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The Cancer Control Challenge:
Better Understanding It to Better Face It

SEX DIFFERENCES IN THE INCIDENCE AND MORTALITY OF STOMACH CANCER IN PARÁ: AN ANALYSIS FROM 2020 TO 2024

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Introduction: Gastric cancer remains a significant public health challenge in Brazil, particularly in the Northern region, where barriers to early diagnosis and treatment persist. The disease disproportionately affects men over 50 and is often identified at advanced stages, complicating prospects for cure. Understanding regional incidence and mortality patterns is crucial to inform effective public health strategies. **Objectives:** This study aims to analyze the incidence and mortality of stomach cancer in Pará, with emphasis on sex differences, from 2020 to 2024. Additionally, it seeks to identify temporal trends using basic statistical methods, providing insights for cancer control policies. **Methods:** This is a descriptive, retrospective, and quantitative study based on secondary data from DATASUS. Data were analyzed in their raw form, without normalization or age-based thresholds, and included all reported ages. The study focused on three indicators: hospital admissions, deaths, and mortality rate (%), stratified by sex and year (2020–2024). Statistical analyses were performed using SPSS version 25.0, applying linear regression to analyze temporal trends, and Chi-square tests to assess proportional differences between sexes. All variables were modeled as categorical or continuous where appropriate, and due to data limitations, potential confounders such as comorbidities or socioeconomic status were not controlled for. Statistical significance was established at $p < 0.05$. **Results:** Between 2020 and 2024, 3,488 hospital admissions for stomach cancer were recorded in Pará, of which 67.3% were in male patients. There were 848 deaths, also predominantly among men (66.9%). The average mortality rate was 24.31%, being slightly higher among women (24.52%) compared to men (24.21%). Hospital admissions showed an increasing linear trend ($p = 0.012$), with the highest annual increase between 2020 and 2021, and an overall increase of 47.5% from 2020 (580 admissions) to 2024 (800 admissions). Mortality rates peaked in 2022 (27%) but showed a drop to 23% in 2024.

The differences in hospital admissions between sexes were statistically significant ($p < 0.01$), and men experienced a more steady increase in admissions over time. **Conclusion:** This study aimed to analyze the incidence and mortality of stomach cancer in Pará, with emphasis on sex differences, from 2020 to 2024. The results demonstrate a significant and statistically validated increase in both hospital admissions and deaths from stomach cancer over this period, with a clear predominance among men. Persistently high mortality rates suggest ongoing challenges with late diagnosis and limited access to effective treatment. These findings highlight the urgent need for public health interventions—including early detection efforts, expanded screening, improved access to oncology care, and educational campaigns on risk factors—to mitigate the burden of stomach cancer in Northern Brazil and improve population health outcomes.

Keywords: Stomach cancer; Epidemiology; Incidence; Mortality; Public health.