

Temporal And Ethnic Disparities in Mortality due to Hematologic Malignancies in the United States: A 25 Year Nationwide Retrospective Analysis

Authors: P.Farooqi¹, H.Alamy², B.Arshad³, M.Mukhtar⁴, B.Nawaz⁵, M.Javid⁶
Affiliations: 1. Desert Regional Medical Center, Palm Springs, California, US 2. Desert Regional Medical Center, Palm Springs, California, US 3. Department of Oncology, Shifa College of Medicine, Islamabad, Pak 4. Department of Oncology, Shifa College of Medicine, Islamabad, Pak 5. Department of General Surgery, King Edward Medical University, Lahore, Pak 6. Department of Medicine, Shifa College of Medicine, Islamabad, Pak



INTRODUCTION

Despite advances in medicine, hematologic malignancies still lead to numerous fatalities in the US. Unequal risk levels appear across communities, distributed unevenly through society. Shifts in patterns emerge gradually; gaps tied to age, ethnicity, and gender remain noticeable. National data on death rates and population-based contrasts are examined in this work, covering the period from 1999 into 2023.

METHOD

From the Centers for Disease Control and Prevention-Wide-ranging Online Data for Epidemiologic Research system, records of deaths linked to cancers of lymphoid and hematopoietic tissue were gathered for people aged 25 or older. Age-adjusted mortality rates (AAMR) per 100,000 population were calculated using the 2000 U.S. standard population.

RESULT

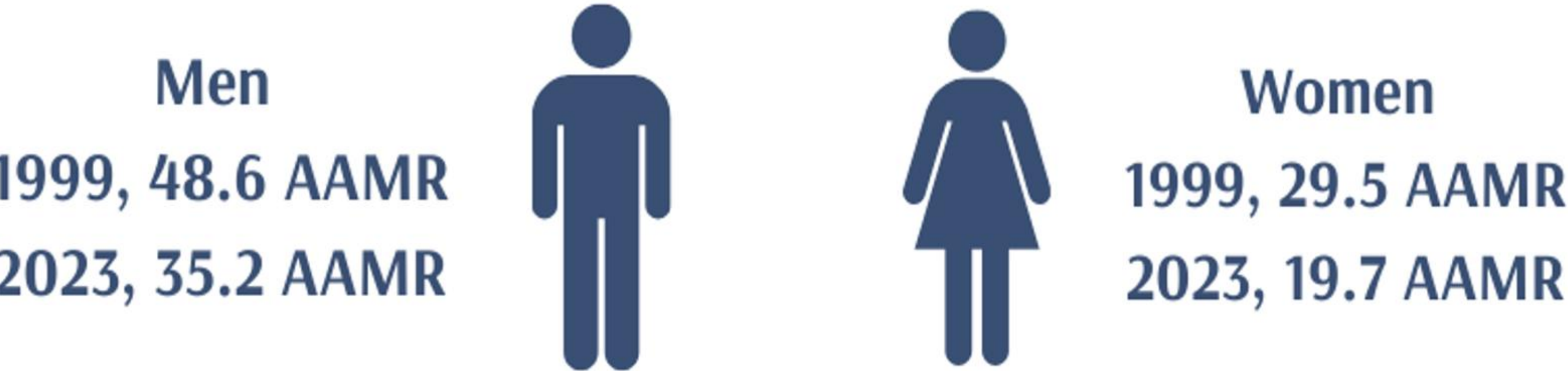
During the study, death counts reached 1,689,156. From 1999 to 2023, the rate fell - from 37.3 to 26.5 per 100,000 - a trend marked by a steady average annual drop of 1.37%. This downward path held true when split by sex, race, ethnicity, city size, and region; yet brief rises surfaced between 2018 and 2021. Higher levels stayed more common in men, elderly age brackets, plus specific states within the Midwest and Appalachia.

CONCLUSION

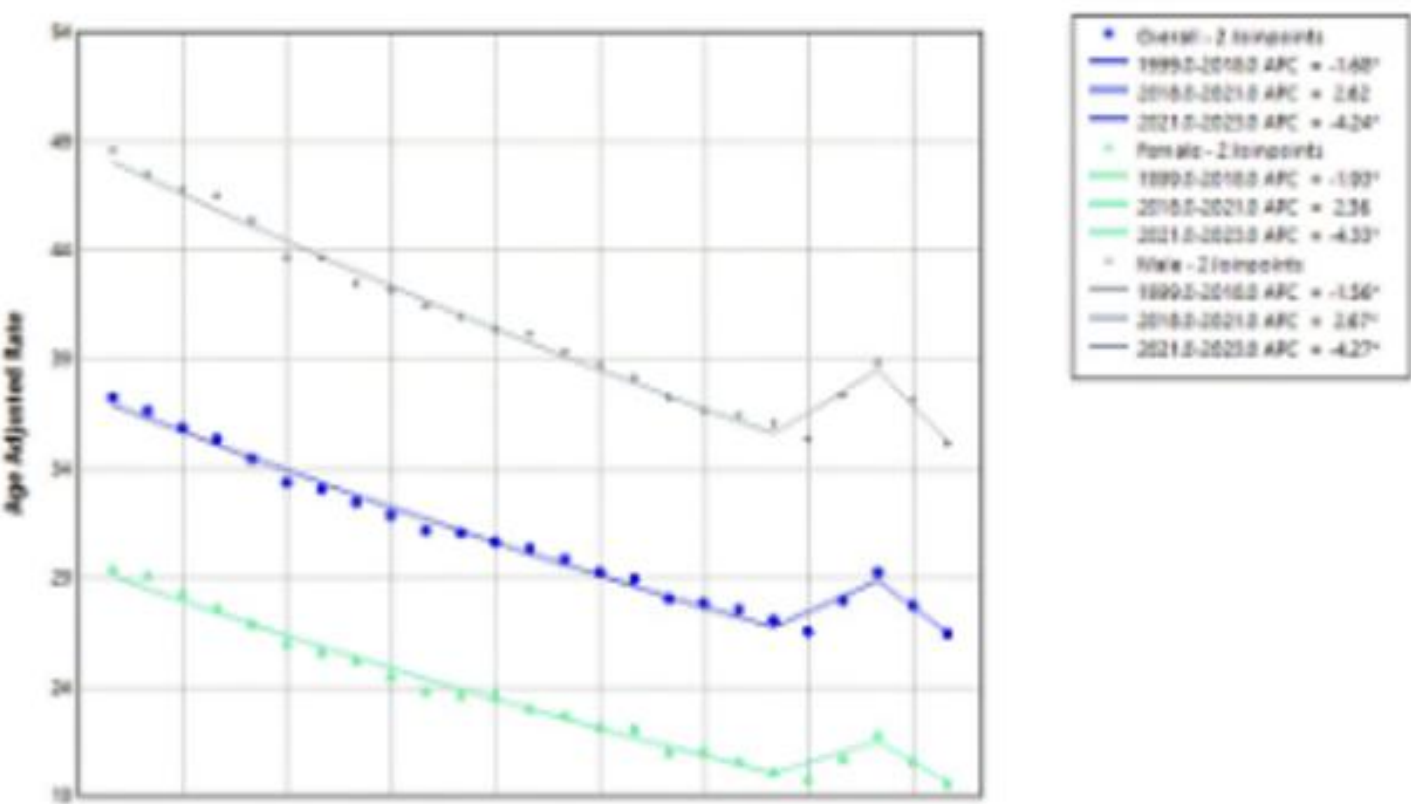
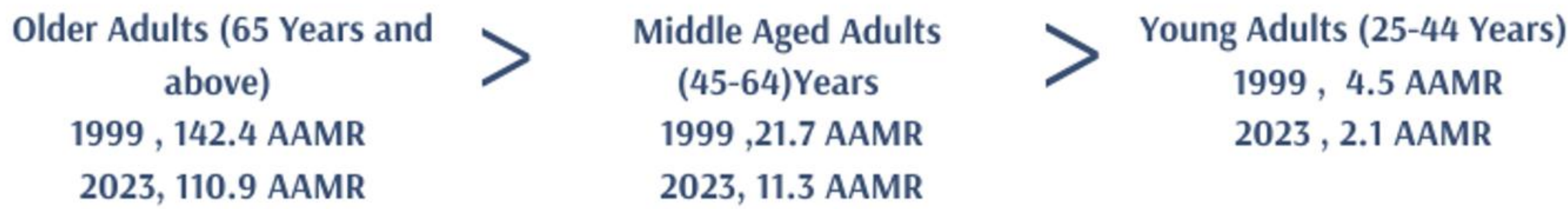
Mortality rates for blood cancers have dropped notably in twenty years; still, differences by population and location persist. Progress depends on focused health efforts alongside fair availability of treatment. Sustained gains require consistent care access for all regions.

GRAPHS & ILLUSTRATIONS

Hematologic Malignancies in the United States Associated Deaths in Adult Patients (Age ≥ 25 Years) between 1999 and 2023 AAMR per 1,000,00

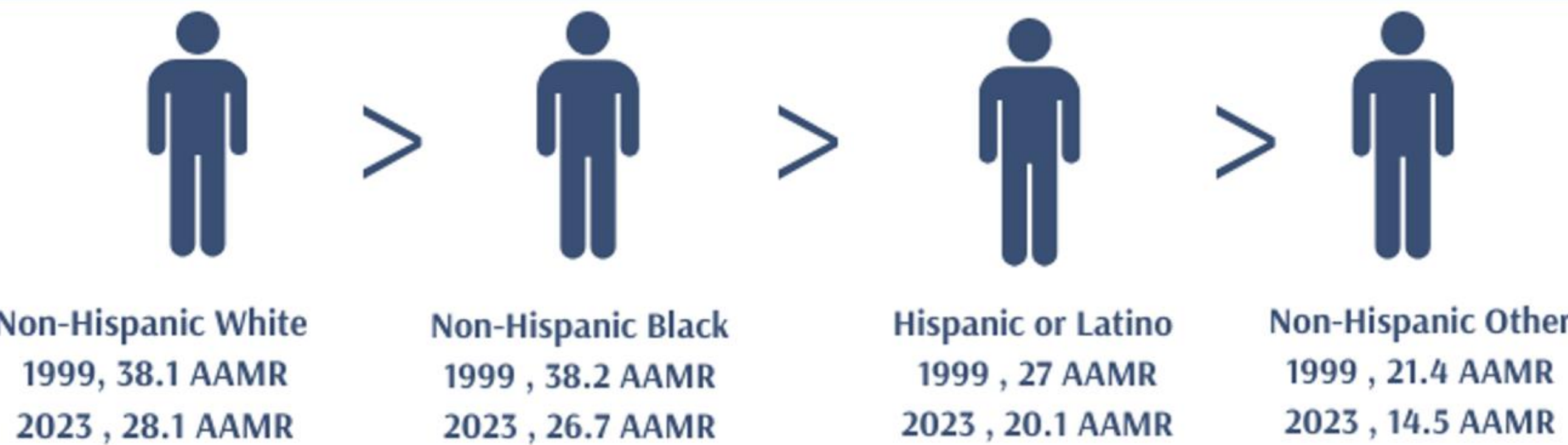


Overall Trends (AAMR per 1,000,00)

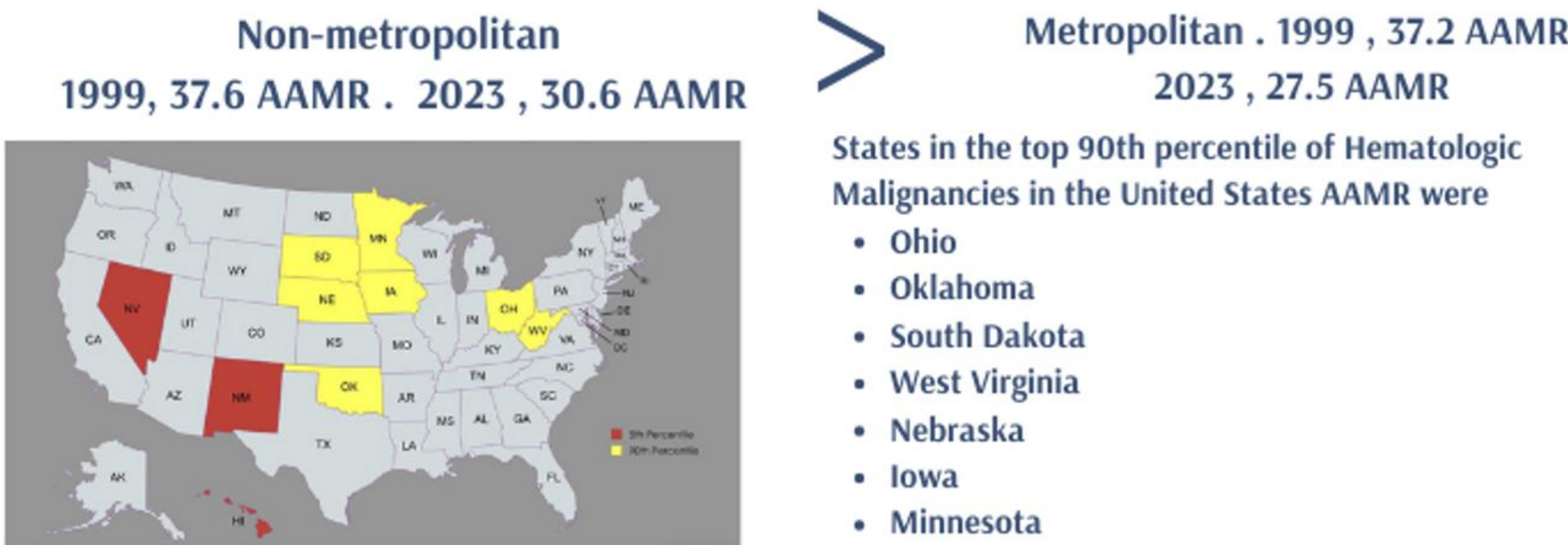


The overall AAMR decreased from 37.3 in 1999 to 26.5 in 2023.

Racial and Ethnic Differences in Mortality per 1,000,00 People Adjusted for Age



Geographical Area 1999 to 2020 (Age-Adjusted Mortality Rate per 1,000,00 People)



Conclusion

From 1999 to 2023, the mortality due to Hematologic Malignancies in the United States decreased initially, but it is on the rise again, with persistent disparities by age, gender, race, and geography highlighting the need for targeted interventions.

AAMR = Age Adjusted Mortality Rate

ACKNOWLEDGEMENTS

We thank the Centers for Disease Control and Prevention for maintaining the WONDER database used in this analysis, and the Internal Medicine Residency Program at Desert Regional Medical Center for supporting this work. No external funding was received; the authors declare no conflicts of interest.

CONTACT INFORMATION

Palwasha Farooqi MD, PGY-2 IM Resident
Palwasha_Farooqi@outlook.com
Desert Regional Medical Centre, Palm Springs, CA

REFERENCES

Centers for Disease Control and Prevention, National Center for Health Statistics. *Underlying Cause of Death 1999–2023 on CDC WONDER Online Database*, released 2024. Data are from the Multiple Cause of Death Files, 1999–2023, as compiled from data provided by the 57 vital statistics jurisdictions through the Vital Statistics Cooperative Program. Available at: <https://wonder.cdc.gov/ucd-icd10.html>