

INTRODUCTION

- Cancer incidence in the young adult population (≤ 45 years) has been increasing within the United States and globally.¹
- Understanding the trends and backgrounds associated with increased mortality is vital for future screening and preventative strategies
- There have been limited studies assessing trends in mortality or how sociodemographic variables may contribute
- We examined cancer mortality rates over a 20-year period to assess for temporal trends and disparities in cancer mortality in the young adult population

METHODS

- The CDC WONDER database was queried for patients between 25-44 years of age with an underlying cause of death due to cancer between 1999 and 2020
- Age-adjusted mortality rates (AAMR) per 100,000 people were extracted and were stratified by sex, race, geographic density, and primary site of malignancy
- Joinpoint regression software was used to estimate annual percent change (APC) and identify significant changes in temporal trends
- APCs were considered increasing/decreasing if the slope was significantly different than 0, with significance set at $p < 0.05$

RESULTS

- From 1999-2020, there were 366,478 cancer-related deaths in young adults nationally
 - There was a significant decline in APC (-1.6%)
- Males (18.4) had an overall lower AAMR than females (23.0) for all cancers
- AAMR was highest in the South (22.4) and lowest in the West (18.3)
- Rural populations had the highest AAMR (24.3) while Urban populations had the lowest (19.8)

- Breast (3.1), Lung (2.1), and Colorectal (1.8) cancers had the highest AAMRs
- Uterine (+2.4%) and Colorectal (+0.7%) cancers had significant increases in annual mortality
- Lung cancer (-5.7%) and non-Hodgkin Lymphoma (-4.3%) had significant decreases

- All racial groups demonstrated a downward trend in AAMR.
- NHB mortality remained higher compared to all other races.

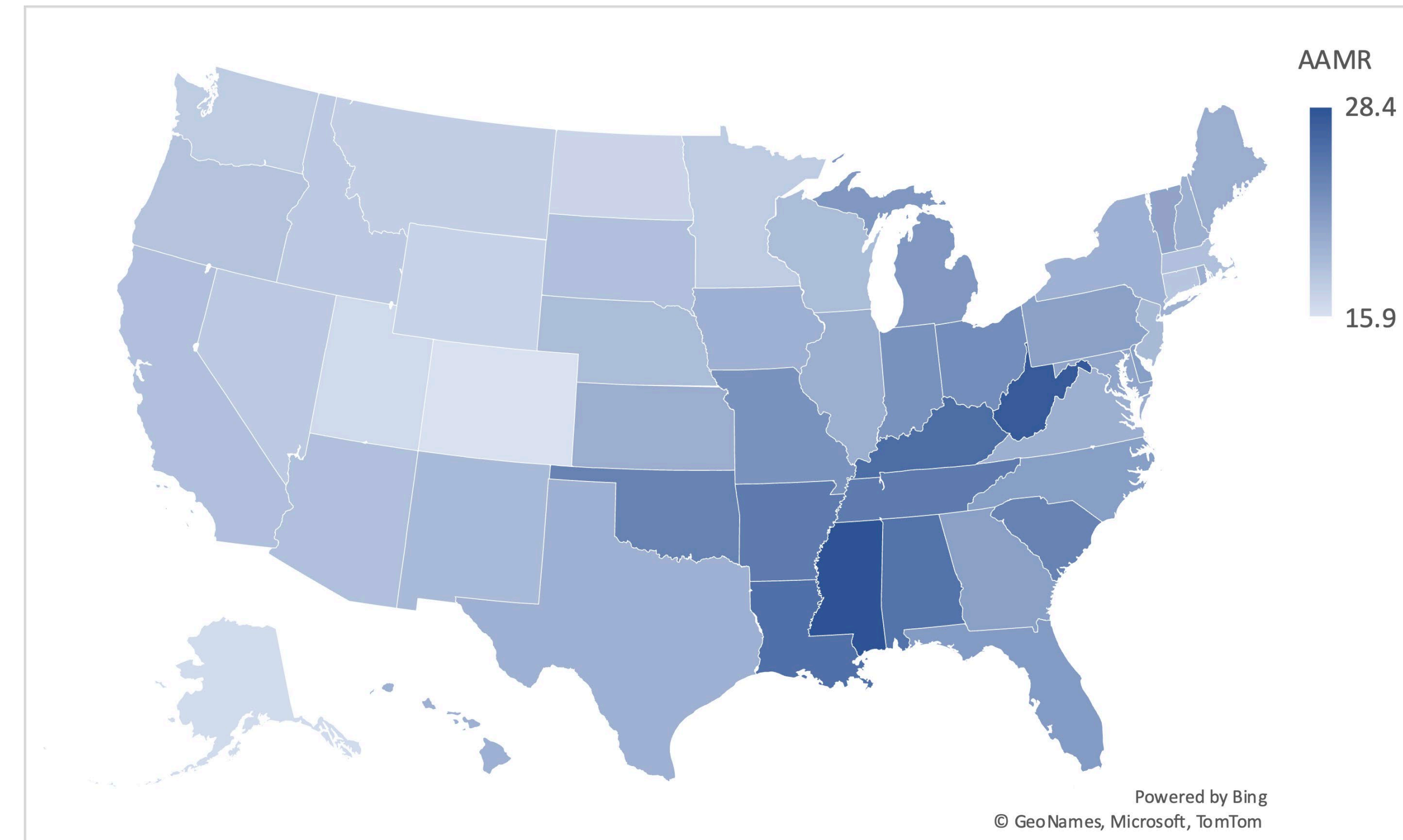


Figure 1. Young Adult Age-Adjusted Cancer-Related Mortality by State

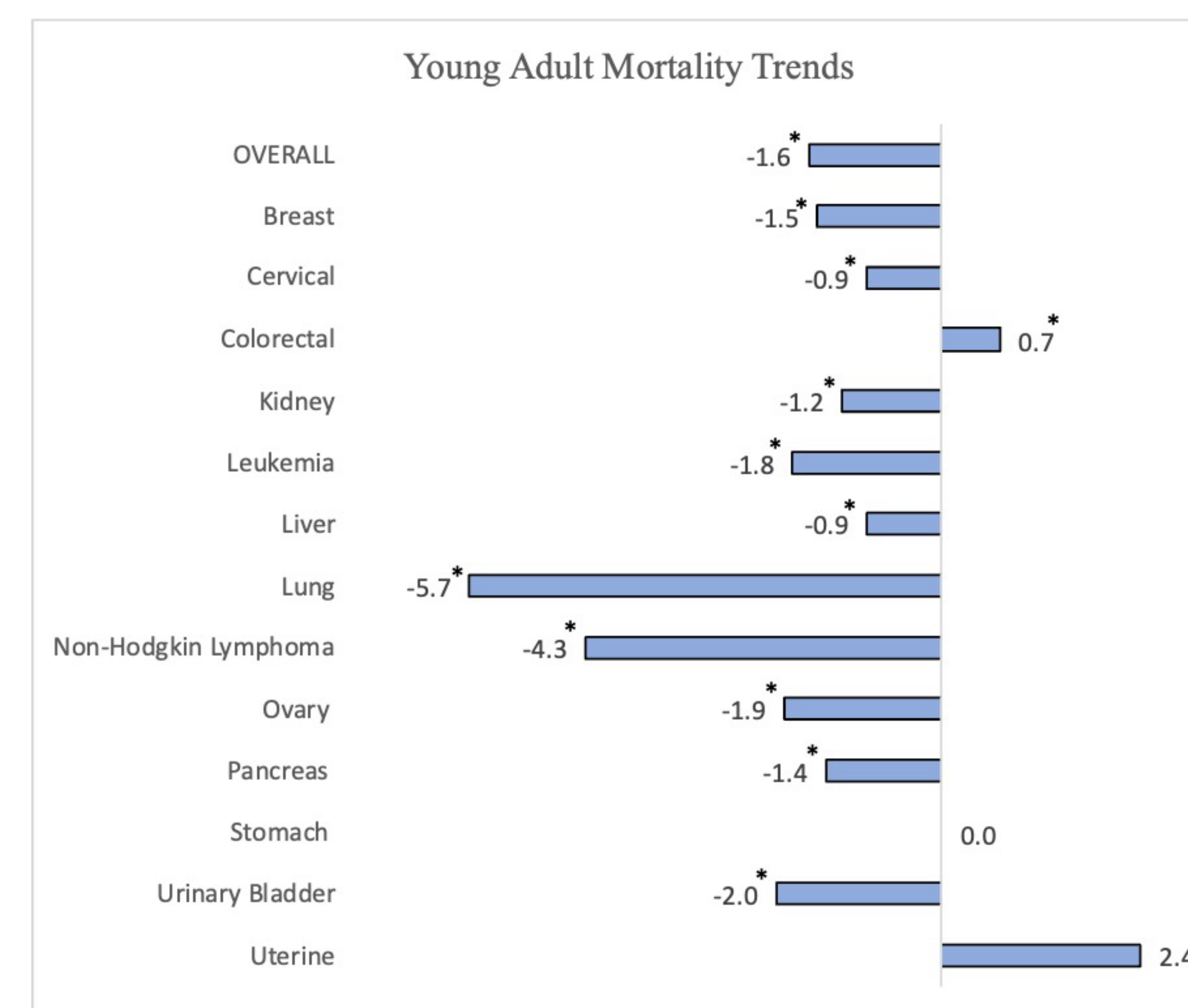


Figure 2. Young Adult Mortality Trends by Primary Site
* Denotes statistical significance at $p < 0.05$.

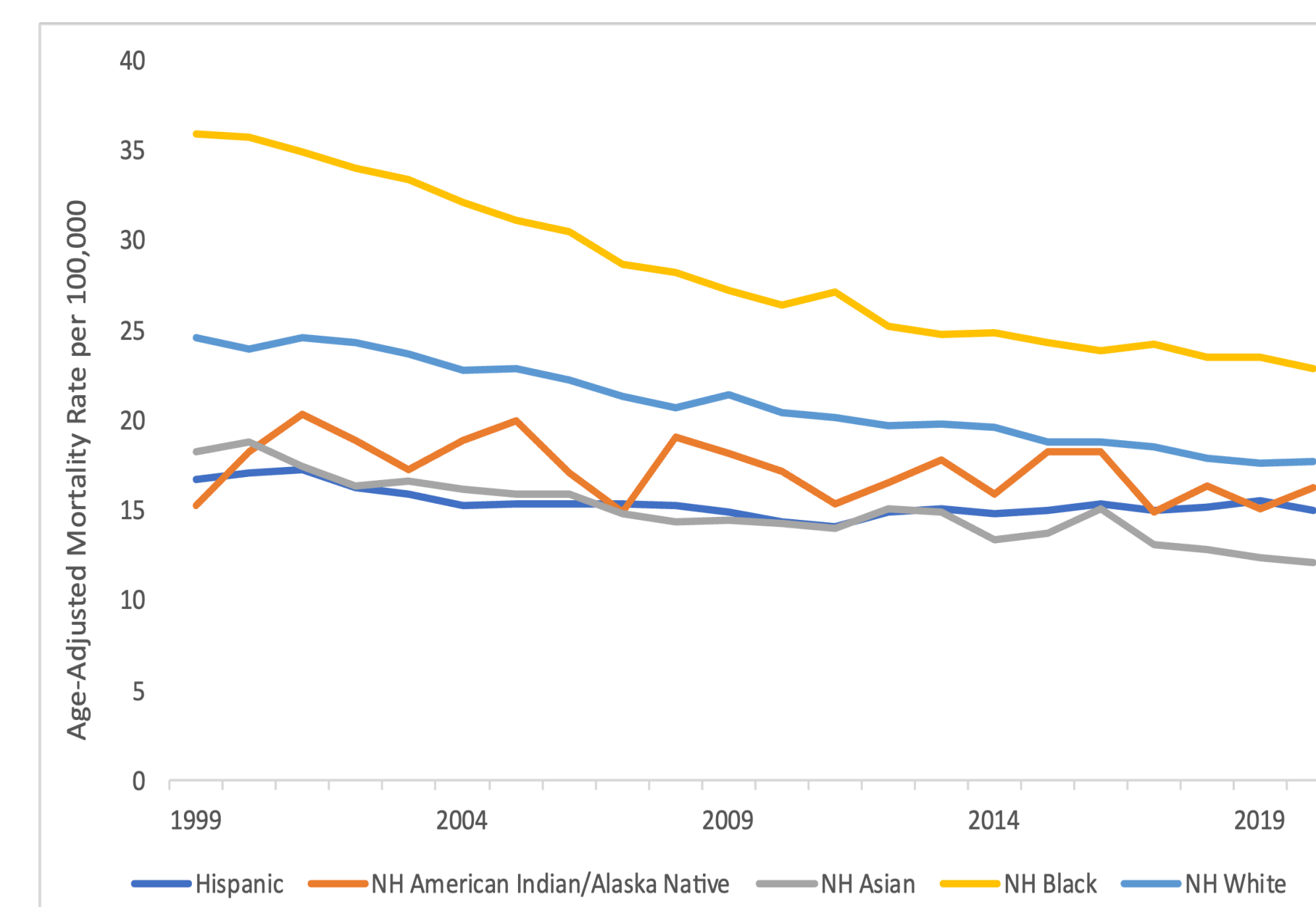


Figure 3. Young Adult Age-Adjusted Cancer-Related Mortality by Race

CONCLUSIONS

- Although overall cancer mortality is decreasing, our findings indicate increased cancer-related mortality in some cancer sites (uterine and colorectal)
- This study also identifies various disparities by both demographic and regional factors related to cancer mortality in young adults
- Future studies should focus on these epidemiologic disparities to develop appropriate screening and treatment strategies

SUMMARY

A better understanding of how sociodemographic factors influence overall cancer mortality in general and within specific subtypes is important for creating awareness around and intervening upon populations that are at higher risk.

REFERENCES

1. Jacobs D, Zhu R, Luo J, et al. Defining Early-Onset Colon and Rectal Cancers. *Front Oncol.* 2018;8:504. doi:10.3389/fonc.2018.00504