



Tennessee Breast and Cervical Cancer Screening Program (TBCSP): 2024 Breast Cancer Surveillance Report

Hannah Schluter, MPH Candidate
Vanderbilt University

Email: hannah.m.schluter@vanderbilt.edu

Supervisors: Elizabeth Berardi, Mari Campos Araujo, Audrey Stach

Introduction

- Breast Cancer is the **most common cancer** and the **second leading** cause of **cancer deaths** in Tennessee Women, with **Black women** having **higher rates of breast cancer mortality** compared to **White women** despite similar incidence rates.
- TBCSP's goal is to **provide cancer screening** and **diagnostic services** to low-income and under/uninsured women and men and **reduce cancer disparities** that negatively impact marginalized communities within the state.
- In **2021**, the TBCSP published its first breast cancer surveillance report.
- This data was translated into **breast cancer snapshots** and utilized to depict and communicate breast cancer statistics within each county in Tennessee by the Tennessee Department of Health (TDH).

Objectives

- The **core objectives** of the 2024 Breast Cancer Surveillance Report includes:
- Update the 2021 data utilized for the breast cancer snapshots
 - Observe changes among counties, regions, and across the state
 - Utilize 2024 data to inform TDH officials the current state of breast cancer statistics within their individual counties.

Methodology

Data Sources:

- TDH Female Breast Cancer Mortality Rates (2011-2020) and Incidence Rates (2016-2020)
- FDA Certified Mammography Facilities
- Centers for Medicare and Medicaid Mapping
- CDC's Social Vulnerability Index: Sum of factors in the CDC's social vulnerability index measurement.

Method of Analysis:

- Score Calculations** – All 4 data sources combined into one weighted score for Tennessee's 95 counties. The higher the score, the more 'total risk' the county is.
- State & Regional Rankings** – The ranking of counties was according to their score. They were ranked from 1 to 95, with 1 being lowest breast cancer risk and 95 being the county with the highest breast cancer risk.
- B:W Mortality Ratio** – B:W mortality data was obtained from the Tennessee Department of Health (TDH) and included the counties who had a statistically significant ratio.

Software:

- Excel was utilized for all statistical analysis.

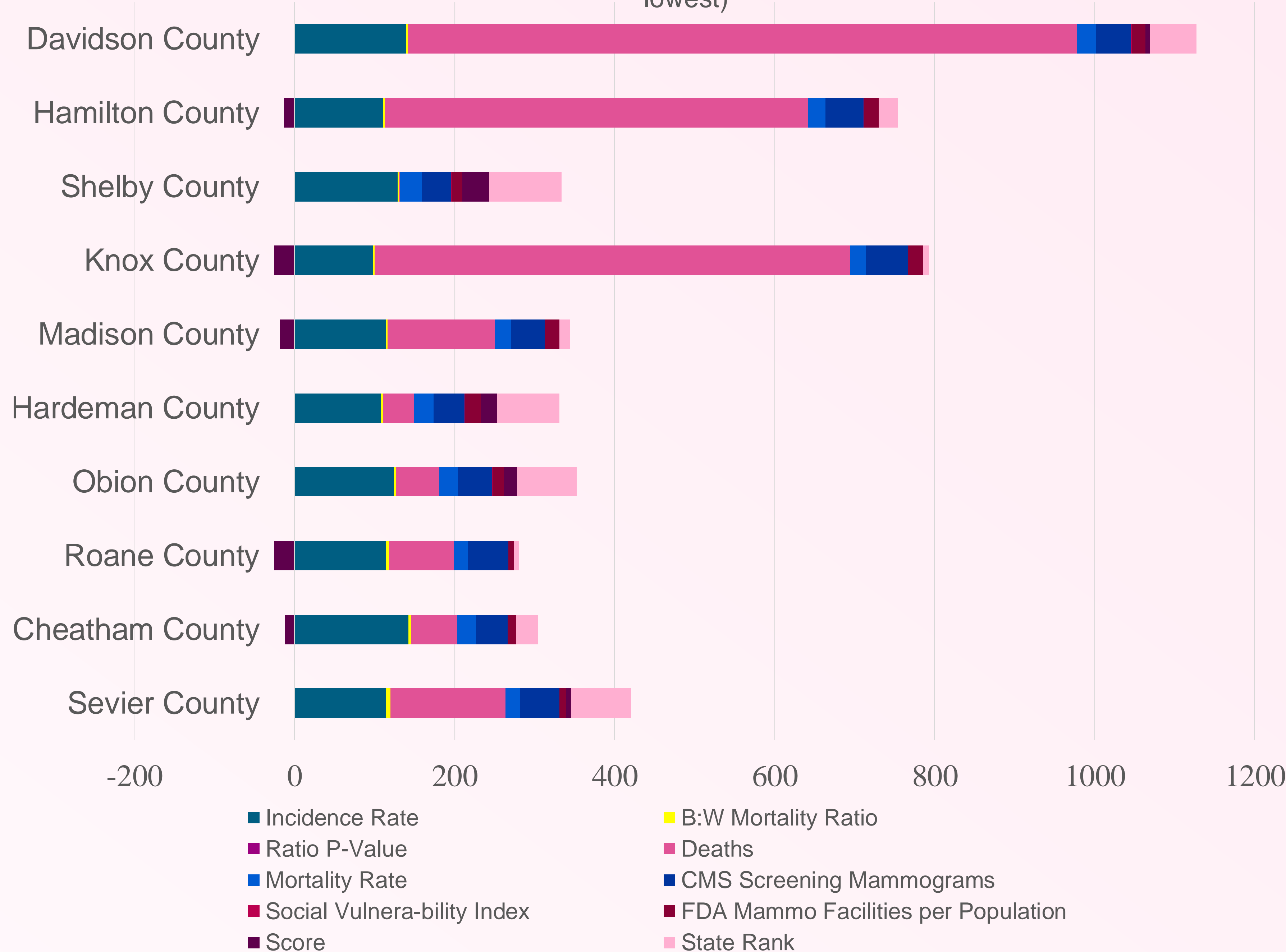
Results

Risk Scores: Ten counties with the highest vs. lowest breast cancer risk

- Highest Risk:** Grundy, Crockett, Lauderdale, Haywood, Shelby, Van Burren, Perry, Scott, Hancock, Morgan
- Lowest Risk:** Cannon, Lewis, Wilson, Moore, Williamson, Roane, Knox, Blount, Hardin, Smith

B:W Mortality: **9 counties** identified with a statistically significant B:W ratio, with Sevier County having the highest B:W Ratio.

Table 1. Black-White Mortality Ratio Data (ranked from highest to lowest)



Mortality Rates: State of Tennessee & Hispanic vs. Non-Hispanic Populations

Table 2. Comparison of Mortality Data from 2021 and 2024 Reports

TDH Snapshot Report	Overall Mortality Rate (2011-2020)	B:W Mortality Rate	Hispanic vs. Non-Hispanic Mortality Ratio
2021 Report	20	1.89	0.9
2024 (Current) Report	21.7	1.47	0.53

Discussion

Sevier County:

- Sevier county had the highest total breast cancer risk score value of **6.91**, compared to the 2021 Report, the score was **1.1**.
- Since Sevier county has a higher score, as compared to its score in 2021, this means that the county has **higher values for the listed indicators, has a more at-risk community, and is overall doing worse than the state average** breast cancer risk.
- The reduction in the risk score value could reflect the impact statewide programs, such as TBCSP, have on reducing health and racial disparities.
- Sevier County had the highest B:W mortality ratio. However, in 2021, their B:W Ratio was **12.5** and in 2024 it reduced to a value of **5.6**.

Hispanic vs. Non-Hispanic Mortality Ratio:

- In the 2024 report, the Hispanic vs. non-Hispanic mortality ratio was reported to be **0.53**.
- Since the ratio is less than 1, it means that Hispanic individuals have a lower mortality rate than non-Hispanic individuals.
- However, this finding can be heavily influenced by the difference in the total population within each category;** there are 9,326 people included in the non-Hispanic category, compared to the 86 people included in the Hispanic population.

State of Tennessee:

- Tennessee demonstrated **an overall reduction in the B:W mortality ratio** and across all counties compared to the 2021 report, even though there is a **1.7** increase in Tennessee's breast cancer mortality rate since 2021.

Conclusion

The TBCSP is a program within TDH that addresses the public health crisis and burden breast cancer has on individuals and their surrounding communities. Increasing public health funding and resources to incorporate more initiatives aimed at improving health literacy, knowledge, and next steps following a mammogram can have a further positive impact on reducing the B:W mortality ratio and overall total score for counties within Tennessee.

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