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

ANALYSIS OF PROSTATE CANCER INCIDENCE AND PROSTATE SPECIFIC ANTIGEN TESTING IN THE NORTH AND NORTHEAST BETWEEN 2015 AND 2024

Ana Caroline Santa Rosa Malcher[1], João Guilherme Juarez Peres[2], Felipe Ewerton Gonçalves da Silva[3], Sabine Goulart de Andrade[3], João Vitor dos Santos Benjamin[3], Felipe Capela do Carmo[3]

[1]Centro Universitário do Estado do Pará (CESUPA);
[2]Universidade Federal do Pará (UFPA);
[3]Universidade Estadual do Pará (UEPA).

Introduction: Prostate cancer is a malignant neoplasm that exclusively affects men and is mainly found in the elderly. Despite its generally slow growth, the absence of symptoms in the early stages makes diagnosis difficult and contributes to late treatment, increasing morbidity and mortality rates. In addition, limited adherence to screening procedures, such as rectal examination and Prostate Specific Antigen (PSA) dosage, also hinders the early detection recommended for men aged 45 and over with a family history, or 50 and over for those with no family history, thus compromising the prognosis. **Objectives:** To analyze the incidence of prostate cancer and its screening using the PSA test in the North and Northeast regions of Brazil between 2015 and 2024. **Methods:** This is a cross-sectional study, collecting data from the North and Northeast between 2015 and 2024 through the Departamento de Informática do Sistema Único de Saúde (DATASUS), analyzing the outpatient production of prostate-specific antigen dosage carried out concomitantly with the incidence of prostate cancer. **Results:** During the analyzed time period, the Northern region had an approximate ratio of 58 PSA dosage procedures carried out for every 100 males (4,828,814 procedures for 8,251,147 individuals), a higher ratio than the Northeastern region, which had a ratio of 45 to 100 (11,777,940 tests carried out on a population of 26,310,306 men). The opposite was observed with regard to the incidence of malignant prostate neoplasia, both in absolute and relative numbers, with higher levels in the Northeast (84,695 cases, representing 0.321% of the male population) compared to the North (12,571 diagnoses, representing 0.152% of the male population). **Conclusion:** The analysis showed significant regional disparities regarding the performance of the featured screening test and the incidence of prostate cancer in the North and Northeast regions of Brazil between 2015 and 2024. The Northern region had a higher proportion of PSA dosages in relation to its population, which may be related to more effective screening strategies or greater adherence by

the local population to preventive examinations. In contrast, the Northeast region, even with a larger population, had lower screening coverage and a higher incidence of malignant prostate neoplasms, suggesting a possible later diagnosis and consequent worsening of cases. These findings reinforce the need to intensify public policies aimed at increasing access and adherence to preventive examinations, especially in areas with lower coverage. Investments in infrastructure, professional training, educational actions and culturally appropriate awareness campaigns are essential to promote early detection, reduce mortality and ensure greater equity in cancer care between the different regions of the country.

Keywords: Prostatic Neoplasms; Prostate-Specific Antigen; Delayed Diagnosis.