

EPIDEMIOLOGICAL ANALYSIS OF OCCUPATIONAL CANCER CASES RELATED TO BENZENE: A LOOK AT THE REALITY OF BRAZILIANS

Hugo Coimbra de Oliveira¹, Julle Kele Pereira Gonçalves¹, Elaine Rodrigues Pinheiro², Stellanny Cilene Rodrigues Castro¹, Giovanna Coelho Sampaio¹, Jaynara da Silva Esteves¹, João Lucas Moita de Sousa³, Isadora Helena Freitas da Silva², Fabiana Costa Cardoso¹, Luísa Margareth Carneiro da Silva¹.

¹Federal University of Pará (UFPA)

²Metropolitan University Center of the Amazon (UNIFAMAZ)

³State University of Pará (UEPA)

Introduction: The World Health Organization has recognized benzene as a carcinogen since 1982. Approximately 7 million Brazilian workers are exposed to benzene, and the difficulties in reducing exposure contribute to cases of occupational cancer. Among the professions most exposed to its harmful effects are workers in the chemical industry and the oil sector. **Objectives:** To analyze the epidemiological profile of cancers related to occupational exposure to benzene in Brazil between 2020 and 2024. **Methods:** This is an ecological and descriptive time series study, which analyzed the relationship between work-related cancer and exposure to benzene by reporting region, in the period 2020 and 2024. The study used secondary data extracted from the Department of Informatics of the Unified Health System (DATASUS), integrating epidemiological information and environmental and occupational exposure records. The variables used in the study included the regional distribution of notifications, the sex of the individuals (male and female), the age group covering all ages, with occupational exposure to benzene and the notified cases of malignant neoplasms associated with this chemical agent, with emphasis on leukemias and lymphomas. **Results:** Between 2020 and 2024, 3,635 cases of occupational cancer were recorded, 251 of which were related to benzene exposure. The South had the highest number of cases (119) and the North the lowest (1). Males were the most affected (216 cases), followed by workers over the age of 50. In addition, white workers (170) and brown workers (62) were the most affected. Those most affected were those with less schooling and longer exposure (>1 year). In addition, 119 of the cases also reported exposure to other carcinogens. Self-employed workers were the most affected (100 cases). In no case was a Communication of Accident at Work (CAT) issued. Looking at the ICD of notification, the most common forms of cancer were other malignant neoplasms of the skin (44 cases), cancer of the bronchi and lungs and, lastly, myeloid leukemias. **Conclusions:** The data shows the importance of occupational cancer associated with exposure to benzene in Brazil, especially among older workers with low levels of education and longer exposure times. In addition, underreporting, reflected in

the absence of CATs, compromises the recognition of work-related illnesses and the enforcement of labor rights in order to implement more effective measures to protect these workers.

Keywords: Occupational cancer; benzene derivatives; Brazil.