
CANCER IN ARKANSAS

CANCER INCIDENCE & MORTALITY

1996 - 1998



THE ARKANSAS CENTRAL CANCER REGISTRY

ARKANSAS DEPARTMENT OF HEALTH

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ACKNOWLEDGEMENTS

This report, *Cancer in Arkansas, Cancer Incidence & Mortality 1996 - 1998*, represents the commitment of many people. We are excited to present the very first cancer report to be published by the Arkansas Central Cancer Registry.

The Arkansas Central Cancer Registry of the Arkansas Department of Health would like to extend a special thanks to all of the facilities that helped identify and abstract all of the newly diagnosed cancer cases in 1996, 1997 and 1998. This report would not have been possible if it were not for the efforts of those hospitals, staff, tumor registrars, hospital cancer registries and medical records personnel. Their combined efforts ensure the quality, confidentiality and completeness of the data represented in this report.

In addition, the ACCR wishes to specifically acknowledge the following organizations who supported, and continues to support, the cancer registry in its efforts to maintain a population-based cancer registry: the American Cancer Society, the Arkansas Cancer Registrar's Association, the Centers for Disease Control & Prevention, and the Arkansas Department of Health.

The ACCR would like to extend a special thanks to the BreastCare Program for their support of the registry. The partnership established between the BreastCare Program and the ACCR is a prime example of a collaborative effort in the control and eventual eradication of breast cancer. It is through this program that the ACCR was able to meet the federal guidelines for state match money.

The registry would not be in existence without the legislative support of the Arkansas General Assembly which passed Act 435, in 1998. This legislation established the ACCR as the central registry for all newly diagnosed cancers in Arkansas.

This comprehensive cancer report was developed and edited by Catherine Hall, MPH, epidemiologist for the Arkansas Central Cancer Registry. Any questions may be directed to her at 501.661.2392.

A NOTE FROM THE DIRECTOR

Cancer is the second leading cause of death in the nation. This is also true for Arkansas. The burden this horrible disease has on our population has never been measured effectively. In 1994, the Centers for Disease Control and Prevention awarded the Arkansas Department of Health a planning grant to establish a cancer registry. Through diligence and cooperation with every facility in Arkansas that diagnoses cancer, we have been able to compile three years of surveillance data. It is our hope and dream this information will be meaningful to everyone and one day lead to a breakthrough in cancer detection and treatment. I would like to personally thank everyone who has worked hard to get this program up and running.

Sincerely,
Travis Tallman

PREFACE

Cancer is a feared diagnosis. Historically, the diagnosis of cancer presaged a slow, painful, possibly disfiguring, death. The fear of cancer can prevent people from seeking diagnosis in a timely fashion.

Cancer is the second leading cause of death in Arkansas, with approximately 6,000 deaths per year (there are approximately 25,000 total deaths per year in Arkansas). While the death rate from heart disease, the number one cause of death, has been steadily decreasing, the death rate from cancer has changed little over the last 25 years.

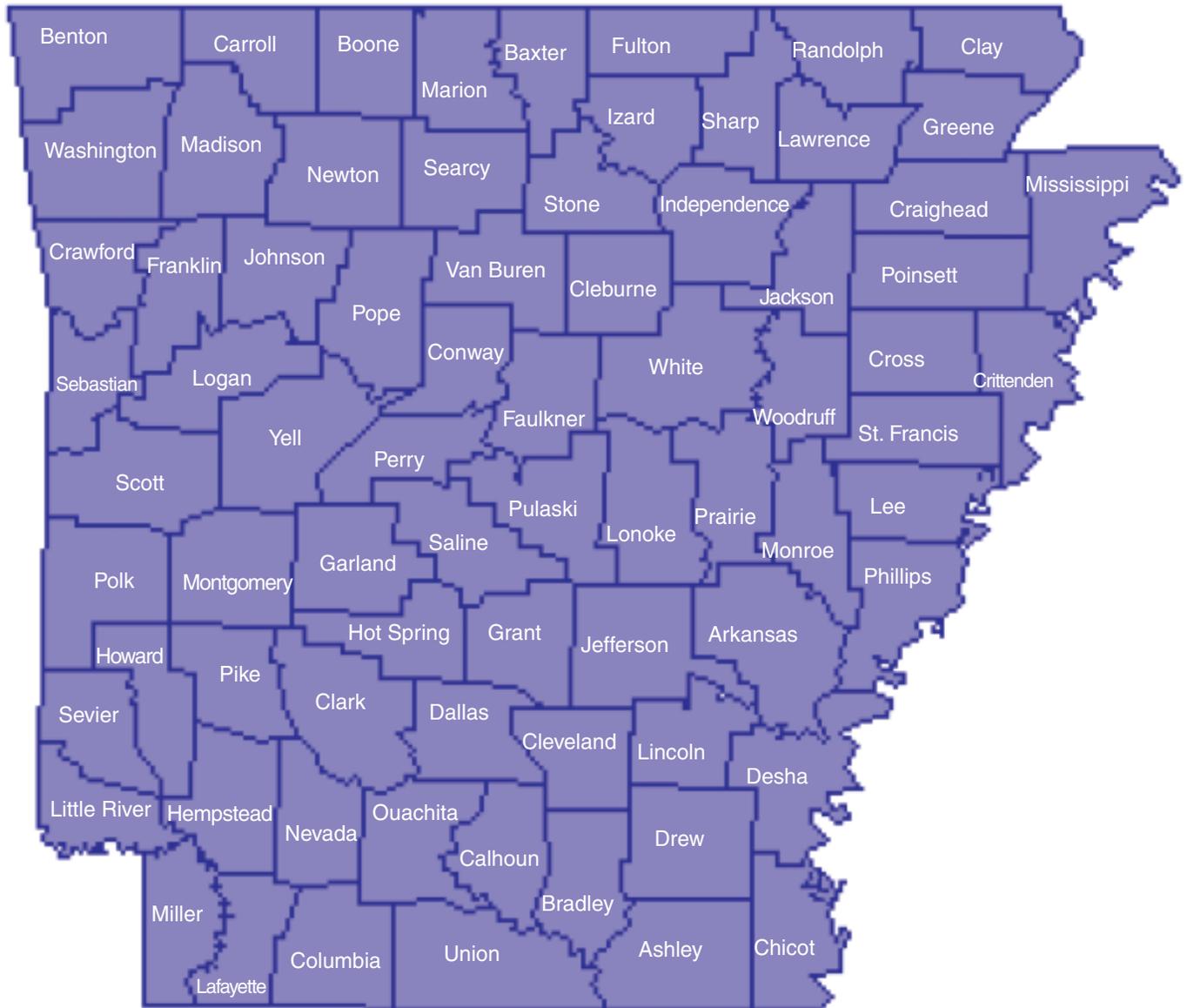
The goal of this report is to raise public awareness regarding cancer in the community, and to lead to public discussion of causes and possible solutions to the problem.

As all politics are local, so, too, all patients with cancer are part of a community. Through awareness of their local burden of cancer, community leaders can be better prepared to help allocate the necessary resources to deal with the problem of cancer. Much of what we know needs to be done – smoking prevention and cessation, better nutrition, mammography, pap smears – is not adequately funded to protect the lives of our citizens.

As you read this report, consider how cancer control and prevention can be improved in your community. Let us know at the Arkansas Department of Health how we can work with you to save more lives in your community and keep our Hometown Healthy.

Fay Boozman, MD
Director
Arkansas Department of Health

ARKANSAS



Arkansas, also known as the Natural State, has a population of approximately 2.67 million and is divided into 77 counties. Pulaski county is the most populated with approximately 350,000 people and is also the county of the capital city, Little Rock. Approximately, 16% of the population is black and 82% white.

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HISTORY OF THE ARKANSAS CENTRAL CANCER REGISTRY

The Arkansas Central Cancer Registry was originally established in 1938 by the Arkansas General Assembly. While the Registry collected minimal data on cancer cases in the state, it was not funded by the state until 1945. By 1970, the data collected were computerized; but due to a state funding crisis in 1979, the Arkansas Central Cancer Registry was eliminated.

In 1989, Arkansas again authorized a state cancer registry to be located at the Arkansas Department of Health, although funding was not available to staff the registry or collect the data. In 1992, the United States Congress passed the "Cancer Registries Amendment Act" (Public Law 102-515) which provided federal funding for state cancer registries. The law was carried out through efforts by the Centers for Disease Control and Prevention (CDC) in Atlanta, Georgia. Funding for a cancer program in Arkansas began in 1994, when the first federal funds were awarded through the National Program for Cancer Registries (NPCR).

In 1994, the Arkansas Board of Health mandated cancer as a reportable disease in the State of Arkansas. With the help of the cancer registries across the state, January 1, 1996, the first cancer data since 1979 were collected in Arkansas.

"Public health surveillance is the ongoing systematic collection, analysis and interpretation of outcome-specific data, closely integrated with the timely dissemination of these data to those responsible for preventing and controlling disease or injury."

-Thacker

INTRODUCTION

DATA COLLECTION

Section # 20-15-201 of 1989 Act 435 requires health care professionals to report all cancer cases to the Arkansas Central Cancer Registry (ACCR). The cancer registry data are reported monthly using computerized cancer registry software from each reporting facility (please refer to pages 48 - 50 for a facility listing). The data are uploaded onto diskette and mailed to the Arkansas Central Cancer Registry. In some instances, the data are transmitted electronically to the ACCR. The diskettes are merged into the Arkansas Central Cancer Registry software and reports are generated to track each facility's progress. Scotts Hill Associates' Cancer Registry Solutions (SHACRS) is the software package used by the Arkansas Central Cancer Registry to collect, manage, report, and analyze cancer incidence data. This system has been dynamically designed to meet the individual needs of the states that currently utilize the software. The implementation of SHACRS has enabled the ACCR to take ownership and control of its information technology needs. The SHACRS staff works with the Cancer Registry to identify all data items needed in the ACCR's dataset to improve data processing efficiency and data quality.

DATA COMPLETENESS

The ACCR required only large hospitals (more than 100 licensed beds) to report patients diagnosed with cancer in 1996. Arkansas' estimated incidence for 1996 from all facilities is 12,658. This expected number of cancer cases is based on a linear interpolation of population estimates for 1995 and 2000. Age-specific cancer incidence rates were based on Surveillance, Epidemiology, and End Results (SEER) data for 1987-1991 (NIH Publication #94-2789). A total of 11,338 cases have been reported for 1996 (90% of the total expected estimated incidence), a total of 12,292 cases have been reported for 1997 (97% of the total expected estimated incidence), and a total of 12,198 cases have been reported for 1998 (95% of the total expected estimated incidence) .

REPORTABLE CASES

Since January 1, 1996, all newly diagnosed cases of cancer in Arkansas are reported to the Arkansas Central Cancer Registry. The cancer cases are reported by county of residence. (Please refer to pages 55 - 59 for a glossary of terms.) As recommended by the American College of Surgeons, non-reportable cancers include skin cancers of the basal or squamous carcinoma type less than 5 centimeters in size or localized, and carcinoma in situ of the cervix.

DATA QUALITY

The quality and accuracy of registry data is crucial when making decisions and assumptions. Several steps are taken to insure quality data. An EDITS program is used to identify any errors in the data. Once the errors are located they are analyzed and changed accordingly. In addition to the EDITS package, management reports are used to view any potential errors with regard to primary site, age and gender.

LIMITATIONS OF DATA

Case reporting for 1996 was estimated to be 90% complete of expected cases. Due to delayed reporting, additional incident cases for 1996 will continue to be reported to the Arkansas Central Cancer Registry (ACCR). This will alter future report totals for 1996, and comparisons should be

made with this in mind. Additionally, the cases reported for 1996 cannot be considered comprehensive and population-based because only hospitals (> 100 beds) were targeted to participate in the initial case reporting based on case load. For 1997, small hospitals (< 100 beds), pathology labs and freestanding surgery centers/clinics were required to report their cancer cases to the ACCR. More complete reporting allows for better comparisons among various populations. In addition, the 1998 data do not include all of the Arkansas cases diagnosed outside of the state due to certain data sharing restrictions. However, the 1996 and 1997 data do include those cases.

CONFIDENTIALITY

Maintaining the confidentiality of the information for each cancer case is a top priority at the ACCR. Strict policies are in place that pertain directly to confidentiality issues. The ACCR is a secured area with many safety measures in place. No data in this annual report are intended to reveal the identity of the individuals who have been diagnosed with cancer. All data are housed on a secured server that is only accessible by ACCR colleagues. All data and file transfers between hospitals and other registries are password encrypted. Reports prepared by the ACCR may have an asterisk (*) in some of the fields to reflect cells with fewer than 5 cases of cancer.

PRIMARY SITE CODES

For each incident case of cancer, a primary site and histologic type is coded using the International Classification of Diseases for Oncology (ICD-O, Version 2; refer to pages 51 - 53 for list).

RACE/ETHNICITY OF CANCER CASES

Race and ethnic categories are collapsed into *white*, *black* and *other/unknown* in some of the reports from the ACCR. White includes Mexican, Puerto Rican, Cuban and all other Caucasians. A combination of white and any other race is coded to the other race. The Hispanic population in Arkansas is growing rapidly, and it will be very important to collect and analyze data for this particular population. Due to an inadequate number of cases in the Hispanic and Asian ethnic groups, analysis of these populations is not reflected in this report.

CANCER CLUSTERS

A cluster is the occurrence of a greater than expected number of cases of a particular disease within a group of people, a geographic area, or a period of time. Due to the public's increased awareness of the various environmental and occupational risk factors for cancer, concern about cancer clusters is expected. The ACCR is currently working on a policy that specifically addresses cancer cluster inquiries. The data in the registry will be used to compare expected cancer rates in various age and racial groups with rates reported in an alleged cancer cluster to determine whether there is a true excess of cases. Nationally, discovery of a cluster with environmental links is very rare.

DEATH CLEARANCE

This is the process by which mortality (death) files are checked against registry (incidence) files. Death clearance was not performed on any of the data included in this report, but will be conducted in the future. The annual DCO (Death Clearance Only) rate should be 1 to 1.5% of total cases and should adhere to North American Association of Central Cancer Registries (NAACCR) guidelines.

AGE-ADJUSTED RATES

Cancer rates vary with age, generally increase with increasing age, and age-distributions in various populations differ. Because of this, incidence and mortality rates are usually age-adjusted to allow comparison of rates between such populations. In this report, all rates are age-adjusted to the 1970 U.S. Standard Population using the direct method. The direct method of age-adjustment is calculated by dividing the population into 10 age groups (most of which are 10 year intervals), calculating the age-specific rate for each age group and then weighting each age-specific rate by multiplying it by the proportion of the standard population of the respective age group. The weighted age-specific rates are then summed giving the age-adjusted rate for the specific cancer, gender or race specified. All of the age-adjusted rates are reflective of events per 100,000 population. All cells with less than 5 reported cancer cases are not identified and rates are not calculated due to the instability of the rate. An asterisk (*) is used in the tables to reflect the small cell size and a (-) is used to denote an unstable rate. Rates based on small numbers of events should always be viewed and interpreted with caution because small numbers result in considerable random variation in the rate estimate.

MORTALITY DATA

All of the mortality information in this report is from the Arkansas Center for Health Statistics at the Arkansas Department of Health. Additional mortality data can be found electronically via the internet at www.healthyarkansas.com.

STAGES OF CANCER

In this report there will be many references to cancer staging. For the purpose of this report, General Summary Stage is used to describe the stages in various cancer sites. The stages are as follows:

Stage 0 = In Situ - Non-invasive malignant tumor; the tumor has not infiltrated the basal membrane.

Stage 1 = Localized - the tumor is confined to the organ of origin.

Stage 2 = Regional by direct extension - the tumor has spread by direct extension to immediately adjacent tissues or organs.

Stage 3 = Regional to lymph nodes - the tumor has spread into lymph nodes regional to the primary site of origin.

Stage 4 = Regional by both direct extension and regional lymph nodes.

Stage 5 = Regional, NOS - the tumor is regionally spread, but the extent of regional spread cannot be determined, or is not specified.

Stage 7 = Distant metastasis - a tumor that has spread beyond the immediately adjacent tissues and has developed secondary or metastatic tumors, has seeding or implants, or is systemic.

Stage 9 = Unknown/Unstageable - not enough information is available to accurately determine the stage.

OVERVIEW OF CANCER IN ARKANSAS

Cancer is a group of diseases characterized by uncontrolled growth and spread of abnormal cells. Death can occur if the spread of these cells is not controlled¹. Most types of cancer cells form a lump or mass called a tumor, and are named after the part of the body where the tumor originates². Cancer is the second leading cause of death in Arkansas, second only to cardiovascular disease. Present rates indicate that about one in three Arkansans now living will eventually be diagnosed with cancer³. In Arkansas, there were approximately 35,795 newly diagnosed cases of malignant cancer and 17,970 deaths due to cancer for 1996-98 combined years. For 1995-1997, the U.S. age-adjusted incidence rate for all cancers combined is 385.6/100,000.

RISK FACTORS

- Everyone is at risk of developing cancer, but the occurrence of cancer increases with age so most cases occur among adults in mid-life and older.
- The single greatest risk factor, aside from age, for all cancers is tobacco use. About 87% of lung cancer deaths and about 30% of all cancer deaths can be attributed to smoking⁴.
- Tobacco smoke contains more than 4,700 chemicals and 60 constituents that are known carcinogens, co-carcinogens, or tumor promoters.
- Excessive alcohol use, especially combined with tobacco products, has been shown to increase the risk of cancer of the oral cavity, throat, esophagus, and liver.
- Studies have shown that diets high in fat and low in fiber are associated with an increased risk of cancer. However, diet and physical activity levels can be modified in adulthood to reduce the risk of developing cancer in the future⁴.
- Among women, obesity is associated with an increased risk of cancer of the breast (among post-menopausal women), uterus (cervix and endometrium), ovary and gallbladder. Among men, obesity is associated with an increased risk of cancer of the colon and prostate⁵.
- There are many other risk factors for cancer including environmental, occupational, viral, familial/genetic, and personal health/lifestyle. Causal factors may act together or in sequence to initiate or promote carcinogenesis.
- No other factors are as important as age and tobacco.

PREVENTION/EARLY DETECTION

- All cancers caused by cigarette smoking or any tobacco use and heavy use of alcohol could be prevented completely. Eliminating the use of all tobacco products would prevent a large number of cancers and cancer-related deaths.
- A low fat diet high in fruits, vegetables, and fiber may help reduce the risk of some cancers.
- Regular cancer screenings and self-exams can detect cancers early and allow for a more successful treatment regimen. This coupled with appropriate follow-up and care will improve survival rates and long-term outcomes. The American Cancer Society estimates that relative survival for breast, tongue, mouth, colon, rectum, cervix, prostate, testis, and melanoma cancers would increase from 80% to 95% if all Americans participated in regular cancer screenings⁴.

¹American Cancer Society. Cancer Facts & Figures - 1996

²American Cancer Society. Breast Cancer Facts & Figures, 1999 - 2000

³American Cancer Society. Cancer Facts & Figures for Arkansas - 1996

⁴American Cancer Society. Cancer Prevention & Early Detection: Facts & Figures - 2000

TREATMENT

-In general, surgery, chemotherapy, radiation, hormone therapy, and/or immunotherapy can and will aid in the treatment of cancer.

-The National Cancer Institute estimates that approximately 8.4 million Americans alive today have a history of cancer. Some of these individuals can be considered cured, while others still have evidence of cancer and may be undergoing treatment⁶

ARKANSAS FACTS

-Three out of four Arkansas families will have a member affected by cancer.³

-One in eight Arkansan women will develop breast cancer at some point during her lifetime.⁴

-Direct medical costs associated with tobacco use in Arkansas exceed \$500 million per year.

-Every year, more than 11,000 children in Arkansas under the age of 18 become new, daily smokers.

-44% of the cancers newly diagnosed in Arkansas for 1996 - 1998 were diagnosed at the localized stage.

-For 1996 - 1998, more Arkansan men were diagnosed with cancer than Arkansan women. Likewise, more males die of cancer than females.

-Among Arkansan women, breast cancer is the most frequently diagnosed cancer followed by lung cancer and colorectal cancer.

-Among Arkansan men, prostate cancer is the most frequently diagnosed cancer followed by lung cancer and colorectal cancer.

Figure 1: Age-distribution of all Cancer Sites Combined, Arkansas: 1996 - 1998

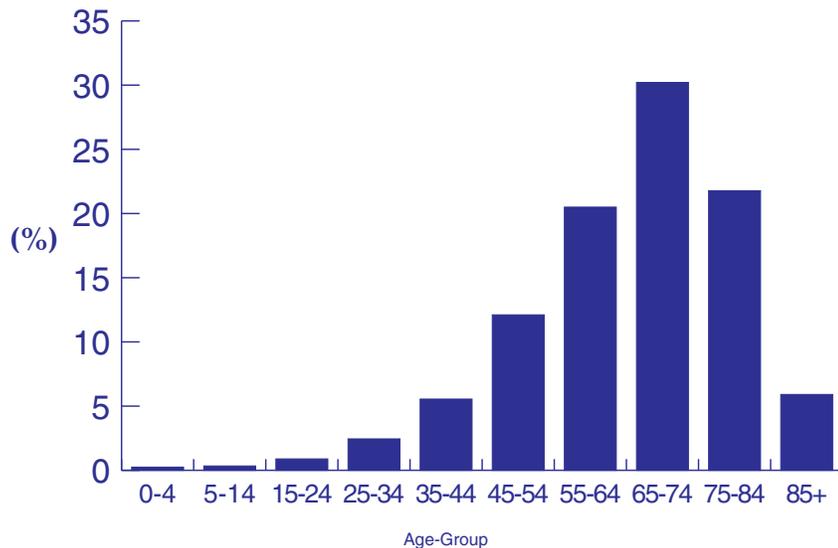
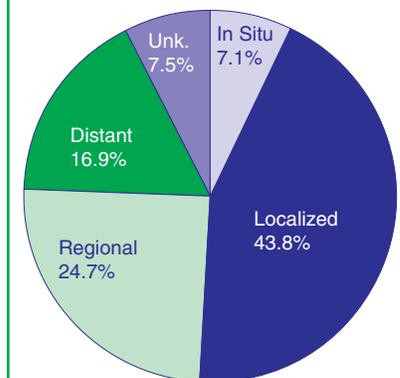


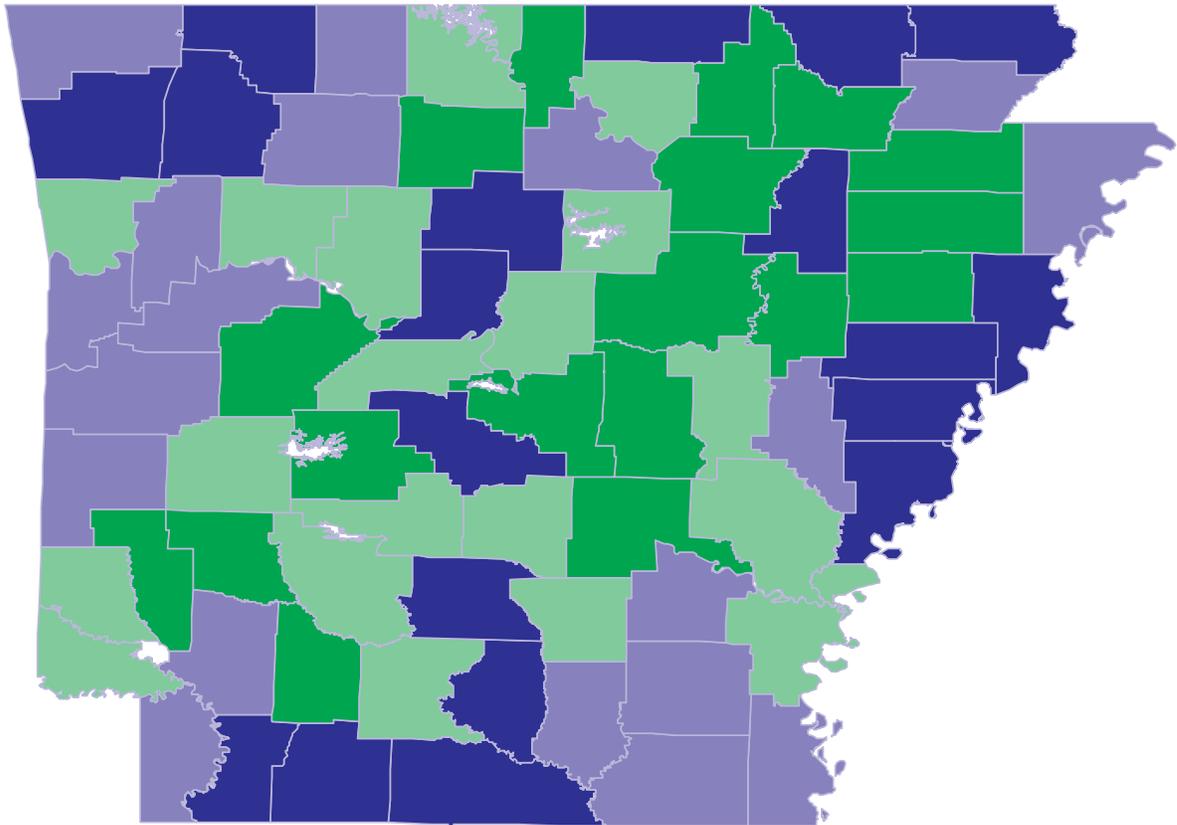
Figure 2: All Cancer Sites Combined Stage at Diagnosis Arkansas: 1996 - 1998



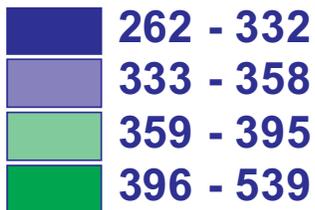
³Harvard Center for Cancer Prevention, Harvard Report on Cancer Prevention. Vol.1: Causes of Human Cancer. Obesity. Cancer Causes and Control 1996;7(Supplement 1):S10-S13.

⁶American Cancer Society. Cancer Facts & Figures - 2000.

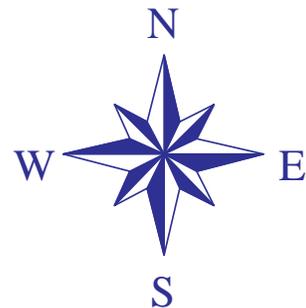
Total Cancer Incidence in Arkansas 1996 - 1998



Quartiles - Rate/100,000



Rates are age-adjusted to the 1970 U.S. Standard Population



LUNG CANCER (TRACHEA & BRONCHUS)

National cancer rates show that lung cancer is the leading cause of death from cancer in both men and women. Lung cancer is also the most commonly diagnosed cancer among Arkansans. For years 1996-98, there were 6,336 newly diagnosed cases of lung cancer among Arkansans. Arkansas outranks other states in smoking prevalence and continues to have one of the highest lung cancer incidence rates. For 1995-1997, the U.S. age-adjusted incidence rate for lung cancer is 59.1/100,000.

RISK FACTORS

- Smoking is the greatest risk factor in the development of lung cancer.
- Smoking is responsible for approximately 87% of the lung cancer cases¹.
- Asbestos, radon, radiation, arsenic and environmental tobacco smoke are some of the exposures considered to be major risk factors.
- A diet lacking fruits and vegetables contributes to an increased risk of lung cancer.

SIGNS & SYMPTOMS

- Some symptoms of lung cancer include the following: persistent cough, shortness of breath, hemoptysis, recurring pneumonia or bronchitis, dyspnea, weight-loss, bone pain, hoarseness, headaches, seizures, swelling of face or neck, chest, shoulder, or arm pain.
- Symptoms often do not appear until the disease is advanced, so early detection is difficult.

PREVENTION

- Currently, there are no early detection screening tests for lung cancer.
- Not smoking is the best way to prevent lung cancer.
- Smoking cessation is the next best preventive measure for lung cancer. In individuals who stop smoking when precancerous changes are found, damaged lung tissue often returns to normal.
- After 10 years of being smoke-free, the risk of lung cancer death is about 50% lower than that of a person who continues to smoke².
- Avoiding exposure to environmental risk factors is another preventive measure.
- Having smoke-free public establishments is critical to eliminate environmental tobacco smoke; thus preventing exposure to non-smokers.

TREATMENT

- Depending on the type and stage of cancer, surgery is the treatment of choice for those lung cancers that are localized.
- Chemotherapy and radiation therapy are often needed in combination with surgery due to the advanced spread of the disease.
- The 5 year survival rate for all stages combined is 14% and 49% for cases detected when the disease is still localized³. However, only 15% of lung cancers are discovered that early³.

¹U.S. Department of Health & Human Services; Centers for Disease Control. Chronic Diseases and Their Risk Factors: The Nation's Leading Causes of Death. 1998, pg. 25.

²U.S. Department of Health and Human Services: A Report of the Surgeon General: The Health Benefits of Smoking Cessation. DHHS Publ. No. (CDC) 90-8416, 1990.

³American Cancer Society. Cancer Facts & Figures - 2000.

ARKANSAS FACTS

- For 1996 - 1998, Arkansas had 6,336 newly diagnosed cases of lung cancer.
- For 1996 - 1998, there were 5,947 lung cancer (including trachea) deaths in Arkansas.
- 37% of Arkansans diagnosed with lung cancer were diagnosed at the distant stage.
- Lung cancer incidence increases with age.
- Males have a much greater incidence of lung cancer than females.
- Smoking prevalence among adults (18+ years of age) is 28.5%, the highest of any state⁴.

Figure 1: Age Distribution of Lung & Bronchus Cancer, Arkansas: 1996 - 1998

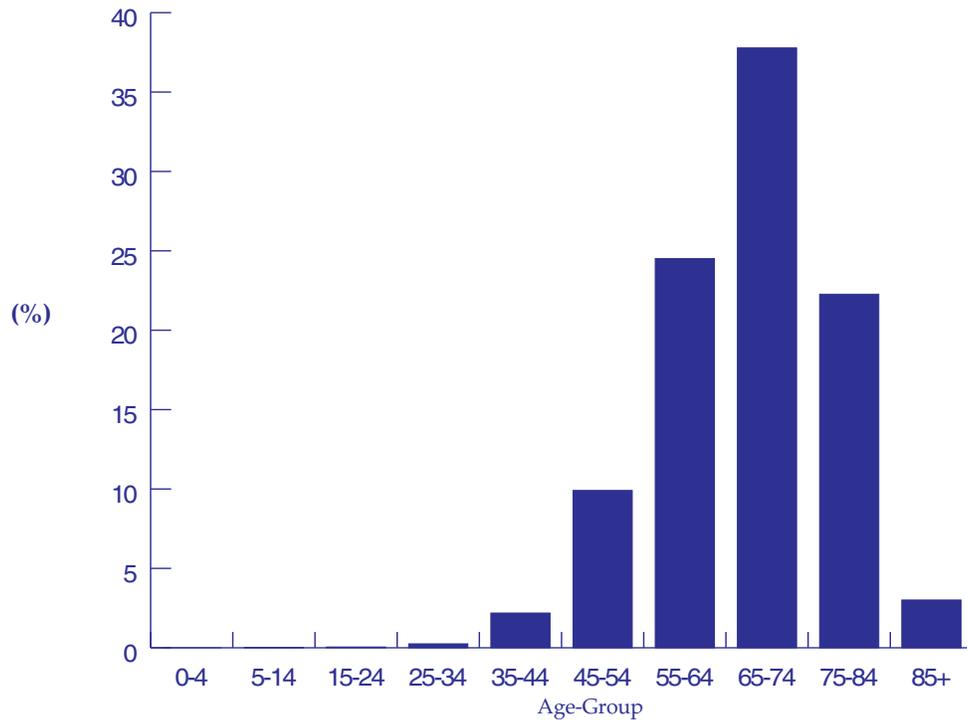
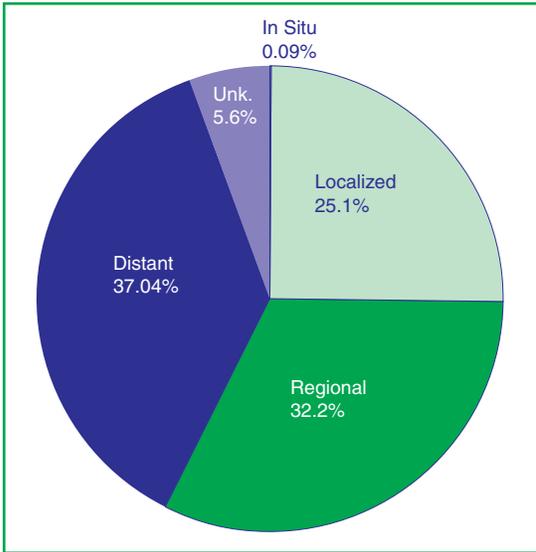
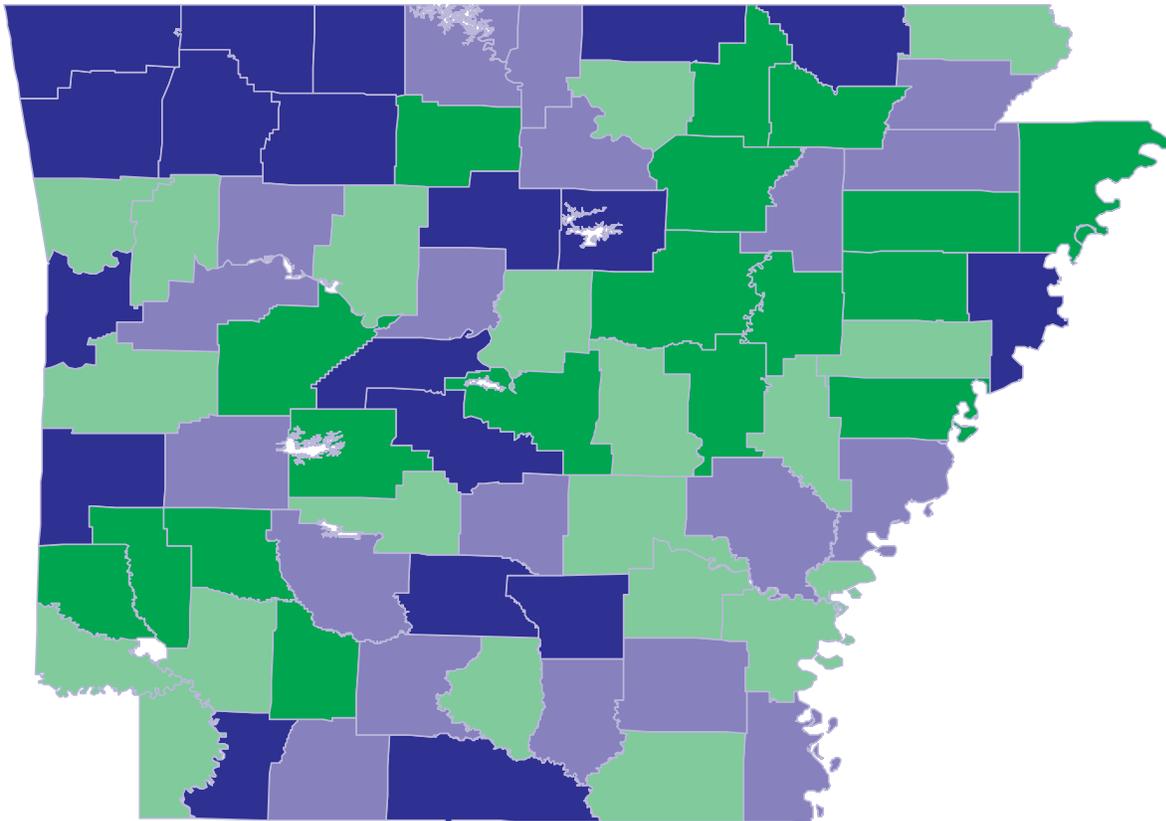


Figure 2:
Lung Cancer
Stage at Diagnosis
Arkansas: 1996 - 1998

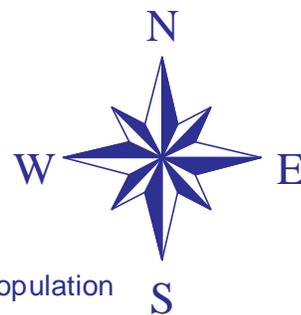
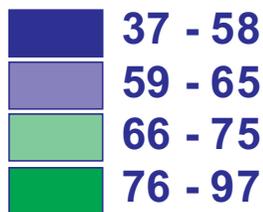


⁴American Cancer Society. Cancer Prevention & Early Detection - Facts & Figures - 2000.

Total Lung Cancer Incidence in Arkansas 1996 - 1998



Quartiles - Rate/100,000



Rates are age-adjusted to the 1970 U.S. Standard Population

FEMALE BREAST CANCER

Excluding cancers of the skin, breast cancer is the most common cancer found in women in the United States, and it is the second leading cause of cancer death among women. Like the U.S., breast cancer is the most commonly diagnosed cancer in women in Arkansas. For 1996 - 1998, there were 5,772 new cases of cancer diagnosed among Arkansans. For 1995-1997, the U.S. age-adjusted incidence rate for female breast cancer (excluding in situ) is 105.4/100,000.

RISK FACTORS

- The primary risk factor for breast cancer is age. The risk of breast cancer increases with age. 77% percent of new cases and 84% of breast cancer deaths occur in women aged 50 and older¹.
- Risk also increases for those women who have a familial or personal history of breast cancer.
- Other risk factors include (but not limited to): early menarche, late menopause, oral contraceptive use, postmenopausal estrogen replacement, nulliparity (no children), benign breast disease, first pregnancy after the age of 30.
- Dietary factors such as fat intake may be linked to an increased risk, but causality has not yet been firmly established.
- Other factors that are currently being investigated as potential risk factors are excessive alcohol intake, weight gain, and exposure to pesticides and other chemicals.

SIGNS & SYMPTOMS

- The earliest sign of breast cancer is an abnormality that appears on a mammogram before it can be felt by the individual either by self-breast exam or clinical breast exam.
- Other symptoms include: painless mass/lump in breast, occasional pain in breast, nipple retraction or tenderness, nipple discharge, skin dimpling and other skin changes, mass or spiculation on mammogram, fixation of tumor.
- Symptoms of metastases include bone pain, hepatomegaly, Central Nervous System (CNS) problems, abdominal masses, or respiratory problems.

PREVENTION & EARLY DETECTION

- Early detection via mammography and clinical breast exams is currently the best method of reducing mortality from breast cancer and increasing treatment options.
- The best strategy of reducing the risk of getting breast cancer is to adhere to screening guidelines, increase physical activity, reduce alcohol consumption and avoid obesity.
- The American Cancer Society (ACS) has adopted screening guidelines for women of various ages. For women aged 40+, ACS recommends an annual mammogram, annual clinical breast examination and monthly breast self-examinations. For women aged 20 to 39, ACS recommends a clinical breast examination every three years and monthly breast self-examinations.

¹American Cancer Society. Breast Cancer Facts & Figures: 1999 - 2000.

TREATMENT

- The optimal treatment is dependent upon the stage of the cancer, the patient's age, preferences and the risks and benefits associated with each form of treatment.
- Most women will have some type of surgery (i.e. lumpectomy, mastectomy) that is often combined with radiation therapy, chemotherapy, monoclonal antibody therapy or hormonal therapy.
- Many times two or more treatment methods are used in conjunction with each other.
- Breast reconstruction has become an important part of treatment practices.
- 5 year survival for localized breast cancer is 96%, for regional stage breast cancer the rate is 77% and for women with distant metastases the rate is 21%².

ARKANSAS FACTS

- For 1996 - 1998, Arkansas had 5,772 newly diagnosed cases of breast cancer (includes female and male). In the United States, males account for approximately 1% of the breast cancers that are diagnosed each year. In Arkansas, there were 49 new cases diagnosed in males accounting for 0.85% of the total breast cancer cases for years 1996 - 1998.
- For 1996 - 1998, there were 1,202 breast cancer deaths in Arkansas.
- 55% of females in Arkansas diagnosed with breast cancer were diagnosed at the localized stage.
- Breast cancer is the number one cancer among females in Arkansas (16% of all cancers diagnosed in Arkansas).
- Arkansas has a state program called BreastCare that provides eligible women screening and treatment services. For more information call toll free 1-877-670-CARE.

Figure 1: Age-distribution of Female Breast Cancer
Arkansas: 1996 - 1998

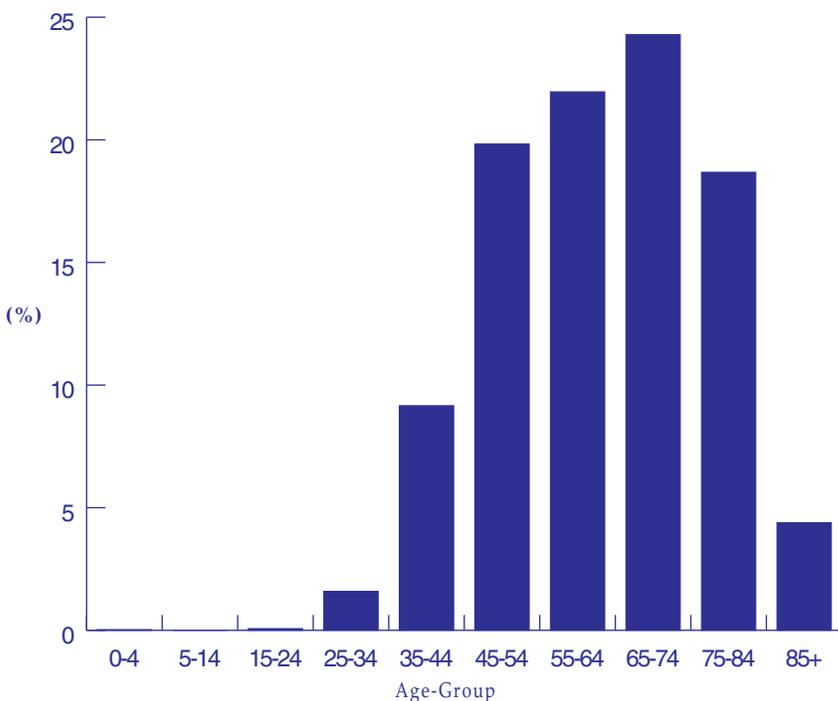
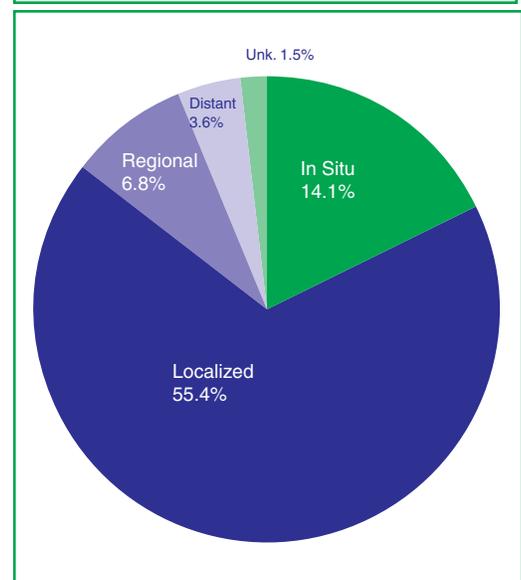
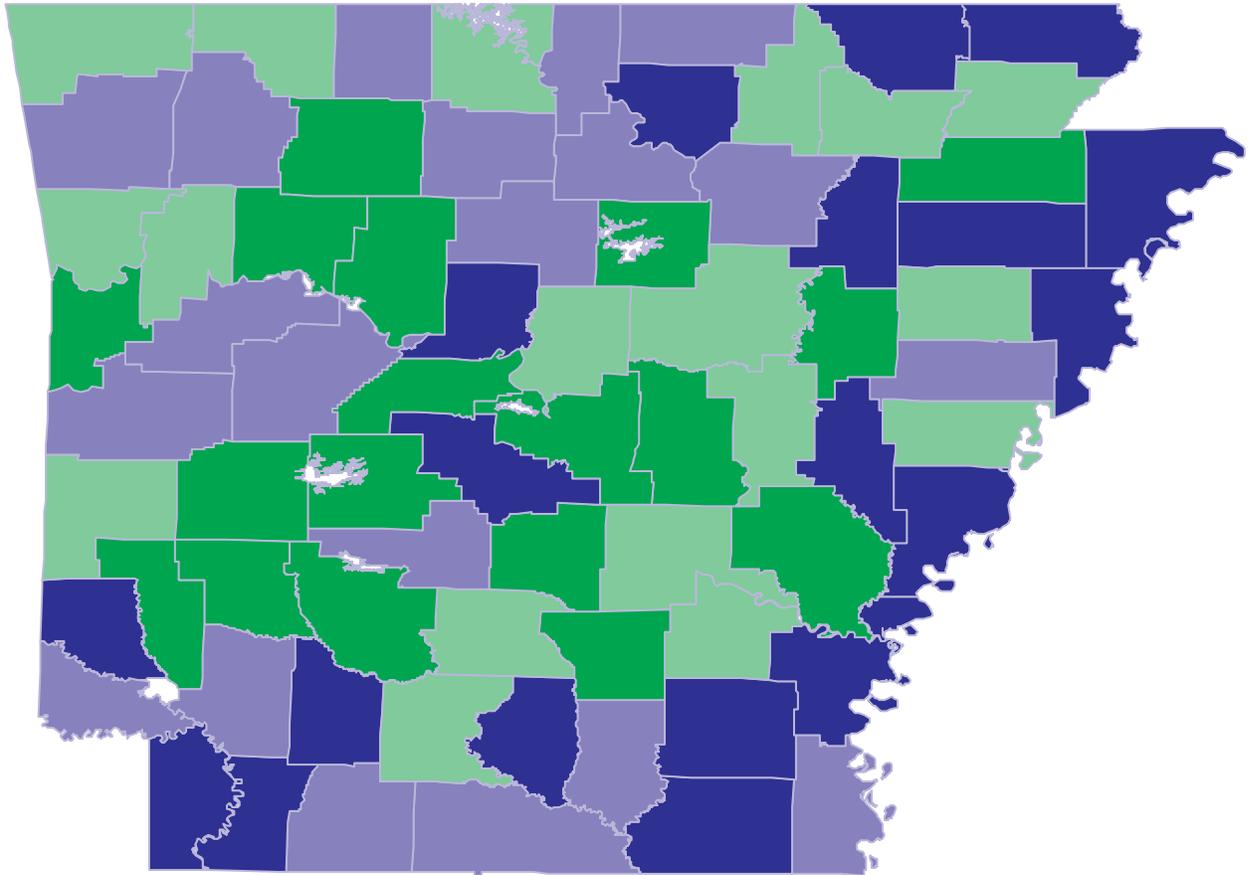


Figure 2: Female Breast Cancer
Stage at Diagnosis
Arkansas: 1996 - 1998



²American Cancer Society. Cancer Facts & Figures – 2000.

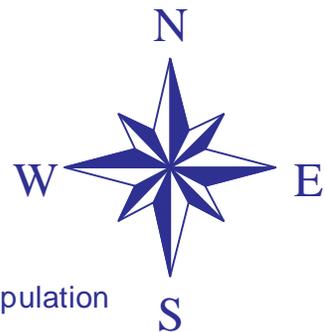
Female Breast Cancer Incidence in Arkansas 1996 - 1998



Quartiles - Rate/100,000

	49 - 87
	88 - 107
	108 - 122
	123 - 176

Rates are age-adjusted to the 1970 U.S. Standard Population



PROSTATE CANCER

Excluding skin cancer, prostate cancer is one of the most common cancers among American men. In Arkansas, it is the most commonly diagnosed cancer in men. After lung cancer, prostate cancer is the second leading cause of cancer death among men in the United States and Arkansas. Prostate cancer incidence rates remain significantly higher in black men than in white men, and in Arkansas the same is true for mortality rates. For 1995-1997, the U.S. age-adjusted incidence rate for prostate cancer is 131/100,000.

RISK FACTORS

- Age is the primary risk factor for prostate cancer; 80% of these cancers are diagnosed in men over 65 years of age with a median age at diagnosis of 72^{1,2}.
- Black Americans have the highest reported mortality in the world.
- Dietary factors such as high fat consumption may play a part in the development of prostate cancer.
- There may be some familial factors that contribute to prostate cancer, but it is not clear if these are due to genetic or environmental factors; this is currently under investigation.
- Occupations in the rubber and cadmium industry are potential risk factors.

SIGNS & SYMPTOMS

- There are many urologic obstructive symptoms such as weak or interrupted urine flow, inability to urinate, difficulty starting or stopping the urine flow, the need to urinate frequently (especially at night), blood in the urine, pain or burning on urination, and continuing pain in lower back, pelvis or upper thighs³.
- Asymptomatic clinical findings on rectal exam such as nodularity or induration (palpation of lumps in the prostate; nodules are non-tender and very hard), prostate enlargement, and prostate hardness.
- Other symptoms include weight loss, lack of appetite, anemia and bone pain (the most frequent complaint of patients presenting with metastatic disease).

PREVENTION & EARLY DETECTION

- To date, there are very limited screening data for prostate cancer, and professional organizations have not agreed on screening guidelines. However, screening for prostate cancer in asymptomatic men will detect tumors at an earlier stage of disease.
- It is recommended that men 50 years and older should consult their physician and make an informed decision with regards to their individual screening practices.
- The prostate-specific antigen (PSA) blood test and digital rectal exam (DRE) are two examples of screening methods. Men who are at higher risk (black men or men who have a familial history of prostate cancer) should consider beginning these tests at an earlier age. Always consult your physician regarding cancer screening.
- For any suspicious findings, a transrectal ultrasound should be performed for further evaluation.
- While screening and treatment are available for prostate cancer the costs, in adverse side effects such as incontinence and impotence, versus benefits are still questionable.

TREATMENT

- There are several treatment options for prostate cancer diagnoses such as surgery, radiation therapy, hormone therapy and anticancer drugs. However, all treatment options depend upon the patient's age, stage of cancer and other medical conditions.
- Treatment using hormones and anticancer drugs are good for controlling the cancer for long periods by shrinking the tumor size and by relieving pain.
- “Watchful Waiting”, observation without immediate active treatment, may be appropriate, particularly for older individuals with low grade and/or early stage tumors⁴.
- 79% of all prostate cancers are discovered in the localized and regional stages⁴.
- The 5 year survival rate is very high for those patients whose tumors are diagnosed at the localized and regional stages⁴.

ARKANSAS FACTS

- For 1996 - 1998, Arkansas had 4,733 new cases of prostate cancer.
- For 1996 - 1998, there were 1,135 prostate cancer deaths in Arkansas.
- 76% of Arkansans diagnosed with prostate cancer were diagnosed in the localized stage.
- Prostate cancer incidence increases with age.

Figure 1: Age-distribution of Prostate Cancer
Arkansas: 1996 - 1998

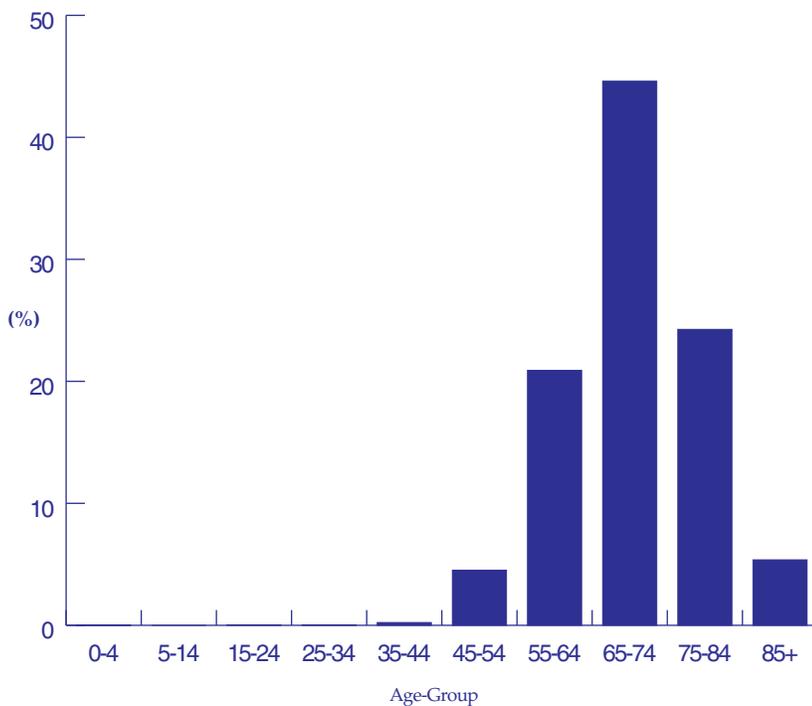
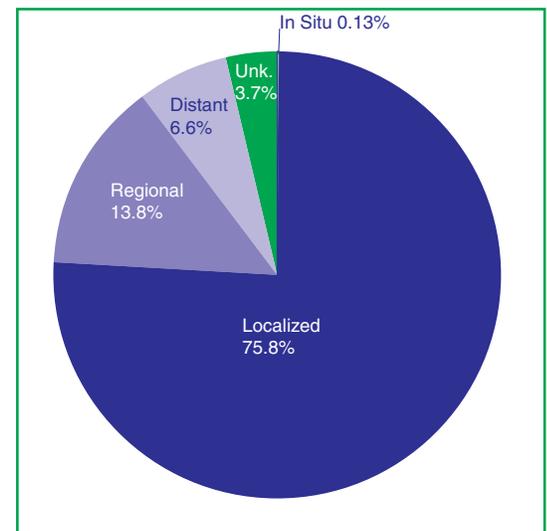


Figure 2: Prostate Cancer Stage at Diagnosis - All Males
Arkansas: 1996 - 1998

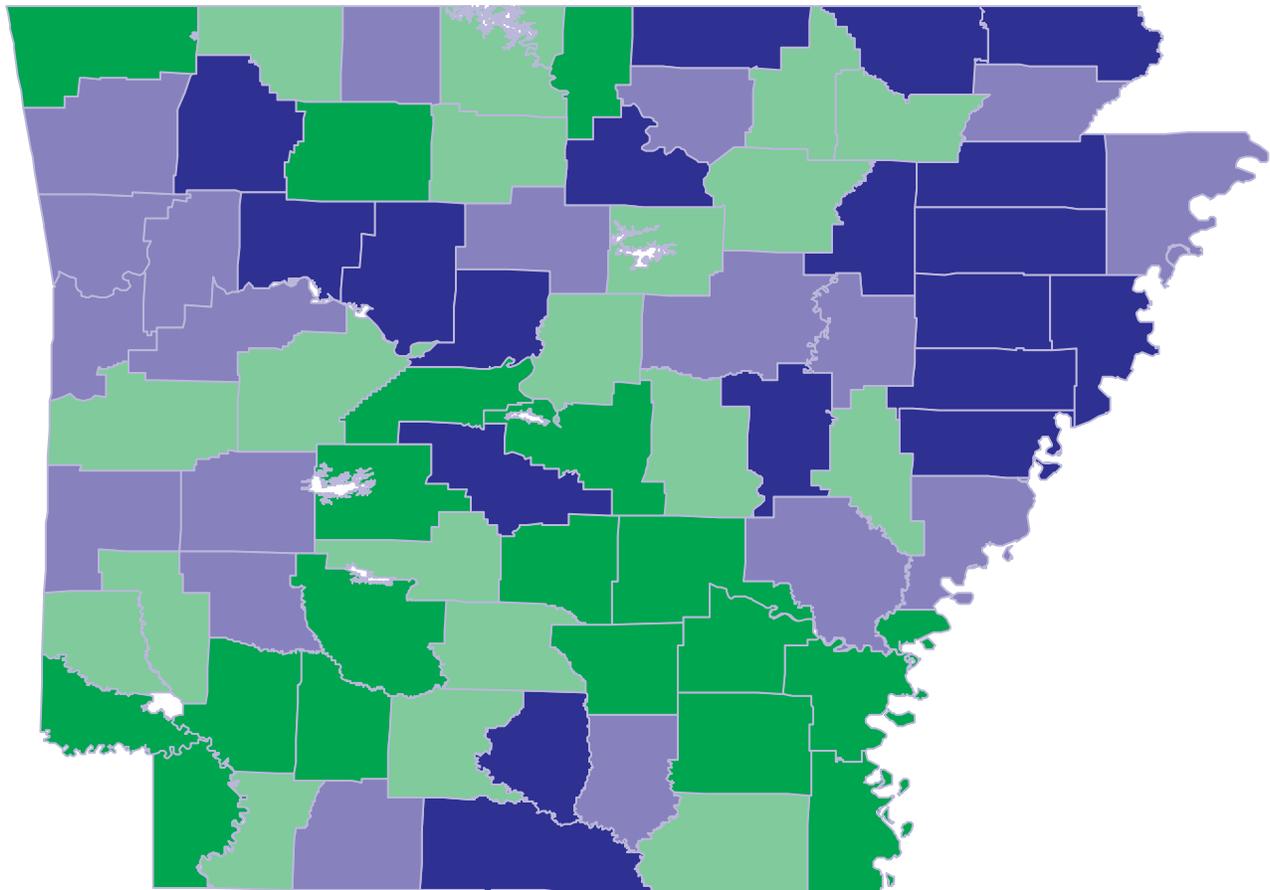


¹Murphy, Gerald P., MD, Lawrence, Walter Jr., M.D., Lenhard, Raymond E., Jr., M.D. American Cancer Society Textbook of Clinical Oncology, 2nd Edition, 1995, ACS, pg. 220.

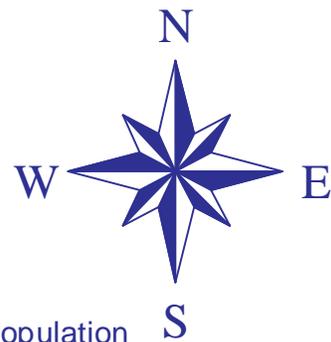
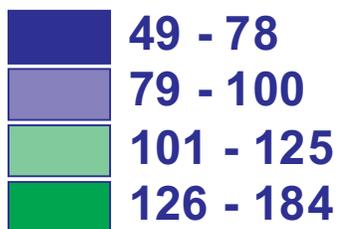
^{1,2,3}American Cancer Society. Cancer Facts & Figures – 1996.

⁴American Cancer Society. Cancer Facts & Figures - 2000.

Prostate Cancer Incidence in Arkansas 1996 - 1998



Quartiles - Rate/100,000



Rates are age-adjusted to the 1970 U.S. Standard Population

COLORECTAL CANCER

Colorectal cancer is the fourth most commonly diagnosed cancer among Arkansans and the third most common cancer in men and women. Incidence rates have declined significantly during the 1990's. This decline may be due to increased screening and polyp removal preventing the progression of polyps to invasive cancer. For 1995-1997, the U.S. age-adjusted incidence rate for colon cancer (excluding rectum) is 31.5/100,000; and for rectum & rectosigmoid the rate is 12.1/100,000.

RISK FACTORS

- Family/personal history of colorectal cancer, polyps or inflammatory bowel disease have been associated with an elevated risk for colorectal cancer.
- Other possible risk factors include physical inactivity, high fat and/or low fiber diet, inadequate intake of fruits and vegetables and alcohol ingestion.
- Estrogen replacement therapy and non-steroidal anti-inflammatory drugs such as aspirin may actually reduce the risk.

SIGNS & SYMPTOMS

- Rectal bleeding
- Blood in the stool
- Change in bowel habits

PREVENTION & EARLY DETECTION

- According to the American Cancer Society, a fecal occult blood test (FOBT) along with a digital rectal exam (DRE) is recommended every year after the age of 50.
- A flexible sigmoidoscopy is recommended every 3 to 5 years after the age of 50.
- These tests are important for the diagnosis and removal of polyps and the ultimate prevention of this cancer. However, a colonoscopy is the best screening method to detect colorectal cancer at an early stage when successful treatment is likely.
- The intake of folic acid may reduce the risk of colorectal cancer.

TREATMENT

- Surgery combined with radiation is the most effective method of treating colorectal cancer.
- Chemotherapy combined with immunologic agents may be beneficial.
- The 5 year survival rate is 90% for localized cancers and 65% for regional cancers.

ARKANSAS FACTS

- For 1996 - 1998, Arkansas had 4,251 new cases of colorectal cancer.
- For 1996 - 1998, there were 1,110 colorectal cancer deaths in Arkansas.
- 48% of Arkansans diagnosed with colorectal cancer were diagnosed in the regional stage.
- Colorectal cancer incidence increases with age.

¹Murphy, Gerald P., MD, Lawrence, Walter Jr., M.D., Lenhard, Raymond E., Jr., M.D. American Cancer Society Textbook of Clinical Oncology, 2nd Edition, 1995, ACS, pg. 220.

^{1,2}American Cancer Society. Cancer Facts & Figures – 1996.

Figure 1: Age-distribution of Colorectal Cancer
Arkansas: 1996 - 1998

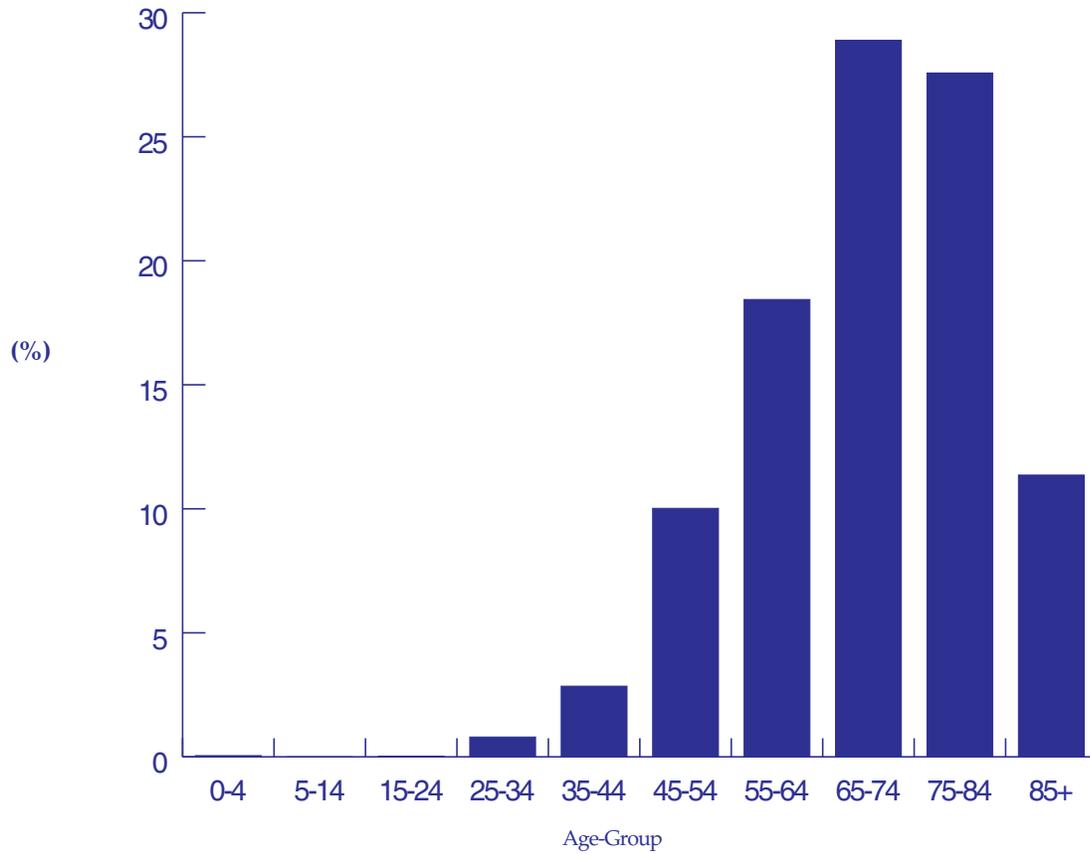
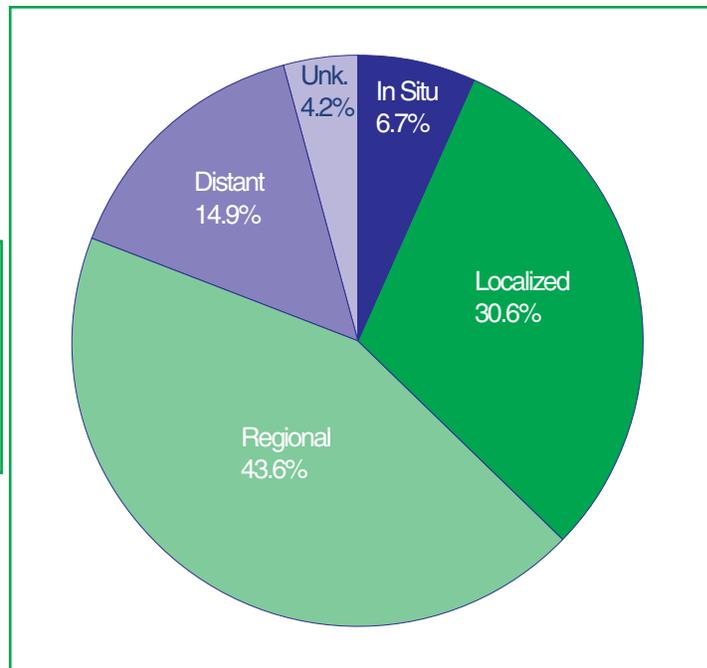
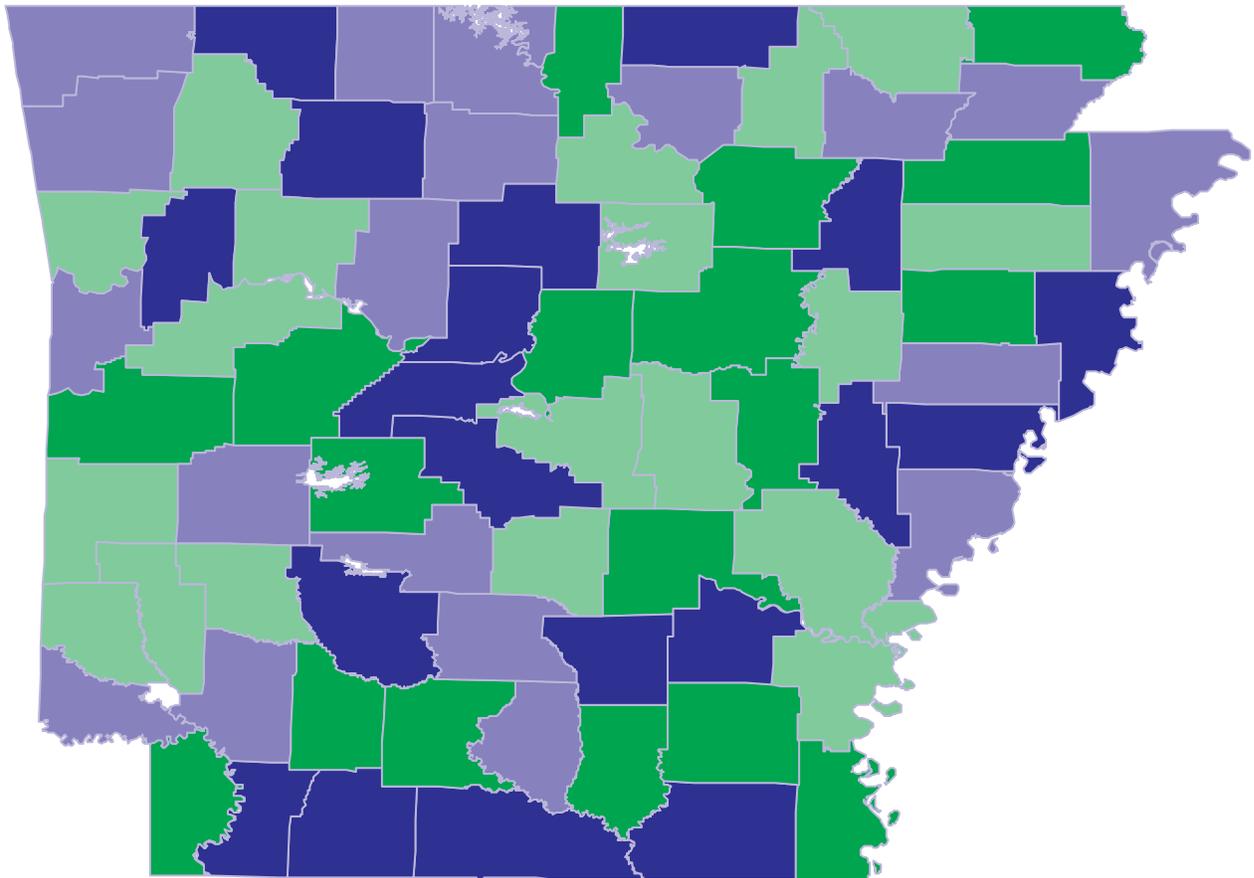


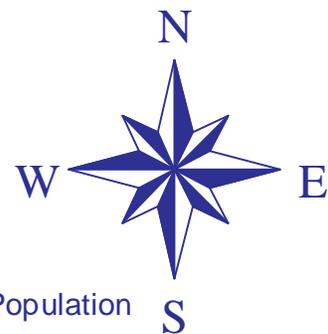
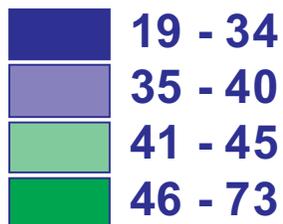
Figure 2:
Colorectal Cancer
Stage at Diagnosis
Arkansas: 1996 - 1998



Colorectal Cancer Incidence in Arkansas 1996 - 1998



Quartiles - Rate/100,000



Rates are age-adjusted to the 1970 U.S. Standard Population

BLADDER CANCER

Bladder cancer is the fifth most common cancer in the United States¹. It is also the fifth most commonly diagnosed cancer in Arkansas with higher incidence and mortality rates seen in males. In the U.S., bladder cancer incidence is about four times higher in men than in women and two times higher in whites than in blacks². For 1995-1997, the U.S. age-adjusted incidence rate for bladder cancer is 16.9/100,000.

RISK FACTORS

- Smoking is the greatest risk factor for bladder cancer because many of the carcinogens in tobacco are excreted in the urine.
- Smokers experience twice the risk of nonsmokers².
- Smoking is estimated to be responsible for about 47% of bladder cancer deaths among men and 37% among women.
- Individuals who live in urban areas are also at risk.
- Individuals who work with dye, rubber, or leather also have a higher risk.

SIGNS & SYMPTOMS

- Blood in the urine
- Increased frequency of urination

PREVENTION & EARLY DETECTION

- Currently, studies do not show a decrease in mortality among individuals detected through screening compared to those detected without screening.
- The primary way to prevent bladder cancer is to eliminate tobacco use.

TREATMENT

- Surgery is the main treatment option used in more than 90% of cases. Surgery is often times combined with other treatment regimens.
- Localized cancers may be treated by administering immunotherapy or chemotherapy directly into the bladder.
- Chemotherapy alone or with radiation before cystectomy (removal of the bladder) has improved some treatment results².
- The 5-year relative survival rate is 93% for bladder cancers diagnosed at the localized stage².

ARKANSAS FACTS

- For 1996 - 1998, there were 1,406 new cases of bladder cancer diagnosed among Arkansans.
- For 1996 - 1998, there were 347 deaths due to bladder cancer.
- The incidence of bladder cancer is greater among men than women, a pattern that is similar to national data.
- Bladder cancer increases with age.
- 57% of the bladder cancers were diagnosed at the localized stage (Summary Stage 1).

¹Fraser MC, Cancer Rates and Risks, 4th Edition, 1996, NIH/NCI, pg. 163.

²American Cancer Society. Cancer Facts & Figures - 2000

Figure 1: Age-distribution of Bladder Cancer
Arkansas: 1996 - 1998

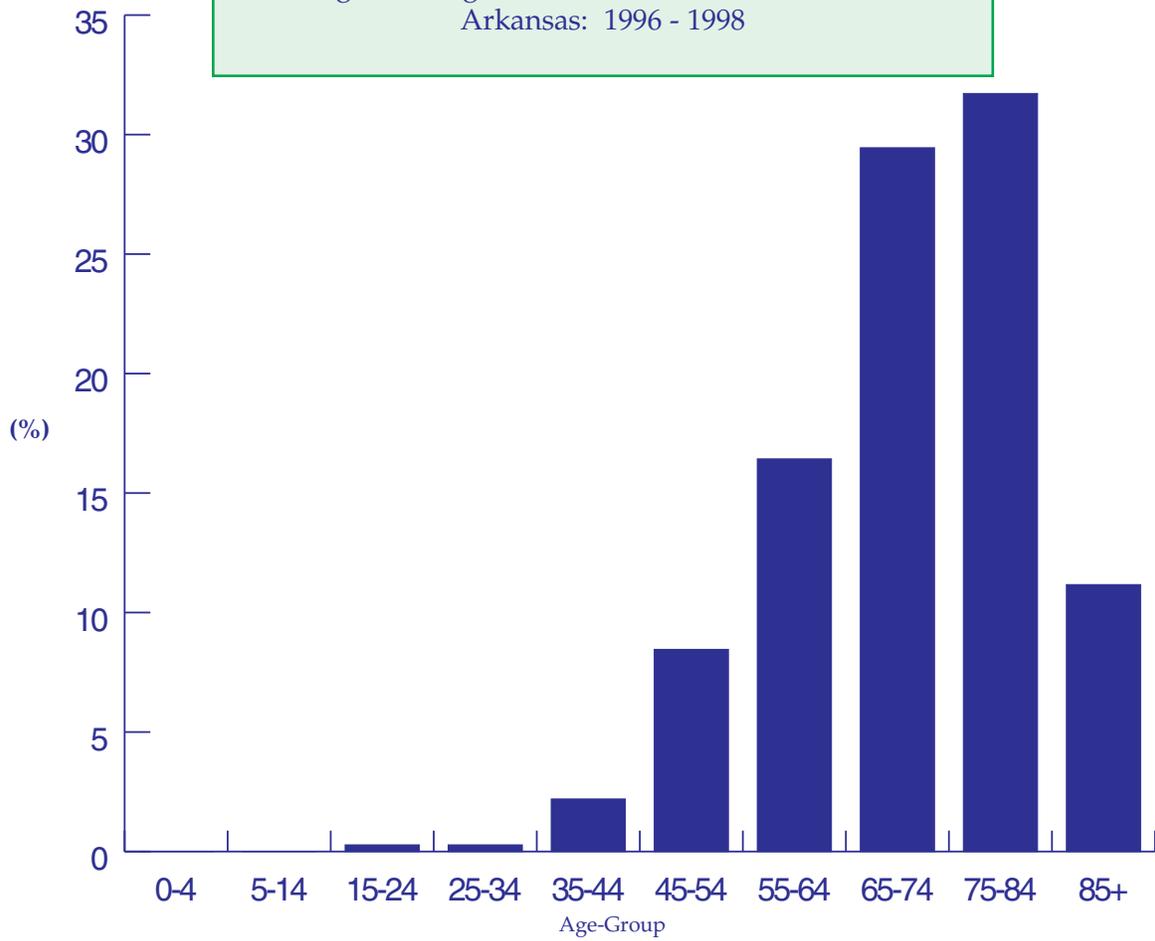
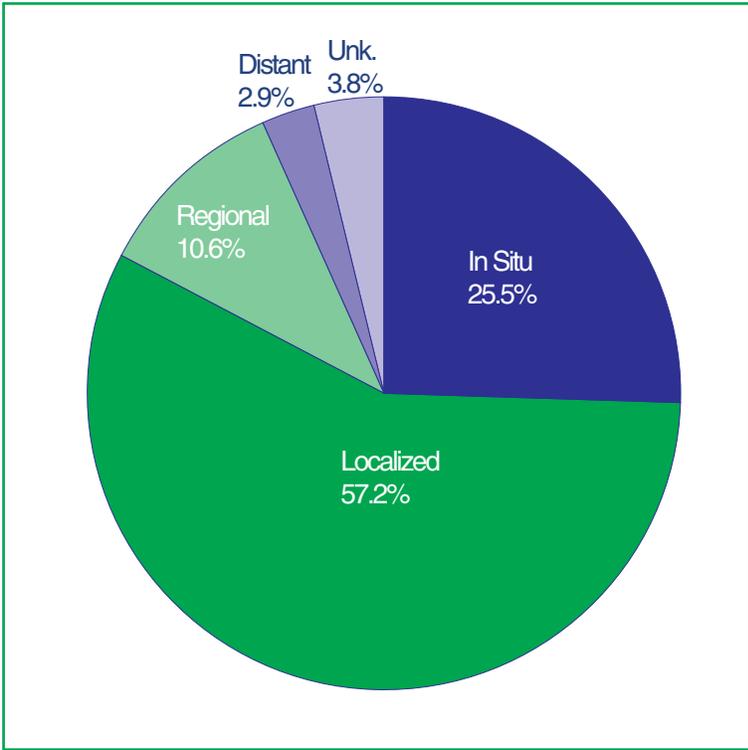
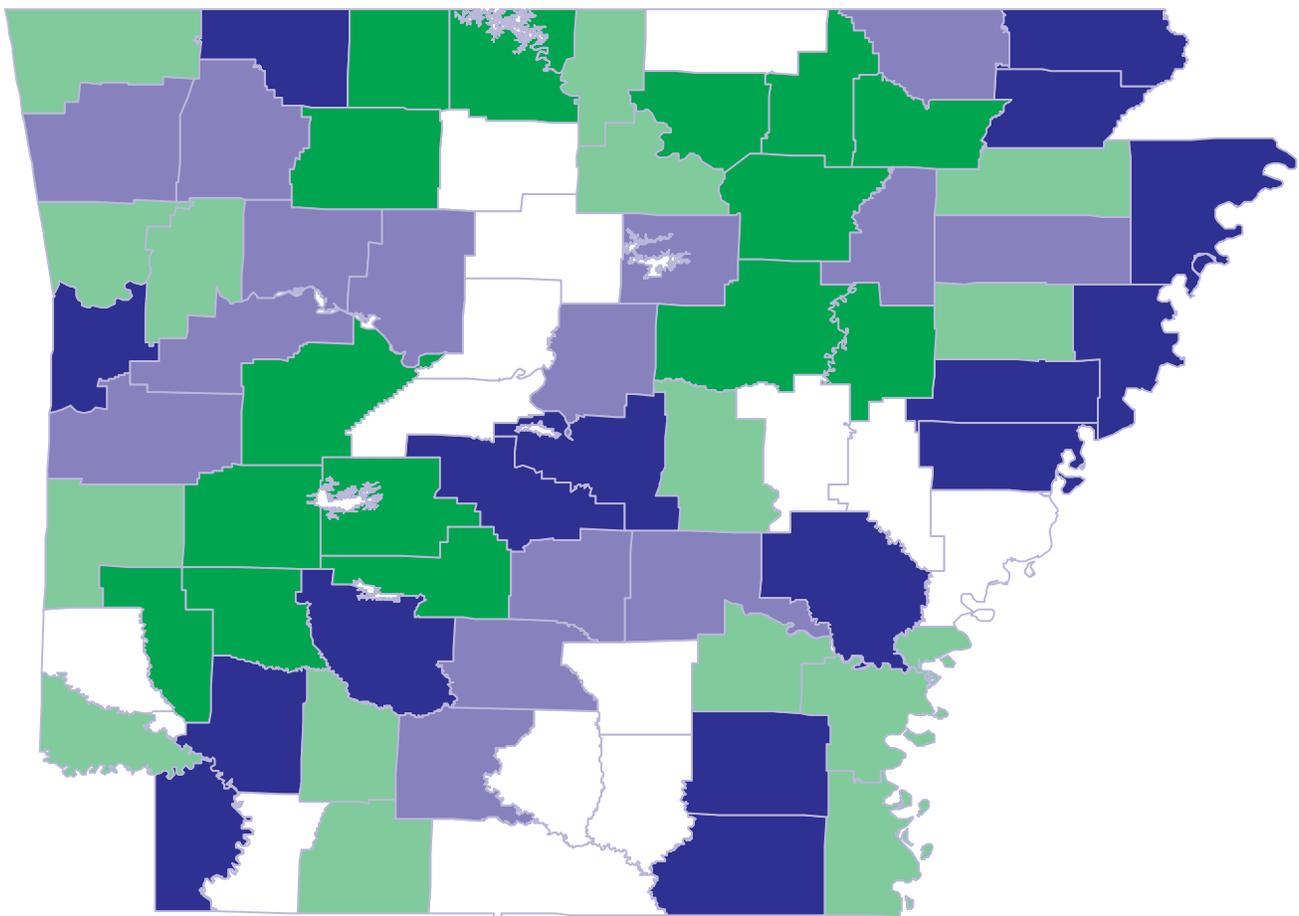


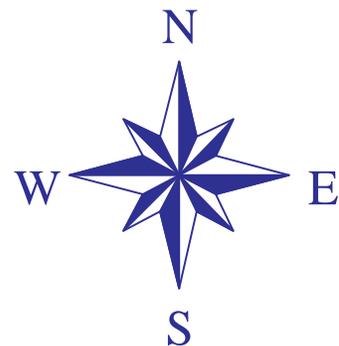
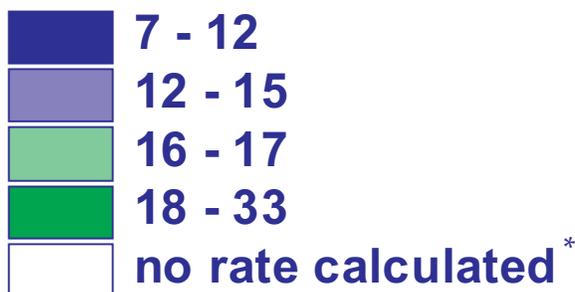
Figure 2:
Bladder Cancer
Stage at Diagnosis
Arkansas: 1996 - 1998



Bladder Cancer Incidence in Arkansas 1996 - 1998



Quartiles - Rate/100,000



Rates are age-adjusted to the 1970 U.S. Standard Population

*A rate is not calculated for those counties with less than 5 cases of cancer.

CERVICAL CANCER

Although incidence and mortality rates have declined over the past few decades, cervical cancer remains one of the leading causes of cancer deaths in women worldwide. For 1996 - 1998, cancer of the cervix was the fourth most commonly diagnosed cancer in women in Arkansas. For 1995-1997, the U.S. age-adjusted incidence rate for cervical cancer is 7.9/100,000.

RISK FACTORS

- Sexual behavior and sexually transmitted infections are linked to cervical cancer.
- First intercourse at an early age, multiple sexual partners, or intercourse with partners who have had multiple sexual partners are risk factors for cervical cancer.
- Tobacco use.
- Low socioeconomic status.
- Choice of contraceptive method appears to affect the risk of cervical cancer.¹
- The human papillomavirus (HPV) plays a role in the etiology of cervical cancer.
- Nutritional factors such as low intake of vitamin C, beta carotene or folacin may be associated with an elevated risk for cervical cancer².

SIGNS & SYMPTOMS

- Abnormal vaginal bleeding or discharge
- Pain and systemic symptoms are late manifestations of the disease.

PREVENTION & EARLY DETECTION

- A regular Pap test is recommended for women who are, or have been sexually active or who have reached 18 years of age.
- Early detection of abnormal cervical neoplasia is obtained through regular use of Pap smears and appropriate treatment.
- Early detection and treatment lowers mortality from cervical cancer.

TREATMENT

- For invasive cancers a combination of surgery and radiation therapy is the typical treatment.
- Cryotherapy for those cancers that are still in the in situ stage; electrocoagulation; laser ablation.
- 89% of cervical cancer patients survive one year after diagnosis¹.
- The 5 year relative survival rate is 91% for localized cancers.

ARKANSAS FACTS

- For 1996 - 1998, there were 1,151 newly diagnosed cases of cervical cancer in Arkansas women.
- For 1996 - 1998, there were 155 cervical cancer deaths in Arkansas.
- 59% of Arkansans diagnosed with cervical cancer were diagnosed at the in situ stage and 25% were diagnosed at the localized stage.

¹American Cancer Society. Cancer Facts & Figures – 1996.

²U.S. Department of Health & Human Services; Centers for Disease Control. Chronic Diseases and Their Risk Factors: The Nation's Leading Causes of Death. 1998, pg. 201.

Figure 1: Age-distribution of Cervical Cancer; All Females
Arkansas: 1996 - 1998

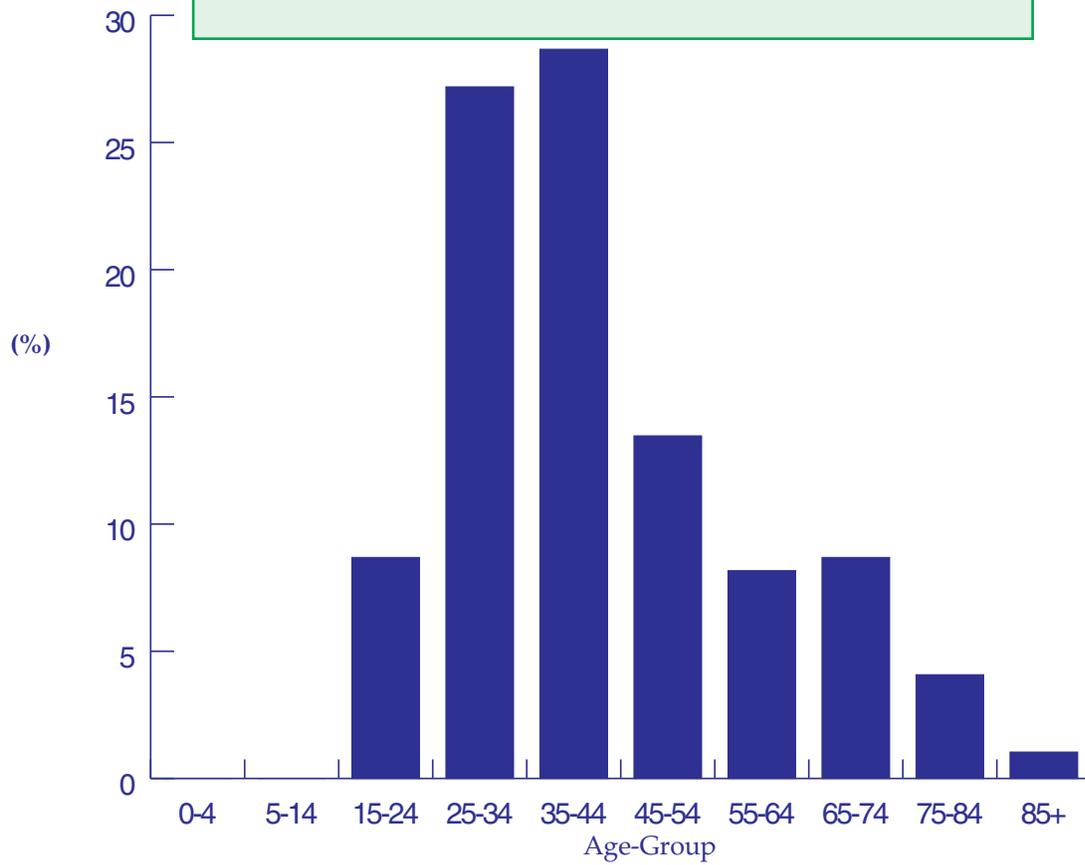
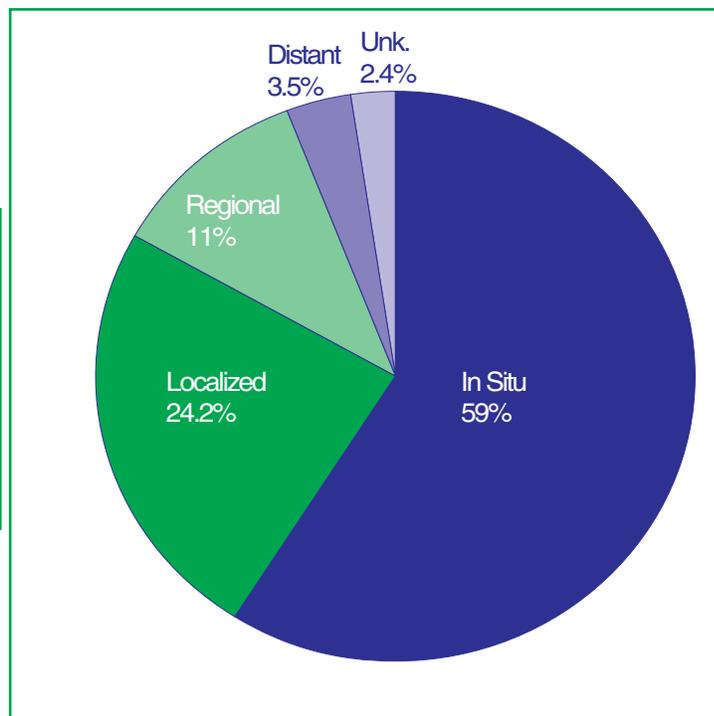
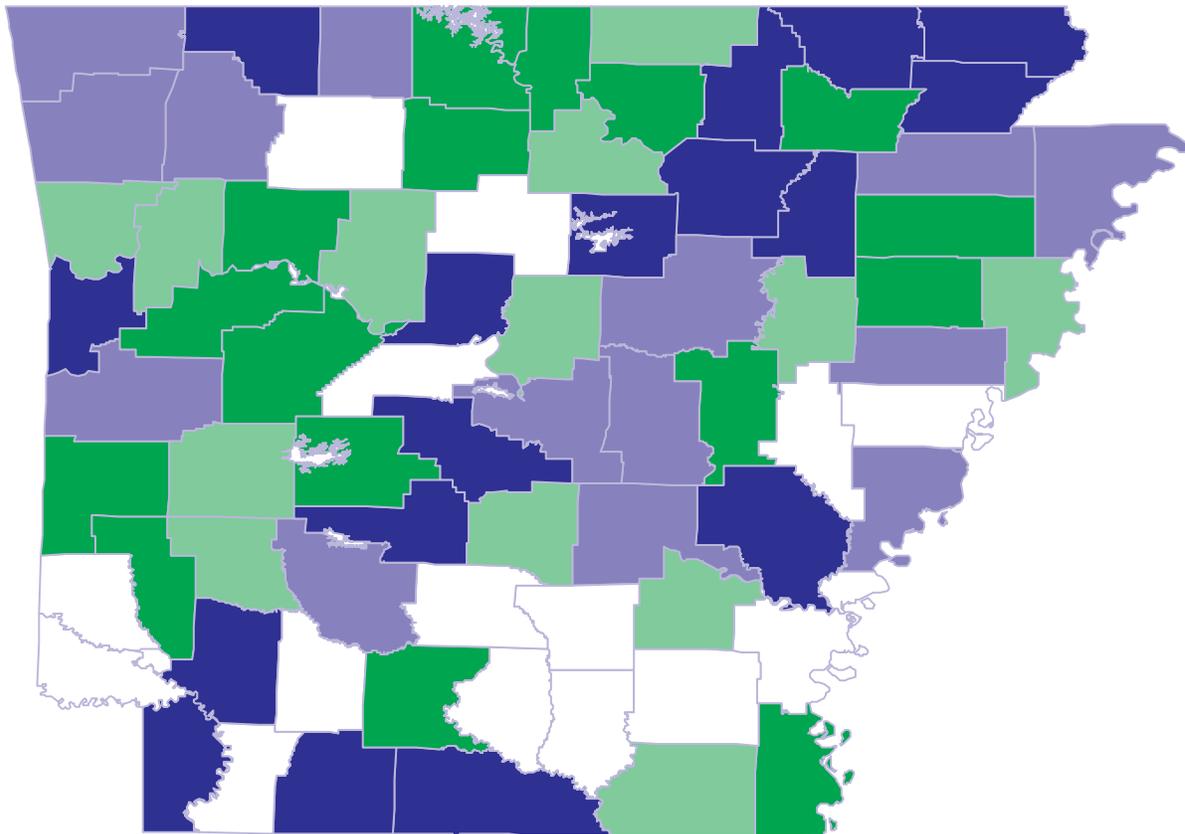


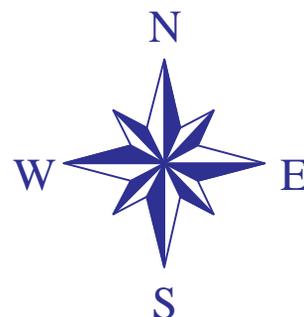
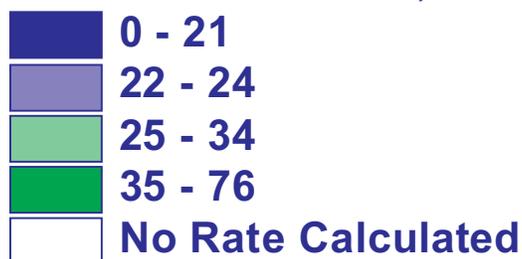
Figure 2:
Cervical Cancer
Stage at Diagnosis
All Females
Arkansas: 1996 - 1998



Cervical Cancer Incidence in Arkansas 1996 - 1998



Quartiles - Rate/100,000



Rates are age-adjusted to the 1970 U.S. Standard Population

* A rate is not calculated for those counties with less than 5 cases of cancer.

Table 1: Cancer Incidence in Arkansas by Gender and Race: 1996 - 1998

		BOTH SEXES		MALE		FEMALE		WHITE		BLACK	
		New Cases	Age-Adj Rate	New Cases	Age-Adj Rate	New Cases	Age-Adj Rate	New Cases	Age-Adj Rate	New Cases	Age-Adj Rate
All Sites	Total	35,798	377.1	18,247	432.5	17,549	339.7	31,783	380.2	3,792	358.7
	1996	11,338	361.6	5,793	416.3	5,544	324.3	10,119	367.2	1,173	328.0
	1997	12,292	389.0	6,235	442.9	6,056	353.6	10,819	388.6	1,378	392.8
	1998	12,199	381.5	6,238	439.3	5,961	341.8	10,873	385.8	1,243	354.9
ALL BUCCAL CAVITY & PHARYNX	Total	862	9.4	602	14.7	260	4.9	772	9.4	86	9.1
	1996	255	8.3	178	13.0	77	4.3	229	8.4	25	7.7
	1997	317	10.3	215	15.8	102	5.6	278	10.1	36	11.4
	1998	292	9.5	210	15.2	82	4.6	267	9.8	25	8.4
Lip	Total	95	1.0	75	1.8	20	0.3	95	1.1	0	0.0
	1996	31	1.0	24	1.7	7	0.3	31	1.1	0	0.0
	1997	44	1.3	36	2.5	8	0.3	44	1.5	0	0.0
	1998	20	0.6	15	1.1	5	0.2	20	0.7	0	0.0
Tongue	Total	195	2.2	140	3.4	55	1.1	172	2.2	22	2.4
	1996	52	1.7	34	2.5	18	1.0	49	1.8	*	-
	1997	75	2.5	53	4.0	22	1.3	61	2.3	13	4.3
	1998	68	2.3	53	3.8	15	0.9	62	2.3	6	2.0
Salivary Glands	Total	91	1.0	58	1.4	33	0.7	86	1.1	5	0.5
	1996	29	0.9	21	1.4	8	0.5	26	1.0	*	-
	1997	27	0.9	15	1.1	12	0.8	25	1.0	*	-
	1998	36	1.1	23	1.7	13	0.7	36	1.3	0	0.0
Floor of Mouth	Total	71	0.8	48	1.2	23	0.4	64	0.8	6	0.7
	1996	20	0.7	16	1.2	*	-	16	0.6	*	-
	1997	27	0.9	14	1.0	13	0.8	25	0.9	*	-
	1998	24	0.8	18	1.4	6	0.3	23	0.9	*	-
Gum & Other Mouth	Total	131	1.3	80	1.9	51	0.8	116	1.3	14	1.4
	1996	44	1.4	28	2.1	16	0.8	37	1.3	6	1.8
	1997	48	1.5	28	2.1	20	0.9	46	1.6	*	-
	1998	39	1.2	24	1.7	15	0.8	33	1.1	6	1.8
Nasopharynx	Total	47	0.5	28	0.7	19	0.4	39	0.5	7	0.8
	1996	15	0.5	9	0.7	6	0.4	12	0.5	*	-
	1997	18	0.6	12	0.8	6	0.3	15	0.5	*	-
	1998	14	0.4	7	0.5	7	0.4	12	0.4	*	-
Tonsil	Total	126	1.4	94	2.3	32	0.6	113	1.4	13	1.3
	1996	33	1.1	21	1.5	12	0.7	30	1.1	*	-
	1997	43	1.4	31	2.2	12	0.8	37	1.4	6	1.8
	1998	50	1.7	42	3.1	8	0.5	46	1.8	*	-
Oropharynx	Total	27	0.3	19	0.5	8	0.2	18	0.2	9	1.1
	1996	5	0.2	*	-	*	-	*	-	*	-
	1997	7	0.3	5	0.4	2	0.1	*	-	*	-
	1998	15	0.5	10	0.7	5	0.3	10	0.3	5	1.7
Hypopharynx	Total	54	0.6	43	1.1	11	0.2	49	0.6	5	0.5
	1996	18	0.6	15	1.1	*	-	18	0.7	0	0.0
	1997	17	0.6	14	1.1	*	-	13	0.5	*	-
	1998	20	0.7	14	1.0	6	0.4	19	0.7	*	-

Rates are age-adjusted to the 1970 U.S. Standard Population (per 100,000 population)

* Indicates less than 5 cases

- Age-adjusted rate not calculated

Table 1: Cancer Incidence in Arkansas by Gender and Race: 1996 - 1998

		BOTH SEXES		MALE		FEMALE		WHITE		BLACK	
		New Cases	Age-Adj Rate	New Cases	Age-Adj Rate	New Cases	Age-Adj Rate	New Cases	Age-Adj Rate	New Cases	Age-Adj Rate
Other Buccal Cavity & Pharynx	Total	25	0.3	17	0.4	8	0.2	20	0.2	5	0.5
	1996	8	0.3	6	0.5	*	-	6	0.2	*	-
	1997	11	0.4	7	0.5	*	-	8	0.3	*	-
	1998	6	0.2	*	-	*	-	6	0.2	0	0.0
ALL DIGESTIVE SYSTEM	Total	6,395	64.2	3,373	79.2	3,022	52.1	5,541	62.8	810	74.6
	1996	1,985	59.9	1,037	73.8	948	48.7	1,713	58.6	262	70.3
	1997	2,146	65.2	1,128	79.7	1,018	53.4	1,856	63.7	276	76.8
	1998	2,265	67.4	1,209	84.2	1,056	54.0	1,972	66.0	273	76.5
Esophagus	Total	317	3.4	244	5.9	73	1.3	243	2.9	73	7.3
	1996	95	3.2	73	5.4	22	1.4	73	2.8	22	6.8
	1997	98	3.1	72	5.2	26	1.3	69	2.5	28	7.9
	1998	124	3.9	99	7.2	25	1.2	101	3.6	23	7.2
Stomach	Total	500	4.9	297	6.9	203	3.3	415	4.6	80	6.9
	1996	156	4.6	95	6.6	61	2.9	136	4.6	20	4.7
	1997	179	5.5	100	7.2	79	4.0	142	4.9	34	8.7
	1998	165	4.7	102	7.0	63	3.0	137	4.4	26	7.3
Small Intestine	Total	112	1.2	65	1.5	47	0.9	99	1.2	13	1.1
	1996	30	0.9	19	1.4	11	0.5	28	1.0	*	-
	1997	53	1.7	33	2.3	20	1.2	44	1.7	9	2.4
	1998	29	0.9	13	0.9	16	0.9	27	1.0	*	-
ALL COLON	Total	3,068	29.9	1,482	34.3	1,586	26.5	2,710	29.7	340	31.0
	1996	972	28.3	466	32.7	506	24.8	852	28.1	117	30.7
	1997	995	29.2	473	32.7	522	26.6	886	29.3	105	29.3
	1998	1,101	32.0	543	37.2	558	27.9	972	31.6	118	32.6
Cecum	Total	657	6.2	285	6.5	372	5.8	595	6.3	58	5.2
	1996	223	6.2	95	6.5	128	6.0	199	6.2	24	6.4
	1997	201	5.7	85	5.8	116	5.5	182	5.8	19	5.1
	1998	233	6.6	105	7.3	128	5.9	214	6.8	15	4.1
Appendix	Total	41	0.5	17	0.4	24	0.5	35	0.4	5	0.6
	1996	13	0.4	6	0.4	7	0.4	11	0.5	*	-
	1997	13	0.4	*	-	10	0.6	11	0.4	*	-
	1998	15	0.5	8	0.6	7	0.4	13	0.5	*	-
Ascending Colon	Total	514	5.0	222	5.1	292	4.8	460	5.0	52	4.6
	1996	172	5.0	67	4.7	105	5.2	151	4.9	21	5.6
	1997	160	4.7	76	5.3	84	4.3	149	5.0	11	2.8
	1998	182	5.1	79	5.4	103	4.9	160	5.0	20	5.3
Hepatic Flexure	Total	153	1.4	79	1.8	74	1.2	137	1.5	16	1.4
	1996	45	1.3	27	1.9	18	0.9	42	1.4	*	-
	1997	55	1.6	30	2.0	25	1.4	48	1.6	7	1.7
	1998	53	1.4	22	1.5	31	1.4	47	1.4	6	1.7
Transverse Colon	Total	287	2.7	126	2.9	161	2.7	258	2.8	28	2.4
	1996	96	2.7	41	2.9	55	2.6	84	2.7	11	2.9
	1997	97	2.8	35	2.4	62	3.1	87	2.8	10	2.6
	1998	94	2.7	50	3.4	44	2.3	87	2.9	7	1.6

Table 1: Cancer Incidence in Arkansas by Gender and Race: 1996 - 1998

		BOTH SEXES		MALE		FEMALE		WHITE		BLACK	
		New Cases	Age-Adj Rate	New Cases	Age-Adj Rate	New Cases	Age-Adj Rate	New Cases	Age-Adj Rate	New Cases	Age-Adj Rate
Splenic Flexure	Total	100	1.0	57	1.3	43	0.7	87	1.0	13	1.2
	1996	27	0.8	17	1.2	10	0.5	24	0.8	*	-
	1997	31	0.9	17	1.1	14	0.7	25	0.8	6	1.6
	1998	42	1.3	23	1.6	19	1.0	38	1.3	*	-
Descending Colon	Total	184	1.8	92	2.1	92	1.6	155	1.7	28	2.6
	1996	46	1.3	25	1.8	21	0.9	42	1.3	*	-
	1997	60	1.8	25	1.8	35	1.9	48	1.6	11	3.3
	1998	78	2.3	42	2.9	36	1.9	65	2.2	13	3.4
Sigmoid Colon	Total	978	9.8	530	12.3	448	7.8	865	9.7	107	10.1
	1996	300	9.0	161	11.3	139	7.1	259	8.8	40	10.5
	1997	328	9.9	182	12.8	146	7.5	298	10.1	27	8.0
	1998	350	10.4	187	12.8	163	8.7	308	10.2	40	11.5
Large Intestine, NOS	Total	154	1.5	74	1.7	80	1.4	118	1.3	33	3.1
	1996	50	1.6	27	2.0	23	1.1	40	1.4	10	2.5
	1997	50	1.4	20	1.3	30	1.5	38	1.2	12	3.3
	1998	54	1.6	27	1.8	27	1.5	40	1.3	11	3.3
ALL RECTUM & RECTOSIGMOID	Total	1183	12.3	651	15.5	532	9.7	1053	12.4	122	11.2
	1996	350	11.0	186	13.5	164	9.0	305	10.9	44	12.0
	1997	385	11.8	225	16.0	160	8.5	340	11.9	43	11.9
	1998	448	14.0	240	17.0	208	11.6	408	14.4	35	9.8
Rectosigmoid Junction	Total	367	3.8	199	4.7	168	3.1	322	3.8	41	3.7
	1996	113	3.6	53	3.8	60	3.4	99	3.6	13	3.0
	1997	110	3.5	69	5.0	41	2.2	95	3.4	13	3.8
	1998	144	4.4	77	5.4	67	3.6	128	4.5	15	4.4
Rectum	Total	816	8.5	452	10.8	364	6.6	731	8.6	81	7.5
	1996	237	7.5	133	9.7	104	5.7	206	7.3	31	8.9
	1997	275	8.4	156	11.0	119	6.3	245	8.5	30	8.2
	1998	304	9.5	163	11.5	141	8.0	280	10.0	20	5.4
Anus, Anal Canal & Anorectum	Total	107	1.1	41	1.0	66	1.3	98	1.2	8	0.7
	1996	35	1.1	16	1.2	19	1.1	30	1.1	5	1.5
	1997	36	1.1	9	0.6	27	1.6	34	1.2	*	-
	1998	36	1.1	16	1.1	20	1.2	34	1.3	*	-
Liver	Total	200	2.1	129	3.1	71	1.2	168	2.0	28	2.5
	1996	64	2.0	40	2.9	24	1.2	53	1.9	8	1.9
	1997	77	2.4	54	3.8	23	1.3	69	2.5	7	2.1
	1998	59	1.8	35	2.5	24	1.2	46	1.6	13	3.3
Intrahepatic Bile Duct	Total	33	0.4	16	0.4	17	0.3	27	0.3	*	-
	1996	12	0.4	*	-	8	0.5	9	0.3	*	-
	1997	8	0.3	*	-	5	0.3	8	0.3	0	0.0
	1998	14	0.5	10	0.7	*	-	10	0.4	*	-
Gallbladder	Total	75	0.7	27	0.6	48	0.8	67	0.7	5	0.5
	1996	24	0.6	8	0.5	16	0.7	20	0.6	*	-
	1997	33	1.0	15	1.0	18	1.1	29	1.0	*	-
	1998	18	0.5	*	-	14	0.6	18	0.5	0	0.0

Table 1: Cancer Incidence in Arkansas by Gender and Race: 1996 - 1998

		BOTH SEXES		MALE		FEMALE		WHITE		BLACK	
		New Cases	Age-Adj Rate	New Cases	Age-Adj Rate	New Cases	Age-Adj Rate	New Cases	Age-Adj Rate	New Cases	Age-Adj Rate
Other Biliary	Total	84	0.8	50	1.2	34	0.6	78	0.9	5	0.4
	1996	28	0.8	17	1.2	11	0.6	27	0.9	*	-
	1997	38	1.2	21	1.5	17	0.8	33	1.2	*	-
	1998	18	0.5	12	0.8	6	0.3	18	0.6	0	0.0
Pancreas	Total	673	6.9	354	8.4	319	5.7	547	6.3	125	12.0
	1996	200	6.3	104	7.5	96	5.3	164	5.8	36	10.3
	1997	227	7.2	119	8.6	108	6.0	188	6.7	39	11.5
	1998	246	7.3	131	9.1	115	5.8	195	6.5	50	14.3
Retroperitoneum	Total	19	0.2	10	0.2	9	0.2	18	0.2	*	-
	1996	7	0.2	*	-	*	-	7	0.3	0	0.0
	1997	6	0.2	*	-	*	-	5	0.2	*	-
	1998	6	0.2	*	-	*	-	6	0.2	0	0.0
Peritoneum, Omentum & Mesentery	Total	19	0.2	6	0.1	13	0.3	14	0.2	5	0.5
	1996	9	0.3	5	0.4	*	-	7	0.3	*	-
	1997	9	0.3	*	-	8	0.5	7	0.3	*	-
	1998	*	-	0	0.0	*	-	0	0.0	*	-
ALL RESPIRATORY SYSTEM	Total	6907	73.6	4471	106.8	2436	47.4	6210	74.4	678	69.1
	1996	2336	75.5	1511	109.8	825	48.2	2110	76.9	221	67.4
	1997	2287	73.0	1476	105.7	811	47.3	2042	73.3	238	73.1
	1998	2291	72.5	1489	105.3	802	46.7	2064	73.4	220	66.8
Nasal Cavity, Middle Ear, & Accessory Sinuses	Total	62	0.7	44	1.0	18	0.4	55	0.7	7	0.7
	1996	24	0.8	18	1.3	6	0.3	21	0.8	*	-
	1997	23	0.8	15	1.1	8	0.5	21	0.8	*	-
	1998	15	0.4	11	0.7	*	-	13	0.4	*	-
Larynx	Total	453	5.0	365	8.8	88	1.8	395	4.9	58	6.0
	1996	143	4.7	113	8.3	30	1.9	125	4.7	18	5.4
	1997	152	5.0	123	8.9	29	1.8	134	4.9	18	5.8
	1998	159	5.2	129	9.3	30	1.8	137	5.1	22	6.7
Lung & Bronchus	Total	6336	67.4	4022	96.0	2314	44.9	5711	68.2	606	61.9
	1996	2154	69.4	1369	99.4	785	45.8	1950	70.8	199	60.9
	1997	2090	66.6	1321	94.5	769	44.7	1866	66.8	217	66.3
	1998	2098	66.3	1337	94.4	761	44.3	1900	67.4	191	58.4
Pleura	Total	37	0.4	31	0.7	6	0.1	35	0.4	*	-
	1996	9	0.3	6	0.5	*	-	9	0.3	0	0.0
	1997	16	0.5	15	1.0	*	-	16	0.5	0	0.0
	1998	12	0.4	10	0.7	*	-	10	0.3	*	-
Trachea, Mediastinum, & Other Respiratory Organs	Total	19	0.2	9	0.2	10	0.2	14	0.2	5	0.4
	1996	6	0.2	5	0.4	*	-	5	0.2	*	-
	1997	6	0.2	*	-	*	-	5	0.2	*	-
	1998	7	0.3	*	-	5	0.3	*	-	*	-
Bones & Joints	Total	53	0.7	26	0.7	27	0.6	48	0.8	*	-
	1996	9	0.3	*	-	6	0.4	8	0.4	*	-
	1997	25	1.0	12	1.1	13	0.9	22	1.1	*	-
	1998	19	0.7	11	0.9	8	0.5	18	0.8	*	-

Table 1: Cancer Incidence in Arkansas by Gender and Race: 1996 - 1998

		BOTH SEXES		MALE		FEMALE		WHITE		BLACK	
		New Cases	Age-Adj Rate	New Cases	Age-Adj Rate	New Cases	Age-Adj Rate	New Cases	Age-Adj Rate	New Cases	Age-Adj Rate
Soft Tissue (Including Heart)	Total	205	2.3	111	2.7	93	1.9	173	2.3	31	2.6
	1996	72	2.5	41	3.1	31	1.9	65	2.6	7	1.8
	1997	76	2.6	35	2.5	40	2.6	58	2.2	18	4.3
	1998	58	2.0	35	2.6	23	1.4	51	2.0	6	1.6
ALL SKIN (Excluding Basal & Squamous)	Total	881	9.3	499	11.8	382	7.4	862	10.5	12	1.1
	1996	228	7.4	128	9.3	100	5.9	223	8.2	*	-
	1997	323	10.2	184	13.0	139	8.1	317	11.5	*	-
	1998	330	10.3	187	13.2	143	8.2	322	11.6	*	-
Melanomas - Skin	Total	790	8.4	445	10.6	345	6.8	777	9.5	8	0.8
	1996	205	6.7	117	8.5	88	5.2	203	7.5	*	-
	1997	287	9.3	163	11.7	124	7.4	282	10.5	*	-
	1998	298	9.4	165	11.7	133	7.7	292	10.5	*	-
Other Nonepithelial Skin	Total	91	0.9	54	1.2	37	0.6	85	0.9	*	-
	1996	23	0.7	11	0.8	12	0.7	20	0.7	*	-
	1997	36	1.0	21	1.4	15	0.7	35	1.1	0	0.0
	1998	32	1.0	22	1.5	10	0.5	30	1.0	*	-
Female Breast	Total	5723	113.6	0	-	5723	113.6	5131	116.9	552	88.9
	1996	1751	105.5	0	-	1751	105.5	1585	109.7	157	75.4
	1997	1947	116.0	0	-	1947	116.0	1736	118.6	194	94.2
	1998	2029	119.4	0	-	2029	119.4	1814	122.5	201	97.0
FEMALE GENITAL SYSTEM	Total	2702	56.6	0	-	2702	56.6	2359	58.2	316	49.3
	1996	871	55.1	0	-	871	55.1	775	57.9	92	41.9
	1997	1005	63.9	0	-	1005	63.9	861	64.5	132	63.7
	1998	828	51.1	0	-	828	51.1	724	52.4	92	41.9
Cervix Uteri	Total	1151	25.9	0	-	1151	25.9	956	26.2	178	27.0
	1996	377	25.3	0	-	377	25.3	322	26.2	53	24.6
	1997	459	31.3	0	-	459	31.3	370	30.8	80	36.7
	1998	317	21.2	0	-	317	21.2	265	21.6	45	19.5
Corpus Uteri (Endometrium)	Total	776	15.3	0	-	776	15.3	707	15.9	64	10.8
	1996	251	15.0	0	-	251	15.0	228	15.6	21	10.0
	1997	268	16.0	0	-	268	16.0	240	16.3	28	15.2
	1998	257	14.8	0	-	257	14.8	239	15.8	15	7.1
Uterus, NOS	Total	25	0.5	0	-	25	0.5	18	0.4	7	1.1
	1996	10	0.6	0	-	10	0.6	6	0.5	*	-
	1997	12	0.8	0	-	12	0.8	9	0.6	*	-
	1998	*	-	0	-	*	-	*	-	0	0.0
Ovary	Total	528	10.6	0	-	528	10.6	484	11.2	40	6.6
	1996	170	10.5	0	-	170	10.5	164	11.8	6	2.7
	1997	178	10.5	0	-	178	10.5	164	11.1	12	5.8
	1998	180	10.8	0	-	180	10.8	156	10.7	22	11.2
Vagina	Total	34	0.6	0	-	34	0.6	24	0.5	10	1.4
	1996	11	0.5	0	-	11	0.5	9	0.5	*	-
	1997	13	0.7	0	-	13	0.7	8	0.5	5	2.1
	1998	10	0.5	0	-	10	0.5	7	0.4	*	-

Table 1: Cancer Incidence in Arkansas by Gender and Race: 1996 - 1998

		BOTH SEXES		MALE		FEMALE		WHITE		BLACK	
		New Cases	Age-Adj Rate	New Cases	Age-Adj Rate	New Cases	Age-Adj Rate	New Cases	Age-Adj Rate	New Cases	Age-Adj Rate
Vulva	Total	167	3.3	0	-	167	3.3	151	3.5	15	2.1
	1996	43	2.5	0	-	43	2.5	37	2.6	6	2.4
	1997	71	4.4	0	-	71	4.4	67	4.9	*	-
	1998	53	3.1	0	-	53	3.1	47	3.2	6	2.6
Other Female Genital Organs	Total	21	0.4	0	-	21	0.4	19	0.5	*	-
	1996	9	0.6	0	-	9	0.6	9	0.7	0	0.0
	1997	*	-	0	-	*	-	*	-	*	-
	1998	8	0.5	0	-	8	0.5	7	0.5	*	-
MALE GENITAL SYSTEM	Total	4934	115.9	4934	115.9	0	-	4243	111.5	651	157.9
	1996	1536	108.9	1536	108.9	0	-	1324	105.3	205	146.2
	1997	1720	121.2	1720	121.2	0	-	1471	116.0	227	164.9
	1998	1682	117.6	1682	117.6	0	-	1452	113.3	219	162.0
Prostate	Total	4733	111.0	4733	111.0	0	-	4051	105.9	642	155.7
	1996	1472	104.2	1472	104.2	0	-	1262	99.9	203	144.7
	1997	1654	116.5	1654	116.5	0	-	1409	110.8	223	161.8
	1998	1611	112.4	1611	112.4	0	-	1384	107.4	216	160.2
Testis	Total	150	3.7	150	3.7	0	-	147	4.3	*	-
	1996	51	3.8	51	3.8	0	-	51	4.5	0	0.0
	1997	48	3.4	48	3.4	0	-	46	3.9	*	-
	1998	51	3.9	51	3.9	0	-	50	4.6	*	-
Penis	Total	49	1.1	49	1.1	0	-	43	1.1	6	1.5
	1996	13	1.0	13	1.0	0	-	11	0.9	*	-
	1997	17	1.2	17	1.2	0	-	15	1.2	*	-
	1998	19	1.3	19	1.3	0	-	17	1.2	*	-
Other Male Genital Organs	Total	*	-	*	-	0	-	*	-	0	0.0
	1996	0	0.0	0	0.0	0	-	0	0.0	0	0.0
	1997	*	-	*	-	0	-	*	-	0	0.0
	1998	*	-	*	-	0	-	*	-	0	0.0
ALL URINARY SYSTEM	Total	2378	24.1	1663	38.7	715	12.8	2177	24.9	187	17.0
	1996	763	23.5	533	37.8	230	12.4	704	24.5	57	14.8
	1997	790	24.0	554	38.6	236	12.8	713	24.4	69	19.2
	1998	830	25.0	580	40.1	250	13.4	765	26.0	61	16.9
Bladder	Total	1406	13.7	1074	24.6	332	5.5	1305	14.4	91	7.8
	1996	457	13.4	340	23.5	117	5.8	426	14.1	31	7.6
	1997	459	13.5	350	24.0	109	5.5	423	14.1	29	7.6
	1998	491	14.3	385	26.2	106	5.2	457	15.0	31	8.4
Kidney & Renal Pelvis	Total	901	9.7	544	13.1	357	6.8	804	9.8	93	8.8
	1996	283	9.3	178	13.2	105	6.1	257	9.6	24	6.4
	1997	307	9.8	190	13.7	117	6.8	267	9.6	39	11.4
	1998	314	10.0	178	12.7	136	7.7	283	10.2	30	8.6
Ureter	Total	52	0.5	31	0.7	21	0.4	51	0.6	*	-
	1996	16	0.5	11	0.8	5	0.3	15	0.5	*	-
	1997	20	0.5	11	0.7	9	0.5	20	0.6	0	0.0
	1998	17	0.5	10	0.7	7	0.4	17	0.6	0	0.0

Table 1: Cancer Incidence in Arkansas by Gender and Race: 1996 - 1998

		BOTH SEXES		MALE		FEMALE		WHITE		BLACK	
		New Cases	Age-Adj Rate	New Cases	Age-Adj Rate	New Cases	Age-Adj Rate	New Cases	Age-Adj Rate	New Cases	Age-Adj Rate
Other Urinary Organs	Total	19	0.2	14	0.3	5	0.1	17	0.2	*	-
	1996	7	0.2	*	-	*	-	6	0.2	*	-
	1997	*	-	*	-	*	-	*	-	*	-
	1998	8	0.3	7	0.5	*	-	8	0.3	0	0.0
Eye & Orbit	Total	59	0.7	32	0.8	27	0.6	57	0.7	*	-
	1996	18	0.6	10	0.7	8	0.4	18	0.7	0	0.0
	1997	30	1.0	14	1.0	16	1.1	29	1.1	0	0.0
	1998	11	0.4	8	0.6	*	-	10	0.4	*	-
ALL BRAIN & OTHER NERVOUS SYSTEM	Total	477	5.7	275	7.0	202	4.5	432	5.9	44	4.0
	1996	163	5.8	102	7.7	61	4.1	147	6.1	16	4.5
	1997	147	5.2	87	6.7	60	3.9	132	5.4	14	3.9
	1998	167	5.9	86	6.6	81	5.5	153	6.3	14	3.7
Brain	Total	448	5.3	259	6.6	189	4.2	409	5.6	38	3.6
	1996	151	5.3	94	7.1	57	3.9	136	5.5	15	4.3
	1997	138	4.9	83	6.4	55	3.5	126	5.2	11	3.1
	1998	159	5.7	82	6.3	77	5.1	147	6.1	12	3.3
Other Nervous System	Total	29	0.3	16	0.4	13	0.3	23	4.5	6	0.5
	1996	12	0.4	8	0.7	*	-	11	0.5	*	-
	1997	9	0.3	*	-	5	0.4	6	0.3	*	-
	1998	8	0.3	*	-	*	-	6	0.2	*	-
ALL ENDOCRINE SYSTEM	Total	378	4.4	107	2.7	271	6.0	326	4.5	49	4.4
	1996	135	4.8	34	2.6	101	6.9	122	5.2	13	3.9
	1997	116	4.0	34	2.5	82	5.3	95	3.8	20	5.4
	1998	127	4.4	39	2.9	88	5.8	109	4.5	16	4.0
Thyroid	Total	341	4.0	87	2.2	254	5.6	299	4.1	39	3.5
	1996	126	4.5	29	2.3	97	6.6	116	4.9	10	3.1
	1997	104	3.6	27	2.0	77	5.0	87	3.5	16	4.4
	1998	111	3.8	31	2.2	80	5.2	96	4.0	13	3.2
Other Endocrine (Including Thymus)	Total	37	0.4	20	0.5	17	0.4	27	0.4	10	0.9
	1996	9	0.3	5	0.4	*	-	6	0.2	*	-
	1997	12	0.4	7	0.5	5	0.4	8	0.3	*	-
	1998	16	0.6	8	0.6	8	0.5	13	0.6	*	-
ALL LYMPHOMAS	Total	1475	15.9	781	19.0	693	13.3	1347	16.6	119	10.1
	1996	457	15.0	236	17.4	220	12.8	413	15.3	40	10.1
	1997	536	17.2	298	21.4	238	13.9	489	17.9	45	11.3
	1998	484	15.7	248	18.3	236	13.3	447	16.6	34	8.8
HODGKIN'S DISEASE	Total	202	2.6	105	2.8	97	2.3	175	2.6	26	2.0
	1996	62	2.3	33	2.6	29	2.0	49	2.1	12	2.8
	1997	76	2.9	39	3.1	37	2.7	67	3.1	9	2.0
	1998	64	2.5	33	2.7	31	2.2	59	2.7	5	1.2
Nodal Hodgkin's Disease	Total	196	2.5	104	2.8	92	2.2	170	2.6	25	1.9
	1996	62	2.3	33	2.6	29	2.0	49	2.1	12	2.8
	1997	73	2.8	39	3.1	34	2.6	64	3.0	9	2.0
	1998	61	2.4	32	2.6	29	2.1	57	2.7	*	-

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		BOTH SEXES		MALE		FEMALE		WHITE		BLACK	
		New Cases	Age-Adj Rate	New Cases	Age-Adj Rate	New Cases	Age-Adj Rate	New Cases	Age-Adj Rate	New Cases	Age-Adj Rate
Extranodal Hodgkin's Disease	Total	6	0.1	*	-	5	0.1	5	0.1	*	-
	1996	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
	1997	*	-	0	0.0	*	-	*	-	0	0.0
	1998	*	-	*	-	*	-	*	-	*	-
NON-HODGKIN'S LYMPHOMA	Total	1273	13.4	676	16.2	596	11.0	1172	13.9	93	8.1
	1996	395	12.7	203	14.7	191	10.8	364	13.2	28	7.4
	1997	460	14.3	259	18.3	201	11.1	422	14.8	36	9.3
	1998	420	13.3	215	15.6	205	11.1	388	13.9	29	7.6
Nodal Non-Hodgkin's Lymphomas	Total	952	10.1	529	12.7	423	7.9	880	10.5	66	5.6
	1996	297	9.5	163	11.8	134	7.5	275	10.0	21	5.4
	1997	338	10.6	199	14.0	139	7.9	315	11.2	21	5.3
	1998	318	10.2	167	12.2	151	8.3	291	10.5	24	6.0
Extranodal Non-Hodgkin's Lymphomas	Total	321	3.3	147	3.5	173	3.1	292	3.4	27	2.5
	1996	98	3.2	40	2.9	57	3.3	89	3.2	7	1.9
	1997	122	3.7	60	4.3	62	3.2	107	3.6	15	4.0
	1998	102	3.1	48	3.4	54	2.9	97	3.4	5	1.6
Multiple Myeloma	Total	330	3.4	180	4.2	150	2.7	268	3.1	62	5.7
	1996	108	3.3	66	4.7	42	2.3	88	3.1	20	5.6
	1997	108	3.2	55	3.8	53	2.8	87	2.9	21	6.1
	1998	114	3.5	59	4.2	55	2.9	93	3.3	21	5.4
ALL LEUKEMIAS	Total	601	6.7	365	9.0	236	4.8	538	6.9	58	5.5
	1996	189	6.4	112	8.3	77	4.8	167	6.5	19	5.0
	1997	205	6.7	135	10.0	70	4.0	180	6.7	24	7.0
	1998	208	6.9	119	8.7	89	5.5	192	7.4	15	4.6
LYMPHOCYTIC LEUKEMIAS	Total	241	2.8	152	3.9	89	2.0	209	2.9	29	2.7
	1996	80	2.9	45	3.6	35	2.3	68	2.9	10	2.6
	1997	76	2.6	55	4.2	21	1.3	62	2.4	13	3.9
	1998	85	3.0	52	3.9	33	2.3	79	3.3	6	1.8
Acute Lymphocytic Leukemia	Total	84	1.2	48	1.4	36	1.1	71	1.3	11	0.9
	1996	28	1.3	16	1.5	12	1.1	24	1.4	*	-
	1997	26	1.1	18	1.6	8	0.7	19	1.0	6	1.4
	1998	30	1.3	14	1.2	16	1.4	28	1.6	*	-
Chronic Lymphocytic Leukemia	Total	151	1.5	100	2.4	51	0.9	133	1.5	18	1.9
	1996	49	1.5	27	1.9	22	1.1	42	1.4	7	1.9
	1997	49	1.5	36	2.6	13	0.6	42	1.4	7	2.4
	1998	53	1.6	37	2.6	16	0.8	49	1.7	*	-
Other Lymphocytic Leukemia	Total	6	0.1	*	-	*	-	5	0.1	0	0.0
	1996	*	-	*	-	*	-	*	-	0	0.0
	1997	*	-	*	-	0	0.0	*	-	0	0.0
	1998	*	-	*	-	*	-	*	-	0	0.0
GRANULOCYTIC (MYELOID) LEUKEMIAS	Total	301	3.2	175	4.2	126	2.4	278	3.4	21	1.9
	1996	91	2.9	55	3.9	36	2.2	82	3.1	8	2.2
	1997	107	3.4	65	4.7	42	2.3	100	3.6	7	1.8
	1998	104	3.3	56	4.0	48	2.8	97	3.6	6	1.8

Table 1: Cancer Incidence in Arkansas by Gender and Race: 1996 - 1998

		BOTH SEXES		MALE		FEMALE		WHITE		BLACK	
		New Cases	Age-Adj Rate	New Cases	Age-Adj Rate	New Cases	Age-Adj Rate	New Cases	Age-Adj Rate	New Cases	Age-Adj Rate
Acute Granulocytic Leukemia	Total	214	2.3	126	3.0	88	1.7	200	2.4	14	1.2
	1996	67	2.2	37	2.6	30	1.9	62	2.3	5	1.3
	1997	76	2.4	50	3.6	26	1.4	71	2.6	5	1.2
	1998	71	2.2	39	2.8	32	1.8	67	2.4	*	-
Chronic Granulocytic Leukemia	Total	73	0.8	44	1.1	29	0.5	64	0.8	7	0.8
	1996	21	0.7	18	1.3	*	-	17	0.7	*	-
	1997	25	0.7	12	0.9	13	0.6	23	0.8	*	-
	1998	28	0.9	15	1.1	13	0.8	25	0.9	*	-
Other Granulocytic Leukemia	Total	14	0.2	5	0.1	9	0.2	14	0.2	0	0.0
	1996	*	-	0	0.0	*	-	*	-	0	0.0
	1997	6	0.2	*	-	*	-	6	0.3	0	0.0
	1998	5	0.2	*	-	*	-	5	0.2	0	0.0
MONOCYTC LEUKEMIAS	Total	6	0.1	4	0.1	*	-	6	0.1	0	0.0
	1996	*	-	*	-	*	-	*	-	0	0.0
	1997	*	-	*	-	*	-	*	-	0	0.0
	1998	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Acute Monocytic Leukemia	Total	*	-	*	-	0	0.0	*	-	0	0.0
	1996	*	-	*	-	0	0.0	*	-	0	0.0
	1997	*	-	*	-	0	0.0	*	-	0	0.0
	1998	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Chronic Monocytic Leukemia	Total	*	-	*	-	*	-	*	-	0	0.0
	1996	*	-	0	0.0	*	-	*	-	0	0.0
	1997	*	-	*	-	0	0.0	*	-	0	0.0
	1998	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Other Monocytic Leukemia	Total	*	-	*	-	*	-	*	-	0	0.0
	1996	*	-	*	-	0	0.0	*	-	0	0.0
	1997	*	-	0	0.0	*	-	*	-	0	0.0
	1998	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Other Acute Leukemias	Total	22	0.2	15	0.4	7	0.1	19	0.2	*	-
	1996	*	-	*	-	0	0.0	*	-	0	0.0
	1997	9	0.3	5	0.4	*	-	7	0.2	*	-
	1998	9	0.3	6	0.4	*	-	8	0.3	*	-
Other Chronic Leukemias	Total	*	-	*	-	*	-	*	-	*	-
	1996	*	-	*	-	*	-	*	-	0	0.0
	1997	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
	1998	*	-	*	-	0	0.0	*	-	0	0.0
Aleukemia, Subleukemic, & NOS	Total	28	0.3	17	0.4	11	0.2	24	0.3	*	-
	1996	9	0.3	5	0.4	*	-	9	0.3	0	0.0
	1997	10	0.3	8	0.6	*	-	8	0.3	*	-
	1998	9	0.3	*	-	5	0.3	7	0.2	*	-
III-Defined & Unspecified Sites & Unknown Primary Site	Total	775	7.8	384	9.0	391	6.9	660	7.6	109	10.6
	1996	267	8.4	136	9.9	131	7.1	240	8.5	27	8.0
	1997	257	7.7	123	8.5	134	7.1	206	7.0	48	13.8
	1998	253	7.5	127	8.8	126	6.5	216	7.3	34	9.9

Table 2: Age-Adjusted Incidence Rates & Counts for all Cancer Sites by County: 1996, 1997, & 1998

County	1996		1997		1998	
	Total	Rate	Total	Rate	Total	Rate
Arkansas	85	310.7	117	425.8	116	418.4
Ashley	73	244.1	118	392.2	111	382.0
Baxter	302	428.8	296	426.9	335	467.9
Benton	582	338.1	662	372.5	624	338.7
Boone	135	307.2	162	366.5	153	350.3
Bradley	58	331.6	71	406.4	48	291.2
Calhoun	15	201.8	34	477.0	22	315.6
Carroll	101	323.2	98	303.4	102	317.6
Chicot	58	324.9	64	327.3	73	397.6
Clark	96	337.8	106	374.5	129	471.9
Clay	80	292.1	80	281.1	111	423.2
Cleburne	134	356.6	144	374.9	155	384.6
Cleveland	46	436.4	40	377.8	36	361.3
Columbia	89	272.2	124	376.2	112	348.5
Conway	72	256.6	87	289.6	77	282.0
Craighead	309	372.6	358	419.7	358	415.7
Crawford	216	406.2	192	349.6	215	382.1
Crittenden	182	365.8	190	377.7	*48	92.6
Cross	104	462.3	105	450.3	80	342.9
Dallas	31	251.1	39	304.7	55	416.8
Desha	70	373.5	78	409.5	65	349.8
Drew	57	295.5	76	378.7	73	382.1
Faulkner	293	397.6	290	385.8	262	337.5
Franklin	77	352.3	75	355.2	74	341.8
Fulton	41	246.2	56	308.0	50	262.6
Garland	686	491.1	729	503.8	892	618.6
Grant	58	321.7	71	389.2	86	459.0
Greene	158	343.0	174	391.5	150	328.3
Hempstead	80	284.4	112	391.6	104	370.1
Hot Spring	166	415.2	144	377.3	150	376.8
Howard	66	360.6	94	534.1	79	419.0
Independence	178	419.4	188	448.2	152	356.6
Izard	86	368.4	88	429.7	84	365.8
Jackson	68	261.1	82	330.7	91	319.3
Jefferson	379	390.2	410	434.6	402	419.6
Johnson	96	369.3	95	356.5	103	370.0
Lafayette	32	249.3	39	306.3	34	266.3
Lawrence	107	436.8	129	530.9	99	388.4
Lee	56	351.1	48	336.7	37	232.0
Lincoln	47	318.6	47	300.1	69	455.9
Little River	64	359.2	79	461.8	60	356.0
Logan	93	333.6	98	347.0	94	319.7

* Incomplete Data

Table 2: Age-Adjusted Incidence Rates & Counts for all Cancer Sites by County: 1996, 1997, & 1998

County	1996		1997		1998	
	Total	Rate	Total	Rate	Total	Rate
Lonoke	175	364.5	217	430.6	215	412.9
Madison	47	275.5	66	371.5	57	324.5
Marion	92	386.6	94	368.6	103	424.2
Miller	150	312.9	144	299.9	200	424.3
Mississippi	208	392.2	221	408.5	113	204.8
Monroe	43	298.4	45	304.6	63	420.6
Montgomery	60	446.5	51	361.8	55	369.1
Nevada	54	407.4	55	422.2	52	408.9
Newton	35	351.0	39	362.7	35	336.7
Ouachita	145	378.4	197	488.8	121	305.5
Perry	40	308.7	58	468.1	50	393.2
Phillips	107	334.0	100	316.1	63	203.8
Pike	60	381.5	59	413.1	69	489.3
Poinsett	128	397.8	130	401.4	131	421.4
Polk	71	262.6	109	369.0	126	431.4
Pope	222	407.8	224	397.9	216	372.6
Prairie	38	266.3	55	414.8	64	466.1
Pulaski	1518	398.1	1690	444.3	1780	472.8
Randolph	67	263.0	69	276.0	97	381.8
St. Francis	111	365.0	118	380.4	61	190.3
Saline	234	286.1	215	250.4	218	249.5
Scott	44	283.6	65	441.1	51	348.9
Searcy	45	391.4	38	308.4	62	537.9
Sebastian	419	328.9	433	343.4	455	358.2
Sevier	69	379.9	65	389.6	64	351.8
Sharp	128	419.6	119	418.1	128	427.9
Stone	55	320.1	61	350.0	59	357.6
Union	178	298.0	201	337.6	168	289.4
Van Buren	84	287.5	95	333.3	82	266.9
Washington	492	345.4	475	321.3	502	329.3
White	336	434.1	324	412.7	352	446.9
Woodruff	44	371.3	50	448.4	60	499.3
Yell	102	404.2	115	477.6	130	498.8

Rates are age-adjusted to the 1970 U.S. Standard Population; per 100,000 population

Table 3: Age-Adjusted Incidence Rates & Counts by Cancer Site & by County; Arkansas: 1996-1998

County	All Cancers		Lung & Bronchus		Female Breast		Prostate		Colorectal	
	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate
Arkansas	318	385.1	57	65.1	52	128.1	33	91.1	38	41.9
Ashley	301	339.3	66	75.8	25	55.6	42	108.7	31	30.4
Baxter	933	441.4	146	65.4	118	104.4	170	142.6	128	53.5
Benton	1868	349.4	280	52	299	110.3	342	130.9	207	35.5
Boone	450	341.4	72	55.7	76	102.8	62	100.6	53	36.3
Bradley	177	343.1	32	64.4	27	90.3	22	98.2	26	46.8
Calhoun	71	330.7	14	67	8	76.8	5	51.8	10	39.5
Carroll	301	314.6	51	51.3	54	111.7	45	103.4	28	28.2
Chicot	195	349.7	37	64.3	25	91.9	33	127.4	30	46.9
Clark	331	395	53	61.8	53	127.7	67	178.4	31	31
Clay	271	331.8	59	72.3	27	63.4	19	49.7	46	55.6
Cleburne	433	372	71	58.2	73	127.2	68	109.6	57	45.7
Cleveland	122	391.1	16	48.5	22	142.6	21	144.3	10	30
Columbia	325	332.3	61	58.7	51	95	39	88.3	34	35.1
Conway	236	276	54	60.1	37	85.9	30	76.2	24	27
Craighead	1025	402.9	162	65.5	176	123.8	80	76.7	126	49.3
Crawford	623	379.2	106	66.6	104	119	69	95.1	69	41.7
Crittenden	420	277.7	84	58.6	61	69	36	60	51	32.7
Cross	289	418.5	52	80.3	43	108.3	23	79.4	52	73
Dallas	125	323.3	19	46	22	120.8	24	125.3	12	35.5
Desha	213	378.1	34	67.3	25	82.3	47	184.1	26	41.5
Drew	206	352	36	62.8	25	81.8	43	168	27	46.5
Faulkner	845	372.7	145	66.6	146	121.7	99	104.3	119	48.9
Franklin	226	349.9	46	69.6	36	111.5	24	80.7	26	34.2
Fulton	147	272.1	21	37.6	26	92.4	21	73.3	15	23.9
Garland	2307	538.6	377	84.3	394	175.1	283	130.9	309	65.2
Grant	215	390	35	65.2	45	152.3	32	133.2	26	45.7
Greene	482	354.1	85	63	89	121.5	56	92.9	55	36.2
Hempstead	296	348.6	58	70.3	42	93.3	63	172.2	36	40.4
Hot Spring	460	389.5	80	68.2	66	107.6	66	122.2	46	35.6
Howard	239	438	43	82.5	38	133.8	29	125	26	41.5
Independence	518	407.7	97	78.2	68	101.8	63	108.7	64	48
Izard	258	387.5	48	74.6	25	69	34	96.3	30	39.1
Jackson	241	303.5	50	59.5	31	72.2	28	76.1	23	27.5
Jefferson	1191	414.7	203	73.3	171	109.4	211	172.8	153	51.5
Johnson	294	364.7	54	64	53	131.9	29	76.1	37	43.1
Lafayette	105	274.6	20	51.8	10	49.2	17	103	12	30.3
Lawrence	335	452.6	65	84.5	48	119.6	38	108.7	31	38.9
Lee	141	306.4	33	76.7	27	110.8	17	78.1	10	19.6
Lincoln	163	358.2	32	74.8	26	117.8	27	142	16	33
Little River	203	392.4	37	73	29	107.3	40	174.1	23	39
Logan	285	333.2	53	61.3	42	93.2	33	79.6	39	43.9
Lonoke	607	403.3	95	65.6	124	153.1	78	125.2	69	44.9
Madison	170	324.5	27	54.1	23	93.5	19	73.6	25	43.9
Marion	289	393.3	46	60	42	113.7	47	123.2	33	40.1
Miller	494	345.8	106	76	55	70.5	81	131.6	68	45.9
Mississippi	542	334.8	117	76.3	73	77.3	56	82	66	39.8
Monroe	151	340.3	32	71.6	18	75.1	24	126.2	14	32.6
Montgomery	166	392.2	26	59.5	32	159.8	18	82.2	16	36
Nevada	161	413.3	31	83.9	14	73	28	168.2	29	72.7
Newton	109	350	14	44.2	20	125.9	22	147.5	9	29
Ouachita	463	390.8	70	61.3	77	112.7	63	111.8	60	50.2
Perry	148	390.6	20	51.3	29	151.2	23	129	14	33.9
Phillips	270	284.8	54	58.6	36	68.4	33	82.8	36	35.2
Pike	188	428.5	41	93.8	31	146.9	19	96	20	45.4
Poinsett	389	407.6	88	93.6	41	79.6	27	63.8	46	44.5
Polk	306	354.4	52	57.6	45	113.6	33	79.6	43	43.3
Pope	662	392.7	123	74.6	127	142	56	76.6	64	37.4
Prairie	157	382.7	31	77.9	25	117.5	16	75.6	23	51.1
Pulaski	4988	438.6	867	78	915	142.2	698	153	516	44.2
Randolph	233	307.5	40	55.9	32	86.8	24	64.8	34	41.3
St. Francis	290	312	66	73	53	103.1	25	61	40	39.8
Saline	667	261.6	113	45.9	114	83.6	79	69.3	88	33.6
Scott	160	358.1	30	66.4	21	92.7	22	101.7	23	48.9
Searcy	145	411.8	35	91.9	19	99.9	20	115.5	14	37.5
Sebastian	1307	343.8	215	57.5	264	127.5	160	99.5	160	38.8
Sevier	198	374.2	46	86.6	22	82.9	28	117.3	24	40.9
Sharp	375	422.4	79	91	52	121	51	103.4	44	42.2
Stone	175	342.4	31	61.3	28	102.1	19	72.7	23	41.8
Union	547	308.4	102	56.7	83	90.5	59	79.2	58	30.5
Van Buren	261	296.1	49	54.6	44	99.7	44	90.7	31	31.4
Washington	1469	332.1	228	53.9	233	98.1	171	91.1	168	36.4
White	1012	431.1	211	91.6	148	122.1	105	99.2	118	47.6
Woodruff	154	439.4	35	96.2	26	156.4	16	90.7	17	41.6
Yell	347	460.5	71	90.3	40	100	37	101.8	45	58.1

Table 3: Age-Adjusted Incidence Rates & Counts by Cancer Site & by County; Arkansas: 1996-1998

County	Cervical		Bladder		Pancreatic		Brain		Leukemia	
	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate
Arkansas	8	21.4	6	7.6	9	10.3	*	-	6	8.2
Ashley	11	26.9	9	9.4	6	6.5	6	7.6	5	5.9
Baxter	35	75.7	44	16.9	26	9.1	11	6.9	18	10.9
Benton	50	22.1	87	15.4	35	6.5	20	4.7	36	7.4
Boone	12	23.8	26	17.6	8	6.1	*	-	7	8.2
Bradley	*	-	*	-	*	-	0	0	*	-
Calhoun	*	-	*	-	*	-	*	-	*	-
Carroll	6	15.1	12	11.5	7	6.2	*	-	*	-
Chicot	9	35.2	9	16.5	5	9.9	*	-	6	12.2
Clark	8	22.1	10	9.8	7	8	5	8.1	5	6
Clay	5	16	11	12.1	*	-	*	-	*	-
Cleveland	9	19.7	19	14.1	7	4.7	*	-	5	3.9
Cleburne	*	-	*	-	*	-	*	-	0	0
Columbia	7	15.2	16	15.6	5	4.3	10	12.3	*	-
Conway	8	20.8	5	4.3	*	-	*	-	*	-
Craighead	33	23.7	46	16.7	9	3.8	8	3.2	18	7.2
Crawford	26	32.2	31	16.5	8	5.2	6	3.7	*	-
Crittenden	29	32.7	16	9.7	8	5.4	*	-	10	6.5
Cross	15	45.6	15	17.6	*	-	5	7.2	7	7.6
Dallas	*	-	5	12.2	*	-	0	0	*	-
Desha	*	-	11	16.2	8	14.2	*	-	*	-
Drew	*	-	7	10.3	*	-	*	-	7	11.4
Faulkner	38	29.3	30	13.1	11	4.8	10	4.6	17	7.7
Franklin	7	25.3	11	16.2	*	-	*	-	*	-
Fulton	5	32.4	*	-	*	-	*	-	*	-
Garland	60	44.3	97	18.2	31	6	28	6.6	42	10.6
Grant	7	25.9	8	13.7	*	-	*	-	*	-
Greene	13	21.6	14	9.9	6	4.5	8	6.7	11	8.9
Hempstead	9	21.9	11	9.1	*	-	*	-	*	-
Hot Spring	10	20.8	24	18.2	8	6.6	7	6.4	7	-
Howard	10	40.9	15	25	6	10.3	6	13.3	7	15.7
Independence	11	18.1	25	17.8	8	6.2	8	6.5	7	5.6
Izard	9	38.5	20	23.4	6	9.6	5	8.7	*	-
Jackson	6	21.4	12	13.1	9	15	5	8.2	6	7.4
Jefferson	36	24.5	45	14.2	36	12	19	7.3	17	6.3
Johnson	13	40.7	11	12.5	6	6.5	8	11.5	*	-
Lafayette	*	-	*	-	*	-	*	-	0	0
Lawrence	18	58.8	20	27.6	*	-	*	-	*	-
Lee	*	-	6	10.8	*	-	0	0	*	-
Lincoln	5	27.1	9	17.5	*	-	*	-	*	-
Little River	*	-	8	16	6	12	0	0	*	-
Logan	12	36.1	13	14.4	6	7.2	5	7.5	5	5.4
Lonoke	22	24.9	24	16.4	7	4.6	8	5.8	9	6.2
Madison	5	22.9	9	13.4	*	-	*	-	*	-
Marion	16	63	16	19.9	10	12.7	*	-	5	6.3
Miller	14	20.8	16	10.4	9	6.2	5	4.2	6	4.2
Mississippi	19	22	17	9.9	6	3.4	6	4.4	11	7.1
Monroe	*	-	*	-	5	9.6	0	0	*	-
Montgomery	5	33.8	15	32.5	5	10.4	*	-	*	-
Nevada	*	-	9	17.2	*	-	0	0	0	0
Newton	*	-	6	20.9	*	-	*	-	*	-
Ouachita	21	43.1	15	12.6	10	7.9	9	8.9	14	13.6
Perry	*	-	*	-	*	-	*	-	*	-
Phillips	10	22.9	5	5.3	6	6.3	5	6.4	6	4.9
Pike	5	27.7	9	19.7	*	-	*	-	*	-
Poinsett	17	39.3	17	15.4	9	9.7	8	9.8	*	-
Polk	13	40.4	17	16.1	5	5.6	5	6.3	6	7.5
Pope	31	33.7	22	12.2	13	7.6	7	4.2	16	9.8
Prairie	6	37.4	*	-	*	-	0	0	*	-
Pulaski	163	24.8	140	12	104	9.1	58	5.5	79	7.1
Randolph	5	17	11	14.3	*	-	5	7.2	5	6.7
St. Francis	11	22.6	9	8.4	8	8.1	*	-	0	0
Saline	21	15.6	30	11.8	12	4.8	10	4	14	6.1
Scott	5	23.1	6	12.6	*	-	*	-	*	-
Searcy	6	44.6	*	-	*	-	*	-	*	-
Sebastian	41	21.7	45	11	21	5.2	20	5.8	16	4.1
Sevier	*	-	*	-	0	0	*	-	6	12.6
Sharp	5	20.4	24	25.4	6	7.1	*	-	5	4.1
Stone	5	26.8	10	17.5	*	-	*	-	5	12.3
Union	16	18.9	12	6	12	7.1	12	7.6	6	3.4
Van Buren	*	-	6	5.9	8	7.7	*	-	*	-
Washington	62	24.7	58	12.5	24	5.6	23	5.3	33	8
White	25	22.6	43	17.7	19	8.1	18	8.5	21	9
Woodruff	5	34.2	8	20.6	*	-	*	-	0	0
Yell	14	43.7	15	19.7	11	12.7	0	0	9	11.8

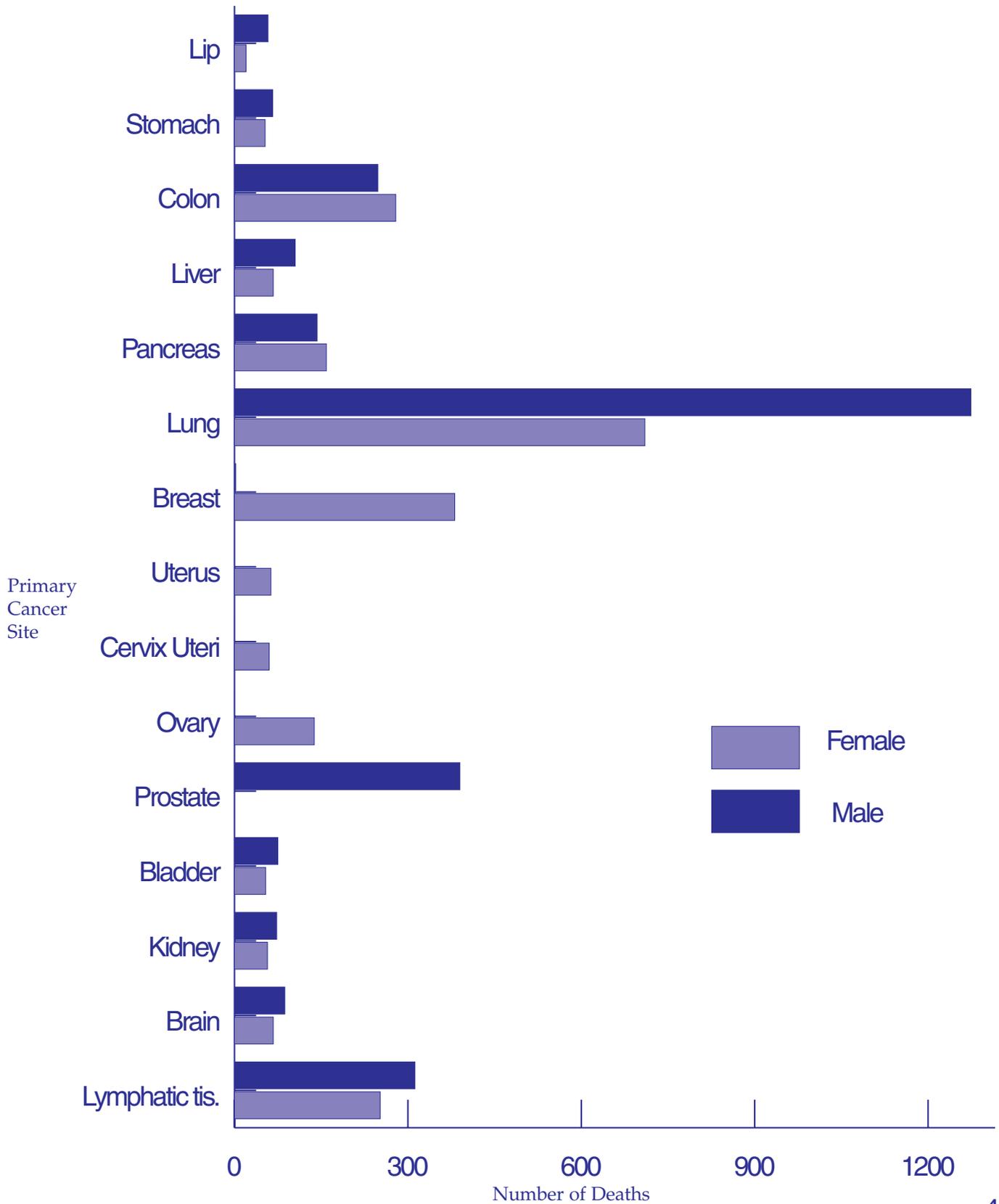
Table 3: Age-Adjusted Incidence Rates & Counts by Cancer Site & by County; Arkansas: 1996-1998

County	Multiple Myeloma		Hodgkin's		Non-Hodgkin's		Skin		Stomach	
	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate
Arkansas	6	6.7	*	-	14	15.9	11	12.9	5	6.3
Ashley	*	-	*	-	15	16.3	7	7.6	*	-
Baxter	*	-	*	-	37	17.1	14	7.8	14	5.4
Benton	13	2.3	11	2.7	71	13.3	28	5.6	22	4.1
Boone	9	6.8	*	-	14	11.5	12	8.6	7	4.6
Bradley	0	0.0	0	0.0	10	20.3	6	13.2	5	8.2
Calhoun	0	0.0	0	0.0	*	-	*	-	0	0.0
Carroll	*	-	0	0.0	10	10.0	10	10.3	*	-
Chicot	*	-	*	-	*	-	*	-	0	0.0
Clark	*	-	*	-	9	9.9	14	19.3	6	6.1
Clay	*	-	0	0.0	13	13.6	8	11.5	5	4.1
Cleburne	*	-	*	-	8	7.3	10	9.9	7	6.3
Cleveland	*	-	0	0.0	7	22.9	*	-	5	16.7
Columbia	5	4.0	*	-	12	11.0	5	5.1	*	-
Conway	*	-	*	-	7	7.5	7	9.8	*	-
Craighead	5	2.0	9	3.5	40	16.3	38	14.1	13	5.2
Crawford	*	-	*	-	18	10.3	30	17.2	8	4.8
Crittenden	9	5.9	*	-	13	8.8	10	6.5	8	5.3
Cross	*	-	*	-	6	8.6	*	-	*	-
Dallas	*	-	0	0.0	*	-	7	14.3	*	-
Desha	*	-	0	0.0	6	14.2	*	-	*	-
Drew	*	-	0	0.0	9	16.3	10	16.3	*	-
Faulkner	*	-	5	1.8	37	15.7	18	7.0	9	4.0
Franklin	*	-	*	-	6	10.0	5	7.5	*	-
Fulton	0	0.0	*	-	5	8.6	*	-	*	-
Garland	23	4.8	12	5.0	100	23.7	52	13.8	28	5.6
Grant	0	0.0	*	-	13	23.7	7	11.5	*	-
Greene	5	3.3	*	-	13	9.6	13	9.4	7	5.0
Hempstead	*	-	0	0.0	8	10.9	*	-	*	-
Hot Spring	*	-	5	6.5	21	17.4	9	6.4	9	7.9
Howard	*	-	*	-	7	9.8	*	-	*	-
Independence	6	5.0	*	-	16	13.0	12	10.0	10	7.3
Izard	*	-	*	-	13	18.7	*	-	6	9.6
Jackson	*	-	0	0.0	6	8.1	7	8.2	*	-
Jefferson	9	2.8	*	-	38	13.4	33	11.6	13	3.9
Johnson	*	-	0	0.0	10	11.2	8	11.1	*	-
Lafayette	*	-	0	0.0	*	-	0	0.0	*	-
Lawrence	*	-	*	-	12	16.1	19	28.9	*	-
Lee	*	-	0	0.0	5	9.1	*	-	*	-
Lincoln	*	-	*	-	*	-	5	10.4	*	-
Little River	*	-	*	-	8	17.0	*	-	6	10.0
Logan	*	-	0	0.0	10	11.9	6	6.4	5	5.7
Lohoke	6	3.6	5	2.3	13	8.4	14	8.0	10	7.1
Madison	0	0.0	*	-	8	15.4	*	-	0	0.0
Marion	*	-	*	-	6	11.4	7	10.3	5	6.0
Miller	7	5.1	*	-	13	8.1	6	4.4	8	5.0
Mississippi	*	-	*	-	18	11.2	21	12.1	*	-
Monroe	*	-	0	0.0	5	12.6	*	-	*	-
Montgomery	0	0.0	0	0.0	6	13.6	6	10.4	0	0.0
Nevada	*	-	*	-	8	18.1	*	-	6	13.3
Newton	0	0.0	*	-	5	15.1	*	-	*	-
Ouachita	5	3.8	*	-	20	15.4	8	7.0	7	5.4
Perry	0	0.0	*	-	*	-	*	-	*	-
Phillips	*	-	0	0.0	10	10.5	*	-	5	4.8
Pike	*	-	0	0.0	*	6.7	*	-	*	-
Poinsett	*	-	*	-	10	10.3	6	6.4	9	8.6
Polk	*	-	*	-	10	10.2	9	11.9	*	-
Pope	7	4.3	8	5.0	26	15.2	22	12.9	13	7.9
Prairie	0	0.0	0	0.0	7	15.9	10	22.9	*	-
Pulaski	41	3.5	39	3.6	164	14.1	136	11.7	73	6.1
Randolph	*	-	*	-	6	7.7	6	8.8	*	-
St. Francis	*	-	*	-	9	10.1	7	8.0	*	-
Saline	5	2.0	*	-	27	10.5	16	6.0	5	1.9
Scott	*	-	*	-	*	-	8	20.5	*	-
Searcy	*	-	0	0.0	*	-	6	15.1	*	-
Sebastian	18	4.6	*	-	39	10.6	26	6.8	22	5.4
Sevier	5	9.0	*	-	7	11.9	*	-	*	-
Sharp	*	-	*	-	18	22.3	6	8.7	7	6.9
Stone	*	-	*	-	7	12.8	*	-	5	8.6
Union	*	-	*	-	19	10.4	12	6.6	*	-
Van Buren	*	-	0	0.0	10	13.4	8	9.2	*	-
Washington	22	4.8	15	3.1	71	16.6	30	6.5	17	3.5
White	11	4.5	6	2.8	38	16.6	31	13.2	10	4.0
Woodruff	0	0.0	0	0.0	9	27.2	*	-	*	-
Yell	*	-	*	-	10	14.4	14	18.8	7	9.2

Table 4: Cancer Deaths By Sex & Race: Arkansas - 1998

CAUSE OF DEATH	ICD-9	All Deaths			Crude Rate/100,000			White Deaths			Nonwhite Deaths		
		Total	Male	Fem.	Total	Male	Fem.	Total	Male	Fem.	Total	Male	Fem.
TOTAL - ALL RESIDENTS	5950	3256	2694	234.4	265.6	205.3	5150	2812	2338	800	444	356	
LIP, ORAL CAVITY AND PHARYNX	140-149	78	58	20	3.1	4.7	1.5	67	48	19	11	10	1
LIP	140	3	3	.	0.1	0.2	.	3	3	.	.	.	.
TONGUE	141	7	5	2	0.3	0.4	0.2	7	5	2	.	.	.
MAJOR SALIVARY GLANDS	142	7	5	2	0.3	0.4	0.2	6	4	2	1	1	.
OTHER & UNSPEC. PARTS OF MOUTH	145	12	5	7	0.5	0.4	0.5	10	3	7	2	2	.
OROPHARYNX	146	3	3	.	0.1	0.2	.	1	1	.	2	2	.
NASOPHARYNX	147	9	6	3	0.4	0.5	0.2	8	5	3	1	1	.
HYPOPHARYNX	148	1	1	.	0	0.1	.	1	1	.	.	.	.
OTHER & ILL-DEFINED SITES	149	36	30	6	1.4	2.4	0.5	31	26	5	5	4	1
DIGESTIVE ORGANS AND PERITONEUM	150-159	1313	679	634	51.7	55.4	48.3	1107	582	525	206	97	109
ESOPHAGUS	150	94	72	22	3.7	5.9	1.7	72	57	15	22	15	7
STOMACH	151	119	66	53	4.7	5.4	4	101	58	43	18	8	10
SMALL INTESTINE & DUODENUM	152	3	.	3	0.1	.	0.2	3	.	3	.	.	.
COLON	153	527	248	279	20.8	20.2	21.3	456	217	239	71	31	40
RECTUM, RECTOSIGMOID JUNC, ANUS	154	64	30	34	2.5	2.4	2.6	54	26	28	10	4	6
LIVER & INTRAHEPATIC BILE DUCTS	155	172	105	67	6.8	8.6	5.1	150	94	56	22	11	11
GALLBLADDER & EXTRAHEPATIC BILE	156	20	10	10	0.8	0.8	0.8	15	7	8	5	3	2
PANCREAS	157	302	143	159	11.9	11.7	12.1	246	119	127	56	24	32
RETROPERITONEUM & PERITONEUM	158	5	2	3	0.2	0.2	0.2	4	1	3	1	1	.
OTHER & ILL-DEFINED SITES	159	7	3	4	0.3	0.2	0.3	6	3	3	1	.	1
RESPIRATORY/INTRATHORACIC ORGANS	160-165	2027	1303	724	79.9	106.3	55.2	1797	1140	657	230	163	67
NASAL CAVITIES,MID EAR, SINUSES	160	3	3	.	0.1	0.2	.	3	3	.	.	.	.
LARYNX	161	34	24	10	1.3	2	0.8	25	18	7	9	6	3
TRACHEA, BRONCHUS AND LUNG	162	1984	1274	710	78.2	103.9	54.1	1763	1117	646	221	157	64
PLEURA	163	3	2	1	0.1	0.2	0.1	3	2	1	.	.	.
THYMUS, HEART & MEDIASTINUM	164	2	.	2	0.1	.	0.2	2	.	2	.	.	.
OTHER & ILL-DEFINED SITES	165	1	.	1	0	.	0.1	1	.	1	.	.	.
BONE,CONNECTIVE TIS.,SKIN,BREAST	170-175	546	89	457	21.5	7.3	34.8	471	85	386	75	4	71
BONE & ARTICULAR CARTILAGE	170	38	21	17	1.5	1.7	1.3	35	20	15	3	1	2
CONNECTIVE & OTHER SOFT TISSUE	171	32	12	20	1.3	1	1.5	27	11	16	5	1	4
MALIGNANT MELANOMA OF SKIN	172	73	42	31	2.9	3.4	2.4	72	42	30	1	.	1
OTHER MALIGNANT NEOPLASM OF SKIN	173	20	12	8	0.8	1	0.6	18	10	8	2	2	.
FEMALE BREAST	174	381	.	381	15	.	29	317	.	317	64	.	64
MALE BREAST	175	2	2	.	0.1	0.2	.	2	2	.	.	.	.
GENITOURINARY ORGANS	179-189	929	546	383	36.6	44.5	29.2	771	437	334	158	109	49
UTERUS, PART UNSPECIFIED	179	42	.	42	1.7	.	3.2	35	.	35	7	.	7
CERVIX UTERI	180	60	.	60	2.4	.	4.6	44	.	44	16	.	16
UTERUS	182	21	.	21	0.8	.	1.6	19	.	19	2	.	2
OVARY & OTHER UTERINE ADNEXA	183	138	.	138	5.4	.	10.5	126	.	126	12	.	12
OTHER & UNSPEC. FEMALE GENITAL	184	11	.	11	0.4	.	0.8	9	.	9	2	.	2
PROSTATE	185	390	390	.	15.4	31.8	.	301	301	.	89	89	.
TESTIS	186	4	4	.	0.2	0.3	.	3	3	.	1	1	.
PENIS & OTHER MALE GENITAL ORGANS	187	4	4	.	0.2	0.3	.	3	3	.	1	1	.
BLADDER	188	129	75	54	5.1	6.1	4.1	116	66	50	13	9	4
KIDNEY & OTHER & UNSPEC URINARY	189	130	73	57	5.1	6	4.3	115	64	51	15	9	6
OTHER AND UNSPECIFIED SITES	190-199	493	269	224	19.4	21.9	17.1	431	236	195	62	33	29
EYE	190	1	.	1	0	.	0.1	1	.	1	.	.	.
BRAIN	191	154	87	67	6.1	7.1	5.1	143	82	61	11	5	6
OTHER & UNSPEC NERVOUS SYSTEM	192	1	.	1	0	.	0.1	1	.	1	.	.	.
THYROID GLAND	193	8	3	5	0.3	0.2	0.4	6	3	3	2	.	2
OTHER ENDOCRINE GLANDS & STRUCT	194	9	7	2	0.4	0.6	0.2	7	5	2	2	2	.
OTHER & ILL-DEFINED SITES	195	53	28	25	2.1	2.3	1.9	51	27	24	2	1	1
WITHOUT SPECIFICATION OF SITE	199	267	144	123	10.5	11.7	9.4	222	119	103	45	25	20
LYMPHATIC & HEMATOPOIETIC TISSUE	200-208	564	312	252	22.2	25.4	19.2	506	284	222	58	28	30
LYMPHOSARCOMA & RETICULOSARCOMA	200	5	2	3	0.2	0.2	0.2	5	2	3	.	.	.
HODGKINS DISEASE	201	9	1	8	0.4	0.1	0.6	8	1	7	1	.	1
OTHER LYMPOID/HISTIOCYTIC TISSUE	202	247	138	109	9.7	11.3	8.3	229	131	98	18	7	11
MULTIPLE MYELOMA & IMMUNOPROLIF	203	85	48	37	3.3	3.9	2.8	67	38	29	18	10	8
LYMPHOID LEUKEMIA	204	63	39	24	2.5	3.2	1.8	55	35	20	8	4	4
MYELOID LEUKEMIA	205	80	49	31	3.2	4	2.4	75	47	28	5	2	3
MONOCYTIC LEUKEMIA	206	3	2	1	0.1	0.2	0.1	3	2	1	.	.	.
OTHER SPECIFIED LEUKEMIA	207	1	.	1	0	.	0.1	1	.	1	.	.	.
LEUKEMIA OF UNSPECIFIED CELL TYPE	208	71	33	38	2.8	2.7	2.9	63	28	35	8	5	3

Figure 1: Number of Cancer Deaths by Primary Site & Sex: Arkansas, 1998



1996 - 1998 REPORTING FACILITIES

ACoS APPROVED FACILITIES

Conway Regional Medical Center
Sparks Regional Medical Center
St. Joseph Regional Health Center
University Hospital of Arkansas
Central Arkansas Radiation Therapy Institute
St. Mary's-Rogers Memorial Hospital
Central Arkansas Hospital

Washington Regional Medical Center
St. Edward Mercy Medical Center
St. Bernard's Regional Medical Center
Central Arkansas Veterans Healthcare Sys.
Jefferson Regional Medical Center
White County Medical Center
Northwest Arkansas Medical Center

HOSPITALS

Baptist Medical Center Arkadelphia
White River Medical Center
Saline Memorial Hospital
Bates Medical Center
Carroll Regional Medical Center
Baptist Memorial Hospital Blytheville
Booneville Community Hospital
Medical Center of Calico Rock
Ouachita County Medical Center
Eastern Ozarks Regional Health System
Johnson County Regional Hospital
***Conway Regional Medical Center**
Chambers Memorial Hospital
De Queen Regional Medical Center
Medical Center of South Arkansas
Eureka Springs Hospital
***Washington Regional Medical Center**
Veterans Affairs Medical Center
Baptist Memorial Hospital Forrest City
***Sparks Regional Medical Center**
***St. Edward Mercy Medical Center**
Arkansas/Oklahoma Radiation Center
Cooper Clinic
Hembree Regional Cancer Center
Holt-Krock Surgery Center
Gravette Medical Center Hospital
North Arkansas Regional Medical Center
Helena Regional Medical Center
Medical Park Hospital
National Park Medical Center
***St. Joseph Regional Health Center**
Rebsamen Regional Medical Center
***St. Bernard's Regional Medical Center**
Regional Medical Center of Northeast Arkansas

Arkadelphia
Batesville
Benton
Bentonville
Berryville
Blytheville
Booneville
Calico Rock
Camden
Cherokee Village
Clarksville
Conway
Danville
De Queen
El Dorado
Eureka Springs
Fayetteville
Fayetteville
Forrest City
Fort Smith
Fort Smith
Fort Smith
Fort Smith
Fort Smith
Fort Smith
Gravette
Harrison
Helena
Hope
Hot Springs
Hot Springs
Jacksonville
Jonesboro
Jonesboro

Northeast Arkansas Surgery Center	Jonesboro
Chicot Memorial Hospital	Lake Village
*University Hospital of Arkansas	Little Rock
*Central Arkansas Veterans Healthcare System	Little Rock
St. Vincent Infirmary Medical Center	Little Rock
Southwest Hospital	Little Rock
Baptist Medical Center	Little Rock
Arkansas Children's Hospital	Little Rock
St Vincent's Doctors Hospital	Little Rock
*Central Arkansas Radiation Therapy Institute	Little Rock
Pathology Associates – St Vincent Infirmary	Little Rock
Hot Springs County Memorial Hospital	Malvern
Mena Medical Center	Mena
Baxter County Regional Hospital	Mountain Home
Central Arkansas Radiation Therapy Institute	Mountain Home
Howard Memorial Hospital	Nashville
Harris Hospital	Newport
Newport Hospital and Clinic	Newport
Baptist Memorial Medical Center	North Little Rock
Arkansas Methodist Hospital	Paragould
North Logan Mercy Hospital	Paris
Piggott Community Hospital	Piggott
*Jefferson Regional Medical Center	Pine Bluff
Randolph County Medical Center	Pocahontas
Gravette Medical Center	Rogers
*St. Mary's-Rogers Memorial Hospital	Rogers
St. Mary's Regional Medical Center	Russellville
Fulton County Hospital	Salem
*White County Medical Center	Searcy
*Central Arkansas Hospital	Searcy
Siloam Springs Memorial Hospital	Siloam Springs
Carroll Regional Medical Center	Springdale
*Northwest Arkansas Medical Center	Springdale
Northwest Arkansas Radiation Therapy Institute	Springdale
Stuttgart Regional Medical Center	Stuttgart
St. Michael Health Care Center	Texarkana (TX)
Wadley Regional Medical Center	Texarkana (TX)
Crawford Memorial Hospital	Van Buren
Mercy Hospital of Scott County	Waldron
Crittenden Memorial Hospital	West Memphis

OUTPATIENT SURGERY CENTERS/CLINICS

Batesville Family Practice Clinic	Batesville
Batesville Surgery Center	Batesville
Conway Dermatology Clinic	Conway
Conway Outpatient Surgery Center	Conway

Arkansas Surgery Center of Fayetteville	Fayetteville
Ginger Dermatology Clinic	Fayetteville
North Hills Gastroenterology	Fayetteville
The Center for Day Surgery	Fort Smith
Cooper Clinic	Fort Smith
Hembree Regional Cancer Center	Fort Smith
Holt-Krock Surgery Center	Fort Smith
BEC Surgery Clinic	Hot Springs
Oncology Clinic of Hot Springs	Hot Springs
Hot Springs Outpatient Clinic	Hot Springs
Hot Springs Outpatient Surgery Center	Hot Springs
Urology Associates of Hot Springs	Hot Springs
Eye Surgery Center of Arkansas	Jonesboro
Northeast Arkansas Surgery Center	Jonesboro
Bressinck-Gibson-Parker-Dinehart Dermatology, PA	Little Rock
Little Rock Diagnostics Clinic	Little Rock
Physicians Surgery Center	Little Rock
Pigeon Creek Medical Center	Mountain Home
Duckworth Muse Clinic	Piggott
Arkansas Surgery and Endoscopy Center	Pine Bluff
Russellville Surgery Center	Russellville
North River Surgery Center	Sherwood
Doctors Surgery Center	West Memphis

PHYSICIAN OFFICES

Patrick Hatfield, MD	Batesville
P. Vasudevan, MD	Helena
Philip R. Hardin, MD	Mountain Home
Bruce A. Junkin, MD	Newport
Michael G. Sangster, MD	No. Little Rock

PATHOLOGY LABORATORIES

Associates Pathologists Lab, P.A.	Eldorado
Northwest Arkansas Pathology Associates, P.A.	Fayetteville
North Arkansas Medical Center Path Lab	Harrison
Pathology Services of Hot Springs	Hot Springs
Doctors Anatomic Pathology Services, P.A.	Jonesboro
St. Bernard Regional Pathology Lab	Jonesboro
Arkansas Pathology Associates, P.A.	Little Rock
Pathology Lab of Arkansas, P.A.	Little Rock
Arkansas Methodist Hospital Lab	Paragould
Pathology Services Lab, P.A.	Russellville

** These facilities are approved cancer programs by the Commission on Cancer.*

STANDARD SITE ANALYSIS CATEGORIES WITH ICD-O-2 CODES

<u>SITE CATEGORY</u>	<u>ICD-O-2 CODES</u> (Except where noted or otherwise specified, each grouping EXCLUDES histologic types 9590 - 9989)
Buccal Cavity and Pharynx	
Lip	C00.0 – C00.9
Tongue	C01.9 – C 02.9
Salivary Glands	C07.9 – C08.9
Floor of Mouth	C04.0 – C04.9
Gum and Other Mouth	C03.0 – C0.3.9, C05.0 – C05.9, C06.0 – C06.9
Nasopharynx	C11.0 – C11.9
Tonsil	C09.0 – C09.9
Oropharynx	C10.0 – C10.9
Hypopharynx	C12.9, C13.0 – C13.9, C14.1
Other Buccal Cavity and Pharynx	C14.0, C14.2 – C14.8
DIGESTIVE SYSTEM	
Esophagus	C15.0 – C15.9
Stomach	C16.0 – C16.9
Small Intestine	C17.0 – C17.9
COLON EXCLUDING RECTUM	
Cecum	C18.0
Appendix	C18.1
Ascending Colon	C18.2
Hepatic Flexure	C18.3
Transverse Colon	C18.4
Splenic Flexure	C18.5
Descending Colon	C18.6
Sigmoid Colon	C18.7
Large Intestines, NOS	C18.8 – C18.9, C26.0
RECTUM AND RECTOSIGMOID	
Rectosigmoid Junction	C19.9
Rectum	C20.9
Anus, Anal Canal and Anorectum	C21.0 – C21.2, C21.8
Liver	C22.0
Intrahepatic Bile Duct	C22.1
Gallbladder	C23.9
Other Biliary	C24.0 – C24.9
Pancreas	C25.0 – C25.9
Retroperitoneum	C48.0
Peritoneum, Omentum, and Mesentery	C48.1 – C48.2
Other Digestive Organs	C26.8 – C26.9, C48.8
RESPIRATORY SYSTEM	
Nasal Cavity, Middle Ear & Accessory Sinuses	C30.0 – C30.1, C31.0 – C31.9, C39.8
Larynx	C32.0 – C32.9
Lung and Bronchus	C34.0 – C34.9
Pleura	C38.4

Trachea, Mediastinum, & Other Respiratory Organs	C33.9, C38.1 – C38.3, C38.8, C39.0, C39.9
Bones and Joints	C40.0 – C41.9
Soft Tissue (Including Heart)	C38.0, C47.0 – C47.9, C49.0 – C49.9
SKIN (EXCLUDING BASAL AND SQUAMOUS)	
Melanomas – Skin	C44.0 – C44.9 Types 872 – 879 ONLY
Other Nonepithelial Skin	C44.0 – C44.9 Excluding Types: 8000 – 8004, 8010 – 8012, 8070 – 8076 8090 – 8096, 8720 – 8790, 9590 - 9989
Breast	C50.0 – C50.9
FEMALE GENITAL SYSTEM	
Cervix Uteri	C53.0 – C53.9
Corpus Uteri	C54.0 – C54.9
Uterus, NOS	C55.9
Ovary	C56.9
Vagina	C52.9
Vulva	C51.0 – C51.9
Other Female Genital Organs	C57.0 – C58.9
MALE GENITAL SYSTEM	
Prostate	C61.9
Testis	C62.0 – C62.9
Penis	C60.0 – C60.9
Other Male Genital Organs	C63.0 – C63.9
URINARY SYSTEM	
Bladder	C67.0 – C67.9
Kidney and Renal Pelvis	C64.9, C65.9
Ureter	C66.9
Other Urinary Organs	C68.0 – C68.9
Eye and Orbit	C69.0 – C69.9
BRAIN & OTHER NERVOUS SYSTEM	
Brain	C71.0 – C71.9 Excluding Types: 953, 9590 – 9989
Other Nervous System	a) C71.0 – C71.9 Type 953 ONLY b) C70.0 – C70.9 Excluding Types 9590 – 9989 c) C72.0 – C72.9 Excluding Types 9590 -9989
ENDOCRINE SYSTEM	
Thyroid	C73.9
Other Endocrine (Including Thymus)	C37.9, C74.0 – C74.9, C75.0 – C75.9
LYMPHOMAS	
HODGKIN'S DISEASE	
Nodal	Types 9650 – 9667 ONLY For Sites: C02.4 , C09.8, C09.9, C11.1, C14.2, C37.9, C42.2 C77.0 – C77.9
Extranodal	Types 9650 – 9667 ONLY For All Other Sites

NON-HODGKIN'S LYMPHOMA

Nodal	Types: 9590 – 9595, 9670 – 9714 ONLY For Sites: C02.4 , C09.8, C09.9, C11.1, C14.2, C37.9, C42.2 C77.0 – C77.9
Extranodal	Types: 9590 – 9595, 9670 – 9714 ONLY For All Other Sites
Multiple Myeloma	Types 9731 – 9732 ONLY For All Sites
LEUKEMIAS	
LYMPHOCYTIC	
Acute Lymphocytic	Type 9821 ONLY
Chronic Lymphocytic	Type 9823 ONLY
Other Lymphocytic	Types 9820, 9822, 9824, 9825, 9826 ONLY
GRANULOCYtic (MYELOID)	
Acute Granulocytic	Types 9861, 9867 ONLY
Chronic Granulocytic	Types 9863, 9868 ONLY
Other Granulocytic	Types 9860, 9862, 9864, 9866 ONLY
MONOCYtic	
Acute Monocytic	Type 9891 ONLY
Chronic Monocytic	Type 9893 ONLY
Other Monocytic	Types 9890, 9892, 9894 ONLY
OTHER	
Other Acute	Types 9801, 9841 ONLY
Other Chronic	Types 9803, 9842, 9931 ONLY
Aleukemic, Subleukemic, and NOS	Types 9800, 9802, 9804, 9827, 9830, 9840, 9850, 9870, 9880, 9900, 9910, 9930 – 9941 ONLY
Ill-Defined and Unspecified Sites	a) Types: 9720 – 9723, 9740, 9741, 9760 – 9764, 9950 – 9989 ONLY For ALL SITES b) C76.0 – C76.8, C80.9 Types 8000 – 9589 ONLY c) C42.0 – C42.4 Types 8000 – 9589 ONLY d) C77.0 – C77.9 Types 8000 – 9589 ONLY
Invalid Site	Site or histology code not within valid range or site code not found in this table

COUNTY POPULATION ESTIMATES BY YEAR

COUNTY	1996	1997	1998	COUNTY	1996	1997	1998
Arkansas	20930	20753	20657	Madison	13009	13065	13242
Ashley	24366	24323	24337	Marion	14386	14444	14860
Baxter	35929	36182	36319	Miller	39229	39550	39526
Benton	126214	130254	133875	Mississippi	50350	50381	50515
Boone	31571	31709	31797	Monroe	10349	10315	10125
Bradley	11558	11469	11408	Montgomery	8410	8515	8648
Calhoun	5688	5699	5684	Nevada	9986	10054	9981
Carroll	22359	22391	22438	Newton	8025	8196	8163
Chicot	15259	15218	15021	Ouachita	28167	27981	27779
Clark	21998	22176	21586	Perry	9239	9425	9629
Clay	17522	17379	17122	Phillips	27666	27614	27302
Cleburne	22253	22548	22890	Pike	10421	10475	10546
Cleveland	8268	8337	8421	Poinsett	24593	24549	24634
Columbia	25278	25252	25109	Polk	19252	19496	19653
Conway	19736	19953	19828	Pope	50892	51259	52041
Craighead	75202	76247	77199	Prairie	9267	9286	9344
Crawford	48828	49469	50267	Pulaski	350612	348896	348813
Crittenden	49336	49519	49794	Randolph	17589	17675	17788
Cross	19284	19389	19414	St. Francis	28333	28374	28127
Dallas	9276	9147	9051	Saline	74170	75893	77156
Desha	15424	15225	15075	Scott	10700	10852	10585
Drew	17755	17603	17475	Searcy	7670	7773	7735
Faulkner	73991	76518	78238	Sebastian	105334	105936	105898
Franklin	16408	16552	16825	Sevier	14540	14526	14608
Fulton	10736	10835	10946	Sharp	16461	16649	16904
Garland	81712	82786	83661	Stone	10835	10961	11092
Grant	15350	15634	15843	Union	45704	45243	45228
Greene	34969	35451	36010	Van Buren	15244	15552	15533
Hempstead	21969	21978	22035	Washington	140342	143623	144989
Hot Spring	28337	28617	28874	White	62051	63117	64629
Howard	13906	13732	13682	Woodruff	9114	8964	8837
Independence	32786	32704	32908	Yell	18915	19054	18987
Izard	12728	13026	13108				
Jackson	18243	17881	17720	TOTAL	2,504,858	2,524,007	2,538,202
Jefferson	82654	82120	81588				
Johnson	20855	21196	21456				
Lafayette	9185	9025	8942				
Lawrence	17381	17439	17207				
Lee	12629	12712	12912				
Lincoln	14188	14302	14326				
Little River	13297	13224	13154				
Logan	21149	21183	21099				
Lonoke	47496	49157	50004				

GLOSSARY OF REGISTRY TERMS¹

Abstract A summary, abridgment, or abbreviated record that identifies pertinent cancer information about the patient, the location of the cancer, the extent of disease at time of diagnosis, the histology of the cancer, the cancer-directed treatment, and the disease process from the time of diagnosis until the patient's death. The abstract is the basis for all of the registry's functions.

Abstracting The process of collecting and recording pertinent cancer data from a health record.

Adjusted rate A rate that has been statistically adjusted to "remove" any effects a given variable may have in relation to the comparisons being made.

Analytic Capable of being analyzed; A category of class of case which indicates that the cancer was initially diagnosed and/or treated at a specific health care facility and is eligible for inclusion in that registry's statistical reports of treatment efficacy and survival.

Annual report A publication produced on a yearly basis that describes the activities of an organization.

Behavior How a tumor acts; for example, benign, malignant (noninvasive or invasive), or metastatic

Cancer A cellular tumor exhibiting the characteristics of invasion and metastasis; a malignant tumor.

Cancer cluster The observation that an unusual number of a specific type of cancer case appears during a certain time period or in residents of a small, well-defined area, such as a street, school district, or in the path of exhaust from polluting smokestack.

Cancer prevention Efforts to develop methods to stop cancer before it develops; stop-smoking programs are efforts at preventing lung cancer.

Cancer Registries Amendment Act Public Law 102-515, enacted in 1992, which provided funding for establishing or enhancing central cancer registry operations in all states

Cancer registry A data collection system that assesses the occurrence and characteristics of reportable neoplasms; a data system designed for the collection, management, and analysis of data on persons with the diagnosis of a malignant or neoplastic disease (cancer). A central cancer registry is a registry that collects cancer information from more than one facility and consolidates multiple reports on a single patient into one record.

Cancer surveillance The process of monitoring the incidence and mortality of cancer.

Cancer-directed treatment Procedures that destroy, modify, control, or remove primary, regional, or metastatic cancer tissue.

Carcinogen Something that has been shown to cause, or linked with the development of, cancer. Carcinogens include the tar in cigarettes, asbestos, and ionizing radiation.

Carcinoma A malignant tumor of epithelial origin in contrast to malignancy of supporting structures (sarcoma) or hematopoietic structures (lymphoma and leukemia).

Case An occurrence of a primary cancer. A patient with two primary cancers represents two cases. Case consolidation combines data from multiple sources pertaining to the same person or case into a single record containing the most complete information from all sources; also called record linkage; common function of a central registry.

Case-finding The systemic process of identifying all cases of a disease eligible to be included in the registry database for a defined population, such as patients of a hospital or residents of a state. Also called case ascertainment.

Centers for Disease Control and Prevention (CDC) A federal agency of the Department of Health and Human Services. In particular, one of the centers of the CDC, the National Center for Chronic Disease Prevention and Health Promotion (NCCDPHP) is responsible for the administration and conduct of the *National Program of Cancer Registries (NPCR)* and other cancer-related programs in the United States.

Certified Tumor Registrar (CTR) The credentials granted to a person who has passed the cancer registry certification examination.

Chemotherapy The use of cancer killing drugs to treat cancer.

Completeness The comprehensiveness of the data set collected, the specification of code values (as opposed to blank and unknown code values), and the avoidance of omissions; assurance that all cases in a specific population have been included in the disease registry.

Confidentiality Maintaining the privacy of personal information obtained in the abstracting process.

Crude rate See Rate.

Death Clearance The process of linking death certificates from a state's vital statistics office with registry records in order to obtain death data for previously registered cancer cases.

Diagnosis The identification of the nature and extent of a tumor or other condition.

Direct extension A term used in staging to indicate contiguous growth of tumor from the primary into an adjacent organ or surrounding tissue.

Distant A category of the summary staging system in which there is tumor at sites in the body remote from the organ of origin; tumor cells may have arrived at the distant site by traveling in the lymphatic system or the vascular system (hematogenous), by floating to the surface of another organ in the fluid of a body cavity (implantation), or by direct growth through an organ adjacent to the primary.

Exposure An ambient environmental factor (such as air pollution), a factor in the individual's environment (such as smoking or diet), or a personal characteristic (such as age, race, or sex) considered to be a precedent factor associated with a likelihood of one's experiencing some health event or endpoint.

Extent of Disease The detailed description of how far a cancer has spread from the primary site at the time of diagnosis; a type of classification based on human anatomy that pertains to cancer spread in an individual case.

Histology The study of the microscopic structure of tissue

In situ French for "in place"; a tumor confined to the organ of origin without invasion; a tumor that fulfills all microscopic criteria for malignancy except invasion of the organ's basement membrane; malignant tumor which has not begun to invade; also described as intraepithelial, noninvasive, or non-infiltrating.

Incidence How many times something occurs in a given time period; for example, the number of times new cancer is diagnosed in a defined population during a defined period of time such as a year. A new occurrence of a cancer is called an incident case.

International Classification of Diseases for Oncology (ICD-O) The worldwide standard coding system for cancer diagnoses, now in its third edition.

Leukemia The presence in the blood of malignant cells which developed in the bone marrow.

Localized A category of the summary staging system in which the tumor is confined to the organ of origin without extension beyond the primary organ.

Lymphoma Malignancy of lymphoid tissues, in other words, those tissues and organs that produce and store cells that fight infection and disease; subdivided into Hodgkin's disease and non-Hodgkin's lymphoma.

Malignancy An invasive, uncontrolled growth of cells capable of invading surrounding structures and producing a metastasis.

Metastasis, Metastases (plural form) Any tumor spread to a part of the body away from the primary.

Mortality Death.

National Cancer Registrars Association (NCRA) a professional organization composed of cancer data specialists, whose purpose is to promote the education and professional development of cancer registrars and cancer registries.

National Program of Cancer Registries (NPCR) A federally funded program, operated by the Centers for Disease Control and Prevention (CDC), to assist state central cancer registries to meet minimum standards for completeness, timeliness, and data quality. NPCR was funded by the Cancer Registries Amendment Act.

North American Association of Central Cancer Registries (NAACCR) An organization of member cancer registries established in 1987, whose purpose is to promote standardized data collection, quality, and consistency of central cancer registry operations, and exchange of information among population-based central cancer registries in North America.

Oncology The study of cancer as a disease process; the study of tumors.

Prevalence The number or rate of cases that exist at a specified time.

Quartile divisions of a distribution into equal, ordered subgroups/quarters.

Radiation therapy Cancer-directed treatment by radioactivity which kills cells by damaging DNA, thereby affecting the ability of the cell to divide. Radiation therapy is treatment using invisible, high-energy rays emitted by radiation sources, which can be at a distance from the tumor (teletherapy) or close to it (brachytherapy).

Rate The measurement of change in a variable over a period of time. The *cancer mortality rate* is the measurement of how many persons in the general population die of cancer during the time period of interest. A *crude rate* is calculated for an entire population. The *incidence rate* measures the frequency at which people at risk develop a disease over a specified time period. The *annual incidence rate* is the incidence rate calculated for a one-year period. The *site-specific rate* is calculated a particular cancer primary, such as lung or breast.

Reference date The starting date established for a registry, usually January 1 of a given year, after which all cases diagnosed or treated at the facility, regardless of date of initial diagnosis, must be entered into the registry.

Regionalized A category of the summary staging system in which the tumor involves more than the organ of origin by means of direct extension or spread to regional lymph nodes.

Registry See also *cancer registry*; a comprehensive health information system designed for the collection, analysis, and dissemination of a specific set of health data; a database that identifies and enumerates every instance of a reportable disease in a defined population.

Reportable Meeting the criteria for inclusion in a registry. The reportable list identifies all diagnoses and types of cases to be included in the cancer registry database and should also specify which diagnoses are non-reportable.

Risk The relationship between the health experience observed for a study group and what would have been expected on the basis of the comparison group's health experience.

Screening A search for occult, undetected, or early stage disease in an asymptomatic population.

Site In registry terms, where a cancer is growing in the body. The primary site is the organ of origin; where the cancer started in the body; also called the topographic site. A metastatic site is where the cancer has spread to; also called a metastasis.

Stage, stage of disease Categories describing the extent of disease, usually at the time of diagnosis. The stage of disease is that part of the abstract containing the data items that identify cancer spread and confirm and support the assigned stage.

Staging A common language developed by medical professionals to communicate information about a disease to others. Staging usually conveys anatomic extent of disease or prognostic information about an individual case; a shorthand method of describing disease. Also, the grouping of cases into broad categories based on extent of disease.

Summary staging A system of describing the anatomic spread of cancer in broad or general terms; localized, regionalized, and distant; sometimes called general staging.

Surgery Most often includes the removal of tissue from the body.

Therapy See treatment.

Treatment The attempt to cure a cancer or relieve symptoms of a cancer by various methods such as surgery, radiation therapy, chemotherapy, hormone therapy, or immunotherapy. Also called *therapy*. Cancer-directed treatment is an attempt to modify, control, remove, or destroy the cancer; also called definitive treatment.

¹ Fritz, April G., Hutchison, Carol L., Roffers, Steven D. Cancer Registry Management: Principles and Practice. 1997: Kendall/Hunt Publishing Company.

SOURCES FOR ADDITIONAL INFORMATION

Centers for Disease Control and
Prevention (CDC)
Division of Cancer Prevention and Control
1600 Clifton Road, NE
Atlanta, GA 30333
Tel: 404.639.3311
800.311.3435
www.cdc.gov

North American Association of Central
Cancer Registries (NAACCR)
2121 West White Oaks Drive, Suite C
Springfield, IL 62704-6495
Tel: 217.698.0800
Fax: 217.698.0188
www.naacr.org

American College of Surgeons (ACoS)
Commission on Cancer
633 North Saint Clair Street
Chicago, IL 60611
Tel: 312.202.5000
www.facs.org

National Cancer Institute (NCI)
Surveillance Epidemiology & End Results
Program (SEER)
Executive Plaza North, 343J
9000 Rockville Pike
Bethesda, MD 20892
Tel: 301.496.8510
Fax: 301.402.0816
1.800.877.1319
www.seer.ims.nci.nih.gov

National Cancer Registrars Assoc. (NCRA)
P.O. Box 15945-295
Lenexa, KS 66285-5945
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www.ncra-usa.org

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