Arizona

Cancer Facts and Figures 2004-2005

A Sourcebook for Planning and Implementing Programs for Cancer Prevention and Control

American Cancer Society®

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Introduction

Dear Reader,

It is with great pride that the American Cancer Society, Great West Division, Inc., presents the inaugural edition of ***Arizona Cancer Facts and Figures 2004-2005: A Sourcebook for Planning and Implementing Programs for Cancer Prevention and Control***. This publication was developed to assist cancer control organizations, health professionals, legislators, donors, community groups, and others who are working to reduce the cancer burden throughout the state of Arizona. The overall goal of this document is to facilitate cancer control planning that is based on data and directed toward clear outcomes.

Cancer is a major public health problem in Arizona. In recent years, there has been significant progress toward reducing death and disease due to cancer. We know, however, that there is much more work to be done. The American Cancer Society has set nationwide goals and objectives to greatly reduce the burden from cancer by 2015. They are:

- A 50% reduction in age-adjusted mortality rates
- A 25% reduction in age-adjusted incidence rates
- A measurable improvement in the quality of life, from the point of diagnosis, and for the balance of life, of all cancer survivors

Arizona Cancer Facts and Figures 2004-2005 outlines the cancer burden in Arizona, and will allow the opportunity to track progress toward these goals. We can meet these challenging goals, but we can't do it alone. We need the assistance of our community partners in cancer control efforts. The American Cancer Society is a leading member of the Arizona Comprehensive Cancer Control (AZCCC) Coalition. The immediate goal of this group is to develop a state cancer plan, which will serve as a road map to guide action in cancer control throughout the state and help to avoid a duplication of services. It is based on the public health model of promoting health and preventing disease using risk reduction, screening, treatment, surveillance, public policy and program evaluation. The American Cancer Society intends to work with our community partners to join forces in the fight against cancer.

The American Cancer Society offers many programs to Arizonans:

- Programs to help patients and families cope with the psychological, emotional, and physical effects of cancer
- Programs to help people get appropriate, timely cancer screenings
- Assistance in getting the cancer information you need
- Advocacy efforts and campaigns to decrease the cancer burden in Arizona
- Cancer research funding of the most promising ideas to benefit Arizonans

If you want to join a leader in the fight against cancer and help us reach our goals, visit us personally or call us at any area office. The American Cancer Society's Arizona office addresses are listed on the inside back cover of this document. More information about cancer and volunteer options are available 24 hours a day, 7 days a week by calling 1-800-ACS-2345. You can also find a wealth of information about cancer from our website www.cancer.org.

This publication is a culmination of collaborative work with the Arizona Department of Health Services, Arizona Cancer Registry. We greatly appreciate the role they have played in providing us with data, especially Amy Stoll, data program manager for the Arizona Cancer Registry. We also acknowledge the assistance we received in reviewing this document. We hope you find the information useful and that it will help you plan more effective, targeted programs to help reduce the cancer burden in Arizona.

Sincerely,

Ann Marie Pomerinke
Chief Executive Officer
American Cancer Society, Great West Division, Inc.

Pamela Meyerhoffer
Chair of the Board
American Cancer Society, Great West Division, Inc.

State of Arizona Overview

Demographic Profile

According to 2001 U.S. Census estimates, there are over 5.2 million residents in Arizona. Approximately 64% identify themselves as non-Hispanic White, 26% percent Hispanic, 5% American Indian, 3% African American, and 2% Asian/Pacific Islander. Of the 15 counties in Arizona, seven counties have a population of less than 100,000 people, and two-thirds of the state's population lives in the Phoenix metropolitan area (Maricopa County). One-third of the state's population is under the age of 18, with Hispanic youth making up almost 40% those under age 18. In contrast, the non-Hispanic White population in Arizona is older, making up about 83% of the state's population aged 65 and older.

Population demographics vary throughout Arizona, as revealed by the demographic make-up of the state's 15 counties (Table 1). Counties in the northeastern part of the state have particularly high percentages of American Indians, while counties in the southeastern part of the state have high percentages of Hispanics. In terms of total population by county, Greenlee County is the smallest with 8,588 residents, while Maricopa County is the largest with 3,144,561 residents. Figure 1 is a map of the State of Arizona, showing all 15 counties.

Access to Health Care

It is important to be aware of the population distribution and demographic make-up of different regions of the state. Not only will the state's overall cancer burden, as measured by the total number of cancers in an area be greatest in highly populated regions, the burden will vary due to the demographic makeup of the counties.

Geographic and economic factors can also inhibit access to care and treatment. Rural inhabitants have less access to physicians and treatment facilities. In addition, a lack of resources makes it difficult for many Arizonans to access cancer prevention screening and treatment programs. Arizona ranks 13th in the nation for people who are below the poverty level and 16th for adults age 25 and older who have less than a high school diploma. About 19% of Arizona's residents have no health insurance of any kind. In looking at differences among racial and socioeconomic groups, Hispanics and the "Other" category (including American Indians and Asian/Pacific Islanders) are the racial/ethnic groups most likely to be uninsured (Figure 2a). Over one-third of individuals with low education (no high school diploma) have no health insurance (Figure 2b). These individuals, therefore, can be considered "at-risk" for being medically underserved.

Understanding Arizona's unique cultural, economic, and political factors can assist in the development and implementation of cancer control efforts. Varying health beliefs among the state's three dominant cultures also influence development and implementation of cancer control activities. For example, many people believe that cancer will not happen to them. Other people believe that cancer screenings are painful, that speaking of illness will cause it, or that cancer is a death sentence. Awareness of these perceptions can assist in developing culturally appropriate messages for cancer prevention, screening and treatment.

Figure 1.

Source: Arizona Department of Health Services, 2003

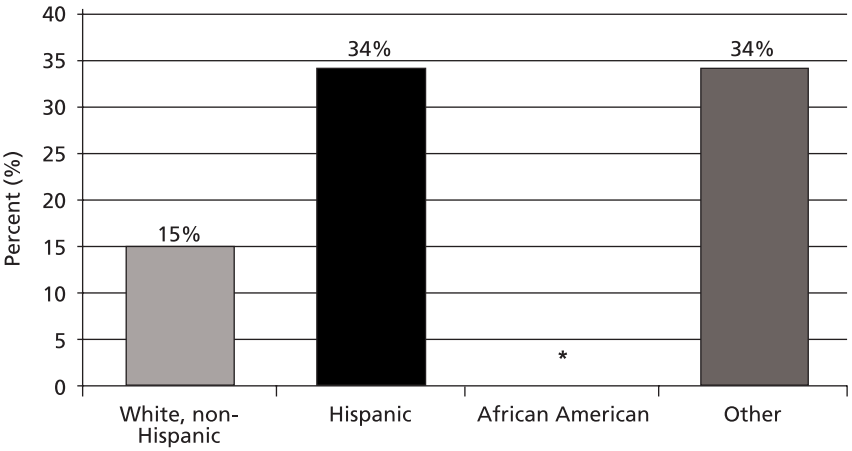
Table 1. Arizona Total Population Estimates by County and Race/Ethnicity, 2001

	Total Population	White, non-Hispanic	Hispanic	African American	American Indian	Asian/Pacific Islander
Arizona	5,241,741	64%	26%	3%	5%	2%
Apache	70,015	18%	4%	<1%	77%	<1%
Cochise	119,268	61%	31%	5%	1%	2%
Coconino	117,815	58%	11%	1%	28%	1%
Gila	52,170	70%	16%	<1%	13%	1%
Graham	34,009	56%	27%	2%	15%	1%
Greenlee	8,588	55%	43%	<1%	2%	1%
La Paz	20,155	65%	22%	1%	11%	<1%
Maricopa	3,144,561	67%	25%	4%	2%	3%
Mohave	159,645	84%	11%	1%	2%	1%
Navajo	98,958	43%	8%	1%	47%	<1%
Pima	857,026	62%	30%	3%	3%	2%
Pinal	184,477	59%	30%	3%	7%	1%
Santa Cruz	39,034	18%	81%	<1%	<1%	1%
Yavapai	172,005	87%	10%	<1%	2%	1%
Yuma	164,015	44%	51%	2%	1%	1%

Source: U.S. Census Bureau 2001 estimates; American Cancer Society Community Assessment E-Tool, 2002
Notes: Percentages are rounded to the nearest whole.

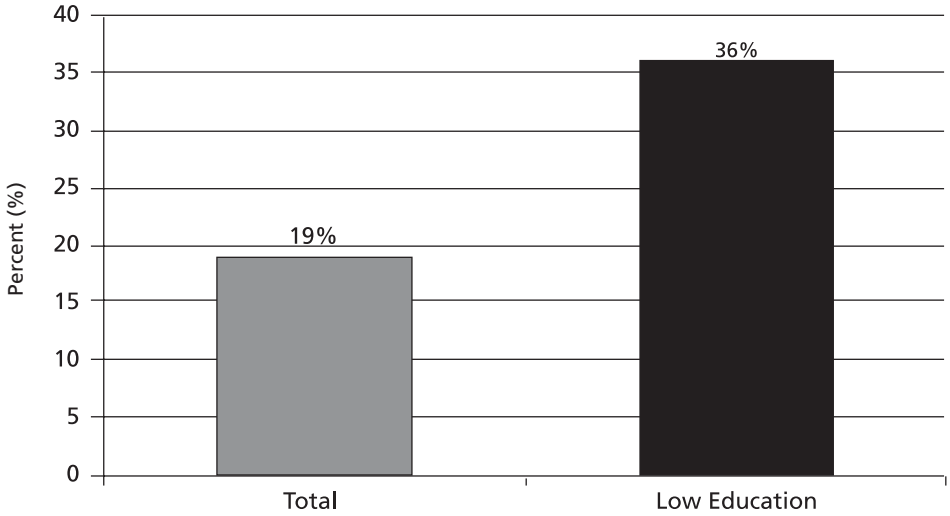
Access to quality care and treatment is essential for cancer patients. In 2000, managed care reform legislation was passed to require managed care plans to provide coverage of cancer prescription drugs (off-label drugs), continuity of healthcare coverage and direct access to specialists.

Figure 2a. Adults With No Health Insurance in Arizona, by Race/Ethnicity, 2002



Source: Behavioral Risk Factor Surveillance System Public Use Data File 2002, Centers for Disease Control and Prevention
Notes: Percentages rounded to the nearest whole
*No data provided for African Americans; fewer than 50 participants in the survey
No Health Insurance defined as responded "no" to having any kind of health care coverage, including health insurance, prepaid plans such as HMOs or government plans such as Medicare

Figure 2b. Adults With No Health Insurance in Arizona, by Education, 2002



Source: Behavioral Risk Factor Surveillance System Public Use Data File 2002, Centers for Disease Control and Prevention
Notes: Adults 25 years old and older with less than a high school education; Percentages rounded to the nearest whole.
No Health Insurance defined as responded "no" to having any kind of health care coverage, including health insurance, prepaid plans such as HMOs or government plans such as Medicare.

Basic Cancer Facts

What Is Cancer?

Cancer is a large group of diseases characterized by uncontrolled growth and spread of abnormal cells. If the spread is not controlled, it can result in death. Cancer can be caused by external factors (chemicals, tobacco smoke, radiation, viruses), internal factors (hormones, immune conditions, genetics), and lifestyle factors (tobacco and alcohol use, unprotected sun exposure, poor nutrition, physical inactivity). Many cancers can be cured if detected and treated promptly, and many others can be prevented by lifestyle changes, especially avoidance of tobacco. Cancer is treated by surgery, radiation, chemotherapy, hormones, and immunotherapy.

How Many New Cases Are Expected To Occur This Year?

It is estimated that 1,368,030 people in the United States will be diagnosed with cancer in the year 2004. In Arizona alone, it is estimated that 23,560 individuals will be diagnosed with the disease this year (Table 2). These estimates do not include non-melanoma skin cancer and carcinoma in situ (non-invasive cancer) for sites other than urinary bladder.

How Many People Are Expected to Die of Cancer This Year?

Cancer is the second leading cause of death in Arizona, second only to heart disease. About 563,700 Americans are expected to die of cancer in 2004. In Arizona, that means an estimated 9,710 people will die from cancer in 2004 (Table 2).

How is Cancer Data Collected?

The Arizona Cancer Registry is a surveillance system that collects, manages, and analyzes information on the incidence and survival of persons having been diagnosed with cancer in Arizona. The registry started collecting information in 1981. Initially, the registry was a voluntary hospital-based reporting system but in 1988, legislation was passed requiring hospitals, clinics, and physicians to report all cancer cases to the Arizona Cancer Registry. The Centers for Disease Control and Prevention provides enhancement funding to supplement state funds for the maintenance and management of the cancer registry in Arizona.

How Were the Cancer Data in This Document Prepared?

The age-adjusted rates in this publication are calculated for the six-year period of 1995-2000 diagnosis years. For each rate calculated, the numerator (number of cases) for the six-year period is added together by five-year age groups. The denominator (population at risk) for the six-year period is added together by five-year age groups. The rate is then calculated by age group and the 2000 U.S. population standard is applied. This rate represents the incidence or mortality rate for that six-year period and is called an *average annual rate*.

The number of cases in this publication is displayed as either a six-year total number of cases or the six-year average number of cases. The footnotes at the bottom of the tables will indicate how the number is displayed. The Arizona Cancer Registry's confidentiality policy states that aggregate numbers of less than 5 will not be displayed if there is a possibility of identifying an individual by displaying the number of cases for the specified area/time. In this document, however, an average number over a six-year period is provided for all cancer cases and deaths, and not an actual number at one point in time. Therefore, numbers less than five are displayed in the data tables.

The average number of cases for a given stratification (i.e., county, age group, gender, cancer site/type) is calculated by adding the cases for the 1995-2000 six-year period and dividing by 6.

Who Is at Risk of Developing Cancer?

Anyone is at risk for cancer. Most cases of cancer affect adults beginning in middle-age since the risk of cancer increases with age. About 80% of all cancers in Arizona are diagnosed at ages 55 and older. All cancers involve the malfunction of genes that control cell growth and division. Only about 5% to 10% of cancers are clearly hereditary – the remainder are a result of damage to genes (mutations) that occurs throughout our lifetime due to internal factors (hormones or digestion of nutrients within cells), or external factors (tobacco use, chemicals, and sunlight).

Similar to the U.S., four cancer sites account for more than half of Arizona's cancer burden. These include breast, colon and rectum, lung and bronchus, and prostate cancers. In a six-year period, these sites, combined, accounted for an average of 60% of the 19,716 new cases of cancer diagnosed, and 40% of the 8,503 cancer deaths in Arizona. An overview of the average annual number of new cases (incidence) and deaths (mortality) for the 10 leading cancer sites is provided in Figure 3.

Could More People Be Saved?

All cancers caused by cigarette smoking and heavy use of alcohol can be prevented completely. The American Cancer Society estimates that about one-third of the cancer deaths expected to occur in 2004 will be related to nutrition, physical inactivity, obesity, and other lifestyle factors and could also be prevented. Regular screening examinations by a health care professional

can result in the detection of breast, colon and rectum, cervical, prostate, and skin cancers at earlier stages when treatment is more likely to be successful.

Progress and hope, however, also are evident. For the first time in history, we see a sustained decline in overall cancer mortality and incidence rates in the U.S. In addition to the striking advances in research and treatment, much can still be accomplished at the state level and in local communities to save lives, decrease cancer rates, and improve the quality of life for all cancer survivors.

What is a Clinical Trial?

A cancer clinical trial is a research study conducted to evaluate new treatment or prevention methods. Each study is designed to answer scientific questions and to find new and safer ways to treat cancer patients.

Why are Clinical Trials Important?

Advances in medicine and science result from new ideas and approaches developed through research. Patients participating in clinical trials provide valuable information concerning the safety and efficacy of new treatments or preventive strategies. If proven to be safe and effective, they are then made available to all patients.

How Can I Find Out About Clinical Trials?

Most cancer clinical trials are funded by the National Cancer Institute through cancer centers, or cooperative networks made up of research institutions, university and community hospitals and clinics associated with them. The Arizona Cancer Center is our local National Cancer Institute-designated comprehensive cancer center at The University of Arizona Health Sciences Center in Tucson.

Information about specific cancer clinical trials can be obtained by contacting the American Cancer Society at 1-800-ACS-2345 or visiting www.cancer.org. You may also contact the Arizona Cancer Center directly at 1-800-622-COPE or by visiting www.azcc.arizona.edu, or the National Cancer Institute's Cancer Information Service at 1-800-4-CANCER or by visiting www.nci.nih.gov.

What is TGen?

The Translational Genomics Research Institute (TGen) is a non-profit biomedical research institute in Arizona, whose mission is to make and translate genomic discoveries into advances in human health. To further genomic-based disease research, TGen has established novel research programs. By implementing specific population studies, significant genomic findings can be expedited that will positively impact individuals with diabetes, autism, prostate and breast cancer, melanoma, and gastric cancer, to name a few. For more information, visit www.tgen.org.

How is Arizona Addressing the Cancer Burden?

The State of Arizona has committed to a statewide comprehensive cancer control effort in order to reduce the burden of cancer in our state through the formation of the Arizona Comprehensive Cancer Control (AZCCC) Coalition. Comprehensive cancer control is a process achieved through a partnership of public and private stakeholders whose common mission is to reduce the overall burden of cancer through prevention and early detection of cancer, effective treatment for cancer and improving the quality of life of those living with cancer. The American Cancer Society is one of the leading organizations of the comprehensive cancer control effort in Arizona. National organizations like the Centers for Disease Control and Prevention (CDC), National Cancer Institute, (NCI) and the National Dialogue on Cancer (now called C-Change) are also assisting states in the development of state cancer plans.

The AZCCC Coalition, has received funding to develop a state cancer plan, managed through the Arizona Department of Health Services. A state cancer plan is a document that serves as a road map to guide action in cancer control throughout the state and helps to avoid a duplication of services. The plan will be based on the public health model of promoting health and preventing disease using risk reduction, screening, treatment, surveillance, public policy and program evaluation. A state cancer plan describes the state's cancer burden, outlines priorities, identifies and addresses the needs of the community in fighting cancer, identifies and addresses gaps in education and services and sets goals for the State of Arizona to reduce the overall burden of cancer. Periodic surveillance and evaluation of the plan is necessary to insure successful accomplishment of goals. The AZCCC Coalition anticipates completion of a state cancer plan, including implementation strategies, by July 2004.

Clinical trials may represent a patient's best and sometimes only treatment option when standard treatment has not proven effective. In 2000, legislation was passed and signed into law that provides coverage of routine patient care costs by managed care plans for a cancer patient regardless of whether a patient is enrolled in a clinical trial or receiving standard treatment.

Table 2. Estimated New Cancer Cases and Deaths for Ten Leading Sites in Arizona, 2004*

Cases		Deaths	
Cancer Site	New Cases	Cancer Site	Deaths
All Sites	23560	All Sites	9710
Female Breast	3980	Lung & Bronchus	2550
Prostate	3920	Colon & Rectum	960
Lung & Bronchus	2760	Female Breast	740
Colon & Rectum	2490	Pancreas	560
Melanoma of the Skin	1180	Prostate	510
Non-Hodgkin's Lymphoma	950	Leukemia	410
Urinary Bladder	1140	Non-Hodgkin's Lymphoma	340
Leukemia	590	Ovary	290
Uterus	510	Liver	260
Cervix	190	Brain & Other Nervous System	240

Source: American Cancer Society *Cancer Facts & Figures 2004*, Surveillance Research, National Home Office, 2004
Notes: These estimates are offered as a rough guide and should be interpreted with caution. They are calculated by apportioning national estimates for 2003 according to the state-specific distribution of estimated cancer deaths, and do not represent actual Arizona data.
*Excludes basal and squamous cell skin cancers and in situ carcinomas except urinary bladder. Rounded to the nearest 10.

Figure 3. Ten Leading Sites of Average New Cancer Cases and Average Deaths in Arizona and Percentage of Total, by Site and Gender, 1995-2000

Cancer Cases		Cancer Deaths	
Male	**Female**	**Male**	**Female**
Prostate	Breast	Lung and Bronchus	Lung and Bronchus
2967 (30%)	3043 (32%)	1413 (31%)	1011 (25%)
Lung and Bronchus	Lung and Bronchus	Prostate	Breast
1688 (16%)	1291 (14%)	553 (12%)	636 (16%)
Colon and Rectum	Colon and Rectum	Colon and Rectum	Colon and Rectum
1185 (12%)	1045 (11%)	434 (9%)	372 (9%)
Urinary Bladder	Uterus	Not Specified	Not Specified
777 (8%)	468 (5%)	342 (7%)	306 (8%)
Melanoma of the Skin	Lymphoma	Pancreas	Pancreas
461 (4%)	390 (4%)	224 (5%)	217 (5%)
Lymphoma	Ovary	Lymphoma	Ovary
459 (4%)	364 (4%)	193 (4%)	209 (5%)
Kidney & Renal Pelvis	Melanoma of the Skin	Leukemia	Lymphoma
318 (3%)	304 (3%)	178 (4%)	170 (4%)
Oral Cavity	Urinary Bladder	Esophagus	Leukemia
292 (3%)	254 (3%)	140 (3%)	139 (3%)
Leukemia	Pancreas	Urinary Bladder	Liver
256 (2%)	222 (2%)	131 (3%)	81 (2%)
Pancreas	Thyroid	Kidney & Renal Pelvis	Brain (and other Nervous System)
228 (2%)	216 (2%)	123 (3%)	80 (2%)
All Sites	**All Sites**	**All Sites**	**All Sites**
10250 (100%)	**9463 (100%)**	**4547 (100%)**	**3956 (100%)**

Source: Arizona Cancer Registry, Arizona Vital Statistics Program
Notes: Percentages are rounded to the nearest whole.

Arizona Cancer Facts

Cancer strikes men, women, and children of all ages and races. The overall cancer incidence rate in Arizona is 409.2 per 100,000 and the overall cancer mortality rate in Arizona is 177.3 per 100,000. Although four cancer sites account for the majority of cancer burden among adults in Arizona and the United States, variations in leading sites are seen due to gender, race/ethnicity, and age differences. This data can be very helpful when determining appropriate interventions and allocation of resources to address the cancer burden.

Race/Ethnicity

When comparing the overall cancer burden among different racial/ethnic groups, White, non-Hispanics have the highest cancer incidence rate compared to other racial/ethnic groups, but African Americans have the highest mortality rate (Figure 4). Lung and bronchus cancer is the second most commonly diagnosed cancer among all racial/ethnic groups except American Indian males, where it is fourth, and Asian/Pacific Islander and Hispanic females where it is third (Table 3). Melanoma is one the five leading causes of cancer only among non-Hispanic White males, whereas upper digestive cancers, including stomach and liver cancer are common in Asian and American Indian males. Reproductive tract cancers are common in all female racial/ethnic groups. However, cervical cancer is only a leading cancer among Hispanic and American Indian females. African Americans have the highest colon and rectum cancer and lung and bronchus cancer mortality rates of any race/ethnicity (see individual cancer sections).

Gender

When comparing the burden of cancer among males and females, Arizona men are more likely than Arizona women to develop cancer and to die from the disease (Figure 5, Figure 6). Prostate cancer is the most commonly diagnosed cancer among Arizona males, followed by lung and bronchus cancer or colon and rectum cancer, except in American Indian males (Table 3). Breast cancer is the most commonly diagnosed cancer among Arizona females, followed by lung and bronchus cancer or colon and rectum cancer. Lung and bronchus cancer is the leading cause of cancer death for both men and women in the state. The second and third leading causes of cancer deaths among men are prostate and colon and rectum cancers. For women, the second leading cause of cancer death is breast cancer, followed third by colon and rectum cancer.

Age

Age is another factor in the amount and type of cancer seen. Among adults, cancer occurs more frequently with advancing age, and the risk of dying from cancer increases significantly. Nearly 80% of Arizona residents who are diagnosed with cancer are age 55 and older and about 88% of deaths from cancer occur in those 55 and older (Table 4). Childhood cancers are grouped according to a different age classification scheme and are discussed in a later section.

Region

The burden of cancer also varies by county. Incidence and mortality counts by county are shown in Table 5 and Table 6. Figure 4 and Figure 5 show the incidence and mortality rates for each county in Arizona, by gender. Coconino County has the highest cancer incidence rate compared to Apache County, which has the lowest (Figure 4). Greenlee County has the highest overall cancer mortality rate, while Yuma County has the lowest overall mortality rate (Figure 5).

Understanding Cancer Incidence and Mortality Rates

Cancer rates represent the number of new cases of cancer per 100,000 population (incidence) or the number of cancer deaths per 100,000 population (mortality) during a specific time period.

For example, if a county's lung cancer incidence rate is 40.0, it means 40 new cases of lung cancer were diagnosed in one year for every 100,000 people. If the county's population is 25,000, then an incidence rate of 40.0 means 10 new cases of lung cancer were diagnosed in that county that year:

$$\frac{\text{40 new cases diagnosed in one year}}{\text{100,000 population}} = \frac{\text{10 new cases diagnosed in one year}}{\text{25,000 population}}$$

Rates provide a useful way to compare the cancer burden irrespective of the actual population size. Rates can be used to compare demographic groups (e.g. males have higher lung cancer incidence rate than females), race/ethnic groups (e.g. non-Hispanic males have a higher prostate cancer incidence rate than Hispanic males), or geographic areas (e.g. Maricopa County has a higher overall cancer incidence rate than Yavapai County)

What Are Age-Adjusted Rates?

As is well known, older age groups generally have higher cancer rates than younger groups. For example, more than 60% of new lung cancer cases occur in people age 65 and older. As a result, if one county's lung cancer incidence rate is higher than another, the first question typically asked is whether the higher-rate county has an older population. To address this issue, all mortality and incidence rates presented in this booklet have been age-adjusted. This removes the effect of the age differences among sub-populations (or in the same population over time) by placing them all in a population with a standard age distribution. This allows for a direct comparison of those populations. It also allows for a comparison of rates within a single population over time. An age-adjusted rate is not a real measure of the burden of the disease on a population, but rather an artificial measure that is used for comparison purposes.

Age Adjustment to the Year 2000 Standard

Starting with the publication of *Arizona Cancer Facts & Figures 2004-2005*, the 2000 U.S. population standard for age-adjustment is used. The purpose of shifting to the Year 2000 Standard is to more accurately reflect contemporary incidence and mortality rates, given the aging of the U.S. population. On average, Americans are living longer because of the decline in infectious and cardiovascular diseases. Greater longevity allows more people to reach the age when cancer and other chronic diseases become more common. Using the Year 2000 Standard in age-adjustment instead of the 1970 or 1940 standards allows age-adjusted rates to be closer to the actual, unadjusted rate in the population.

All mortality and incidence rates in this publication, provided by the Arizona Cancer Registry, were age-adjusted to the U.S. 2000 standard million population, the "standard" used by cancer registries throughout the nation. This rate represents the number of new cases (incidence) or deaths (mortality) per 100,000 persons that would occur in a year if the population had the age structure of the 2000 U.S. standard million population. ***Comparisons of data from publications age-adjusting to different standards (e.g., 1970 U.S. Standard) would lead to erroneous conclusions and should be avoided.***

It is important to note that in no case will the actual number of cases/deaths or age-specific rates change, only the age-standardized rates which are weighted to the different age-distribution.

Table 3. Five Leading Cancer Cases and Five Leading Cancer Deaths in Arizona, by Gender and Race/Ethnicity, Six-Year Averages, 1995-2000

MALE INCIDENCE

White, non-Hispanic

		Cases	Percent
	All Sites	8918	100%
1	Prostate	2526	28%
2	Lung	1531	17%
3	Colon & Rectum	1054	12%
4	Bladder	729	8%
5	Melanoma	453	5%

Hispanic

		Cases	Percent
	All Sites	717	100%
1	Prostate	184	26%
2	Lung	87	12%
3	Colon & Rectum	80	11%
4	NHL	37	5%
5	Kidney/RP	32	4%

African American

		Cases	Percent
	All Sites	200	100%
1	Prostate	64	32%
2	Lung	38	19%
3	Colon & Rectum	24	12%
4	Kidney/RP	8	4%
5	NHL	6	3%

American Indian

		Cases	Percent
	All Sites	138	100%
1	Prostate	28	21%
2	Colon & Rectum	15	10%
3	Kidney/RP	12	9%
4	Lung	9	7%
4	Stomach	9	6%
5	NHL	5	4%

Asian/Pacific Islander

		Cases	Percent
	All Sites	48	100%
1	Prostate	9	19%
2	Lung	9	18%
3	Colon & Rectum	6	13%
4	Leukemia	2	5%
5	Bladder	2	4%
5	Liver	2	4%

MALE MORTALITY

White, non-Hispanic

		Deaths	Percent
	All Sites	3960	100%
1	Lung	1277	32%
2	Prostate	484	12%
3	Colon & Rectum	459	12%
4	Pancreas	191	5%
5	Lymphoma	165	4%

Hispanic

		Deaths	Percent
	All Sites	371	100%
1	Lung	82	22%
2	Prostate	40	11%
3	Colon & Rectum	36	10%
4	Stomach	21	6%
5	Pancreas	20	5%

African American

		Deaths	Percent
	All Sites	109	100%
1	Lung	35	32%
2	Prostate	18	16%
3	Colon & Rectum	11	10%
4	Pancreas	5	5%
5	Stomach	3	3%

American Indian

		Deaths	Percent
	All Sites	79	100%
1	Liver	8	10%
2	Lung	8	10%
3	Prostate	8	10%
4	Stomach	7	9%
5	Colon & Rectum	6	8%

Asian/Pacific Islander

		Deaths	Percent
	All Sites	22	100%
1	Lung	6	27%
2	Prostate	2	9%
3	Colon & Rectum	2	9%
4	Liver	2	9%
5	Pancreas	1	4%

FEMALE INCIDENCE

White, non-Hispanic

		Cases	Percent
	All Sites	8278	100%
1	Breast	2690	32%
2	Lung	1201	14%
3	Colon & Rectum	937	11%
4	Uterus	410	5%
5	Ovary	310	4%

Hispanic

		Cases	Percent
	All Sites	693	100%
1	Breast	198	29%
2	Colon & Rectum	62	9%
3	Lung	47	7%
4	Cervix	40	6%
5	Uterus	33	5%

African American

		Cases	Percent
	All Sites	161	100%
1	Breast	51	32%
2	Lung	22	14%
3	Colon & Rectum	21	13%
4	NHL	6	4%
5	Uterus	5	3%

American Indian

		Cases	Percent
	All Sites	166	100%
1	Breast	40	24%
2	Uterus	14	8%
3	Colon & Rectum	11	7%
3	Ovary	11	7%
4	Kidney/RP	10	6%
5	Cervix	8	5%

Asian/Pacific Islander

		Cases	Percent
	All Sites	71	100%
1	Breast	25	35%
2	Colon & Rectum	9	13%
3	Lung	7	10%
4	Ovary	3	4%
5	NHL	3	4%
5	Thyroid	3	4%

FEMALE MORTALITY

White, non-Hispanic

		Deaths	Percent
	All Sites	3452	100%
1	Lung	943	27%
2	Breast	551	16%
3	Colon & Rectum	342	10%
4	Pancreas	185	5%
5	Ovary	181	5%

Hispanic

		Deaths	Percent
	All Sites	306	100%
1	Breast	54	18%
2	Lung	37	12%
3	Colon & Rectum	23	7%
4	Pancreas	20	6%
5	Ovary	18	6%

African American

		Deaths	Percent
	All Sites	83	100%
1	Lung	18	22%
2	Breast	17	20%
3	Colon & Rectum	10	12%
4	Pancreas	5	6%
5	Stomach	3	4%

American Indian

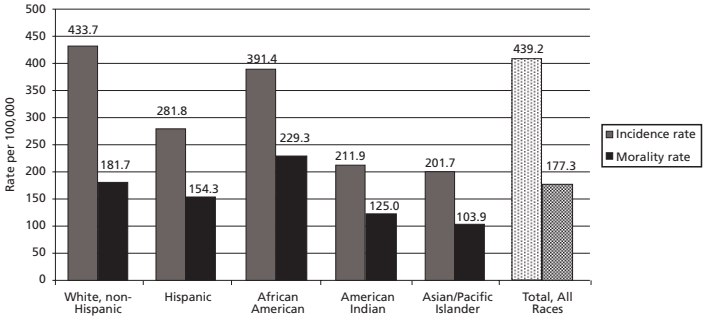
		Deaths	Percent
	All Sites	80	100%
1	Breast	9	11%
2	Ovary	6	7%
3	Liver	5	6%
4	Colon & Rectum	5	6%
5	Lung	5	6%
5	Stomach	5	6%

Asian/Pacific Islander

		Deaths	Percent
All Sites		30	100%
1	Lung	5	17%
2	Breast	5	17%
3	Colon & Rectum	2	7%
4	Pancreas	2	7%
5	Lymphoma	2	7%

Source: Arizona Cancer Registry
Notes: Counts are six-year average, rounded to the nearest whole. Rates are average annual and are per 100,000 population, age-adjusted to the 2000 U.S. standard population. Lung = Lung and bronchus; Liver = Liver and intra-hepatic bile duct; NHL = Non-Hodgkin's Lymphoma; RP = Renal Pelvis; Uterus = Endometrium.

Figure 4. Incidence and Mortality Rates in Arizona, All Cancers Combined, by Race/Ethnicity, 1995-2000



Source: Arizona Cancer Registry, Arizona Vital Statistics Program
Notes: Rates are average annual and per 100,000 population, age-adjusted to the 2000 U.S. standard population. Total includes cases of unknown race/ethnicity. Incidence includes *in situ* bladder, all other *in situ* cases are excluded.

Table 4. Average Incidence and Mortality Counts and Percentage of Total Cancer Cases and Deaths in Arizona by Age of Diagnosis, 1995-2000

Age	Average Cases	Percentage of Total Cases	Average Deaths	Percentage of Total Deaths
<25	299	2%	58	<1%
25-29	159	2%	27	<1%
30-34	272	1%	49	<1%
35-39	423	2%	88	1%
40-44	654	3%	175	2%
45-49	925	5%	247	3%
50-54	1238	6%	389	5%
55-59	1592	8%	552	6%
60-64	2072	10%	773	9%
65-69	2929	15%	1118	13%
70-74	3228	16%	1409	17%
75+	5917	30%	3618	43%

Source: Arizona Cancer Registry, Arizona Vital Statistics Program
Notes: Average counts and deaths are rounded to the nearest whole; percentages are rounded to the nearest whole.

Table 5. Average Incidence Counts for Selected Cancers in Arizona by County and Gender, 1995-2000

County	Breast (Female)		Prostate		Lung & Bronchus		Colon & Rectum		Melanoma (Skin Cancer)		Total, All Cancers	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
Arizona	--	3043	2967	--	1688	1291	1185	1045	461	304	10250	9463
Apache	--	15	13	--	6	2	6	5	2	1	54	54
Cochise	--	69	80	--	45	30	25	27	11	8	260	232
Coconino	--	60	53	--	20	19	17	16	12	5	169	179
Gila	--	35	38	--	29	19	19	13	7	3	150	122
Graham	--	16	18	--	9	4	7	8	3	2	60	53
Greenlee	--	6	4	--	3	2	2	1	0	1	16	15
La Paz	--	11	16	--	10	6	7	3	3	1	56	39
Maricopa	--	1778	1687	--	933	738	675	595	283	192	5767	5411
Mohave	--	105	130	--	113	81	61	43	12	6	511	374
Navajo	--	35	50	--	20	12	16	14	5	2	149	117
Pima	--	602	533	--	282	229	206	198	81	54	1825	1821
Pinal	--	86	93	--	69	37	41	33	10	6	341	280
Santa Cruz	--	18	19	--	9	6	6	4	2	1	64	58
Yavapai	--	136	150	--	81	63	57	55	24	16	483	431
Yuma	--	67	76	--	56	40	40	28	7	4	285	234

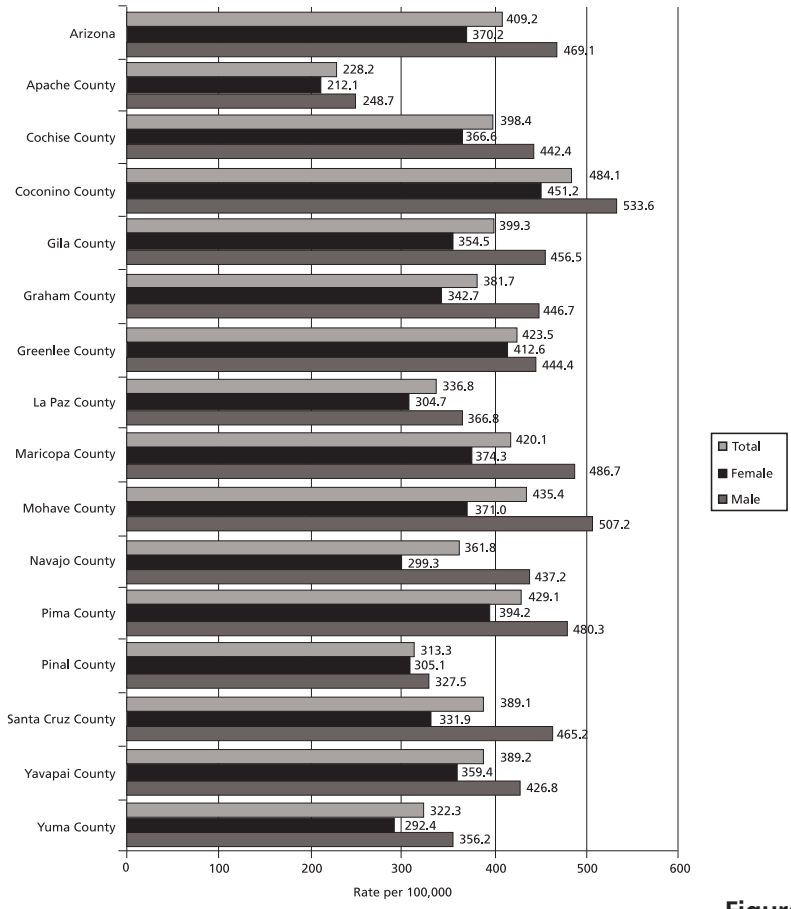
Source: Arizona Cancer Registry
Notes: Counts are rounded to the nearest whole. Arizona average total includes cases of unknown county.

Table 6. Average Mortality Counts for Selected Cancers in Arizona by County and Gender, 1995-2000

County	Breast (Female)		Prostate		Lung & Bronchus		Colon & Rectum		Melanoma (Skin Cancer)		Total, All Cancers	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
Arizona	--	633	552	--	1412	1011	431	387	79	38	4547	3956
Apache	--	3	3	--	5	3	4	2	0	0	30	29
Cochise	--	19	19	--	44	26	10	10	1	1	129	104
Coconino	--	10	7	--	13	9	4	5	1	1	52	52
Gila	--	9	9	--	26	16	9	5	1	0	79	56
Graham	--	5	5	--	8	4	3	3	1	0	30	26
Greenlee	--	1	2	--	2	2	1	0	0	0	8	7
La Paz	--	4	3	--	7	5	2	2	1	1	24	17
Maricopa	--	366	299	--	767	581	247	228	47	24	2479	2263
Mohave	--	24	23	--	93	62	23	13	2	1	247	174
Navajo	--	9	9	--	16	9	5	5	1	0	66	55
Pima	--	108	102	--	247	177	74	75	18	9	816	715
Pinal	--	24	22	--	62	35	15	13	2	1	181	134
Santa Cruz	--	4	5	--	7	3	2	1	0	0	29	21
Yavapai	--	33	33	--	72	54	22	19	3	1	238	198
Yuma	--	15	15	--	43	26	11	7	3	1	122	93

Source: Arizona Cancer Registry
Notes: Average deaths are rounded to the nearest whole.

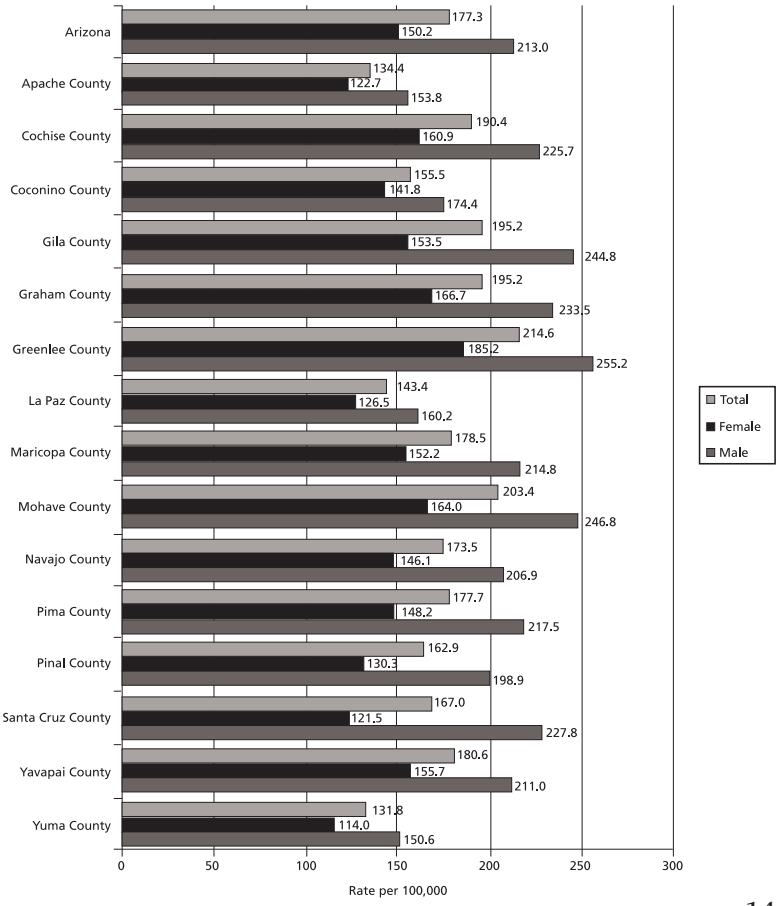
Figure 5. Incidence Rates in Arizona, All Cancers Combined by County and Gender, 1995-2000



Source: Arizona Cancer Registry
Notes: Rates are per 100,000 and age-adjusted to the U.S. 2000 population standard. Rates are six-year average annual.

Source: Arizona Cancer Registry, Arizona Vital Statistics Program
Notes: Rates are per 100,000 and age-adjusted to the U.S. 2000 population standard. Rates are six-year average annual.

Figure 6. Mortality Rates in Arizona, All Cancers Combined, by County and Gender, 1995-2000



Using Data for Identifying Populations for Priority Action

The more clearly a cancer control planning group can understand the needs of the at-risk population, the more effective the plan is likely to be. Data such as that provided in this booklet and others can help identify populations for priority action. For example, knowing how age and race/ethnicity affect cancer incidence, mortality, and staging can be very helpful when planning interventions to increase the use of early detection exams, or when planning patient services. These are only two factors for consideration. The unequal burden of cancer on certain ethnic minorities and on medically underserved populations has been well documented in national and other studies, and these groups would always require consideration as at-risk populations.

Despite exciting reductions in cancer incidence and mortality over the past several years, many minorities continue to experience high cancer incidence and mortality rates. Efforts must be made to reduce cancer rates in minority and medically underserved populations. Turning the tide of cancer among minority and underserved populations will require new approaches and a deeper understanding of the uniqueness of these populations and their communities.

Based on the definition provided in the recent Institute of Medicine report *The Unequal Burden of Cancer: Special Populations*, special populations refers collectively to ethnic and medically underserved groups. Ethnicity is broadly defined by a combination of features that cause one to be defined by others or oneself as part of a group, such as common ancestry or history, religion, language, customs, occupation or region. **Medically underserved** cuts across ethnic groups to refer to individuals with insufficient or no health insurance or who have little education, reside in rural or inner-city areas, are unemployed, or are of low socioeconomic status, all factors associated with poor health and increased cancer burden.

Survival and Staging

Today, when normal life expectancy is taken into consideration (factors such as dying of heart disease, accidents, and diseases of old age), a relative five-year survival rate of 63% percent is seen for all cancers combined.

One of the strongest predictors of survival is the degree to which the cancer has spread when discovered, referred to as the stage at diagnosis. Cancer staging, based on a summary classification developed by the National Cancer Institute's Surveillance, Epidemiology and End Results (SEER) program, refers to the extent of disease categorized as *in situ*, localized, regional, and distant. Generally, the earlier a cancer is detected, the better the prognosis. Among Arizona's residents, approximately one-third of all cancers are diagnosed in local stage and varies little by county (Table 7). Some differences, however, are seen among racial/ethnic groups and between different cancer types. Detailed staging data by race/ethnicity are included in the sections for each highlighted cancer (except childhood cancer).

Five-year survival rates for common cancers such as female breast, prostate, colon and rectum, cervix, and melanoma of the skin are 90 to 97 percent if they are discovered before having spread beyond the organ where the cancer began (Table 8).

We have made significant progress in helping individuals survive cancer through prevention, early detection, and treatment. Notable accomplishments in cancer research on early detection methods, genetics, and treatment, have benefited all Americans. However, we still have a long way to go. Following American Cancer Society cancer screening guidelines could help save many lives lost to cancer. Screening guidelines are included in the section for each of the specific cancer sites highlighted in this document.

Table 7. Percentage of Total Cancers in Arizona by Stage of Diagnosis and County, 1995-2000

	In Situ	Local	Regional	Distant	Unknown
Arizona	8%	38%	19%	18%	17%
Apache	5%	39%	18%	20%	18%
Cochise	6%	35%	19%	18%	22%
Coconino	8%	40%	23%	18%	11%
Gila	7%	34%	19%	19%	19%
Graham	6%	35%	19%	17%	22%
Greenlee	5%	33%	21%	25%	16%
La Paz	3%	35%	20%	22%	20%
Maricopa	9%	39%	19%	17%	16%
Mohave	4%	40%	19%	20%	18%
Navajo	6%	34%	22%	22%	16%
Pima	8%	37%	20%	18%	18%
Pinal	5%	39%	19%	19%	18%
Santa Cruz	5%	32%	20%	20%	22%
Yavapai	6%	37%	21%	18%	17%
Yuma	5%	29%	17%	19%	29%

Source: Arizona Cancer Registry.
Notes: Percentages are rounded to the nearest whole.

Table 8. Five-Year Relative Survival Rates for Selected Cancers by Stage of Diagnosis, United States, 1992-1999

Cancer Site	All Stages	Local	Regional	Distant
Bladder	82%	94%	48%	6%
Breast (female)	87%	97%	79%	23%
Cervix	71%	92%	51%	16%
Colon & Rectum	62%	90%	65%	9%
Esophagus	14%	29%	13%	2%
Kidney	63%	90%	60%	9%
Larynx	65%	83%	48%	20%
Liver	7%	16%	6%	2%
Lung & Bronchus	15%	49%	16%	2%
Melanoma (skin)	90%	97%	60%	14%
Oral Cavity	57%	82%	48%	26%
Ovary	53%	95%	72%	31%
Pancreas	4%	17%	7%	2%
Prostate	97%	100%	†	34%
Stomach	22%	59%	22%	2%
Testis	95%	99%	95%	73%
Thyroid	96%	99%	95%	60%
Uterus	84%	96%	65%	26%

Source: Surveillance, Epidemiology, and End Results (SEER) Program, 1973-2000, Division of Cancer Control and Population Sciences, NCI, 2003; American Cancer Society Cancer Facts & Figures 2004, Surveillance Research, National Home Office, 2004.
Notes: Rates are adjusted for normal life expectancy and are based on cases diagnosed from 1992-1999, followed through to 2000.
† The rate for local stage represents local and regional stages combined.

Cancer Stage of Diagnosis

In situ—a malignant cancer that is "noninvasive" and confined to a small circumscribed area within the tissue of origin. The tumors have not invaded or penetrated surrounding tissue. An *in situ* lesion can only be diagnosed by microscopic examination.

Localized—a malignant cancer that has not spread beyond the organ of origin or basement membrane. The tumor may be widely invasive within the organ of origin (primary site) and may even show metastasis with the organ of origin. It can still be considered "localized" as long as there is no extension beyond the outer limits of the primary organ and no evidence of metastasis elsewhere within the body.

Regional—a malignant cancer that that has spread beyond the limits of the organ of origin to adjacent organs or tissues or to surrounding lymph nodes. These neoplasms (tumors classified according to their cell of origin) can have regional direct extension or involvement of regional lymph nodes. Remote spread must be reasonably ruled out.

Distant—refers to a malignant cancer that has spread to remote areas from the primary tumor either by direct extension or discontinuous metastasis to distant organs or tissues, or via the lymphatic system to distant lymph nodes.

Unstaged or Unknown—used when there is insufficient information to determine the stage or extent of the disease at diagnosis. This may include limited pathology or death certificate information.

Cancer Risks

Smoking, diet, infectious diseases, chemicals, and radiation cause about three-quarters of all cancer deaths in the Unites States. Factors, such as tobacco use, an unhealthy diet, and physical inactivity have a much greater effect on individual cancer risks than do trace levels of pollutants in food, drinking water, and air. Thirty percent of all cancer deaths can be attributed to tobacco. Tobacco-related cancer risks include tobacco use and exposure to secondhand smoke, or environmental tobacco smoke (ETS). Current information about the prevalence of tobacco use among adults and youth is included in the section on lung and bronchus (lung) cancer.

Nutrition, Physical Activity, and Obesity

Nutrition. For the majority of Americans who do not use tobacco products, nutrition and physical activity are the most important modifiable determinants of cancer risk. If Americans ate a healthy, balanced diet that emphasized plant foods and that helped maintain a healthful weight, as many as one-third of all cancer deaths in the U.S. could be prevented.

Factors that can affect cancer risk include types of foods, how food is prepared, portion sizes, fat content, food variety, and overall balance of the diet. Strong scientific evidence concludes that diets high in fruits and vegetables have protective effects against cancers of the gastrointestinal tract (e.g., colon and rectum) and respiratory tract (e.g., lung and bronchus, larynx). Diets low in fruits and vegetables are linked with an increased risk of oral, ovarian, and cervical cancers. High-fat diets have also been linked with an increased risk of colon and rectum, prostate, and endometrial cancers. In Arizona, only 23% of adults (Figure 7) and 20% of youth (Figure 8) reported consuming at least five fruits and vegetables per day.

Physical Activity. Additionally, the benefits of moderate physical activity (at least 30 minutes or more a day; 5 or more days per week), in the prevention of cancer is well-documented. Specifically, regular physical activity reduces the risk of colon and rectum and breast cancers, and maintains a healthy weight. More limited research suggests that regular physical activity may also reduce the risk of cancer of the pancreas, prostate, lung and bronchus, and endometrium. Just over half of Arizonans are engaging in moderate physical activity (Figure 9) and over two-thirds of Arizona's youth are engaging vigorous physical activity (Figure 10).

Overweight and Obesity. Excessive caloric intake from unhealthy diets combined with inadequate physical activity leads to weight gain and the development of overweight and obesity. Obesity increases the risk of many chronic diseases, including cancers of the breast (among postmenopausal women), colon, uterus (endometrium), prostate, kidney, esophagus, and thyroid. For breast cancer, in addition to controlling weight, activity may act through effects on hormone levels. For colon and rectum cancer, physical activity stimulates movement through the bowel, reducing the length of time the bowel lining is exposed to potential carcinogens. Limited research suggests that obesity may also contribute to an increased risk for cancers of the lung and bronchus, ovary, testis, liver, pancreas, gallbladder, and head and neck. In Arizona, about 57% of adults are categorized as overweight (Figure 11, combination of clinically overweight and clinically obese).

The overweight and obese categories for youth are different from the adult definitions. A child's body composition can change dramatically through adolescence. Youth are categorized as overweight and at risk for being overweight. In Arizona, 11% of youth are overweight and 14% are at risk for being overweight (Figure 12).

Active for Life℠ is a worksite wellness program that can help people be more active, improving their health while fostering team work and boosting morale at the worksite. Participants set a personal goal for being physically active, work in teams for social support, and receive incentives for progress toward goals.

Accompanying this program is **Meeting Well**, a guidebook for planning healthy meetings and events.

Moderate Physical Activity Examples*

Less Vigorous, More Time

Washing and waxing a car for 45-60 minutes

Washing windows and floors for 45-60 minutes

Playing volleyball for 45 minutes

Playing touch football for 30-45 minutes

Gardening for 30-45 minutes

Wheeling self in wheelchair for 30-45 minutes

Walking 1 1/2 miles in 35 minutes (20 minutes per mile)

Basketball (shooting baskets) for 30 minutes

Bicycling for 5 miles in 30 minutes

Dancing fast (social) for 30 minutes

Pushing a stroller for 1 1/2 miles in 30 minutes

Raking leaves for 30 minutes

Walking 2 miles in 30 minutes (15 minutes per mile)

Water aerobics for 30 minutes

Swimming laps for 20 minutes

Wheelchair basketball for 20 minutes

Basketball (playing a game) for 15-20 minutes

Bicycling 4 miles in 15 minutes

Jumping rope for 15 minutes

Running 1 1/2 miles in 15 minutes (10 minutes a mile)

Shoveling snow for 15 minutes

Stairwalking for 15 minutes

More Vigorous, Less Time

* The amount of physical activity is influenced by the duration, intensity, and frequency. The same amount of activity can be obtained in longer sessions of moderately intense activities (such as brisk walking) as in shorter sessions of more strenuous activities (such as running). **Adapted from**: Chronic Disease Notes and Reports (Fall 1996), publication of the Centers for Disease Control and Prevention.

To achieve the American Cancer Society physical activity guidelines, adults may choose a variety of activities. Some examples may include:

- Bicycle 5 miles in 30 minutes
- Walk 2 miles in 30 minutes and run 1 1/2 miles in 15 minutes
- Garden for 30 minutes
- Play volleyball for 45 minutes

Body Mass Index for Adults

Different measures are used to determine whether a person is considered normal weight, overweight, taking into account height. A common scale is the body mass index (BMI), or ratio of weight (in kilograms) to height (in meters, squared). For adults aged 20 years and older, overweight is defined as a BMI of 25.0-29.9 kg/m^2; obesity is defined as a BMI of 30.0 kg/m^2 or greater.

The table relates BMI to pounds and inches rather than height (in the left column) and weight category (in pounds). An adult aged 20 or older is considered overweight or obese if his or her weight falls within the corresponding area of the table. for example, a 5'4" woman is considered overweight if she weighs between 145 to 173 pounds. She is considered obese if she weighs 174 pounds or more. A 5'10" man is considered overweight if he weighs between 174 and 206 pounds and obese if he weighs 207 pounds or more.

* Overweight is defined as a BMI of 25.0-29.9 kg/m^2

** Obesity is defined as a BMI of 30.0 kg/m^2 or greater

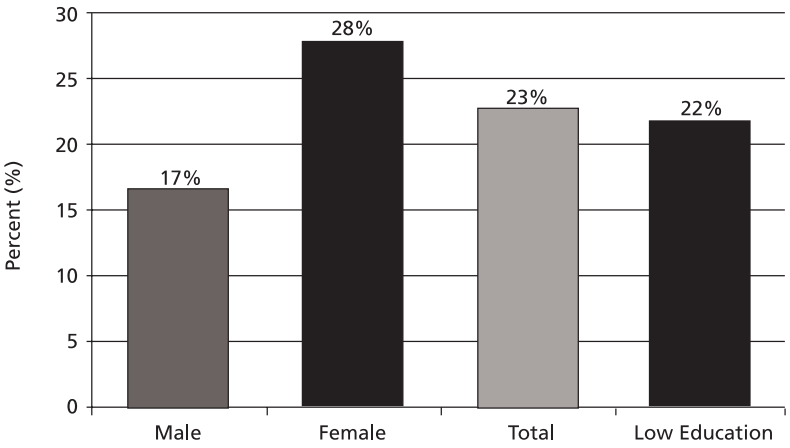
Height (feet, inches)	**Body Weight** (pounds)	
	Overweight*	**Obese****
6'4"	205	246
6'3"	200	240
6'2"	194	233
6'1"	189	227
6'0"	184	221
5'11"	179	215
5'10"	174	207
5'9"	169	203
5'8"	164	197
5'7"	159	191
5'6"	155	186
5'5"	150	180
5'4"	145	174
5'3"	141	169
5'2"	136	164
5'1"	132	158
5'0"	128	153
4'11"	124	148
4'10"	119	143

Body Mass Index for Youth and Adolescents

As children grow, their body compositions change dramatically through adolescence. Thus, the overweight and obesity definitions for youth differ from the definitions for adults. Caution is necessary when using body mass index (BMI) as a measure of body composition in youth. Growth charts show the entire distribution of a measurement (height, weight) or measurement ratio (BMI) across a range of ages and present multiple percentiles. The growth charts were revised in 2000 and are available at the Centers for Disease Control and Prevention's National Center for Health Statistics website at www.cdc.gov/growthcharts. In this report, the following definitions are used:

- Overweight: 95th percentile for BMI
- At risk for becoming overweight: 85th to 94th percentile for BMI

Figure 7. Adults in Arizona Consuming At Least Five Fruits and Vegetables a Day, 2002

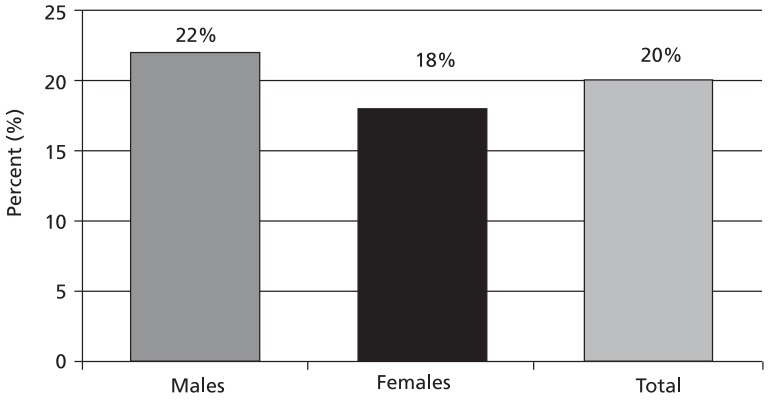


Source: American Cancer Society Surveillance Research; Behavioral Risk Factor Surveillance System Public Use Data Tape, 2002, National Center for Chronic Disease Prevention and Health Promotion, Centers for Disease Control and Prevention, 2003.

Notes: Data are limited to adults age 18 and older. Percentages are rounded to the nearest whole.

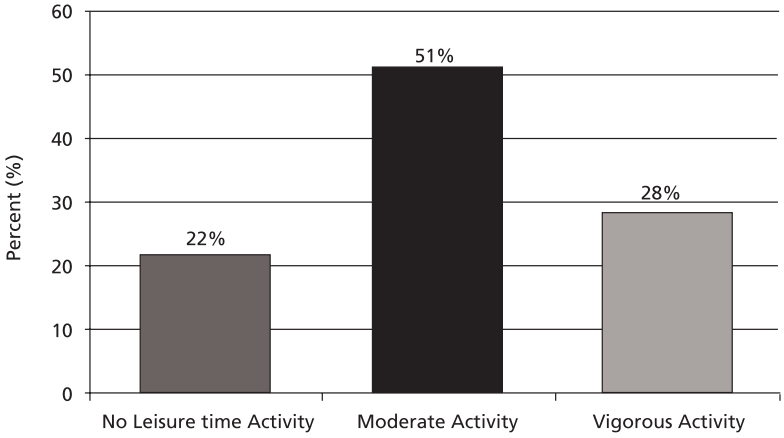
* "Low Education" refers to adults age 25 and older without a high school diploma

Figure 8. High School Youth in Arizona Who Consume At Least Five Fruits and Vegetables A Day, 2003



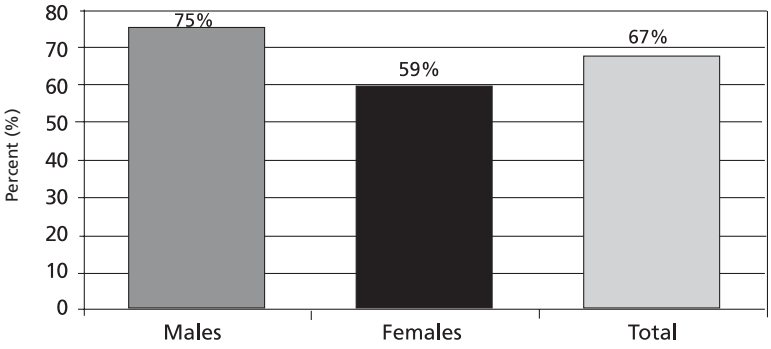
Source: Arizona Department of Education, Arizona Youth Risk Behavior Survey (YRBS) 2003.
Notes: Data are weighted and limited to youth in grades 9-12 under the age of 18. Percentages are rounded to the nearest whole.

Figure 9. Adult Physical Activity in Arizona, 2001



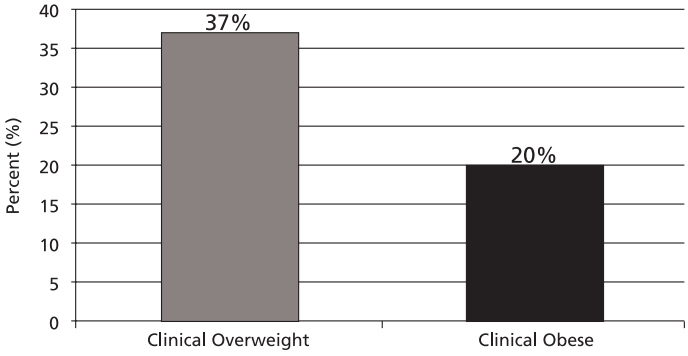
Source: Behavioral Risk Factor Surveillance System Public Use Data Tape, 2002, Centers for Disease Control and Prevention.
Notes: Data are limited to adults age 18 and older. Percentages are rounded to the nearest whole.
"Moderate" refers to physical activity at least 30 minutes in length on 5 or more days of the week (includes "vigorous").
"Vigorous" refers to any activity that causes large increases in breathing or heart rate at least 20 minutes three or more times per week.
"No Leisure Time" refers to no physical activity during leisure time.

Figure 10. Vigorous Physical Activity Among High School Youth in Arizona, 2003



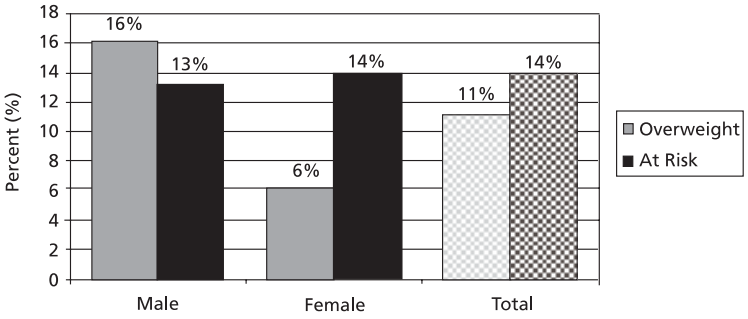
Source: Arizona Department of Education, Arizona Youth Risk Behavior Survey (YRBS) 2003.
Notes: Data are weighted and limited to youth in grades 9-12 under the age of 18. Percentages are rounded to the nearest whole.
"Vigorous" refers to physical activity that caused sweating and breathing hard for 20 minutes or more on three or more of the seven days preceding the survey.

Figure 11. Clinical Overweight* and Clinical Obese Adults in Arizona, 2002**



Source: Behavioral Risk Factor Surveillance System Public Use Data Tape, 2002, Centers for Disease Control and Prevention.
Notes: Data are limited to adults age 18 and older. Percentages are rounded to the nearest whole.
* "Overweight" is defined as a BMI of 25.0-29.9 kg/m^2
** "Obesity" is defined as a BMI of 30.0 kg/m^2 or greater

Figure 12. High School Youth in Arizona Who Are Overweight and At Risk for Becoming Overweight, 2003



Source: Arizona Department of Education, Arizona Youth Risk Behavior Survey (YRBS) 2003.
Notes: Data are weighted and limited to youth in grades 9-12 under the age of 18. Percentages are rounded to the nearest whole.
"At risk for becoming overweight" defined as 85th to 94th percentile for Body Mass Index
"Overweight" defined as 95th or higher percentile for Body Mass Index

Environmental Risks

The degree of risk from pollutants in food, drinking water, and air depends on the concentration, intensity, and duration of exposure. Substantial increases in risk have been shown in settings where workers have been exposed to high concentrations of ionizing radiation, certain chemicals, metals and other substances, as well as among radiation victims and patients treated with drugs or therapies later found to be carcinogenic. Even low-dose exposures that pose only small risk to individuals can still cause substantial ill health across an entire population if the exposures are widespread. For example, secondhand smoke from tobacco increases risk in large numbers of people who do not smoke but are exposed to others' smoke. Strong regulatory controls and attention to safe occupational practices, drug testing, and consumer product safety play an important role in reducing risk of cancer from environmental exposures. For more information about environmental pollutants, visit www.epa.gov.

Risk Assessment. The risk assessment process evaluates the cancer-causing potential of a substance, the levels of the substance in the environment, and the extent to which people are actually exposed. However, the process is not perfect. For most potential carcinogens, data are only available from high-dose experiments in animals or highly exposed occupational groups. Risk assessment generally makes conservative assumptions to err on the side of safety. For cancer safety standards, acceptable risks are usually limited to those that increase risk by no more than one case per million persons over a lifetime.

Safety standards developed in this way for chemical or radiation exposures are the basis for federal regulatory activities at the Food and Drug Administration (FDA), the Environmental Protection Agency (EPA), and the Occupational Safety and Health Administration (OSHA). The application of laws and procedures by which standards are implemented and risks are controlled is called risk management.

Infectious Agents and Cancer. The role of infectious disease has been known as a cause of cancer in animals since the beginning of the last century. Only recently has infection with certain viruses, bacteria, and parasites in human cancer been recognized as a risk factor for several types of cancer. Examples include Epstein-Barr virus, human immunodeficiency virus, *helicobacter* pylori, human papilloma virus, and hepatitis B and C viruses.

Although some types of infection can increase a person's risk of developing certain types of cancer, most people with these infections never develop cancer. Their likelihood of developing cancer may also be influenced by other risk factors. For example, *helicobacter* pylori infection may increase a person's risk of developing stomach cancer, but that risk is also influenced by dietary factors (high intake of smoked and salted foods and starches with low intake of fruits and vegetables) and smoking.

Even though some infections that influence cancer risk are contagious, it is important to remember that cancer is not a contagious disease.

Breast Cancer

Table 9. Female Breast Cancer in Arizona, 1995-2000

	Average Count	Rate per 100,000
Incidence	3043	121.8
Mortality	636	24.9

Source: Arizona Cancer Registry, Arizona Vital Statistics Program
Notes: Counts and rates are six-year average, rounded to the nearest whole. Rates are per 100,000 and age-adjusted to the U.S. 2000 population standard.

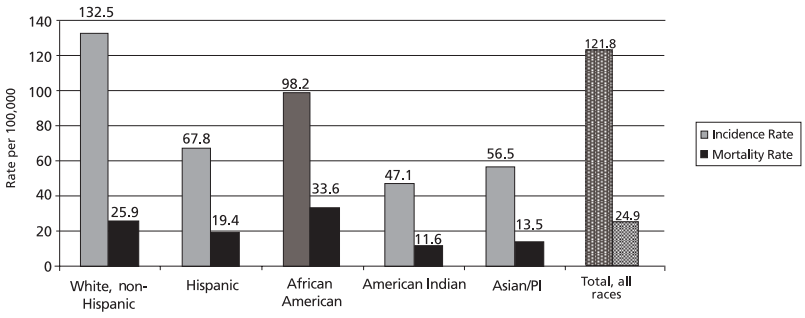
Breast cancer is a malignant (cancerous) tumor that develops from cells in the breast. Although breast cancer can occur in males, this section will focus on female breast cancers. Breast cancer is the most common cancer among women in Arizona, regardless of race/ethnicity. On average, 3,043 new cases of female invasive breast cancer are diagnosed in Arizona each year, and another 636 deaths are caused by the disease

(Table 9). Table 10 shows the average number of cases and deaths observed between the years 1995 and 2000. Among Arizona females, it accounts for nearly one-third of all cancer cases, and 16% of the female cancer deaths. The risk of female breast cancer increases with age. While approximately 2% of Arizona women who develop breast cancer are under age 35, about 80% of female breast cancers occur in women age 50 and older (Table 11). It is estimated that 3,980 new cases and 740 deaths to breast cancer will occur in Arizona in 2004.

Since 1995, the Arizona Department of Health Services has received funding from the Centers for Disease Control and Prevention to screen low income, uninsured or underinsured women for breast and cervical cancer through the Well Woman Health Check Program. After federal legislation was passed in 2000 to offer a treatment program, the Arizona State Legislature passed the Breast and Cervical Cancer Treatment Act in 2001 that provides 3-1 matching funds from the federal government to treat women diagnosed with breast or cervical cancer through the **Well Woman Health Check Program**. Screenings are offered to qualified women through the Department of Health Services Well Woman Health Check Program and treatment is administered through the Arizona Health Care Cost Containment System (AHCCCS). The American Cancer Society in Arizona is partnering with the Well Woman Health Check Program to promote screenings among low income, uninsured or underinsured women.

Arizona exhibits a common pattern in which non-Hispanic White females are diagnosed with breast cancer at higher rates than other race/ethnicity groups. Age-adjusted incidence and mortality rates are lowest in American Indian women and intermediate in Hispanic women (Figure 13). Although the population of African American females in Arizona is low, with a corresponding small number of breast cancer cases (51 per year) and breast cancer deaths (17 per year), African American females in Arizona experience higher breast mortality rates than any other racial/ethnic group.

Figure 13. Female Breast Cancer Incidence and Mortality Rates in Arizona, by Race/Ethnicity, 1995-2000



Source: Arizona Cancer Registry
Notes: Rates are per 100,000 and age-adjusted to the U.S. 2000 population standard. Rates are six-year average annual. "Asian/PI" refers to Asian/Pacific Islander.

Table 10. Average Female Breast Cancer Cases and Deaths, by County, 1995-2000

County	Cases	Deaths
Arizona	3043	636
Apache	15	3
Cochise	69	19
Coconino	60	10
Gila	35	9
Graham	16	5
Greenlee	6	1
La Paz	11	4
Maricopa	1778	366
Mohave	105	24
Navajo	35	9
Pima	602	108
Pinal	86	24
Santa Cruz	18	4
Yavapai	136	33
Yuma	67	15

Source: Arizona Cancer Registry, Arizona Vital Statistics Program
Notes: Counts are six-year averages. Cases may not add up to total due to averaging. Arizona average cases include cases of unknown county.

Table 11. Female Breast Cancer Average Incidence Counts and Percentage of Total New Cancer Cases in Arizona, by Age of Diagnosis, 1995-2000

Age Group	Cases	Percentage of Total Cases
<35	58	2%
35-44	101	3%
40-44	182	6%
45-49	277	9%
50-54	314	10%
55-59	312	10%
60-64	306	10%
65-69	390	13%
70-74	402	13%
75-79	345	11%
80-84	197	6%
85+	160	5%

Source: Arizona Cancer Registry
Notes: Counts are six-year averages. Percentages are rounded to the nearest whole.

Risk Factors

Being a woman is the greatest risk factor for breast cancer. Although breast cancer can occur in men, the disease is over 100 times more common in women than in men. Breast cancer risks are higher among women with a family history of the disease. Having a first-degree relative (a mother, sister, or daughter) with breast cancer approximately doubles a woman's risk. However, it is important to note that most women with breast cancer do not have a first-degree relative with the disease. Studies also show that only 5% of breast cancers result from inherited mutations of the BRCA1 and BRCA2 genes. Additional risk factors include a history of non-cancerous breast disease; starting menstruation or monthly periods before age 12, starting menopause after age 55; more than 5 years postmenopausal estrogen replacement therapy; never having children or having first live birth after age 30; use of alcohol, especially two or more drinks daily; obesity, especially excessive weight gain after menopause; physical inactivity.

Early Detection

The earlier breast cancer is found, the better the chances for successful treatment. A mammogram is the best detection method because it can usually detect abnormalities that may be cancerous before symptoms develop; however, some cancers that are not apparent on a mammogram can be felt by the woman or her health care provider. The American Cancer Society recommends that women begin having an annual mammogram and clinical breast exam at age 40. A clinical breast exam should be part of a periodic health exam, about every three years, for women in their 20's and 30's. Breast self exam is also an option for women starting in their 20's. Women should know how their breasts normally feel and report any changes to their healthcare provider. In 2002, 56% of Arizona women age 40 and older reported having had a mammogram and clinical breast exam in the past year (Table 12). As in other areas of the nation, differences in screening behaviors in Arizona are seen among women of different age, race, and socioeconomic status. Women age 65 and older are more likely to have had a mammogram only than women between the ages of 40-64 years. Women with no health insurance are the group least likely to have had a mammogram and clinical breast exam in the past year (25%). Hispanic women and those in the "Other" category (which includes American Indian and Asian/Pacific Islander) have lower screening rates than White, non-Hispanic women for mammogram and clinical breast exam.

Signs and symptoms of breast cancer can include a new lump or mass, although most breast lumps are benign (non-cancerous); a generalized swelling of part of a breast (even if no distinct lump is felt); skin irritation or dimpling; nipple pain or retraction (turning inward); redness or scaliness of the nipple or breast skin; or a discharge other than breast milk.

Survival and Staging

Numerous studies have shown that early detection saves lives and increases treatment options. When breast cancer is diagnosed at its earliest stage, survival is excellent. The five-year survival rate (1992-1999) among persons diagnosed with breast cancer is 97% for those diagnosed early (local stage). That rate falls to 78% when the cancer was detected at a regional stage, and 23% when detected at a distant stage. In Arizona, 27% of breast cancers diagnosed between 1995 and 2000 were detected in late stage (regional and distant). We see some variation among different racial/ethnic groups in Arizona (Figure 14a). Nearly 37% of breast cancers diagnosed in Hispanic, African American, and American Indian women are diagnosed in late stage, compared to 26% of non-Hispanic White women. Variations in late stage diagnosis of breast cancer also exist among the state's 15 counties (Figure 14b). La Paz, Gila, and Navajo Counties have the highest proportion of breast cancers diagnosed in late stage ($\geq$ 33.4% of cases). Factors such as a lack of access to screening and treatment and/or lack of awareness of the need for screening can contribute to poor early detection of breast cancer.

Reach to Recovery® is a program that provides one-to-one support for women facing breast cancer and for those who have had breast cancer surgery. Survivors increase their ability to cope, manage illness, and maintain work and family roles.

Table 12. Recent* Mammogram and Clinical Breast Exam Among Women 40 Years of Age and Older in Arizona, 2002

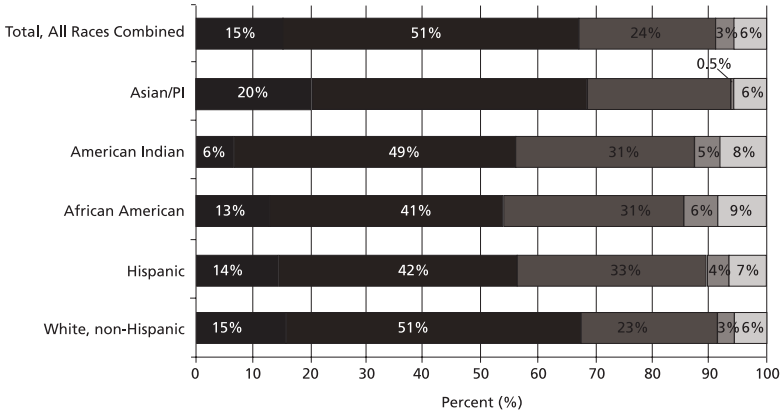
Characteristic	Mammogram and CBE within the past year	Mammogram only within the past year
Age		
40+ years	56%	64%
40-64 years	56%	60%
65+ years	57%	71%
Race/Ethnicity		
White, non-Hispanic	56%	63%
Hispanic	51%	63%
African American	†	†
Other	52%	55%
No Health Insurance**	25%	30%

Source: Behavioral Risk Factor Surveillance System Public Use Data Tape 2002, Centers for Disease Control and Prevention.
Notes: Data limited to women age 40 and older. Percentages are rounded to the nearest whole. "Other" category includes American Indian and Asian/Pacific Islander. CBE refers to clinical breast exam.
† No data provided for African Americans; fewer than 50 participants in the survey.
* "Recent" refers to breast cancer screening examinations within the past year.
** "No Health Insurance" refers to women aged 40 to 64 who reported they did not have any kind of health care coverage, including health insurance, prepaid plans such as HMOs, or government plans such as Medicare.

American Cancer Society Breast Cancer Screening Guidelines

- Yearly mammograms are recommended starting at age **40** and continuing for as long as a woman is in good health.
- Clinical breast exam should be part of a periodic health exam, about every three years for women in their 20s and 30s, and every year for women 40 and older.
- Women should know how their breasts normally feel and report any breast change promptly to their health care provider. Monthly breast self exam is an option for women starting in their 20s.
- Women at increased risk (e.g., family history, genetic tendency, past breast cancer) should talk with their doctors about the benefits and limitations of starting mammography screening earlier, having additional tests (i.e., breast ultrasound and MRI), or having more frequent exams.

Figure 14a. Percentage of Female Breast Cancer Cases by SEER Summary Stage in Arizona, by Race/Ethnicity, 1995-2000



Source: Arizona Cancer Registry
Notes: "Asian/PI" refers to Asian/Pacific Islander. Percentages are rounded to the nearest whole.

Figure 14b. Percentage of Female Breast Cancers Diagnosed in Late Stage in Arizona, by County, 1995-2000

Source: Arizona Cancer Registry

Breast Health Worksite Wellness is a breast cancer education and early detection program that is directed at women in our local communities. The objective of the program is to increase the number of targeted women in the workplace who have an annual mammogram and clinical breast exam, and to increase the awareness of the importance of routine self-breast exam. The message is **early detection saves lives!**

Cervical Cancer

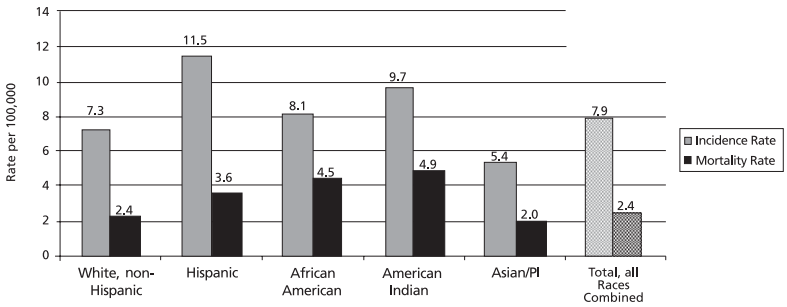
Table 13. Cervical Cancer in Arizona, 1995-2000

	Average Count	Rate per 100,000
Incidence	187	7.9
Mortality	58	2.4

Source: Arizona Cancer Registry, Arizona Vital Statistics Program
Notes: Counts and rates are six-year average, rounded to the nearest whole. Rates are per 100,000 and age-adjusted to the U.S. 2000 population standard.

Cervical cancer begins in the lining of the cervix. The cervix is the lower part of the womb, or uterus, which connects the body of the uterus (where a fetus grows) to the vagina or birth canal. On average, 187 women in Arizona are diagnosed with cervical cancer each year and 58 die from it (Table 13). Table 14 shows the average number of cases and deaths observed between the years 1995 and 2000. Cervical cancer is one of the leading five causes of cancer for Hispanic and American Indian women, which is not the case for the other races. About 55% of cervical cancers are diagnosed in women below the age of 50 (Table 15). It is estimated that 190 new cases of cervical cancer will occur in Arizona in 2003.

Figure 15. Cervical Cancer Incidence and Mortality Rates in Arizona, by Race/Ethnicity, 1995-2000



Source: Arizona Cancer Registry
Notes: Rates are per 100,000 and age-adjusted to the U.S. 2000 population standard. Rates are six-year average annual. "Asian/PI" refers to Asian/Pacific Islander.

Overall, incidence rates for cervical cancer in Arizona are highest among Hispanic and American Indian females and lowest among Asian/Pacific Islander females. Mortality rates are highest among African American and American Indian females and lowest among White, non-Hispanic and Asian/Pacific Islander females. Figure 15 presents the average annual cervical cancer incidence and mortality rates by race/ethnicity for Arizona females, 1995-2000.

Table 14. Total Cervical Cancer Cases and Deaths by County, 1995-2000

County	Cases	Deaths
Arizona	1124	350
Apache	14	5
Cochise	23	9
Coconino	32	4
Gila	20	1
Graham	6	1
Greenlee	2	1
La Paz	7	1
Maricopa	607	202
Mohave	56	15
Navajo	20	9
Pima	223	58
Pinal	31	9
Santa Cruz	14	0
Yavapai	33	17
Yuma	31	13

Source: Arizona Cancer Registry, Arizona Vital Statistics Program
Notes: Cases and deaths are six-year totals. Arizona total includes 5 deaths and 5 cases of unknown county.

Table 15. Cervical Cancer Average Incidence Counts and Percentage of Total New Cancer Cases in Arizona, by Age of Diagnosis, 1995-2000

Age Group	Cases	Percentage of Total Cases
<35	34	18%
35-39	22	12%
40-44	28	15%
45-49	19	10%
50-54	19	10%
55-59	15	8%
60-64	14	7%
65-69	12	6%
70+	27	14%

Source: Arizona Cancer Registry
Notes: Counts are six-year averages. Percentages are rounded to the nearest whole.

Risk Factors

Cervical cancer usually occurs among women in their childbearing years and beyond. The average age of diagnosis is between the ages of 50-55 years. Research indicates that the following risk factors also increase the likelihood of developing cervical cancer: having sex at an early age; having had many sexual partners, or having sex with men who have had many partners; infection with human papilloma virus (HPV); infection with human immunodeficiency virus (HIV), the virus that causes acquired immunodeficiency syndrome (AIDS); cigarette smoking; being poor (may be related to lack of access to regular Pap tests); a diet low in fruits and vegetables.

Prevention and Early Detection

Most cervical cancers can be prevented in two ways. The first is by preventing exposure to HPV, which can cause pre-cancers. The second way is by having regular Pap tests. Cervical cancer incidence and mortality rates have decreased markedly in the past several decades, with most of the reduction attributed to the introduction of the Pap test. The Pap test detects cervical cancer and precancerous lesions. When it is detected early, cervical cancer is one of the most successfully treated cancers. The American Cancer Society recommends that women should begin annual screening approximately three years after beginning to have vaginal intercourse, but no later than age 21 (see "Cervical Cancer Screening Guidelines" for more detail).

Over the past 25 years, the high prevalence of Pap screening has led to a significant reduction in the incidence of cervical cancer. In Arizona, 88% of women age 18 and over report having had a recent Pap test (Table 16). As is seen in national patterns, Arizona women with no health insurance have the lowest screening rate overall. Women between the ages of 18 and 64 have the higher screening rates, than women age 65 and older. White, non-Hispanic and Hispanic women have screening patterns that are almost the same.

Signs and symptoms of cervical cancer may include unusual vaginal bleeding, spotting, or discharge, and pain or bleeding during sex. However, cervical pre-cancers and early cervical cancer often have no signs or symptoms, making it very important for a woman to have regular Pap tests.

Survival and Staging

The survival rate for cervical cancer is 92% if detected in early stage (local). These rates drop sharply if the cancer has spread by the time it is detected – to 51% in regional stage and 16% in distant stage. Fewer than 42% of the cervical cancers diagnosed in Arizona between 1995 and 2000 were detected in late (regional or distant) stage. We see some variation among different racial/ethnic groups in Arizona (Figure 16a). American Indian, Asian/Pacific Islander, and Hispanic women, compared to non-Hispanic White females, are more likely to be diagnosed in late stage of cervical cancer. Variations in late stage diagnosis of cervical cancer also exist among the state's 15 counties (Figure 16b). Coconino, Navajo, and Yuma Counties have the highest proportion of cervical cancers diagnosed in late stage ($\geq$ 51.7% of cases). Factors such as a lack of access to screening and treatment, lack of awareness of the need for screening, and other cultural barriers can contribute to poor early detection of cervical cancer.

American Cancer Society Cervical Cancer Screening Guidelines

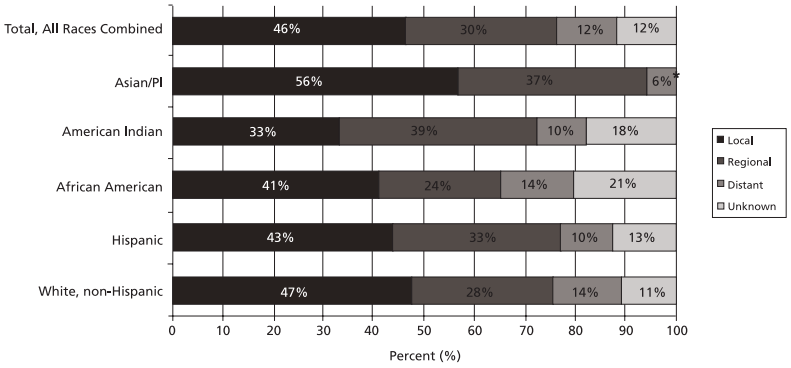
- Screening should begin approximately three years after a woman begins having vaginal intercourse, but no later than 21 years of age.
- Screening should be done every year with regular Pap tests or every two years using liquid-based tests.
- At or after age 30, women who have had three normal test results in a row may get screened every 2-3 years. However, doctors may suggest a woman get screened more often if she has certain risk factors, such as HIV infection or a weak immune system.
- Women 70 years and older who have had three or more consecutive normal Pap tests in the last 10 years may choose to stop cervical cancer screening.
- Screening after total hysterectomy (with removal of the cervix) is not necessary unless the surgery was done as a treatment for cervical cancer.

Table 16. Recent Pap Test* Among Adult Women 18 Years of Age and Older in Arizona, 2002

Characteristic	Pap Test within the past 3 years
Age	
18+ years	88%
18-44 years	89%
45-64 years	88%
65+	84%
Race/Ethnicity	
White, non-Hispanic	88%
Hispanic	90%
African American	†
Other	86%
No Health Insurance**	77%

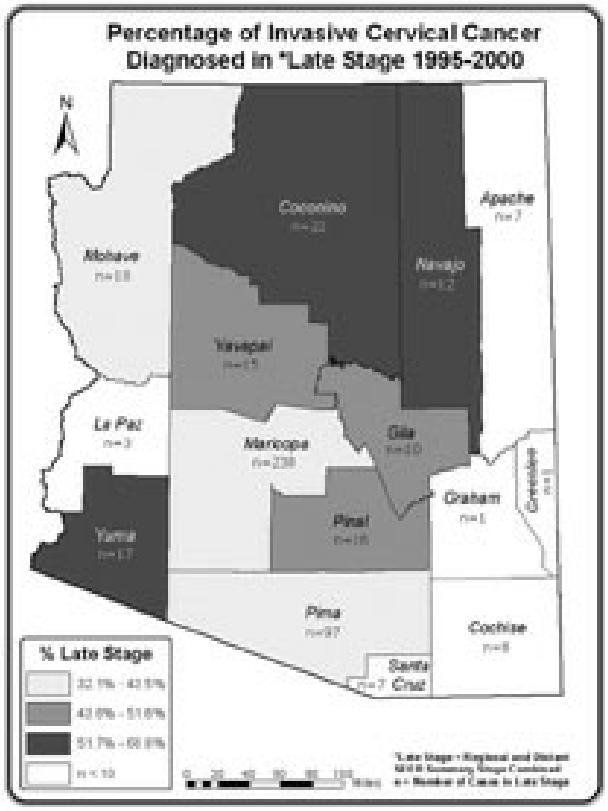
Source: Behavioral Risk Factor Surveillance System (BRFSS), 2002, Centers for Disease Control and Prevention.
Notes: Data are limited to women age 18 and older. Percentages are rounded to the nearest whole. "Other" category includes American Indian and Asian/Pacific Islander.
† No data provided for African Americans; fewer than 50 participants in the survey.
* "Recent" defined as a Pap test within the past three years in women with an intact uterus.
** "No Health Insurance" refers to women aged 18 to 64 who reported they did not have any kind of health care coverage, including health insurance, prepaid plans such as HMOs, or government plans such as Medicare.

Figure 16a. Percentage of Cervical Cancer Cases by SEER Summary Stage in Arizona, by Race/Ethnicity, 1995-2000



Source: Arizona Cancer Registry
Notes: "Asian/PI" refers to Asian/Pacific Islander. Percentages are rounded to the nearest whole.
* No data available

Figure 16b. Percentage of Cervical Cancer Diagnosed in Late Stage in Arizona, by County, 1995-2000



Source: Arizona Cancer Registry

Colon and Rectum Cancer

Table 17. Colorectal Cancer in Arizona, 1995-2000

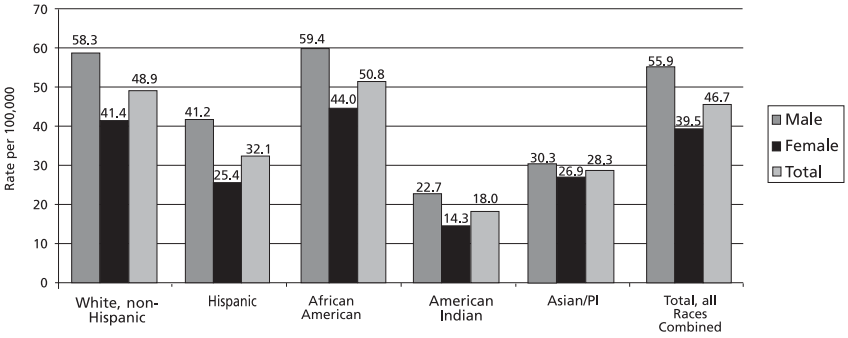
	Male		Female		Total	
	Average Count	Rate per 100,000	Average Count	Rate per 100,000	Average Count	Rate per 100,000
Incidence	1185	55.9	1045	39.5	2230	46.7
Mortality	434	20.5	372	14.5	806	17.2

Source: Arizona Cancer Registry, Arizona Vital Statistics Program
Notes: Counts and rates are six-year average, rounded to the nearest whole. Rates are per 100,000 and age-adjusted to the 2000 U.S. standard.

Colon and rectum (hereinafter referred to as colorectal) cancer begins in either the colon or the rectum, which are both part of the digestive or gastrointestinal system, where food is processed. It is the third leading cause of cancer for both men and women, following prostate and lung & bronchus for men, and breast and lung & bronchus for women. On average, 2,230 new cases of colorectal cancer are diagnosed in Arizona each year and another 806 deaths are caused by the disease (Table 17). Table 18 shows the average number of cases and deaths by county. Colorectal cancer accounts for approximately 11% of all cancer incidence and almost 10% of all cancer mortality in Arizona, males and females combined. Colorectal cancer is the third leading cause of cancer death in males (following lung & bronchus and prostate) and females (following lung & bronchus and breast), all races combined. The risk of colorectal cancer increases significantly with age. Close to 90% of Arizona residents who develop colorectal cancer are age 55 or older at the time of diagnosis; and 72% are age 65 or older at time of diagnosis (Table 19). It is estimated that 2,490 new cases and 960 deaths of colorectal cancer will occur in Arizona in 2004.

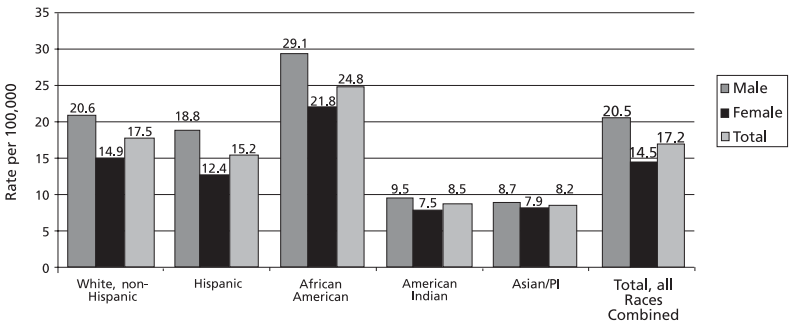
Overall, incidence rates for colorectal cancer in Arizona are highest among African American males, followed closely by White, non-Hispanic males, and lowest among American Indian females. Mortality rates are also highest among African American males, followed by White, non-Hispanic males, and lowest among American Indian females. Figures 17a and 17b present the average annual incidence and mortality rates by race/ethnicity and gender for Arizona residents, 1995-2000.

Figure 17a. Colorectal Cancer Incidence Rates in Arizona by Race/Ethnicity and Gender, 1995-2000



Source: Arizona Cancer Registry
Notes: Rates are per 100,000 and age-adjusted to the U.S. 2000 population standard. Rates are six-year average annual. "Asian/PI" refers to Asian/Pacific Islander.

Figure 17b. Colorectal Cancer Mortality Rates in Arizona by Race/Ethnicity and Gender, 1995-2000



Source: Arizona Cancer Registry
Notes: Rates are per 100,000 and age-adjusted to the U.S. 2000 population standard. Rates are six-year average annual. "Asian/PI" refers to Asian/Pacific Islander.

Table 18. Average Colorectal Cancer Cases and Deaths by County and Gender, 1995-2000

County	Cases			Deaths		
	Male	Female	Total	Male	Female	Total
Arizona	1185	1045	2230	434	372	806
Apache	6	5	11	4	2	6
Cochise	25	27	52	10	10	20
Coconino	17	16	33	4	5	9
Gila	19	13	32	9	5	14
Graham	7	8	15	3	3	6
Greenlee	2	1	3	1	0	1
La Paz	7	3	10	2	2	4
Maricopa	675	595	1270	247	228	475
Mohave	61	43	104	23	13	36
Navajo	16	14	30	5	5	10
Pima	206	198	404	74	75	149
Pinal	41	33	74	15	13	28
Santa Cruz	6	4	10	2	1	3
Yavapai	57	55	112	22	19	41
Yuma	40	28	68	11	7	18

Source: Arizona Cancer Registry, Arizona Vital Statistics Program
Notes: Counts are six-year averages. Cases and deaths may not add up to total due to averaging. Average totals include male and female cases of unknown county.

Table 19. Colorectal Cancer Average Incidence Counts and Percentage of Total New Cancer Cases in Arizona, by Gender and Age of Diagnosis, 1995-2000

Age Group	Cases			Percentage of Total Cases		
	Male	Female	Total	Male	Female	Total
<35	10	7	17	<1%	<1%	<1%
35-39	9	10	19	<1%	<1%	<1%
40-44	21	21	42	2%	2%	2%
45-49	37	30	67	3%	3%	3%
50-54	54	49	103	4%	5%	5%
55-59	90	59	149	8%	6%	7%
60-64	122	87	209	10%	8%	9%
65-69	183	128	311	15%	12%	14%
70-74	203	164	367	17%	16%	16%
75-79	201	189	390	17%	18%	17%
80-84	152	153	305	13%	15%	14%
85+	103	148	251	9%	14%	11%

Source: Arizona Cancer Registry
Notes: Counts are six-year averages. Percentages are rounded to the nearest whole.

Risk Factors

Men and women are equally affected by colorectal cancer. Fewer than 10% of colorectal cancers are caused by inherited gene mutations. Family history of colorectal cancers, certain other cancers, and benign colon polyps increases the risk of colorectal cancer. A personal history of colorectal polyps, previously treated colorectal cancer, and inflammatory bowel disease are also risk factors. In addition, physical inactivity, a diet high in fat (especially from red meat), obesity, smoking, alcohol use, and a diet low in fruits and vegetables are also risk factors.

Signs and symptoms of colorectal cancer include rectal bleeding, blood in the stool, or a change in bowel habits. These, however, can also be symptoms for other, less serious illnesses – if they appear, one should consult a physician.

Prevention and Early Detection

Even though the exact cause of most colorectal cancers is not known, it is possible to prevent many colorectal cancers. Early detection can help find and remove pre-cancerous polyps (tissue growths) in the colon. As mentioned previously, evidence suggests that engaging in regular physical activity; eating plenty of fruits, vegetables, and whole grain foods; and limiting consumption of high-fat foods – especially red meat – may help to prevent colorectal cancers. Colorectal cancers can almost always be cured if they are detected early. Screening tests can detect colon polyps before they become cancerous, as well as early-stage colorectal cancers. The American Cancer Society recommends that people of average risk with no symptoms begin screening at age 50 (see "Colorectal Cancer Screening Guidelines" for more detail).

Although following the screening guidelines for colorectal cancer can help detect colon polyps before they become cancerous, as well as identify early-stage colorectal cancers, few Arizonans are following the recommendations for screening. In 2002, 27% of the adult population age 50 and older in Arizona reported having a fecal occult blood test (FOBT) in the last year, and only 42% reported having had a colonoscopy or sigmoidoscopy within the past five years (Table 20). The proportion of those having had a colonoscopy or sigmoidoscopy was lowest among those with no health insurance and among those age 50-64 years.

Survival and Stage of Diagnosis

Five-year survival from colorectal cancer (1992-1999) is about 90% when the cancer is diagnosed before it has extended beyond the intestinal wall (local stage). These rates drop sharply if the cancer has spread by the time it is detected – to 65% in regional stage and 9% in distant stage. More than half (53%) of the colorectal cancers diagnosed in Arizona between 1995 and 2000 were detected in late (regional or distant) stage. We see some variation among different racial/ethnic groups in Arizona (Figure 18a). Over half of colorectal cancers are diagnosed in late stage for all racial groups, with the exception of Asian/Pacific Islanders – just under half at 49%. Variations in late stage diagnosis of colorectal cancer also exist among the state's 15 counties (Figure 18b). Coconino, Navajo, and Gila Counties have the highest proportion of colorectal cancers diagnosed in late stage ($\geq$ 62.6% of cases). Factors such as a lack of access to screening and treatment and/or lack of awareness of the need for screening can contribute to poor early detection of colorectal cancer.

Table 20. Sigmoidoscopy or Colonoscopy and Fecal Occult Blood Test Among Adults 50 Years of Age and Older in Arizona, 2002

Characteristic	FOBT within the past year %	Sigmoidoscopy or Colonoscopy within the past 5 years %
Age		
50↑ years	27%	42%
50-64 years	25%	36%
65↑ years	30%	50%
Gender		
Male	29%	47%
Female	26%	38%
Race/Ethnicity		
White, non-IIispanic	28%	44%
IIispanic	19%	27%
African American	†	†
Other	†	†
No Health Insurance**	10%	11%

Source: Behavioral Risk Factor Surveillance System (BRFSS), 2002; Centers for Disease Control and Prevention
Notes: Data are limited to men and women 50 years and older. Percentages are rounded to the nearest whole. FOBT refers to fecal occult blood test.
"Other" category includes American Indian and Asian/Pacific Islander
† No data provided for African Americans or "Other"; fewer than 50 participants in the survey.
** "No Health Insurance" refers to adults 50 to 64 who reported they did not have any kind of health care coverage, including health insurance, prepaid plans such as HMOs, or government plans such as Medicare.

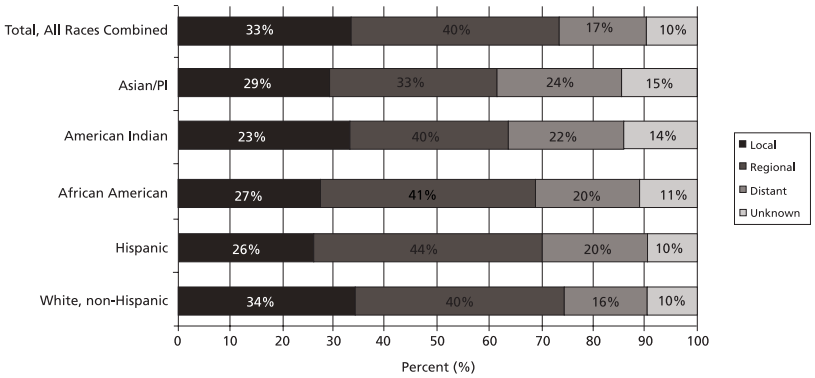
American Cancer Society
Colorectal Cancer Screening Guidelines

Beginning at age 50, men and women should follow one of the examination schedules below:

- A fecal occult blood test (FOBT) every year
- A flexible sigmoidoscopy every five years
- Annual FOBT and flexible sigmoidoscopy every 5 years*
- A double-contrast barium enema every 5 years
- A colonoscopy every 10 years

* Combined testing is preferred over either annual FOBT or flex sigmoidoscopy every 5 years alone. People who are at moderate or high risk for colorectal cancer should talk with a doctor about a different testing schedule.

Figure 18a. Percentage of Colorectal Cancer Cases by SEER Summary Stage in Arizona, by Race/Ethnicity, 1995-2000



Source: Arizona Cancer Registry
Notes: Percentages are rounded to the nearest whole.

Figure 18b. Percentage of Colorectal Cancers Diagnosed in Late Stage in Arizona, by County, 1995-2000

Source: Arizona Cancer Registry

Lung and Bronchus Cancer

Table 21. Lung Cancer in Arizona, 1995-2000

	Male		Female		Total	
	Average Count	Rate per 100,000	Average Count	Rate per 100,000	Average Count	Rate per 100,000
Incidence	1688	76.8	1291	48.6	2979	61.0
Mortality	1413	65.3	1011	37.8	2424	50.0

Source: Arizona Cancer Registry
Notes: Percentages are rounded to the nearest whole.

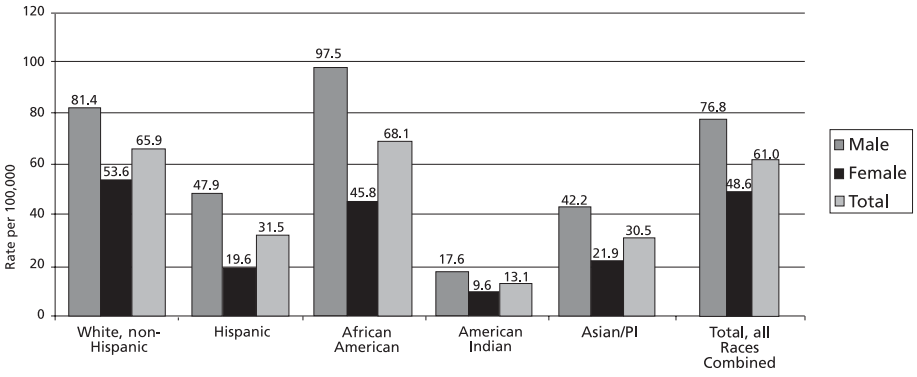
There are two major types of lung and bronchus cancer (hereinafter referred to as lung cancer), non-small cell lung cancer and small cell lung cancer. Each grows and spreads in different ways and is treated differently. Lung cancer is the second most common cancer diagnosed among Arizona men (following prostate cancer) and women (following breast cancer). However, it is the number one leading cause of cancer deaths among both men and women combined. On average, 2,979 new cases of lung cancer are diagnosed in Arizona each year and another 2,424 residents die from the disease (Table 21). Table 22 shows the average number of cases and deaths by county. Lung cancer accounts for 15% of Arizona's cancer incidence, yet nearly 30% of all cancer deaths in the state. Lung cancer causes more deaths every year in Arizona than do prostate, breast, and colorectal cancers combined. The risk of lung cancer increases significantly with age. Over 90% of Arizona residents who develop lung cancer are age 55 or older at the time of diagnosis; just over 70% are age 65 or older at the time of diagnosis (Table 23). It is estimated that 2,760 new cases and 2,550 deaths to lung cancer will occur in Arizona in 2004.

Gender and race/ethnicity also are factors in lung cancer incidence and mortality rates. Across all race/ethnic groups, African American males have the highest lung cancer incidence and mortality rates in Arizona (Figures 19a, 19b). Male incidence and mortality rates are significantly higher than that of Arizona females, similar to national trends. Overall, when considering the differences in lung cancer rates by race/ethnicity, African Americans have the highest incidence and mortality rates, followed by White, non-Hispanic, and American Indians have the lowest.

Arizona has a top ranked **Tobacco Education and Prevention Program (TEPP)** that is funded with tobacco tax revenue as approved by voters in 1994. The program consists of local projects in schools and communities, a smokers' helpline and a media campaign that focus on preventing youth from smoking and helping adults to quit. The program has helped drop smoking prevalence rates by 21% since it started in 1995.

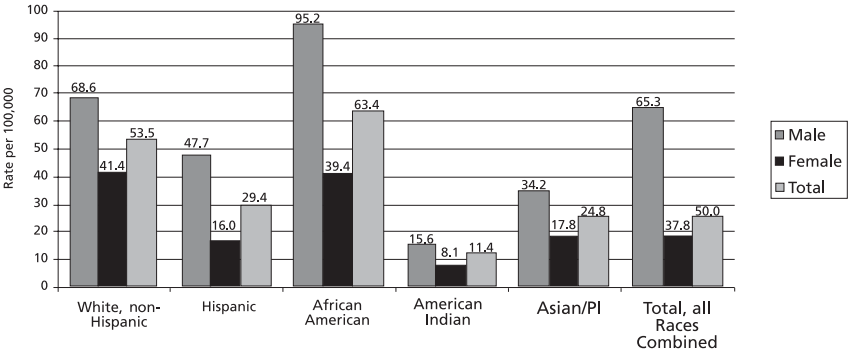
In 2002, Arizona voters passed a referendum that raises the tobacco tax and preserves the Tobacco Education and Prevention Program. Money raised from the tobacco tax will be used for health insurance for the low income, uninsured; trauma centers and uncompensated care; research; and early detection and prevention programs of the 4 leading causes of death by disease including cancer.

Figure 19a. Lung Cancer Incidence Rates in Arizona by Race/Ethnicity and Gender, 1995-2000



Source: Arizona Cancer Registry
Notes: Rates are per 100,000 and age-adjusted to the U.S. 2000 population standard. Rates are six-year average annual. "Asian/PI" refers to Asian/Pacific Islander.

Figure 19b. Lung Cancer Mortality Rates in Arizona by Race/Ethnicity and Gender, 1995-2000



Source: Arizona Cancer Registry
Notes: Rates are per 100,000 and age-adjusted to the U.S. 2000 population standard. Rates are six-year average annual. "Asian/PI" refers to Asian/Pacific Islander.

Arizonans Clearing the Air (ACTA) is leading the fight against secondhand smoke. Funded by the Robert Wood Johnson Foundation and other affiliates, ACTA provides a range of services including:

- Teaching communities about smoke-free clean indoor air policies and helping enact them
- Working with lawmakers and citizens to educate Arizonans about the dangers of secondhand smoke
- Providing training to citizen organizations interested in passing smoke-free laws
- Coordinating the efforts of people and organizations that support smoke-free laws in their communities

Table 22. Average Lung Cancer Cases and Deaths by County and Gender, 1995-2000

County	Cases			Deaths		
	Male	Female	Total	Male	Female	Total
Arizona	1688	1291	2979	1413	1011	2424
Apache	6	2	8	5	3	8
Cochise	45	30	75	44	26	70
Coconino	20	19	39	13	9	22
Gila	29	19	48	26	16	42
Graham	9	4	13	8	4	12
Greenlee	3	2	5	2	2	4
La Paz	10	6	16	7	5	12
Maricopa	933	738	1671	767	581	1348
Mohave	113	81	194	93	62	155
Navajo	20	12	32	16	9	25
Pima	282	229	511	247	177	424
Pinal	69	37	106	62	35	97
Santa Cruz	9	6	15	7	3	10
Yavapai	81	63	144	72	54	126
Yuma	56	40	96	43	26	69

Source: Arizona Cancer Registry, Arizona Vital Statistics Program
Notes: Counts are six-year averages. Cases and deaths may not add up to total due to averaging. Average total includes male and female cases of unknown county.

The American Cancer Society's **Great American Smokeout®**, the third Thursday in November is an opportunity to raise awareness about the true impact of tobacco use and how we can help smokers quit.

Table 23. Lung Cancer Average Incidence Counts and Percentage of Total New Cancer Cases in Arizona, by Gender and Age of Diagnosis, 1995-2000

Age Group	Cases			Percentage of Total Cases		
	Male	Female	Total	Male	Female	Total
<35	6	3	9	<1%	<1%	<1%
35-39	6	7	13	<1%	<1%	<1%
40-44	21	17	38	1%	1%	1%
45-49	42	31	73	2%	2%	2%
50-54	72	63	135	4%	5%	4%
55-59	131	105	236	8%	8%	8%
60-64	202	146	348	12%	11%	12%
65-69	306	226	532	18%	17%	18%
70-74	352	267	619	21%	21%	21%
75-79	289	230	519	17%	18%	17%
80-84	185	130	315	11%	10%	11%
85+	78	65	143	5%	5%	5%

Source: Arizona Cancer Registry
Notes: Counts are six-year averages. Percentages are rounded to the nearest whole.

Freshstart® is a worksite wellness program that is designed to help the adult smoker quit smoking. It emphasizes that smoking cessation is a two-part process: stopping and staying stopped. Freshstart uses group interaction at the worksite to support quitting goals and addresses the variety of reasons people smoke: physical addiction, habit, and psychological dependency.

Risk Factors

Tobacco use is by far the greatest risk factor for lung cancer. The longer a person uses tobacco and the more they use, the greater their risk of developing lung cancer. If a person stops smoking before cancer develops, the damaged lung tissue gradually improves. Nonsmokers who breathe in the smoke of others, called secondhand smoke (or environmental tobacco smoke; ETS), are at increased risk for lung cancer. People exposed to cancer-causing agents (through the workplace especially), such as asbestos, radon, arsenic, vinyl chloride, coal products, and radioactive ores like aluminum are also at an increased risk for lung cancer. The risk of lung cancer is much greater if individuals who are exposed to these agents also smoke.

Symptoms of lung cancer can include a cough that does not go away or gets worse over time; chest pain; shortness of breath, wheezing, or hoarseness; weight loss and loss of appetite; coughing up blood; fever without a known reason; repeated problems with pneumonia or bronchitis. While these may be signs of other less serious illnesses, a physician should be consulted if they persist.

Prevention and Early Detection

The best way to prevent lung cancer is to quit smoking, or to never start at all. In 2002, 23% of adults in Arizona reported being current smokers (Table 24). Among racial/ethnic groups, Hispanics have the lowest smoking prevalence (18%), compared to those in the "Other" category (30%), which includes American Indian and Asian/Pacific Islanders. The two groups with the highest smoking rates are those age 18-24 years and adults with low education. Regarding youth smoking prevalence, 21% of Arizona youth report having smoked cigarettes within the past 30 days and 59% had tried smoking in their lifetime (Figure 20). The prevalence of smoking is about the same among male and female youth.

Breathing in other people's smoke should also be avoided. Smokers and nonsmokers alike can reduce their risk by eating a healthy, balanced diet with at least five servings of fruits and vegetables each day. People should inquire about cancer-causing chemicals they may be exposed to at work and take appropriate measures to protect themselves. Monitoring indoor radon levels, especially in the home, may also protect against lung cancer.

Symptoms of lung cancer often do not appear until the disease has spread, making early detection difficult. Many lung cancers are found as a result of tests performed for an unrelated medical condition. A doctor may do a physical exam and health-related interview to check for risk factors and symptoms. Tests such as a chest x-ray, analysis of cells in the phlegm, and biopsy may be ordered.

Survival and Stage of Diagnosis

Five-year survival (1992-1999) from lung cancer is about 49% when the cancer is diagnosed before it has extended beyond the lung or bronchus. These rates drop sharply if the cancer has spread by the time it is detected – to 16% in regional stage and 2% in distant stage. About 62% of the lung cancers diagnosed in Arizona between 1995 and 2000 were detected in late (regional or distant) stage. We see little variation among different racial/ethnic groups in Arizona (Figure 21a). Over two-thirds of lung cancers are diagnosed in late stage for American Indians and Hispanics. Variations in late stage diagnosis of lung cancer also exist among the state's 15 counties (Figure 21b). Coconino, Yavapai, and Greenlee Counties have the highest proportion of lung cancers diagnosed in late stage ($\geq$ 69.4% of cases).

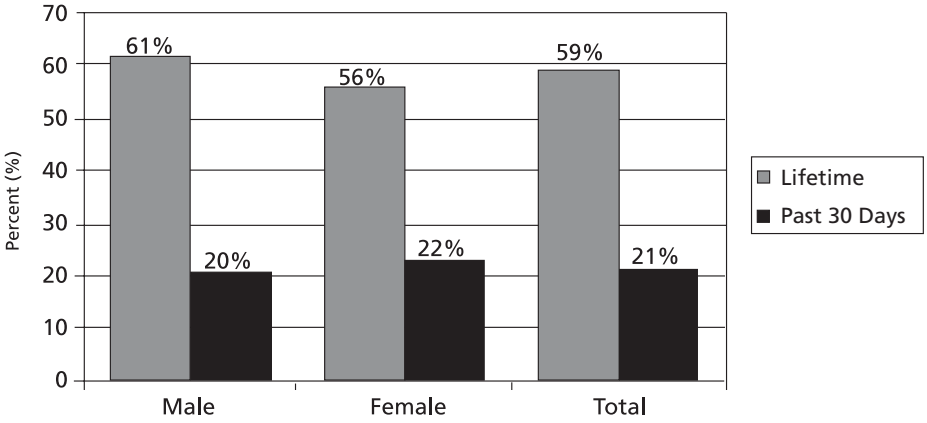
Table 24. Current Adult Smokers in Arizona, 2002

Characteristic	Percent
Total	23%
Gender	
Male	27%
Female	20%
Age	
18-24 years	30%
25-64 years	26%
65+ years	10%
Race/Ethnicity	
White, non-Hispanic	25%
Hispanic	18%
African American	20%
Other	30%
Low Education*	36%

Source: Behavioral Risk Factor Surveillance System (BRFSS), 2002; Centers for Disease Control and Prevention.
Notes: Data are limited to adults age 18 and older. Percentages are rounded to the nearest whole. "Other" category includes American Indian and Asian/Pacific Islander.
* Low Education refers to adults age 25 and older without a high school diploma.

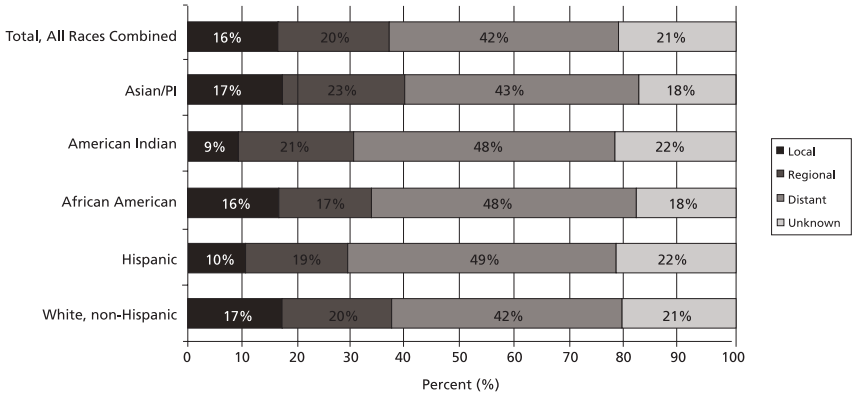
AZ HealthLinks is a program funded by the Tobacco Education and Prevention Program (TEPP) that provides technical assistance and training to tobacco control staff and worksite personnel to deliver worksite wellness activities, increase smoke-free workplaces, and increase employee referrals to tobacco cessation programs.

Figure 20. Cigarette Use Among High School Youth in Arizona, by Gender, 2003



Source: Arizona Department of Education, Arizona Youth Risk Behavior Survey (YRBS) 2003
Notes: Data are weighted and limited to youth in grades 9-12 under the age of 18. Percentages are rounded to the nearest whole.
"Lifetime" is defined as ever having smoked a cigarette
"Past 30 days" is defined as having smoked on one or more of the preceding 30 days

Figure 21a. Percentage of Lung Cancer Cases by SEER Summary Stage in Arizona by Race/Ethnicity, 1995-2000



Source: Arizona Cancer Registry
Notes: "Asian/PI" refers to Asian/Pacific Islander.

Figure 21b. Percentage of Lung Cancers Diagnosed in Late Stage in Arizona by County, 1995-2000

Source: Arizona Cancer Registry

Melanoma of the Skin

Table 25. Melanoma in Arizona, 1995-2000

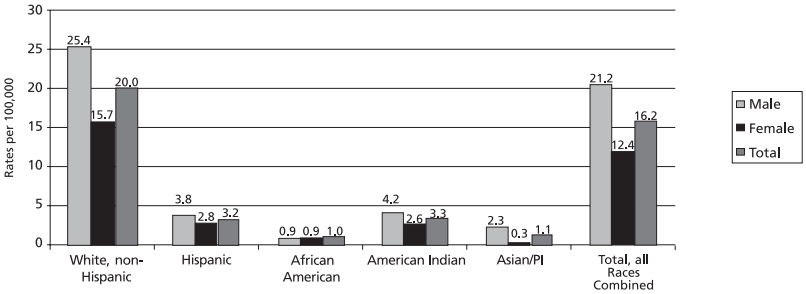
	Male		Female		Total	
	Average Count	Rate per 100,000	Average Count	Rate per 100,000	Average Count	Rate per 100,000
Incidence	461	21.2	304	12.4	765	16.2
Mortality	81	3.7	39	1.6	120	2.5

Source: Arizona Cancer Registry, Arizona Vital Statistics Program
Notes: Counts and rates are six-year average, rounded to the nearest whole. Rates are per 100,000 and age-adjusted to the 2000 U.S. standard.

Skin cancer is the most common of all cancers. Skin cancers are classified as non-melanoma and melanoma. Most skin cancers are classified as non-melanoma, meaning they occur in either basal cells or squamous cells. These cells are located at the base of the outer layer of the skin or cover the internal and external surfaces of the body. Most non-melanoma skin cancers develop on sun-exposed areas of the body (e.g., face, ear, neck, lips, and backs of the hands). Melanoma of the skin (hereinafter referred to as melanoma), is the focus of this section. Melanoma develops from melanocytes, the cells that produce our skin color. Melanoma is much less common than basal cell and squamous cell skin cancers, but it is far more serious. It accounts for only 5% of skin cancers but causes about 77% of skin cancer deaths. On average, 765 new cases of melanoma are diagnosed in Arizona each year. Another 120 Arizonans die from the disease (Table 25). Table 26 shows the average number of cases and deaths by county. Melanoma is the fifth most common cancer among males and seventh among females, all races combined, and accounts for 3% of the total cancer incidence. Melanoma accounts for less than 1% of deaths among men and women. The risk of melanoma increases with age. In Arizona, approximately 60% of melanoma cases are diagnosed in those age 55 years and older and 43% are diagnosed among those age 65 years and older (Table 27). It is estimated that 1,180 new melanoma cases will occur in Arizona in 2004.

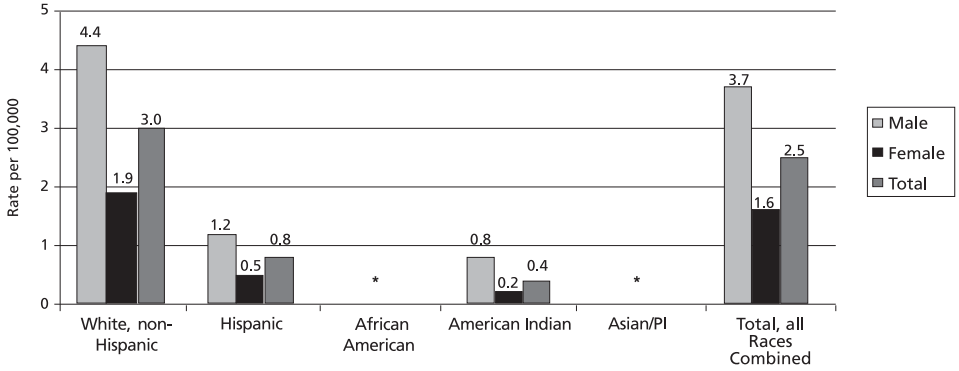
In Arizona, White, non-Hispanic males have the highest incidence and mortality rates of any racial/ethnic group (Figures 22a, 22b). Incidence rates among White, non-Hispanics (male and female) are more than six times higher than any other racial/ethnic group. Mortality rates among White, non-Hispanics are about three times higher than all other racial/ethnic groups.

Figure 22a. Melanoma Incidence Rates in Arizona by Race/Ethnicity and Gender, 1995-2000



Source: Arizona Cancer Registry
Notes: Rates are per 100,000 and age-adjusted to the U.S. 2000 population standard. Rates are six-year average annual. Mortality rates not available for African American and Asian/PI. "Asian/PI" refers to Asian/Pacific Islander.

Figure 22b. Melanoma Mortality Rates in Arizona by Race/Ethnicity and Gender, 1995-2000



Source: Arizona Cancer Registry
Notes: Rates are per 100,000 and age-adjusted to the U.S. 2000 population standard. Rates are six-year average annual. "Asian/PI" refers to Asian/Pacific Islander.
* Mortality rates not available for African American and Asian/PI.

Table 26. Average Melanoma Cases and Deaths by County and Gender, 1995-2000

County	Cases			Deaths		
	Male	Female	Total	Male	Female	Total
Arizona	461	304	765	81	39	120
Apache	2	1	3	0	0	0
Cochise	11	8	19	1	1	2
Coconino	12	5	17	1	1	2
Gila	7	3	10	1	0	1
Graham	3	2	5	1	0	1
Greenlee	0	1	1	0	0	0
La Paz	3	1	4	1	1	2
Maricopa	283	192	475	47	24	71
Mohave	12	6	18	2	1	3
Navajo	5	2	7	1	0	1
Pima	81	54	135	18	9	27
Pinal	10	6	16	2	1	3
Santa Cruz	2	1	3	0	0	0
Yavapai	24	16	40	3	1	4
Yuma	7	4	11	3	1	4

Source: Arizona Cancer Registry, Arizona Vital Statistics Program
Notes: Counts are six-year averages. Cases may not add up to total due to averaging. Average total includes male and female cases of unknown county.

Risk Factors

Men are more likely to develop skin cancers than women. Age is a significant factor for developing skin cancers. Race is also a significant risk factor – White, non-Hispanics are about 10 times more likely to develop skin cancers than African Americans. People with many moles and those who have some large moles have an increase risk for melanoma. Other risk factors for both types of skin cancer include use of medicines that suppress the immune system; excessive exposure to light from tanning lamps, booths, or sunlight; severe, blistering sunburns, particularly in childhood or teenage years; exposure to arsenic; chemical exposure including exposure to tar, coal, paraffin, and certain types of oil; and exposure to radiation treatment.

For melanoma, the most important warning sign is a change in the size, shape, or color of a mole or signs that its border is becoming more ragged. Other symptoms include scaliness, bleeding, or change in the appearance of a bump or nodule; the spread of pigmentation beyond its border; or a change in sensation, itchiness, tenderness, or pain.

Prevention and Early Detection

The best way to prevent skin cancer is to limit unprotected exposure to the sun, especially between 10 a.m. and 4 p.m. Most of the skin can be protected with clothing and broad-brimmed hats. Wraparound sunglasses provide the best protection for the eyes and the skin around the eyes. Sunscreens with a sun protection factor (SPF) of 15 or more should be used on areas of skin exposed to the sun. The use of tanning parlors and sun lamps should be avoided. Because severe sunburns in childhood may greatly increase the risk of melanoma in later life, children especially, should be protected from the sun.

Melanoma, if detected early, is most likely to be completely cured. Part of a routine cancer-related checkup should include a skin examination by a health care professional qualified to diagnose skin cancer. The American Cancer Society recommends a cancer-related checkup by a physician, including skin examination, every three years for people between 20 and 40, and every year for anyone age 40 and older. Monthly skin self-examinations and awareness of the warning signs of melanomas also may be helpful in detecting melanoma at an early, curable stage.

Survival and Stage at Diagnosis

Five-year survival (1992-1999) from melanoma is about 97% if detected early (local stage) and also about 90% overall for non-melanoma skin cancers. This rate drops sharply for melanoma if the cancer is detected in late stage – 60% in regional stage and 14% in distant stage – making early detection the best opportunity for full recovery. Only about 6% of the melanoma cases diagnosed in Arizona between 1995 and 2000 were detected in late (regional or distant) stage. In stark contrast to some of the other cancers highlighted in this document, most melanoma cases are detected in early stage. We see considerable variation among different racial/ethnic groups in Arizona (Figure 23a). American Indians have the highest proportion of melanoma cases detected in late stage (25%), followed by Hispanics (15%). Variations in late stage diagnosis of melanoma also exist among the state's 15 counties (Figure 23b). Mohave and Yuma Counties have the highest proportion of melanoma cases diagnosed in late stage ($\geq$ 12.1% of cases).

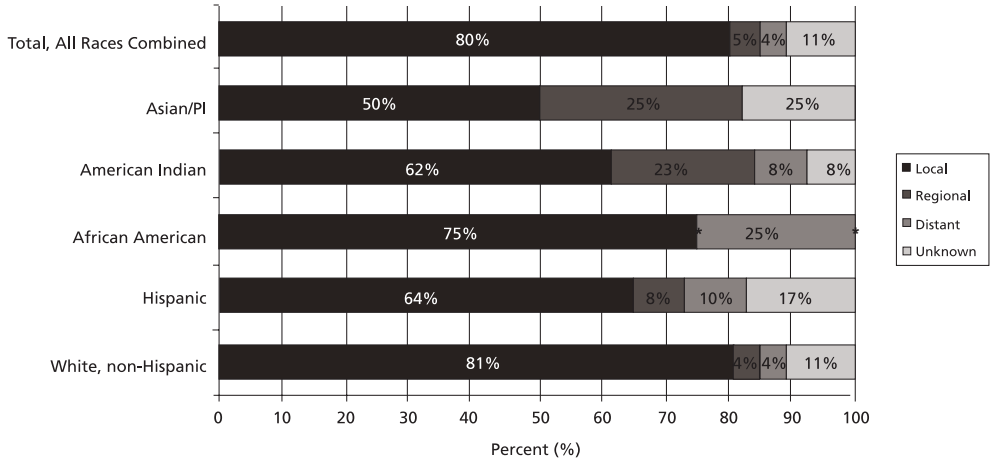
Table 27. Melanoma Average Incidence Counts and Percentage of Total New Cancer Cases in Arizona by Gender and Age of Diagnosis, 1995-2000

Age Group	Cases			Percentage of Total Cases		
	Male	Female	Total	Male	Female	Total
<35	31	44	75	7%	15%	10%
35-39	23	26	49	5%	9%	6%
40-44	26	31	57	6%	10%	7%
45-49	38	26	64	8%	9%	8%
50-54	39	26	65	8%	9%	8%
55-59	40	22	62	9%	7%	8%
60-64	42	22	64	9%	7%	8%
65-69	58	23	81	13%	8%	11%
70-74	56	29	85	12%	9%	11%
75-79	49	25	74	11%	8%	10%
80-84	39	19	58	8%	6%	8%
85+	21	13	34	4%	4%	4%

Source: Arizona Cancer Registry
Notes: Counts are six-year averages. Percentages are rounded to the nearest whole.

Sun Safe Communities is a worksite wellness program designed for employees who spend time outdoors. This sun safety program heightens awareness of skin cancer and provides sun protection education. The goal is to adopt prevention activities that will reduce the risk of skin cancer.

Figure 23a. Percentage of Melanoma Cases by SEER Summary Stage in Arizona, by Race/Ethnicity, 1995-2000



Source: Arizona Cancer Registry
Notes: "Asian/PI" refers to Asian/Pacific Islander. Percentages are rounded to the nearest whole.
* Data not available for this stage.

For Early Detection of Skin Cancer Follow the ABCD Rule:

A— Asymmetry – one half of the mole does not match the other half

B— Border irregularity – the edges are ragged, notched or blurred

C— Color – the pigmentation is not uniform, with variable degrees of tan, brown or black

D— Diameter greater than 6 millimeters – any sudden or progressive increase in size should be of concern

Figure 23b. Percentage of Melanomas Diagnosed in Late Stage in Arizona, by County, 1995-2000

Source: Arizona Cancer Registry

American Cancer Society Recommends The Slip! Slop! Slap! And Wrap!℠ Method of Skin Cancer Prevention:

- **Slip** on a shirt
- **Slop** on sunscreen of SPF 15 (or higher)
- **Slap** on a hat before any exposure to the sun, and
- **Wrap** on a pair of sunglasses

Prostate Cancer

Table 28. Prostate Cancer in Arizona, 1995-2000

	Average Count	Rate per 100,000
Incidence	2967	133.6
Mortality	553	27.1

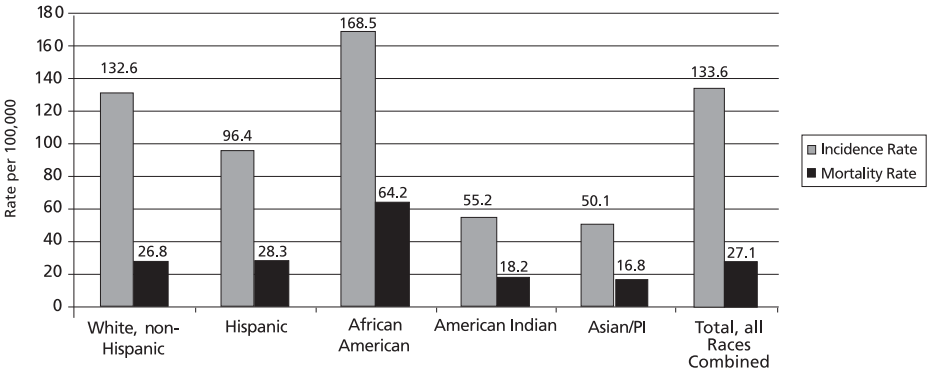
Source: Arizona Cancer Registry, Arizona Vital Statistics Program
Notes: Counts and rates are six-year average, rounded to the nearest whole. Rates are per 100,000 and age-adjusted to the 2000 U.S. standard.

The prostate gland is walnut-sized and is located in front of the rectum, behind the penis, and under the bladder. Most prostate cancers grow very slowly, but when they spread, they can do so quickly. Among all race/ethnic groups, prostate cancer is the leading type of cancer diagnosed in men. On average, 2,967 new cases of prostate cancer are diagnosed each year in Arizona. Another 553 men die from the disease (Table 28). Table 29 shows the average number of cases and deaths by county. Prostate cancer accounts for approximately 29% of the cancer incidence and 12% of the cancer deaths in Arizona males. Age is the strongest risk factor for prostate cancer. Almost 95% of Arizona males who develop prostate cancer are age 55 or older at the time of diagnosis, and about 73% are age 65 or older at the time of diagnosis (Table 30). It is estimated that 3,920 new cancer cases and 560 deaths to prostate cancer will occur in Arizona in 2004.

Overall, when considering the differences in prostate cancer rates by race/ethnicity, African American males have the highest incidence and mortality rates, followed by White non-Hispanic and Hispanic males for incidence, and followed by Hispanic and White, non-Hispanic males for mortality. American Indian and Asian/Pacific Islander males have both the lowest incidence and mortality rates for prostate cancer (Figure 24).

In 2000, legislation was passed to create a special task force of prostate cancer survivors, physicians and the directors of cancer research institute at Arizona State University and cancer research institute at the University of Arizona to study ways to increase research and public awareness of prostate cancer. The task force expires July 1, 2010.

Figure 24. Prostate Cancer Incidence and Mortality Rates in Arizona by Race/Ethnicity, 1995-2000



Source: Arizona Cancer Registry
Notes: Rates are per 100,000 and age-adjusted to the U.S. 2000 population standard. Rates are six-year average annual. "Asian/PI" refers to Asian/Pacific Islander.

Table 29. Average Prostate Cancer Cases and Deaths by County, 1995-2000

County	Cases	Deaths
Arizona	2967	553
Apache	13	3
Cochise	80	19
Coconino	53	7
Gila	38	9
Graham	18	5
Greenlee	4	2
La Paz	16	3
Maricopa	1687	299
Mohave	130	23
Navajo	50	9
Pima	533	102
Pinal	93	22
Santa Cruz	19	5
Yavapai	150	33
Yuma	76	15

Source: Arizona Cancer Registry, Arizona Vital Statistics Program
Notes: Counts are six-year averages. Cases may not add up to total due to averaging. Arizona average includes cases of unknown county.

Table 30. Prostate Cancer Average Incidence Counts and Percentage of Total New Cancer Cases in Arizona by Age of Diagnosis, 1995-2000

Age Group	Cases	Percentage of Total Cases
<45	8	<1%
45-49	35	1%
50-54	114	4%
55-59	244	8%
60-64	412	14%
65-69	650	22%
70-74	655	22%
75-79	466	16%
80-84	242	8%
85+	142	5%

Source: Arizona Cancer Registry
Notes: Counts are six-year averages. Percentages are rounded to the nearest whole.

Risk Factors

Only men are at risk for prostate cancer. Although men of any age can get prostate cancer, it is found most often in men over 50. Men of African American descent have the highest prostate cancer incidence rates in the world. As previously mentioned, African American men in Arizona have an incidence rate more than twice that of White, non-Hispanic men. Studies suggest that 5 to 10% of prostate cancers may be hereditary. A high-fat diet may play a part in causing prostate cancer. In addition, engaging in regular physical activity and maintaining a healthy weight may help reduce the risk of developing prostate cancer.

Most early cases of prostate cancer cause no symptoms, but some early signs may be frequent urination, especially at night; difficulty starting urination or inability to urinate; and weak or painful urination. These symptoms, however, may also be signs of other condition – if they appear, one should consult a physician.

Prevention and Early Detection

Although many uncertainties remain regarding the causes of prostate cancer, researchers have found several factors that increase the risk of developing the disease. Risk factors such as race, age, and family history are beyond a man's control. However, eating a diet low in fat – especially low in saturated fat – may help reduce a man's risk for developing the disease. A diet that is high in fruits and vegetables may also help prevent prostate cancer, but this has not been proven.

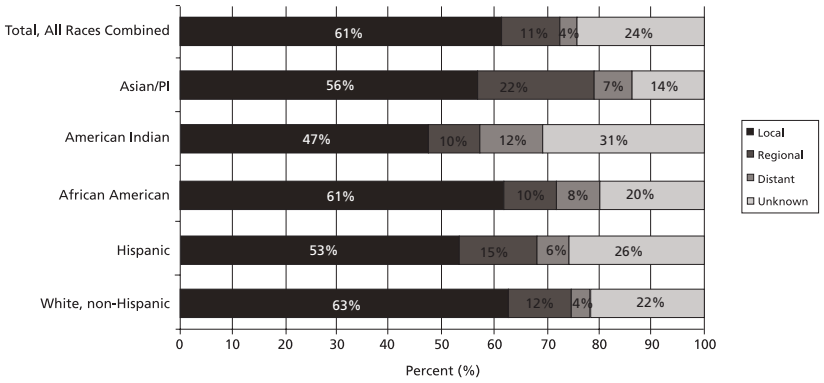
Early detection may offer men with prostate cancer the greatest opportunity for full recovery. Beginning at age 50, the American Cancer Society recommends that all men should talk to their doctors about having a digital rectal exam (DRE) and a prostate-specific antigen (PSA) blood test every year. Men who are at high risk for prostate cancer (African American men, or men with a first-degree relative, such as a father or brother, diagnosed with prostate cancer at a young age) should begin testing at age 45. In Arizona, almost 60% of men age 50 and older report having had a PSA within the past year, and about 55% report having had a DRE within the past year (Table 31). The lowest screening rates are among men between the ages of 50 and 64 years, and among men with low education.

Survival and Stage of Diagnosis

Five-year survival (1992-1999) from prostate cancer is about 97% overall. This rate drops sharply if the cancer is detected in distant stage (34%), making early detection the best opportunity for full recovery. Only about 15% of the prostate cancers diagnosed in Arizona between 1995 and 2000 were detected in late (regional or distant) stage. In stark contrast to the other cancers highlighted in this document, most prostate cancers are detected in early stage. We see some variation among different racial/ethnic groups in Arizona (Figure 25a). Nearly 30% of prostate cancers are diagnosed in late stage for Asian/Pacific Islanders compared to about 15% among White, non-Hispanics. Variations in late stage diagnosis of prostate cancer also exist among the state's 15 counties (Figure 25b). Coconino, Graham, Pima, and Santa Cruz Counties have the highest proportion of prostate cancers diagnosed in late stage ($\geq$ 19.1% of cases).

Man to Man® is a program that provides prostate cancer survivors a one-to-one visit with prostate cancer patients early in their diagnosis, providing support and information that will help them make informed decisions about the disease and their options.

Figure 25a. Percentage of Prostate Cancer Cases by SEER Summary Stage in Arizona by Race/Ethnicity, 1995-2000



Source: Arizona Cancer Registry
Notes: Percentages are rounded to the nearest whole.

Figure 25b. Percentage of Prostate Cancers Diagnosed in Late Stage in Arizona by County, 1995-2000

Source: Arizona Cancer Registry

American Cancer Society
Prostate Cancer Screening Guidelines

Doctors should offer the prostate-specific antigen (PSA) blood test and digital rectal exam (DRE) annually, beginning at age 50, to men who do not have any serious medical problems and can be expected to live at least ten years or more.

Men who are at high risk for prostate cancer (African American men; men with a first-degree relative diagnosed with prostate cancer at a young age) should begin testing at age 45.

Table 31. Recent* Prostate-Specific Antigen Test and Digital Rectal Exam Among Men Age 50 Years and Older in Arizona, 2002

Characteristic	PSA within the past year %	DRE within the past year %
Age		
50+ years	59%	55%
50-64 years	53%	52%
65+ years	67%	59%
Race/Ethnicity		
White, non-Hispanic	64%	58%
Hispanic	†	†
African American	†	†
Other	†	†
Low Education**	39%	44%

Source: Behavioral Risk Factor Surveillance System (BRFSS), 2002; Centers for Disease Control and Prevention.
Notes: Data are limited to men age 50 and older. Percentages are rounded to the nearest whole. "Other" category includes American Indian and Asian/Pacific Islander.
PSA—Prostate Specific Antigen test; DRE—Digital Rectal Exam.
† No data provided for African American, Hispanic, or "Other"; fewer than 50 participants in the survey.
* "Recent" defined as a PSA or DRE test within the past year.
** "Low Education" refers to adults age 50 and older without a high school diploma.

Childhood Cancer In Arizona

When considering the occurrence of cancer across all age groups, childhood cancer is rare, with only about one percent of all cancers occurring before the age of 15 in Arizona. Although the absolute number of deaths due to cancer in children and adolescents is low relative to adults, the toll in terms of potential years lost is high, and cancer remains the leading cause of death by disease among Arizona children ages 1 to 14 years. Childhood cancers include leukemia, brain and spinal cord cancers, neuroblastoma, Wilm's tumor (kidney), Hodgkin's disease and non-Hodgkin's lymphoma, rhabdomyosarcoma, retinoblastoma, osteosarcoma, and Ewing sarcoma. Leukemia is the leading cause of cancer among children, accounting for nearly 30% of cancers diagnosed in males, and one-quarter of the cancer diagnosed in females (Table 32). Between 1995 and 2000, cancer was diagnosed in a total of 1,202 Arizona children and young adults under the age of 20 (Table 33). Figure 26 compares incidence rates among childhood age groups.

Risk Factors

Genetic factors and certain prenatal and postnatal exposures can increase the risk of developing some childhood cancers. Unlike adult cancers, childhood cancers are not significantly related to lifestyle factors such as tobacco or alcohol use, poor diet, or not enough physical activity. Many of the causes of childhood cancers remain unknown.

Early Detection

Cancers in children are often difficult to recognize. Parents should make sure their children have regular medical checkups and should be alert to any unusual symptoms that persist. These include an unusual mass or swelling; unexplained paleness and loss of energy; sudden tendency to bruise; a persistent, localized pain or limping; prolonged, unexplained fever or illness; frequent headaches, often with vomiting; sudden eye or vision changes, and excessive, rapid weight loss.

Survival

The progress in the treatment of childhood cancers over the last thirty years has been impressive. Nationwide, mortality rates from all childhood cancers combined have steadily declined by about 47% since 1975. The overall 5-year relative survival rate for all childhood cancers combined is 78%. Figure 27 shows the 5-year survival rates (1992-1999) for Hodgkin's disease, Wilm's tumor (kidney), acute lymphocytic leukemia, bone and joint, brain and central nervous system (CNS), and neuroblastoma. The availability of newer, more effective chemotherapy treatments is the principal cause of improved survival among childhood cancer patients.

Children with cancer must be treated in institutions that provide the intensive treatment, supportive care, and psychosocial services required to achieve these successful outcomes. Clinical trials are available to help improve the outcome for all children with cancer, and must be considered in the evaluation of each child at the time of diagnosis.

Children who face cancer should have the opportunity to experience as many of the joys and freedoms of a healthy childhood as possible. The American Cancer Society's **Arizona Camp Sunrise** and **Sidekicks** programs, accredited by the American Camping Association, are dedicated to providing an exciting, medically safe camp program for children who have or have had cancer and their siblings. At camp, children can share ideas and experiences, gain independence, and improve their self-image.

Table 32. Ten Leading Childhood Cancer Cases and Percentage of Total Childhood Cancers in Arizona, Six-Year Totals, 1995-2000

Male			Female		
Cancer Site	Cases	% of Total	Cancer Site	Cases	% of Total
Leukemia	188	29%	Leukemia	139	25%
Brain	99	15%	Brain	93	17%
Non-Hodgkin's Lymphoma	48	7%	Hodgkin's Disease	67	12%
Testis	46	7%	Non-Hodgkin's Lymphoma	37	7%
Hodgkin's Disease	40	6%	Bone	31	6%
Bone	33	5%	Neuroblastoma	27	5%
Neuroblastoma	28	4%	Connective Tissue	26	5%
Connective Tissue	26	4%	Kidney/Renal Pelvis	25	4%
Eye	26	4%	Melanoma	23	4%
Melanoma	25	4%	Wilm's Tumor	20	4%
Kidney/Renal Pelvis	20	3%			
All Sites	645	100%	All Sites	557	100%

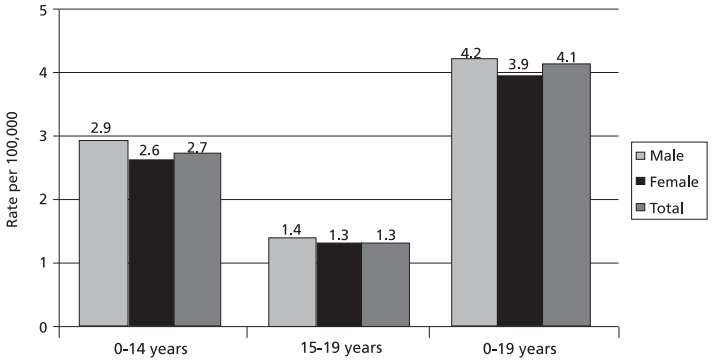
Source: Arizona Cancer Registry
Notes: Childhood cancers between ages 0-19 years.

Table 33. Childhood Cancer Cases by Age Group at Diagnosis, Six-Year Totals, 1995-2000

Age Group	Cases		
	Male	Female	Total
0-4 years	212	206	418
5-9 years	113	76	189
10-14 years	121	99	220
15-19 years	199	176	375
0-19 years	645	557	1202

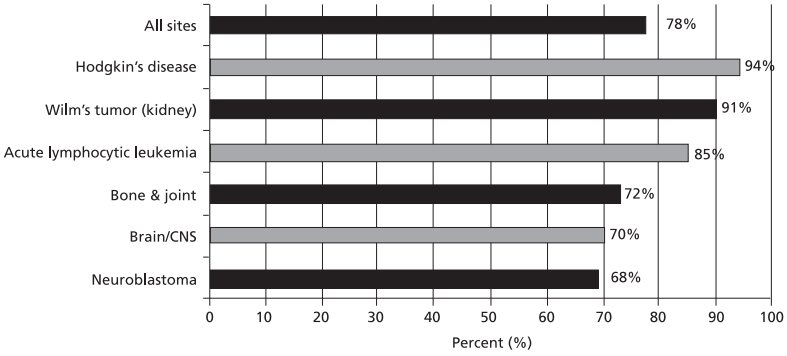
Source: Arizona Cancer Registry
Notes: Cases are six-year totals.

Figure 26. Childhood Cancer Incidence Rates in Arizona by Age Group and Gender, 1995-2000



Source: Arizona Cancer Registry
Notes: Rates are six-year averages. Rates are per 100,000 and age-adjusted to the U.S. 2000 population standard

Figure 27. Five-Year Relative Survival Rates for Selected Cancer Sites/Types Among Children 0-19 Years Old in the United States, 1992-1999



Source: American Cancer Society *Cancer Facts & Figures 2004*, Surveillance Research, National Home Office, 2004

American Cancer Society Childhood and Family Programs

Camps

Arizona Camp Sunrise
A week-long residential camp held in the pines of Payson for children between the ages of 8-18 who have or have had cancer. It is a place where children who have cancer are able to get away and just be kids. The psychological benefits gained by these campers provide strength and support for them long after camp is over.

Sunrise Sidekicks
A week-long residential camp for brothers and sisters, between the ages of 8-18, who have a sibling with cancer. The experience helps siblings better understand and deal with their brother's or sister's disease and provides them the opportunity to talk with other kids with similar concerns.

Summer Fun Day Camp
A day camp offered to children who have or have had cancer and their siblings between the ages of 3-7 years old. The experience provides younger children the chance to have a fund and exciting camp experience (arts & crafts, sports, field trips, and much more), and allows parents some much-needed time on their own.

Family Camp
A two-day camp experience for Camp Sunrise families who have children between the ages of 3-7 years old. This camp allows families to spend time away from their busy lives, spend quality time together, and meet other families who share similar experiences.

Retreats

Winter Retreat
A weekend retreat for teens who have or have had cancer and their siblings between the ages of 13-18. It is an important source of strength and support and a chance to get away for a short time and rejuvenate and visit with good friends.

Spring Retreat
A weekend retreat for children who have or have had cancer and their siblings between the ages of 8-12. It is designed in such a way that the children are able to share their trials as well as their accomplishments and help each other in the process. Age appropriate activities are offered to best serve the children who attend.

San Juan River Rafting
A five-day river rafting experience for teens between the ages of 13-18 who have or have had cancer. This trip is designed to challenge and teach teens not only how to work as a team but develop individual strengths and skills. This trip is limited to 15 teens each year.

Lake Powell Teen Retreat
A four-day house boating retreat for teens, age 13-18, who have a sibling who has or has had cancer. This retreat provides siblings with a chance to meet others who have been through what they have while enjoying the beauty of Lake Powell. Teens are able to fish, swim, and jet ski, as well as hike the scenic canyon.

Family Activities

Family Day
An opportunity for parents and family members to spend the day with their children at summer camp. Families participate in camp activities.

Hot Air Balloon Festival
Local hot air balloon club provides children and family members the experience to ride in a hot air balloon and participate in a picnic lunch.

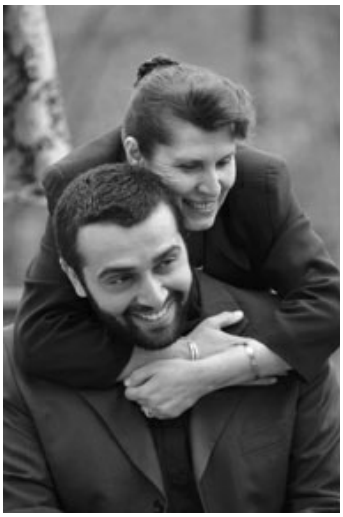
Holiday Gift Program
Families who are in need of assistance are able to select gifts for their children in early December.

Sports Days
Tickets donations by local professional sports teams (AZ Diamondbacks, Phoenix Coyotes, Phoenix Mercury, Phoenix Suns) offer children and family members the opportunity to see their favorite sports heroes in action, and sometimes even meet them in person.

Scholarships
Cancer treatment for children imposes an extraordinary financial strain on young families. Although the cancer is frequently treated successfully, the patient may lose the ability for a college education due to financial hardship. The Great West Division offers financial assistance to eligible college-bound childhood cancer survivors. Access to higher education will improve the quality of life of the cancer survivor, and they, in turn, assist the American Cancer Society in the recruitment of new volunteers (an obligation to grant recipients).

Quality of Life

From the time of diagnosis, the quality of life for every cancer patient and survivor is affected in some way. The essence of one's quality of life, regardless of the status of life or state of health, is the individual's capability to make personal, meaningful decisions that satisfy one's inner most needs. One of the American Cancer Society's three goals for 2015 is to measurably improve the quality of life of all cancer survivors, family members and caregivers from the time of diagnosis and for the balance of life. To achieve this goal, the American Cancer Society will focus its efforts on enhancing a person's capacity to provide for those aspects of life that encompass the most essential elements of meaningful existence. Through these efforts, the American Cancer Society aims to minimize the impact of cancer on quality of life. The American Cancer Society has identified four quality of life factors that affect cancer patients and their families; these factors are social, psychological and emotional, physical, and spiritual.



The concerns that patients and survivors most often express are the following:

- Fear of recurrence
- Chronic and/or acute pain
- Sexual problems; fatigue
- Guilt for delaying screening or treatment, or for doing things that may have caused the cancer
- Changes in physical appearance
- Depression
- Sleep difficulties
- Changes in what they are able to do after treatment
- The impact of cancer on loved ones and finances

The quality of life of those living with cancer is an issue that has received increased attention in the last few years. The American Cancer Society is dedicated to providing hope and help during diagnosis and treatment, progress toward treatment options, and answers to cancer-related questions and concerns. The programs and services of the American Cancer Society are provided free to cancer patients, families and caregivers. Cancer patients, survivors, and their family and friends should feel free to call on the American Cancer Society and take advantage of our information and services in their time of need. No one has to make the cancer journey alone.

American Cancer Society Quality of Life Programs and Services

Cancer Information—
1.800.ACS.2345 and www.cancer.org
No matter where you are, the information center will answer your questions about cancer issues. Call anytime—24 hours a day, 7 days a week. The website is an interactive online cancer resource center containing in-depth information on every major type of cancer, free publications, and access to recent news and research articles.

Cancer Survivors' Network
Accessed through our website or by phone at 1.877.333.HOPE, the Cancer Survivors' Network unites all people touched by cancer.

Client Services
Information about community programs, general and site-specific cancers, referrals to other complementary services, and employment and insurance issues are available to individuals, service organizations, and medical facilities.

Gift Items
Personal items such as dressings, wigs. ostomy supplies and laryngectomy bibs are available to cancer survivors to help enhance their quality of life. Availability and selection of items varies by location.

Guestrooms
Complementary or reduced lodging is available through innkeepers in some communities for patients and their family members who must travel to distant cities for cancer treatment.

I Can Cope®
Quality of life classes including information about caregiving, medication and treatment options, and resource availability, help to strengthen the emotional capacities of cancer patients and their families.

Look Good...Feel Better®
Women with cancer learn makeup and skincare techniques to offset the damaging effects of chemotherapy and radiation. Participants experience increased self-confidence and knowledge of self-care.

Man to Man®
Prostate cancer survivors visit one-to-one with prostate cancer patients early in their diagnosis, providing support and information that will help them make informed decisions about the disease and their options.

Reach to Recovery®
Breast cancer survivors provide one-to-one support for women facing breast cancer and for those who have had breast cancer surgery. Survivors increase their ability to cope, manage illness, and maintain work and family roles.

Retreats and Camps
Weekend retreats and day camps staffed with medical personnel are designed to give cancer survivors or family members of various age groups (children, siblings, or adults) a change of focus and an uplifting break from the daily stresses that are a part of living with cancer.

Road to Recovery℠
Volunteer drivers, in some communities, provide transportation to doctor appointments and cancer treatments, providing access to medical care for those needing assistance.

Support Group Information and Referral
Provide encouragement, education and social activities for patients, family members and friends who are coping with cancer-related issues. Groups vary from general support to assistance in dealing with specific cancers. Contact your local office for the support groups in your area.

Other Major Cancer Sites Sites	Cancer Risk Factors	Early Diagnosis	Warning
Leukemia	Persons with Down syndrome certain genetic abnormalities; smoking; ionizing radiation; exposure to certain chemicals like benzene; certain forms are related to retrovirus HTLG-1	When suspected, diagnosis can be made using blood tests and bone marrow biopsy	Fatigue, paleness, weight loss, repeated infection, fever, easy bruising, nosebleeds
Non-Hodgkin's Lymphoma	Few known risk factors; include reduced immune function; exposure to infectious agents and chemicals; age; individuals having had organ transplants; HIV and HTLG-1	When suspected, diagnosis can be made through a biopsy	Easily seen of felt lymph nodes on side of neck, groin, underarm, or above collarbone; fever; unexplained weight loss
Oral Cavity and Pharynx	Cigarette, cigar or pipe smoking; use of smokeless tobacco; excessive consumption of alcohol	Dentists and primary care physicians can identify abnormal changes in oral tissues	Sore that bleeds easily and does not heal; lump or thickening; red/white patch that persists; difficulty in moving jaw, tongue, or in chewing
Ovary	Increases with age; possible dietary factors; older women who have never had children are at risk; women who have had breast cancer or family history of breast or ovarian cancers	A thorough pelvic exam, transvaginal ultrasound, and blood test for tumor marker CA125 should be offered to women of high risk	Often "silent"; enlargement of the abdomen; abdominal symptoms, pain
Pancreas	Cigarette and cigar smoking; may be associated with pancreatitis, diabetes and physical inactivity and obesity and diet	"Silent" early course of disease; only biopsy yields certain diagnosis	Generally develops without symptoms in early stages; symptoms often occur in later stages, jaundice
Stomach	Bacterial infection, diet high in smoked, salted, pickled foods; tobacco use; previous stomach surgery; family history; stomach polyps	When suspected, a doctor can perform a complete physical exam including endoscopic exams and/or ultrasound and other exams	Unintended weight loss and loss of appetite; pain; nausea; heartburn or indigestion; vomiting with or without blood
Urinary Bladder	Smoking; aniline dye used in textile and rubber industries	High risk individuals can be screened through examination of cells in urine and bladder wall	Blood in urine; increased frequency of urination
Uterus	High cumulative exposure to estrogen; infertility; history of nonpolyposis colon cancer; obesity and overweight	Pelvic exam; endometrial tissue sampling at menopause if high risk	Abnormal uterine bleeding or spotting; pain

Data Sources

American Cancer Society. The American Cancer Society conducts epidemiology and surveillance research to evaluate trends in cancer incidence and mortality cancer risk factors, cancer patient care, and studies the causes and prevention of cancer in large prospective studies. In addition to *Cancer Facts & Figures*, the American Cancer Society provides descriptive cancer statistics in several other publications including *Cancer Statistics*, *Breast Cancer Facts & Figures*, *Cancer Facts & Figures for African Americans*, and *Cancer Facts & Figures for Hispanics/Latinos* (English and Spanish). Trends and patterns in cancer risk factors such as tobacco use, nutrition, and physical activity are presented in *Cancer Prevention & Early Detection Facts & Figures*. These documents serve as resources for American Cancer Society Divisions to assess progress toward the Society's goals. This segment of the American Cancer Society collaborates with the National Cancer Institute (NCI), the Centers for Disease Control and Prevention (CDC), including the National Center for Health Statistics, and the North American Association of Central Cancer Registries (NAACCR) to produce the annual Report to the Nation on progress related to cancer prevention and control in the United States.

Arizona Cancer Registry (ACR). The ACR is a surveillance system that collects, manages, and analyzes information on the incidence and survival of persons having been diagnosed with cancer in Arizona. The registry started collecting information in 1981. Initially, the registry was a voluntary hospital-based reporting system but in 1988, legislation was passed requiring hospitals, clinics, and physicians to report all cancer cases to the Arizona Cancer Registry. The Centers for Disease Control and Prevention provides enhancement funding to supplement state funding for the maintenance and management of the cancer registry in Arizona.

Behavioral Risk Factor Surveillance System (BRFSS). The BRFSS is a survey developed and managed by the Centers for Disease Control and Prevention (CDC), National Center for Chronic Disease Prevention and Health Promotion (NCCDPHP) and the U.S. states and territories. The survey is designed to provide state prevalence estimates on behavioral risk factors such as tobacco use, physical activity and cancer screening. Data are gathered through monthly, computer-assisted telephone interviews of adults aged 18 years and older living in households in a state or U.S. territory. The BRFSS is an annual survey and all 50 states, the District of Columbia and Puerto Rico have participated since 1996. The methods are generally comparable from state to state and from year to year, which allows states to monitor the effects of interventions over time. Prevalence estimates from BRFSS are subject to several limitations. The prevalence estimates are only applicable to adults living in households with a residential telephone line. Although 95% of U.S. households have telephones, the coverage ranges from 87% to 98% in the states and varies by state. In Arizona, this survey is administered through the Arizona Department of Health Services.

Census 2000. The Census Bureau collects information on population and housing characteristics at the state level, as well as population and housing unit counts for cities, counties, and American Indian and Alaska Native areas. Community leaders use the census for everything from planning schools and building roads to providing recreational opportunities and managing health care services. The U.S. Constitution mandates conducting a census every 10 years. Detailed information is available that summarizes characteristics from every person and household in the U.S. by age, race/ethnicity, and family composition. Samples from households also provide useful information such as income, education, and occupation, as well as broader issues such as demographic trends and economic opportunities.

Surveillance, Epidemiology, and End Results (SEER) Program. The SEER Program of the National Cancer Institute is the most authoritative source of information on cancer incidence and survival in the U.S. Case ascertainment for SEER began on January 1, 1973. The SEER Program currently collects and publishes cancer incidence and survival data from 11 population-based cancer registries and three supplemental registries covering approximately 14% of the U.S. population. Expansion registries increase the coverage to approximately 26%. Information on more than 3 million in situ and invasive cancer cases is included in the SEER database, and approximately 170,000 new cases are accessioned each year within the SEER catchment areas. The SEER Registries routinely collect data on patient demographics, primary tumor site, morphology, stage at diagnosis, first course of treatment, and follow-up for vital status. The SEER Program and the Centers for Disease Control and Prevention (CDC) are the only comprehensive sources of population-based information in the U.S. that include stage of cancer at the time of diagnosis and survival rates within each stage. The mortality data reported by SEER are provided by the National Center for Health Statistics.

Youth Risk Behavior Survey (YRBS). The YRBS was developed in 1990, and implemented for the first time in Arizona in 2003, to monitor priority health risk behaviors that contribute markedly to the leading causes of death, disability, and social problems among youth and adults in the United States. These behaviors, often established during childhood and early adolescence, include tobacco use; unhealthy dietary behaviors; inadequate physical activity; alcohol and other drug use; sexual behaviors that contribute to unintended pregnancy and sexually transmitted diseases, including HIV infection; and behaviors that contribute to unintentional injuries and violence. The YRBS includes national, state, and local school-based surveys of representative samples of 9th through 12th grade students. These surveys are conducted every two years, usually during the spring semester. The national survey, conducted by CDC, provides data representative of high school students in public and private schools in the United States. The state and local surveys, conducted by departments of health and education, provide data representative of the state or local school district. In Arizona, this survey provides weighted data and is administered through the Arizona Department of Education.

Other Cancer Resources

American College of Surgeons ..... www.facs.org

Arizona Department of Health Services ..... www.hs.state.az.us
- Arizona Cancer Registry
- Arizona Vital Statistics Program
- Office of Epidemiology and Statistics
- Office of Nutrition and Chronic Disease Prevention Services
- Tobacco Education and Prevention Program
- Well Woman Health Check Program

Arizona Cancer Center ..... www.azcc.arizona.edu

Cancer PLANET ..... www.cancerplanet.cancer.gov

Centers for Disease Control and Prevention ..... www.cdc.gov
- Comprehensive Cancer Control Program
- National Breast and Cervical Cancer Early Detection Program
- National Program of Cancer Registries

Intercultural Cancer Council ..... www.iccnetwork.org

National Cancer Institute ..... www.nci.nih.gov
- Surveillance, Epidemiology and End Results (SEER) Program
- Clinical Trials Information

National Dialogue on Cancer (now known as C-Change) ..... www.ndoc.org

North American Association of Central Cancer Registries (NAACCR) ..... www.naaccr.org

Translational Genomics (TGen) Research Institute ..... www.tgen.org

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The American Cancer Society is the nationwide community-based voluntary health organization dedicated to eliminating cancer as a major health problem by preventing cancer, saving lives and diminishing suffering from cancer through research, education, advocacy and service.

1.800.ACS.2345
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