

MORTALITY BY LYMPHOID AND HEMATOPOIETIC MALIGNANT NEOPLASMS IN THE INDIGENOUS POPULATION OF PARÁ, BRAZIL, BETWEEN 2013 – 2023

Fabio Kawan Monteiro Soares¹, Ayla Joana Regina dos Santos Alves¹, Symara Rodrigues Antunes², Helem Ferreira Ribeiro^{1,3}, Arthur Fernandes Farias¹, Gabriely Borsoi Leite¹, Lorrana Giovanna dos Santos Wassally¹, Maria Eduarda Bezerra Negreiros¹, Rafaela Vieira Souza⁴, Giovanna Karla Sousa Pereira⁴

¹Faculty of Medicine, Center for Biological and Health Sciences, State University of Pará (UEPA), Campus VIII, Marabá, Pará, Brazil

²Metropolitan University Center of the Amazon (UNIFAMAZ), Belém, Pará, Brazil

³Faculty member, Department of Morphology and Functional Sciences, Center for Biological and Health Sciences, State University of Pará (UEPA), Campus VIII, Marabá, Pará, Brazil

⁴Faculty of Medical Sciences of Pará (ITPAC), Marabá, Pará, Brazil

Introduction: Leukemia and other lymphoid and hematopoietic malignancies exhibit high prevalence and mortality among indigenous populations in the Amazon, reflecting diagnostic and therapeutic challenges in isolated, resource-limited regions. Regional studies report age-standardized incidence and mortality ratios exceeding those of non-indigenous groups, suggesting genetic, socioeconomic, and geographic influences on disease dynamics. **Objectives:** To analyze the epidemiological profile of mortality from lymphoid, hematopoietic, and related malignant neoplasms in the indigenous population of Pará State between 2013 and 2023. **Methods:** A retrospective, cross-sectional study using publicly available data from the Brazilian Unified Health System's Hospital Information System (SIH/SUS). We analyzed deaths among indigenous individuals in Pará from 2013 to 2023 attributed to lymphoid and hematopoietic malignancies. Variables included year of death, health macro-region, municipality, age group, ICD-10 neoplasm category, and indigenous race/ethnicity. **Results:** From 2013 to 2023, 16 deaths were recorded, with no entries for 2015. Mortality peaked in 2019 and 2021 (three deaths each), while 2014, 2016, and 2022 each had two deaths; all other years had one. Macro-regions I (Belém) and III (Santarém) accounted for 14 of 16 deaths (87.5%), and macro-region IV (Marabá) for the remaining two. By municipality, Belém reported four deaths and Oriximiná three; Afuá, Itaituba, Itupiranga, Jacareacanga, Mocajuba, Novo Progresso, Santa Bárbara do Pará, Santarém, and Tucuruí each reported one. Notably, 68.8% of deaths (11/16) occurred in individuals under 20 years, most frequently in the 10–14 age group (four deaths). **Conclusion:** Mortality from lymphoid and hematopoietic malignancies in Pará's indigenous populations is predominantly among youth and concentrated in the Belém and Santarém regions. These findings underscore the need to

strengthen epidemiological surveillance, improve early diagnostic and treatment access in remote areas, and tailor prevention strategies to the socio-cultural context of these communities. Limitations: small case count, potential underreporting, and lack of detailed clinical data.

Keywords: Hematologic neoplasms; leukemia; mortality; epidemiology; health of indigenous peoples.