

Trends in Cancer in Arkansas 2005-2015



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Introduction

Cancer is one of the leading causes of death in the United States (US) and Arkansas – for both genders, in all regions, for all race groups, and for most age groups. The American Cancer Society¹ estimates that in any given year more than 1.5 million people will receive a diagnosis of cancer and nearly 600,000 persons will die because of the disease. In Arkansas specifically, for the year 2017, the American Cancer Society estimates a total of more than 16,000 new cases and some 6800 deaths.² Of those, more than 2600 cases of lung cancer, 2100 cases of breast cancer, 1440 prostate cancer cases, and 1390 colorectal cancer cases are anticipated.² These and other cancer cases that will occur during the year represent a significant burden for the state and its citizens.

In the United States overall, the National Cancer Institute reports that the cancer mortality rate has declined 13% in the 10-year period 2004 to 2013.¹ During same period rates of smoking, a primary risk factor for many types of cancer, also declined. However, obesity, which is also a risk factor for many cancers, is increasing throughout the nation.¹ Further, the population is aging, as ‘Baby Boomers’ move into older age groups, and cancer is more common among people of older ages.

Arkansas Cancer Plan

In Arkansas, efforts to reduce the burden of cancer are guided by the Arkansas Cancer Plan (2015-2020). The plan is intended to provide guidance for a wide variety of interested and engaged individuals, organizations, institutions, policy makers, and others who wish to participate in a coordinated effort to impact the incidence, prevalence and mortality associated with cancer in the state. The plan was devised by a broad group of partners representing a range of stakeholder groups, and includes an emphasis on evidence-based practices in prevention, early detection and care.

In 2012 members of the Arkansas Cancer Coalition agreed to focus on seven priority cancers for the current plan:

- Lung
- Colorectal
- Breast
- Prostate
- Oral
- Skin
- Cervical

Sources and Rate Calculation

Data reported below were obtained from two sources. Data regarding incidence rates (that is, the number of new cases of disease each year) were obtained from the Arkansas Department of Health’s Comprehensive Cancer Registry, using the online query system.³ Data regarding mortality rates (that is, the number of deaths from disease each year) were obtained from the online query system maintained by the Centers for Disease Control.⁴

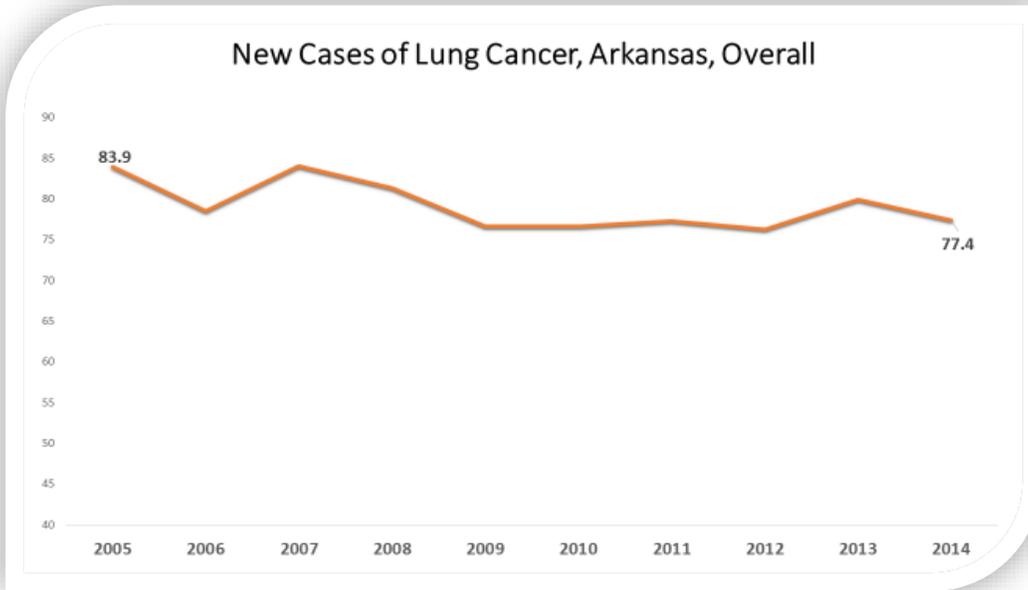
In both cases, rates were calculated as a rate per 100,000 persons. Using rates allows for a comparison across groups and years, even though the absolute number of cases or deaths and persons in the population may vary by year. In addition, all rates were calculated as age-adjusted rates, so that differences in the age distribution of the population could be accommodated.

Notes on Interpretation

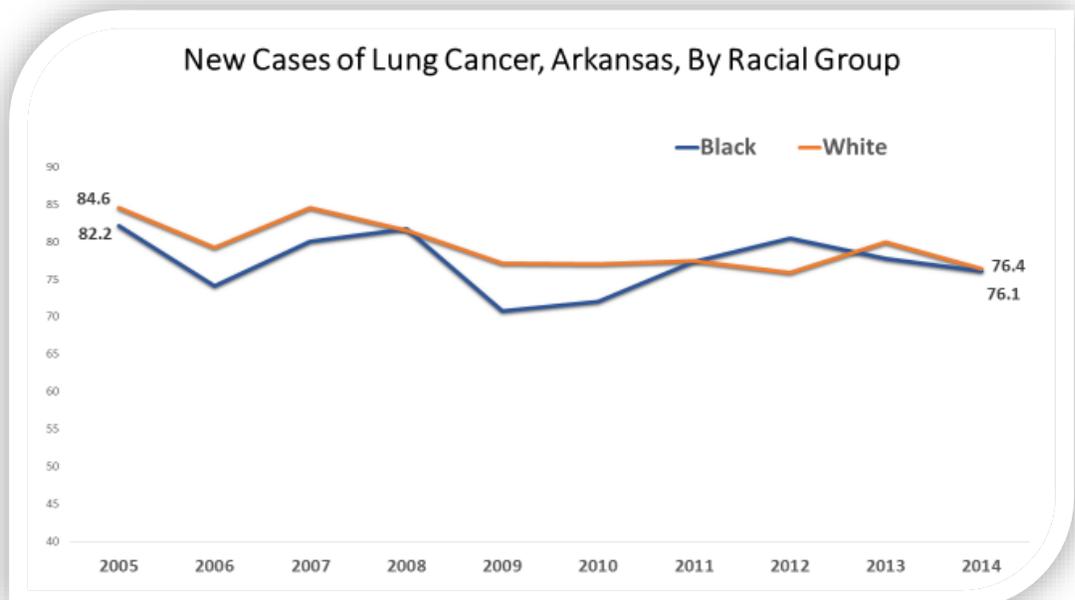
The reader should be careful to examine the rates and trends presented below and interpret them with caution. Incidence rates are indicators of the occurrence of disease. Increases in incidence rates may indicate a more frequent occurrence of the disease, because of greater exposures to factors that cause disease. Similarly, incidence rates may decline when the use of preventive measures (e.g., sunscreen) increases or the frequency of risk behaviors (e.g., smoking) decrease. However, increases in incidence rates can also be observed when screening programs are implemented, because we are systematically looking for new cases of disease. This is a particularly important factor to be considered when considering differences between racial/ethnic groups.

Mortality rates are generally thought to be the better indicator of progress in combatting cancer. Decreases in mortality rates typically mean that deaths are being prevented. This may occur because: 1) incidence of cancer is declining; 2) cases are being identified at earlier stages when they are more amenable to treatment; and/or 3) treatment methods are becoming more effective, improving short- and long-term survival rates.

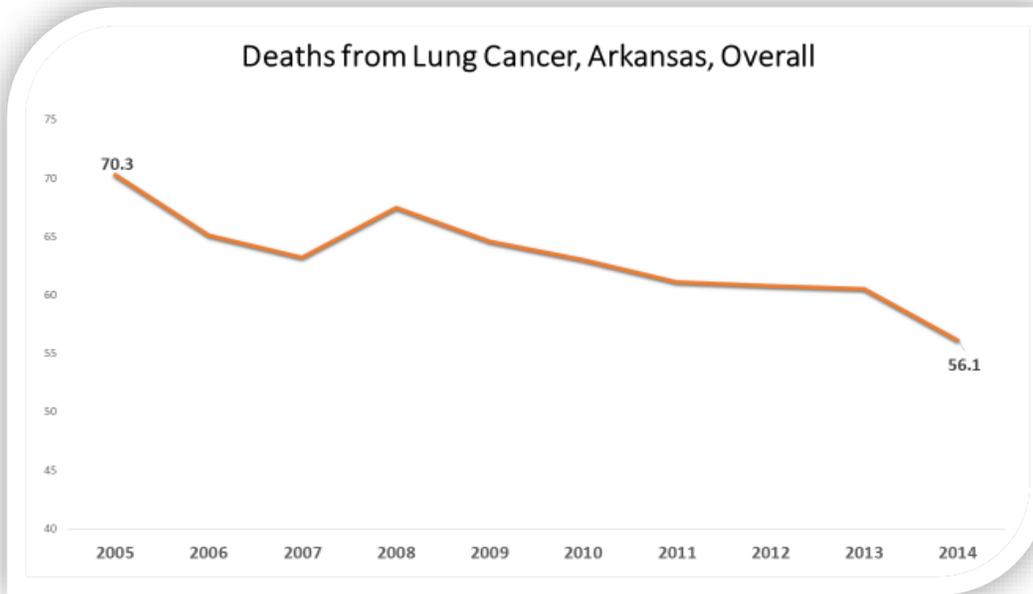
Lung Cancer – New Cases



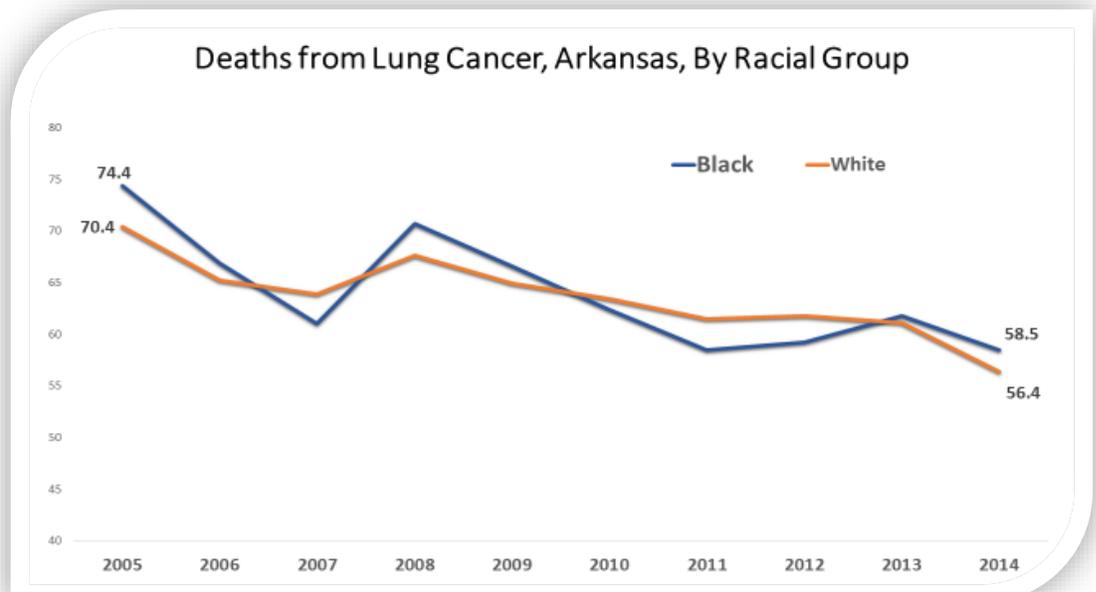
- Overall, the incidence of lung cancer fell slightly (8%) over the 10-year period.
- Incidence rates for both black and white Arkansans declined over time.
- Because the decline among African Americans (11%) was slightly greater than among Whites (9%), the gap between the two groups was essentially eliminated during the period.
 - At the beginning of the period, incidence rates were 3% higher among Blacks.
 - At the end of the period, rates for the two groups were essentially equal.



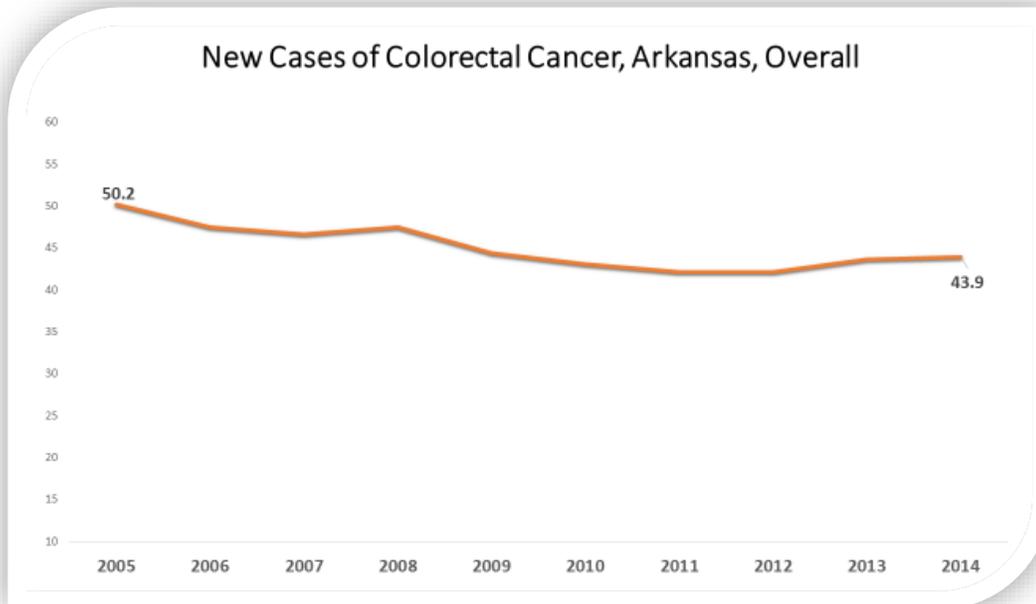
Lung Cancer – Deaths



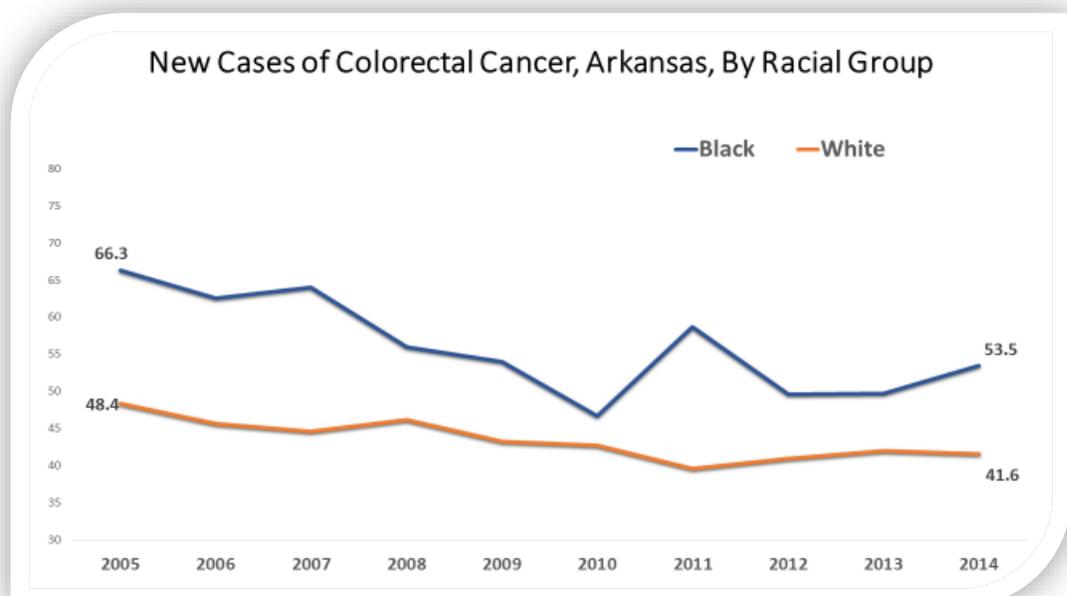
- Deaths from lung cancer fell 25% during the 10-year period.
- Death rates for both black and white Arkansans declined over time.
- Because the decline among African Americans (27%) was slightly greater than among Whites (25%), the gap between the two groups was reduced.
 - At the beginning of the period, mortality rates were 6% higher among blacks.
 - At the end of the period, mortality rates were 3% higher among blacks.



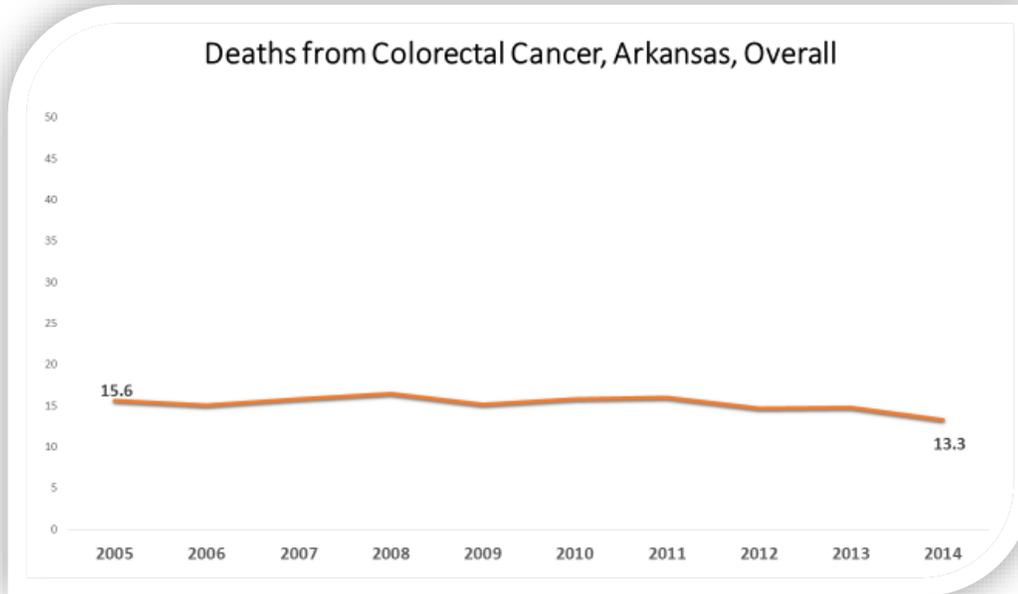
Colorectal Cancer – New Cases



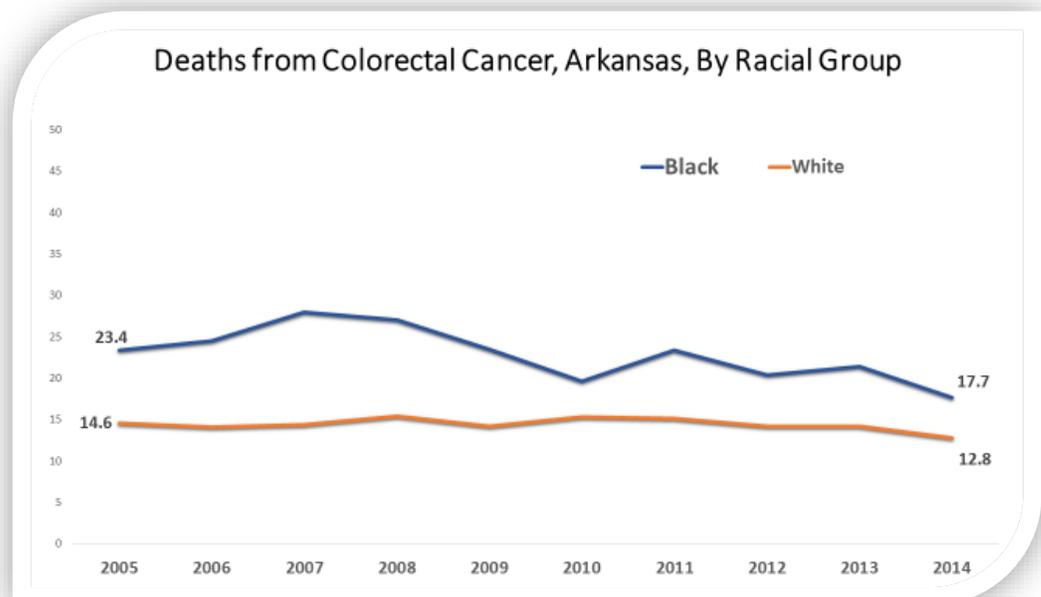
- Overall, the incidence of colorectal cancer declined by 14% over the 10-year period.
- Incidence rates for both black and white Arkansans declined over time.
- Because the decline was greater among Blacks (24%) than among Whites (16%), the disparity between the two groups was reduced during the period.
 - At the beginning of the period, incidence rates were 39% higher among blacks.
 - At the end of the period, incidence rates were 29% higher among blacks.



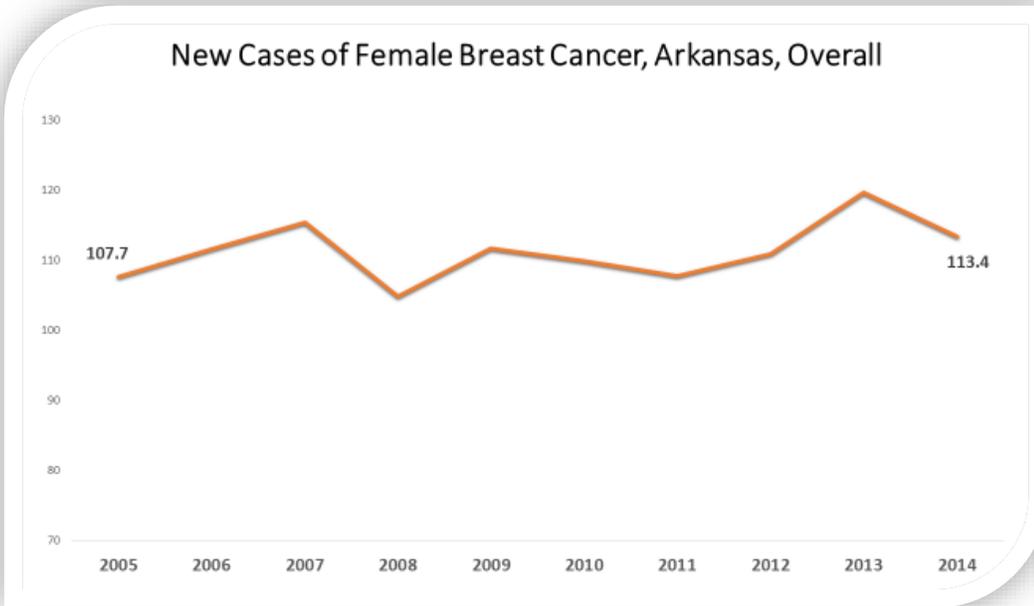
Colorectal Cancer – Deaths



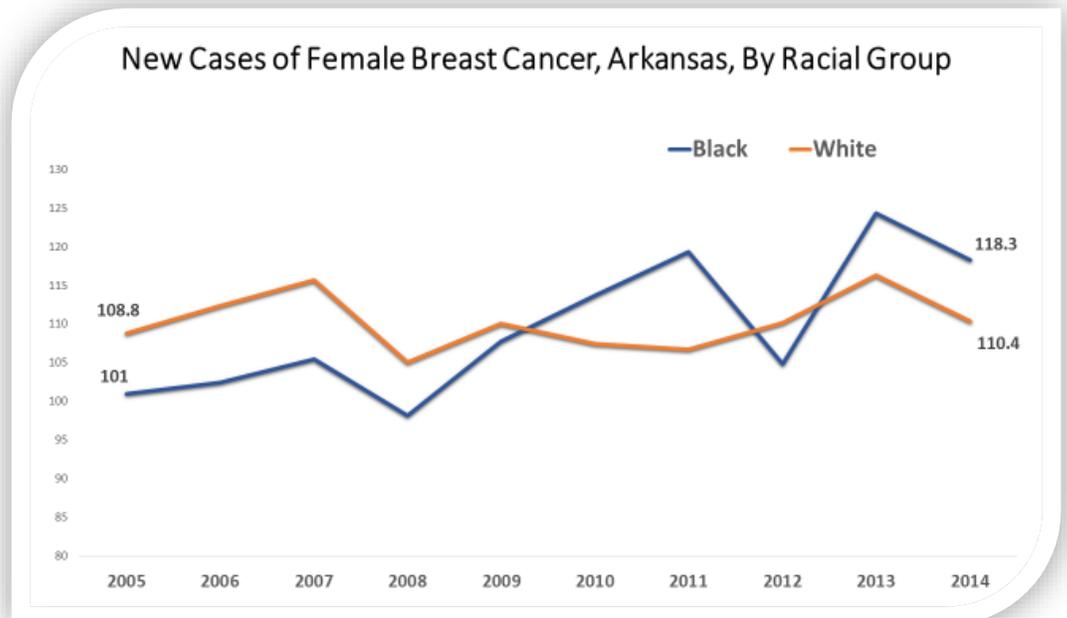
- Overall, death rates for colorectal cancer declined by 17% over the 10-year period.
- Mortality rates for both black and white Arkansans declined over time.
- Because the decline was greater among Blacks (32%) than among Whites (14%), the disparity between the two groups was reduced during the period.
 - At the beginning of the period, mortality rates were 60% higher among blacks.
 - At the end of the period, mortality rates were 38% higher among blacks.



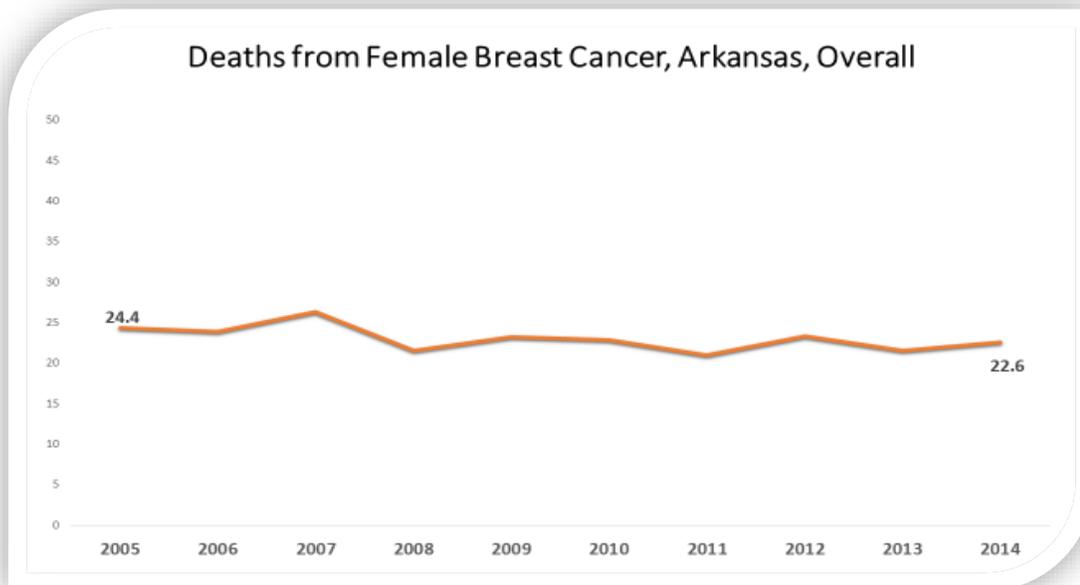
Breast Cancer (Female) – New Cases



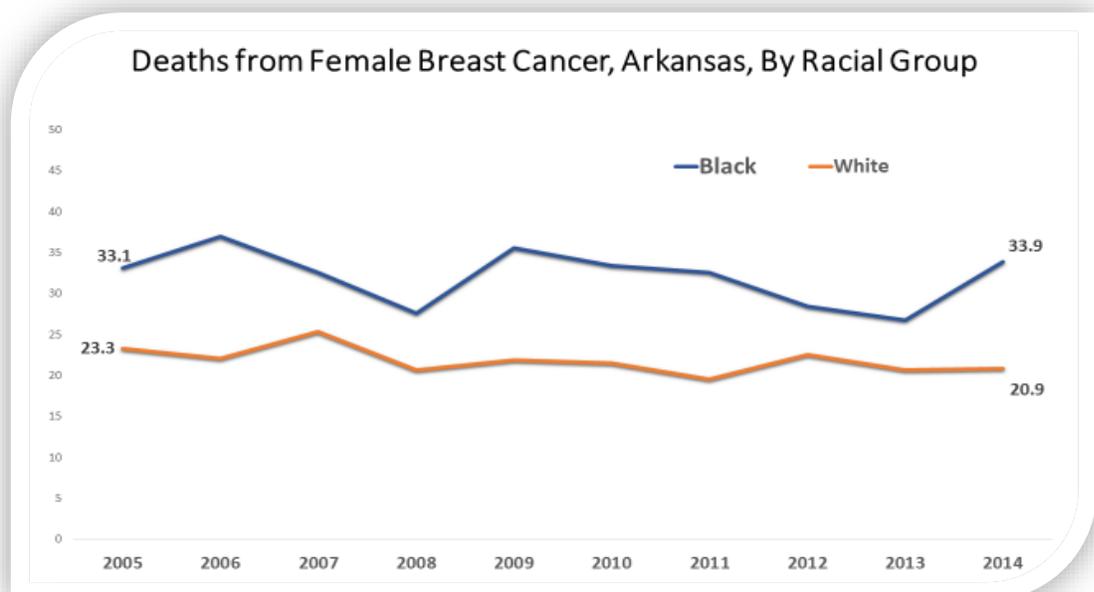
- Overall, the incidence of breast cancer rose slightly (5%) over the 10-year period.
- Most of the increase in overall incidence rates can be attributed to increases in incidence among black Arkansans. Rates for black women rose about 17% over time, while incidence rates for white women remained essentially stable.
- Because of the increase among black women and the stable rates among white women, the gap between groups was reversed. At the beginning of the period rates were higher among white women, while at the end of the period rates were higher among black women.



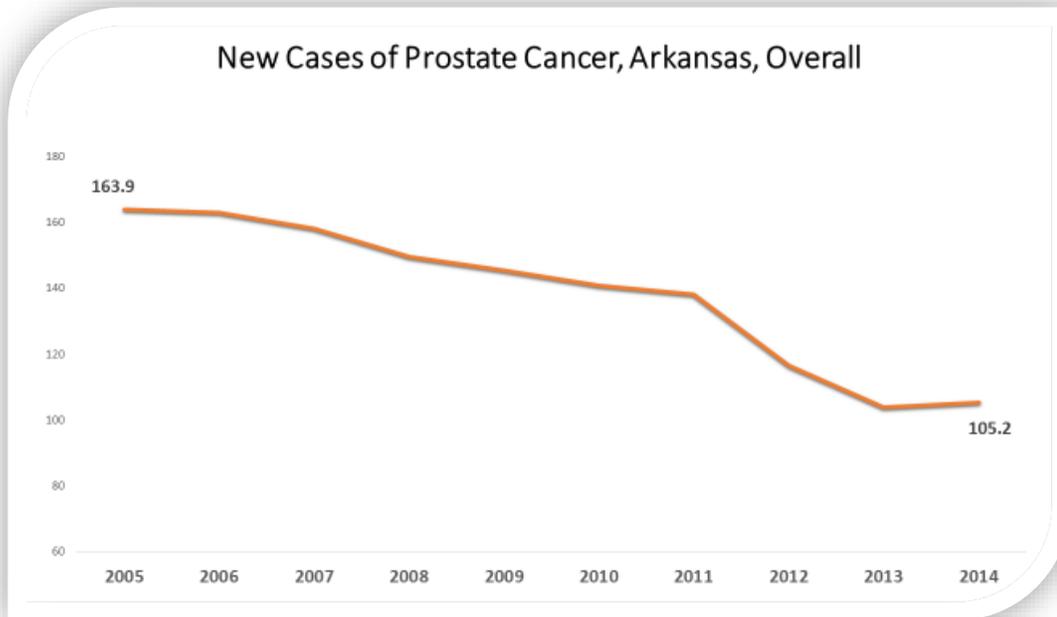
Breast Cancer (Female) – Deaths



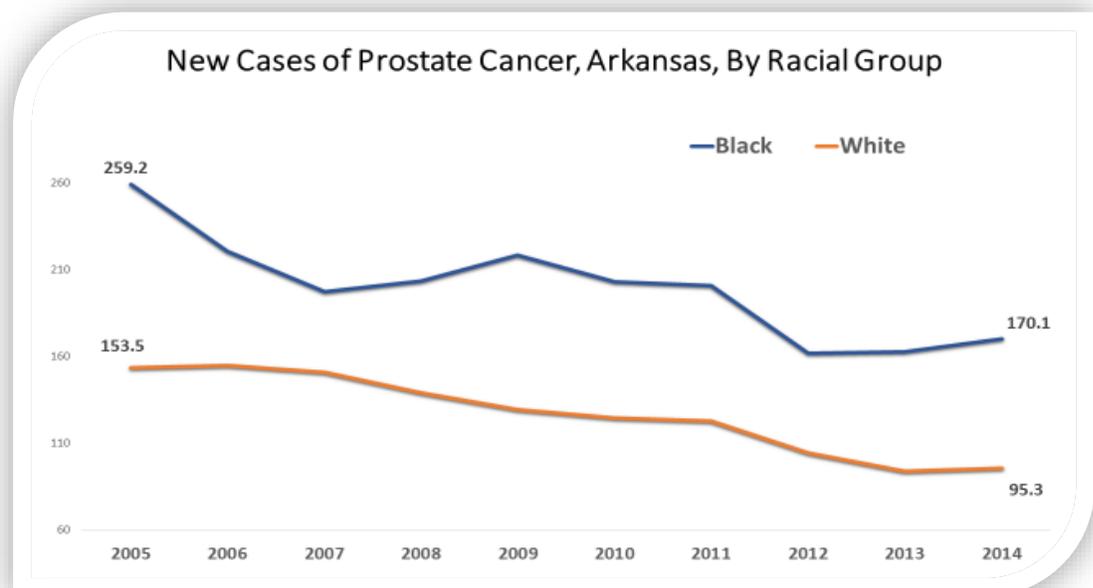
- Overall, death rates for breast cancer declined by 8% over the 10-year period.
- Mortality rates for white Arkansans declined by 11% over the period, but rates for black women remained essentially stable.
- Because only white women experienced the decline in rates, the disparity between the two groups increased during the period.
 - At the beginning of the period, death rates were 42% higher among blacks.
 - At the end of the period, death rates were 62% higher among blacks.



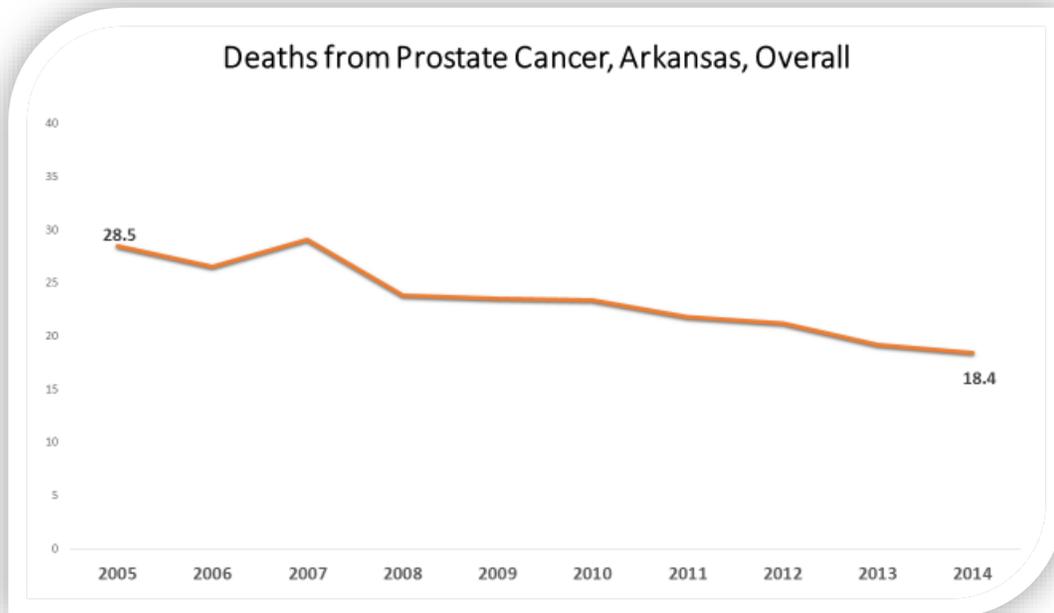
Prostate Cancer – New Cases



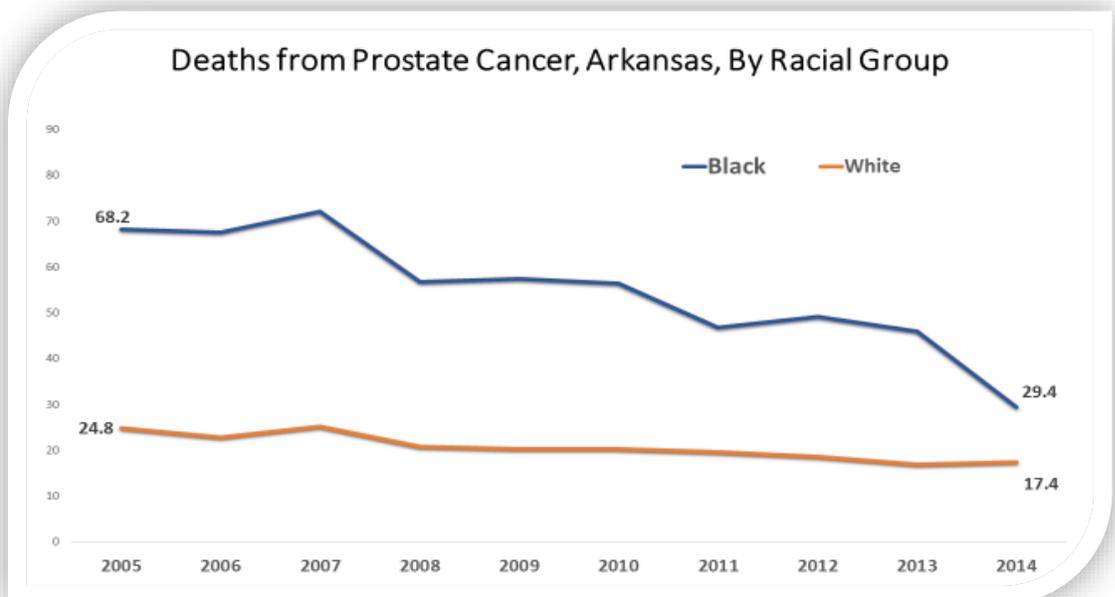
- Overall, the incidence of prostate cancer declined substantially (56%) over the 10-year period.
- Incidence rates for both black and white Arkansans declined over time.
- Because the decline was greater among whites (61%) than among blacks (52%), the gap between the two groups was increased during the period.
 - At the beginning of the period, incidence rates were 69% higher among blacks.
 - At the end of the period, incidence rates were 78% higher among blacks.



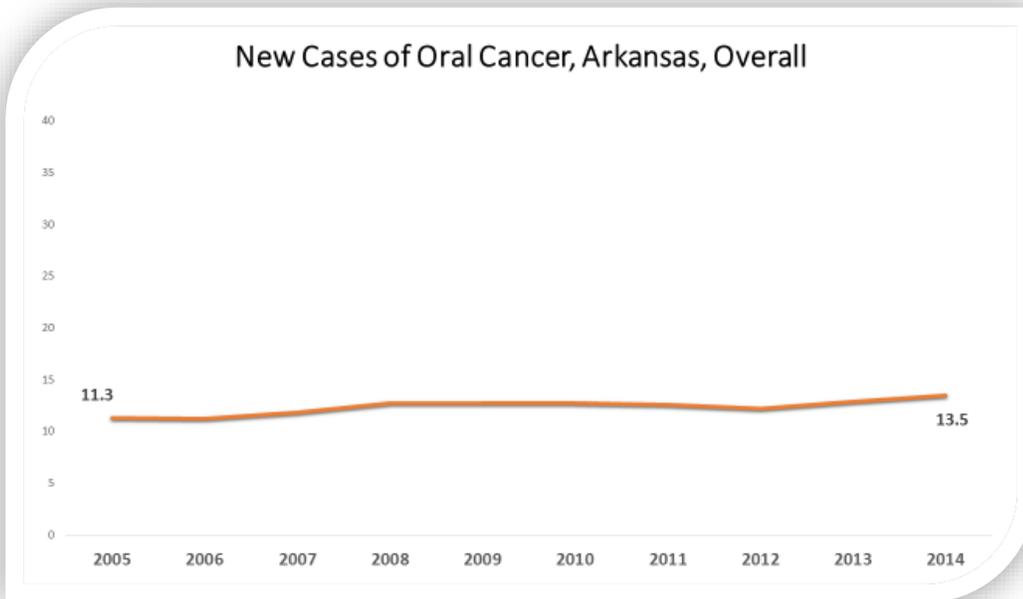
Prostate Cancer – Deaths



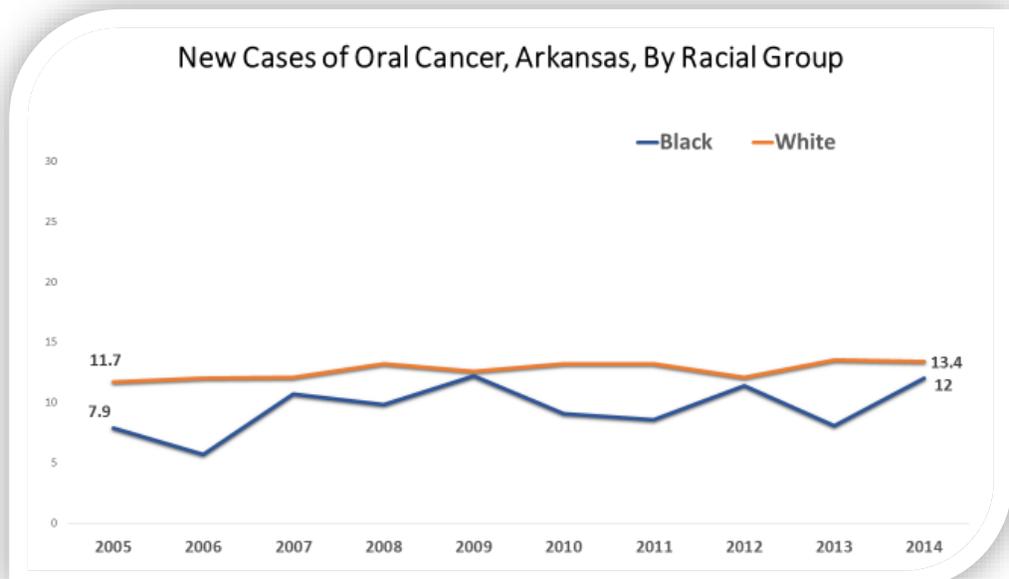
- Overall, death rates for prostate cancer declined by 55% over the 10-year period.
- Mortality rates for both African American and white men declined substantially.
 - Rates for white men declined by 43%
 - Rates for black men were reduced by more than half.
- Because of the significantly greater reduction in rates among black men, the gap between the two groups was reduced during the period.
 - At the beginning of the period, death rates were nearly 3 times higher among blacks.
 - At the end of the period, death rates were 69% higher among blacks.



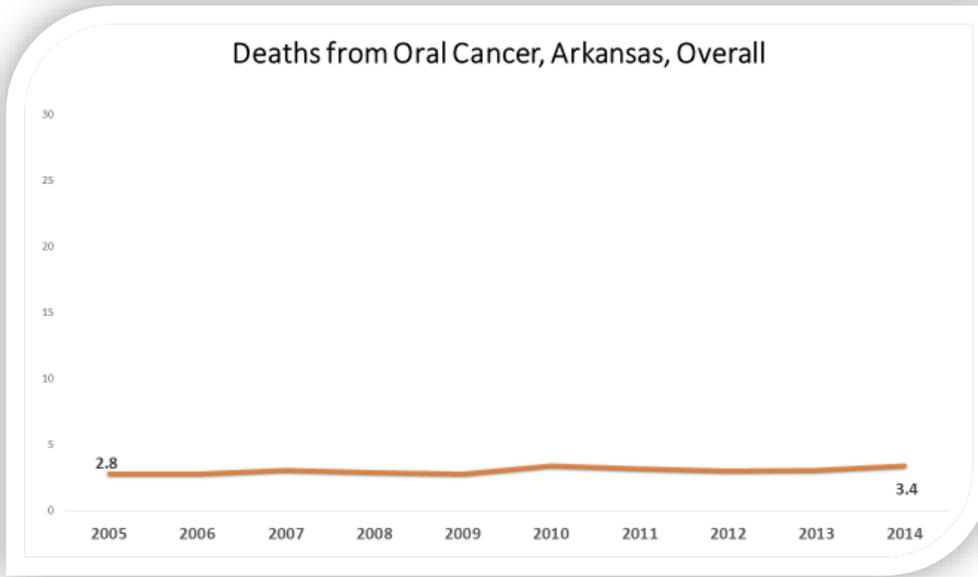
Oral Cancer – New Cases



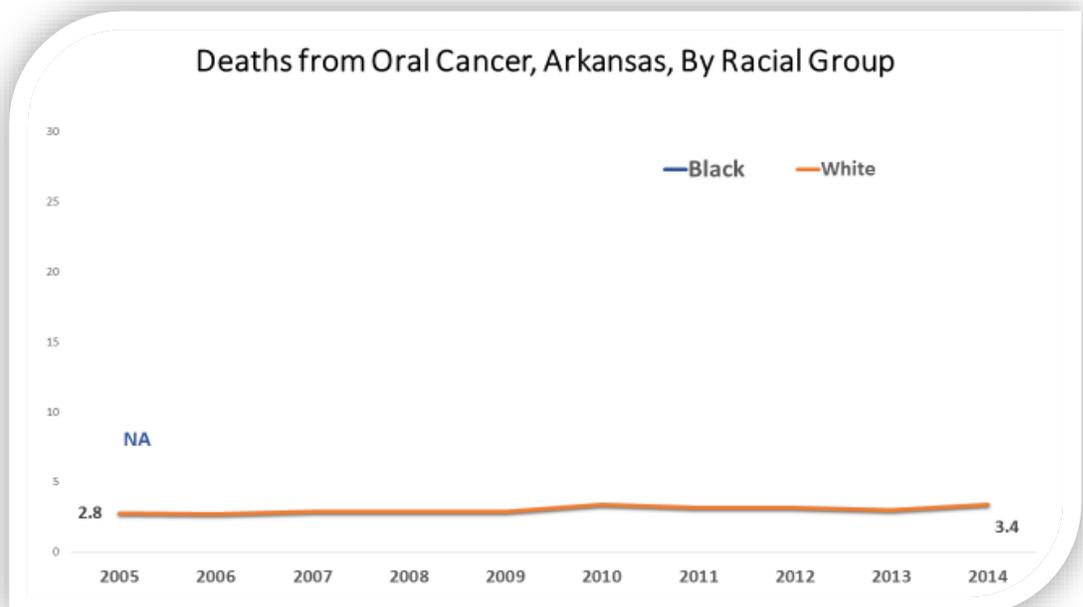
- Overall, incidence rates for oral cancer increased by nearly 20% over the 10-year period.
- Incidence rates for white Arkansans increased by 15% over the period, while rates for black Arkansans increased by 52%.
- Because of the increase among African Americans, the gap between the two groups narrowed during the period.
 - At the beginning of the period, death rates were 48% higher among whites.
 - At the end of the period, death rates were 12% higher among whites.



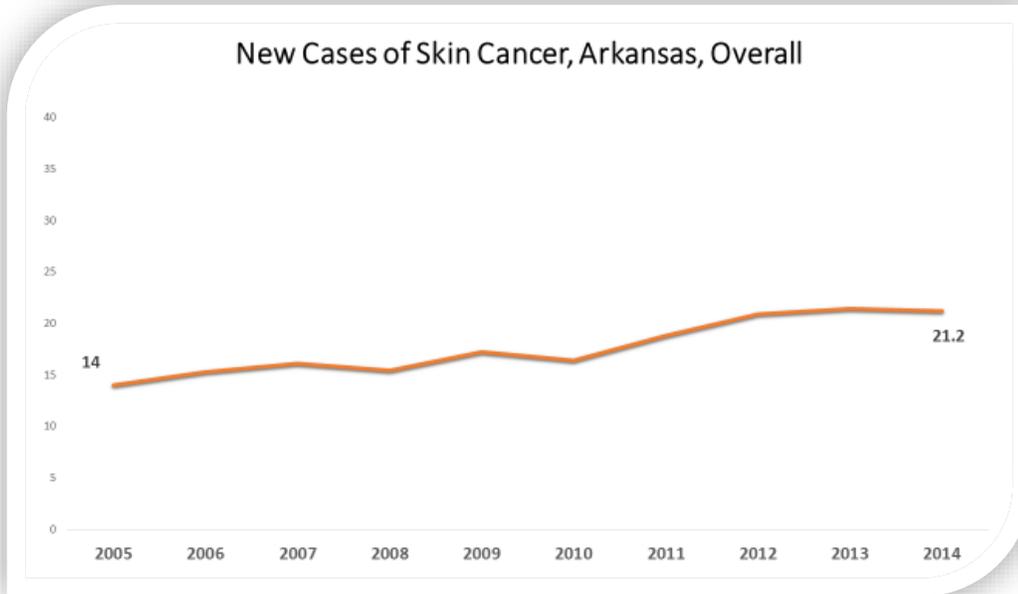
Oral Cancer – Deaths



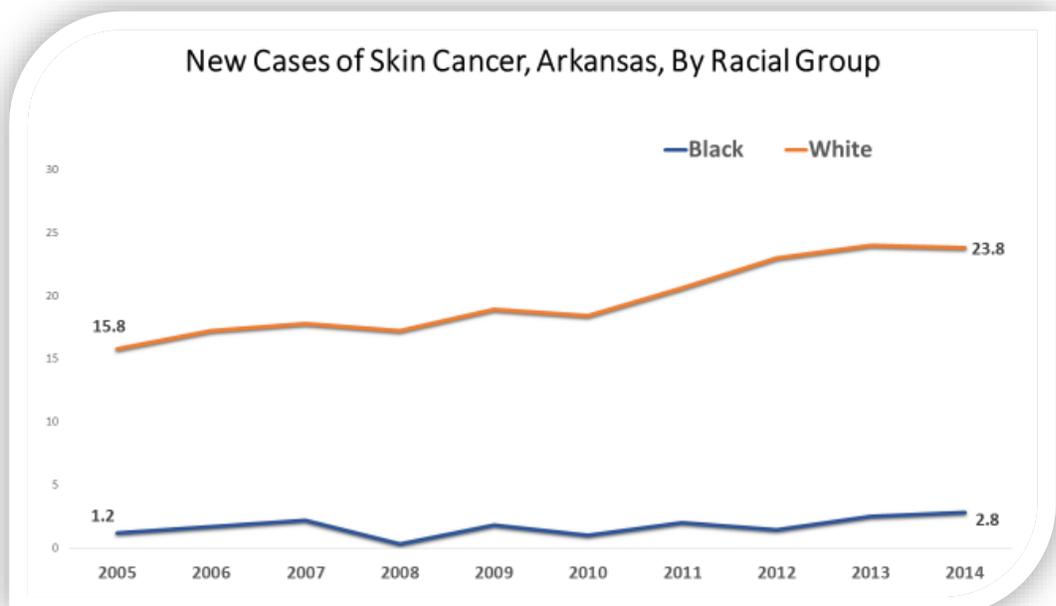
- Overall, death rates for oral cancer increased by 21% over the 10-year period.
- Deaths among African Americans were too few in number to yield stable rates over the 10-year period, so it is not possible to compare rates between black and white groups.



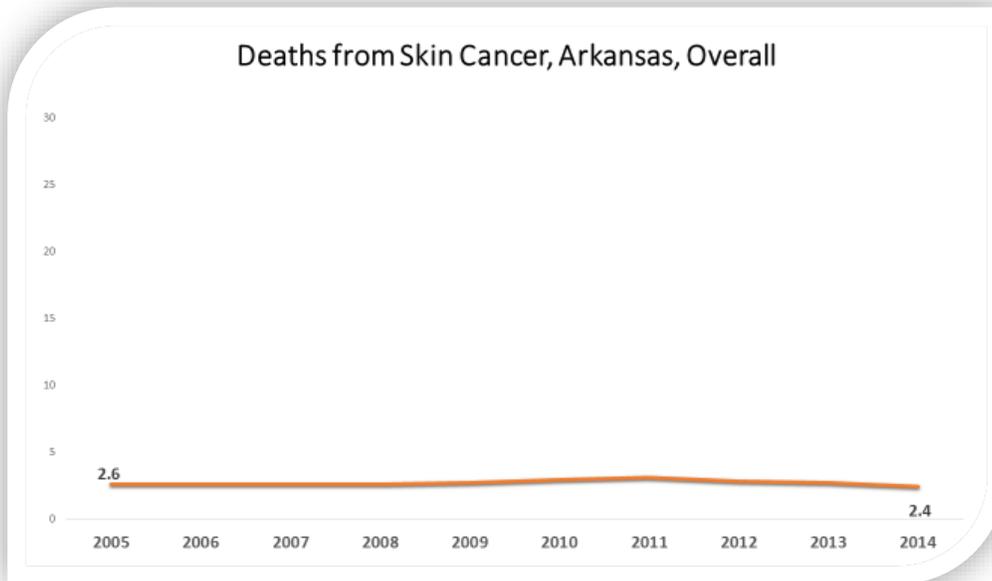
Skin Cancer – New Cases



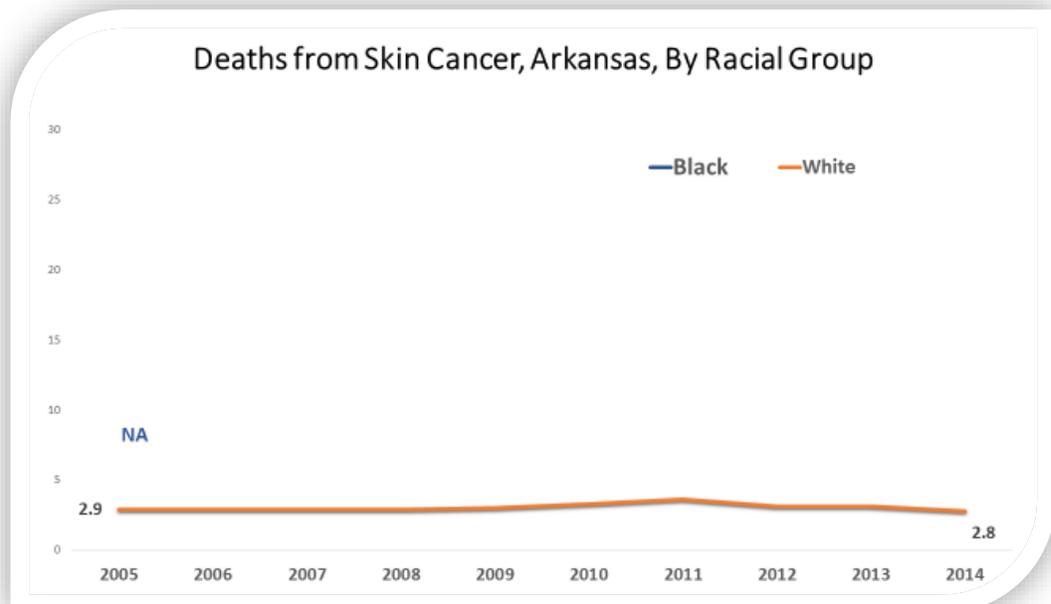
- Overall, incidence rates for skin cancer increased by 51% over the 10-year period.
- Incidence rates for white Arkansans increased by 51% over the period. Rates for African Americans were very low but doubled over the period.
- The gap between the two groups widened during the period.



Skin Cancer – Deaths

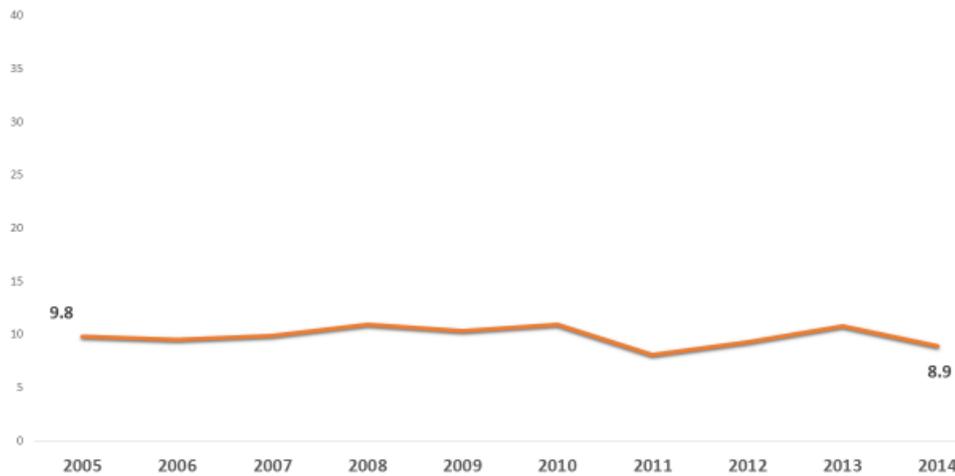


- Overall, death rates for skin cancer remained essentially stable over the 10-year period.
- Deaths among African Americans were too few in number to yield stable rates over the 10-year period, so it is not possible to compare rates between black and white groups.



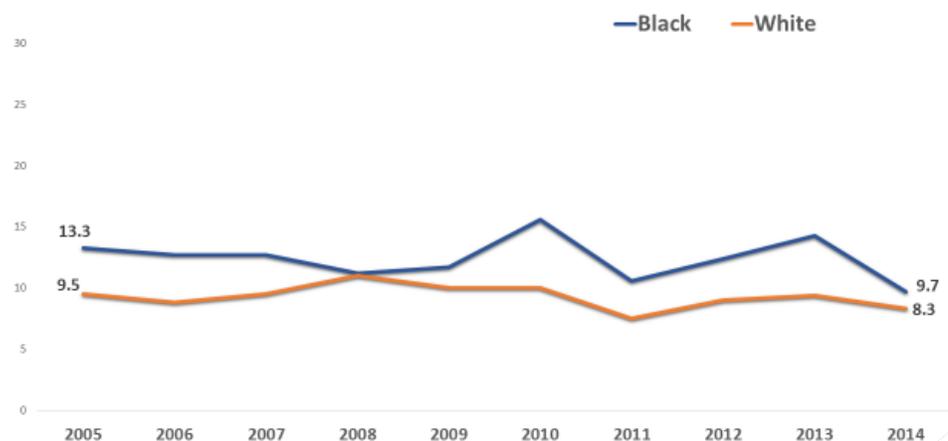
Cervical Cancer

New Cases of Cervical Cancer, Arkansas, Overall

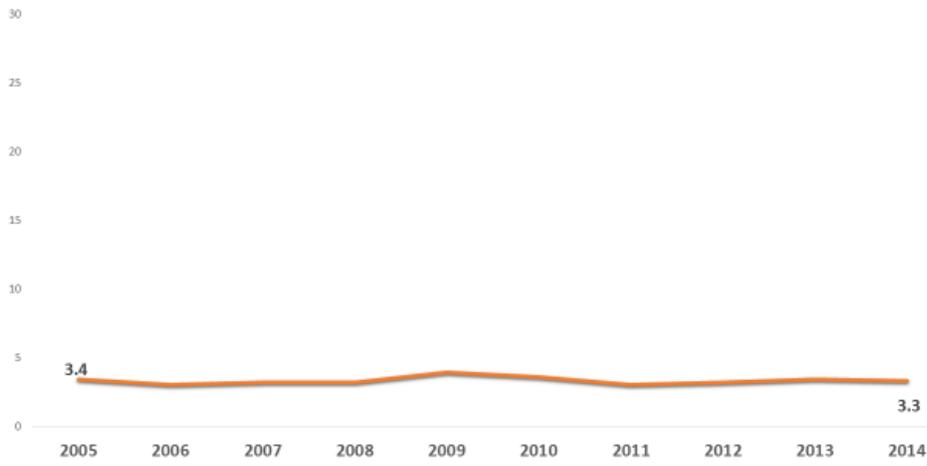


- Overall, incidence rates for cervical cancer decreased by 10% over the 10-year period.
- Incidence rates for both African American and white women decreased during the period.
 - Incidence rates decreased by 37% among black women.
 - Incidence rates decreased by 14% among white women.
- Because of the greater declines among black women, the gap between groups was narrowed during the period.
 - At the beginning of the period, incidence rates were 40% higher among Blacks.
 - At the end of the period, rates were 14% higher among Blacks.

New Cases of Cervical Cancer, Arkansas, By Racial Group

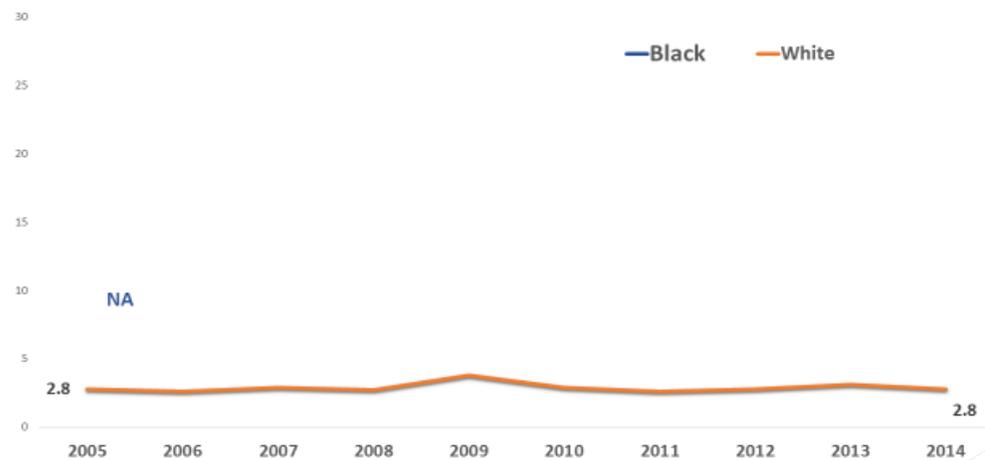


Deaths from Cervical Cancer, Arkansas, Overall



- Overall, mortality rates for cervical cancer remained essentially stable over the 10-year period.
- Deaths among African Americans were too few in number to yield stable rates over the 10-year period, so it is not possible to compare rates between black and white groups.

Deaths from Cervical Cancer, Arkansas, By Racial Group



References

1. National Cancer Institute (NCI). (n.d.). *Cancer Statistics*. Accessed May 10, 2017: www.cancer.gov/about-cancer/understanding/statistics.
2. American Cancer Society. (n.d.) *Arkansas At-a-Glance*. Accessed July 27, 2017: www.cancerstatisticscenter.cancer.org/#/state/Arkansas.
3. Arkansas Department of Health. (n.d.) *The Arkansas Central Cancer Registry*. Accessed May 10, 2017: <http://cancer-rates.info/ar/>.
4. Centers for Disease Control and Prevention. (n.d.) *Underlying Cause of Death*. Access May 10, 2017: <https://wonder.cdc.gov/ucd-icd10.html>.