Oncology 2025
The Cancer Control Challenge:
Better Understanding It to Better Face It

REGIONAL INEQUALITIES IN CERVICAL CANCER MORTALITY IN BRAZIL (2010-2023)

Filipe Ferreira Quaresma[1], Evillyn Costa Fonseca[1], Luana Costa Dias[1], Kauan Afonso Lima[1], Izabela Fuentes[1].

[1]Faculdade de Ciências Médicas Afya (AFYA)

Introduction: Cervical cancer (ICD-10: C53), though highly preventable, continues to pose a serious public health challenge in Brazil. As the third most common cancer among Brazilian women, with approximately 16,000 new cases annually (INCA 2023). **Objectives:** This study analyzes mortality trends (2010-2023) among regions, age groups, and race/ethnicity to inform policy. **Methods:** Ecological study using secondary data from Brazil's Mortality Information System (SIM/DATASUS) for women aged 20-70+. **Results:** The analysis of cervical cancer mortality in Brazil (2010-2023) revealed 84,794 recorded deaths, with striking regional disparities: the Southeast accounted for 28,052 deaths (33.1%), followed by the Northeast with 26,555 (31.3%), while the South, North, and Central-West regions represented 14.5%, 13.2%, and 7.9% of cases respectively. Notably, the Northeast's mortality burden is disproportionately severe when considering population distribution. Age-specific patterns showed peak mortality among 50-59 year-olds (18,454 deaths, 21.8%) and women over 70 (19,756 deaths, 23.3%), contrasted with significantly lower rates in younger groups (2,415 deaths in 20-29 year-olds, 2.8%). Racial disparities were particularly evident, with mixed-race women comprising 46.5% of deaths (39,389 cases) and Black women 8.1% (6,861 cases), collectively representing 54.6% of deaths. White women accounted for 34,942 deaths (41.2%), while Asian/Indigenous women represented 1% (831 cases), and 3.3% of records (2,771 deaths) lacked racial classification. These findings suggest three key patterns: the Northeast's elevated mortality likely reflects healthcare access barriers, the low mortality among women under 30 demonstrates HPV vaccine effectiveness (introduced 2014), while the high mortality in women over 50 reveals persistent gaps in screening implementation. The racial mortality disparities underscore socioeconomic vulnerabilities, though unclassified cases (3.3%) limit more comprehensive equity assessments. **Conclusion:** This study's documentation of persistent disparities in cervical cancer mortality offers critical insights for oncology practice and cancer control efforts in Brazil. The patterns observed—particularly the disproportionate burden among older women, mixed-race/Black populations, and Northeastern residents—reflect systemic challenges that extend beyond biological factors to reveal gaps in healthcare delivery. Closing these gaps demands integrating

oncology and public health interventions that consider Brazil's complex regional and demographic landscape.

Keywords: Cervical cancer; Mortality; Health information systems.