

## EPIDEMIOLOGICAL TRENDS OF CERVICAL CANCER IN BRAZIL AND PARÁ: A COMPARATIVE ANALYSIS BETWEEN 2019 AND 2023

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**Introduction:** The management of cervical cancer is well established and effective when initiated early; however, in the state of Pará, mortality from this neoplasm remains high, highlighting significant regional disparities and delays in diagnosis. **Objectives:** To analyze and compare cervical cancer treatment data in Pará and Brazil from 2019 to 2023, focusing on regional disparities in access, care, and outcomes. **Methods:** A descriptive epidemiological study was conducted using secondary data from the Oncology Observatory, including chemotherapy and radiotherapy APACs (Authorization of Outpatient Procedures) with ICD-10 code C53 from SIA/SUS (Datusus) and Hospital Cancer Registries (INCA). The 2019–2023 period was selected to capture pre-pandemic and post-pandemic trends. **Results:** From 2019 to 2023, Pará lagged behind the national average in timely cervical cancer treatment. In chemotherapy, cases starting after 60 days increased from 70.1% (2019) to 87.6% (2022), with slight improvement in 2023 (82.2%). Treatments initiated within 30 days decreased from 10.2% (2019) to 4.9% (2022), then rose to 7.0% (2023). Nationally, the proportion of patients starting chemotherapy after 60 days ranged from 71.8% to 74.3%, while treatments within 30 days remained between 10.5% and 12.2%. In radiotherapy, Pará recorded delays exceeding 90% annually, with a median wait time of 234 days in 2021, compared to 132 days nationally. Treatment within the municipality of residence was less frequent in Pará (29.7%–38.8%) than in Brazil overall (37.9%–40.4%), indicating decentralization challenges. The ethnic profile in Pará showed an increase in mixed-race patients from 61.7% (2019) to 99.3% (2023), while Black patients decreased from 36.3% to 0% after 2021. White patients ranged from 1.5% to 8.0%, showing a decline, and Asian patients appeared only in 2021 (2.2%). In Brazil, ethnic distribution remained stable, with mixed-race (48.7%–52.3%), white (37.1%–40.2%), Black (5.1%–6.0%), and Asian (4.4%–5.9%) populations. In Pará, chemotherapy from 2019 to 2023 predominantly involved women aged 40–59, with a shift from the 50–59 to the 40–49 age group from 2020 onward, alongside increases among those aged 30–39 and 60–69. Radiotherapy followed a similar pattern, initially peaking in the 50–59 and 60–69 age groups in 2019 and later concentrating among women aged 40–49. Nationally, age distribution was more balanced, with a higher proportion of elderly women receiving treatment. Disease staging in Pará initially showed predominance of stage II, but stages

III and IV increased from 2021, accounting for over 56% of chemotherapy cases in 2023, suggesting late diagnosis; nationally, stage III was most frequent. Mortality rates in Pará were higher than the national average, particularly among mixed-race women aged 40–59, whereas nationally, deaths were more ethnically diverse and more common after age 50. **Conclusion:** The findings highlight major oncology challenges in Pará, including delayed treatment initiation, advanced-stage diagnoses, limited access to care, and racial disparities, all of which contribute to poorer outcomes and higher mortality, underscoring the need for targeted improvements in healthcare delivery and public policy.

**Keywords:** Uterine cervical neoplasms; Therapeutics; Health equity.