

# Cancer in Oklahoma Data Brief Series:

## Prostate Cancer in Oklahoma - Update 2025

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### Introduction

In the latest available data (2022 for cases and 2023 for deaths), prostate cancer was the most diagnosed cancer and the second leading cause of death from cancer among men in the United States (119 cases/100,000 and 19 deaths/100,000) and in Oklahoma (113 cases/100,000 and 20 deaths/100,000). Nationally, in 2022, Oklahoma ranks 34<sup>th</sup> worst among all states (and the District of Columbia and Puerto Rico) in prostate cancer incidence. In 2023, they ranked 15<sup>th</sup> worst in overall prostate cancer mortality. The latter ranking is a small improvement from 2018, when Oklahoma ranked 13<sup>th</sup> worst. All major prostate cancer screening guidelines emphasize shared decision-making regarding the use of prostate-specific antigen (PSA) testing. The United States Preventive Services Task Force (USPSTF) recommendation applies to men aged 55-69 years and suggests offering this test for selected patients depending on individual circumstances.”<sup>2</sup> In contrast, the American Cancer Society<sup>2</sup> (ACS) and the American Urological Association<sup>3</sup> prostate cancer guidelines more strongly encourage men at high risk of developing cancer, including African American men and those with a family history, to begin screening at age 45 (ACS) or age 40 (AUA). Also, the AUA and ACS guidelines provide guidance on screening intervals based on PSA levels.

The initial Prostate Cancer in Oklahoma Data Brief was completed in 2021. This update summarizes new cancer screening, incidence, and mortality rates for prostate cancer among men in Oklahoma. It concludes by discussing the significance of findings on clinical practice and public health policy.

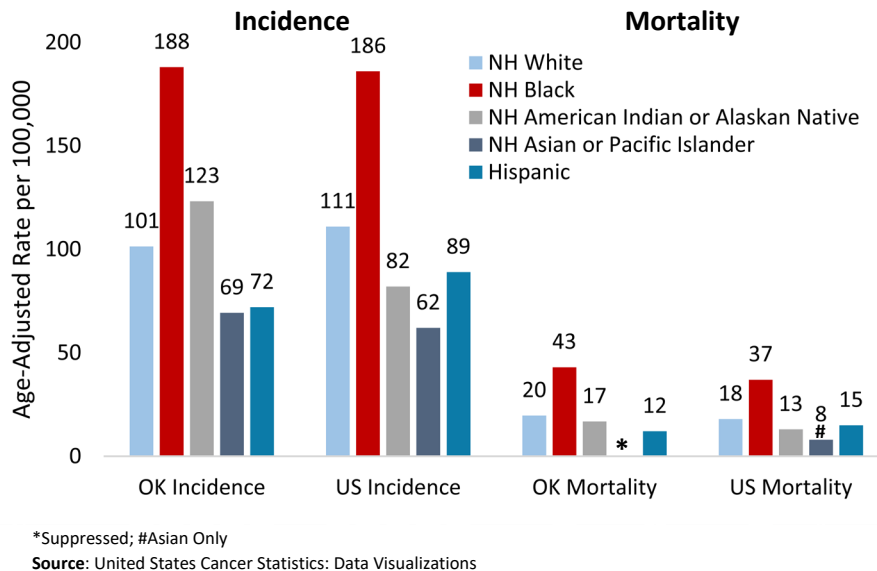
### Methods

Data for cancer incidence were obtained from the Oklahoma Central Cancer Registry (OCCR), the Centers for Disease Control’s (CDC) National Program of Cancer Registries (NPCR), and the NCI’s Surveillance, Epidemiology, and End Results (SEER) program. Cancer mortality data were from Oklahoma Vital Statistics and the CDC’s National Vital Statistics System (NVSS). Information about cancer screening was obtained from the Behavioral Risk Factor Surveillance System (BRFSS). For this study, Hispanic persons were classified as Hispanic regardless of race. Those who identified as White, Black, African American, American Indian, Alaska Native, Asian, or Pacific Islander were classified as Non-Hispanic (NH), thus excluding individuals of these groups with Hispanic ethnicity. All data sources used in this brief were publicly available and provided de-identified data. All incidence and mortality rates are per 100,000 population. In this report, we used the most recent available data for each specific analysis variable. For incident cases, the period was 2018-2022; for mortality, it was 2019-2023. However, for subgroup analysis, the period may be 2017-2021. To ensure the stability of estimates and confidentiality, rates were suppressed if fewer than 16 counts were reported in a specific category. All rates were age-adjusted to the 2000 US standard population. Prostate cancer cases (ICD-0-03 C619) in men were analyzed. Cases were limited to invasive cancers. BRFSS estimates were suppressed for stability if the unweighted sample size was less than 50. Unknown values were excluded (except unknown stage), and resulting percentages were

weighted averages estimated from the sample and population sizes. Staging for this data brief used the SEER summary stage.

## Results

**Figure 1: Age-adjusted prostate cancer incidence (2018-2022) and mortality (2019-2023) rates per 100,000 men by race in Oklahoma and the United States**



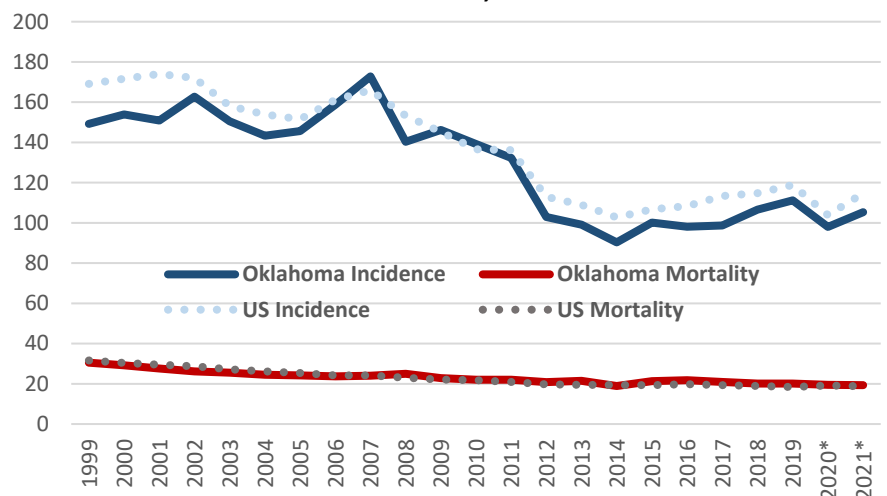
Overall, 1,203,167 prostate cancer cases were diagnosed between 2018 and 2022 in the US, and 33,881 men died. In Oklahoma, there were 12,791 prostate cancer cases, and 2,057 men died. The prostate cancer incidence rate in Oklahoma was 108 per 100,000 people compared to 116 per 100,000 for the US.

**Figure 1** shows the prostate cancer rates per 100,000 population by race and ethnicity in Oklahoma and the United States. Non-Hispanic (NH) Black or African American men in Oklahoma and the United States have the highest incidence and mortality rates of any of the racial or ethnic groups by far. Compared to NH White men, NH Black or African

American men in Oklahoma were 1.9 times more likely to be diagnosed with prostate cancer and 1.7 times more likely to die from prostate cancer. Both the incidence rate and the mortality for Black or African American men in Oklahoma was higher than for their US counterparts. Among the major racial or ethnic groups, NH American Indian or Alaska Native men had the second highest incidence rates and third highest mortality rates. NH American Indian or Alaska Native men in Oklahoma were more likely to be diagnosed and more likely to die from prostate cancer compared to NH American Indian or Alaska Native men in the United States overall. Among the racial or ethnic groups examined, Asian or Pacific Islander men had the lowest incidence and Hispanic men the lowest mortality rates (Oklahoma Asian or Pacific Islander rates were suppressed due to the small numbers). Compared to Asian or Pacific Islander men in the United States, Asian or Pacific Islander men in Oklahoma were more likely to be diagnosed.

**Figure 2** shows yearly trends of prostate cancer incidence and mortality for Oklahoma and the United States. Overall, Oklahoma mirrors the United States, with a large drop

**Figure 2: Trend of prostate cancer incidence and mortality rates in Oklahoma and the United States, 1999-2021**

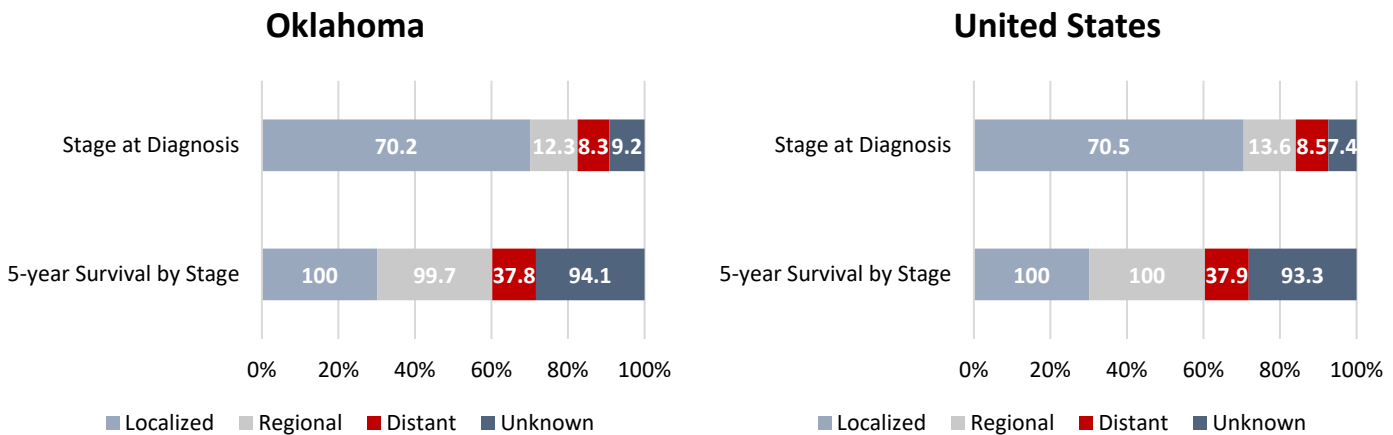


\*2020 and 2021 were during the COVID-19 pandemic; thus, screening rates are lower than previous years.

Source: CDC Wonder

in prostate cancer diagnoses beginning around 2007 and a much smaller decrease in mortality. For 2020 and 2021 (during the COVID-19 pandemic), there was a major drop in 2020 incidence rates with an increase in 2021, but the rates were still not up to pre-pandemic levels.

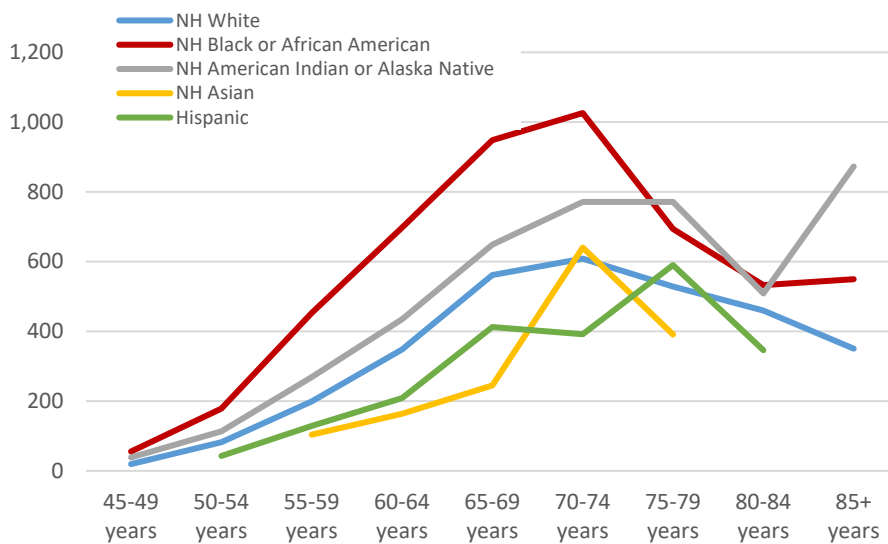
**Figure 3: Stage at Diagnosis compared to 5-Year Relative Survival by Stage in Oklahoma and the US 2018-2022**



Source: United States Cancer Statistics: Data Visualization

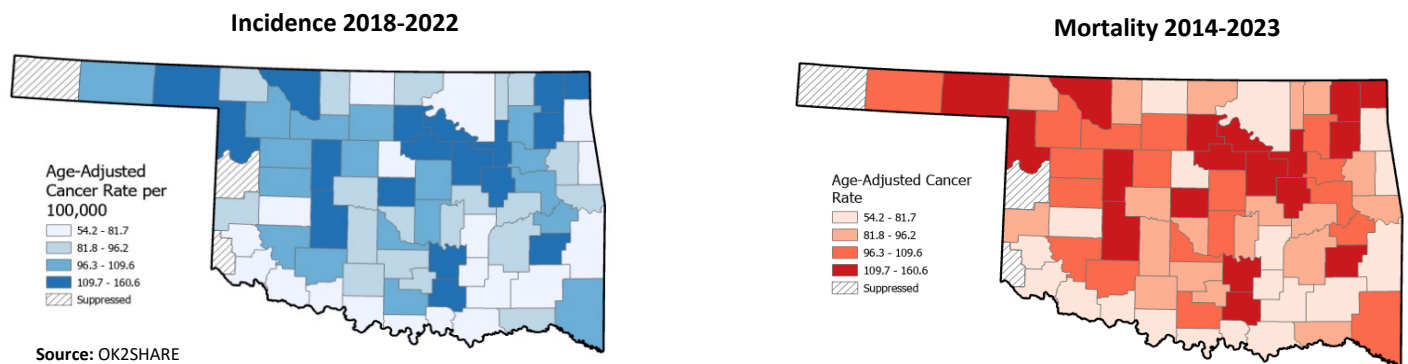
**Figure 3** shows Oklahoma prostate cancer staging at diagnosis by race for 2018 through 2022 and the five-year survival by stage for 2015 through 2021. Most prostate cancers in Oklahoma are found during the local stage.

**Figure 4: Prostate cancer age-specific incidence rate by race and age groups—Oklahoma 2017-2021**



Source: CDC Wonder

**Figure 4** shows Oklahoma prostate cancer age-specific incidence rates by race and age groups. It illustrates several interesting trends among racial or ethnic groups. First, the incidence rates all increase from very low for men in their late forties and early fifties to peaks around their late sixties to early seventies, except for American Indians or Alaska Natives, who peak at 85, but with a dip in the early eighties. This differs from the previous report, where we observed diagnoses rising throughout, rather than dropping in the late seventies and early eighties. As shown previously, Black or African American men are particularly at risk for prostate cancer in younger age groups, with a large gap in their rates and the next highest of American Indian and Alaska Natives.

**Figure 5: Overall age-adjusted prostate cancer incidence and mortality rate by county Oklahoma**

**Figure 5** shows maps of prostate cancer incidence rates (2018-2022) and mortality rates (2013-2022) by county for Oklahoma. There appears to be lower incidence rates of prostate cancer in the Southeastern part of Oklahoma. Poor mortality rates are scattered throughout Oklahoma, with several counties suppressed even with ten years of data. There was substantially higher incidence rates in urban areas compared to rural areas (115.1 vs 95.5), but no difference in mortality rates (19.9 vs 20.1).

### **Conclusions and Implications for Practice and Policy**

Prostate cancer is the most frequently diagnosed cancer among men in Oklahoma. Diagnosing and treating prostate cancer is critical for the health and economic productivity of the state. Findings form the basis for the following recommendations to increase awareness of prostate cancer and prostate cancer screening and reduce prostate cancer incidence and mortality. First, the residents of Oklahoma need to be aware of the importance of prostate cancer screening, diagnosis, and treatment. Many patients present with late-stage disease. Statewide efforts, such as media campaigns, to increase awareness of prostate cancer symptoms and prostate cancer screening could help reduce the burden of prostate cancer in Oklahoma.

Health care professionals in Oklahoma need to work with men on shared and informed decision-making concerning prostate cancer screening. Statewide efforts to educate health care professionals about how to engage in discussions with their patients about prostate cancer screening and prostate cancer symptoms are warranted. In particular, men who have an increased risk of developing prostate cancer, including African American men and those with a family history of prostate cancer, should consider screening beginning as early as age 40.

Efforts are needed to ensure that all men in Oklahoma with prostate cancer have access to the most effective treatments based on current evidence, as well as access to emerging therapies, such as immunotherapy, when appropriate. To achieve this, financial, travel, and other barriers to health care need to be reduced. Additionally, providing access to clinical trials focused on improving prostate cancer outcomes could help elevate the standard of care for men with advanced disease.

There is an urgent need to develop and implement interventions to ensure the early detection of prostate cancer in high-risk groups, particularly among Black or African American men. For instance, combining PSA testing with additional tests for biomarkers, prostate imaging, or other methods may be crucial for improving early-stage cancer detection in this population. Furthermore, research is needed to identify the most effective treatments for prostate cancer in high-risk groups, including Black or African American men. Moreover, funding should be increased to ensure diversity among patients enrolled in cancer clinical trials, as findings from trials ultimately improve cancer outcomes. Funding also is needed for basic science research to identify why many cancers, including prostate cancer, are particularly lethal among Black or African American persons and, in Oklahoma, American Indian/Alaska Native persons.

Finally, efforts to improve the consistency of prostate cancer screening guidelines issued by national groups would help clinicians and patients make informed choices about screening. This need to align screening guidelines is especially important for men who are at increased risk of developing prostate cancer, including African American/Black men and those with a family history of prostate cancer. These and additional actions are needed if, as a state, we are truly serious about achieving the ambitious goal of eliminating prostate mortality cancer in Oklahoma.

**Screening resources:**

American Cancer Society. American Cancer Society recommendations for prostate cancer early detection. 2023  
<https://www.cancer.org/cancer/types/prostate-cancer/detection-diagnosis-staging/acs-recommendations.html>

United States Preventive Services Task Force, Grossman DC, Curry SJ, et al. Screening for Prostate Cancer: US Preventive Services Task Force Recommendation Statement. *JAMA*. May 8 2018;319(18):1901-1913. doi:10.1001/jama.2018.3710

**Data Sources:**

Oklahoma State Department of Health (OSDH), Center for Health Statistics, Health Care Information, Vital Statistics, on Oklahoma Statistics on Health Available for Everyone (OK2SHARE).  
<https://www.health.state.ok.us/stats/Registries/cancer/Final/mortality.shtml>

Oklahoma State Department of Health (OSDH), Disease Prevention & Preparedness Service, Chronic Disease Service, Oklahoma Central Cancer Registry (OCCR), on Oklahoma Statistics on Health Available for Everyone (OK2SHARE).  
<https://www.health.state.ok.us/stats/Registries/cancer/Final/Statistics.shtml>

U.S. Cancer Statistics Working Group. U.S. Cancer Statistics Data Visualizations Tool. U.S. Department of Health and Human Services, Centers for Disease Control and Prevention and National Cancer Institute; <https://www.cdc.gov/cancer/dataviz>, released in June 2025.

Suggested Citation: United States Cancer Statistics - Incidence: 1999 - 2021, WONDER Online Database. United States Department of Health and Human Services, Centers for Disease Control and Prevention and National Cancer Institute; 2023 submission; 2024 release. Accessed at <http://wonder.cdc.gov/cancer-v2021.html> on Jun 11, 2025.

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1. U.S. Cancer Statistics Working Group. U.S. Cancer Statistics Data Visualizations Tool. Accessed July 2024.  
<https://gis.cdc.gov/Cancer/USCS/#/AtAGlance/>
2. American Cancer Society. Recommendations for Prostate Cancer Early Detection. Accessed October 18,, 2024.  
<https://www.cancer.org/cancer/types/prostate-cancer/detection-diagnosis-staging/acs-recommendations.html>
3. Wei JT, Barocas D, Carlsson S, et al. Early Detection of Prostate Cancer: AUA/SUO Guideline Part I: Prostate Cancer Screening. *J Urol*. Jul 2023;210(1):46-53. doi:10.1097/JU.0000000000003491
4. American Cancer Society. American Cancer Society recommendations for prostate cancer early detection. 2021;
5. United States Preventive Services Task Force, Grossman DC, Curry SJ, et al. Screening for Prostate Cancer: US Preventive Services Task Force Recommendation Statement. *JAMA*. May 8 2018;319(18):1901-1913. doi:10.1001/jama.2018.3710

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