

<https://doi.org/10.29289/25945394V36S11169>

1169 – Epidemiological profile and spatial analysis of breast cancer mortality in Minas Gerais, Brazil (2001–2021)

Fernanda Ritt de Souza¹, Leonardo Moreira Dias¹, Maria Fernanda Noel Dias¹, Antonio Mello Souza e Oliveira¹, Lara Mensato Döring¹, Jan Pawel Pachnicki¹

¹Faculdade Evangélica Mackenzie do Paraná – Curitiba (PR), Brazil.

Introduction: Breast cancer mortality in Brazil exhibits heterogeneous patterns across its vast territory. Within this context, the state of Minas Gerais is noteworthy for its high mortality indices. Between 2001 and 2021, the state recorded over 26,000 deaths, with rates showing a progressive upward trend. Understanding the epidemiological and spatial dynamics of these victims is essential for tailoring public health policies as well as enhancing breast cancer prevention and women's health promotion. This study aims to analyze the spatial distribution and epidemiological profile related to breast cancer mortality in the municipalities of Minas Gerais from 2001 to 2021.

Methods: This epidemiological study focused on spatial analysis using mortality data from the Mortality Information System (SIM/DATASUS) and population data from IBGE. Crude and standardized mortality rates were calculated for each municipality. Variables included sex, age, race, marital status, education, and location. Temporal analysis was performed using Joinpoint and spatial analysis via GeoDa.

Results: 26,320 deaths were recorded during the study period. The predominant profile consisted of women, aged 50–59 (24.9%), white (52%), married (39%), and with 1–3 years of schooling (19%). Spatial clusters of high mortality were identified in regions such as Triângulo Mineiro, Zona da Mata, and the Belo Horizonte Metropolitan area. The highest mortality rates were found in Passos (22.61/100 k), Perdões (19.30/100 k), and Juiz de Fora (19.20/100 k). Average mortality was 12.26/100 k, with an average annual increase of 3.88%.

Conclusion: The findings confirm a significant rise in breast cancer mortality over the two analyzed decades. By identifying high-risk clusters and the specific demographic profile of the victims, this study provides a critical roadmap for resource allocation and the implementation of targeted screening strategies in the most affected regions of Minas Gerais.

Ethics: Public data.

Keywords: spatio-temporal analysis; breast neoplasms; mortality registries; Epidemiology.