



# The Mysterious Connection of Cancer and Disseminated Intravascular Coagulation: Decoding Trends and Disparities in the United States

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## INTRODUCTION

- Disseminated Intravascular Coagulation (DIC) is a life-threatening complication of cancer, marked by uncontrolled blood clotting.
- It occurs in 7% of consecutive cancer patients, leading to increased morbidity and mortality.
- Understanding the epidemiology of DIC in cancer patients is crucial for targeted prevention and intervention strategies.

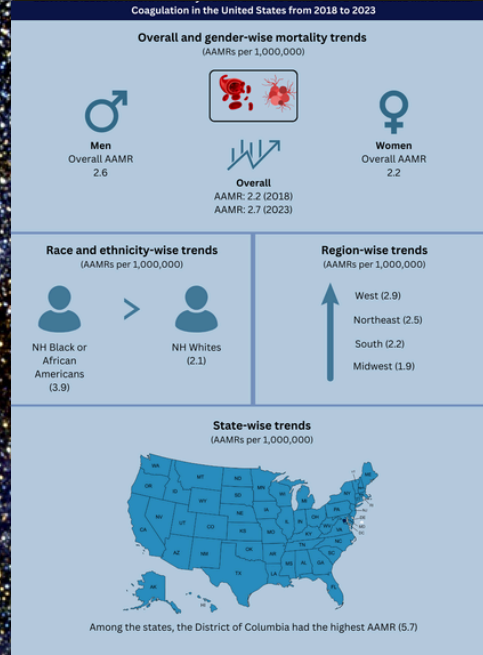
## PURPOSE

- To analyze trends in mortality due to disseminated intravascular coagulation (DIC) in cancer patients in the United States.
- To identify demographic and geographic disparities associated with DIC-related deaths.
- To highlight at-risk populations and suggest targeted interventions for reducing mortality.

## METHODS

- Study Design: Adhering to STROBES criteria, a retrospective analysis was conducted.
- Data Source: CDC-WONDER (2018–2023) mortality statistics for DIC in cancer patients.
- Statistical Analysis: Age-Adjusted Mortality Rates (AAMRs) per 1,000,000 individuals.
- Annual Percentage Change (APC) and Average Annual Percentage Change (AAPC).
- Data stratified by age, gender, urbanization, race, census region, and states.
- Joinpoint regression model used for trend analysis.

## RESULTS



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- Racial Disparities:** Highest AAMR: Non-Hispanic (NH) Black or African Americans (3.9).  
APC: 0.35% (95% CI: -0.12 to 0.723)
- Geographical Disparities:** Highest AAMR: West (2.9).  
APC: 4.93% (95% CI: 1.49 to 8.85).
- State-wise Disparities:** Highest AAMR: District of Columbia (5.7).
- Place of Death:** Majority of deaths occurred in inpatient medical facilities.

## DISCUSSION

- Future research should explore:
- Underlying causes of disparities.
  - Improved early detection and prevention
  - Interventions to reduce inpatient mortality among high-risk groups.

## RESULTS

- DIC and cancer accounted for 3,256 fatalities in the US from 2018–2023.
- AAMR increased from 2.2 (2018) to 2.7 (2023), with an APC of 4.27% (95% CI: 1.66 to 7.24).
- Gender Disparities**
- Males had a higher AAMR (2.6) than females (2.2).
- APC: Males 3.17%, Females 5.65%.
- Age-Related Mortality**
- Mortality peaked in the 65+ age group. APC: 1.90% (95% CI: 0.31 to 3.54).

## CONCLUSIONS

- DIC-related mortality is increasing, disproportionately affecting males, NH Black individuals, older adults, and residents in the Western US.
- Early detection, better management, and public health interventions can help reduce mortality rates in vulnerable populations.

## REFERENCES

Available upon request.