

EPIDEMIOLOGICAL AND TEMPORAL ANALYSIS OF MORTALITY FROM MALIGNANT STOMACH NEOPLASMS IN BRAZIL FROM 2010 TO 2021

Jefferson Pereira Corrêa¹; Lucas Silva Cabeça¹; Bruna Giovanna Bastos Aguiar¹; Maria Eduarda Amaral Fidalgo¹

¹Department Of Medicine, Federal University of Pará (UFPA), Belém, Pará, Brazil

Introduction: Stomach cancer, or gastric cancer, is a malignant neoplasm characterized by the abnormal proliferation of cells in the stomach. It is considered a multifactorial disease, with genetic predisposition, demographic characteristics, unbalanced diets, and infection by *Helicobacter pylori* being significant risk factors for its development. Gastric cancer is a major public health concern and ranks among the top five primary locations of malignant neoplasms in terms of incidence and mortality worldwide, with the majority of cases occurring in developing countries. In Brazil, the regional distribution of this disease reveals notable disparities. **Objectives:** To analyze the temporal and epidemiological trends of mortality due to malignant neoplasm of the stomach in Brazil between 2010 and 2021. **Methods:** This is a retrospective, descriptive, and quantitative study based on data provided by the Mortality Information System (SIM), available on the DATASUS platform. The analyzed information refers to deaths caused by malignant neoplasm of the stomach in Brazil from January 2010 to December 2021. The variables analyzed were age group, year, and region. Data were organized in Excel tables, and graphs were generated using RStudio software version 4.1.1 with the “forecast” package. **Results:** A total of 169,864 deaths from malignant neoplasm of the stomach were recorded in Brazil between 2010 and 2021. The highest prevalence occurred in 2019, with 15,111 deaths (8.9%), while the lowest was in 2011, with 13,328 deaths (7.84%). Regarding spatial distribution, the Southeast region had the highest concentration, with 78,259 deaths (46.07%), followed by the Northeast with 38,988 deaths (23%) and the South with 29,367 deaths (18%). Concerning age groups, the most affected was 70–79 years, with 44,620 deaths (26.26%), followed by 60–69 years (43,088; 25.36%), ≥80 years (33,180; 19.53%), and 50–59 years (28,982; 17.06%). Time series analysis demonstrated an upward trend until early 2020, with growth between 2011 and 2014, stability from 2015 to 2016, a decline in 2017, and an exponential increase until 2020. From that year onward, a sharp decline in mortality was observed, followed by a renewed increase beginning in 2021. **Conclusion:** The epidemiological and temporal analysis revealed an overall increasing trend in mortality from malignant stomach neoplasms in Brazil. In addition to significant underreporting between 2020 and 2021—likely influenced by the COVID-19 pandemic—other factors may have contributed to the subsequent rise

In deaths, suggesting a multifactorial delayed impact. These findings highlight the urgent need for public health policies focused on prevention, early diagnosis, and improved access to care, particularly among the most affected populations, to reduce disease burden and improve outcomes.

Keywords: Gastric cancer; epidemiology; mortality rate.