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## **Non-Hodgkin's Lymphoma in a Tertiary Pediatric Hematology-Oncology department in Kuwait: A Retrospective Analysis**

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## Non-Hodgkin's Lymphoma in a Tertiary Pediatric Hematology-Oncology department in Kuwait: A Retrospective Analysis

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**Introduction:** Pediatric non-Hodgkin's lymphoma (NHL) is the third most common malignancy among children. It comprises a heterogenous group of malignancies with many subtypes. Recent advances in understanding the biology of the disease and global collaborative efforts in stratifying and managing childhood NHL have led to improvements in survival. This study aimed to evaluate the clinical outcomes, survival rates of pediatric NHL patients at a single center in Kuwait.

**Methodology:** A retrospective cohort study was conducted using medical records of pediatric NHL patients aged less than 16 years diagnosed between 2010-2023 at the NBK Children's Hospital in Kuwait. Demographic, clinical, and treatment data were analyzed, overall survival (OS), event free survival (EFS) were calculated using the Kaplan-Meier method.

**Results:** A total of 67 pediatric NHL patients were analyzed. The median age at diagnosis was 6 years with a male to female ratio of 2:1. Of the 67 patients analyzed, 53% were Kuwaiti citizens and non-Kuwaitis accounted for 47 %. B-cell lymphoma accounted for 80% of cases, the most common subtypes were Burkitt's Lymphoma, and Diffuse large B-cell Lymphoma.

T-cell lymphoma accounted for 15 %, and anaplastic large cell lymphoma (ALCL) 4 % of patients. The 5 year OS and EFS were 82% and 80% respectively. We found that T-cell NHL, life threatening presentations and treatment related toxicities were associated with inferior outcomes.

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**Conclusion:** The overall outcomes of pediatric NHL in Kuwait are comparable to other developing countries but still inferior to developed countries. The main challenges were relapses in T-cell NHL and toxic deaths. Efforts to improve supportive care are essential to optimize treatment outcomes.