2024 Arkansas Cancer Facts & Figures

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Cancer Facts & Figures 2024

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Executive Summary

The United States (US) Congress passed the "Cancer Registries Amendment Act" (Public Law 102-515) in 1992 providing federal funding for state cancer registries – an effort carried out by the Centers for Disease Control and Prevention (CDC) in Atlanta, Georgia. The passing of this law allowed funding for a cancer program in Arkansas beginning in 1994, when the first federal funds were awarded through the National Program for Cancer Registries (NPCR). Additionally, the Arkansas State Board of Health mandated cancer as a reportable disease in the State of Arkansas, further establishing the Arkansas Central Cancer Registry (ACCR).[1]

The ACCR is a population-based registry designed to collect information on all patients with newly diagnosed cancers (incidence). The ACCR began collecting information on all Arkansas residents diagnosed with cancer starting January 1, 1996. The ACCR serves as the data reserve for all cancer cases received from hospital registries, physicians' offices, specialty clinics, pathology laboratories and treatment facilities. The registry provides cancer data to numerous entities with a focus on cancer research and public health interventions to reduce the burden of cancer in Arkansas.

About this Comprehensive Report

The purpose of this 2024 published report is to provide readily available descriptive statistics for all reportable new cancer cases (incidence) and cancer related deaths (mortality) in Arkansas.

This report serves as an update to the *Arkansas Cancer Facts & Figures 2017* report. This update was developed to aid cancer programs, researchers, clinicians, partners, advocates, and the public to use as a valuable source by readily accessing tables, figures and graphs. This report consists of screen-able cancers (female breast cancer, colorectal cancer, lung and bronchus cancer, prostate cancer, and cervical cancer) and those without established screenings (lymphoma, melanoma, ovarian cancer, pancreatic cancer, and urinary bladder cancer).

This report includes incidence data up to 2019. This was the last complete cancer diagnosis year prior to the COVID-19 pandemic, and the latest year that the ACCR was gold certified by the North American Association of Central Cancer Registries (NAACCR). A follow-up report will be provided in the next year to compare with pandemic-impacted cancer diagnosis years 2020 and 2021.

ARKANSAS CENTRAL
CANCER REGISTRY

Section 1: All Cancer Sites

Overview

The human body consists of trillions of cells over a lifetime. These cells grow and divide as needed.[2] When a cell has damaged DNA or gets old, it is normally eliminated and new cells take their place. Some abnormal cells may not follow the elimination process leading to the uncontrolled growth and spread into surrounding tissue.[3] Some of these cells grow rapidly, some grow slowly, some stop growing completely, and others may regress. If the cell elimination process is disrupted, abnormal cells start to grow and multiply when they should not. These cells then form tumors (lumps of tissue) over a long period of time. Tumors can be either be non-cancerous (benign) or cancerous (malignant).[4]

- A **benign** tumor remains confined to its original location, does not actively invade surrounding normal tissue, and does not spread to distant body sites. However, some benign growths can become malignant after some time.[5]
- A **malignant tumor**, commonly referred to as cancer, can develop other tumors, destroy and invade surrounding normal tissue, and can spread throughout the body.[5]

The type of cancer a patient has is identified by the part of the body where it started. This can be categorized as either hematologic or solid tumor.[4]

- **Hematologic** (blood) cancers stem from the blood cells, which includes leukemia, lymphoma, and multiple myeloma.
- **Solid** tumor cancers stem from any of the body organs or tissues. Common solid tumor cancers include breast, prostate, lung, and colorectal.

Cancer is not one disease. Cancer is a multifactorial, genetic disease that develops slowly over many years.[4] There are more than 100 types of cancers, each one with different risk factors, exposures and causes.[4,6] Each cancer type is influenced by genetic, behavioral, and environmental factors, affecting populations differently. As such, each cancer has different courses of illness, responses to treatment, and survival chances.

Most cancers can develop from a complex mix of many risk factors and can take different roles in cancer development and growth. Sometimes it can also develop in individuals without any risk factors. Nevertheless, risk factors identified in cancer research can help the patient and clinician become aware of their own risk by cancer type and which screening tests to consider, if available.

General Risk Factors for All Cancer Sites

In general, common risk factors for most cancers depend on whether they are **modifiable** and **non-modifiable** risk factors[7,8]:

- Modifiable risk factors:
  - Health behaviors and lifestyle factors (tobacco use, alcohol use, weight, diet, physical activity)
- Non-modifiable risk factors:
  - Age
  - Sex
  - Race
  - Ethnicity
  - Family history
  - Genetics
- Other factors that may or may not be modifiable:
  - Environmental and/or workplace exposures (including arsenic, asbestos, air pollution)

Key Findings

From 2015- 2019, the top three (3) cancers with the highest incidence rate were breast (female), prostate (male), and lung & bronchus (**Table 1.1**). The top three (3) cancer deaths were lung & bronchus, breast (female), and prostate (male) (**Table 1.2**).

All Cancer Sites Incidence

- Arkansas had a lower rate for all cancer sites compared to the US for 2005-2013. From 2015-2019, the rate for all cancer sites was higher in Arkansas than the U.S, with Arkansas having 476.7 cases per 100,000 population in 2019, compared to the US rate of 450.8 cases per 100,000 population (**Figure 1.3**).
- Between 2003 and 2019, the overall rate in Arkansas generally increased among females but decreased among males. In 2019, the overall cancer rate was 428.4 per 100,000 population for Black females and 446.6 per 100,000 population for White females. Among males in 2019, the overall cancer rate was 564.7 per 100,000 among Black males and 511.6 per 100,000 among White males (**Figure 1.4, Figures 1.5A-D**).
- In 2015-2019, females had a significantly lower combined incidence rate for all cancers sites than males. Among males, Black males had a significantly higher incidence rate that White males (**Figure 1.6**).
- The age-specific incidence rate for all cancer sites in 2015-2019 increased as the age group increased for all sex and race groups approximately peaking at '75-79' and '80-84' age groups. Black and White females age-specific rates were significantly lower than males with Black males experiencing a higher age-specific incidence rate than White males for most age groups (**Figure 1.7, Figures 1.8A-D**).
- Arkansas counties with higher-than-expected number of all cancers site cases diagnosed for 2010-2019 were mostly located on the eastern part of the state, with the highest in Lawrence, Poinsett, and Woodruff counties (**Figure 1.9**).
- Individuals with a cancer site diagnosed at an early stage have a higher chance of long-term survival than those diagnosed at a later stage. Late-stage diagnosis for all cancer sites combined ranged from 44.3% to 50.6% by all sex and race groups (**Figure 1.10**).

All Cancer Sites Mortality

- Arkansas had a higher overall trend rate for all cancer site deaths than the US from 2005 through 2019. In 2019, the rate of newly diagnosed cancers in Arkansas was 165.2 per 100,000 population while the US had a rate of 146.0 per 100,000 population (**Figure 1.11**).
- Between 2003 and 2019, the rate for all cancer site deaths in Arkansas decreased across all sex and race groups. Black males had the highest overall trend rate followed by White males, Black females, and White females. In 2019, the mortality rates for all cancer sites for each group were: 163.3 per 100,000 population for Black females, 135.3 per 100,000 population for White females, 237.0 per 100,000 population for Black males, and 201.8 per 100,000 population for White males (**Figure 1.12, Figures 1.13A-D**).
- Black and White males had a higher mortality rate of all cancer sites compared to Black and White females, respectively (**Figure 1.14**).
- Across all age groups, the age-specific mortality rate for all cancer sites increased as the age group increased. Males had a higher age-specific rate for each age group compared to females (**Figure 1.15, Figures 1.16A-D**).
- Arkansas counties with higher-than-expected deaths for all cancer sites were Pulaski, Craighead, and Sebastian (**Figure 1.17**).

Table 1.1: Age-Adjusted Incidence Rates and Number of Newly Diagnosed Cases, Selected Cancers, Arkansas, 2015-2019

Primary Cancer Site	Number of Newly Diagnosed Cases	Age-Adjusted Incidence Rate
Breast (Female)	11,657	122.2
Prostate (Male)	10,367	111.9
Lung & Bronchus	13,902	71.7
Colorectal	7,865	43.1
Melanoma of the Skin (White)	3,752	25.0
Urinary Bladder	3,504	18.5
Non-Hodgkin Lymphoma	3,282	17.9
Ovary (Female)	980	10.4
Cervical (Female)	743	9.5
Pancreas	2,353	2.4

Figure 1.1: Percentage of Newly Diagnosed Cancers by Primary Site, Selected Cancers, Arkansas, 2015-2019

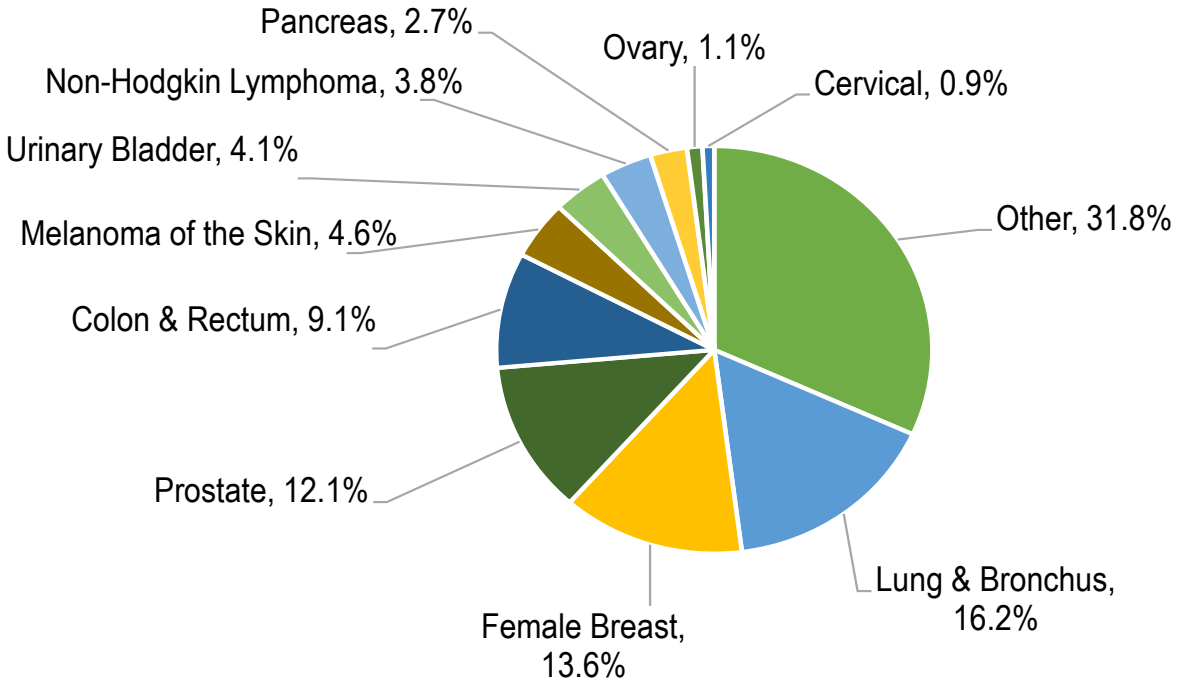


Table 1.2: Age-Adjusted Mortality Rates and Number of Deaths, Selected Cancers, Arkansas, 2015-2019

Primary Cancer Site	Number of Deaths	Age-Adjusted Incidence Rate
Lung and Bronchus	9,787	50.7
Breast (Female)	1,951	19.5
Prostate (Male)	1,475	18.8
Colorectal	2,872	15.4
Pancreas	2,087	11.0
Ovary (Female)	650	6.5
Non-Hodgkin Lymphoma	952	5.1
Urinary Bladder	777	4.1
Cervical (Female)	290	3.4
Melanoma of the Skin (White)	350	2.2

Figure 1.2: Percentage of Cancer Deaths by Primary Site Selected Cancers, Arkansas, 2015-2019

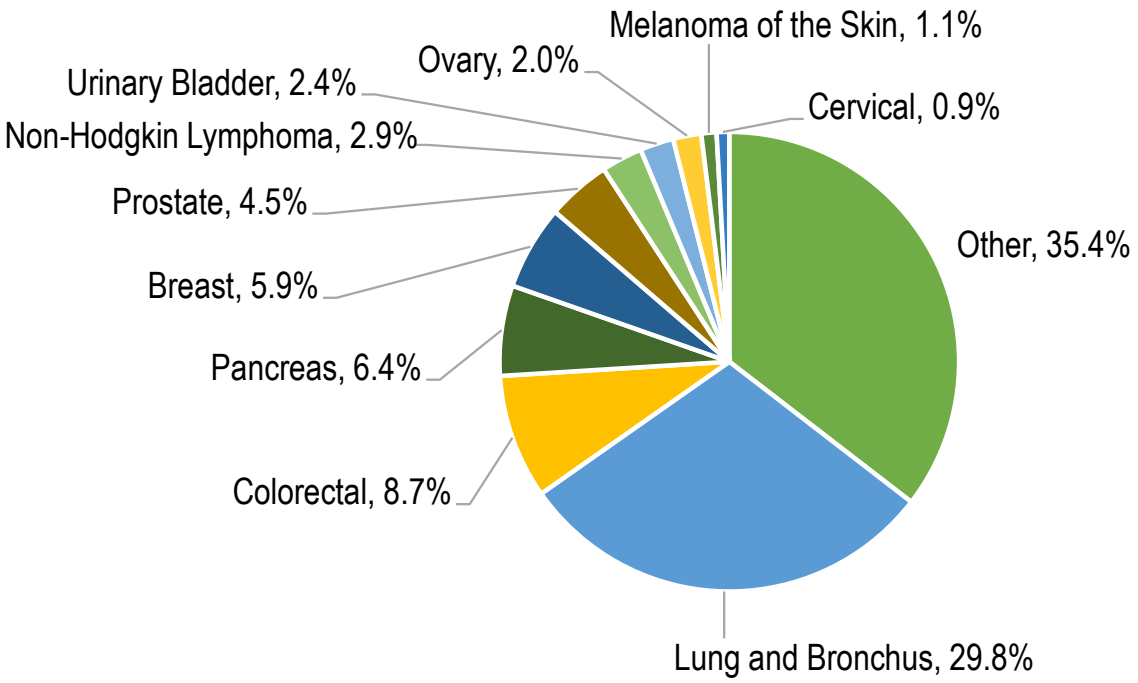


Figure 1.3: Age-Adjusted Incidence Rate Trendline, All Cancer Sites, US and Arkansas, 2005-2019

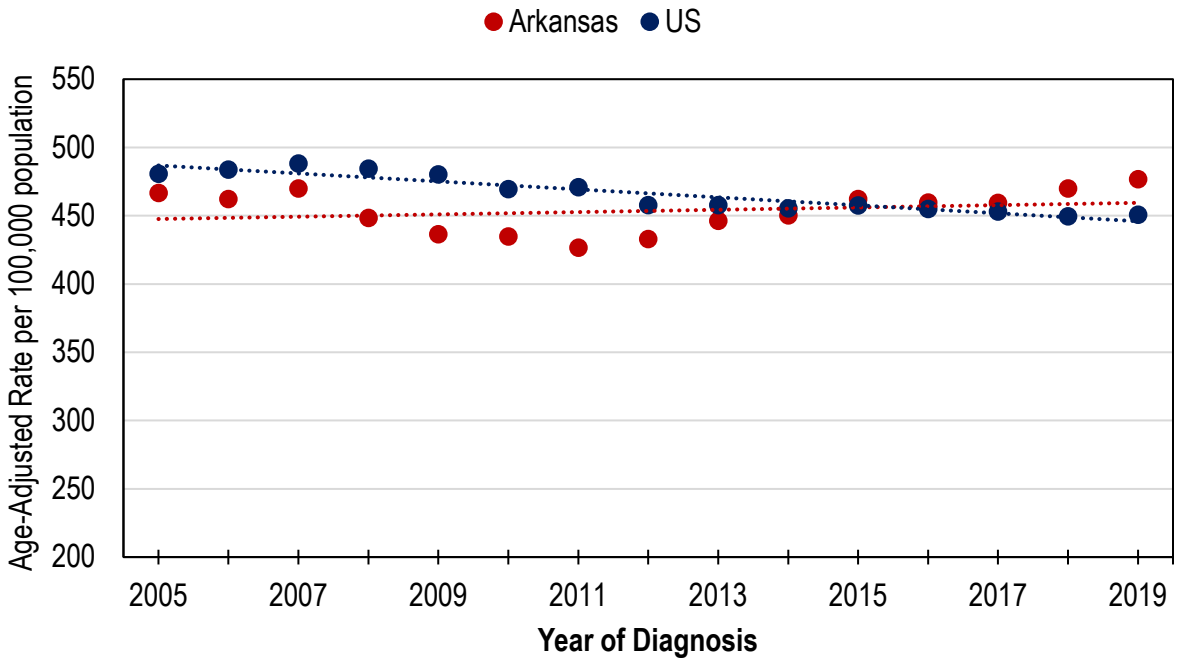


Figure 1.4: Age-Adjusted Incidence Rate Trendline by Race, Sex, and Year of Diagnosis, All Cancer Sites, Arkansas, 2003-2019

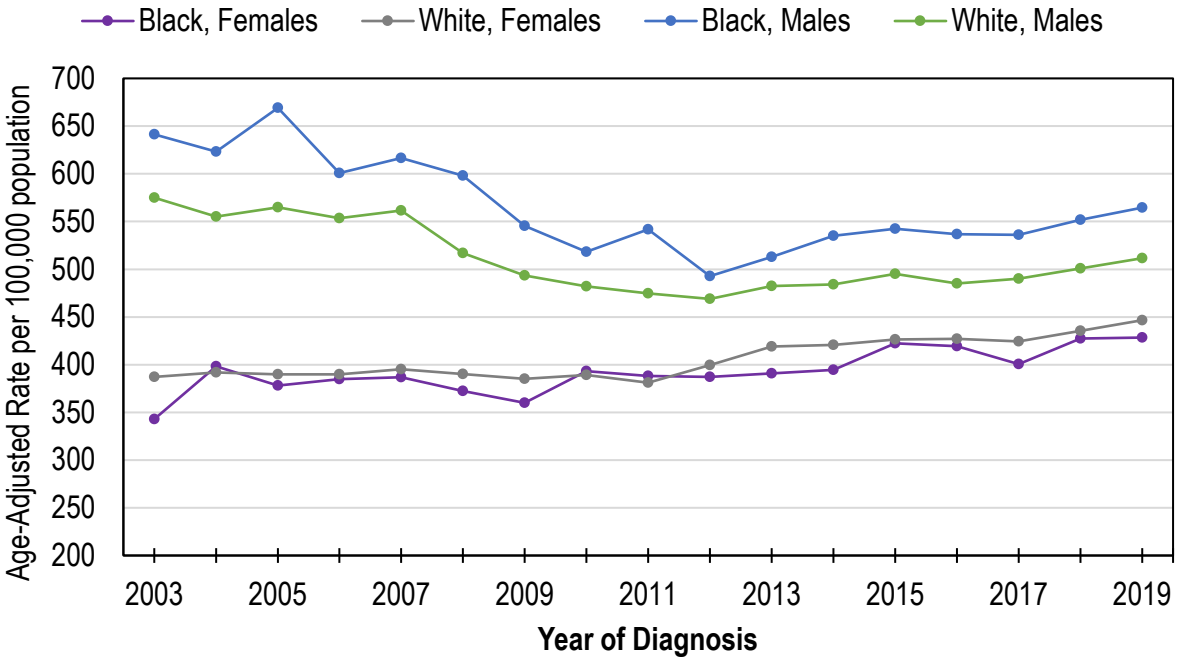


Figure 1.3: Age-Adjusted Incidence Rate Trendline, All Cancer Sites, US and Arkansas, 2005-2019

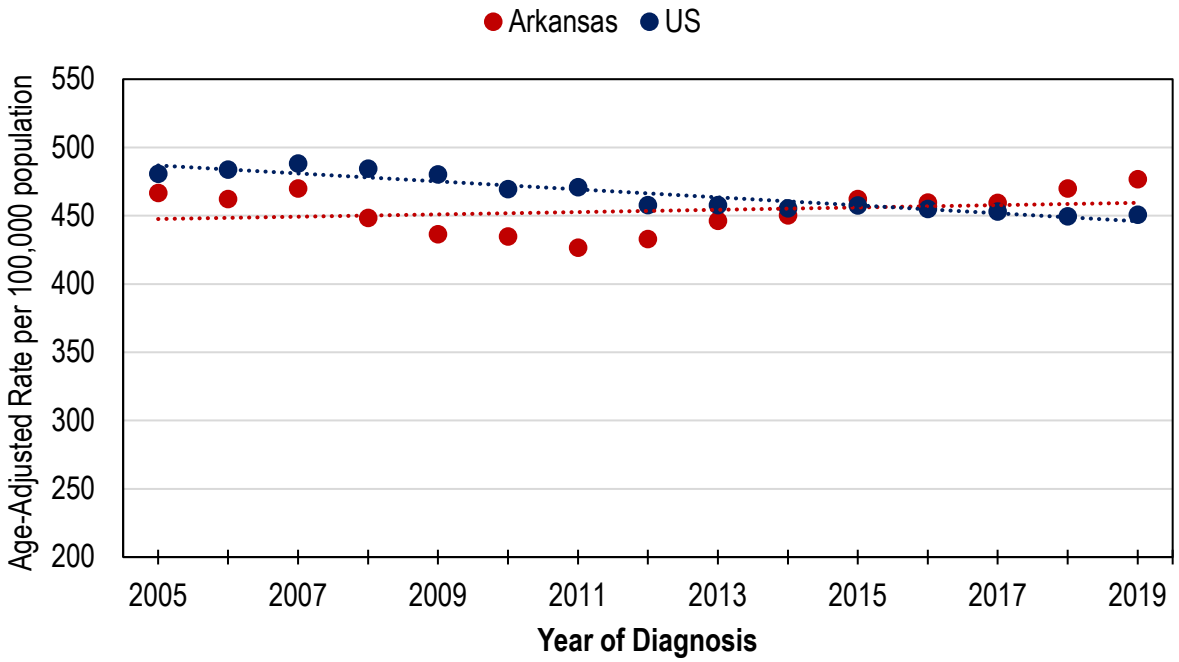
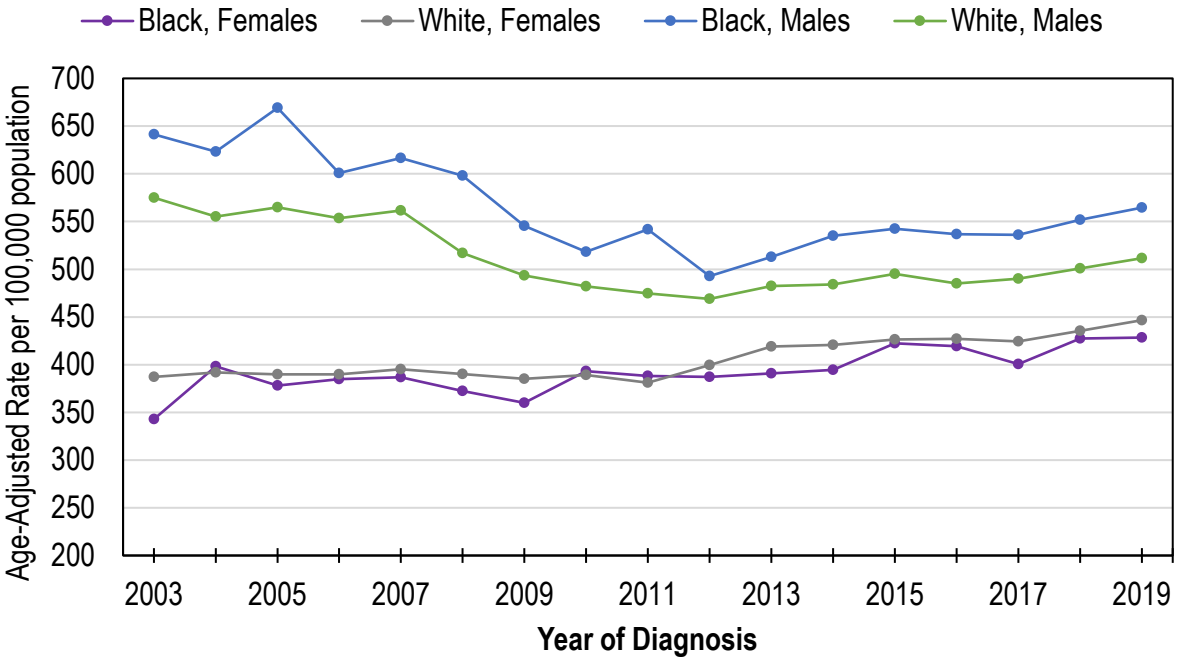
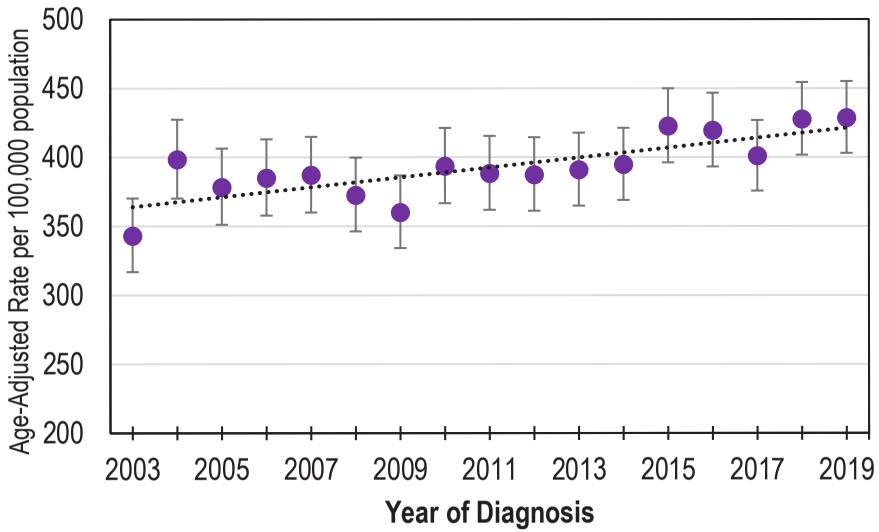


Figure 1.4: Age-Adjusted Incidence Rate Trendline by Race, Sex, and Year of Diagnosis, All Cancer Sites, Arkansas, 2003-2019

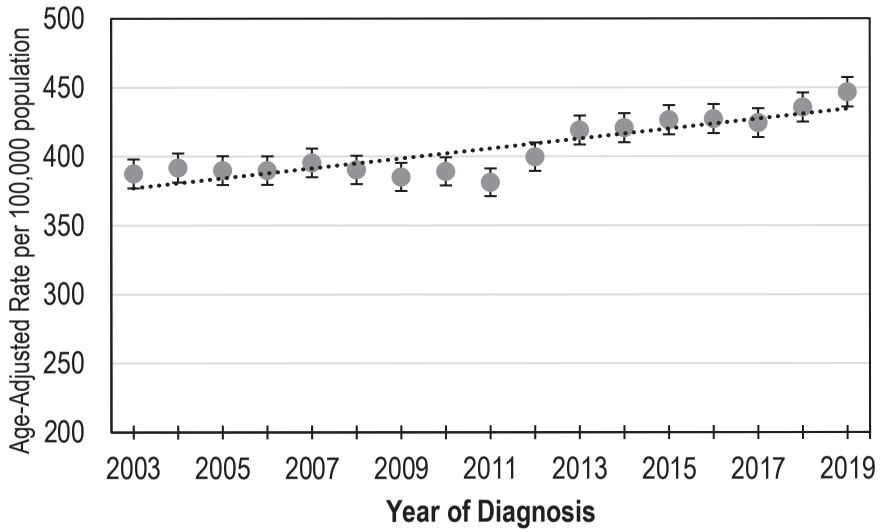


Figures 1.5A-D: Age-Adjusted Incidence Rate and 95% CI by Race, Sex, and Year of Diagnosis, All Cancer Sites, Arkansas, 2003-2019

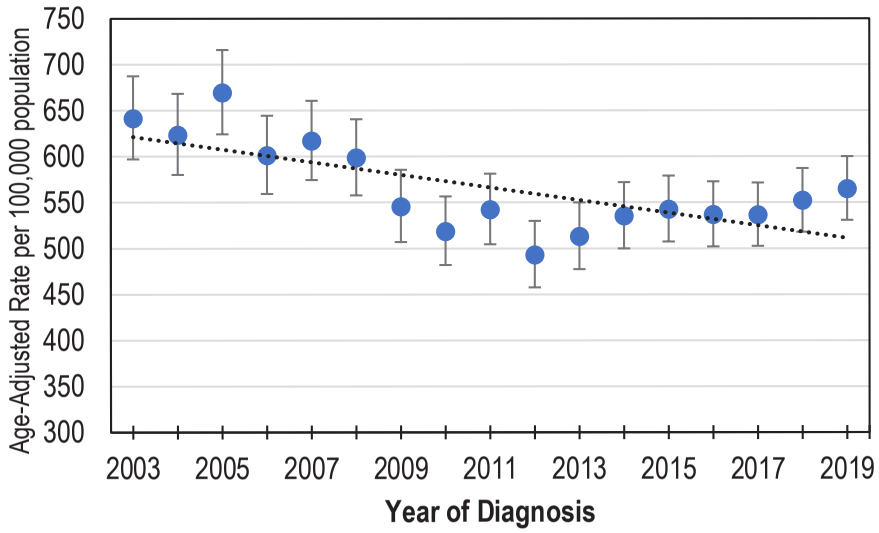
1.5A: Black, Females



1.5B: White, Females



1.5C: Black, Males



1.5D: White, Males

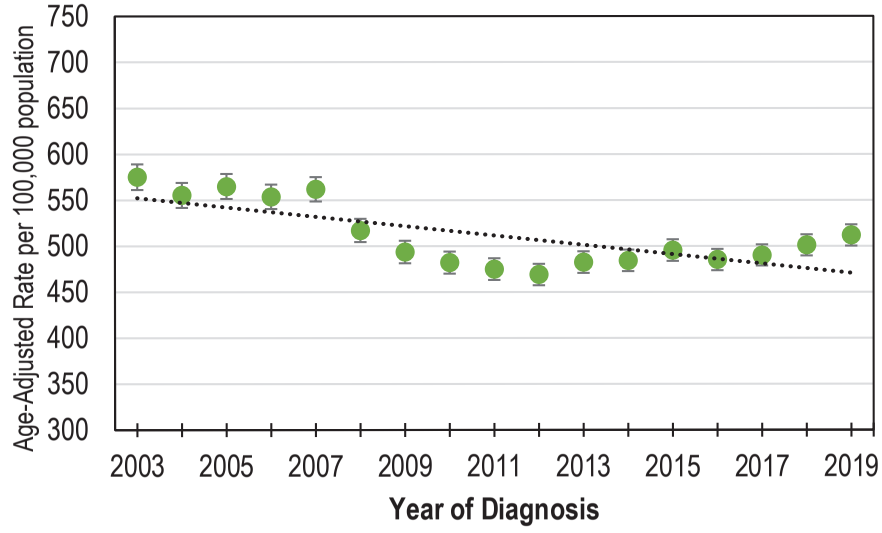


Figure 1.6: Age-Adjusted Incidence Rate and 95% CI by Race and Sex, All Cancer Sites, Arkansas, 2015-2019

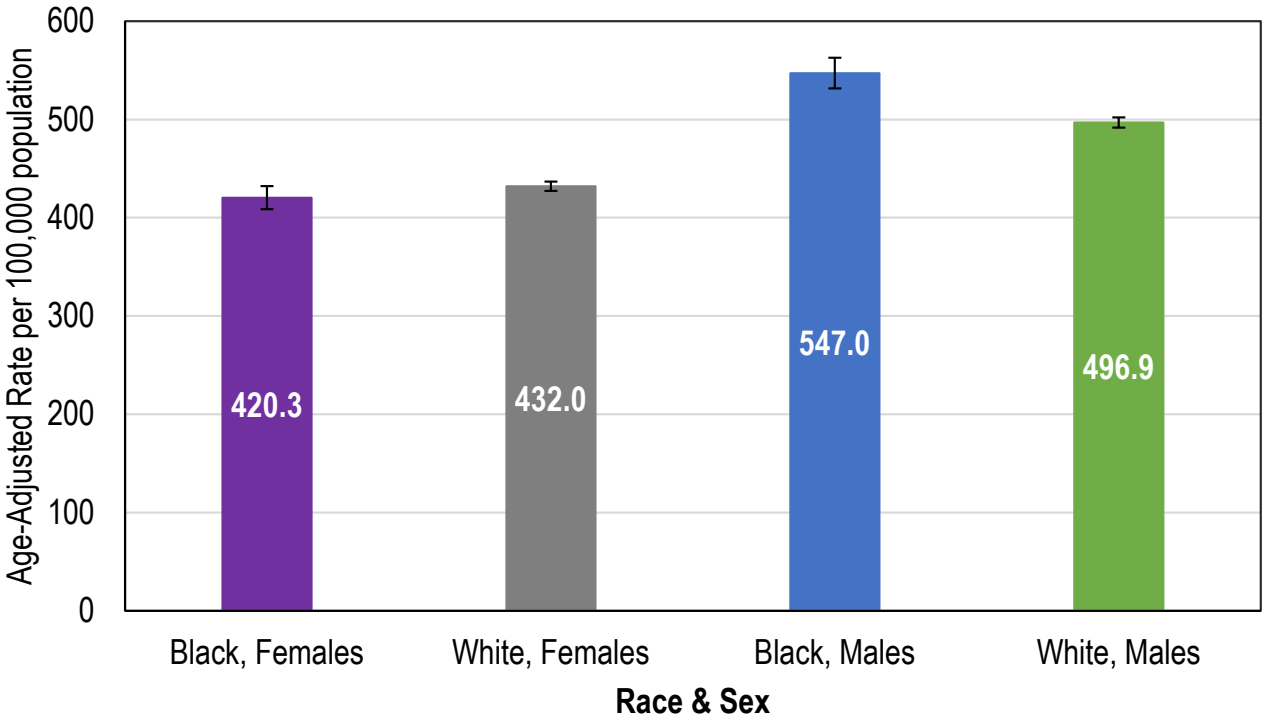
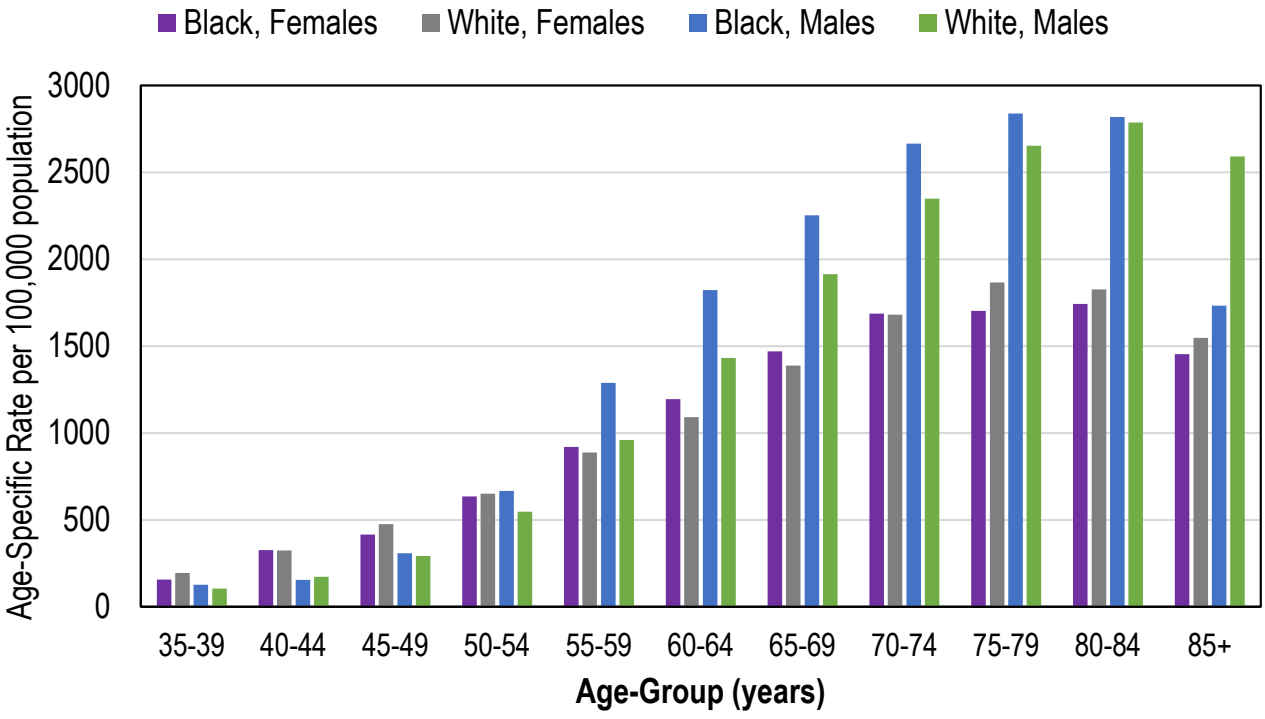
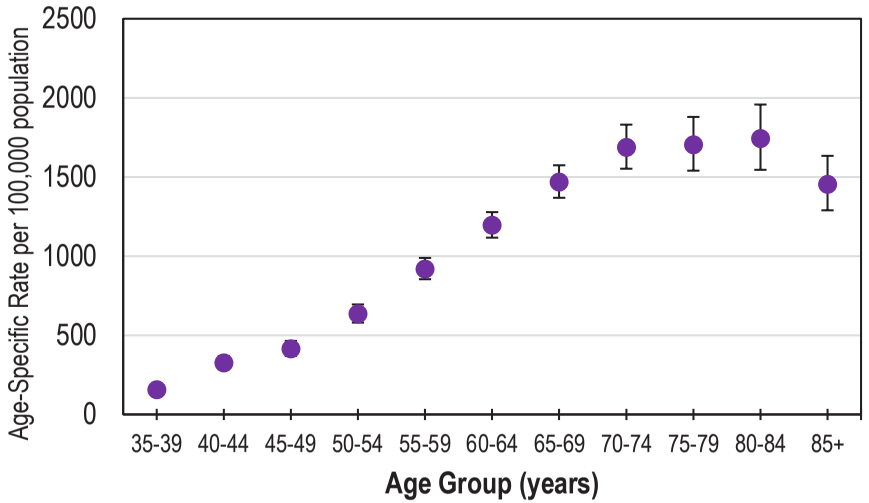


Figure 1.7: Age-Specific Incidence Rate by Race, Sex, and Age Group, All Cancer Sites, Arkansas, 2015-2019

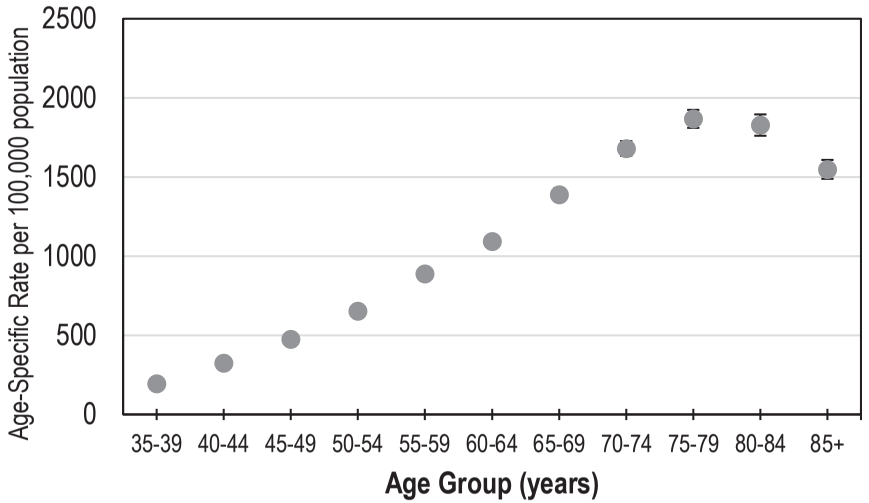


Figures 1.8A-D: Age-Specific Incidence Rate and 95% CI by Race, Sex, and Age Group, All Cancer Sites, Arkansas, 2015-2019

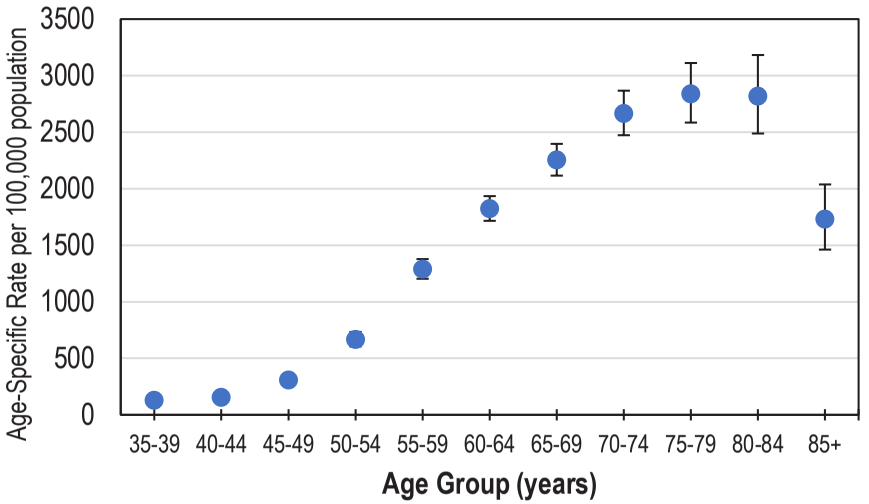
1.8A: Black, Females



1.8B: White, Females



1.8C: Black, Males



1.8D: White, Males

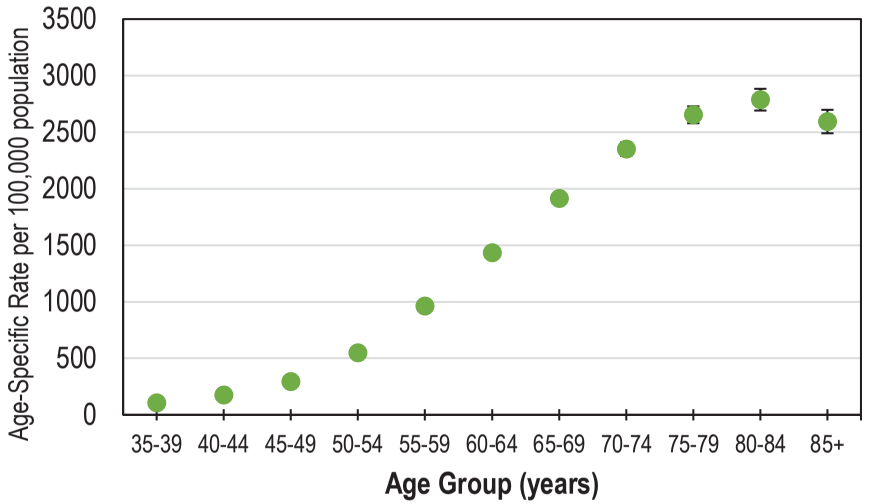


Figure 1.9: Standardized Incidence Ratio (SIR) by County, All Cancer Sites, Arkansas, 2010-2019

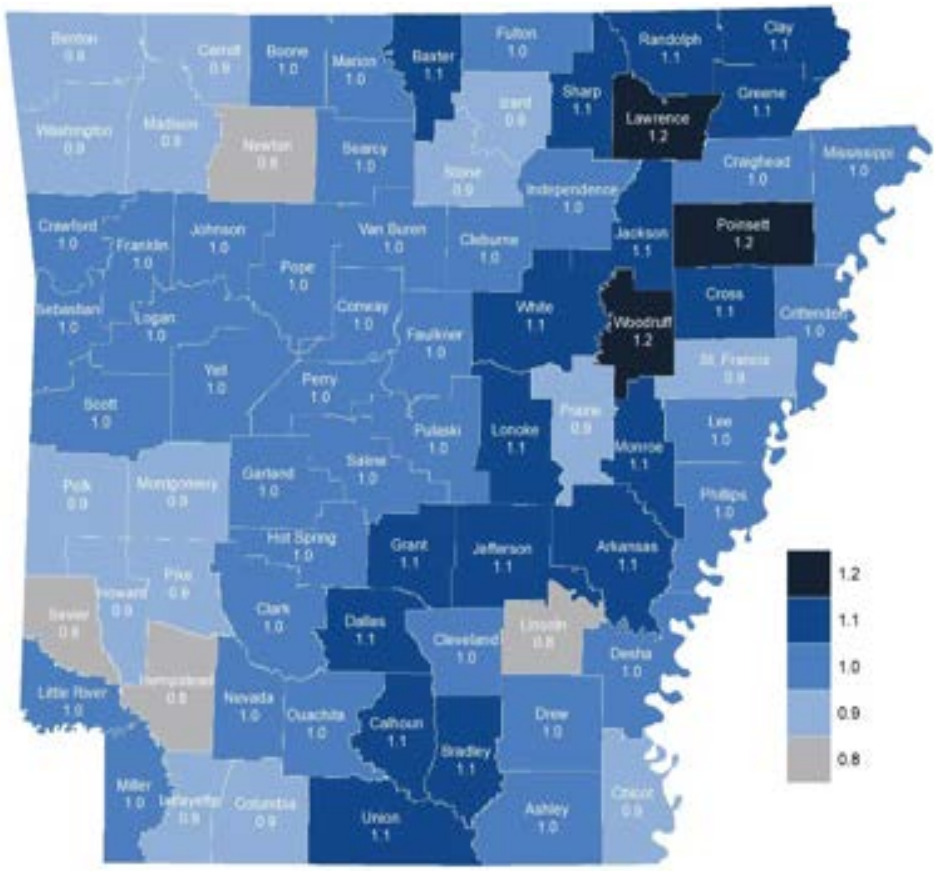


Figure 1.10: Percentage of SEER Summary Stage at Diagnosis by Race/Sex, All Cancer Sites, Arkansas, 2015-2019

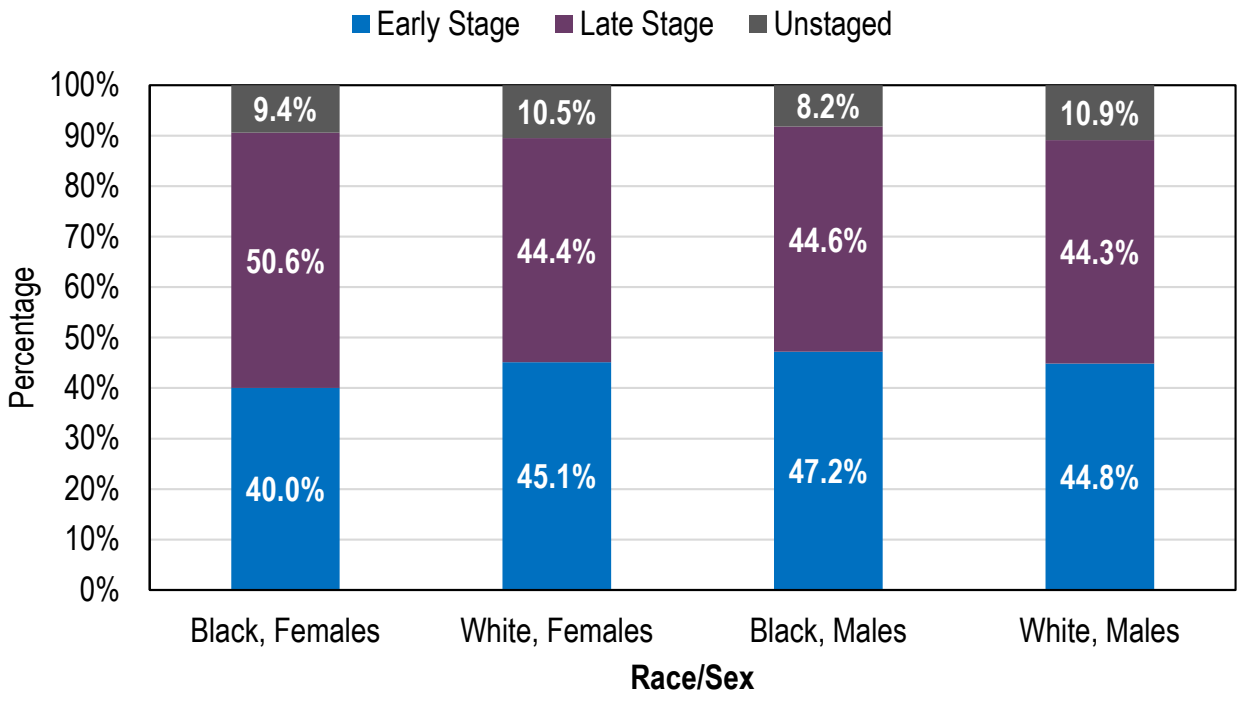


Figure 1.11: Age-Adjusted Mortality Rate Trendline, All Cancer Sites, US and Arkansas, 2005-2019

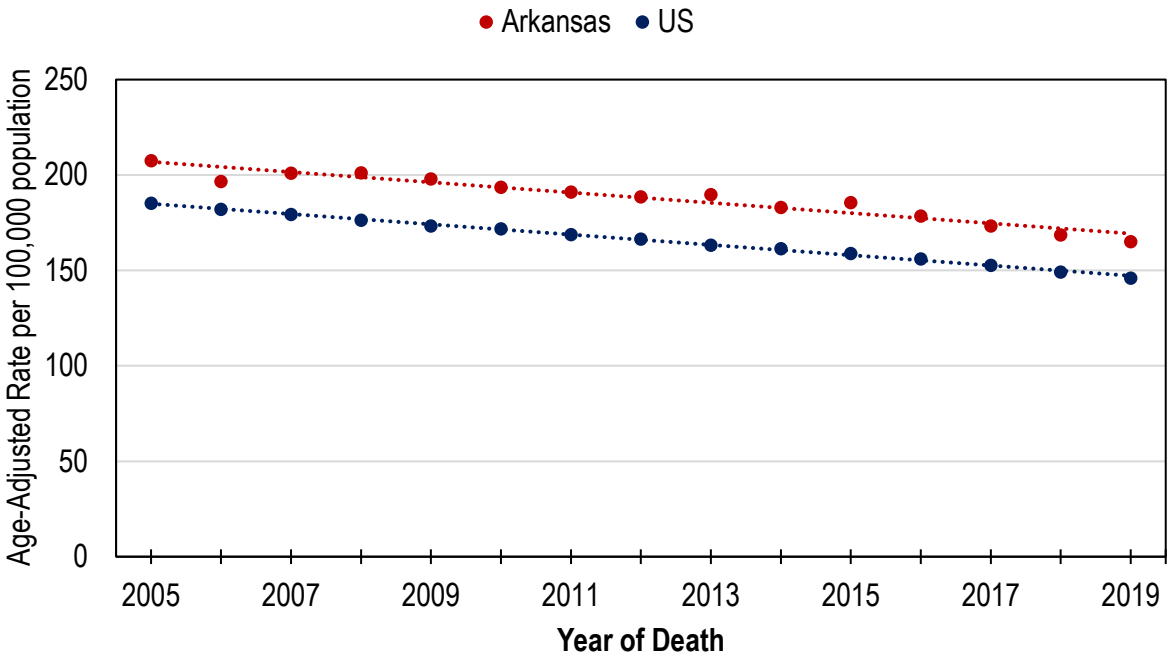
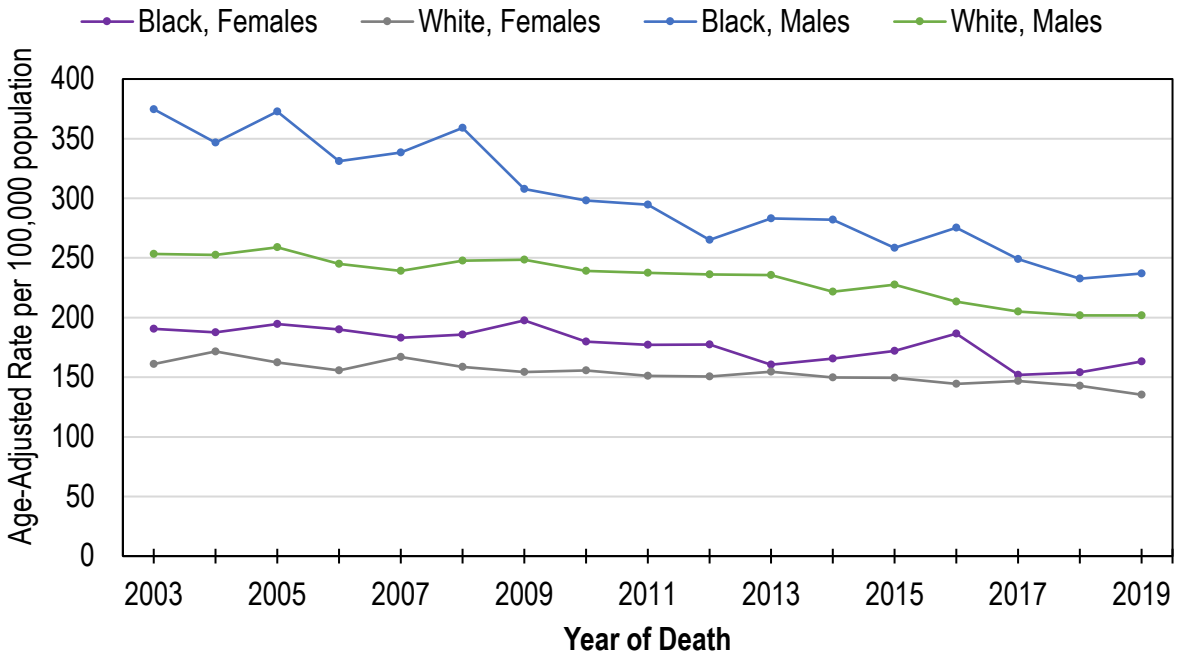
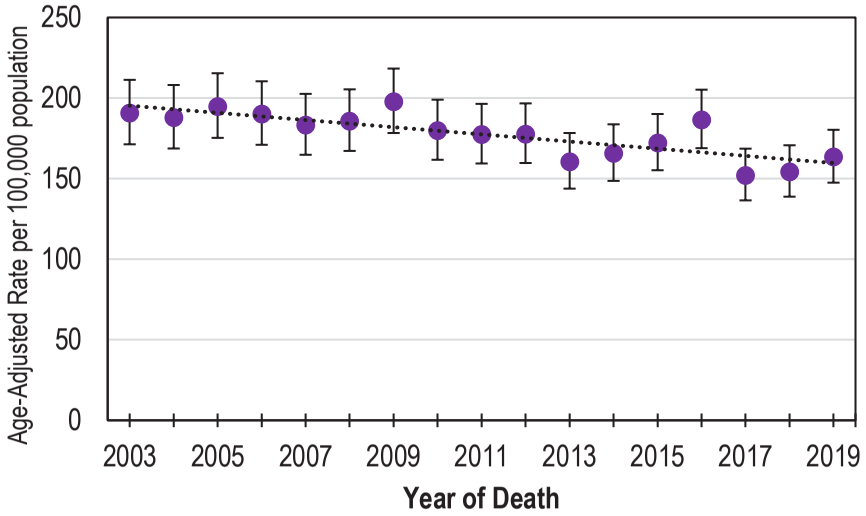


Figure 1.12: Age-Adjusted Mortality Rate Trendline by Race and Sex, All Cancer Sites, Arkansas, 2003-2019

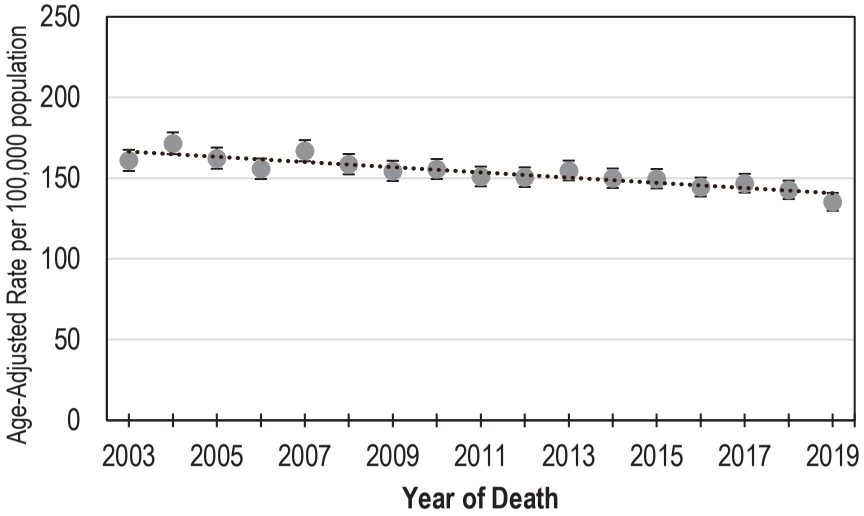


Figures 1.13A-D: Age-Adjusted Mortality Rate and 95% CI by Race, Sex, and Year of Death, All Cancer Sites, Arkansas, 2003-2019

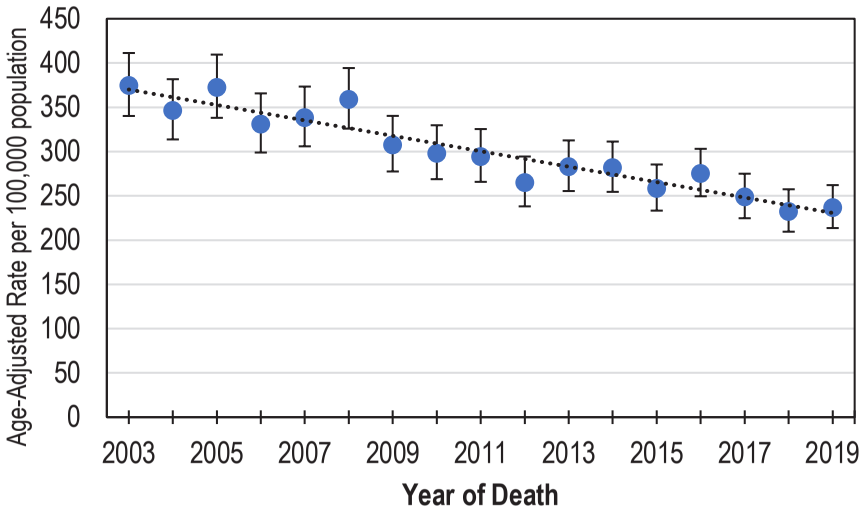
1.13A: Black, Females



1.13B: White, Females



1.13C: Black, Males



1.13D: White, Males

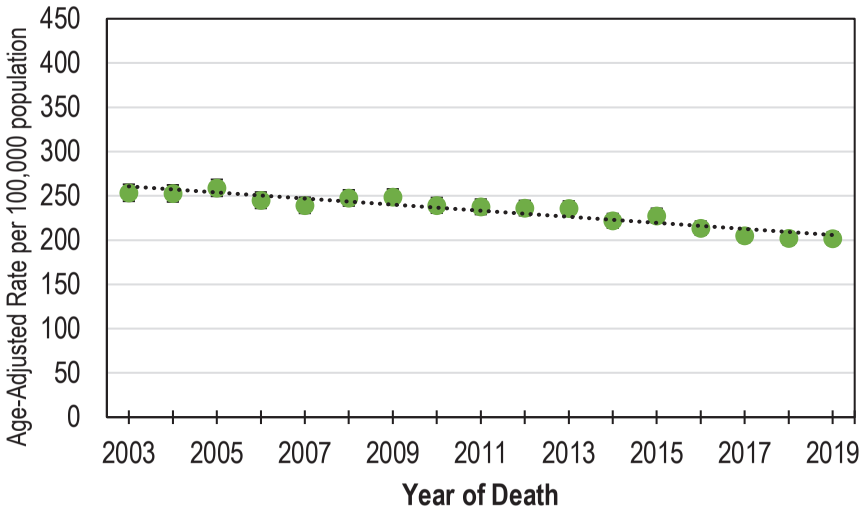


Figure 1.14: Age-Adjusted Mortality Rate and 95% CI by Race and Sex, All Cancer Sites, Arkansas, 2015-2019

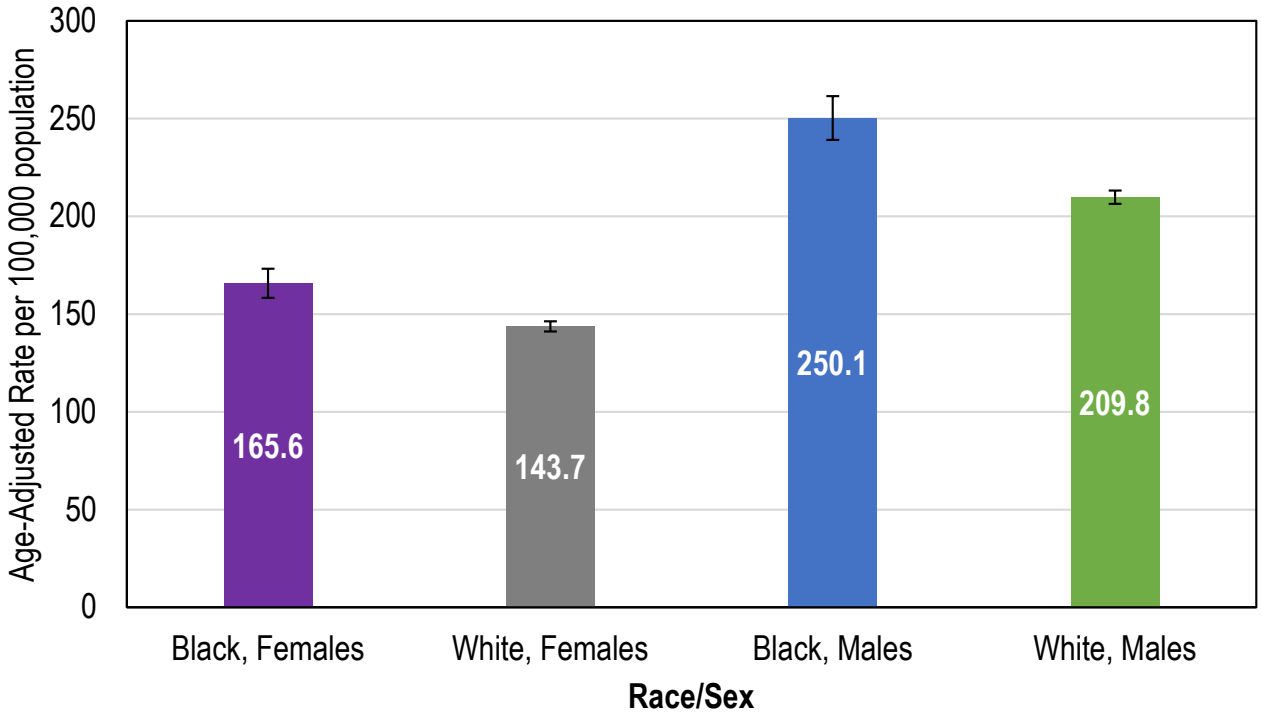
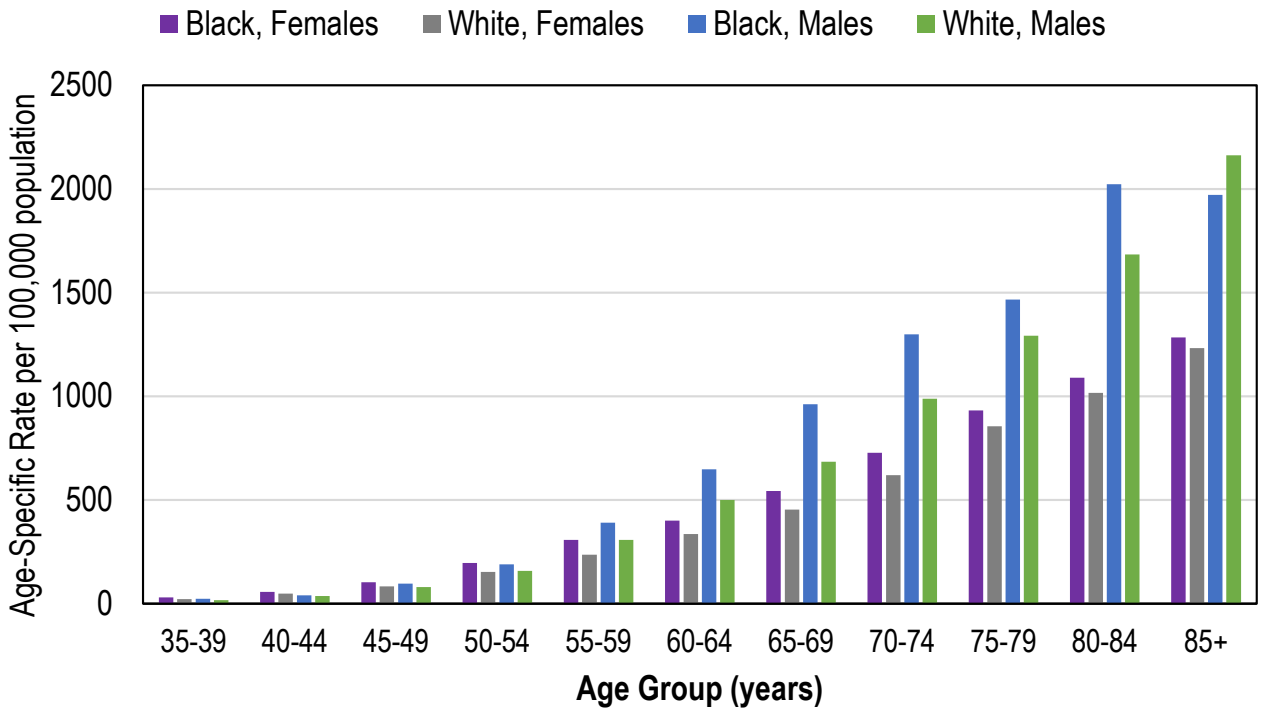
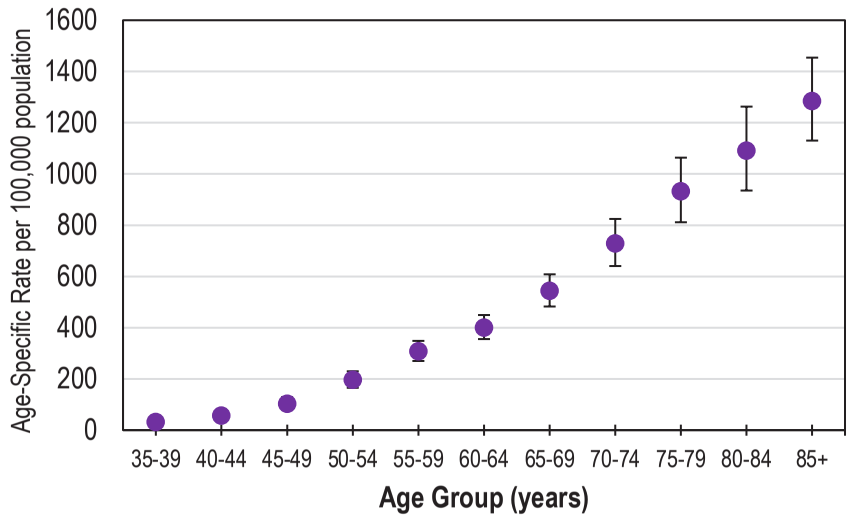


Figure 1.15: Age-Specific Mortality Rate by Race, Sex, and Age Group, All Cancer Sites, Arkansas, 2015-2019

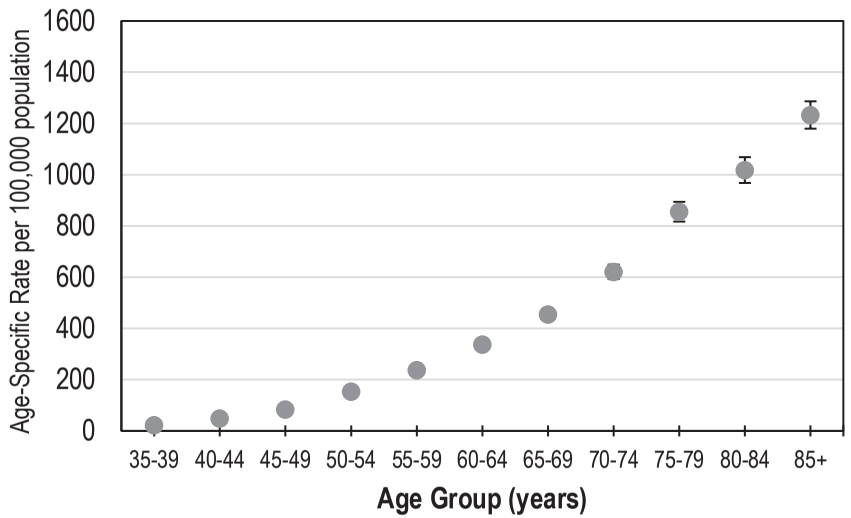


Figures 1.16A-D: Age-Specific Mortality Rate and 95% CI by Race, Sex, and Age Group, All Cancer Sites, Arkansas, 2015-2019

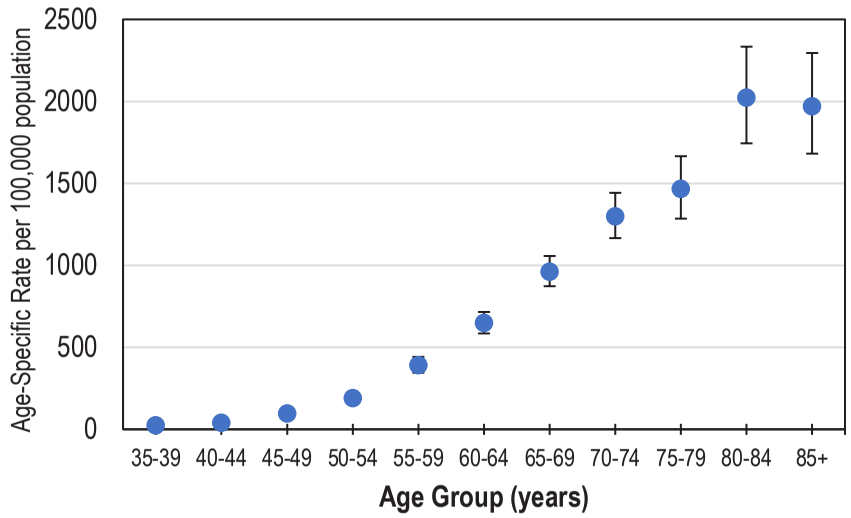
1.16A: Black, Females



1.16B: White, Females



1.16C: Black, Males



1.16D: White, Males

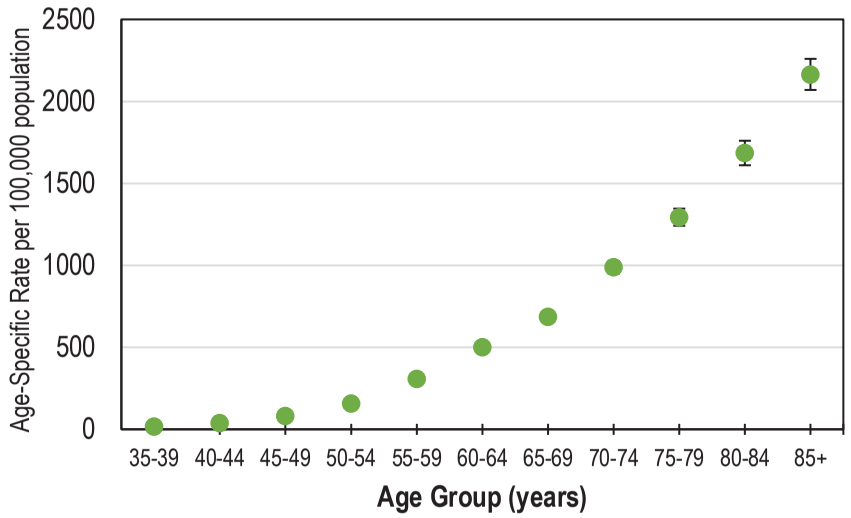
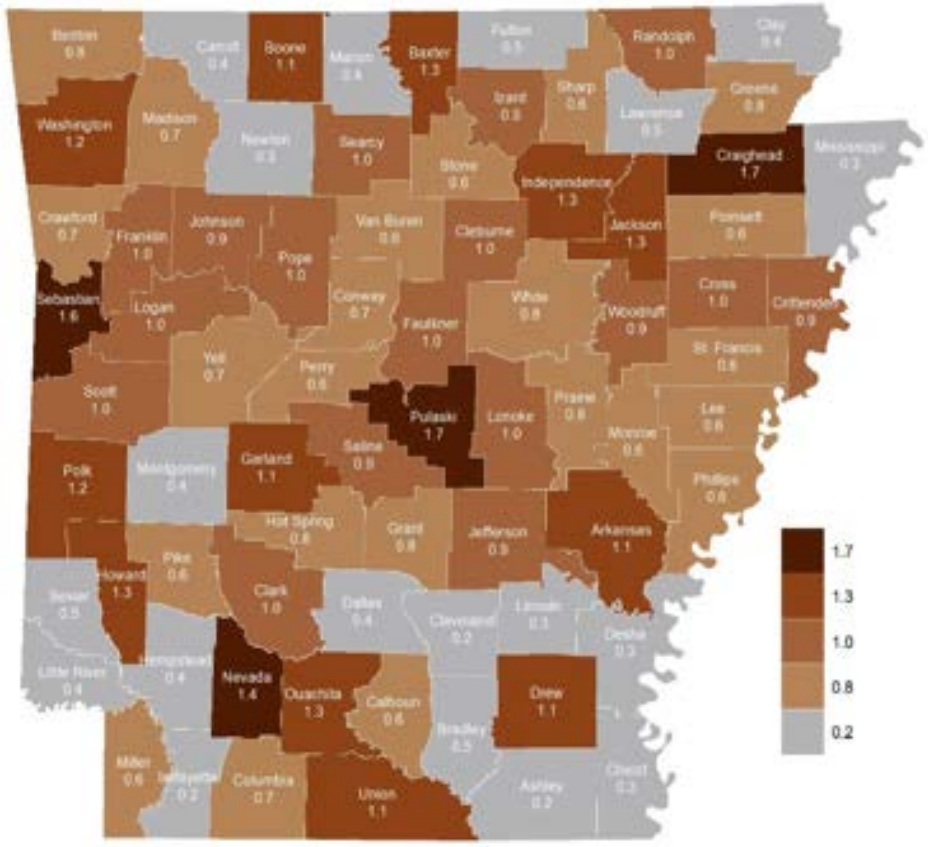


Figure 1.17: Standardized Mortality Ratio (SMR) by County, All Cancer Sites, Arkansas, 2010-2019



ARKANSAS CENTRAL CANCER REGISTRY

Section 2: Childhood Cancers

Overview

Cancer that develops during childhood is different from the types that develop in adults.[9] Most causes for developing a type of cancer during childhood are not strongly associated with lifestyle or environmental risk factors. An even smaller number are caused by genetic changes.

Although childhood cancers are considered rare under the US Rare Disease Act of 2002 (disease that affects populations smaller than 200,000 people), it is the second leading cause of death among children 5 to 9 years of age.[10–12]

The most common childhood and adolescent cancers in the US are[13]:

- → Leukemias
- → Malignant brain and other central nervous system (ONS) tumors
- → Lymphomas
- → Malignant soft tissue sarcomas
- → Malignant germ cell tumors
- → Malignant bone tumors

Key Findings

Childhood Cancers Incidence

- The two most common types of cancer diagnosed among Arkansas children aged 0 to 14 years were leukemia followed by brain and other nervous system cancers (**Figure 2.1**).
- The two most common cancers diagnosed among Arkansas adolescents aged 15 to 19 years were lymphoma and leukemia and carcinomas (including skin) (**Figure 2.2**).
- For 2005-2019, the crude childhood cancer incidence yearly rates increased for both Arkansas and the US, with Arkansas having an overall lower trend than the US (**Figure 2.3**).
- In Arkansas, the crude incidence rate for childhood cancers was higher among White than Black children and adolescents. White males had the highest crude incidence rate of 17.7 cases per 100,000 population, followed by White females (17.6 cases per 100,000 population), Black males (16.6 cases per 100,000 population), and Black females (12.6 cases per 100,000 population) (**Figure 2.4**).

Childhood Cancers Mortality

- The rate of childhood cancer deaths was slightly higher in the US than Arkansas from 2005 through 2019. Caution is suggested in interpretation due to Arkansas data varying by year of death (**Figure 2.5**).
- For 2015-2019, the rate of childhood cancer deaths was higher among White males and females (**Figure 2.6**).

Figure 2.1: Percentage of Pediatric (Ages 0-14) Cases Newly Diagnosed by Cancer Type, Arkansas, 2015-2019

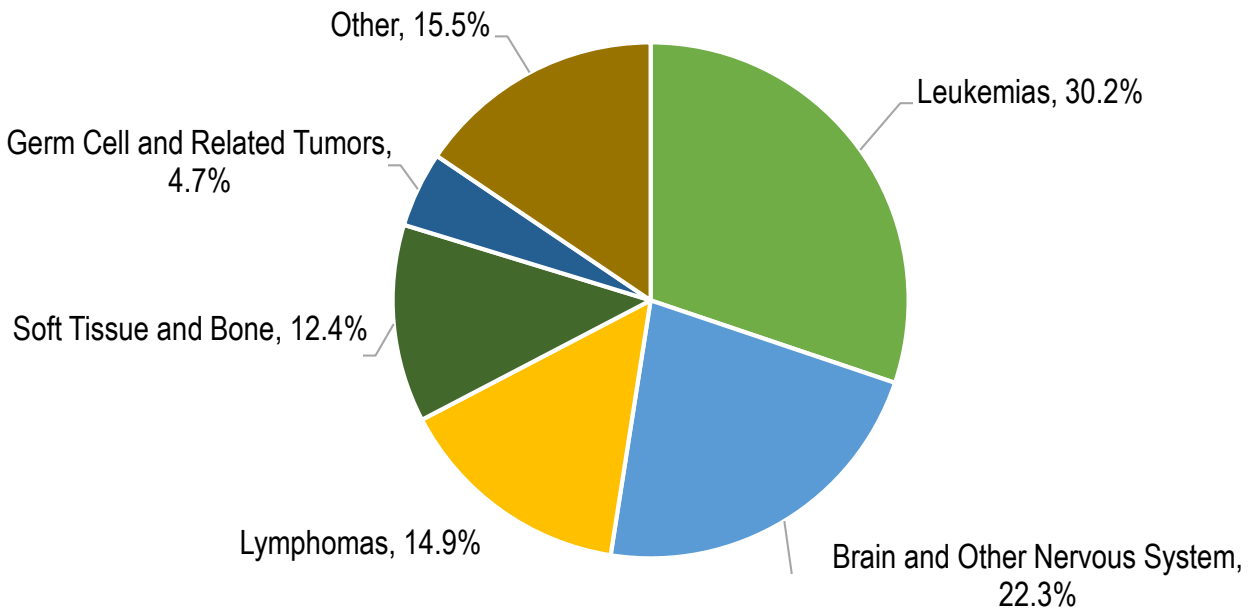


Figure 2.2: Percentage of Adolescents (Ages 15-19) Newly Diagnosed by Cancer Type, Arkansas, 2015-2019

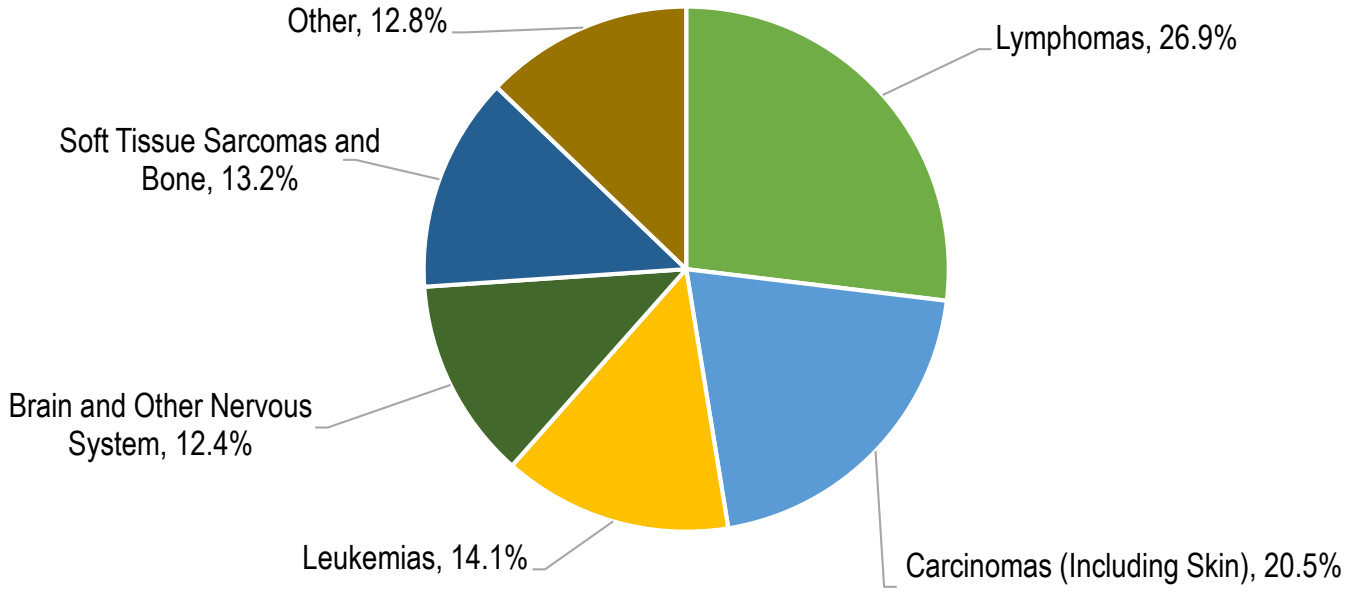


**Figure 2.3: Crude Incidence Rate Trendline,
All Childhood Cancers, US and Arkansas, 2005-2019**

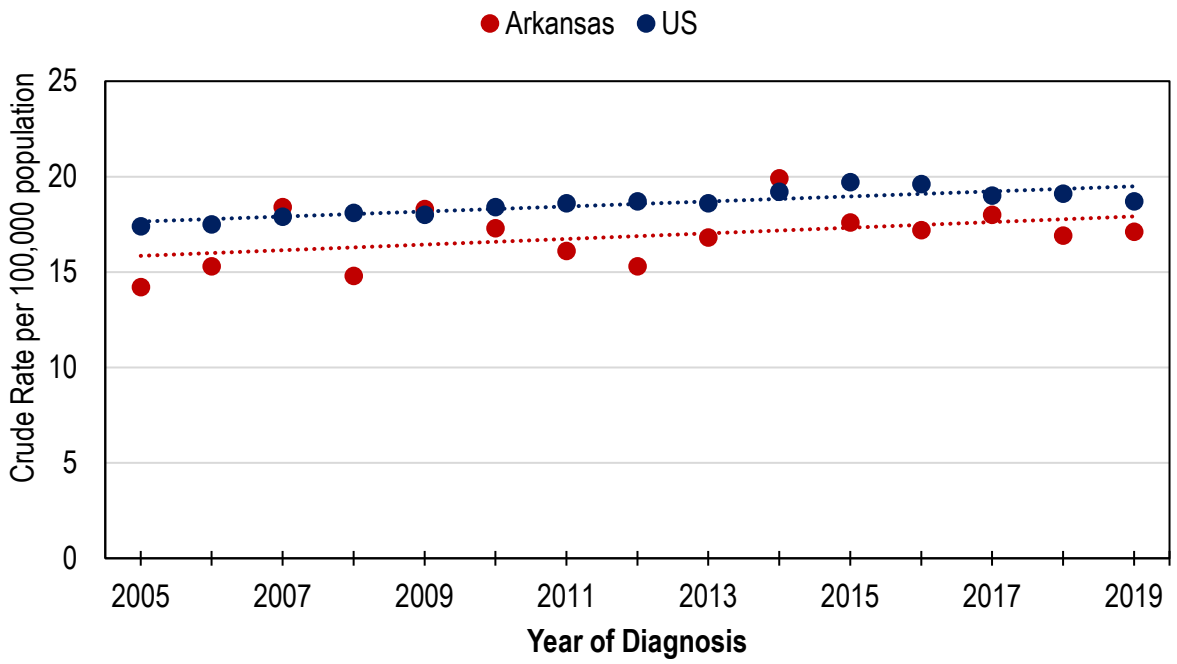


**Figure 2.4: Crude Incidence Rate and 95% CI by Race and Sex,
All Childhood Cancers, Arkansas, 2015-2019**

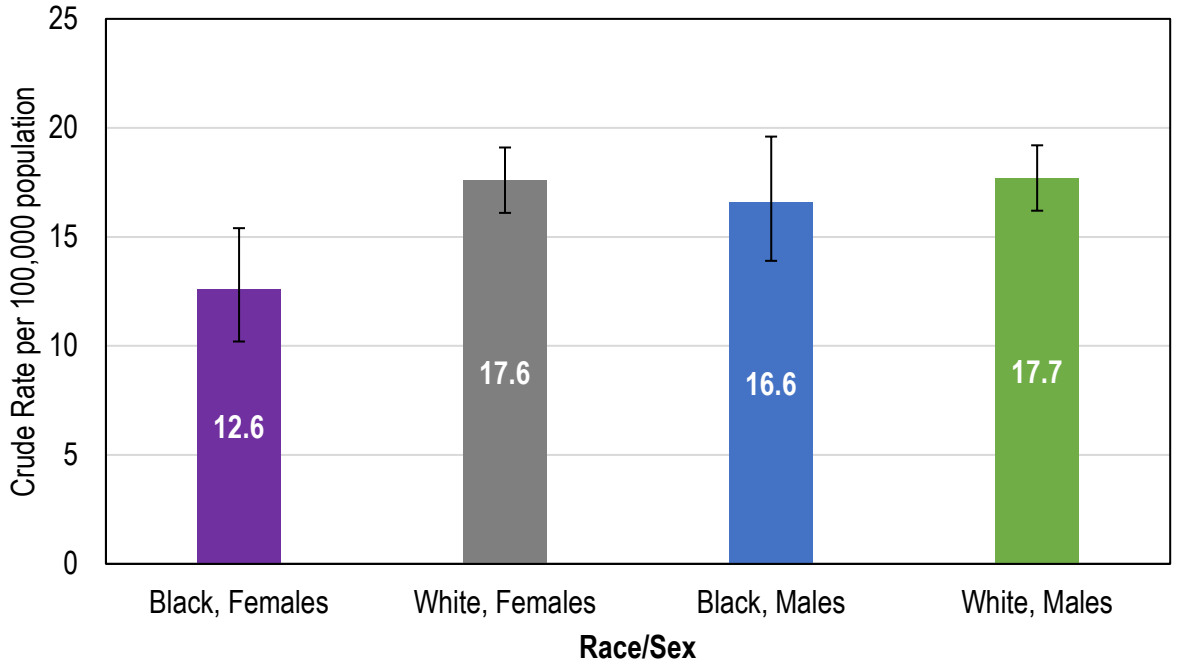


Figure 2.5: Crude Mortality Rate Trendline, All Childhood Cancers, US and Arkansas, 2005-2019

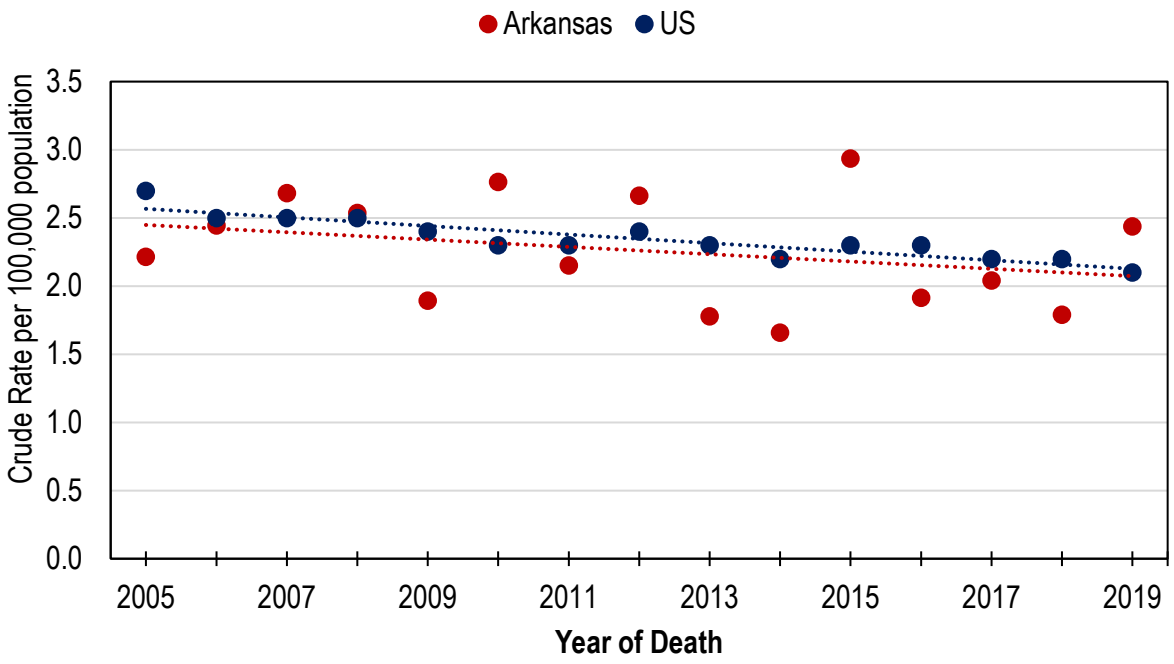
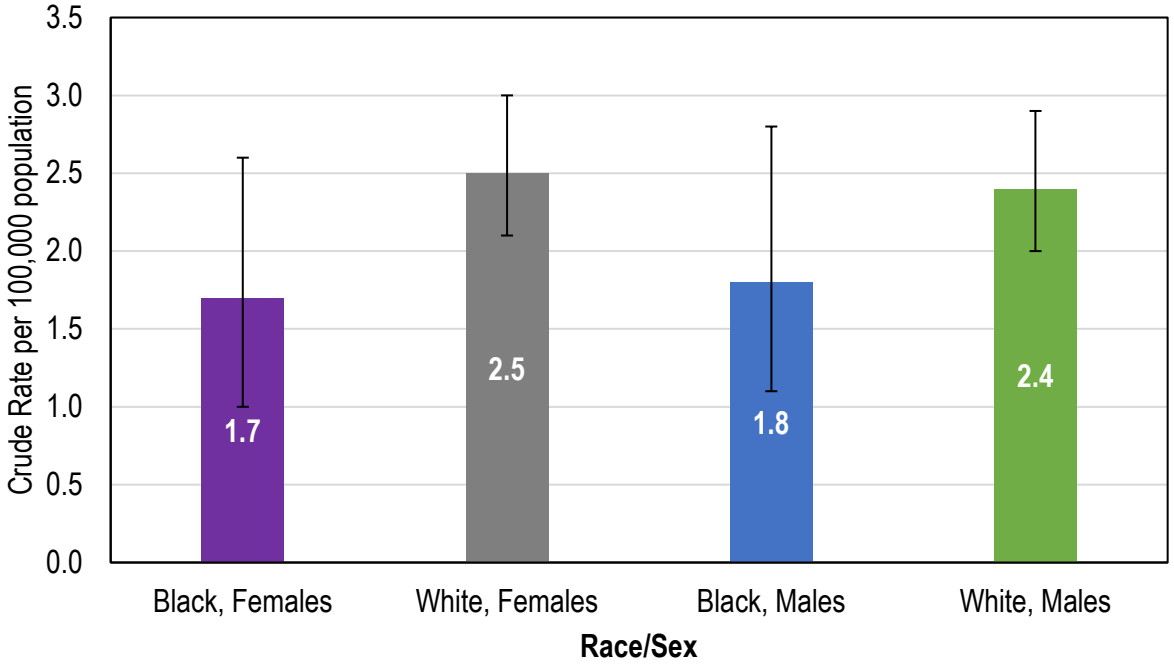


Figure 2.6: Crude Mortality Rate and 95% CI by Race and Sex, All Childhood Cancers, Arkansas, 2015-2019



Section 3: Breast cancer

Overview

With breast cancer as the second most common cause of cancer death for females in the US, mammography screenings has been shown to reduce deaths from breast cancer among women.[14] A mammography is one of the most common screening tests used for early detection of breast cancer signs.[15] As of April 2024, the US Preventive Services Task Force (USPSTF) updated its breast cancer screening for **females ages 40 to 74 to have a mammography every other year**.[16]

Breast Cancer Risk Factors

Common risk factors that can increase your risk for breast cancer include:

- Older age
- A personal history of breast cancer or benign (noncancerous) breast disease
- Inherited risk of breast cancer
- Dense breast tissue
- Reproductive history resulting in greater exposure to estrogen
- Taking hormone therapy for symptoms of menopause
- Radiation therapy to the breast or chest
- Obesity
- Alcohol consumption

The CDC identified a list of additional risk factors for females at-risk of early-onset breast cancer (younger than 45).[17] The following can increase your risk for early-onset breast cancer, if you:

- Have a family history of close relative diagnosed with breast cancer before the age of 45 (especially if more than one relative was diagnosed or if a male relative had breast cancer)
- Yourself or have a close relative diagnosed with ovarian cancer at any age
- Have changes in certain breast cancer genes (BRCA1 and BRCA2), or have close relatives with these changes, but have not been tested yourself
- Have Ashkenazi Jewish heritage
- Have received radiation therapy to the breast or chest during childhood or early adulthood
- Have had breast cancer or certain other breast health problems, such as lobular carcinoma in situ (LCIS), ductal carcinoma in situ (DCIS), atypical ductal hyperplasia, or atypical lobular hyperplasia
- Have been told that you have dense breasts from a mammogram

If you have any of these characteristics, talk to your doctor about your family history and other risk factors you might have.

Key Findings

Breast Cancer Incidence

- From 2005 to 2019, the rate for breast cancer increased in both Arkansas and the US with Arkansas having a lower overall trendline. In 2019, the rate for breast cancer in Arkansas was 129.2 cases per 100,000 population, compared to the US rate of 131.5 cases per 100,000 population (**Figure 3.1**).
- Between 2003 and 2019, the rate for breast cancer for Black and White females was similar increasing over time. In 2019, the rate for breast cancer for Black females was 130.4 per 100,000 compared to White females' rate of 127.9 per 100,000 population (**Figure 3.2, Figures 3.3A-B**).
- Black females had a higher rate of breast cancer incidence rates in 2015-2019 than White females. Black females had a rate of 123.6 per 100,000 population, while White females had a rate of 119.7 per 100,000 population (**Figure 3.4**).

- In 2015-2019, Black females had a higher age-specific rate for age groups younger than 64 compared to White females. White females had a higher age-specific rate for breast cancer for age groups older than 65 (**Figure 3.5, Figures 3.6A-B**).
- Arkansas counties with the highest incidence rates for breast cancer were mostly in the northwest and some central areas of the state. Counties with a standardized incidence ratio (SIR) of 1.00, or greater, have a higher incidence of cancer than the state overall, which could indicate a high breast cancer screening (mammography) prevalence (**Figure 3.7**).
- About 40% of Black females were diagnosed at a late stage for breast cancer compared to 30.9% of White females (**Figure 3.8**).

Breast Cancer Survival

- Early diagnosis for a localized breast cancer diagnosis has close to a 100% 5-year relative survival. As such, the earlier breast cancer is detected, the better the survival (**Figure 3.9, Table 3.1**).

Breast Cancer Mortality

- From 2005 to 2019, the rate of breast cancer gradually decreased in both Arkansas and the US. In 2019, Arkansas females had breast cancer mortality rate of 18.2 deaths per 100,000 population, compared to the US rate of 19.4 deaths per 100,000 population (**Figure 3.10**).
- Between 2003 and 2019, the rate of breast cancer deaths in Arkansas decreased for both Black females and White females, although Black females had a higher mortality rate than White females. In 2019, the breast cancer mortality rates were 24.6 per 100,000 population for Black females and 17.4 per 100,000 population for White females (**Figure 3.11, Figures 3.12A-B**).
- Black females had significantly higher breast cancer mortality rate than Whites females. During this period, the mortality rate per 100,000 population was 27.9 for Black females and 18.4 for White females (**Figure 3.13**).
- For all age groups, Blacks females had a higher age-specific mortality rate for breast cancer than Whites females in 2015-2019 (**Figure 3.14, Figures 3.15A-B**).
- Arkansas counties Sebastian, Garland, and Craighead had more breast cancer deaths than expected (**Figure 3.16**).

Figure 3.1: Age-Adjusted Incidence Rate Trendline Among Females, Breast Cancer, US and Arkansas, 2005-2019

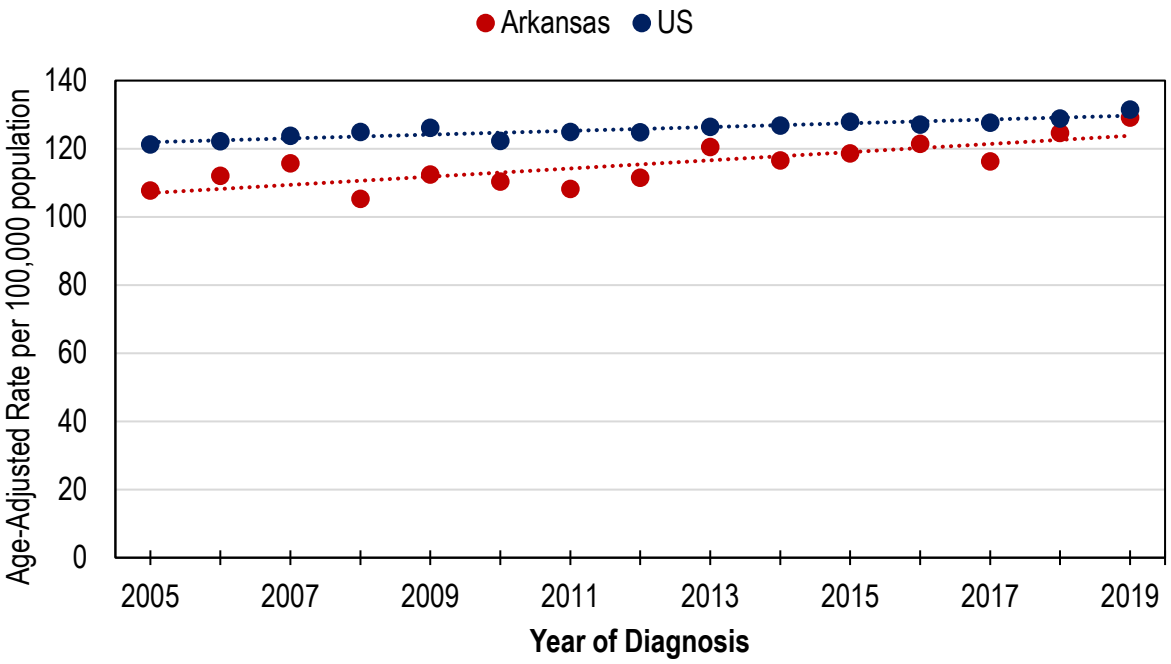
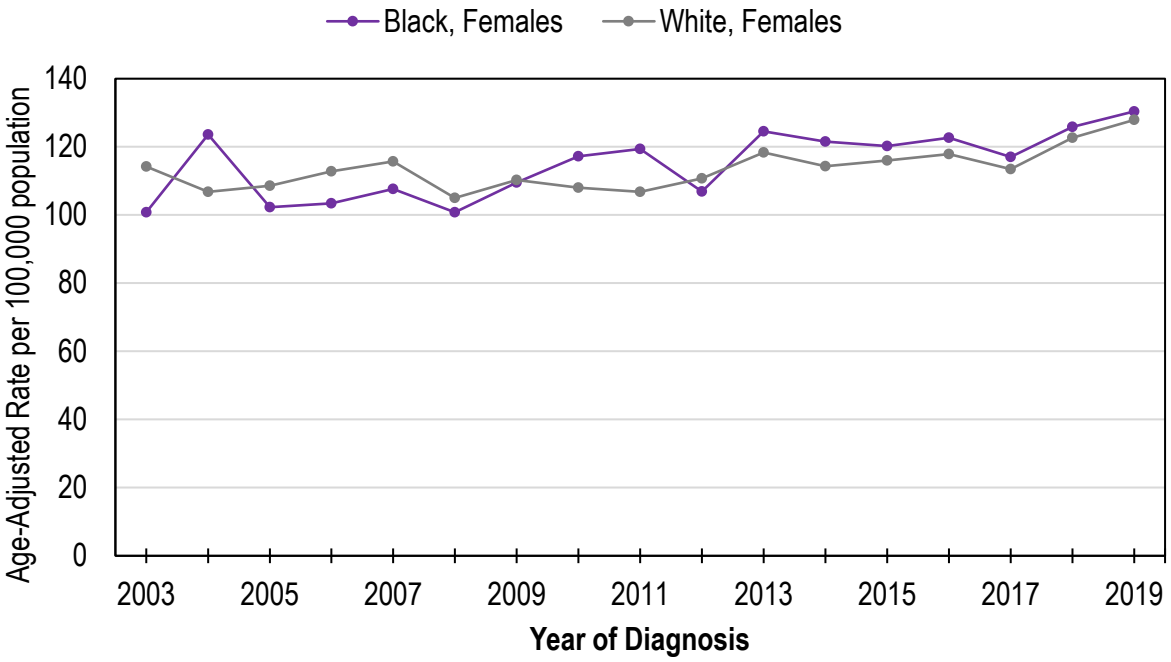
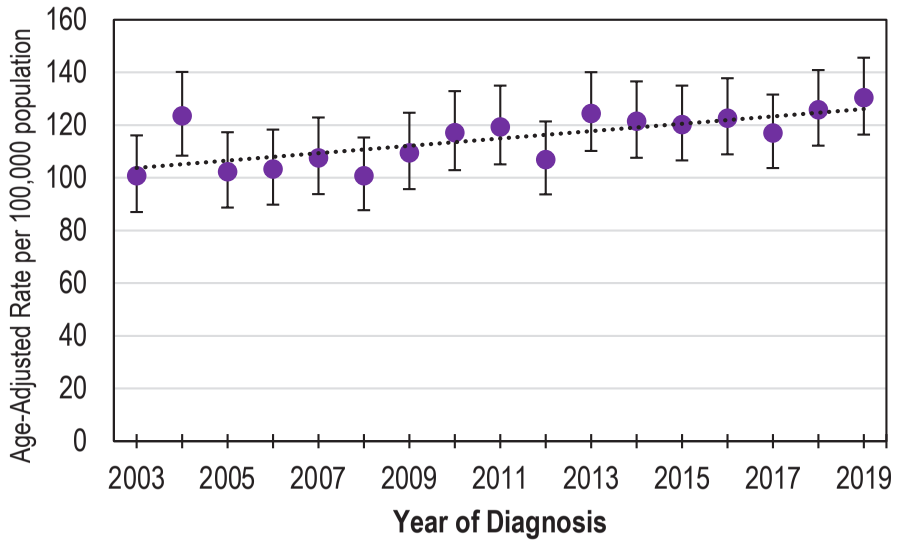


Figure 3.2: Age-Adjusted Incidence Rate Trendline by Race Among Females, Breast Cancer, Arkansas, 2003-2019



Figures 3.3A-B: Age-Adjusted Incidence Rate and 95% CI by Race and Year of Diagnosis Among Females, Breast Cancer, Arkansas, 2003-2019

3.3A: Black, Females



3.3B: White, Females

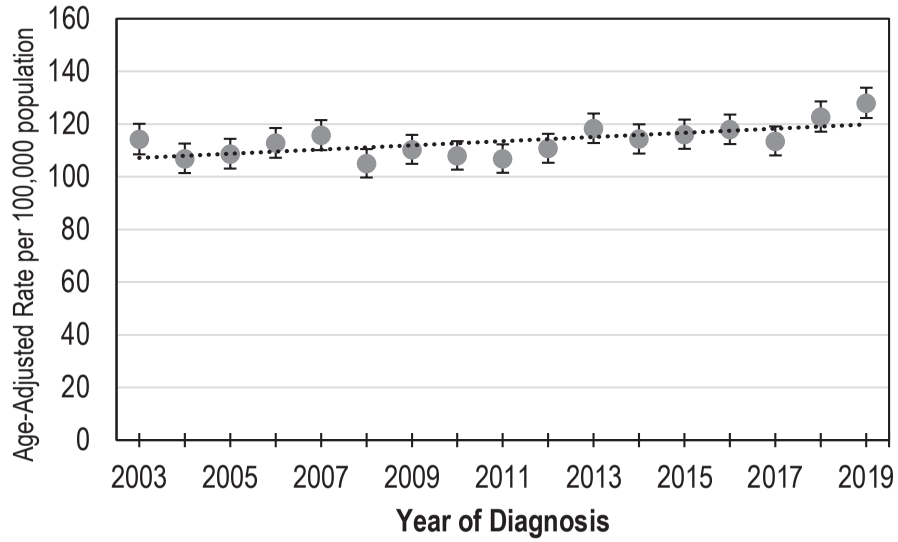


Figure 3.4: Age-Adjusted Incidence Rate and 95% CI by Race Among Females, Breast Cancer, Arkansas, 2015-2019

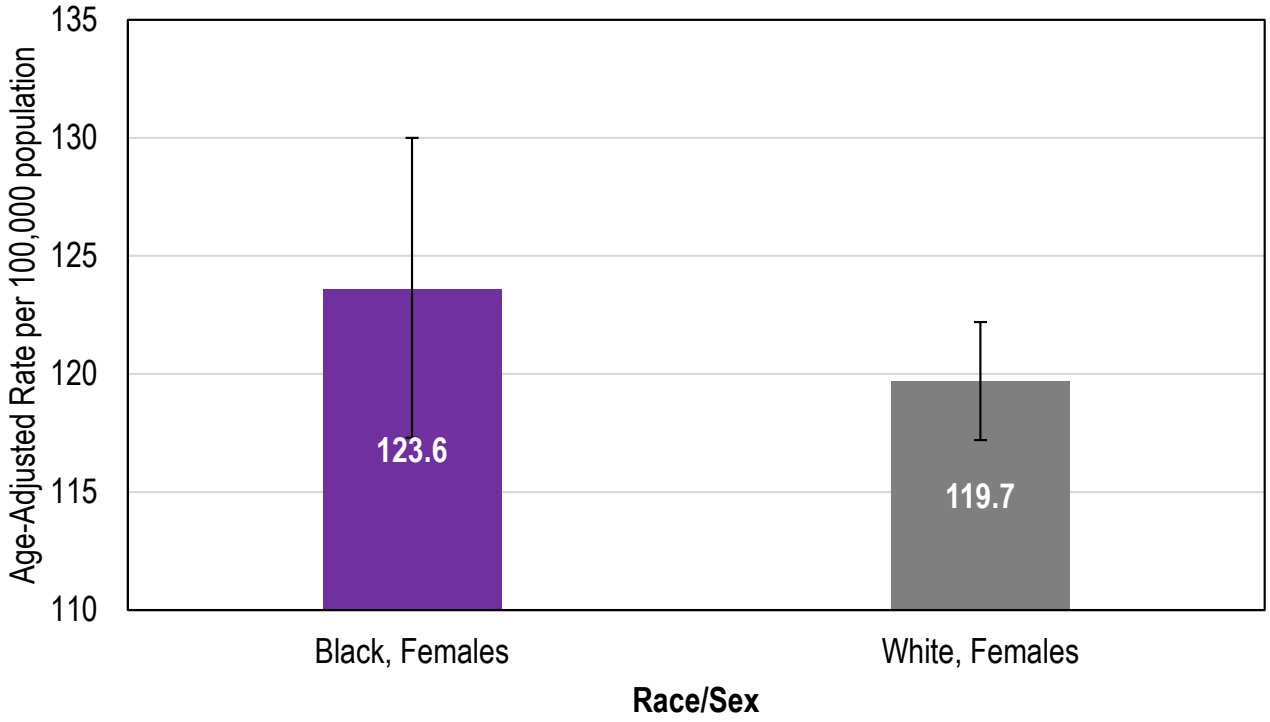
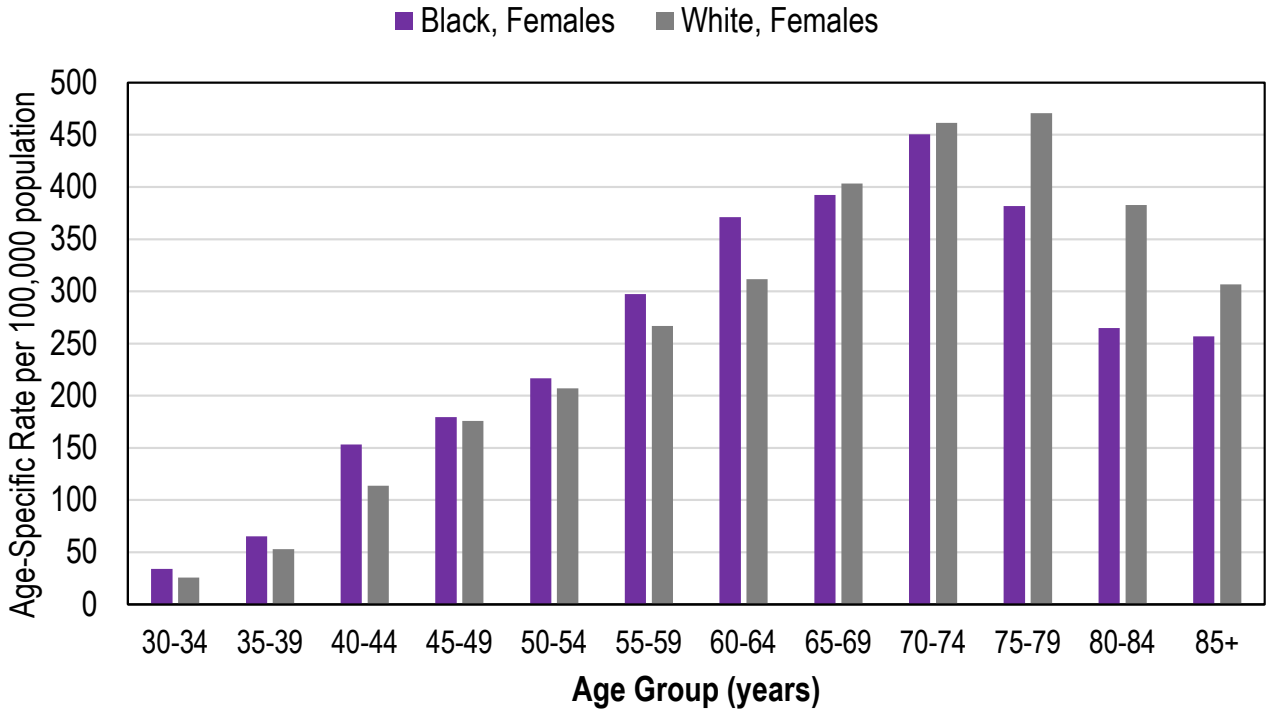
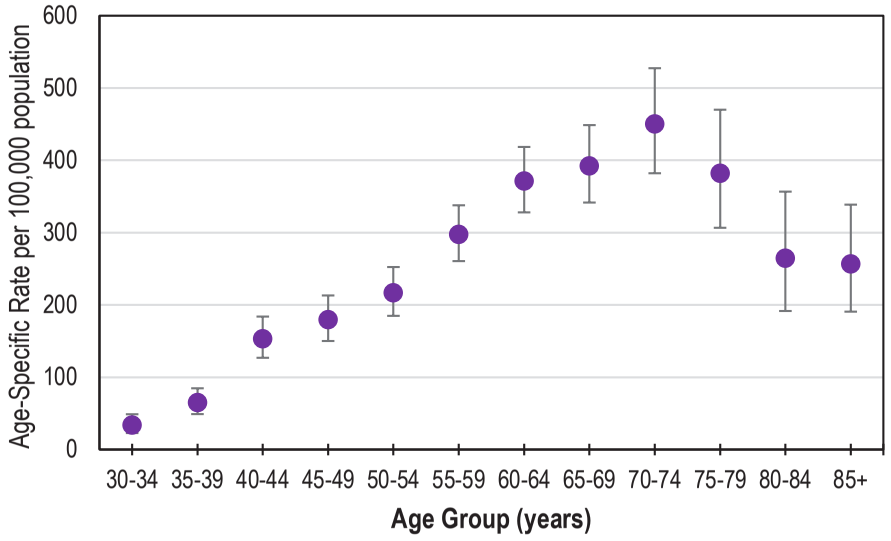


Figure 3.5: Age-Specific Incidence Rate by Race and Age Group Among Females, Breast Cancer, Arkansas, 2015-2019



Figures 3.6A-B: Age-Specific Incidence Rate and 95% CI by Race and Age Group Among Females, Breast Cancer, Arkansas, 2015-2019

3.6A: Black, Females



3.6B: White, Females

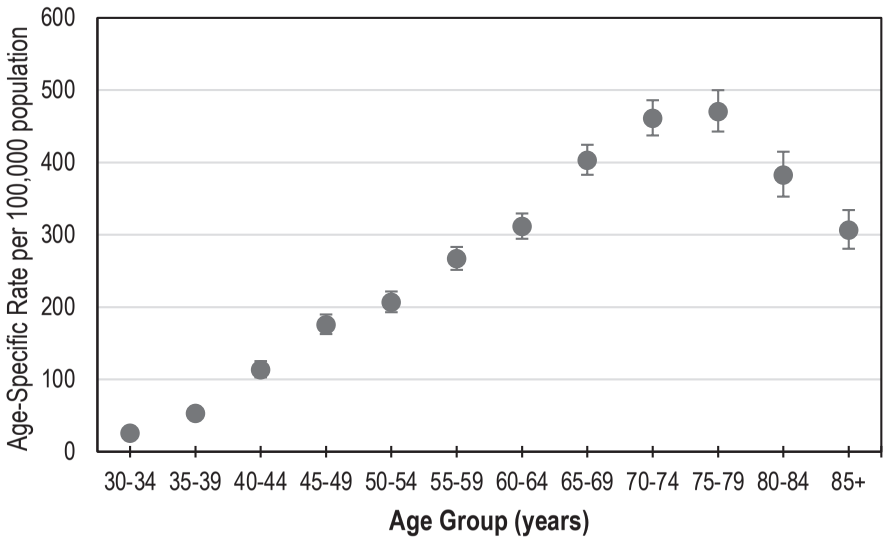


Figure 3.7: Standardized Incidence Ratio (SIR) by County Among Females, Breast Cancer, Arkansas, 2010-2019

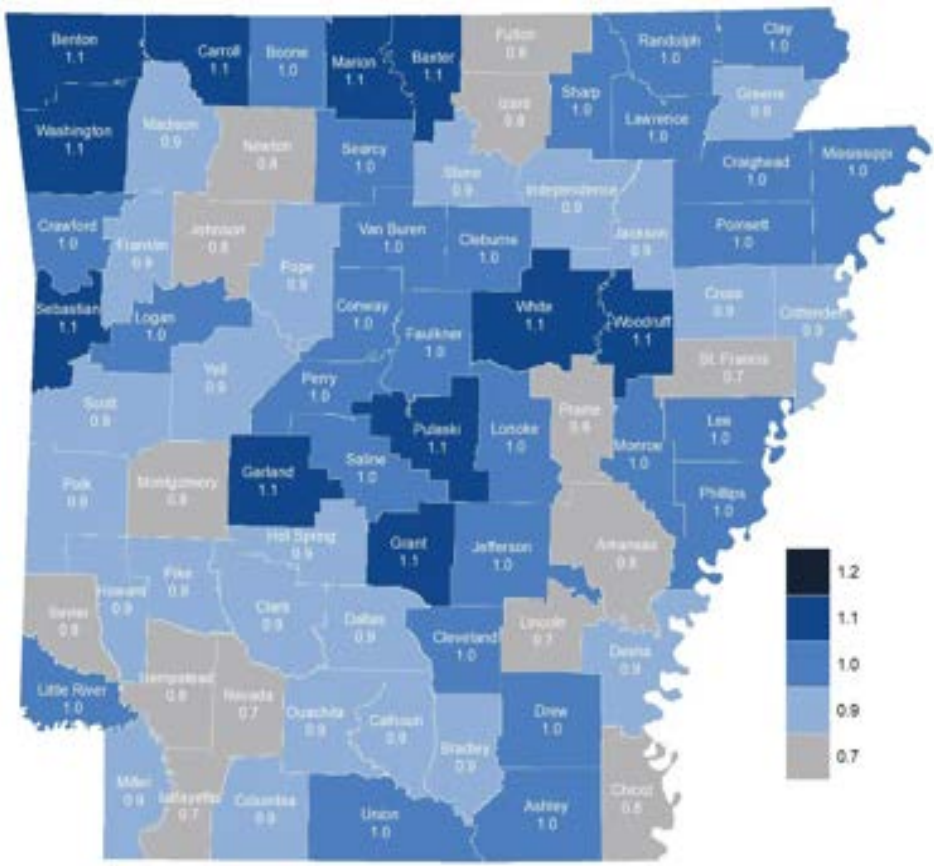
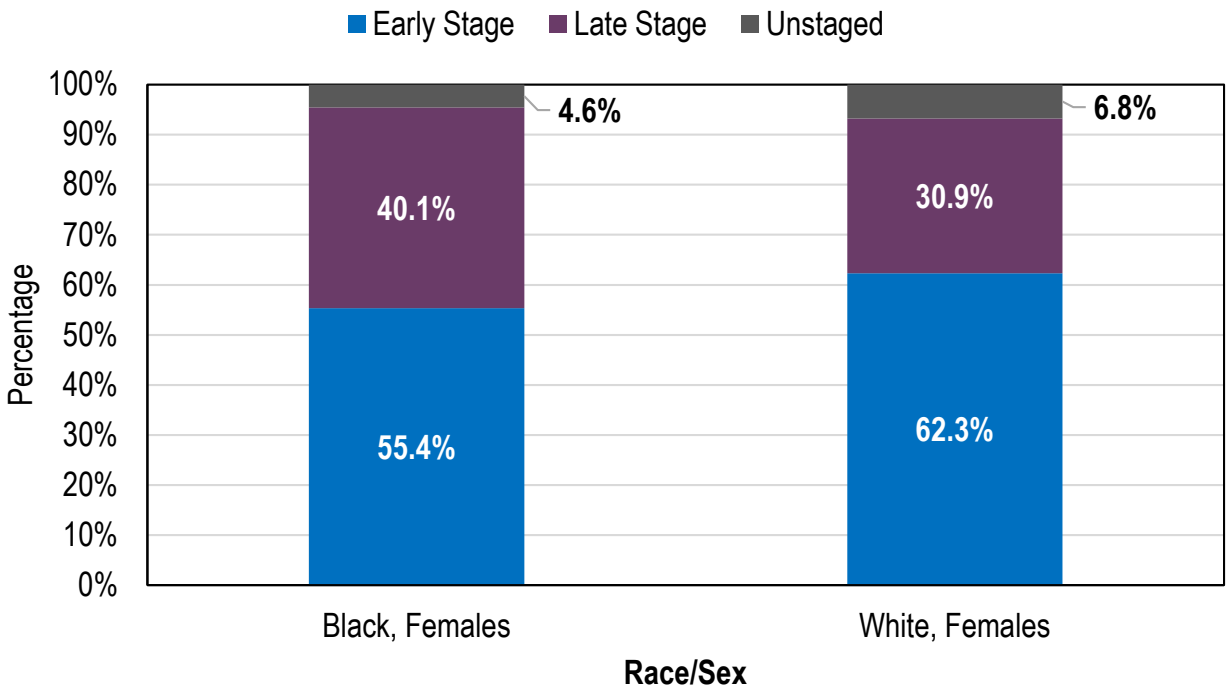


Figure 3.8: Percentage of SEER Summary Stage at Diagnosis by Race Among Females, Breast Cancer, Arkansas, 2015-2019



SURVIVAL: BREAST CANCER

Figure 3.9: 5-Year Relative Survival Percent (%) by Stage at Diagnosis Among Females, Breast Cancer, Arkansas, 2007-2019

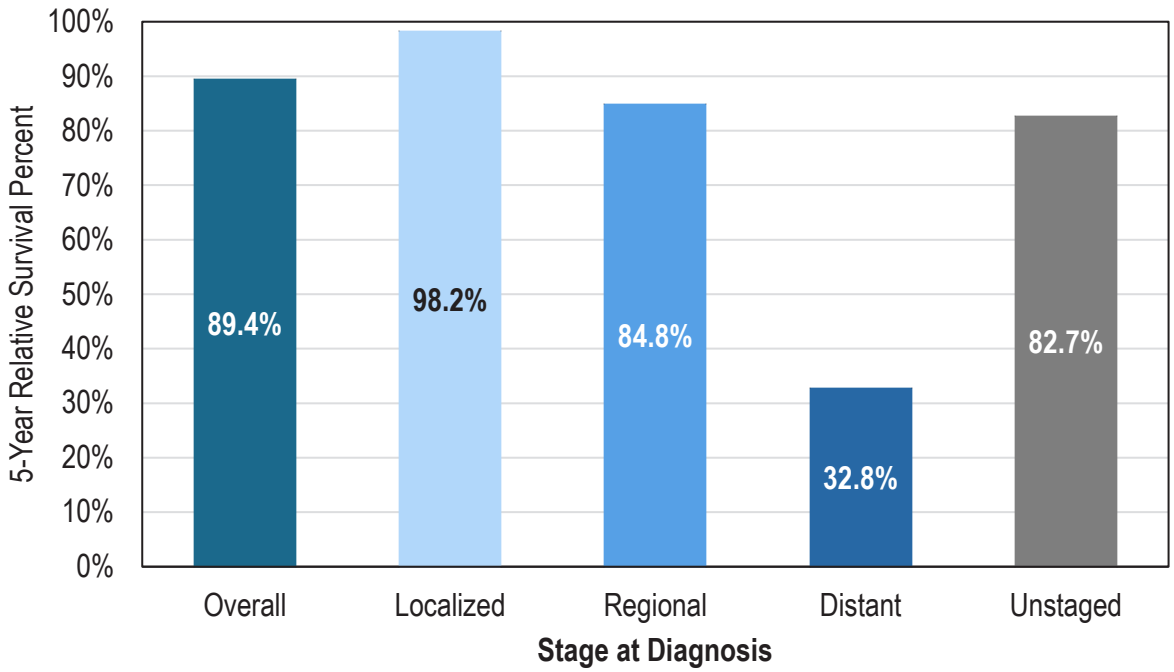


Table 3.1: 5-Year Relative Survival Percent (%) by Stage at Diagnosis and Years after Diagnosis Among Females, Breast Cancer, Arkansas, 2007-2019

	5-Year Relative Survival Percent by Stage at Diagnosis				
Years after Diagnosis	Overall	Localized	Regional	Distant	Unstaged
1	97%	100%	98%	71%	94%
2	95%	100%	95%	57%	90%
3	93%	99%	90%	47%	88%
4	91%	99%	87%	40%	84%
5	89%	98%	85%	33%	83%

Figure 3.10: Age-Adjusted Mortality Rate Trendline Among Females, Breast Cancer, Arkansas, 2005-2019

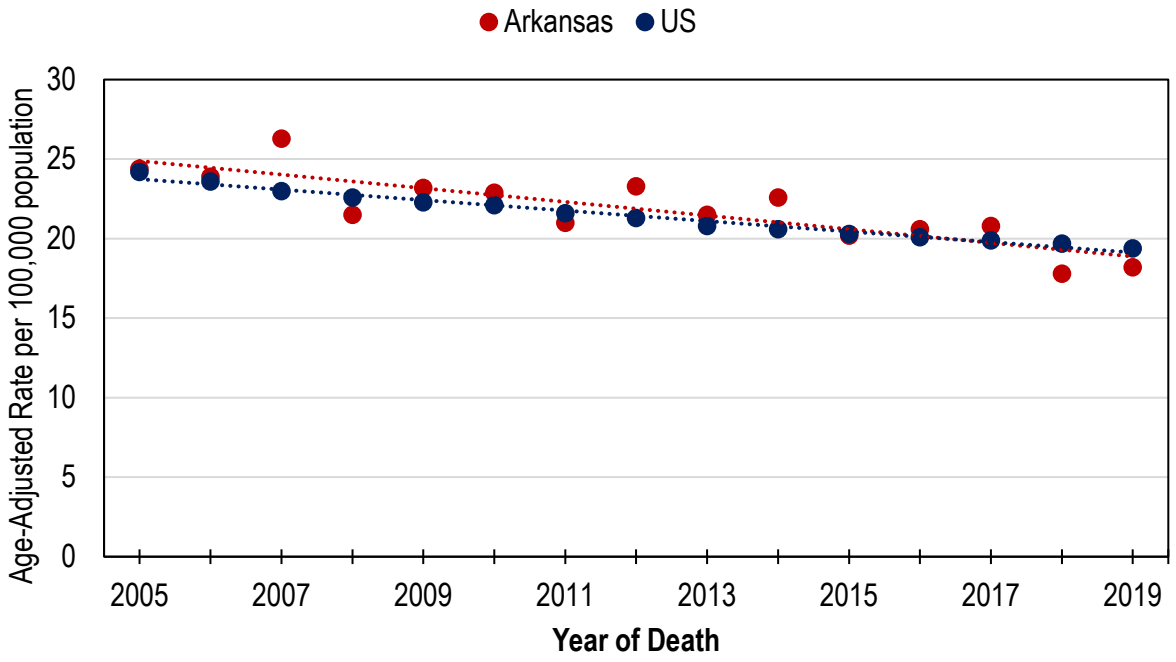
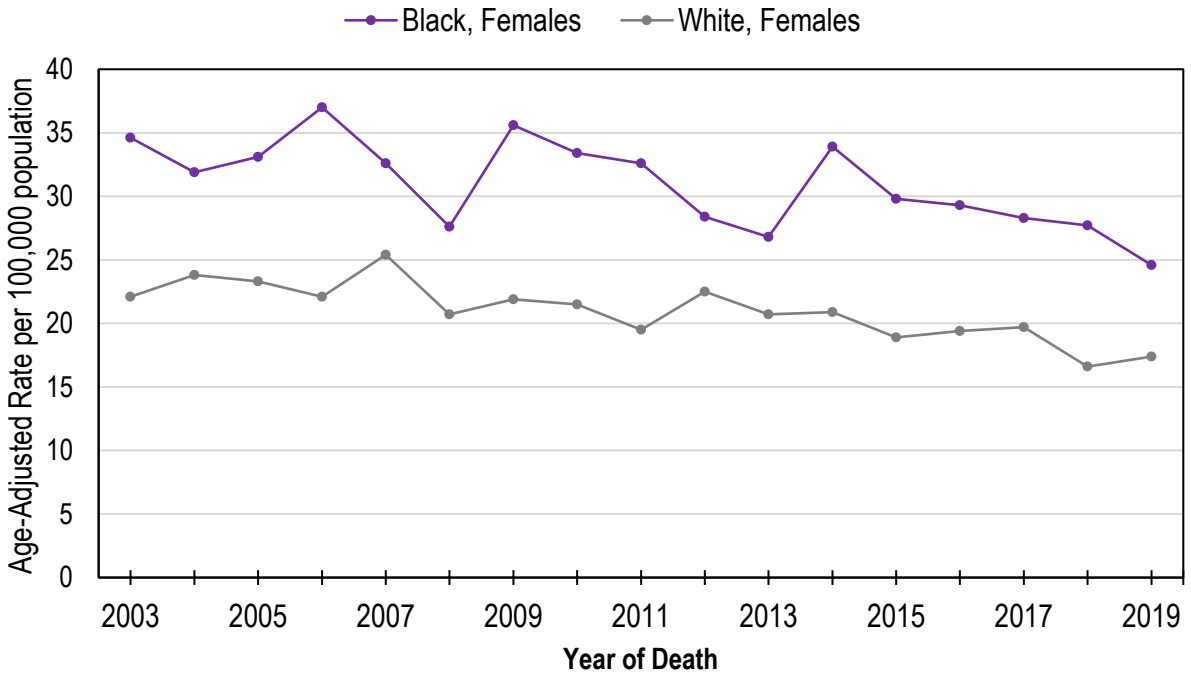
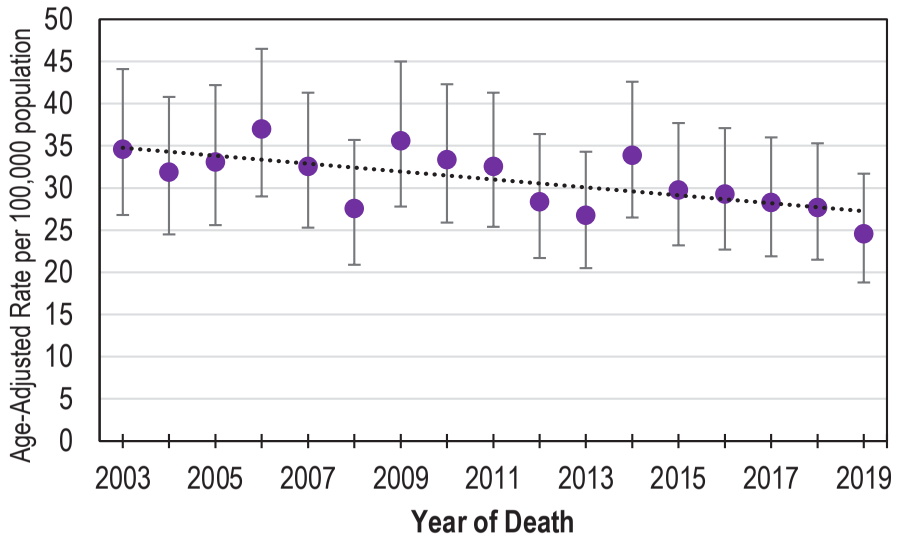


Figure 3.11: Age-Adjusted Mortality Rate Trendline by Race Among Females, Breast Cancer, Arkansas, 2003-2019



Figures 3.12A-B: Age-Adjusted Mortality Rate and 95% CI by Race and Year of Death Among Females, Breast Cancer, Arkansas, 2003-2019

3.12A: Black, Females



3.12B: White, Females

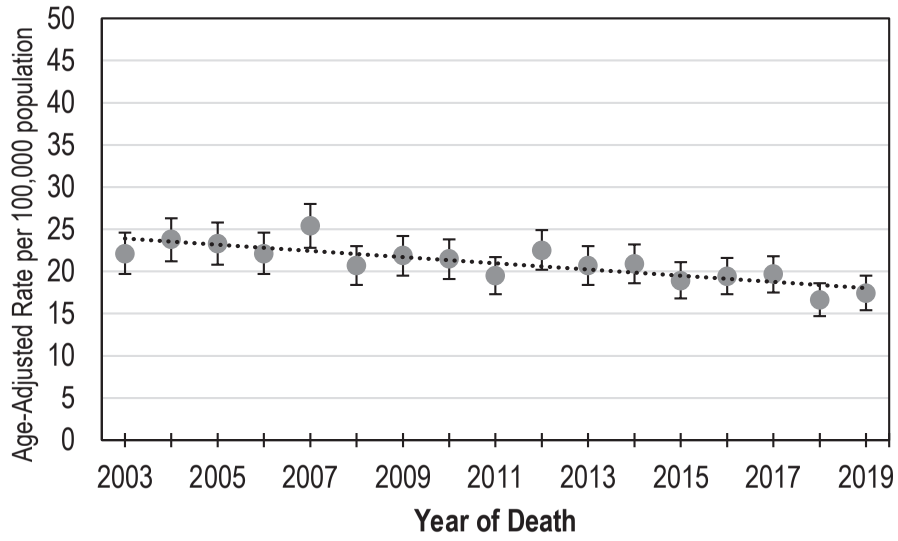


Figure 3.13: Age-Adjusted Mortality Rate and 95% CI by Race Among Females, Breast Cancer, Arkansas, 2015-2019

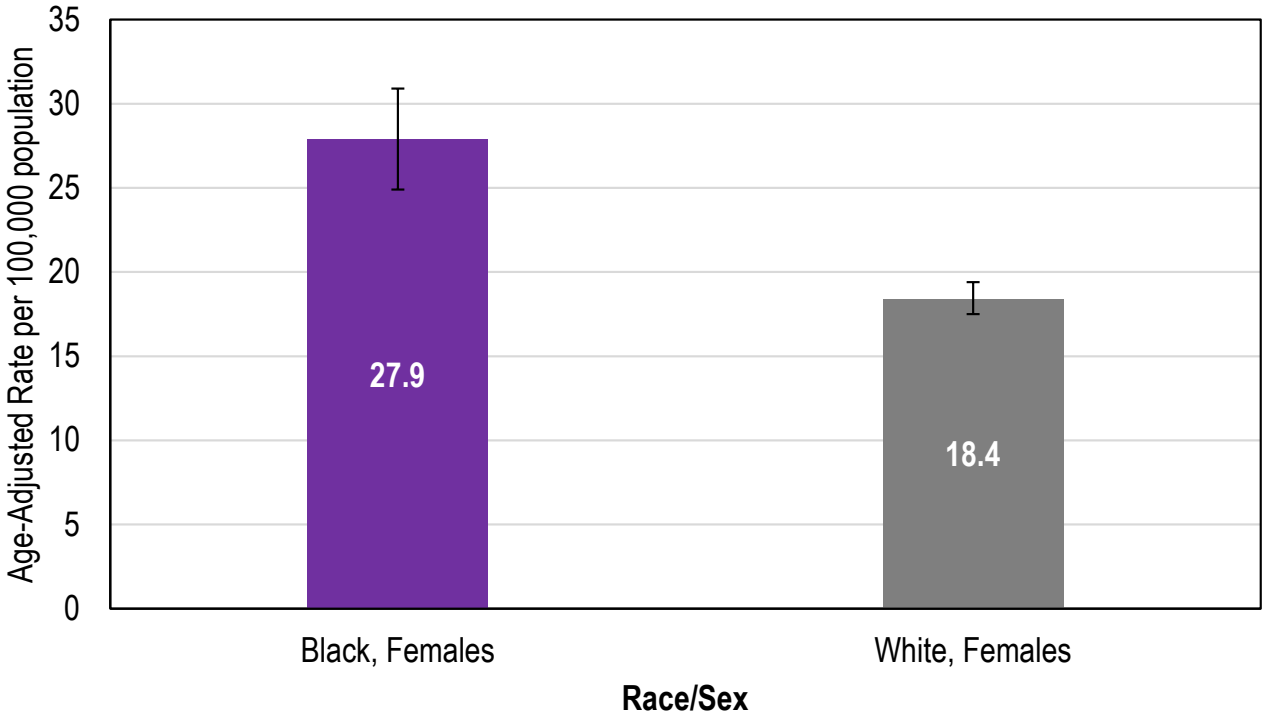
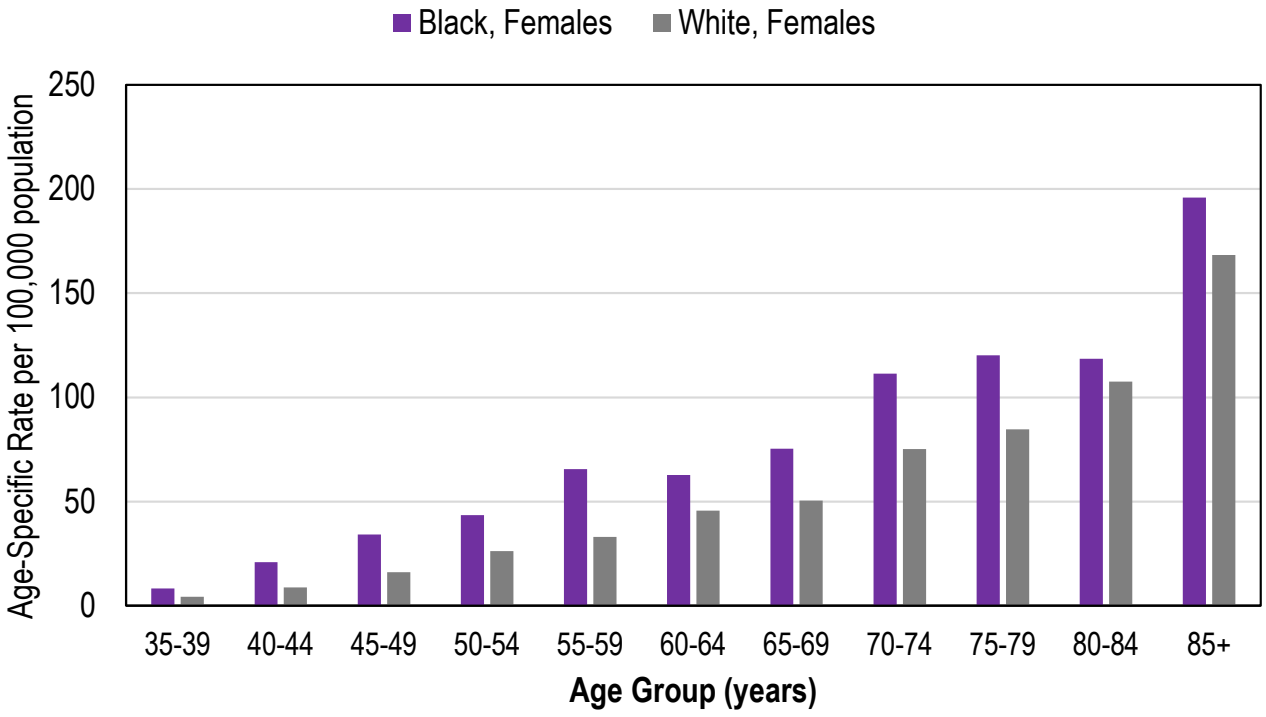
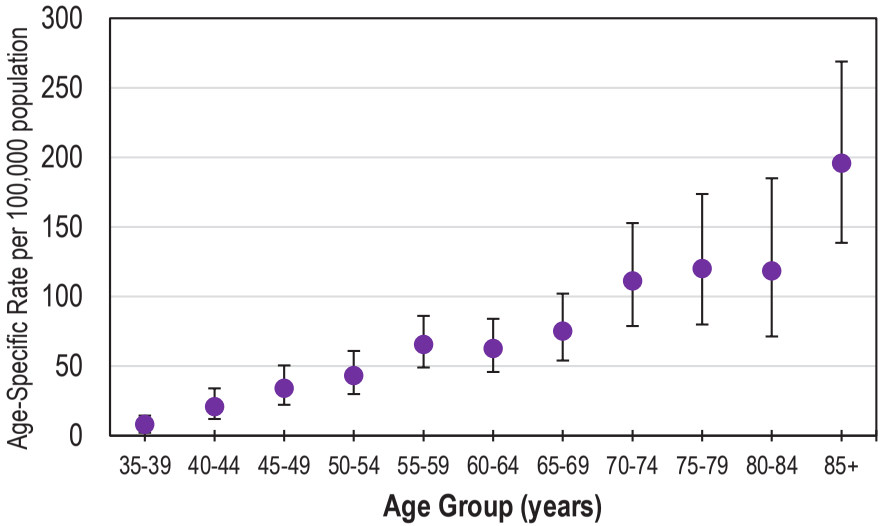


Figure 3.14: Age-Specific Mortality Rate by Race and Age Group Among Females, Breast Cancer, Arkansas, 2015-2019



Figures 3.15A-B: Age-Specific Mortality Rate and 95% CI by Race and Age Group Among Females, Breast Cancer, Arkansas, 2015-2019

3.15A: Black, Females



3.15B: White, Females

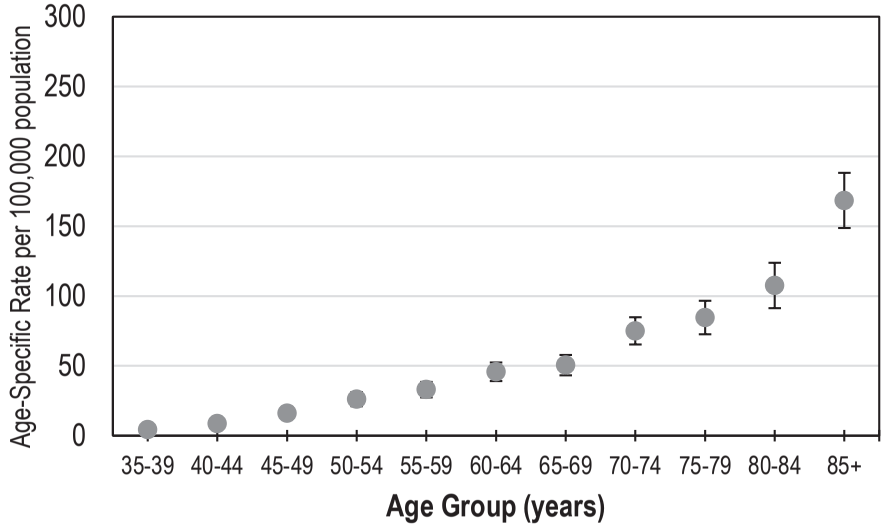
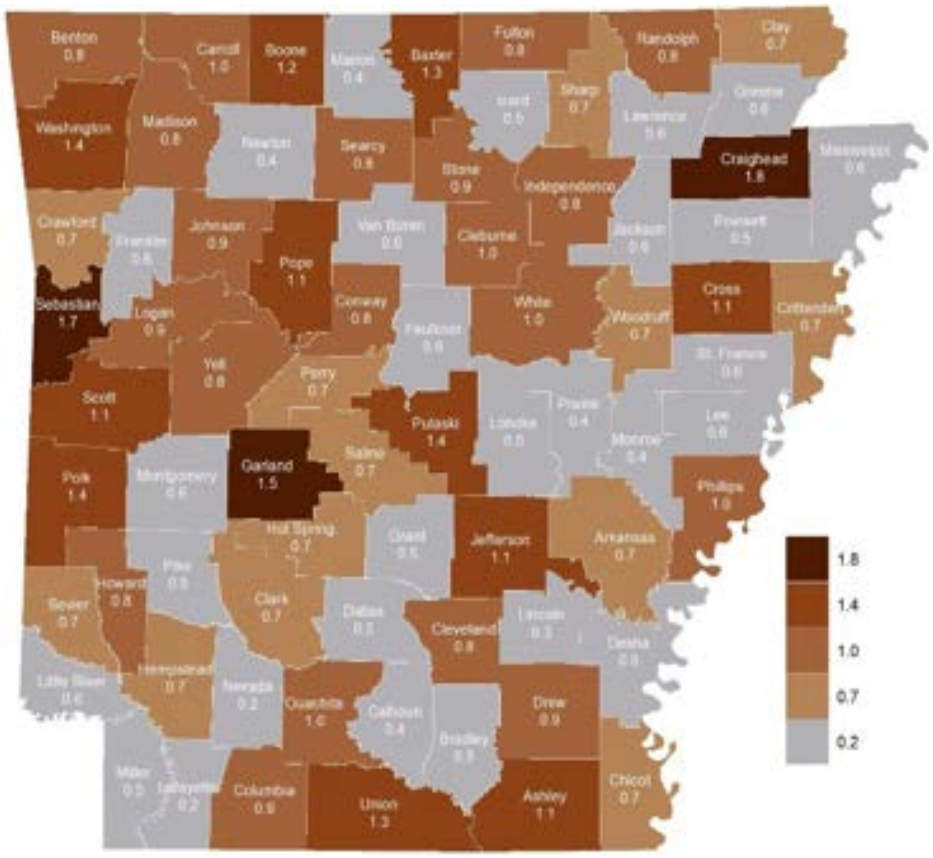


Figure 3.16: Standardized Mortality Ratio (SMR) by County Among Females, Breast Cancer, Arkansas, 2010-2019



ARKANSAS CENTRAL CANCER REGISTRY

Section 4: Colorectal Cancer

Overview

Colorectal, also referred to as colon and rectum, cancer is the third leading cancer-related death in the US.18 However, studies show that some screening tests can help find cancer at an early stage and may decrease the number of deaths from the disease.

These screening tests can be categorized into two (2) types of tests: Stool-based and Visual (structural).[19]

- **Stool-based tests** check the stool (feces) for signs of cancer by detecting hidden blood in the stool or certain abnormal DNA sections that come from cancer or polyps (small clump of cells that form on the lining of the colon), depending on the test. These tests are less invasive and easier to perform than a Visual exam but do need to be done more often and may require a colonoscopy if there are abnormal findings. This includes fecal immunochemical test (FIT), guaiac-based fecal occult blood test (gFOBT), and a multitargeted stool DNA test (Cologuard) with fecal immunochemical testing (MT-sDNA or FIT-DNA or sDNA-FIT).
- **Visual (structural) exams** are performed with either a scope (a tube-like instrument with a light and tiny video camera on the end) inserted through the rectum or an imaging test (x-ray). This includes colonoscopy, computed tomography (CT) colonography, and sigmoidoscopy. Among all colorectal cancer screenings test options, colonoscopies are the gold standard as it looks at the entire rectum and colon and it is possible to remove polyps, where cancer usually starts, and perform biopsies.[20]

As of May 2021, the USPSTF updated its recommendations for individuals to start receiving **screenings at age 45 to 75 years of age** instead of starting at the age of 50. Individuals with certain risk factors may need to start screening even earlier.[21] Similarly, as part of the state's ongoing efforts to reduce colorectal cancer morbidity, the Arkansas General Assembly passed Act 779 in 2021, aligning with USPSTF's recommendation, lowering the age to 45 for colorectal cancer screening.[22] The 2021 Act 779 mandates health insurance companies to cover any follow-up examinations or lab tests related to colorectal cancer screening allowing more accessible and affordable screenings.[22] As rates of early-onset (younger than 50) colorectal cancer increases in the US, colorectal cancer screenings are becoming life-saving measures.[23,24]

Colorectal Cancer Risk Factors

Common risk factors that can increase your risk for colorectal cancer include[25]:

- Older age
- Inflammatory bowel disease such as Crohn's disease or ulcerative colitis
- Personal or family history of colorectal cancer or colorectal polyps
- A genetic syndrome such as familial adenomatous polyposis (FAP) or hereditary non-polyposis colorectal cancer (Lynch syndrome)
- Lack of regular physical activity
- A diet low in fruit and vegetables
- A low-fiber and high-fat diet, or a diet high in processed meats
- Overweight and obesity
- Alcohol consumption
- Tobacco use

For an overview of the benefits and limits for each colorectal cancer screening, visit The American Cancer Society (ACS): **Colorectal Cancer Screening Tests**. Consult your medical provider for the best option for you.

Key Findings

Colorectal Cancer Incidence

- The incidence rate of colorectal cancer in Arkansas and the US has decreased over time. However, Arkansas had a higher overall rate of colorectal cancer from 2008-2019 compared to the US (**Figure 4.1**).
- Between 2003 and 2019, the colorectal cancer incidence rate was generally higher among Black females than White females and among Black males than White males. In 2019, the colorectal cancer incidence rate for the following groups were: 55.0 per 100,000 population for Black females, 36.7 per 100,000 population for White females, 69.6 per 100,000 population for Black males, and 49.6 per 100,000 population for White males (**Figure 4.2, Figures 4.3A-D**).
- For 2015-2019, Black females and males had a higher colorectal cancer incidence rate than Whites females and males, respectively (**Figure 4.4**).
- Black males had the highest colorectal cancer age-specific incidence rate for most age groups followed by Black females (**Figure 4.5, Figures 4.6A-D**).
- For 2010-2019, Arkansas counties that had observed the highest excess of colorectal cancer cases than expected were Lawrence and Cross (**Figure 4.7**).
- Across all groups for 2015-2019, more than 50% of colorectal cancer cases were diagnosed at a late-stage. Black females were slightly more likely (59.8%) to be diagnosed at a later stage for colorectal cancer than White females (57.7%). White males were slightly more likely (60.9%) to be diagnosed with colorectal cancer at a later stage than Black males (60.2%) (**Figure 4.8**).

Colorectal Cancer Survival

- Although the overall survival percent for 2007-2019 is 63.5%, the 5-year relative survival percent is higher (88.4%) when diagnosed early (**Figure 4.9, Table 4.1**).

Colorectal Cancer Mortality

- The colorectal cancer mortality rate has decreased over time in Arkansas and the US from 2005-2019. However, Arkansas colorectal cancer mortality trendline was higher than the US. In 2019, the colorectal cancer mortality rate in Arkansas was 16.0 deaths per 100,000 population compared to the US rate of 13.2 deaths per 100,000 population (**Figure 4.10**).
- For 2003 and 2019, mortality rate for colorectal cancer in Arkansas decreased for all race and sex populations. Black females and male had a higher rate of colorectal cancer mortality than their White counterparts. In 2019, the mortality rate for colorectal cancer mortality rates by sex and race were: 20.8 per 100,000 population for Black females, 13.1 per 100,000 population for White females, 28.7 per 100,000 population for Black males, and 18.2 per 100,000 population for White males (**Figure 4.11, Figures 4.12A-D**).
- Black males had the highest mortality rate for colorectal cancer while White females had the lowest (**Figure 4.13**).
- For 2015-2019, colorectal cancer age-specific mortality rates were higher among Black females and males than Whites for most age groupings. Black females had the highest age-specific rate of colorectal cancer deaths for ages groups '80-84' and '85+' (**Figure 4.14, Figures 4.15A-D**).
- Arkansas counties with more colorectal cancer deaths than expected were Craighead, Sebastian, and Union (**Figure 4.16**).

Figure 4.1: Age-Adjusted Incidence Rate Trendline, Colorectal Cancer, US and Arkansas, 2005-2019

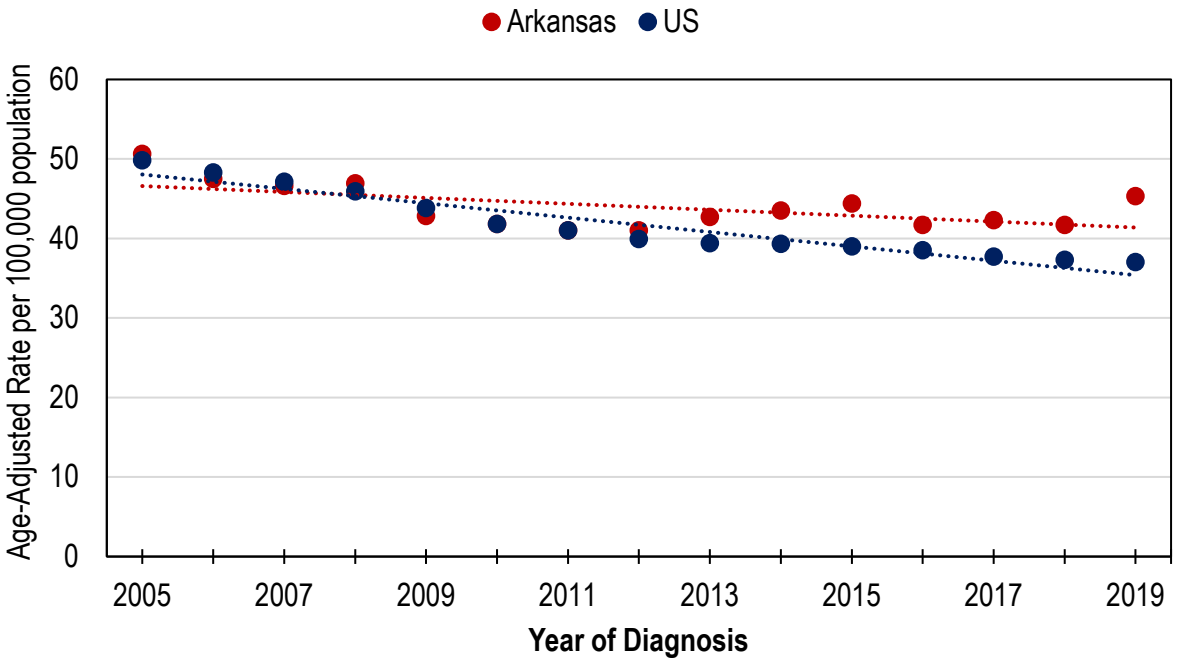
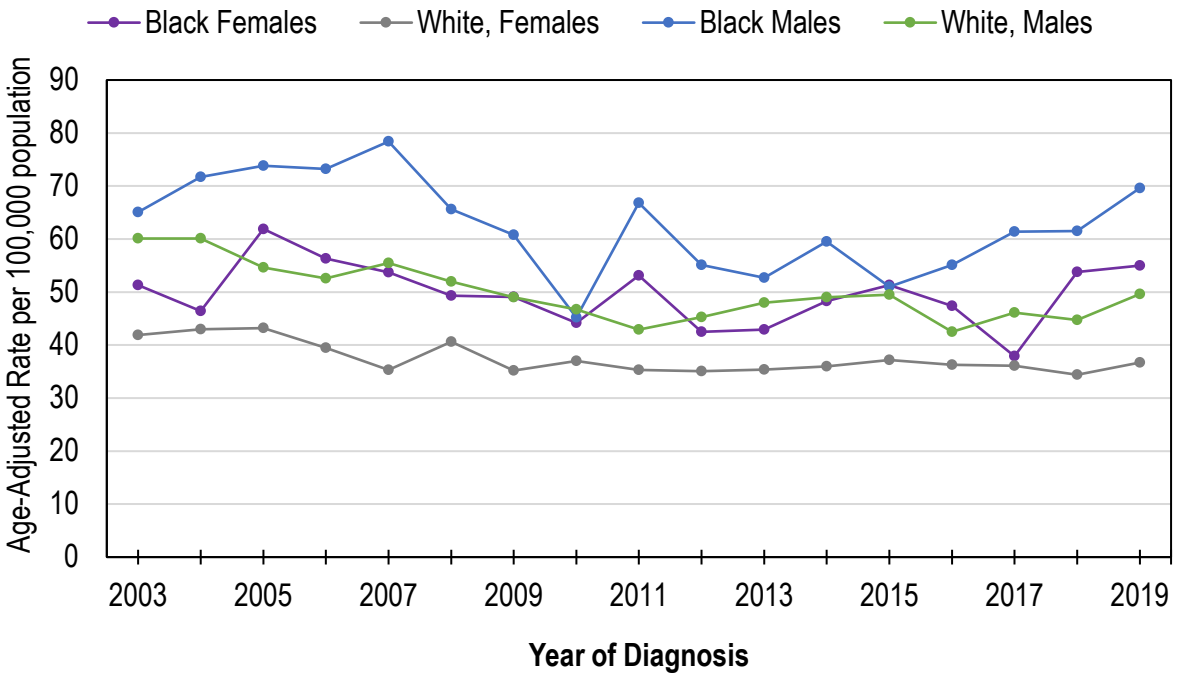
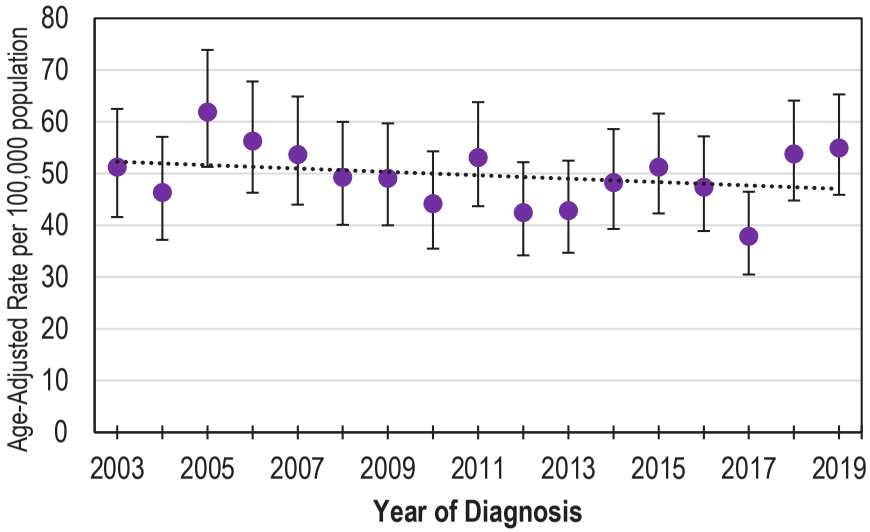


Figure 4.2: Age-Adjusted Incidence Rate Trendline by Race, Sex, and Year of Diagnosis, Colorectal Cancer, Arkansas, 2003-2019

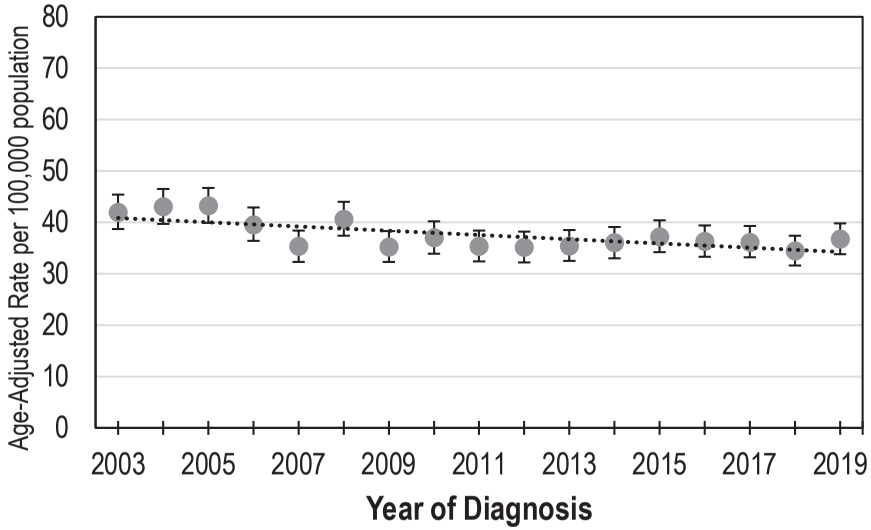


Figures 4.3A-D: Age-Adjusted Incidence Rate and 95% CI by Race, Sex, and Year of Diagnosis, Colorectal Cancer, Arkansas, 2003-2019

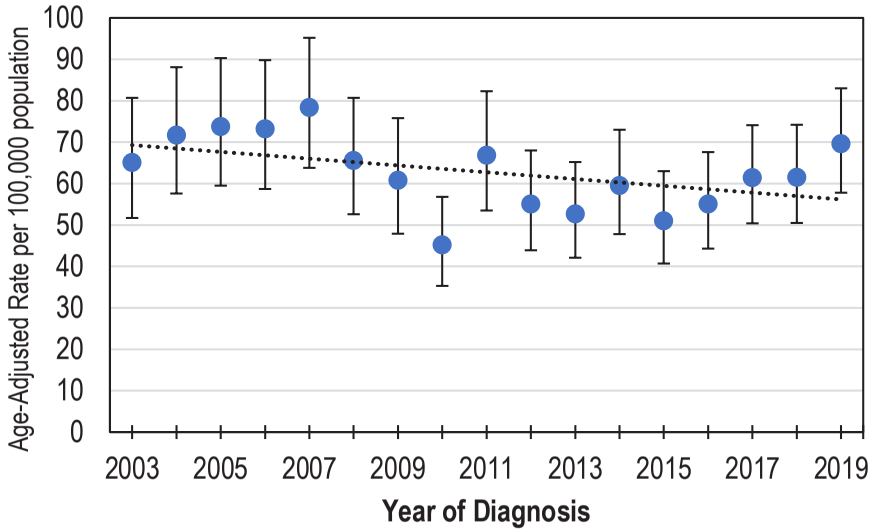
4.3A: Black, Females



4.3B: White, Females



4.3C: Black, Males



4.3D: White, Males

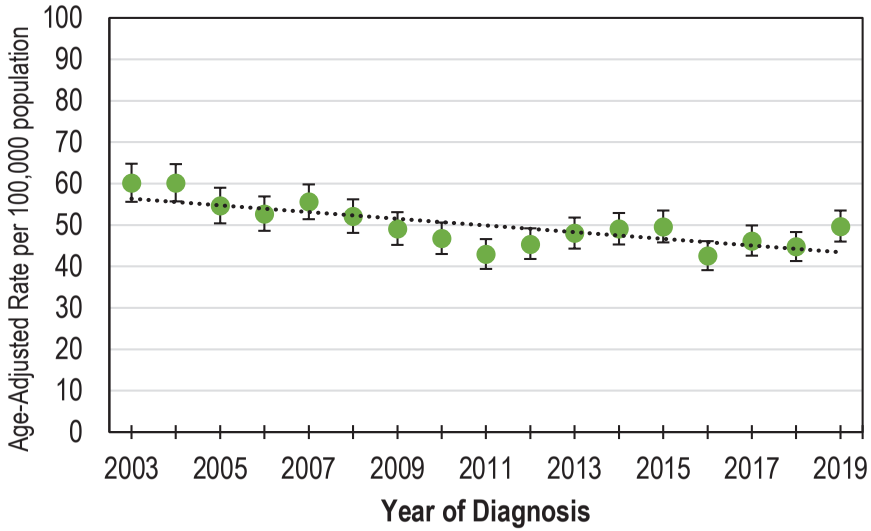


Figure 4.4: Age-Adjusted Incidence Rate and 95% CI by Race and Sex, Colorectal Cancer, Arkansas, 2015-2019

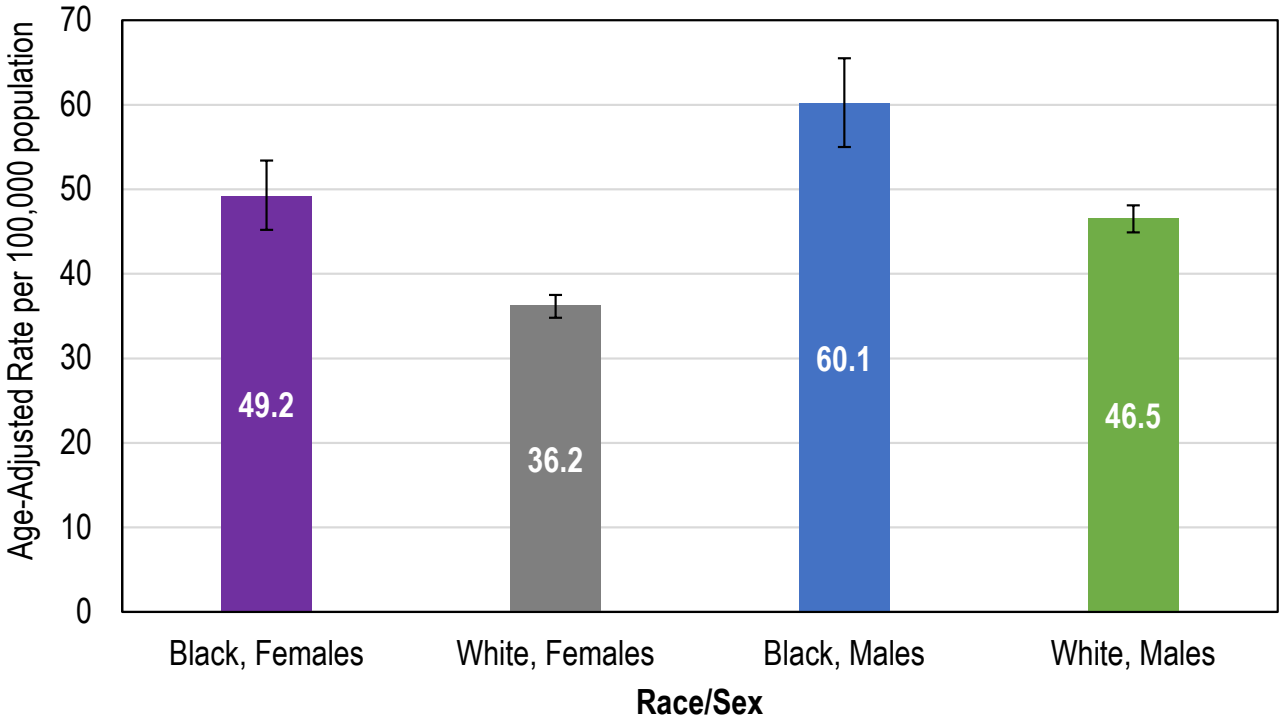
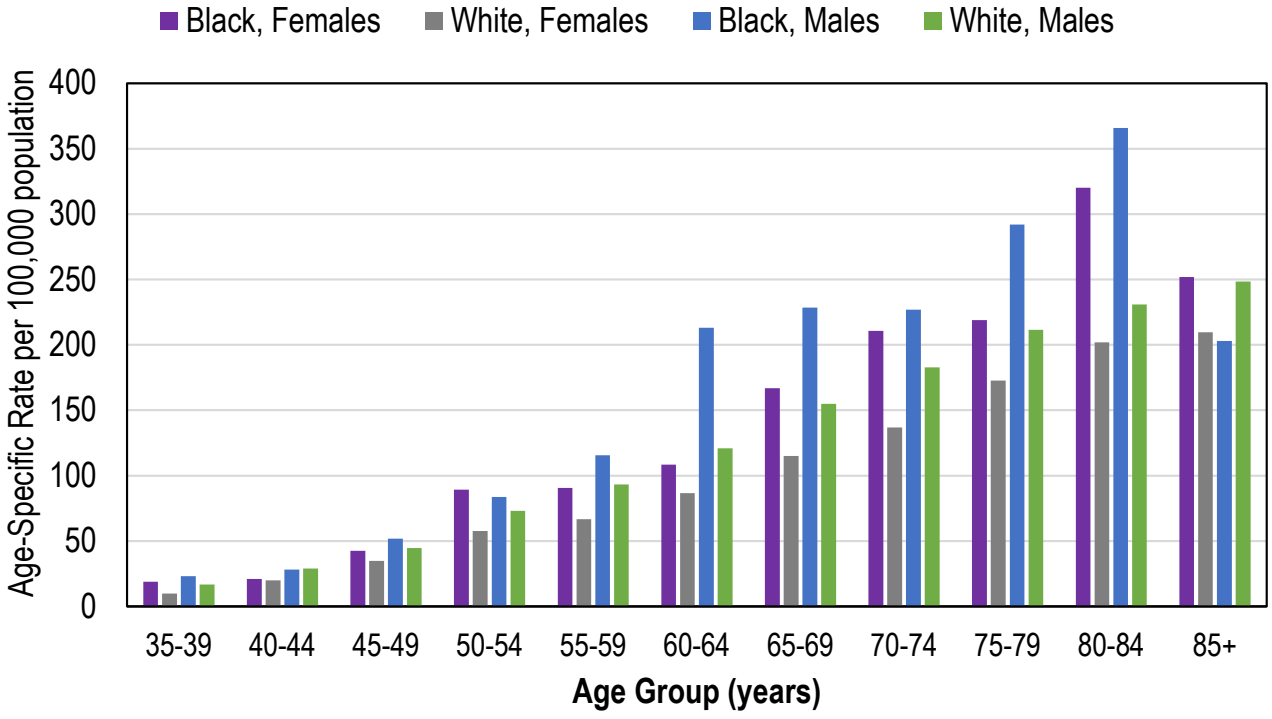
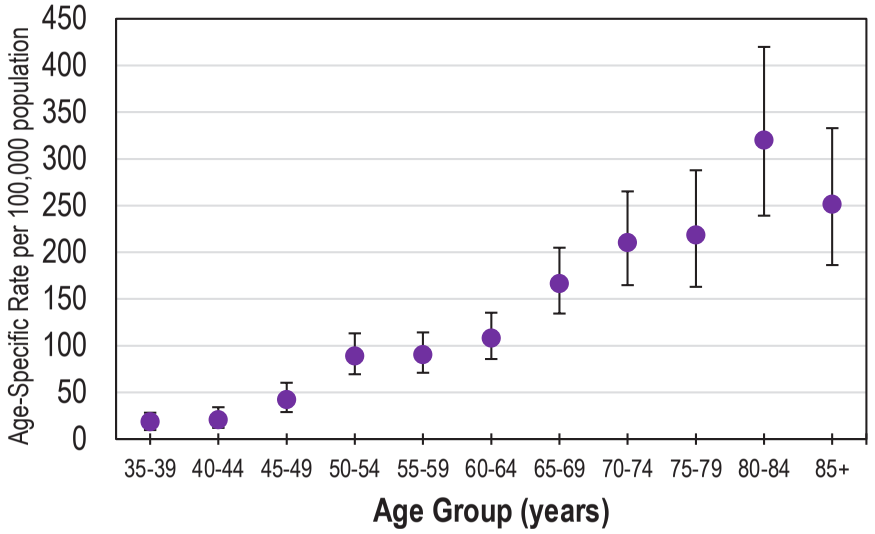


Figure 4.5: Age-Specific Incidence Rate by Race, Sex, and Age Group, Colorectal Cancer, Arkansas, 2015-2019

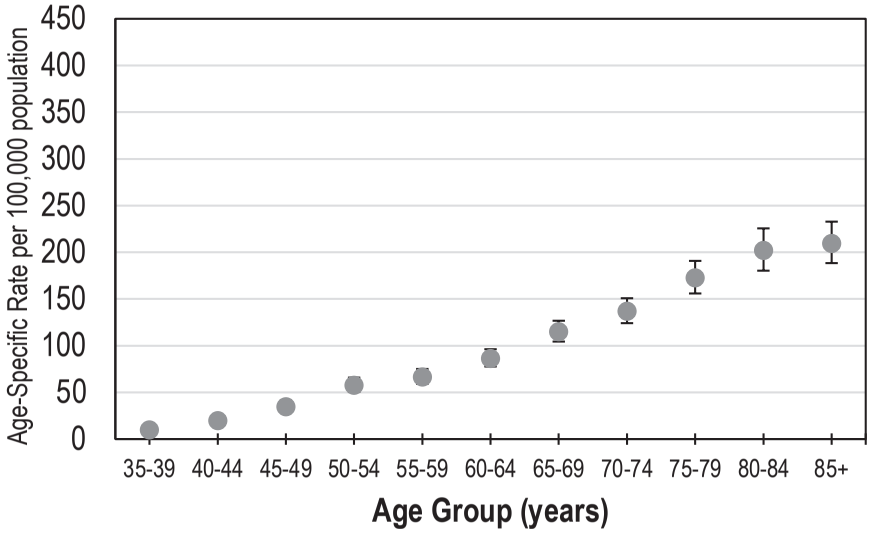


Figures 4.6A-D: Age-Specific Incidence Rate and 95% CI by Race, Sex, and Age Group, Colorectal Cancer, Arkansas, 2015-2019

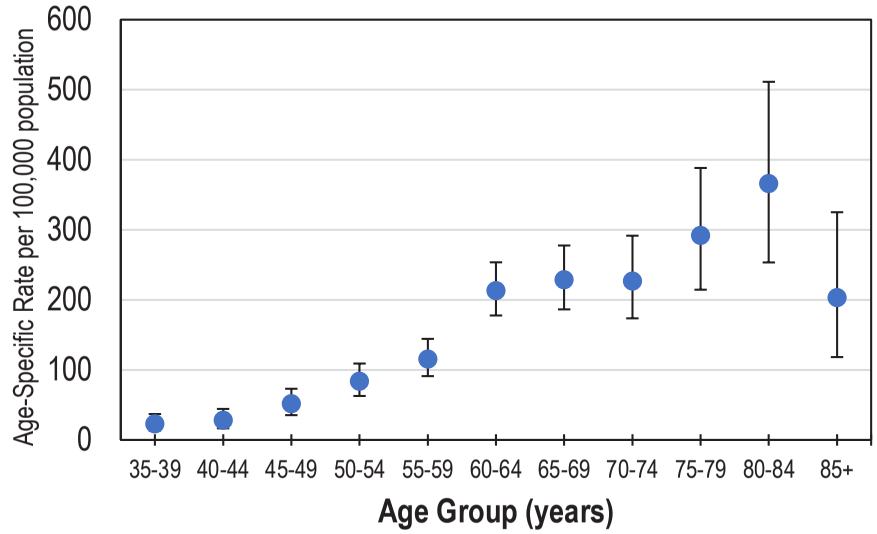
4.6A: Black, Females



4.6B: White, Females



4.6C: Black, Males



4.6D: White, Males

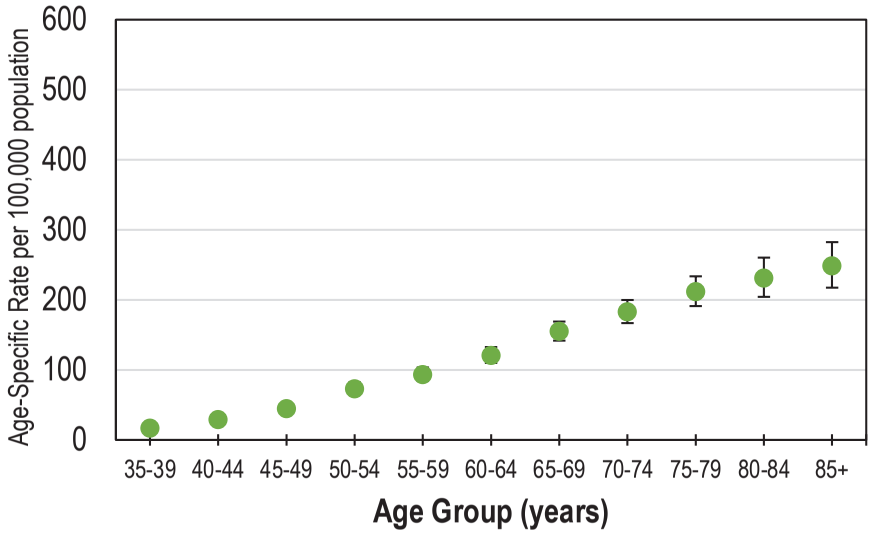


Figure 4.7: Standardized Incidence Ratio (SIR) by County, Colorectal Cancer, Arkansas, 2010-2019

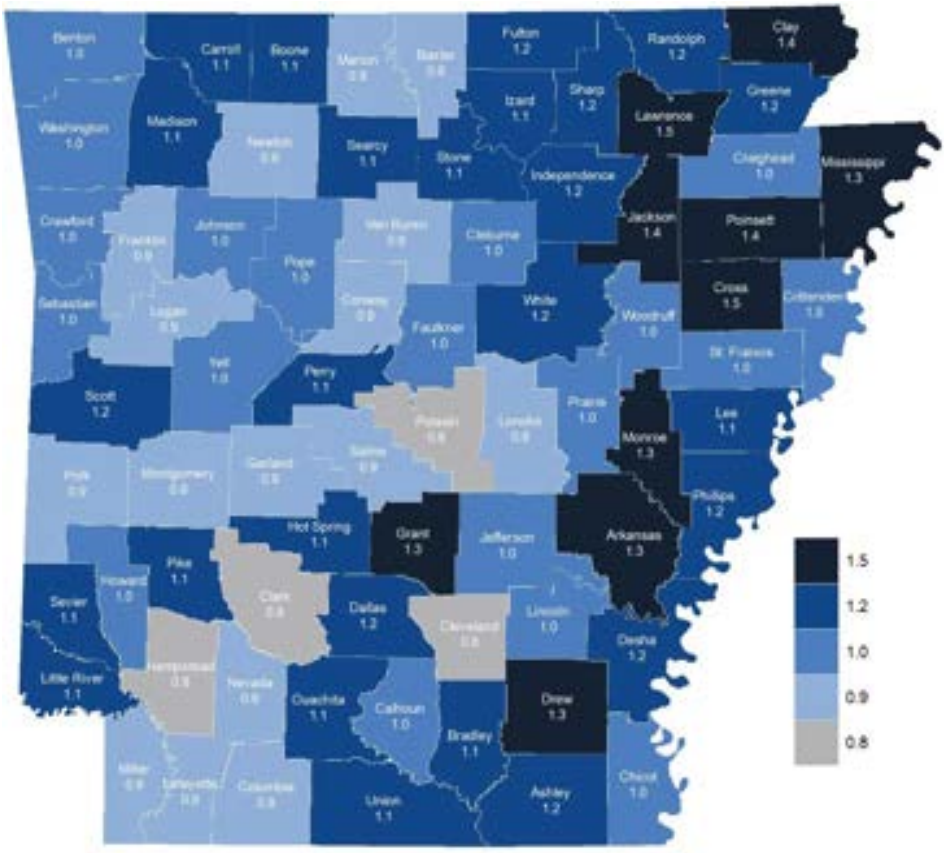


Figure 4.8: Percentage of SEER Summary Stage at Diagnosis by Race and Sex, Colorectal Cancer, Arkansas, 2015-2019

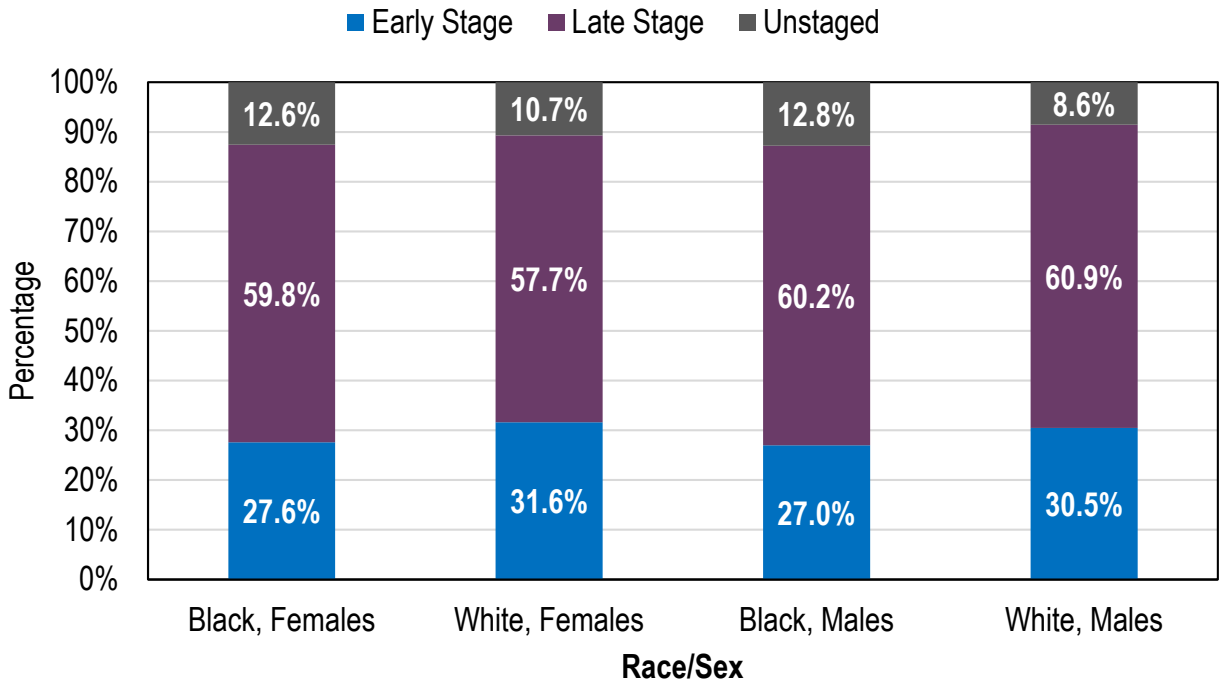


Figure 4.9: 5-Year Relative Survival Percent (%) by Stage at Diagnosis, Colorectal Cancer, Arkansas, 2007-2019

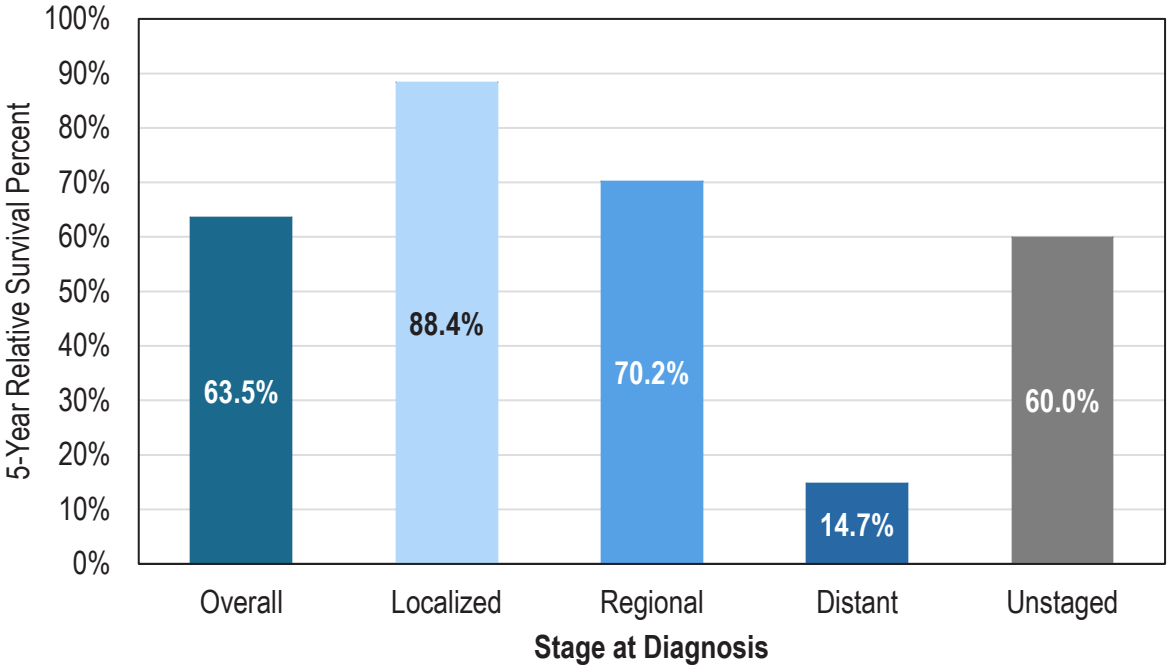


Table 4.1: 5-Year Relative Survival Percent (%) by Stage at Diagnosis and Years after Diagnosis, Colorectal Cancer, Arkansas, 2007-2019

	Relative Survival Percent by Stage at Diagnosis				
Years after Diagnosis	Overall	Localized	Regional	Distant	Unstaged
1	83%	94%	89%	56%	79%
2	75%	93%	83%	37%	72%
3	70%	91%	78%	25%	66%
4	66%	90%	74%	19%	63%
5	64%	88%	70%	15%	60%

Figure 4.10: Age-Adjusted Mortality Rate Trendline, Colorectal Cancer, US and Arkansas, 2005-2019

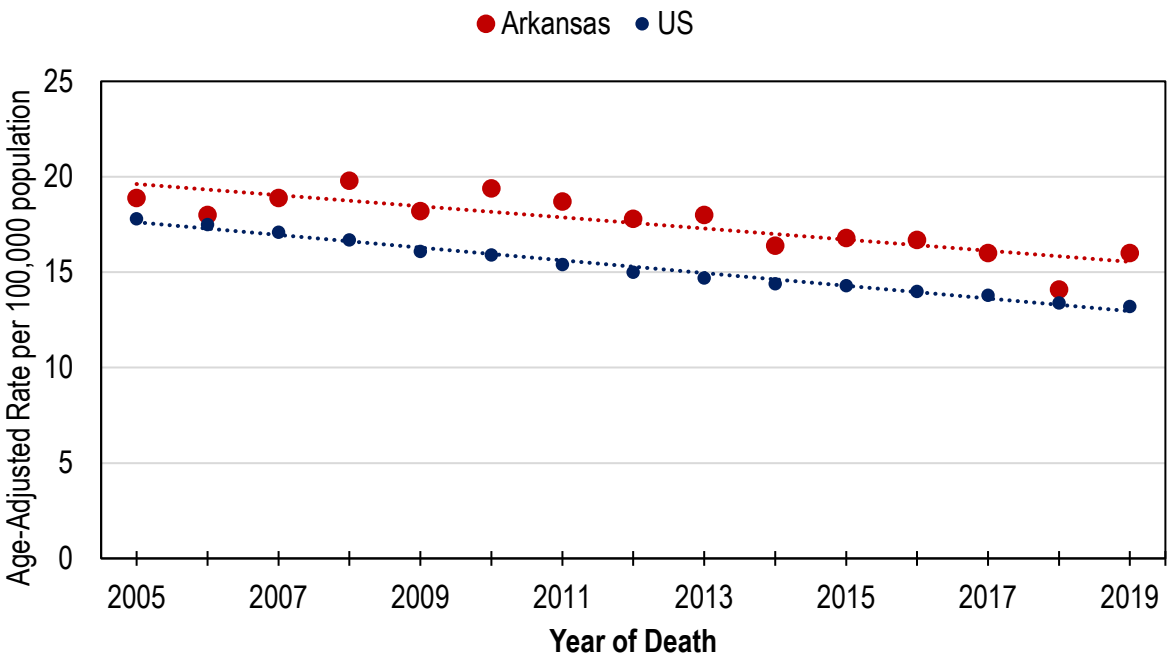
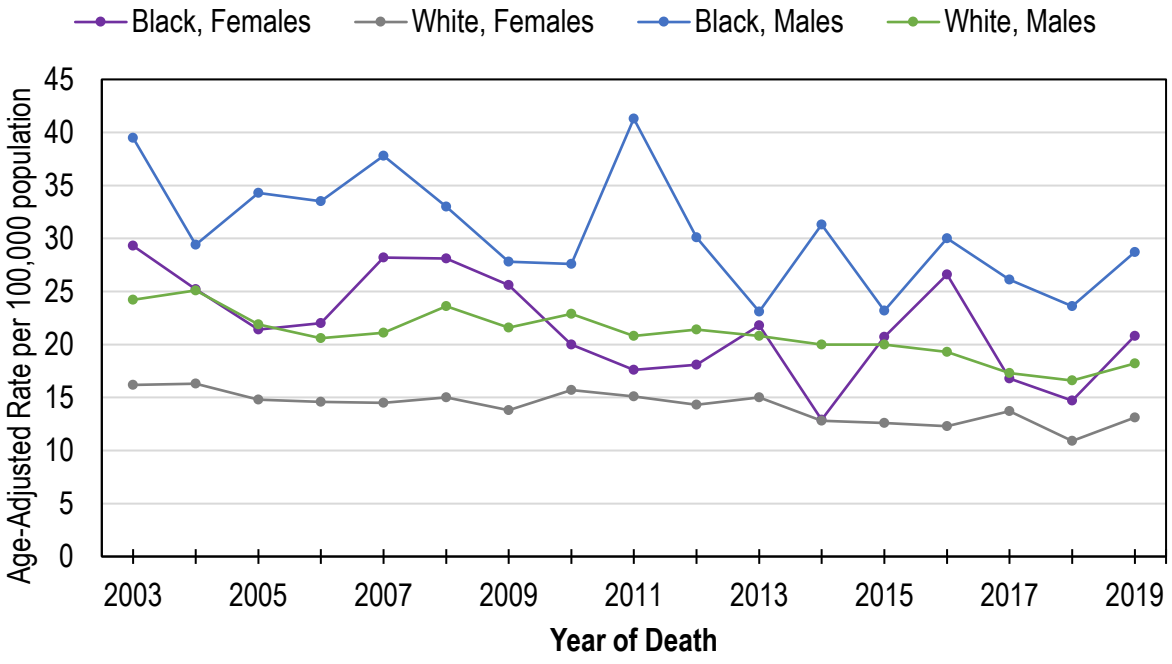
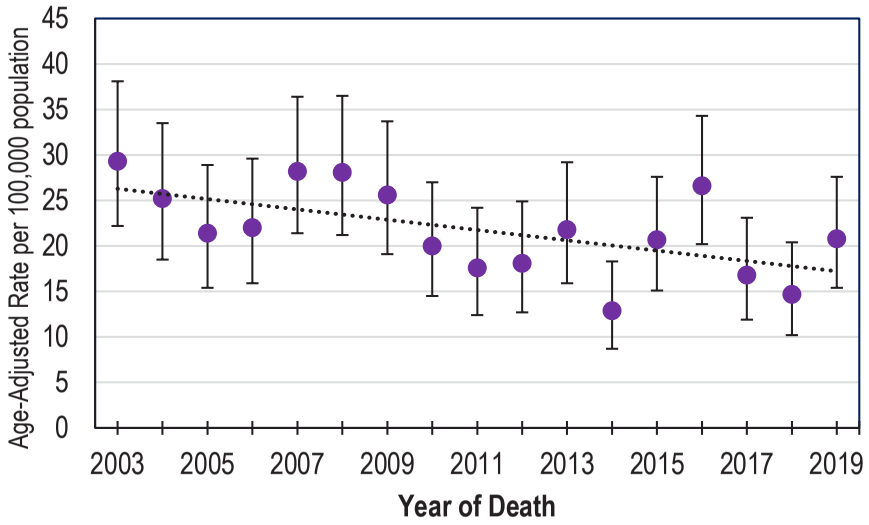


Figure 4.11: Age-Adjusted Mortality Rate Trendline by Race, Sex, and Year of Death, Colorectal Cancer, Arkansas, 2003-2019

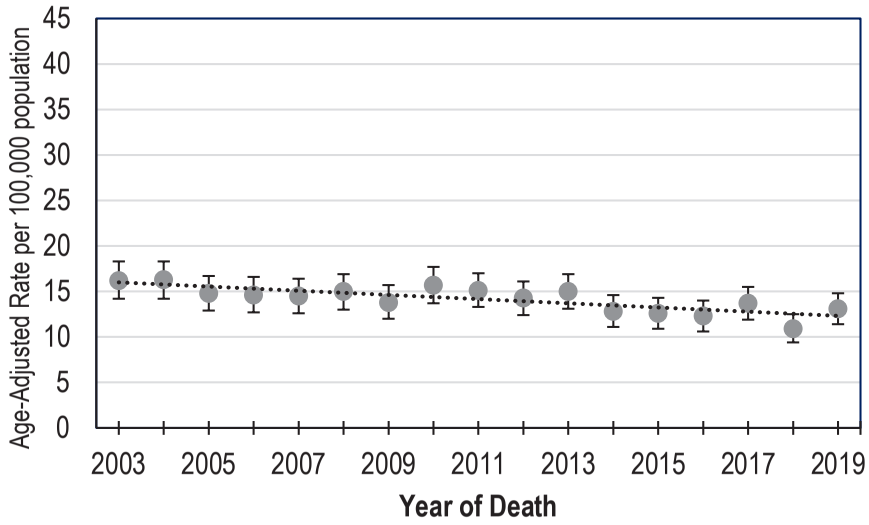


Figures 4.12A-D: Age-Adjusted Mortality Rate and 95% CI by Race, Sex, and Year of Death, Colorectal Cancer, Arkansas, 2003-2019

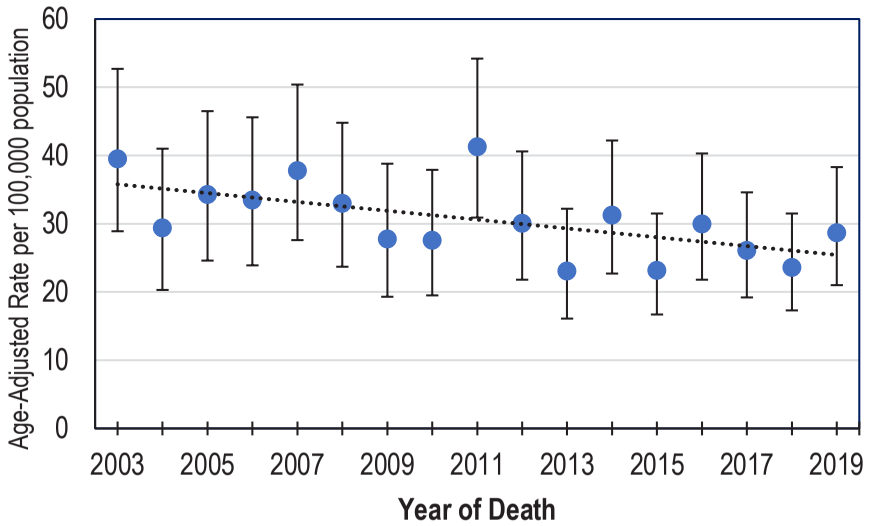
4.12A: Black, Females



4.12B: White, Females



4.12C: Black, Males



4.12D: White, Males

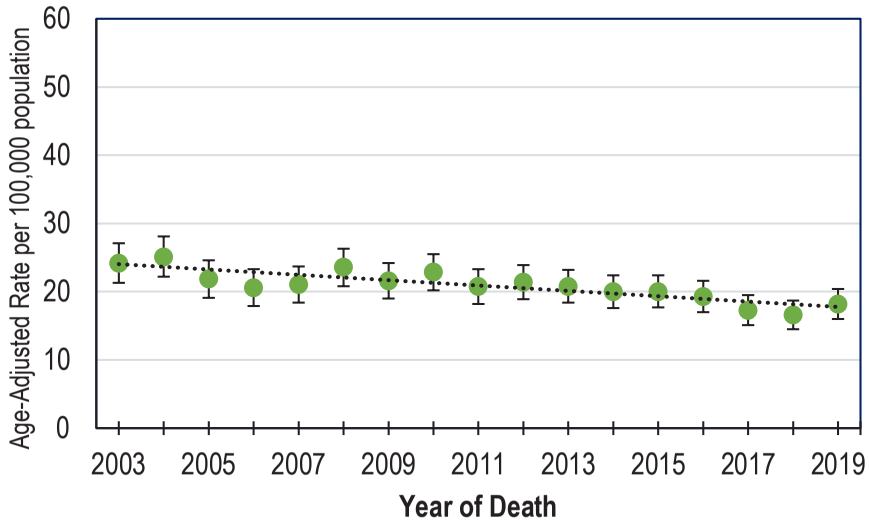


Figure 4.13: Age-Adjusted Mortality Rate and 95% CI by Race and Sex, Colorectal Cancer, Arkansas, 2015-2019

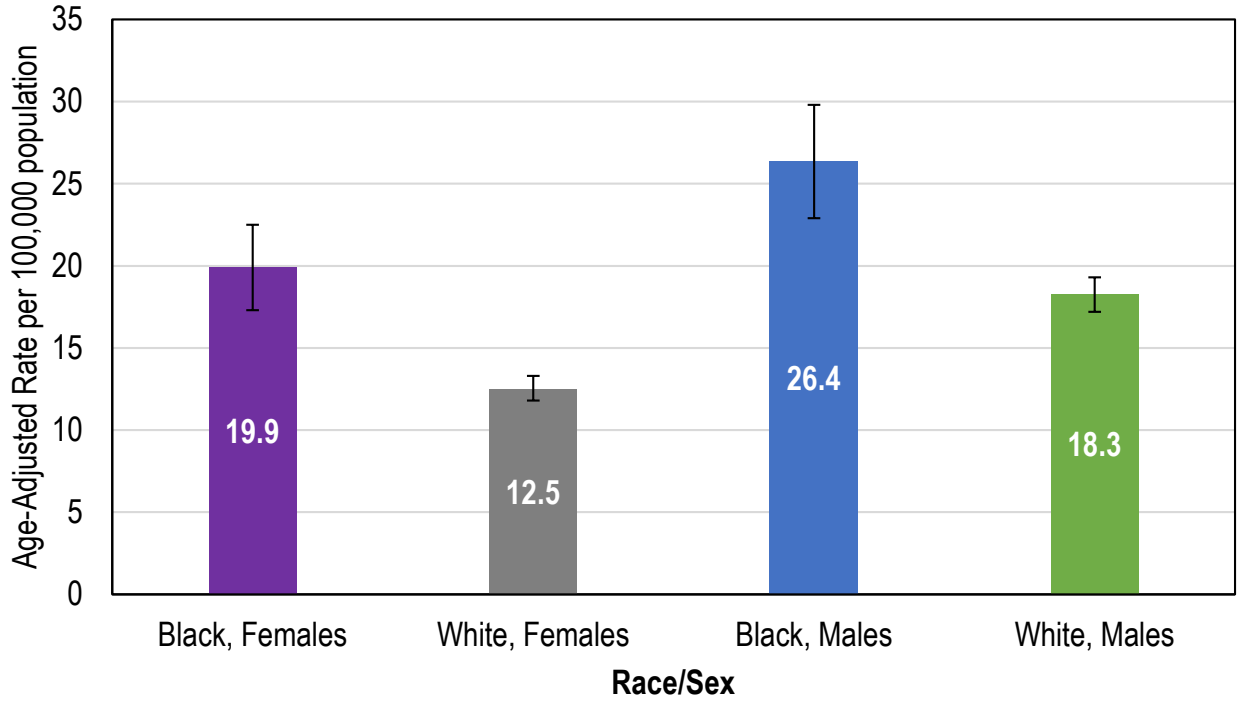
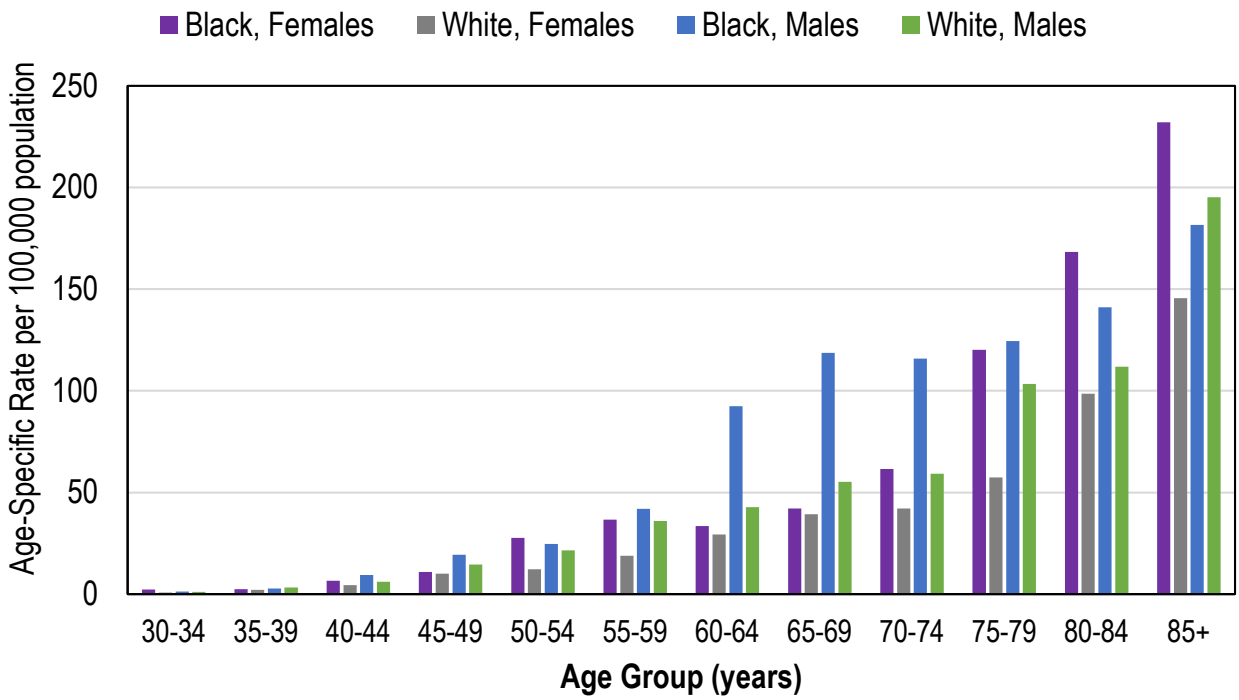
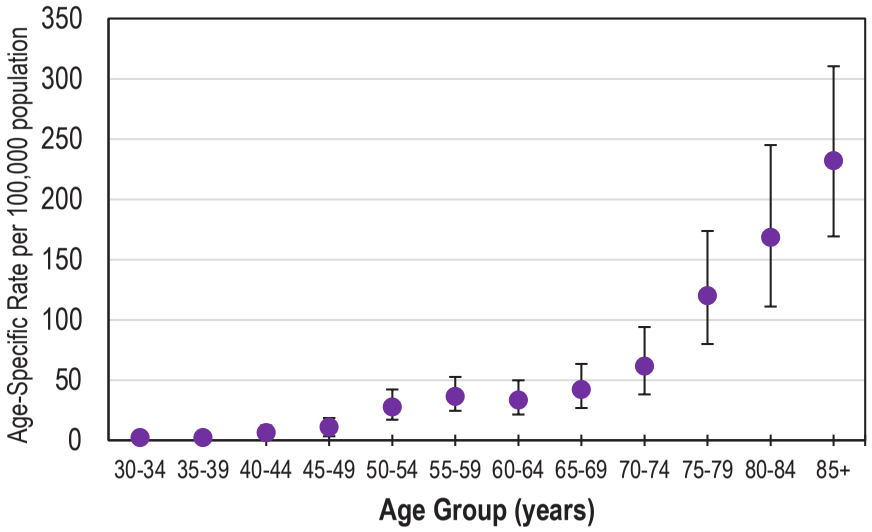


Figure 4.14: Age-Specific Mortality Rate by Race, Sex, and Age Group, Colorectal Cancer, Arkansas, 2015-2019

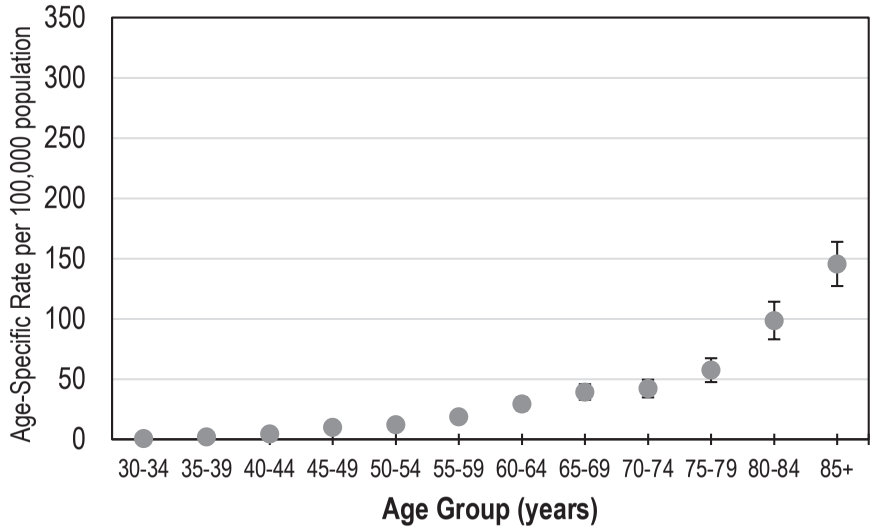


Figures 4.15A-D: Age-Specific Mortality Rate and 95% CI by Race, Sex, and Age Group, Colorectal Cancer, Arkansas, 2015-2019

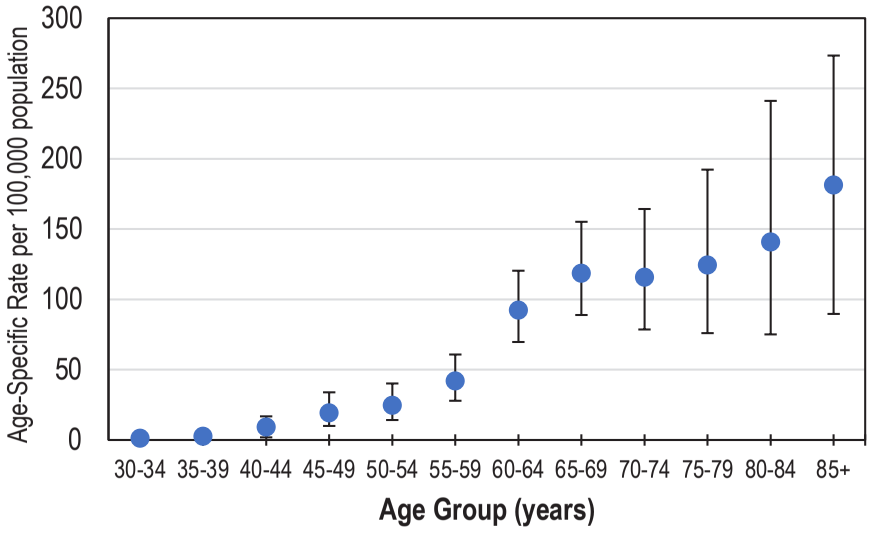
4.15A: Black, Females



4.15B: White, Females



4.15C: Black, Males



4.15D: White, Males

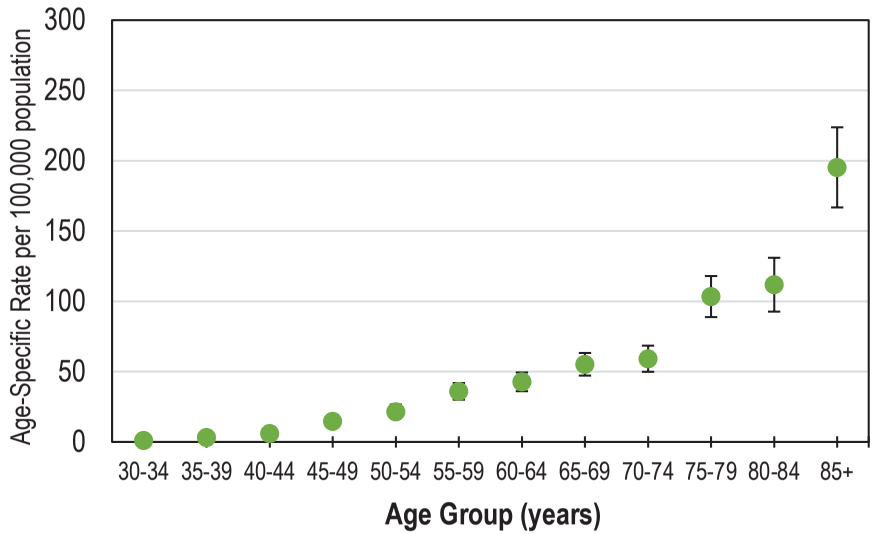
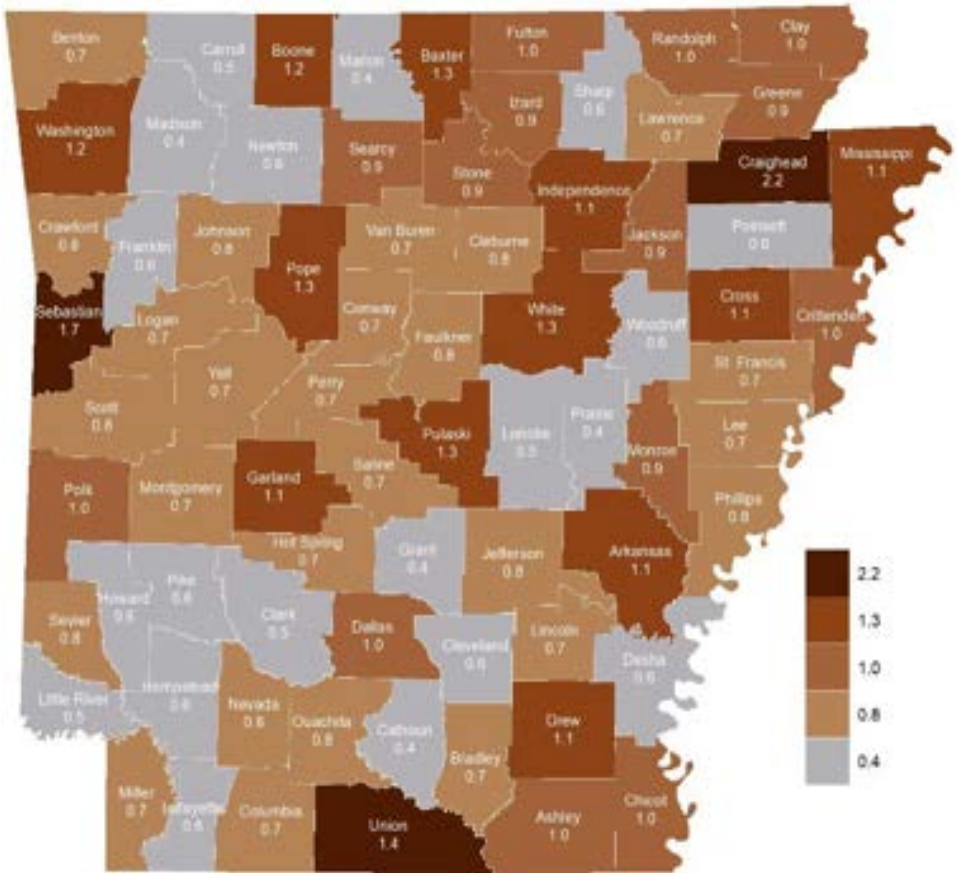


Figure 4.16: Standardized Mortality Ratio (SMR) by County, Colorectal Cancer, Arkansas, 2010-2019



ARKANSAS CENTRAL CANCER REGISTRY

Section 5: Lung and Bronchus Cancer

Overview

Lung and bronchus cancer, collectively referred to as lung cancer, is the number one leading cause of cancer-related death in the US and Arkansas.[26,27] Most individuals diagnosed with lung cancer are detected after signs and symptoms develop, meaning the cancer is usually too aggressive for curative treatment.28 Lung cancer screening is most effective when more of the high-risk populations are screened annually. Screening reduces the lung cancer death rate by up to 20% when detected at early stages as it is more likely to be curable.[29,30]

In March 2021, the USPSTF updated its recommendations for lung cancer screening. The previous recommendation had annual screenings with low-dose computed tomography (LDCT) in adults aged 55 to 80 years who have a 30 pack-year smoking history and currently smoke or have quit within the past 15 years. The new update **expands the screening recommendation in adults aged 50 to 80 years who have a 20 pack-year smoking history and currently smoke or have quit within the past 15 years. Additionally, the USPSTF recommends discontinuing lung cancer screening once a person has not smoked for 15 years** or has a health problem that substantially limits life expectancy or the ability or willingness to have curative lung surgery.[31] According to the State of Lung Cancer 2023 Report, screening rates among at-risk individuals are low in the US with only 4.5% of those at high risk screened.[29] Arkansas had a lower rate of 3.7% at-risk individuals in the state screened for lung cancer.

Contact your insurance plan to find out if your health insurance covers lung cancer screening.

Lung Cancer Risk Factors

- Common risk factors that can increase your risk for lung cancer include[32]:
- Cigarette, cigar, and pipe smoking
- Secondhand smoke
- Family history of lung cancer
- HIV infection
- Environmental exposures (asbestos, air pollution)
- Workplace exposures (arsenic, chromium, nickel, beryllium, cadmium, tar and soot)
- Beta carotene supplements in heavy smokers

Key Findings

Lung Cancer Incidence

- The lung cancer incidence rate decreased in both Arkansas and the US from 2005-2019, but Arkansas had a higher overall rate. In 2019, the incidence rate for lung cancer in Arkansas was 69.7 cases per 100,000 population compared to the US rate of 54.3 cases per 100,000 population (**Figure 5.1**).
- The rate of lung cancer decreased over time for Black and White males but were higher compared to females. Although the rate of newly diagnosed lung cancer rates overall is decreasing, Black and White females rates are slightly increasing for 2003-2019. In 2019, Black females had lung cancer rate of 52.0 per 100,000 population, 63.7 per 100,000 population for White females, 90.5 per 100,000 population for Black males, and 77.9 per 100,000 population for White males (**Figure 5.2, Figures 5.3A-D**).
- Black females had the lowest cancer incidence rate compared to all groups; Black males had the highest incidence rate for 2015-2019 (**Figure 5.4**).

- The disease patterns at age groups <50 years differed from older ages. In the older age groups, ≥ 50 years, Black males had a higher incidence rate than White males, except for those 85+ years. In the younger age groups, the age-specific rate varied for each population group (**Figure 5.5, Figures 5.6A-D**).
- Arkansas counties with more-than-expected lung cancer cases were mostly in the northeastern part of the state (**Figure 5.7**).
- The percentage of newly diagnosed lung cancer at a late stage ranged from 64% to 70.9% during 2015-2019. Black males were more likely to be diagnosed with colorectal cancer at a later stage (**Figure 5.8**).

Lung Cancer Survival

- For 2007-2019, lung cancer had a low 5-year relative survival percent for a distant stage of diagnosis of 6.2% (**Figure 5.9, Table 5.1**).

Lung Cancer Mortality

- From 2005 to 2019, Arkansas had a higher lung cancer rate trendline than the US, but both experienced a decrease over time. In 2019, lung cancer mortality rate in Arkansas was 45.7 deaths per 100,000 population, compared to the US rate of 33.4 deaths per 100,000 population (**Figure 5.10**).
- Between 2003 and 2019, the lung cancer mortality rate in Arkansas decreased for White males and females, and Black males, but increased for Black females. In 2019, the lung cancer mortality rates by race and sex were: 33.7 per 100,000 population for Black females, 37.6 per 100,000 population for White females, 65.9 per 100,000 population for Black males, and 57.2 per 100,000 population for White male (**Figure 5.11, Figures 5.12A-D**).
- For 2015-2019, Black males had double the rate of lung cancer deaths than the lowest group, Black females (**Figure 5.13**).
- During 2015-2019, Black males had a higher mortality rate of lung cancer for age groups 50 through 84. Overall, lung cancer mortality rates were higher among males than females (**Figure 5.14, Figures 5.15A-D**).
- Craighead county had the highest more-than-expected lung cancer deaths (**Figure 5.16**).

Figure 5.1: Age-Adjusted Incidence Rate Trendline by Year of Diagnosis, Lung & Bronchus Cancer, US and Arkansas, 2005-2019

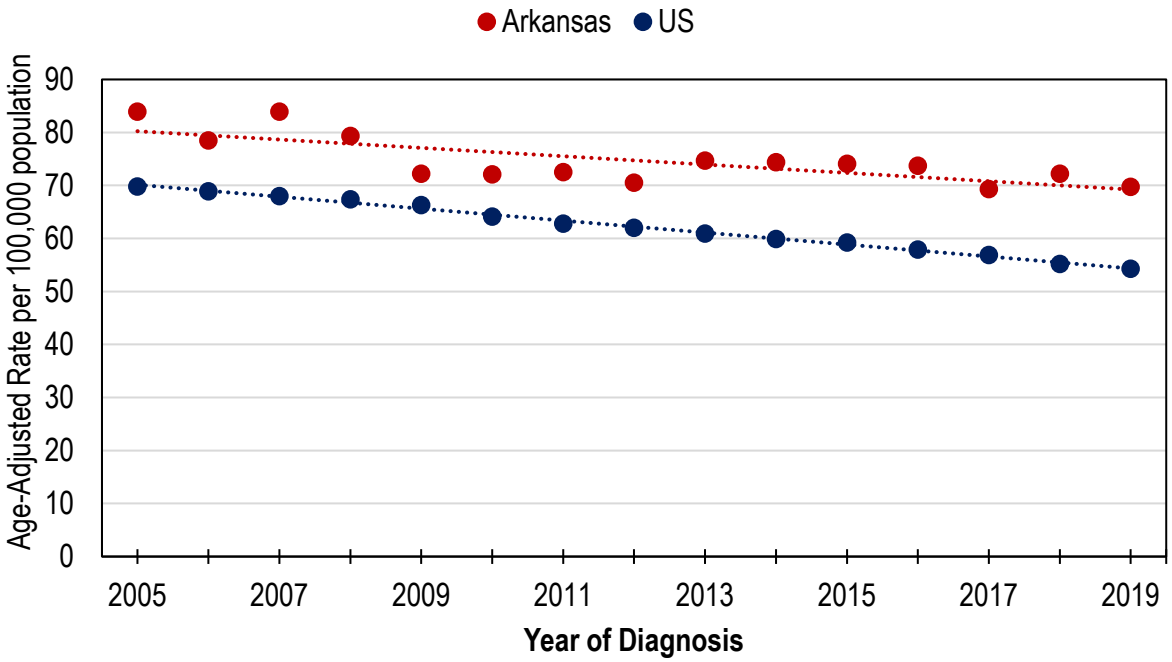
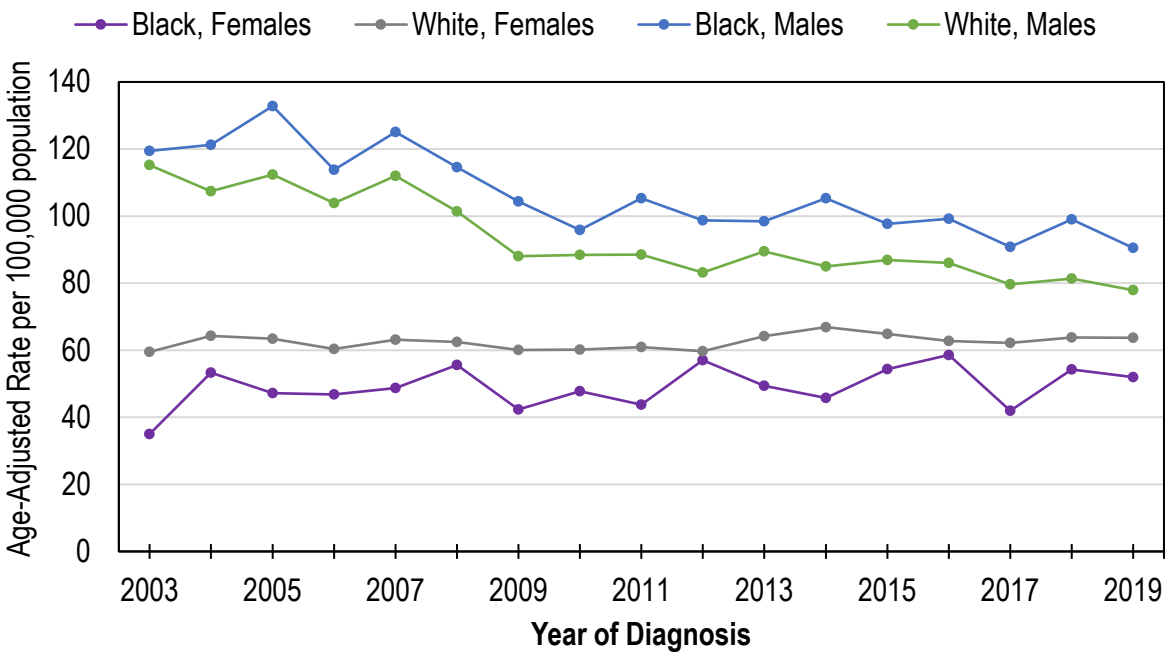
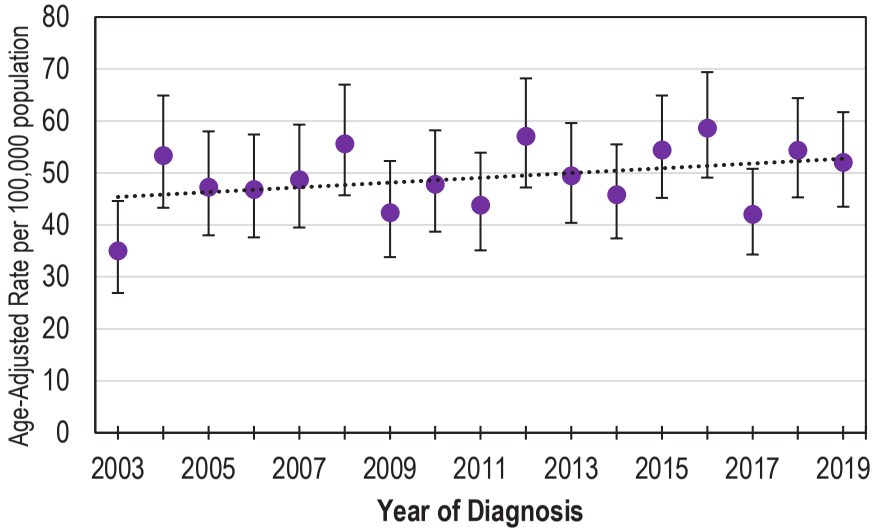


Figure 5.2: Age-Adjusted Incidence Rate Trendline by Race and Sex, Lung & Bronchus Cancer, Arkansas, 2003-2019

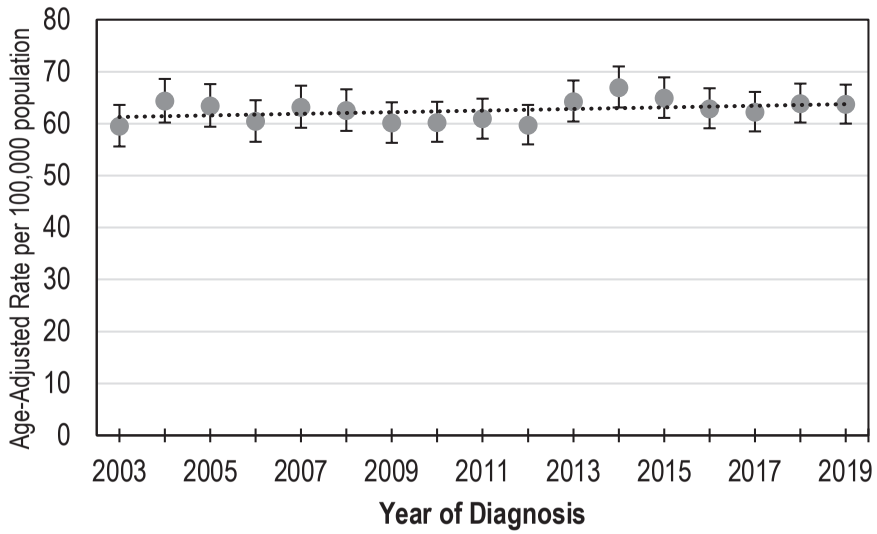


Figures 5.3A-D: Age-Adjusted Incidence Rate and 95% CI by Race, Sex, and Year of Diagnosis, Lung & Bronchus Cancer, Arkansas, 2003-2019

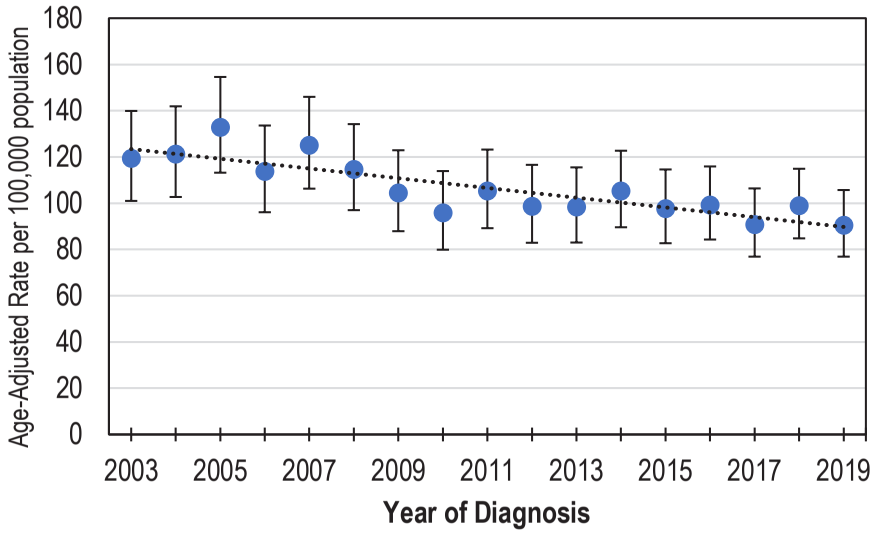
5.3A: Black, Females



5.3B: White, Females



5.3C: Black, Males



5.3D: White, Males

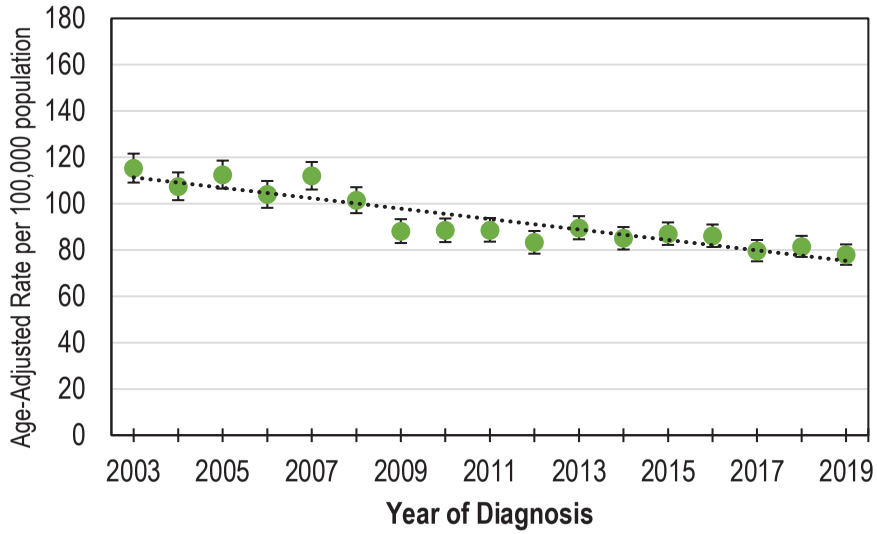


Figure 5.4: Age-Adjusted Incidence Rate and 95% CI by Race and Sex, Lung & Bronchus Cancer, Arkansas, 2015-2019

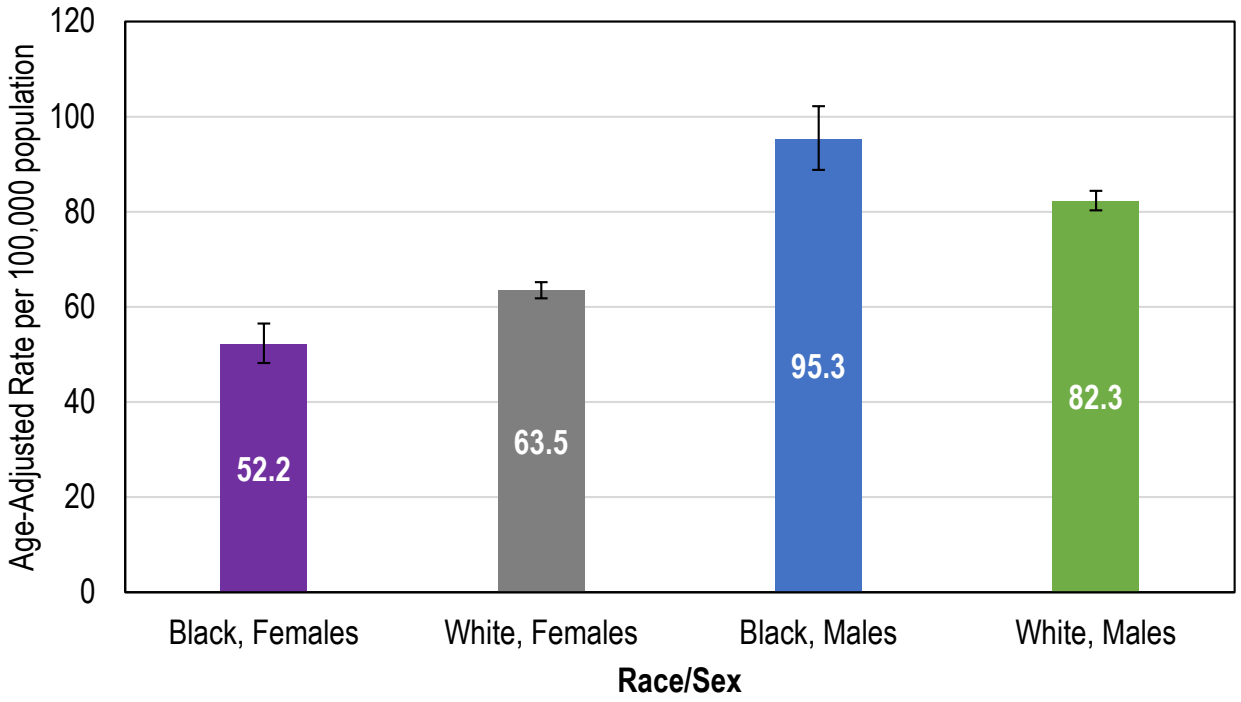
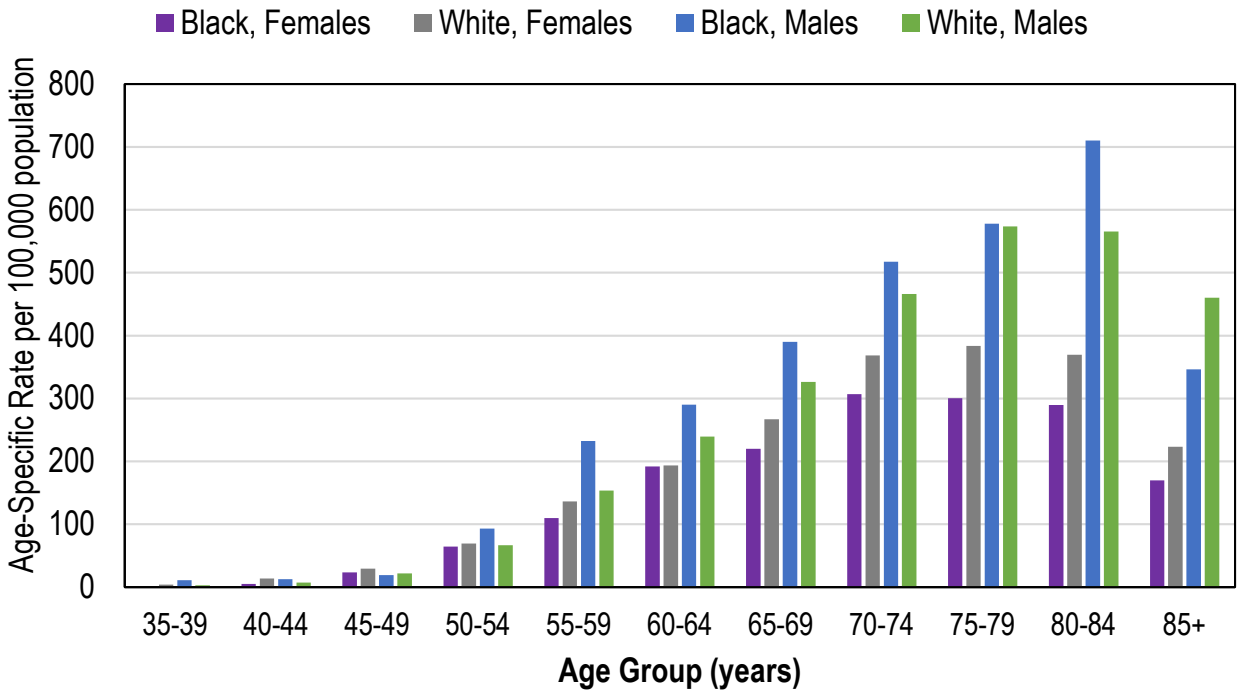
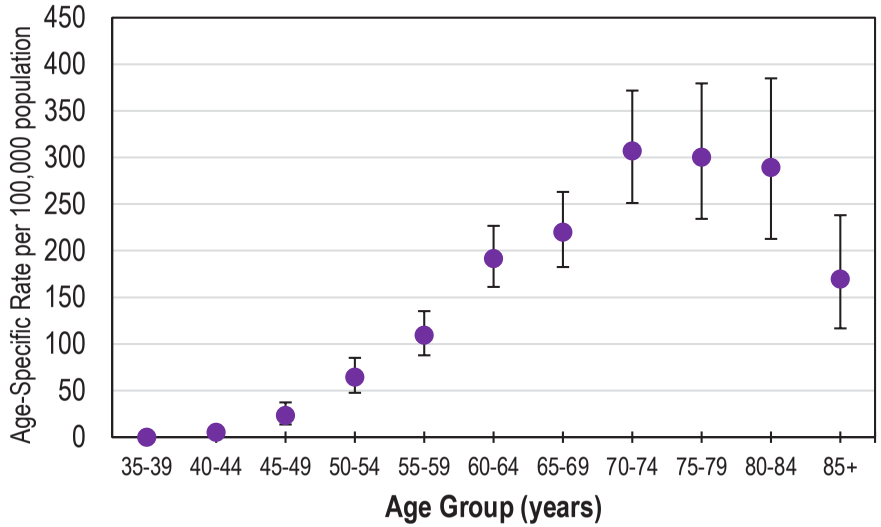


Figure 5.5: Age-Specific Incidence Rate by Race, Sex, and Age Group, Lung & Bronchus Cancer, Arkansas, 2015-2019

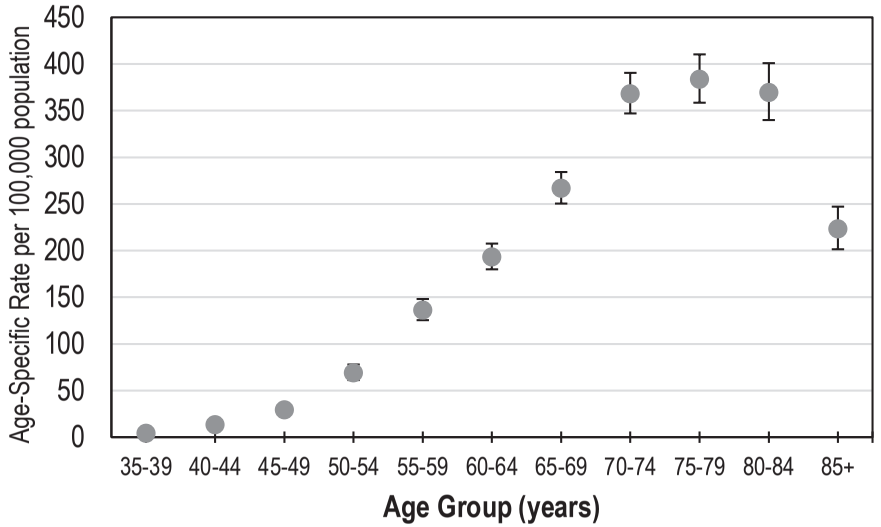


Figures 5.6A-D: Age-Specific Incidence Rate and 95% CI by Race, Sex, and Age Group, Lung & Bronchus Cancer Arkansas, 2015-2019

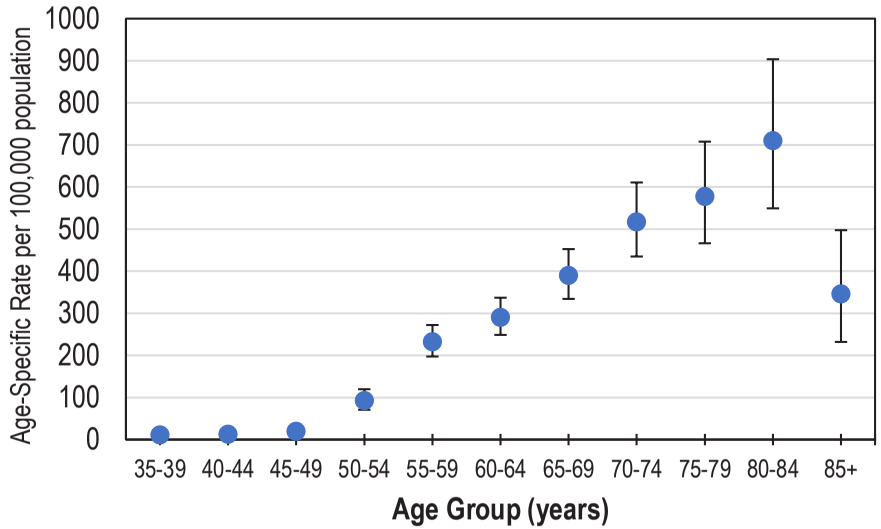
5.6A: Black, Females



5.6B: White, Females



5.6C: Black, Males



5.6D: White, Males

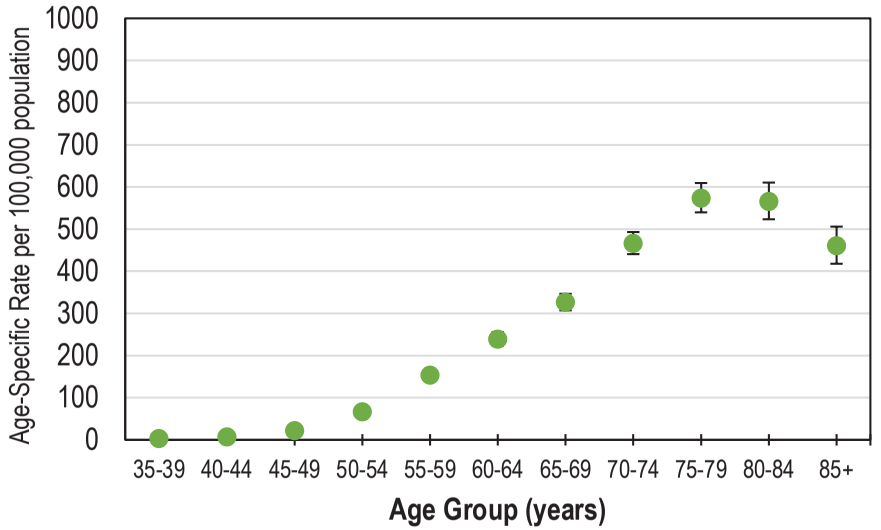


Figure 5.7: Standardized Incidence Ratio (SIR) by County, Lung & Bronchus Cancer, Arkansas, 2010-2019

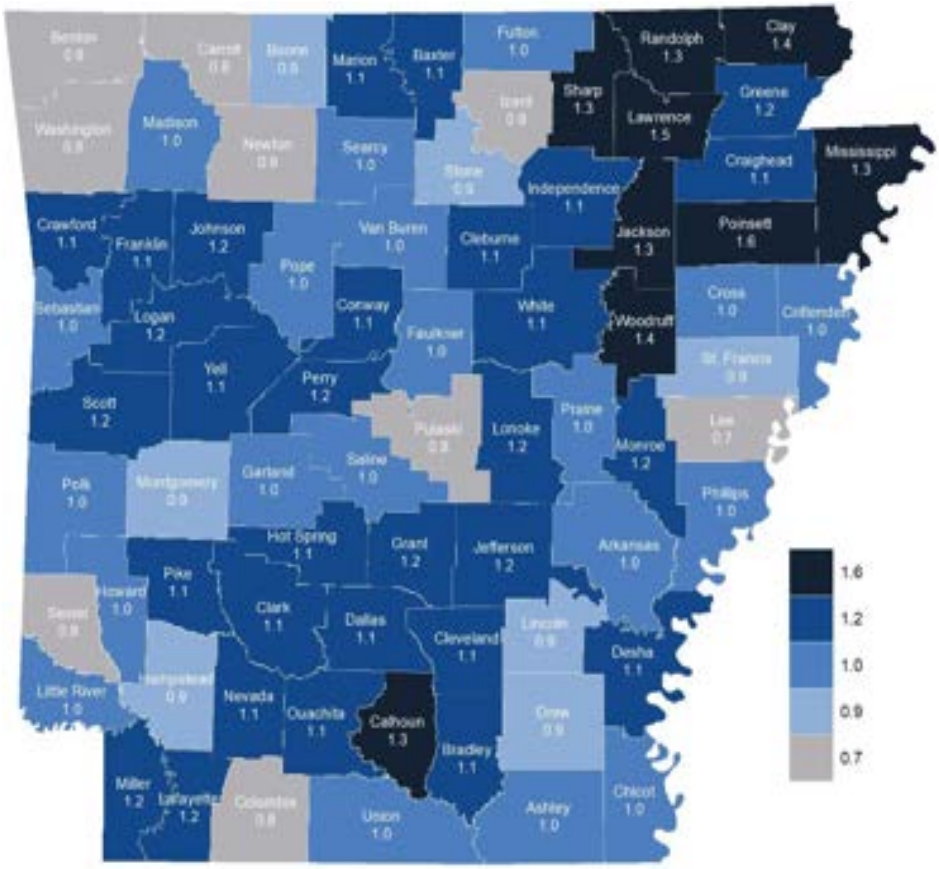


Figure 5.8: Percentage of SEER Summary Stage at Diagnosis by Race and Sex, Lung & Bronchus Cancer, Arkansas, 2015-2019

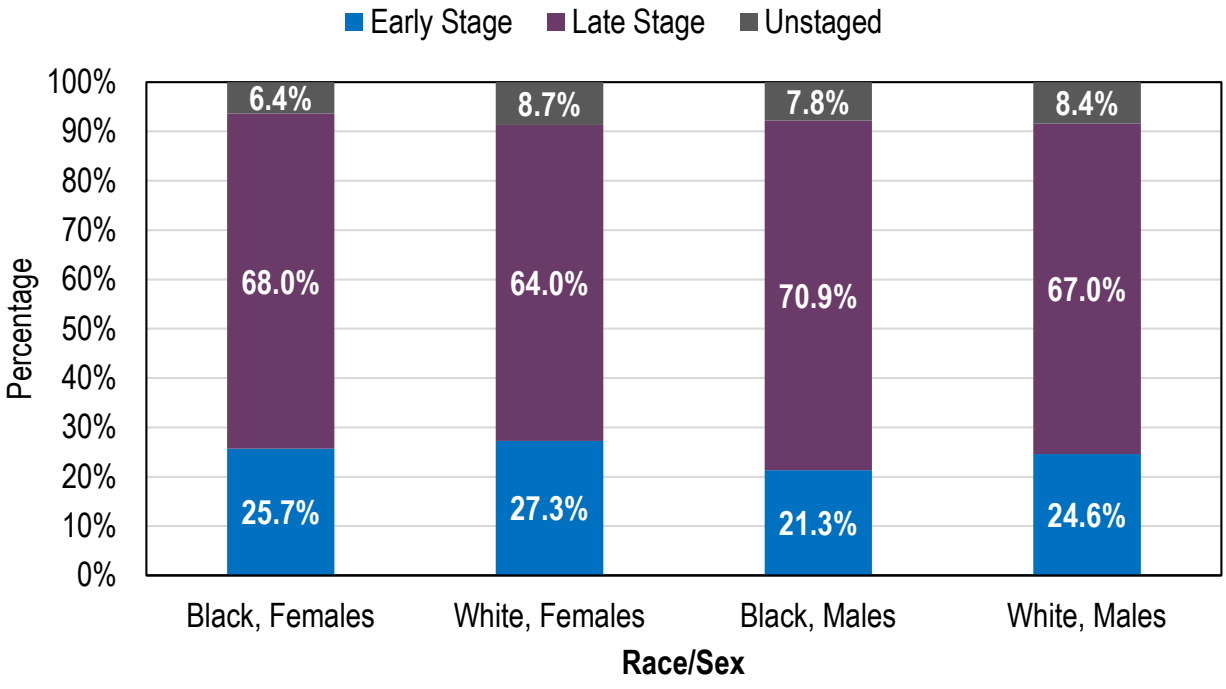


Figure 5.9: 5-Year Relative Survival Percent (%) by Stage at Diagnosis, Lung & Bronchus Cancer, Arkansas, 2007-2019

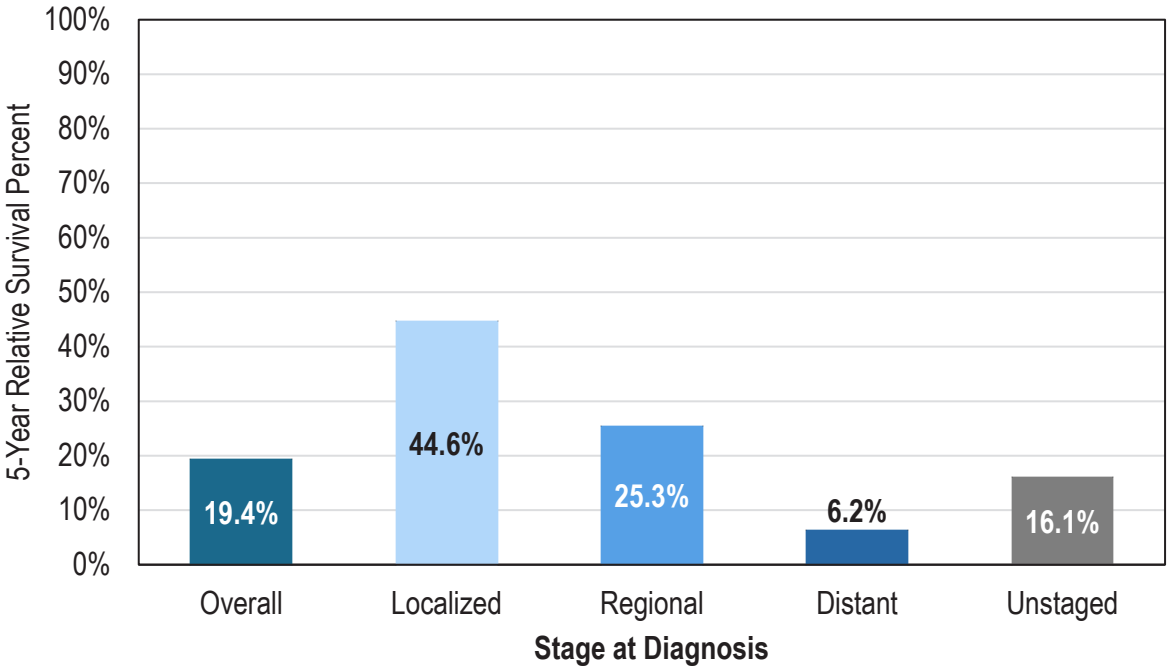


Table 5.1: 5-Year Relative Survival Percent (%) by Stage at Diagnosis and Years after Diagnosis, Lung & Bronchus Cancer, Arkansas, 2007-2019

	Relative Survival Percent by Stage at Diagnosis				
Years after Diagnosis	Overall	Localized	Regional	Distant	Unstaged
1	46%	76%	60%	29%	41%
2	32%	63%	43%	15%	28%
3	26%	55%	34%	10%	21%
4	22%	50%	29%	8%	18%
5	19%	45%	25%	6%	16%

Figure 5.10: Age-Adjusted Mortality Rate Trendline, Lung & Bronchus Cancer, US and Arkansas, 2005-2019

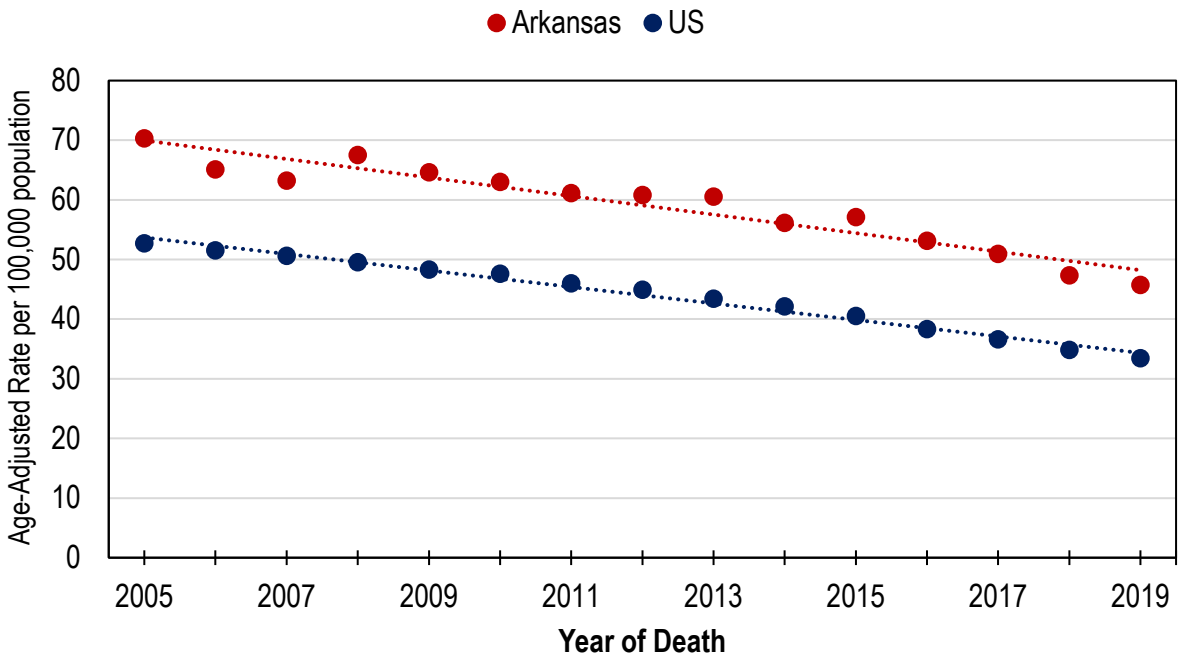
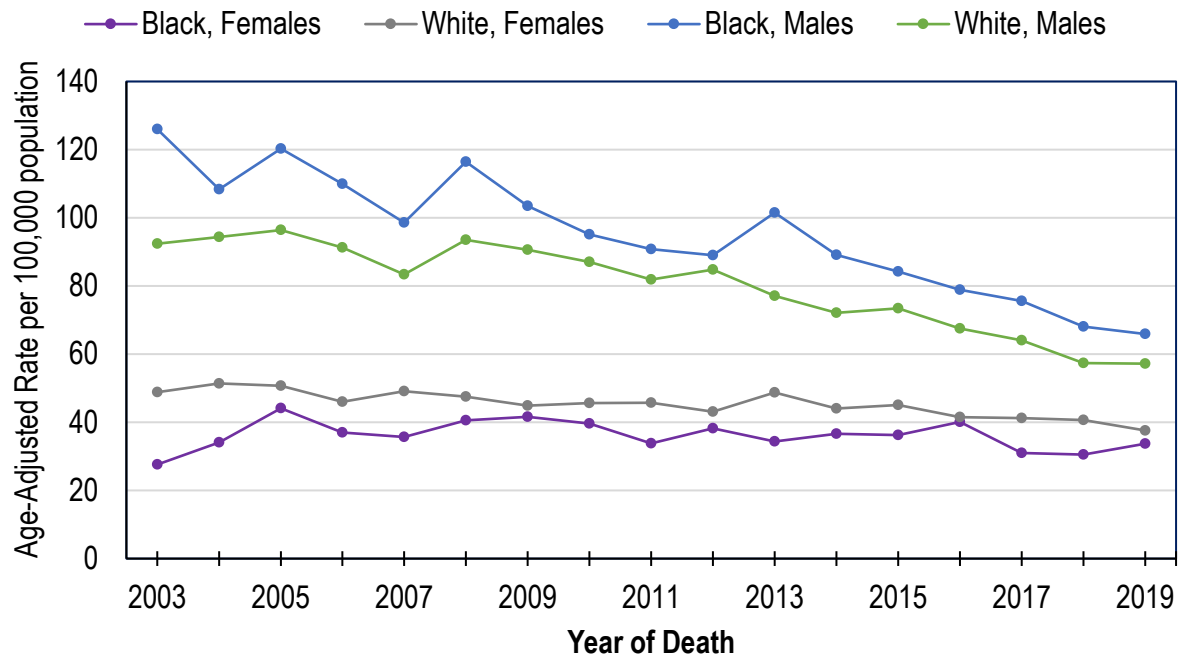
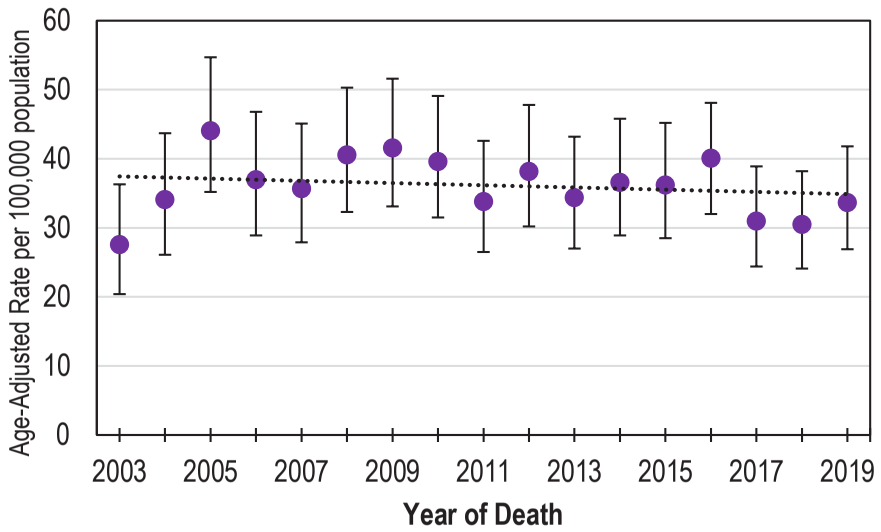


Figure 5.11: Age-Adjusted Mortality Rate Trendline by Race, Sex, and Year of Death, Lung & Bronchus Cancer, Arkansas, 2003-2019

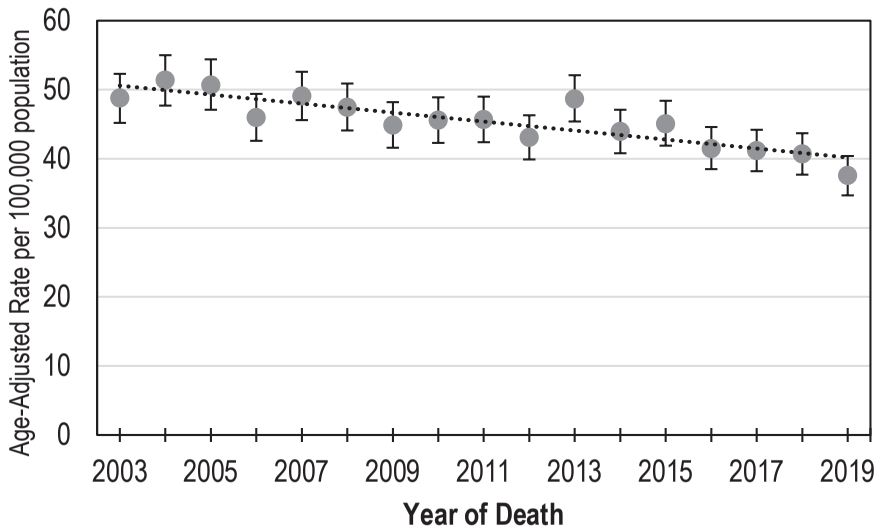


Figures 5.12A-D: Age-Adjusted Mortality Rate and 95% CI by Race, Sex, and Year of Death, Lung & Bronchus Cancer, Arkansas, 2003-2019

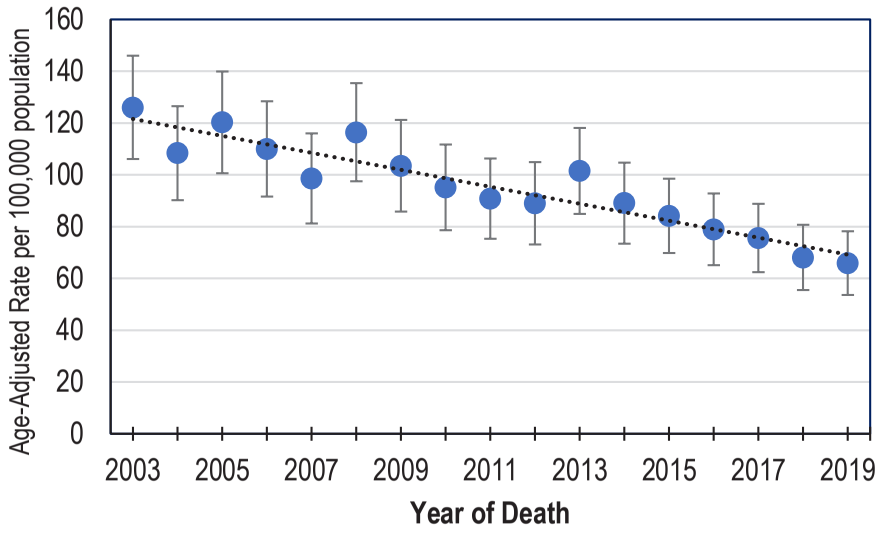
5.12A: Black, Females



5.12B: White, Females



5.12C: Black, Males



5.12D: White, Males

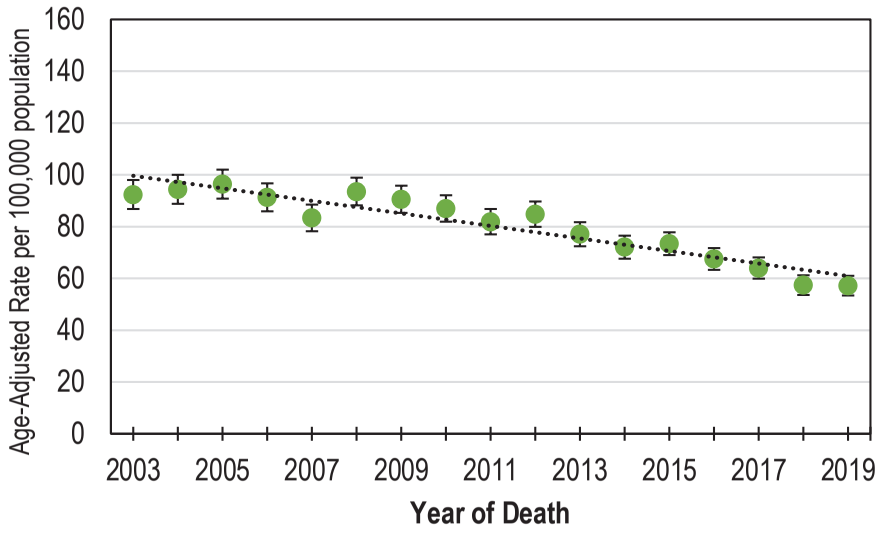


Figure 5.13: Age-Adjusted Mortality Rate and 95% CI by Race and Sex, Lung & Bronchus Cancer, Arkansas, 2015-2019

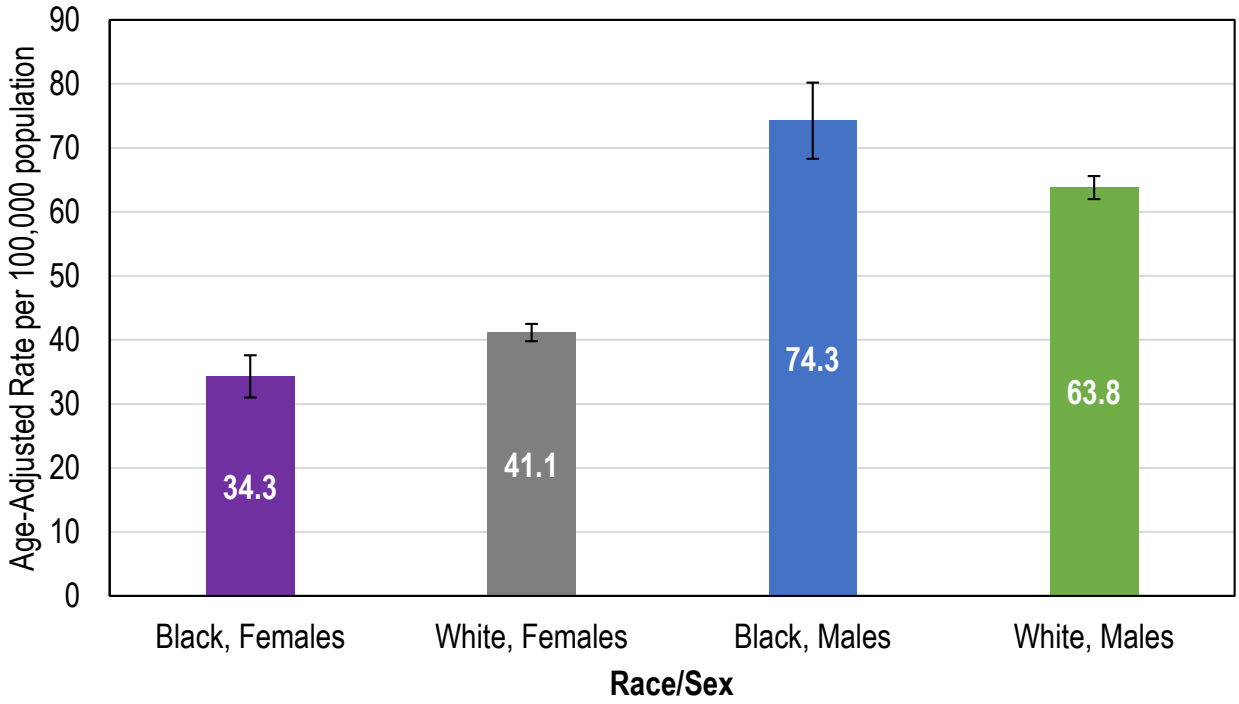
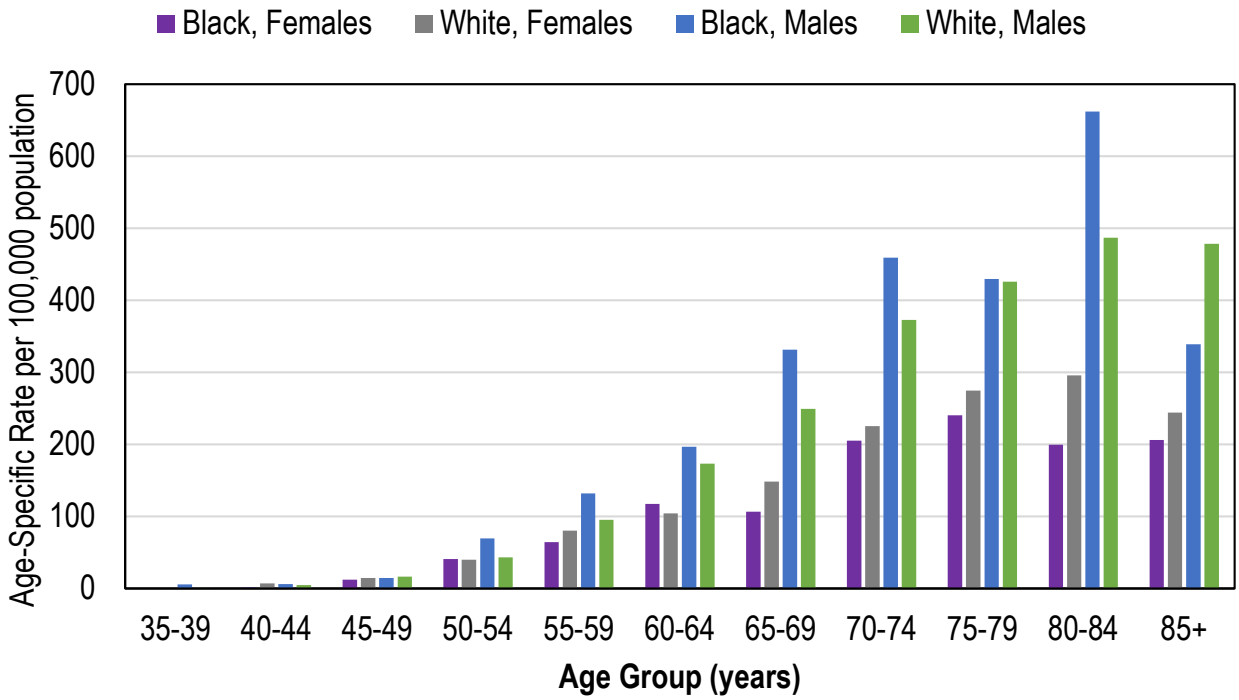
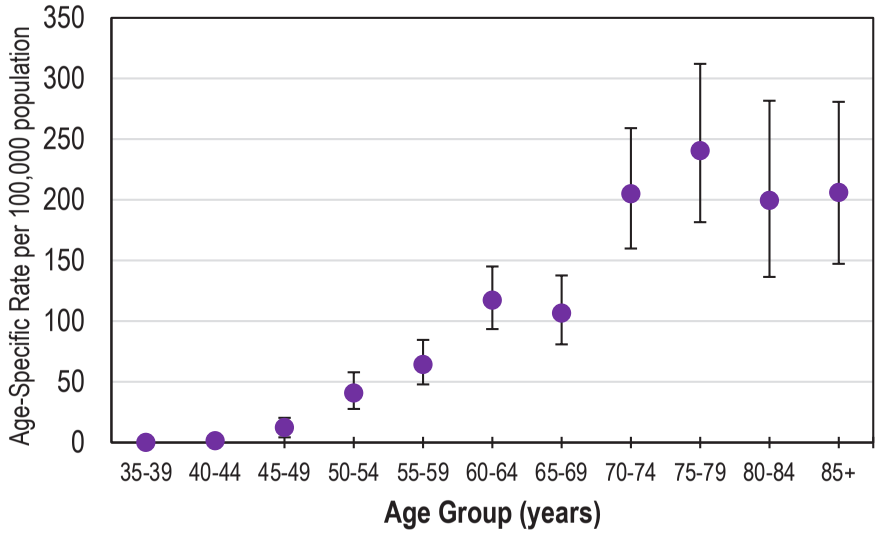


Figure 5.14: Age-Specific Mortality Rate by Race, Sex, and Age Group, Lung & Bronchus Cancer, Arkansas, 2015-2019

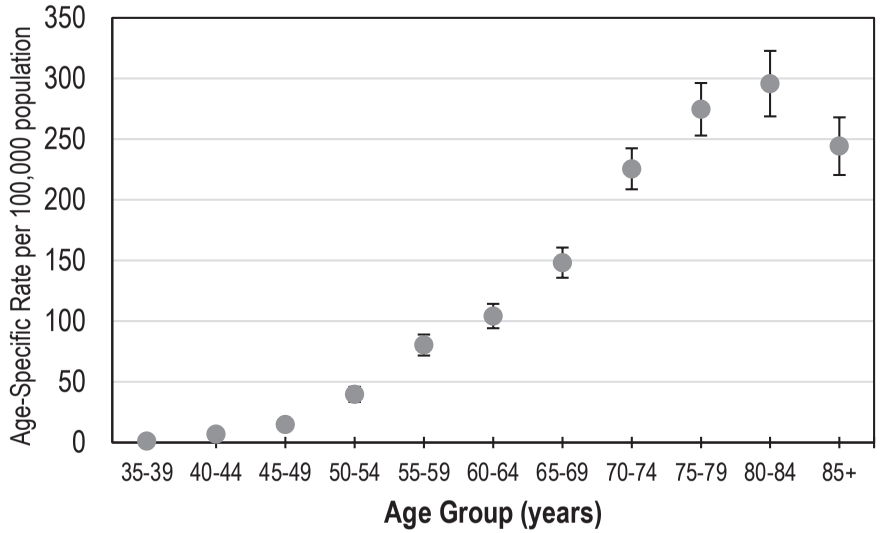


Figures 5.15A-D: Age-Specific Mortality Rate and 95% CI by Race, Sex, and Age Group, Lung & Bronchus Cancer, Arkansas, 2015-2019

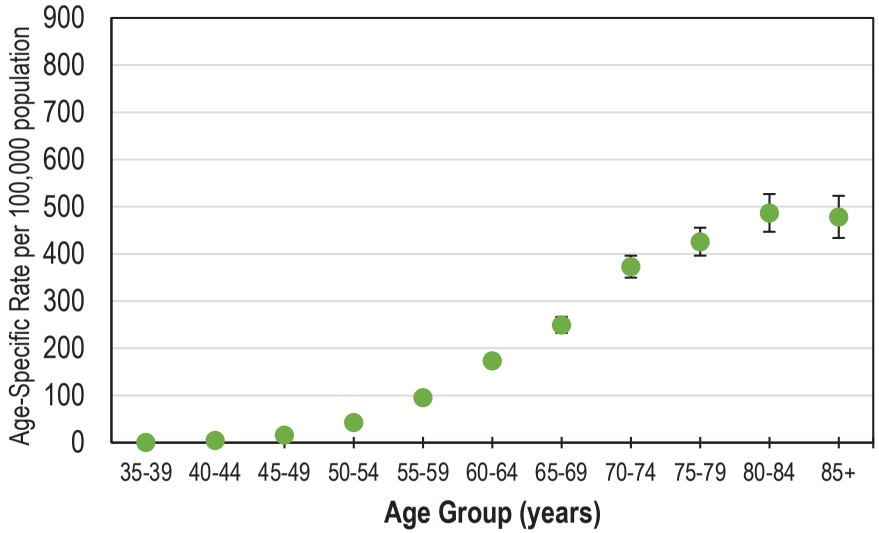
5.15A: Black, Females



5.15B: White, Females



5.15C: Black, Males



5.15D: White, Males

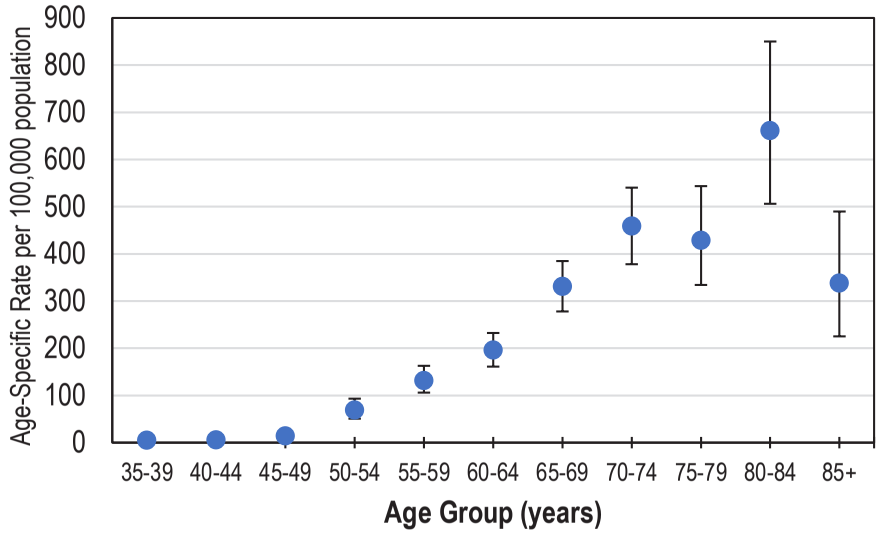
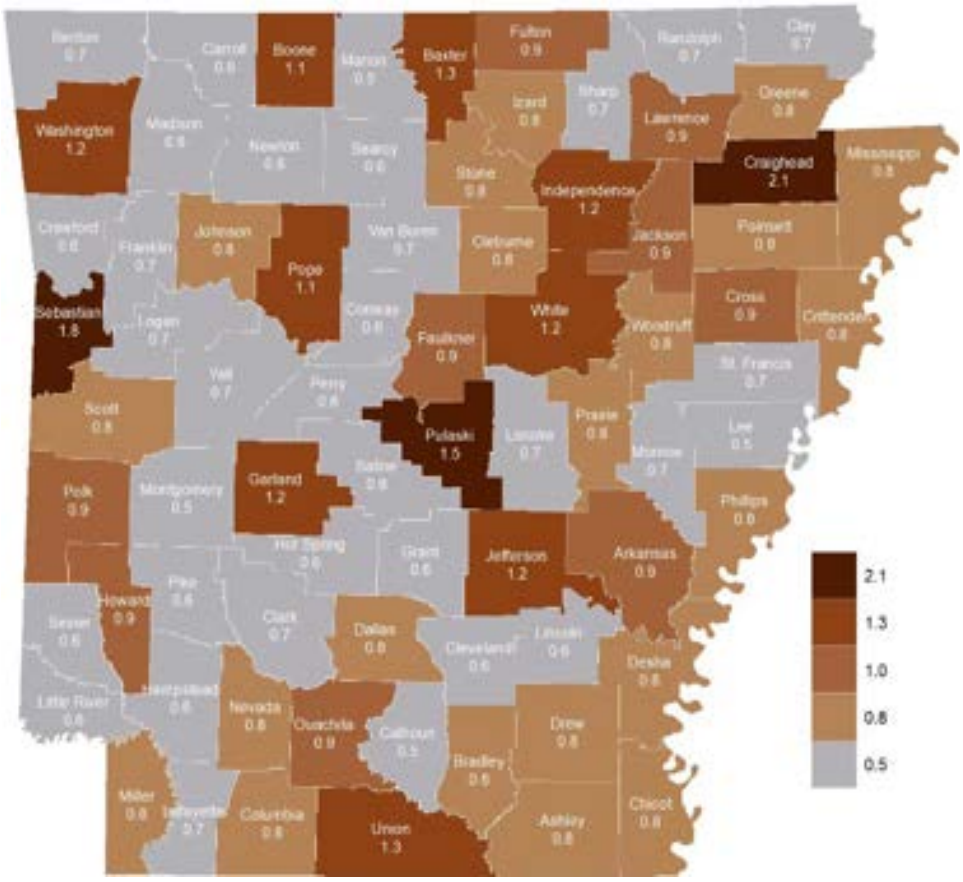


Figure 5.16: Standardized Mortality Ratio (SMR) by County, Lung & Bronchus Cancer, Arkansas, 2010-2019



ARKANSAS CENTRAL CANCER REGISTRY

Section 6: Non-Hodgkin Lymphoma

About Hematologic (Blood) Cancers

Most hematologic (blood) cancers start in the bone marrow affecting the production and function of blood cells. When there is presence of cancerous blood cells, the normal blood cell development process is interrupted by uncontrolled abnormal cell growth. This prevents non-cancerous blood cells from performing its function such as fighting off infections or preventing bleeding.[33] There are currently no routine screening guidelines for early detection of blood cancers among individuals without symptoms.[34]

There are three main types of blood cancers:

- **Myeloma** prevents the normal production of antibodies (white blood cells). This type of blood cancer weakens the immune system leaving the body vulnerable to infections.[33]
- **Leukemia** can be a chronic (slow growing) or acute (fast growing) type of cancer. The rapid production of abnormal white blood cells prevents the body from fighting off infections weakening the ability of the bone marrow in producing red blood cells and platelets.[35]
- **Lymphoma** affects the lymphatic system, a part of the body's germ-fighting network producing immune cells. The general progression of lymphoma starts when abnormal lymphocytes become lymphoma cells multiplying and gathering in the lymph nodes and other tissues. With time, the cancerous cells impair the immune system.[33]

Among these three (3) blood cancers, there were more lymphoma cases diagnosed in Arkansas than leukemia and myeloma (**Figure 6.1, Table 6.1, Table 6.2**).

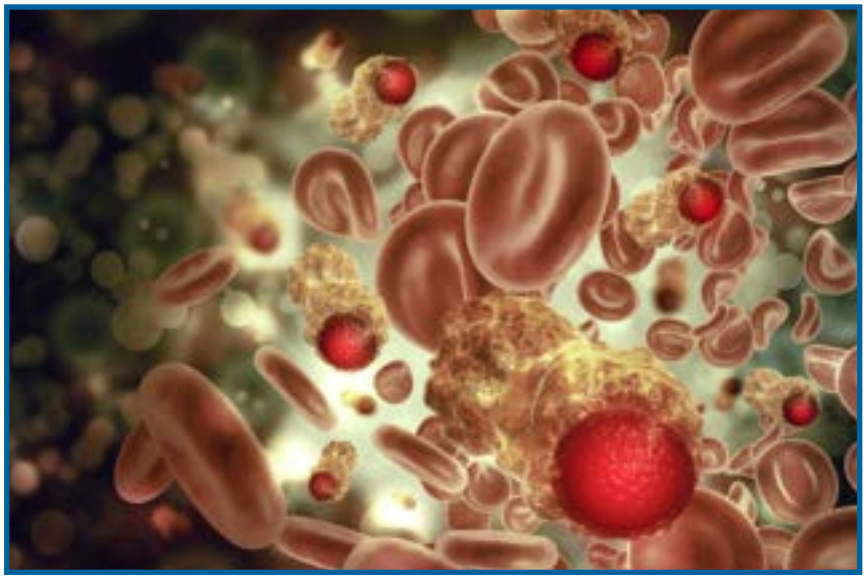


Figure 6.1: Percentage of Selected Hematopoietic Cancers Newly Diagnosed, Arkansas, 2015-2019

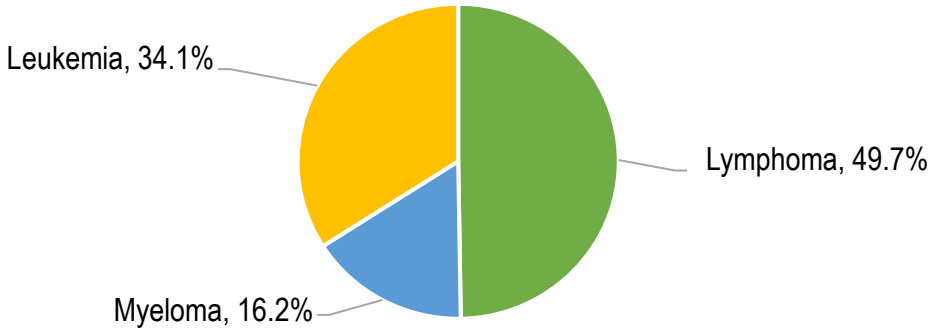


Table 6.1: Age-Adjusted Incidence Rate and 95% CI of Common Hematopoietic Cancers, US and Arkansas, 2019

	Arkansas		US
Type of Cancer	Number of Newly Diagnosed Cases	Age-Adjusted Incidence Rate *(95% CI)*	Age-Adjusted Incidence Rate *(95% CI)*
Leukemia	**534**	**14.4** *(13.1 - 15.7)*	**13.8** *(13.7 - 13.9)*
Lymphoma	**780**	**21.1** *(19.6 - 22.7)*	**21.2** *(21.1 - 21.4)*
Myeloma	**254**	**6.5** *(5.7 - 7.4)*	**7.1** *(7.0 - 7.2)*

Table 6.2: Age-Adjusted Mortality Rate and 95% CI of Common Hematopoietic Cancers, US and Arkansas, 2019

	Arkansas		US
Type of Cancer	Number of Deaths	Age-Adjusted Mortality Rate *(95% CI)*	Age-Adjusted Mortality Rate *(95% CI)*
Leukemia	**157**	**4.2** *(3.5 - 4.8)*	**4.6** *(4.5 - 4.7)*
Lymphoma	**211**	**5.6** *(4.8 - 6.3)*	**5.2** *(5.2 - 5.3)*
Myeloma	**126**	**3.2** *(2.6 - 3.8)*	**3.0** *(3.0 - 3.1)*

Non-Hodgkin Lymphoma Overview

There are two common types of lymphomas: Hodgkin lymphoma (HL) and non-Hodgkin lymphoma (NHL). Both HL and NHL come from different types of cells, behave and spread differently, and respond to treatment differently. As such, it is important to know which type of lymphoma a person has for the best treatment option. Most HLs can be cured, but the prognosis for NHLs can depend on the subtype.36

Non-Hodgkin Lymphoma Risk Factors

Common risk factors that may increase your risk for NHL include[37]:

- Autoimmune diseases (rheumatoid arthritis, lupus and celiac disease)
- Some prescribed medications treating illnesses (such as methotrexate or TNF inhibitors for rheumatoid arthritis)
- Viruses and infections (HIV/AIDS, Helicobacter pylori infection, Epstein-Barr virus, human T-cell leukemia/lymphoma virus, human herpes virus 8, hepatitis C virus)
- Radiation therapy and/or chemotherapy to treat other cancers
- Immunosuppressant drugs to treat patients who have had an organ transplant
- Inherited immune disorders (Wiskott-Aldrich syndrome)

For this report, incidence and mortality data is presented for **non-Hodgkin lymphoma**, as it is the most prevalent among blood cancers.

Key Findings

Non-Hodgkin Lymphoma (NHL) Incidence

- The incidence rate of NHL for the US slightly decreases while Arkansas' incidence rate trendline was flat. Arkansas had an overall rate trendline for NHL below the US (**Figure 6.2**).
- From 2003-2019, White males had the highest overall rate trendline for NHL compared to all other groups. Incidence rate trendline for NHL increased for Black females and males but decreased for White males and females. In 2019, the incidence rates for NHL for each group were: 13.1 per 100,000 population for Black females, 14.3 per 100,000 population for White females, 19.9 per 100,000 population for Black males, and 23.8 per 100,000 population for White males (**Figure 6.3, Figures 6.4A-D**).
- Overall, for 2015-2019, White males had the highest incidence rate of NHL followed by Black males, White females, and Black females (**Figure 6.5**).
- During 2015-2019, each age group had differing age-specific incidence rates by population. Most notable, White males had a higher incidence rate of NHL for most age groups (**Figure 6.6, Figures 6.7A-D**).
- The two Arkansas counties with a higher-than-expected number of NHL cases for 2010-2019 were Lonoke and Lawrence (**Figure 6.8**).
- In 2015-2019, there were more cases diagnosed at a late stage than early stage. Black females had a higher percent of late-stage NHL followed by White males, White females, and Black males (**Figure 6.9**).

Non-Hodgkin Lymphoma (NHL) Survival

- Although the 5-year relative survival percent for a localized NHL diagnosis is the highest (77.9%) for 2007-2019, there is no significant difference between regional and distant diagnosis (**Figure 6.10, Table 6.3**).

Non-Hodgkin Lymphoma (NHL) Mortality

- From 2005 to 2019, the mortality rate for NHL decreased in both Arkansas and the US. For Arkansas, the rate of NHL deaths varied between 2009 through 2017. In 2019, the NHL mortality rate in Arkansas was 5.2 deaths per 100,000 population, compared to the US rate of 5.0 deaths per 100,000 population (**Figure 6.11**).
- White males in Arkansas had the highest rate trendline of NHL deaths for 2003 through 2019 but has decreased over time. The rate of NHL deaths also decreased among Black males and White females, while Black females have a relatively flat trendline. c, namely for Black females and males. In 2019, the NHL mortality rates by race and sex were: 2.9 per 100,000 population for Black females, 3.8 per 100,000 population for White females, 3.5 per 100,000 population for Black males, and 7.4 per 100,000 population for White males (**Figure 6.12, Figure 6.13A-D**).
- In 2015-2019, White males had more than double the mortality of NHL than the lowest group, Black, females (**Figure 6.14**).
- White males had a higher mortality rate for NHL as age groups increased (**Figure 6.15, Figure 6.16A-D**).
- For 2010-2019, Arkansas counties Pulaski and Craighead had more than expected NHL deaths.

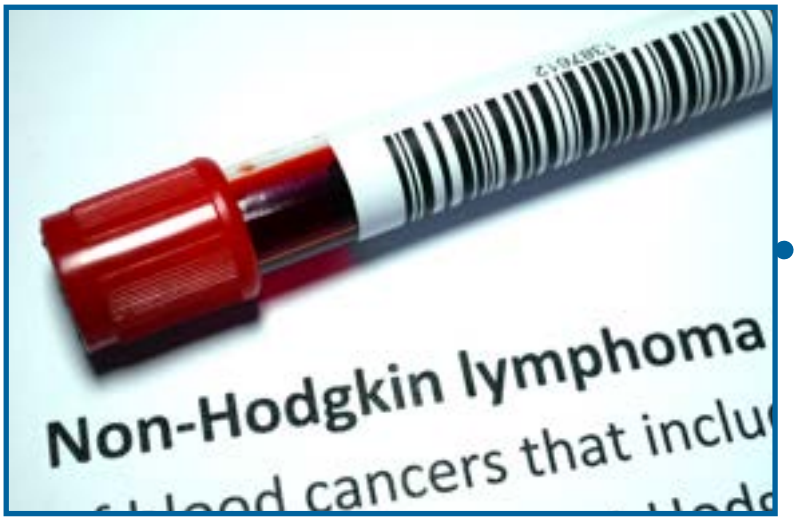


Figure 6.2: Age-Adjusted Incidence Rate Trendline, Non-Hodgkin Lymphoma, US and Arkansas, 2005-2019

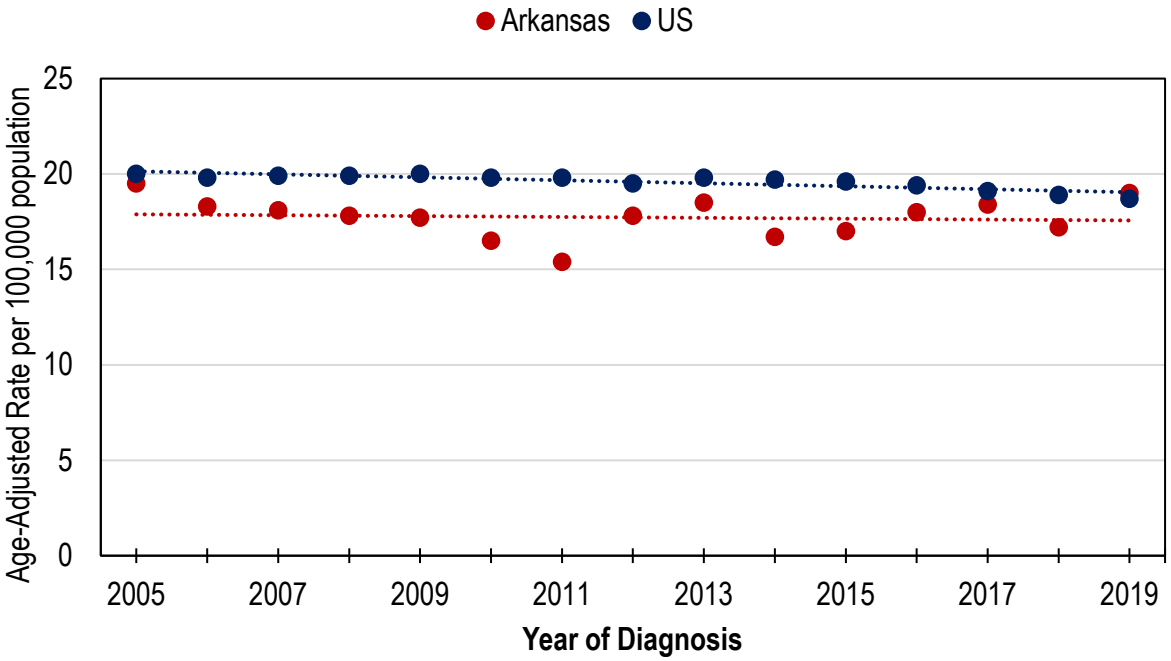
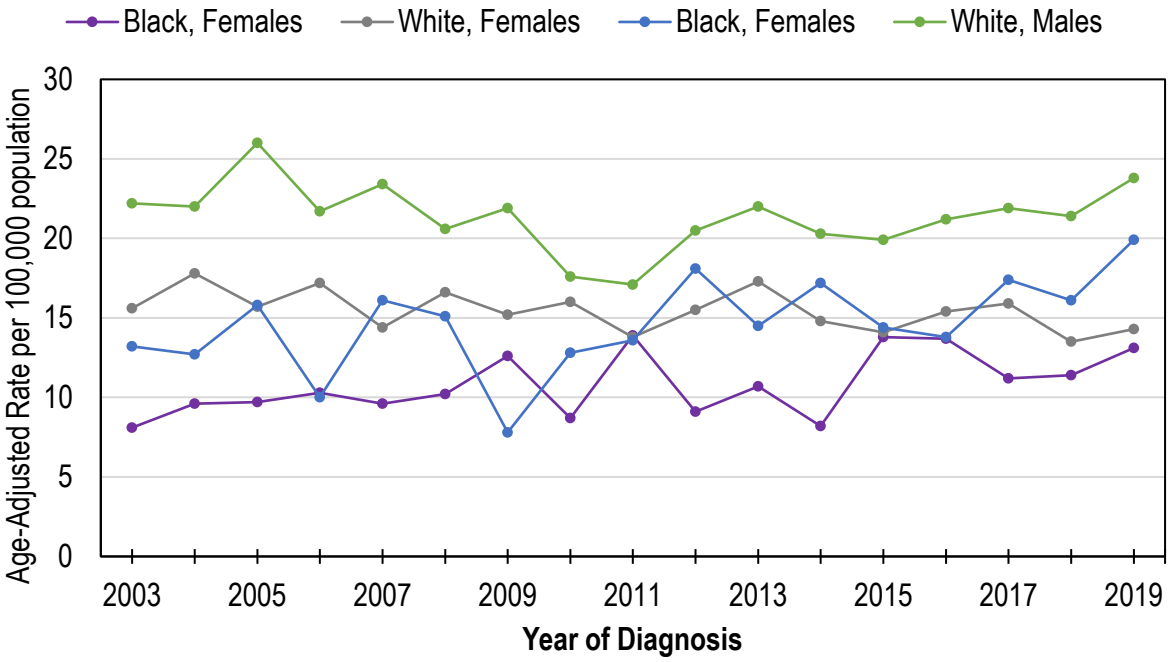
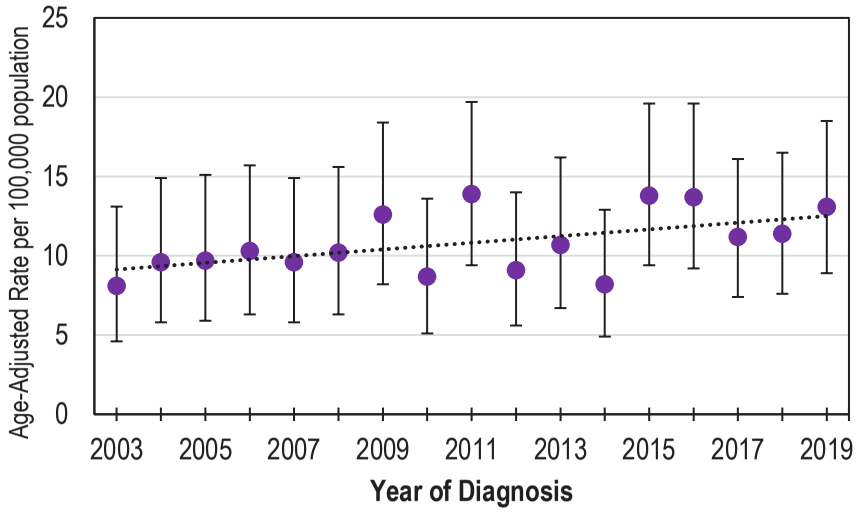


Figure 6.3: Age-Adjusted Incidence Rate Trendline by Race and Sex, Non-Hodgkin Lymphoma, Arkansas, 2003-2019

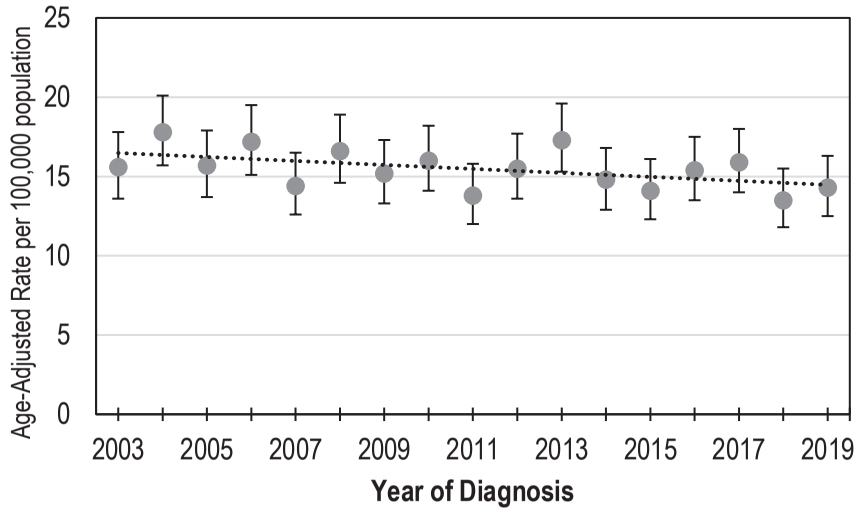


Figures 6.4A-D: Age-Adjusted Incidence Rate and 95% CI by Race, Sex and Year of Diagnosis, Non-Hodgkin Lymphoma, Arkansas, 2003-2019

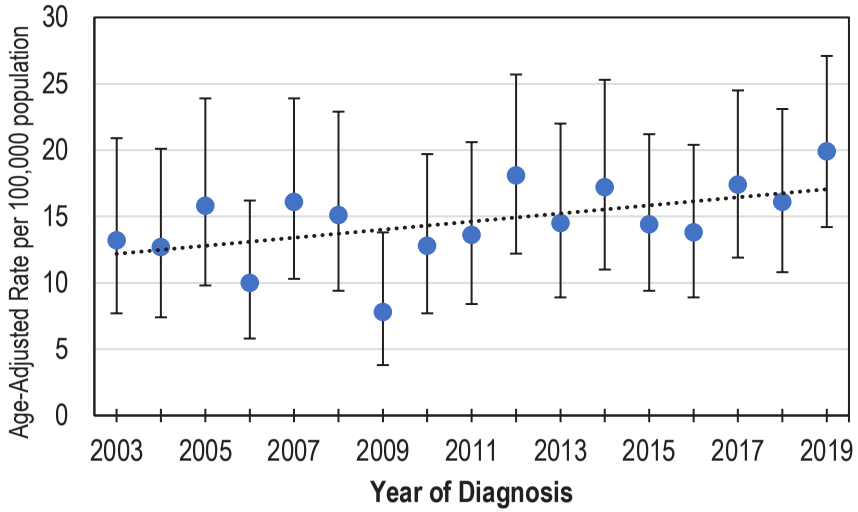
6.4A: Black, Females



6.4B: White, Females



6.4C: Black, Males



6.4D: White, Males

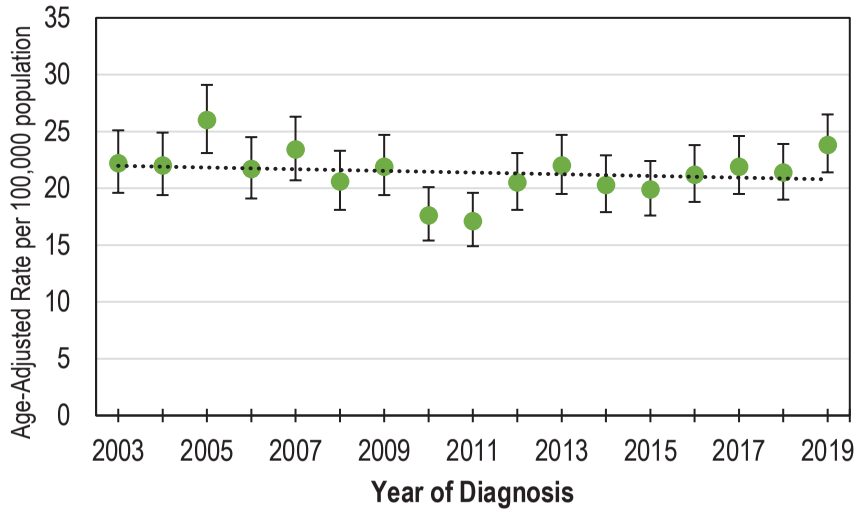


Figure 6.5: Age-Adjusted Incidence Rate and 95% CI by Race and Sex, Non-Hodgkin Lymphoma, Arkansas, 2015-2019

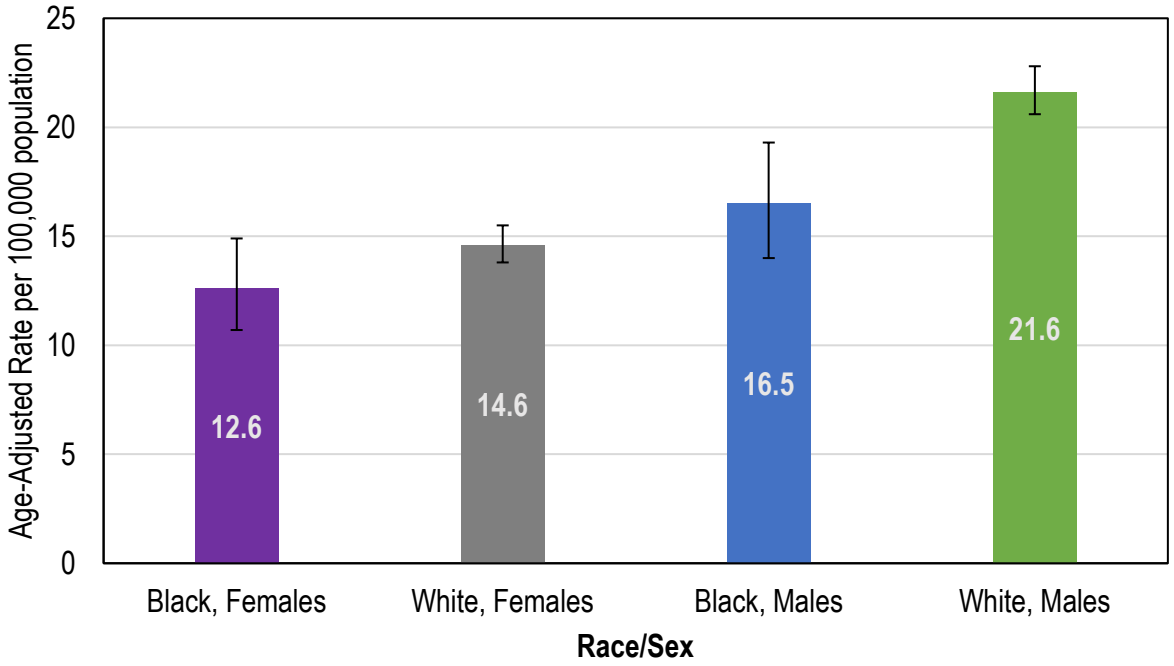
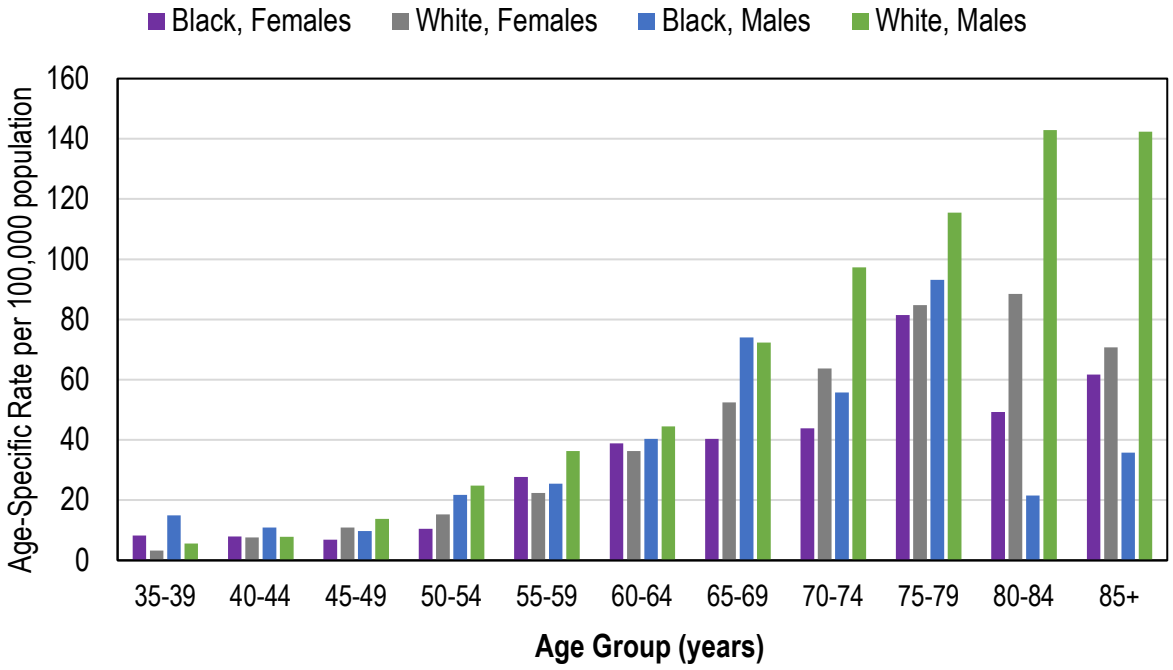
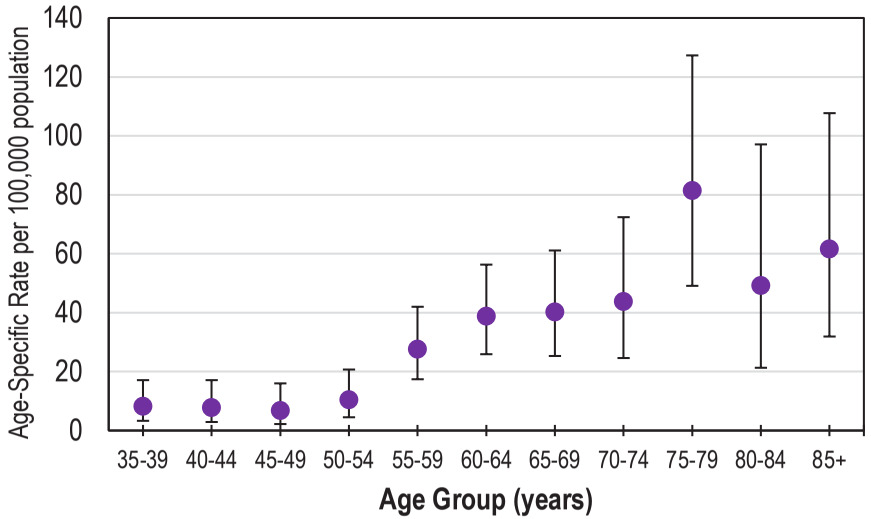


Figure 6.6: Age-Specific Incidence Rate by Race, Sex, and Age Group, Non-Hodgkin Lymphoma, Arkansas, 2015-2019

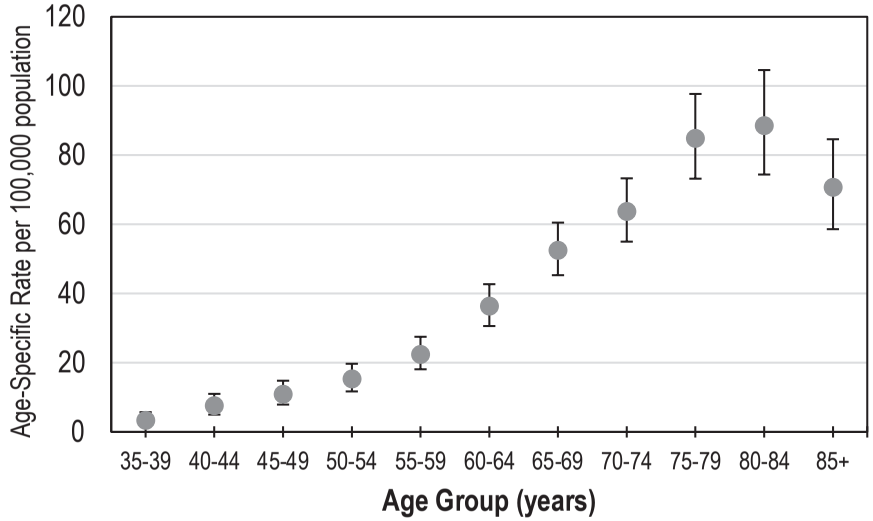


Figures 6.7A-D: Age-Specific Incidence Rate and 95% CI by Race, Sex, and Age Group, Non-Hodgkin Lymphoma, Arkansas, 2015-2019

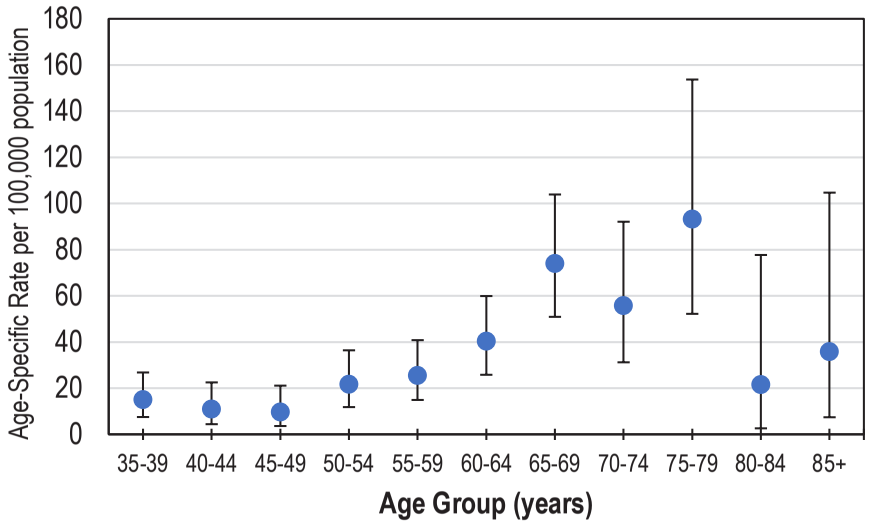
6.7A: Black, Females



6.7B: White, Females



6.7C: Black, Males



6.7D: White, Males

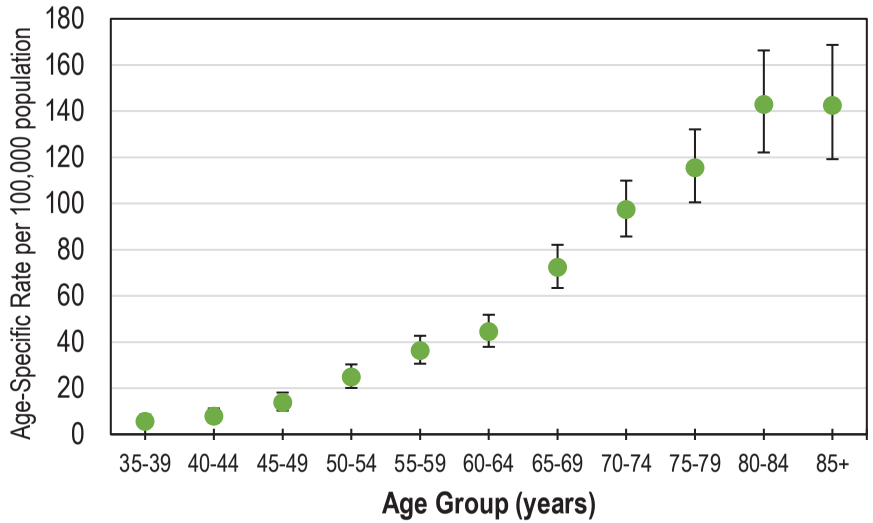


Figure 6.8: Standardized Incidence Ratio (SIR) by County, Non-Hodgkin Lymphoma, Arkansas, 2010-2019

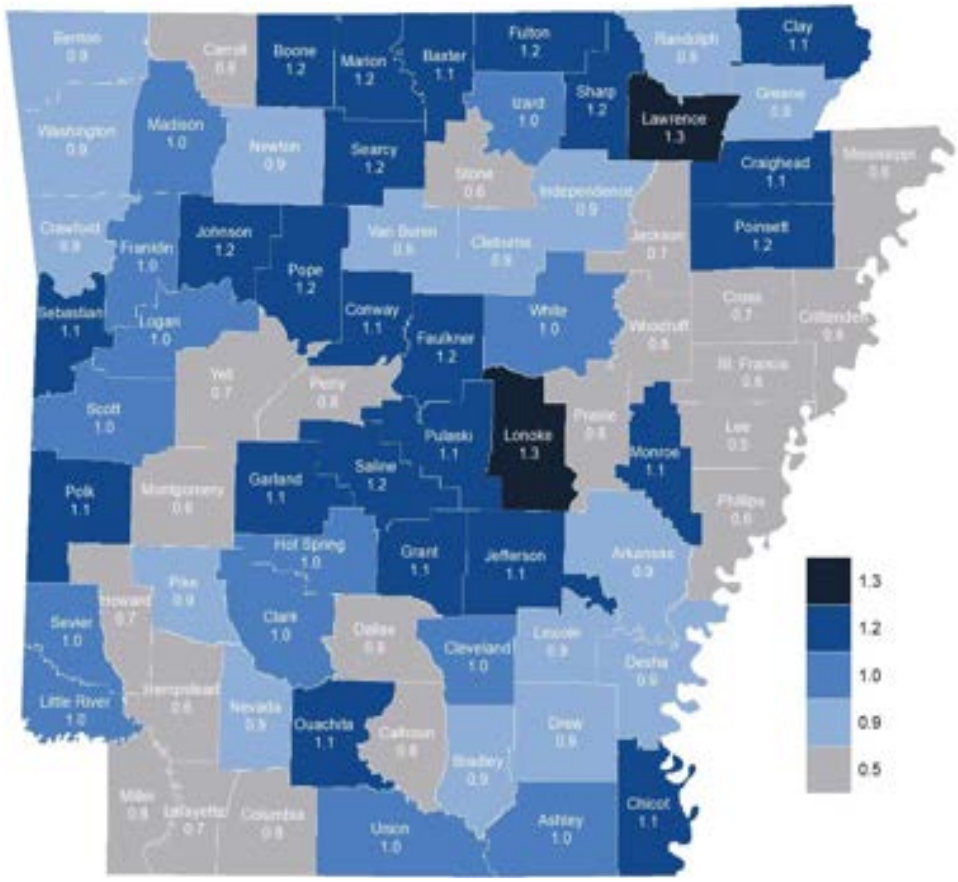


Figure 6.9: Percentage of SEER Summary Stage at Diagnosis by Race and Sex, Non-Hodgkin Lymphoma, Arkansas, 2015-2019

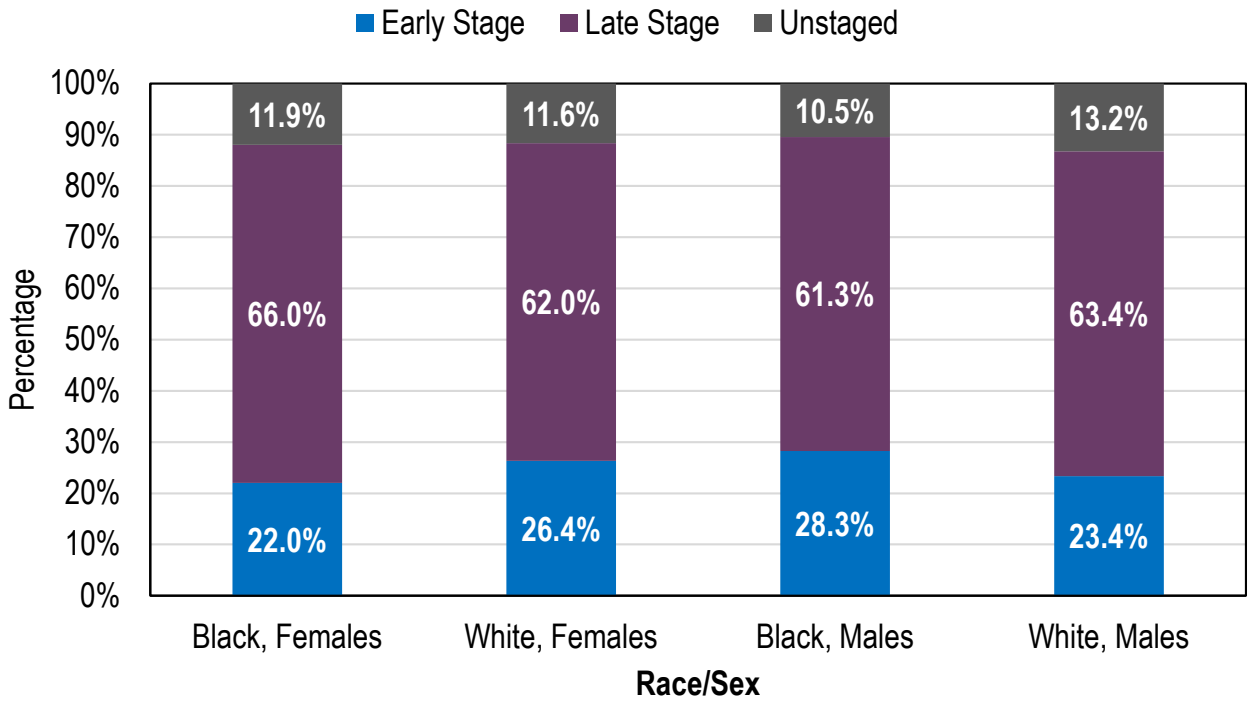


Figure 6.10: 5-Year Relative Survival Percent (%) by Stage at Diagnosis, Non-Hodgkin Lymphoma, Arkansas, 2007-2019

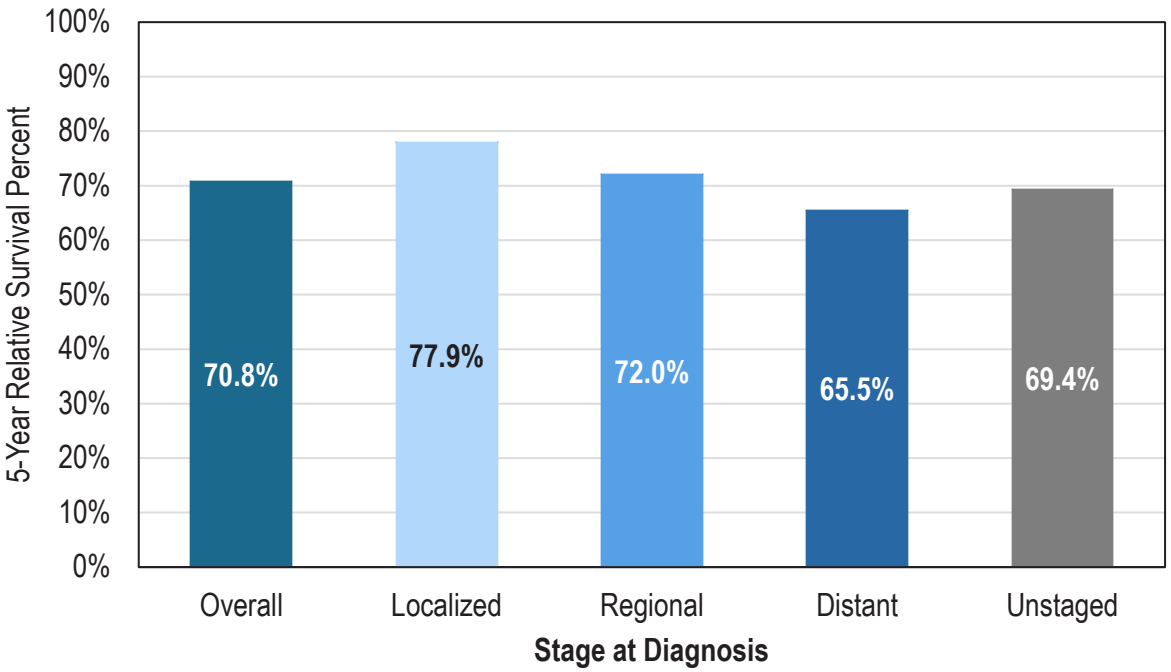


Table 6.3: 5-Year Relative Survival Percent (%) by Stage at Diagnosis and Years after Diagnosis, Non-Hodgkin Lymphoma, Arkansas, 2007-2019

	Relative Survival Percent by Stage at Diagnosis				
Years after Diagnosis	Overall	Localized	Regional	Distant	Unstaged
1	81%	85%	82%	79%	78%
2	77%	82%	78%	73%	75%
3	74%	80%	76%	70%	73%
4	72%	79%	73%	68%	71%
5	71%	78%	72%	66%	69%

Figure 6.11: Age-Adjusted Mortality Rate by Year of Death Trendline, Non-Hodgkin Lymphoma, US and Arkansas, 2005-2019

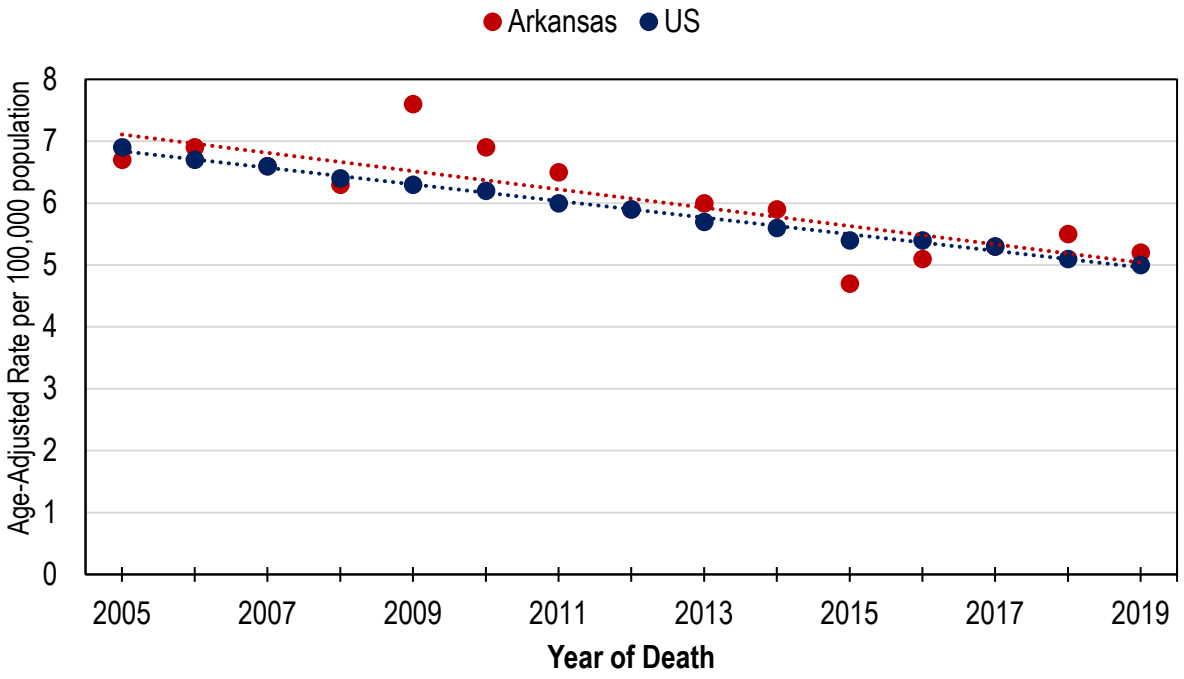
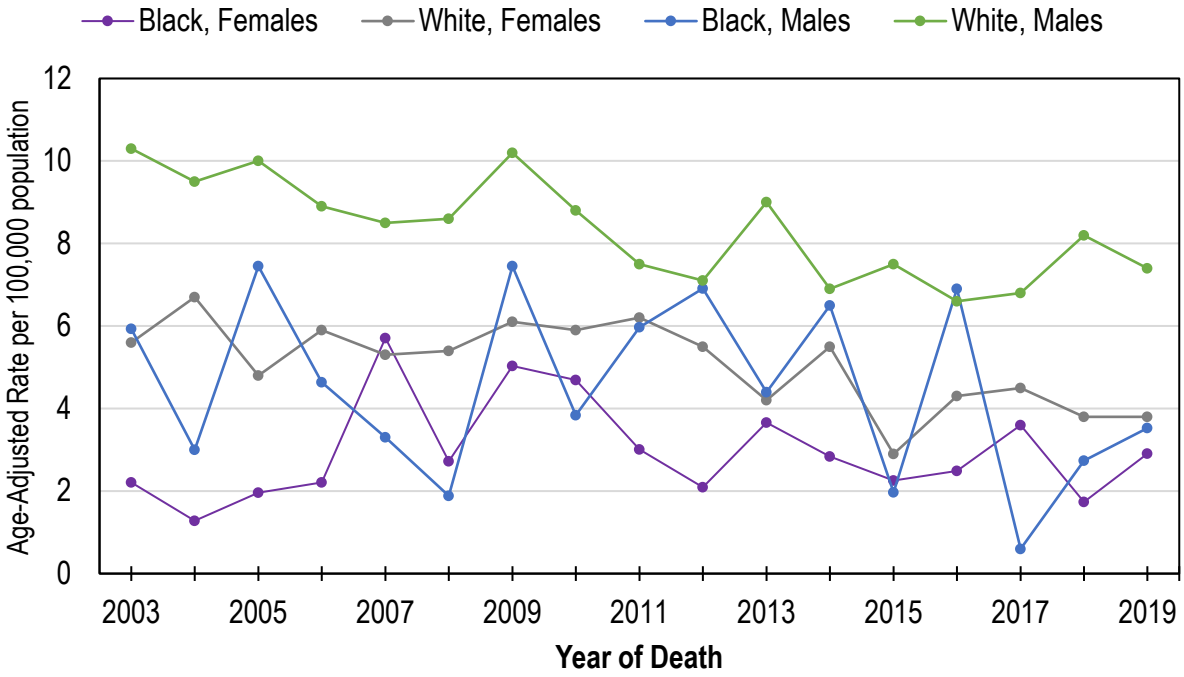
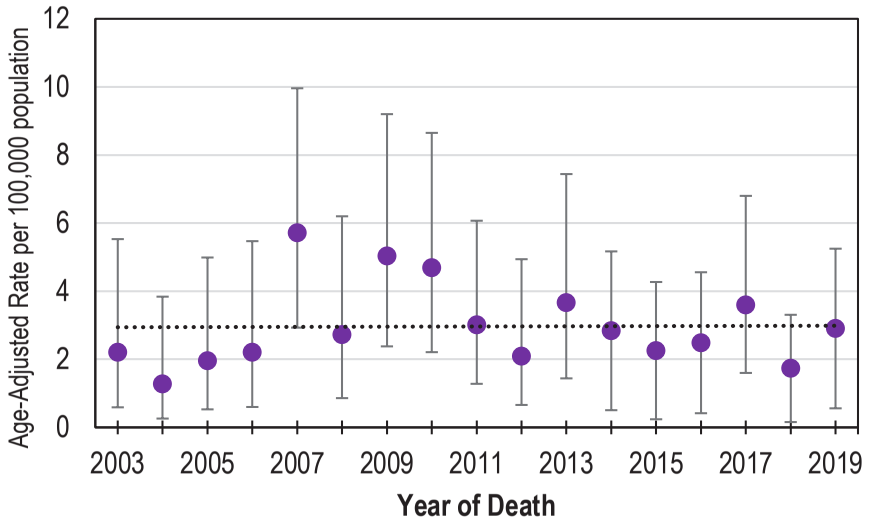


Figure 6.12: Age-Adjusted Mortality Rate Trendline by Race and Sex, Non-Hodgkin Lymphoma, Arkansas, 2003-2019

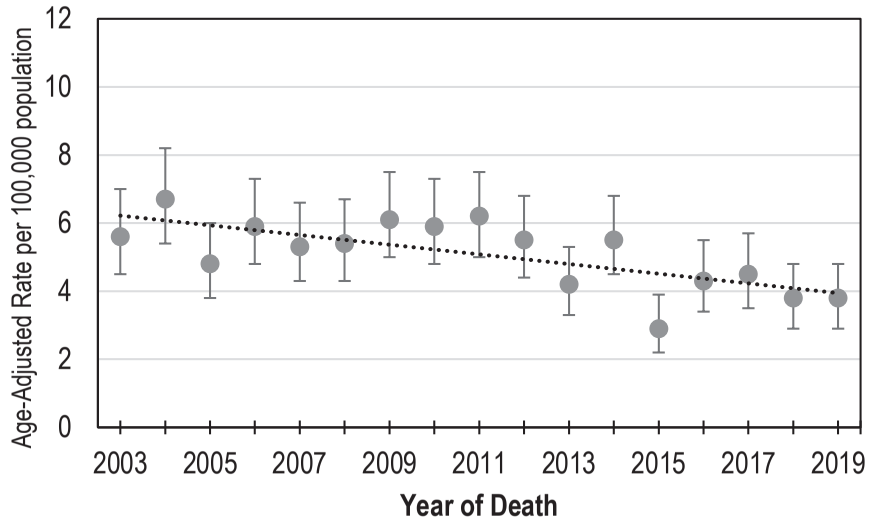


Figures 6.13A-D: Age-Adjusted Mortality Rate and 95% CI by Race, Sex, and Year of Death, Non-Hodgkin Lymphoma, Arkansas, 2003-2019

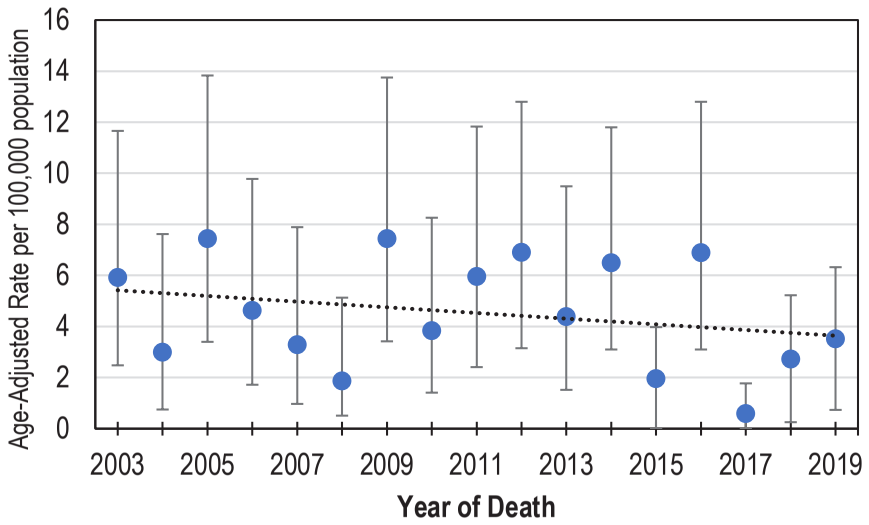
6.13A: Black, Females



6.13B: White, Females



6.13C: Black, Males



6.13D: White, Males

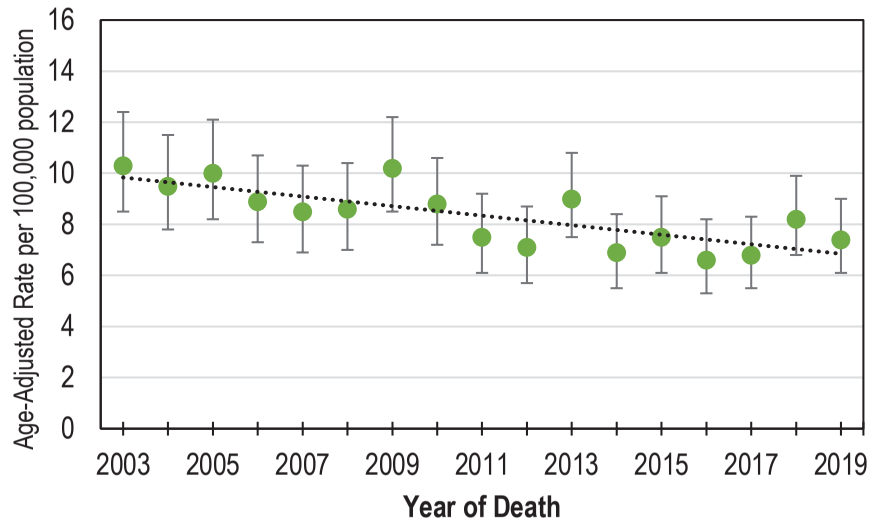


Figure 6.14: Age-Adjusted Mortality Rate and 95% CI by Race and Sex, Non-Hodgkin Lymphoma, Arkansas, 2015-2019

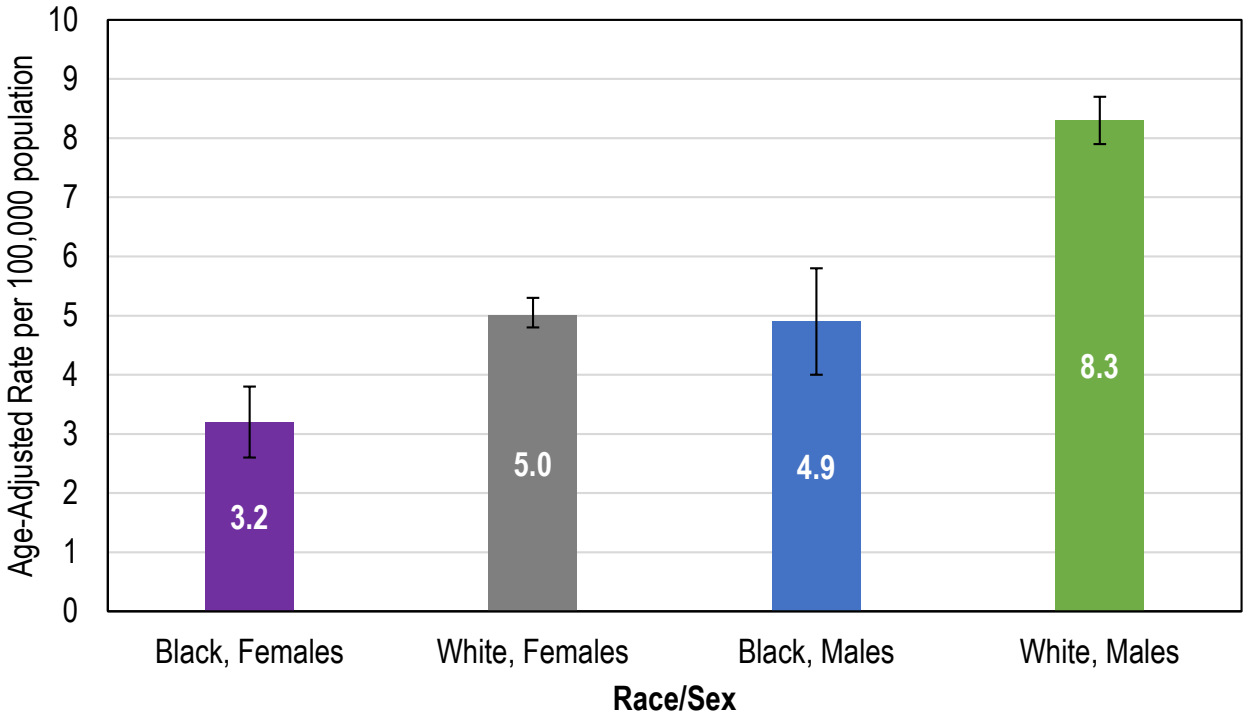
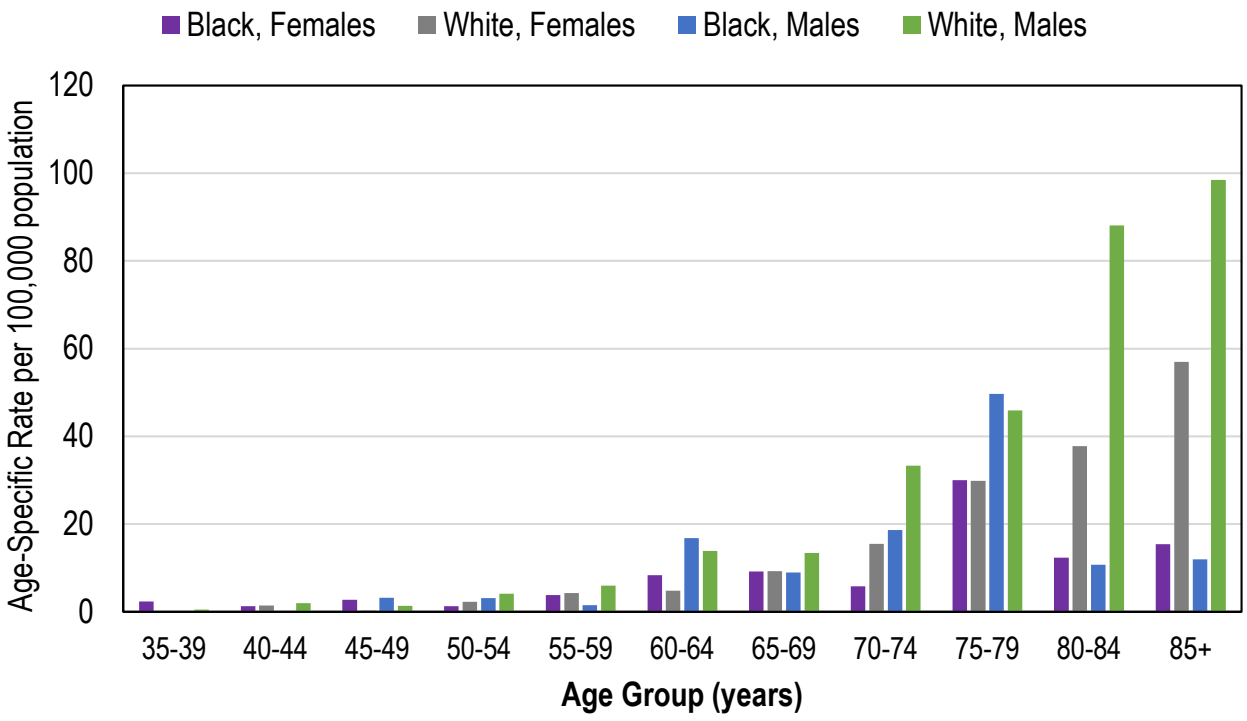
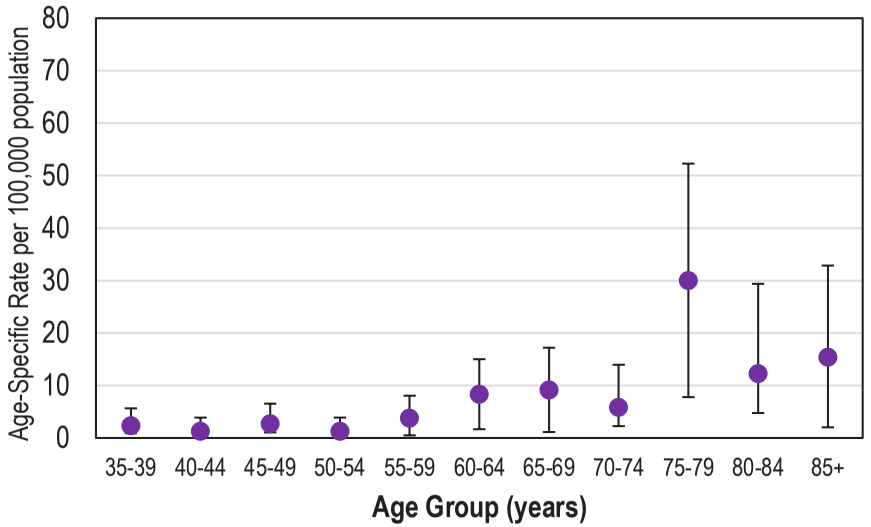


Figure 6.15: Age-Specific Mortality Rate by Age Group, Non-Hodgkin Lymphoma, Arkansas, 2015-2019

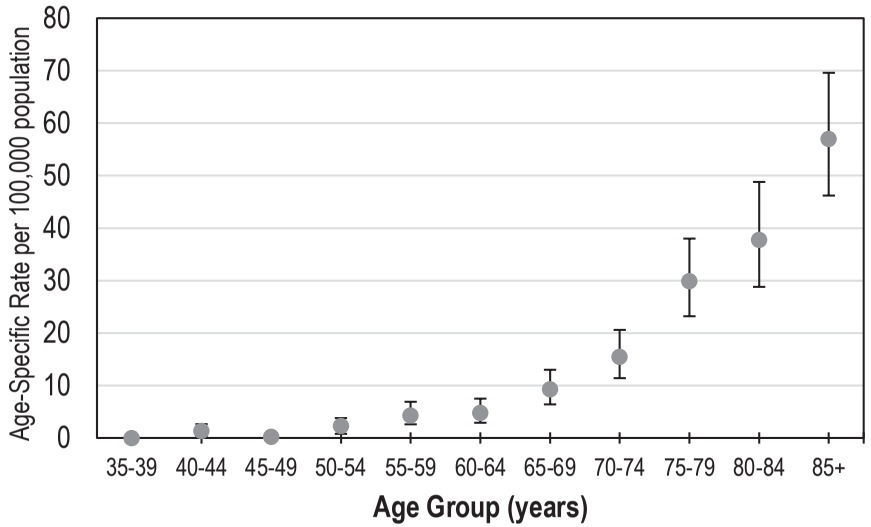


Figures 6.16A-D: Age-Specific Mortality Rate and 95% CI by Race, Sex, and Age Group, Non-Hodgkin Lymphoma, Arkansas, 2015-2019

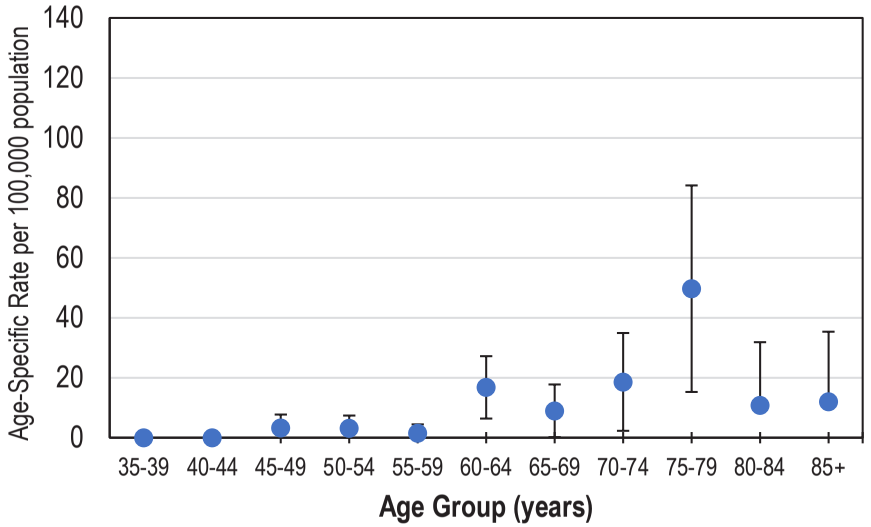
6.16A: Black, Females



6.16B: White, Females



6.16C: Black, Males



6.16D: White, Males

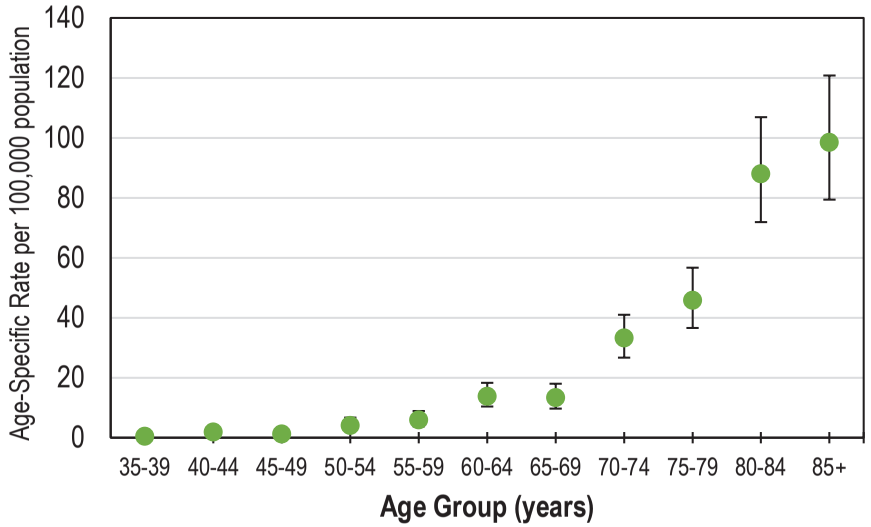
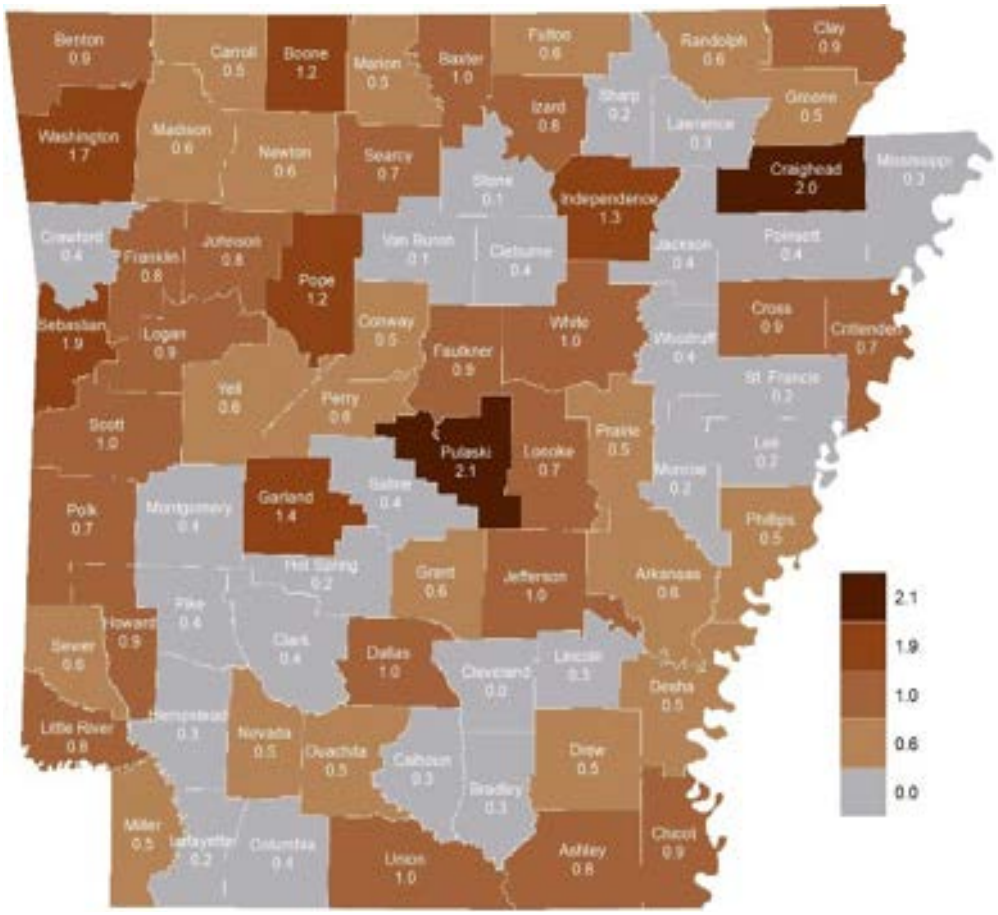


Figure 6.17: Standardized Mortality Ratio (SMR) by County, Non-Hodgkin Lymphoma, Arkansas, 2010-2019



ARKANSAS CENTRAL CANCER REGISTRY

Section 7: Melanoma

Overview

The skin is the largest organ of the body, covering the entire external surface.[38] Compared to non-melanoma skin cancers (basal cell and squamous cell carcinoma), melanoma makes up a smaller number of skin cancer cases. However, melanoma has the most skin cancer deaths because it is more likely to invade and spread to nearby tissue and other parts of the body.[38]

Melanoma is a type of skin cancer on the melanocytes, cells found in the lower part of the first layer of skin that produces the melanin pigment. While it can begin in a mole, other common sites include the neck, face, chest, back (for males), and legs (for females).

The risk of melanoma is lower among individuals with darkly pigmented skin and higher among those with fair complexion, but everyone can still get skin cancer.[39] There is currently insufficient evidence on whether skin cancer screenings, including for melanoma, lowers the rates of death from skin cancer, but there are general recommendations to lower the risk of melanoma.[39–41]

- → Regularly check your skin for new, changing or abnormal moles.
- → Limiting exposure to ultraviolet rays may help lower the risk of melanoma and skin cancer in general.
- → The majority of dermatologists and other health organizations do not recommend using tanning beds and sunlamps.
- → The ACS recommends wearing a shirt, sunglasses, a hat and using sunscreen when exposed to the sun, including on cloudy days.
- → The American Academy of Dermatology Association recommends sunscreen of at least 30 SPF. A higher number of SPF can last about the same amount of time as low-number SPF. Both should be reapplied every two (2) hours when outdoors.

Melanoma Risk Factors

Common risk factors that can increase your risk for melanoma skin cancer include:[39]

- A fair complexion, including:
  - Fair skin that freckles and burns easily, does not tan, or tans poorly
  - Blue or green or other light-colored eyes
  - Red or blond hair
- Exposure to natural or artificial sunlight (ultraviolet rays) over long periods of time
- History of many blistering sunburns, especially as a child or teenager
- Having many moles
- Family history of unusual moles
- Family or personal history of melanoma
- Being of White race

With the burden of melanoma higher among White populations, this report presents incidence, mortality, and survival among White Arkansans.

Key Findings

Melanoma Incidence

- From 2005 through 2019, Arkansas previously had a lower trendline than the US through 2018. Rates increased for the US and Arkansas, with the state having a steep increase. In 2019, the rate of newly diagnosed melanoma in Arkansas was 30.0 cases per 100,000 population, compared to the US rate of 26.8 cases per 100,000 population (**Figure 7.1**).

- For 2003-2019, White males had a higher incidence rate, although incidence rates have increased for both White females and males. In 2019, the melanoma incidence rate per 100,000 population was 24.7 for White females and 37.2 for White males (**Figure 7.2, Figure 7.3A-D**).
- White males had a higher incidence rate than females for 2015-2019 (**Figure 7.4**).
- For 2015-2019, White females had a higher incidence rate of being diagnosed with melanoma in younger age groups (35 through 49) with a slight decrease as age groups increased. White males had a higher rate after the age of 50 with significant differences compared to females for age groups ≥ 60 (**Figure 7.5, Figure 7.6A-B**).
- Arkansas counties with higher-than-expected melanoma cases during 2010-2019 include Pulaski, Woodruff, and Desha (**Figure 7.7**).
- In 2015-2019, less than 16% of newly diagnosed melanoma cases were late stage, although there was a large percentage of unstaged cases (more than 20%) among White females and males (Figure 7.8).

Melanoma Survival

- Melanoma had a greater 5-year relative survival (96.8%) when diagnosed at an early stage (localized) (**Figure 7.9, Table 7.1**).

Melanoma Mortality

- From 2005 to 2019, the rate of melanoma deaths among White females and males have decreased in both Arkansas and the US. In 2019, the melanoma mortality rate in Arkansas was 1.7 deaths per 100,000 population, compared to the US rate of 2.4 deaths per 100,000 population (Figure 7.10).
- White males had a significantly higher melanoma mortality rate trendline than females from 2003 through 2019. Both groups have had a decrease over time. In 2019, the mortality rate for melanoma among White populations were: 0.9 per 100,000 population for White females and 2.9 per 100,000 population for White male (**Figure 7.11, Figure 7.12A-B**).
- White males had more than double the melanoma mortality rate compared to White females during 2015-2019 (**Figure 7.13**).
- The melanoma mortality rate for White males was significantly higher as age increased in 2015-2019 (**Figure 7.14, Figure 7.15A-B**).
- Arkansas counties with higher-than-expected deaths due to melanoma include Arkansas, Craighead, Howard and Pulaski (**Figure 1.8**).

Figure 7.1: Age-Adjusted Incidence Rate Trendline Among White Population, Melanoma, US and Arkansas, 2005-2019

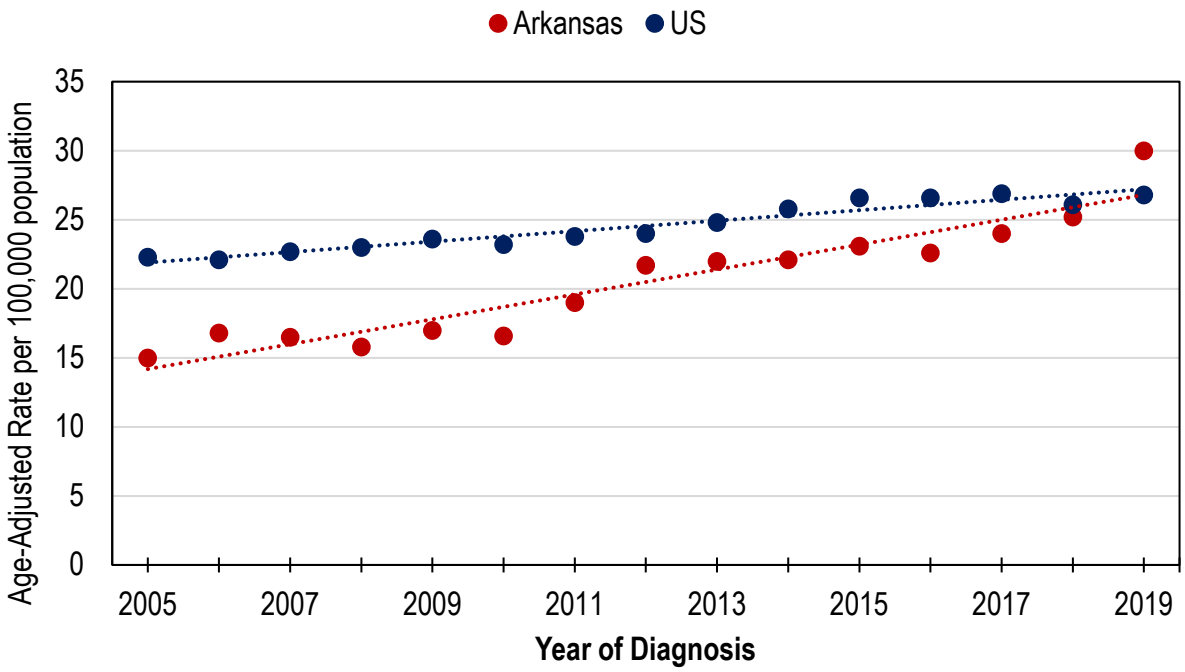
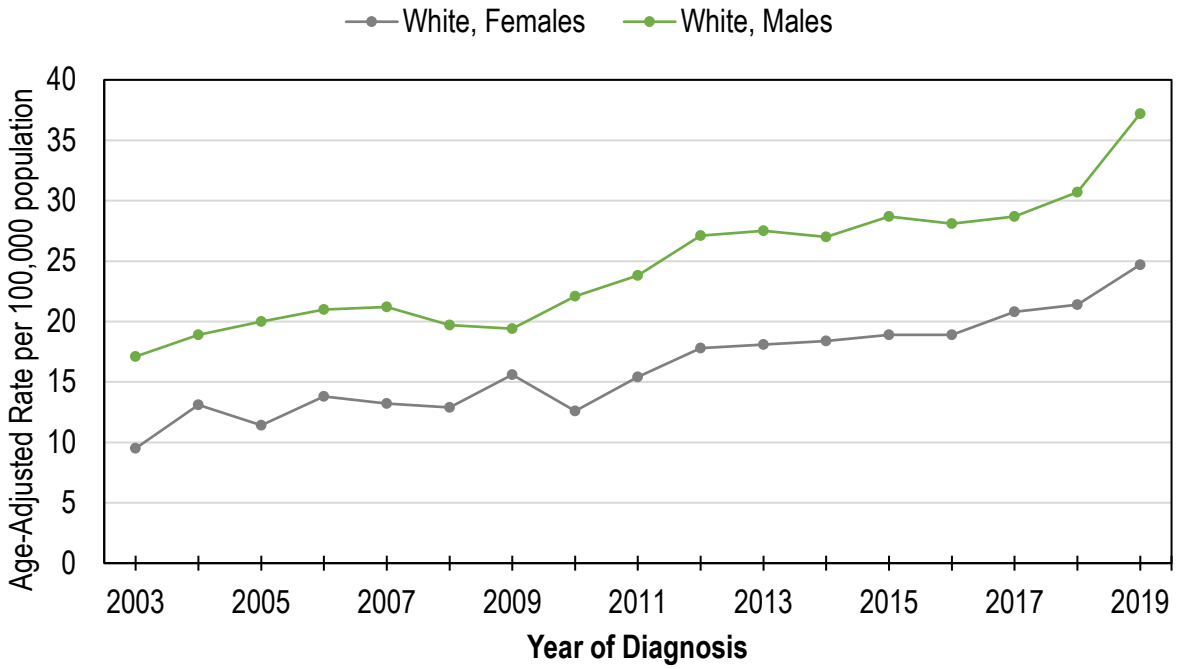
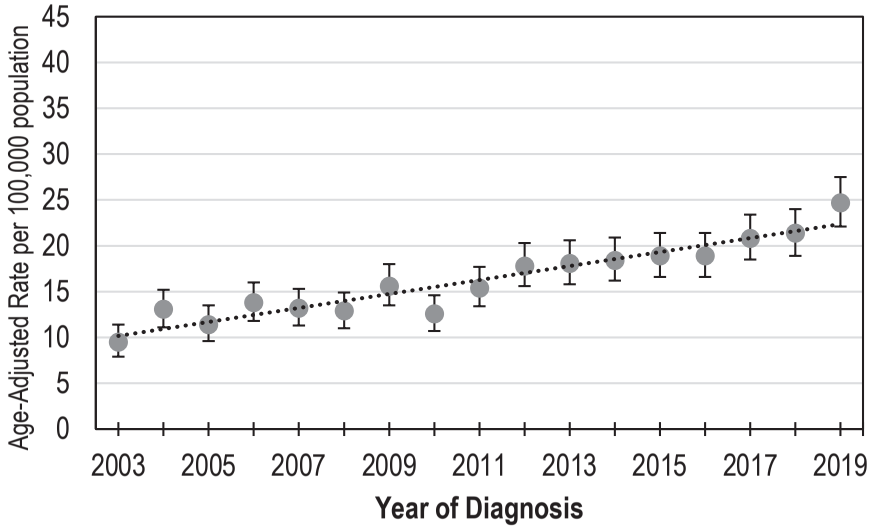


Figure 7.2: Age-Adjusted Incidence Rate Trendline by Sex Among White Population, Melanoma, Arkansas, 2003-2019



Figures 7.3A-B: Age-Adjusted Incidence Rate and 95% CI by Sex and Year of Diagnosis Among White Population, Melanoma, Arkansas, 2003-2019

7.3A: White, Females



7.3B: White, Males

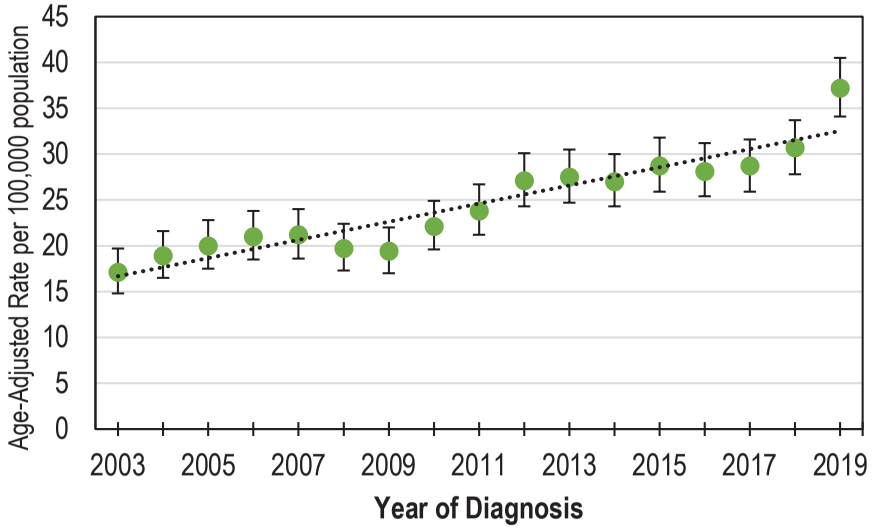


Figure 7.4: Age-Adjusted Incidence Rate and 95% CI by Sex Among White Population, Melanoma, Arkansas, 2015-2019

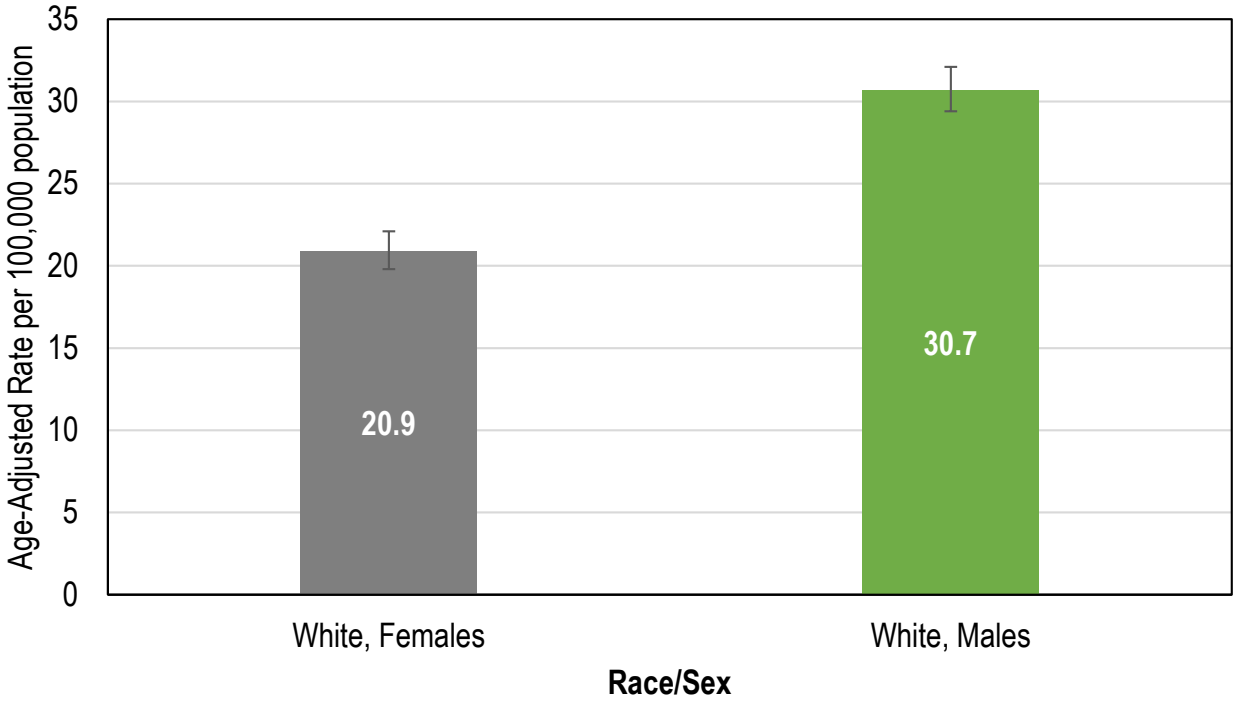
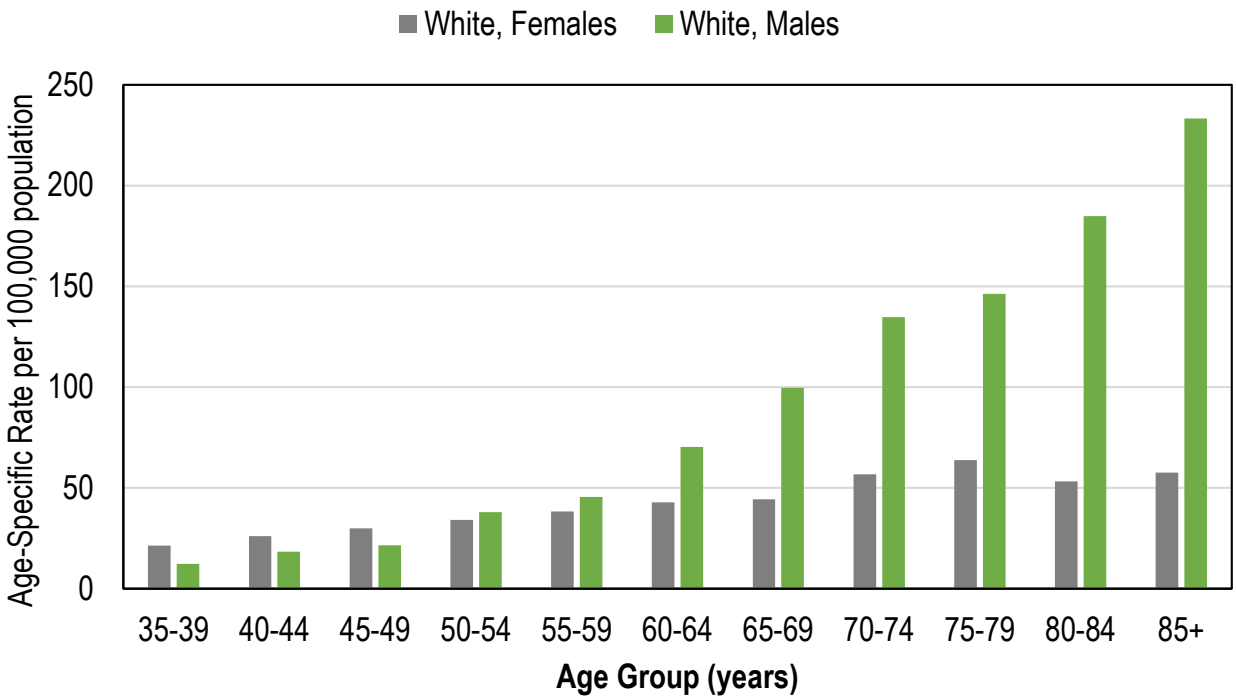
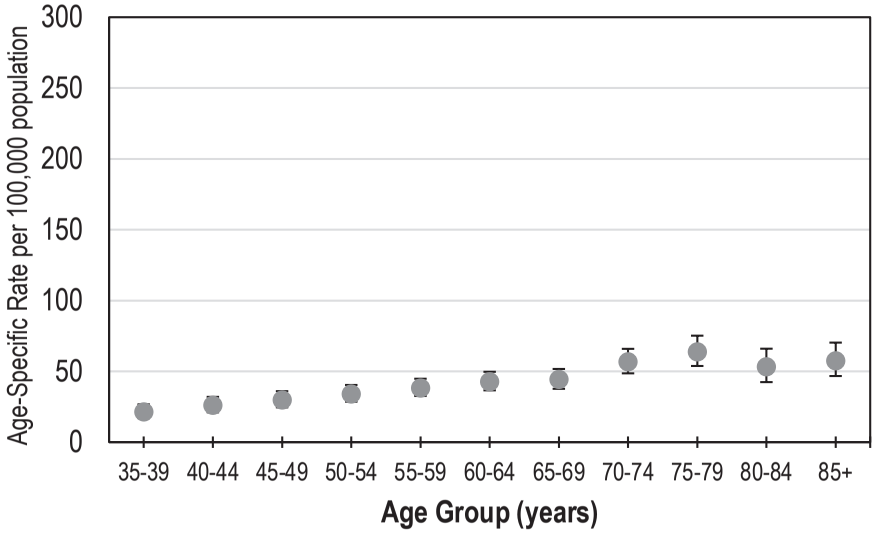


Figure 7.5: Age-Specific Incidence Rate by Sex and Age Group Among White Population, Melanoma, Arkansas, 2015-2019



Figures 7.6A-B: Age-Specific Incidence Rate and 95% CI by Sex and Age Group Among White Population, Melanoma, Arkansas, 2015-2019

7.6A: White, Females



7.6B: White, Males

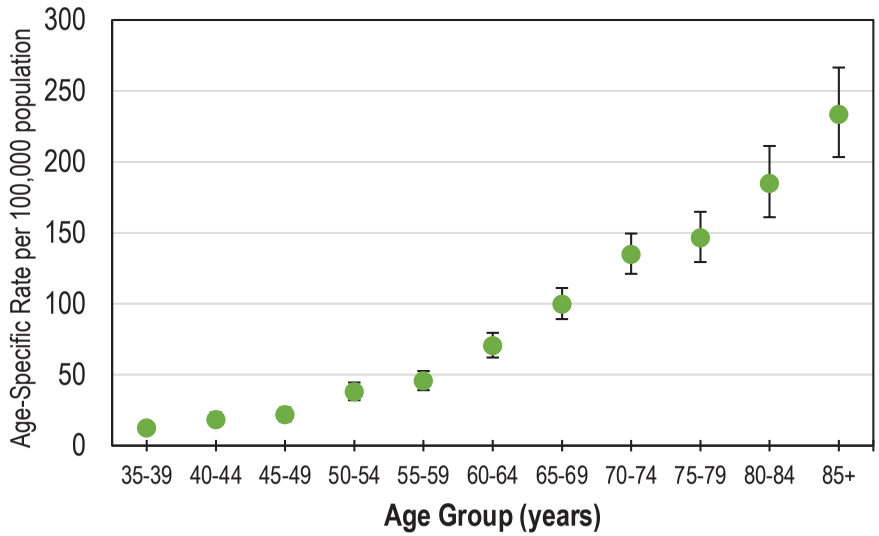


Figure 7.7: Standardized Incidence Ratio (SIR) by County Among White Population, Melanoma, Arkansas, 2010-2019

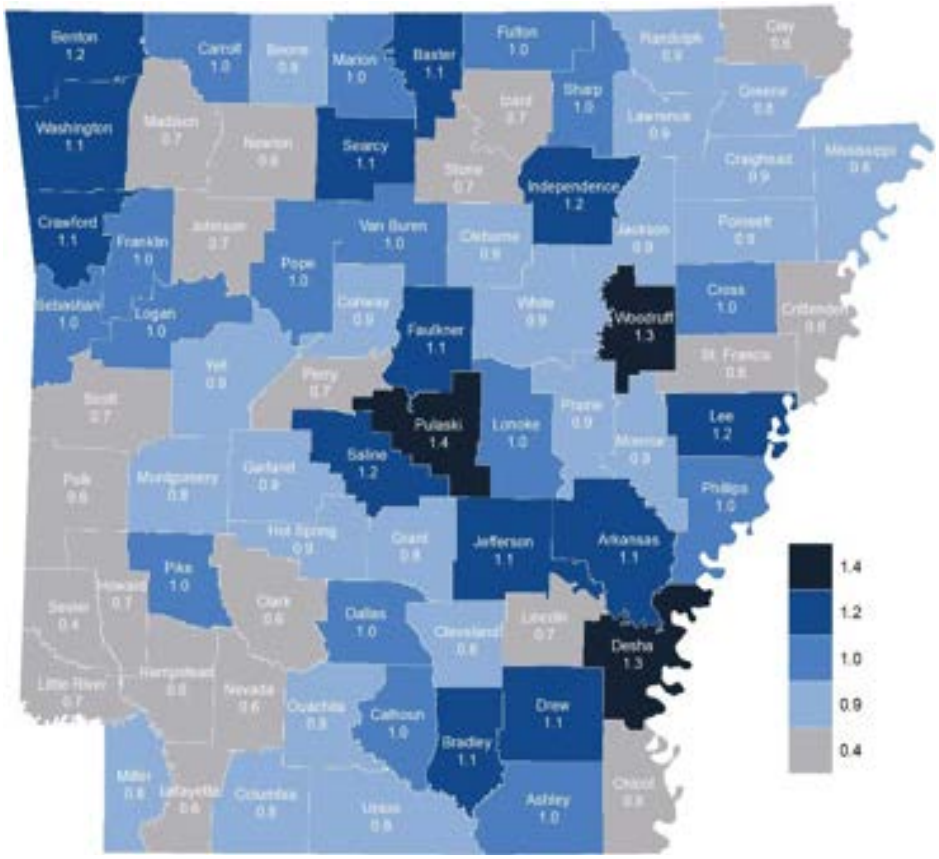
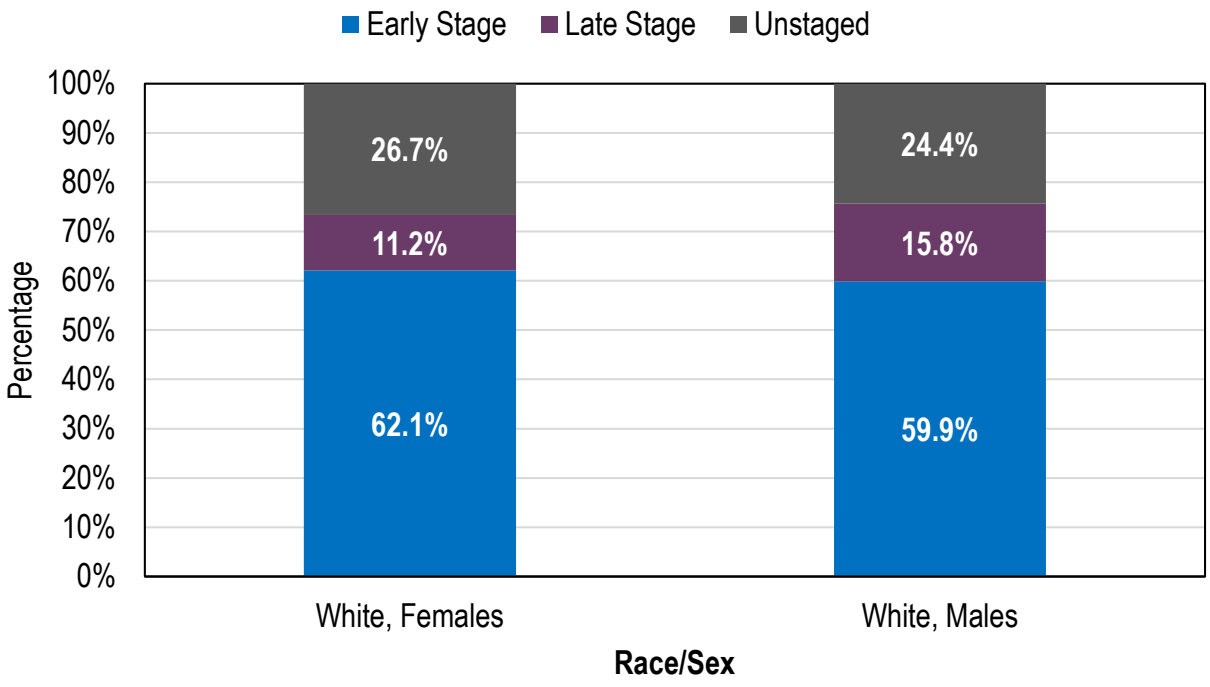


Figure 7.8: Percentage of SEER Summary Stage at Diagnosis by Sex Among White Population, Melanoma, Arkansas, 2015-2019



SURVIVAL: MELANOMA

Figure 7.9: 5-Year Relative Survival Percent (%) by Stage at Diagnosis Among White Population, Melanoma, Arkansas, 2007-2019

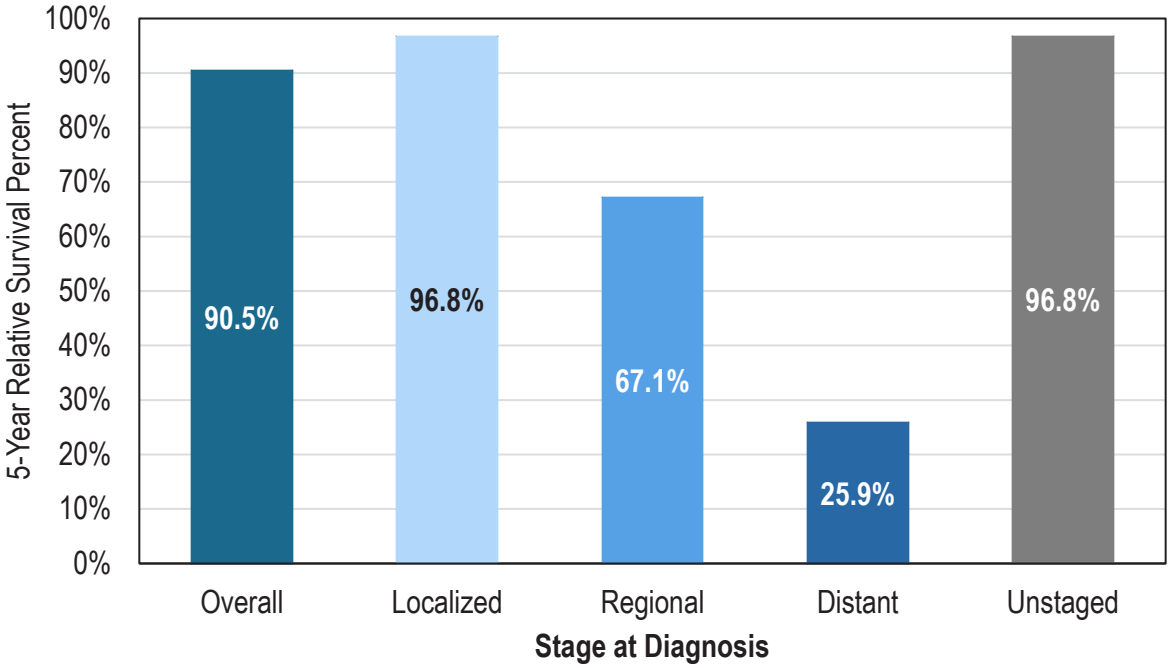


Table 7.1: 5-Year Relative Survival Percent (%) by Stage at Diagnosis and Years after Diagnosis Among White Population, Melanoma, Arkansas, 2007-2019

	Relative Survival Percent by Stage at Diagnosis				
Years after Diagnosis	Overall	Localized	Regional	Distant	Unstaged
1	96%	100%	93%	46%	99%
2	94%	99%	83%	35%	98%
3	92%	98%	74%	30%	97%
4	91%	98%	69%	28%	97%
5	91%	97%	67%	26%	97%

Figure 7.10: Age-Adjusted Mortality Rate Trendline Among White Population, Melanoma, US and Arkansas, 2005-2019

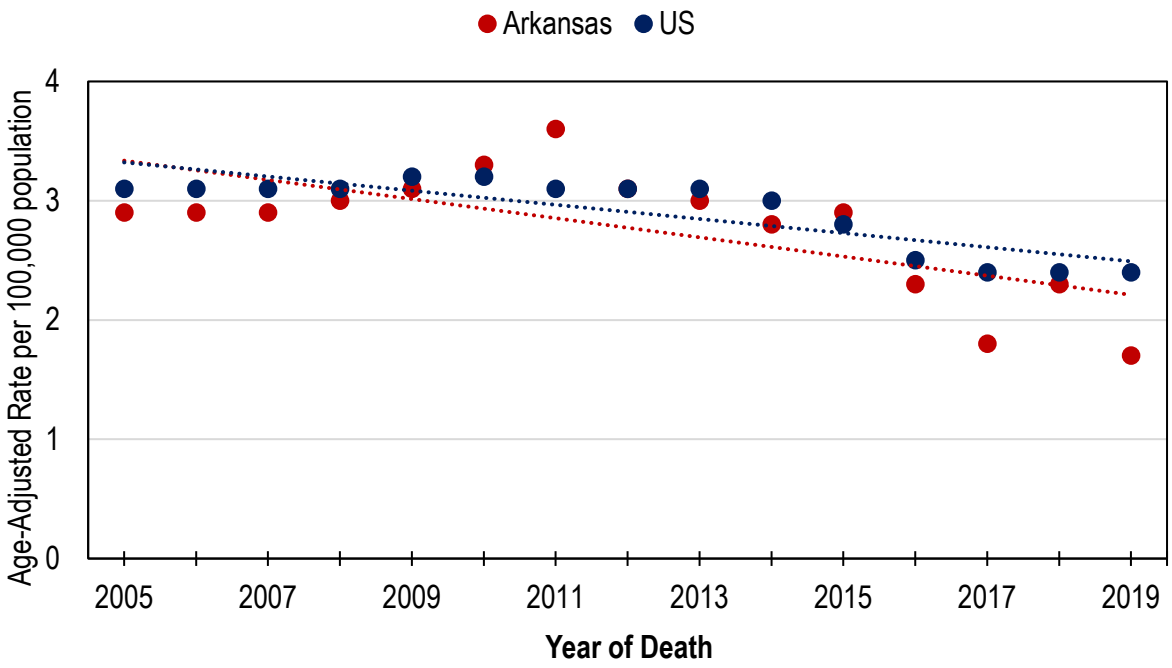
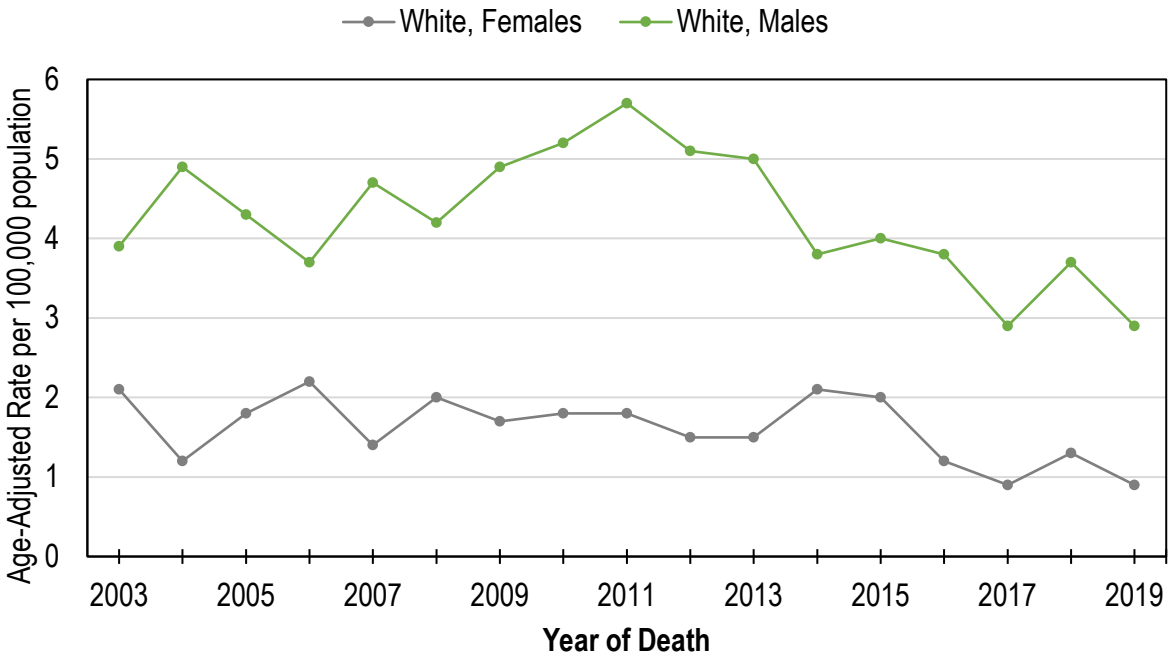
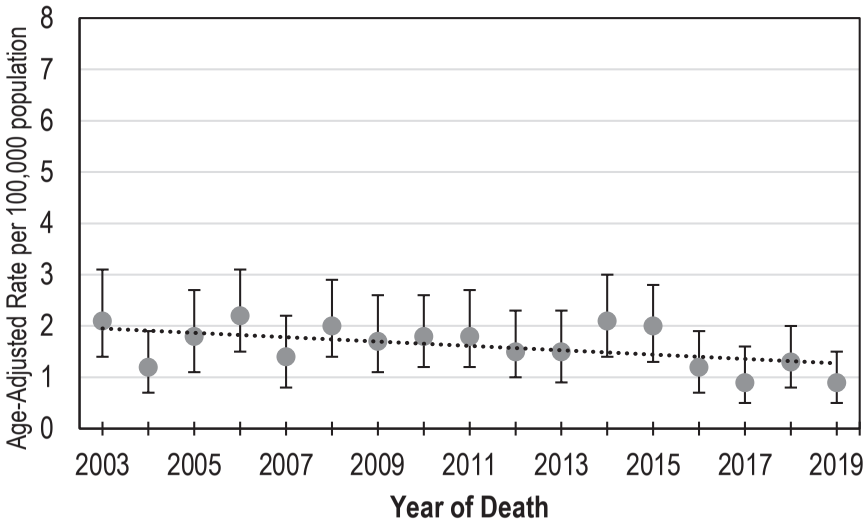


Figure 7.11: Age-Adjusted Mortality Rate Trendline by Sex Among White Population, Melanoma, Arkansas, 2003-2019



Figures 7.12A-B: Age-Adjusted Mortality Rate and 95% CI by Sex and Year of Death Among White Population, Melanoma, Arkansas, 2003-2019

7.12A: White, Females



7.12B: White, Males

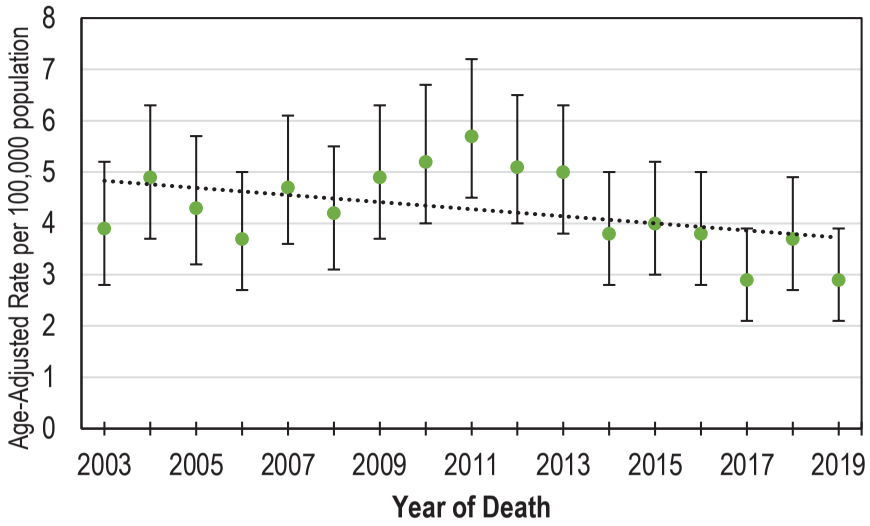


Figure 7.13: Age-Adjusted Mortality Rate and 95% CI by Sex Among White Population, Melanoma, Arkansas, 2015-2019

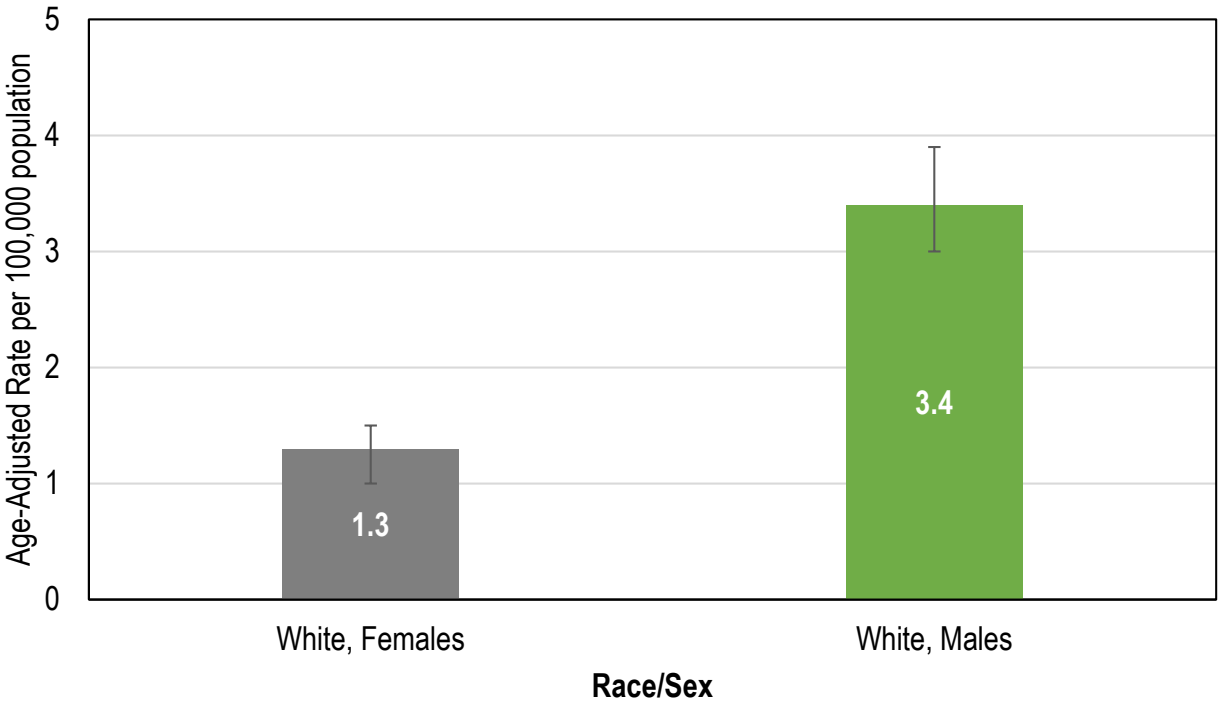
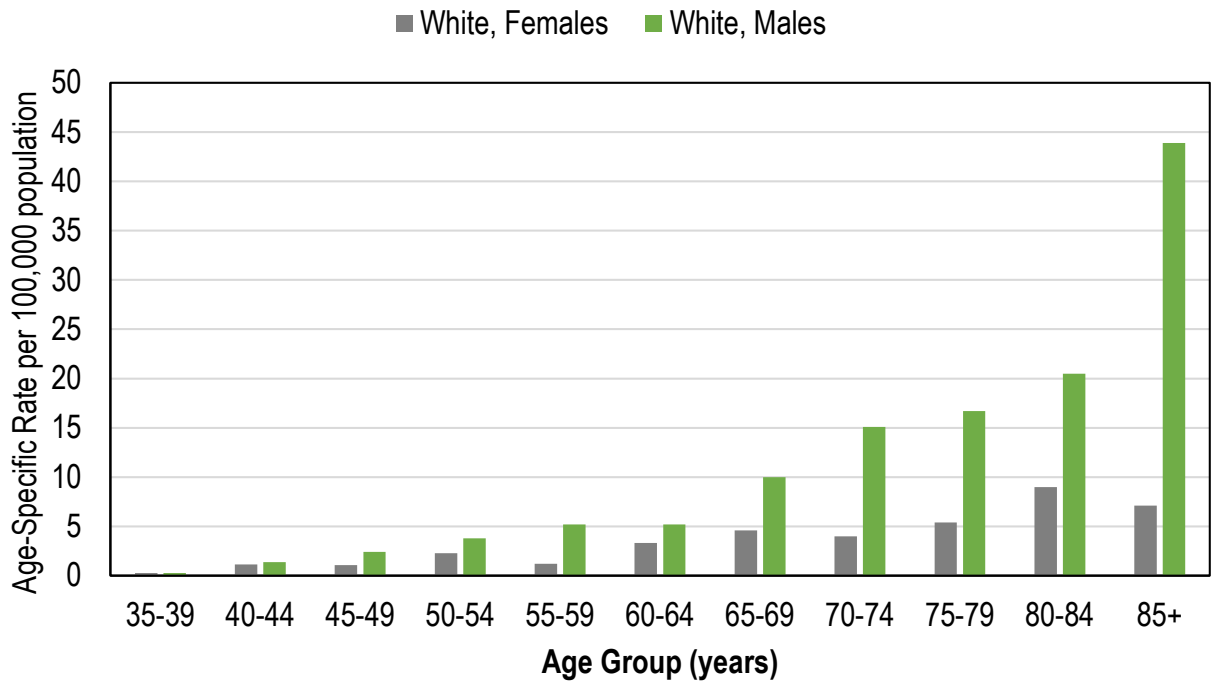
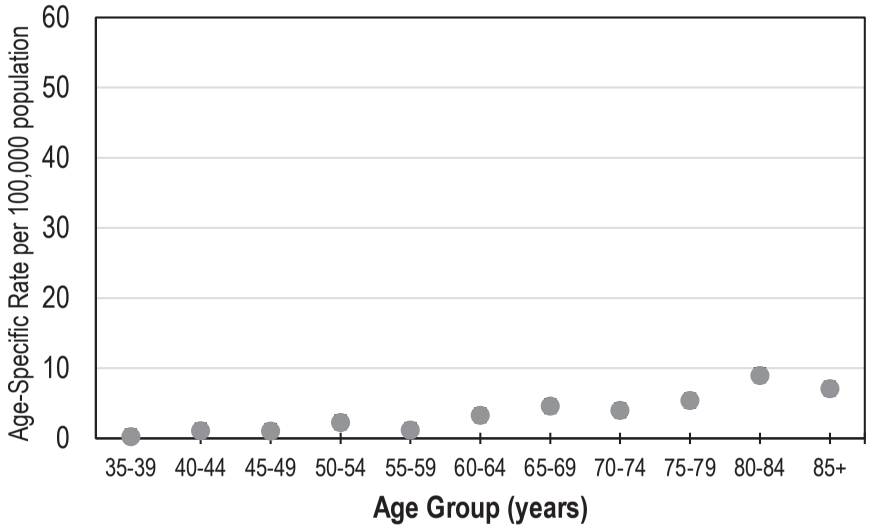


Figure 7.14: Age-Specific Mortality Rate by Sex and Age Group Among White Population, Melanoma, Arkansas, 2015-2019



Figures 7.15A-B: Age-Specific Mortality Rate and 95% CI by Race, Sex, and Age Group Among White Population, Melanoma, Arkansas, 2015-2019

7.15A: White, Females



7.15B: White, Males

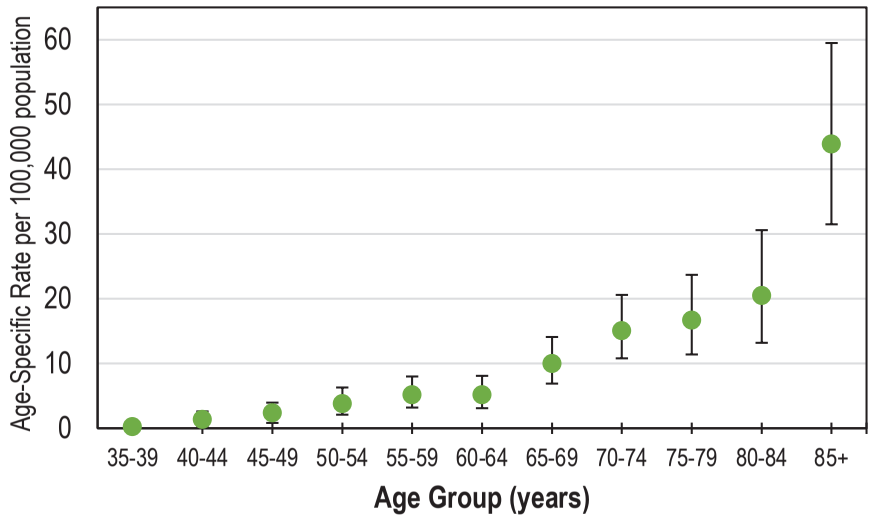
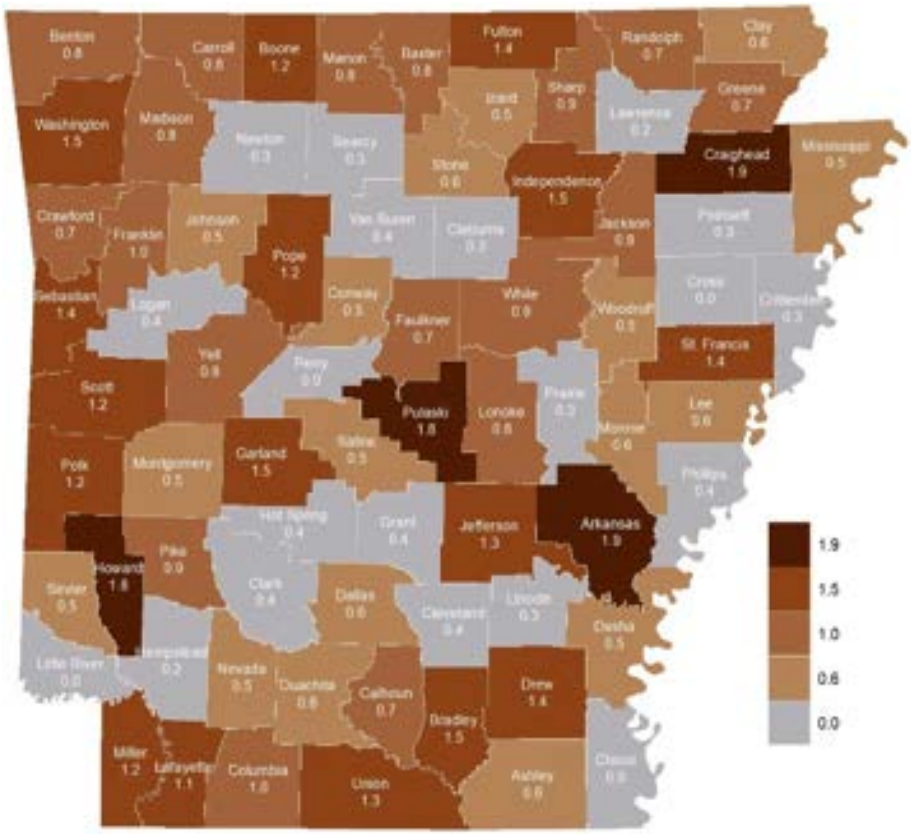


Figure 7.16: Standardized Mortality Ratio (SMR) by County Among White Population, Melanoma, Arkansas, 2010-2019



ARKANSAS CENTRAL CANCER REGISTRY

Section 8: Ovarian Cancer

Overview

The rate of newly diagnosed ovarian cancer have declined over time in the US, but incidence and mortality rates remain high among developed countries.[42] Research has suggested that many ovarian cancer cases may stem from cells in the far end of the fallopian tubes, and is commonly diagnosed among postmenopausal females with approximately 10-15% of cases being due to genetics (such as BRCA genes, hereditary nonpolyposis colon cancer or Lynch syndrome and Peutz-Jeghers syndrome).[42,43] There is currently no recommended routine screening for ovarian cancer without symptoms.

Ovarian Cancer Risk Factors

- Common risk factors that can increase your risk for ovarian cancer include[42]:
- Older age
- Overweight and/or obesity
- Having children later or never having a full-term pregnancy
- Hormone therapy after menopause
- Fertility treatment
- History of breast cancer
- Smoking
- Family history of ovarian cancer, breast cancer, or colorectal cancer
- Family history syndrome, including:
    - Hereditary breast and ovarian cancer syndrome (HBOC)
    - Hereditary nonpolyposis colon cancer (HNPCC)
    - Peutz-Jeghers syndrome
    - MUTYH-associated polyposis

Key Findings*

*Caution is suggested in interpretation as Arkansas data had a high variation in incidence and mortality rates, specifically among Black females.

Ovarian Cancer Incidence

- Ovarian cancer incidence rates decreased in both Arkansas and the US, although Arkansas had more rate variation from 2005 through 2019. In 2019, the rate for ovarian cancer in Arkansas was 8.3 cases per 100,000 population, compared to the US rate of 9.9 cases per 100,000 population (**Figure 8.1**).
- During 2015-2019, Black females had a lower ovarian cancer incidence rate trendline than White females. Ovarian cancer incidence rates decreased over time for White females and remained relatively flat for Black females (**Figure 8.2, Figures 8.3A-B**).
- Overall, White females had a higher incidence rate of ovarian cancer compared to Black females in 2015-2019 (**Figure 8.4**).
- The age-specific rate of ovarian cancers diagnosed in Arkansas for 2015-2019 varied by age group for both Black and White females. White females had higher incidence rate for age groups 30 through 54, 60 through 79, while White females had a higher rate for age groups 55-59, and 80 through 85+ (**Figure 8.5, Figures 8.6A-D**).
- Arkansas counties with a higher-than-expected number of ovarian cancers diagnosed during 2010-2019 were in the northern part of the state (**Figure 8.7**).
- More than 70% of Black and White females were diagnosed in a late stage (**Figure 8.8**).

Ovarian Cancer Survival

- The 5-year relative survival for ovarian cancer among Arkansas females in 2007-2019 was higher by year when diagnosed at an early stage (localized) but lowered when diagnosed at a distant stage (**Figure 8.9, Table 8.1**).

Ovarian Cancer Mortality

- From 2005 to 2019, the mortality rate for ovarian cancer decreased in both Arkansas and the US with close rate trendlines. In 2019, the ovarian cancer mortality rate in Arkansas was 5.3 deaths per 100,000 population, compared to the US rate of 6.0 deaths per 100,000 population (Figure 8.10).
- Black and White female rate trendlines varied by year of death from 2003-2019. Ovarian cancer mortality rate in Arkansas decreased for White females. In 2019, the ovarian cancer mortality rates per 100,000 population were 4.8 for Black females and 5.5 for White females (**Figure 8.11, Figures 8.12A-B**).
- For 2015-2019, Black females had a higher ovarian cancer mortality rate than White females (**Figure 8.13**).
- During 2015-2019, Black females had a significantly higher age-specific mortality rate for ovarian cancer for age groups '55-59', '65-69', and '70-74' (**Figure 8.14, Figure 8.15A-B**).
- Arkansas counties with higher-than-expected ovarian cancer deaths include Craighead, Sebastian, and Pulaski (**Figure 8.16**)

INCIDENCE: OVARIAN CANCER

Figure 8.1: Age-Adjusted Incidence Rate Trendline Among Females, Ovarian Cancer, US and Arkansas, 2005-2019

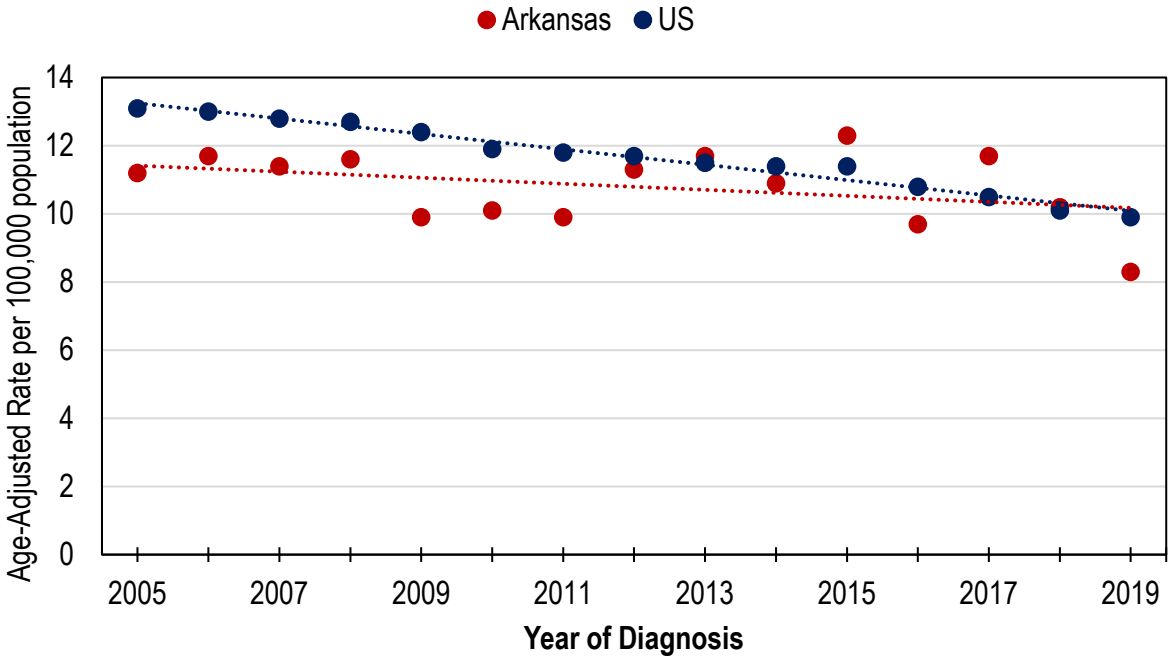
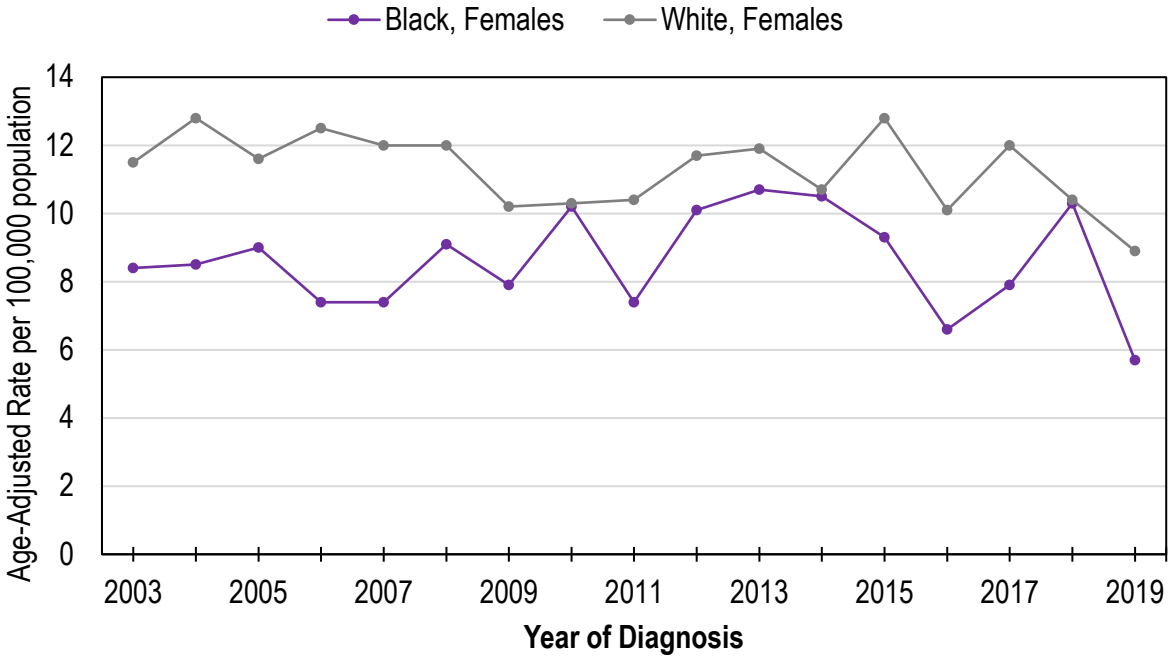
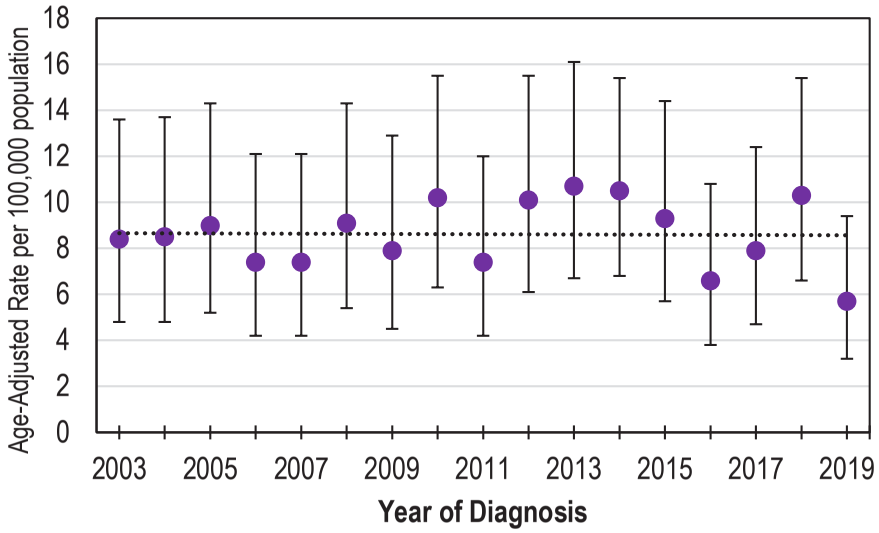


Figure 8.2: Age-Adjusted Incidence Rate Trendline by Race Among Females, Ovarian Cancer, Arkansas, 2003-2019



Figures 8.3A-B: Age-Adjusted Incidence Rate and 95% CI by Race and Year of Diagnosis Among Females, Ovarian Cancer, Arkansas, 2003-2019

8.3A: Black, Females



8.3B: White, Females

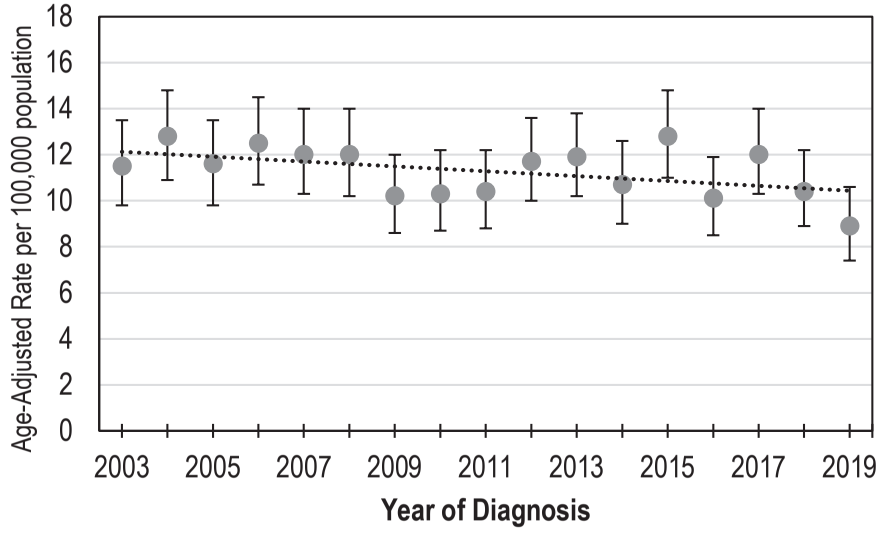


Figure 8.4: Age-Adjusted Incidence Rate and 95% CI by Race Among Females, Ovarian Cancer, Arkansas, 2015-2019

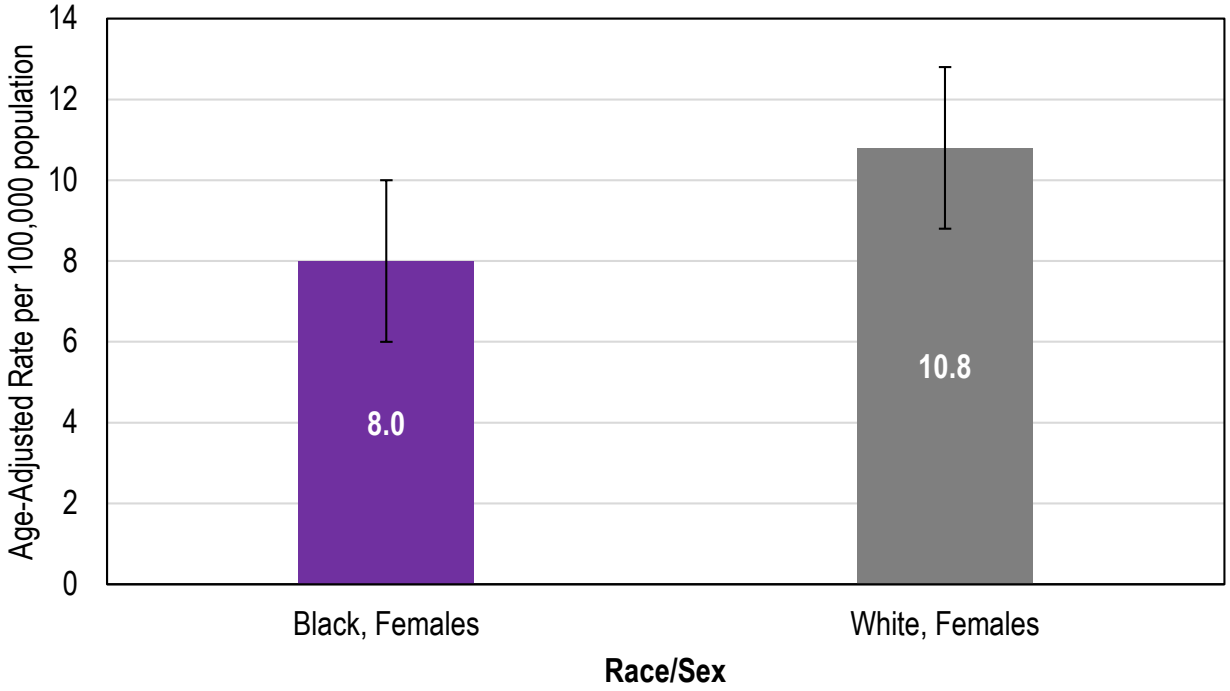
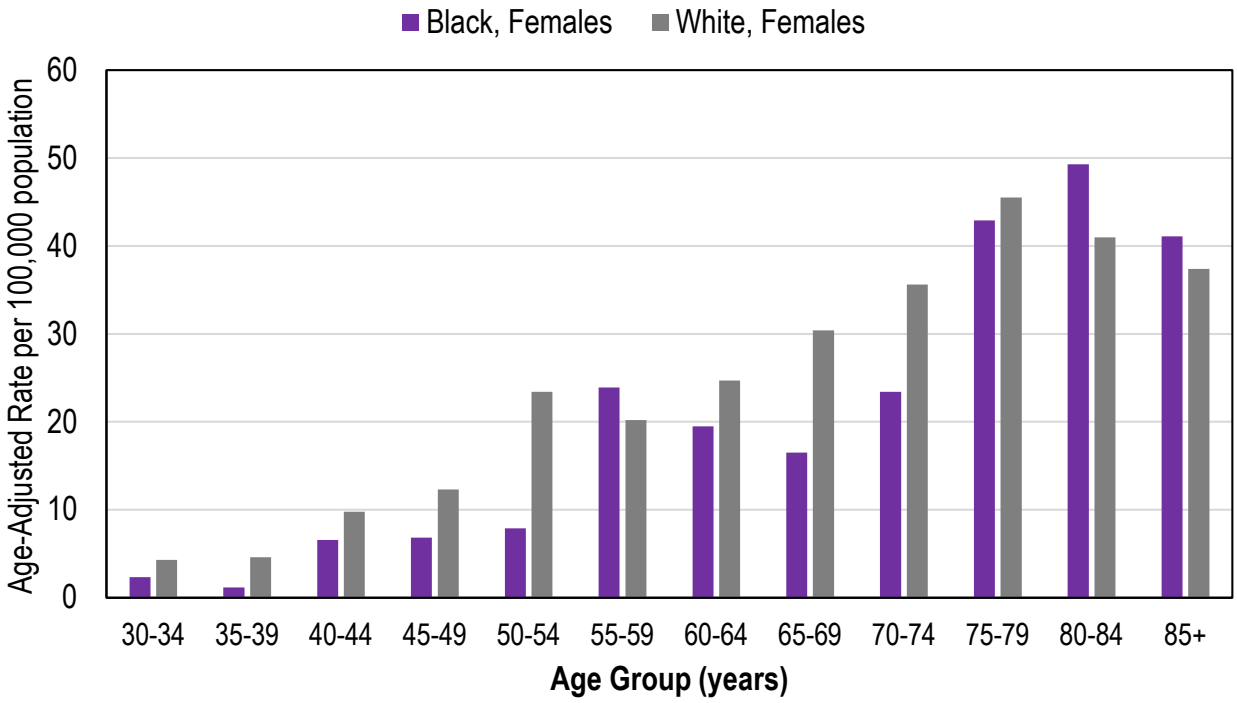
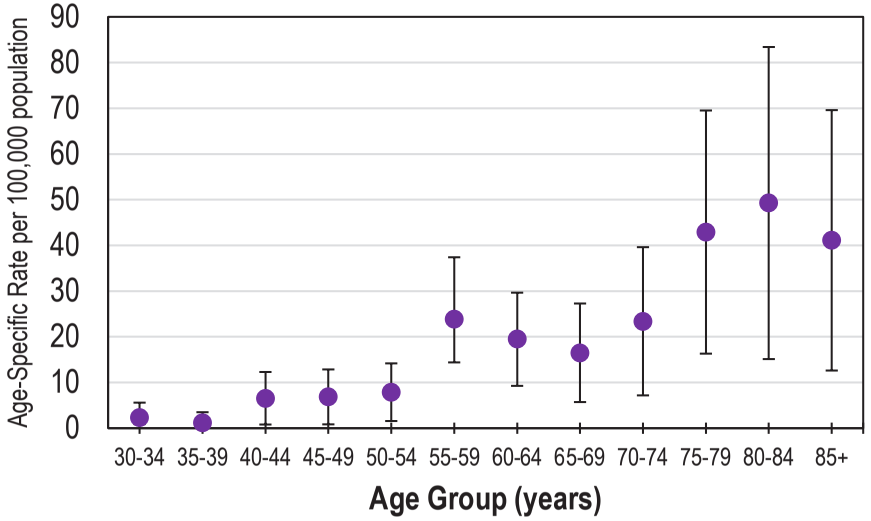


Figure 8.5: Age-Specific Incidence Rate by Race and Age Group Among Females, Ovarian Cancer, Arkansas, 2015-2019



Figures 8.6A-B: Age-Specific Incidence Rate and 95% CI by Race and Age Group Among Females, Ovarian Cancer, Arkansas, 2015-2019

8.6A: Black, Females



8.6B: White, Females

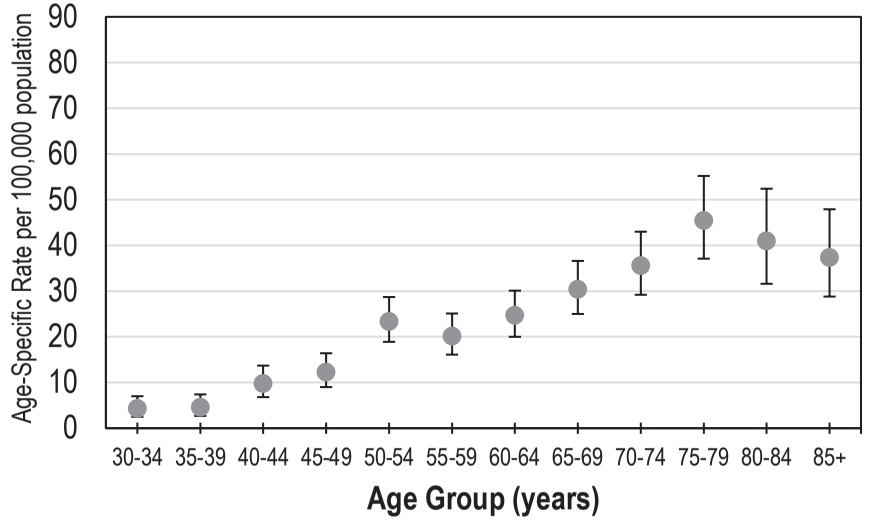


Figure 8.7: Standardized Incidence Ratio (SIR) by County Among Females, Ovarian Cancer, Arkansas, 2010-2019

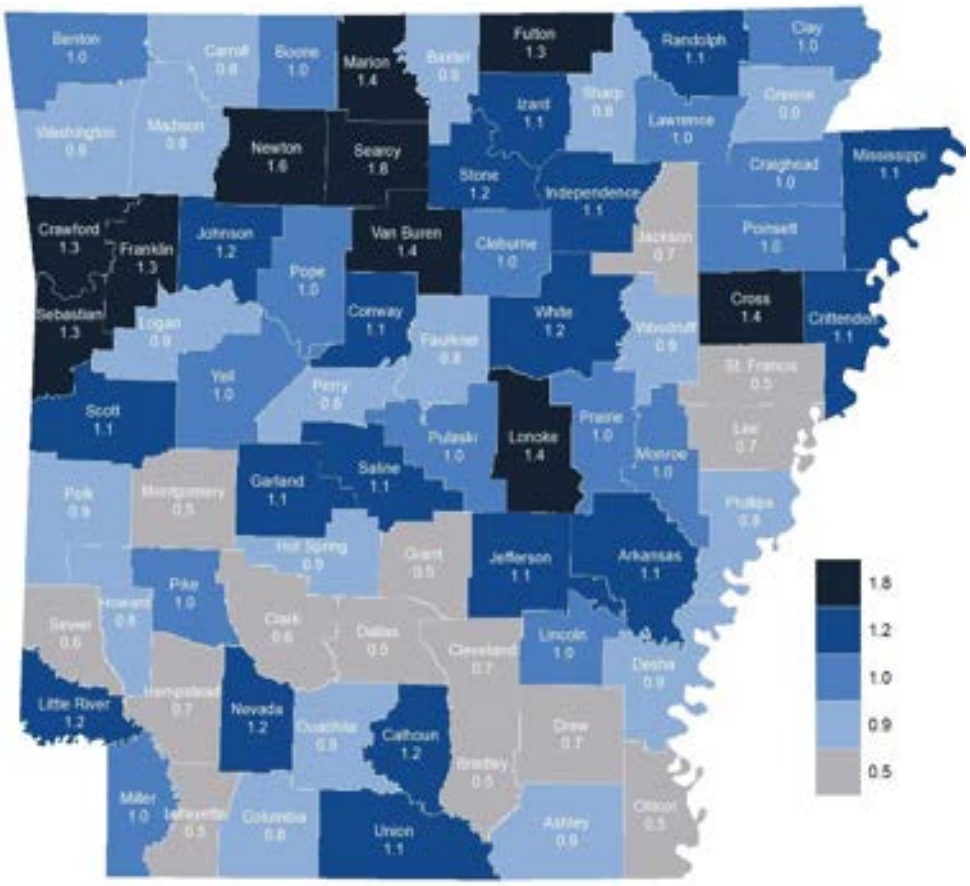
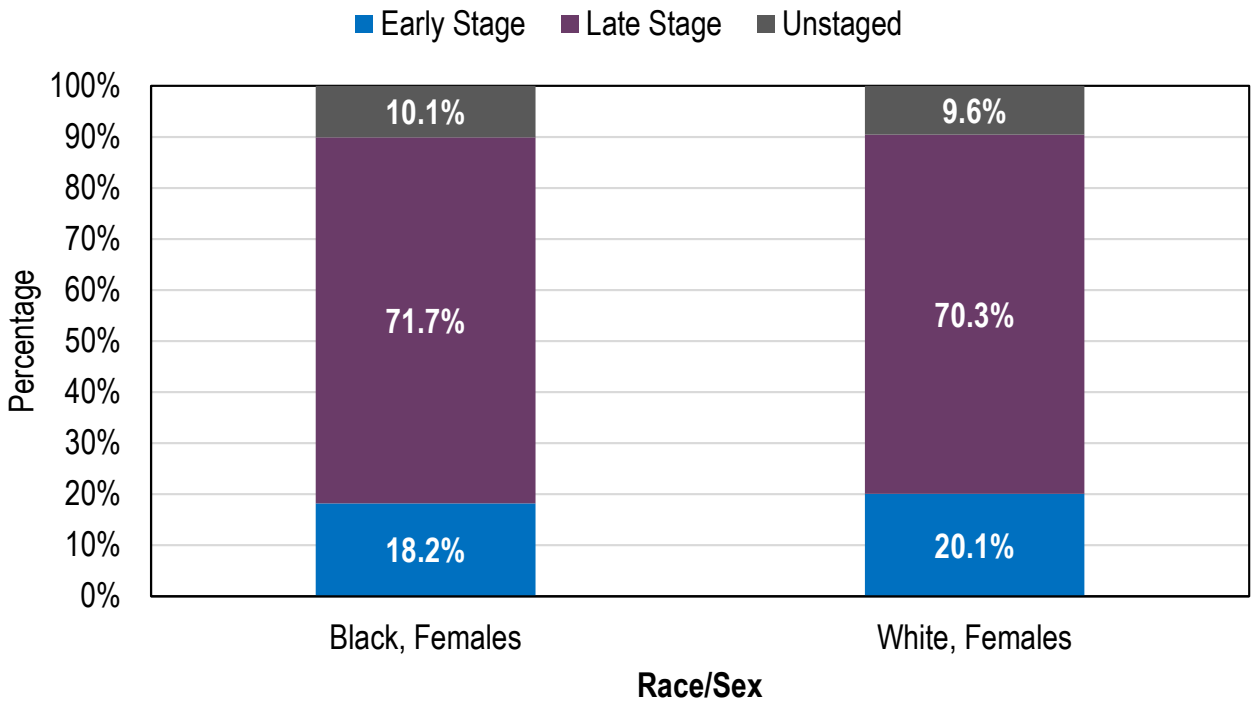


Figure 8.8: Percentage of SEER Summary Stage at Diagnosis by Race Among Females, Ovarian Cancer, Arkansas, 2015-2019



SURVIVAL: OVARIAN CANCER

Figure 8.9: 5-Year Relative Survival Percent (%) by Stage at Diagnosis Among Females, Ovarian Cancer, Arkansas, 2007-2019

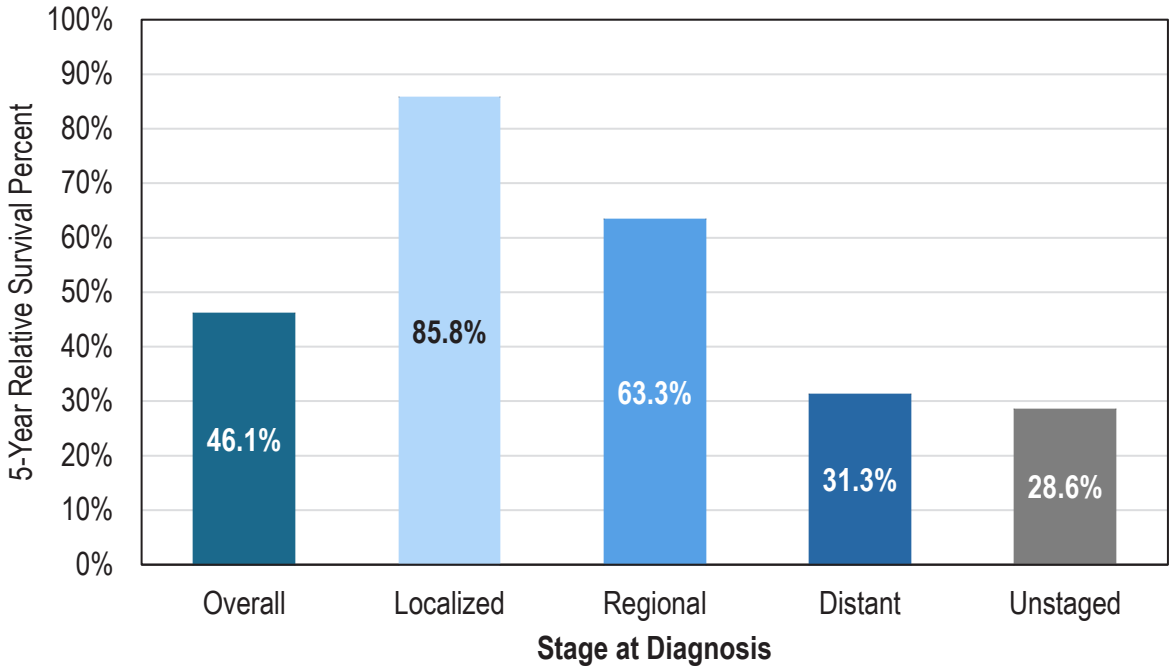


Table 8.1: 5-Year Relative Survival Percent (%) by Stage at Diagnosis and Years after Diagnosis Among Females, Ovarian Cancer, Arkansas, 2007-2019

	Relative Survival Percent by Stage at Diagnosis				
Years after Diagnosis	Overall	Localized	Regional	Distant	Unstaged
1	75%	93%	85%	69%	59%
2	65%	92%	80%	55%	47%
3	57%	90%	74%	44%	39%
4	51%	87%	67%	37%	33%
5	46%	86%	63%	31%	29%

Figure 8.10: Age-Adjusted Mortality Rate Trendline Among Females, Ovarian Cancer, US and Arkansas, 2005-2019

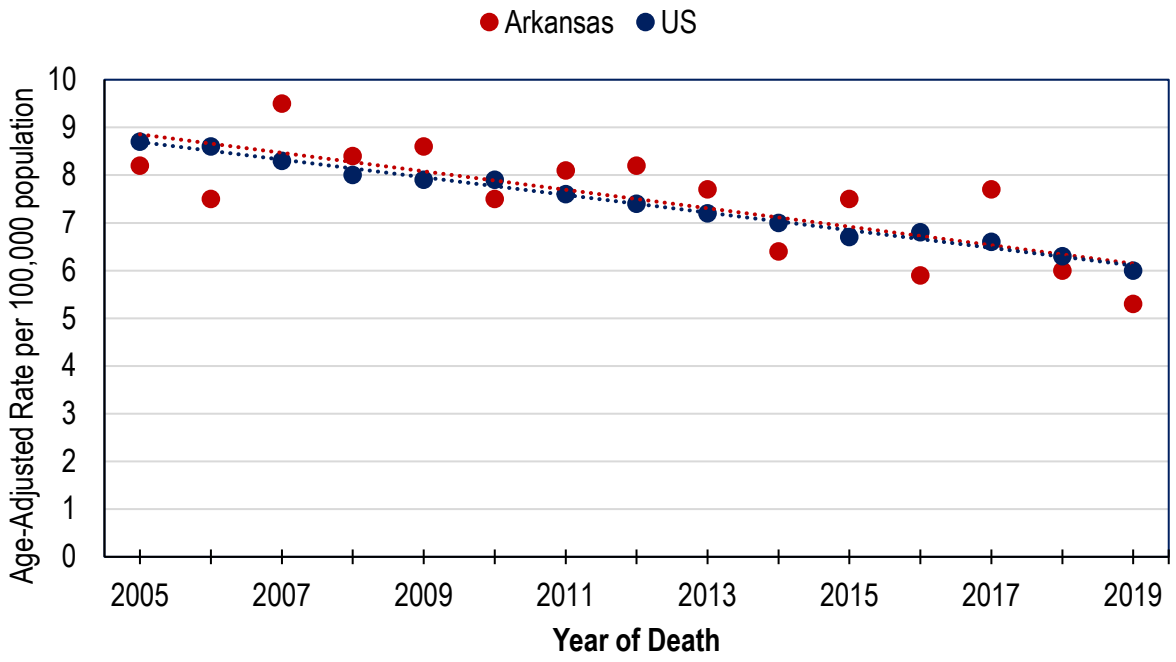
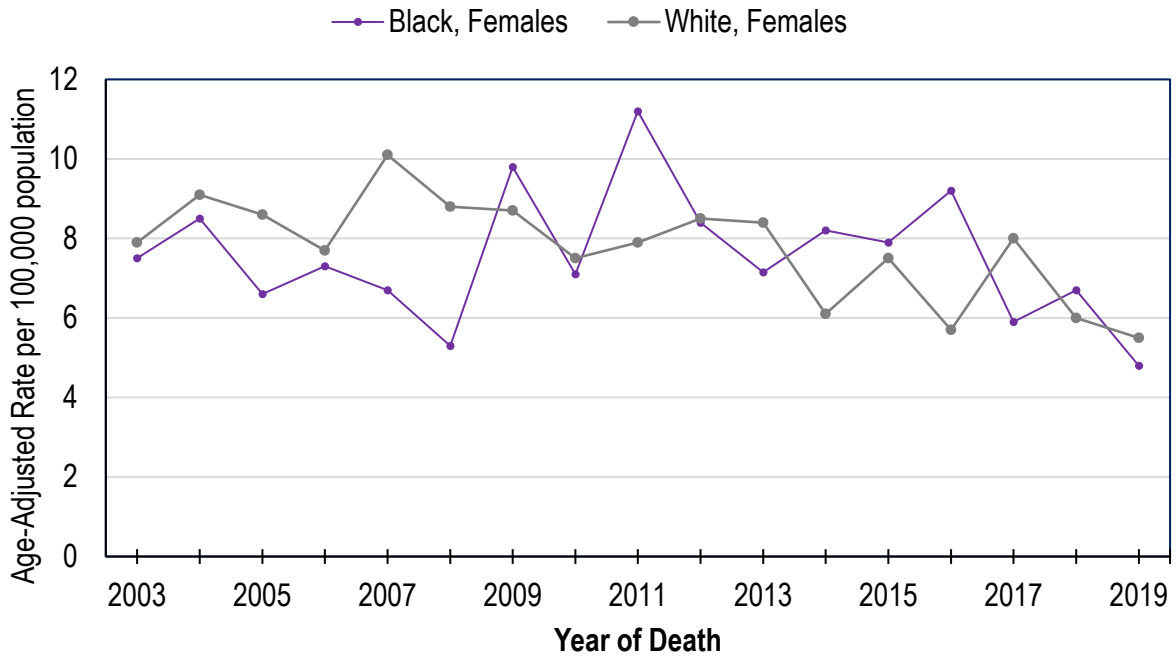
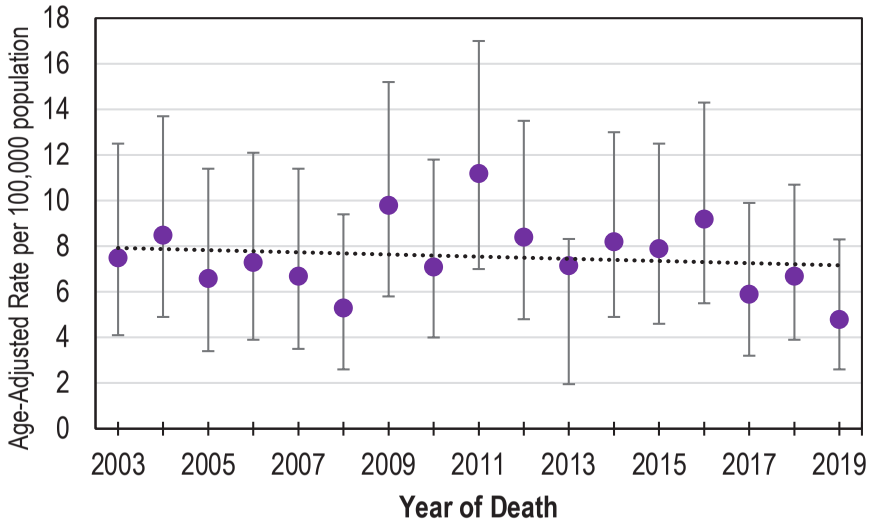


Figure 8.11: Age-Adjusted Mortality Rate Trendline by Race Among Females, Ovarian Cancer, Arkansas, 2003-2019



Figures 8.12A-B: Age-Adjusted Mortality Rate and 95% CI by Race and Year of Death Among Females, Ovarian Cancer, Arkansas, 2003-2019

8.12A: Black, Females



8.12B: White, Females

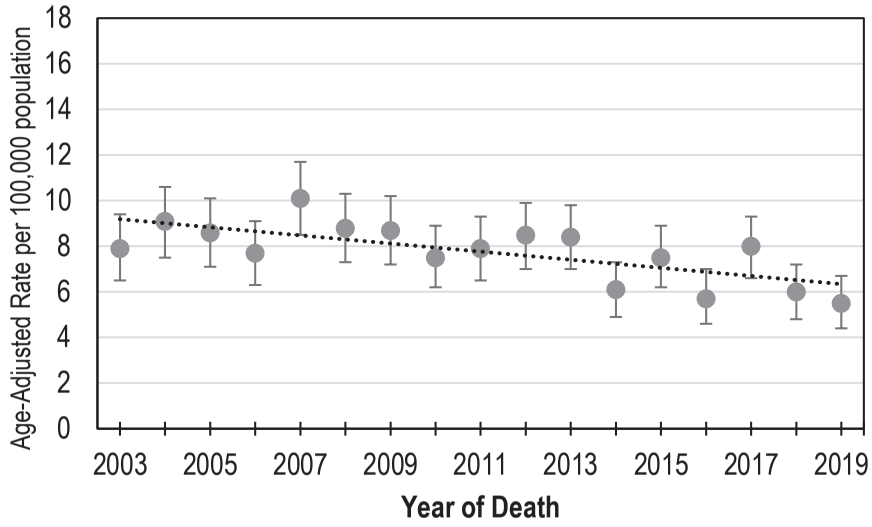


Figure 8.13: Age-Adjusted Mortality Rate and 95% CI by Race Among Females, Ovarian Cancer, Arkansas, 2015-2019

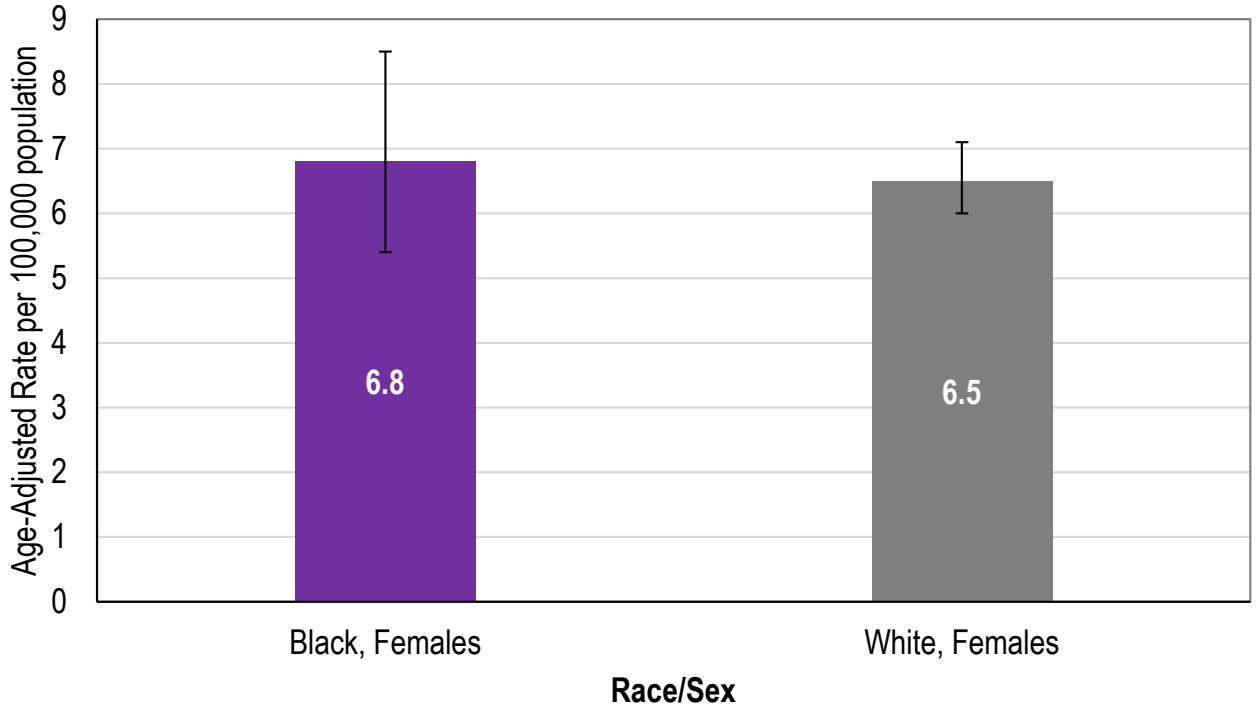
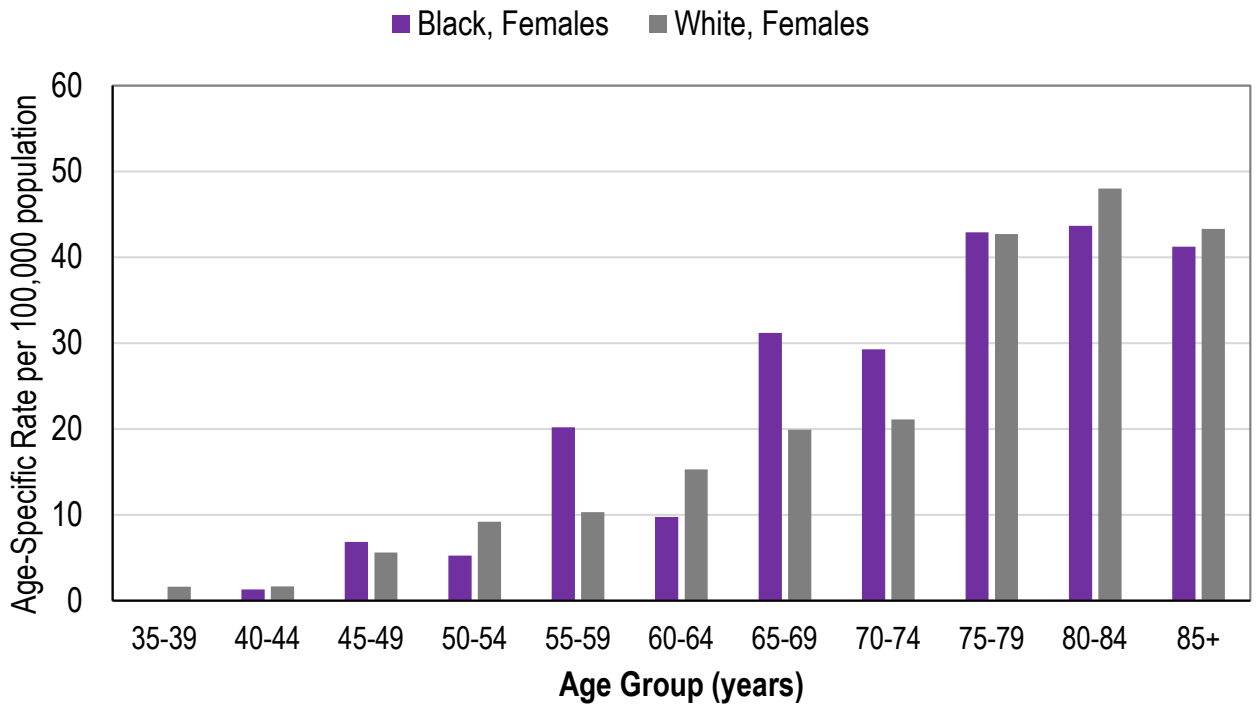
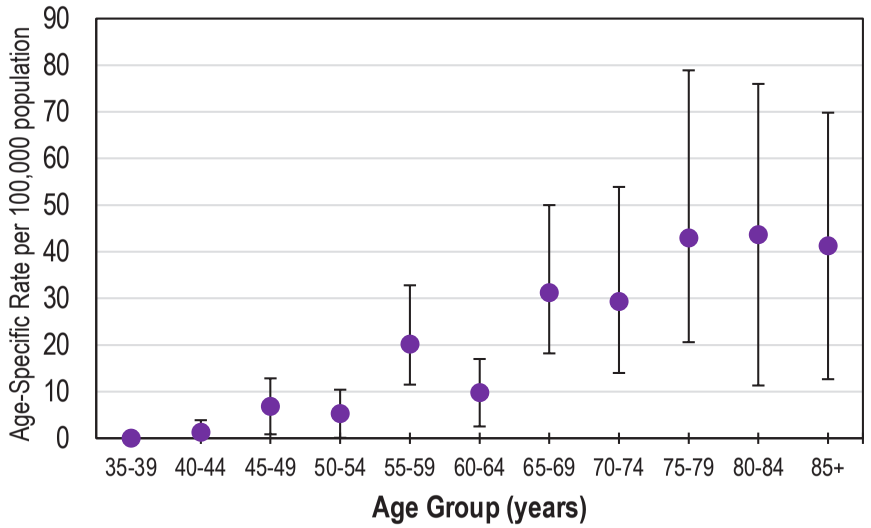


Figure 8.14: Age-Specific Mortality Rate by Race and Age Group Among Females, Ovarian Cancer, Arkansas, 2015-2019



Figures 8.15A-B: Age-Specific Mortality Rate and 95% CI by Race and Age Group Among Females, Ovarian Cancer, Arkansas, 2015-2019

8.15A: Black, Females



8.15B: White, Females

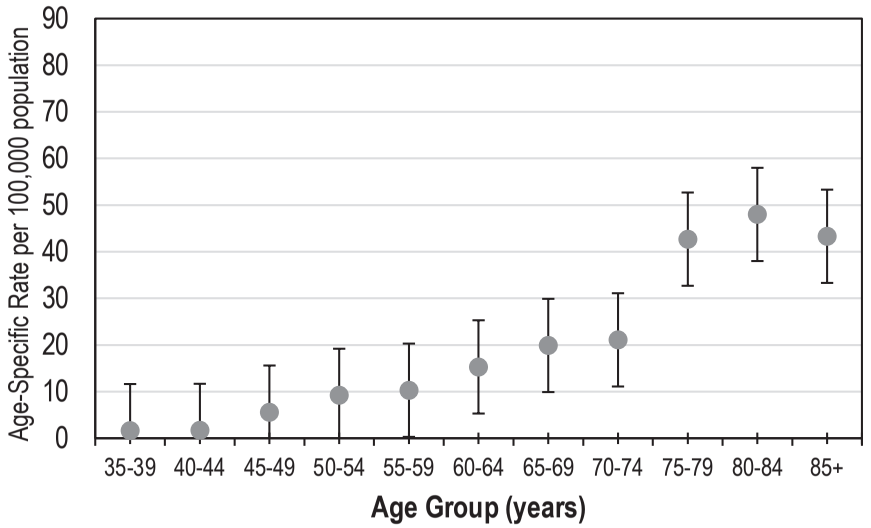
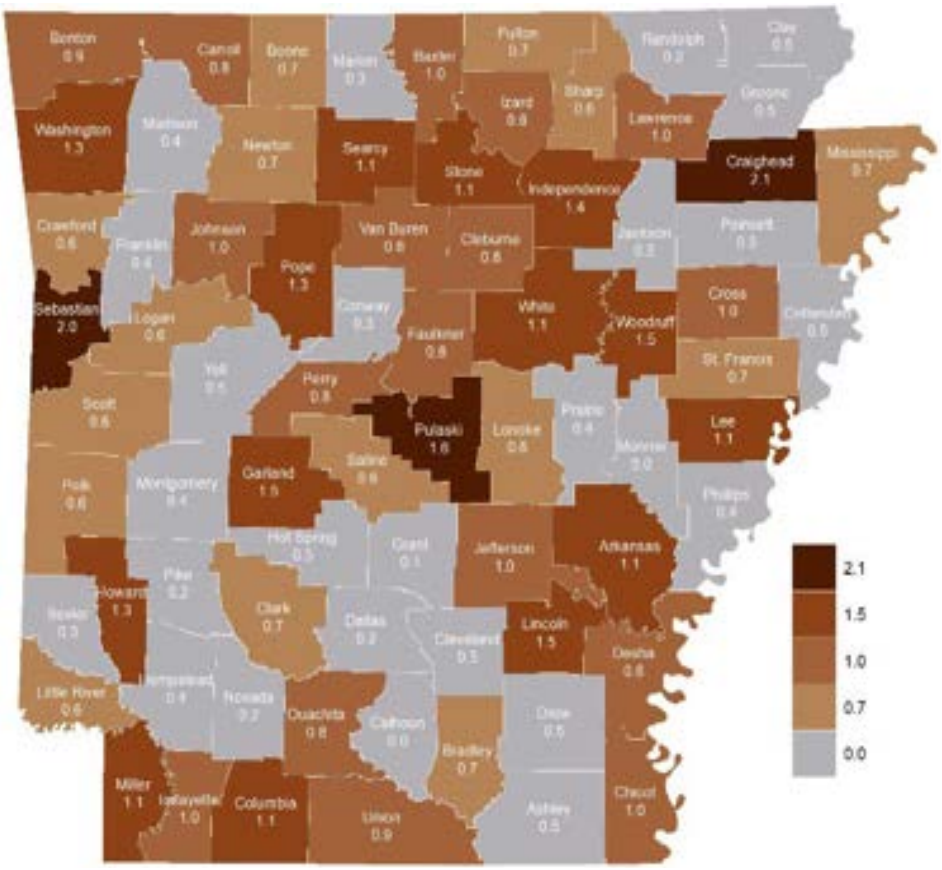


Figure 8.16: Standardized Mortality Ratio (SMR) by County Among Females, Ovarian Cancer, Arkansas, 2010-2019



ARKANSAS CENTRAL CANCER REGISTRY

Section 9: Pancreatic Cancer

Overview

Unfortunately, it is difficult to detect and diagnose pancreatic cancer early due its location being behind other organs (including the stomach, small intestine, liver, gallbladder, spleen, and bile ducts), there are no noticeable signs and symptoms in the early stage, but if there are signs and symptoms, they may be similar to those of many other illnesses.[44] Additionally, there is currently no recommended routine screening for pancreatic cancer without symptoms.

There are two cells in the pancreas, exocrine and endocrine, with two main roles[44]:

- **Exocrine pancreas cells:** These cells produce juices to help break down food into substances the body can use, such as helping digest food as it passes through the gastrointestinal tract.
- **Endocrine pancreas cells:** These cells produce hormones, such as insulin and glucagon, that help control blood sugar levels and help the body use and store the energy it gets from food.

Pancreatic cancer can occur in either the exocrine or endocrine pancreas cells. Approximately 95% of pancreatic cancers come from the exocrine type and usually diagnosed at an advanced stage.[44]

Neuroendocrine cancer, a subgroup of endocrine cells, are less common and have a better prognosis.[45] It is important to know which type of pancreatic cancer an individual has since they each use different tests for diagnosis, have different treatment options, and prognosis.

Pancreatic Cancer Risk Factors

Common risk factors that can increase your risk for pancreatic cancer include[46]:

- Older age
- Family history of pancreatic cancer
- Inherited genetic syndromes
- Tobacco use
- Overweight
- Diabetes
- Chronic pancreatitis
- Workplace exposure to carcinogens used in dry cleaning and metal working industries

Key Findings

Pancreatic Cancer Incidence

- From 2005 through 2019, the incidence rate for pancreatic cancer increased in both Arkansas and the US. Arkansas had a lower incidence rate trendline than the US. In 2019, the rate of pancreatic cancer in Arkansas was 12.7 cases per 100,000 population, compared to the US rate of 13.5 cases per 100,000 population (**Figure 9.1**).
- Black females and males had a more variation in pancreatic cancer incidence rates while White females and males had a lower rate trendline from 2003 through 2019. White females and males had stable trend rates. Although Black females had a slight increase, caution is suggested due to the rate variation by year of diagnosis. In 2019, the pancreatic cancer incidence rates were: 19.8 per 100,000 population for Black females, 9.6 per 100,000 population for White females, 19.6 per 100,000 population for Black males, and 14.4 per 100,000 population for White males (**Figure 9.2, Figures 9.3A-D**).
- For 2015-2019, Black females and males had a higher pancreatic cancer incidence rate compared to White females and males, respectively (**Figure 9.4**).

- During 2015-2019, the age-specific incidence rate for pancreatic cancer increased across all groups from 2015-2019. Most notable, Black males had the highest rate of being diagnosed with pancreatic cancer for age group '80-84' (**Figure 9.5, Figure 9.6A-D**).
- Arkansas counties with higher-than-expected pancreatic cancer cases diagnosed in 2010-2019 included Poinsett, Calhoun, Bradley, and Chicot (**Figure 9.7**).
- For 2015-2019, more than 70% of pancreatic cancer cases in Arkansas were diagnosed at a late stage across all groups (**Figure 9.8**).

Pancreatic Cancer Survival

- From 2007-2019, the 5-year relative survival for pancreatic cancer for all stages and year after diagnosis was poor. Cases diagnosed at an early stage (localized) had a 42% relative survival 1 year after time of diagnosis, decreasing over a 5-year period (**Figure 9.9, Table 9.1**).

Pancreatic Cancer Mortality

- The mortality rate for pancreatic cancer decreased in Arkansas while slightly increased in the US from 2005 through 2019. There is no significant trendline rate difference between the US and Arkansas. In 2019, the mortality rate for pancreatic cancer in Arkansas was 10.6 deaths per 100,000 population, compared to the US rate of 11.0 deaths per 100,000 population (**Figure 9.10**).
- From 2003 through 2019, Black females, White females and White males had slightly stable trend rates, while Black males had decreased. Caution is suggested in interpretating trendline rates for Black females and males due to rate variation. In 2019, the pancreatic cancer mortality rates were: 15.3 per 100,000 population for Black females, 8.5 per 100,000 population for White females, 16.6 per 100,000 population for Black males, and 11.8 per 100,000 population for White males (**Figure 9.11, Figure 9.12A-D**).
- During 2015-2019, mortality rates for pancreatic cancer were higher among Black females and males compared to White females and males, respectively (**Figure 9.13**).
- Across all Arkansas race and sex, the age-specific mortality rate for pancreatic cancer increased, with significant increase among Black males and females up to '80-84' age group (**Figure 9.14, Figure 9.15A-D**).
- Arkansas counties with higher-than-expected pancreatic deaths in 2010-2019 were Craighead, Baxter, and Pulaski (**Figure 9.16**).

Figure 9.1: Age-Adjusted Incidence Rate Trendline, Pancreatic Cancer, US and Arkansas, 2005-2019

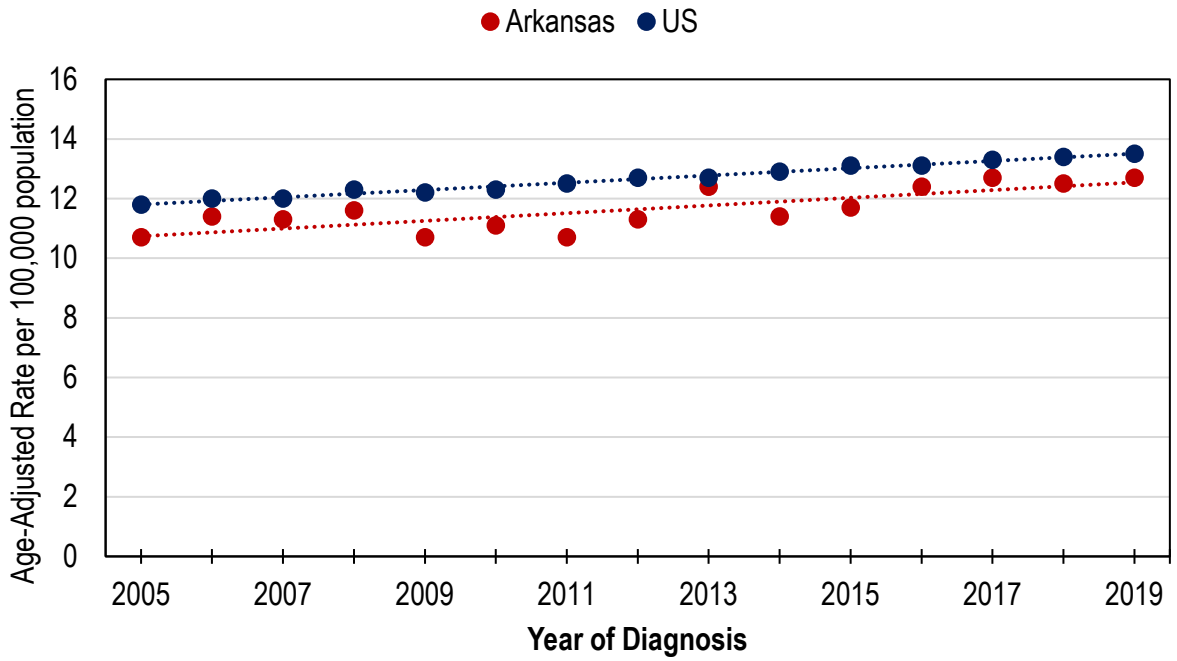
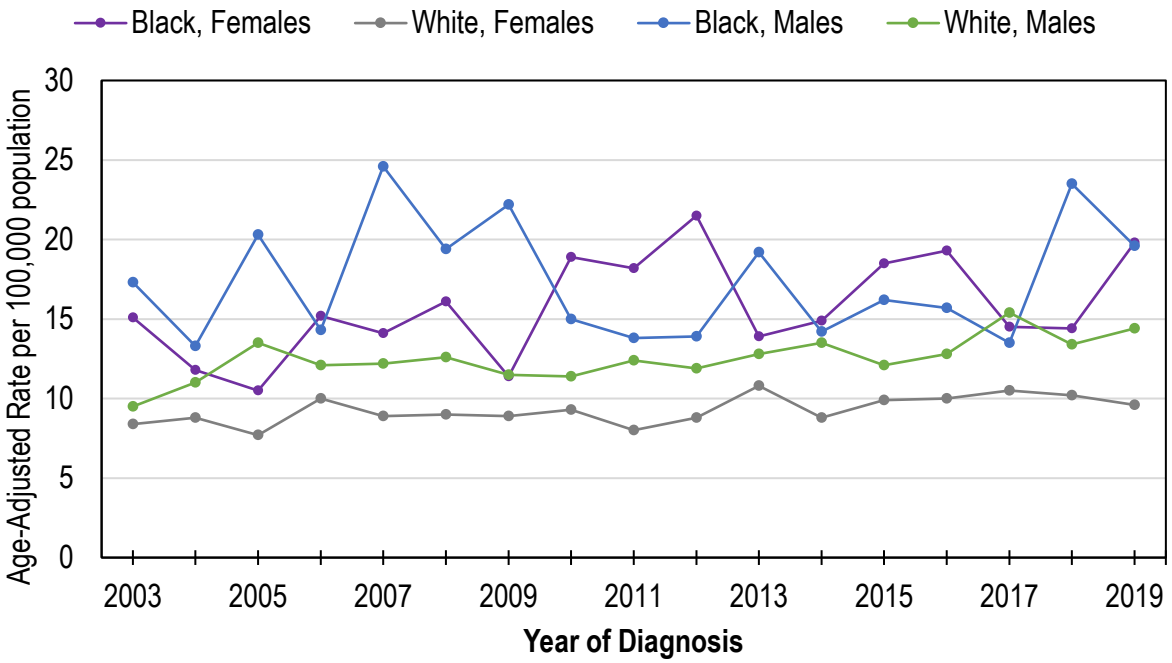
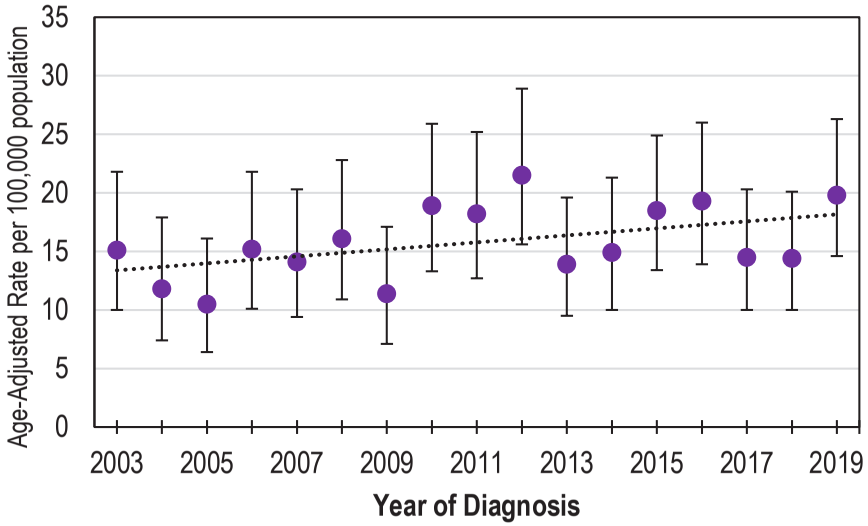


Figure 9.2: Age-Adjusted Incidence Rate Trendline by Race and Sex, Pancreatic Cancer, Arkansas, 2003-2019

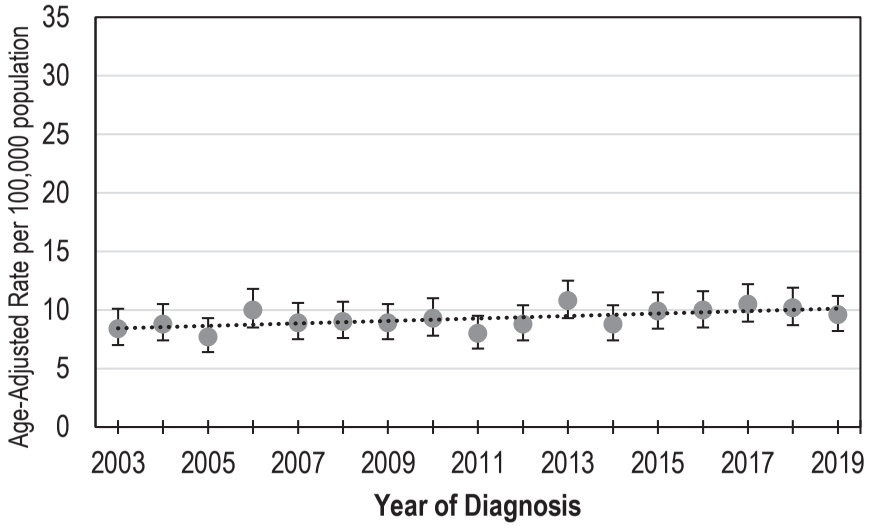


Figures 9.3A-D: Age-Adjusted Incidence Rate and 95% CI by Race, Sex, and Year of Diagnosis, Pancreatic Cancer, Arkansas, 2003-2019

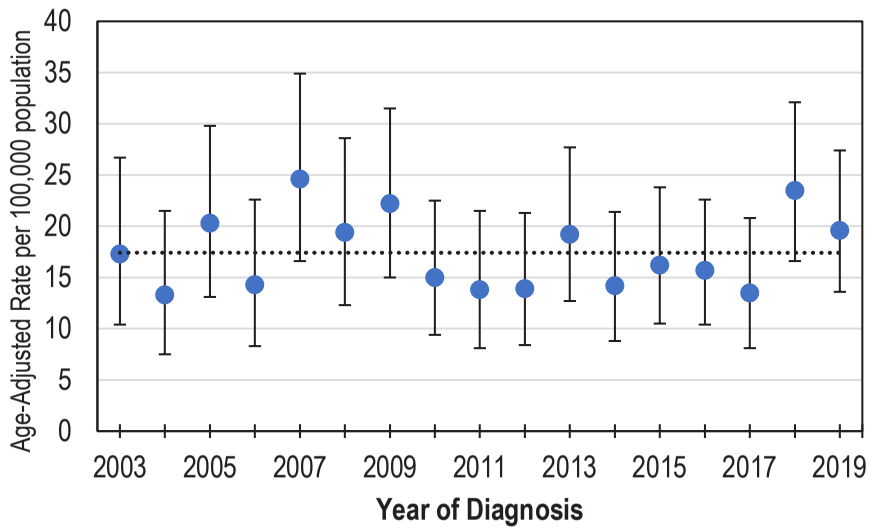
9.6A: Black, Females



9.6B: White, Females



9.6C: Black, Males



9.6D: White, Males

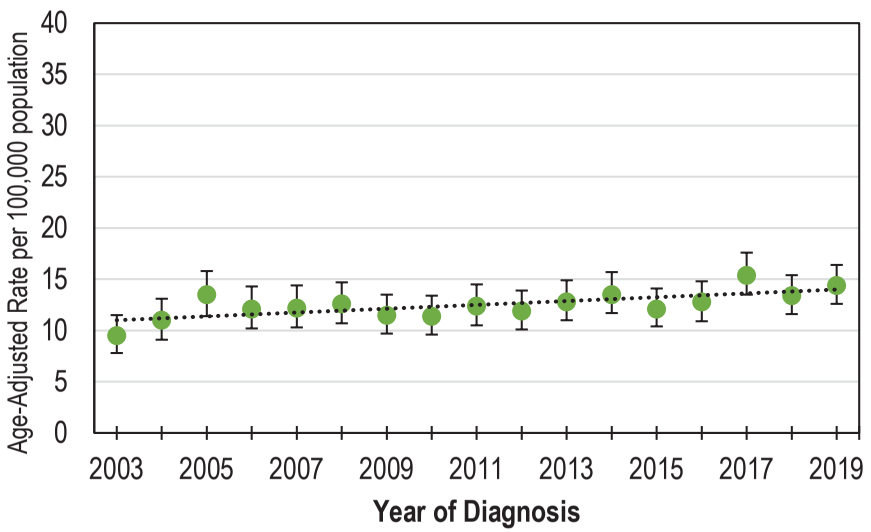


Figure 9.4: Age-Adjusted Incidence Rate and 95% CI by Race and Sex, Pancreatic Cancer, Arkansas, 2015-2019

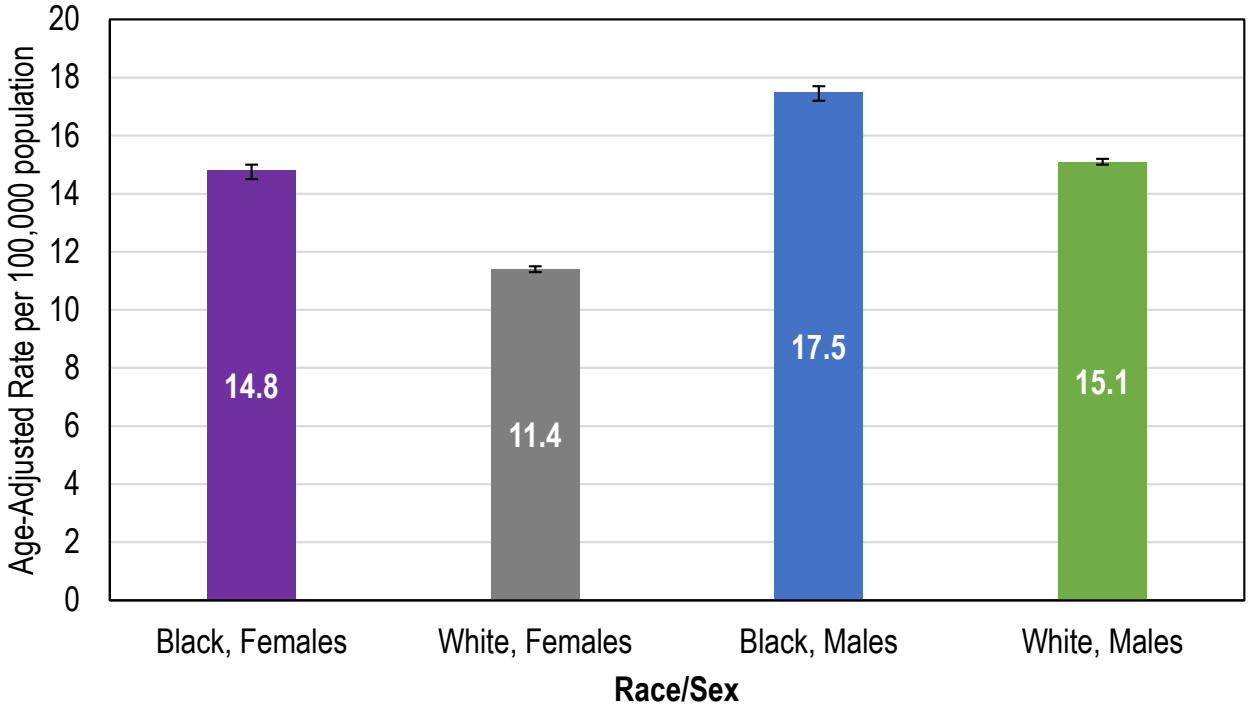
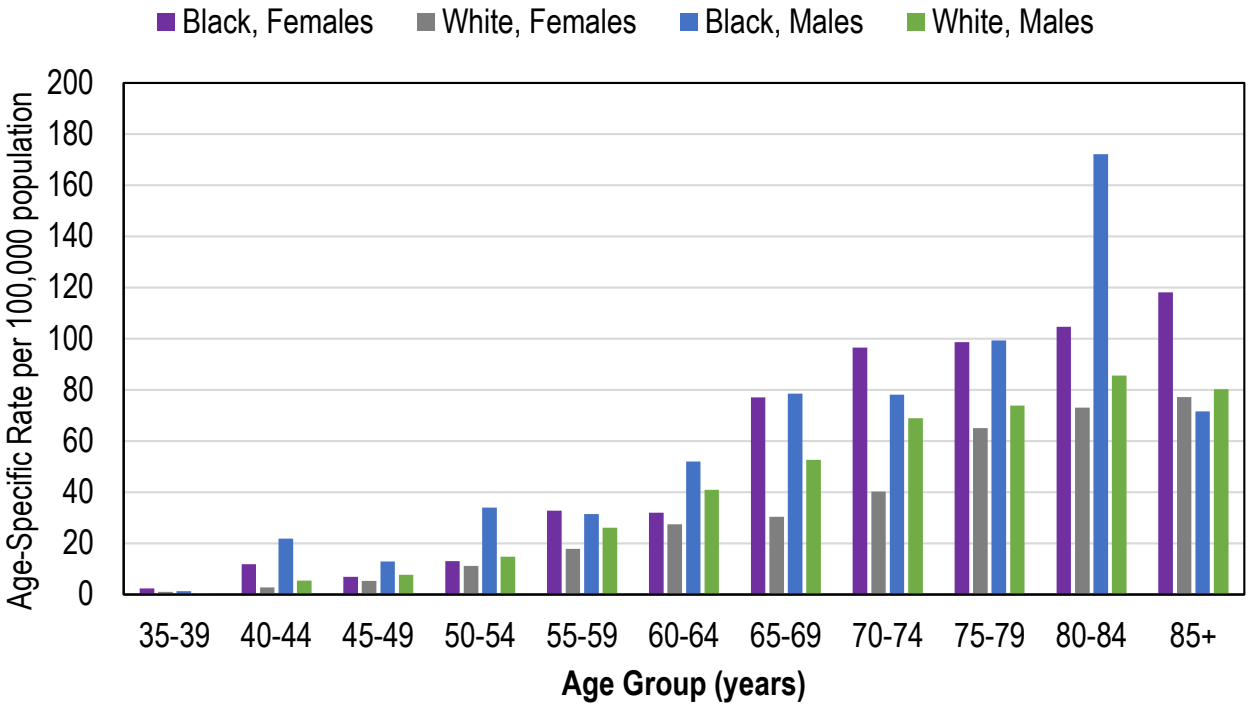
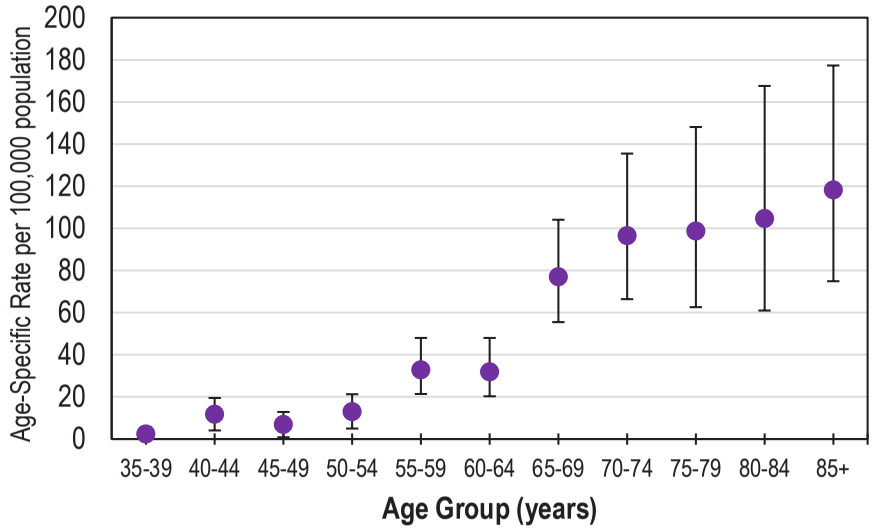


Figure 9.5: Age-Specific Incidence Rate by Race, Sex, and Age Group, Pancreatic Cancer, Arkansas, 2015-2019

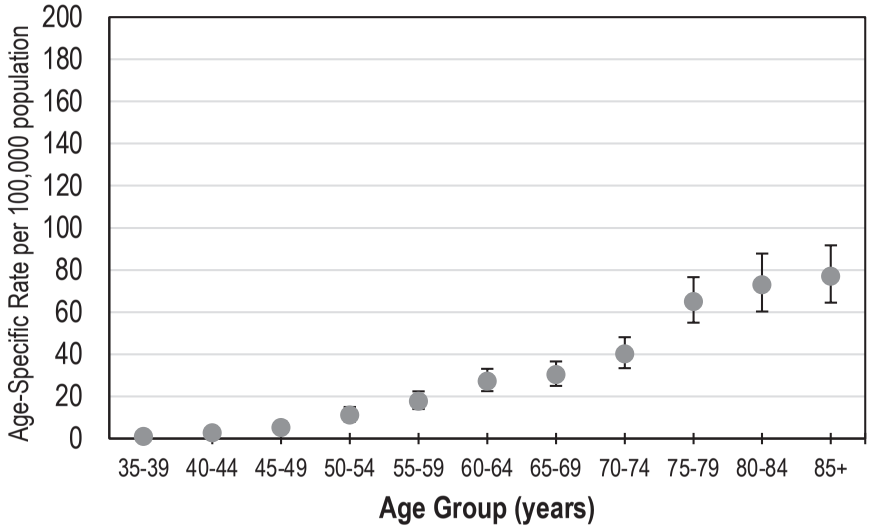


Figures 9.6A-D: Age-Specific Incidence Rate and 95% CI by Race, Sex and Age Group, Pancreatic Cancer, Arkansas, 2015-2019

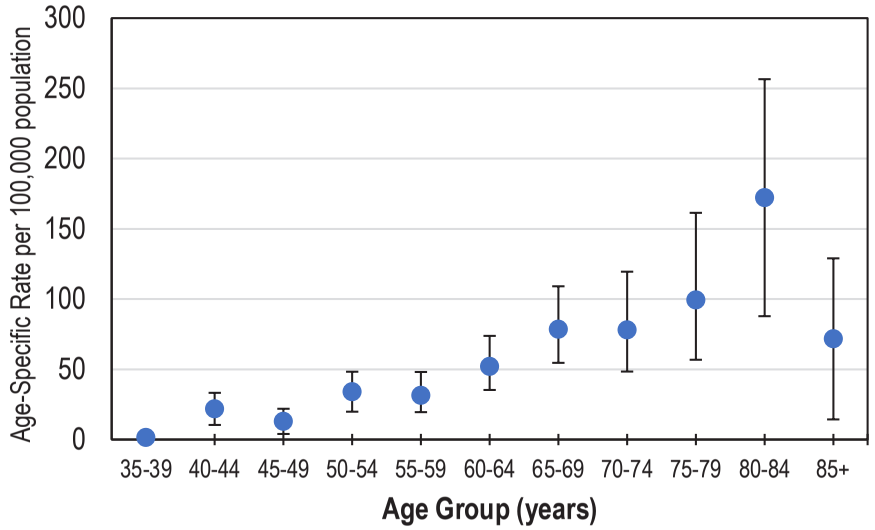
9.3A: Black, Females



9.3B: White, Females



9.3C: Black, Males



9.3D: White, Males

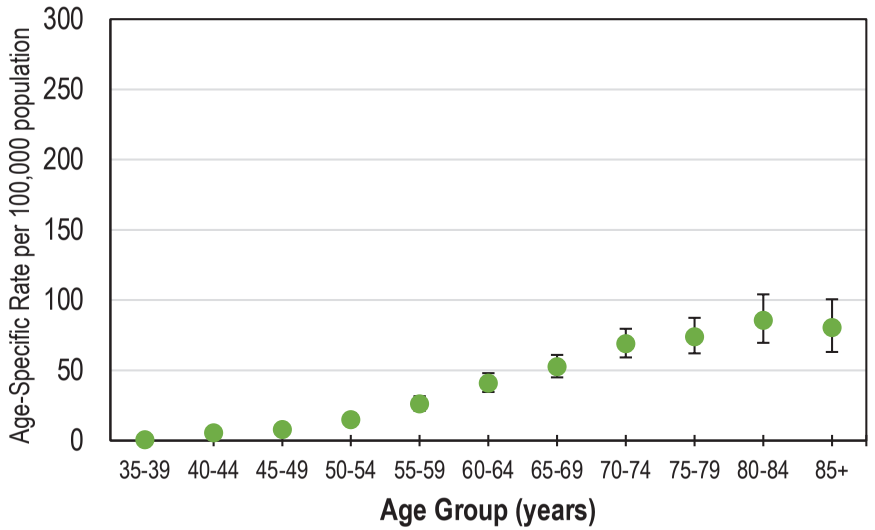


Figure 9.7: Standardized Incidence Ratio (SIR) by County, Pancreatic Cancer, Arkansas, 2010-2019

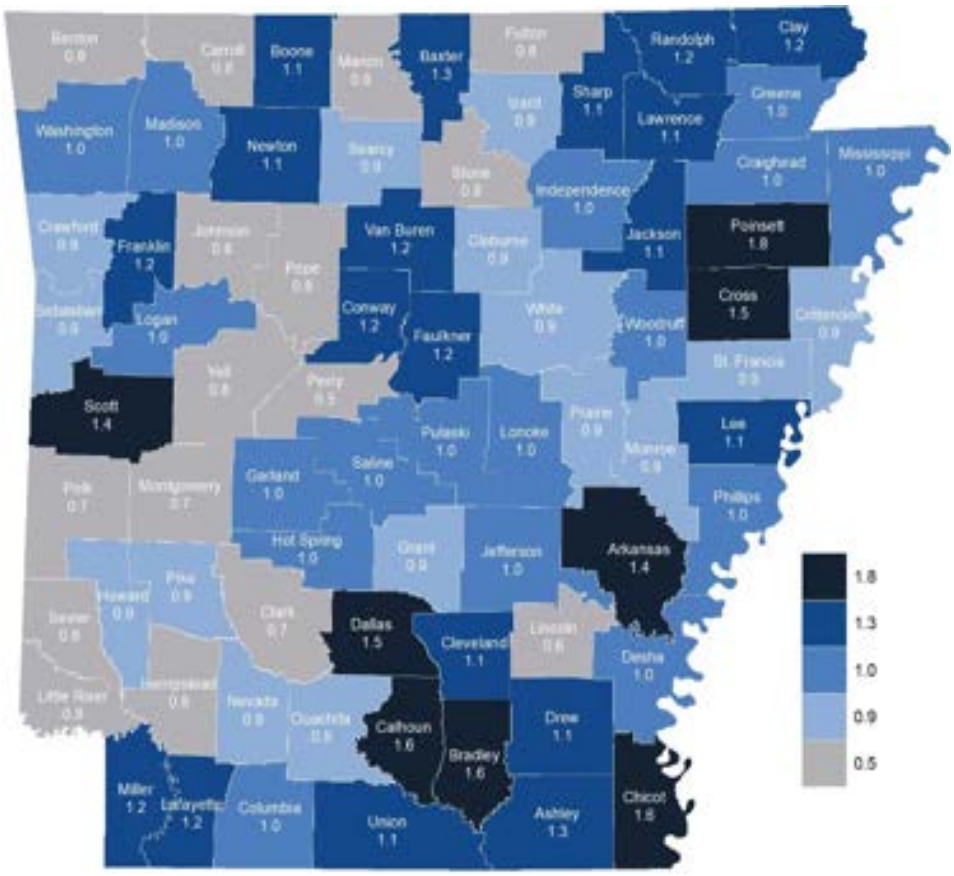
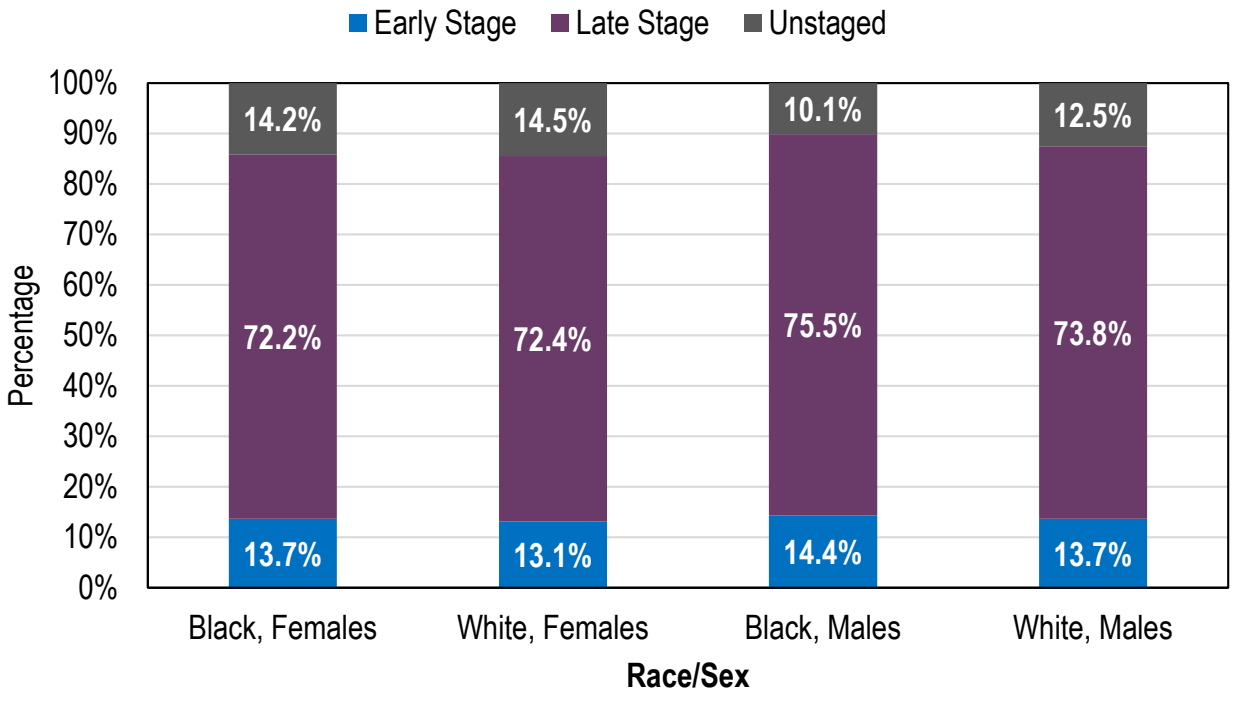


Figure 9.8: Percentage of SEER Summary Stage at Diagnosis by Race and Sex, Pancreatic Cancer, Arkansas, 2015-2019



SURVIVAL: PANCREATIC CANCER

Figure 9.9: 5-Year Relative Survival Percent (%) by Stage at Diagnosis, Pancreatic Cancer, Arkansas, 2007-2019

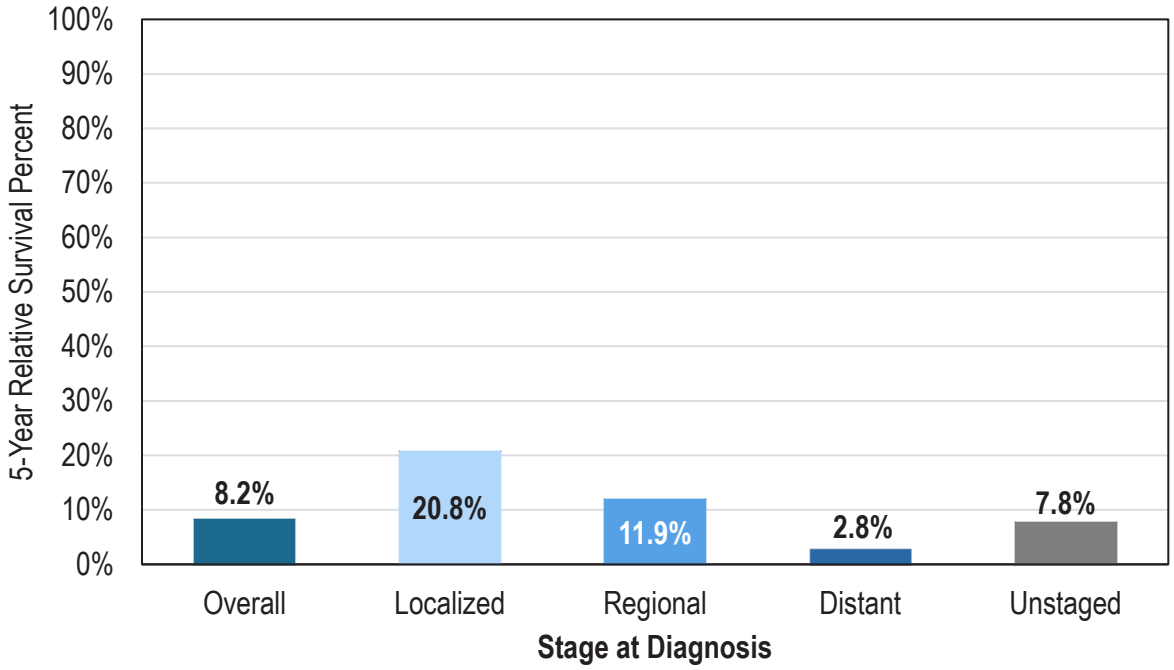


Table 9.1: 5-Year Relative Survival Percent (%) by Stage at Diagnosis and Years after Diagnosis, Pancreatic Cancer, Arkansas, 2007-2019

	Relative Survival Percent by Stage at Diagnosis				
Years after Diagnosis	Overall	Localized	Regional	Distant	Unstaged
1	28%	42%	47%	16%	27%
2	15%	31%	25%	7%	16%
3	11%	25%	16%	5%	12%
4	9%	22%	13%	3%	8%
5	8%	21%	12%	3%	8%

Figure 9.10: Age-Adjusted Mortality Rate Trendline, Pancreatic Cancer, US and Arkansas, 2005-2019

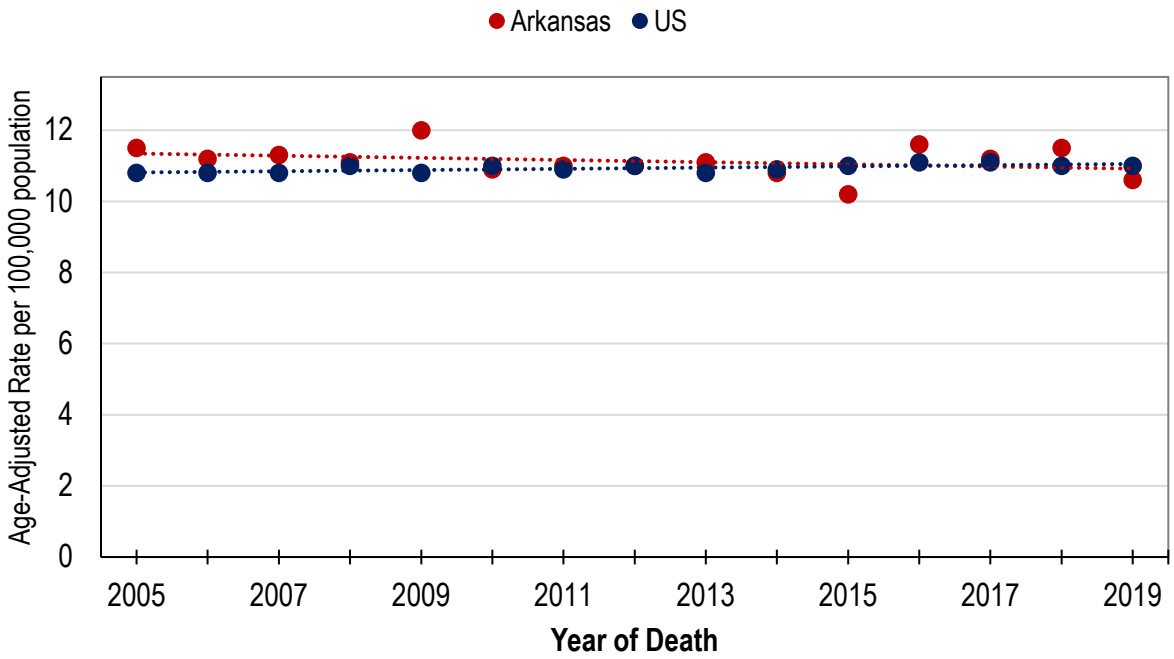
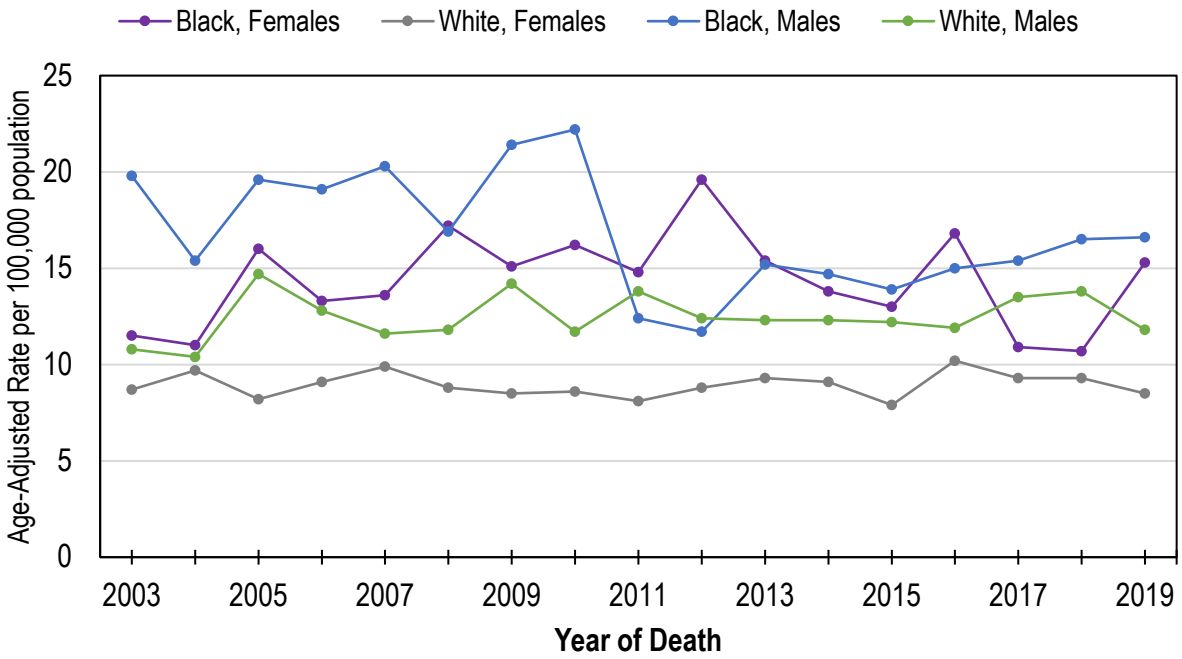
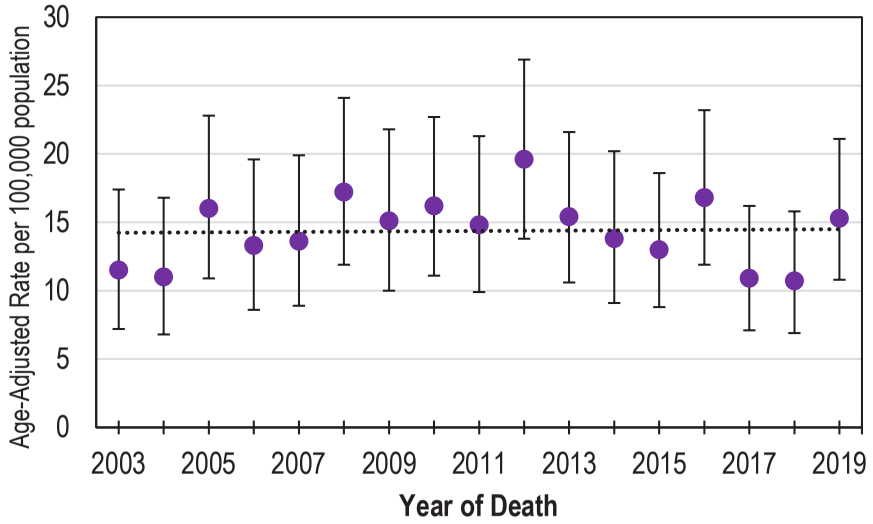


Figure 9.11: Age-Adjusted Mortality Rate Trendline by Race and Sex, Pancreatic Cancer, Arkansas, 2003-2019

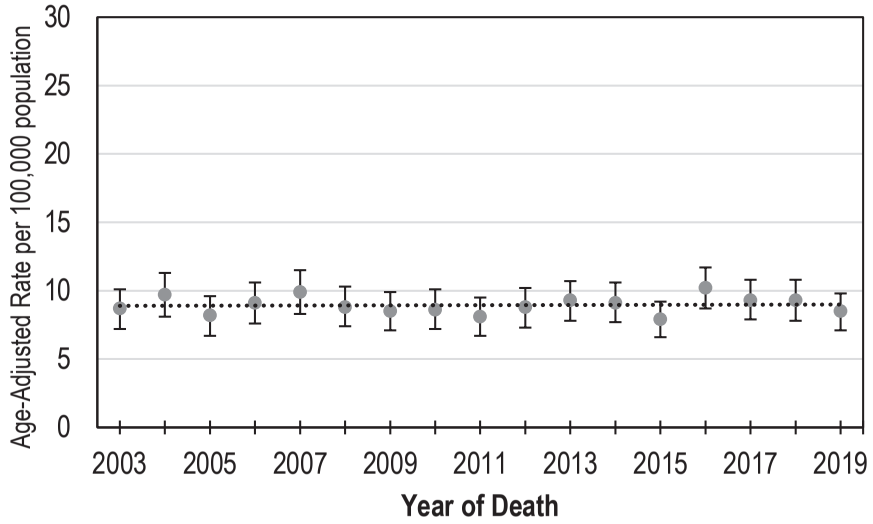


Figures 9.12A-D: Age-Adjusted Mortality Rate and 95% CI by Race, Sex, and Year of Death, Pancreatic Cancer, Arkansas, 2003-2019

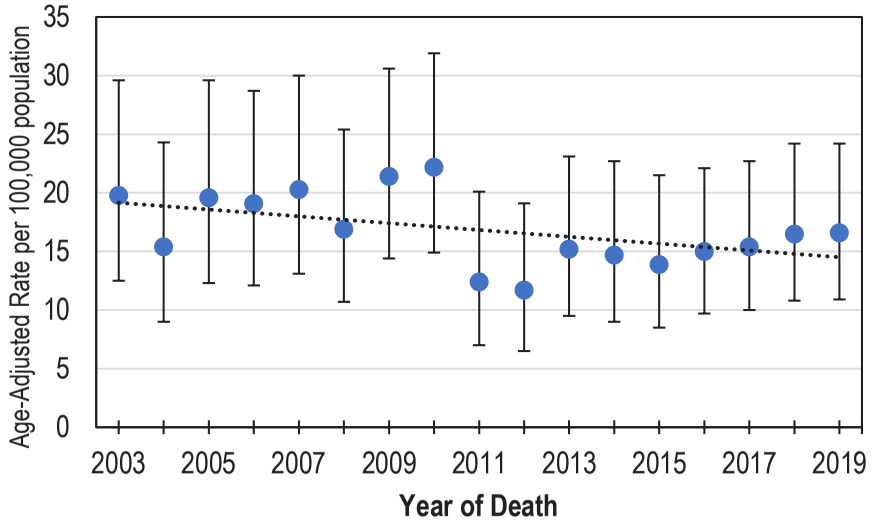
9.12A: Black, Females



9.12B: White, Females



9.12C: Black, Males



9.12D: White, Males

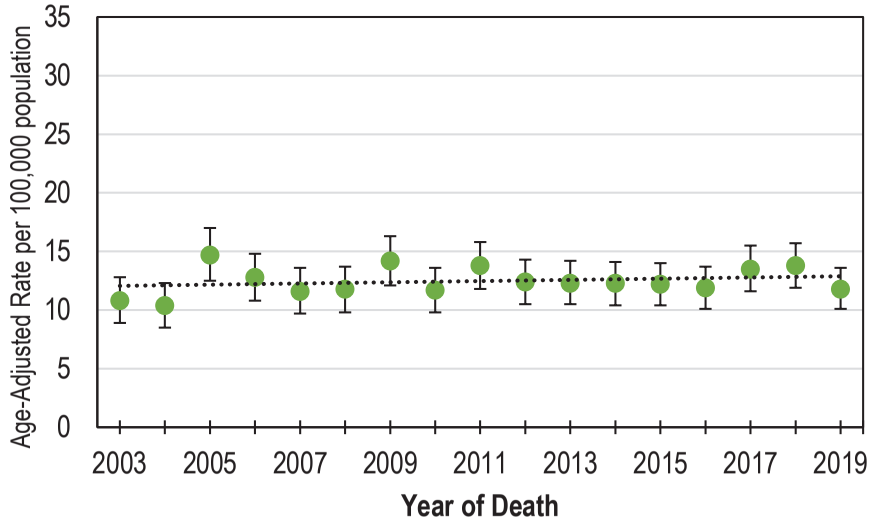


Figure 9.13: Age-Adjusted Mortality Rate and 95% CI by Race and Sex, Pancreatic Cancer, Arkansas, 2015-2019

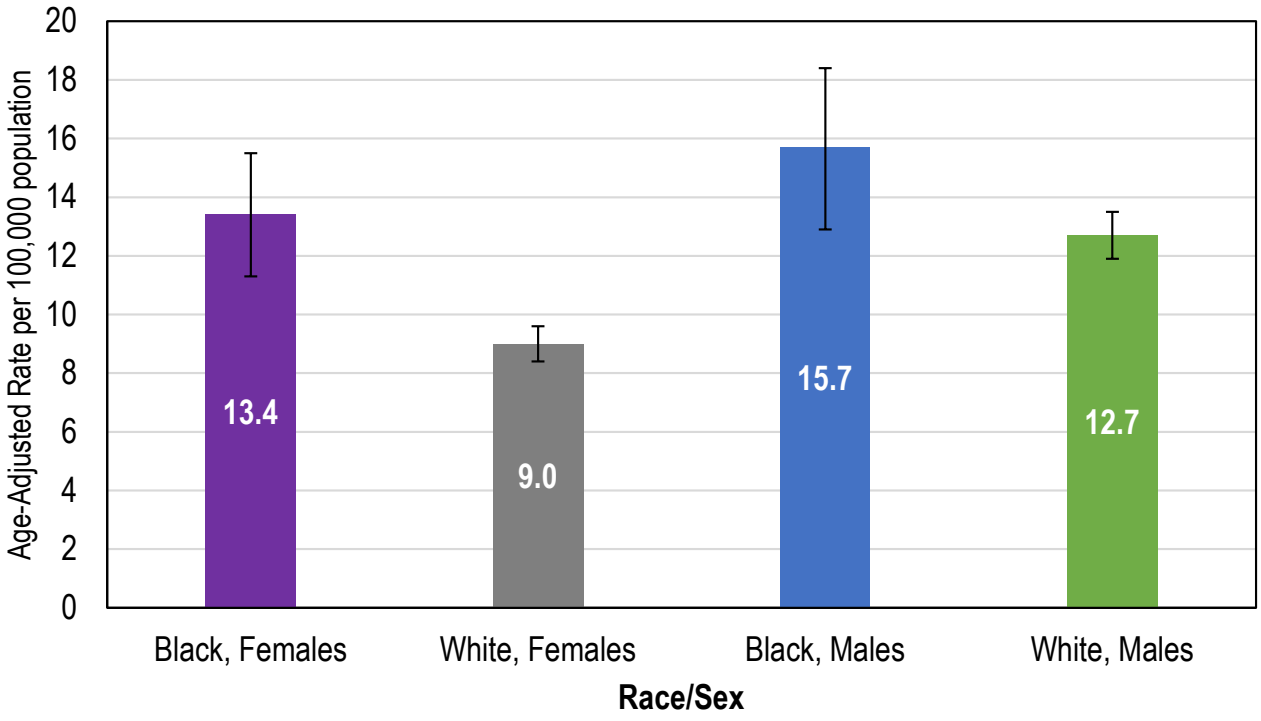
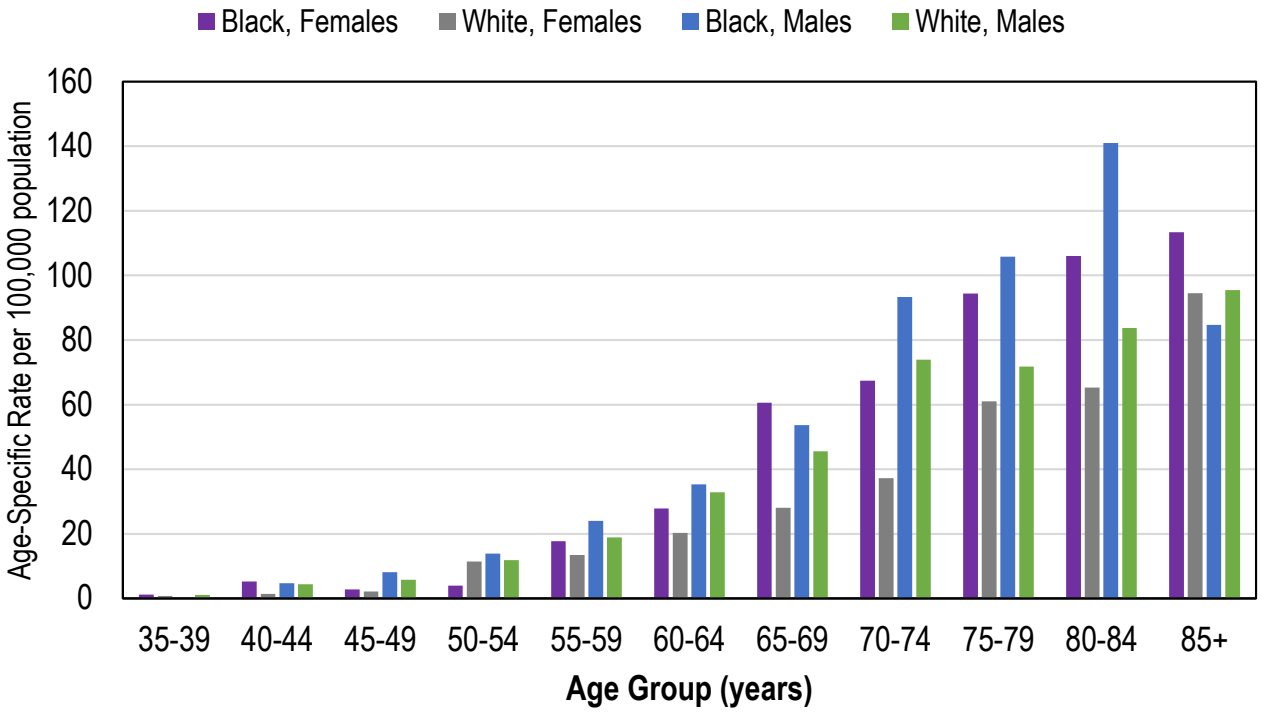
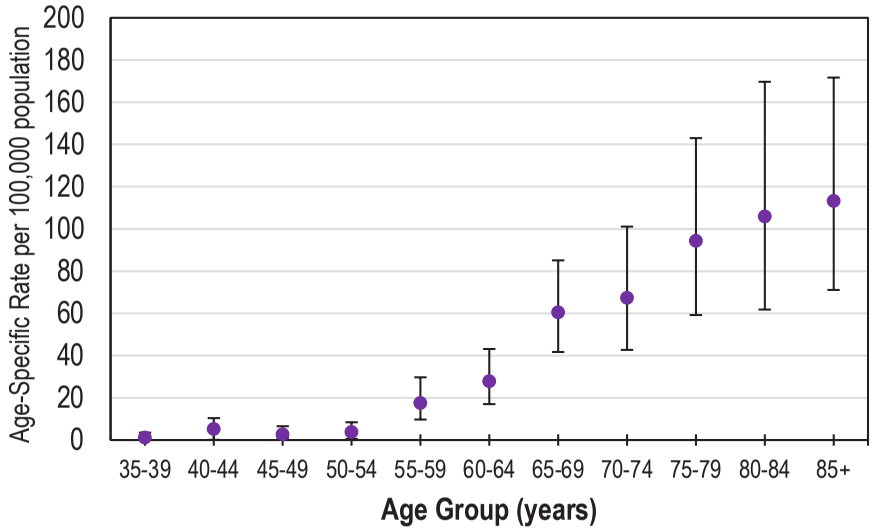


Figure 9.14: Age-Specific Mortality Rate by Race, Sex, and Age Group, Pancreatic Cancer, Arkansas, 2015-2019

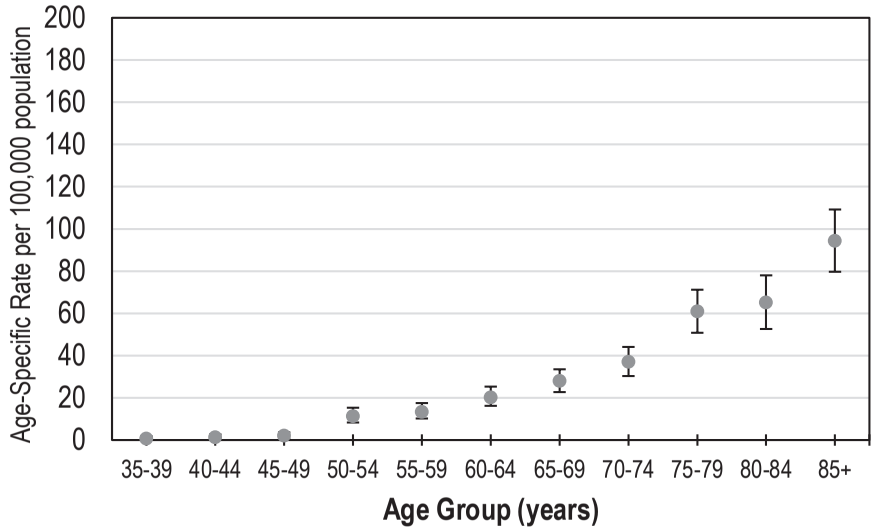


Figures 9.15A-D: Age-Specific Mortality Rate and 95% CI by Race, Sex, and Age Group, Pancreatic Cancer, Arkansas, 2015-2019

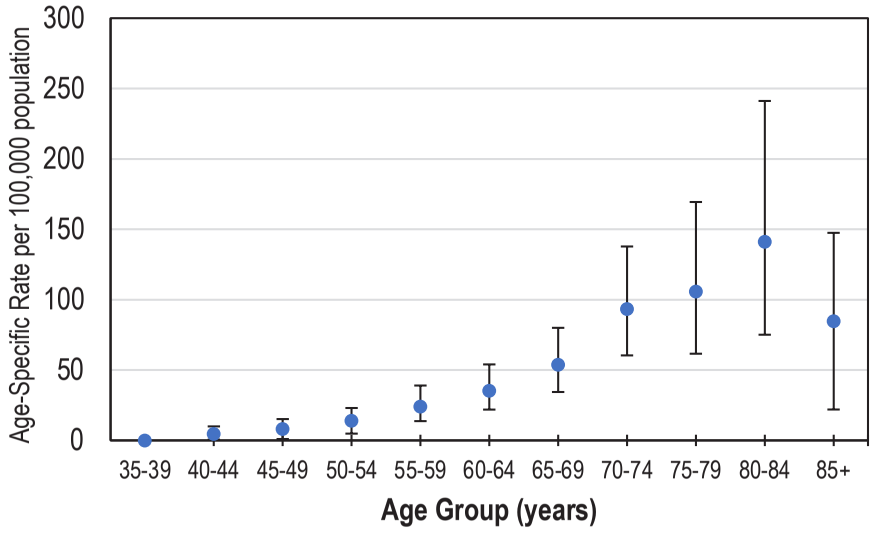
9.15A: Black, Females



9.15B: White, Females



9.15C: Black, Males



9.15D: White, Males

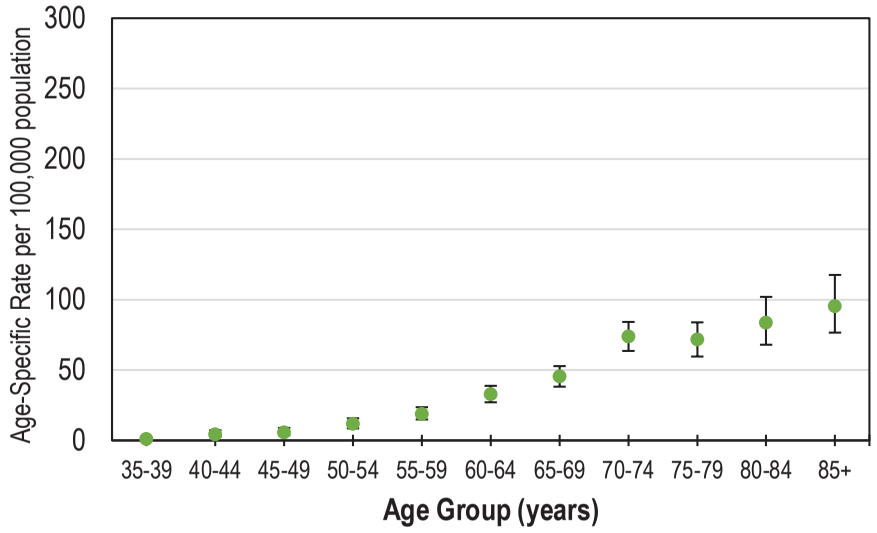
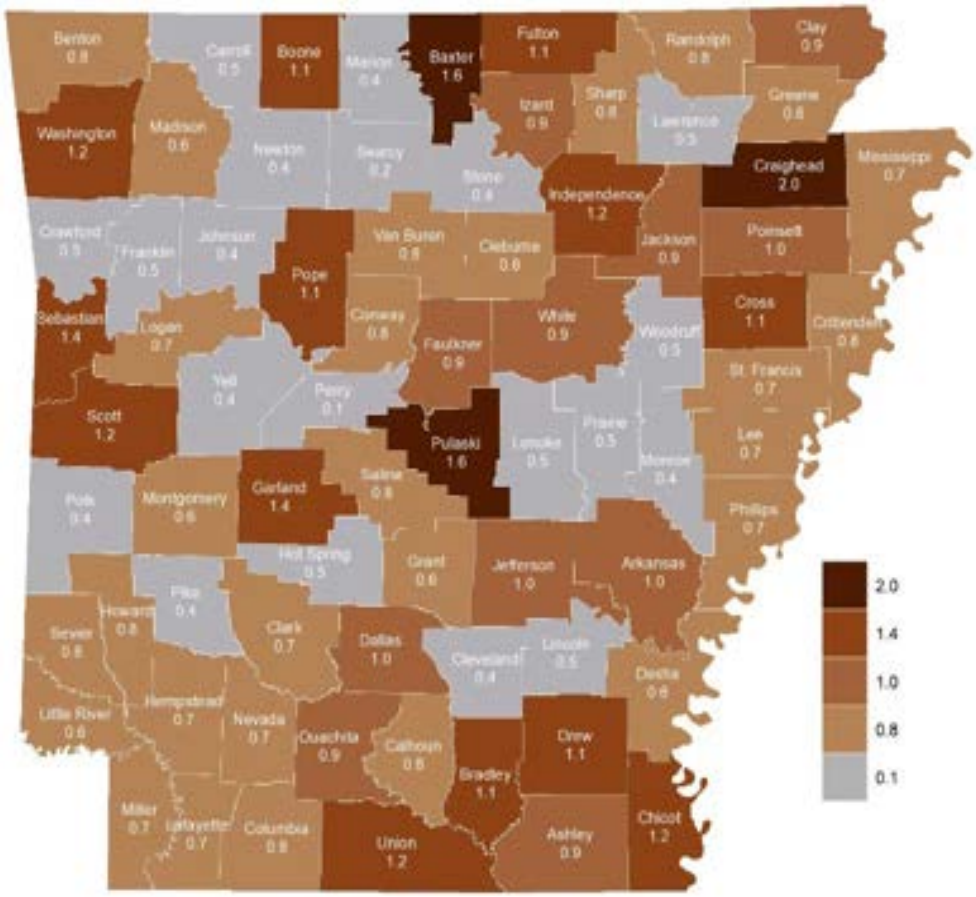


Figure 9.16: Standardized Mortality Ratio (SMR) by County, Pancreatic Cancer, Arkansas, 2010-2019



ARKANSAS CENTRAL CANCER REGISTRY

Section 10: Prostate Cancer

Overview

Among males, prostate cancer is the most common cancer and the second leading cause of cancer death in the US. It is a slow-developing disease most commonly seen among older males.[47,48] Although a digital rectal exam (DRE) or prostate-specific antigen (PSA)-based testing are more commonly known for prostate cancer screening tests, there is currently no standard screening test for prostate cancer.

The 2018 USPSTF recommends prostate cancer screening as an individualized decision. Males, ages 55 to 69, should consult with their healthcare provider about undergoing periodic PSA-based testing for prostate cancer. Comparatively, the ACS recommends screening at the following three (3) risk levels:

- **Very High Risk:** Males 40 years of age with more than one first-degree relative who had prostate cancer at an early age.
- **High Risk:** Males 45 years of age for those with African American background, and males who have a first-degree relative diagnosed with prostate cancer younger than age [65].
- **Average Risk:** Males 50 years of age.

Finding and treating prostate cancer before symptoms occur may not improve a male's health or help them live longer as more research is needed.[49] Before deciding whether or not to be screened, males should discuss with their healthcare provider to consider the balance of benefits and harms of prostate cancer screening based on their personal, medical and family health history, as well as the patient's values about the benefits and harms of screening and treatment-specific outcomes, along with other health needs.

Prostate Cancer Risk Factors

Common risk factors that can increase your risk for prostate cancer include[50]:

- Older age
- Race/ethnicity
- Family history of prostate cancer
- Inherited gene changes including BRCA genes and Lynch syndrome

Key Findings

Prostate Cancer Incidence

- Among males, incidence rates for prostate cancer decreased in both Arkansas and the US from 2005 through 2019. In 2019, the rate of newly diagnosed prostate cancer in Arkansas was 112.3 cases per 100,000 population, compared to the US rate of 116.6 cases per 100,000 population (**Figure 10.1**).
- Black males had a higher trendline rate than White males from 2003 through 2019. Prostate cancer incidence rates decreased for both Black and White males over time with a slight increase in 2012-2013. In 2019, the prostate cancer incidence rate for Black males was 180.3 per 100,000, and 103.5 per 100,000 population for White males (**Figure 10.2, Figures 10.3A-B**).
- In 2015-2019, Black males had a significantly higher prostate cancer incidence rate than White males (**Figure 10.4**).
- The age-specific incidence rate for prostate cancer increased for all males in 2015-2019, with Black males having a significant difference compared to White males (**Figure 10.5, Figures 10.6A-B**).
- Arkansas counties with higher-than-expected prostate cancer cases diagnosed during 2010-2019 include Clark, Cleveland, garland, and Woodruff (**Figure 10.7**).
- For 2015-2019, early stage diagnosis for prostate cancer among Black and White males were 79.6% and 77.0%, respectively. Late stage prostate cancer diagnosed for all males was less than 20% (**Figure 10.8**).

Prostate Cancer Survival

- For 2007-2019, the 5-year relative survival for localized and regional prostate cancer diagnosis was over 99%. Relative survival for the 5 years after a localized and regional prostate cancer diagnosis was favorable (**Figure 10.9, Table 10.1**).

Prostate Cancer Mortality

- From 2005 to 2019, the mortality rate for prostate cancer decreased in both Arkansas and the US. In 2019, the prostate cancer mortality rate in Arkansas was 20.6 deaths per 100,000 population, compared to the US rate of 18.3 deaths per 100,000 population (**Figure 10.10**).
- Black males had a higher prostate cancer mortality trendline rate compared to White males from 2003-2019. Although the mortality rate for prostate cancer decreased for Black and White males, both groups had a slight increase starting in 2017. In 2019, the mortality rates for prostate cancer among males were 41.0 per 100,000 population for Black males and 18.4 per 100,000 population for White males (**Figure 10.11, Figures 10.12A-B**).
- For 2015-2019, Black males had double the mortality rate of prostate cancer compared to White males (**Figure 10.13**).
- The age-specific mortality rate for prostate cancer increased by age group for both Black and White males. Cancer mortality rates were higher among Blacks males than Whites males for all age groups (**Figure 10.14, Figures 10.15A-B**).
- Arkansas counties with a higher-than-expected prostate cancer deaths include Craighead, Sebastian, and Union (**Figure 10.16**).

Figure 10.1: Age-Adjusted Incidence Rate Trendline Among Males, Prostate Cancer, US and Arkansas, 2005-2019

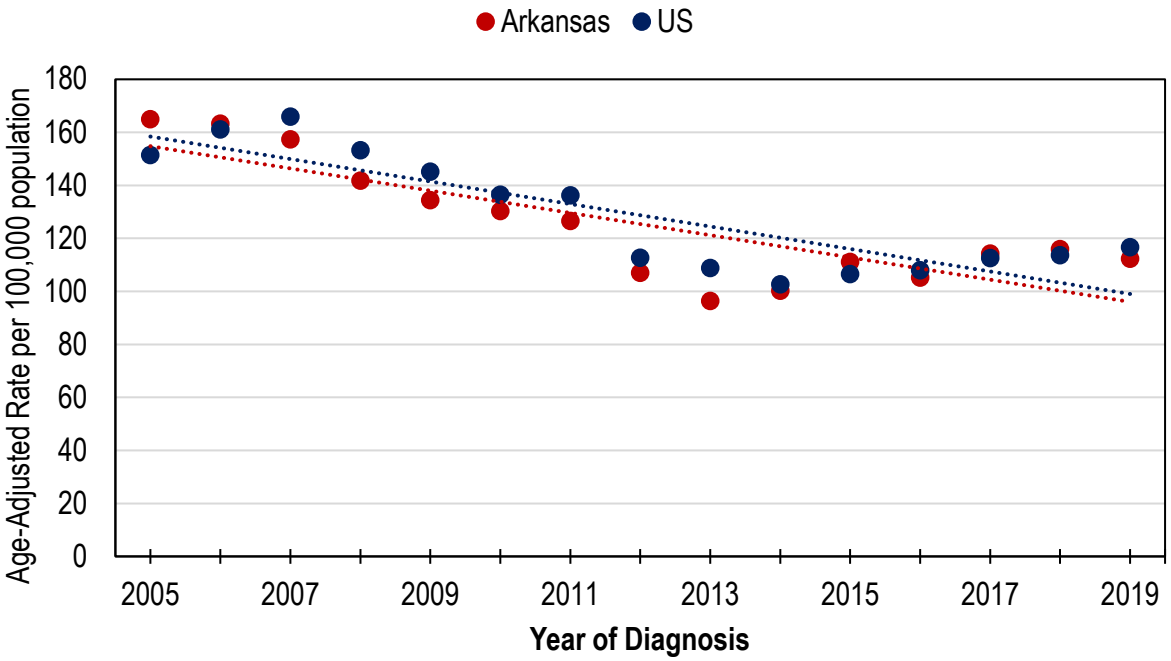
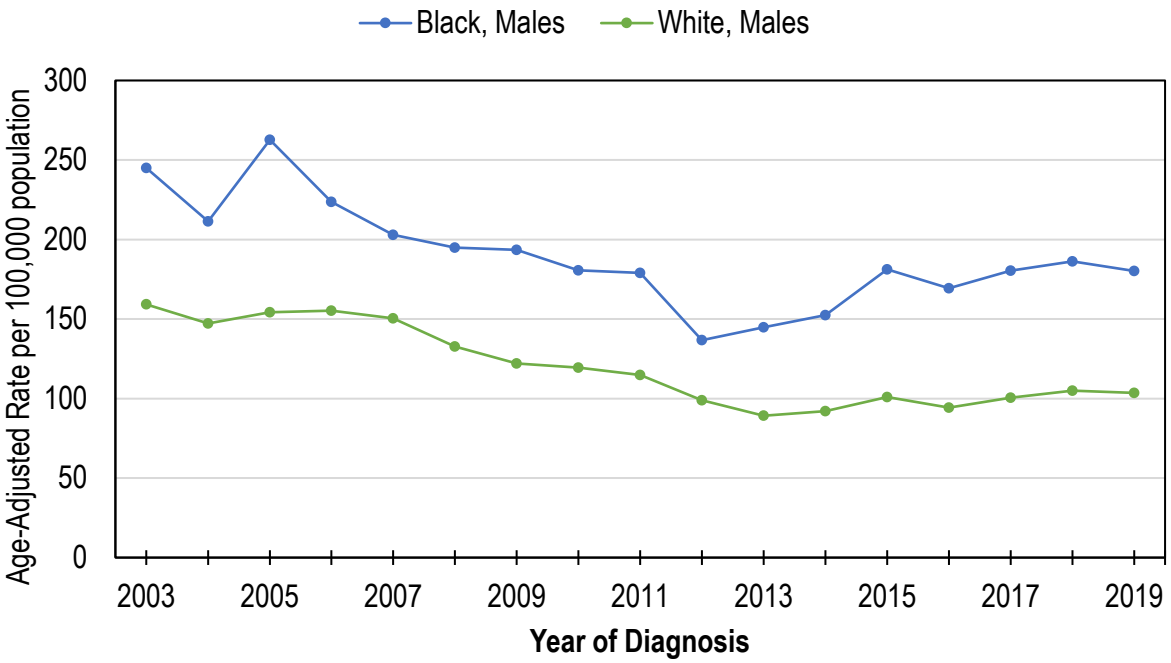
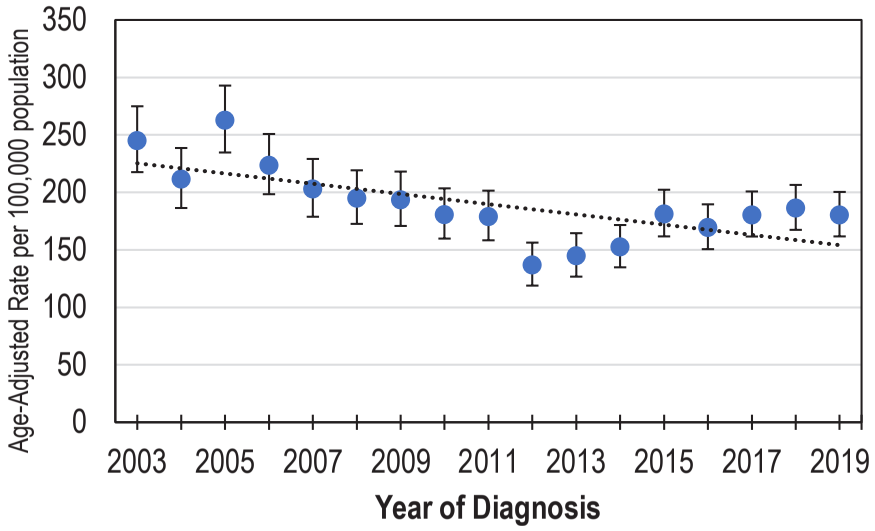


Figure 10.2: Age-Adjusted Incidence Rate Trendline by Race Among Males, Prostate Cancer, Arkansas, 2003-2019



Figures 10.3A-B: Age-Adjusted Incidence Rate and 95% CI by Race and Year of Diagnosis Among Males, Prostate Cancer, Arkansas, 2003-2019

10.3A: Black, Males



10.3B: White, Males

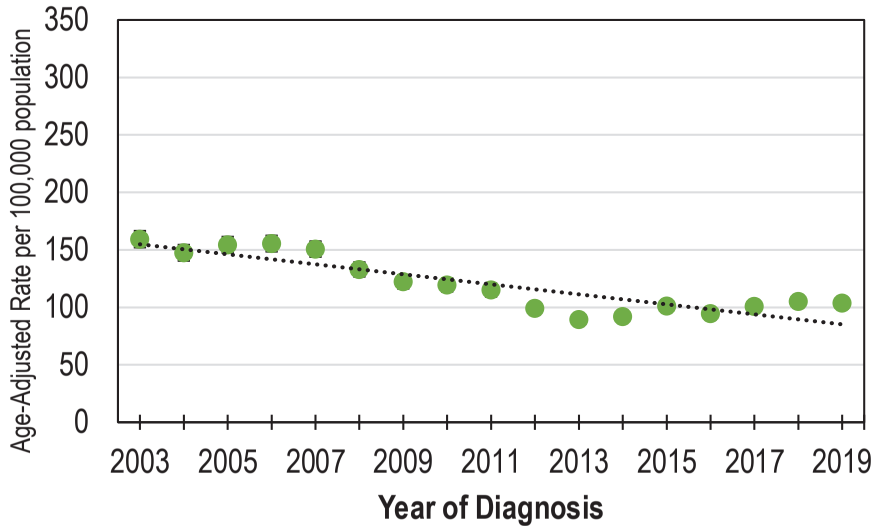


Figure 10.4: Age-Adjusted Incidence Rate and 95% CI by Race Among Males, Prostate Cancer, Arkansas, 2015-2019

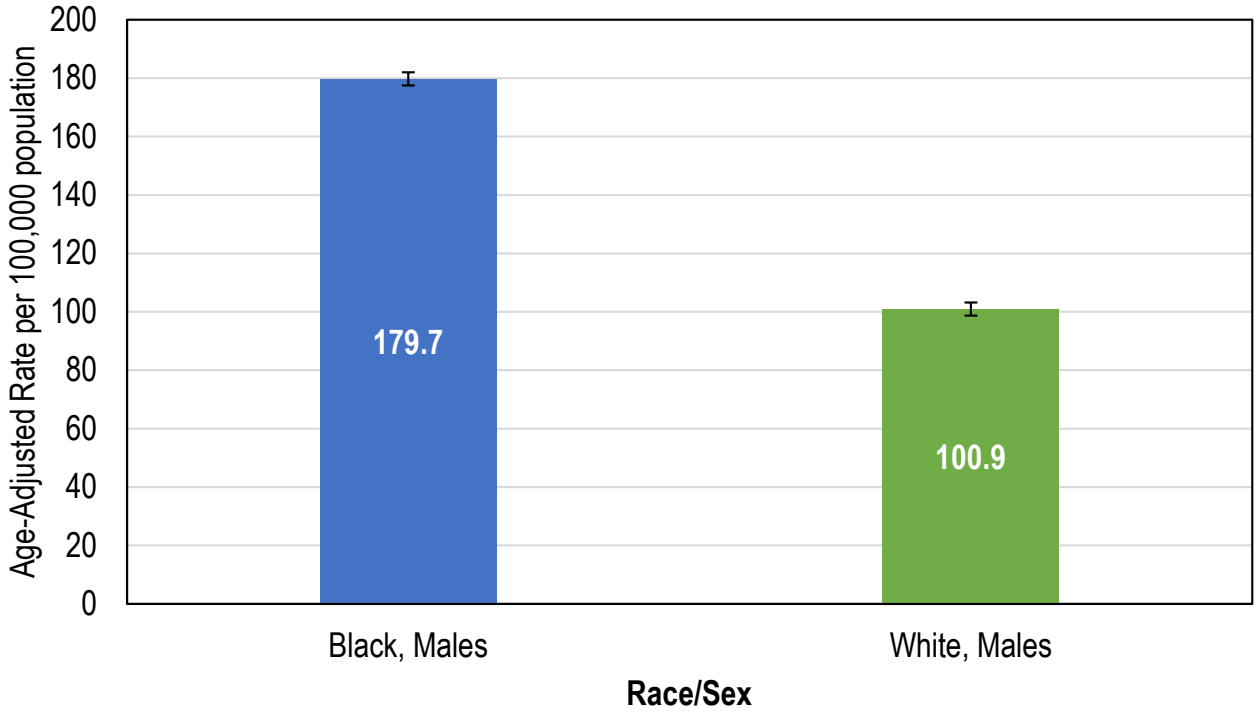
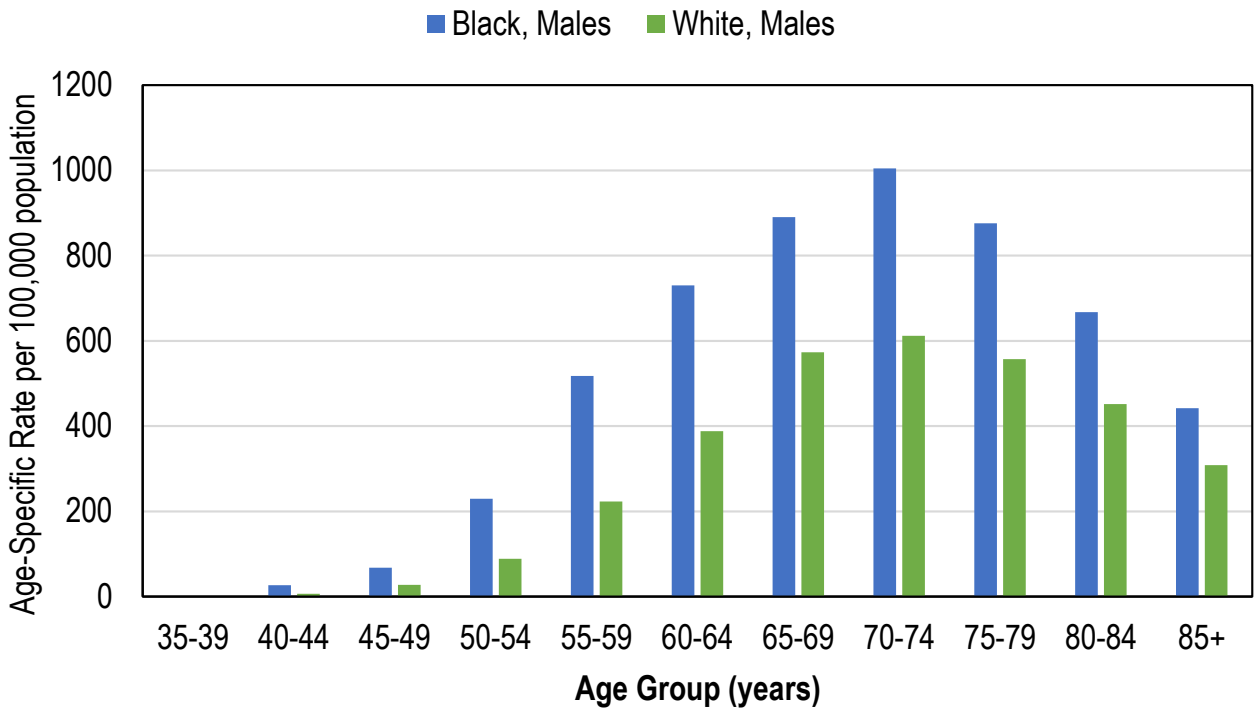
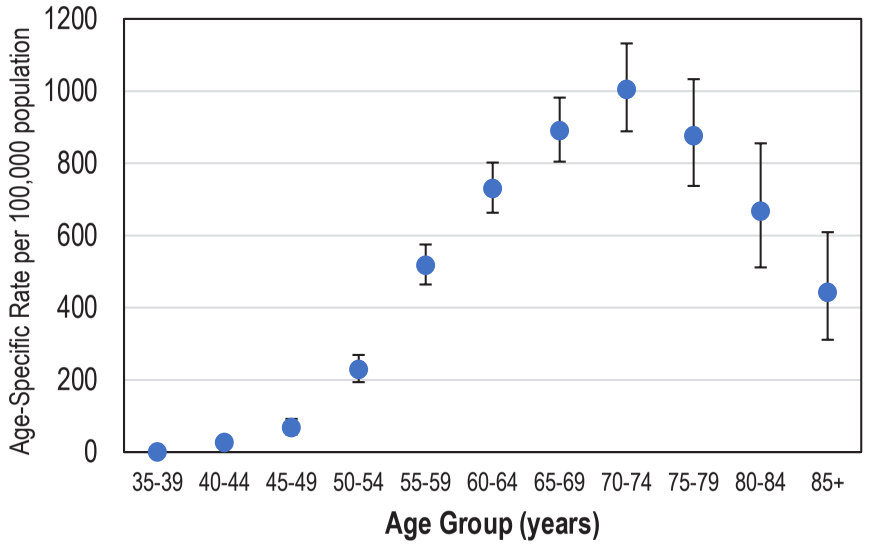


Figure 10.5: Age-Specific Incidence Rate by Race and Age Group Among Males, Prostate Cancer, Arkansas, 2015-2019



Figures 10.6A-B: Age-Specific Incidence Rate and 95% CI by Race and Age Group Among Males, Prostate Cancer, Arkansas 2015-2019

10.6A: Black, Males



10.6B: White, Males

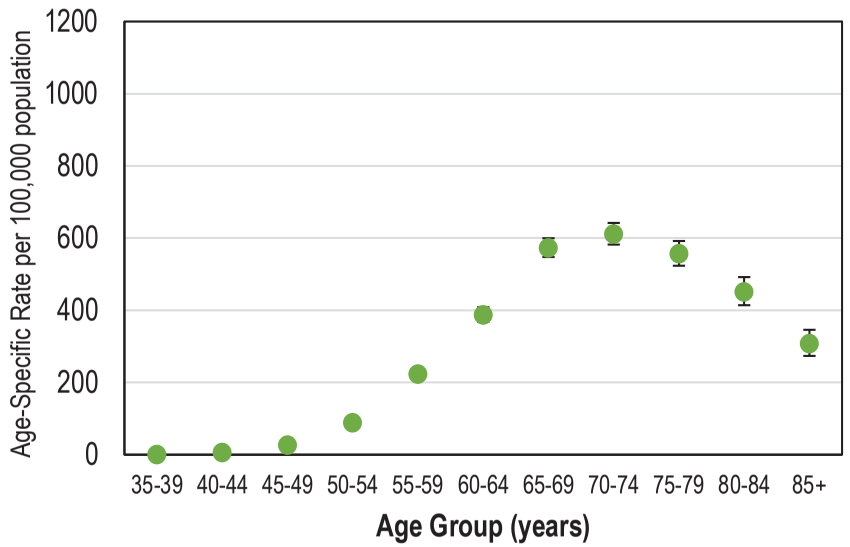


Figure 10.7: Standardized Incidence Ratio (SIR) by County Among Males, Prostate Cancer, Arkansas, 2010-2019

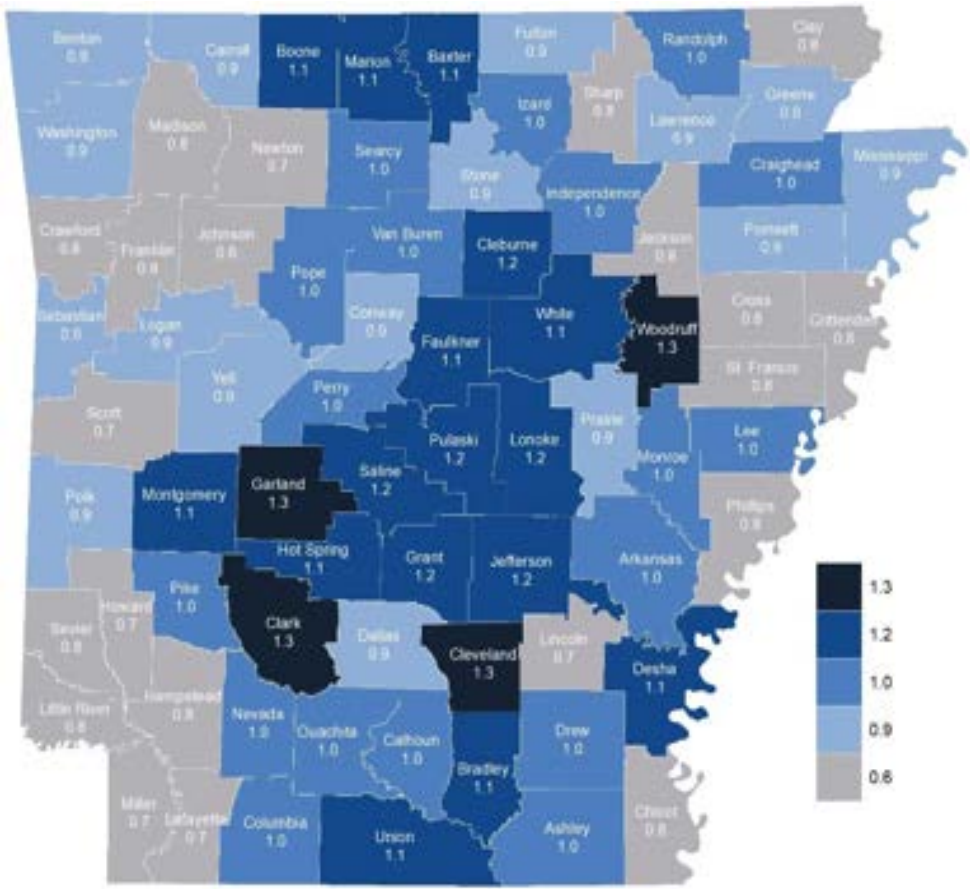
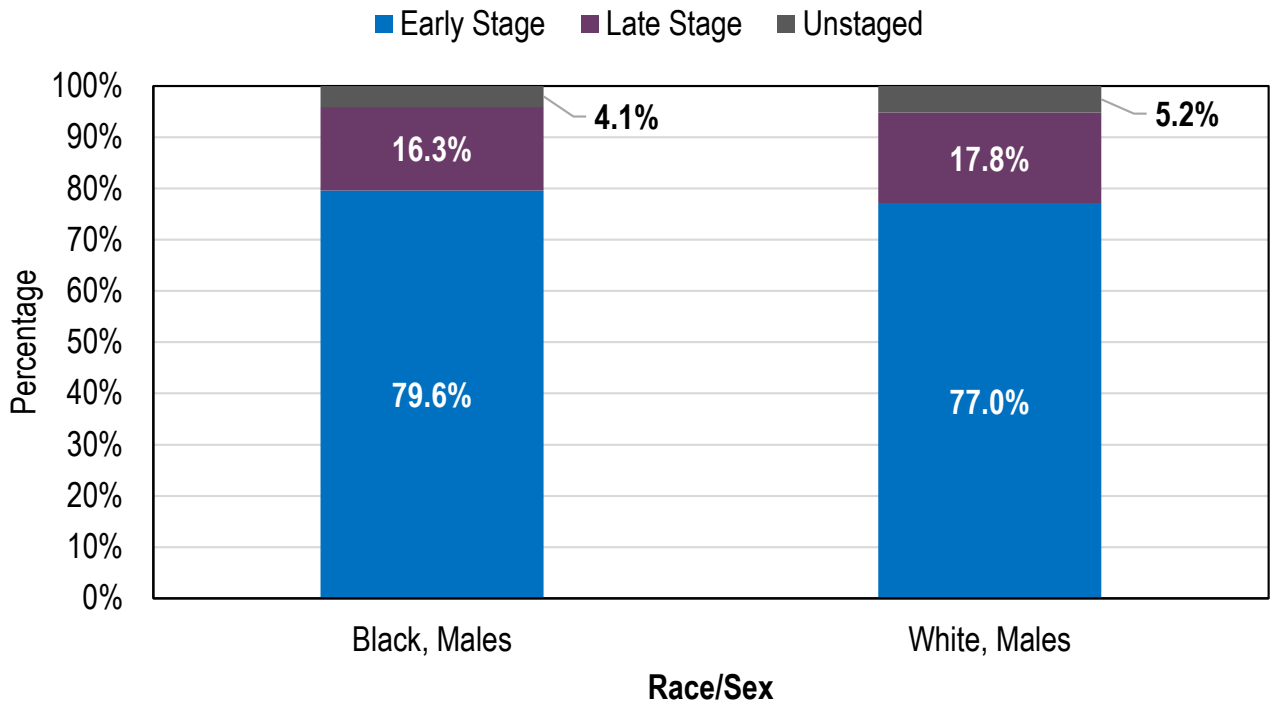


Figure 10.8: Percentage of SEER Summary Stage at Diagnosis by Race Among Males, Prostate Cancer, Arkansas, 2015-2019



SURVIVAL: PROSTATE CANCER

Figure 10.9: 5-Year Relative Survival Percent (%) by Stage at Diagnosis Among Males, Prostate Cancer, Arkansas, 2007-2019

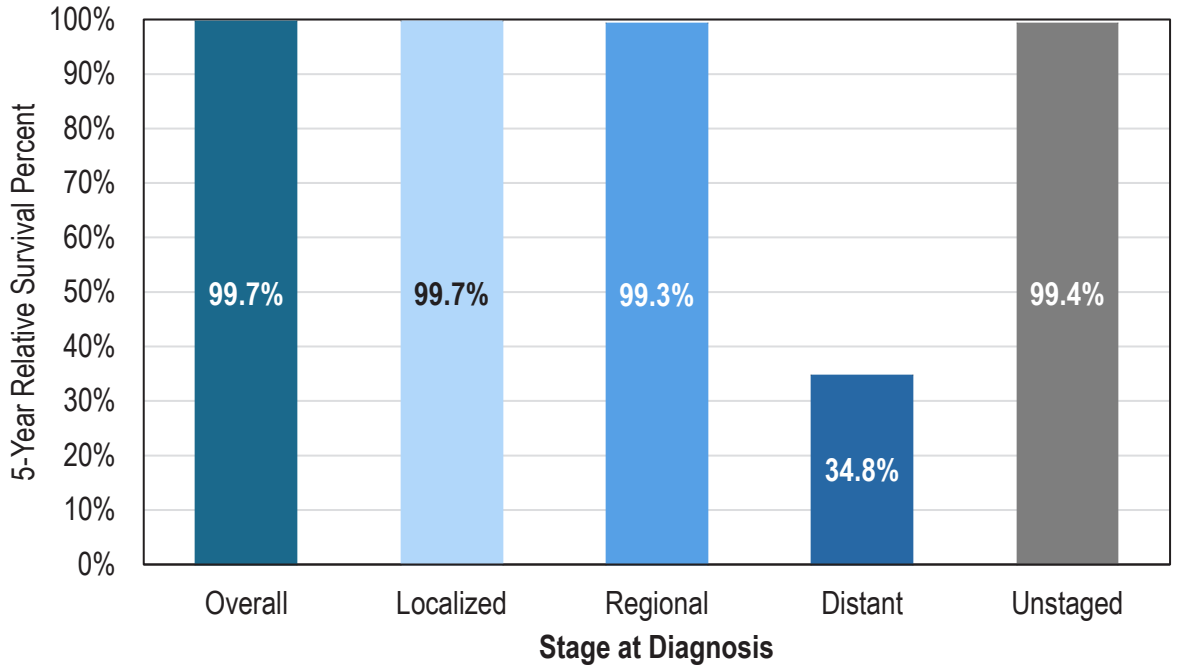


Table 10.1: 5-Year Relative Survival Percent (%) by Stage at Diagnosis and Years after Diagnosis Among Males, Prostate Cancer, Arkansas, 2007-2019

	Relative Survival Percent by Stage at Diagnosis				
Years after Diagnosis	Overall	Localized	Regional	Distant	Unstaged
1	100%	100%	100%	81%	100%
2	100%	100%	100%	65%	100%
3	100%	100%	100%	52%	100%
4	100%	100%	100%	43%	100%
5	100%	100%	99%	35%	99%

Figure 10.10: Age-Adjusted Mortality Rate Trendline Among Males, Prostate Cancer, US and Arkansas, 2005-2019

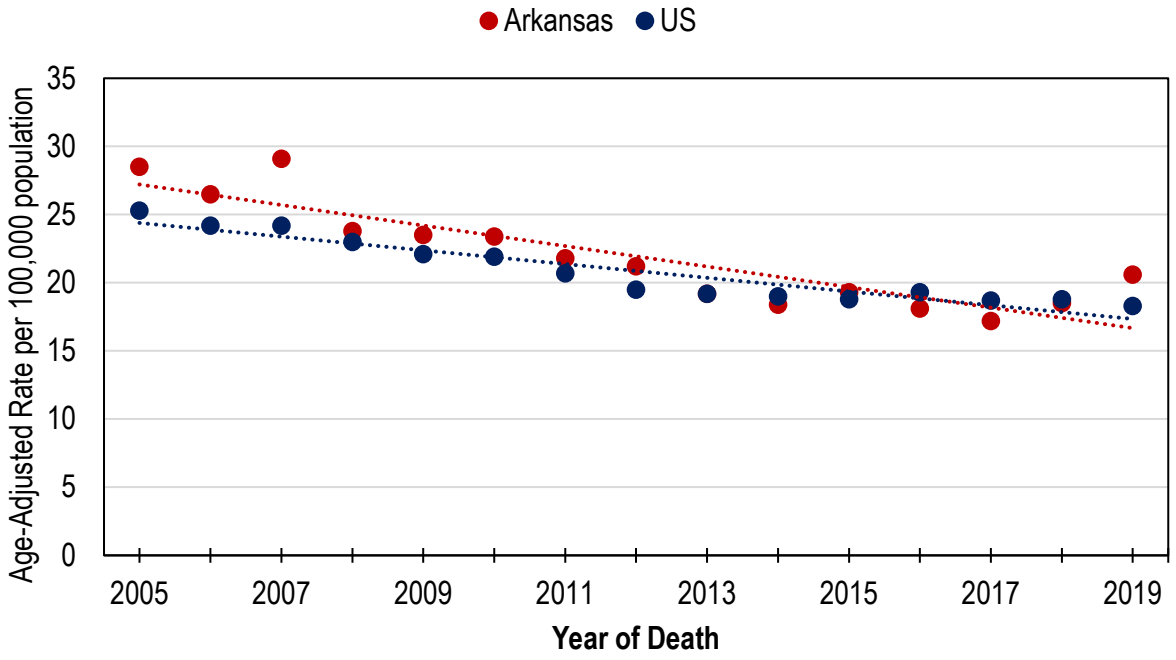
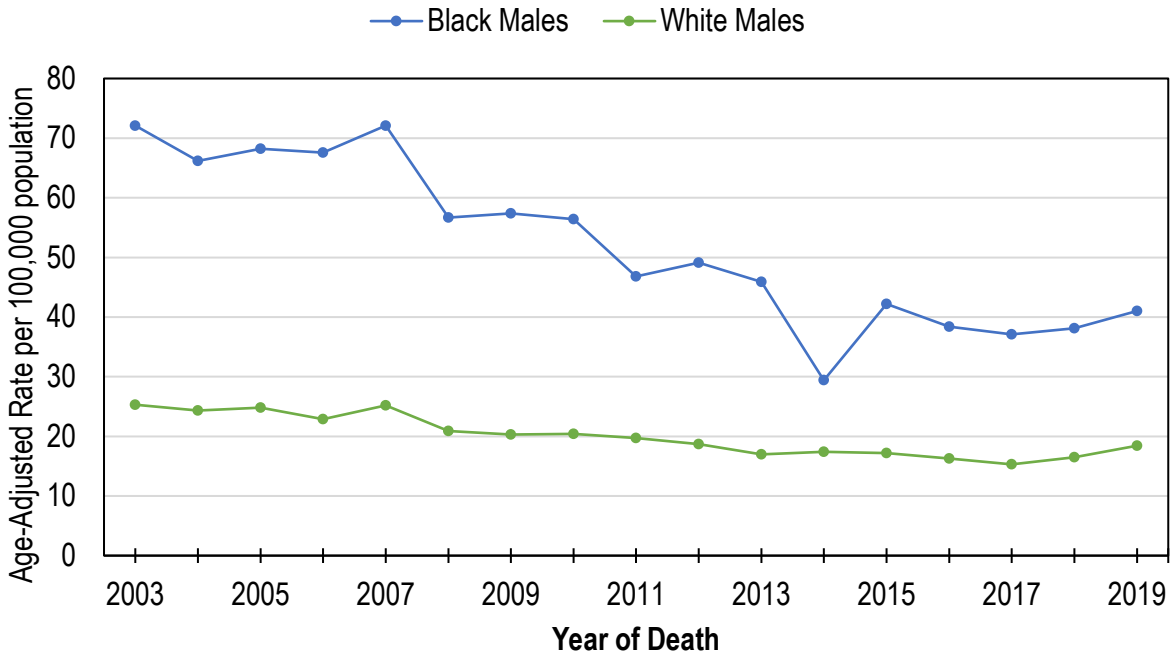
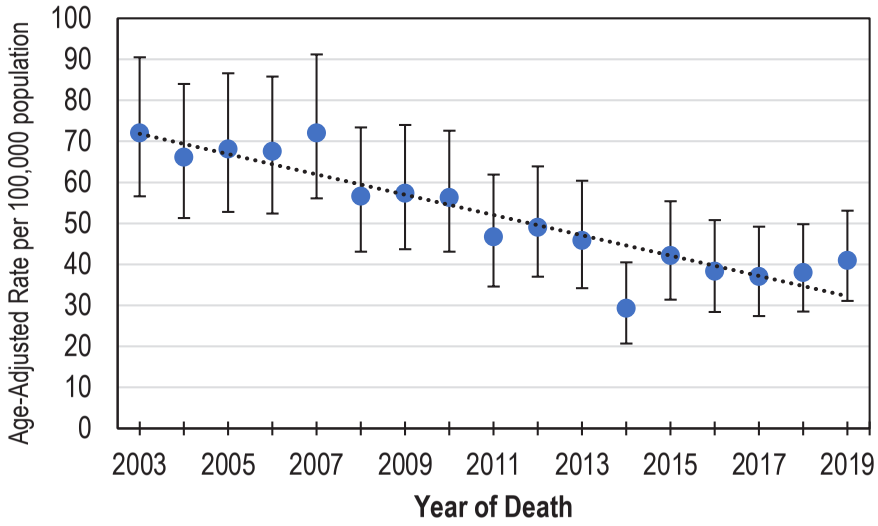


Figure 10.11: Age-Adjusted Mortality Rate Trendline by Race and Sex Among Males, Prostate Cancer, Arkansas, 2003-2019



Figures 10.12A-B: Age-Adjusted Mortality Rate and 95% CI by Race and Year of Death Among Males, Prostate Cancer, Arkansas, 2003-2019

10.12A: Black, Males



10.12B: White, Males

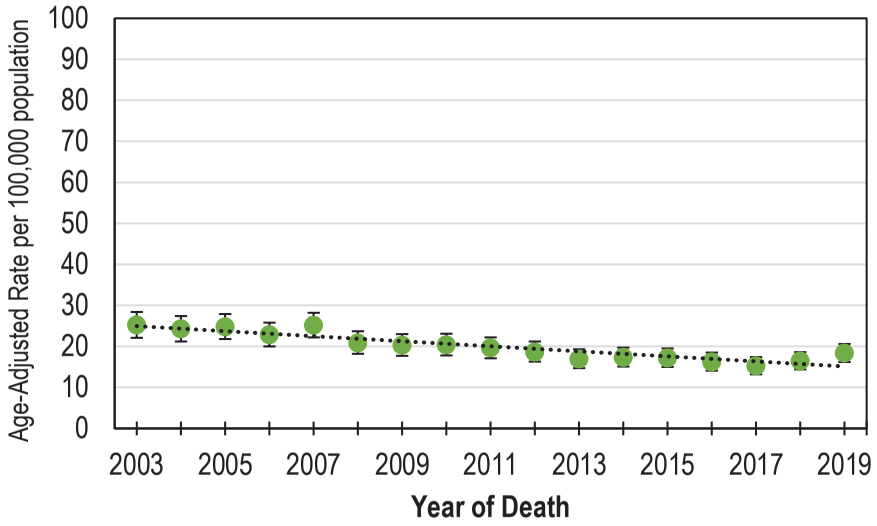


Figure 10.13: Age-Adjusted Mortality Rate and 95% CI by Race Among Males, Prostate Cancer, Arkansas, 2015-2019

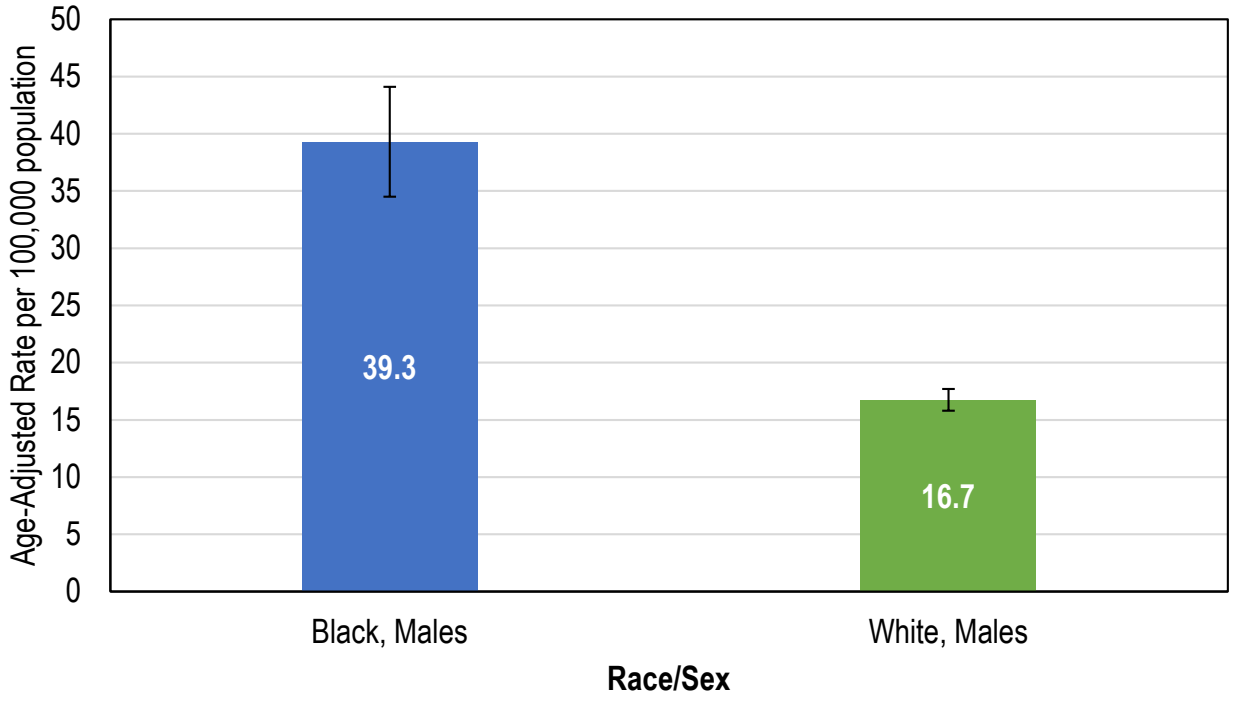
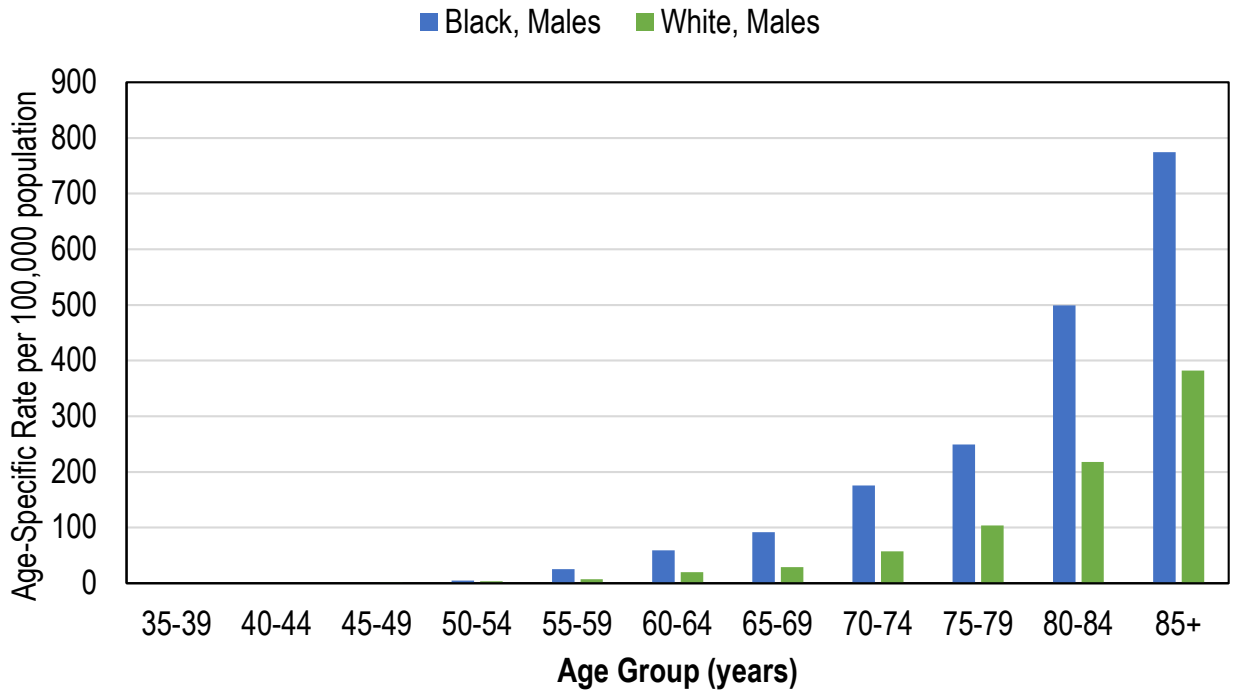


Figure 10.14: Age-Specific Mortality Rate by Race and Age Group Among Males, Prostate Cancer, Arkansas, 2015-2019



Figures 10.15A-B: Age-Specific Mortality Rate and 95% CI by Race and Age Group Among Males, Prostate Cancer, Arkansas, 2015-2019

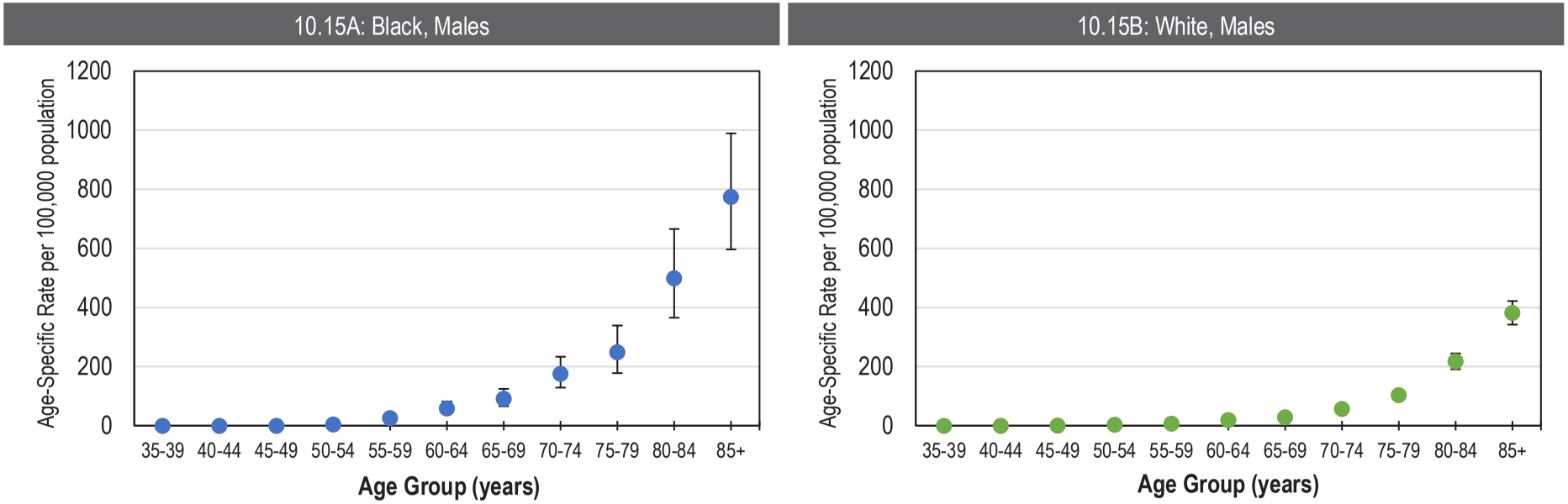
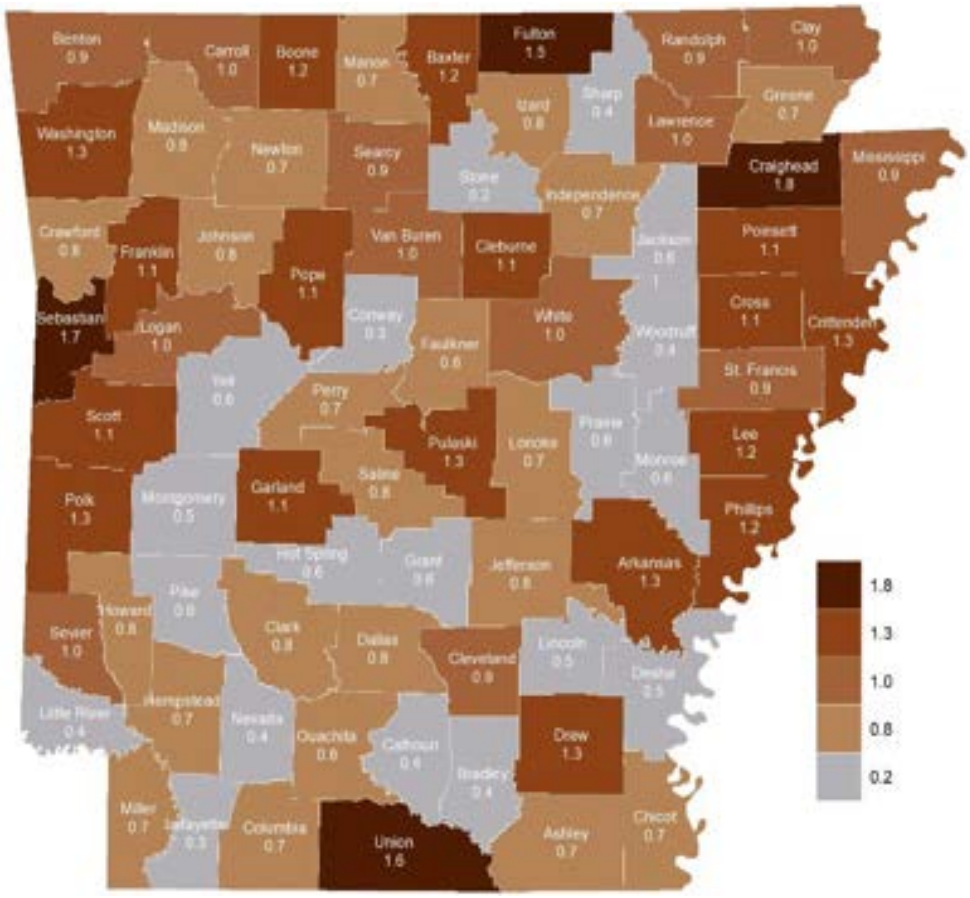


Figure 10.16: Standardized Mortality Ratio (SMR) by County Among Males, Prostate Cancer, Arkansas, 2010-2019



ARKANSAS CENTRAL CANCER REGISTRY

Section 11: Urinary Bladder Cancer

Overview

Urinary bladder cancer is more common among males than females, with approximately half of all bladder cancers initially found when the cancer is still only in the inner layer of the bladder wall (in-situ).[51] There are currently no recommended screening tests for urinary bladder cancer. Many of the risk factors for bladder cancer do not directly cause cancer, but rather increase the chance of DNA damage in cells that may lead to bladder cancer.

Urinary Bladder Risk Factors

- Common risk factors that can increase your risk for urinary bladder cancer include:
- Tobacco, especially smoking cigarettes
- Having a family history of bladder cancer
- Having certain genetic changes linked to bladder cancer (such as HRAS, RB1, PTEN/MMAC1, NAT2, and GSTM1)
- Being exposed to paints, dyes, metals, or petroleum products in the workplace
- Past treatment with radiation therapy to the pelvis or with certain anticancer drugs (such as cyclophosphamide or ifosfamide)
- Dietary supplements containing aristolochic acid
- Drinking water that has high levels of arsenic or has been treated with chlorine
- Having a bladder infection caused by a parasite called Schistosoma haematobium (common in Africa and the Middle East but rare in the US)
- Long-term use of urinary catheters

Key Findings

Urinary Bladder Cancer Incidence

- From 2005 to 2019, the incidence rate for urinary bladder cancer decreased in the US but was slightly stable for Arkansas. Caution is suggested in interpretating Arkansas trend due to the variation of incidence rates. In 2019, the urinary bladder cancer incidence rate in Arkansas was 17.8 cases per 100,000 population, compared to the US rate of 18.8 cases per 100,000 population (**Figure 11.1**).
- Incidence rates for urinary bladder cancer for all race and sex groups varied. Overall, white males had a higher trendline rate than all other groups. In 2019, the urinary bladder cancer rates were: 5.1 per 100,000 population for Black females, 8.3 per 100,000 population for White females, 15.8 per 100,000 population for Black males, and 31.7 per 100,000 population for White males (**Figure 11.2, Figures 11.3A-D**).
- For 2015-2019, White males had an incidence rate for urinary bladder cancer more than double the rate of Black males (**Figure 11.4**).
- In 2015-2019, the age-specific rate for newly diagnosed urinary bladder cancer incidence rate increased by age group for all groups. White males had a significantly higher rate for each age group (**Figure 11.5, Figures 11.6A-D**).
- Arkansas counties with higher-than-expected urinary bladder cancer cases were Poinsett and Woodruff (**Figure 11.7**).
- During 2015-2019, Black females had a higher percentage (21.4%) of late stage urinary bladder cancer among females, and White males had a higher percentage (11.0%) of late stage urinary bladder cancer among males (**Figure 11.8**).

Urinary Bladder Cancer Survival

- The 5-year relative survival for urinary bladder cancer cases in 2007-2019 for a localized stage is approximately 67% and decreases to 5.4% for a distant stage (**Figure 11.9, Table 11.1**).

Urinary Bladder Cancer Mortality*

*Caution is suggested in interpretation as Arkansas data had a high variation in mortality rates for all race and sex groups.

- From 2005 to 2019, the mortality trendline rate for urinary bladder cancer in Arkansas and the US had a slight decrease. In 2019, the urinary bladder cancer mortality rate in Arkansas was 3.9 deaths per 100,000 population, compared to the US rate of 4.1 deaths per 100,000 population (**Figure 11.10**).
- Between 2003 and 2019, the mortality rates for urinary bladder cancer for all race and sex groups varied by year of death. In 2019, the urinary bladder cancer mortality rates were: 2.3 per 100,000 population for Black females, 1.4 per 100,000 population for White females, 6.9 per 100,000 population for Black males, and 7.2 per 100,000 population for White males (**Figure 11.11, Figures 11.12A-D**).
- Overall, White males had the highest mortality rate for urinary bladder cancer mortality rate (**Figure 11.13**).
- During 2015-2019, the age-specific mortality rate for urinary bladder cancer increased by age group for all race and sex groups. Whtie males had a higher age-specific mortality rate with a significant increase for age groups 80 through 85+ (**Figure 11.14, Figures 11.15**).
- Arkansas counties with higher-than-expected urinary bladder cancer deaths for 2010-2019 were Pulaski, Craighead, and Sebastian (**Figure 11.16**).

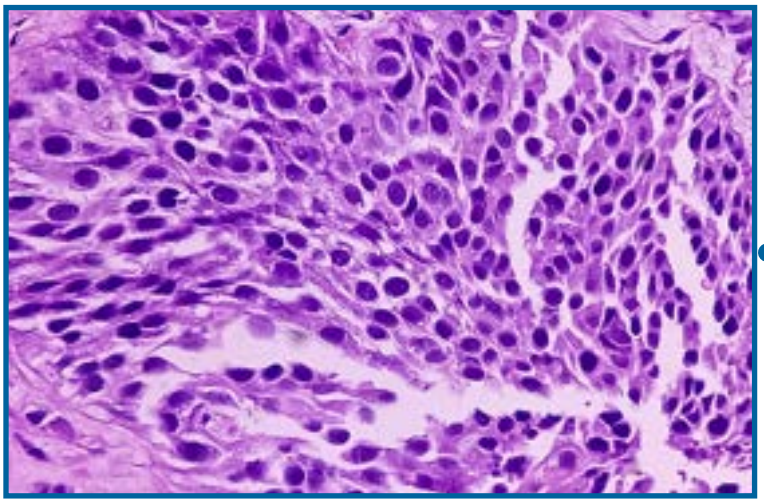


Figure 11.1: Age-Adjusted Incidence Rate Trendline, Urinary Bladder Cancer, US and Arkansas, 2005-2019

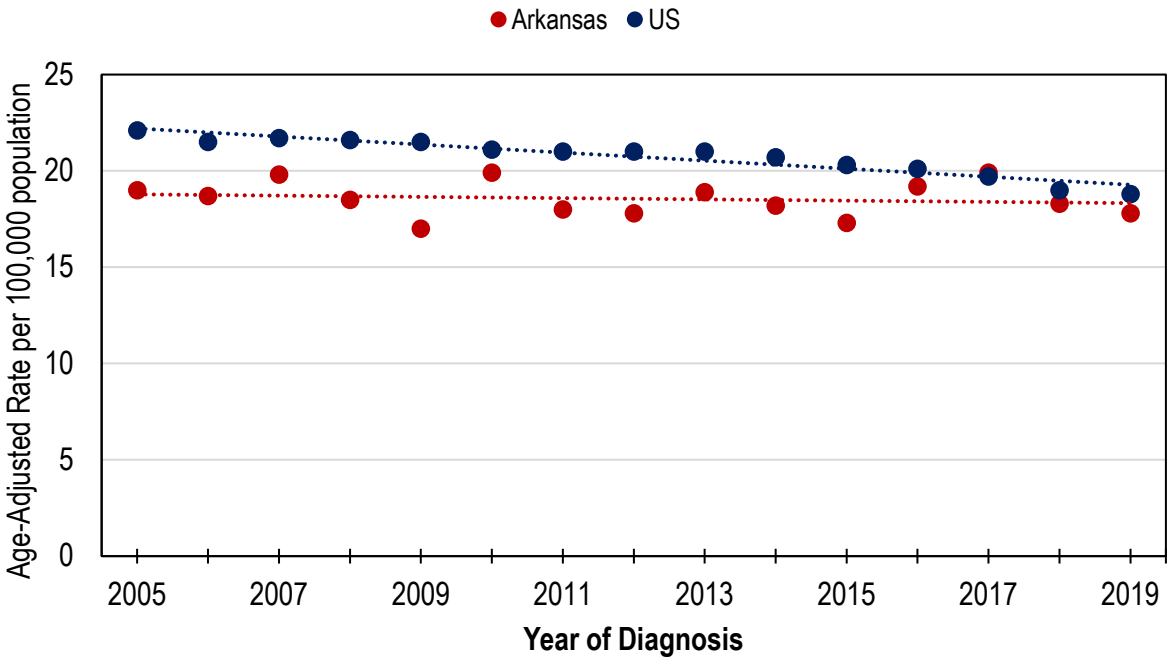
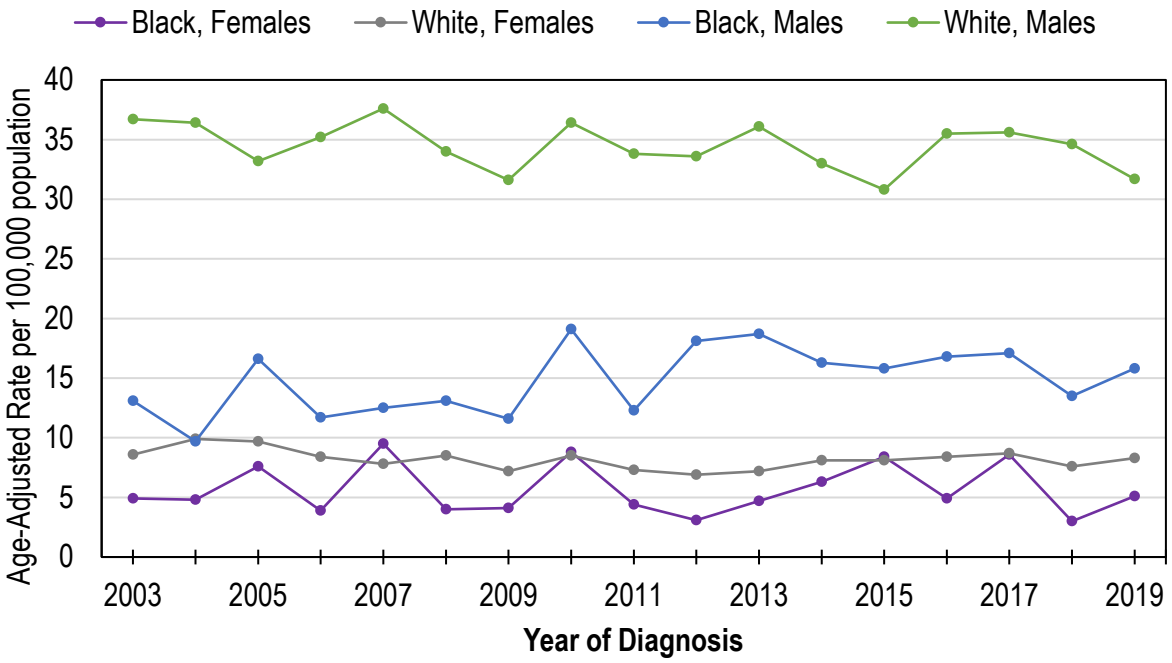
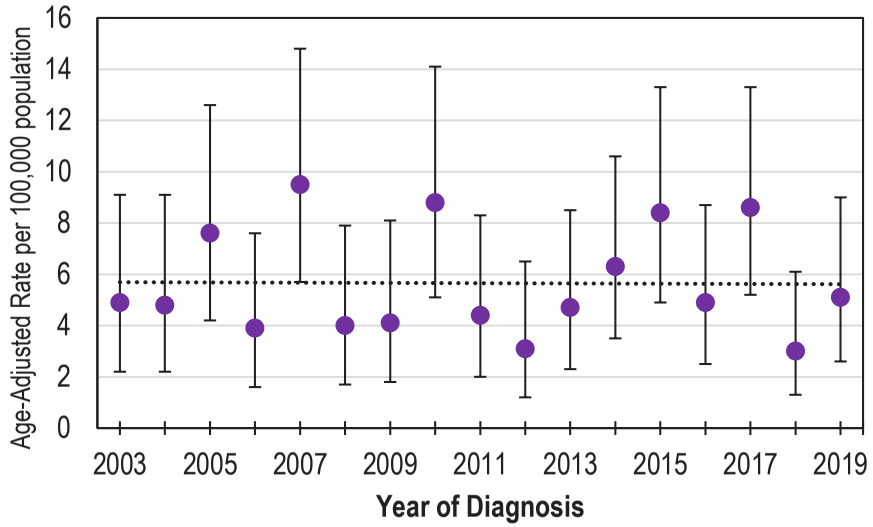


Figure 11.2: Age-Adjusted Incidence Rate Trendline by Race and Sex, Urinary Bladder Cancer, Arkansas, 2003-2019

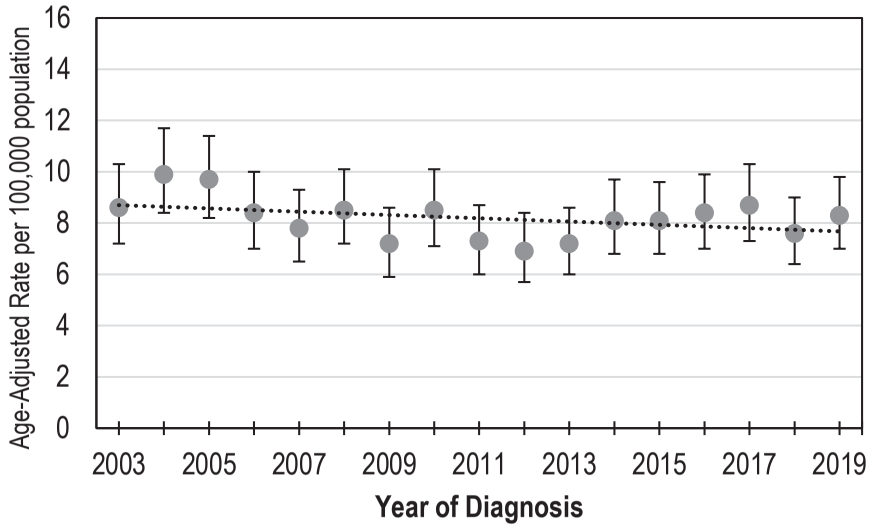


Figures 11.3A-D: Age-Adjusted Incidence Rate and 95% CI by Race, Sex, and Year of Diagnosis, Urinary Bladder Cancer, Arkansas, 2003-2019

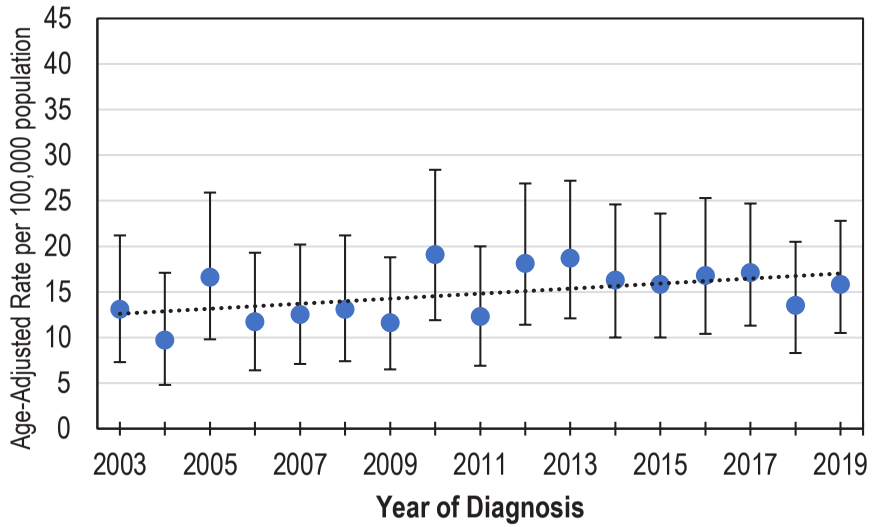
11.3A: Black, Females



11.3B: White, Females



11.3C: Black, Males



11.3D: White, Males

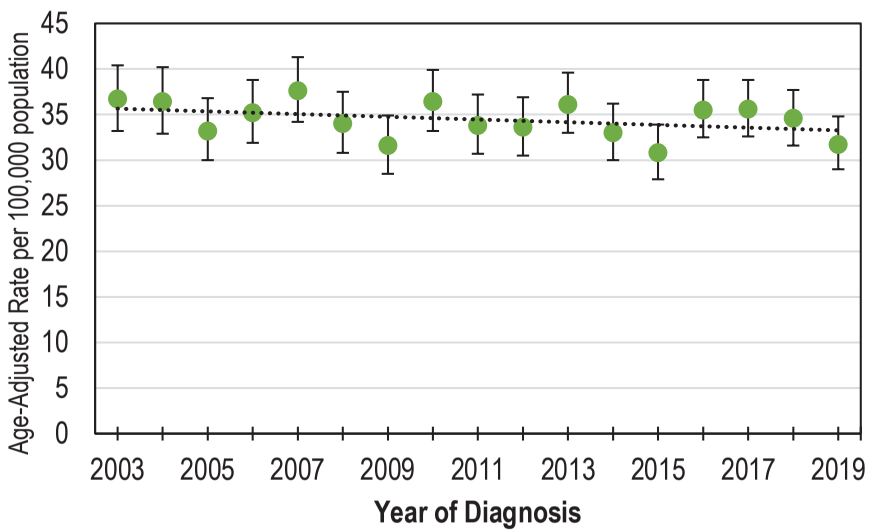


Figure 11.4: Age-Adjusted Incidence Rate and 95% CI by Race and Sex, Urinary Bladder Cancer, Arkansas, 2015-2019

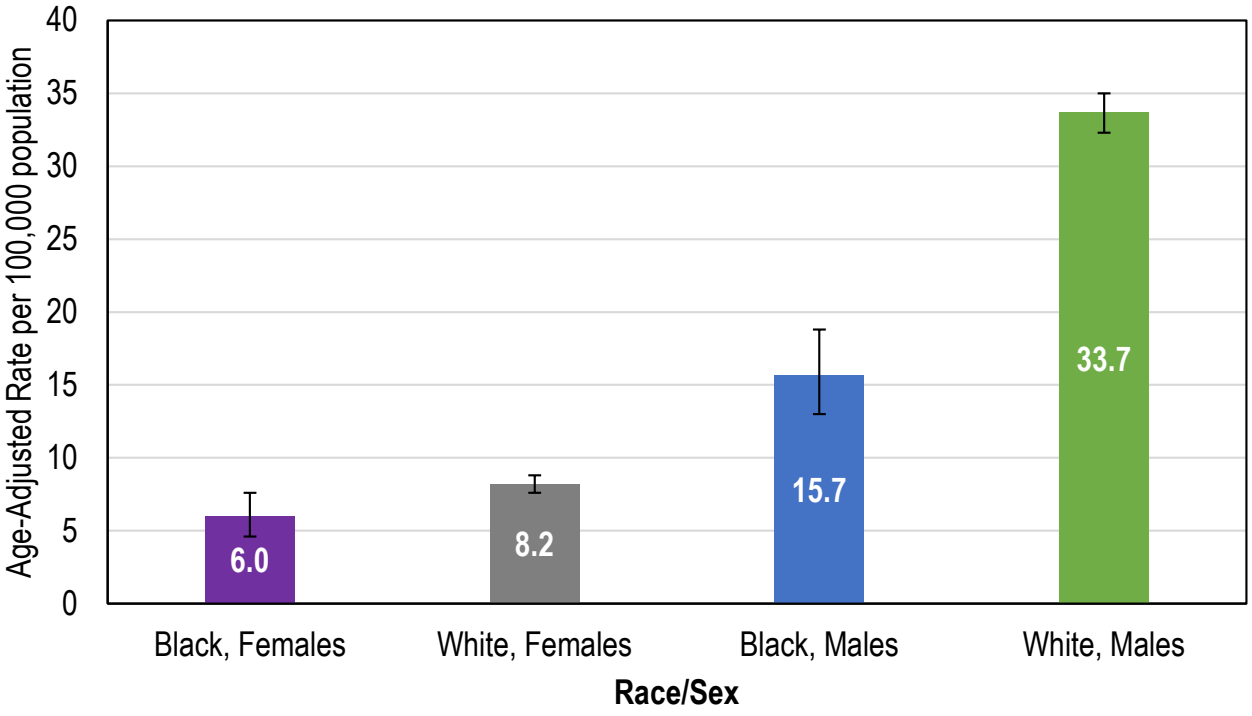
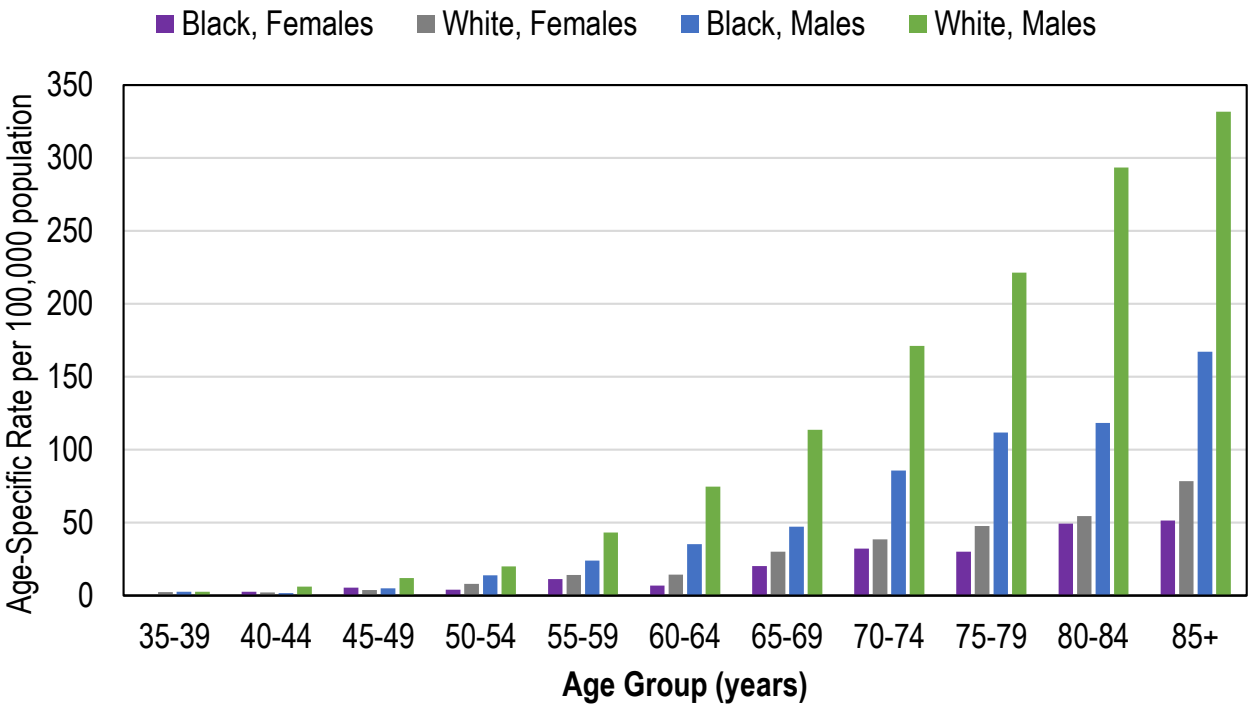
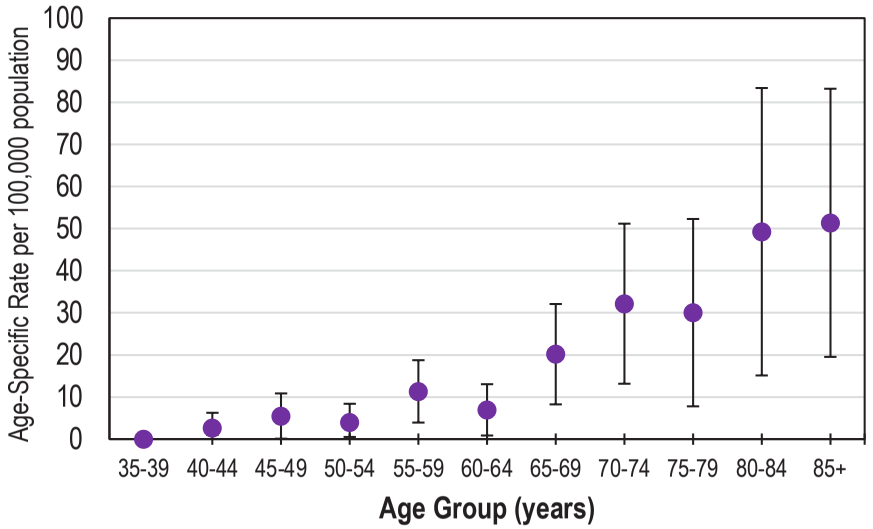


Figure 11.5: Age-Specific Incidence Rate by Race, Sex, and Age Group, Urinary Bladder Cancer, Arkansas, 2015-2019

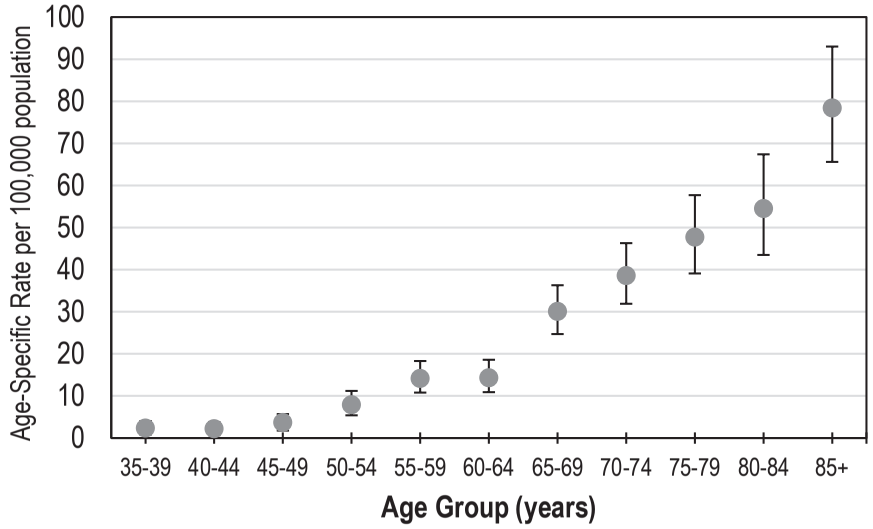


Figures 11.6A-D: Age-Specific Incidence Rate and 95% CI by Race, Sex, and Age Group, Urinary Bladder Cancer, Arkansas, 2015-2019

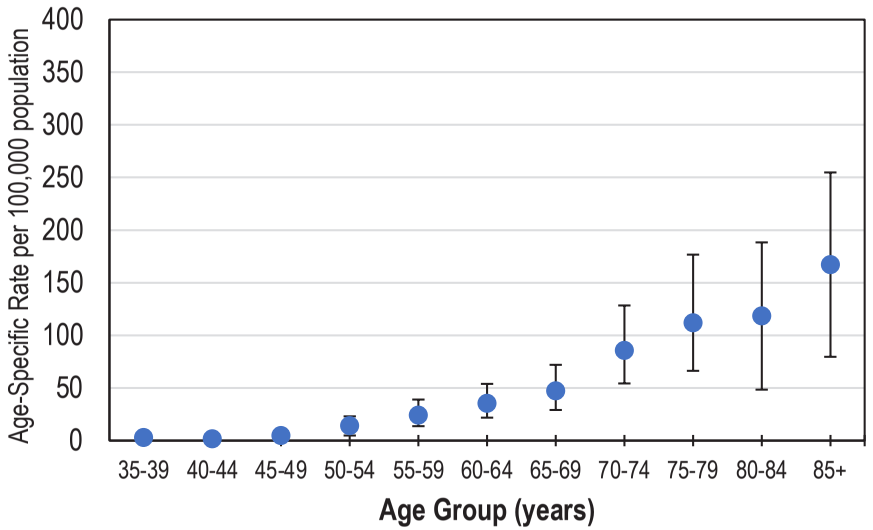
11.6A: Black, Females



11.6B: White, Females



11.6C: Black, Males



11.6D: White, Males

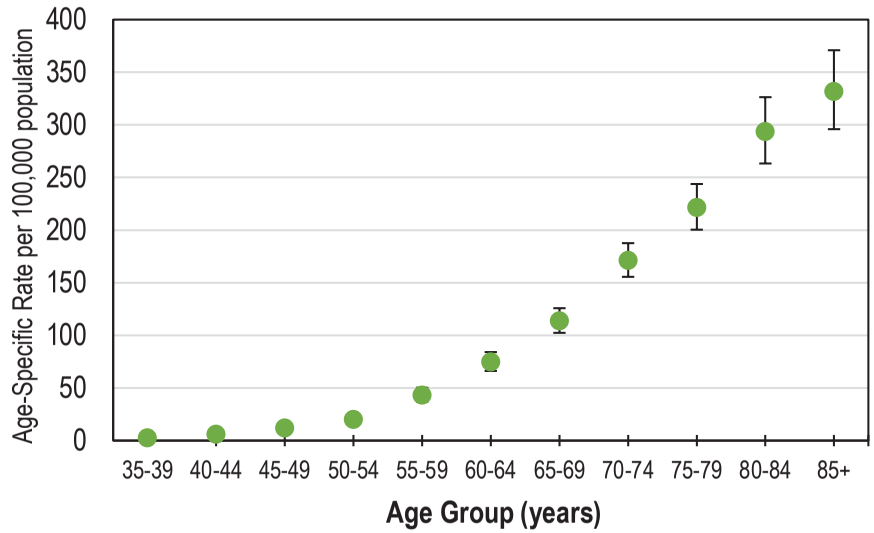


Figure 11.7: Standardized Incidence Ratio (SIR) by County, Urinary Bladder Cancer, Arkansas, 2010-2019

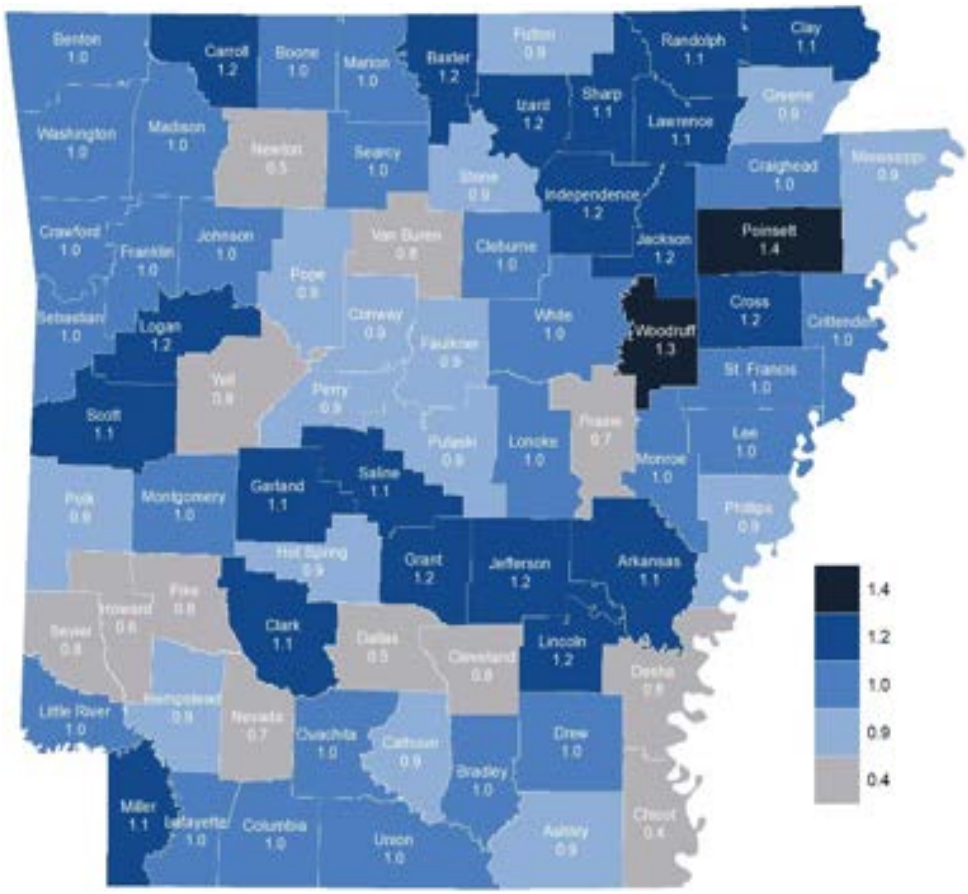
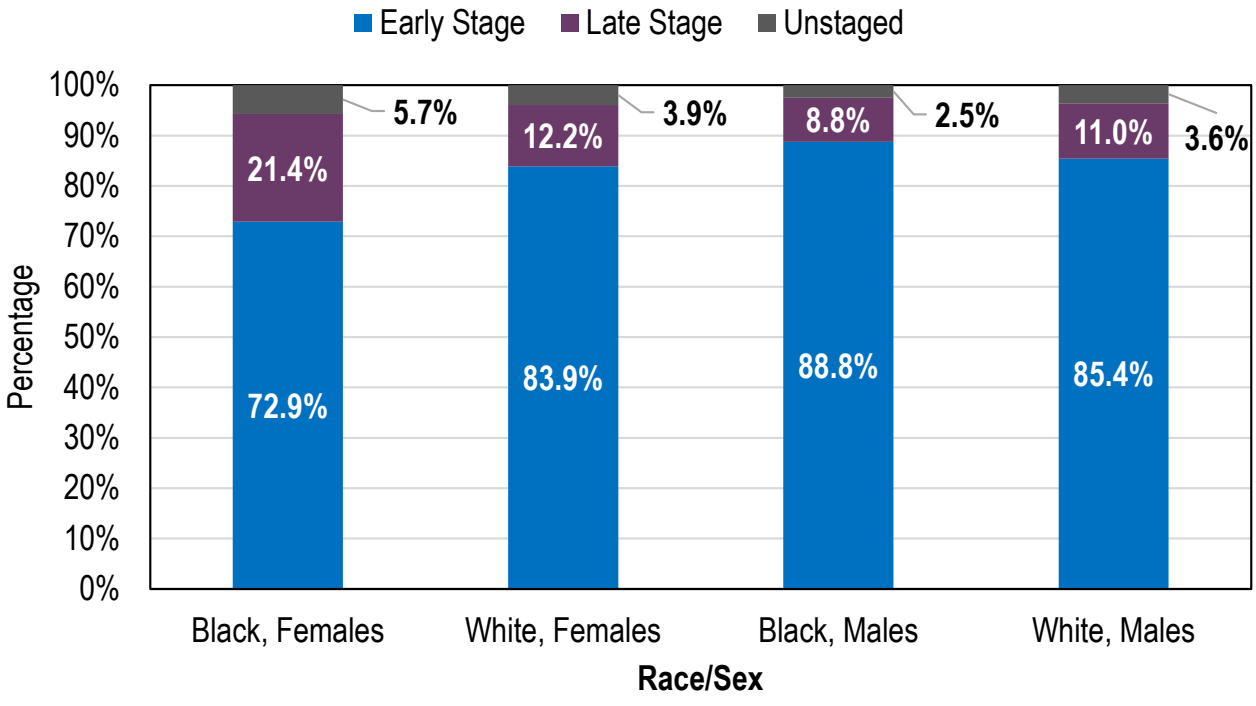


Figure 11.8: Percentage of SEER Summary Stage at Diagnosis by Race and Sex, Urinary Bladder Cancer, Arkansas, 2015-2019



SURVIVAL: URINARY BLADDER CANCER

Figure 11.9: 5-Year Relative Survival Percent (%) by Stage at Diagnosis, Urinary Bladder Cancer, Arkansas, 2007-2019

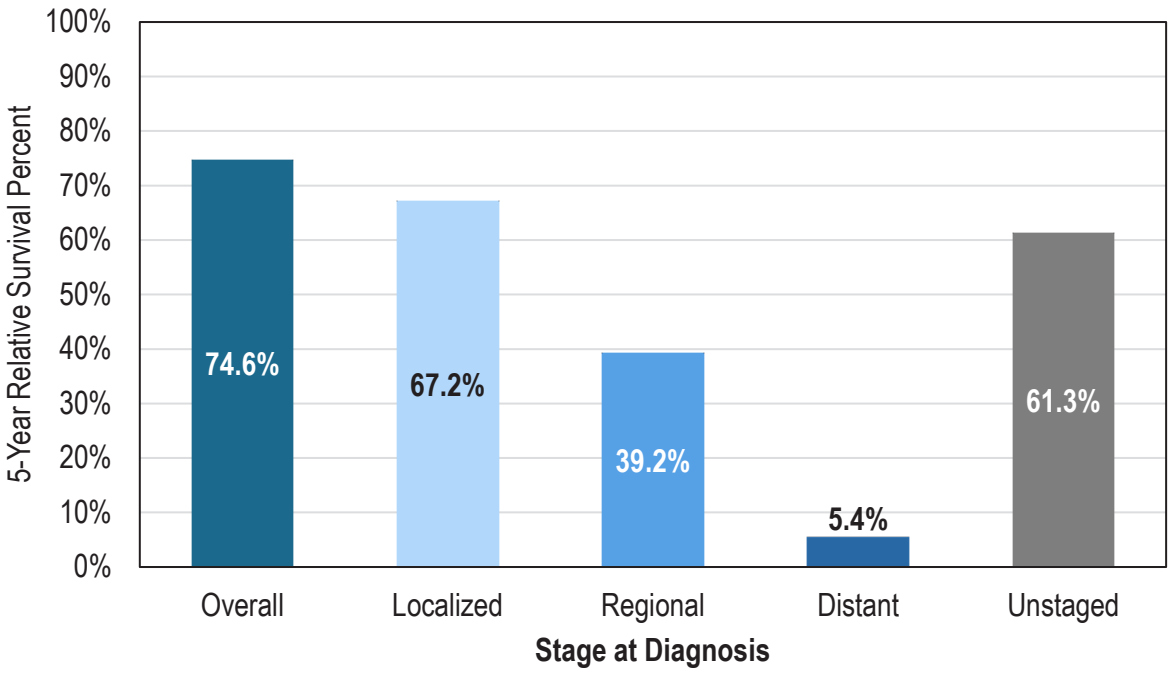


Table 11.1: 5-Year Relative Survival Percent (%) by Stage at Diagnosis and Years after Diagnosis, Urinary Bladder Cancer, Arkansas, 2007-2019

	Relative Survival Percent by Stage at Diagnosis				
Years after Diagnosis	Overall	Localized	Regional	Distant	Unstaged
1	88%	85%	69%	26%	77%
2	82%	78%	51%	11%	70%
3	79%	74%	45%	7%	67%
4	77%	70%	40%	6%	65%
5	75%	67%	39%	5%	61%

Figure 11.10: Age-Adjusted Mortality Rate Trendline, Urinary Bladder Cancer, US and Arkansas, 2005-2019

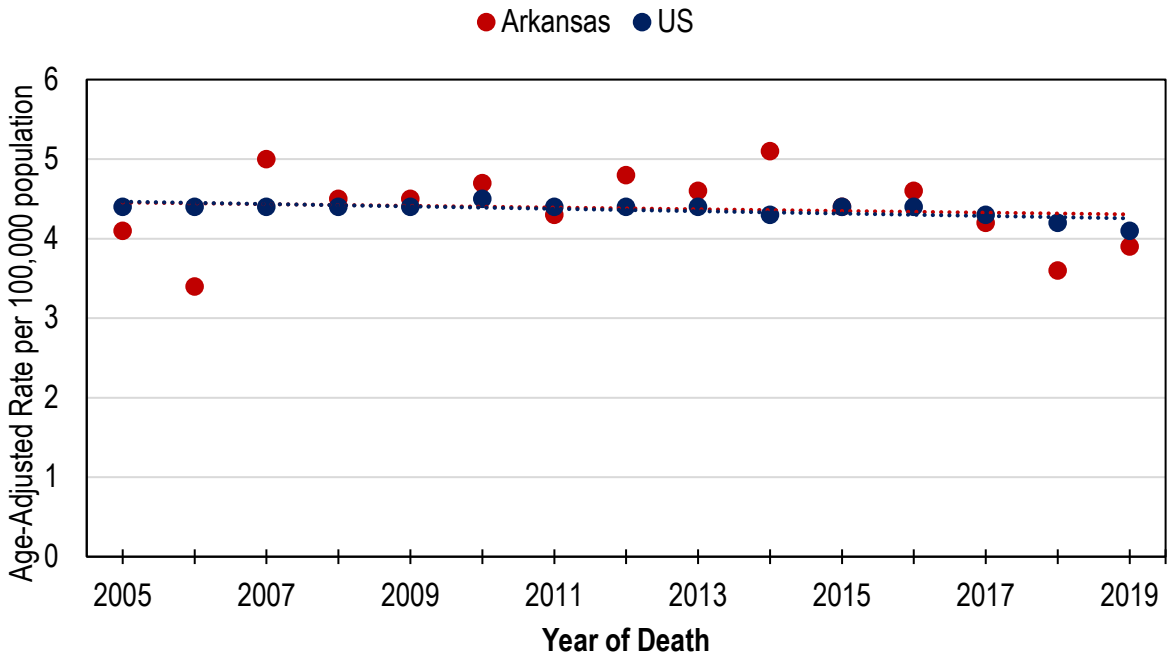
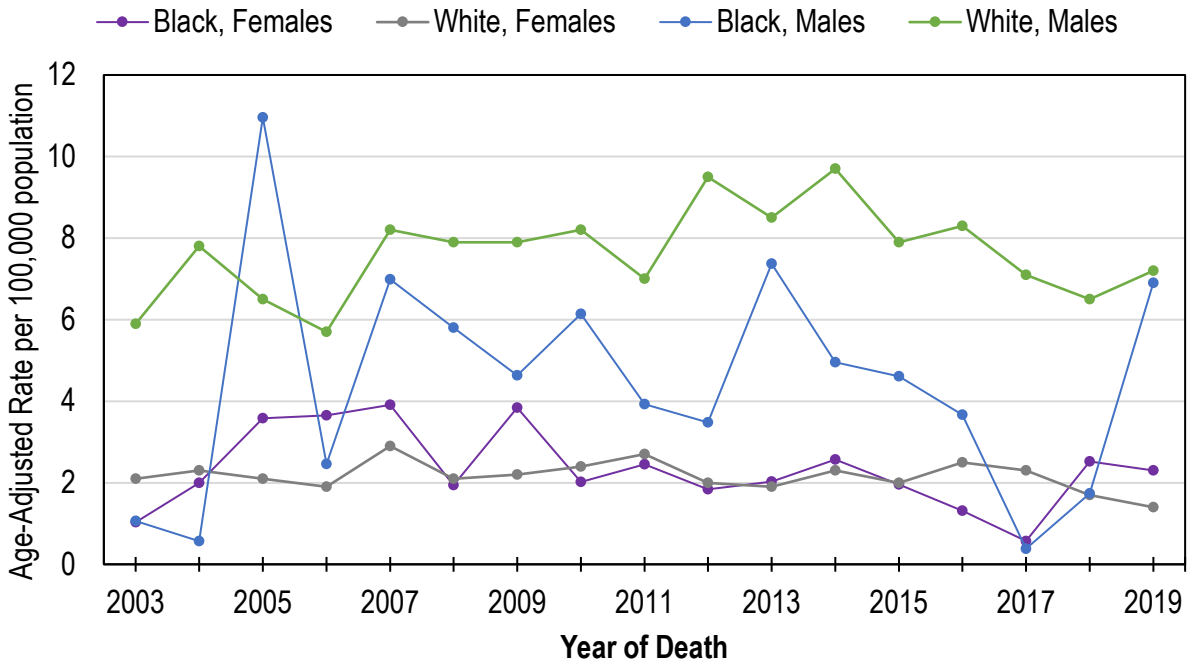
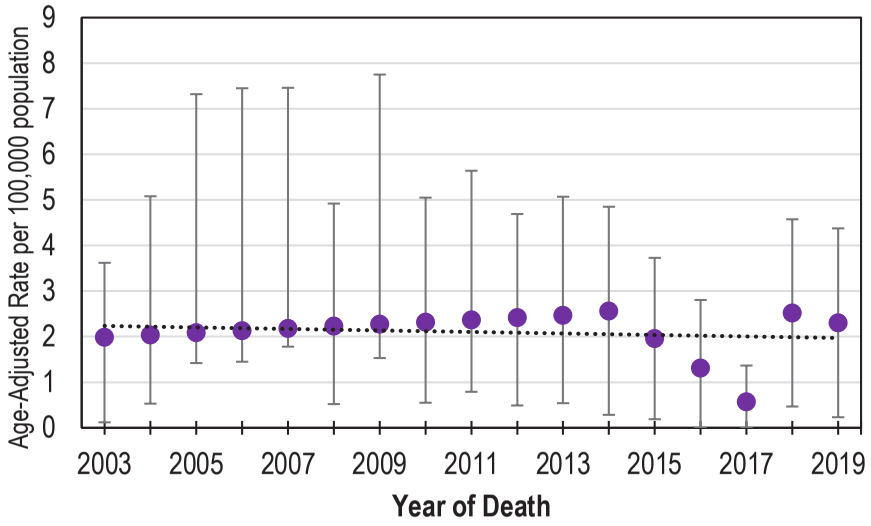


Figure 11.11: Age-Adjusted Mortality Rate Trendline by Race and Sex, Urinary Bladder Cancer, Arkansas, 2003-2019

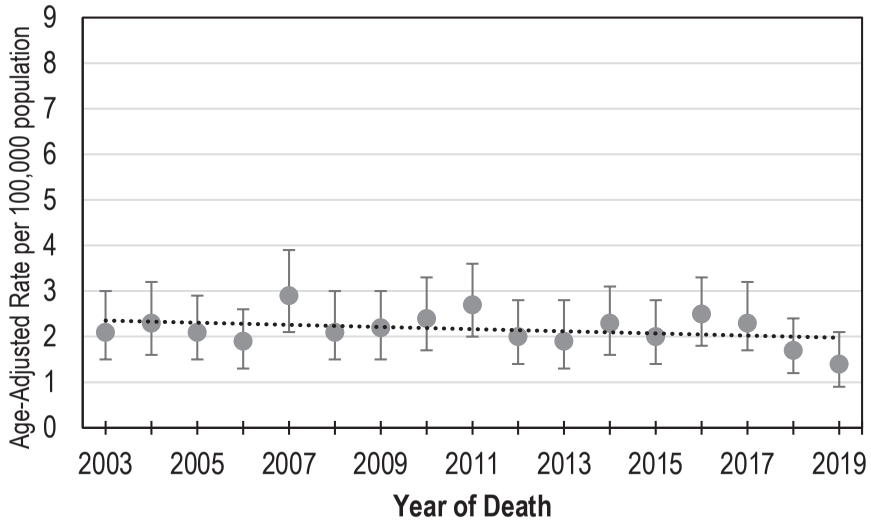


Figures 11.12A-D: Age-Adjusted Mortality Rate and 95% CI by Race, Sex, and Year of Death, Urinary Bladder Cancer, Arkansas, 2003-2019

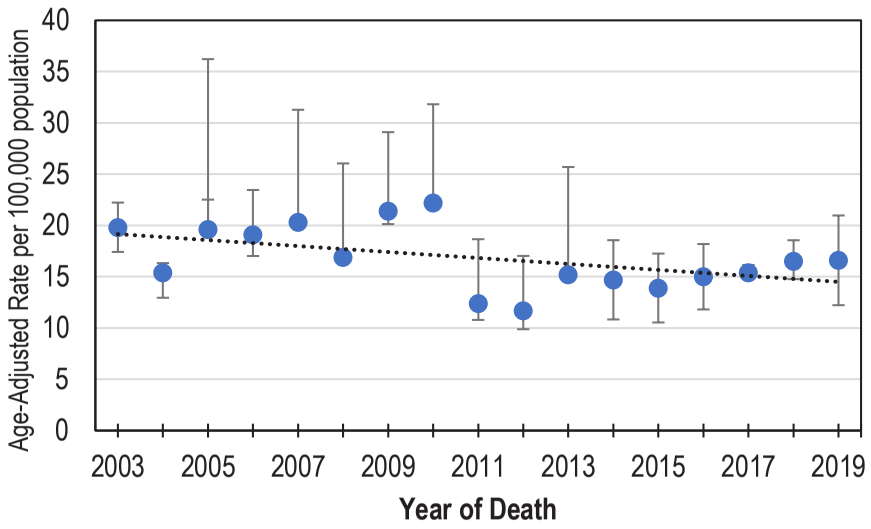
11.12A: Black, Females



11.12B: White, Females



11.12C: Black, Males



11.12D: White, Males

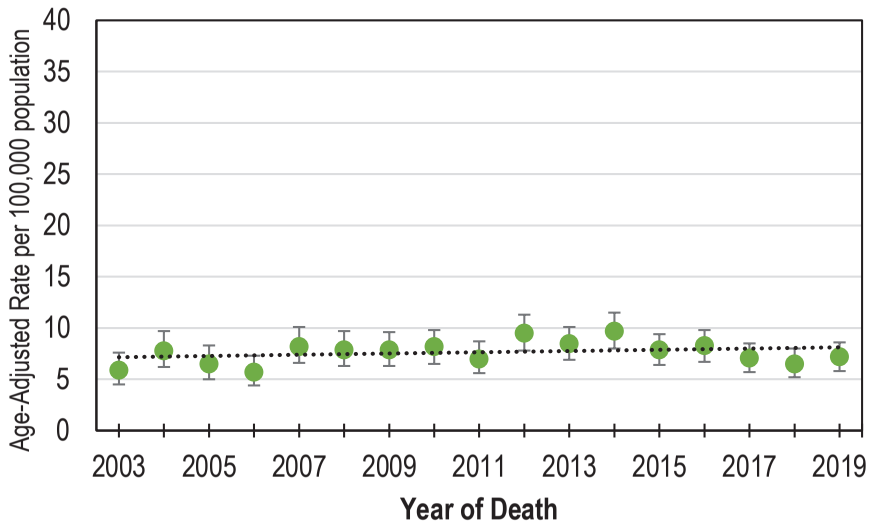


Figure 11.13: Age-Adjusted Mortality Rate and 95% CI by Race and Sex, Urinary Bladder Cancer, Arkansas, 2015-2019

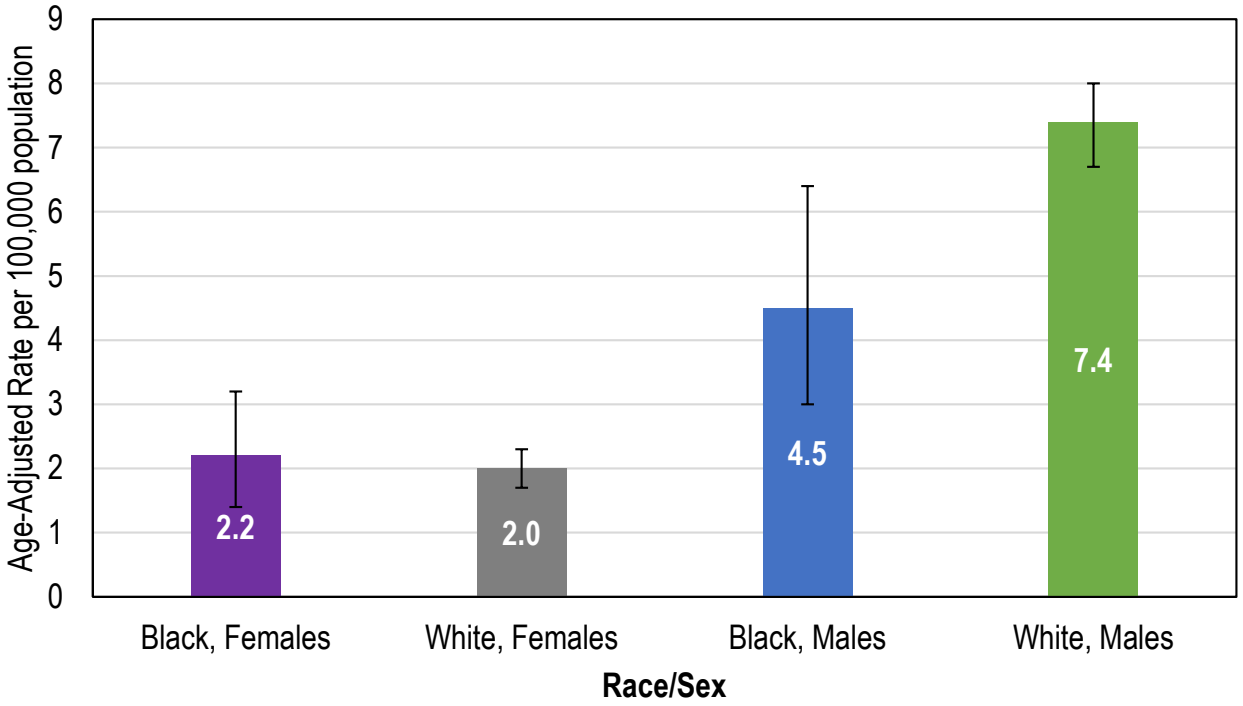
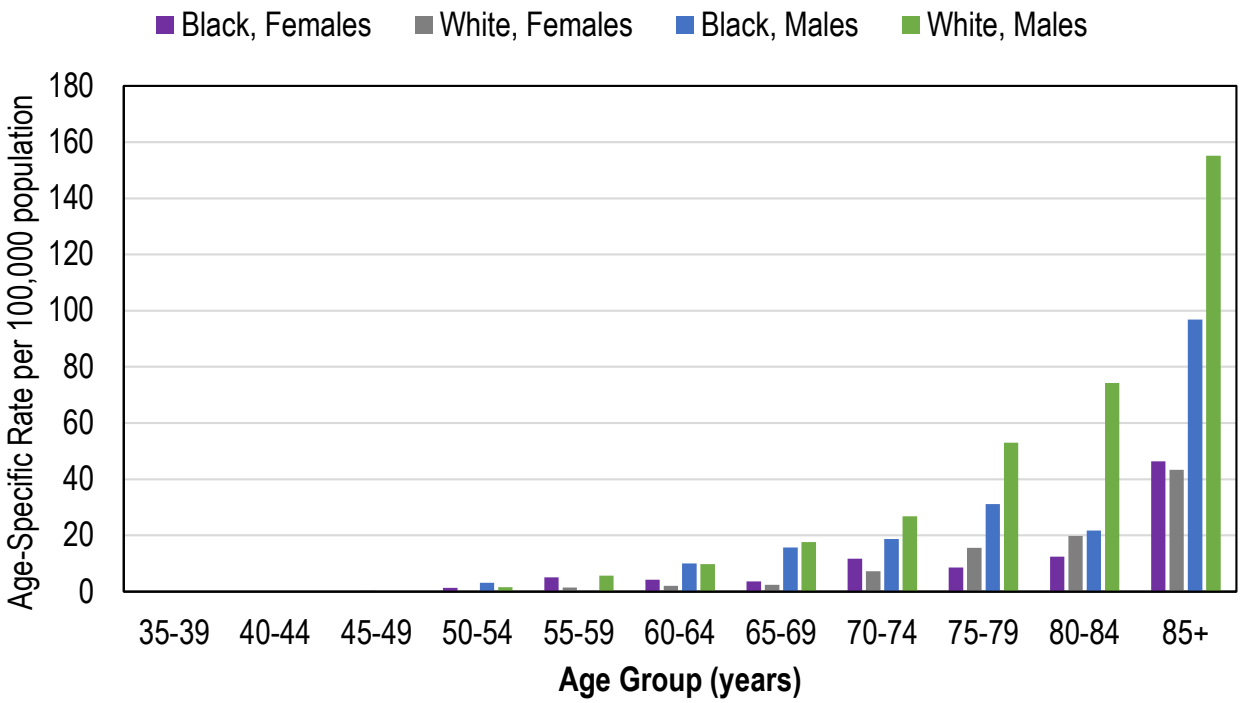


Figure 11.14: Age-Specific Mortality Rate by Age Group, Urinary Bladder Cancer, Arkansas, 2015-2019



Figures 11.15A-D: Age-Specific Mortality Rate and 95% CI by Race, Sex, and Age Group, Urinary Bladder Cancer, Arkansas, 2015-2019

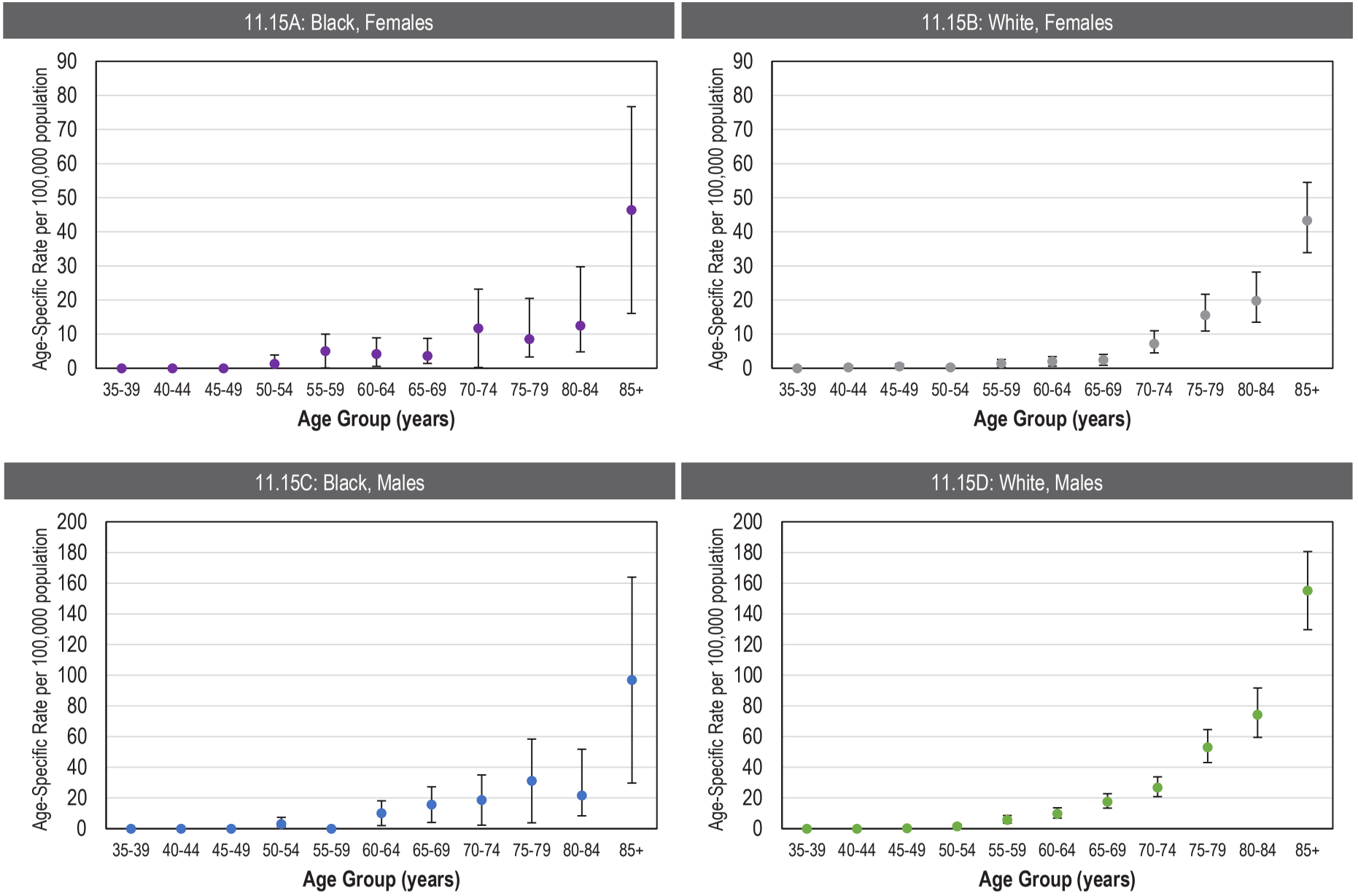
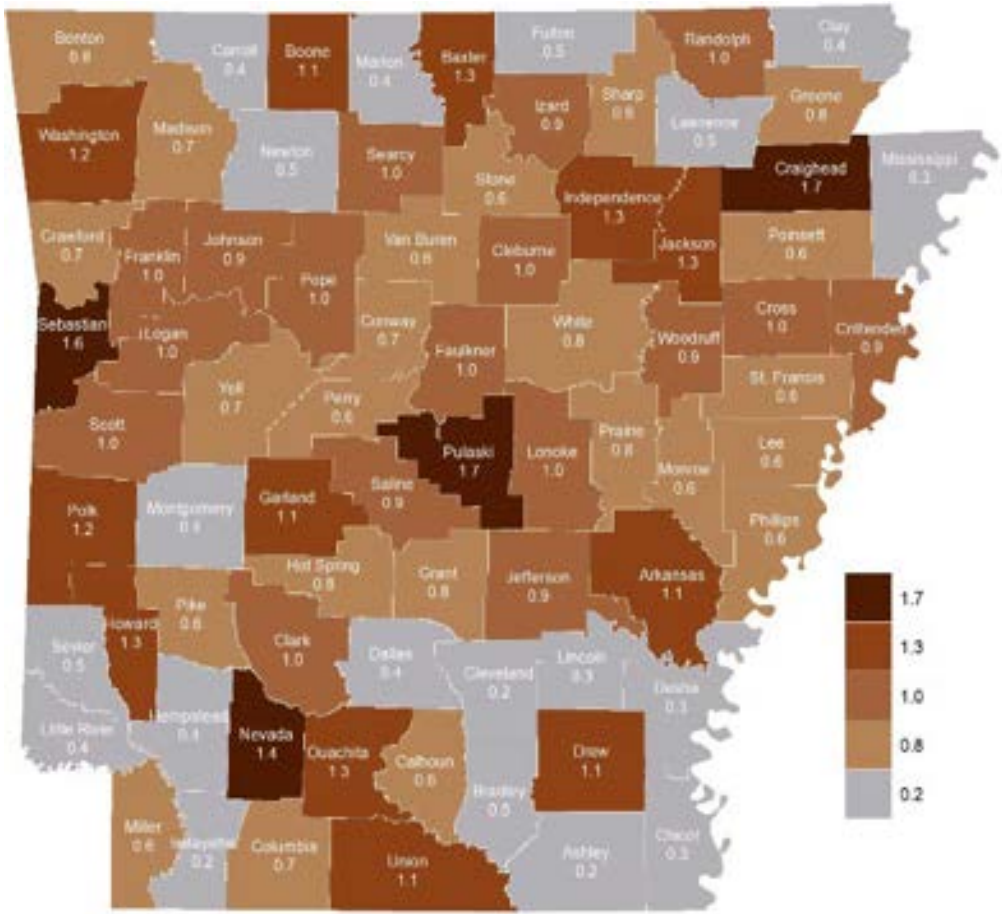


Figure 11.16: Standardized Mortality Ratio (SMR) by County, Urinary Bladder Cancer, Arkansas, 2010-2019



ARKANSAS CENTRAL CANCER REGISTRY

Section 12: Cervical Cancer

Overview

The US has a lower incidence and mortality cervical cancer rates compared to developing countries as it is one of the most successfully treatable type of cancer, if detected early with routine screening.[52] The USPSTF recommends cervical cancer screening every three (3) years with cervical cytology only (Pap test), in females aged 21 to 29 years.[53] Females aged 30 to 65 years may also have screening every three (3) years with cervical cytology only, every five (5) years with high-risk human papillomavirus (hrHPV) testing only, or every five (5) years with hrHPV testing in combination with cytology (co-testing).

Research has estimated 91% of cervical cancer cases most likely caused by the human papillomavirus (HPV) infection.[54] Although most HPV infections may go away on their own, some high-risk subtypes may not, which can lead to the development of cervical cancer.[55] Additionally, HPV has been found to be attributable to at least six (6) additional cancers, vulva, vagina, penis, anus, oral, and throat, highlighting the importance of the HPV vaccine for both females and males.[56] With HPV-infected cervical cells typically taking about 20 years to develop into cancer, the CDC's Advisory Committee on Immunization Practices (ACIP) recommends starting routing vaccination at age 11 or 12 years (2 doses), or individuals through age 26 years if not adequately vaccinated when younger.[57,58]

Cervical Cancer Risk Factors

Common risk factors that can increase your risk for cervical cancer include[56]:

- Human papillomavirus (HPV) infection
- Use of diethylstilbestrol (DES) hormonal drug (rare as it was given to some women between 1938 and 1971 to prevent miscarriage, but has also affected females exposed in utero, who are collectively known as "DES daughters")
- Having a family history of cervical cancer
- Sexual history (such as becoming sexually active especially females younger than 18 years of age, having many sexual partners, having one partner who is considered high risk)
- Smoking
- Having a weakened immune system
- Chlamydia infection
- Long-term use of oral contraceptives (birth control pills)
- Having multiple full-term pregnancies
- Young age at first full-term pregnancy

Key Findings

Cervical Cancer Incidence

- Arkansas had a higher rate than the US from 2005 through 2019. Trendline rates for Arkansas and the US have slightly decreased over time. In 2019, the incidence rate in Arkansas was 9.5 cases per 100,000 population, compared to the US rate of 7.7 cases per 100,000 population (**Figure 12.1**).
- For most years, the cervical cancer incidence rate was higher among Black females than White females from 2003 through 2019. Cervical cancer rates for both Black and White females in Arkansas slightly decreased although there was a high-rate variation. In 2019, the cervical cancer rate for Black females was 7.9 per 100,000 compared to White females of 9.5 per 100,000 population (**Figure 12.2, Figures 12.3A-B**).

- For 2015-2019, Black females had a slightly higher cervical cancer incidence rates than White females, but the difference was not significant (**Figure 12.4**).
- During 2015-2019, the age-specific rate for cervical cancer peaked for White females at age group '45-49'. Black females had no visible pattern for age-specific rate for cervical but had a noticeable rise among age groups '65-69' and '75-79' (**Figure 12.5, Figures 12.6A-B**).
- The top 5 Arkansas counties with higher-than-expected cervical cancer cases were Scott, Woodruff, Sharp, Miller, and Monroe (**Figure 12.7**).
- From 2015-2019, approximately half of Black females (54.7%) and White females (48.7%) were diagnosed in a late stage (**Figure 12.8**).

Cervical Cancer Survival

- The 5-year relative survival for cervical cancer cases in 2007-2019 for a localized stage is approximately 86.5% and decreases to 21.8% for a distant stage (**Figure 12.9, Table 12.1**).

Cervical Cancer Mortality

- From 2005 to 2019, the mortality rate for cervical cancer decreased in the US while Arkansas had a stable trend. Overall, Arkansas cancer mortality rate was higher than the US. In 2019, the cervical cancer mortality rate in Arkansas was 3.1 deaths per 100,000 population, compared to the US rate of 2.1 deaths per 100,000 population (**Figure 12.10**).
- Between 2003 and 2019, the mortality rate for cervical cancer in Arkansas did not have a stable rate for Black females but was fairly stable for White females. For most years between 2003 and 2019, cervical cancer mortality rates were higher in Black females than in White females. In 2019, the cervical cancer mortality rate for Black females was 3.2 per 100,000 population and 3.1 per 100,000 population for White females (**Figure 12.11, Figures 12.12A-B**).
- Black females had a slightly higher cervical cancer mortality rate than White females in 2015-2019, but the difference was not significant (**Figure 12.13**).
- From 2015-2019, the age-specific rate for cervical cancer deaths was highest among Black females than White females, with a significant difference for age group '85+' (**Figure 12.14, Figures 12.15A-B**).
- Arkansas counties with higher-than-expected cervical cancer deaths for 2010-2019 were Pulaski and Craighead (**Figure 12.16**).

Figure 12.1: Age-Adjusted Incidence Rate Trendline, Cervical Cancer, US and Arkansas, 2005-2019

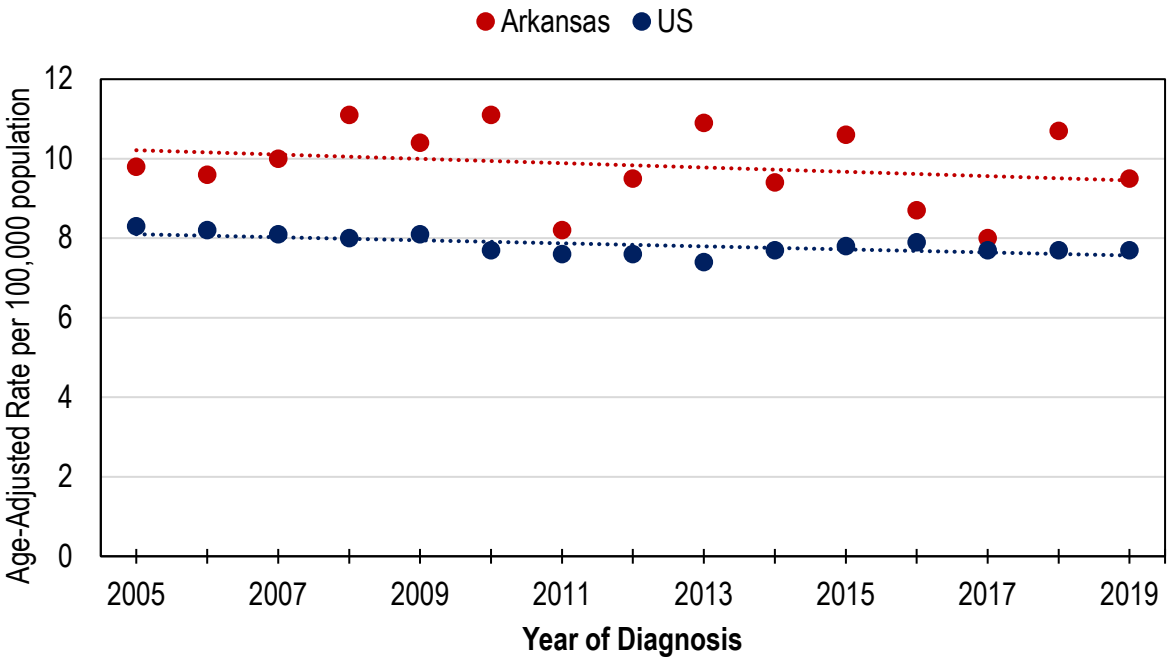
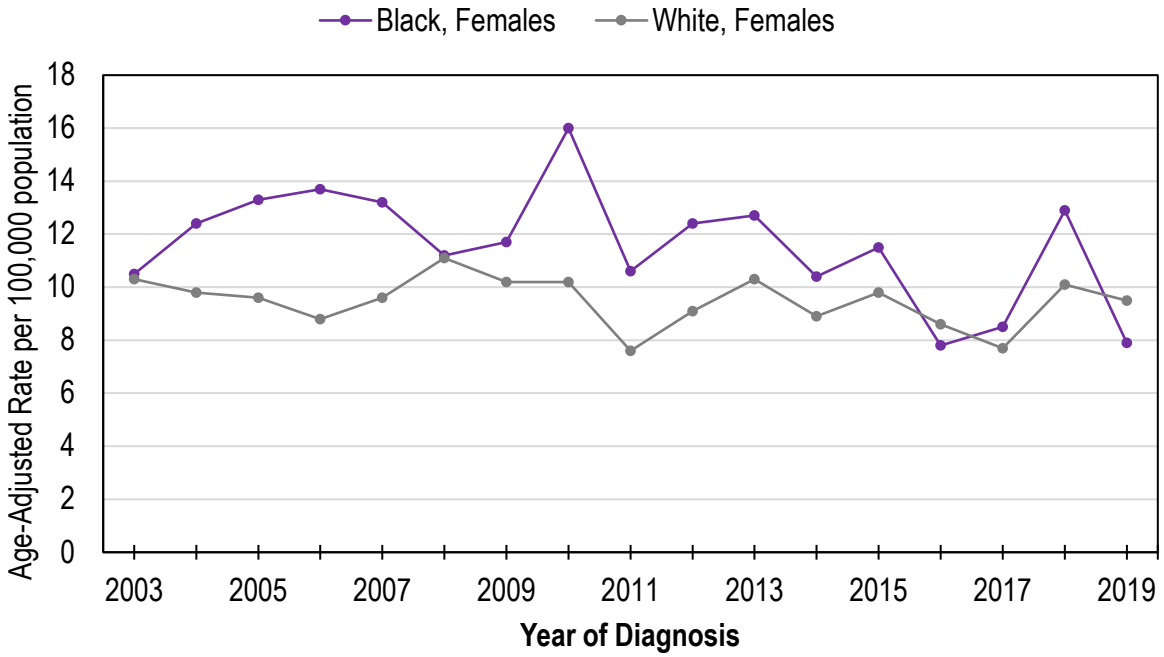
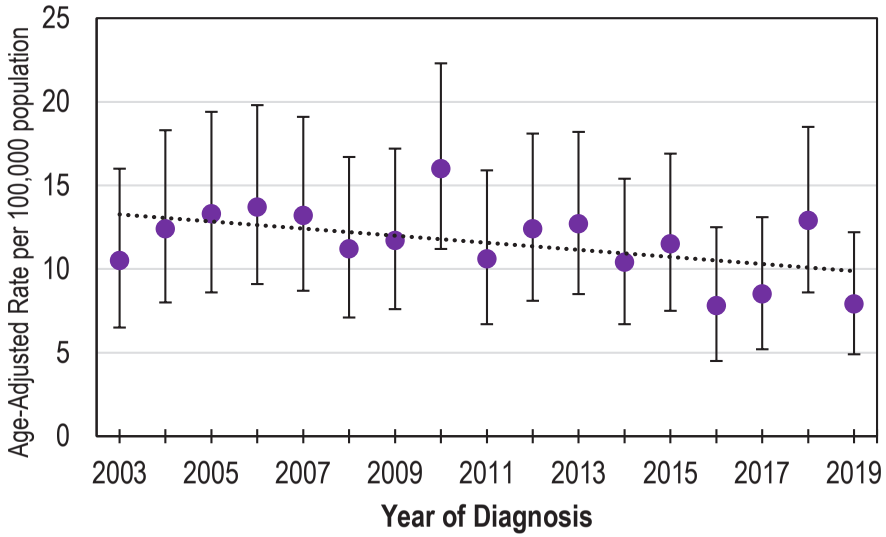


Figure 12.2: Age-Adjusted Incidence Rate Trendline by Race and Sex, Cervical Cancer, Arkansas, 2003-2019



Figures 12.3A-B: Age-Adjusted Incidence Rate and 95% CI by Race, Sex, and Year of Diagnosis, Cervical Cancer, Arkansas, 2003-2019

12.3A: Black, Females



12.3B: White, Females

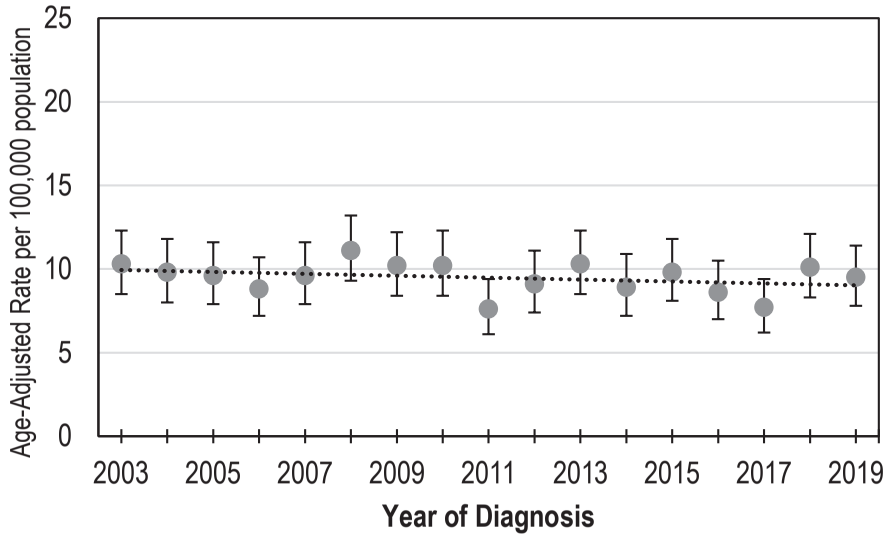


Figure 12.4: Age-Adjusted Incidence Rate and 95% CI by Race and Sex, Cervical Cancer, Arkansas, 2015-2019

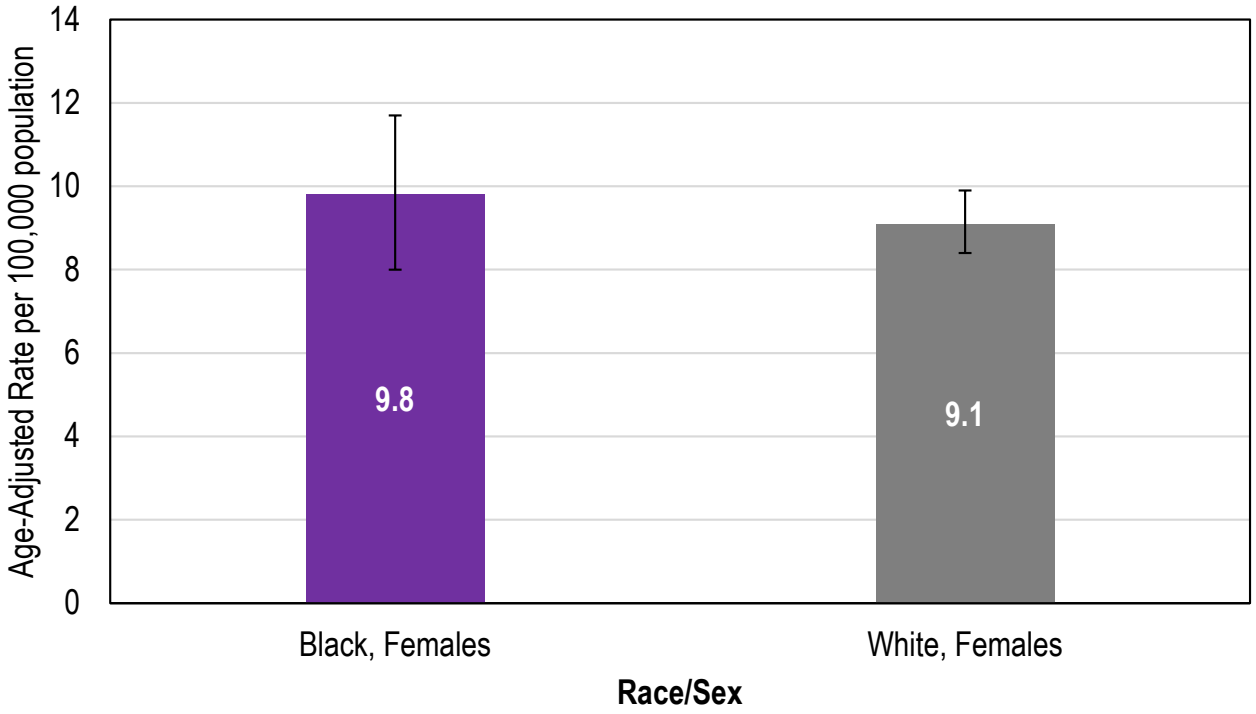
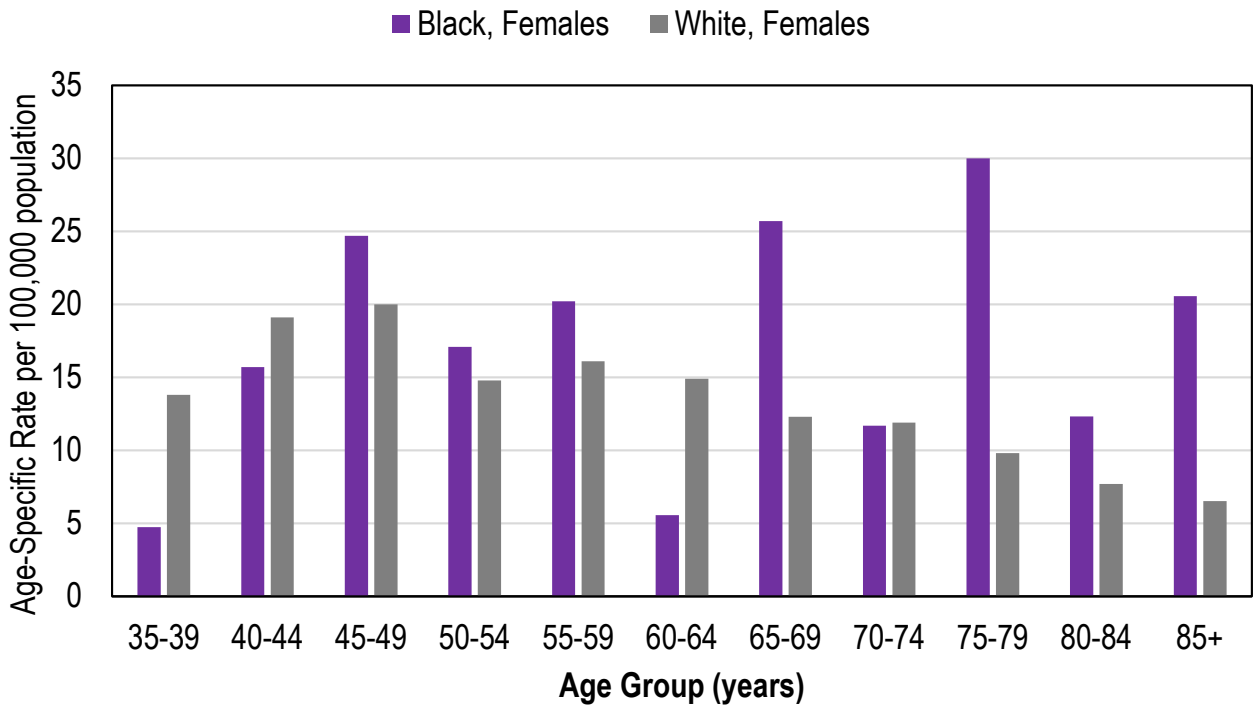
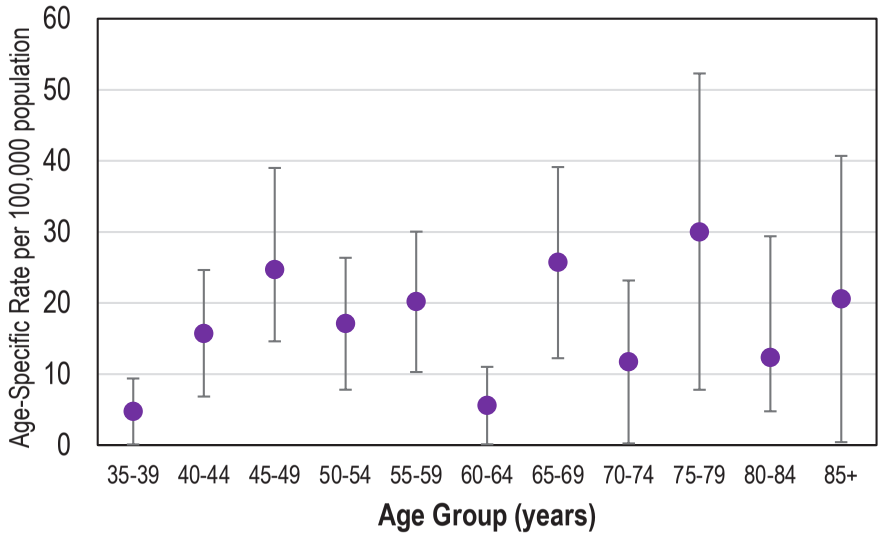


Figure 12.5: Age-Specific Incidence Rate by Race, Sex, and Age Group, Cervical Cancer, Arkansas, 2015-2019



Figures 12.6A-B: Age-Specific Incidence Rate and 95% CI by Race, Sex, and Age Group, Cervical Cancer, Arkansas, 2015-2019

12.6A: Black, Females



12.6B: White, Females

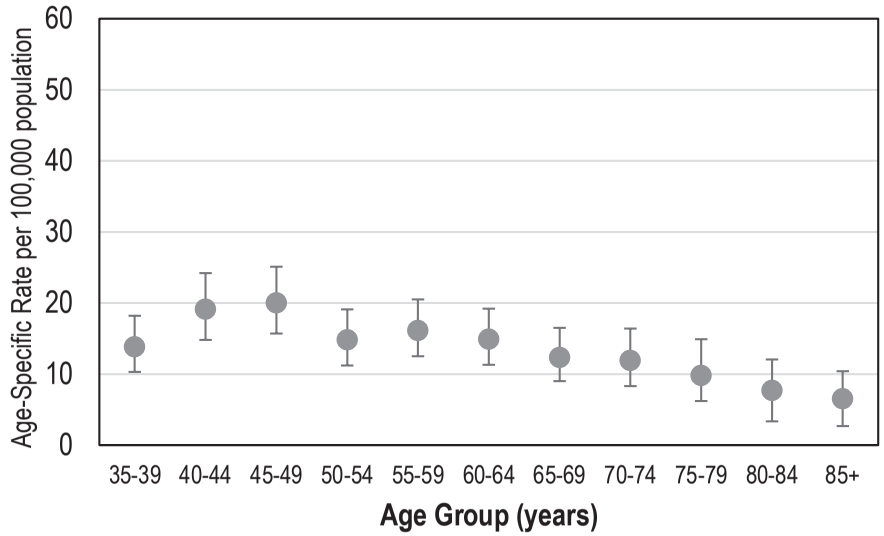


Figure 12.7: Standardized Incidence Ratio (SIR) by County, Cervical Cancer, Arkansas, 2010-2019

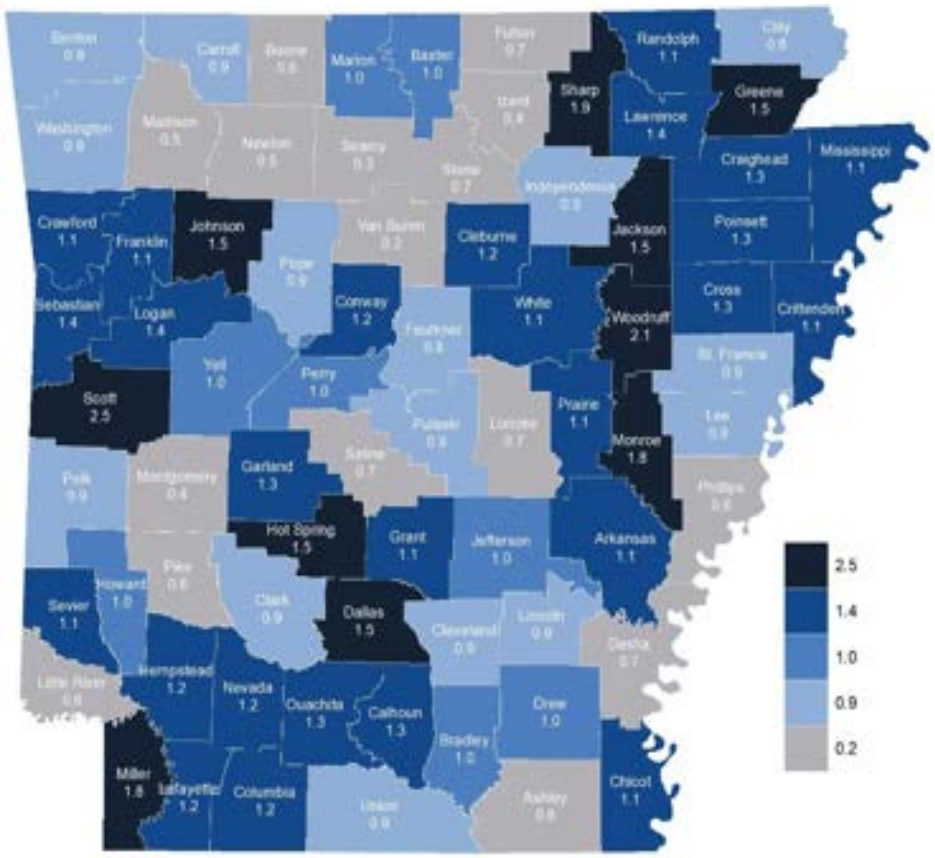


Figure 12.8: Percentage of SEER Summary Stage at Diagnosis by Race and Sex, Cervical Cancer, Arkansas, 2015-2019

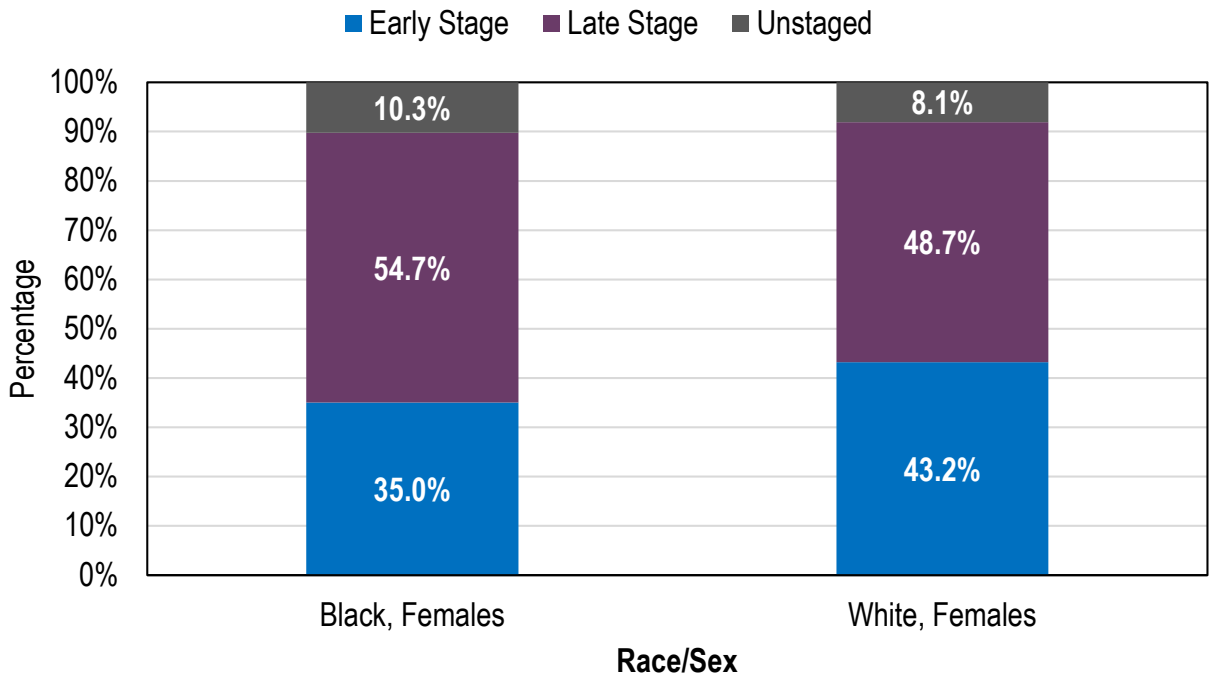


Figure 12.9: 5-Year Relative Survival Percent (%) by Stage at Diagnosis, Cervical Cancer, Arkansas, 2007-2019

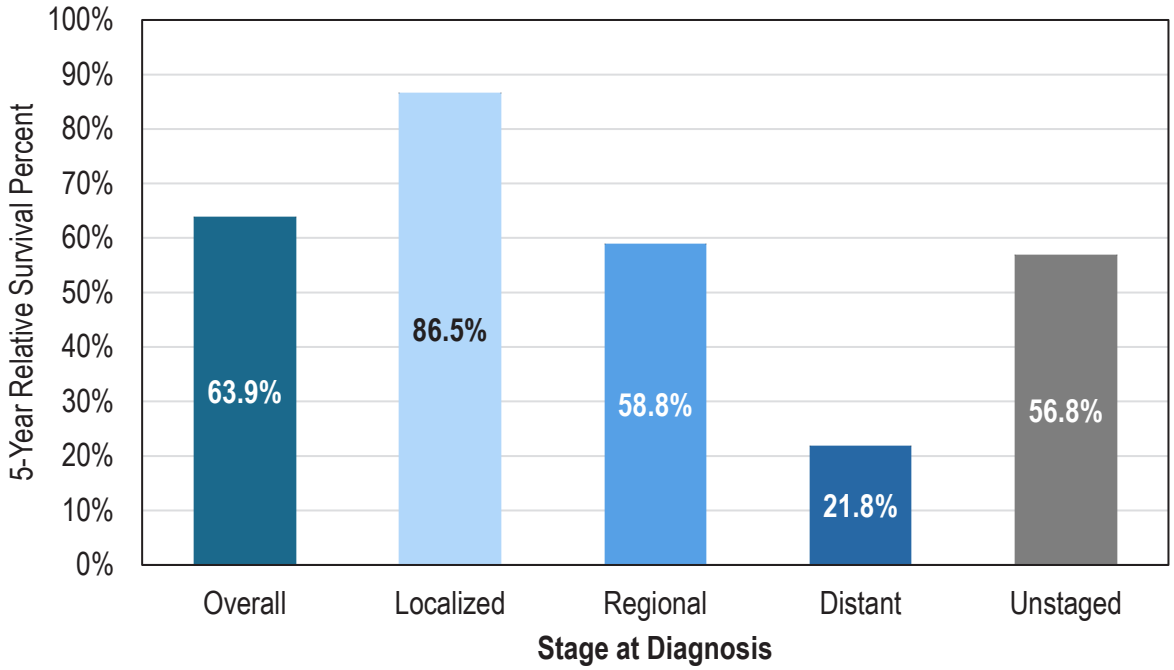


Table 12.1: 5-Year Relative Survival Percent (%) by Stage at Diagnosis and Years after Diagnosis, Urinary Bladder Cancer, Arkansas, 2007-2019

	Relative Survival Percent by Stage at Diagnosis				
Years after Diagnosis	Overall	Localized	Regional	Distant	Unstaged
1	85%	97%	86%	61%	79%
2	76%	94%	76%	39%	70%
3	71%	91%	69%	31%	62%
4	67%	89%	63%	25%	59%
5	64%	87%	59%	22%	57%

Figure 12.10: Age-Adjusted Mortality Rate Trendline, Cervical Cancer, Arkansas, 2005-2019

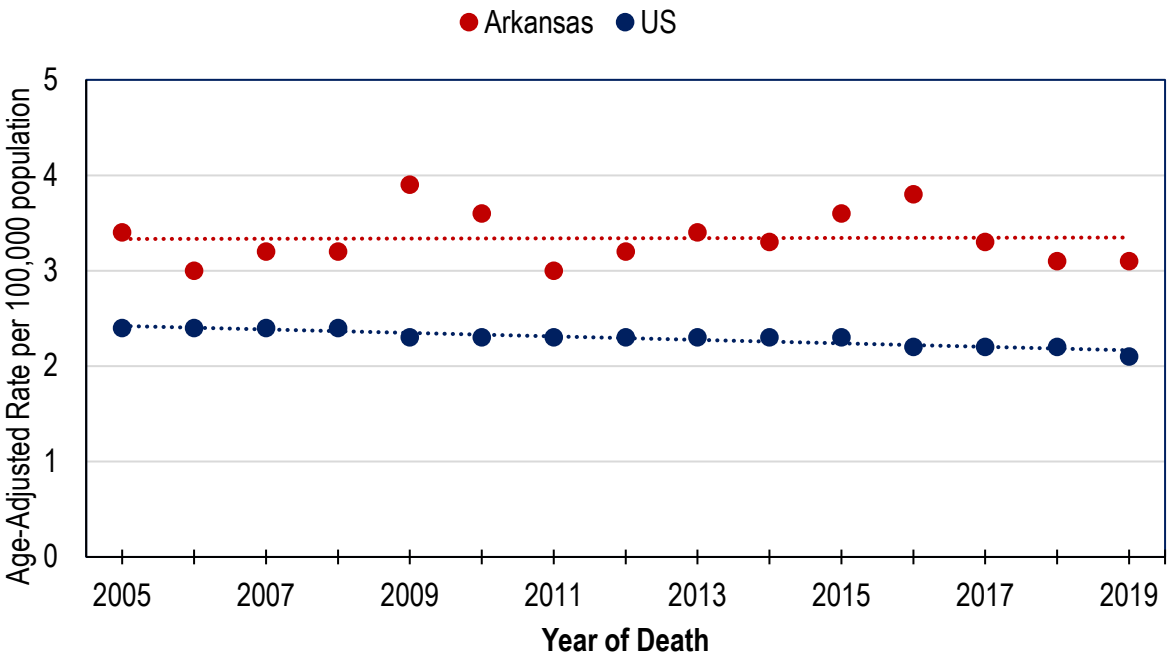
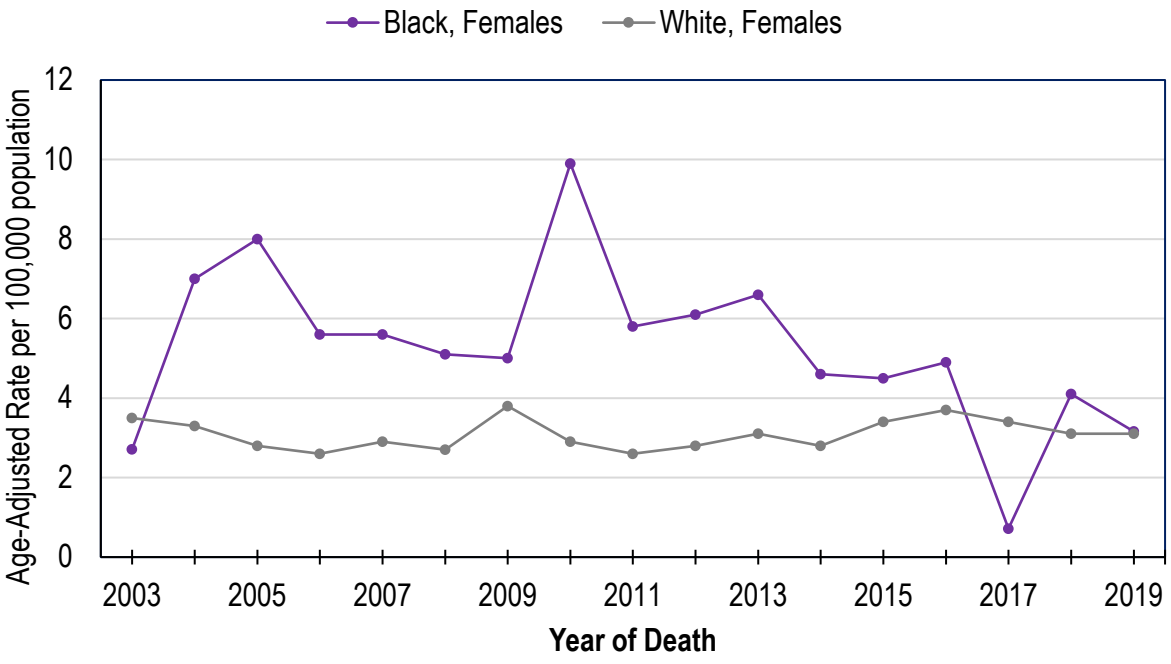
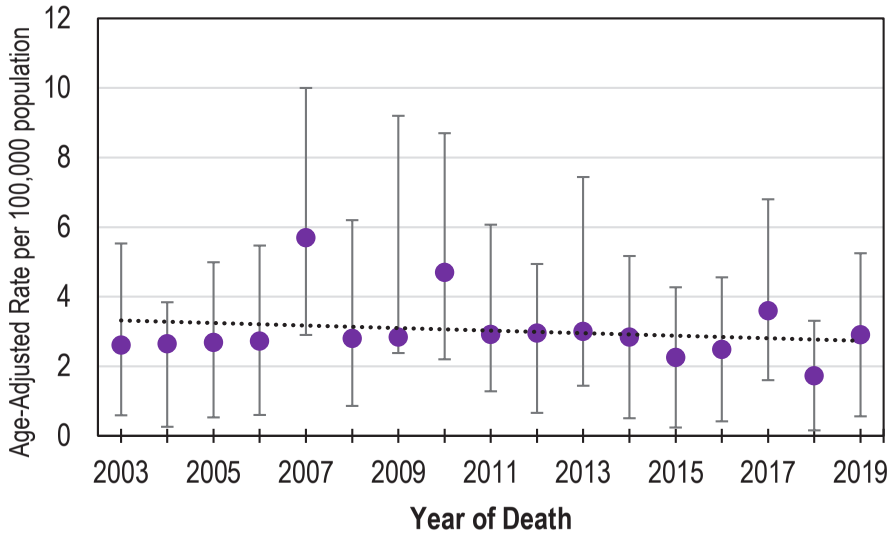


Figure 12.11: Age-Adjusted Mortality Rate by Race and Sex, Cervical Cancer, Arkansas, 2003-2019



Figures 12.12A-B: Age-Adjusted Mortality Rate and 95% CI by Race, Sex, and Year of Death, Cervical Cancer, Arkansas, 2003-2019

12.12A: Black, Females



12.12B: White, Females

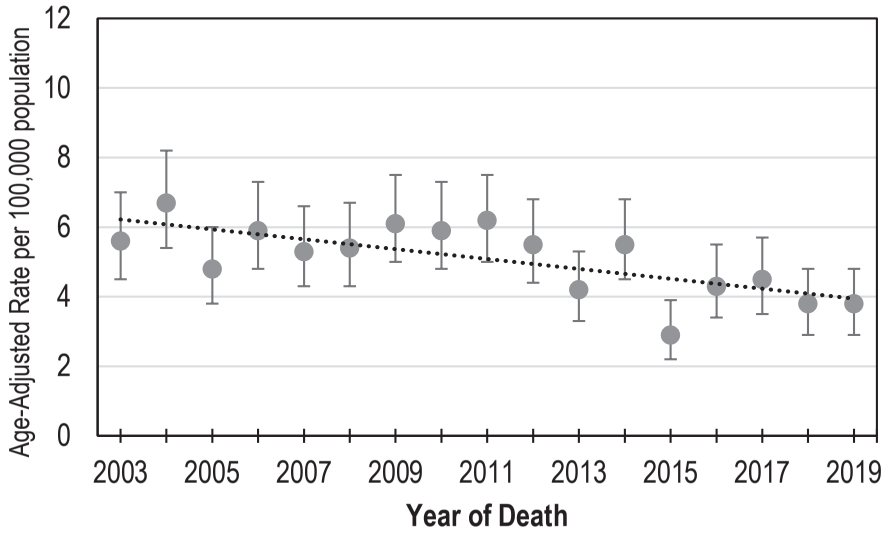


Figure 12.13: Age-Adjusted Mortality Rate and 95% CI by Race and Sex, Cervical Cancer, Arkansas, 2015-2019

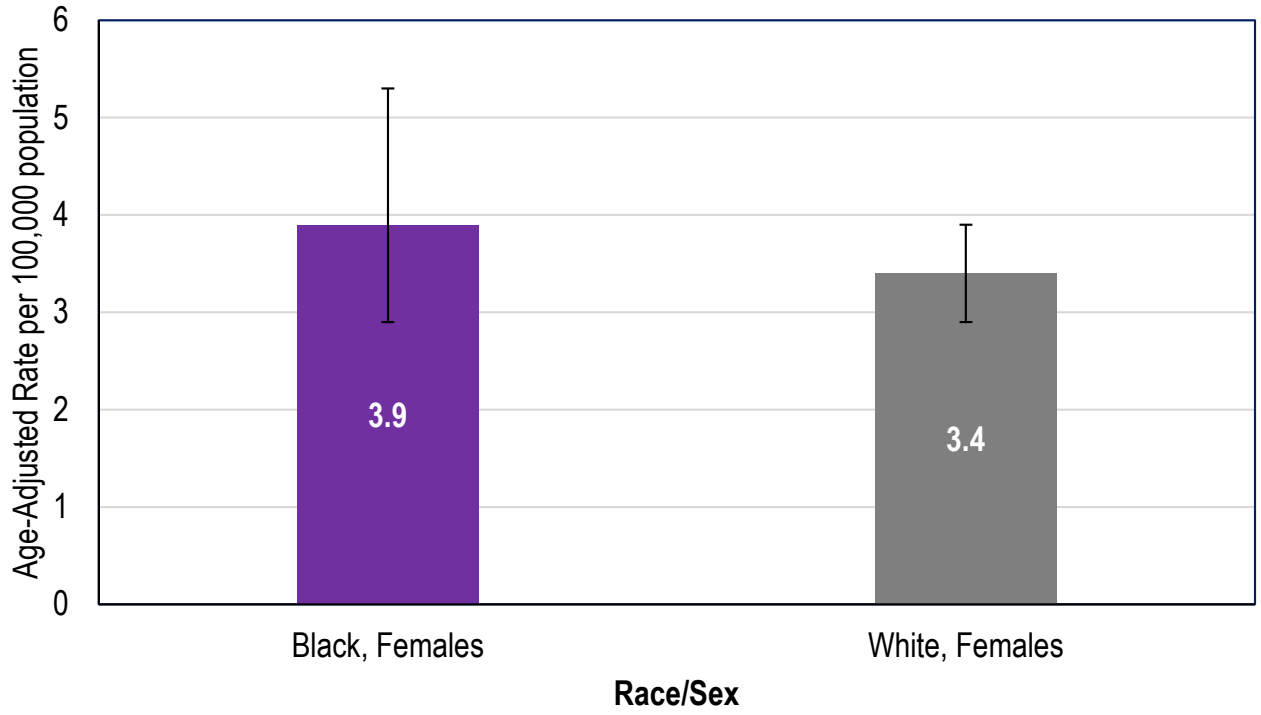
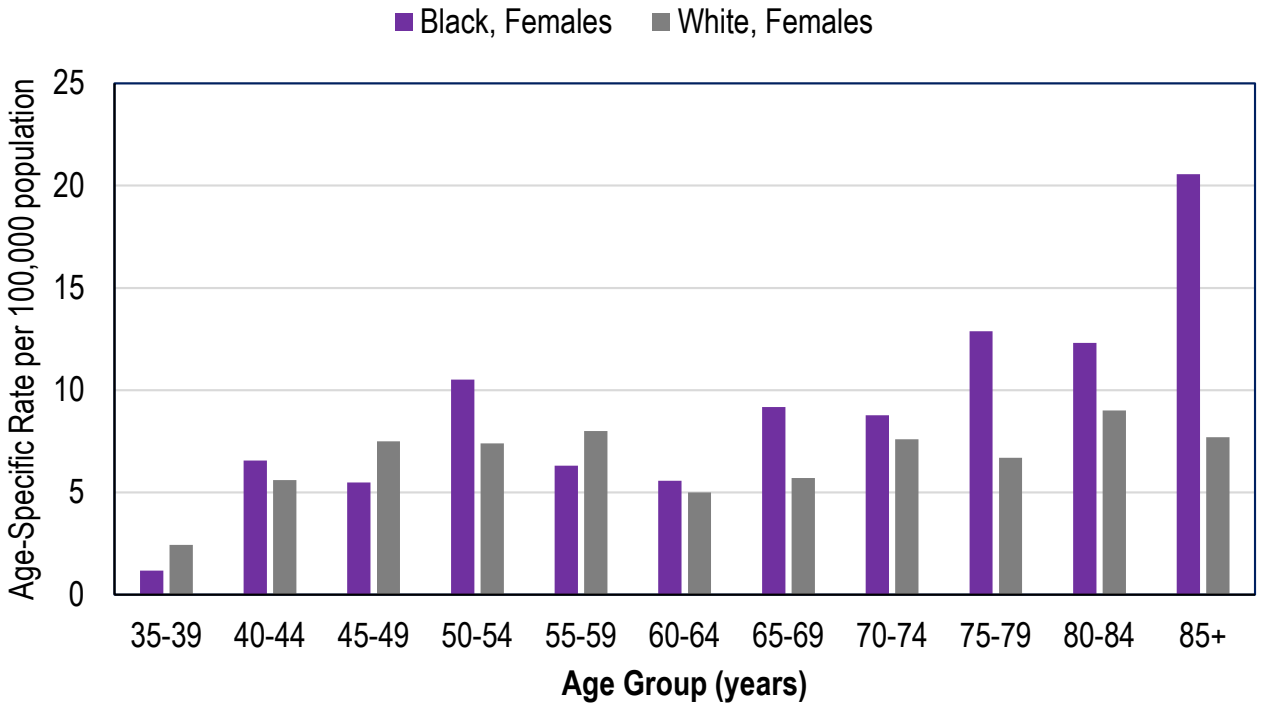
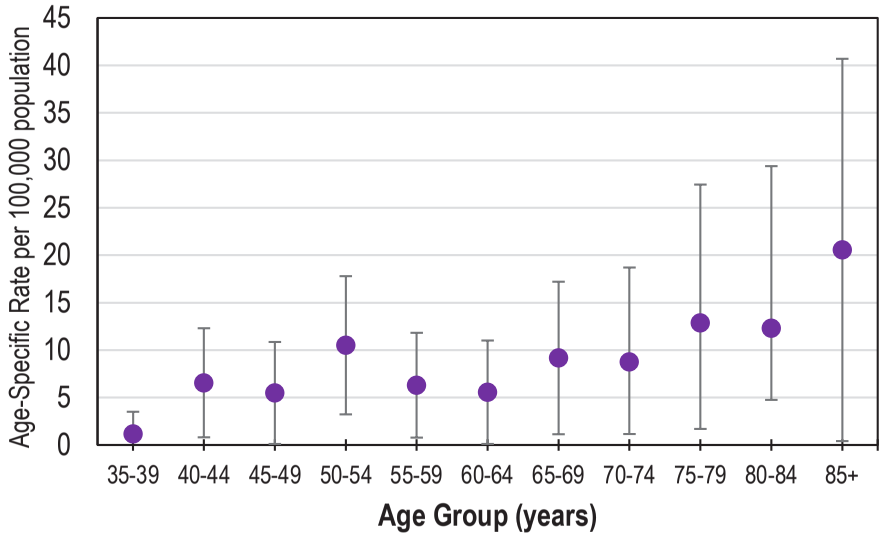


Figure 12.14: Age-Specific Mortality Rate by Race, Sex, and Age Group, Cervical Cancer, Arkansas, 2015-2019



Figures 12.15A-B: Age-Specific Mortality Rate and 95% CI by Race, Sex, and Age Group, Cervical Cancer, Arkansas, 2015-2019

12.15A: Black, Females



12.15B: White, Females

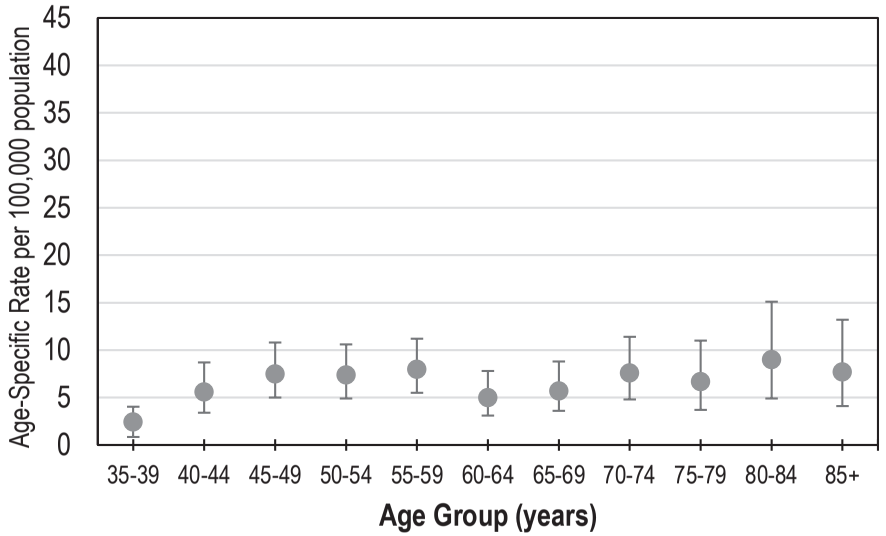
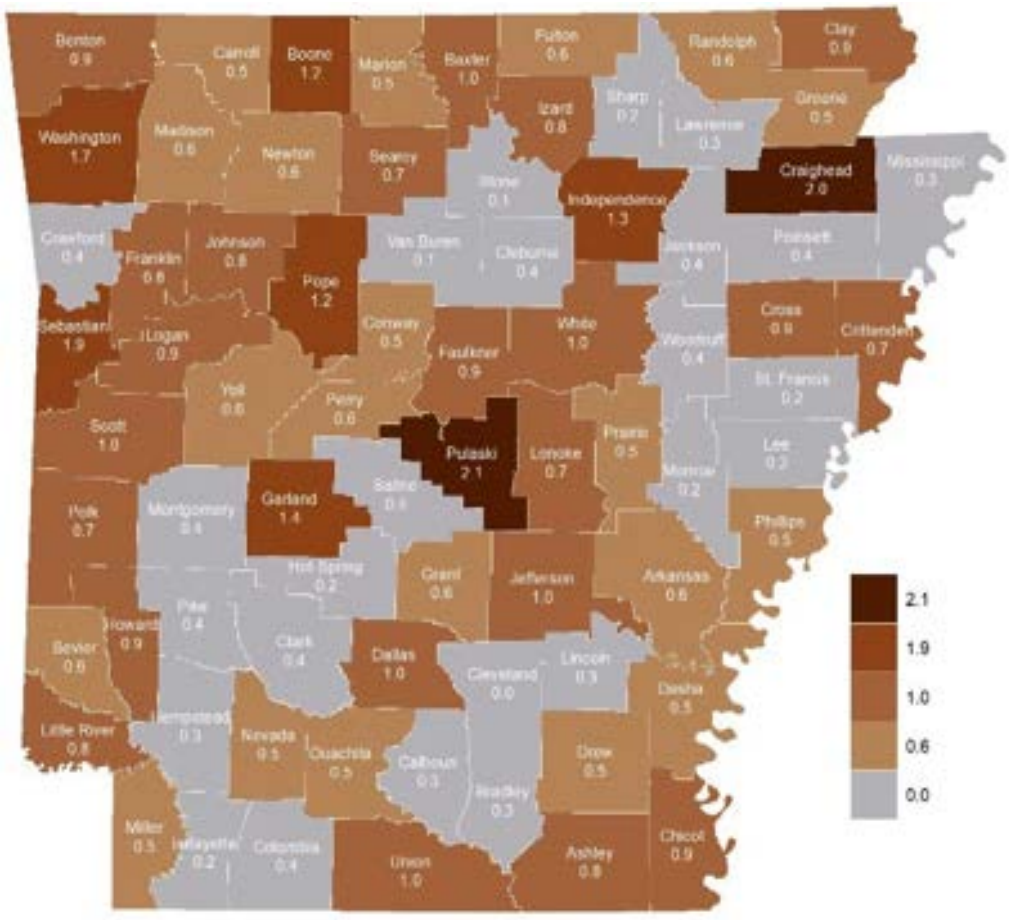


Figure 12.16: Standardized Mortality Ratio (SMR) by County, Cervical Cancer, Arkansas, 2010-2019



ARKANSAS CENTRAL CANCER REGISTRY

Table 1. Age-Adjusted Incidence Rates and Counts by Cancer Site and County, Arkansas, 2015-2019

	All Cancer Sites		Breast Cancer (Female)		Colorectal Cancer		Lung Cancer		Non-Hodgkin Lymphoma		Melanoma	
County	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate
Arkansas	648	524.2	66	105.8	71	59.6	89	69.5	16	12.0	30	33.0
Ashley	684	479.5	86	128.5	70	50.4	115	78.9	28	19.5	32	27.3
Baxter	1,830	465.0	226	119.1	149	39.1	370	86.3	77	18.6	77	19.5
Benton	5,809	418.9	995	135.3	516	37.6	762	55.1	210	15.3	370	28.7
Boone	1,221	459.1	188	141.1	110	39.6	184	64.6	60	21.6	45	20.1
Bradley	347	471.9	28	78.8	29	41.2	64	82.5	14	17.8	12	26.1
Calhoun	199	507.1	25	117.6	17	47.3	45	109.3	~	~	~	~
Carroll	900	422.4	138	137.1	95	46.4	148	64.7	26	11.8	45	23.9
Chicot	347	442.8	44	128.3	37	43.8	62	73.8	15	18.0	~	~
Clark	626	488.0	80	127.5	49	37.5	125	92.6	21	17.2	17	16.3
Clay	583	539.2	67	125.0	59	53.0	122	103.6	22	19.8	21	19.9
Cleburne	1,034	491.5	132	117.5	83	41.0	178	76.3	34	16.5	57	29.3
Cleveland	270	462.7	35	119.1	21	34.1	53	82.8	~	~	14	27.5
Columbia	561	398.5	77	108.2	54	36.8	79	53.8	22	15.0	18	22.2
Conway	653	450.8	87	124.5	59	41.0	131	84.6	29	20.9	26	20.9
Craighead	2,786	496.4	377	128.1	229	41.2	473	82.1	108	19.1	120	24.5
Crawford	1,739	445.8	220	110.1	153	39.1	303	73.5	65	16.2	87	23.8
Crittenden	1,255	465.0	170	120.4	139	52.7	197	71.5	34	12.4	26	16.6
Cross	561	521.6	69	122.4	66	63.2	88	73.7	18	17.6	20	28.4
Dallas	261	464.4	33	108.2	31	59.5	48	77.5	~	~	~	~
Desha	408	521.2	44	120.2	52	63.5	67	82.8	11	15.3	14	32.0
Drew	583	507.0	77	131.1	73	63.6	83	67.3	22	19.0	24	26.1
Faulkner	2,827	464.1	407	127.8	231	37.8	429	70.2	125	20.5	149	28.3
Franklin	563	460.2	71	113.7	43	36.5	115	89.1	16	13.8	27	25.1
Fulton	446	450.2	42	89.7	45	41.5	91	82.6	33	40.0	24	29.3
Garland	3,577	471.5	485	124.3	291	38.5	573	70.7	153	20.9	132	19.4
Grant	594	500.4	78	132.8	50	43.6	114	88.8	21	18.0	18	15.8
Greene	1,313	488.8	151	106.7	136	50.3	234	82.4	45	16.3	57	22.8
Hempstead	543	381.2	66	89.8	59	43.6	99	63.6	13	8.2	16	17.2
Hot Spring	1,063	470.6	119	102.6	102	45.5	180	73.9	42	18.6	41	21.3
Howard	313	373.0	47	114.8	36	40.3	47	53.1	~	~	12	17.9
Independence	1,096	461.1	133	109.7	117	48.4	197	78.9	36	14.2	60	25.6
Izard	431	383.0	43	77.0	52	49.5	77	61.2	20	16.1	15	15.9
Jackson	523	469.0	65	118.1	60	52.5	99	84.9	14	13.2	16	16.8
Jefferson	2,311	524.7	308	134.2	242	54.9	394	84.4	94	23.7	58	31.9
Johnson	690	432.3	73	93.3	73	45.0	143	85.3	37	24.0	23	15.0
Lafayette	224	408.5	19	73.8	25	48.3	46	79.9	~	~	~	~
Lawrence	657	588.4	63	105.8	70	62.4	145	119.6	28	26.9	24	25.0
Lee	299	477.0	47	175.6	32	49.5	37	57.0	~	~	~	~
Lincoln	306	384.1	33	93.9	29	36.0	64	78.2	~	~	~	~
Little River	400	443.7	56	121.2	50	56.2	64	66.5	~	~	17	25.7
Logan	704	460.3	96	128.4	57	35.7	147	91.0	34	21.8	37	27.3
Lonoke	1,928	492.1	245	119.0	143	36.9	310	78.3	79	21.3	97	27.3
Madison	451	409.6	65	116.9	48	42.9	83	70.6	20	17.7	20	18.7
Marion	655	426.0	90	122.4	54	35.0	130	83.5	31	17.4	26	17.5
Miller	1,154	430.3	170	121.0	99	37.6	244	87.8	36	13.7	35	18.3
Mississippi	1,179	493.0	154	125.8	123	51.6	258	105.0	21	9.0	29	18.6
Monroe	291	545.5	31	117.0	35	66.2	53	90.5	~	~	~	~
Montgomery	318	411.1	35	86.0	33	44.8	53	59.1	~	~	14	17.2
Nevada	282	467.6	28	105.2	27	43.0	51	78.4	11	17.7	~	~
Newton	246	358.1	32	99.6	26	36.7	41	55.8	12	19.3	~	~
Ouachita	837	492.3	78	83.8	100	60.8	148	81.8	34	18.5	25	26.3
Perry	317	442.4	46	138.3	36	52.1	66	83.3	~	~	11	17.6
Phillips	571	461.3	87	136.5	70	56.5	86	63.9	~	~	14	28.4
Pike	319	429.7	42	113.5	33	44.7	64	79.7	~	~	11	16.5
Poinsett	887	564.1	98	121.3	91	59.1	190	117.0	38	22.7	34	24.8
Polk	651	425.5	70	94.7	53	34.4	123	74.6	32	20.4	21	15.0
Pope	1,630	439.2	187	99.4	154	42.8	264	68.6	83	22.8	86	26.0
Prairie	278	433.9	25	80.1	34	56.0	46	63.3	~	~	15	28.1
Pulaski	10,402	456.0	1,478	121.7	788	35.5	1,368	58.5	419	18.9	511	34.1
Randolph	666	549.0	81	128.8	57	47.2	136	106.9	24	19.4	23	19.8
St. Francis	674	427.0	82	109.7	81	50.3	124	79.1	17	10.6	~	~
Saline	3,547	469.0	467	118.9	266	37.0	534	66.5	137	18.7	208	31.2
Scott	320	433.1	38	113.8	31	38.4	68	87.6	11	13.7	12	21.7
Searcy	324	507.7	48	147.6	30	51.3	57	78.8	12	21.6	20	34.8
Sebastian	3,477	459.1	497	125.2	296	39.8	565	71.7	126	16.7	149	23.1
Sevier	323	343.4	51	108.0	42	44.3	49	51.1	18	19.8	~	~
Sharp	717	513.2	82	135.8	65	42.9	173	111.3	33	22.3	35	24.4
Stone	438	404.8	52	104.0	47	47.0	85	65.2	~	~	18	22.0
Union	1,272	487.5	147	109.2	131	53.2	191	71.0	51	19.3	29	16.0
Van Buren	650	469.7	83	125.3	49	34.5	118	73.4	20	15.9	33	26.6
Washington	4,515	414.2	735	129.5	439	41.1	571	52.1	174	15.4	268	26.4
White	2,250	481.9	318	128.0	239	50.7	343	70.4	88	18.7	102	25.3
Woodruff	270	556.3	31	128.8	20	33.7	54	101.9	~	~	14	41.7
Yell	566	407.1	70	99.4	50	34.5	99	69.1	16	11.6	24	18.7

~ Statistics not displayed due to fewer than 10 cases

Table 1. Age-Adjusted Incidence Rates and Counts by Cancer Site and County, Arkansas, 2015-2019

	Ovarian Cancer (Female)		Pancreatic Cancer		Prostate Cancer (Male)		Urinary Bladder Cancer		Cervical Cancer (Female)	
County	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate
Arkansas	~	~	28	23.7	87	135.7	24	17.9	~	~
Ashley	~	~	26	18.9	79	103.4	23	15.4	~	~
Baxter	21	14.5	65	14.3	199	92.8	111	24.4	~	~
Benton	72	10.0	131	9.5	631	94.6	262	19.1	49	7.4
Boone	11	8.7	45	15.9	154	111.7	55	19.3	~	~
Bradley	~	~	14	20.3	53	148.2	~	~	~	~
Calhoun	~	~	~	~	24	120.1	~	~	~	~
Carroll	11	10.7	20	8.3	109	91.8	65	29.1	~	~
Chicot	~	~	20	25.6	56	152.0	~	~	~	~
Clark	~	~	~	~	105	161.8	25	18.6	~	~
Clay	~	~	19	17.6	47	91.3	25	21.0	~	~
Cleburne	16	16.5	29	14.0	114	97.1	63	26.0	~	~
Cleveland	~	~	11	20.0	43	138.3	~	~	~	~
Columbia	~	~	23	15.5	78	113.8	17	10.6	~	~
Conway	12	13.9	20	13.1	59	80.5	18	11.4	~	~
Craighead	27	9.4	75	13.2	315	119.8	108	19.1	35	13.0
Crawford	31	15.3	44	11.3	155	77.5	69	17.5	15	9.1
Crittenden	12	8.4	41	16.4	186	139.1	38	14.3	15	10.7
Cross	11	19.5	28	24.9	62	118.7	23	20.0	~	~
Dallas	~	~	11	19.0	31	103.9	~	~	~	~
Desha	~	~	~	~	68	168.8	~	~	~	~
Drew	~	~	15	11.7	77	138.3	18	15.1	~	~
Faulkner	30	9.1	76	12.2	316	109.5	101	17.6	23	7.3
Franklin	12	19.6	17	13.6	54	85.0	25	18.9	~	~
Fulton	~	~	12	10.9	46	83.7	19	15.0	~	~
Garland	36	9.7	92	10.9	548	139.1	174	21.1	31	10.3
Grant	~	~	~	~	72	119.7	26	20.9	~	~
Greene	12	9.4	35	12.7	142	106.7	57	20.7	~	~
Hempstead	~	~	16	10.0	58	78.2	24	16.6	~	~
Hot Spring	13	11.3	29	12.0	145	122.7	43	19.4	18	21.2
Howard	~	~	~	~	29	68.3	11	11.3	~	~
Independence	12	9.9	32	13.8	91	76.7	49	20.6	11	11.2
Izard	~	~	~	~	50	80.5	30	24.4	~	~
Jackson	~	~	15	13.1	43	78.2	25	21.4	~	~
Jefferson	22	10.8	65	14.3	355	158.5	86	19.5	19	10.3
Johnson	~	~	16	9.8	52	60.9	23	14.3	~	~
Lafayette	~	~	14	22.8	24	80.1	~	~	~	~
Lawrence	~	~	20	16.6	64	110.4	30	26.0	~	~
Lee	~	~	~	~	49	157.6	12	20.3	~	~
Lincoln	~	~	~	~	37	93.6	21	26.1	~	~
Little River	~	~	~	~	42	91.7	18	19.5	~	~
Logan	~	~	15	9.0	63	77.3	35	21.1	~	~
Lonoke	29	14.0	44	10.7	238	123.9	75	18.9	14	7.9
Madison	~	~	12	9.3	42	72.8	21	19.1	~	~
Marion	~	~	15	9.2	85	93.6	32	19.5	~	~
Miller	13	9.6	38	14.3	82	59.4	42	14.5	17	16.3
Mississippi	~	~	28	11.0	144	120.8	37	15.5	14	13.4
Monroe	~	~	~	~	38	138.5	12	19.2	~	~
Montgomery	~	~	~	~	49	117.5	16	17.6	~	~
Nevada	~	~	~	~	39	122.1	~	~	~	~
Newton	~	~	~	~	26	67.0	~	~	~	~
Ouachita	~	~	23	12.4	123	146.6	27	15.7	15	21.2
Perry	~	~	~	~	32	85.3	13	18.5	~	~
Phillips	~	~	19	14.2	84	141.5	19	15.7	~	~
Pike	~	~	~	~	43	106.7	15	20.3	~	~
Poinsett	~	~	37	23.3	93	123.6	36	22.0	~	~
Polk	~	~	16	9.3	96	120.4	28	16.9	~	~
Pope	16	8.6	36	9.4	179	93.9	63	16.4	11	6.6
Prairie	~	~	~	~	27	81.3	13	19.3	~	~
Pulaski	114	9.2	313	13.8	1,535	138.6	366	16.3	93	8.6
Randolph	~	~	20	15.5	76	122.2	35	27.1	~	~
St. Francis	~	~	20	12.7	112	139.6	28	18.5	~	~
Saline	36	9.3	86	11.1	453	116.3	160	20.6	21	7.0
Scott	~	~	~	~	17	42.9	20	25.6	~	~
Searcy	~	~	~	~	31	84.4	16	23.2	~	~
Sebastian	54	13.8	84	10.9	324	87.2	132	16.8	38	11.9
Sevier	~	~	~	~	32	62.2	14	15.3	~	~
Sharp	~	~	21	13.2	56	71.6	27	18.9	~	~
Stone	~	~	~	~	53	86.9	17	13.8	~	~
Union	17	11.5	45	17.4	172	131.8	41	15.5	11	9.6
Van Buren	~	~	17	10.3	69	90.7	27	16.5	~	~
Washington	56	10.2	112	10.4	474	88.8	191	18.1	30	5.7
White	36	14.3	49	10.0	211	91.7	94	20.1	22	11.4
Woodruff	~	~	~	~	40	165.8	12	23.9	~	~
Yell	~	~	13	9.2	57	79.2	21	15.7	~	~

~ Statistics not displayed due to fewer than 10 cases

Table 2. Age-Adjusted Mortality Rates and Counts by Cancer Site and County, Arkansas, 2015-2019

	All Cancer Sites		Breast Cancer (Female)		Colorectal Cancer		Lung Cancer		Non-Hodgkin Lymphoma		Melanoma	
County	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate
Arkansas	261	206.3	1951	19.5	24	19.0	70	54.1	~	~	~	~
Ashley	306	208.6	~	~	28	20.0	99	65.2	~	~	~	~
Baxter	787	187.3	17	23.2	52	12.3	258	58.9	25	5.7	10.0	3.2
Benton	2,068	151.7	41	18.8	168	12.5	530	38.8	71	5.3	34	2.5
Boone	476	171.7	136	18.4	38	14.1	139	49.4	19	6.8	~	~
Bradley	145	192.1	32	20.5	~	~	48	62.1	~	~	~	~
Calhoun	90	228.5	11	31.5	~	~	33	80.3	~	~	~	~
Carroll	350	155.9	~	~	33	15.8	89	37.6	~	~	~	~
Chicot	176	213.0	25	20.7	16	21.3	60	70.6	~	~	~	~
Clark	231	174.1	11	25.8	19	14.0	76	57.0	~	~	~	~
Clay	267	229.5	17	23.8	24	21.0	87	72.5	10	8.8	~	~
Cleburne	425	177.8	17	27.9	34	15.1	142	57.4	~	~	~	~
Cleveland	115	193.3	24	21.5	~	~	47	76.1	~	~	~	~
Columbia	267	175.5	~	~	31	19.4	79	49.9	~	~	~	~
Conway	260	170.9	17	23.2	19	12.5	80	50.6	12	7.5	~	~
Craighead	939	167.8	22	29.2	79	14.2	272	48.5	30	5.3	12	2.3
Crawford	695	178.0	58	19.2	54	14.1	225	56.1	20	5.3	~	~
Crittenden	571	218.1	44	20.4	56	21.6	165	61.7	12	4.3	~	~
Cross	249	224.8	34	24.4	34	32.7	72	59.7	~	~	~	~
Dallas	117	203.2	14	24.3	15	22.8	31	52.1	~	~	~	~
Desha	135	163.4	10	39.7	14	17.2	45	55.4	~	~	~	~
Drew	219	184.6	11	21.6	28	24.8	59	48.3	~	~	~	~
Faulkner	973	163.6	12	18.4	90	15.5	295	49.0	31	5.3	~	~
Franklin	234	183.2	44	13.3	14	11.1	93	73.7	~	~	~	~
Fulton	207	192.9	10	13.8	19	17.1	71	64.3	~	~	~	~
Garland	1,341	165.5	13	23.0	117	14.8	390	46.7	55	7.1	12	1.4
Grant	226	183.5	82	18.3	21	16.4	73	57.8	~	~	~	~
Greene	506	185.8	11	17.6	53	19.7	162	57.5	10	4.0	~	~
Hempstead	238	159.0	26	17.1	17	11.8	79	51.9	~	~	~	~
Hot Spring	416	178.4	14	16.6	41	17.3	126	52.1	13	5.6	~	~
Howard	155	170.4	29	25.0	13	13.7	44	48.5	~	~	~	~
Independence	395	161.1	~	~	33	13.2	118	47.0	~	~	~	~
Izard	202	163.1	13	9.7	17	14.6	66	51.0	~	~	~	~
Jackson	236	208.0	~	~	23	21.4	81	69.2	~	~	~	~
Jefferson	876	196.3	14	20.2	73	16.7	294	63.9	25	6.1	~	~
Johnson	309	189.8	66	26.1	27	16.3	100	60.1	12	8.5	~	~
Lafayette	85	148.5	21	26.0	~	~	26	44.7	~	~	~	~
Lawrence	262	211.1	~	~	23	19.2	88	68.9	~	~	~	~
Lee	127	200.5	11	16.0	17	28.0	30	46.3	~	~	~	~
Lincoln	152	190.7	~	~	18	22.5	54	67.2	~	~	~	~
Little River	148	162.6	~	~	16	17.5	47	52.0	~	~	~	~
Logan	280	175.9	14	32.2	17	10.0	83	50.9	10	6.3	~	~
Lonoke	719	189.4	17	19.6	46	12.5	235	60.1	25	7.3	10	2.8
Madison	202	185.0	48	23.3	15	14.1	63	56.3	~	~	~	~
Marion	275	178.6	~	~	22	14.1	88	54.8	~	~	~	~
Miller	518	192.3	16	27.1	45	17.1	170	61.8	11	3.7	~	~
Mississippi	505	206.9	33	23.0	68	27.5	164	66.1	10	4.5	~	~
Monroe	142	249.5	26	20.1	15	28.8	47	77.6	~	~	~	~
Montgomery	155	195.1	~	~	23	33.2	41	46.0	~	~	~	~
Nevada	126	198.8	~	~	11	17.6	46	69.9	~	~	~	~
Newton	113	163.5	~	~	10	14.7	36	46.4	~	~	~	~
Ouachita	385	220.9	~	~	35	20.5	120	67.5	12	6.8	~	~
Perry	140	181.4	20	21.3	13	18.2	51	64.3	~	~	~	~
Phillips	239	192.2	10	26.7	32	27.4	55	41.7	~	~	~	~
Pike	141	176.7	22	36.9	14	17.0	52	63.1	~	~	~	~
Poinsett	356	222.1	~	~	32	21.0	131	80.2	~	~	~	~
Polk	322	197.8	14	15.8	29	17.5	98	59.3	12	7.2	~	~
Pope	629	167.2	20	29.0	67	17.8	200	52.1	33	9.0	~	~
Prairie	103	150.6	27	13.1	~	~	34	46.3	~	~	~	~
Pulaski	3,659	160.8	~	~	294	13.0	929	40.2	104	4.8	33	1.5
Randolph	273	212.2	270	21.4	32	25.7	84	66.4	~	~	~	~
St. Francis	266	169.4	11	16.9	21	13.0	88	55.9	~	~	~	~
Saline	1,242	163.2	21	26.9	107	15.1	376	47.3	39	5.4	10	1.3
Scott	149	189.5	74	18.7	12	14.8	44	55.1	~	~	~	~
Searcy	125	174.5	~	~	12	15.1	41	54.2	~	~	~	~
Sebastian	1,259	165.9	~	~	107	14.2	375	48.0	39	5.4	22	3.0
Sevier	153	164.8	65	16.1	20	21.3	48	49.0	~	~	~	~
Sharp	316	204.5	~	~	25	15.7	106	67.7	14	8.6	~	~
Stone	202	165.6	18	25.5	17	14.7	74	58.2	~	~	~	~
Union	551	211.8	13	22.6	56	21.0	161	61.0	10	3.9	~	~
Van Buren	242	156.3	30	21.5	21	13.7	83	50.4	~	~	~	~
Washington	1,598	151.9	14	19.6	105	10.0	349	32.9	54	5.2	18	1.7
White	849	178.1	78	13.2	87	18.8	266	54.6	22	5.0	10	2.1
Woodruff	107	201.2	42	16.2	~	~	34	63.1	~	~	~	~
Yell	250	174.4	~	~	19	14.3	72	49.9	~	~	~	~

~ Statistics not displayed due to fewer than 10 cases

Table 2. Age-Adjusted Mortality Rates and Counts by Cancer Site and County, Arkansas, 2015-2019

	Ovarian Cancer (Female)		Pancreatic Cancer		Prostate Cancer (Male)		Urinary Bladder Cancer		Cervical Cancer (Female)	
County	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate
Arkansas	650	6.5	26	21.3	~	~	15	11.6	~	~
Ashley	~	~	22	14.9	14	22.0	~	~	~	~
Baxter	~	~	62	13.5	29	12.7	29	6.7	~	~
Benton	16	9.7	120	8.7	108	19.3	47	3.5	17	2.4
Boone	44	5.8	37	13.3	22	17.7	14	4.9	~	~
Bradley	~	~	14	18.3	~	~	~	~	~	~
Calhoun	~	~	~	~	~	~	~	~	~	~
Carroll	~	~	19	7.5	16	14.6	~	~	~	~
Chicot	11	10.0	15	17.7	~	~	~	~	~	~
Clark	~	~	10	7.7	13	23.5	~	~	~	~
Clay	~	~	21	18.1	~	~	~	~	~	~
Cleburne	~	~	31	13.0	23	19.8	21	8.1	~	~
Cleveland	~	~	~	~	~	~	~	~	~	~
Columbia	~	~	19	12.8	17	25.9	~	~	~	~
Conway	~	~	18	11.7	10	13.9	~	~	~	~
Craighead	~	~	67	11.9	36	16.0	17	3.1	15	5.9
Crawford	17	5.4	37	9.5	33	21.2	22	5.8	~	~
Crittenden	22	10.2	36	13.9	37	41.1	13	5.2	13	9.6
Cross	~	~	24	22.4	10	21.4	~	~	~	~
Dallas	~	~	~	~	~	~	~	~	~	~
Desha	~	~	~	~	~	~	~	~	~	~
Drew	~	~	13	10.3	13	26.0	~	~	~	~
Faulkner	~	~	75	12.4	29	13.6	25	4.4	11	3.3
Franklin	19	5.9	11	9.1	11	19.5	~	~	~	~
Fulton	~	~	10	8.4	14	24.7	~	~	~	~
Garland	~	~	103	12.5	65	17.8	28	3.2	14	4.1
Grant	27	6.6	13	10.7	~	~	~	~	~	~
Greene	~	~	28	9.6	19	17.6	15	5.8	~	~
Hempstead	~	~	21	14.0	11	17.9	~	~	~	~
Hot Spring	~	~	32	14.3	10	10.1	11	4.7	~	~
Howard	11	9.6	~	~	11	29.2	~	~	~	~
Independence	~	~	32	13.8	14	12.7	12	5.1	~	~
Izard	~	~	~	~	~	~	~	~	~	~
Jackson	~	~	19	16.6	~	~	~	~	~	~
Jefferson	~	~	49	10.6	38	22.6	19	4.3	~	~
Johnson	19	8.3	17	10.4	12	16.2	~	~	~	~
Lafayette	~	~	~	~	~	~	~	~	~	~
Lawrence	~	~	18	15.0	13	24.3	~	~	~	~
Lee	~	~	~	~	14	48.8	~	~	~	~
Lincoln	~	~	~	~	~	~	~	~	~	~
Little River	~	~	~	~	~	~	~	~	~	~
Logan	~	~	15	9.4	15	23.2	13	8.2	~	~
Lonoke	~	~	39	9.6	22	15.6	20	5.7	~	~
Madison	15	7.6	14	12.4	11	21.8	~	~	~	~
Marion	~	~	16	9.8	17	24.1	~	~	~	~
Miller	~	~	29	10.8	19	17.9	~	~	~	~
Mississippi	10	7.0	23	9.2	28	28.7	~	~	~	~
Monroe	~	~	~	~	~	~	~	~	~	~
Montgomery	~	~	~	~	11	26.8	~	~	~	~
Nevada	~	~	~	~	~	~	~	~	~	~
Newton	~	~	10	17.4	~	~	~	~	~	~
Ouachita	~	~	29	16.2	16	21.6	~	~	~	~
Perry	~	~	~	~	~	~	~	~	~	~
Phillips	~	~	17	12.4	24	48.2	~	~	~	~
Pike	~	~	~	~	~	~	~	~	~	~
Poinsett	~	~	34	21.0	~	~	~	~	~	~
Polk	~	~	15	9.1	21	29.4	~	~	~	~
Pope	~	~	25	6.5	31	19.9	15	3.9	~	~
Prairie	10	5.1	~	~	~	~	~	~	~	~
Pulaski	~	~	269	12.0	176	20.0	93	4.1	46	3.9
Randolph	77	6.0	19	13.4	11	19.1	~	~	~	~
St. Francis	~	~	15	9.2	23	35.7	~	~	~	~
Saline	~	~	78	10.0	53	16.3	40	5.4	~	~
Scott	23	5.3	10	12.1	~	~	~	~	~	~
Searcy	~	~	~	~	~	~	~	~	~	~
Sebastian	~	~	68	8.9	53	17.3	20	2.7	15	4.9
Sevier	27	6.6	~	~	~	~	~	~	~	~
Sharp	~	~	21	13.4	12	17.5	~	~	~	~
Stone	~	~	~	~	~	~	~	~	~	~
Union	~	~	41	15.7	29	26.3	14	5.3	~	~
Van Buren	~	~	12	7.2	12	16.3	~	~	~	~
Washington	~	~	73	7.0	45	10.9	21	2.0	~	~
White	27	4.7	44	9.0	38	19.9	12	2.5	~	~
Woodruff	23	9.1	~	~	~	~	~	~	~	~
Yell	~	~	15	11.0	11	19.4	13	9.3	~	~

~ Statistics not displayed due to fewer than 10 cases

Technical Notes

Age-adjusted rates: Calculated in a manner that allows for the comparisons of populations with different age distributions. They are usually calculated per unit of the population (100,000). For example, a county with a large proportion of persons over the age of 55 would have higher counts of cancer compared to other counties with younger populations. By using an age-adjusted calculation, we can adjust for this age-difference and compare the burden across different population groups. The rates are based on case counts and population estimates. Cancer case counts change over time because new cases are discovered or other revisions. The Census Bureau estimates of population also change over time. Consequently, estimates reported here will differ slightly from previous reports and likely will differ from future reports. Age-adjusted rates were computed from age-specific rates for 19 age groups: <1, 1-4, 5-9, ..., 80-84, and 85+. The age-adjusted rate is weighted by the US 2000 Standard Million average of these age-specific rates. Confidence intervals are computed using the Tiwari method.

Standardized incidence/mortality ratio (SIR/SMR): A ratio of observed cases in a county during a period of time to the expected cases. Expected cases are computed by applying the corresponding county population estimates to age-race-sex-year-specific rates for Arkansas. Confidence intervals for SMR or SIR are computed by Byar's approximation. If the rate is greater than one (1.00), it is interpreted as having a higher-than-expected number of cases or deaths in the study population. A cause for concern in a county would be if the SIR or SMR was > 4.00.

Data Sources:

- Incident cancer cases were obtained from the Arkansas Central Cancer Registry database on October 1, 2023.
- Cancer mortality cases were obtained from the Arkansas Vital Statistics, Death Certificates on February 26, 2024.
- Survival cases were obtained from the Arkansas Central Cancer Registry database on February 4, 2024.
- Cancer incident cases from the United States were obtained from the National Cancer Institute's SEER*Stat program, https://wonder.cdc.gov/, for 1999- 2013, October 13, 2023.
- United States mortality data were obtained from CDC Wonder Cancer Mortality Files web site, https://wonder.cdc.gov/, for 1999-2013, February 28, 2024.
- Population estimates were downloaded from SEER web site, https://seer.cancer.gov/popdata/.

Cancer coding classification:

- Cancer incidence data are based on SEER Site Recode ICD-O-3/WHO 2008 Definition and were calculated using SEER*Stat.
- Cancer mortality data are based on SEER Cause of Death Recode 1969+ (03/01/2018) for underlying cause of cancer death.
- Survival data was based on the incident cancer cases obtained from the Arkansas Central Cancer Registry database and were calculated using SEER*Stat.
- Staging by cancer was derived from SEER*Stat's merged staging variable.

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RESOURCES

List of resources:

- American Cancer Society: The National Football League (NFL) partnered with the American Cancer Society to launch Crucial Catch, an online tool for cancer resources, including a cancer screening location search tool for cervical, breast, lung, prostate and colorectal cancer. To search for screening programs near you, please visit: https://crucialcatch.cancer.org/locations/.
- Arkansas Cancer Coalition: The mission of the Arkansas Cancer Coalition is "to facilitate and provide partnerships to reduce the human suffering and economic burden from cancer for the citizens of Arkansas." To learn more about the coalition, please visit: https://arcancercoalition.org/.
- Arkansas Prostate Cancer Foundation: The mission of the Arkansas Prostate Cancer Foundation mission is to educate, encourage and engage with men to make the best possible healthcare decisions. The foundation also serves as an ongoing source of information for prostate cancer survivors and healthcare professionals. To learn more about the Arkansas Prostate Cancer Foundation, please visit: https://arprostatecancer.org/.
- Be Well Arkansas: The Be Well Arkansas program, established within the Arkansas Department of Health's Tobacco Prevention and Cessation Branch, offers tips and support to quit smoking and address health conditions like diabetes and high blood pressure. To learn more about the program, please visit: https://www.bewellarkansas.org/.
- BreastCare: The Arkansas Department of Health's BreastCare program provides breast and cervical cancer screening and diagnostic services for eligible Arkansas women. To see if you qualify for free screening, please visit: https://healthy.arkansas.gov/programs-services/prevention-healthy-living/breastcare-program/breastcare-eligibility-services/.
- Lung Cancer Screening: The U.S. Preventive Services Task Force (USPSTF) recommends annual lung cancer screening with low-dose computed tomography for adults aged 50 to 80 years who have a 20 pack-year smoking history and currently smoke or have quit within the past 15 years. Talk to your healthcare provider to find out if you are meet these criteria. To search for lung cancer screening programs near you, please visit the American College of Radiology's locator tool: https://www.acr.org/Clinical-Resources/Lung-Cancer-Screening-Resources/LCS-Locator-Tool
- Your Cancer Resource Guide: In an effort to connect survivors and their families to statewide resources, the Arkansas Department of Health's BreastCare Program and its partners, created a comprehensive cancer guide to help cancer survivors and their families access available resources necessary to improving lives. To view the guide, please visit: https://healthy.arkansas.gov/wp-content/uploads/Your_Cancer_Resource_Guide_compressed.pdf

Arkansas Central Cancer Registry General Contact information:
Email: ADH.ACCR@Arkansas.Gov
Website: https://healthy.arkansas.gov/programs-services/data-statistics-registries/arkansas-cancer-registry/

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