Ovarian Cancer in California

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State of California

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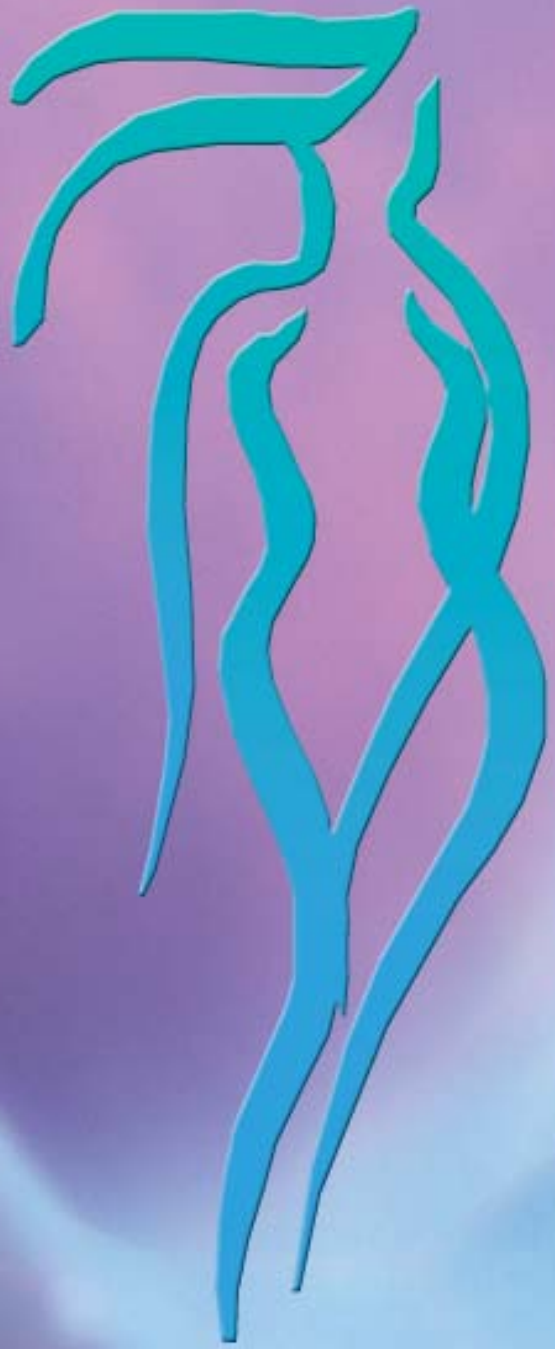

Ovarian Cancer is the Fifth Most Common Cancer in California Women, and the Fifth Leading Cause of Cancer Death Among California Women.

Message From the California Cancer Registry

This special summary report about ovarian cancer in California women provides the most current and accurate statistical information available on the disease. Ovarian cancer is particularly important because it often is diagnosed at late stages when it has spread beyond the ovary to other tissues, and this disease has a much higher mortality rate than most other cancers. Regrettably, early detection methods currently available are far less than perfect, and our understanding of ovarian cancer risk factors is quite incomplete. Most distressing, prevention of this cancer lies beyond our immediate grasp.

Yet, there is reason for genuine optimism. With emerging new scientific advances, expectations are high that within the next few years, researchers will develop accurate early detection methods. Scientists are beginning to unveil the mysteries of the biochemical and genetic mechanisms of all cancers, thereby providing us with a firm foundation and direction for addressing the causes and prevention of ovarian cancer. Concurrently, advances in treatment and care continue to extend and improve the quality of life of ovarian cancer survivors.

It is our sincere hope that this report will be informative to health care providers, policy makers, researchers, advocates, and particularly to ovarian cancer patients who face the great challenges posed by this disease. The horizons are brighter than ever, the fulfillment of promise more real. We commend the dedicated professionals, advocates, patients, and the public who are engaged in the war against cancer. At the same time, we challenge you to continue your fine efforts maximizing the remarkable new scientific advances that are now available for understanding and defeating this terrible disease.

Sincerely,

William E. Wright, Ph.D., Chief
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Robert Schlag, M.Sc., Chief
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Department of Health Services

What is Ovarian Cancer?

Ovarian cancer is a rare and serious gynecologic cancer that occurs in one or both of a woman's ovaries. Ovaries are located deep within the pelvic region on each side of the uterus where they store eggs for reproduction, and are the main source of the female hormones, estrogen, and progesterone. Ovarian cancer is the fifth most common cancer in California women, and the fifth leading cause of cancer death among California women. With only 50 percent of women surviving for five years after diagnosis, ovarian cancer causes more deaths than any other gynecologic cancer. In the year 2001, the California Cancer Registry estimates that over 2,600 new cases of ovarian cancer will be diagnosed, and about 1,400 California women will die from this disease.

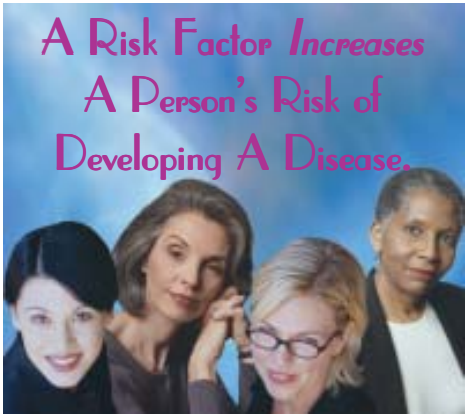
What Are the Symptoms for Ovarian Cancer?

Because the ovaries lie deep within the pelvis, early tumors are difficult to detect. Often there are no symptoms until the disease has spread throughout the abdomen. If present they are often vague and similar to many other conditions. If you have the following vague but persistent problems that cannot otherwise be explained, you should contact your doctor:

- **Swelling of the stomach (abdomen)**
- **Gas, bloating, abdominal discomfort, lower backaches, and/or indigestion**
- **Unusual vaginal bleeding**
- **Pain during intercourse**
- **Nausea or loss of appetite**
- **Feeling chronically tired or fatigued**
- **Frequent urination, constipation, or otherwise unexplained changes in bowel habits**
- **A feeling of fullness even after a light meal**
- **Pelvic pain or lumps in abdomen**

What Are the Causes and Risk Factors for Ovarian Cancer?

The causes of ovarian cancer are poorly understood, but we do know some of the risk factors involved. A risk factor **increases** a person's risk of developing a disease. While some risk factors can be controlled, others, like a person's race or age, cannot be changed. It is important to remember that while risk factors increase the risk of developing a disease, they do not guarantee it will occur. A woman should be extra vigilant in watching for early symptoms if she has any of the following risk factors for ovarian cancer:



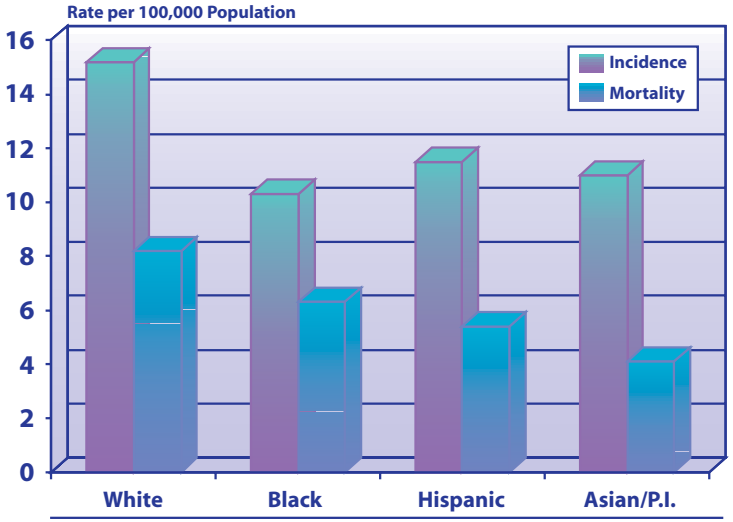
- **Family history of ovarian cancer:** Having a mother, sister, or daughter with ovarian cancer. Inherited risks account for approximately seven percent of ovarian cancers.
- **Age:** Over half of all ovarian cancers occur in women 60 years of age or older, with incidence peaking after age 75.
- **Use of fertility drugs:** The use of the fertility drug, clomiphene citrate, without achieving pregnancy.
- **Menstrual history:** Starting periods before the age of 12, menopausal onset at a later than usual age, never having children, or having the first child after the age of 30.
- **Breast cancer:** Women with a history of breast cancer are at a slightly higher risk of developing ovarian cancer.
- **Exposure to asbestos:** Asbestos has been found frequently in the ovaries of women with ovarian cancer. Asbestos sources for this exposure may be from occupational settings, environmental factors, or from some feminine hygiene products, containing asbestos-like talc.

The following factors **may reduce** a woman's risk of ovarian cancer:

- **Bearing many children:** Reduces the number of times ovulation occurs.
- **Oral contraceptive use:** Use of "the pill" for five or more years, does not need to be continuous, may decrease the risk of ovarian cancer by as much as 50 percent.
- **Breast feeding:** Ovulation often stops during breast feeding.

Who Develops Ovarian Cancer?

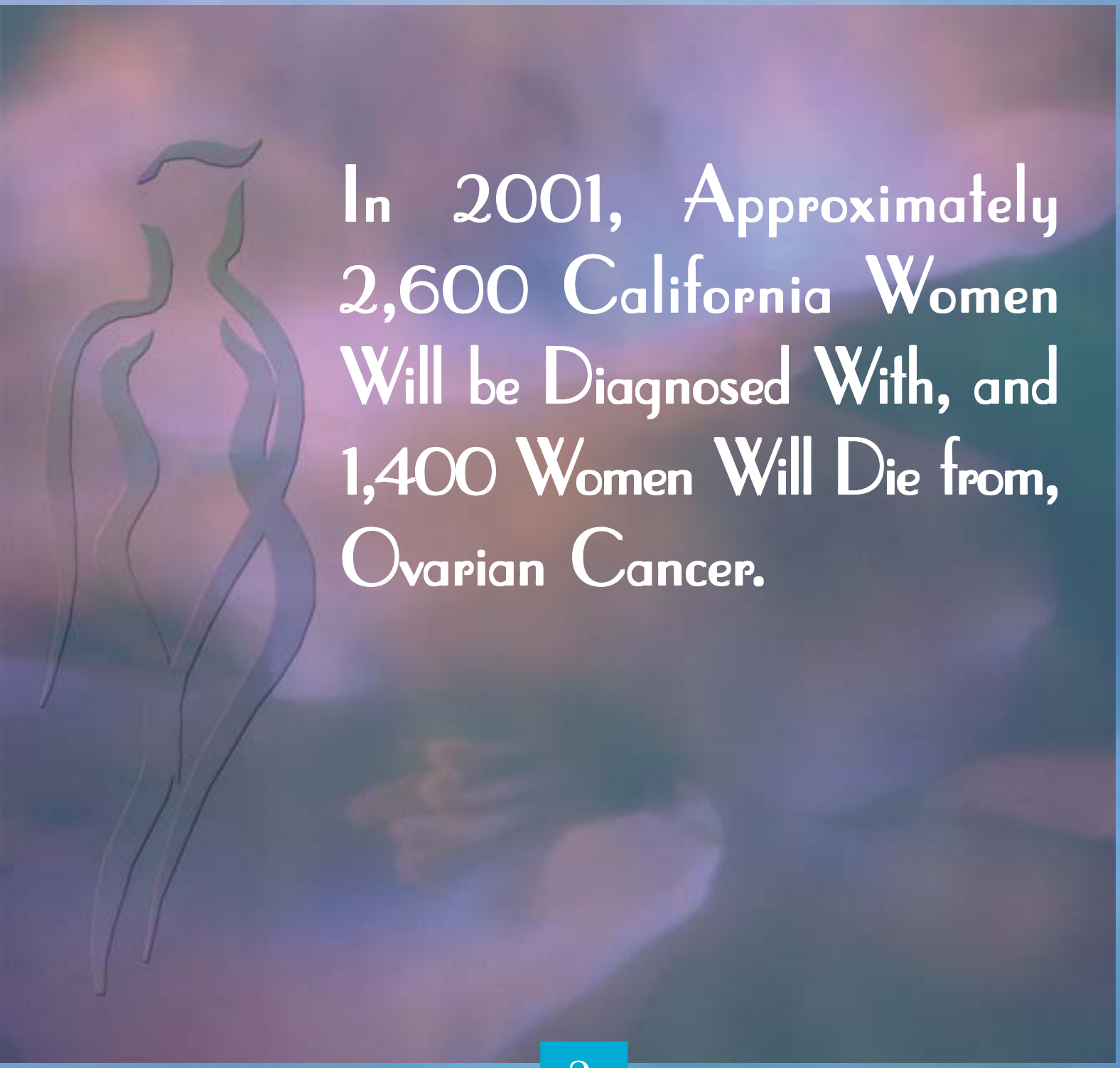
California Incidence and Mortality Rates by Race/Ethnicity, 1994-1998 Combined



Rates are age-adjusted to the 1970 U.S. standard population.
Prepared by the California Department of Health Services, Cancer Surveillance Section.

From 1988 through 1998, 27,407 California women were diagnosed with ovarian cancer. Among the four major race/ethnic groups in California, non-Hispanic white women have the highest incidence rate (number of new cases each year per 100,000 women) of ovarian cancer. The incidence rate for white women had a significant decrease of 15 percent from 17.2 cases per 100,000 population in 1988 to 14.9 cases per 100,000 in 1998. For the same time period, rates for black women have also decreased significantly from 13.0 cases per 100,000 to 10.3 cases per 100,000. The rates for Hispanics and Asian/Pacific Islander women have fluctuated at about 10-13 cases per 100,000.

Among the Four Major Race/Ethnic Groups in California, Non-Hispanic White Women Have the Highest Incidence Rate.

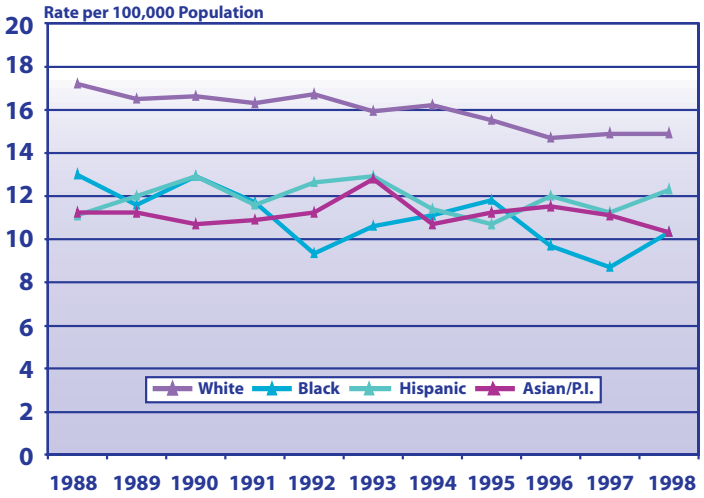


In 2001, Approximately 2,600 California Women Will be Diagnosed With, and 1,400 Women Will Die from, Ovarian Cancer.

At What Age is Ovarian Cancer Most Often Diagnosed?

Although ovarian cancer incidence and mortality rates are highest in older women, ovarian cancer may also occur in younger aged women. In California, white women 80 years of age and older have the highest rate of ovarian cancer, at 65 cases per 100,000 population. Mortality rates steadily increase with age; the highest rates are seen in women 85 years of age and older. Before the age of 40, ovarian cancer deaths are very rare, but they do occur occasionally. Approximately 170 deaths occurred in women under 40 years of age from 1994 through 1998.

Ovarian Cancer Incidence by Race/Ethnicity and Year



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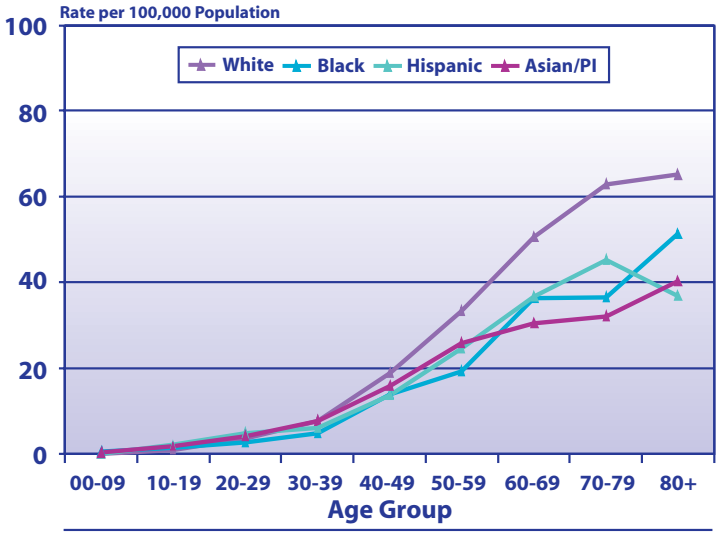
Ovarian Cancer Incidence by Race/Ethnicity and Age Group, 1994-1998 Combined



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What Are Some Screening Tests to Detect Ovarian Cancer?

Currently, no consistently reliable screening test for ovarian cancer exists. A woman at high risk for ovarian cancer or with ovarian cancer in her family history, or a woman with symptoms should be examined by a gynecologist or a gynecologic oncologist (a doctor who specializes in ovarian, vaginal, or uterine cancer) and screened with a combination of tests. The following tests are available and should be discussed with a physician:

- **If you are 18-40, have a rectovaginal pelvic exam every 1-3 years**
- **Annual rectovaginal pelvic exams for women age 40 and above**

Women with a family history of ovarian cancer or other risk factors should talk to their doctors about methods available for screening and evaluation of ovarian cancer. Tests which may be recommended in some women with a family history of ovarian cancer or symptoms include:

- **Transvaginal ultrasound**
- **Biomarker testing, which measures a tumor marker found in the blood of women with ovarian cancer.**
- **Diagnostic tests such as the Computed axial tomography scan (CT) and Positron emission tomography scan (PET), which may be used to help confirm suspected ovarian cancer.**

Note: Currently, neither ultrasound nor biomarker testing, such as CA-125, is sufficiently reliable in detecting ovarian cancer among women who have not developed symptoms and have no strong family history of this disease. Also, neither method is effective in detecting this cancer among premenopausal women. It is hoped clinical trials will develop better screening methods and recommendations.

What is the Treatment for Ovarian Cancer?

Treatment of ovarian cancer depends on the stage of the disease, the type of disease, and the patient's age and overall health. The three treatment options for ovarian cancer are:

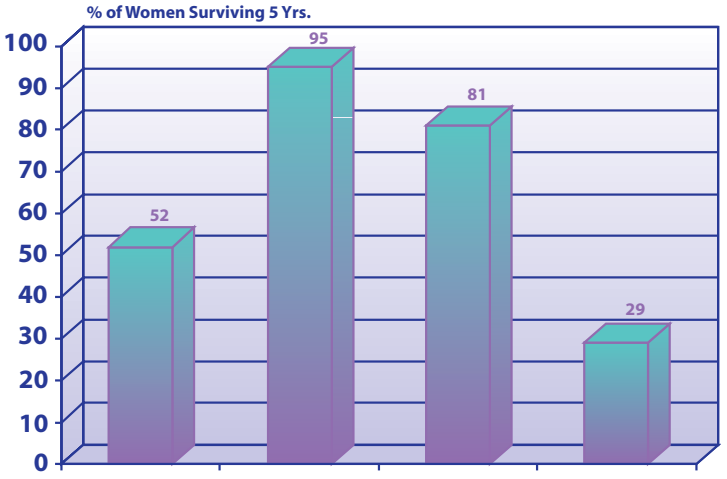
- ***Surgery:*** Surgery is the primary treatment for ovarian cancer, and allows the doctor to verify the diagnosis of cancer, to determine what stage the cancer is in, and to remove as much of the cancer as possible.
- **Chemotherapy:** Chemotherapy involves the use of drugs to kill the cancer cells. Chemotherapy is often used after surgery to kill any remaining cancer cells.
- **Radiation Therapy:** Radiation therapy is rarely used to treat ovarian cancer, but it may be used to kill cancer cells and to shrink tumors.

To find up-to-date information regarding the treatment of ovarian cancer, please visit the National Cancer Institute's Physician Data Query (PDQ) system at: http://cancernet.nci.nih.gov/pdq/pdq_treatment.shtml.

Who Survives Ovarian Cancer?

Five-year survival for tumors found in the early stage, when the cancer is still contained in the ovaries, is approximately 95 percent. Unfortunately, only 26 percent of tumors are diagnosed in their early stage. Most cancers are diagnosed in later stages, after the cancer has spread to other organs or throughout the body. Five-year survival for the later stage diagnosis decreases dramatically. Treatment and detection of ovarian cancer have greatly improved in recent years, with the five-year survival rate significantly increasing from 37 percent in 1974-1976 to 52 percent in 1992-1997.

Percent of Women Surviving Five Years after Diagnosis with Ovarian Cancer, by Stage of Disease



	All Stages	Localized	Regional	Distant
% of Tumors Found at this Stage*		26%	10%	59%

* Unstaged tumors are excluded.

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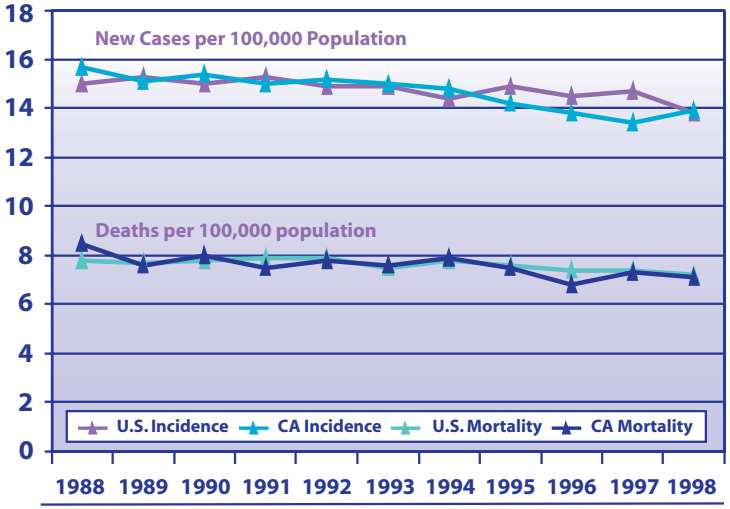
Treatment and Detection of Ovarian Cancer have Greatly Improved in Recent Years.

How Does California Compare With the United States?

From 1988 through 1998, the ovarian cancer incidence and mortality rates among California women were about the same as were found in the rest of the United States.

Over the last decade in California the incidence rate has fallen by 16 percent for all races combined while the mortality rate has declined by 14 percent.

Ovarian Cancer Incidence and Mortality Rates*, California vs. the U.S., all Races Combined



*** U.S. mortality rates include California. U.S. incidence rates exclude California. Rates are age-adjusted to the 1970 U.S. standard population.**

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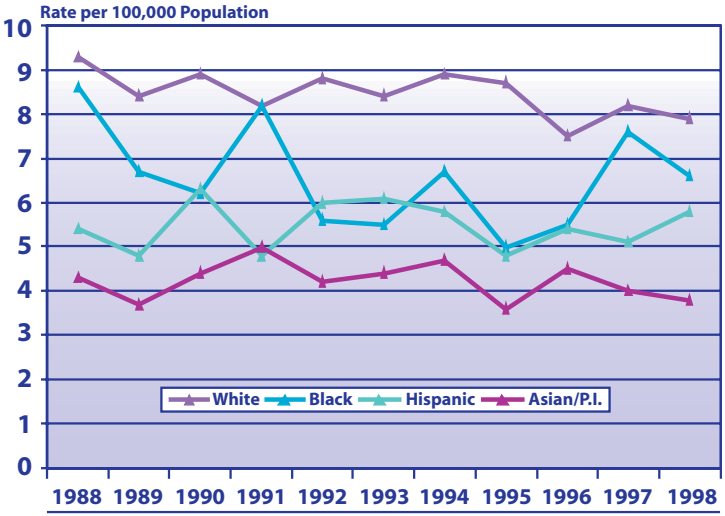
Do Mortality Rates Differ by Race/Ethnicity?

Each year approximately 1,400 women in California die from ovarian cancer. Although the numbers are somewhat variable year to year, white women have the highest mortality rate for ovarian cancer. The rate in this group has declined approximately 15 percent from 9.3 deaths per 100,000 population in 1988 to 7.9 deaths per 100,000 in 1998. Asian/Pacific Islander women have the lowest mortality rates among the race/ethnic groups, with rates ranging from 3.6 deaths per 100,000 population to 5.0 deaths per 100,000 during the years 1988-1998.

Ovarian Cancer Mortality by Race/Ethnicity and Year



Rates are age-adjusted to the 1970 U.S. standard population.

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What is Your Risk of Being Diagnosed?

Ovarian cancer is the fifth most common cancer diagnosed and the fifth leading cause of cancer deaths among women in California. A female born in California today will have about a 1.7 percent chance of being diagnosed with ovarian cancer sometime during her lifetime, and a 1.1 percent chance of dying from this disease.

Top Five Cancer Types and Cancer-Related Deaths, California, 1994-1998

	Cases	Death
1	Breast	Lung & Bronchus
2	Lung & Bronchus	Breast
3	Colon & Rectum	Colon & Rectum
4	Uterus	Pancreas
5	Ovary	Ovary

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Where Can I Find Out More About Ovarian Cancer?

Please visit the following web sites for more information on ovarian cancer and for support and advocacy groups:

Cancer Information:

- **http://www.ccrcal.org (California Cancer Registry)**
- **http://www.dhs.ca.gov/director/owh (Office of Women's Health)**
- **http://www.nci.nih.gov (National Cancer Institute)***
- **http://www.cancer.org (American Cancer Society)***

Ovarian Cancer Advocacy/Support Groups:

- **http://www.ovariancancer.com (The Gilda Radner Familial Ovarian Cancer Registry)***
- **http://www.ovarian.org (National Ovarian Cancer Coalition)***
- **http://www.supportconnection.org (Support Connection)***

*** Non California Department of Health Services (DHS) websites. These websites may not reflect view or opinions of DHS.**

The Horizons are Brighter than Ever, the Fulfillment of Promise More Real.

Other reports currently available on the CCR web site:
http://www.ccrcal.org/

- Cancer in California, December 2000.
- California Cancer Facts and Figures, 2001. September 2000.
- Prostate Cancer in California: Special Report. June 2000.
- Breast Cancer in California: Stage at Diagnosis and Medi-Cal Status. March 2000.
- Childhood Cancer in California, 1988-1994. April 1999.
- Breast Cancer in California. March 1996.

To be released soon:
- Colon and Rectum Cancer in California, 1988-1997.

Don't forget to vist the CCR Surveillance Spotlight: A non-technical focus on a specific cancer or on a topic related to cancer, often developed in conjunction with a public health event.

Department of Health Services
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July 2001
Searching for Causes & Cures