

## TEMPORAL ANALYSIS OF CONIZATION REALIZATIONS IN BRAZIL FROM 2014 TO 2024: REGIONAL TRENDS AND IMPLICATIONS FOR CERVICAL CANCER CONTROL

Ana Raquel Gouveia Vasconcelos<sup>1</sup>, Kamila da Silva Teles Gonçalves<sup>1</sup>, Luiza Nogueira Pinheiro<sup>1</sup>, Mychaell Klynderlly de Lima Farias<sup>1</sup>, Maria Luiza Cavalcante de Oliveira<sup>1</sup>

<sup>1</sup> Universidade Federal do Pará - UFPA

**Introduction:** Conization is a surgical method of removing a cone shaped portion of the cervix for the diagnosis of cases of microinvasive disease and for the treatment of cervical intraepithelial neoplasia (CIN). The technique is used to confirm a diagnosis of a lesion when colposcopy is not sufficient to visualize the changes. Its main objective is to remove abnormal cells that can develop into cervical cancer, thus preventing the development of the disease. The procedure is generally safe and preserves fertility in many cases, contributing to the patient's reproductive health and quality of life. Therefore, it is essential to emphasize conization as a key strategy for the diagnosis and treatment of precursor lesions, especially in regions with higher rates of cervical cancer. **Objectives:** The study aims to investigate how the conization rate has evolved over the decade in Brazilian regions. **Methods:** A descriptive study executed with secondary data from DATASUS, covering the period from 2014 to 2024. The conizations made were investigated, distributed by year of service and region, and applied in the RStudio software. The rates were calculated per 100 000 inhabitants and the temporal trends were processed using the Prais-Winsten regression model. **Results:** The temporal analysis revealed an increasing trend in most Brazilian regions. The Northeast, Southeast and South regions showed a significant rise in the performance of the procedure, with conization rates of 0.102, 0.087 and 0.436 per 100,000 inhabitants, respectively. These findings are statistically significant, as indicated by a *p-value* < 0.05. Brazil overall also demonstrates a positive trend of 0.138 (*p* = 0.0006). However, the

North (with an estimated growth rate of 0.00148 and  $p = 0.867$ ) and Central-West (with an upward trend of 0.0258 and  $p = 0.765$ ) regions remain stable, with non-significant figures. In this context, the study highlights regional disparities in access to and performance of conization. **Conclusion:** Temporal analysis reveals an upward trend in cervical conization procedures over the past decade in specific regions of Brazil. Regional disparities indicate unequal access to healthcare services, suggesting possible underdiagnosis, delays in the treatment of precursor lesions, and failures in screening programs. In this context, it is necessary to strengthen prevention, screening, and treatment strategies, with the expansion of specialized services and a reassessment of oncology planning in these regions, focusing on reducing inequalities and the impact of cervical cancer on the Brazilian population.

**Keywords:** Conization; Cancer; Trend.