	^	^	^
Tuolumne/Mariposa	81.3%	^	^	^	91.7%	^	^	^	^	^	^	^

Source: Cancer Surveillance Program, Region 2, CCR, Sacramento, CA. January 2007 Quarterly Submission.

AAIR = Average annual age-adjusted incidence rates per 100,000 (2000 US Standard) for the five-year period.

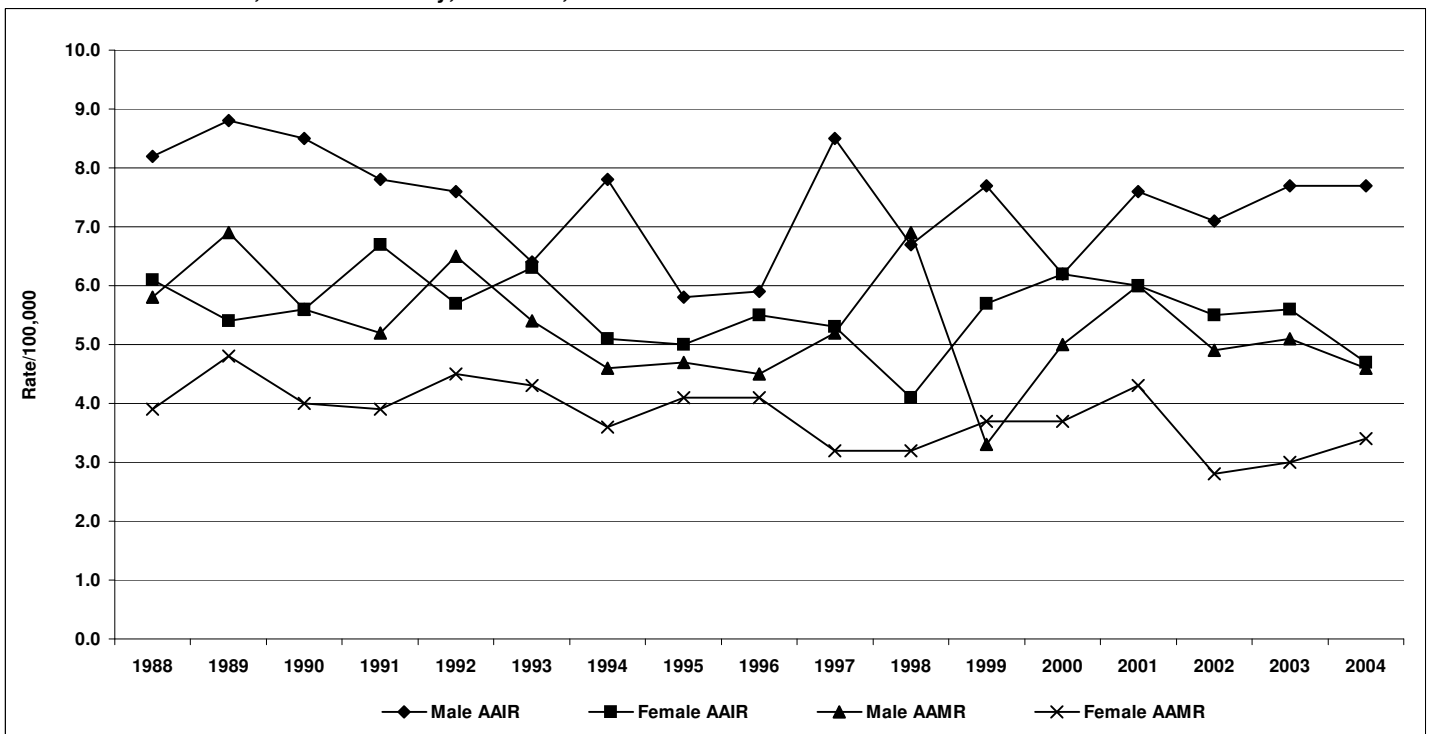
AAMR = Average annual age-adjusted mortality rates per 100,000 (2000 US Standard) for the five-year period.

^ = Rates or percentages based on fewer than 10 cases are not shown or not applicable for gender specific cancer sites.

Race/ethnicity categories are mutually exclusive; N/A = non-applicable.

Excludes in situ cases.

**Figure 2.** Age-adjusted incidence (AAIR) and mortality (AAMR) rates of brain and nervous system, by year and sex, for Central Valley, California, 1988-2004.





**CANCER INCIDENCE AND MORTALITY IN THE CENTRAL VALLEY REGION, CALIFORNIA, 2000-2004**

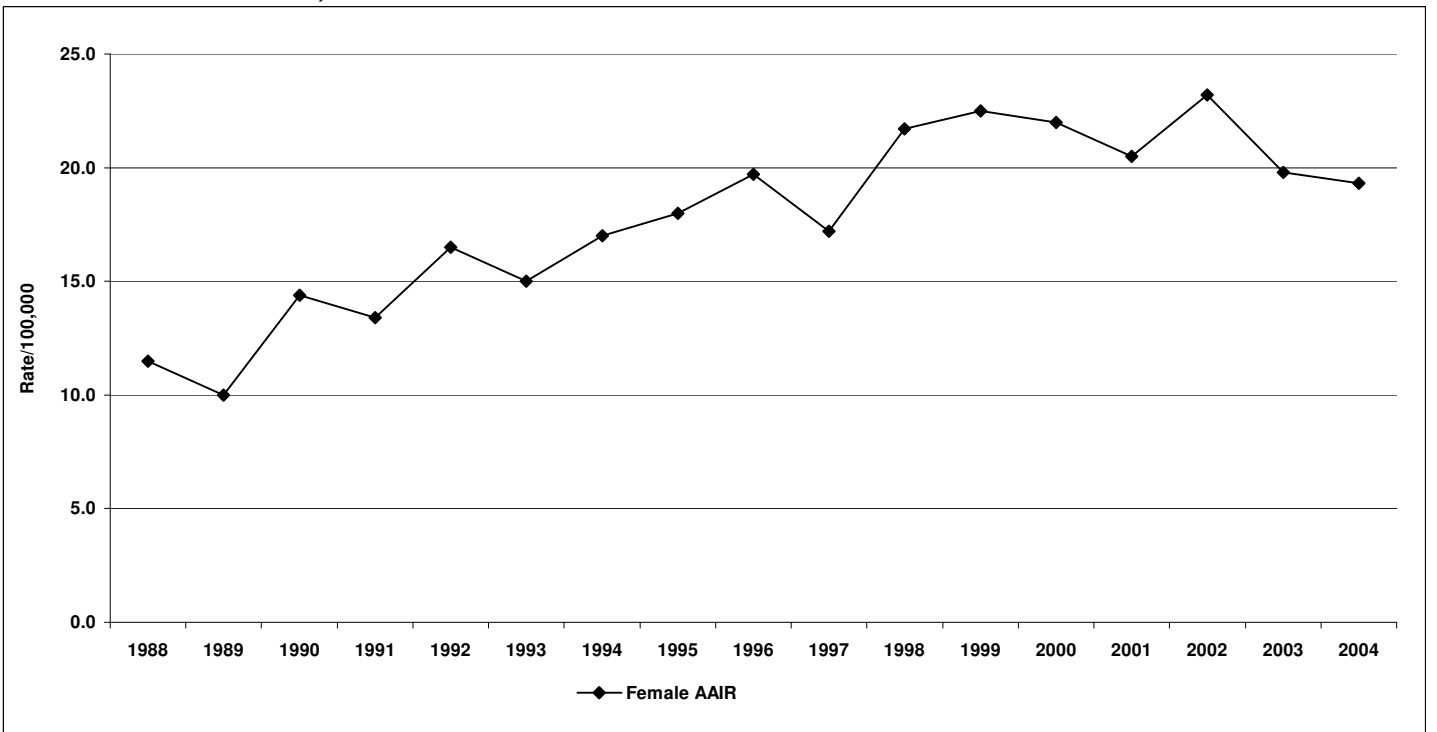
**BREAST (IN SITU)**

**Table 3.** Number of new cases, deaths, percent of stage at diagnosis, annual average age-adjusted incidence and mortality rates of in situ breast cancer by race, county, and sex, for Central Valley, California, 2000-2004.

Races / Counties	Total				Male				Female			
	Cases	AAIR	Deaths	AAMR	Cases	AAIR	Deaths	AAMR	Cases	AAIR	Deaths	AAMR
All races	1,363	21.0	^	^	^	^	^	^	1,363	21.0	^	^
NH White	1,018	23.8	^	^	^	^	^	^	1,018	23.8	^	^
NH Black	34	16.2	^	^	^	^	^	^	34	16.2	^	^
Hispanic	234	14.1	^	^	^	^	^	^	234	14.1	^	^
NH Asian/PI	50	14.8	^	^	^	^	^	^	50	14.8	^	^
Fresno	459	25.1	^	^	^	^	^	^	459	25.1	^	^
Kern	246	16.6	^	^	^	^	^	^	246	16.6	^	^
Kings	47	20.4	^	^	^	^	^	^	47	20.4	^	^
Madera	61	19.4	^	^	^	^	^	^	61	19.4	^	^
Merced	96	20.5	^	^	^	^	^	^	96	20.5	^	^
Stanislaus	222	20.2	^	^	^	^	^	^	222	20.2	^	^
Tulare	157	19.0	^	^	^	^	^	^	157	19.0	^	^
Tuolumne/Mariposa	75	30.8	^	^	^	^	^	^	75	30.8	^	^
<b>Stage of Diagnosis</b>		<b>In Situ</b>				<b>In Situ</b>				<b>In Situ</b>		
All races		100.0%				^				100.0%		
NH White		100.0%				^				100.0%		
NH Black		100.0%				^				100.0%		
Hispanic		100.0%				^				100.0%		
NH Asian/PI		100.0%				^				100.0%		
Fresno		100.0%				^				100.0%		
Kern		100.0%				^				100.0%		
Kings		100.0%				^				100.0%		
Madera		100.0%				^				100.0%		
Merced		100.0%				^				100.0%		
Stanislaus		100.0%				^				100.0%		
Tulare		100.0%				^				100.0%		
Tuolumne/Mariposa		100.0%				^				100.0%		

Source: Cancer Surveillance Program, Region 2, CCR, Sacramento, CA. January 2007 Quarterly Submission.  
 AAIR = Average annual age-adjusted incidence rates per 100,000 (2000 US Standard) for the five-year period.  
 AAMR = Average annual age-adjusted mortality rates per 100,000 (2000 US Standard) for the five-year period.  
 ^ = Rates based on fewer than 10 cases are not shown or not applicable for gender specific cancer sites.  
 Race/ethnicity categories are mutually exclusive; N/A = non-applicable.  
 Excludes invasive cases.

**Figure 3.** Age-adjusted incidence (AAIR) rate of in situ breast cancer, by year and sex, for Central Valley, California, 1988-2004.



# CANCER INCIDENCE AND MORTALITY IN THE CENTRAL VALLEY REGION, CALIFORNIA, 2000-2004

## BREAST (INVASIVE)

**Table 4.** Number of new cases, deaths, percent of diagnosis, annual average age-adjusted incidence and mortality rates of invasive breast cancer, by race, county, and sex, for Central Valley, California, 2000-2004.

Races / Counties	Total				Male				Female			
	Cases	AAIR	Deaths	AAMR	Cases	AAIR	Deaths	AAMR	Cases	AAIR	Deaths	AAMR
All races	7,842	63.7	1,597	24.5	50	0.9	^	^	7,792	119.3	1,597	24.5
NH White	5,869	72.9	1,235	27.5	38	1.1	^	^	5,831	134.6	1,235	27.5
NH Black	261	60.1	65	30.1	^	^	^	^	259	116.5	65	30.1
Hispanic	1,384	42.7	238	15.6	^	^	^	^	1,377	84.0	238	15.6
NH Asian/PI	224	35.8	59	17.4	^	^	^	^	222	66.3	59	17.4
Fresno	2,258	65.5	438	23.7	13	0.9	^	^	2,245	121.7	438	23.7
Kern	1,721	61.1	380	26.0	12	1.0	^	^	1,709	115.3	380	26.0
Kings	294	62.2	50	21.7	^	^	^	^	291	125.0	50	21.7
Madera	365	62.0	59	19.3	^	^	^	^	364	115.9	59	19.3
Merced	495	56.1	134	28.6	^	^	^	^	495	105.4	134	28.6
Stanislaus	1,378	67.2	273	24.8	^	^	^	^	1,369	123.4	273	24.8
Tulare	942	60.7	197	23.7	^	^	^	^	933	112.6	197	23.7
Tuolumne/Mariposa	389	79.7	49	26.4	^	^	^	^	386	154.0	49	26.4
Stage of Diagnosis	Local	Regional	Remote	N/A	Local	Regional	Remote	N/A	Local	Regional	Remote	N/A
All races	60.1%	32.8%	4.0%	3.1%	58.0%	34.0%	^	^	60.1%	32.8%	4.0%	3.1%
NH White	62.3%	30.6%	3.8%	3.3%	63.2%	28.9%	^	^	62.3%	30.6%	3.8%	3.3%
NH Black	53.3%	39.1%	5.0%	^	^	^	^	^	53.3%	39.0%	5.0%	^
Hispanic	53.0%	40.8%	4.8%	1.5%	^	^	^	^	52.9%	40.7%	4.8%	1.5%
NH Asian/PI	51.8%	41.5%	^	^	^	^	^	^	52.3%	41.0%	^	^
Fresno	58.5%	34.7%	4.5%	2.3%	^	^	^	^	58.5%	34.7%	4.5%	2.3%
Kern	59.9%	33.0%	3.8%	3.3%	^	^	^	^	60.0%	33.1%	3.8%	3.2%
Kings	59.0%	32.9%	5.1%	^	^	^	^	^	58.9%	32.9%	5.1%	^
Madera	57.0%	36.7%	3.8%	^	^	^	^	^	56.9%	36.8%	3.8%	^
Merced	57.6%	34.5%	4.6%	3.2%	^	^	^	^	57.6%	34.5%	4.6%	3.2%
Stanislaus	66.8%	27.0%	3.0%	3.2%	^	^	^	^	66.9%	26.8%	3.1%	3.2%
Tulare	58.0%	35.6%	4.7%	1.7%	^	^	^	^	58.0%	35.5%	4.7%	1.7%
Tuolumne/Mariposa	58.6%	28.3%	^	11.6%	^	^	^	^	58.3%	28.5%	^	11.7%

Source: Cancer Surveillance Program, Region 2, CCR, Sacramento, CA. January 2007 Quarterly Submission.

AAIR = Average annual age-adjusted incidence rates per 100,000 (2000 US Standard) for the five-year period.

AAMR = Average annual age-adjusted mortality rates per 100,000 (2000 US Standard) for the five-year period.

^ = Rates or percentages based on fewer than 10 cases are not shown or not applicable for gender specific cancer sites.

Race/ethnicity categories are mutually exclusive; N/A = non-applicable.

Excludes in situ cases.

**Figure 4.** Age-adjusted incidence (AAIR) and mortality (AAMR) rates of invasive breast cancer, by year and sex, for Central Valley, California, 1988-2004.



**CANCER INCIDENCE AND MORTALITY IN THE CENTRAL VALLEY REGION, CALIFORNIA, 2000-2004**

**UTERINE CERVIX**

**Table 5.** Number of new cases, deaths, percent of stage at diagnosis, annual average age-adjusted incidence and mortality rates of uterine cervix cancer, by race, county, and sex, for Central Valley, California, 2000-2004.

Races / Counties	Total				Male				Female			
	Cases	AAIR	Deaths	AAMR	Cases	AAIR	Deaths	AAMR	Cases	AAIR	Deaths	AAMR
All races	655	9.9	180	2.8	^	^	^	^	655	9.9	180	2.8
NH White	285	7.8	91	2.2	^	^	^	^	285	7.8	91	2.2
NH Black	29	11.5	13	5.6	^	^	^	^	29	11.5	13	5.6
Hispanic	297	14.9	67	3.7	^	^	^	^	297	14.9	67	3.7
NH Asian/PI	35	10.1	^	^	^	^	^	^	35	10.1	^	^
Fresno	184	9.9	59	3.3	^	^	^	^	184	9.9	59	3.3
Kern	172	11.3	42	2.8	^	^	^	^	172	11.3	42	2.8
Kings	23	9.2	^	^	^	^	^	^	23	9.2	^	^
Madera	45	13.7	^	^	^	^	^	^	45	13.7	^	^
Merced	39	7.8	10	2.0	^	^	^	^	39	7.8	10	2.0
Stanislaus	91	8.1	27	2.4	^	^	^	^	91	8.1	27	2.4
Tulare	89	10.7	27	3.3	^	^	^	^	89	10.7	27	3.3
Tuolumne/Mariposa	^	^	^	^	^	^	^	^	^	^	^	^
Stage of Diagnosis	Local	Regional	Remote	N/A	Local	Regional	Remote	N/A	Local	Regional	Remote	N/A
All races	50.4%	35.3%	10.1%	4.3%	^	^	^	^	50.4%	35.3%	10.1%	4.3%
NH White	54.7%	29.8%	11.2%	4.2%	^	^	^	^	54.7%	29.8%	11.2%	4.2%
NH Black	62.1%	^	^	^	^	^	^	^	62.1%	^	^	^
Hispanic	47.1%	39.7%	9.1%	4.0%	^	^	^	^	47.1%	39.7%	9.1%	4.0%
NH Asian/PI	28.6%	54.3%	^	^	^	^	^	^	28.6%	54.3%	^	^
Fresno	48.9%	41.8%	8.7%	^	^	^	^	^	48.9%	41.8%	8.7%	^
Kern	53.5%	34.3%	11.0%	^	^	^	^	^	53.5%	34.3%	11.0%	^
Kings	47.8%	^	^	^	^	^	^	^	47.8%	^	^	^
Madera	57.8%	24.4%	^	^	^	^	^	^	57.8%	24.4%	^	^
Merced	59.0%	^	^	^	^	^	^	^	59.0%	^	^	^
Stanislaus	49.5%	33.0%	12.1%	^	^	^	^	^	49.5%	33.0%	12.1%	^
Tulare	42.7%	37.1%	^	11.2%	^	^	^	^	42.7%	37.1%	^	11.2%
Tuolumne/Mariposa	^	^	^	^	^	^	^	^	^	^	^	^

Source: Cancer Surveillance Program, Region 2, CCR, Sacramento, CA. January 2007 Quarterly Submission.

AAIR = Average annual age-adjusted incidence rates per 100,000 (2000 US Standard) for the five-year period.

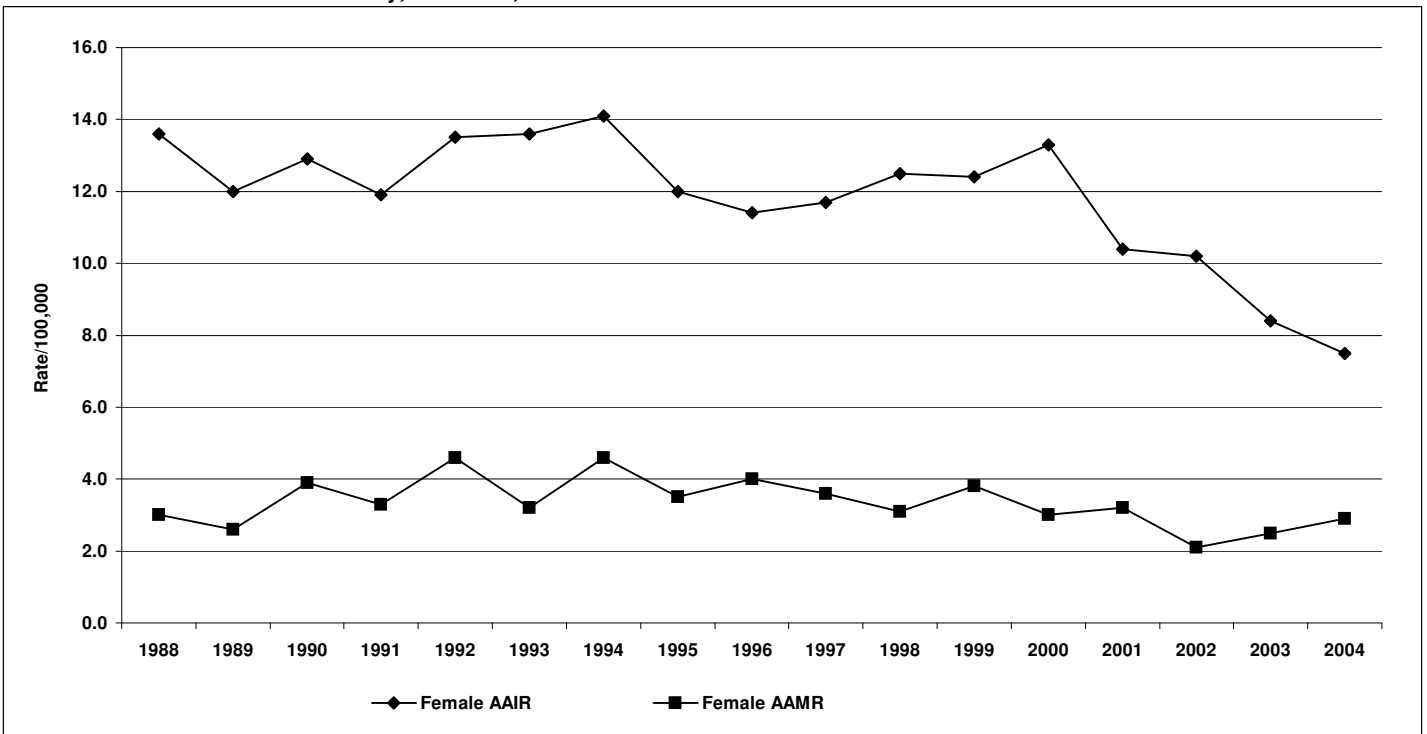
AAMR = Average annual age-adjusted mortality rates per 100,000 (2000 US Standard) for the five-year period.

^ = Rates or percentages based on fewer than 10 cases are not shown or not applicable for gender specific cancer sites.

Race/ethnicity categories are mutually exclusive; N/A = non-applicable.

Excludes in situ cases.

**Figure 5.** Age-adjusted incidence (AAIR) and mortality (AAMR) rates of uterine cervix cancer, by year and sex, for Central Valley, California, 1988-2004.



# CANCER INCIDENCE AND MORTALITY IN THE CENTRAL VALLEY REGION, CALIFORNIA, 2000-2004

## COLON (EXCLUDING RECTUM)

**Table 6.** Number of new cases, deaths, percent of stage at diagnosis, annual average age-adjusted incidence and mortality rates of colon cancer, by race, county, and sex, for Central Valley, California, 2000-2004.

Races / Counties	Total				Male				Female			
	Cases	AAIR	Deaths	AAMR	Cases	AAIR	Deaths	AAMR	Cases	AAIR	Deaths	AAMR
All races	3,898	32.9	1,681	14.4	1,969	37.9	889	17.5	1,929	29.0	792	11.9
NH White	2,944	35.1	1,290	15.3	1,460	40.9	662	18.7	1,484	30.9	628	12.7
NH Black	153	39.6	74	21.0	78	43.5	39	24.8	75	36.8	35	18.2
Hispanic	654	25.9	251	10.4	355	28.6	144	12.2	299	23.2	107	8.7
NH Asian/PI	122	21.7	66	11.7	63	25.4	44	16.9	59	18.7	22	7.3
Fresno	1,079	32.0	443	13.3	532	36.6	232	16.3	547	28.6	211	10.9
Kern	890	33.3	433	16.7	454	37.9	222	19.2	436	29.6	211	14.5
Kings	123	29.2	54	13.0	58	29.8	31	16.8	65	28.4	23	10.1
Madera	192	33.4	70	12.5	89	33.2	35	13.4	103	33.3	35	11.4
Merced	279	33.8	125	15.3	151	42.5	82	23.6	128	27.2	43	9.3
Stanislaus	678	34.2	289	14.6	352	41.7	150	18.2	326	28.7	139	12.2
Tulare	479	31.7	196	13.2	238	36.1	102	15.8	241	28.3	94	10.9
Tuolumne/Mariposa	178	35.6	53	13.5	95	40.9	24	13.2	83	31.3	29	13.4
Stage of Diagnosis	Local	Regional	Remote	N/A	Local	Regional	Remote	N/A	Local	Regional	Remote	N/A
All races	38.1%	38.2%	19.0%	4.7%	39.9%	36.7%	18.3%	5.0%	36.2%	39.7%	19.7%	4.4%
NH White	39.3%	37.8%	18.4%	4.6%	41.0%	36.6%	18.0%	4.5%	37.7%	38.9%	18.7%	4.6%
NH Black	32.7%	41.2%	18.3%	7.8%	31.4%	34.3%	20.0%	14.3%	41.8%	37.3%	20.9%	^
Hispanic	35.8%	38.6%	20.8%	4.7%	39.3%	35.6%	19.5%	5.6%	31.8%	42.1%	22.4%	3.7%
NH Asian/PI	28.3%	44.2%	27.5%	^	32.7%	40.0%	27.3%	^	34.8%	26.1%	39.1%	^
Fresno	34.9%	43.0%	19.2%	2.9%	38.2%	40.8%	18.6%	2.4%	31.8%	45.2%	19.7%	3.3%
Kern	33.9%	39.3%	20.4%	6.3%	34.4%	39.2%	19.8%	6.6%	33.5%	39.4%	21.1%	6.0%
Kings	42.3%	30.1%	19.5%	8.1%	39.7%	27.6%	24.1%	^	44.6%	32.3%	15.4%	^
Madera	36.5%	41.7%	19.3%	^	42.7%	37.1%	18.0%	^	31.1%	45.6%	20.4%	^
Merced	41.4%	32.0%	18.7%	7.9%	42.0%	30.7%	16.7%	10.7%	40.6%	33.6%	21.1%	^
Stanislaus	43.1%	35.3%	17.1%	4.6%	45.2%	34.7%	15.3%	4.8%	40.8%	35.9%	19.0%	4.3%
Tulare	41.3%	35.3%	19.0%	4.4%	42.9%	32.4%	20.2%	4.6%	39.8%	38.2%	17.8%	4.1%
Tuolumne/Mariposa	43.8%	33.7%	18.0%	^	43.2%	35.8%	15.8%	^	44.6%	31.3%	20.5%	^

Source: Cancer Surveillance Program, Region 2, CCR, Sacramento, CA. January 2007 Quarterly Submission.

AAIR = Average annual age-adjusted incidence rates per 100,000 (2000 US Standard) for the five-year period.

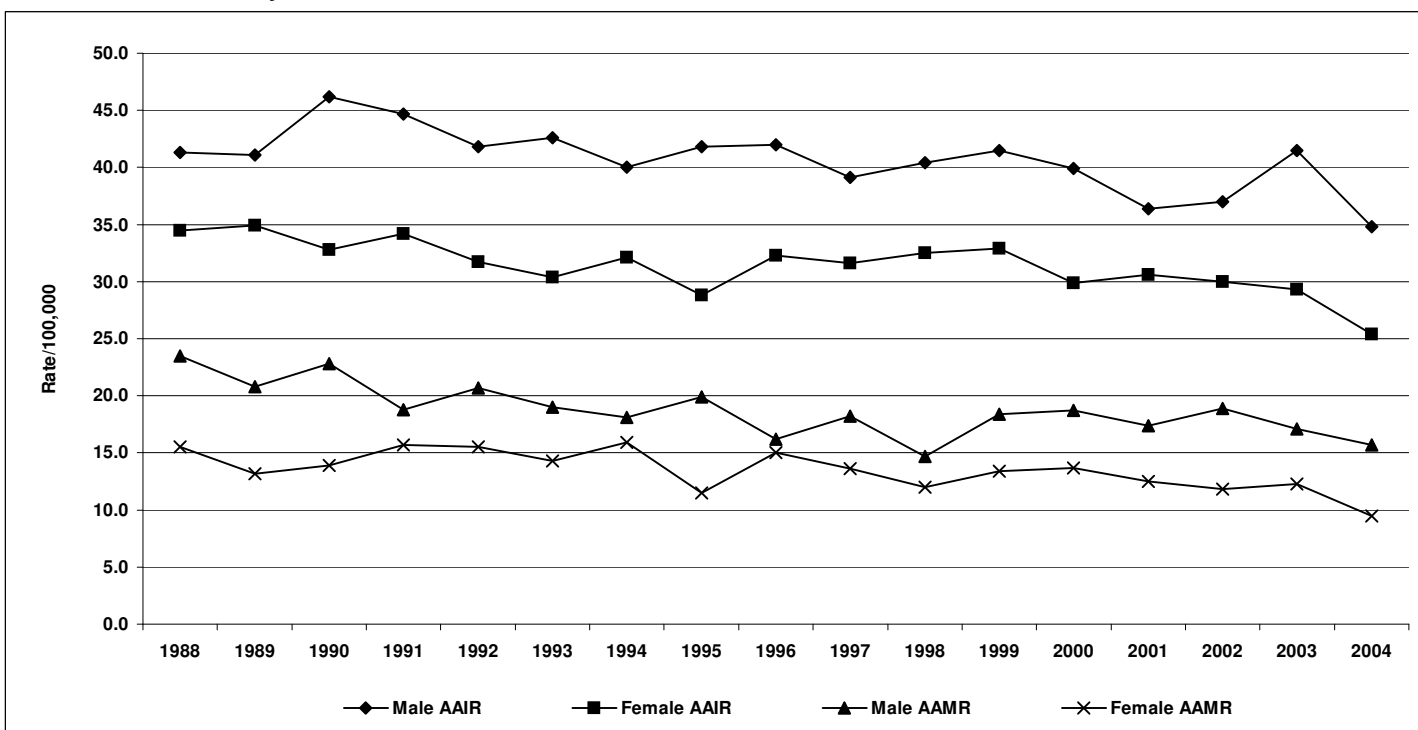
AAMR = Average annual age-adjusted mortality rates per 100,000 (2000 US Standard) for the five-year period.

^ = Rates or percentages based on fewer than 10 cases are not shown or not applicable for gender specific cancer sites.

Race/ethnicity categories are mutually exclusive; N/A = non-applicable.

Excludes in situ cases.

**Figure 6.** Age-adjusted incidence (AAIR) and mortality (AAMR) rates of colon cancer, by year and sex, for Central Valley, California, 1988-2004.



CANCER INCIDENCE AND MORTALITY IN THE CENTRAL VALLEY REGION, CALIFORNIA, 2000-2004

COLON AND RECTUM (IN SITU)

**Table 7.** Number of new cases, deaths, percent of stage at diagnosis, annual average age-adjusted incidence and mortality rates of in situ colon and rectum cancer, by race/ethnicity, and county, for Central Valley, California, 2000-2004.

Races / Counties	Total				Male				Female			
	Cases	AAIR	Deaths	AAMR	Cases	AAIR	Deaths	AAMR	Cases	AAIR	Deaths	AAMR
All races	245	2.0	^	^	158	2.9	^	^	87	1.3	^	^
NH White	183	2.2	^	^	116	3.2	^	^	67	1.4	^	^
NH Black	^	^	^	^	^	^	^	^	^	^	^	^
Hispanic	37	1.3	^	^	21	1.7	^	^	16	1.0	^	^
NH Asian/PI	11	1.9	^	^	^	^	^	^	^	^	^	^
Fresno	59	1.7	^	^	30	2.0	^	^	29	1.6	^	^
Kern	59	2.2	^	^	38	3.0	^	^	21	1.4	^	^
Kings	^	^	^	^	^	^	^	^	^	^	^	^
Madera	11	1.9	^	^	^	^	^	^	^	^	^	^
Merced	20	2.2	^	^	18	4.4	^	^	^	^	^	^
Stanislaus	32	1.6	^	^	18	2.1	^	^	14	1.2	^	^
Tulare	41	2.7	^	^	31	4.7	^	^	10	1.1	^	^
Tuolumne/Mariposa	21	4.1	^	^	14	5.7	^	^	^	^	^	^
<b>Stage of Diagnosis</b>		<b>In Situ</b>				<b>In Situ</b>				<b>In Situ</b>		
All races		100.0%				100.0%				100.0%		
NH White		100.0%				100.0%				100.0%		
NH Black		100.0%				100.0%				100.0%		
Hispanic		100.0%				100.0%				100.0%		
NH Asian/PI		100.0%				100.0%				100.0%		
Fresno		100.0%				100.0%				100.0%		
Kern		100.0%				100.0%				100.0%		
Kings		100.0%				100.0%				100.0%		
Madera		100.0%				100.0%				100.0%		
Merced		100.0%				100.0%				100.0%		
Stanislaus		100.0%				100.0%				100.0%		
Tulare		100.0%				100.0%				100.0%		
Tuolumne/Mariposa		100.0%				100.0%				100.0%		

Source: Cancer Surveillance Program, Region 2, CCR, Sacramento, CA. January 2007 Quarterly Submission.

AAIR = Average annual age-adjusted incidence rates per 100,000 (2000 US Standard) for the five-year period.

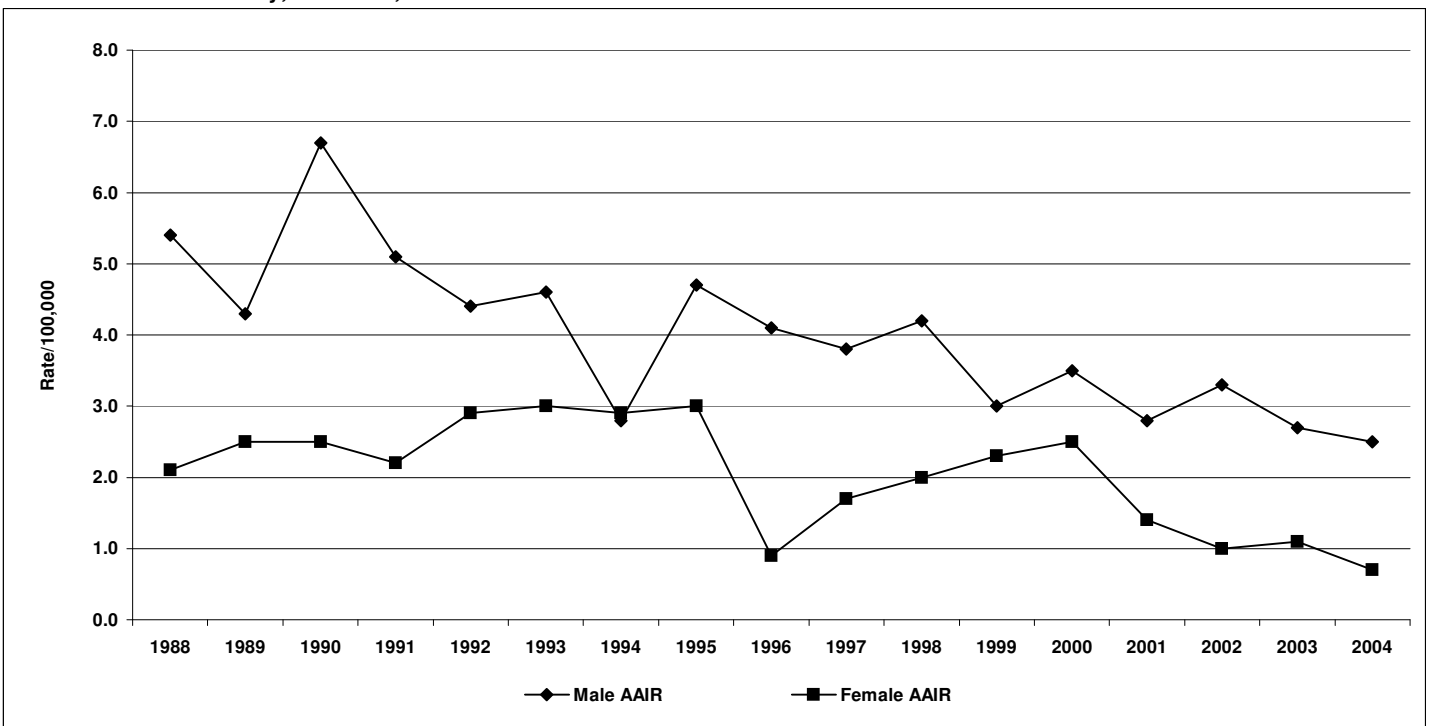
AAMR = Average annual age-adjusted mortality rates per 100,000 (2000 US Standard) for the five-year period.

^ = Rates or percentages based on fewer than 10 cases are not shown or not applicable for gender specific cancer sites.

Race/ethnicity categories are mutually exclusive; N/A = non-applicable.

Excludes invasive cases.

**Figure 7.** Age-adjusted incidence (AAIR) rates of in situ colon and rectum cancer, by year and sex, for Central Valley, California, 1988-2004.



# CANCER INCIDENCE AND MORTALITY IN THE CENTRAL VALLEY REGION, CALIFORNIA, 2000-2004

## COLON AND RECTUM

**Table 8.** Number of new cases, deaths, percent of stage at diagnosis, annual average age-adjusted incidence and mortality rates of invasive colon and rectum cancer, by race, county, and sex, for Central Valley, California, 2000-2004.

Races / Counties	Total				Male				Female			
	Cases	AAIR	Deaths	AAMR	Cases	AAIR	Deaths	AAMR	Cases	AAIR	Deaths	AAMR
All races	5,579	46.8	2,073	17.7	2,974	56.3	1,108	21.7	2,605	39.3	965	14.5
NH White	4,109	49.4	1,587	18.9	2,147	59.8	812	22.9	1,962	41.4	775	15.7
NH Black	209	53.9	88	24.7	111	59.9	46	28.9	98	48.5	42	21.7
Hispanic	1,000	38.0	314	12.7	571	44.4	194	16.1	429	32.1	120	9.6
NH Asian/PI	210	37.0	84	14.9	119	47.0	56	21.8	91	28.8	28	9.1
Fresno	1,535	45.5	521	15.6	797	54.2	270	18.8	738	38.7	251	13.0
Kern	1,286	47.7	532	20.4	690	56.5	281	24.1	596	40.5	251	17.3
Kings	189	43.4	72	17.0	108	52.9	43	22.4	81	35.1	29	12.8
Madera	266	46.2	87	15.5	140	52.1	42	16.3	126	40.6	45	14.7
Merced	399	47.8	157	19.2	226	62.1	102	29.3	173	36.8	55	11.8
Stanislaus	959	48.1	370	18.7	512	59.4	192	23.0	447	39.4	178	15.8
Tulare	696	46.0	244	16.4	364	54.9	130	19.9	332	39.2	114	13.1
Tuolumne/Mariposa	249	49.6	66	16.8	137	58.4	31	16.9	112	42.1	35	16.1
Stage of Diagnosis	Local	Regional	Remote	N/A	Local	Regional	Remote	N/A	Local	Regional	Remote	N/A
All races	39.6%	36.7%	18.5%	5.2%	40.7%	35.6%	18.5%	5.2%	38.3%	38.0%	18.5%	5.2%
NH White	40.6%	36.0%	18.1%	5.3%	42.0%	35.0%	18.1%	4.9%	39.1%	37.2%	18.0%	5.7%
NH Black	34.9%	37.8%	19.1%	8.1%	31.5%	36.9%	19.8%	11.7%	38.8%	38.8%	18.4%	^
Hispanic	37.9%	37.9%	19.9%	4.3%	39.1%	36.4%	19.8%	4.7%	36.4%	39.9%	20.0%	3.7%
NH Asian/PI	30.5%	45.2%	21.9%	^	30.3%	45.4%	21.0%	^	30.8%	45.1%	23.1%	^
Fresno	37.2%	40.7%	19.3%	2.9%	39.5%	39.1%	18.9%	2.4%	34.7%	42.3%	19.6%	3.4%
Kern	35.3%	38.4%	19.1%	7.2%	36.4%	36.7%	19.4%	7.5%	34.1%	40.4%	18.8%	6.7%
Kings	42.3%	31.2%	19.0%	7.4%	39.8%	31.5%	22.2%	^	45.7%	30.9%	14.8%	^
Madera	39.5%	38.0%	19.2%	^	43.6%	32.9%	20.0%	^	34.9%	43.7%	18.3%	^
Merced	40.9%	32.3%	18.3%	8.5%	38.5%	31.9%	18.6%	11.1%	43.9%	32.9%	17.9%	^
Stanislaus	44.2%	33.3%	17.1%	5.4%	45.9%	33.6%	15.6%	4.9%	42.3%	32.9%	18.8%	6.0%
Tulare	42.7%	34.9%	17.8%	4.6%	43.4%	33.8%	18.7%	4.1%	41.9%	36.1%	16.9%	5.1%
Tuolumne/Mariposa	45.8%	32.1%	17.3%	4.8%	43.1%	35.0%	17.5%	^	49.1%	28.6%	17.0%	^

Source: Cancer Surveillance Program, Region 2, CCR, Sacramento, CA. January 2007 Quarterly Submission.

AAIR = Average annual age-adjusted incidence rates per 100,000 (2000 US Standard) for the five-year period.

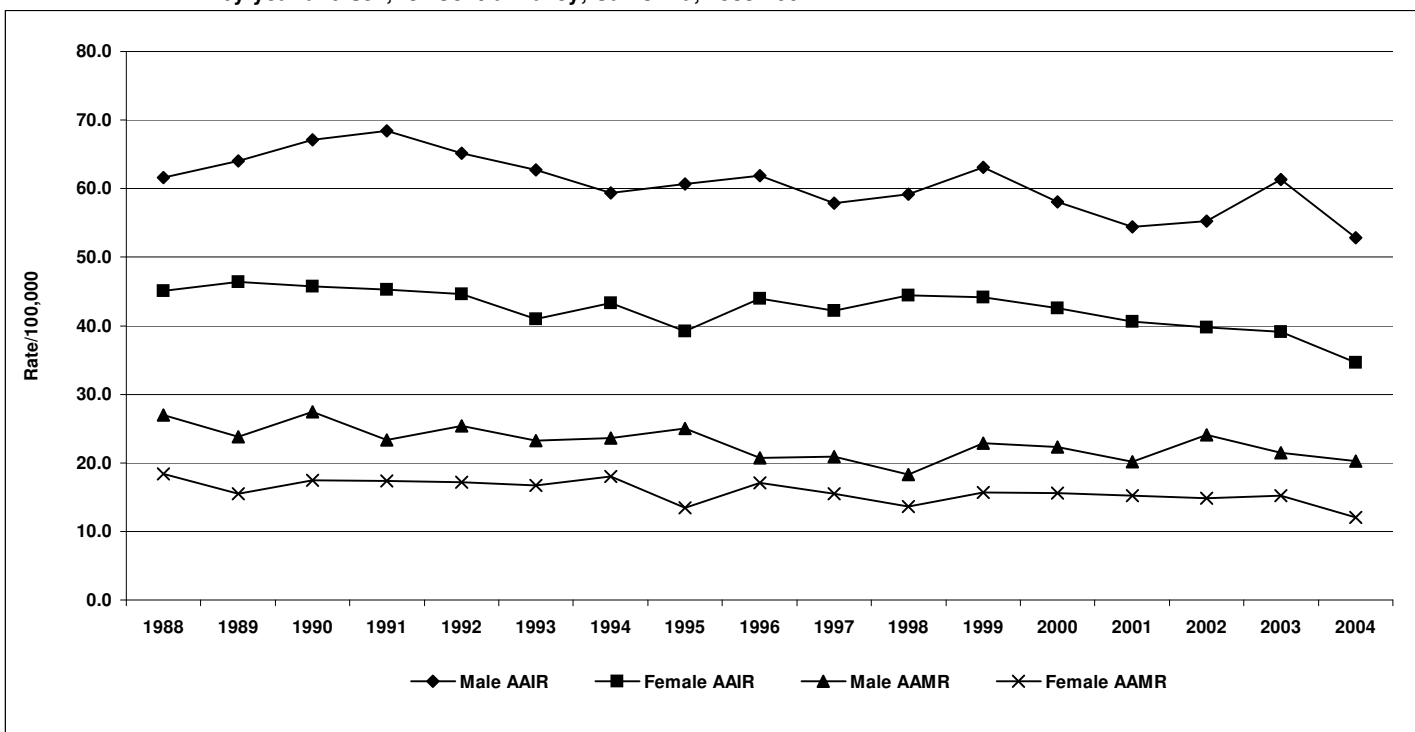
AAMR = Average annual age-adjusted mortality rates per 100,000 (2000 US Standard) for the five-year period.

^ = Rates or percentages based on fewer than 10 cases are not shown or not applicable for gender specific cancer sites.

Race/ethnicity categories are mutually exclusive; N/A = non-applicable.

Excludes in situ cases.

**Figure 8.** Age-adjusted incidence (AAIR) and mortality (AAMR) rates of invasive colon and rectum cancer, by year and sex, for Central Valley, California, 1988-2004.



# CANCER INCIDENCE AND MORTALITY IN THE CENTRAL VALLEY REGION, CALIFORNIA, 2000-2004

## UTERINE CORPUS

**Table 9.** Number of new cases, deaths, percent of stage at diagnosis, annual average age-adjusted incidence and mortality rates of uterine corpus cancer, by race, county, and sex, for Central Valley, California, 2000-2004.

Races / Counties	Total				Male				Female			
	Cases	AAIR	Deaths	AAMR	Cases	AAIR	Deaths	AAMR	Cases	AAIR	Deaths	AAMR
All races	1,279	19.6	223	3.4	^	^	^	^	1,279	19.6	223	3.4
NH White	928	21.1	161	3.3	^	^	^	^	928	21.1	161	3.3
NH Black	33	16.3	12	5.8	^	^	^	^	33	16.3	12	5.8
Hispanic	264	16.7	42	3.1	^	^	^	^	264	16.7	42	3.1
NH Asian/PI	40	11.8	^	^	^	^	^	^	40	11.8	^	^
Fresno	335	18.1	67	3.6	^	^	^	^	335	18.1	67	3.6
Kern	315	21.3	50	3.4	^	^	^	^	315	21.3	50	3.4
Kings	52	23.0	11	4.7	^	^	^	^	52	23.0	11	4.7
Madera	75	23.7	15	4.8	^	^	^	^	75	23.7	15	4.8
Merced	90	19.2	10	2.2	^	^	^	^	90	19.2	10	2.2
Stanislaus	197	17.7	34	3.0	^	^	^	^	197	17.7	34	3.0
Tulare	154	18.6	26	3.1	^	^	^	^	154	18.6	26	3.1
Tuolumne/Mariposa	61	24.2	^	^	^	^	^	^	61	24.2	^	^
Stage of Diagnosis	Local	Regional	Remote	N/A	Local	Regional	Remote	N/A	Local	Regional	Remote	N/A
All races	68.1%	18.3%	8.6%	5.0%	^	^	^	^	68.1%	18.3%	8.6%	5.0%
NH White	68.8%	17.7%	8.5%	5.1%	^	^	^	^	68.8%	17.7%	8.5%	5.1%
NH Black	63.6%	^	^	^	^	^	^	^	63.6%	^	^	^
Hispanic	68.6%	21.6%	7.6%	^	^	^	^	^	68.6%	21.6%	7.6%	^
NH Asian/PI	60.0%	^	^	^	^	^	^	^	60.0%	^	^	^
Fresno	68.7%	19.4%	9.9%	^	^	^	^	^	68.7%	19.4%	9.9%	^
Kern	71.1%	14.0%	7.6%	7.3%	^	^	^	^	71.1%	14.0%	7.6%	7.3%
Kings	69.2%	^	^	^	^	^	^	^	69.2%	^	^	^
Madera	68.0%	17.3%	^	^	^	^	^	^	68.0%	17.3%	^	^
Merced	60.0%	24.4%	11.1%	^	^	^	^	^	60.0%	24.4%	11.1%	^
Stanislaus	69.0%	19.3%	8.6%	^	^	^	^	^	69.0%	19.3%	8.6%	^
Tulare	64.9%	22.1%	6.5%	6.5%	^	^	^	^	64.9%	22.1%	6.5%	6.5%
Tuolumne/Mariposa	65.6%	16.4%	^	^	^	^	^	^	65.6%	16.4%	^	^

Source: Cancer Surveillance Program, Region 2, CCR, Sacramento, CA. January 2007 Quarterly Submission.

AAIR = Average annual age-adjusted incidence rates per 100,000 (2000 US Standard) for the five-year period.

AAMR = Average annual age-adjusted mortality rates per 100,000 (2000 US Standard) for the five-year period.

^ = Rates or percentages based on fewer than 10 cases are not shown or not applicable for gender specific cancer sites.

Race/ethnicity categories are mutually exclusive; N/A = non-applicable.

Excludes in situ cases.

**Figure 9.** Age-adjusted incidence (AAIR) and mortality (AAMR) rates of uterine corpus cancer, by year and sex, for Central Valley, California, 1988-2004.



# CANCER INCIDENCE AND MORTALITY IN THE CENTRAL VALLEY REGION, CALIFORNIA, 2000-2004

## ESOPHAGUS

**Table 10.** Number of new cases, deaths, percent of stage at diagnosis, annual average age-adjusted incidence and mortality rates of esophageal cancer, by race, county, and sex, for Central Valley, California, 2000-2004.

Races / Counties	Total				Male				Female			
	Cases	AAIR	Deaths	AAMR	Cases	AAIR	Deaths	AAMR	Cases	AAIR	Deaths	AAMR
All races	517	4.3	460	3.9	399	7.5	362	6.9	118	1.8	98	1.5
NH White	411	5.0	365	4.4	317	8.7	285	7.8	94	2.0	80	1.7
NH Black	27	7.2	26	7.2	19	12.0	20	13.6	8	4.0	^	^
Hispanic	64	2.6	60	2.3	50	4.2	48	3.8	14	1.2	12	0.9
NH Asian/PI	10	1.8	^	^	^	^	^	^	2	0.6	^	^
Fresno	131	3.9	129	3.9	102	7.0	104	7.2	29	1.5	25	1.3
Kern	106	3.9	101	3.7	89	7.3	80	6.4	17	1.2	21	1.5
Kings	19	4.5	17	4.0	14	6.8	13	6.5	^	^	^	^
Madera	24	4.1	19	3.4	20	7.4	14	5.4	^	^	^	^
Merced	36	4.1	27	3.2	25	6.4	19	4.8	11	2.3	^	^
Stanislaus	98	4.8	86	4.3	76	8.7	70	7.9	22	1.9	16	1.4
Tulare	83	5.5	66	4.4	58	8.6	50	7.6	25	3.1	16	2.0
Tuolumne/Mariposa	20	3.9	13	3.4	15	6.1	11	6.7	^	^	^	^
Stage of Diagnosis	Local	Regional	Remote	N/A	Local	Regional	Remote	N/A	Local	Regional	Remote	N/A
All races	24.8%	26.9%	29.0%	19.3%	24.1%	27.3%	30.6%	18.0%	27.1%	25.4%	23.7%	23.7%
NH White	24.1%	26.0%	28.7%	21.2%	23.0%	26.2%	31.5%	19.2%	27.7%	25.5%	19.1%	27.7%
NH Black	^	^	^	^	^	^	^	^	^	^	^	^
Hispanic	26.6%	32.8%	32.8%	^	28.0%	36.0%	26.0%	^	^	^	^	^
NH Asian/PI	^	^	^	^	^	^	^	^	^	^	^	^
Fresno	25.2%	32.8%	28.2%	13.7%	25.5%	33.3%	27.5%	13.7%	^	^	^	^
Kern	20.8%	19.8%	25.5%	34.0%	20.2%	19.1%	29.2%	31.5%	^	^	^	^
Kings	^	^	^	^	^	^	^	^	^	^	^	^
Madera	^	^	41.7%	^	^	^	^	^	^	^	^	^
Merced	^	^	44.4%	^	^	^	^	^	^	^	^	^
Stanislaus	26.5%	28.6%	25.5%	19.4%	25.0%	30.3%	28.9%	15.8%	^	^	^	^
Tulare	30.1%	27.7%	31.3%	^	29.3%	22.4%	36.2%	^	^	40.0%	^	^
Tuolumne/Mariposa	^	^	^	^	^	^	^	^	^	^	^	^

Source: Cancer Surveillance Program, Region 2, CCR, Sacramento, CA. January 2007 Quarterly Submission.

AAIR = Average annual age-adjusted incidence rates per 100,000 (2000 US Standard) for the five-year period.

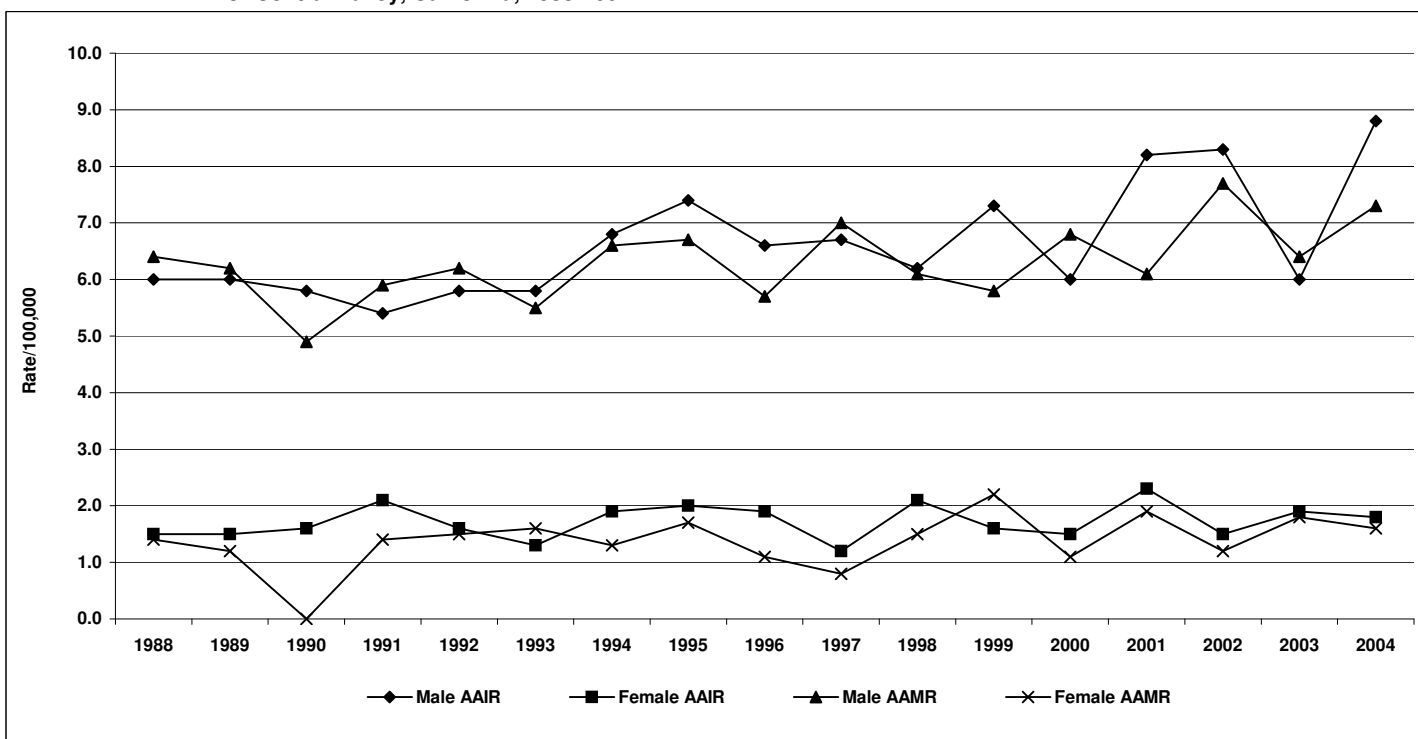
AAMR = Average annual age-adjusted mortality rates per 100,000 (2000 US Standard) for the five-year period.

^ = Rates or percentages based on fewer than 10 cases are not shown or not applicable for gender specific cancer sites.

Race/ethnicity categories are mutually exclusive; N/A = non-applicable.

Excludes in situ cases.

**Figure 10.** Age-adjusted incidence (AAIR) and mortality (AAMR) rates of esophageal cancer, by year and sex, for Central Valley, California, 1988-2004.





# CANCER INCIDENCE AND MORTALITY IN THE CENTRAL VALLEY REGION, CALIFORNIA, 2000-2004

## GALLBLADDER

**Table 11.** Number of new cases, deaths, percent of stage at diagnosis, annual average age-adjusted incidence and mortality rates of gallbladder cancer, by race, county, and sex, for Central Valley, California, 2000-2004.

Races / Counties	Total				Male				Female			
	Cases	AAIR	Deaths	AAMR	Cases	AAIR	Deaths	AAMR	Cases	AAIR	Deaths	AAMR
All races	142	1.2	82	0.7	39	0.8	26	0.5	103	1.6	56	0.9
NH White	70	0.8	53	0.6	18	0.5	13	0.4	52	1.1	40	0.9
NH Black	^	^	^	^	^	^	^	^	^	^	^	^
Hispanic	58	2.5	25	1.1	15	1.5	10	1.0	43	3.4	15	1.2
NH Asian/PI	11	1.8	^	^	^	^	^	^	^	^	^	^
Fresno	41	1.2	20	0.6	10	0.7	^	^	31	1.7	16	0.9
Kern	34	1.3	13	0.5	^	^	^	^	25	1.7	^	^
Kings	^	^	^	^	^	^	^	^	^	^	^	^
Madera	^	^	^	^	^	^	^	^	^	^	^	^
Merced	10	1.2	^	^	^	^	^	^	^	^	^	^
Stanislaus	22	1.1	15	0.8	^	^	^	^	15	1.3	^	^
Tulare	24	1.6	19	1.3	^	^	^	^	15	1.7	12	1.4
Tuolumne/Mariposa	^	^	^	^	^	^	^	^	^	^	^	^
Stage of Diagnosis	Local	Regional	Remote	N/A	Local	Regional	Remote	N/A	Local	Regional	Remote	N/A
All races	14.1%	36.6%	46.5%	^	^	35.9%	51.3%	^	14.6%	36.9%	44.7%	^
NH White	14.3%	32.9%	50.0%	^	^	^	^	^	^	30.8%	50.0%	^
NH Black	^	^	^	^	^	^	^	^	^	^	^	^
Hispanic	^	37.9%	46.6%	^	^	^	^	^	^	41.9%	41.9%	^
NH Asian/PI	^	^	^	^	^	^	^	^	^	^	^	^
Fresno	^	43.9%	39.0%	^	^	^	^	^	^	38.7%	38.7%	^
Kern	^	35.3%	44.1%	^	^	^	^	^	^	^	40.0%	^
Kings	^	^	^	^	^	^	^	^	^	^	^	^
Madera	^	^	^	^	^	^	^	^	^	^	^	^
Merced	^	^	^	^	^	^	^	^	^	^	^	^
Stanislaus	^	^	54.5%	^	^	^	^	^	^	^	^	^
Tulare	^	^	70.8%	^	^	^	^	^	^	^	66.7%	^
Tuolumne/Mariposa	^	^	^	^	^	^	^	^	^	^	^	^

Source: Cancer Surveillance Program, Region 2, CCR, Sacramento, CA. January 2007 Quarterly Submission.

AAIR = Average annual age-adjusted incidence rates per 100,000 (2000 US Standard) for the five-year period.

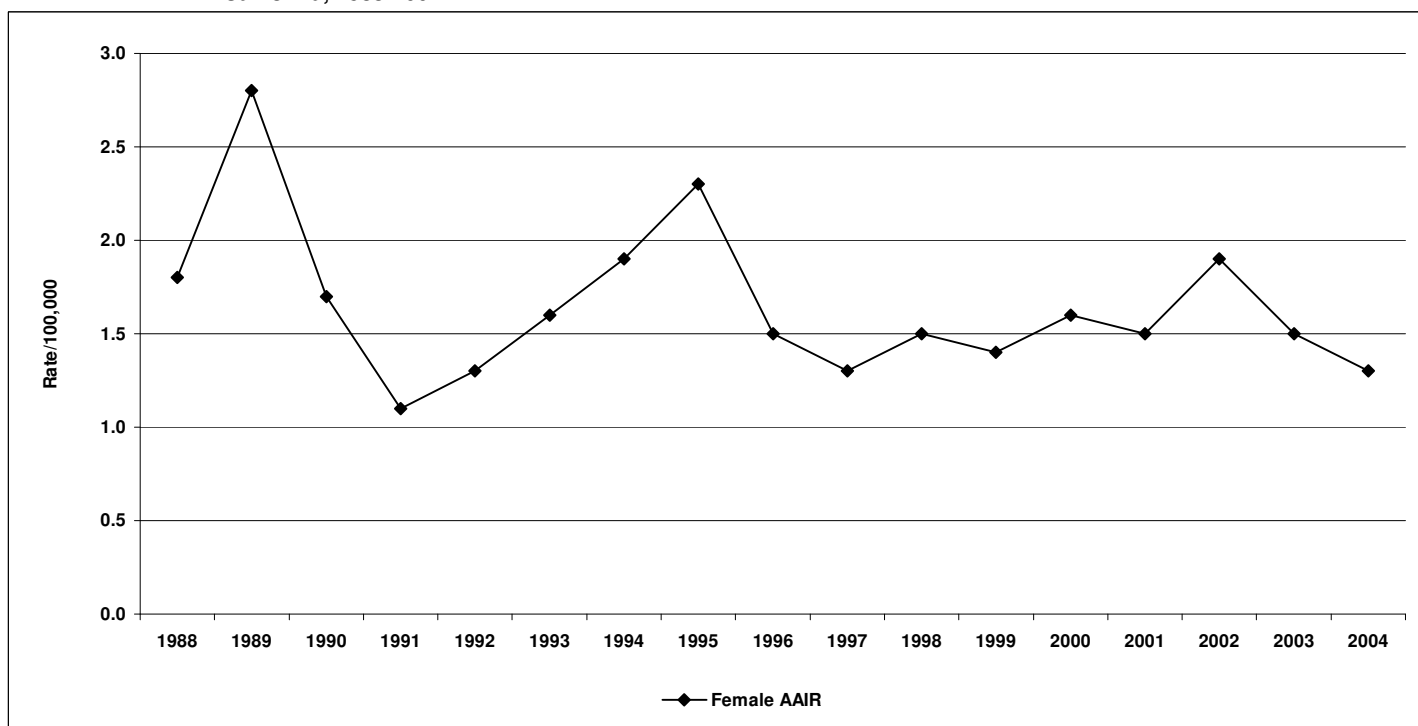
AAMR = Average annual age-adjusted mortality rates per 100,000 (2000 US Standard) for the five-year period.

^ = Rates or percentages based on fewer than 10 cases are not shown or not applicable for gender specific cancer sites.

Race/ethnicity categories are mutually exclusive; N/A = non-applicable.

Excludes in situ cases.

**Figure 11.** Age-adjusted incidence (AAIR) rates of gallbladder cancer, by year and sex, for Central Valley, California, 1988-2004.



# CANCER INCIDENCE AND MORTALITY IN THE CENTRAL VALLEY REGION, CALIFORNIA, 2000-2004

## HODGKIN'S LYMPHOMA

**Table 12.** Number of new cases, deaths, percent of stage at diagnosis, annual average age-adjusted incidence and mortality rates of Hodgkin's lymphoma, by race, county, and sex, for Central Valley, California, 2000-2004.

Races / Counties	Total				Male				Female			
	Cases	AAIR	Deaths	AAMR	Cases	AAIR	Deaths	AAMR	Cases	AAIR	Deaths	AAMR
All races	307	2.2	65	0.5	179	2.5	36	0.6	128	1.8	29	0.4
NH White	190	2.8	44	0.6	112	3.4	25	0.7	78	2.2	19	0.5
NH Black	10	1.6	^	^	^	^	^	^	^	^	^	^
Hispanic	95	2.0	17	0.5	53	2.2	^	^	42	1.7	^	^
NH Asian/PI	^	^	^	^	^	^	^	^	^	^	^	^
Fresno	91	2.4	11	0.3	51	2.8	^	^	40	2.0	^	^
Kern	58	1.8	19	0.6	32	2.0	12	0.9	26	1.6	^	^
Kings	18	2.5	^	^	10	2.3	^	^	^	^	^	^
Madera	^	^	^	^	^	^	^	^	^	^	^	^
Merced	28	2.7	^	^	18	3.4	^	^	10	2.0	^	^
Stanislaus	54	2.3	12	0.6	32	2.7	^	^	22	1.9	^	^
Tulare	38	2.1	13	0.8	25	2.7	^	^	13	1.4	^	^
Tuolumne/Mariposa	12	3.1	^	^	^	^	^	^	^	^	^	^
Stage of Diagnosis	Nodal		Extranodal		Nodal		Extranodal		Nodal		Extranodal	
All races	96.7%		3.3%		97.2%		^		96.1%		^	
NH White	96.3%		^		96.4%		^		96.2%		^	
NH Black	100.0%		^		^		^		^		^	
Hispanic	96.8%		^		98.1%		^		95.2%		^	
NH Asian/PI	^		^		^		^		^		^	
Fresno	93.9%		^		94.5%		^		92.5%		^	
Kern	98.8%		^		98.3%		^		100.0%		^	
Kings	96.2%		^		94.4%		^		^		^	
Madera	83.3%		^		^		^		^		^	
Merced	100.0%		^		100.0%		^		100.0%		^	
Stanislaus	96.1%		^		96.3%		^		95.5%		^	
Tulare	100.0%		^		100.0%		^		100.0%		^	
Tuolumne/Mariposa	100.0%		^		100.0%		^		^		^	

Source: Cancer Surveillance Program, Region 2, CCR, Sacramento, CA. January 2007 Quarterly Submission.

AAIR = Average annual age-adjusted incidence rates per 100,000 (2000 US Standard) for the five-year period.

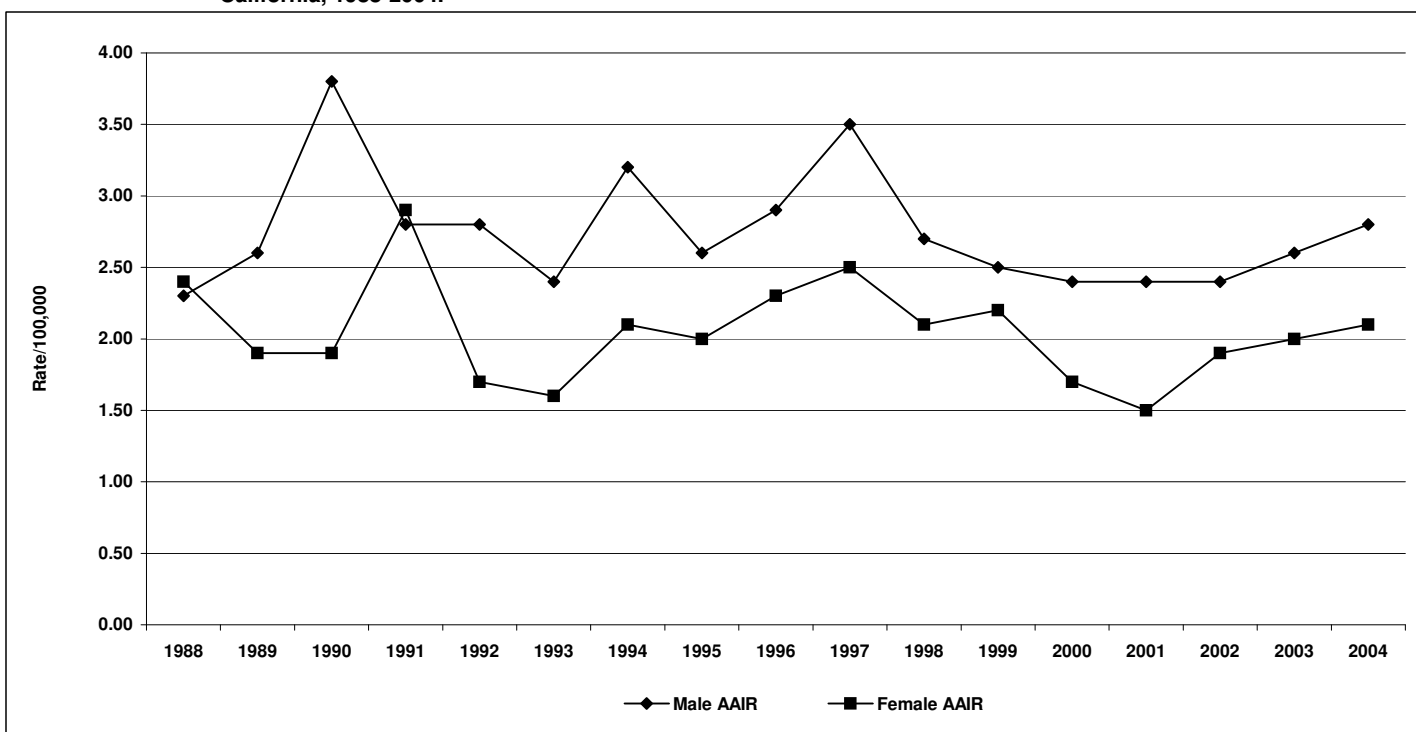
AAMR = Average annual age-adjusted mortality rates per 100,000 (2000 US Standard) for the five-year period.

^ = Rates or percentages based on fewer than 10 cases are not shown or not applicable for gender specific cancer sites.

Race/ethnicity categories are mutually exclusive; N/A = non-applicable.

Excludes in situ cases.

**Figure 12.** Age-adjusted incidence (AAIR) rates of Hodgkin's lymphoma, by year and sex, for Central Valley, California, 1988-2004.



# CANCER INCIDENCE AND MORTALITY IN THE CENTRAL VALLEY REGION, CALIFORNIA, 2000-2004

## KAPOSI'S SARCOMA

**Table 13.** Number of new cases, deaths, percent of stage at diagnosis, annual average age-adjusted incidence and mortality rates of Kaposi's sarcoma, by race, county, and sex, for Central Valley, California, 2000-2004.

Races / Counties	Total				Male				Female			
	Cases	AAIR	Deaths	AAMR	Cases	AAIR	Deaths	AAMR	Cases	AAIR	Deaths	AAMR
All races	53	0.4	^	^	45	0.8	^	^	^	^	^	^
NH White	17	0.2	^	^	15	0.5	^	^	^	^	^	^
NH Black	^	^	^	^	^	^	^	^	^	^	^	^
Hispanic	29	1.0	^	^	24	1.5	^	^	^	^	^	^
NH Asian/PI	^	^	^	^	^	^	^	^	^	^	^	^
Fresno	27	0.8	^	^	25	1.5	^	^	^	^	^	^
Kern	10	0.4	^	^	^	^	^	^	^	^	^	^
Kings	^	^	^	^	^	^	^	^	^	^	^	^
Madera	^	^	^	^	^	^	^	^	^	^	^	^
Merced	^	^	^	^	^	^	^	^	^	^	^	^
Stanislaus	^	^	^	^	^	^	^	^	^	^	^	^
Tulare	^	^	^	^	^	^	^	^	^	^	^	^
Tuolumne/Mariposa	^	^	^	^	^	^	^	^	^	^	^	^
Stage of Diagnosis	Local	Regional	Remote	N/A	Local	Regional	Remote	N/A	Local	Regional	Remote	N/A
All races	67.9%	^	^	26.4%	64.4%	^	^	28.9%	^	^	^	^
NH White	82.4%	^	^	^	80.0%	^	^	^	^	^	^	^
NH Black	^	^	^	^	^	^	^	^	^	^	^	^
Hispanic	62.1%	^	^	34.5%	54.2%	^	^	41.7%	^	^	^	^
NH Asian/PI	^	^	^	^	^	^	^	^	^	^	^	^
Fresno	63.0%	^	^	^	60.0%	^	^	^	^	^	^	^
Kern	^	^	^	^	^	^	^	^	^	^	^	^
Kings	^	^	^	^	^	^	^	^	^	^	^	^
Madera	^	^	^	^	^	^	^	^	^	^	^	^
Merced	^	^	^	^	^	^	^	^	^	^	^	^
Stanislaus	^	^	^	^	^	^	^	^	^	^	^	^
Tulare	^	^	^	^	^	^	^	^	^	^	^	^
Tuolumne/Mariposa	^	^	^	^	^	^	^	^	^	^	^	^

Source: Cancer Surveillance Program, Region 2, CCR, Sacramento, CA. January 2007 Quarterly Submission.

AAIR = Average annual age-adjusted incidence rates per 100,000 (2000 US Standard) for the five-year period.

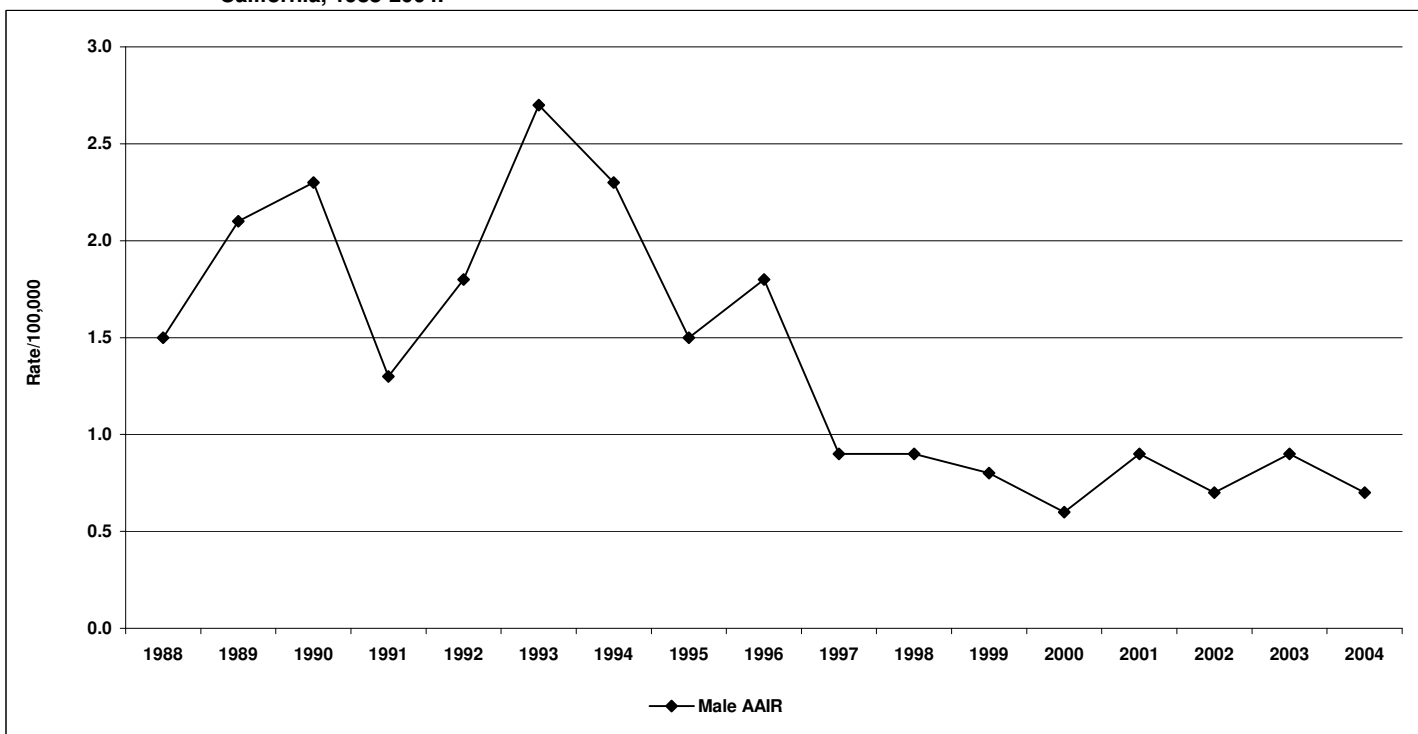
AAMR = Average annual age-adjusted mortality rates per 100,000 (2000 US Standard) for the five-year period.

^ = Rates or percentages based on fewer than 10 cases are not shown or not applicable for gender specific cancer sites.

Race/ethnicity categories are mutually exclusive; N/A = non-applicable.

Excludes in situ cases.

**Figure 13.** Age-adjusted incidence (AAIR) rate of Kaposi's sarcoma, by year and gender, for Central Valley, California, 1988-2004.



# CANCER INCIDENCE AND MORTALITY IN THE CENTRAL VALLEY REGION, CALIFORNIA, 2000-2004

## KIDNEY AND RENAL PELVIS

**Table 14.** Number of new cases, deaths, percent of stage at diagnosis, annual average age-adjusted incidence and mortality rates of kidney and renal pelvis cancer, by race, county, and sex, for Central Valley, California, 2000-2004.

Races / Counties	Total				Male				Female			
	Cases	AAIR	Deaths	AAMR	Cases	AAIR	Deaths	AAMR	Cases	AAIR	Deaths	AAMR
All races	1,585	13.0	499	4.2	991	17.6	323	6.1	594	9.1	176	2.7
NH White	1,057	13.0	353	4.3	686	18.7	233	6.4	371	8.5	120	2.6
NH Black	58	13.5	15	3.8	35	18.1	11	5.8	23	9.6	^	^
Hispanic	431	14.8	126	5.0	246	17.2	75	6.2	185	12.5	51	3.9
NH Asian/PI	27	4.5	^	^	17	6.1	^	^	10	3.1	^	^
Fresno	491	14.4	152	4.6	292	19.1	98	6.7	199	10.8	54	2.9
Kern	336	12.0	100	3.7	218	16.8	68	5.7	118	8.0	32	2.2
Kings	65	13.8	14	3.3	40	17.4	10	5.1	25	10.6	^	^
Madera	78	13.3	26	4.5	51	18.3	19	6.7	27	8.7	^	^
Merced	112	12.7	40	4.7	77	18.6	24	6.2	35	7.4	16	3.5
Stanislaus	259	12.8	85	4.3	147	16.0	50	5.8	112	10.2	35	3.1
Tulare	172	11.1	66	4.3	109	15.2	40	5.6	63	7.7	26	3.1
Tuolumne/Mariposa	72	14.3	14	3.6	57	23.3	12	6.9	15	5.9	^	^
Stage of Diagnosis	Local	Regional	Remote	N/A	Local	Regional	Remote	N/A	Local	Regional	Remote	N/A
All races	59.8%	17.2%	18.8%	4.2%	58.5%	17.2%	20.1%	4.2%	62.0%	17.2%	16.7%	4.2%
NH White	60.6%	16.4%	19.0%	4.0%	58.5%	17.5%	20.1%	3.9%	64.7%	14.3%	17.0%	4.0%
NH Black	60.3%	20.7%	^	^	65.7%	^	^	^	52.2%	^	^	^
Hispanic	57.5%	19.3%	18.6%	4.6%	57.7%	17.1%	20.3%	4.9%	57.3%	22.2%	16.2%	^
NH Asian/PI	70.4%	^	^	^	70.6%	^	^	^	^	^	^	^
Fresno	61.3%	15.3%	18.3%	5.1%	61.6%	13.4%	19.2%	5.8%	60.8%	18.1%	17.1%	^
Kern	63.7%	13.1%	18.8%	4.5%	62.4%	14.7%	17.4%	5.5%	66.1%	10.2%	21.2%	^
Kings	46.2%	30.8%	21.5%	^	35.0%	35.0%	27.5%	^	64.0%	^	^	^
Madera	47.4%	29.5%	16.7%	^	52.9%	31.4%	^	^	37.0%	^	^	^
Merced	62.5%	17.9%	17.0%	^	58.4%	19.5%	18.2%	^	71.4%	^	^	^
Stanislaus	62.9%	17.0%	18.1%	^	61.9%	14.3%	23.1%	^	64.3%	20.5%	11.6%	^
Tulare	55.2%	19.8%	22.1%	^	52.3%	21.1%	24.8%	^	60.3%	17.5%	17.5%	^
Tuolumne/Mariposa	52.8%	16.7%	19.4%	^	52.6%	17.5%	19.3%	^	^	^	^	^

Source: Cancer Surveillance Program, Region 2, CCR, Sacramento, CA. January 2007 Quarterly Submission.

AAIR = Average annual age-adjusted incidence rates per 100,000 (2000 US Standard) for the five-year period.

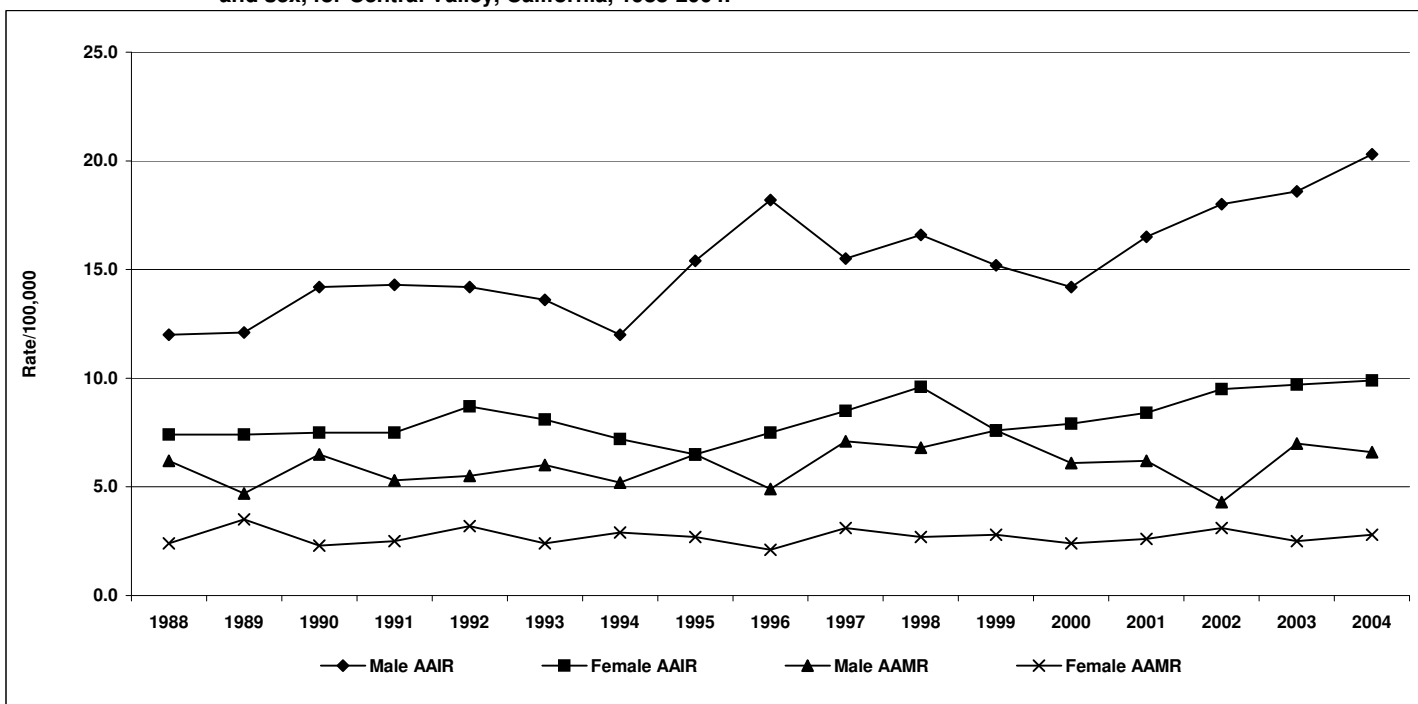
AAMR = Average annual age-adjusted mortality rates per 100,000 (2000 US Standard) for the five-year period.

^ = Rates or percentages based on fewer than 10 cases are not shown or not applicable for gender specific cancer sites.

Race/ethnicity categories are mutually exclusive; N/A = non-applicable.

Excludes in situ cases.

**Figure 14.** Age-adjusted incidence (AAIR) and mortality (AAMR) rates of kidney and renal pelvis cancer, by year and sex, for Central Valley, California, 1988-2004.



# CANCER INCIDENCE AND MORTALITY IN THE CENTRAL VALLEY REGION, CALIFORNIA, 2000-2004

## LARYNX

**Table 15.** Number of new cases, deaths, percent of stage at diagnosis, annual average age-adjusted incidence and mortality rates of larynx cancer, by race, county, and sex, for Central Valley, California, 2000-2004

Races / Counties	Total				Male				Female			
	Cases	AAIR	Deaths	AAMR	Cases	AAIR	Deaths	AAMR	Cases	AAIR	Deaths	AAMR
All races	385	3.2	124	1.1	311	5.6	102	2.0	74	1.1	22	0.3
NH White	287	3.5	92	1.1	220	6.0	72	2.0	67	1.5	20	0.4
NH Black	18	4.3	13	3.4	16	7.9	11	6.1	^	^	^	^
Hispanic	63	2.3	17	0.7	58	4.5	17	1.5	^	^	^	^
NH Asian/PI	^	^	^	^	^	^	^	^	^	^	^	^
Fresno	97	2.9	33	1.0	72	4.8	27	1.9	25	1.4	^	^
Kern	103	3.8	26	1.0	89	7.1	21	1.8	14	1.0	^	^
Kings	20	4.4	^	^	17	7.8	^	^	^	^	^	^
Madera	15	2.6	^	^	11	4.0	^	^	^	^	^	^
Merced	30	3.5	^	^	24	6.2	^	^	^	^	^	^
Stanislaus	62	3.1	25	1.2	51	5.4	22	2.5	11	1.0	^	^
Tulare	48	3.1	18	1.2	40	5.7	13	2.0	^	^	^	^
Tuolumne/Mariposa	10	2.7	^	^	^	^	^	^	^	^	^	^
Stage of Diagnosis	Local	Regional	Remote	N/A	Local	Regional	Remote	N/A	Local	Regional	Remote	N/A
All races	55.1%	19.0%	19.5%	6.5%	56.3%	16.1%	21.2%	6.4%	50.0%	31.1%	^	^
NH White	57.1%	19.9%	16.7%	6.3%	58.6%	15.9%	19.5%	5.9%	52.2%	32.8%	^	^
NH Black	^	^	^	^	^	^	^	^	^	^	^	^
Hispanic	57.1%	15.9%	22.2%	^	60.3%	17.2%	17.2%	^	^	^	^	^
NH Asian/PI	^	^	^	^	^	^	^	^	^	^	^	^
Fresno	50.5%	23.7%	22.7%	^	54.2%	18.1%	25.0%	^	40.0%	40.0%	^	^
Kern	63.1%	16.5%	12.6%	^	65.2%	14.6%	13.5%	^	^	^	^	^
Kings	55.0%	^	^	^	^	^	^	^	^	^	^	^
Madera	73.3%	^	^	^	^	^	^	^	^	^	^	^
Merced	50.0%	^	^	^	54.2%	^	^	^	^	^	^	^
Stanislaus	48.4%	16.1%	27.4%	^	47.1%	^	33.3%	^	^	^	^	^
Tulare	50.0%	^	^	^	45.0%	^	^	^	^	^	^	^
Tuolumne/Mariposa	^	^	^	^	^	^	^	^	^	^	^	^

Source: Cancer Surveillance Program, Region 2, CCR, Sacramento, CA. January 2007 Quarterly Submission.

AAIR = Average annual age-adjusted incidence rates per 100,000 (2000 US Standard) for the five-year period.

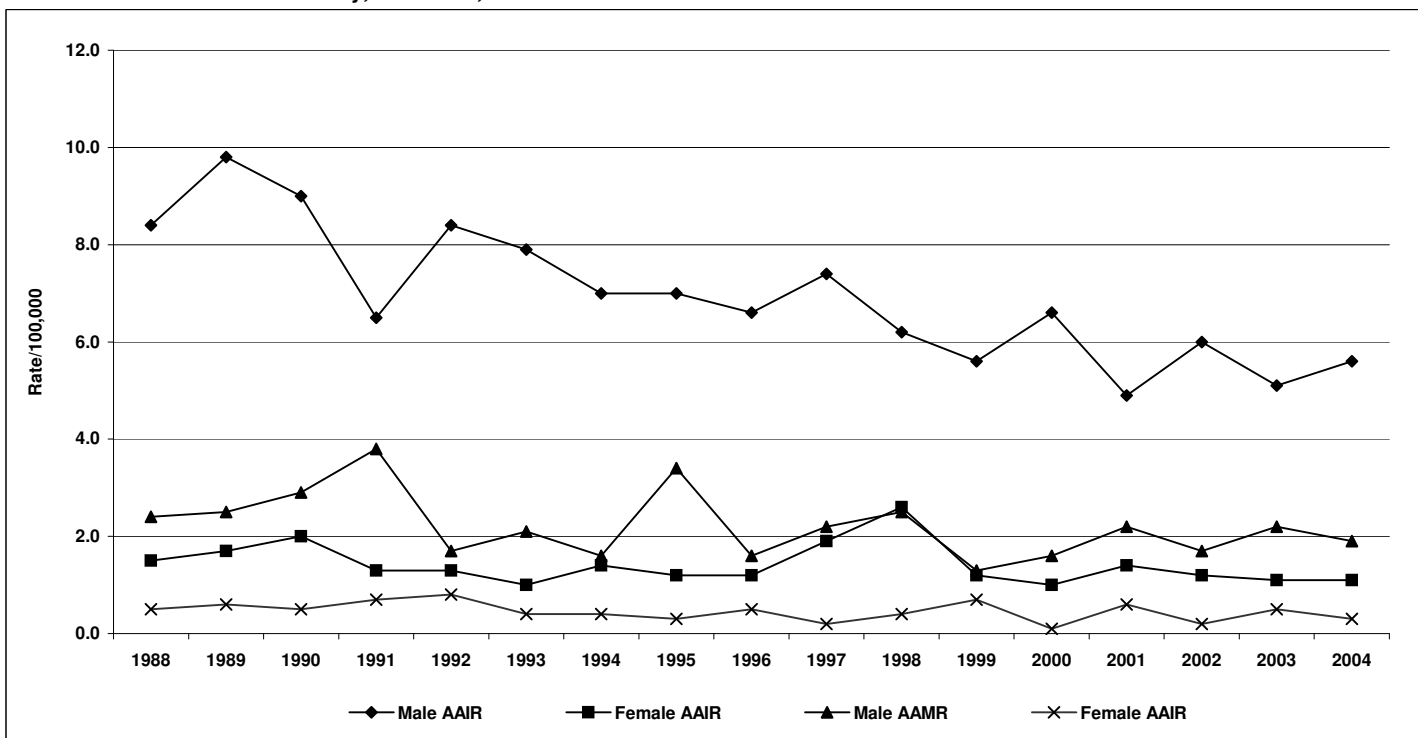
AAMR = Average annual age-adjusted mortality rates per 100,000 (2000 US Standard) for the five-year period.

^ = Rates or percentages based on fewer than 10 cases are not shown or not applicable for gender specific cancer sites.

Race/ethnicity categories are mutually exclusive; N/A = non-applicable.

Excludes in situ cases.

**Figure 15.** Age-adjusted incidence (AAIR) and mortality (AAMR) rates of larynx cancer, by year and sex, for Central Valley, California, 1988-2004.



# CANCER INCIDENCE AND MORTALITY IN THE CENTRAL VALLEY REGION, CALIFORNIA, 2000-2004

## LEUKEMIA

**Table 16.** Number of new cases, deaths, percent of stage at diagnosis, annual average age-adjusted incidence and mortality rates of leukemia, by race, county, and sex, for Central Valley, California, 2000-2004.

Races / Counties	Total				Male				Female			
	Cases	AAIR	Deaths	AAMR	Cases	AAIR	Deaths	AAMR	Cases	AAIR	Deaths	AAMR
All races	1,497	11.7	867	7.2	846	14.6	470	9.0	651	9.4	397	5.9
NH White	940	11.8	629	7.6	550	15.7	353	10.2	390	8.8	276	5.8
NH Black	44	10.3	25	6.1	28	14.2	8	4.0	16	7.0	17	7.6
Hispanic	427	10.7	180	5.7	224	11.6	95	6.5	203	9.9	85	5.2
NH Asian/PI	58	9.1	33	5.7	28	9.0	14	5.5	30	9.1	19	5.9
Fresno	482	13.3	264	7.6	268	16.6	141	9.4	214	10.7	123	6.3
Kern	309	10.4	172	6.3	181	13.5	91	7.9	128	8.0	81	5.4
Kings	64	12.2	27	6.2	40	15.9	22	11.7	24	9.0	5	2.1
Madera	55	9.2	31	5.3	35	13.1	19	7.4	20	6.1	12	3.8
Merced	108	11.9	76	9.0	61	15.5	47	13.9	47	9.4	29	6.0
Stanislaus	224	10.6	157	7.8	118	12.6	78	9.3	106	9.1	79	6.9
Tulare	195	11.8	98	6.3	110	14.9	52	8.0	85	9.4	46	5.1
Tuolumne/Mariposa	60	12.3	32	8.7	33	14.6	14	7.9	27	9.8	18	8.9
Stage of Diagnosis	Lymphocytic		Myeloid & Monocytic		Lymphocytic		Myeloid & Monocytic		Lymphocytic		Myeloid & Monocytic	
All races	52.9%		47.1%		55.1%		44.9%		49.9%		50.1%	
NH White	52.8%		47.2%		54.1%		45.9%		51.0%		49.0%	
NH Black	40.0%		60.0%		42.3%		57.7%		^		^	
Hispanic	54.3%		45.7%		59.2%		40.8%		48.7%		51.3%	
NH Asian/PI	43.4%		56.6%		39.3%		60.7%		48.0%		52.0%	
Fresno	53.1%		46.9%		54.8%		45.2%		50.8%		49.2%	
Kern	58.2%		41.8%		58.0%		42.0%		58.6%		41.4%	
Kings	52.5%		47.5%		52.6%		47.4%		52.2%		47.8%	
Madera	54.9%		45.1%		57.6%		42.4%		^		^	
Merced	50.0%		50.0%		56.1%		43.9%		42.2%		57.8%	
Stanislaus	42.5%		57.5%		46.8%		53.2%		37.8%		62.2%	
Tulare	58.2%		41.8%		60.0%		40.0%		55.8%		44.2%	
Tuolumne/Mariposa	48.2%		51.8%		51.6%		48.4%		44.0%		56.0%	

Source: Cancer Surveillance Program, Region 2, CCR, Sacramento, CA. January 2007 Quarterly Submission.

AAIR = Average annual age-adjusted incidence rates per 100,000 (2000 US Standard) for the five-year period.

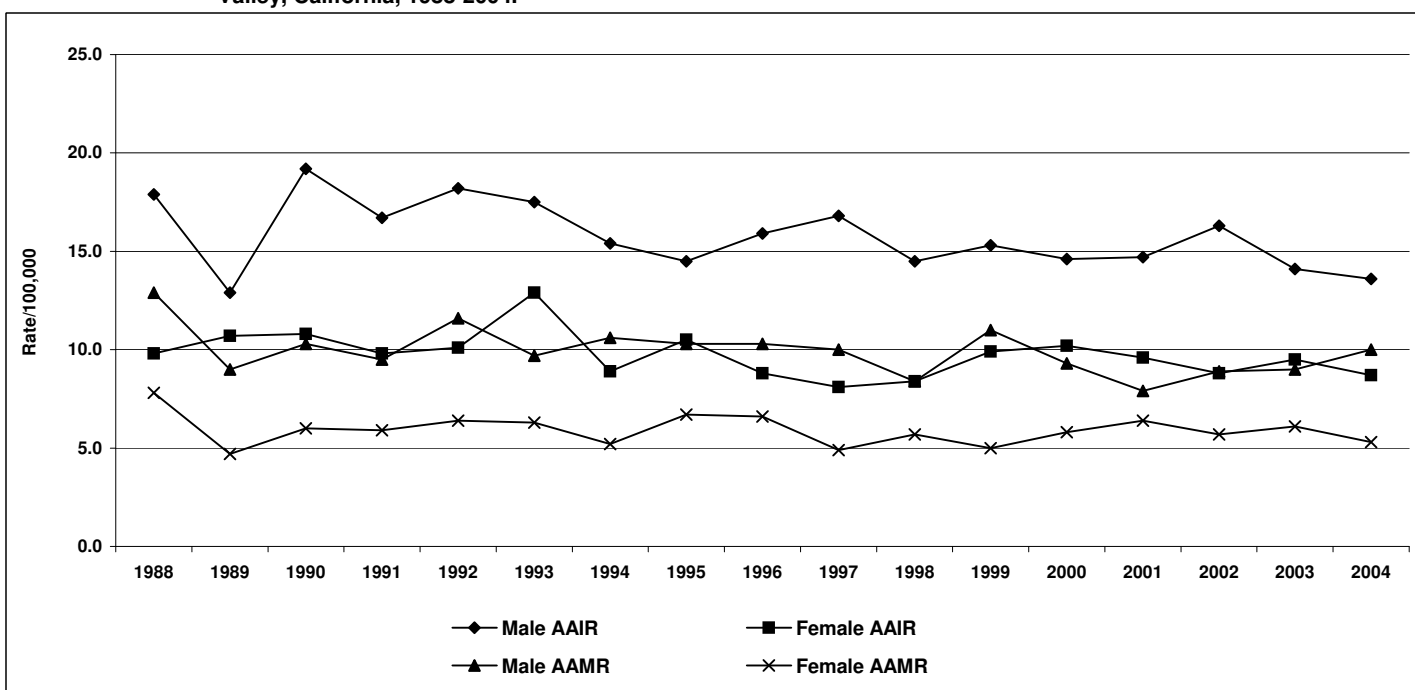
AAMR = Average annual age-adjusted mortality rates per 100,000 (2000 US Standard) for the five-year period.

^ = Rates or percentages based on fewer than 10 cases are not shown or not applicable for gender specific cancer sites.

Race/ethnicity categories are mutually exclusive; N/A = non-applicable.

Excludes in situ cases.

**Figure 16.** Age-adjusted incidence (AAIR) and mortality (AAMR) rates of leukemia, by year and sex, for Central Valley, California, 1988-2004.



CANCER INCIDENCE AND MORTALITY IN THE CENTRAL VALLEY REGION, CALIFORNIA, 2000-2004

LIVER

**Table 17.** Number of new cases, deaths, percent of stage at diagnosis, annual average age-adjusted incidence and mortality rates of liver cancer, by race, county, and sex, for Central Valley, California, 2000-2004.

Races / Counties	Total				Male				Female			
	Cases	AAIR	Deaths	AAMR	Cases	AAIR	Deaths	AAMR	Cases	AAIR	Deaths	AAMR
All races	799	6.5	589	4.9	562	9.7	391	7.1	237	3.6	198	3.0
NH White	354	4.4	297	3.6	249	6.8	201	5.5	105	2.3	96	2.0
NH Black	41	9.2	25	6.0	27	12.3	16	7.4	14	6.2	^	^
Hispanic	323	11.3	214	8.2	227	15.3	136	9.9	96	7.2	78	6.3
NH Asian/PI	72	12.3	53	9.3	53	19.5	38	14.7	19	6.2	15	4.9
Fresno	308	8.9	214	6.3	220	13.8	146	9.6	88	4.7	68	3.6
Kern	138	5.0	115	4.3	90	6.8	72	5.6	48	3.3	43	3.0
Kings	29	6.1	21	4.6	21	8.5	12	5.0	^	^	^	^
Madera	28	4.7	19	3.4	19	6.7	12	4.5	^	^	^	^
Merced	62	6.9	45	5.2	42	10.0	27	6.5	20	4.2	18	3.9
Stanislaus	106	5.2	84	4.2	69	7.5	58	6.5	37	3.3	26	2.3
Tulare	99	6.4	69	4.6	81	11.1	50	7.3	18	2.2	19	2.3
Tuolumne/Mariposa	29	5.9	20	5.3	20	8.4	12	6.7	^	^	^	^
Stage of Diagnosis	Local	Regional	Remote	N/A	Local	Regional	Remote	N/A	Local	Regional	Remote	N/A
All races	36.9%	19.0%	22.3%	21.8%	36.5%	20.8%	21.9%	20.8%	38.0%	14.8%	23.2%	24.1%
NH White	33.3%	20.1%	22.0%	24.6%	33.3%	21.7%	20.9%	24.1%	33.3%	16.2%	24.8%	25.7%
NH Black	29.3%	^	^	31.7%	^	^	^	^	^	^	^	^
Hispanic	40.9%	18.9%	22.3%	18.0%	39.6%	21.1%	21.6%	17.6%	43.8%	13.5%	24.0%	18.8%
NH Asian/PI	41.7%	13.9%	26.4%	18.1%	41.5%	^	26.4%	^	^	^	^	^
Fresno	41.9%	18.5%	26.6%	13.0%	40.5%	21.4%	25.0%	13.2%	45.5%	11.4%	30.7%	12.5%
Kern	30.4%	19.6%	15.2%	34.8%	30.0%	20.0%	13.3%	36.7%	31.3%	^	^	31.3%
Kings	^	^	37.9%	^	^	^	^	^	^	^	^	^
Madera	42.9%	^	^	^	^	^	^	^	^	^	^	^
Merced	27.4%	^	21.0%	40.3%	28.6%	^	23.8%	35.7%	^	^	^	50.0%
Stanislaus	34.9%	20.8%	19.8%	24.5%	36.2%	21.7%	17.4%	24.6%	32.4%	^	^	^
Tulare	38.4%	25.3%	22.2%	14.1%	37.0%	27.2%	23.5%	12.3%	^	^	^	^
Tuolumne/Mariposa	41.4%	^	^	^	^	^	^	^	^	^	^	^

Source: Cancer Surveillance Program, Region 2, CCR, Sacramento, CA. January 2007 Quarterly Submission.

AAIR = Average annual age-adjusted incidence rates per 100,000 (2000 US Standard) for the five-year period.

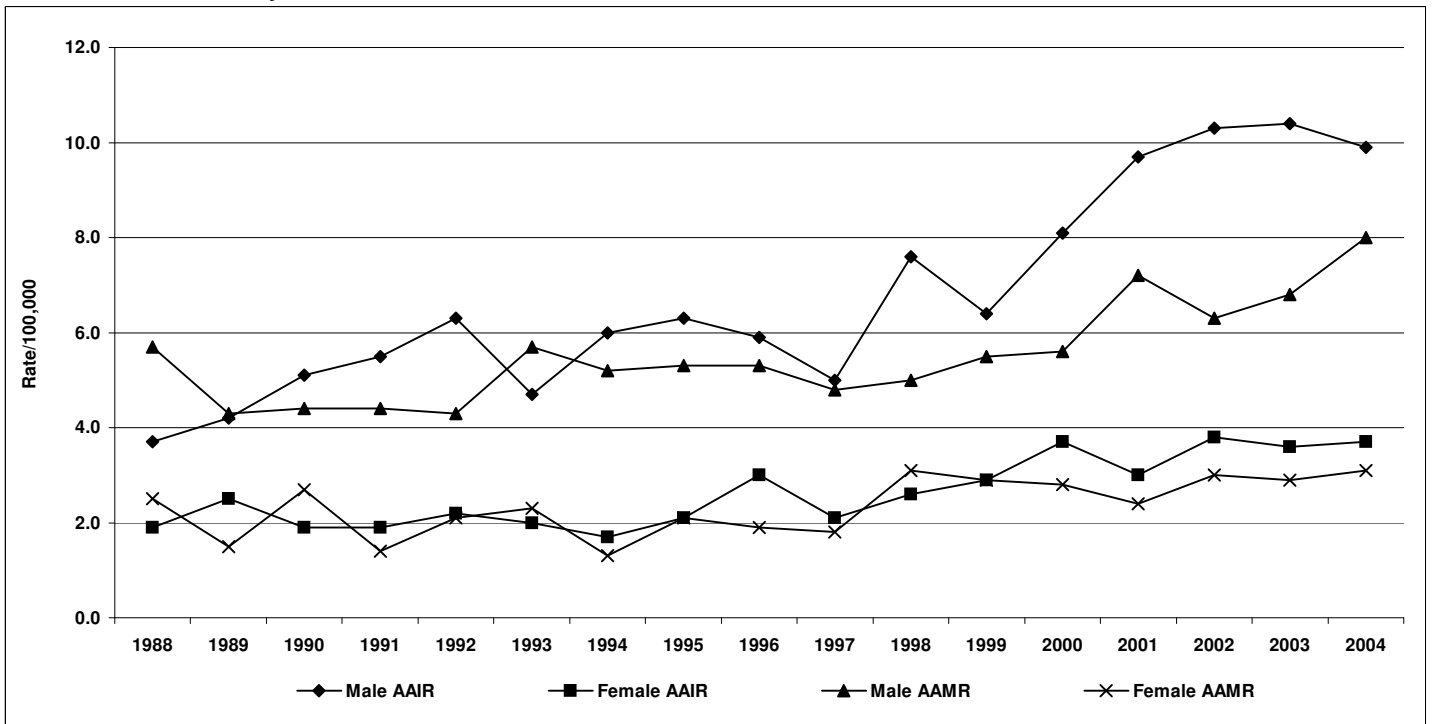
AAMR = Average annual age-adjusted mortality rates per 100,000 (2000 US Standard) for the five-year period.

^ = Rates or percentages based on fewer than 10 cases are not shown or not applicable for gender specific cancer sites.

Race/ethnicity categories are mutually exclusive; N/A = non-applicable.

Excludes in situ cases.

**Figure 17.** Age-adjusted incidence (AAIR) and mortality (AAMR) rates of liver cancer, by year and sex, for Central Valley, California, 1988-2004.



CANCER INCIDENCE AND MORTALITY IN THE CENTRAL VALLEY REGION, CALIFORNIA, 2000-2004

LUNG AND BRONCHUS

**Table 18.** Number of new cases, deaths, percent of stage at diagnosis, annual average age-adjusted incidence and mortality rates of lung and bronchus cancer, by race, county, and sex, for Central Valley, California, 2000-2004.

Races / Counties	Total				Male				Female			
	Cases	AAIR	Deaths	AAMR	Cases	AAIR	Deaths	AAMR	Cases	AAIR	Deaths	AAMR
All races	7,419	62.8	5,811	49.9	4,023	76.9	3,207	62.7	3,396	52.3	2,604	40.3
NH White	6,041	73.0	4,874	58.6	3,195	88.1	2,602	72.2	2,846	62.2	2,272	48.9
NH Black	304	80.7	229	61.6	194	113.8	147	87.1	110	54.3	82	41.1
Hispanic	846	35.8	568	24.7	497	45.0	369	34.6	349	27.7	199	16.1
NH Asian/PI	186	33.3	140	25.4	112	44.6	89	36.2	74	24.4	51	16.7
Fresno	1,867	56.3	1,434	43.7	1,003	69.9	822	58.2	864	46.6	612	33.2
Kern	1,857	69.6	1,475	56.5	1,024	86.0	795	69.2	833	57.2	680	47.2
Kings	244	56.8	200	47.9	149	73.2	121	62.6	95	41.9	79	35.1
Madera	351	61.0	259	46.1	209	79.6	157	61.9	142	46.0	102	33.6
Merced	497	59.0	378	45.6	264	70.9	212	57.9	233	50.2	166	36.2
Stanislaus	1,323	67.0	1,084	55.6	675	78.6	559	66.2	648	59.0	525	48.2
Tulare	861	57.4	707	47.6	473	71.4	391	59.9	388	46.9	316	38.5
Tuolumne/Mariposa	419	81.7	213	54.8	226	93.8	113	62.9	193	71.2	100	48.2
Stage of Diagnosis	Local	Regional	Remote	N/A	Local	Regional	Remote	N/A	Local	Regional	Remote	N/A
All races	14.9%	20.7%	54.3%	10.2%	14.2%	20.6%	55.5%	9.6%	15.7%	20.7%	52.8%	10.8%
NH White	14.9%	21.0%	53.7%	10.4%	14.3%	21.2%	54.7%	9.7%	15.6%	20.8%	52.6%	11.1%
NH Black	14.5%	20.1%	56.3%	9.2%	14.9%	16.0%	59.3%	9.8%	13.6%	27.3%	50.9%	^
Hispanic	15.5%	18.9%	56.6%	9.0%	14.3%	18.1%	59.2%	8.5%	17.2%	20.1%	53.0%	9.7%
NH Asian/PI	15.1%	18.8%	57.5%	8.6%	13.4%	24.1%	54.5%	^	17.6%	^	62.2%	^
Fresno	14.8%	21.7%	58.9%	4.7%	13.4%	21.8%	59.8%	5.1%	16.4%	21.5%	57.9%	4.2%
Kern	14.5%	20.8%	46.4%	18.3%	14.4%	21.7%	48.1%	15.8%	14.8%	19.7%	44.3%	21.2%
Kings	10.7%	21.3%	59.8%	8.2%	10.7%	20.8%	61.1%	7.4%	10.5%	22.1%	57.9%	^
Madera	18.8%	19.4%	56.4%	5.4%	20.6%	17.7%	56.9%	4.8%	16.2%	21.8%	55.6%	^
Merced	15.5%	19.0%	52.4%	13.1%	13.3%	18.3%	54.8%	13.7%	18.0%	19.7%	49.8%	12.4%
Stanislaus	17.2%	17.9%	55.9%	9.0%	15.1%	17.7%	58.5%	8.8%	19.4%	18.1%	53.2%	9.3%
Tulare	11.6%	22.2%	59.1%	7.1%	12.1%	21.2%	59.1%	7.6%	11.1%	23.5%	59.0%	6.4%
Tuolumne/Mariposa	14.8%	24.1%	50.6%	10.5%	16.8%	23.9%	50.0%	9.3%	12.4%	24.4%	51.3%	11.9%

Source: Cancer Surveillance Program, Region 2, CCR, Sacramento, CA. January 2007 Quarterly Submission.

AAIR = Average annual age-adjusted incidence rates per 100,000 (2000 US Standard) for the five-year period.

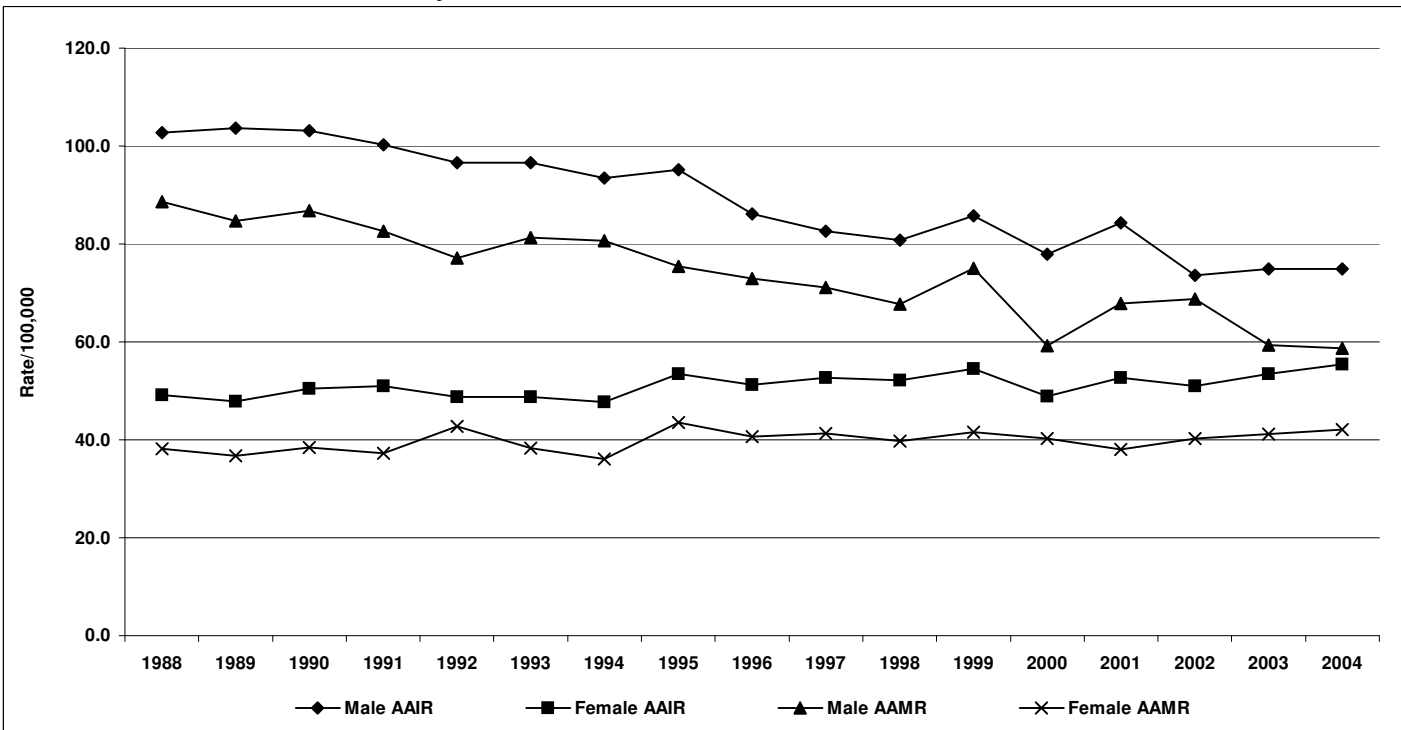
AAMR = Average annual age-adjusted mortality rates per 100,000 (2000 US Standard) for the five-year period.

^ = Rates or percentages based on fewer than 10 cases are not shown or not applicable for gender specific cancer sites.

Race/ethnicity categories are mutually exclusive; N/A = non-applicable.

Excludes in situ cases.

**Figure 18.** Age-adjusted incidence (AAIR) and mortality (AAMR) rates of lung and bronchus cancer, by year and sex, for Central Valley, California, 1988-2004.







# CANCER INCIDENCE AND MORTALITY IN THE CENTRAL VALLEY REGION, CALIFORNIA, 2000-2004

## MELANOMA

**Table 20.** Number of new cases, deaths, percent of stage at diagnosis, annual average age-adjusted incidence and mortality rates of invasive melanoma, by race, county, and sex, for Central Valley, California, 2000-2004.

Races / Counties	Total				Male				Female			
	Cases	AAIR	Deaths	AAMR	Cases	AAIR	Deaths	AAMR	Cases	AAIR	Deaths	AAMR
All races	1,925	15.4	307	2.6	1,119	19.9	197	3.7	806	12.1	110	1.7
NH White	1,672	21.5	276	3.4	994	27.8	174	4.8	678	16.8	102	2.4
NH Black	^	^	^	^	^	^	^	^	^	^	^	^
Hispanic	107	3.2	28	0.9	43	3.3	22	1.4	64	3.2	^	^
NH Asian/PI	^	^	^	^	^	^	^	^	^	^	^	^
Fresno	447	12.7	73	2.2	256	16.0	49	3.3	191	10.1	24	1.3
Kern	552	19.3	88	3.2	334	26.0	52	4.3	218	14.4	36	2.4
Kings	59	11.9	13	2.9	38	16.6	10	5.0	21	8.6	^	^
Madera	88	14.9	12	2.1	47	17.8	^	^	41	12.6	^	^
Merced	120	13.7	20	2.4	70	18.2	15	4.4	50	10.4	^	^
Stanislaus	335	16.1	42	2.1	187	20.4	25	2.9	148	13.1	17	1.5
Tulare	214	13.7	40	2.6	119	16.9	27	3.9	95	11.4	13	1.5
Tuolumne/Mariposa	84	24.0	16	4.4	52	30.0	^	^	32	19.1	^	^
Stage of Diagnosis	Local	Regional	Remote	N/A	Local	Regional	Remote	N/A	Local	Regional	Remote	N/A
All races	80.9%	8.6%	5.2%	5.2%	79.6%	8.8%	6.3%	5.3%	82.8%	8.3%	3.7%	5.2%
NH White	81.0%	9.1%	5.1%	4.7%	80.1%	9.2%	5.8%	4.9%	82.4%	9.0%	4.1%	4.4%
NH Black	^	^	^	^	^	^	^	^	^	^	^	^
Hispanic	72.0%	^	11.2%	^	58.1%	^	23.3%	^	81.3%	^	^	^
NH Asian/PI	^	^	^	^	^	^	^	^	^	^	^	^
Fresno	83.9%	8.5%	3.8%	3.8%	85.5%	6.6%	3.9%	3.9%	81.7%	11.0%	^	^
Kern	77.2%	8.3%	7.2%	7.2%	74.9%	9.0%	9.0%	7.2%	80.7%	7.3%	4.6%	7.3%
Kings	76.3%	^	^	^	65.8%	^	^	^	95.2%	^	^	^
Madera	85.2%	^	^	^	85.1%	^	^	^	85.4%	^	^	^
Merced	75.8%	10.8%	^	8.3%	75.7%	^	^	^	76.0%	^	^	^
Stanislaus	85.1%	7.8%	3.0%	4.2%	82.9%	8.6%	^	^	87.8%	6.8%	^	^
Tulare	81.8%	9.8%	6.1%	^	79.8%	10.1%	^	^	84.2%	^	^	^
Tuolumne/Mariposa	78.2%	10.0%	^	^	79.4%	^	^	^	76.2%	^	^	^

Source: Cancer Surveillance Program, Region 2, CCR, Sacramento, CA. January 2007 Quarterly Submission.

AAIR = Average annual age-adjusted incidence rates per 100,000 (2000 US Standard) for the five-year period.

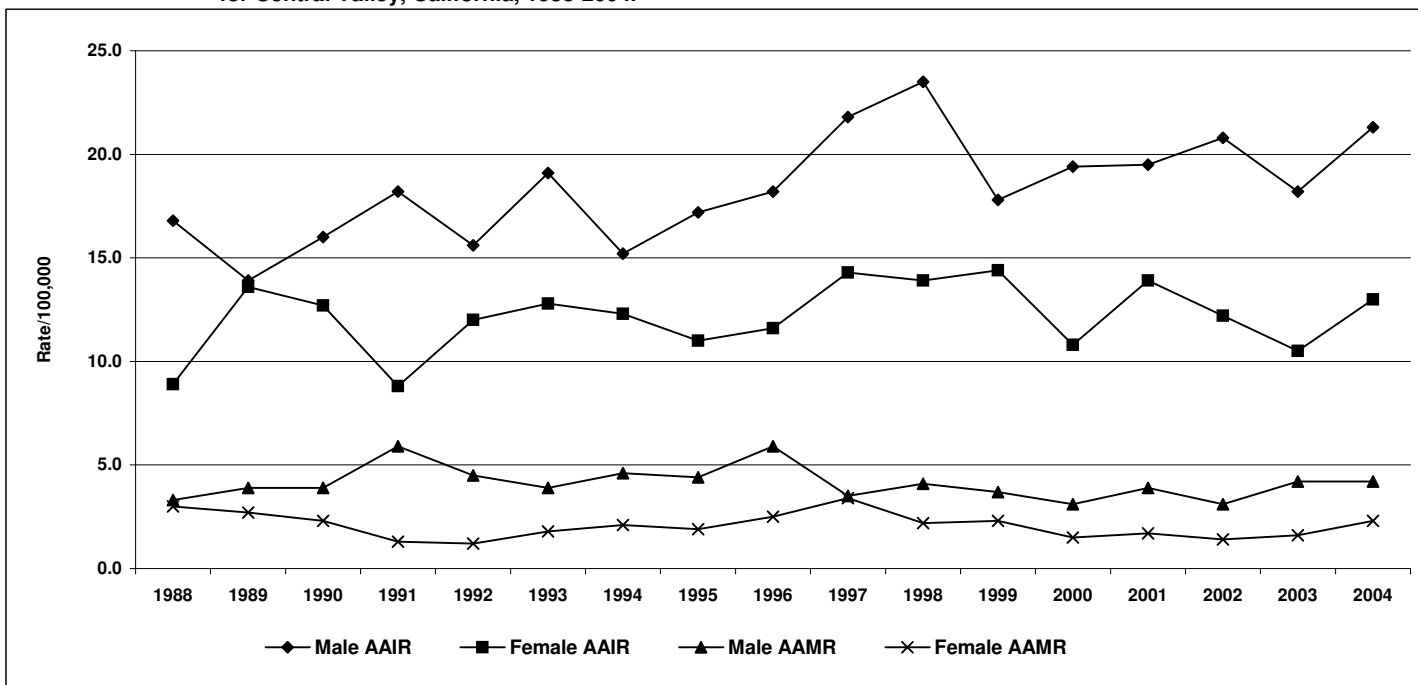
AAMR = Average annual age-adjusted mortality rates per 100,000 (2000 US Standard) for the five-year period.

^ = Rates based on fewer than 10 cases are not shown or not applicable for gender specific cancer sites.

Race/ethnicity categories are mutually exclusive; N/A = non-applicable.

Excludes in situ cases.

**Figure 20.** Age-adjusted incidence (AAIR) and mortality (AAMR) rates of invasive melanoma, by year and sex, for Central Valley, California, 1988-2004.



# CANCER INCIDENCE AND MORTALITY IN THE CENTRAL VALLEY REGION, CALIFORNIA, 2000-2004

## MESOTHELIOMA

**Table 21.** Number of new cases, deaths, percent of stage at diagnosis, annual average age-adjusted incidence and mortality rates of mesothelioma, by race, county, and sex, for Central Valley, California, 2000-2004.

Races / Counties	Total				Male				Female			
	Cases	AAIR	Deaths	AAMR	Cases	AAIR	Deaths	AAMR	Cases	AAIR	Deaths	AAMR
All races	120	1.0	90	0.8	104	2.0	81	1.6	16	0.2	^	^
NH White	93	1.1	74	0.9	83	2.3	67	1.9	10	0.2	^	^
NH Black	^	^	^	^	^	^	^	^	^	^	^	^
Hispanic	22	0.8	13	0.5	17	1.4	12	1.0	^	^	^	^
NH Asian/PI	^	^	^	^	^	^	^	^	^	^	^	^
Fresno	28	0.8	23	0.7	24	1.6	20	1.4	^	^	^	^
Kern	23	0.9	18	0.7	22	1.9	16	1.3	^	^	^	^
Kings	^	^	^	^	^	^	^	^	^	^	^	^
Madera	^	^	^	^	^	^	^	^	^	^	^	^
Merced	^	^	^	^	^	^	^	^	^	^	^	^
Stanislaus	26	1.3	20	1.1	22	2.7	18	2.3	^	^	^	^
Tulare	11	0.7	^	^	^	^	^	^	^	^	^	^
Tuolumne/Mariposa	13	2.5	^	^	11	4.5	^	^	^	^	^	^
Stage of Diagnosis	Local	Regional	Remote	N/A	Local	Regional	Remote	N/A	Local	Regional	Remote	N/A
All races	12.5%	15.0%	60.0%	12.5%	12.5%	13.5%	61.5%	12.5%	^	^	^	^
NH White	11.8%	18.3%	59.1%	10.8%	12.0%	16.9%	59.0%	12.0%	^	^	^	^
NH Black	^	^	^	^	^	^	^	^	^	^	^	^
Hispanic	^	^	59.1%	^	^	^	64.7%	^	^	^	^	^
NH Asian/PI	^	^	^	^	^	^	^	^	^	^	^	^
Fresno	^	^	64.3%	^	^	^	66.7%	^	^	^	^	^
Kern	^	^	52.2%	^	^	^	54.5%	^	^	^	^	^
Kings	^	^	^	^	^	^	^	^	^	^	^	^
Madera	^	^	^	^	^	^	^	^	^	^	^	^
Merced	^	^	^	^	^	^	^	^	^	^	^	^
Stanislaus	^	^	69.2%	^	^	^	63.6%	^	^	^	^	^
Tulare	^	^	^	^	^	^	^	^	^	^	^	^
Tuolumne/Mariposa	^	^	84.6%	^	^	^	^	^	^	^	^	^

Source: Cancer Surveillance Program, Region 2, CCR, Sacramento, CA. January 2007 Quarterly Submission.

AAIR = Average annual age-adjusted incidence rates per 100,000 (2000 US Standard) for the five-year period.

AAMR = Average annual age-adjusted mortality rates per 100,000 (2000 US Standard) for the five-year period.

^ = Rates based on fewer than 10 cases are not shown or not applicable for gender specific cancer sites.

Race/ethnicity categories are mutually exclusive; N/A = non-applicable.

Excludes in situ cases.

**Figure 21.** Age-adjusted incidence (AAIR) rate of mesothelioma, by year and sex, for Central Valley, California, 1988-2004.







**CANCER INCIDENCE AND MORTALITY IN THE CENTRAL VALLEY REGION, CALIFORNIA, 2000-2004**

**ORAL CAVITY AND PHARYNX**

**Table 24.** Number of new cases, deaths, annual average age-adjusted incidence and mortality rates of oral cavity and pharynx cancer, by race, county, and sex, for Central Valley, California, 2000-2004.

Races / Counties	Total				Male				Female			
	Cases	AAIR	Deaths	AAMR	Cases	AAIR	Deaths	AAMR	Cases	AAIR	Deaths	AAMR
All races	1,209	9.8	353	3.0	840	14.6	224	4.1	369	5.6	129	2.0
NH White	938	11.6	269	3.3	653	17.6	165	4.5	285	6.5	104	2.2
NH Black	50	11.6	17	4.2	40	20.8	14	7.5	10	4.1	^	^
Hispanic	168	5.6	47	1.8	110	7.1	30	2.3	58	4.1	17	1.4
NH Asian/PI	35	5.4	20	3.1	22	7.3	15	5.1	13	3.8	^	^
Fresno	318	9.3	85	2.5	219	14.0	50	3.3	99	5.3	35	1.9
Kern	284	10.0	91	3.3	196	14.7	55	4.4	88	5.9	36	2.5
Kings	39	8.2	10	2.3	30	12.2	^	^	^	^	^	^
Madera	48	8.2	14	2.4	35	12.4	^	^	13	4.1	^	^
Merced	84	9.5	28	3.2	55	12.9	18	4.2	29	6.1	10	2.1
Stanislaus	222	10.9	67	3.4	156	16.5	44	4.9	66	5.9	23	2.1
Tulare	143	9.2	43	2.9	100	13.9	30	4.3	43	5.1	13	1.7
Tuolumne/Mariposa	71	14.6	12	3.0	49	20.6	10	5.3	22	8.6	^	^
Stage of Diagnosis	Local	Regional	Remote	N/A	Local	Regional	Remote	N/A	Local	Regional	Remote	N/A
All races	33.9%	45.7%	13.7%	6.7%	31.2%	48.7%	13.6%	6.5%	40.1%	38.8%	14.1%	7.0%
NH White	35.5%	46.3%	11.2%	7.0%	32.9%	49.0%	10.9%	7.2%	41.4%	40.0%	11.9%	6.7%
NH Black	26.0%	46.0%	20.0%	^	^	50.0%	^	^	^	^	^	^
Hispanic	29.8%	45.2%	21.4%	^	26.4%	50.9%	20.9%	^	36.2%	34.5%	22.4%	^
NH Asian/PI	^	42.9%	42.9%	^	^	^	50.0%	^	^	^	^	^
Fresno	30.8%	46.9%	18.2%	4.1%	26.5%	51.1%	19.2%	^	40.4%	37.4%	16.2%	^
Kern	34.2%	44.7%	13.4%	7.7%	32.7%	45.9%	11.7%	9.7%	37.5%	42.0%	17.0%	^
Kings	^	64.1%	^	^	^	66.7%	^	^	^	^	^	^
Madera	39.6%	50.0%	^	^	40.0%	48.6%	^	^	^	^	^	^
Merced	34.5%	47.6%	^	^	32.7%	50.9%	^	^	37.9%	41.4%	^	^
Stanislaus	41.4%	37.4%	10.4%	10.8%	39.1%	42.3%	9.6%	9.0%	47.0%	25.8%	^	15.2%
Tulare	33.6%	44.1%	15.4%	7.0%	33.0%	46.0%	15.0%	^	34.9%	39.5%	^	^
Tuolumne/Mariposa	28.2%	57.7%	^	^	20.4%	61.2%	^	^	45.5%	50.0%	^	^

Source: Cancer Surveillance Program, Region 2, CCR, Sacramento, CA. January 2007 Quarterly Submission.

AAIR = Average annual age-adjusted incidence rates per 100,000 (2000 US Standard) for the five-year period.

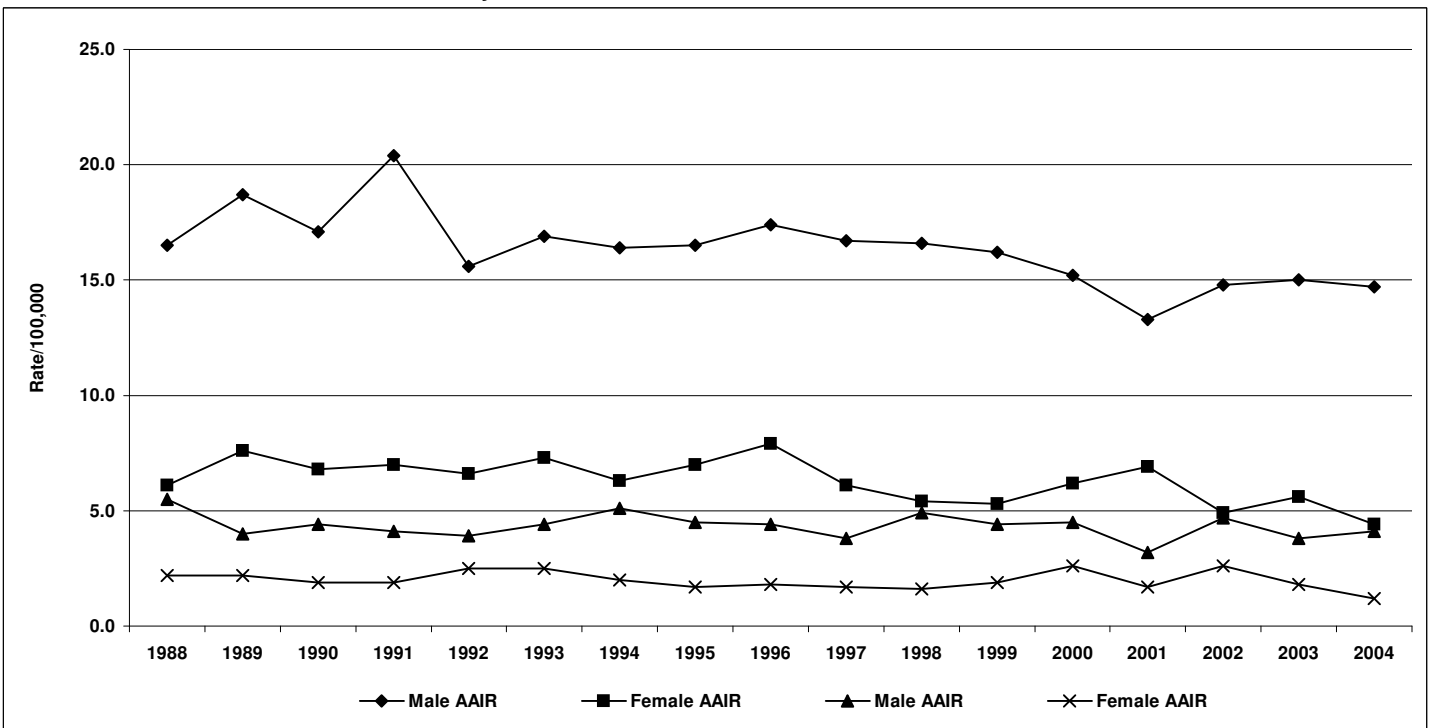
AAMR = Average annual age-adjusted mortality rates per 100,000 (2000 US Standard) for the five-year period.

^ = Rates or percentages based on fewer than 10 cases are not shown or not applicable for gender specific cancer sites.

Race/ethnicity categories are mutually exclusive; N/A = non-applicable.

Excludes in situ cases.

**Figure 24.** Age-adjusted incidence (AAIR) and mortality (AAMR) rates of oral cavity and pharynx cancer, by year and sex, for Central Valley, California, 1988-2004.



# CANCER INCIDENCE AND MORTALITY IN THE CENTRAL VALLEY REGION, CALIFORNIA, 2000-2004

## OVARY

**Table 25.** Number of new cases, deaths, percent of stage at diagnosis, annual average age-adjusted incidence and mortality rates of ovary cancer, by race, county, and sex, for Central Valley, California, 2000-2004.

Races / Counties	Total				Male				Female			
	Cases	AAIR	Deaths	AAMR	Cases	AAIR	Deaths	AAMR	Cases	AAIR	Deaths	AAMR
All races	826	12.5	617	9.5	^	^	^	^	826	12.5	617	9.5
NH White	581	13.2	473	10.2	^	^	^	^	581	13.2	473	10.2
NH Black	21	9.6	18	9.0	^	^	^	^	21	9.6	18	9.0
Hispanic	193	12.4	105	8.0	^	^	^	^	193	12.4	105	8.0
NH Asian/PI	27	8.2	21	6.8	^	^	^	^	27	8.2	21	6.8
Fresno	238	12.8	164	8.8	^	^	^	^	238	12.8	164	8.8
Kern	192	12.9	147	10.1	^	^	^	^	192	12.9	147	10.1
Kings	30	12.7	24	10.8	^	^	^	^	30	12.7	24	10.8
Madera	32	10.3	26	8.6	^	^	^	^	32	10.3	26	8.6
Merced	47	9.9	32	6.9	^	^	^	^	47	9.9	32	6.9
Stanislaus	136	12.1	99	8.9	^	^	^	^	136	12.1	99	8.9
Tulare	114	13.6	92	11.1	^	^	^	^	114	13.6	92	11.1
Tuolumne/Mariposa	37	15.4	24	11.9	^	^	^	^	37	15.4	24	11.9
Stage of Diagnosis	Local	Regional	Remote	N/A	Local	Regional	Remote	N/A	Local	Regional	Remote	N/A
All races	13.1%	16.0%	61.3%	9.7%	^	^	^	^	13.1%	16.0%	61.3%	9.7%
NH White	11.7%	16.7%	62.8%	8.8%	^	^	^	^	11.7%	16.7%	62.8%	8.8%
NH Black	^	^	71.4%	^	^	^	^	^	^	^	71.4%	^
Hispanic	15.5%	14.5%	58.5%	11.4%	^	^	^	^	15.5%	14.5%	58.5%	11.4%
NH Asian/PI	^	^	44.4%	^	^	^	^	^	^	^	44.4%	^
Fresno	12.2%	19.3%	62.6%	5.9%	^	^	^	^	12.2%	19.3%	62.6%	5.9%
Kern	14.6%	12.5%	60.9%	12.0%	^	^	^	^	14.6%	12.5%	60.9%	12.0%
Kings	^	^	56.7%	^	^	^	^	^	^	^	56.7%	^
Madera	^	^	75.0%	^	^	^	^	^	^	^	75.0%	^
Merced	21.3%	^	55.3%	^	^	^	^	^	21.3%	^	55.3%	^
Stanislaus	14.7%	11.0%	60.3%	14.0%	^	^	^	^	14.7%	11.0%	60.3%	14.0%
Tulare	9.6%	19.3%	64.0%	^	^	^	^	^	9.6%	19.3%	64.0%	^
Tuolumne/Mariposa	^	^	48.6%	^	^	^	^	^	^	^	48.6%	^

Source: Cancer Surveillance Program, Region 2, CCR, Sacramento, CA. January 2007 Quarterly Submission.

AAIR = Average annual age-adjusted incidence rates per 100,000 (2000 US Standard) for the five-year period.

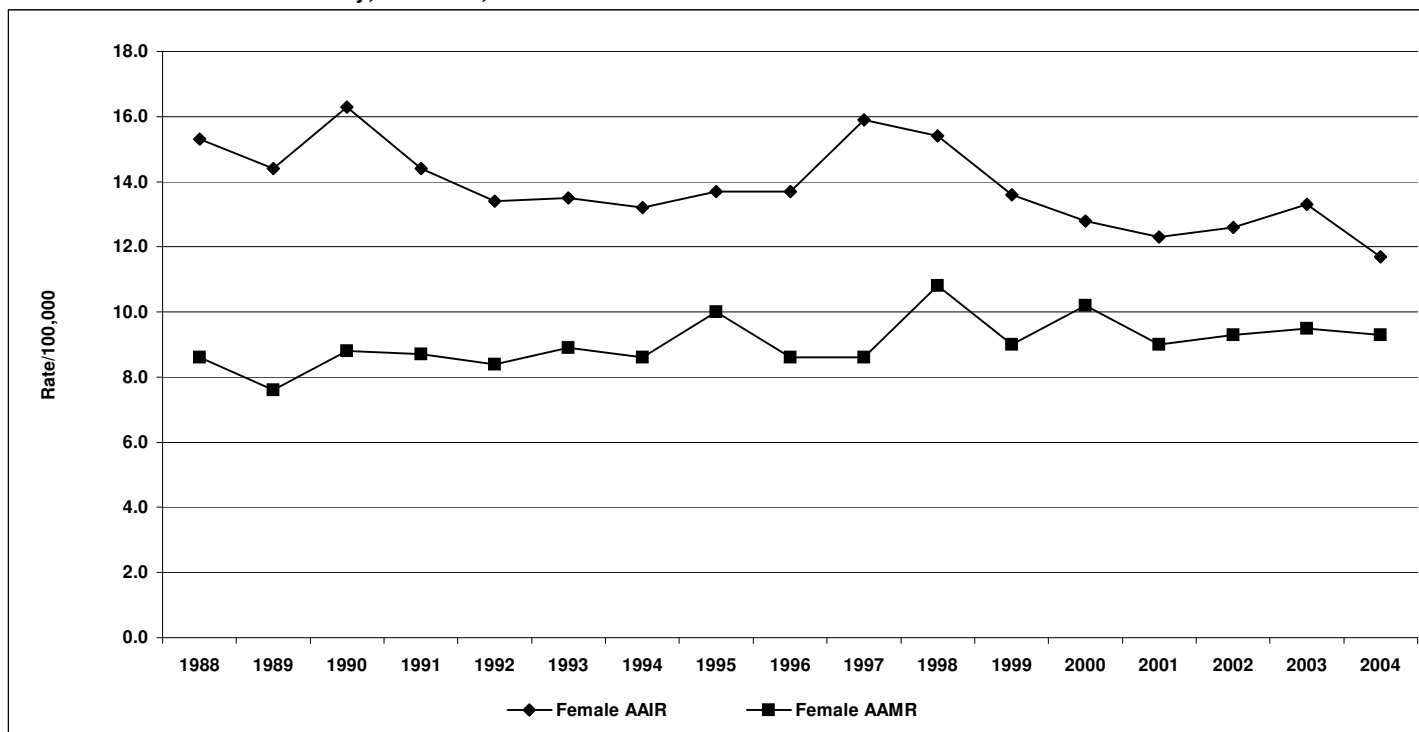
AAMR = Average annual age-adjusted mortality rates per 100,000 (2000 US Standard) for the five-year period.

^ = Rates or percentages based on fewer than 10 cases are not shown or not applicable for gender specific cancer sites.

Race/ethnicity categories are mutually exclusive; N/A = non-applicable.

Excludes in situ cases.

**Figure 25.** Age-adjusted incidence (AAIR) and mortality (AAMR) rates of ovary cancer, by year and sex, for Central Valley, California, 1988-2004.



CANCER INCIDENCE AND MORTALITY IN THE CENTRAL VALLEY REGION, CALIFORNIA, 2000-2004

PANCREAS

**Table 26.** Number of new cases, deaths, percent of stage at diagnosis, annual average age-adjusted incidence and mortality rates of pancreas cancer, by race, county, and sex, for Central Valley, California, 2000-2004.

Races / Counties	Total				Male				Female			
	Cases	AAIR	Deaths	AAMR	Cases	AAIR	Deaths	AAMR	Cases	AAIR	Deaths	AAMR
All races	1,248	10.5	1,179	10.1	618	11.8	580	11.2	630	9.5	599	9.1
NH White	874	10.5	866	10.4	444	12.4	434	12.1	430	9.0	432	9.0
NH Black	52	14.4	52	14.6	24	14.5	22	13.3	28	13.9	30	15.1
Hispanic	261	11.0	224	9.7	123	10.0	107	8.9	138	11.6	117	10.2
NH Asian/PI	47	8.4	37	6.8	23	9.3	17	7.0	24	7.6	20	6.5
Fresno	326	9.8	316	9.6	164	11.2	157	10.9	162	8.6	159	8.5
Kern	297	11.2	285	10.9	142	12.1	138	11.8	155	10.6	147	10.2
Kings	56	12.4	46	10.7	29	13.0	22	11.2	27	11.9	24	10.6
Madera	59	10.3	51	9.1	31	11.4	27	10.2	28	9.0	24	7.8
Merced	104	12.5	81	9.9	48	12.8	41	11.2	56	12.0	40	8.7
Stanislaus	196	9.9	199	10.2	88	10.4	87	10.5	108	9.6	112	9.9
Tulare	163	10.8	153	10.3	87	13.1	80	12.2	76	8.9	73	8.6
Tuolumne/Mariposa	47	9.5	35	9.1	29	12.1	21	11.4	18	7.5	14	7.1
Stage of Diagnosis	Local	Regional	Remote	N/A	Local	Regional	Remote	N/A	Local	Regional	Remote	N/A
All races	6.7%	23.4%	49.4%	20.5%	6.0%	20.4%	53.1%	20.6%	7.3%	26.3%	45.9%	20.5%
NH White	5.9%	24.4%	47.5%	22.2%	5.9%	20.5%	50.7%	23.0%	6.0%	28.4%	44.2%	21.4%
NH Black	^	26.9%	42.3%	19.2%	^	^	41.7%	^	^	^	42.9%	^
Hispanic	8.4%	19.9%	56.3%	15.3%	^	18.7%	61.8%	13.8%	10.9%	21.0%	51.4%	16.7%
NH Asian/PI	^	21.3%	59.6%	^	^	^	65.2%	^	^	^	54.2%	^
Fresno	8.0%	23.9%	50.6%	17.5%	6.1%	23.2%	53.7%	17.1%	9.9%	24.7%	47.5%	17.9%
Kern	8.1%	25.6%	40.4%	25.9%	^	21.1%	42.3%	30.3%	9.7%	29.7%	38.7%	21.9%
Kings	^	19.6%	62.5%	17.9%	^	^	72.4%	^	^	^	51.9%	^
Madera	^	30.5%	47.5%	20.3%	^	^	61.3%	^	^	35.7%	^	^
Merced	^	15.4%	58.7%	18.3%	^	^	68.8%	^	^	21.4%	50.0%	19.6%
Stanislaus	^	24.5%	50.5%	21.4%	^	15.9%	56.8%	21.6%	^	31.5%	45.4%	21.3%
Tulare	8.0%	22.1%	52.8%	17.2%	^	24.1%	49.4%	16.1%	^	19.7%	56.6%	18.4%
Tuolumne/Mariposa	^	^	48.9%	23.4%	^	^	48.3%	^	^	^	^	^

Source: Cancer Surveillance Program, Region 2, CCR, Sacramento, CA. January 2007 Quarterly Submission.

AAIR = Average annual age-adjusted incidence rates per 100,000 (2000 US Standard) for the five-year period.

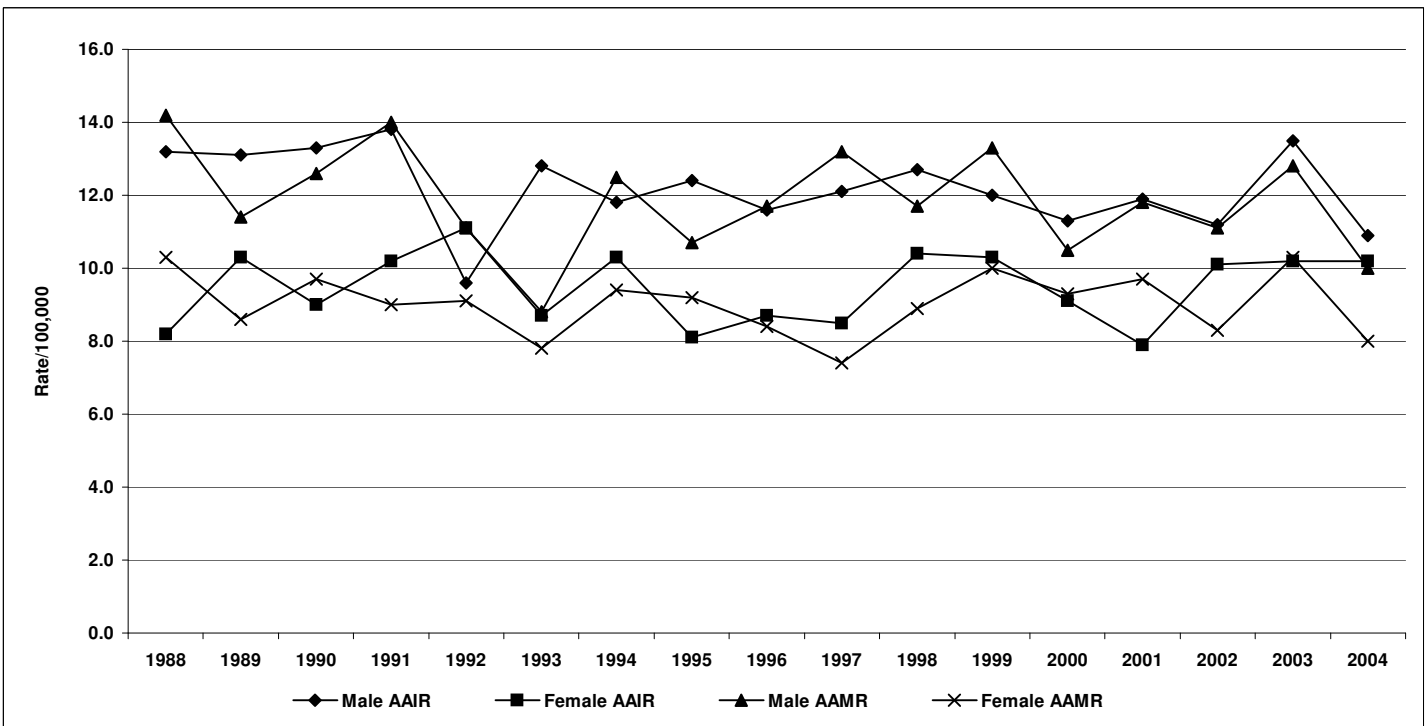
AAMR = Average annual age-adjusted mortality rates per 100,000 (2000 US Standard) for the five-year period.

^ = Rates or percentages based on fewer than 10 cases are not shown or not applicable for gender specific cancer sites.

Race/ethnicity categories are mutually exclusive; N/A = non-applicable.

Excludes in situ cases.

**Figure 26.** Age-adjusted incidence (AAIR) and mortality (AAMR) rates of pancreas cancer, by year and sex, for Central Valley, California, 1988-2004.





**CANCER INCIDENCE AND MORTALITY IN THE CENTRAL VALLEY REGION, CALIFORNIA, 2000-2004**

**PROSTATE**

**Table 27.** Number of new cases, deaths, percent of stage at diagnosis, annual average age-adjusted incidence and mortality rates of prostate cancer, by race, county, and sex, for Central Valley, California, 2000-2004.

Races / Counties	Total				Male				Female			
	Cases	AAIR	Deaths	AAMR	Cases	AAIR	Deaths	AAMR	Cases	AAIR	Deaths	AAMR
All races	7,692	145.8	1,119	24.5	7,692	145.8	1,119	24.5	^	^	^	^
NH White	5,275	143.8	830	24.5	5,275	143.8	830	24.5	^	^	^	^
NH Black	404	239.1	83	61.1	404	239.1	83	61.1	^	^	^	^
Hispanic	1,392	127.1	175	20.9	1,392	127.1	175	20.9	^	^	^	^
NH Asian/PI	201	81.9	31	14.9	201	81.9	31	14.9	^	^	^	^
Fresno	2,224	152.5	328	25.0	2,224	152.5	328	25	^	^	^	^
Kern	1,629	134.2	246	24.7	1,629	134.2	246	24.7	^	^	^	^
Kings	314	165.0	34	21.5	314	165.0	34	21.5	^	^	^	^
Madera	429	160.3	59	25.7	429	160.3	59	25.7	^	^	^	^
Merced	566	153.5	73	23.1	566	153.5	73	23.1	^	^	^	^
Stanislaus	1,048	119.9	188	24.9	1,048	119.9	188	24.9	^	^	^	^
Tulare	1,025	156.2	134	23.1	1,025	156.2	134	23.1	^	^	^	^
Tuolumne/Mariposa	457	184.5	44	26.1	457	184.5	44	26.1	^	^	^	^
Stage of Diagnosis	Local	Regional	Remote	N/A	Local	Regional	Remote	N/A	Local	Regional	Remote	N/A
All races	80.2%	10.5%	4.3%	5.0%	80.2%	10.5%	4.3%	5.0%	^	^	^	^
NH White	80.1%	10.8%	4.1%	4.9%	80.1%	10.8%	4.1%	4.9%	^	^	^	^
NH Black	78.2%	10.4%	6.4%	5.0%	78.2%	10.4%	6.4%	5.0%	^	^	^	^
Hispanic	79.5%	11.6%	4.4%	4.6%	79.5%	11.6%	4.4%	4.6%	^	^	^	^
NH Asian/PI	76.1%	10.4%	8.5%	5.0%	76.1%	10.4%	8.5%	5.0%	^	^	^	^
Fresno	79.6%	12.5%	5.1%	2.7%	79.6%	12.5%	5.1%	2.7%	^	^	^	^
Kern	79.3%	9.1%	4.1%	7.6%	79.3%	9.1%	4.1%	7.6%	^	^	^	^
Kings	80.6%	11.8%	3.8%	3.8%	80.6%	11.8%	3.8%	3.8%	^	^	^	^
Madera	81.6%	11.7%	4.4%	2.3%	81.6%	11.7%	4.4%	2.3%	^	^	^	^
Merced	78.4%	6.7%	4.2%	10.6%	78.4%	6.7%	4.2%	10.6%	^	^	^	^
Stanislaus	82.3%	9.0%	4.5%	4.3%	82.3%	9.0%	4.5%	4.3%	^	^	^	^
Tulare	80.8%	10.0%	4.2%	5.0%	80.8%	10.0%	4.2%	5.0%	^	^	^	^
Tuolumne/Mariposa	81.0%	12.0%	^	5.3%	81.0%	12.0%	^	5.3%	^	^	^	^

Source: Cancer Surveillance Program, Region 2, CCR, Sacramento, CA. January 2007 Quarterly Submission.

AAIR = Average annual age-adjusted incidence rates per 100,000 (2000 US Standard) for the five-year period.

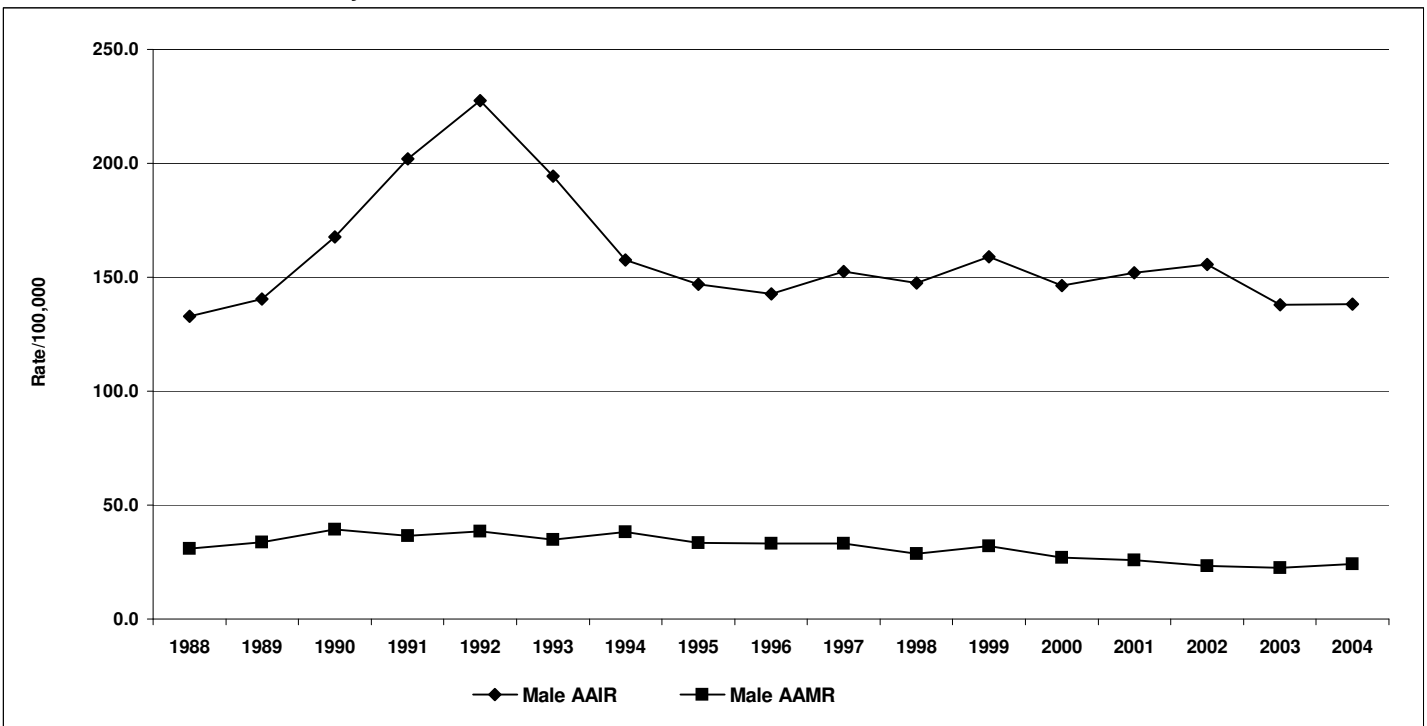
AAMR = Average annual age-adjusted mortality rates per 100,000 (2000 US Standard) for the five-year period.

^ = Rates or percentages based on fewer than 10 cases are not shown or not applicable for gender specific cancer sites.

Race/ethnicity categories are mutually exclusive; N/A = non-applicable.

Excludes in situ cases.

**Figure 27.** Age-adjusted incidence (AAIR) and mortality (AAMR) rates of prostate cancer, by year and sex, for Central Valley, California, 1988-2004.



# CANCER INCIDENCE AND MORTALITY IN THE CENTRAL VALLEY REGION, CALIFORNIA, 2000-2004

## RECTUM AND RECTOSIGMOID

**Table 28.** Number of new cases, deaths, percent of stage at diagnosis, annual average age-adjusted incidence and mortality rates of rectum and rectosigmoid cancer, by race, county, and sex, for Central Valley, California, 2000-2004.

Races / Counties	Total				Male				Female			
	Cases	AAIR	Deaths	AAMR	Cases	AAIR	Deaths	AAMR	Cases	AAIR	Deaths	AAMR
All races	1,682	14.0	392	3.3	1,006	18.4	219	4.1	676	10.3	173	2.6
NH White	1,165	14.2	297	3.6	687	18.9	150	4.2	478	10.5	147	3.1
NH Black	56	14.3	14	3.7	33	16.4	^	^	23	11.7	^	^
Hispanic	347	12.2	63	2.3	217	15.9	50	3.9	130	8.9	13	0.8
NH Asian/PI	88	15.3	18	3.2	56	21.5	12	4.9	32	10.1	^	^
Fresno	456	13.5	78	2.3	265	17.6	38	2.6	191	10.2	40	2.1
Kern	396	14.4	99	3.8	236	18.6	59	4.9	160	10.9	40	2.8
Kings	66	14.2	18	4.1	50	23.0	12	5.6	16	6.7	^	^
Madera	74	12.7	17	3.1	51	18.9	^	^	23	7.3	10	3.3
Merced	121	14.1	32	3.9	76	19.9	20	5.7	45	9.6	12	2.5
Stanislaus	281	13.9	81	4.1	160	17.7	42	4.8	121	10.7	39	3.6
Tulare	217	14.3	48	3.2	126	18.7	28	4.2	91	10.9	20	2.2
Tuolumne/Mariposa	71	14.0	13	3.4	42	17.5	^	^	29	10.8	^	^
Stage of Diagnosis	Local	Regional	Remote	N/A	Local	Regional	Remote	N/A	Local	Regional	Remote	N/A
All races	43.0%	33.4%	17.4%	6.2%	42.1%	33.5%	18.9%	5.5%	44.4%	33.1%	15.1%	7.4%
NH White	44.0%	31.6%	17.3%	7.0%	44.3%	31.6%	18.3%	5.8%	43.7%	31.6%	15.9%	8.8%
NH Black	41.1%	28.6%	21.4%	^	39.4%	^	^	^	43.5%	^	^	^
Hispanic	41.8%	36.6%	18.2%	3.5%	38.7%	37.8%	20.3%	^	46.9%	34.6%	14.6%	^
NH Asian/PI	34.1%	47.7%	14.8%	^	32.1%	46.4%	17.9%	^	37.5%	50.0%	^	^
Fresno	42.5%	35.1%	19.5%	2.9%	42.3%	35.8%	19.6%	^	42.9%	34.0%	19.4%	^
Kern	38.4%	36.4%	16.2%	9.1%	40.3%	31.8%	18.6%	9.3%	35.6%	43.1%	12.5%	8.8%
Kings	42.4%	33.3%	18.2%	^	40.0%	36.0%	20.0%	^	^	^	^	^
Madera	47.3%	28.4%	18.9%	^	45.1%	25.5%	23.5%	^	52.2%	^	^	^
Merced	39.7%	33.1%	17.4%	9.9%	31.6%	34.2%	22.4%	^	53.3%	31.1%	^	^
Stanislaus	47.0%	28.5%	17.1%	7.5%	47.5%	31.3%	16.3%	^	46.3%	24.8%	18.2%	10.7%
Tulare	45.6%	34.1%	15.2%	5.1%	44.4%	36.5%	15.9%	^	47.3%	30.8%	14.3%	^
Tuolumne/Mariposa	50.7%	28.2%	15.5%	^	42.9%	33.3%	^	^	62.1%	^	^	^

Source: Cancer Surveillance Program, Region 2, CCR, Sacramento, CA. January 2007 Quarterly Submission.

AAIR = Average annual age-adjusted incidence rates per 100,000 (2000 US Standard) for the five-year period.

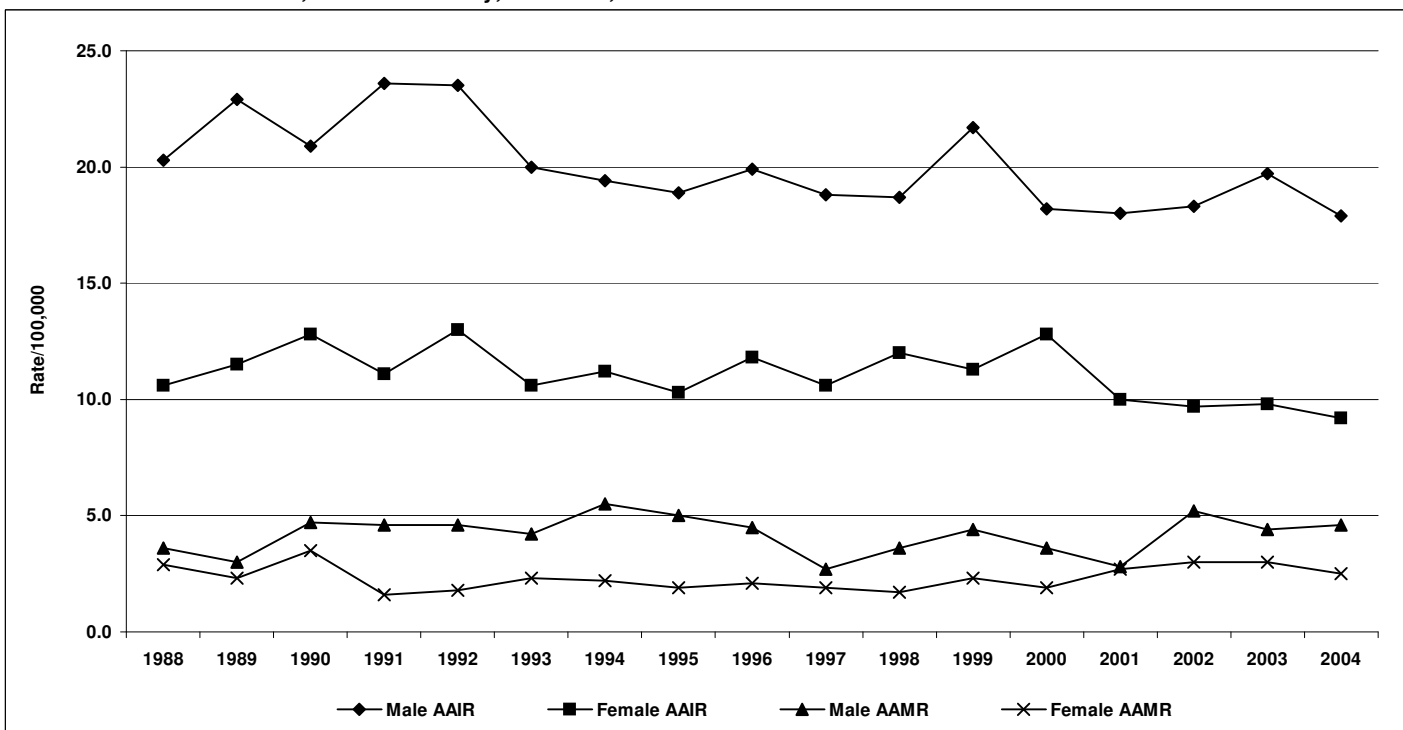
AAMR = Average annual age-adjusted mortality rates per 100,000 (2000 US Standard) for the five-year period.

^ = Rates or percentages based on fewer than 10 cases are not shown or not applicable for gender specific cancer sites.

Race/ethnicity categories are mutually exclusive; N/A = non-applicable.

Excludes in situ cases.

**Figure 28.** Age-adjusted incidence (AAIR) and mortality (AAMR) rates of rectum and rectosigmoid cancer, by year and sex, for Central Valley, California, 1988-2004.



# CANCER INCIDENCE AND MORTALITY IN THE CENTRAL VALLEY REGION, CALIFORNIA, 2000-2004

## STOMACH

**Table 29.** Number of new cases, deaths, percent of stage at diagnosis, annual average age-adjusted incidence and mortality rates of stomach cancer, by race, county, and sex for Central Valley, California, 2000-2004.

Races / Counties	Total				Male				Female			
	Cases	AAIR	Deaths	AAMR	Cases	AAIR	Deaths	AAMR	Cases	AAIR	Deaths	AAMR
All races	954	8.0	588	5.0	597	11.2	375	7.2	357	5.4	213	3.2
NH White	499	6.0	294	3.5	315	8.7	184	5.1	184	3.9	110	2.3
NH Black	52	13.6	36	10.2	31	17.6	24	15.3	21	10.0	12	6.2
Hispanic	334	13.2	216	8.8	212	17.5	144	12.4	122	9.2	72	5.6
NH Asian/PI	65	12.1	42	7.9	37	14.9	23	9.7	28	9.6	19	6.3
Fresno	304	9.0	165	4.9	187	12.9	104	7.3	117	6.2	61	3.2
Kern	218	8.1	136	5.2	133	10.9	84	7.3	85	5.7	52	3.5
Kings	38	8.5	31	7.0	28	14.0	23	12.2	10	4.2	8	3.3
Madera	40	6.9	33	5.8	24	8.9	22	8.4	16	5.1	11	3.6
Merced	65	7.8	43	5.1	33	8.6	21	5.6	32	6.8	22	4.7
Stanislaus	154	7.7	91	4.7	102	11.6	58	6.8	52	4.7	33	3.0
Tulare	102	6.6	71	4.7	67	9.6	51	7.7	35	4.0	20	2.3
Tuolumne/Mariposa	33	6.6	11	3.0	23	10.1	^	^	10	3.7	^	^
Stage of Diagnosis	Local	Regional	Remote	N/A	Local	Regional	Remote	N/A	Local	Regional	Remote	N/A
All races	23.5%	29.2%	34.6%	12.7%	21.1%	31.2%	35.2%	12.6%	27.5%	26.1%	33.6%	12.9%
NH White	23.0%	29.5%	32.5%	15.0%	21.6%	31.4%	33.0%	14.0%	25.5%	26.1%	31.5%	16.8%
NH Black	21.2%	23.1%	38.5%	^	^	^	41.9%	^	^	^	^	^
Hispanic	22.8%	30.2%	38.0%	9.0%	20.8%	33.0%	37.3%	9.0%	26.2%	25.4%	39.3%	9.0%
NH Asian/PI	29.2%	29.2%	32.3%	^	^	27.0%	37.8%	^	39.3%	^	^	^
Fresno	25.7%	27.3%	40.5%	6.6%	20.3%	29.4%	41.7%	8.6%	34.2%	23.9%	38.5%	^
Kern	22.5%	30.7%	28.4%	18.3%	23.3%	31.6%	29.3%	15.8%	21.2%	29.4%	27.1%	22.4%
Kings	^	39.5%	28.9%	^	^	39.3%	^	^	^	^	^	^
Madera	30.0%	40.0%	27.5%	^	^	^	^	^	^	^	^	^
Merced	15.4%	27.7%	36.9%	20.0%	^	39.4%	33.3%	^	^	^	40.6%	^
Stanislaus	18.2%	31.2%	36.4%	14.3%	22.5%	26.5%	36.3%	14.7%	^	40.4%	36.5%	^
Tulare	29.4%	23.5%	34.3%	12.7%	19.4%	32.8%	37.3%	^	48.6%	^	28.6%	^
Tuolumne/Mariposa	^	^	^	^	^	^	^	^	^	^	^	^

Source: Cancer Surveillance Program, Region 2, CCR, Sacramento, CA. January 2007 Quarterly Submission.

AAIR = Average annual age-adjusted incidence rates per 100,000 (2000 US Standard) for the five-year period.

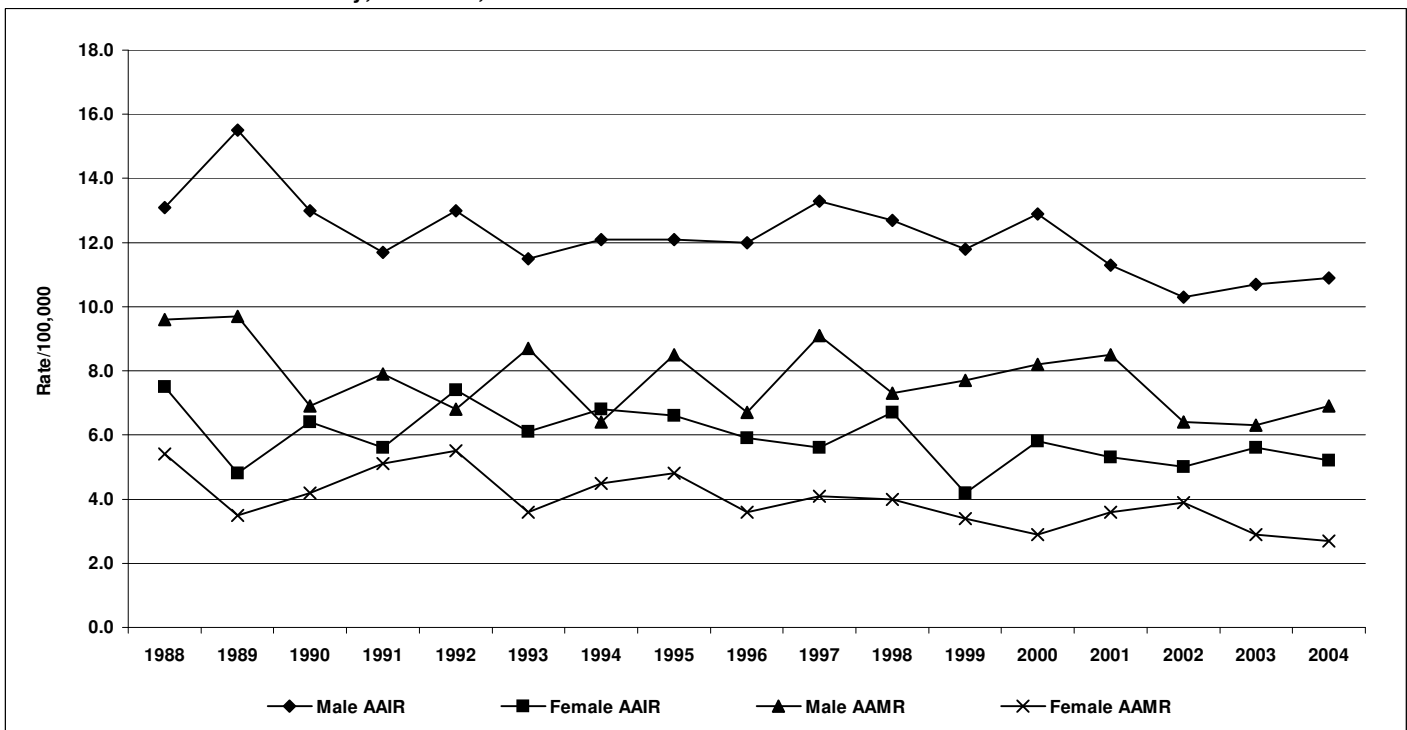
AAMR = Average annual age-adjusted mortality rates per 100,000 (2000 US Standard) for the five-year period.

^ = Rates or percentages based on fewer than 10 cases are not shown or not applicable for gender specific cancer sites.

Race/ethnicity categories are mutually exclusive; N/A = non-applicable.

Excludes in situ cases.

**Figure 29.** Age-adjusted incidence (AAIR) and mortality (AAMR) rates of stomach cancer, by year and sex, for Central Valley, California, 1988-2004.



# CANCER INCIDENCE AND MORTALITY IN THE CENTRAL VALLEY REGION, CALIFORNIA, 2000-2004

## TESTIS

**Table 30.** Number of new cases, deaths, percent of stage at diagnosis, annual average age-adjusted incidence and mortality rates of testis cancer, by race, county, and sex, for Central Valley, California, 2000-2004.

Races / Counties	Total				Male				Female			
	Cases	AAIR	Deaths	AAMR	Cases	AAIR	Deaths	AAMR	Cases	AAIR	Deaths	AAMR
All races	396	5.3	29	0.4	396	5.3	29	0.4	^	^	^	^
NH White	223	6.9	20	0.6	223	6.9	20	0.6	^	^	^	^
NH Black	^	^	^	^	^	^	^	^	^	^	^	^
Hispanic	153	4.4	^	^	153	4.4	^	^	^	^	^	^
NH Asian/PI	^	^	^	^	^	^	^	^	^	^	^	^
Fresno	109	2.7	^	^	109	2.7	^	^	^	^	^	^
Kern	95	2.7	^	^	95	2.7	^	^	^	^	^	^
Kings	20	2.7	^	^	20	2.7	^	^	^	^	^	^
Madera	13	2.1	^	^	13	2.1	^	^	^	^	^	^
Merced	23	2.1	^	^	23	2.1	^	^	^	^	^	^
Stanislaus	73	3.2	12	1.2	73	3.2	12	1.2	^	^	^	^
Tulare	51	2.8	^	^	51	2.8	^	^	^	^	^	^
Tuolumne/Mariposa	12	6.3	^	^	12	6.3	^	^	^	^	^	^
Stage of Diagnosis	Local	Regional	Remote	N/A	Local	Regional	Remote	N/A	Local	Regional	Remote	N/A
All races	67.9%	15.7%	14.4%	^	67.9%	15.7%	14.4%	^	^	^	^	^
NH White	72.6%	14.3%	10.3%	^	72.6%	14.3%	10.3%	^	^	^	^	^
NH Black	^	^	^	^	^	^	^	^	^	^	^	^
Hispanic	61.4%	17.6%	20.3%	^	61.4%	17.6%	20.3%	^	^	^	^	^
NH Asian/PI	^	^	^	^	^	^	^	^	^	^	^	^
Fresno	64.2%	22.9%	11.0%	^	64.2%	22.9%	11.0%	^	^	^	^	^
Kern	62.1%	15.8%	18.9%	^	62.1%	15.8%	18.9%	^	^	^	^	^
Kings	60.0%	^	^	^	60.0%	^	^	^	^	^	^	^
Madera	^	^	^	^	^	^	^	^	^	^	^	^
Merced	73.9%	^	^	^	73.9%	^	^	^	^	^	^	^
Stanislaus	74.0%	^	^	^	74.0%	^	^	^	^	^	^	^
Tulare	78.4%	^	^	^	78.4%	^	^	^	^	^	^	^
Tuolumne/Mariposa	^	^	^	^	^	^	^	^	^	^	^	^

Source: Cancer Surveillance Program, Region 2, CCR, Sacramento, CA. January 2007 Quarterly Submission.

AAIR = Average annual age-adjusted incidence rates per 100,000 (2000 US Standard) for the five-year period.

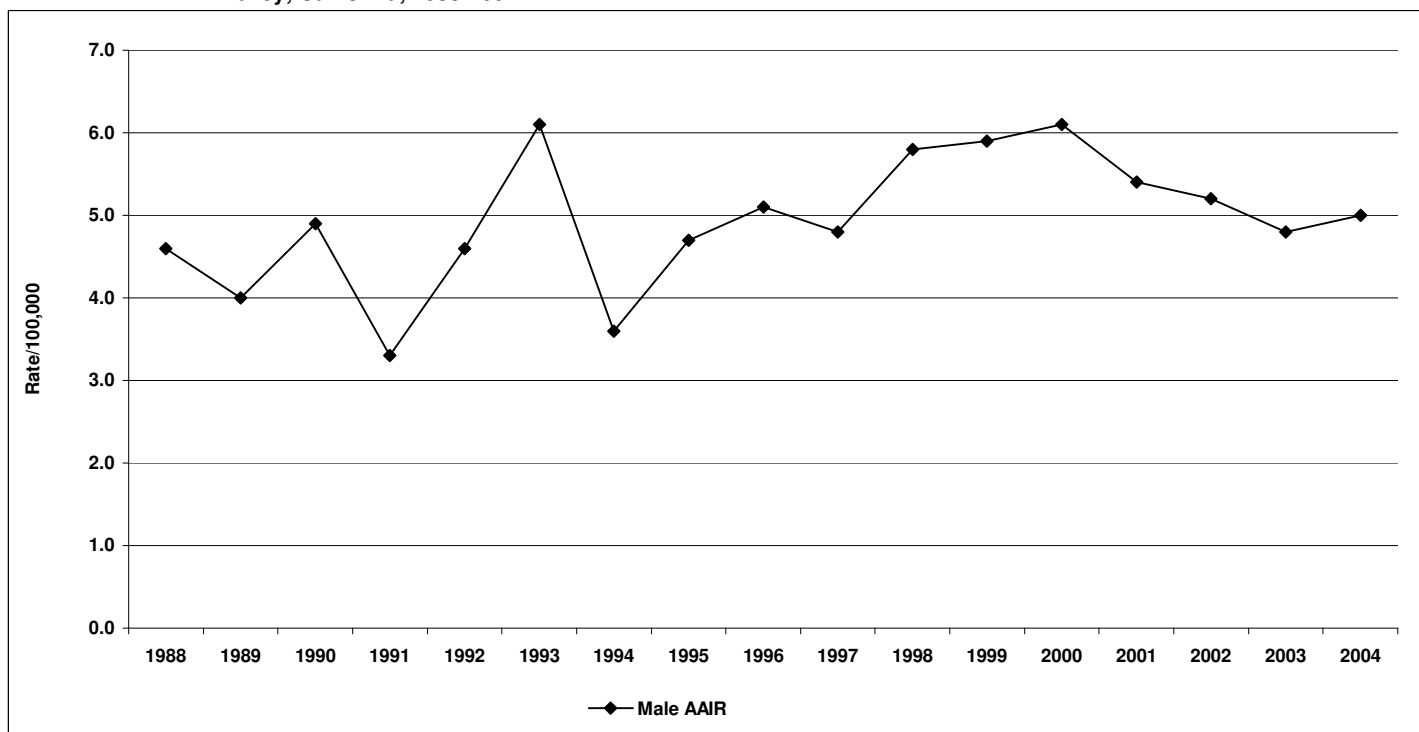
AAMR = Average annual age-adjusted mortality rates per 100,000 (2000 US Standard) for the five-year period.

^ = Rates or percentages based on fewer than 10 cases are not shown or not applicable for gender specific cancer sites.

Race/ethnicity categories are mutually exclusive; N/A = non-applicable.

Excludes in situ cases.

**Figure 30.** Age-adjusted incidence (AAIR) and mortality (AAMR) rates of testis cancer, by year and sex, for Central Valley, California, 1988-2004.



# CANCER INCIDENCE AND MORTALITY IN THE CENTRAL VALLEY REGION, CALIFORNIA, 2000-2004

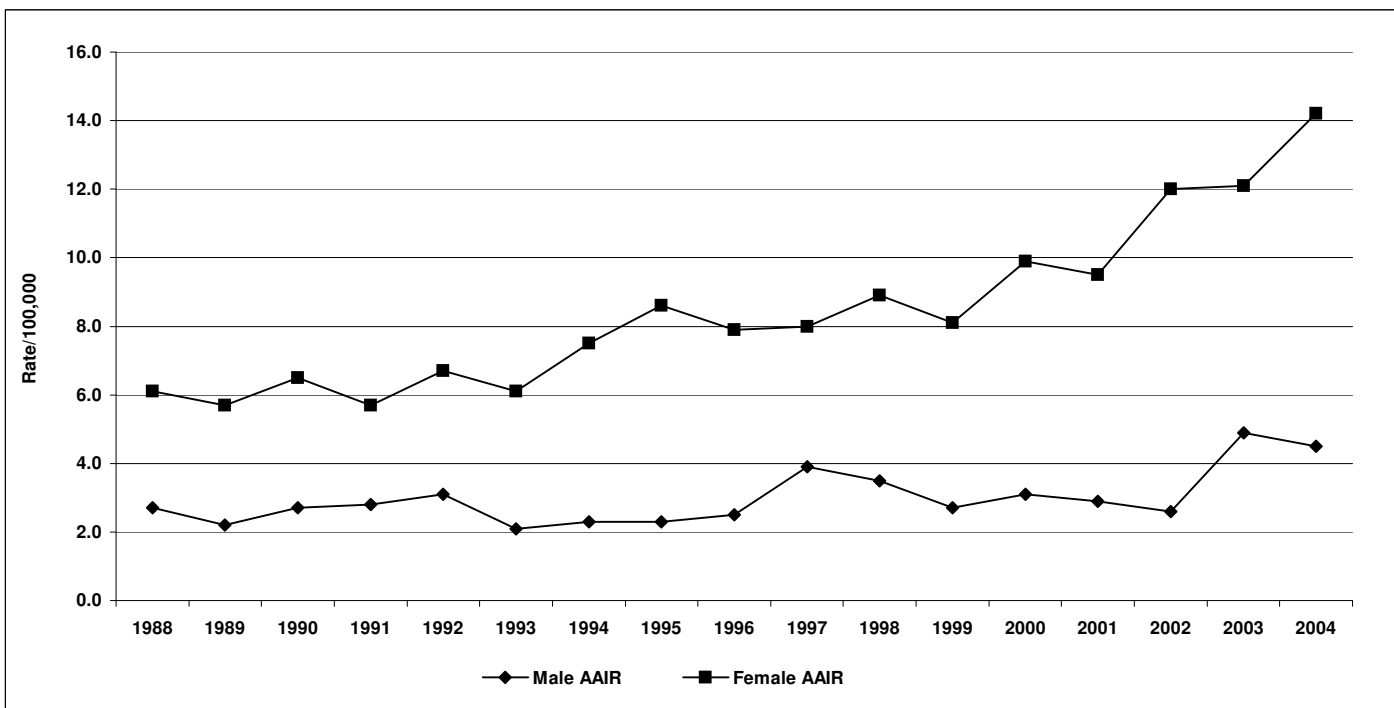
## THYROID

**Table 31.** Number of new cases, deaths, percent of stage at diagnosis, annual average age-adjusted incidence and mortality rates of thyroid cancer, by race, county, and sex, for Central Valley, California, 2000-2004.

Races / Counties	Total				Male				Female			
	Cases	AAIR	Deaths	AAMR	Cases	AAIR	Deaths	AAMR	Cases	AAIR	Deaths	AAMR
All races	996	7.5	60	0.5	219	3.6	23	0.5	777	11.6	37	0.6
NH White	600	8.3	27	0.3	147	4.1	^	^	453	12.3	19	0.4
NH Black	25	4.5	^	^	^	^	^	^	22	8.4	^	^
Hispanic	310	7.2	23	1.0	53	3.2	11	1.2	257	11.6	12	0.9
NH Asian/PI	52	8.1	^	^	11	4.2	^	^	41	11.6	^	^
Fresno	297	8.1	21	0.6	68	4.0	^	^	229	12.1	13	0.7
Kern	223	7.2	12	0.5	38	2.7	^	^	185	12.0	^	^
Kings	33	5.1	^	^	12	3.5	^	^	21	7.9	^	^
Madera	59	9.6	^	^	^	^	^	^	52	15.8	^	^
Merced	80	8.4	^	^	19	4.5	^	^	61	12.4	^	^
Stanislaus	163	7.4	^	^	39	3.9	^	^	124	10.9	^	^
Tulare	114	6.8	12	0.8	25	3.5	^	^	89	10.3	^	^
Tuolumne/Mariposa	27	6.2	^	^	11	4.7	^	^	16	8.2	^	^
Stage of Diagnosis	Local	Regional	Remote	N/A	Local	Regional	Remote	N/A	Local	Regional	Remote	N/A
All races	67.2%	23.8%	7.3%	1.7%	54.8%	29.7%	13.2%	^	70.7%	22.1%	5.7%	1.5%
NH White	71.5%	21.0%	6.0%	^	60.5%	26.5%	11.6%	^	75.1%	19.2%	4.2%	^
NH Black	80.0%	^	^	^	^	^	^	^	81.8%	^	^	^
Hispanic	57.7%	31.3%	9.0%	^	35.8%	41.5%	18.9%	^	62.3%	29.2%	7.0%	^
NH Asian/PI	65.4%	21.2%	^	^	^	^	^	^	65.9%	^	^	^
Fresno	65.7%	25.6%	7.7%	^	50.0%	45.6%	^	^	70.3%	19.7%	8.7%	^
Kern	72.6%	18.4%	6.7%	^	65.8%	^	^	^	74.1%	19.5%	^	^
Kings	60.6%	30.3%	^	^	^	^	^	^	71.4%	^	^	^
Madera	71.2%	18.6%	^	^	^	^	^	^	71.2%	19.2%	^	^
Merced	58.8%	32.5%	^	^	^	^	^	^	63.9%	31.1%	^	^
Stanislaus	68.7%	23.9%	6.1%	^	71.8%	^	^	^	67.7%	26.6%	^	^
Tulare	63.2%	25.4%	11.4%	^	40.0%	^	^	^	69.7%	25.8%	^	^
Tuolumne/Mariposa	70.4%	^	^	^	^	^	^	^	87.5%	^	^	^

Source: Cancer Surveillance Program, Region 2, CCR, Sacramento, CA. January 2007 Quarterly Submission.  
 AAIR = Average annual age-adjusted incidence rates per 100,000 (2000 US Standard) for the five-year period.  
 AAMR = Average annual age-adjusted mortality rates per 100,000 (2000 US Standard) for the five-year period.  
 ^ = Rates or percentages based on fewer than 10 cases are not shown or not applicable for gender specific cancer sites.  
 Race/ethnicity categories are mutually exclusive; N/A = non-applicable.  
 Excludes in situ cases.

**Figure 31.** Age-adjusted incidence (AAIR) rates of thyroid cancer, by year and sex, for Central Valley, California 1988-2004.



# CANCER INCIDENCE AND MORTALITY IN THE CENTRAL VALLEY REGION, CALIFORNIA, 2000-2004

## URINARY BLADDER CANCER

**Table 32.** Number of new cases, deaths, percent of stage at diagnosis, annual average age-adjusted incidence and mortality rates of urinary bladder cancer, by race, county, and sex, for Central Valley, California, 2000-2004.

Races / Counties	Total				Male				Female			
	Cases	AAIR	Deaths	AAMR	Cases	AAIR	Deaths	AAMR	Cases	AAIR	Deaths	AAMR
All races	2,208	18.7	493	4.2	1,673	32.6	348	7.2	535	8.1	145	2.2
NH White	1,808	21.6	429	5.0	1,374	38.3	311	8.9	434	9.2	118	2.4
NH Black	40	10.8	10	3.0	30	17.3	^	^	10	5.2	^	^
Hispanic	234	10.0	44	2.4	172	15.7	25	2.9	62	5.0	19	1.9
NH Asian/PI	45	8.4	10	2.1	38	15.7	^	^	^	^	^	^
Fresno	615	18.3	154	4.6	467	32.9	107	7.9	148	7.7	47	2.4
Kern	486	18.2	99	3.9	369	31.0	64	5.8	117	8.0	35	2.4
Kings	70	16.4	13	3.3	61	31.4	^	^	^	^	^	^
Madera	87	15.2	29	5.2	68	26.3	24	9.9	19	6.1	^	^
Merced	183	21.8	34	4.2	135	37.3	26	8.1	48	10.4	^	^
Stanislaus	369	18.6	78	3.9	266	31.1	55	6.8	103	9.1	23	2.0
Tulare	263	17.6	62	4.2	200	31.5	43	7.1	63	7.5	19	2.2
Tuolumne/Mariposa	135	26.3	17	4.3	107	44.8	14	8.0	28	10.5	^	^
Stage of Diagnosis	Local	Regional	Remote	N/A	Local	Regional	Remote	N/A	Local	Regional	Remote	N/A
All races	71.8%	13.8%	8.0%	6.4%	72.8%	14.2%	6.9%	6.2%	68.9%	12.6%	11.3%	7.3%
NH White	73.5%	13.6%	7.3%	5.6%	74.5%	13.8%	6.5%	5.3%	70.5%	13.0%	9.8%	6.7%
NH Black	53.6%	^	^	^	54.5%	^	^	^	^	^	^	^
Hispanic	65.2%	15.2%	13.0%	^	66.0%	17.5%	10.7%	^	62.9%	^	^	^
NH Asian/PI	54.8%	^	^	^	59.3%	^	^	^	^	^	^	^
Fresno	73.8%	11.4%	9.0%	5.8%	75.4%	11.9%	7.1%	5.6%	69.2%	^	14.3%	^
Kern	70.7%	18.0%	4.1%	7.1%	71.7%	18.3%	^	6.8%	68.0%	17.3%	^	^
Kings	68.9%	^	^	^	66.7%	^	^	^	^	^	^	^
Madera	70.6%	^	^	^	70.7%	^	^	^	^	^	^	^
Merced	73.9%	11.4%	^	^	71.6%	^	^	^	81.0%	^	^	^
Stanislaus	71.4%	14.3%	9.2%	5.1%	72.2%	13.9%	9.0%	^	69.2%	^	^	^
Tulare	69.5%	13.2%	11.9%	^	73.2%	14.3%	8.9%	^	59.0%	^	^	^
Tuolumne/Mariposa	72.9%	^	^	^	72.5%	^	^	^	^	^	^	^

Source: Cancer Surveillance Program, Region 2, CCR, Sacramento, CA. January 2007 Quarterly Submission.

AAIR = Average annual age-adjusted incidence rates per 100,000 (2000 US Standard) for the five-year period.

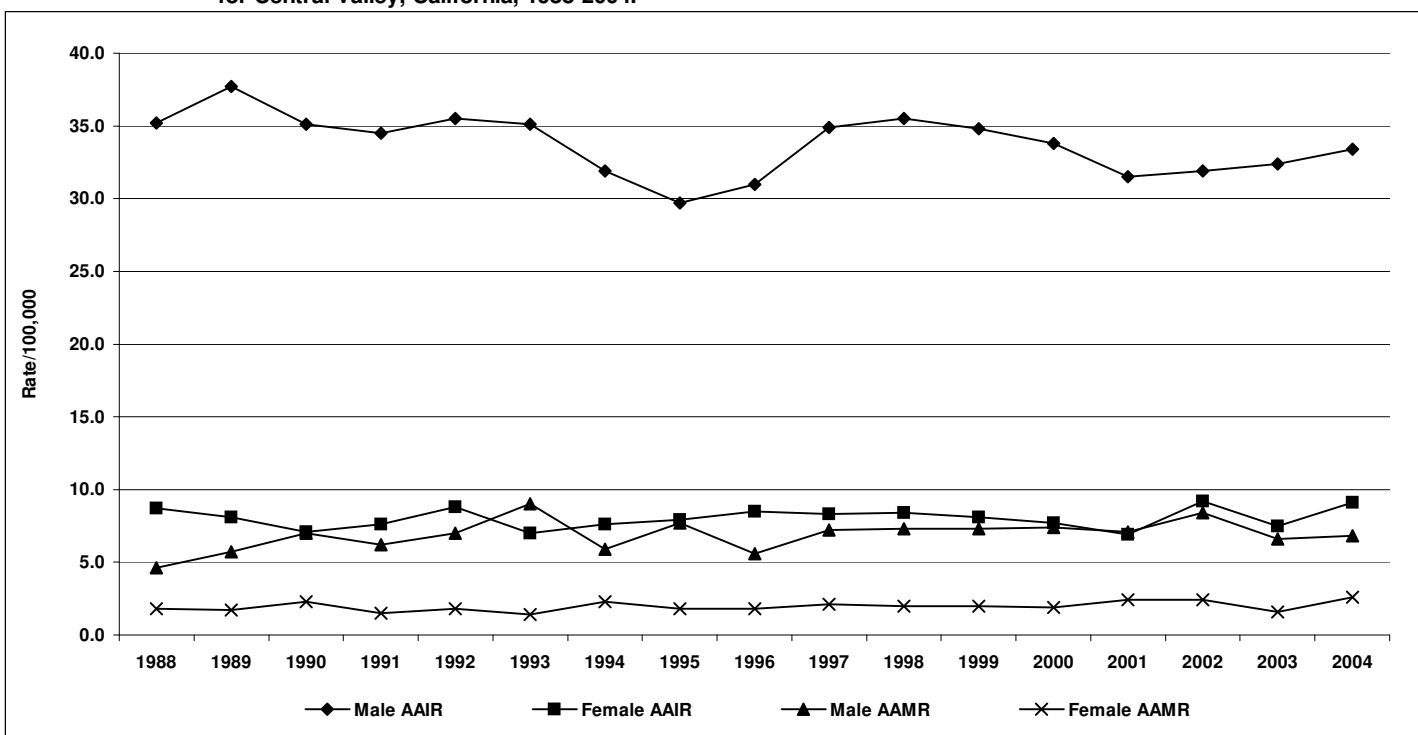
AAMR = Average annual age-adjusted mortality rates per 100,000 (2000 US Standard) for the five-year period.

^ = Rates or percentages based on fewer than 10 cases are not shown or not applicable for gender specific cancer sites.

Race/ethnicity categories are mutually exclusive; N/A = non-applicable.

Includes in situ cases.

**Figure 32.** Age-adjusted incidence (AAIR) and mortality (AAMR) rates of urinary bladder cancer, by year and sex, for Central Valley, California, 1988-2004.



---

## APPENDICES

---

**CANCER INCIDENCE AND MORTALITY IN THE CENTRAL VALLEY REGION, CALIFORNIA, 2000-2004**

**APPENDIX A**

See Site for ICD-0-2 Incidence Data

<u>Site Description</u>	<u>Site</u>	<u>Types</u>
<b>Buccal cavity and pharynx</b>		
Lip	C000-C009	(EXEC TYPES 9590-9970)
Tongue	C019-C029	(EXEC TYPES 9590-9970)
Salivary Glads	C079-C089	(EXEC TYPES 9590-9970)
Floor of mouth	C040-C049	(EXEC TYPES 9590-9970)
Gum and other mouth	C030-C039-,C050-C059, C060-C069	(EXEC TYPES 9590-9970)
Nasopharynx	C110-C119	(EXEC TYPES 9590-9970)
Tonsil	C090-C099	(EXEC TYPES 9590-9970)
Oropharynx	C100-C109	(EXEC TYPES 9590-9970)
Hypopharynx	C129,C130-C139,C141	(EXEC TYPES 9590-9970)
Other buccal cavity and pharynx	C140,C142-C148	(EXEC TYPES 9590-9970)
<b>Digestive system</b>		
Esophagus	C150-159	(EXEC TYPES 9590-9970)
Stomach	C160-C169	(EXEC TYPES 9590-9970)
Small intestine	C170-C179	(EXEC TYPES 9590-9970)
Colon exc. Rectum		
Cecum	C180	(EXEC TYPES 9590-9970)
Appendix	C181	(EXEC TYPES 9590-9970)
Ascending colon	C182	(EXEC TYPES 9590-9970)
Hepatic flexure	C183	(EXEC TYPES 9590-9970)
Transverse colon	C184	(EXEC TYPES 9590-9970)
Splenic flexure	C185	(EXEC TYPES 9590-9970)
Descending colon	C186	(EXEC TYPES 9590-9970)
Sigmoid colon	C187	(EXEC TYPES 9590-9970)
Large intestine, NOS	C188-C189,C260	(EXEC TYPES 9590-9970)
<b>Rectum and rectosigmoid</b>		
Rectosigmoid junction	C199	(EXEC TYPES 9590-9970)
Rectum	C200	(EXEC TYPES 9590-9970)
Anus, anal canal and anorectum	C210-C212,C218	(EXEC TYPES 9590-9970)
Liver	C220	(EXEC TYPES 9590-9970)
Intrahepatic bile ducts	C221	(EXEC TYPES 9590-9970)
Gallbladder	C239	(EXEC TYPES 9590-9970)
Other biliary	C240-C249	(EXEC TYPES 9590-9970)
Pancreas	C250-C259	(EXEC TYPES 9590-9970)
Retroperitoneum	C480	(EXEC TYPES 9590-9970)
Peritoneum, omentum and mesentery	C481-C482	(EXEC TYPES 9590-9970)
Other digestive organs	C268-C269,C488	(EXEC TYPES 9590-9970)
<b>Respiratory system</b>		
Nasal cavity, middle ear and accessory sinuses	C300-C301,C310-C319, C398	(EXEC TYPES 9590-9970)
Larynx	C320-C329	(EXEC TYPES 9590-9970)
Lung and bronchus	C340-C349	(EXEC TYPES 9590-9970)
Pleura	C384	(EXEC TYPES 9590-9970)
Trachea, mediastinum, and other respiratory organs	C339,C381-C383,C388, C390,C399	(EXEC TYPES 9590-9970)



**CANCER INCIDENCE AND MORTALITY IN THE CENTRAL VALLEY REGION, CALIFORNIA, 2000-2004**

**APPENDIX A**

**SEER Site Recode for ICD-0-2 Incidence Data (continued)**

<b>Site Description</b>	<b><u>Site</u></b>	<b><u>Types</u></b>
Bones and joints	C400-C419	(EXC TYPES 9590-9970)
Soft Tissue (including heart)	C380,C470-C479, C490-C499	(EXC TYPES 9590-9970)
Skin (excluding basal and squamous)		
Melanomas – Skin	C440-C449	(TYPES 872-879)
Other non-epithelial skin	C440-C449	(EXC TYPES 8000-8004, 8010-8012,8070-8076, 8090-8096,8720-8790, 9700-9701)
Breast	C500-C509	(EXC TYPES 9590-9970)
Female genital system		
Cervix	C530-C539	(EXC TYPES 9590-9970)
Corpus	C540-C549	(EXC TYPES 9590-9970)
Uterus, NOS	C559	(EXC TYPES 9590-9970)
Ovary	C569	(EXC TYPES 9590-9970)
Vagina	C529	(EXC TYPES 9590-9970)
Vulva	C510-C519	(EXC TYPES 9590-9970)
Other female genital organs	C570-C589	(EXC TYPES 9590-9970)
Male genital system		
Prostate	C619	(EXC TYPES 9590-9970)
Testis	C620-C629	(EXC TYPES 9590-9970)
Penis	C600-C609	(EXC TYPES 9590-9970)
Other male genital organs	C630-C639	(EXC TYPES 9590-9970)
Urinary system		
Bladder	C670-C679	(EXC TYPES 9590-9970)
Kidney and renal pelvis	C649,659	
Uterer	C669	
Other urinary organs	C680-C689	(EXC TYPES 9590-9970)
Eye and orbit	(C690-C699	(EXC TYPES 9590-9970)
Brain and other nervous system		
Brain	C710-C719	(EXC TYPES 953,9590-9970)
Other nervous system	C710-C719 C700-C709,C720-C729	(TYPE 953) (EXC TYPES 9590-9970)
Endocrine system		
Thyroid	C739	(EXC TYPES 9590-9970)
Other endocrine (includes thymus)	C379,C740-C749 C750-C759	(EXC TYPES 9590-9970)
Lymphomas		
Hodgkin's Disease	All sites	(TYPES 9650-9667)
Non-Hodgkin's Lymphoma	All sites	(TYPES 9590-9595,9670- 9714)

APPENDIX A

SEER Site Recode for ICD-0-2 Incidence Data (continued)

<u>Site Description</u>	<u>Site</u>	<u>Types</u>
Multiple myeloma	All sites	(TYPES 9731-9732)
Leukemias	All sites	
Lymphocytic		
Acute lymphocytic		(TYPES 9821)
Chronic lymphocytic		(TYPES 9820,9822,9824)
Other lymphocytic		9825,9826)
Granulocytic		
Acute granulocytic		(TYPES 9861,9867)
Chronic granulocytic		(TYPES 9863,9868)
Other granulocytic		(TYPES 860,9862,9864,9866)
Monocytic		
Acute monocytic		(TYPE 9891)
Chronic monocytic		(TYPE 9893)
Other monocytic		(TYPES 9890,9892,9894)
Other		
Acute other		
Chronic other		
Aleukemic, subleukemic, and NOS		(TYPES 800,9802,9804,9827, 9830,9840,9850,9870,9880, 9900,9910,9930-9941)
III defined and unspecified sites		(TYPES 9720-723,9740,9741, 9760-9764,9950-9989)
	C760-C768,C809	(EXC TYPES 9590-9970)
	C420-C424	(EXC TYPES 9590-9940)
	C770-C779	(EXC TYPES 9590-9750)
Invalid sites		Site or histology code not In valid range or site/ Histology combination not found in this table.

APPENDIX B: HOSPITALS IN REGION 2

---

<b>Alta Hospital District</b> 500 Adelaide Way Dinuba, CA 93618 Phone: (559) 591-4171	<b>Dos Palos Memorial Hospital</b> 2118 Marguerite Street Dos Palos, CA 93620 Phone: (209) 392-6106
<b>Bakersfield Memorial Hospital</b> P.O. Box 1888 420 43th Street Bakersfield, CA 93303 Phone: (661) 327-1792	<b>Emanuel Medical Center</b> 825 Delbon Avenue Turlock, CA 95380 Phone: (209) 667-4200
<b>Bloss Memorial Hospital District</b> 1691 Third Street Atwater, CA 95301 Phone: (209) 358-8201	<b>Fresno Community Hospital and Medical Center</b> Fresno & R Street P.O. Box 1232 Fresno, CA 93715 Phone: (559) 442-6000
<b>Central Valley General Hospital</b> 1025 N. Douty Street Hanford, CA 93230 Phone: (559) 583-2100	<b>Fresno Surgery Center</b> 6125 N. Fresno Street Fresno, CA 93710 Phone: (559) 431-8000
<b>Chowchilla District Memorial Hospital</b> PO Box 1027 Chowchilla, CA 93610 Phone: (559) 665-3781	<b>Good Samaritan Hospital</b> 901 Olive Drive Bakersfield, CA 93308 Phone: (805) 399-4461
<b>Clovis Community Hospital</b> 2755 Herndon Avenue Clovis, CA 93612 Phone: (559) 323-4000	<b>Hanford Community Medical Center</b> 450 Greenfield Avenue Hanford, CA 93230 Phone: (661) 582-9000
<b>Coalinga Regional Medical Center</b> 1191 Phelps Avenue Coalinga, CA 93210 Phone: (559) 935-6400	<b>John C. Fremont Hospital</b> P.O. Box 216 5189 Hopsital Road Mariposa, CA 95338 Phone: (209) 966-3631
<b>Corcoran District Hospital</b> P.O. Box 758 1310 Hanna Avenue Corcoran, CA 93212 Phone: (559) 992-5051	<b>Kaiser Permanente Medical Center-Fresno</b> 7300 N. Fresno Street Fresno, CA 93720 Phone: (559) 448-4500
<b>Delano Regional Medical Center</b> 1401 Garces Highway Delano, CA 93215 Phone: (661) 725-4800	<b>Kaweah Delta District Hospital</b> 400 W. Mineral King Boulevard Visalia, CA 93291 Phone: (559) 625-2211
<b>Del Puerto Hospital</b> P.O. Box 187 Patterson, CA 95363 Phone: (209) 892-8781	<b>Kern Medical Center</b> 1830 Flower Street Bakersfield, CA 93305 Phone: (805) 326-2000
<b>Doctors Medical Center</b> P.O. Box 4138 1441 Florida Avenue Modesto, CA 95350 Phone: (209) 578-1211	<b>Kern Valley Hospital District</b> P.O. Box 1628 Lake Isabella, CA 93240-1628 Phone: (619) 379-2681

APPENDIX B: HOSPITAL IN REGION 2

---

**Lindsay Hospital Medical Center**  
740 N. Sequoia Avenue  
Lindsay, CA 93247  
Phone: (559) 562-4955

**Memorial Hospital Los Banos**  
520 West "I" Street  
Los Banos, CA 93635  
Phone: (209) 826-0591

**Madera Community Hospital**  
1250 E. Almond Avenue  
Madera, CA 93637  
Phone: (559) 675-5555

**Memorial Hospital at Exeter**  
215 Crespi Avenue  
Exeter, CA 93221  
Phone: (559) 592-2151

**Memorial Medical Center**  
1700 Coffee Road  
Modesto, CA 95355  
Phone: (209) 526-4500

**Merced Community Medical Center**  
301 E. 13th Street  
Merced, CA 95340  
Phone: (209) 385-7000

**Mercy Hospital and Health Services**  
2740 M Street  
Merced, CA 95340  
Phone: (209) 384-6444

**Mercy Healthcare Bakersfield**  
2215 Truxtun Avenue  
Bakersfield, CA 93301  
Phone: (661) 632-5000

**Oak Valley District Hospital**  
350 S. Oak Avenue  
Oakdale, CA 95361  
Phone: (209) 847-3011

**Porterville Developmental Center**  
26501 Avenue 140  
P.O. Box 2000,  
Porterville, CA 93258-2000  
Phone: (559) 782-2222

**Ridgecrest Hospital**  
1081 N. China Lake Boulevard  
Ridgecrest, CA 93555  
Phone: (760) 446-3551

**Saint Agnes Medical Center**  
1303 E. Herndon Avenue  
Fresno, CA 93710  
Phone: (559) 449-3000

**Sanger General Hospital**  
2558 Jensen Avenue  
Sanger, CA 93657  
Phone: (559) 875-6571

**San Joaquin Community Hospital**  
2615 Eye Street  
Bakersfield, CA 93301  
Phone: (661) 395-3000

**Selma District Hospital**  
1141 Rose Avenue  
Selma, CA 93662  
Phone: (559) 891-1000

**Sierra Kings District Hospital**  
372 W. Cypress Avenue  
Reedley, CA 93654  
Phone: (559) 638-8155

**Sierra View District Hospital**  
465 West Putnam  
Porterville, CA 93257  
Phone: (559) 784-1110

**Sonora Community Hospital**  
One South Forest Road  
Sonora, CA 95370  
Phone: (209) 532-3161

**Stanislaus Medical Center**  
830 Scenic Drive  
Modesto, CA 95350  
Phone: (209) 558-7000

**Tehachapi Hospital**  
115 West "E" Street  
Techachapi, CA 93561  
Phone: (661) 822-3241

**Tulare District Hospital**  
869 Cherry Street  
Tulare, CA 93274  
Phone: (559) 688-0821

**Tuolumne General Hospital**  
101 E. Hospital Road  
Sonora, CA 95370  
Phone: (209) 533-7100

APPENDIX B: HOSPITAL IN REGION 2

---

**Valley Children's Hospital**  
9300 Valley Children's Place  
Madera, CA 93703  
Phone: (559) 353-3000

**University Medical Center**  
445 South Cedar Avenue  
Fresno, CA 93702  
Phone: (559) 453-4000

**Veterans Affairs Medical Center**  
2615 E. Clinton Avenue  
Fresno, CA 93703  
Phone: (559) 225-6100

**Visalia Community Hospital**  
1633 S. Court Street  
Visalia, CA 93277  
Phone: (559) 733-1333

APPENDIX C

Formula for Rates and Standard Errors  
 Mathematical definitions used in rate calculations:

For the age-specific rate:

$$r_i = \left( \frac{c_i}{n_i} \right)$$

where  $r_i$  is the age-specific rate for age and/or gender group  $i$ ,  $c_i$  is the count of cases for that age and/or gender group, and  $n_i$  is the count of persons at risk (i.e., the population) for that age and/or gender group; rates will be presented per 100,000 population.

The formula for the Standard error of the age-specific rate:

$$(S.E.)_i = \sqrt{\left( \frac{c_i}{n_i^2} \right) 100,000^2}$$

Age-adjusted rate:

$$A.A.R. = \sum_{i=0-4}^{85+} (w_i r_i)$$

where  $w_i$  is the proportion of that age group in the 2000 U.S. Standard.

The Standard error of age-adjusted rate<sup>1</sup>:

$$(S.E.A.A.R.) = \sqrt{\sum_{i=0-4}^{85+} w_i^2 (S.E._i)^2}$$

<sup>1</sup>Breslow, N.E., and Day, N.E. *Statistical Methods in Cancer Research: Vol. II, The Design and Analysis of Cohort Studies*. IARC Scientific Publications No. 82. International Agency for Research on Cancer, Lyon, 1987 (page 59).

APPENDIX D: STANDARD POPULATION

Age	2000 United States Standard Population <sup>1</sup>	World Standard Population <sup>1</sup>
All Ages	1,000,000	1,000,000
0-5	69,135	120,000
5-9	72,533	100,000
10-14	73,032	90,000
15-19	72,169	90,000
20-24	66,478	80,000
25-29	64,529	80,000
30-34	71,044	60,000
35-39	80,762	60,000
40-44	81,851	60,000
45-49	72,118	60,000
50-54	62,716	50,000
55-59	48,454	40,000
60-64	38,793	40,000
65-69	34,264	30,000
70-74	31,773	20,000
75-79	26,999	10,000
80-84	17,842	5,000
85+	15,508	5,000

1 Surveillance, Epidemiology, and End Results  
 National Cancer Institute  
 Executive Plaza North, Room 3431  
 Bethesda, MD, 20892-7352  
<http://seer.cancer.gov/USPops/>

APPENDIX E: ADDITIONAL INFORMATION

---

The following articles provide more detailed information on the rationale for adopting and the impact of the Year 2000 Standard.

Hoyert DL, Anderson RN. Age-adjusted death rates: trend data based on the Year 2000 Standard population. National Vital Statistics Reports, September 21, 2001; Volume 49, number 9. Hyattsville, MD: National Center for Health Statistics. Available on [http://www.cdc.gov/nchs/data/nvsr/nvsr49/nvsr40\\_09.pdf](http://www.cdc.gov/nchs/data/nvsr/nvsr49/nvsr40_09.pdf).

Year 2000 population standard for age-adjusted death rates in the United States: information on the adoption, implementation and impact, plus frequently asked Q&A's. Centers for Disease Control and Prevention, National Center for Health Statistics. Available on <http://www.cdc.gov/nchs/data/IW134Pfct.pdf>.

Klein RJ, Schoenborn CA. Age adjustment using the 2000 projected U.S. population. Healthy People 2010 Statistical Notes, January 2001; Number 20. Center for Disease Control and Prevention. Available on <http://www.cdc.gov/nchs/data/statnt/statnt20.pdf>.

Anderson RN, Rosenberg HM. Report on the second workshop on age adjustment. Vital and Health Statistics, December 1998; Series 4, number 30. Available on [http://www.cdc.gov/nchs/data/sr4\\_30.pdf](http://www.cdc.gov/nchs/data/sr4_30.pdf).

Anderson RN, Rosenberg HM. Age standardization of death rates: implementation of the Year 2000 Standard. National Vital Statistics Reports, October 7, 1998; Volume 47, number 3. Hyattsville, MD: National Center for Health Statistics. Available on [http://www.cdc.gov/nchs/data/nvsr47\\_3.pdf](http://www.cdc.gov/nchs/data/nvsr47_3.pdf).