CANCER IN ARIZONA

CANCER INCIDENCE AND MORTALITY
2005-2007

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Cancer Incidence and Mortality
2005-2007

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Cancer Incidence and Mortality in Arizona

The 2005-2007 Annual Report for The Arizona Cancer Registry

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Executive Summary

The Arizona Cancer Registry (ACR) is a population-based surveillance system funded by the state of Arizona with assistance from the Centers for Disease Control and Prevention (CDC) Cooperative Agreement 5U58DP000796. The registry is designed to collect, manage and analyze information on incidence and survival of Arizona residents diagnosed with cancer.

The ACR received approximately 95% of cases expected to be reported in Arizona in 2005 & 2006 and 98% of its cases in 2007. Incomplete data is the result of missing cases from pathology laboratories and physicians, as well as some rural hospitals. Case counts in Maricopa and Pima Counties have been affected by non-reported data from Veterans Hospitals for the years 2005-2007. This resulted in lower counts and rates. As data is received updates will be made available through the ACR website at www.azdhs.gov/phs/phstats/acr .

Highlights of the findings for Arizona in 2005-2007 include:

Cancer Incidence in Arizona, 2005-2007

- An average of 25,454 cases of cancer (all invasive and *in situ* bladder) were diagnosed and reported per year in the state with an average annual age-adjusted rate of 400.9 per 100,000.
- Lung cancer was the most common type of cancer diagnosed among both sexes with an average annual age-adjusted rate of 55.4 per 100,000. Prostate cancer was the most common type of cancer diagnosed in males (140.7 per 100,000 males) and breast cancer was the most common type of cancer diagnosed in females (104.6 per 100,000 females).
- Trends of cancer incidence rates in Arizona have shown very little change over the last 7 years. Arizona rates have consistently been slightly lower than national rates.
- Sixty five percent of female breast cases were diagnosed in an early stage of disease (in situ or local stage) while only 4% were diagnosed in the distant stage. This indicates that breast neoplasia is being diagnosed in earlier stages which may contribute to better prognoses.

Cancer Mortality in Arizona, 2005-2007

- An average of 9,815 cancer deaths was reported per year in the state giving an average annual age-adjusted rate of 153.0 per 100,000.
- Lung cancer caused the greatest number of cancer deaths among both sexes. Prostate cancer in males and breast cancer in females caused the second highest number of cancer deaths, followed by colorectal cancer in both sexes (excluding the ill-defined site category).
- African Americans and Whites Non-Hispanics have the highest age-adjusted rate of cancer deaths (162.9 and 160.3 per 100,000) among all racial/ethnic groups.
- Lung cancer continues to be the deadliest cancer with almost as many deaths as new cases diagnosed per year.

Arizona Cancer Registry (ACR) Overview

Historical Perspective: The ACR began operating in 1980 and started collecting information in 1981. Initially, the registry was a voluntary hospital-based reporting system. Mandatory reporting of all Arizona cases became effective in January 1, 1992. The rules require hospitals, clinics and physicians to report cases.

Funding: The ACR receives its funding from state legislature appropriations to the Arizona Department of Health Services. A matching enhancement fund to support and improve the registry is provided through the National Program of Cancer Registries (NPCR) from a CDC Cooperative Agreement (5U58DP000796).

Goals of the ACR:

- To collect complete and accurate incidence information and monitor incidence patterns
- To improve and maintain high standards in the quality of information collected
- To promote and assist hospital cancer registries
- To identify population subgroups at high risk for cancer
- To assist in the identification of geographic regions of this state that need intervention programs or epidemiological research, detection and prevention
- To perform studies
- To provide biostatistics and epidemiologic information to the medical community

The services provided to reporting facilities include: exchange of follow-up information, consultation and assistance, statistical support, response to data requests, response to coding and abstracting questions (technical support), training workshops, support of cancer registry software, and provision of all forms and manuals.

The quality assurance program is a comprehensive program that includes: reviewing data to ensure completeness and accuracy, visual editing, immediate and batch edits utilizing the Rocky Mountain Cancer Data System (RMCDS) software program and the CDC/North American Association of Central Cancer Registries (NAACCR) EDITS, additional reports are reviewed for accuracy, duplicate report checking, on-site case ascertainment reviews to determine the completeness of reporting at hospitals, on-site re-abstracting studies to ascertain the validity of the data submitted, internal review, and a timeliness and completeness monitoring program.

Annual Report: This annual report represents persons diagnosed with cancer in 2005-2007 who reside in Arizona. 2007 marks the thirteenth complete year of population-based incidence reporting for Arizona. The registry collects information on all invasive cancers and *in situ* neoplasms with the exception of cervix *in situ*. The registry also collects cases of benign brain tumors.

We hope that this document can provide useful information to assist with cancer control activities and provide information for intervention and prevention programs.

Acknowledgments: We would like to acknowledge all participating hospitals, clinics, physicians, and pathology laboratories (freestanding and hospital-based). The hospitals account for most of the reportable cases, providing complete identification and registration of each person with a diagnosis of cancer. Without their cooperation this report would not be possible.

We would like to recognize the New Mexico Tumor Registry (NMTR), which travels into Arizona to collect information in the Indian Health Services (IHS) facilities. Through our agreement with NMTR and IHS, we are able to have complete reporting from Native Americans in the state.

Accomplishments and Activities

Case Reporting:

- A total of 71 hospitals report to the ACR. This report includes data from all non-federal hospitals and three of six federal facilities (VA and military). The three VA hospitals data was not reported for most of 2005 and all of 2006 and 2007. CDC estimates the VA facilities contribute approximately 5% of Arizona resident cases to the ACR. In addition, the ACR receives cases from outpatient freestanding clinics and physician offices.
- Of the 71 hospitals, the ACR travels to 12 hospitals (less than 50 beds) to perform data collection of cancer cases. The remaining hospitals submit their reports to the ACR electronically.
- The ACR also performs case-finding at 33 freestanding and hospital pathology laboratories in order to capture unreported cases. Most cases that were identified only at pathology laboratories were prostate and melanoma.
- To collect the cases of Arizona residents traveling to other states for diagnosis and/or treatment, the ACR has several interstate data exchange agreements. Data is exchanged with all neighboring states. ACR receives Arizona resident cases from 21 states across the U.S. This includes an agreement with New Mexico and the Indian Health Service (IHS) allowing Arizona to record American Indian cases seen only at USPHS Indian Hospitals.
- The ACR completed data linkages with Navajo and Hopi National Breast and Cervical Cancer Early Detection Programs (NBCCEDP). The linkage provided the screening programs with staging information and it also provided the ACR with potentially missed cases.
- All information collected, abstracted and coded is consistent with the NAACCR national standards. The Arizona Coding Handbook includes the standards of the American College of Surgeons Commission on Cancer's "*Facility Oncology Registry Data Standards*" (FORDS) *Revised for 2009*.
- The ACR receives all of its case reports from hospitals and interstate exchanges through internet secure file data transfers.

Data Submissions to National/Government Organizations:

- The ACR is a member of the North American Association of Central Cancer Registries (NAACCR), an organization for cancer registries, governmental agencies, professional associations, and private groups in North America interested in enhancing the quality and use of cancer registry data. This organization promotes and advances uniform data standards for cancer registration. It has created the data standards used to evaluate cancer registries.
  - NAACCR annually conducts registry certification of central cancer registries as part of its call for data. The registries are evaluated on its standards for completeness, accuracy, and timeliness.
  - The ACR annually submits its data for evaluation and certification by NAACCR when it participates in the NAACCR Call for Data.
  - NAACCR publishes *Cancer in North America (CINA)*, which addresses both incidence and mortality in the United States and Canada.
- The ACR submits data to Central Brain Tumor Registry of the United States (CBTRUS). This is the largest population-based database of primary brain tumors.
- The ACR submits data to the CDC, NPCR-CSS (National Program of Cancer Registries - Cancer Surveillance System). The CDC and National Cancer Institute (NCI) publish the *United States Cancer Statistics*. This is the official federal statistics on cancer incidence from registries with high quality data.

Data Submissions to State Organizations:

- The ACR provides cancer staging information on female breast and cervical cancer to the Well Woman HealthCheck Program (WWHP) which is part of the National Breast and Cervical Cancer Early Detection Program administered by the CDC. The ACR has historically provided staging information to the WWHP. In 2008 annual linkages between WWHP and the ACR were initiated that provided more complete staging information while identifying cases missing from the ACR database.
- The ACR contributes statistical information to the Arizona Comprehensive Cancer Control (CCC) Program. The Arizona CCC Program is part of the National Comprehensive Cancer Control program administered by the CDC. The Arizona CCC program provides leadership for and coordination of statewide cancer control efforts.

Data Quality, Timeliness and Completeness:

- The ACR was recognized for achieving the Silver Standard, the second highest NAACCR standard certification possible for 2007 data. The ACR did not receive certification for 2005 and 2006 years due to the data being incomplete, as less than 90 percent of the expected number of cases had been submitted.
- Currently all data used for this report meets completion standards set by NAACCR. The completeness of data by year is 95% - in 2005, 95% - in 2006, and 98% - in 2007.
- CDC NPCR-CSS evaluated ACR data for years 2005 through 2007, using the data standards developed by NAACCR, in the areas of case ascertainment, completeness of information on critical variables, data accuracy and timeliness. These criteria are used for inclusion in the *United State Cancer Statistics* (USCS).
- The ACR met the standards set for inclusion in the USCS for 2005 and 2007 data set by CDC CSS-NPCR. The ACR did not meet the USCS inclusion standard for 2006 because, at the time of submission, the data was incomplete.

- Individual elements measured by CDC CSS-NPCR were as follows:

1) ACR achievement for the % of cases that were "Death Certificate Only":	2005	2006	2007	NAACCR Silver Standard	NAACCR Gold Standard
	3.34	3.68	3.82	< 5%	< 3%

2) Completeness of case ascertainment of the expected number of cases as estimated by the SEER U.S. incidence to mortality ratio:	2005	2006	2007	NAACCR Silver Standard	NAACCR Gold Standard
	90.9%	88.6%	91.6%	90%	95%

3) The completeness of information recorded as achieved the "Gold" standard for the rated fields of:	Percent Missing		
	2005	2006	2007
Age at Diagnosis	0.0%	0.1%	0.0%
Sex	0.0%	0.0%	0.1%
Race	3.0%	2.1%	1.8%
County	0.1%	0.2%	0.6%

Analysis and Special Studies:

The ACR completed an average of 28 requests per year for data and special analysis in 2008 and 2009. The Arizona Cancer Registry is involved with research studies in Arizona. The ADHS Human Subjects Review Committee has approved the studies. Among the analysis done were:

- Analyzed Data in response to cancer concern at Corona Del Sol High School
  - Responded to a request by the Tempe High School district to review a cancer concern of brain cancer among faculty and students at Corona High School. A report was issued and presented to the community.
- Research Triangle Institute (RTI) Study of Osteosarcoma Surveillance
  - RTI is conducting an Osteosarcoma surveillance study. The primary purpose of this study is to monitor Forteo™ exposure in Osteosarcoma patients to contribute to the scientific knowledge regarding possible prevalence of demographic characteristics and medical factors in adults with this rare cancer. The ACR provides RTI with a confidential data file for cases that meet eligibility requirements for the study.
- Analyzed cancer data among the Tohono O'odham Tribe
  - Wrote a report describing cancer among the Tohono O'odham Tribe for the tribal cancer committee.

- Participated in a study analyzing cancer rates among children with birth defects

- Part of a three state collaboration to estimate the absolute and relative risk of cancer in children born with birth defects.

- ACR data was used to assess cancer burden in minority communities
  - Four customized documents that minority communities may use for assessing the burden and opportunities for controlling cancer. The document contains both cancer data and possible activities that communities may wish to pursue to address their burden. This "Matrix for Prioritizing Interventions and Research" analyzed cancer in the Asian Pacific Islander community, the African American Community, Hispanic Community and the American Indian community.

Access to Arizona Cancer Registry Data:

- ACR Cancer Data Query System is an interactive query system that is an Indicator Based Information System for Public Health (IBIS-PH). This system allows the public to query cancer rates, mortality rates and population estimates for Arizona. It is updated three times annually. This query system can be accessed on the internet at: http://healthdata.az.gov/query/module_selection/azcr/AzCRSelection.html.
- Community Health Analysis Areas (CHAAs): The Arizona Department of Health Services (ADHS) developed Community Health Analysis Areas (CHAAs) to better analyze cancer and other diseases within Arizona. The CHAA geography was developed for analysis of health data. It combines census boundaries, county, and city boundaries in 126 areas that maintain community characteristics. The ACR uses this geography to report community level cancer statistics. The analysis of cancer by CHAA can be accessed on the internet at: http://www.azdhs.gov/phs/azchaa/.

Education and Training:

- The ACR completed a revised Arizona Cancer Registry Coding Handbook that included the Commission on Cancer's "*Facility Oncology Registry Data Standards*" (FORDS) *Revised for 2009* and the *Arizona Cancer Registry Supplement.*
- The registry publishes newsletters. The newsletters include information on cancer data, educational opportunities, coding problems and solutions, upcoming changes, and data submission procedures for facilities.
- The ACR has held annual workshops for reporting facilities with the goal of improving the quality of data submitted. These workshops serve as important conduits for information on new reporting requirements and clarification of existing requirements.
- The ACR also hosts an Introductory Workshop for beginning registrars on an ad-hoc basis. The goal of these workshops is to provide an overview of reporting requirements and coding/abstracting, with a particular emphasis on hands-on exercises.

Confidentiality Definition and Procedures

Confidentiality: As per A.R.S. §36-133 E. Information collected on individuals by the surveillance system that can identify an individual is confidential.

In addition, the ACR had established policies and procedures for the management and disclosure of confidential information to further protect privacy. All patient information is maintained in a confidential manner, consistent with the law, between the ACR and the reporting source. Policies do allow releasing aggregate data to anyone on request.

Copies and information: Additional information can be obtained by contacting the Arizona Cancer Registry at (602) 542-7320 or at www.azdhs.gov/phs/phstats/acr. Copies of this report are available on the website.

Introduction to the Annual Report

The 2005-2007 Cancer Incidence and Mortality in Arizona Annual Report contains three chapters that report information on the status of cancer incidence and mortality in Arizona for the years 2005-2007. The first chapter contains information on cancer incidence in Arizona by demographics and primary site. The second chapter contains information on cancer mortality. This chapter presents cancer data that has been averaged over the three-year period covered in this report. For year-specific data on cancer mortality refer to the Arizona Health Status and Vital Statistics Report which is available online at http://www.azdhs.gov/plan/report/ahs/index.htm. The third and final chapter contains in depth statistics on select cancers: female breast, colorectal, lung, melanoma, and prostate.

The format of the chapters of this report was chosen so that information about cancer in Arizona would be easy to understand and meaningful in its presentation. Tables with incidence rates that were calculated based on small numerators (case counts less than 10) are denoted by a '^'.

The user of this report should take care to review the methods of collecting and presenting the data, and all footnotes attached to the tables, and graphs before interpreting the information.

Methods and Technical Notes

This annual report includes cases diagnosed in 2005, 2006 and 2007, and trend data dating back to year 2000. This report focuses on invasive cancer cases with the exception of basal and squamous cell skin cancer cases, which were not reportable to the ACR. *In situ* cases were included in Table 1, Cancer Cases by Primary Site and Behavior, Average Annual Count, 2005-2007. *In situ* urinary bladder cases were also combined with invasive urinary bladder cases in many of the tables and graphs depicting invasive cancer cases. This approach was used to create data comparable to the Surveillance, Epidemiology, and End Results (SEER) program reports. This report used the SEER definitions of the cases by cancer type, and this is presented in the tables in the Appendix.

Analysis Criteria

Cases were classified by primary site and/or histologic type, behavior, race and ethnicity, age at diagnosis, sex and county of residence at diagnosis.

Primary Site and Histologic Type

Primary site and histologic type were classified according to the International Classification of Diseases for Oncology, Third Edition (a.k.a. ICD-O-3).

Behavior

Behavior code: The 5th digit of the morphology code that indicates the growth pattern of a tumor, and whether or not it is invasive.

- Invasive: A malignant tumor that has invaded the basement membrane of the tissue of origin

- *In situ*: Non-infiltrating, non-invasive intraepithelial tumor cells that have not penetrated the basement membrane or extended beyond the epithelial tissue

Race/Ethnicity

Race/Ethnicity is identified from the physician's notations and the medical record admission that generally contains information concerning a person's race and ethnicity. Race/Ethnicity definitions used in this report are; White non-Hispanic, White Hispanic, Black, American Indian, and Asian/Pacific Islander. Cases having an unknown race diagnosed with a primary site of melanoma of the skin were coded as a race of White and an ethnicity determined by a computerized algorithm of Hispanic names.

Incidence rates were divided into two ethnicity categories: Hispanic and non-Hispanic. For this report, all cases with an unknown ethnicity were considered non-Hispanic.

Age at Diagnosis

Age groups were divided into eight 10-year age groups for incidence counts for ages 0-79 and for all cases age 80 and above. Mortality counts were divided into eight 10-year age groups from ages 5-84, a 0-4 year age group, and an 85+ age group.

Residence at Diagnosis

The residency of cases at the time of diagnosis was grouped by county and by Arizona versus non-Arizona resident. Non-Arizona residents were excluded in the analysis.

Incidence Counts

Incidence counts were the number of cases diagnosed with a reportable cancer in 2005-2007 by diagnosis year. A cancer case can either be a tumor originating in one primary site or may be a systemic cancer of a specific histologic type. More than one cancer case may be reported for an individual. This "one-to-many" relationship results in a higher number of cancer cases than individual persons recorded in the registry.

Certain demographic variables may be unknown for some cases. Therefore comparing total numbers between different figures and tables may not yield equal numbers. Additionally, the totals for all categories within a figure or table may not equal the state total.

Additionally, 2007 data may under-represent some rural areas of the state as case ascertainment at a few rural hospitals was not completed. The effect of this may be lower than expected rates and counts for that year for some rural counties.

Age-Adjusted Incidence and Mortality Rates

Age-adjustment is a process used to compare incidence and mortality rates over time or among geographic areas or populations that have different age distributions. Because most disease rates increase with increasing age, age-adjustment eliminates the confounding effect of age when comparing rates.

Beginning with the 1999 data year, federal agencies and the Arizona Cancer Registry have adopted the year 2000 projected U.S. population as the new standard for age-adjusting incidence and mortality rates. All incidence and mortality rates were adjusted using the 2000 U.S. standard population by the direct method, and were presented as number of cancers per 100,000 persons.

Cancer mortality rates were calculated on counts of cancer deaths that meet all of the following criteria:

- The cancer death occurs to an Arizona resident
- The primary cause of death is coded C00 to C97 using ICD-l0*
- The case is reported to the Arizona Office of Vital Records

*The primary cause of death is classified according to the International Classification of Diseases, Injuries and Causes of Death, Tenth Revision, 1992.

Average Counts and Rates

This report contains several figures and tables that average three years of data to produce an average annual count. When doing so, each averaged number is calculated separately, and rounded to a whole number. Due to rounding the *total* rounded value may not equal the total of two individually calculated numbers in that category.

Population Denominators

The population numbers used for analysis in this report were taken from United States Census Bureau and modified by SEER. The SEER program applied a race/ethnicity bridge to the population numbers previous to the year 2000 to more accurately estimate the number of minorities in years previous to the 2000 census. The ACR chose to use these population numbers for calculating age-adjusted rates in order to be comparable with other state and national cancer data.

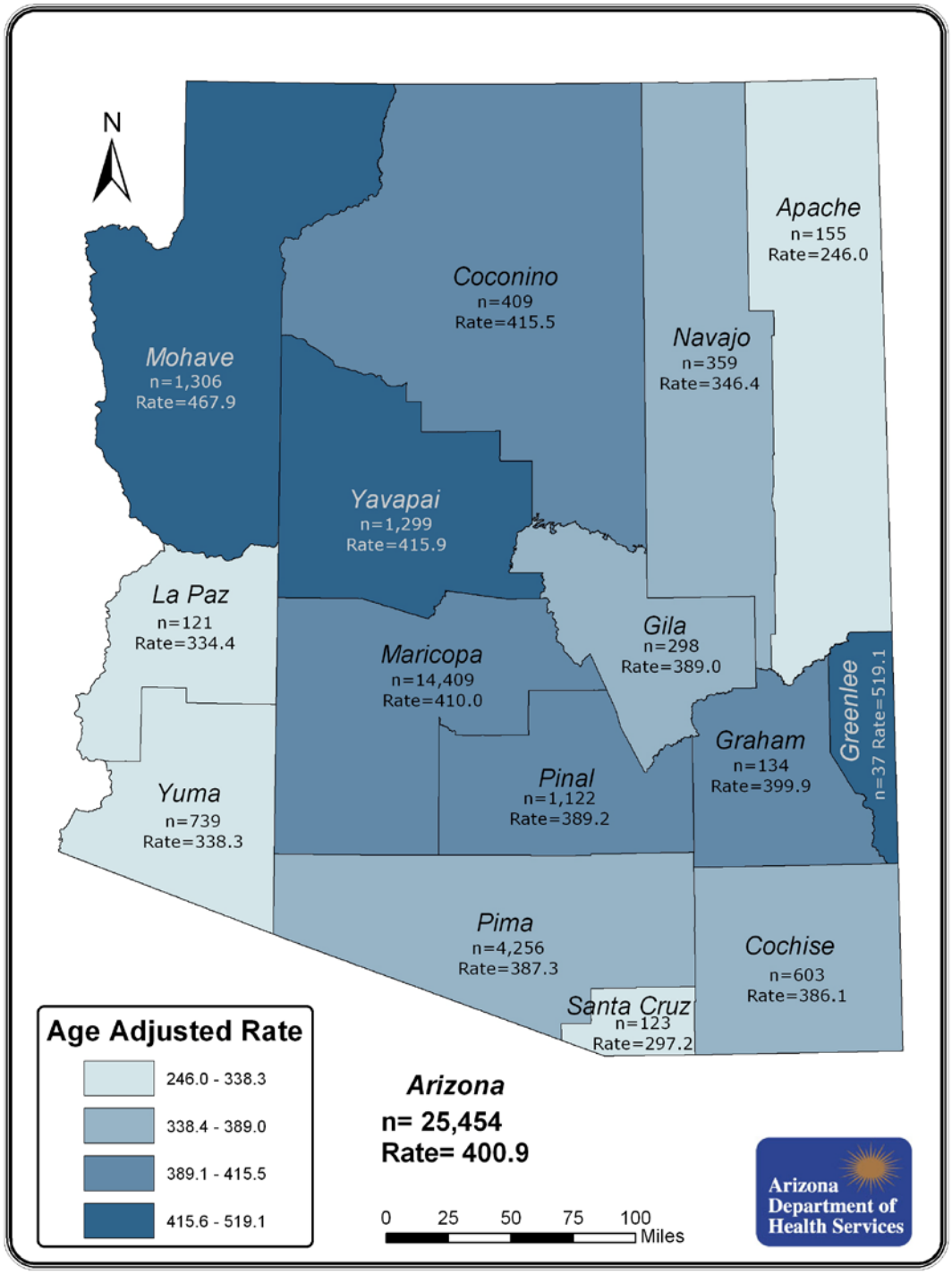
Caution in Using Small Numbers

The intent of these data is to provide the reader with useful information on cancer in Arizona. However, it is important not to mislead the data users on the meaning of this data. Rates or other analysis based on fewer than 10 cases are not considered statistically reliable and are denoted by a ' ^ ' in the rate tables. However, zero cases are denoted by 0.0 in the tables.

CHAPTER 1

Cancer Incidence
2005-2007

Incidence of Invasive Cancer in Arizona
Average Annual Counts and Age-Adjusted Rates by County
2005-2007



Note: County of residence for 85 cases is unknown. The sum of the cases per county does not equal the state total listed in this map.

Figure 1: Ten Leading Sites* of Invasive Cancer Cases by Site and Gender, Average Annual Count, 2005-2007

Male

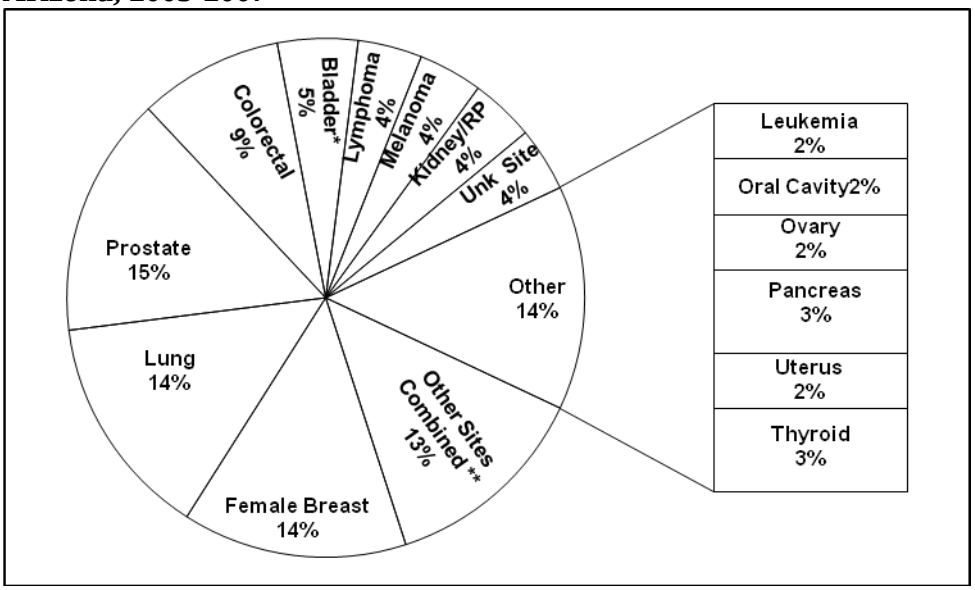
1. Prostate (3,951)
2. Lung & Bronchus (1,842)
3. Colorectal (1,247)
4. Bladder, incl. *In situ* (937)
5. Lymphoma (591)
6. Melanoma of the Skin (564)
7. Kidney/Renal Pelvis (557)
   Other NOS (537)
8. Oral Cavity (379)
9. Leukemia (352)
10. Pancreas (344)

Female

1. Breast (3,458)
2. Lung & Bronchus (1,690)
3. Colorectal (1,124)
4. Uterus (630)
5. Thyroid (555)
6. Lymphoma (514)
   Other, NOS (490)
7. Ovary (398)
8. Melanoma of the Skin (367)
9. Kidney/Renal Pelvis (362)
10. Pancreas (309)

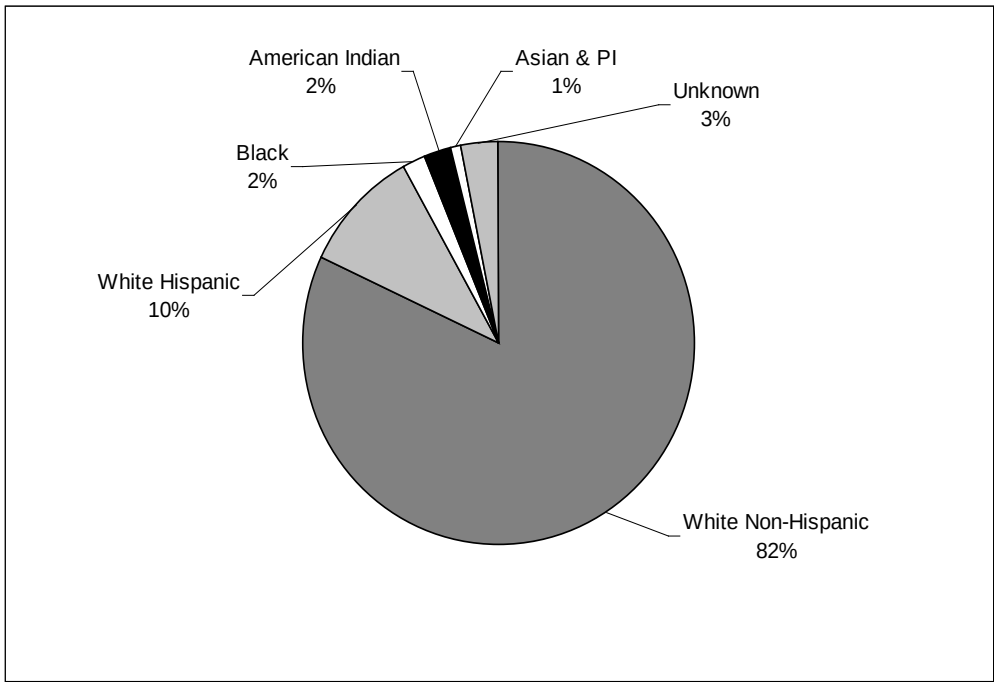
*Note: Ten Leading Sites in addition to 'Other, NOS';
Other, NOS=Ill-defined site or site not otherwise specified

Figure 2: Invasive Case Distribution by Site Based on Average Annual Count, Arizona, 2005-2007



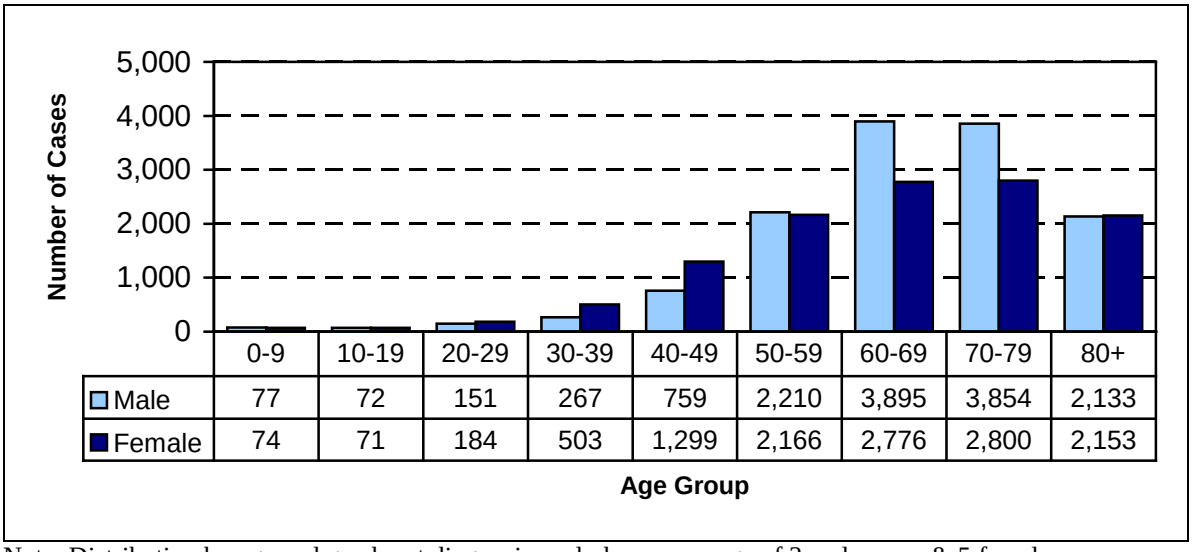
Note: *Percentage of bladder cases includes invasive and *in situ* cases.
Bladder cases include an average of 671 *in situ* cases.
** Other Combined includes all other primary sites not specifically listed in this chart.

Figure 3: Invasive Cancer Cases By Percent of Race/Ethnicity 2005-2007



*Unknown category includes 'other' race. Self identified race is listed as "other" when the patient does not identify a recognized racial group.

.Figure 4: Invasive Cancer Cases by Age and Gender in Arizona, Average Annual Count, 2005 -2007



	0-9	10-19	20-29	30-39	40-49	50-59	60-69	70-79	80+
Male	77	72	151	267	759	2,210	3,895	3,854	2,133
Female	74	71	184	503	1,299	2,166	2,776	2,800	2,153

Note: Distribution by age and gender at diagnosis excludes an average of 3 male cases & 5 female cases per diagnosis year due to unknown age.

Table 1: Cancer Cases by Primary Site and Behavior, Average Annual Count, 2005-2007

	Behavior		
Primary Site	**In Situ**	**Invasive**	**Total**
Total, All Sites	2450	24783*	27233
Oral Cavity and Pharynx	20	556	576
Lip	9	29	37
Tongue	4	165	169
Salivary Gland	0	64	65
Floor of Mouth	2	31	33
Gum and Other Mouth	3	78	81
Nasopharynx	0	24	24
Tonsil	1	88	89
Oropharynx	0	28	28
Hypopharynx	0	30	30
Other Oral Cavity and Pharynx	1	19	20
Digestive System	121	4423	4544
Esophagus	4	275	279
Stomach	3	324	327
Small Intestine	0	95	95
Colorectal	93	2372	2465
Colon excluding Rectum	63	1728	1791
Rectum Rectosigmoid	30	644	674
Anus	14	80	94
Liver and Intrahepatic Bile Duct	0	378	378
Liver	0	348	348
Intrahepatic Bile Duct	0	30	30
Gallbladder	4	76	80
Other Biliary	1	88	89
Pancreas	2	653	655
Retroperitoneum, Peritoneum, Omentum, Mesentery	0	61	61
Other Digestive Organs	0	21	21
Respiratory System	16	3797	3811
Nose, Nasal Cavity, Middle Ear	1	39	40
Larynx	12	168	180
Lung and Bronchus	3	3532	3535
Pleura	0	48	48
Trachea, Mediastinum and Other Respiratory Organs	0	10	10
Bones and Joints	0	58	58
Soft Tissue Including Heart	0	185	185
Skin Excluding Basal and Squamous	641	1011	1655
Melanoma	639	931	1570
Other Skin	2	80	82
Breast	807	3508	4315
Female Genital System	106	1340	1446

Table 1: Cancer Cases by Primary Site and Behavior, Average Annual Count, 2005-2007

	Behavior		
Primary Site	**In Situ**	**Invasive**	**Total**
Cervix	0	218	218
Corpus Uteri	8	603	611
Uterus NOS	1	26	27
Ovary	2	398	400
Vagina	21	16	37
Vulva	73	57	130
Other Female Genital Organs	1	22	23
Male Genital System	13	4138	4151
Prostate	1	3951	3952
Testis	1	158	159
Penis	11	23	34
Other Male Genital Organs	0	6	6
Urinary System	716	1565	2281
Urinary Bladder*	671	596*	1267
Kidney and Renal Pelvis	16	919	935
Ureter	22	37	59
Other Urinary Organs	7	13	20
Eye and Orbit	8	45	53
Brain and Other Nervous System	0	415	415
Brain	0	386	386
Cranial Nerves and Other Nervous System	0	29	29
Endocrine System	0	764	764
Thyroid	0	729	729
Other Endocrine including Thymus	0	35	35
Lymphoma	0	1105	1105
Hodgkin's Lymphoma	0	125	125
Non-Hodgkin's Lymphoma	0	980	980
Multiple Myeloma	0	276	276
Leukemia	0	602	602
Lymphocytic Leukemia	0	285	285
Myeloid and Monocytic Leukemia	0	271	271
Other Leukemia	0	46	46
Ill Defined and Unspecified**	0	1028	1028

Note: Counts were a three-year average for diagnosis years 2005-2007. Average of total of all cases does not equal the sum of the average of each cancer site due to rounding.

* The invasive case count excludes in-situ bladder cases that are included in all other figures and tables that count invasive bladder cases.

**Ill defined and unspecified site includes cases where the primary site can't be specifically identified.

Table 2: Invasive Cancer Cases by Primary Site and Gender, 2005-2007

	Gender								
	2005			2006			2007		
Primary Site	**Male**	**Female**	**Total**	**Male**	**Female**	**Total**	**Male**	**Female**	**Total**
Total, All Sites	12855	11505	24363	13455	12014	25471	13955	12574	26530
Oral Cavity and Pharynx	371	179	550	359	178	537	408	177	585
Lip	34	13	47	11	2	13	22	6	28
Tongue	106	47	153	101	52	153	131	59	190
Salivary Gland	37	29	66	48	26	74	36	16	52
Floor of Mouth	22	7	29	12	15	27	31	6	37
Gum and Other Mouth	36	34	70	52	36	88	35	42	77
Nasopharynx	13	10	23	19	9	28	13	8	21
Tonsil	62	14	76	77	19	96	74	18	92
Oropharynx	13	16	29	14	8	22	23	11	34
Hypopharynx	30	6	36	17	6	23	23	7	30
Other Oral Cavity and Pharynx	18	3	21	8	5	13	20	4	24
Digestive System	2457	1930	4387	2342	1961	4304	2601	1971	4573
Esophagus	225	41	266	217	79	296	213	51	264
Stomach	192	118	310	216	122	338	200	123	323
Small Intestine	57	38	95	44	39	83	53	53	106
Colorectal	1303	1150	2453	1149	1103	2253	1290	1120	2410
Colon excluding Rectum	891	902	1793	820	858	1679	895	817	1712
Rectum and Rectosigmoid Junction	412	248	660	329	245	574	395	303	698
Anus	31	40	71	29	53	82	36	50	86
Liver and Intrahepatic Bile Duct	241	98	339	246	103	349	314	132	447
Liver	228	86	314	223	88	311	297	122	420
Intrahepatic Bile Duct	13	12	25	23	15	38	17	10	27
Gallbladder	29	58	87	23	53	76	23	41	64
Other Biliary	40	35	75	41	53	94	62	32	94
Pancreas	315	305	620	341	306	647	375	316	691

Table 2: Invasive Cancer Cases by Primary Site and Gender, 2005-2007

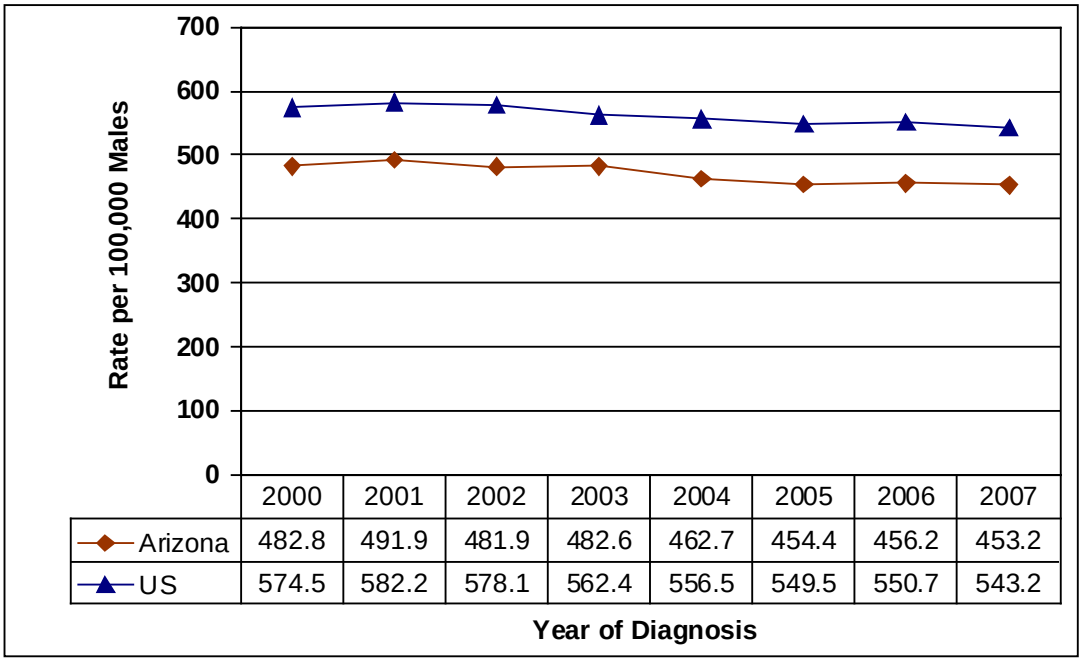
	Gender								
	2005			2006			2007		
Primary Site	**Male**	**Female**	**Total**	**Male**	**Female**	**Total**	**Male**	**Female**	**Total**
Retroperitoneum, Peritoneum, Omentum and Mesentery	19	35	54	23	38	61	21	45	66
Other Digestive Organs	5	12	17	13	12	25	14	8	22
Respiratory System	2047	1744	3791	2048	1704	3752	2041	1808	3849
Nose, Nasal Cavity and Middle Ear	25	12	37	20	18	38	22	21	43
Larynx	135	34	169	136	31	167	134	34	168
Lung and Bronchus	1845	1684	3529	1844	1644	3488	1836	1743	3579
Pleura	35	13	48	43	7	50	37	8	45
Trachea, Mediastinum and Other Respiratory Organs	7	1	8	5	4	9	12	2	14
Bones and Joints	40	24	64	30	28	58	31	20	51
Soft Tissue including Heart	79	100	179	94	89	183	108	84	192
Skin excluding Basal and Squamous	576	370	946	611	439	1050	654	383	1037
Melanoma	531	334	865	569	401	970	593	366	959
Other Skin	45	36	81	42	38	80	61	17	78
Breast	50	3215	3265	44	3360	3404	56	3798	3854
Female Genital System	NA	1245	1245	NA	1371	1371	NA	1407	1407
Cervix	NA	198	198	NA	219	219	NA	238	238
Corpus Uteri	NA	545	545	NA	626	626	NA	639	639
Uterus NOS	NA	23	23	NA	26	26	NA	30	30
Ovary	NA	373	373	NA	413	413	NA	409	409
Vagina	NA	17	17	NA	19	19	NA	13	13
Vulva	NA	62	62	NA	51	51	NA	57	57
Other Female Genital Organs	NA	27	27	NA	17	17	NA	21	21
Male Genital System	3724	NA	3725	4450	NA	4451	4238	NA	4238
Prostate	3552	NA	3553	4242	NA	4243	4058	NA	4058

Table 2: Invasive Cancer Cases by Primary Site and Gender, 2005-2007

	Gender								
	2005			2006			2007		
Primary Site	**Male**	**Female**	**Total**	**Male**	**Female**	**Total**	**Male**	**Female**	**Total**
Testis	149	NA	149	176	NA	176	150	NA	150
Penis	14	NA	14	29	NA	29	25	NA	25
Other Male Genital Organs	9	NA	9	3	NA	3	5	NA	5
Urinary System	1475	636	2111	1434	669	2103	1663	726	2389
Urinary Bladder (includes *in situ*)	923	284	1207	888	290	1178	999	314	1313
Kidney and Renal Pelvis	523	332	855	516	360	876	631	394	1025
Ureter	19	16	35	17	18	35	25	15	40
Other Urinary	10	4	14	13	1	14	8	3	11
Eye and Orbit	26	19	45	20	28	48	28	15	43
Brain and Other Nervous System	214	192	406	240	186	426	230	185	415
Brain	204	183	387	224	166	390	210	172	382
Cranial Nerves and Other Nervous System	10	9	19	16	20	36	20	13	33
Endocrine System	187	522	710	186	567	753	217	614	831
Thyroid	164	513	678	160	547	707	200	604	804
Other Endocrine including Thymus	23	9	32	26	20	46	17	10	27
Lymphoma	592	507	1099	546	507	1053	634	528	1162
Hodgkin's Lymphoma	68	57	125	61	56	117	71	62	133
Non-Hodgkin's Lymphoma	524	450	974	485	451	936	563	466	1029
Multiple Myeloma	151	117	268	133	136	269	162	130	292
Leukemia	317	230	547	392	274	666	347	249	596
Lymphocytic Leukemia	174	103	277	184	120	304	171	104	275
Myeloid and Monocytic Leukemia	125	117	242	178	128	306	145	121	266
Other Leukemia	18	10	28	30	26	56	31	24	55
Ill Defined and Unspecified	549	475	1025	526	517	1043	536	479	1015

Note: NA= Not Applicable; Total cases includes Hermaphrodite and Transsexual Cases

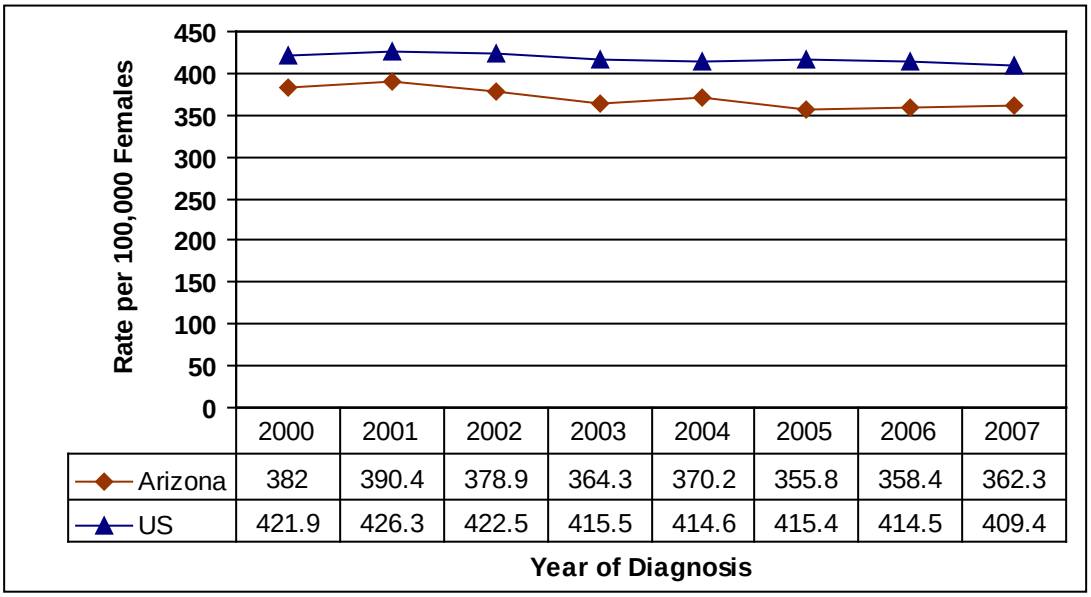
Figure 5: Age-Adjusted Incidence Rates Among Arizona Males All Sites, 2001-2007



	2000	2001	2002	2003	2004	2005	2006	2007
Arizona	482.8	491.9	481.9	482.6	462.7	454.4	456.2	453.2
US	574.5	582.2	578.1	562.4	556.5	549.5	550.7	543.2

Source: U.S. Cancer Statistics Working Group. *United States Cancer Statistics: 1999–2007 Incidence and Mortality Web-based Report*. Atlanta: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention and National Cancer Institute; 2010. Accessed at http://apps.nccd.cdc.gov/uscs/cancersbystateandregion.aspx on 12/15/10.

Figure 6: Age-Adjusted Incidence Rates Among Arizona Females All Sites, 2001-2007



	2000	2001	2002	2003	2004	2005	2006	2007
Arizona	382	390.4	378.9	364.3	370.2	355.8	358.4	362.3
US	421.9	426.3	422.5	415.5	414.6	415.4	414.5	409.4

Source: U.S. Cancer Statistics Working Group. *United States Cancer Statistics: 1999–2007 Incidence and Mortality Web-based Report*. Atlanta: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention and National Cancer Institute; 2010. Accessed at http://apps.nccd.cdc.gov/uscs/cancersbystateandregion.aspx on 12/15/10.

Table 3: Age-Adjusted Incidence Rates of Invasive Cancer Cases by Primary Site and Gender, 2005-2007									
	Gender								
	2005			2006			2007		
Primary Site	**Male**	**Female**	**Total**	**Male**	**Female**	**Total**	**Male**	**Female**	**Total**
Total, All Sites	453.2	354.7	398.1	451.7	356.0	397.9	444.3	353.4	393.4
Oral Cavity and Pharynx	12.9	5.5	9	11.9	5.3	8.4	12.6	4.9	8.5
Lip	1.2	0.4	0.8	0.4	0.1^	0.2	0.7	0.2^	0.4
Tongue	3.7	1.5	2.5	3.3	1.5	2.4	4	1.6	2.7
Salivary Gland	1.3	0.9	1.1	1.7	0.8	1.2	1.1	0.4	0.8
Floor of Mouth	0.8	0.2^	0.5	0.4	0.4	0.4	0.9	0.2^	0.5
Gum and Other Mouth	1.3	1	1.2	1.8	1.1	1.4	1.1	1.2	1.1
Nasopharynx	0.4	0.3	0.4	0.6	0.3^	0.4	0.4	0.3^	0.3
Tonsil	2.1	0.4	1.2	2.5	0.5	1.5	2.3	0.6	1.4
Oropharynx	0.4	0.5	0.5	0.5	0.2^	0.3	0.6	0.3	0.5
Hypopharynx	1	0.2^	0.6	0.6	0.2^	0.4	0.7	0.2^	0.4
Other Oral Cavity and Pharynx	0.6	0.1^	0.3	0.3^	0.2^	0.2	0.6	0.1^	0.3
Digestive System	87.1	57.4	71.3	79.5	56.3	67	83.2	53.6	67.5
Esophagus	7.9	1.2	4.3	7.4	2.3	4.7	6.9	1.4	4
Stomach	6.9	3.6	5.1	7.2	3.5	5.2	6.5	3.4	4.8
Small Intestine	2	1.1	1.5	1.4	1.1	1.3	1.7	1.5	1.6
Colorectal	46.3	34.1	39.8	39.2	31.6	35.1	41.1	30.4	35.4
Colon excluding Rectum	31.9	26.6	29.1	28	24.5	26.1	28.8	22	25.2
Rectum and Rectosigmoid Junction	14.4	7.6	10.7	11.1	7.1	9	12.3	8.4	10.2
Anus	1.1	1.2	1.2	1	1.6	1.3	1.2	1.4	1.3
Liver and Intrahepatic Bile Duct	8.4	3	5.5	8.2	2.9	5.4	9.8	3.6	6.6
Liver	7.9	2.6	5.1	7.4	2.5	4.8	9.2	3.4	6.2
Intrahepatic Bile Duct	0.5	0.4	0.4	0.8	0.4	0.6	0.6	0.3^	0.4
Gallbladder	1	1.8	1.4	0.8	1.6	1.2	0.8	1.2	1
Other Biliary	1.4	1	1.2	1.4	1.5	1.5	2.1	0.9	1.4
Pancreas	11.1	8.9	10	11.6	8.7	10.1	12.2	8.4	10.2

Table 3: Age-Adjusted Incidence Rates of Invasive Cancer Cases by Primary Site and Gender, 2005-2007									
	Gender								
	2005			2006			2007		
Primary Site	**Male**	**Female**	**Total**	**Male**	**Female**	**Total**	**Male**	**Female**	**Total**
Retroperitoneum	0.4	0.4	0.4	0.5	0.4	0.4	0.4	0.3^	0.3
Peritoneum, Omentum and Mesentery	0.3^	0.7	0.5	0.3^	0.7	0.5	0.2^	1	0.6
Other Digestive Organs	0.2^	0.4	0.3	0.4	0.4	0.4	0.4	0.2^	0.3
Respiratory System	72.8	52.4	61.7	69.8	49.3	58.5	66	50.1	57.3
Nose, Nasal Cavity and Middle Ear	0.9	0.4	0.6	0.7	0.5	0.6	0.7	0.6	0.7
Larynx	4.8	1	2.7	4.5	0.9	2.6	4.2	0.9	2.4
Lung and Bronchus	65.6	50.6	57.4	62.9	47.6	54.4	59.6	48.4	53.4
Pleura	1.3	0.4	0.8	1.5	0.2^	0.8	1.2	0.2^	0.7
Trachea, Mediastinum and Other Respiratory Organs	0.2^	0.0^	0.1^	0.2^	0.1^	0.1^	0.3	0.0^	0.2
Bones and Joints	1.4	0.8	1.1	1	0.9	1	0.9	0.7	0.8
Soft Tissue including Heart	2.8	3.1	3	3.1	2.7	2.9	3.3	2.4	2.8
Skin excluding Basal and Squamous	20.6	11.9	15.7	20.6	13.5	16.6	21.2	11.4	15.8
Melanoma	18.9	10.8	14.4	19.2	12.4	15.4	19.3	10.9	14.6
Other Skin	1.7	1.1	1.3	1.4	1.1	1.3	1.9	0.5	1.1
Breast	1.8	100.8	53.9	1.4	100.7	53.6	1.8	106.9	57
Female Genital System	NA	39.1	NA	NA	41.5	NA	NA	40.8	NA
Cervix	NA	6.7	NA	NA	7.3	NA	NA	7.3	NA
Corpus Uteri	NA	17	NA	NA	18.7	NA	NA	18.3	NA
Uterus NOS	NA	0.7	NA	NA	0.8	NA	NA	0.9	NA
Ovary	NA	11.6	NA	NA	12.2	NA	NA	11.7	NA
Vagina	NA	0.5	NA	NA	0.6	NA	NA	0.4	NA
Vulva	NA	1.8	NA	NA	1.5	NA	NA	1.7	NA
Other Female Genital Organs	NA	0.8	NA	NA	0.5	NA	NA	0.5	NA
Male Genital System	129.8	NA	NA	147.4	NA	NA	133.8	NA	NA
Prostate	124	NA	NA	140.7	NA	NA	128.2	NA	NA

Table 3: Age-Adjusted Incidence Rates of Invasive Cancer Cases by Primary Site and Gender, 2005-2007

	Gender								
	2005			2006			2007		
Primary Site	**Male**	**Female**	**Total**	**Male**	**Female**	**Total**	**Male**	**Female**	**Total**
Testis	5	NA	NA	5.6	NA	NA	4.6	NA	NA
Penis	0.5	NA	NA	1	NA	NA	0.8	NA	NA
Other Male Genital Organs	0.3^	NA	NA	0.1^	NA	NA	0.2^	NA	NA
Urinary System	52.5	19.3	34.3	48.5	19.4	32.6	53.3	19.7	35
Urinary Bladder (includes *in situ*)	33.3	8.4	19.6	30.3	8.2	18.1	32.5	8.4	19.3
Kidney and Renal Pelvis	18.2	10.3	14	17.2	10.6	13.7	19.6	10.8	15
Ureter	0.6	0.5	0.6	0.6	0.5	0.5	0.9	0.4	0.6
Other Urinary	0.4	0.1^	0.2	0.4	0.0^	0.2	0.3^	0.1^	0.2
Eye and Orbit	0.9	0.6	0.7	0.7	0.8	0.7	0.8	0.4	0.6
Brain and Other Nervous System	7.3	6.1	6.7	8	5.6	6.7	7.3	5.5	6.3
Brain	7	5.8	6.4	7.5	5	6.2	6.7	5.1	5.8
Cranial Nerves and Other Nervous System	0.3	0.3^	0.3	0.5	0.6	0.6	0.6	0.4	0.5
Endocrine System	6.4	17.3	11.9	6	18.3	12.2	6.9	19.2	13
Thyroid	5.6	17	11.4	5.2	17.7	11.5	6.4	18.9	12.6
Other Endocrine including Thymus	0.8	0.3^	0.5	0.8	0.6	0.7	0.5	0.3	0.4
Lymphoma	20.9	15.5	18	18.3	15.1	16.6	20.4	14.8	17.3
Hodgkin's Lymphoma	2.3	1.9	2.1	2	1.8	1.9	2.3	1.9	2.1
Non-Hodgkin's Lymphoma	18.6	13.7	16	16.3	13.3	14.7	18.1	12.9	15.2
Multiple Myeloma	5.4	3.5	4.4	4.4	4	4.1	5.1	3.6	4.3
Leukemia	11	7.1	8.9	13.2	7.9	10.3	11.1	7.1	8.8
Lymphocytic Leukemia	6	3.2	4.5	6.1	3.5	4.7	5.3	2.9	4
Myeloid and Monocytic Leukemia	4.4	3.6	3.9	6	3.7	4.8	4.7	3.5	4
Other Leukemia	0.6	0.3	0.5	1.1	0.7	0.8	1.1	0.7	0.8
Ill Defined and Unspecified	19.7	14.1	16.7	17.9	14.7	16.1	16.8	12.5	14.6

^ = Fewer than 10 cases reported. The rate is considered unstable

Table 4: Age-Adjusted Incidence Rates of Invasive Cancer Cases by County and Gender, All Races, in Arizona, 2005-2007

	2005			2006			2007		
County	Male	Female	Total	Male	Female	Total	Male	Female	Total
Apache	354.0	194.2	265.7	269.6	280.4	274.0	246.0	168.7	204.3
Cochise	412.5	359.0	384.0	421.5	369.4	393.7	410.3	353.5	381.1
Coconino	457.5	361.0	406.6	463.7	418.3	441.5	456.1	335.7	391.2
Gila	411.7	301.6	351.1	459.6	276.3	360.7	472.3	380.2	420.5
Graham	443.2	323.9	382.7	470.6	382.6	420.6	411.9	375.1	388.4
Greenlee	500.9	388.4	437.4	527.2	655.0	589.4	551.6	494.7	507.8
La Paz	401.2	323.7	362.2	334.6	223.9	279.9	497.6	182.5	336.2
Maricopa	466.0	360.1	405.5	467.8	362.3	407.4	451.9	366.7	402.8
Mohave	570.8	417.1	489.8	491.3	392.5	439.1	528.7	403.4	462.9
Navajo	414.8	283.0	342.6	354.3	331.0	340.7	368.0	326.8	345.9
Pima	418.4	356.1	383.1	428.9	334.4	375.0	450.1	340.2	388.7
Pinal	456.5	350.9	399.7	453.9	373.2	408.4	382.3	306.7	340.2
Santa Cruz	366.3	322.6	342.6	329.8	201.9	259.8	281.0	291.1	286.8
Yavapai	459.5	362.3	405.7	481.8	390.1	432.1	462.1	353.3	404.0
Yuma	385.5	297.6	338.6	372.9	324.8	346.3	393.1	272.8	329.1
ARIZONA	453.2	354.7	398.1	451.7	356	397.9	444.3	353.4	393.4

Table 5: Age-Adjusted Incidence Rates of Invasive Cancer Cases by County and Gender for White, Non-Hispanics in Arizona, 2005-2007

	2005			2006			2007		
County	Male	Female	Total	Male	Female	Total	Male	Female	Total
Apache	433.8	256.2	338.6	387.2	559.5	485.4	309.1	169.8	244.2
Cochise	423.7	410.5	416.9	451.3	417.0	433.0	423.2	379.4	402.7
Coconino	515.7	445.4	480.8	559.8	496.1	531.8	551.0	417.1	482.6
Gila	455.5	348.3	396.1	469.3	306.5	382.5	513.8	407.4	455.0
Graham	443.7	372.5	409.6	522.6	464.9	487.3	464.8	426.7	440.4
Greenlee	543.9	557.4	554.1	660.4	697.9	654.8	454.2^	507.7^	443.1
La Paz	377.1	399.4	390.9	343.2	239.5	291.5	568.4	172.5	369.2
Maricopa	473.7	377.3	418.8	482.7	376.8	422.9	467.2	387.6	421.7
Mohave	575.7	429.8	499.4	504.5	407.8	453.6	513.2	424.7	466.7
Navajo	452.4	331.4	389.5	401.2	422.6	411.9	421.2	390.3	404.4
Pima	410.5	368.1	386.3	429.9	356.8	387.9	455.3	362.3	403.7
Pinal	469.7	363.8	414.1	462.7	388.0	420.5	393.5	326.7	355.8
Santa Cruz	435.0	371.0	402.0	377.8	164.0	270.4	314.2	449.7	383.2
Yavapai	453.3	360.1	401.7	474.2	394.0	430.8	461.6	347.8	400.9
Yuma	421.8	381.1	396.9	399.5	389.5	391.5	425.4	300.3	358.5
ARIZONA	463.1	375.6	415.5	467.9	377.0	417.5	460.1	377.3	414.1

^ = Fewer than 10 cases reported. The rate is considered unstable.

Table 6: Age-Adjusted Incidence Rates of Invasive Cancer Cases by County and Gender for White, Hispanics in Arizona, 2005-2007

	2005			2006			2007		
County	Male	Female	Total	Male	Female	Total	Male	Female	Total
Apache	404.6^	97.3	266.8	276.3	209.0	246.6	164.5	68.1	115.1
Cochise	317.0	194.2	247.4	291.3	231.5	255.0	263.7	275.6	267.6
Coconino	369.2	562.9	461.2	333.1	413.0	374.0	380.2	243.0	295.8
Gila	229.1^	198.8	209.9	364.7	235.0	281.0	306.2	256.8	267.9
Graham	364.3	277.5	335.6	260.5	247.2	240.5	310.7	220.2	254.4
Greenlee	303.3^	226.2	264.4	469.8	516.8	500.4	675.6	459.0	555.1
La Paz	456.1^	127.0	290.4	485.5	139.3	306.3	255.7	248.9	270.3
Maricopa	327.5	243.3	276.7	327.5	237.9	273.3	291.9	244.9	261.7
Mohave	237.0	299.4	268.5	366.0	263.0	310.3	385.8	222.7	299.7
Navajo	254.8^	323.2	286.3	229.9	140.1	167.0	262.3	352.8	316.0
Pima	318.3	278.4	294.0	335.5	251.0	284.8	316.3	281.7	295.0
Pinal	356.4	255.4	300.7	357.7	277.9	311.0	300.8	224.9	263.6
Santa Cruz	257.0	297.8	279.9	246.4	220.7	233.8	220.3	216.6	217.2
Yavapai	345.0	318.7	322.9	263.8	229.2	241.0	240.8	237.7	236.5
Yuma	359.7	194.3	274.0	402.6	235.6	313.4	383.3	279.8	327.1
ARIZONA	321.1	254.1	281.1	330.1	244.6	279.3	303.8	256.8	274.8

^ = Fewer than 10 cases reported. The rate is considered unstable.

Table 7: Age-Adjusted Incidence Rates of Invasive Cancer Cases by County and Gender for Blacks in Arizona, 2005-2007

	2005			2006			2007		
County	Male	Female	Total	Male	Female	Total	Male	Female	Total
Apache	0.0	0.0	0.0	0.0	0.0	0.0	453.9^	0.0	167.2^
Cochise	423.1^	285.0^	361.3	383.3^	689.3^	503.4	427.3	206.7	319.1
Coconino	407.3^	246.8^	333.5^	0.0	410.2^	191.2^	644.7^	363.7^	473.7^
Gila	454.7^	0.0	282.2^	0.0	0.0	0.0	1713.2^	0.0	1713.2^
Graham	0.0	403.0^	186.0^	0.0	0.0	0.0	0.0	0.0	0.0
Greenlee	3177.3^	0.0	3177.3^	0.0	0.0	0.0	0.0	0.0	0.0
La Paz	0.0	0.0	0.0	0.0	1142.1^	428.3^	0.0	0.0	0.0
Maricopa	366.3	324.7	343.6	412.8	353.1	376.7	428.6	358.6	385.7
Mohave	310.2^	273.3^	215.6^	462.1^	477.2^	476.3^	168.4	100.8^	132.4^
Navajo	74.3^	0.0	39.1^	552.9^	0.0	278.7^	901.0^	172.3^	549.0^
Pima	459.3	339.4	400.3	375.7	199.7	285.8	495.8	237.0	358.3
Pinal	389.8	367.8^	358.7	433.1	588.5	504.8	371.0	473.6	399.1
Santa Cruz	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Yavapai	138.7	736.3^	443.4^	0.0	138.7^	60.1^	244.7^	433.6^	349.1^
Yuma	469.3	249.7^	341.9^	62.1^	452.7^	237.1^	148.4^	137.9^	152.6^
ARIZONA	381.6	323.9	350.8	385.2	339.1	357.9	435.7	331.2	376.2

^ = Fewer than 10 cases reported. The rate is considered unstable.

Table 8: Age-Adjusted Incidence Rates of Invasive Cancer Cases by County and Gender for American Indians in Arizona, 2005-2007

	2005			2006			2007		
County	Male	Female	Total	Male	Female	Total	Male	Female	Total
Apache	284.3	170.6	218.7	221.6	196.2	205.5	223.9	170.3	192.2
Cochise	85.9^	373.7^	239.1^	0.0	121.2^	55.4^	247.2^	93.6^	167.1^
Coconino	286.6	108.6	183.4	203.6	203.6	202.7	197.2	174.3	182.1
Gila	88.8^	188.0^	141.9^	224.3^	106.5^	161.9^	214.4^	262.0^	233.7
Graham	451.2	97.3^	283.2^	447.7^	151.4^	295.0	264.3^	536.0^	427.7
Greenlee	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
La Paz	178.0^	182.0^	175.7^	156.3^	224.8^	195.7^	513.3^	126.1^	298.4^
Maricopa	175.2	222.2	202.1	217.5	216.3	216.3	460.6	261.0	342.2
Mohave	436.8^	46.3^	209.7^	75.2^	104.2^	95.0^	100.9^	148.2^	117.6^
Navajo	260.9	205.9	224.8	262.0	219.2	236.0	234.7	246.9	240.1
Pima	288.4	168.2	211.3	286.5	240.5	258.8	245.1	177.0	206.9
Pinal	198.2	245.3	229.7	392.9	247.1	297.7	255.5	204.9	231.5
Santa Cruz	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Yavapai	0.0	145.4^	74.6^	119.1^	114.1^	110.1^	544.4^	240.6^	357.0^
Yuma	298.0^	90.0^	171.5^	59.1^	0.0	26.8^	0.0	266.3^	132.8^
ARIZONA	250.2	180.8	208.7	232.4	204.7	215.7	272.4	215.2	238.7

^ = Fewer than 10 cases reported. The rate is considered unstable.

Table 9: Age-Adjusted Incidence Rates of Invasive Cancer Cases by County and Gender for Asians/Pacific Islanders in Arizona, 2005-2007

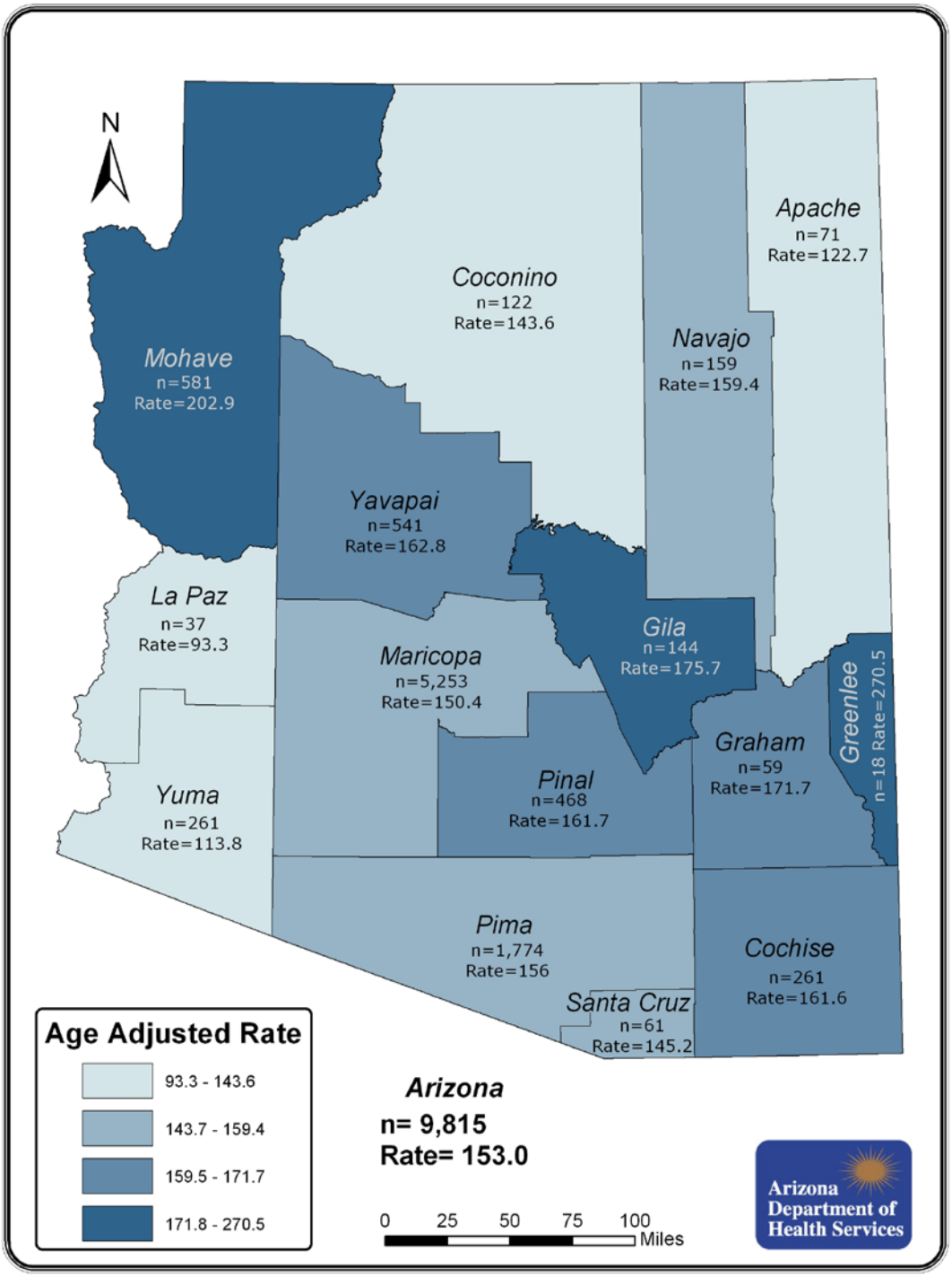
	2005			2006			2007		
County	Male	Female	Total	Male	Female	Total	Male	Female	Total
Apache	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cochise	0.0	220.1^	177.0^	196.3^	120.2^	133.1^	366.9^	98.5^	164.0^
Coconino	380.7^	156.3^	280.8^	136.9^	396.4^	309.8^	115.4^	0.0	57.0^
Gila	0.0	0.0	0.0	0.0	428.3^	214.2^	0.0	0.0	0.0
Graham	627.2^	0.0	298.6^	594.7^	0.0	446.1^	0.0	1876.3^	738.9^
Greenlee	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
La Paz	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maricopa	245.6	169.1	199.4	227.5	217.7	217.6	287.6	188.8	230.5
Mohave	347.3^	277.2^	265.3^	0.0	53.6^	31.8^	273.1^	143.0^	170.9^
Navajo	1350.0^	285.0^	499.0^	0.0	0.0	0.0	397.2^	0.0	211.8^
Pima	258.9	196.6	219.9	286.9	211.8	236.8	148.1	162.1	157.9
Pinal	328.8^	138.7^	233.0^	384.2^	649.2^	531.6	349.2^	274.6^	310.8^
Santa Cruz	0.0	0.0	0.0	0.0	892.1^	446.1^	489.5^	0.0	263.6^
Yavapai	155.2^	167.2^	154.7^	387.2^	387.8^	371.3^	0.0	144.5^	91.7^
Yuma	214.2^	69.2^	136.7^	584.9^	99.1^	268.1^	291.9^	173.8^	191.6^
ARIZONA	246.2	173.2	201.9	255.8	220.4	230.3	262.0	180.0	212.7

^ = Fewer than 10 cases reported. The rate is considered unstable.

CHAPTER 2

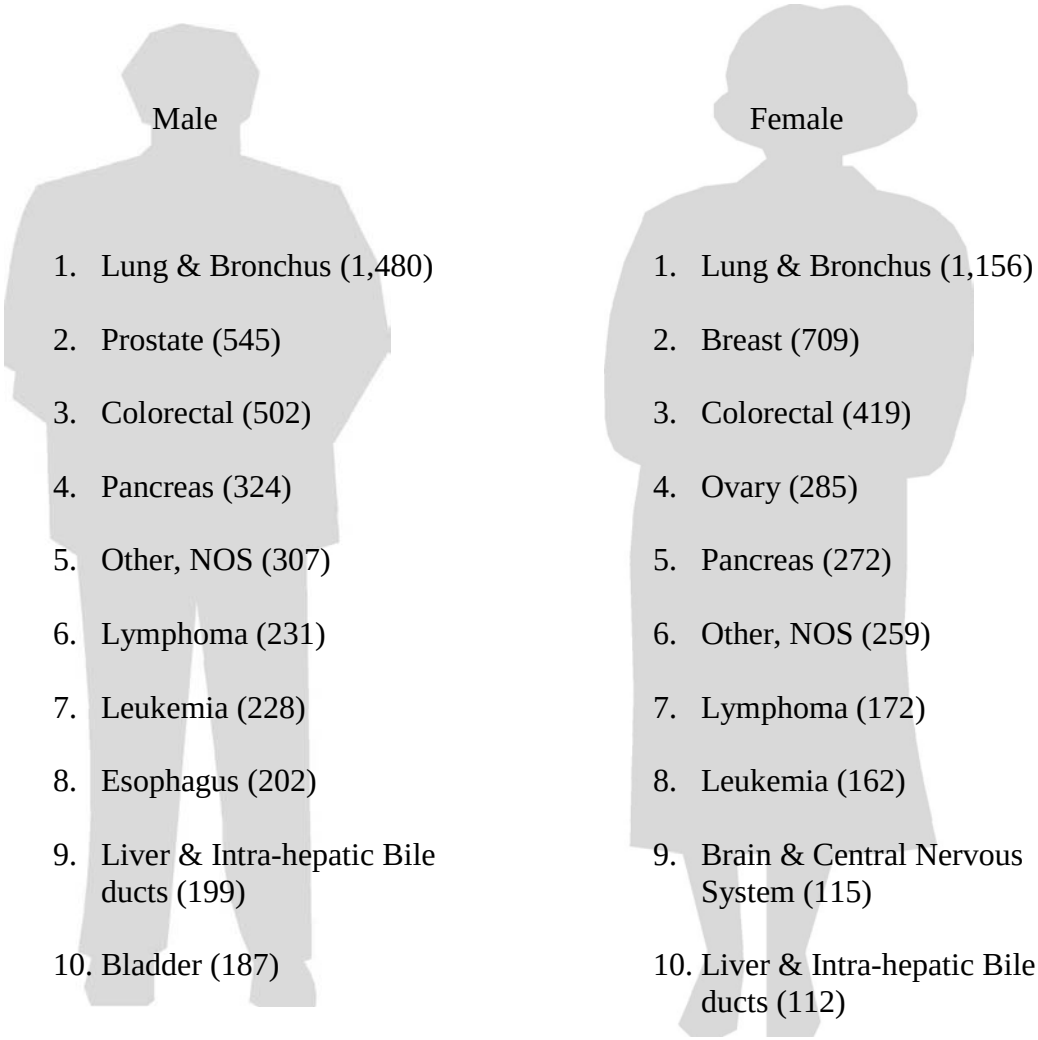
Cancer Mortality

Cancer Mortality in Arizona
Average Annual Counts and Age-Adjusted Rates by County
2005-2007



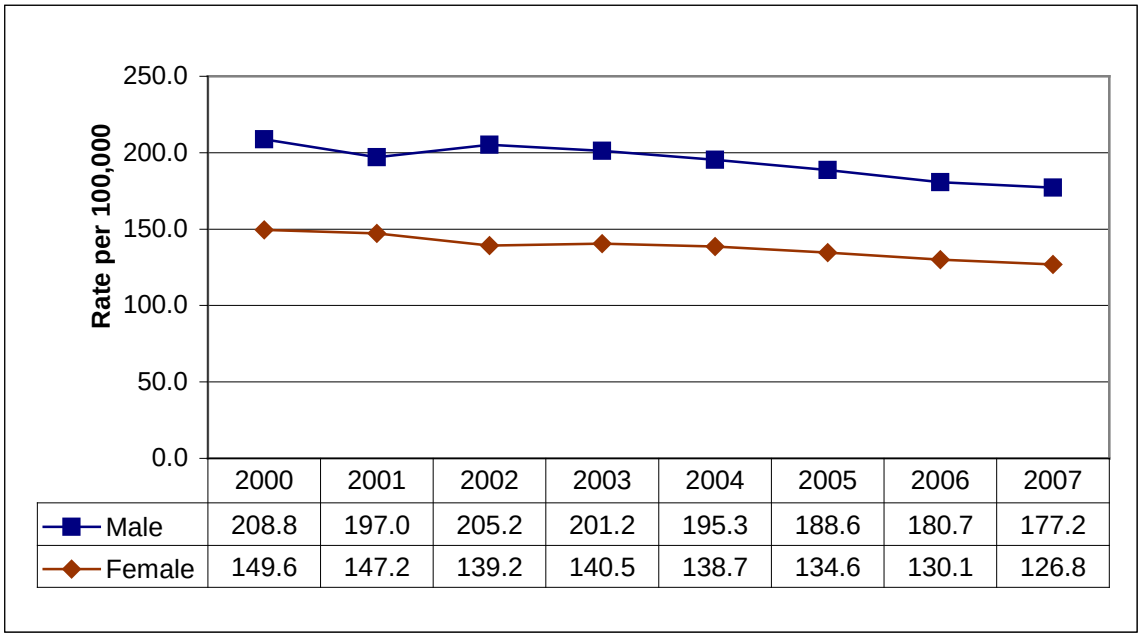
Note: County of residence for some cases is unknown. The sum of the cases per county does not equal the state total listed in this map due to rounding and the inclusion of an average of 4 cases per year with an unknown county of residence.

Figure 7: Ten Leading Sites of Cancer Deaths by Site and Gender, Average Annual Count, 2005-2007



*Other, NOS=Ill-defined or site not otherwise specified.

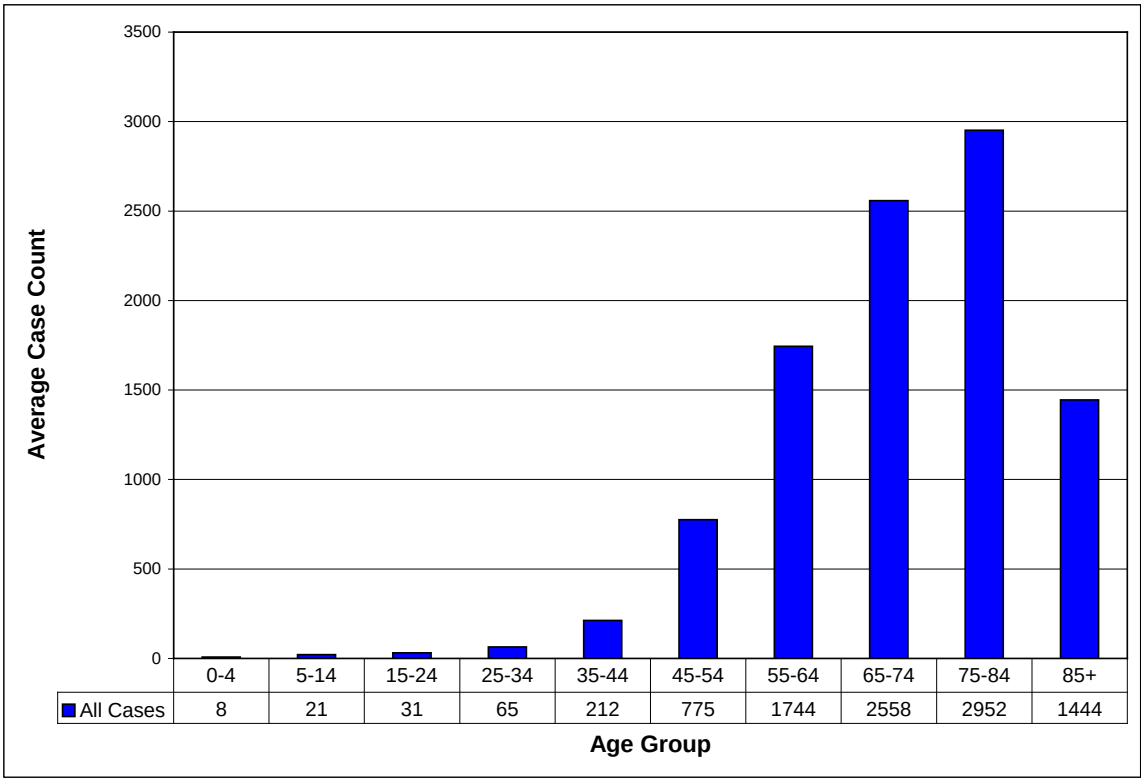
Figure 8: Age-Adjusted Cancer Mortality Rates for All Cancers by Gender and Year, Arizona, 2000-2007



	2000	2001	2002	2003	2004	2005	2006	2007
Male	208.8	197.0	205.2	201.2	195.3	188.6	180.7	177.2
Female	149.6	147.2	139.2	140.5	138.7	134.6	130.1	126.8

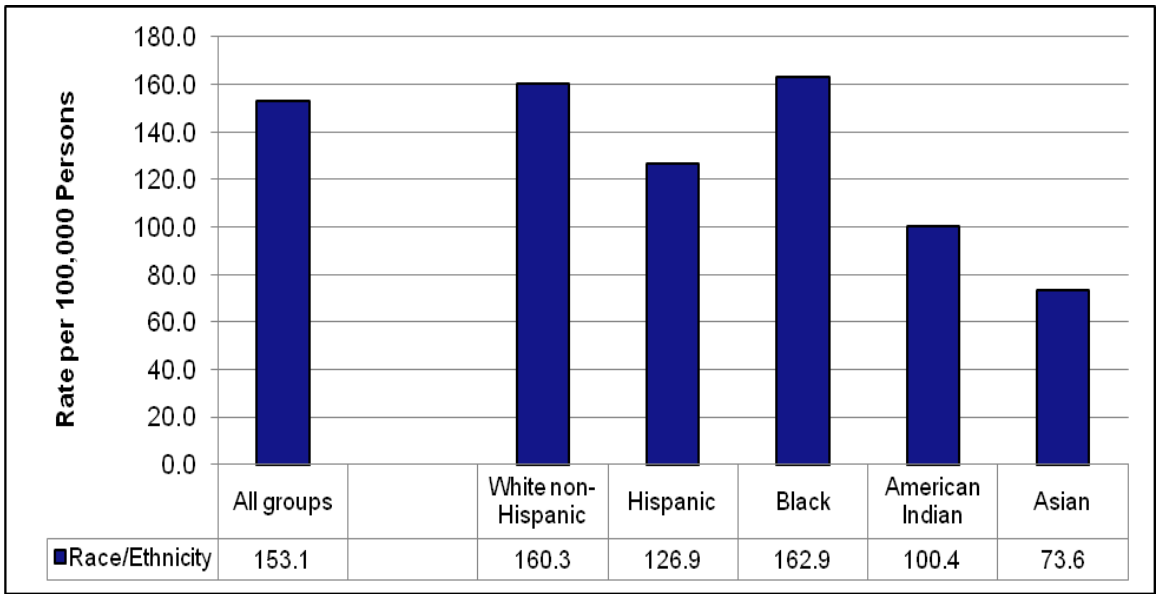
Number of deaths per 100,000 population age-adjusted to the 2000 U.S. standard

Figure 9: Cancer Mortality by Age in Arizona, Average Annual Count, 2005-2007



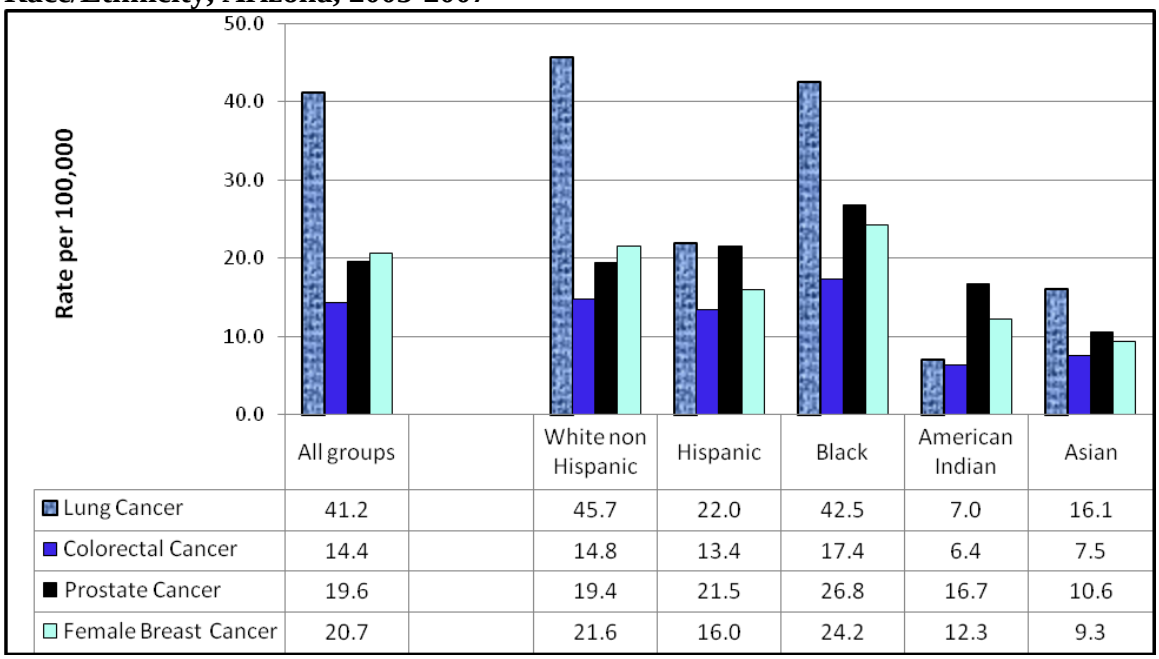
	0-4	5-14	15-24	25-34	35-44	45-54	55-64	65-74	75-84	85+
All Cases	8	21	31	65	212	775	1744	2558	2952	1444

Figure 10: Average Annual Age-Adjusted Mortality Rates of Invasive Cancer Cases by Race/Ethnicity, 2005-2007



Race/Ethnicity	All groups	White non-Hispanic	Hispanic	Black	American Indian	Asian
	153.1	160.3	126.9	162.9	100.4	73.6

Figure 11: Average Annual Age-Adjusted Mortality Rates for Select Cancers by Race/Ethnicity, Arizona, 2005-2007



	All groups	White non Hispanic	Hispanic	Black	American Indian	Asian
Lung Cancer	41.2	45.7	22.0	42.5	7.0	16.1
Colorectal Cancer	14.4	14.8	13.4	17.4	6.4	7.5
Prostate Cancer	19.6	19.4	21.5	26.8	16.7	10.6
Female Breast Cancer	20.7	21.6	16.0	24.2	12.3	9.3

Adjusted to the 2000 standard U.S. population. The rates were per 100,000 persons in specified group per year. The rates for prostate cancer were per 100,000 males. The rates for breast cancer were per 100,000 females.

CHAPTER 3

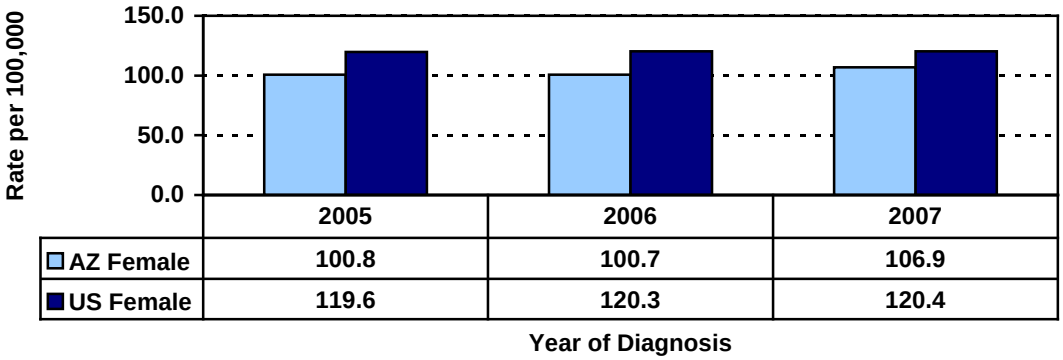
Incidence and Mortality of Select Cancers

Female Breast Cancer
Colorectal Cancer
Lung and Bronchus Cancer
Melanoma
Prostate Cancer

Female Breast Cancer in Arizona

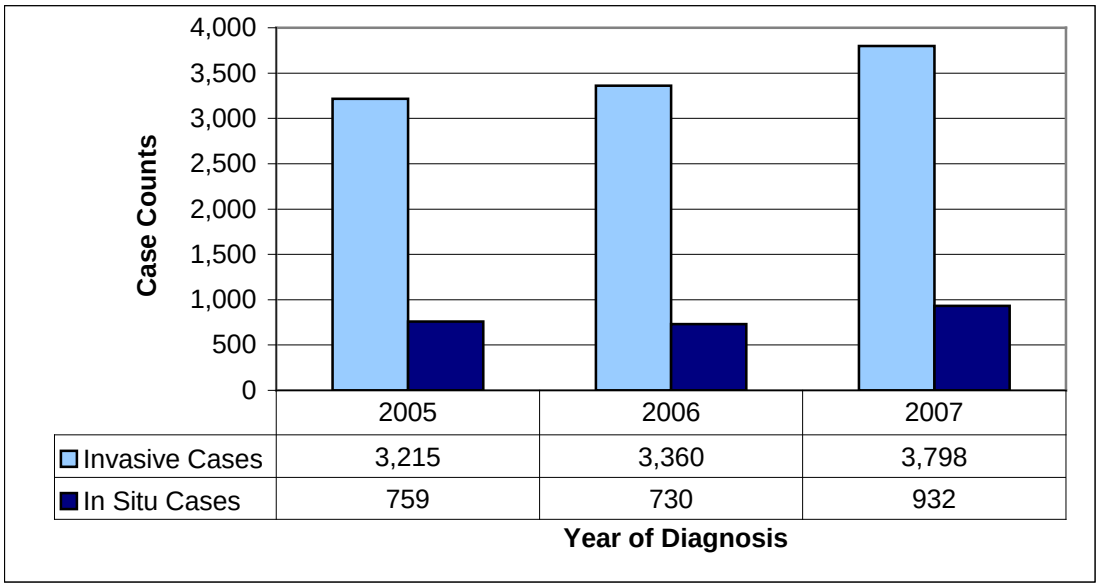
Breast cancer is the most frequently diagnosed cancer and the second most common cancer death identified among women in Arizona during 2005-2007. This cancer also continues to be the most common type diagnosed among women in the US. In 2005-2007, an average of 3,458 new invasive and 800 *in situ* cases of female breast cancer was diagnosed per year in Arizona.

Figure 12: U.S.* and Arizona Female Breast Cancer Age-Adjusted Incidence Rates, 2005-2007



Source: U.S. Cancer Statistics Working Group. *United States Cancer Statistics: 1999–2007 Incidence and Mortality Web-based Report*. Atlanta: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention and National Cancer Institute; 2010. Available at: www.cdc.gov/uscs.

Figure 13: Counts of Invasive and In Situ Female Breast Cancer In Arizona Residents, 2005-2007



About half (46%) of female breast cancer cases were diagnosed with local stage of disease, and one quarter was diagnosed with regional stage. While 19% of cases were diagnosed *in situ* stage, only 4% of female breast cancer cases were diagnosed with distant stage. This indicates that breast cancer is being diagnosed in earlier stages, which will contribute to successful treatments, and better prognoses.

Figure 14: Percentage of Female Breast Cancer Cases by SEER Summary Stage, 2005-2007

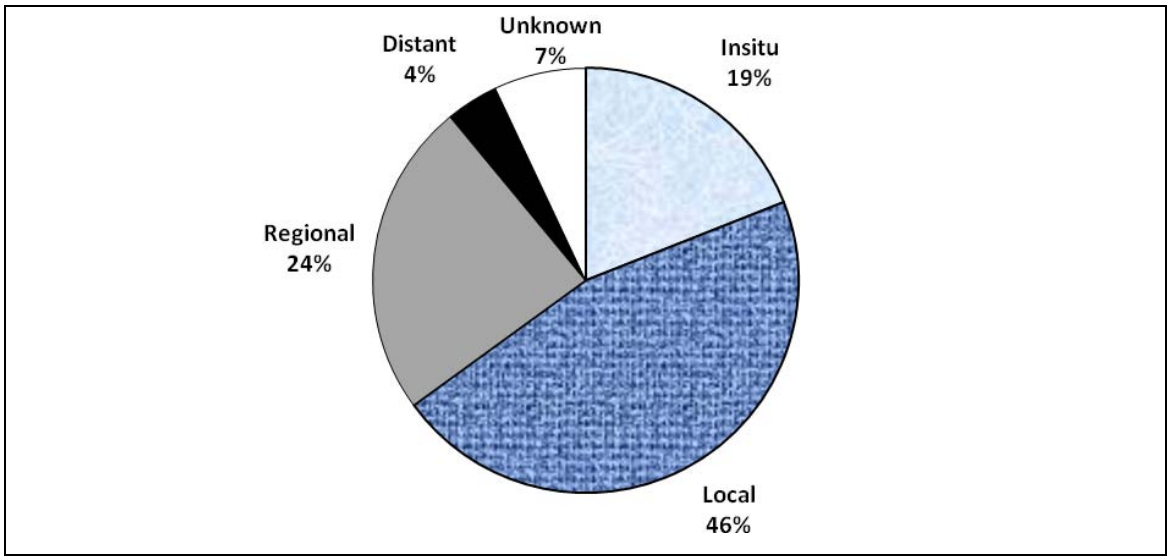
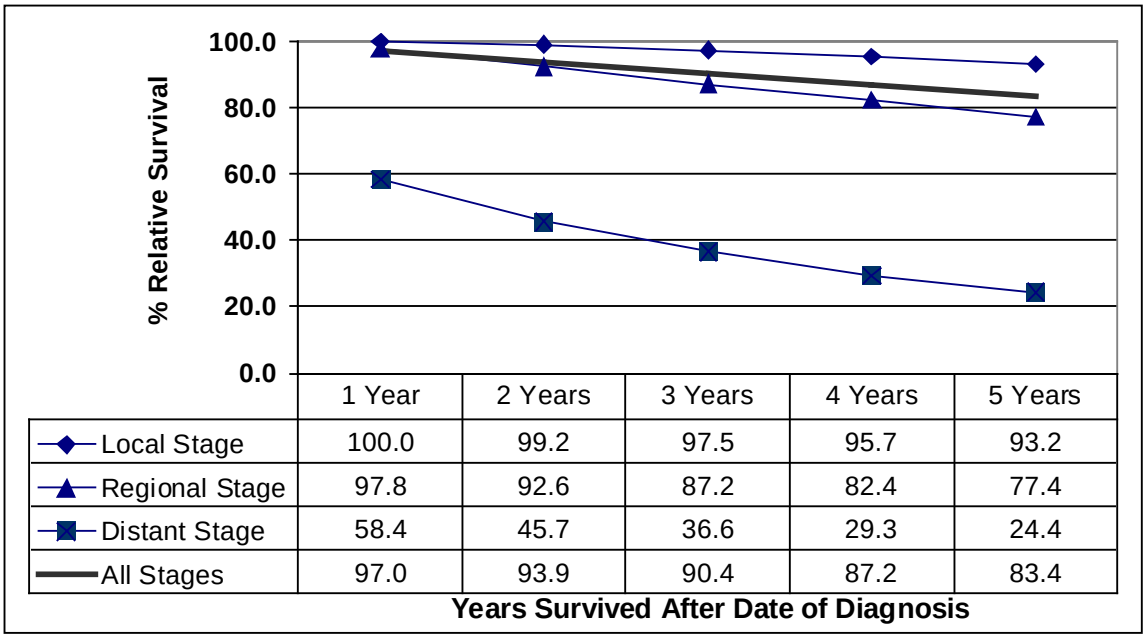
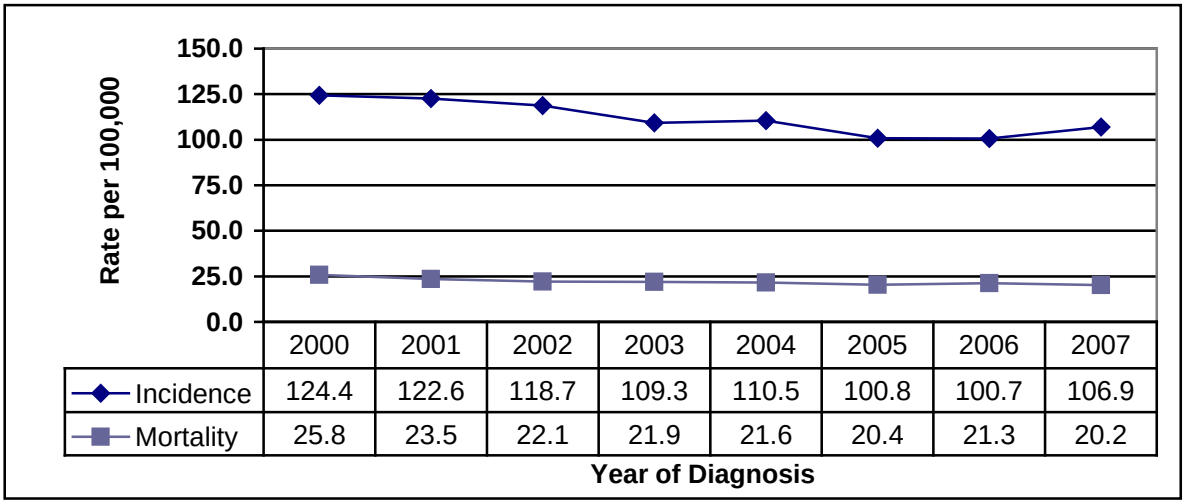


Figure 15: Five-Year Percent Relative Female Breast Cancer Survival, 1995-2005



From 2000-2006, the age-adjusted incidence rate for breast cancer had decreased by 20 percent. However, it increased by 6 percent from 2006 to 2007. The age-adjusted mortality rate for female breast cancer had remained constant. Female breast cancer diagnoses occur over five times more frequently than do deaths caused by the same cancer.

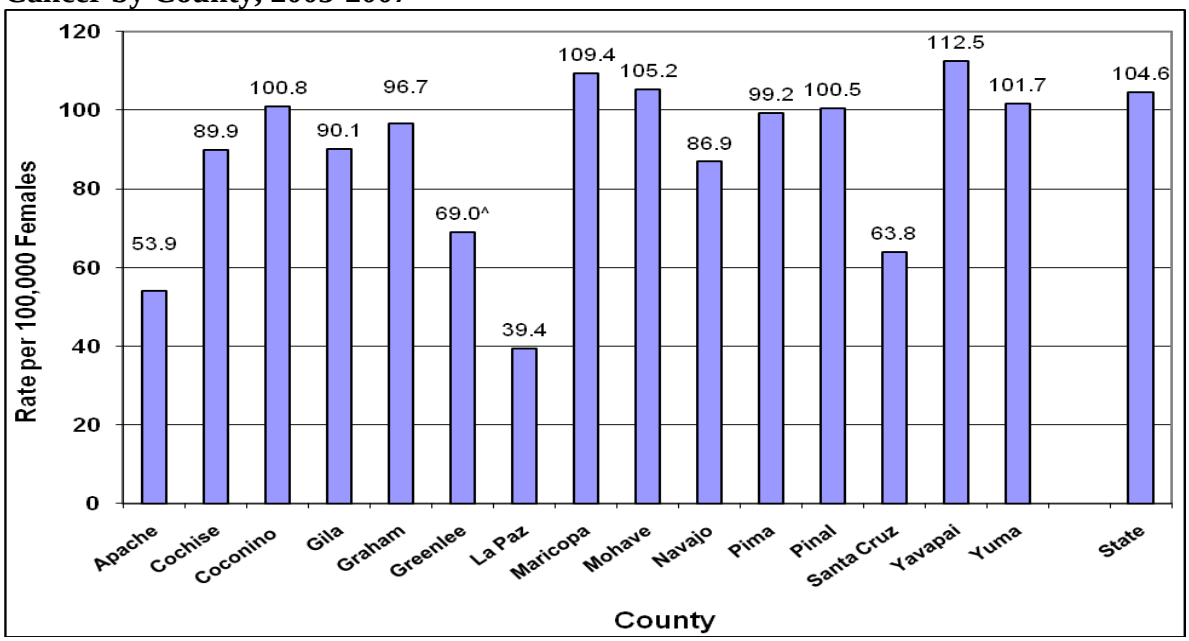
Figure 16: Age-Adjusted Incidence and Mortality Rates for Female Breast Cancer in Arizona, 2000-2007



	2000	2001	2002	2003	2004	2005	2006	2007
Incidence	124.4	122.6	118.7	109.3	110.5	100.8	100.7	106.9
Mortality	25.8	23.5	22.1	21.9	21.6	20.4	21.3	20.2

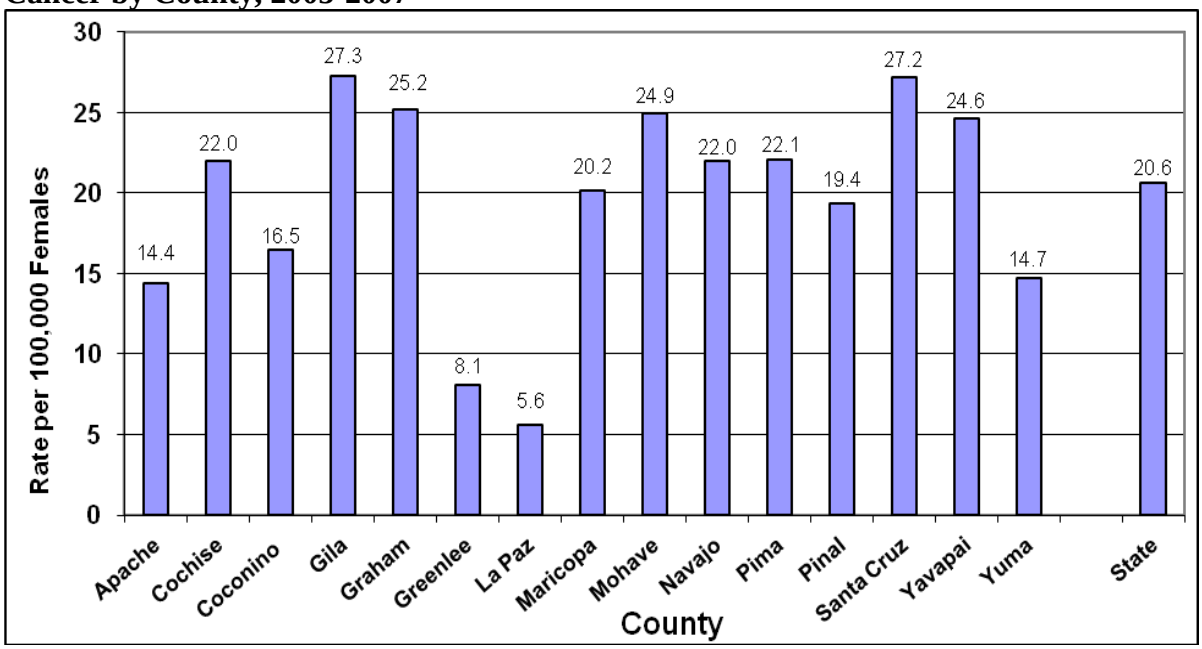
In 2005-2007, Yavapai County had the highest incidence rate (112.5), while Gila and Santa Cruz counties had the highest mortality rates for female breast cancer (27.3 and 27.2 per 100,000, respectively). When compared to the state rate in 2005-2007, twelve counties have lower average incidence rates, and four counties had higher average incidence rates than the state.

Figure 17: Average Annual Age-Adjusted Incidence Rates for Female Breast Cancer by County, 2005-2007



^ = Fewer than 10 cases reported. The rate is considered unstable.

Figure 18: Average Annual Age-Adjusted Mortality Rates for Female Breast Cancer by County, 2005-2007



^ = Fewer than 10 cases reported. The rate is considered unstable.

When analyzed by race and ethnicity, the female breast cancer incidence rates were highest among White, non-Hispanics (113.1 per 100,000) in Arizona, and the mortality rate was highest among Blacks (24.2 per 100,000). American Indians have the lowest female breast cancer incidence (47.9 per 100,000) while the mortality rate among Asians and Pacific Islanders (9.3 per 100,000) is the lowest among race/ethnicity groups.

Figure 19: Average Annual Age-Adjusted Incidence Rates for Female Breast Cancer by Race/Ethnicity, 2005-2007

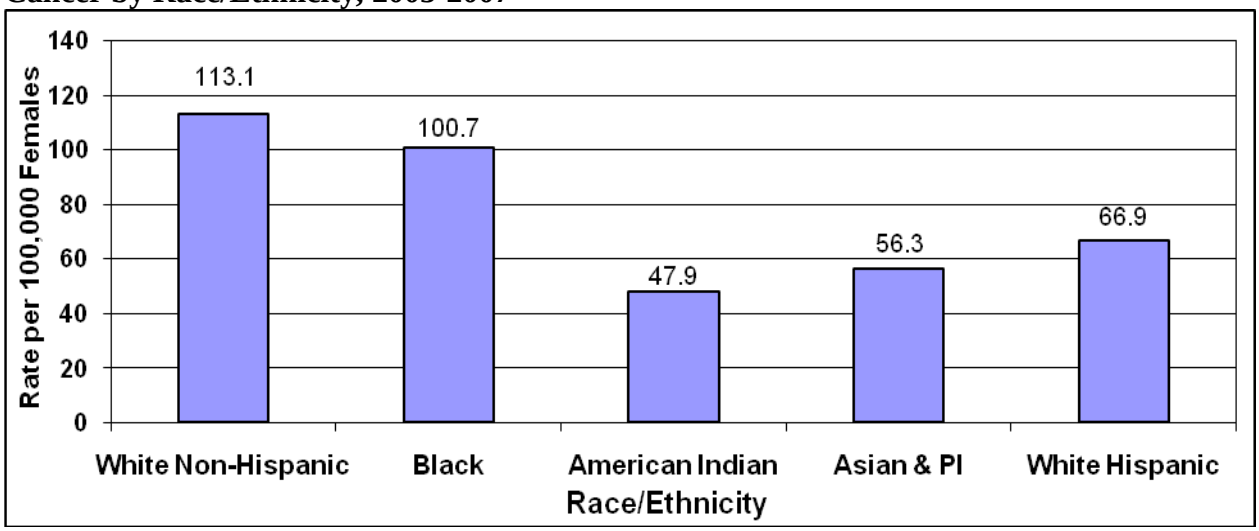
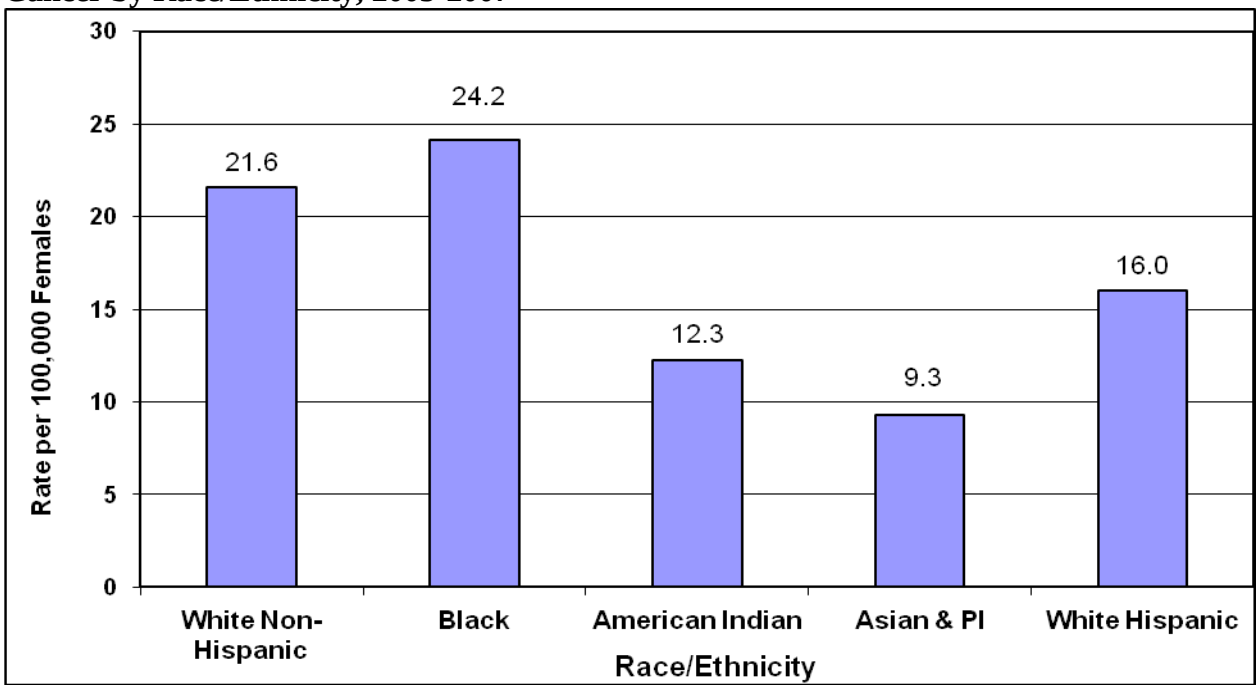


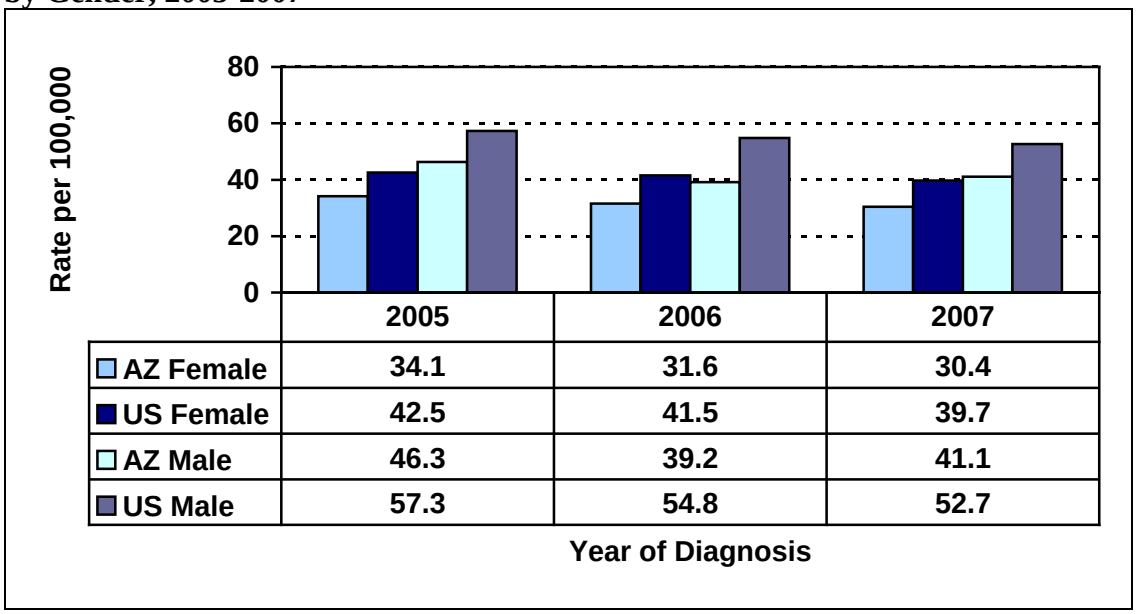
Figure 20: Average Annual Age-Adjusted Mortality Rates for Female Breast Cancer by Race/Ethnicity, 2005-2007



Colorectal Cancer in Arizona

Colorectal cancer was the third most frequently diagnosed cancer among Arizonans in 2005-2007 (see Figure 1). A total of 1,247 and 1,124 cases of invasive colorectal cancer were reported in men and women, on average during this time period. The percentage change in the incidence of colorectal cancer decreased 11 percent for Arizona females and 6% for Arizona males between 2005 and 2007. In 2007 the Arizona female and male rates of colorectal cancer were considerably lower than the U.S. female and male rates.

Figure 21: U.S.* and Arizona Age-Adjusted Incidence Rates for Colorectal Cancer by Gender, 2005-2007



Source: U.S. Cancer Statistics Working Group. *United States Cancer Statistics: 1999–2007 Incidence and Mortality Web-based Report.* Atlanta: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention and National Cancer Institute; 2010. Available at: www.cdc.gov/uscs

When analyzed by stage, slightly more cases of colorectal cancer cases were diagnosed in local stage as in regional stage (36% and 30% respectively), and those stages combined accounted for nearly two-thirds of all diagnosed cases. Approximately 30% of cases were diagnosed in regional stage and 17% were diagnosed in distant stage. Information about the importance of colorectal screenings will help educate the public about the benefits of early detection of colorectal cancer. ADHS has implemented a CDC program to pay for uninsured persons to receive colorectal screening. The goal is to increase the number of screenings performed, thereby decreasing the number of colorectal cases diagnosed in later stages and increasing treatment options and chances of survival.

Figure 22: Percentage of Colorectal Cancer Cases by SEER Summary Stage, 2005-2007

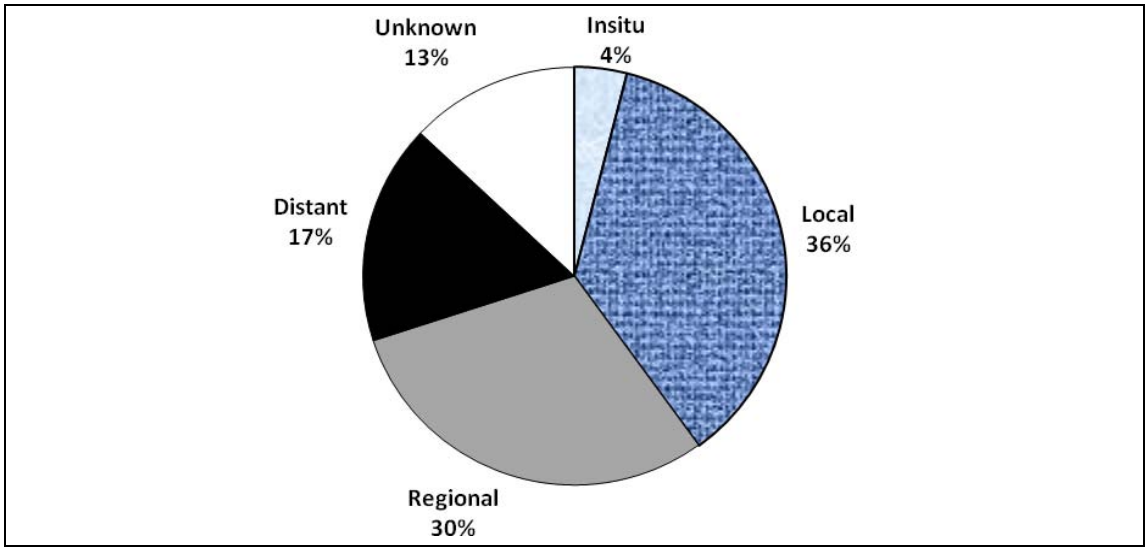
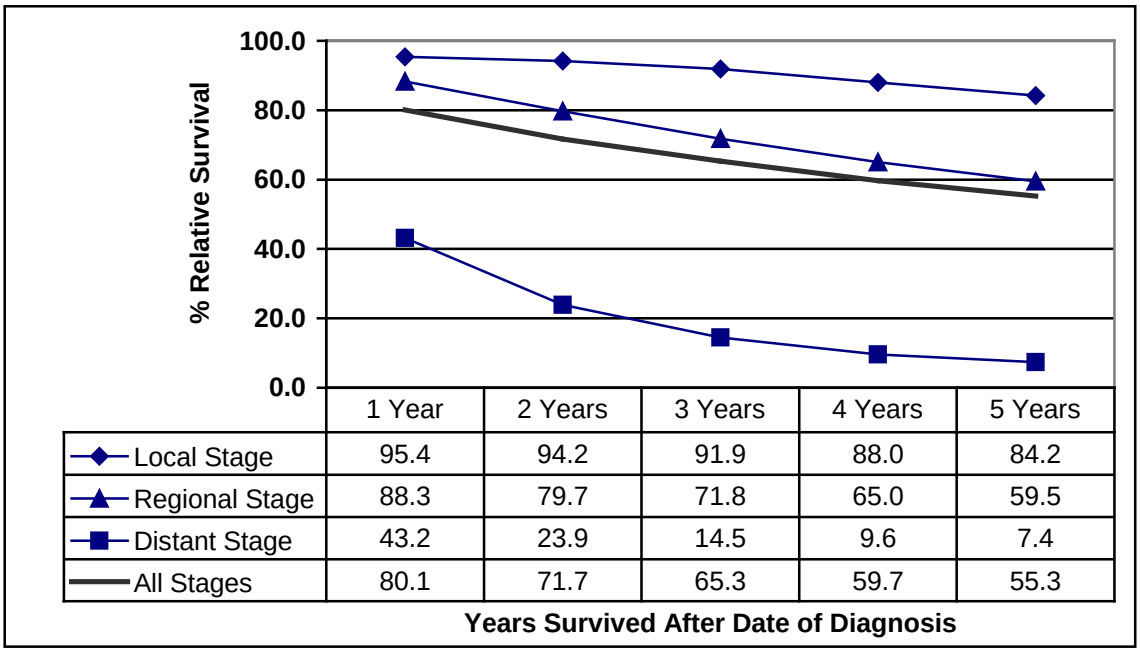


Figure 23: Five-Year Percent Relative Colorectal Cancer Survival, 1995-2005

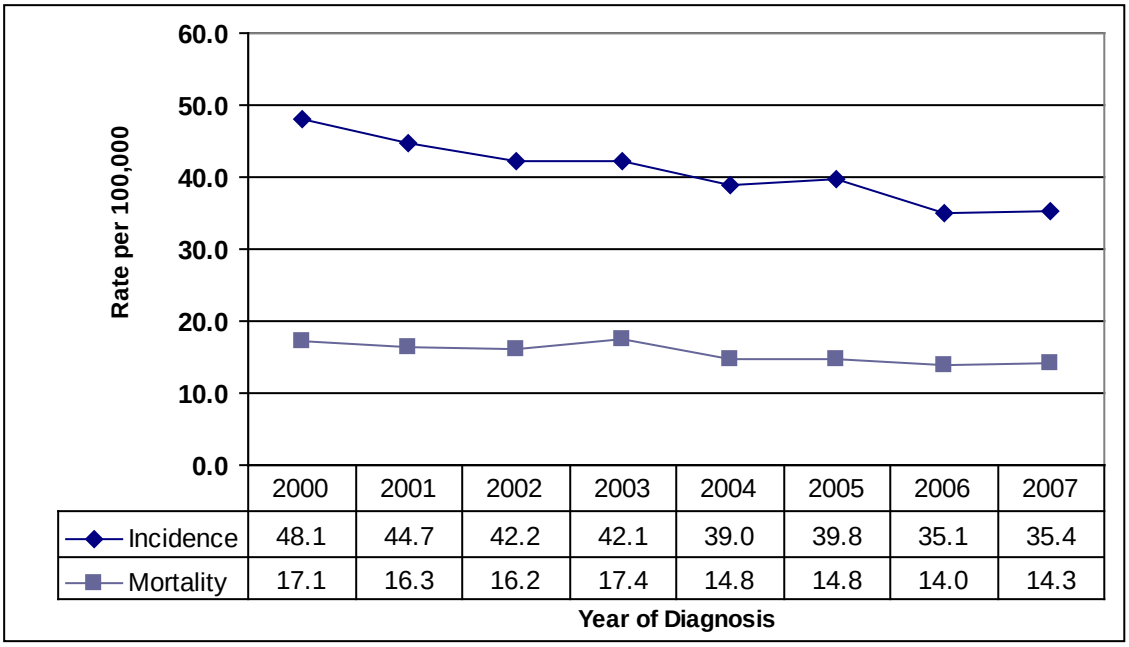


	1 Year	2 Years	3 Years	4 Years	5 Years
Local Stage	95.4	94.2	91.9	88.0	84.2
Regional Stage	88.3	79.7	71.8	65.0	59.5
Distant Stage	43.2	23.9	14.5	9.6	7.4
All Stages	80.1	71.7	65.3	59.7	55.3

Years Survived After Date of Diagnosis

From 2000 to 2006, the age-adjusted incidence rate decreased 27 percent while mortality rate in Arizona for colorectal cancer decreased 16 percent. There was no change in the incidence or mortality from colorectal cancer between 2006 and 2007.

Figure 24: Age-Adjusted Incidence and Mortality Rates for Colorectal Cancer In Arizona, 2000-2007



	2000	2001	2002	2003	2004	2005	2006	2007
Incidence	48.1	44.7	42.2	42.1	39.0	39.8	35.1	35.4
Mortality	17.1	16.3	16.2	17.4	14.8	14.8	14.0	14.3

When analyzed by county in 2005-2007, Greenlee County had the highest colorectal cancer incidence rate and Graham County had the highest mortality rate (67.9 and 22.5 per 100,000, respectively).

Figure 25: Average Annual Age-Adjusted Incidence Rates for Colorectal Cancer By County, 2005-2007

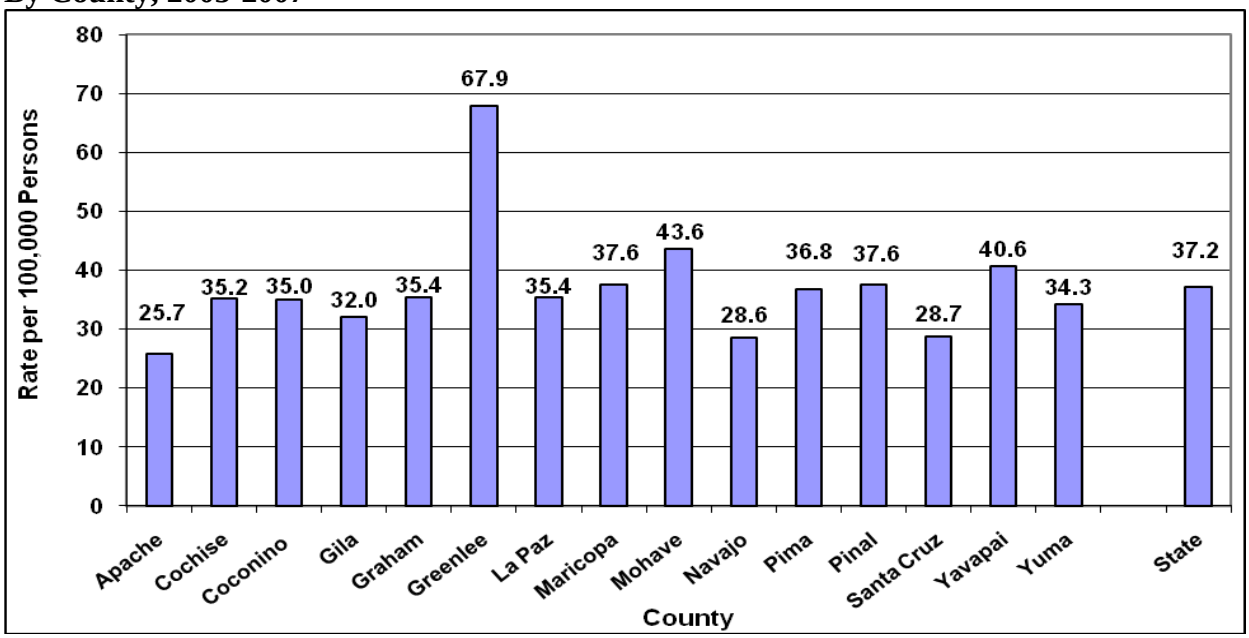
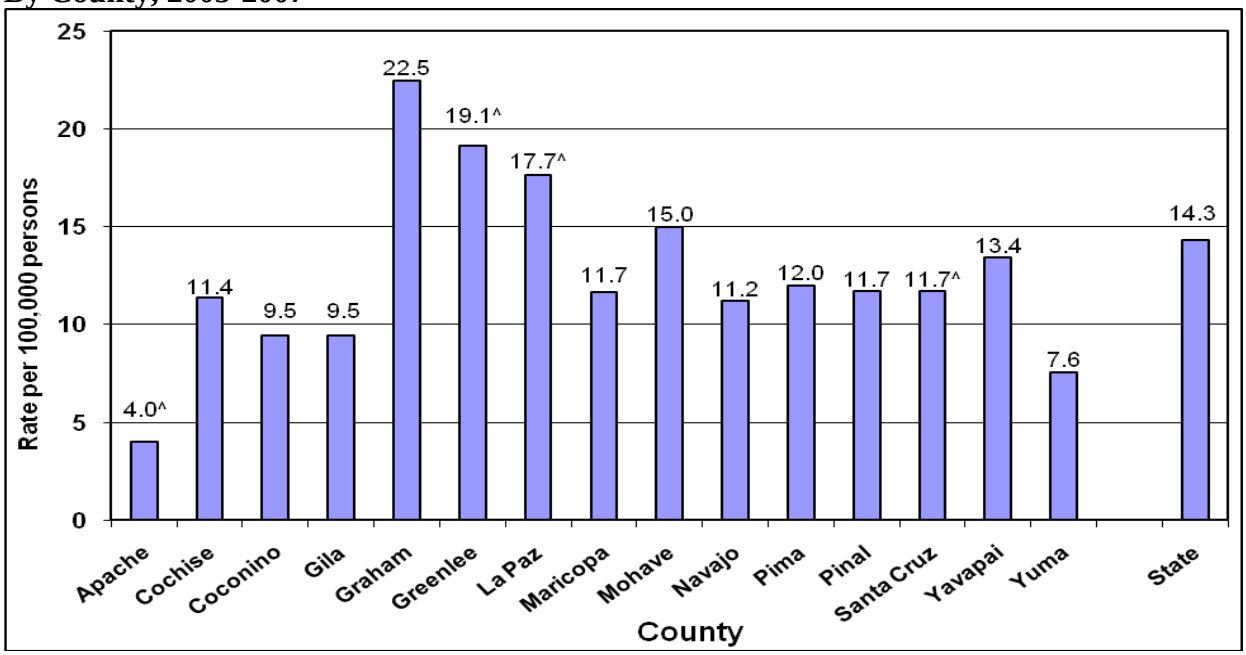


Figure 26: Average Annual Age-Adjusted Mortality Rates for Colorectal Cancer By County, 2005-2007



^ = Fewer than 10 cases reported. The rate is considered unstable.

When analyzed by race and ethnicity, Blacks and White Non-Hispanics have the highest rates in colorectal cancer incidence (40.0 and 37.9 per 100,000 respectively) and Blacks have the highest mortality rates in Arizona (17.4 per 100,000). American Indians and Asians/PI have the lowest colorectal cancer incidence rates (24.8 and 27.5 per 100,000 respectively). These two groups also have the lowest mortality rates for colorectal cancer (6.4 and 7.5 per 100,000, respectively).

Figure 27: Average Annual Age-Adjusted Incidence Rates for Colorectal Cancer By Race/Ethnicity, 2005-2007

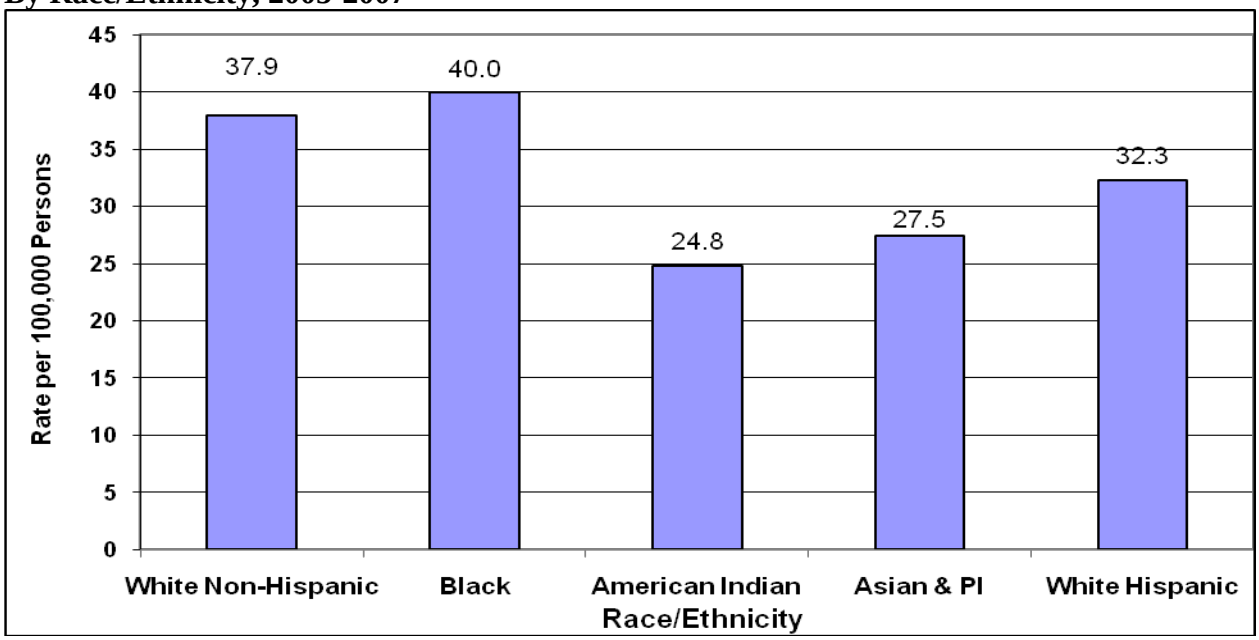
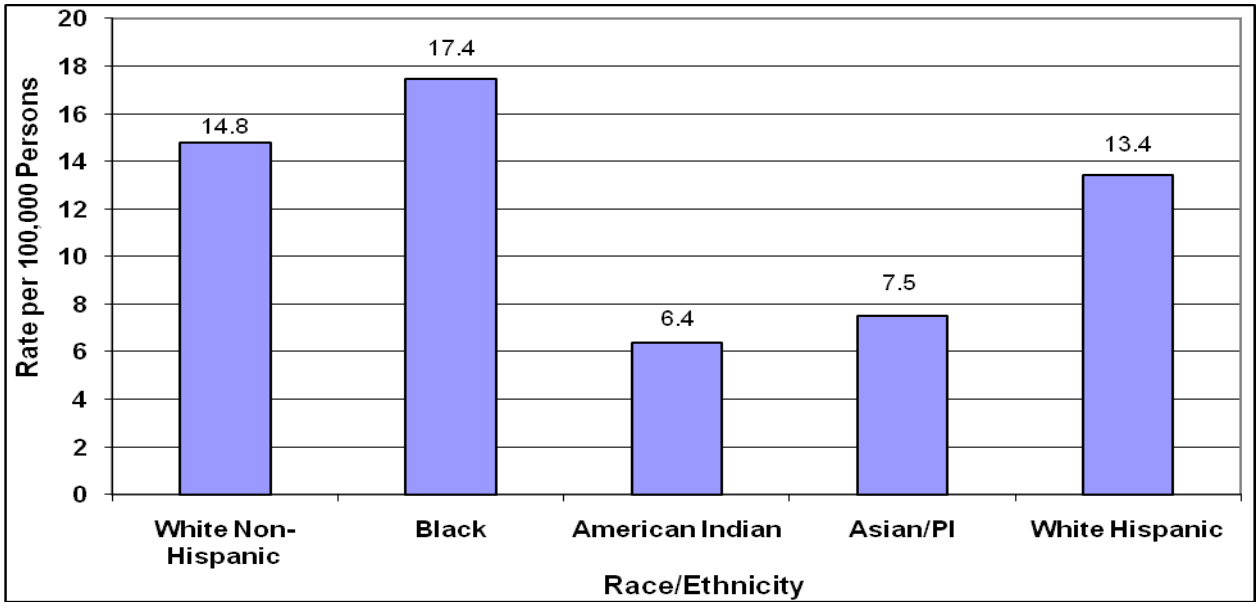


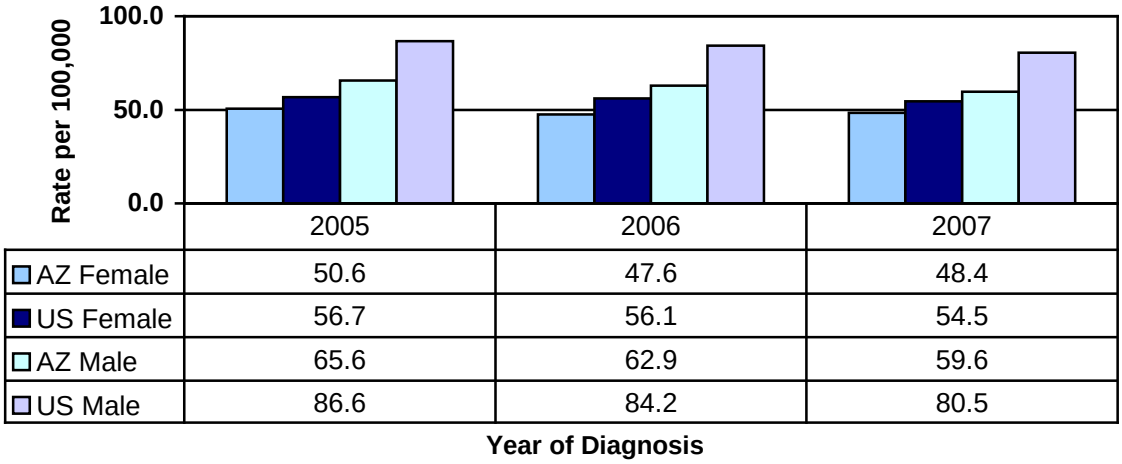
Figure 28: Average Annual Age-Adjusted Mortality Rates for Colorectal Cancer By Race/Ethnicity, 2005-2007



Lung Cancer in Arizona

Lung Cancer was the second most common cancer diagnosed among Arizonans in 2005-2007 (see Figure 1). An average of 1,842 and 1,690 cases occurred per year among males and females, respectively, during this time period. In 2007 the Arizona female and male rates of colorectal cancer were lower than the U.S. female and male rates (13% and 35% respectively).

Figure 29: U.S.* and Arizona Age-Adjusted Incidence Rates for Lung Cancer By Gender, 2005-2007



	2005	2006	2007
AZ Female	50.6	47.6	48.4
US Female	56.7	56.1	54.5
AZ Male	65.6	62.9	59.6
US Male	86.6	84.2	80.5

Source: U.S. Cancer Statistics Working Group. *United States Cancer Statistics: 1999–2007 Incidence and Mortality Web-based Report*. Atlanta: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention and National Cancer Institute; 2010. Available at: www.cdc.gov/uscs

When analyzed by stage, more lung cancer cases were diagnosed in distant stage (40.2%) than any other stage. This was due to no effective screening method for this cancer, and consequently this cancer is often found once it has progressed to a later stage. The percentage of cases diagnosed in local and regional stage *combined* was only 36.5%. In Arizona, one out of five lung cancer cases were reported to the ACR with an unknown stage, which makes it difficult to accurately report the number of cases by stage. Because there is no effective screening method, and since it is known that smoking causes lung cancer, reducing the number of smokers will lower the total number of lung cancers diagnosed at any stage, and will ultimately diminish the number of deaths due to lung cancer.

Figure 30: Percentage of Lung Cancer Cases by SEER Summary Stage, 2005-2007

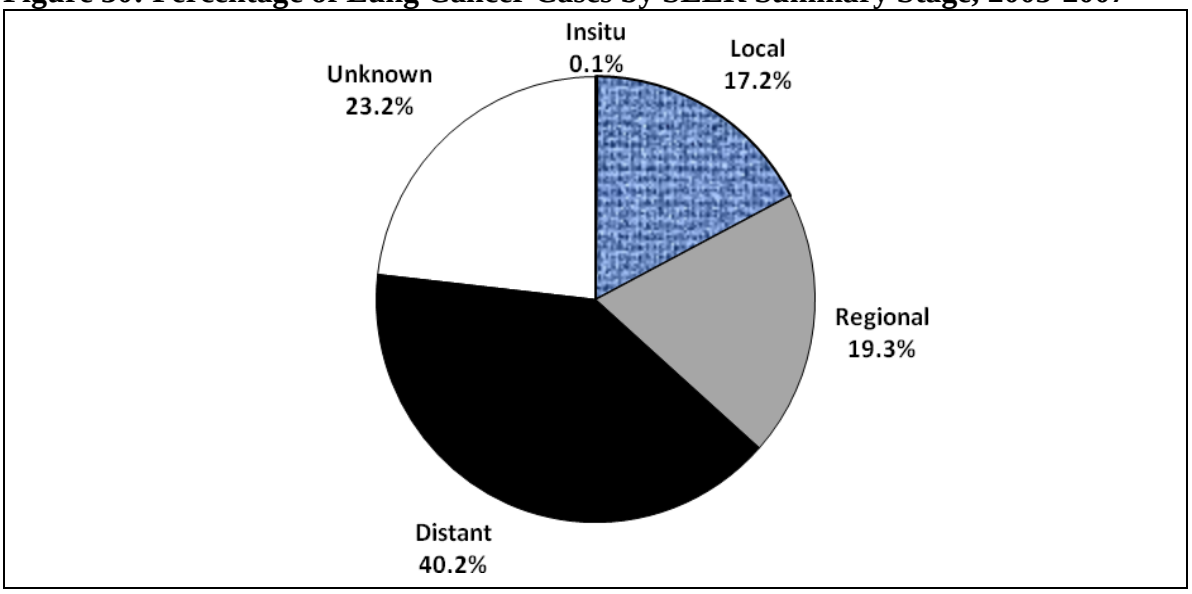
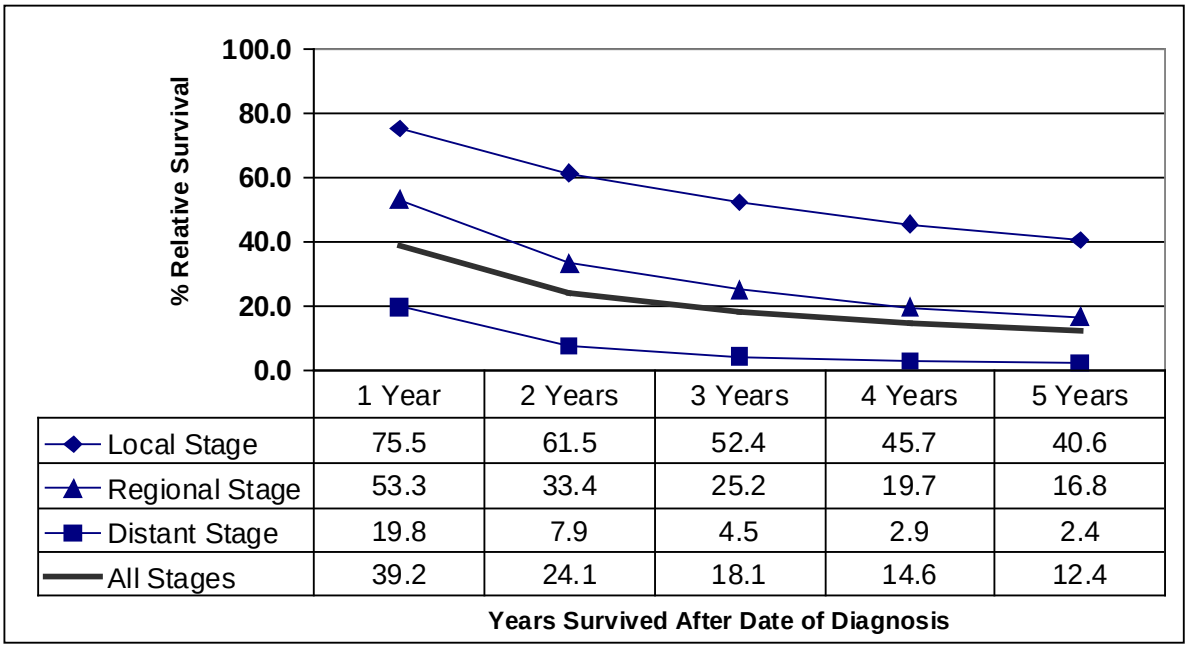


Figure 31: Five-Year Percent Relative Lung Cancer Survival, 1995-2005

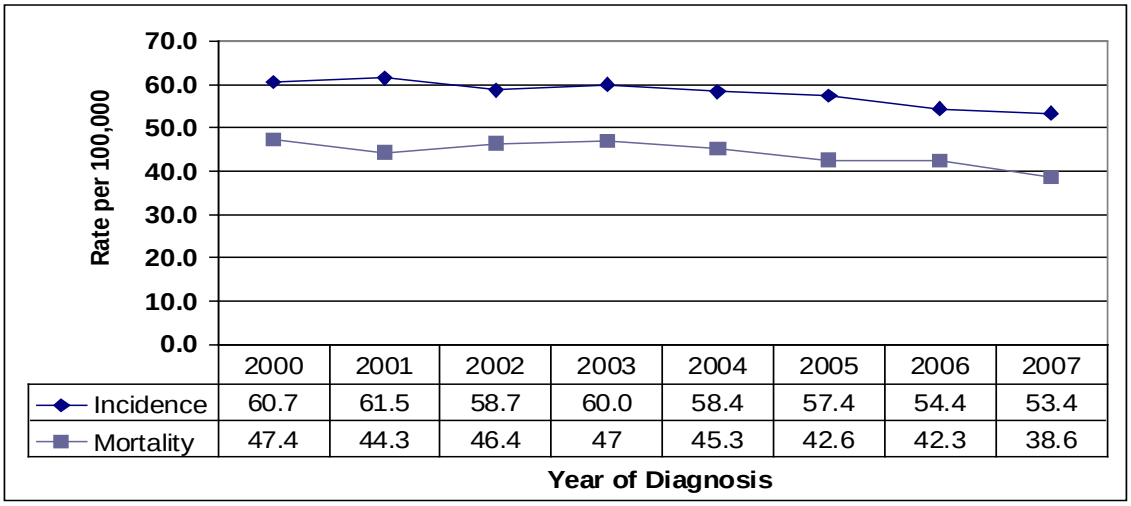


	1 Year	2 Years	3 Years	4 Years	5 Years
Local Stage	75.5	61.5	52.4	45.7	40.6
Regional Stage	53.3	33.4	25.2	19.7	16.8
Distant Stage	19.8	7.9	4.5	2.9	2.4
All Stages	39.2	24.1	18.1	14.6	12.4

Years Survived After Date of Diagnosis

Lung cancer continues to be a deadly cancer, with almost as many deaths per year (75%) as were cases diagnosed in Arizona. For Arizona men and women, lung cancer was the most common type of cancer death in 2005-2007. Cancer incidence decreased 12% and cancer mortality decreased 19% between 2000 and 2007.

Figure 32: Age-Adjusted Incidence and Mortality Rates for Lung Cancer in Arizona, 2000-2007



	2000	2001	2002	2003	2004	2005	2006	2007
Incidence	60.7	61.5	58.7	60.0	58.4	57.4	54.4	53.4
Mortality	47.4	44.3	46.4	47	45.3	42.6	42.3	38.6

In 2005-2007, Mohave County had both the highest lung cancer incidence and mortality rates in the State of Arizona (90.6 and 69.8 per 100,000, respectively). Apache county has the lowest incidence rate of lung cancer at 20.8 cases per 100,000 persons.

Figure 33: Average Annual Age-Adjusted Incidence Rates for Lung Cancer by County, 2005-2007

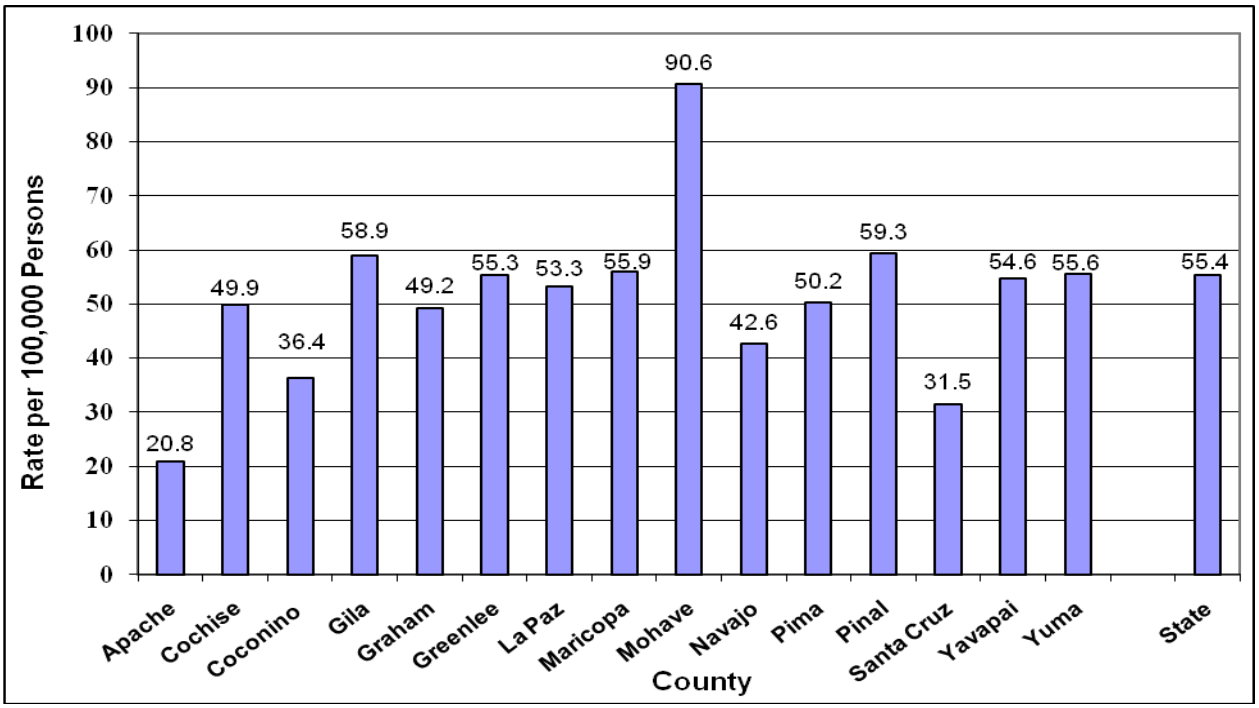
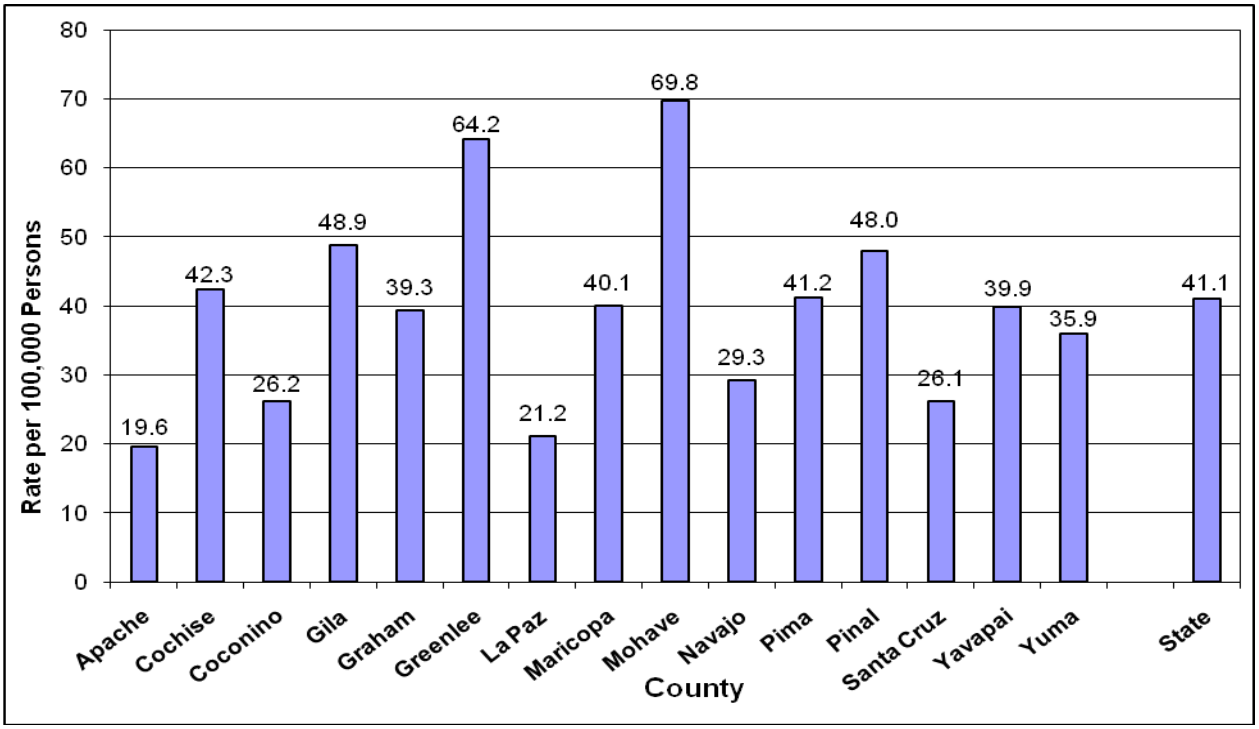


Figure 34: Average Annual Age-Adjusted Mortality Rates for Lung Cancer by County, 2005-2007



When analyzed by race and ethnicity, the lung cancer incidence and mortality rates were highest among White Non-Hispanics and Blacks (61.2 and 52.3 per 100,000 persons respectively) in Arizona. American Indians had the lowest rates for both lung cancer incidence and mortality (12.2 per 100,000 and 7.0 per 100,000, respectively).

Figure 35: Average Annual Age-Adjusted Incidence Rates for Lung Cancer by Race/Ethnicity, 2005-2007

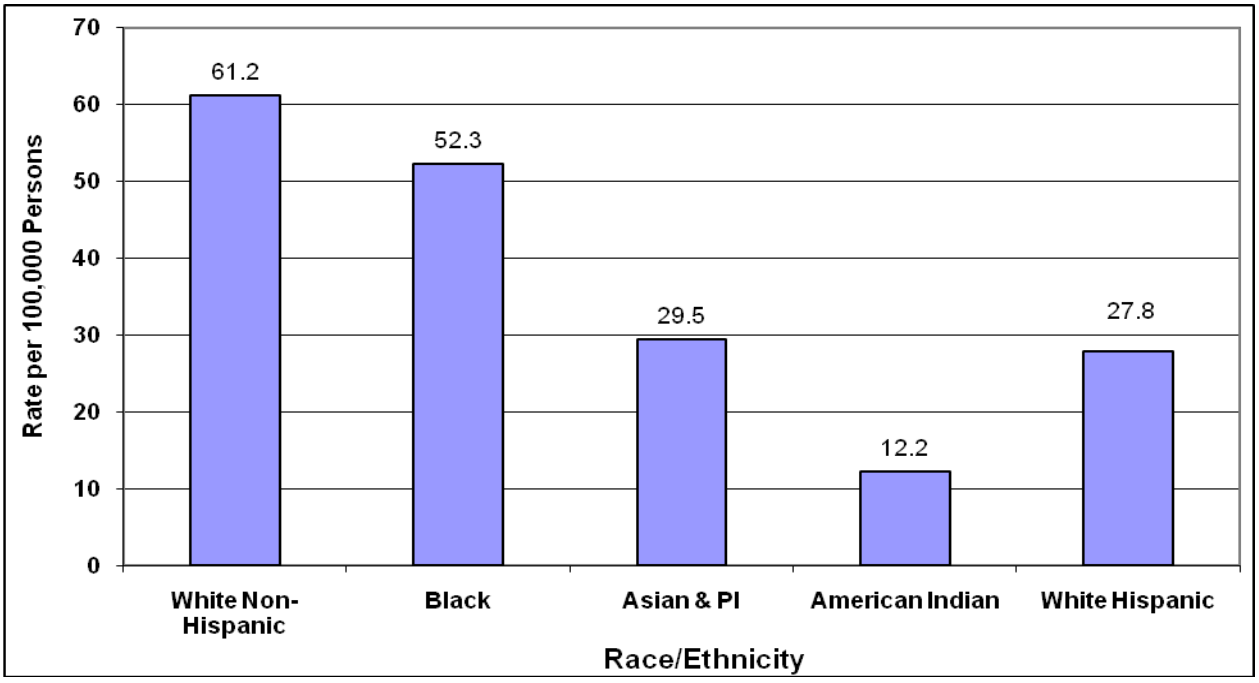
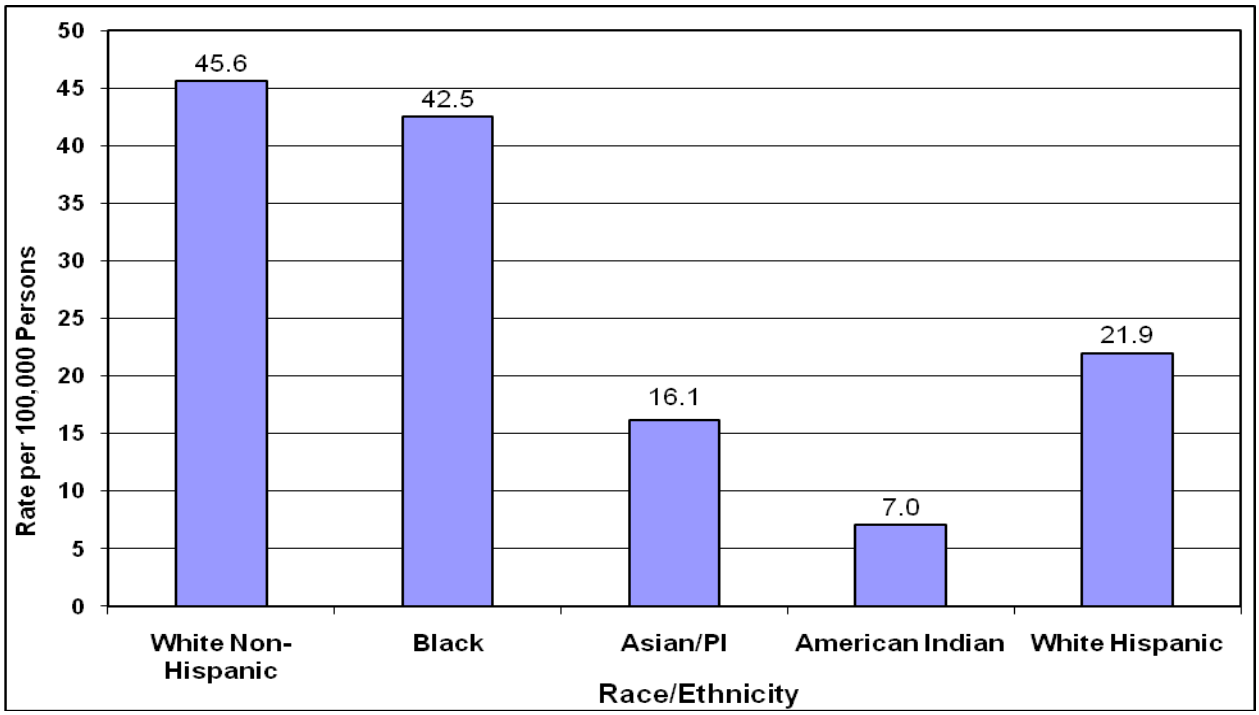


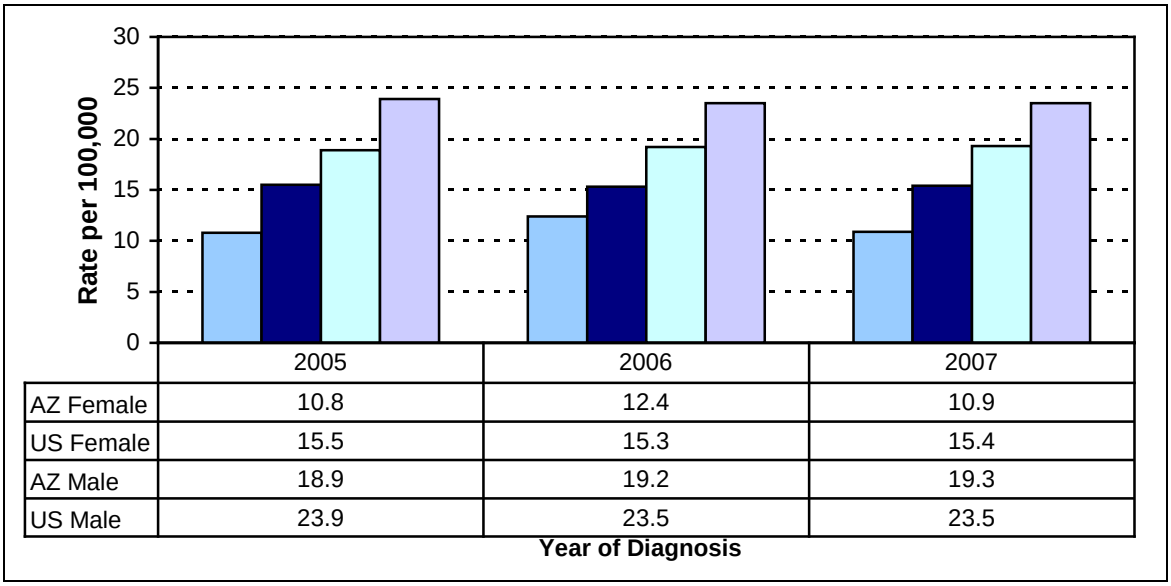
Figure 36: Average Annual Age-Adjusted Mortality Rates for Lung Cancer by Race/Ethnicity, 2005-2007



Melanoma in Arizona

Melanoma incidence, in 2005 to 2007, was the sixth most common type of cancer diagnosed among men, and the ninth most common type of cancer diagnosed among women in Arizona. Compared to U.S. rates, the incidence of melanoma cancer in Arizona was 30% and 21% lower than U.S. national rate. The reason for lower Arizona rates is unclear.
The Arizona Cancer Registry does not collect data on basal and squamous cell carcinomas, which is the most common type of skin cancer.

Figure 37: U.S.* and Arizona Age-Adjusted Incidence Rates For Melanoma Cancer by Gender, 2005-2007



	2005	2006	2007
AZ Female	10.8	12.4	10.9
US Female	15.5	15.3	15.4
AZ Male	18.9	19.2	19.3
US Male	23.9	23.5	23.5

Source: U.S. Cancer Statistics Working Group. *United States Cancer Statistics: 1999–2007 Incidence and Mortality Web-based Report*. Atlanta: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention and National Cancer Institute; 2010. Available at: www.cdc.gov/uscs

When analyzed by stage, melanoma cases were most often diagnosed in an early stage (In situ or Local stage 41% and 40% respectively) , followed by regional stage (11%) and least often in distant stage (3%). Sun protection practices and health education about sun shade for children and adults can help reduce the number of melanoma cases diagnosed and the number of melanoma deaths.

Figure 38: Percentage of Melanoma Cases by SEER Summary Stage, 2005-2007

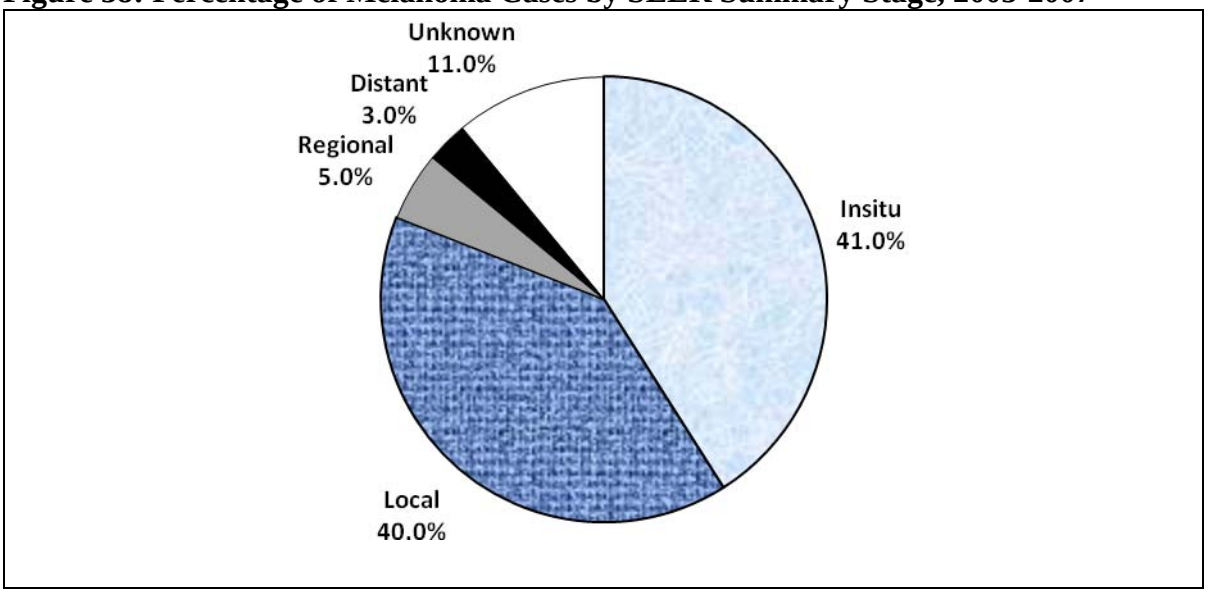
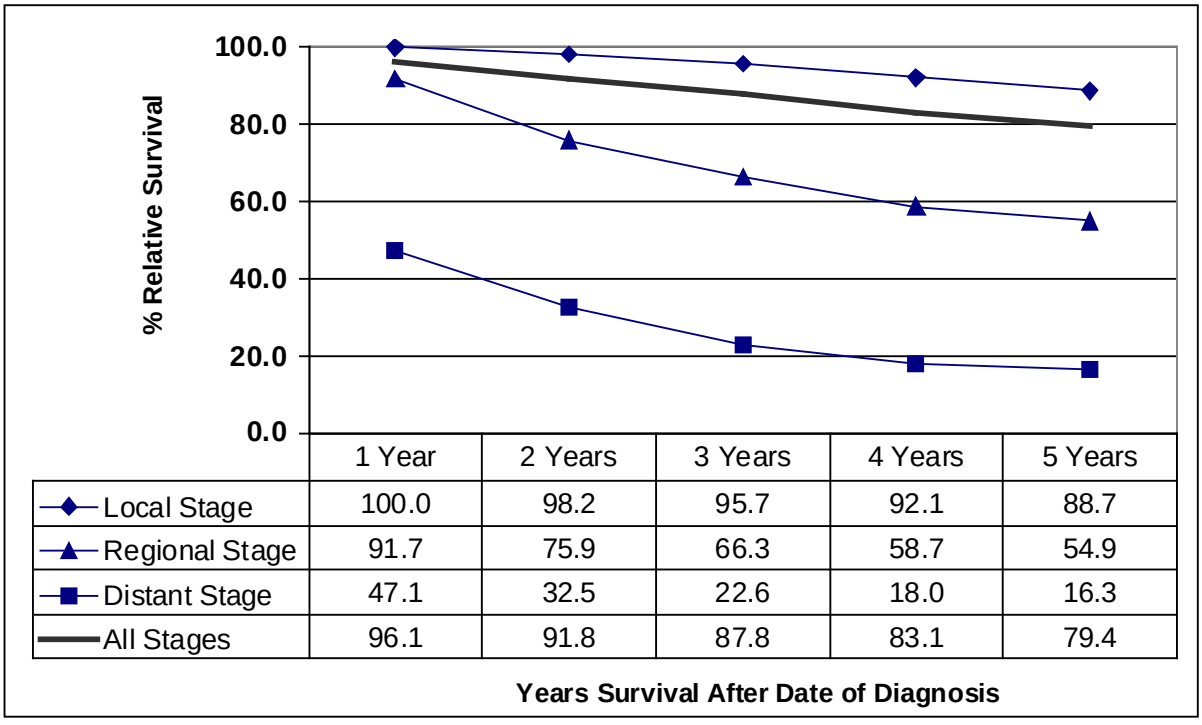


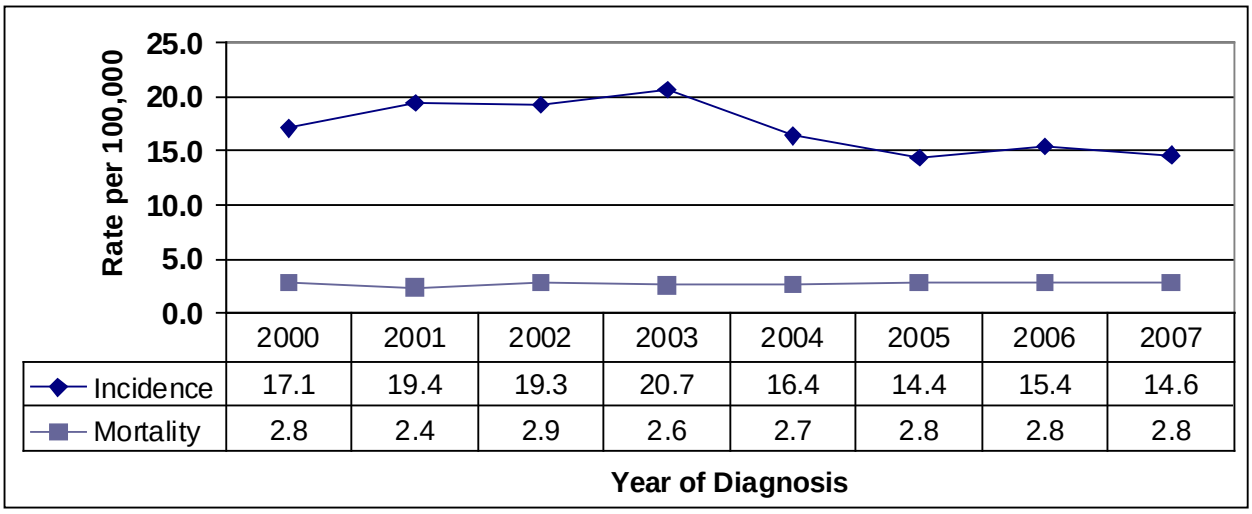
Figure 39: Five-Year Percent Relative Melanoma Survival, 1995-2005



	1 Year	2 Years	3 Years	4 Years	5 Years
Local Stage	100.0	98.2	95.7	92.1	88.7
Regional Stage	91.7	75.9	66.3	58.7	54.9
Distant Stage	47.1	32.5	22.6	18.0	16.3
All Stages	96.1	91.8	87.8	83.1	79.4

During 2005-2007, the age-adjusted incidence rate for melanoma increased 6.9% from 2005 to 2006; then decreased 5.2% to 14.6 cases per 100,000 persons in 2007. The age-adjusted mortality rate for melanoma remained constant. There was sharp decline of 31% from 2003 to 2005 for melanoma incidence. The cause of the decline is unknown. However, part of the decline might be attributed to incomplete reporting. More than most cancers, the ACR is dependent on complete reporting from pathology laboratories and physicians for 40 percent of the melanoma case reports. When reports from these sources are missed, under-reporting of melanoma will occur. In 2005 to 2007, seven percent of melanoma cases lacked address identification and could not be included in this report.

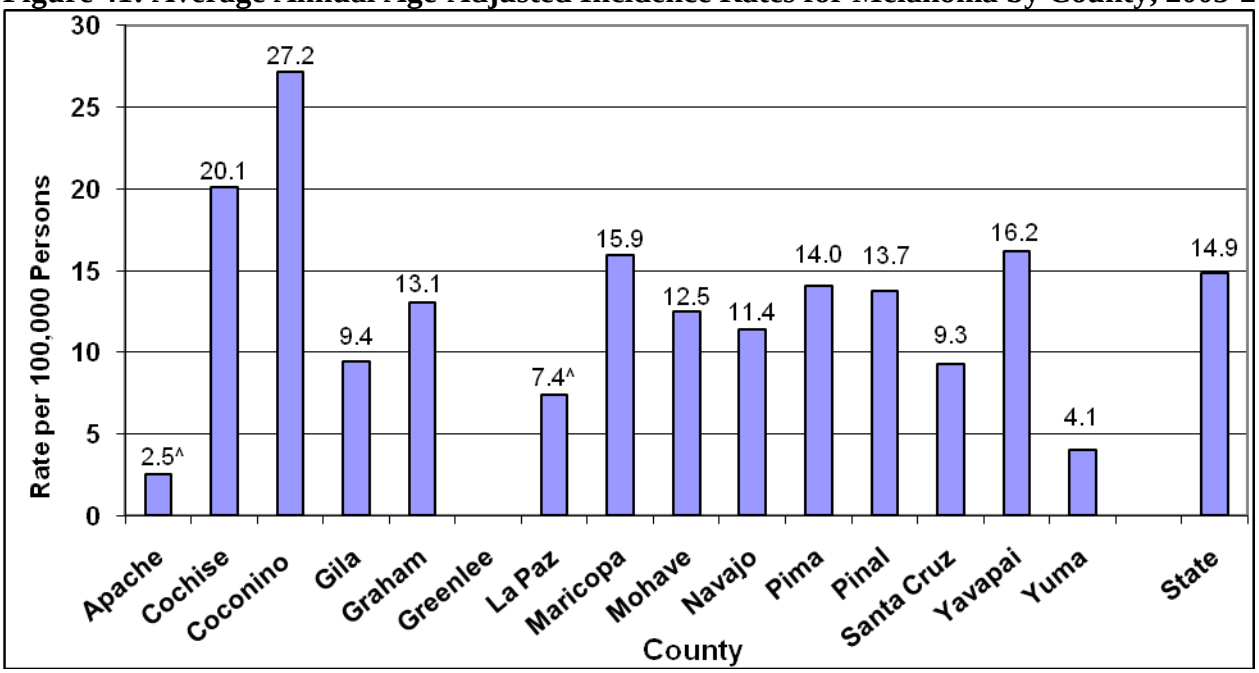
Figure 40: Age-Adjusted Incidence and Mortality Rates for Melanoma in Arizona, 2000-2007



	2000	2001	2002	2003	2004	2005	2006	2007
Incidence	17.1	19.4	19.3	20.7	16.4	14.4	15.4	14.6
Mortality	2.8	2.4	2.9	2.6	2.7	2.8	2.8	2.8

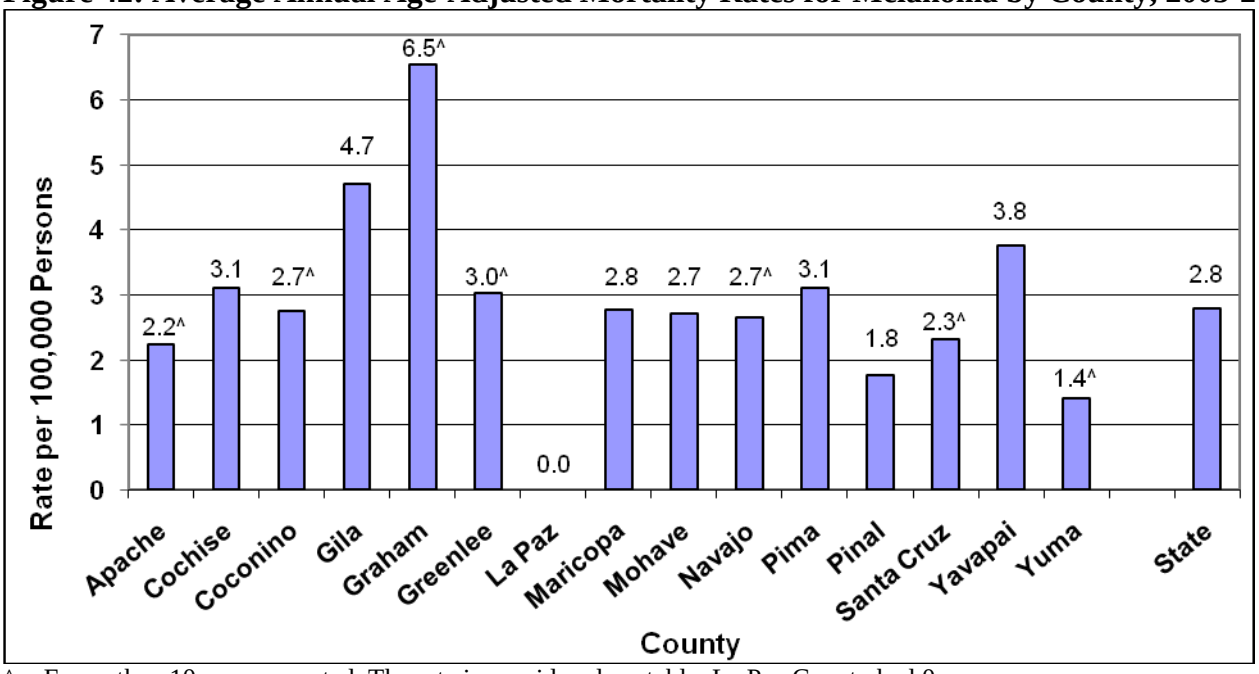
In 2005-2007, Coconino County had the highest melanoma incidence rate (27.2 per 100,000). Gila County had the highest melanoma mortality rate of 4.7 per 100,000 (not considering the unstable rates). However, there is no statistical significance of the rates between the counties as the counts of melanoma deaths were small within most counties.

Figure 41: Average Annual Age-Adjusted Incidence Rates for Melanoma by County, 2005-2007



^ = Fewer than 10 cases reported. The rate is considered unstable. Greenlee count had 0 cases.

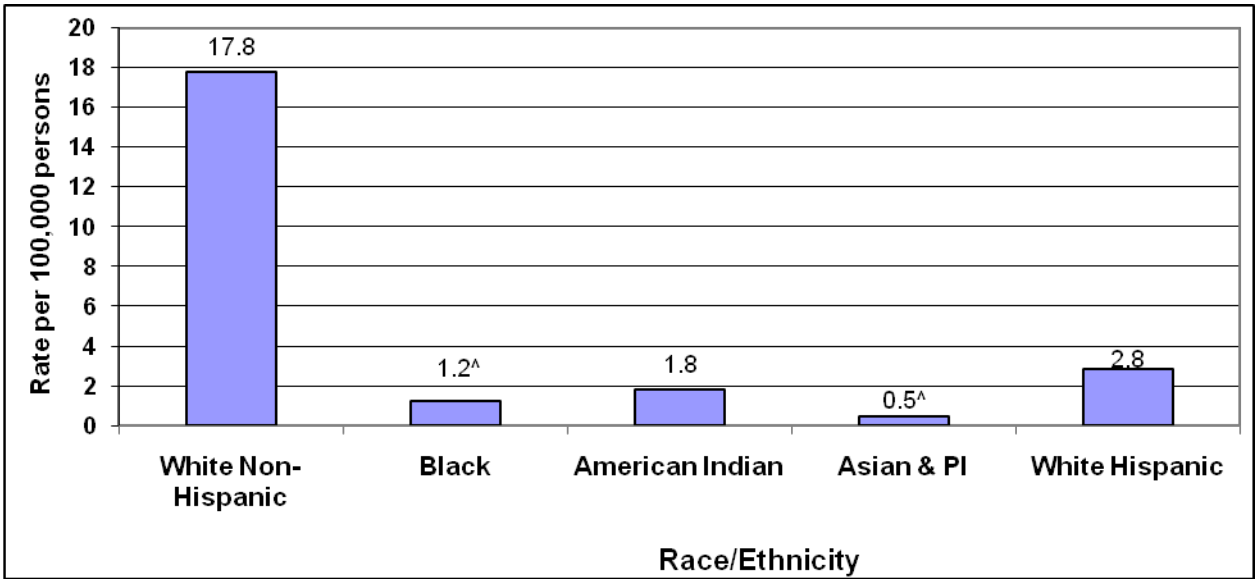
Figure 42: Average Annual Age-Adjusted Mortality Rates for Melanoma by County, 2005-2007



^ = Fewer than 10 cases reported. The rate is considered unstable. La Paz County had 0 cases.

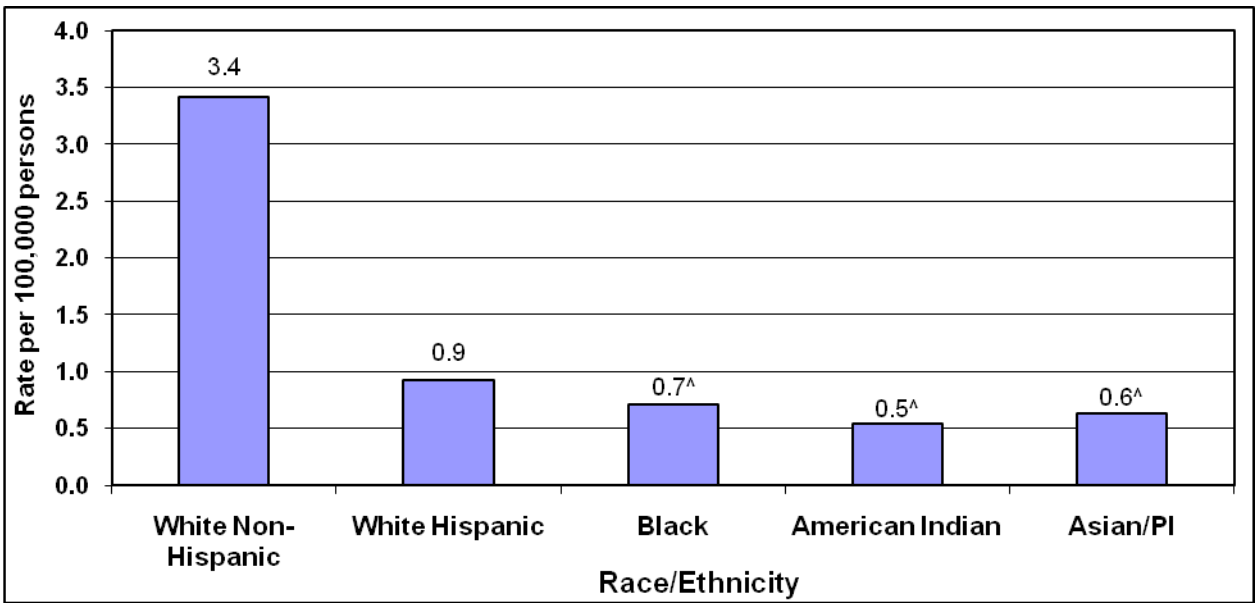
When analyzed by race and ethnicity, melanoma cases were typically compared between White, non-Hispanics and White, Hispanics in Arizona. The overall melanoma rates largely reflect the rates among White, non-Hispanics since approximately 87% of melanoma cases were diagnosed among this racial group.

Figure 43: Average Annual Age-Adjusted Incidence Rates for Melanoma by Race/Ethnicity, 2005-2007



^ = Fewer than 10 cases reported. The rate is considered unstable.

Figure 44: Average Annual Age-Adjusted Mortality Rates for Melanoma by Race/Ethnicity, 2005-2007

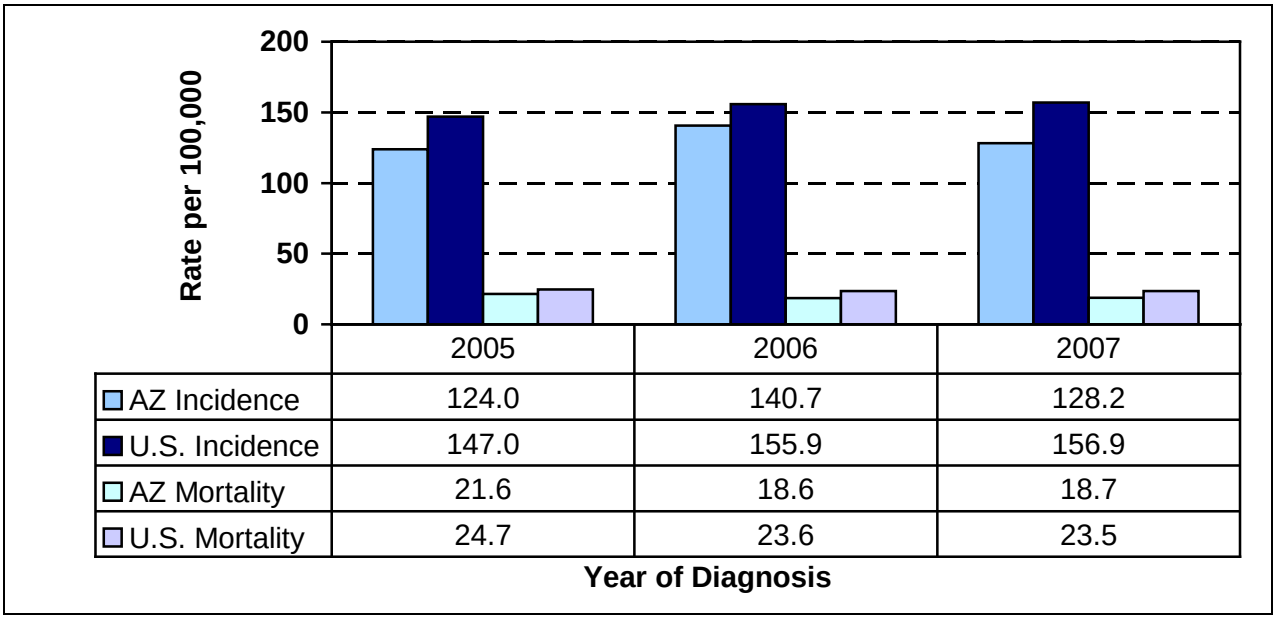


^ = Fewer than 10 cases reported. The rate is considered unstable.

Prostate Cancer in Arizona

Prostate cancer was the most frequently diagnosed cancer among Arizona men in 2005-2007 (see Figure 1). This cancer continues to be the most common type of cancer diagnosed among men in the US as well. Prostate cancer was the second most common cancer death among men in Arizona during 2005-2007, with an average of 547 deaths per year. Arizona state rates were consistently lower than national rates during this time period.

Figure 45: U.S. and Arizona Age-Adjusted Incidence and Mortality Rates for Prostate Cancer 2005-2007



	2005	2006	2007
AZ Incidence	124.0	140.7	128.2
U.S. Incidence	147.0	155.9	156.9
AZ Mortality	21.6	18.6	18.7
U.S. Mortality	24.7	23.6	23.5

Source: U.S. Cancer Statistics Working Group. *United States Cancer Statistics: 1999–2007 Incidence and Mortality Web-based Report*. Atlanta: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention and National Cancer Institute; 2010. Available at: www.cdc.gov/uscs

When analyzed by stage, prostate cancer cases in Arizona were most commonly diagnosed in local stage (72%), followed by regional stage (11%) then distant stage (3%). The five year survival rate for most prostate cancer cases is greater than five years. However, cases diagnosed in a distant stage have a five year survival of 24 percent.

Figure 46: Percentage of Prostate Cancer Cases by SEER Summary Stage, 2005-2007

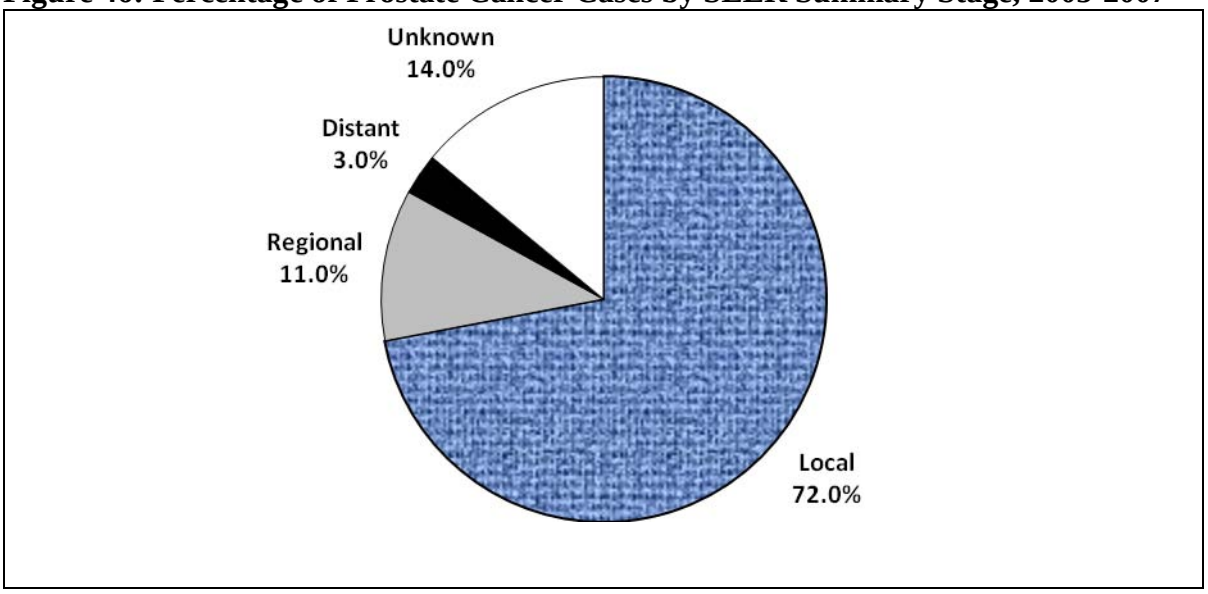
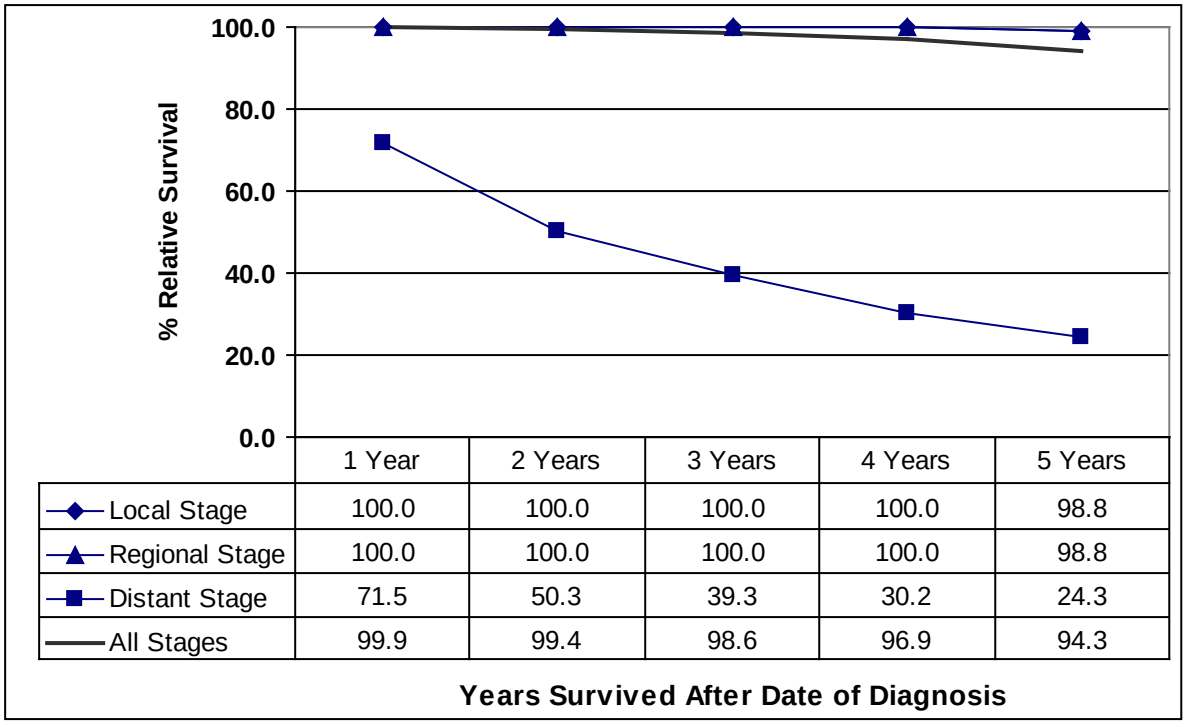


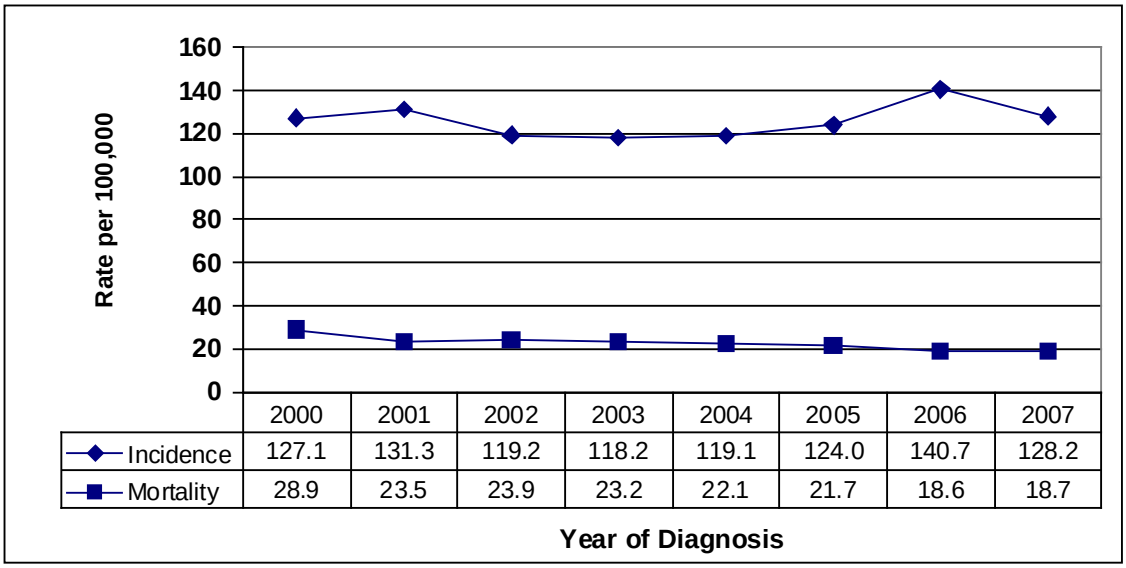
Figure 47: Five-Year Percent Relative Prostate Cancer Survival, 1995-2005



	1 Year	2 Years	3 Years	4 Years	5 Years
Local Stage	100.0	100.0	100.0	100.0	98.8
Regional Stage	100.0	100.0	100.0	100.0	98.8
Distant Stage	71.5	50.3	39.3	30.2	24.3
All Stages	99.9	99.4	98.6	96.9	94.3

Between 2005 and 2006 the age-adjusted incidence rates increased 13.5 percent then decreased 8.8 percent in 2007. This decrease may be due to incomplete reporting from pathology laboratory and physicians. Between 2000 and 2006 the mortality rates for prostate cancer decreased 36 percent. They remained almost constant between 2006 and 2007.

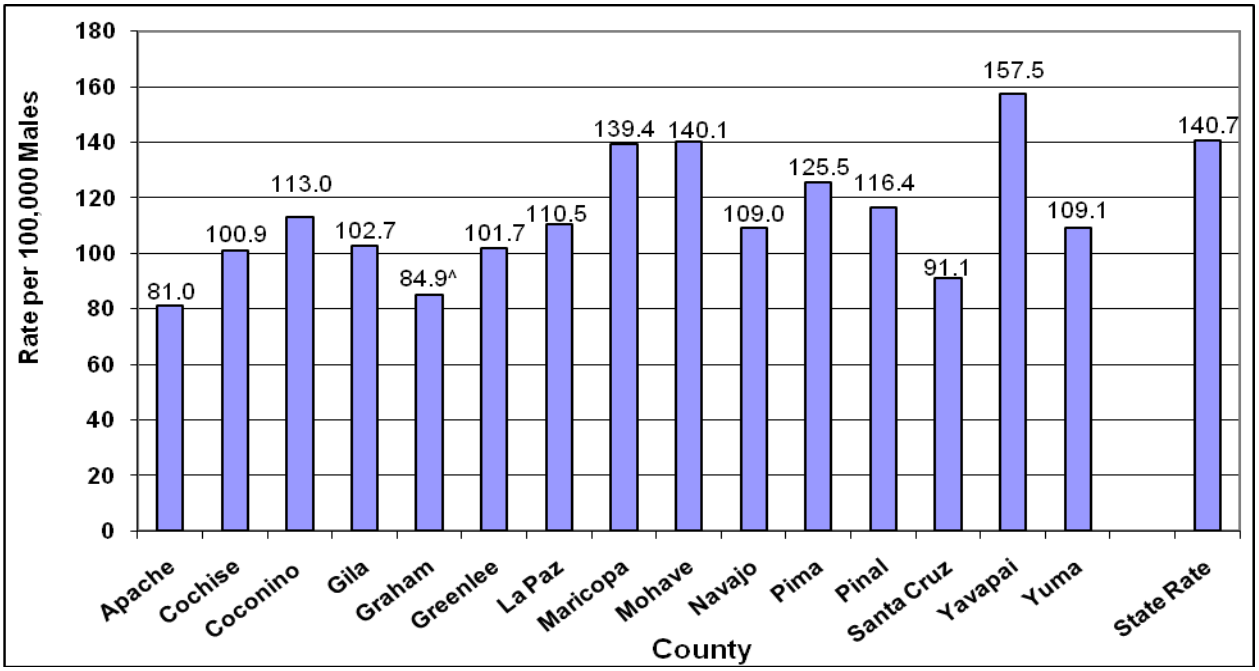
Figure 48: Age-Adjusted Incidence and Mortality Rates for Prostate Cancer in Arizona, 2000-2007



	2000	2001	2002	2003	2004	2005	2006	2007
Incidence	127.1	131.3	119.2	118.2	119.1	124.0	140.7	128.2
Mortality	28.9	23.5	23.9	23.2	22.1	21.7	18.6	18.7

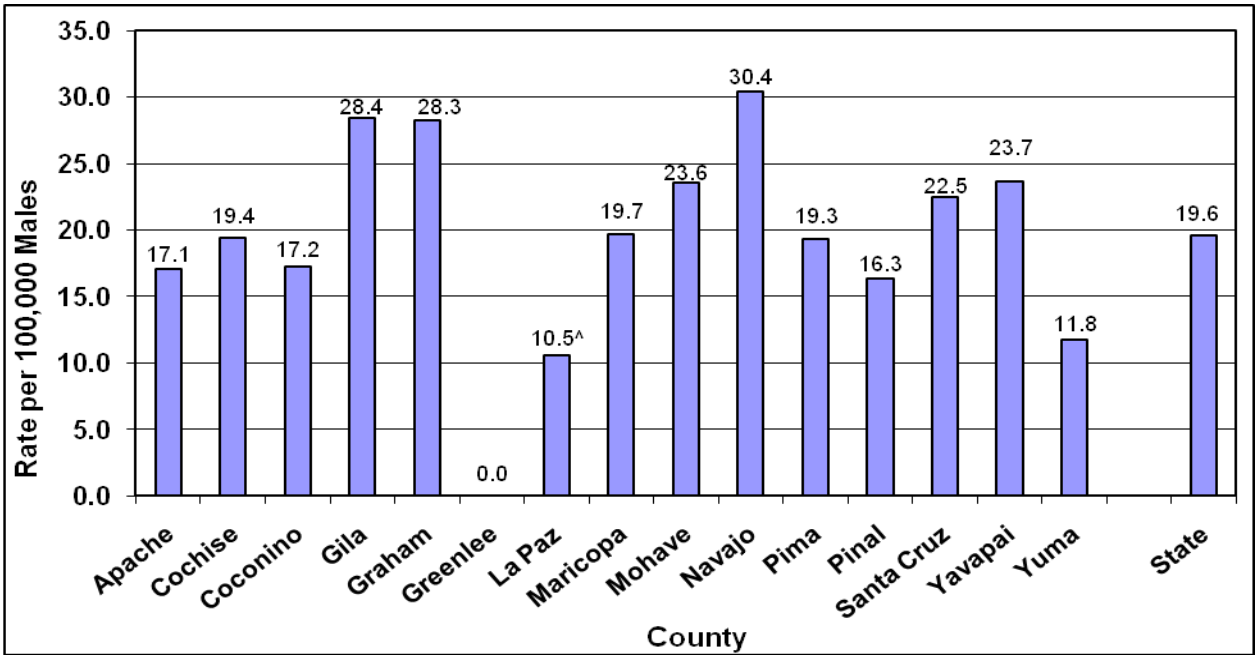
In 2005-2007, Yavapai County had the highest incidence rate (157.5 per 100,000), and Navajo County had the highest mortality rate (30.4 per 100,000) for prostate cancer.

Figure 49: Average Annual Age-Adjusted Incidence Rates for Prostate Cancer by County, 2005-2007



^ = Fewer than 10 cases reported. The rate is considered unstable.

Figure 50: Average Annual Age-Adjusted Mortality Rates for Prostate Cancer by County, 2005-2007



^ = Fewer than 10 cases reported. The rate is considered unstable.

When analyzed by race and ethnicity, prostate cancer incidence was highest among Blacks (154.0 per 100,000). Prostate cancer mortality was highest among Blacks (26.8 per 100,000). However, there was no significant statistical difference in mortality between Blacks, White Non-Hispanics, and White Hispanics.

Figure 51: Average Annual Age-Adjusted Incidence Rates for Prostate Cancer By Race/Ethnicity, 2005-2007

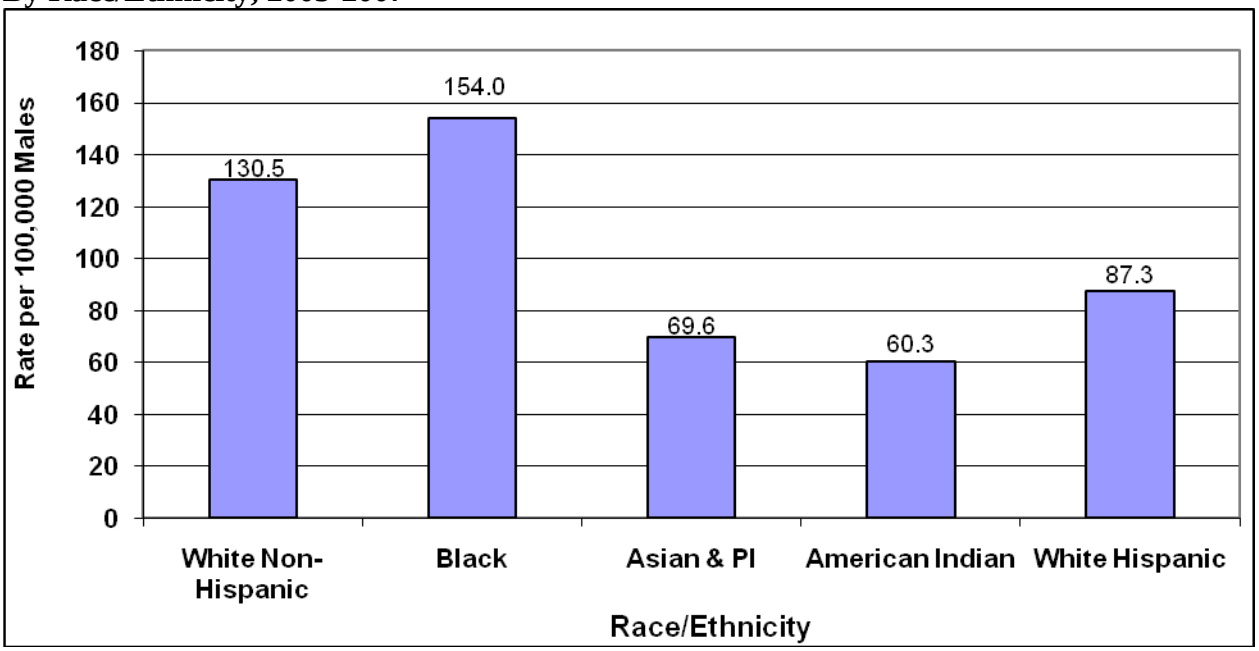
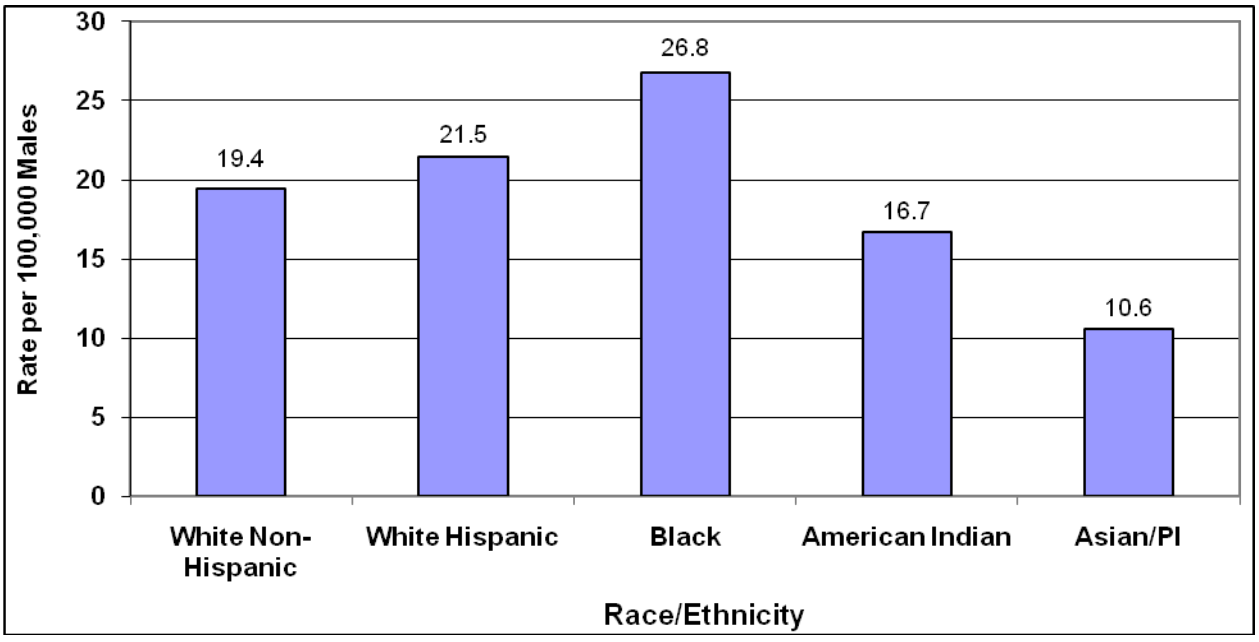


Figure 52: Average Annual Age-Adjusted Mortality Rates for Prostate Cancer By Race/Ethnicity, 2005-2007



APPENDIX

Site Group	ICD-O-3 Site	ICD-O-3 Histology (Type)
Oral Cavity and Pharynx		
Lip	C000-C009	
Tongue	C019-C029	
Salivary Gland	C079-C089	
Floor of Mouth	C040-C049	
Gum and Other Mouth	C030-C039, C050-C059, C060-C069	
Nasopharynx	C110-C119	
Tonsil	C090-C099	
Oropharynx	C100-C109	
Hypopharynx	C129, C130-C139	
Other Oral Cavity and Pharynx	C140, C142-C148	excluding 9590-9989, and sometimes 9050-9055, 9140+
Digestive System		
Esophagus	C150-C159	
Stomach	C160-C169	excluding 9590-9989, and sometimes 9050-9055, 9140+
Small Intestine	C170-C179	
Colon and Rectum		
Colon excluding Rectum		
Cecum	C180	
Appendix	C181	
Ascending Colon	C182	
Hepatic Flexure	C183	
Transverse Colon	C184	
Splenic Flexure	C185	
Descending Colon	C186	
Sigmoid Colon	C187	excluding 9590-9989, and sometimes 9050-9055, 9140+
Large Intestine, NOS	C188-C189, C260	
Rectum and Rectosigmoid Junction		
Rectosigmoid Junction	C199	
Rectum	C209	
Anus, Anal Canal and Anorectum	C210-C212, C218	excluding 9590-9989, and sometimes 9050-9055, 9140+
Liver and Intrahepatic Bile Duct		
Liver	C220	
Intrahepatic Bile Duct	C221	
Gallbladder	C239	
Other Biliary	C240-C249	excluding 9590-9989, and sometimes 9050-9055, 9140+
Pancreas	C250-C259	

Retroperitoneum	C480	
Peritoneum, Omentum and Mesentery	C481-C482	
Other Digestive Organs	C268-C269, C488	
Respiratory System		
Nose, Nasal Cavity and Middle Ear	C300-C301, C310-C319	
Larynx	C320-C329	
Lung and Bronchus	C340-C349	
Pleura	C384	
Trachea, Mediastinum and Other Respiratory Organs	C339, C381-C383, C388, C390, C398, C399	excluding 9590-9989, and sometimes 9050-9055, 9140+
Bones and Joints	C400-C419	excluding 9590-9989, and sometimes 9050-9055, 9140+
Soft Tissue including Heart	C380, C470-C479, C490-C499	excluding 9590-9989, and sometimes 9050-9055, 9140+
Skin excluding Basal and Squamous		
Melanoma of the Skin	C440-C449	8720-8790
Other Non-Epithelial Skin	C440-C449	excluding 8000-8005, 8010-8045, 8050-8084, 8090-8110, 8720-8790, 9590-9989, and sometimes 9050-9055, 9140+
Breast	C500-C509	excluding 9590-9989, and sometimes 9050-9055, 9140+
Female Genital System		
Cervix Uteri	C530-C539	excluding 9590-9989, and sometimes 9050-9055, 9140+
Corpus and Uterus, NOS		
Corpus Uteri	C540-C549	
Uterus, NOS	C559	
Ovary	C569	
Vagina	C529	
Vulva	C510-C519	
Other Female Genital Organs	C570-C589	excluding 9590-9989, and sometimes 9050-9055, 9140+
Male Genital System		
Prostate	C619	
Testis	C620-C629	excluding 9590-9989, and sometimes 9050-9055, 9140+
Penis	C600-C609	

Other Male Genital Organs	C630-C639	
Urinary System		
Urinary Bladder	C670-C679	excluding 9590-9989, and sometimes 9050-9055, 9140+
Kidney and Renal Pelvis	C649, C659	
Ureter	C669	
Other Urinary Organs	C680-C689	
Eye and Orbit	C690-C699	excluding 9590-9989, and sometimes 9050-9055, 9140+
Brain and Other Nervous System		
Brain	C710-C719	excluding 9530-9539, 9590-9989, and sometimes 9050-9055, 9140+
Cranial Nerves Other Nervous System	C710-C719	9530-9539
	C700-C709, C720-C729	excluding 9590-9989, and sometimes 9050-9055, 9140+
Endocrine System		
Thyroid	C739	excluding 9590-9989, and sometimes 9050-9055, 9140+
Other Endocrine including Thymus	C379, C740-C749, C750-C759	
Lymphoma		
Hodgkin Lymphoma		
Hodgkin - Nodal	C024, C098-C099, C111, C142, C379, C422, C770-C779	9650-9667
Hodgkin - Extranodal	All other sites	
Non-Hodgkin Lymphoma		
NHL - Nodal	C024, C098,C099, C111,C142, C379,C422, C770-C779	9590-9596, 9670-9671, 9673, 9675, 9678-9680, 9684, 9687, 9689-9691, 9695, 9698-9702, 9705, 9708-9709, 9714-9719, 9727-9729, 9823, 9827
NHL - Extranodal	All sites except C024, C098-C099, C111, C142, C379, C422, C770-C779	9590-9596, 9670-9671, 9673, 9675, 9678-9680, 9684, 9687, 9689-9691, 9695, 9698-9702, 9705, 9708-9709, 9714-9719, 9727-9729
	All sites except C024, C098-C099, C111, C142, C379, C420-C422, C424, C770-C779	9823, 9827
Myeloma		9731-9732, 9734

Leukemia		
Lymphocytic Leukemia		
Acute Lymphocytic Leukemia		9826,9835-9837
Chronic Lymphocytic Leukemia	C420, C421, C424	9823
Other Lymphocytic Leukemia		9820, 9832-9834, 9940
Myeloid and Monocytic Leukemia		
Acute Myeloid Leukemia		9840, 9861, 9866, 9867, 9871-9874, 9895-9897, 9910, 9920
Acute Monocytic Leukemia		9891
Chronic Myeloid Leukemia		9863, 9875, 9876, 9945, 9946
Other Myeloid/Monocytic Leukemia		9860, 9930
Other Leukemia		
Other Acute Leukemia		9801, 9805, 9931
Aleukemic, subleukemic and NOS		9733, 9742, 9800, 9831, 9870, 9948, 9963, 9964
	C420, C421, C424	9827
Mesothelioma +		9050-9055
Kaposi Sarcoma +		9140
Miscellaneous		9740-9741, 9750-9758, 9760-9769, 9950, 9960-9962, 9970, 9975, 9980, 9982-9987, 9989
	C760-C768, C809	excluding 9590-9989, and sometimes 9050-9055, 9140+
	C420-C424	
	C770-C779	
Invalid	Site or histology code not within valid range or site code not found in this table.	

+ The Site Recode variable can be created with or without Mesothelioma (9050-9055) and Kaposi Sarcoma (9140) as separate groupings. The table above documents both possibilities.
*Available from http://seer.cancer.gov/siterecode/icdo3_d01272003/ [Accessed May 2, 2005].

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