

INCIDENCE AND EPIDEMIOLOGICAL PROFILE OF PROSTATE CANCER IN BRAZILIAN REGIONS BETWEEN 2021 AND 2025: ANALYSIS BY REGION, AGE GROUP, AND THERAPEUTIC MANAGEMENT

Flávio de Oliveira Costa Filho¹, Isabela de Castro Frota Lima², Diego Simeone¹, Anderson Vinícius Alves de Moraes¹, Pedro Henrique de Melo del Castillo¹, Danilo Soares Santos¹.

¹Faculdade de Ciências Médicas (AFYA), Bragança

²Universidade do Estado do Pará (UEPA)

Introduction: Prostate cancer is the second most common type of cancer in men worldwide, surpassed only by lung cancer. The risk of prostate cancer is related to age, ethnicity, family history, PSA level, and findings on digital rectal examination. The main therapeutic approaches are surgical procedures (prostatectomies), radiotherapy, and hormone therapies, which can be applied alone or in combination, in addition to active surveillance. The choice of treatment type will depend on the stage of the disease and the risk of metastasis. **Objectives:** This study aims to analyze the incidence of prostate cancer in Brazilian regions between 2021 and 2025, as well as the epidemiological profile of this disease. **Methods:** This is a retrospective, observational, and descriptive study, quantitative in nature, based on secondary data extracted from DATASUS. Prostate cancer cases between the years 2021 and 2025 were analyzed, considering the following variables: region of residence, age group, and therapeutic management. The data were organized in spreadsheets using Microsoft Excel software. **Results:** A total of 162,899 cases of prostate cancer were recorded during the study period. The region with the highest incidence was the Southeast (0.19), followed by the South (0.17) and Northeast (0.14) regions; the Central-West (0.09) and North (0.07) regions had the lowest incidences. Regarding the age group, a proportional increase in cases was observed with advancing age, with 76% of cases occurring between 60 and 79 years old, peaking in diagnoses between 65 and 69 years old (22.39%). Regarding therapeutic management, underreporting was identified in 25.72% of cases, which lacked information on this variable. Despite this, it was found that the most used treatment was chemotherapy (46.42%), followed by surgery (16.19%) and radiotherapy (11.28%). **Conclusion:** The incidence of prostate cancer in Brazil shows significant regional heterogeneity, possibly influenced by unequal access to health services and diagnostic methods. Regarding the age group, it became evident that the risk increases progressively with age, with the subgroup between 65 and 69 years old being at the highest risk. Nevertheless, the 50 to 60 age range is crucial for early detection, justifying specific screening strategies. Furthermore, data on therapeutic management suggest underreporting at the national level, which hinders obtaining a reliable sample of the Brazilian reality. Moreover,

DATASUS data do not include therapeutic forms such as hormone blockade and active surveillance, which may lead to an incomplete analysis of this variable. Despite these limitations, it is evident that treatment forms vary according to the patient's age and disease stage, reinforcing the need for individualization and adequate access to therapy. These findings highlight the importance of public policies that reduce regional inequalities in access to diagnosis and treatment of prostate cancer in Brazil.

Keywords: Prostate cancer; epidemiology; therapeutic management.