DISPARITIES AND TRENDS IN CERVICAL CANCER AND HEART FAILURE MORTALITY IN US ADULTS (1999-2020)

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Introduction

Cervical cancer remains a major cause of female mortality, while heart failure adds significant comorbidity. Their coexistence poses challenges due to shared risk factors and treatment effects. Understanding these links is vital for improving outcomes.

Aim

To assess national trends in cervical cancer mortality among patients with heart failure and identify key demographic and regional disparities.

Methods

The study utilized CDC WONDER data (1999–2020) to assess female deaths with ICD-10 codes C53 (cervical cancer) and I50 (heart failure). Mortality rates were compared across race and urbanization levels. Trends were analyzed using Joinpoint Regression (v5.3.0, NCI) to estimate Annual Percent Change (APC) with 95% confidence intervals.

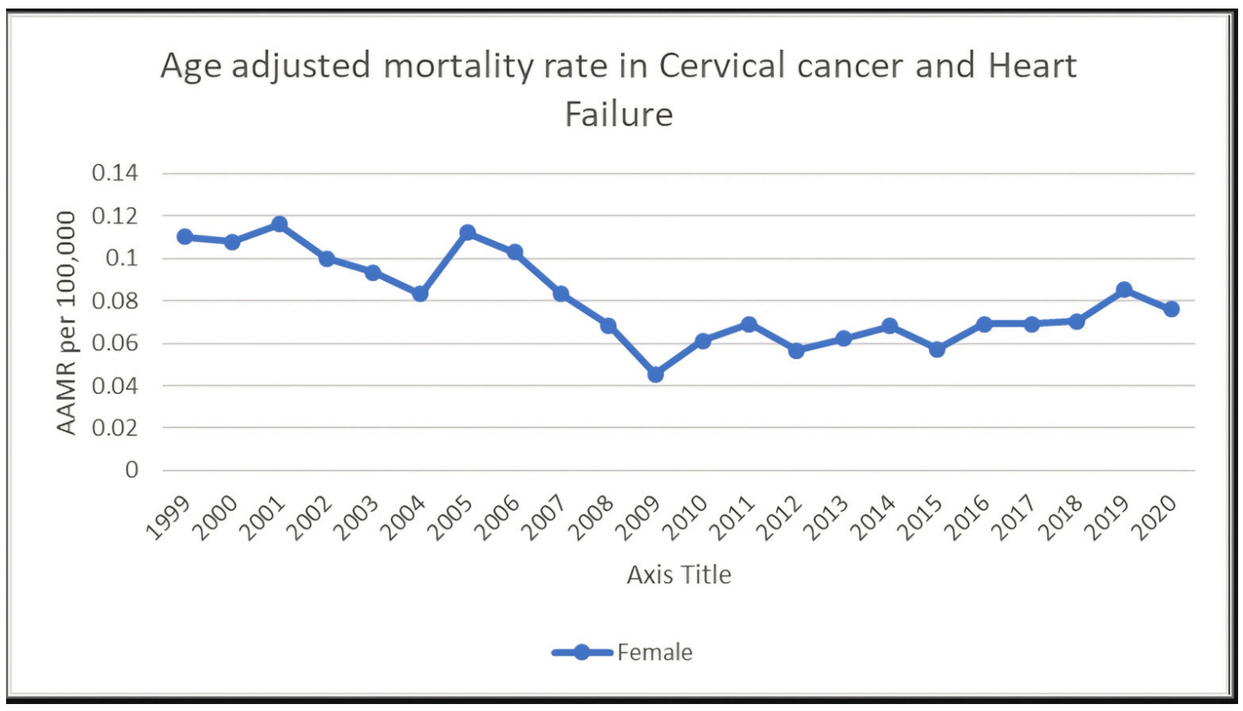
Results

Overall trend:
A total of 5,534 deaths were identified from 1999–2020. The age-adjusted mortality rate (AAMR) showed an overall decline (AAPC –1.28%), reflecting improved cervical cancer prevention and control over the two decades.

Gender Trends:
Among females, AAMR decreased from 0.11 to 0.076 per 100,000. The trend showed an initial decline (1999–2009) followed by a rise after 2009 (APC +3.27%), possibly linked to reduced screening and vaccination coverage.

Race Trends:
The White population showed a steady decline in AAMR from 0.0396 to 0.0277 per 100,000 (APC –2.61%), indicating the continued impact of early detection and HPV vaccination programs.

Census Region Trends:
Women in large metropolitan areas experienced the greatest improvement, with AAMR falling from 0.067 to 0.024 per 100,000 (APC –4.13%), reflecting better healthcare access and preventive measures in urban settings.



Conclusion

Cervical cancer mortality declined from 1999–2020, reflecting benefits of screening and HPV vaccination. However, recent increases and subgroup disparities highlight the need for targeted prevention and equitable healthcare access.