

**TITLE: EPIDEMIOLOGICAL PROFILE OF MORTALITY FROM OTHER TYPES OF NON-HODGKIN LYMPHOMA IN NORTHERN BRAZIL BETWEEN 2019 AND 2023.**

**Authors:** Danilo Pereira Pinheiro<sup>1\*</sup>, Bruna Katrine Trindade Costa<sup>1</sup>, Maria Eduarda Sofia Vieira França<sup>1</sup>; Sérgio Beltrão de Andrade Lima<sup>2</sup>; Helem Ferreira Ribeiro<sup>3</sup>, Danielle Cristinne Azevedo Feio<sup>4</sup>; Symara Rodrigues Antunes<sup>4</sup>

<sup>1</sup> Centro Universitário Metropolitano da Amazônia (UNIFAMAZ)

<sup>2</sup> Universidade Federal do Pará (UFPA)

<sup>3</sup> Universidade do Estado do Pará (UEPA)

<sup>4</sup> Centro Universitário Metropolitano da Amazônia (UNIFAMAZ)

**Introduction:** Non-Hodgkin lymphomas (NHL) comprise a heterogeneous group of hematological malignancies, primarily originating from B-cells. Among its subtypes, diffuse lymphomas (ICD-10: C83), cutaneous and peripheral T-cell lymphomas (ICD-10: C84), and other and unspecified types of NHL (ICD-10: C85) stand out. These cancers exhibit wide clinical and prognostic variability, demanding ongoing epidemiological surveillance. In Brazil, according to data from the National Cancer Institute (INCA, 2023), NHLs are among the ten most frequent cancer types in both men and women. Given the geographical, socioeconomic, and infrastructural particularities of the Northern Region, epidemiological analyses are essential to guide public policies and local healthcare interventions. **Objectives:** To analyze mortality data related to non-Hodgkin lymphomas in Northern Brazil between 2019 and 2023, focusing on temporal distribution, sex, age group, and geographic location. **Methodology:** This is a descriptive, retrospective epidemiological study based on data from the Mortality Information System (SIM), accessed through the TABNET/DATASUS platform. The analysis included deaths recorded from 2019 to 2023 with underlying causes classified under ICD-10 codes C83, C84, and C85. Variables considered were year of death, sex, age group, and state of residence. **Results:** A total of 831 deaths from non-Hodgkin lymphomas were recorded in Northern Brazil between 2019 and 2023, corresponding to approximately 1.7 deaths per 100,000 inhabitants per year. The state of Pará reported the highest number of deaths (n = 386; 46.44%), followed by Amazonas (n = 153; 18.40%) and Rondônia (n = 95; 11.43%). Most deaths occurred among males (59.6%) and individuals aged over 60 years (43.8%). Among NHL subtypes, C85 (other and unspecified types) was the most prevalent (n = 547; 65.8%), followed by C83 (diffuse NHL) with 231 deaths (27.8%), and C84 (cutaneous and peripheral T-cell lymphomas) with 53 deaths (6.4%). A fluctuating mortality trend was observed, with a slight decline in 2022 (147 deaths) and a peak in 2023 (183 deaths), the highest in the study period. Although states such as Roraima (36 deaths), Amapá (38 deaths), and Acre (36 deaths) reported lower absolute numbers, their proportional mortality rates suggest a significant

impact, especially considering their smaller populations. **Conclusion:** The study reveals persistently high mortality rates from NHL in Northern Brazil, with a concentration of cases in the states of Pará and Amazonas, predominance among elderly males, and a higher incidence of the C85 subtype. The heterogeneity across states indicates marked regional disparities in access to diagnosis and oncological treatment. Temporal fluctuations and geographic discrepancies underscore the need for region-specific strategies to strengthen and modernize cancer care networks, with an emphasis on early diagnosis, access to advanced therapies such as CAR-T cell treatment, and continuous support for epidemiological surveillance. Further investigations are essential to understand the barriers faced by the Northern Brazilian population in accessing cancer care and to propose more equitable healthcare solutions.

**Keywords:** Non-Hodgkin lymphoma; Epidemiology; Mortality.