

ECOLOGICAL STUDY ON MALIGNANT NEOPLASIA OF THE ESOPHAGUS IN THE BRAZILIAN AMAZON REGION FROM 2014 TO 2024

Caroline Duarte de Almeida¹; Haroldo Gomes Ferreira Filho¹

¹Universidade Federal do Pará (UFPA)

Introduction: Esophageal cancer is a significant public health issue. According to the National Cancer Institute (INCA), it is the eighth most prevalent cancer worldwide. In Brazil, an estimated 10,990 new cases are expected to be diagnosed annually through 2025. Most cases are concentrated in the Southeast and South regions of the country; however, there is a scarcity of epidemiological studies in the Amazon region. In this context, this study aims to clarify the epidemiology of this disease in that Brazilian region.

Objectives: To describe the cases of malignant neoplasms of the esophagus in the Brazilian Amazon region over the past decade. **Methods:** This is a retrospective ecological time-series study. Data were collected through the Department of Informatics of the Brazilian Unified Health System (DATASUS), specifically from the Oncology Panel. The variables analyzed were diagnosis (ICD-10: C15 – malignant neoplasm of the esophagus), number of cases, year of notification (2014 to 2024), age group, gender, states comprising the Amazon region (Acre, Amapá, Amazonas, Maranhão, Mato Grosso, Pará, Rondônia, Roraima, Tocantins), lesion stage, and type of therapy. The results obtained were organized in a spreadsheet and analyzed using descriptive statistics. As these are secondary data, approval from the Research Ethics Committee was not required, according to CNS Resolution No. 510/2016. **Results:** During the analyzed period, 3,031 cases of malignant esophageal neoplasms were recorded. In 2014, there were 171 cases (5.6%), and in 2024 there were 320 cases (10.5%), with the highest number recorded in 2023, totaling 375 cases (12.3%) in the region. The age groups with the highest prevalence were 55–59 years, with 532 cases (17.5%), 60–64 years with 518 cases (17%), and 65–69 years with 501 cases (16.5%). There were 637 cases (21%) in females and 2,394 (79%) in males. Regarding the states within the Amazon region, Mato Grosso accounted for the largest proportion of cases, with 875 cases (28.8%), followed by Maranhão with 579 cases (19%) and Pará with 463 cases (15.2%). As for tumor staging (T), 59 lesions (2%) were classified as T0, 69 as T1 (2.2%), 604 as T2 (20%), and 1,724 (56.8%) as T3 and T4. Approximately 20% of the cases did not have staging information recorded. Regarding treatment, 44.6% of cases received chemotherapy, 31% radiotherapy, 5.2% both treatments, and 4.5% surgical management. **Conclusion:** The study showed a significant increase in esophageal cancer cases in the Amazon region over the last decade. The highest incidence was observed in males and in individuals between the fifth and seventh decades of life. Most

cases were diagnosed at advanced stages (T3 and T4), and chemotherapy and radiotherapy were the most commonly used therapeutic modalities, indicating predominance of treatments for later disease stages. These findings reinforce the need for prevention, screening, early diagnosis, and expanded access to specialized oncology services. The data presented can contribute to strengthening health strategies in the Brazilian Amazon region.

Keywords: Epidemiology; esophageal neoplasms; health surveillance; amazon region