Sepsis Mortality Among Patients with Myeloid Leukemia in the United States, 1999-2023: Insights, Trends, and Disparities

IN ASSOCIATION WITH: soho society of hematologic oncology

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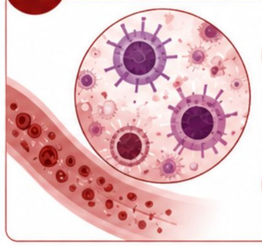
FAWZI RESEARCH NETWORK

INTRODUCTION



Sepsis is a **life-threatening** condition that frequently complicates major diseases like **myeloid leukemia.**

Both conditions can lead to significant **morbidity** and **mortality.**

Despite its clinical significance, trends in **sepsis** among **myeloid leukemia patients** in the U.S. remain understudied.

THIS STUDY AIMS TO

Describe the national trends, temporal patterns, and **disparities** in **sepsis mortality** among adults with myeloid leukemia in the U.S. from 1999 to 2023.

METHODS

01 DATA SOURCE
Nationwide mortality records were obtained from the **CDC-WONDER** database.

02 POPULATION
U.S. adults aged **≥25 years.**

03 CASE DEFINITION
Myeloid leukemia: ICD-10 code **C92**
Sepsis: ICD-10 codes **A40, A41** and above

04 MEASURES
Age-adjusted mortality rates (**AAMRs**) were calculated per 100,000 population for key demographic and geographic variables.

05 TREND ANALYSIS
Joinpoint regression analysis was used to estimate Annual Percent Changes (**APCs**) and Average Annual Percent Changes (**AAPCs**).

STUDY PERIOD: 1999 – 2023

PRIMARY OUTCOME: Sepsis mortality among adults with myeloid luekemia.

RESULTS

Total deaths (1999–2023)
35,075

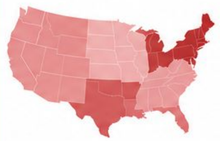
Overall Age-Adjusted Mortality Rate (**AAMR**) per 100,000 population
0.62

AAPC 0.31
(95% CI 0.09 to 0.53)
p = 0.007

AAMR (PER 100,000) AND ANNUAL PERCENT CHANGE (APC) BY SUBGROUP

SUBGROUP		AAMR (per 100,000)	AAPC	95% CI	p-value
Sex					
	Male	**0.82**	0.17	-0.05 to 0.40	0.113
	Female	**0.48**	0.33	-0.01 to 0.67	0.056
Race / Ethnicity					
	Non-Hispanic Black	**0.68**	–	–	–
	Non-Hispanic White	**0.64**	–	–	–
Residence					
	Metropolitan	**0.64**	–	–	–
	Non-metropolitan	**0.60**	–	–	–
Age Group					
	≥ 65 years	**1.86**	–	–	–

BY REGION (AAMR PER 100,000)



Region	Trend
Northeast	Declined ↓
Midwest	Stable —
South	Stable —
West	Increased ↑

OTHER KEY FINDINGS

- The vast majority of deaths occurred in **inpatient medical facilities (88.80%).**
- Sepsis mortality among myeloid leukemia patients showed a **modest but statistically significant increase** over time.
- Higher mortality observed in **Non-Hispanic Blacks** compared with other racial groups.
- Slightly higher mortality in **metropolitan areas** compared to non-metropolitan areas.

Key Takeaway: Trends in sepsis mortality among myeloid leukemia patients increased modestly from 1999 to 2023, with notable disparities by race and residence.

CONCLUSION

Sepsis mortality among myeloid leukemia patients in the U.S. **increased modestly** from 1999 to 2023.

Higher mortality trends were observed in **urban (metropolitan)** areas and among **Non-Hispanic Blacks.**

Declines in mortality were observed in the **Northeast region.**

The vast majority of deaths occurred in **inpatient medical facilities** (88.80%).