

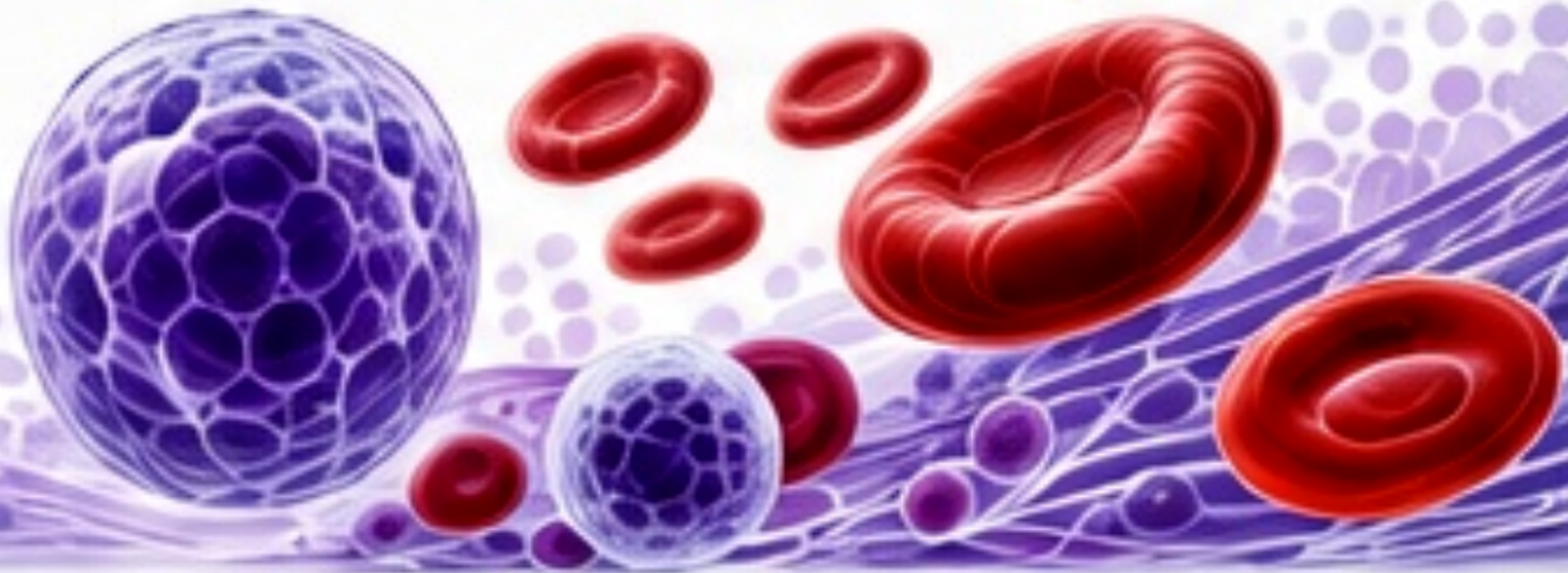
RACIAL DISPARITIES IN ACUTE MYELOID LEUKEMIA MORTALITY IN THE UNITED STATES, 2018-2024:

A NATIONWIDE TREND ANALYSIS ACROSS 15 RACIAL GROUPS

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BACKGROUND

Acute myeloid leukemia (AML) is a highly lethal hematologic malignancy. Despite therapeutic advances, racial disparities in AML mortality remain poorly characterized across all CDC-defined racial groups for 2018-2024. We performed a comprehensive nationwide trend analysis to address this gap.

RESEARCH QUESTION

How did AML mortality trends differ across racial groups in the United States from 2018-2024, and which demographic and geographic subgroups experienced the greatest changes?

DATA HEADLINE (2018-2024)

76,804
Total AML deaths
10,667 in 2018
11,605 in 2024
↑ 8.8% increase

15
Racial groups
(CDC single-race classification)

AAPC
Black Americans
+2.20%*
(95% CI: 0.65-3.77)
p = 0.038
~2X higher than White Americans

AAPC
White Americans
+1.04%*
(95% CI: 0.63-1.46)
p = 0.004

86.5%
White Americans of all AML deaths

8.9%
Black Americans

AML mortality rose in the U.S. from 2018-2024

METHODS: STUDY DESIGN

Data Source
CDC WONDER Multiple Cause of Death (2018-2024)

Population
15 racial groups (Single-race classification)

Stratified Analyses

- Census region
- 2013 NCHS urbanization level
- 10-year age groups
- Sex
- Educational attainment

Outcome
AML mortality (ICD-10: C91.0)

Analysis
Average Annual Percent Change (AAPC) via log-linear regression (p<0.05 significant)

KEY TAKEAWAYS

1
Black Americans experienced a significantly rising AML mortality trend (+2.20% AAPC), ~2X higher than White Americans.

2
Regional disparities are pronounced: Black Americans in the West had the highest increase (+4.97% AAPC).

3
Disproportionate increases were seen among older adults and higher-educated individuals.

MORTALITY TRENDS BY RACE (AAPC %)

Average Annual Percent Change (AAPC), 2018-2024

Vietnamese

+5.31%

Multiracial

+5.51%

Korean

+4.58%

Asian Indian

+4.66%

Other Asian

+4.56%

Japanese

+3.59%

Black Americans

+2.20%*

White Americans

+1.04%*

Chinese

-1.38%

Other Pacific Islander

-3.68%↓

* p < 0.05 (statistically significant)

SIGNIFICANT REGIONAL TRENDS (AAPC %)

WEST

- Black Americans +4.97%*
- Koreans +10.24%*
- White Americans +1.74%*

MIDWEST

- White Americans +1.22%*

NORTHEAST

- No significant racial group trends

SOUTH

- No significant racial group trends

★ * p < 0.05
Regions per U.S. Census Division

TRENDS BY EDUCATIONAL ATTAINMENT (AAPC %)

Black Americans

- Some College +7.83%*
- Doctoral/Professional +10.55%*

White Americans

- Associate Degree +3.34%*
- Bachelor's Degree +3.05%*

* p < 0.05 (statistically significant)

SIGNIFICANT TRENDS BY AGE (AAPC %)

45-54 YEARS

- White Americans -3.32%*

55-64 YEARS

- White Americans -2.20%*

65-74 YEARS

- Black Americans +4.04%*

75-84 YEARS

- Black Americans +5.26%*
- Asian Indians +16.10%*
- White Americans +3.84%*

↑ Significant Increase (p<0.05) ↓ Significant Decrease (p<0.05)

TRENDS BY SEX (AAPC %)

Females

- White Americans +1.10%↑
- Multiracial +5.65%↑

Males

- No racial group showed statistically significant trends

* p < 0.05 (statistically significant)

DISPARITY CONCENTRATION

Where inequalities in AML mortality are most concentrated

RACE
Black Americans highest AAPC

AGE
Older adults (65+) most affected

REGION
Western U.S. highest increases

EDUCATION
Higher education strata affected

CONCLUSIONS

AML mortality rose significantly in the U.S. from 2018-2024, with Black Americans experiencing disproportionate acceleration—particularly among older adults, Western-region residents, and higher-educated individuals.

Emerging upward trends across several Asian subgroups (Vietnamese, Korean, Asian Indian, Other Asian, Japanese) warrant close surveillance.

Equitable access to novel AML therapies and racially inclusive clinical trials are urgently needed to address these disparities.

FUTURE DIRECTIONS

Estimate site-specific AML mortality VLW to identify highest-yield prevention targets.

Partition losses into mortality-driven disability-driven components.

Model region-specific AML control investment scenarios.

Develop targeted interventions for high-risk subgroups (older adults, Black Americans, West).

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METHODS NOTE: AAPC = Average Annual Percent Change; CI = Confidence Interval; AML = Acute Myeloid Leukemia; ICD-10: C91.0; NCHS = National Center for Health Statistics; VLW = Value of Lost Welfare; DALYs = Disability-Adjusted Life Years.

SOURCES: CDC WONDER Multiple Cause of Death, 2018-2024; U.S. Census Bureau; NCHS Urbanization 2013; Authors' original analysis.

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