

# CLINICAL PRESENTATIONS OF ACUTE LEUKEMIA

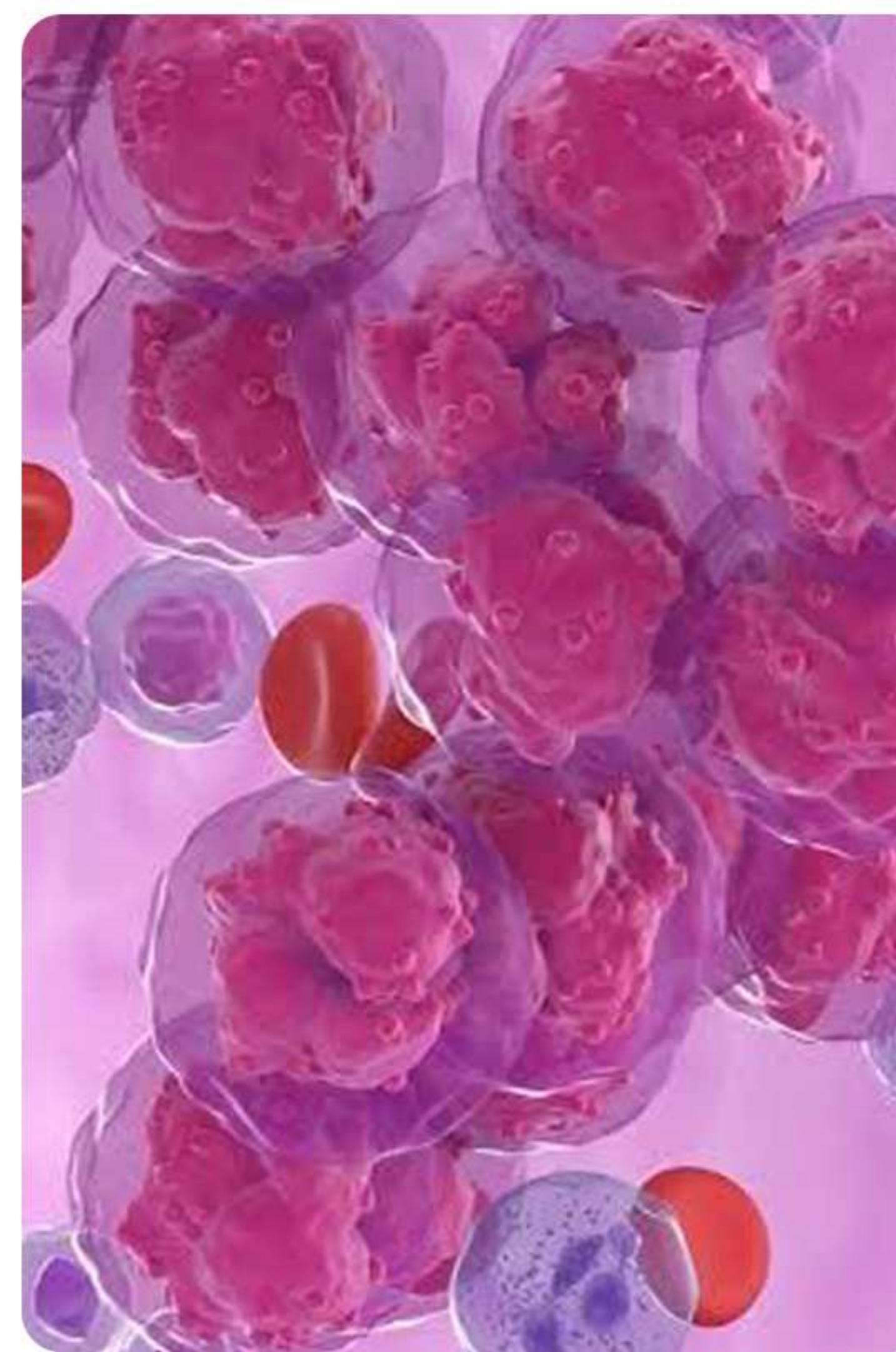
## Understanding disease types, diagnosis and clinical significance

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### 1 INTRODUCTION :

- Acute leukemias (ALs) are among the most common cancers with high mortality worldwide.
- They result from clonal proliferation of hematopoietic precursors.
- Classified as Acute Lymphoblastic Leukemia (ALL) and Acute Myeloid Leukemia (AML).
- ALL is the most frequent malignancy in children, while AML predominates in adults.
- In developing countries, bone marrow aspiration and biopsy remain key diagnostic tools due to limited access to cytogenetic and flow cytometry studies.
- Early diagnosis and treatment are crucial for better outcomes.
- Accurate subtype diagnosis is essential to guide therapy choices and predict prognosis



### 2 OBJECTIVES :

- To document the age and gender distribution of various types of leukemia
- To determine the main presenting complaints and clinical findings of acute leukemia
- To explore the association between clinical features and leukemia types (if any)

### 3 METHODOLOGY:

### 4 RESULTS :

Out of a total 618 bone marrow aspirations performed during the study , 92(15%) revealed that patients were suffering from different forms of acute leukemias.



#### STUDY DESIGN

Retrospective, Descriptive study



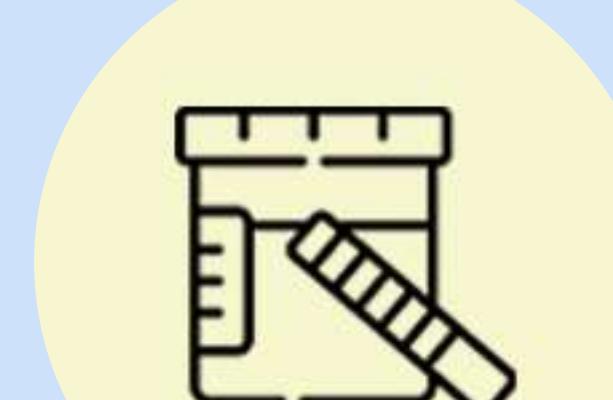
#### STUDY SETTING

Hayatabad Medical Complex , Peshawar



#### STUDY DURATION

January 2024 to May 2025

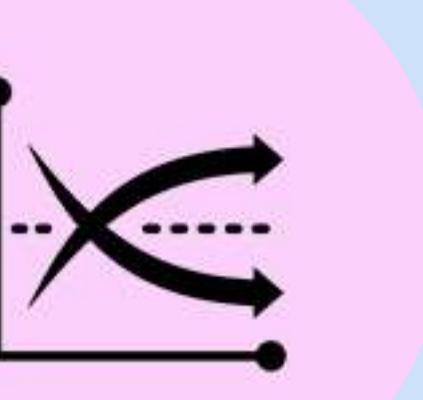


#### SAMPLE SIZE

618 bone marrow biopsies were reviewed



**STATISTICAL ANALYSIS:**  
• using SPSS data was recorded and analysed  
• Fisher's Exact test was applied to test the association.  
• P value of  $<0.05$ (95%) confidence level was considered as criteria of significance.



**VARIABLES**  
Variables were presented as mean , standard deviation and categorical variables were assessed as frequencies



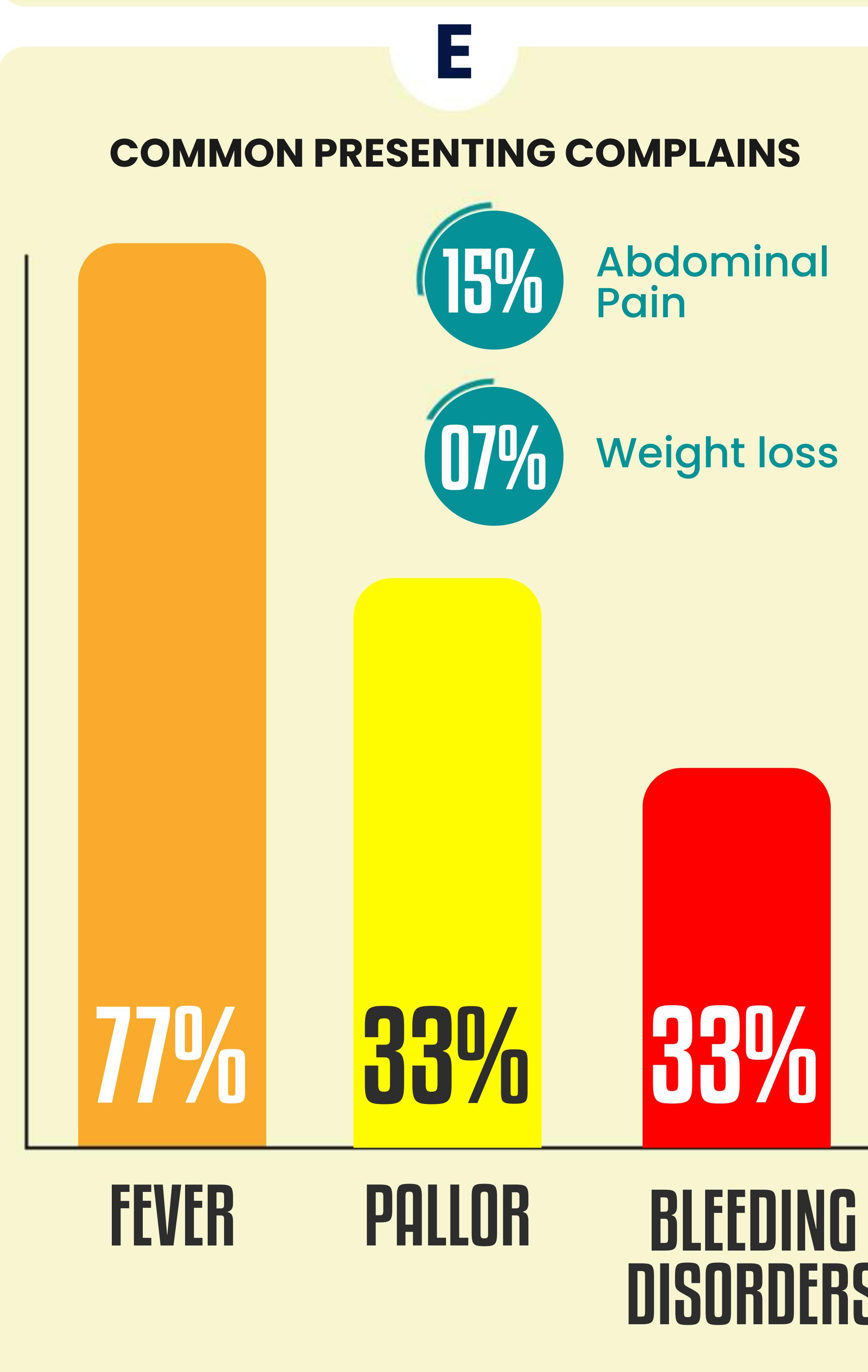
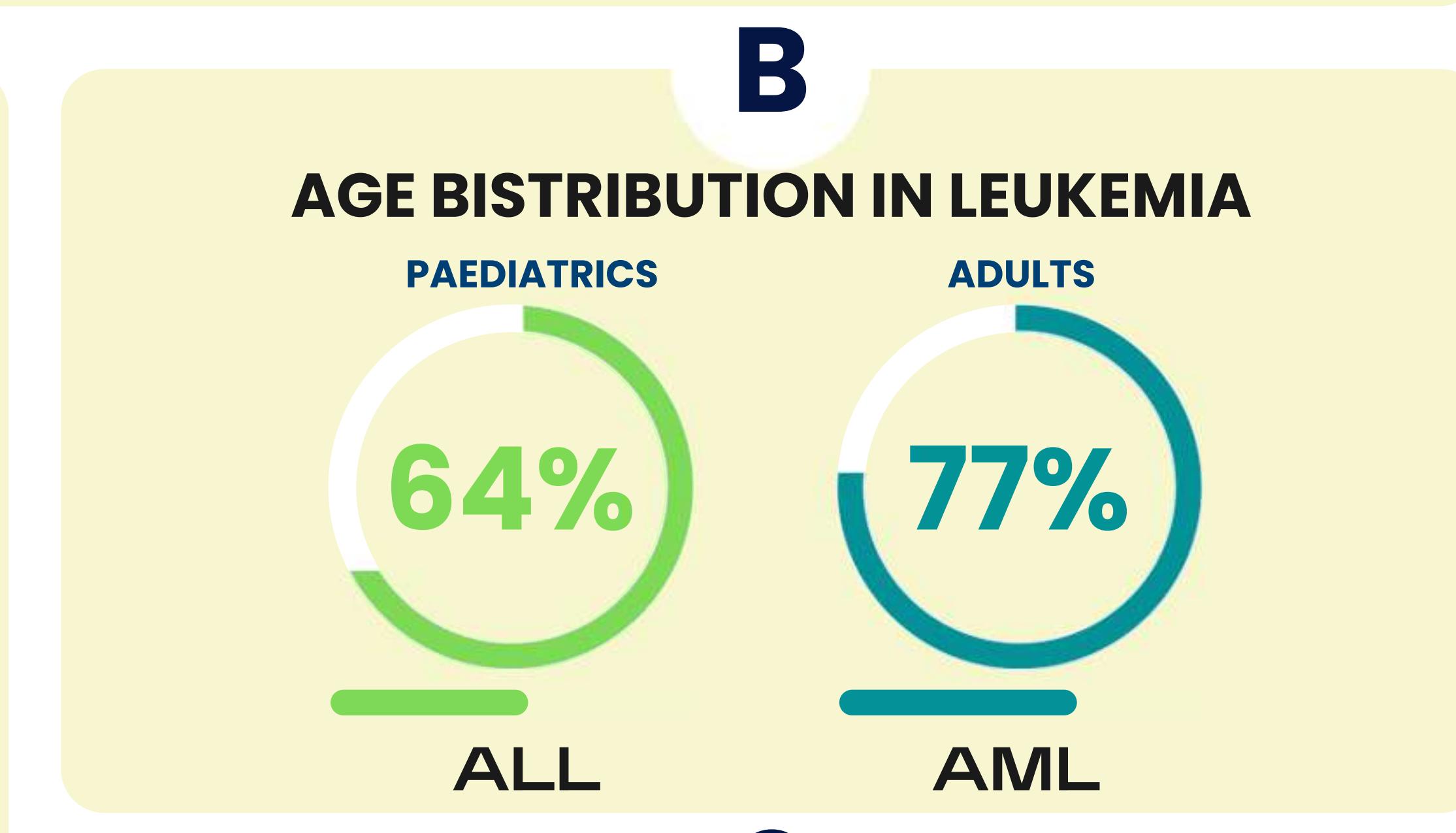
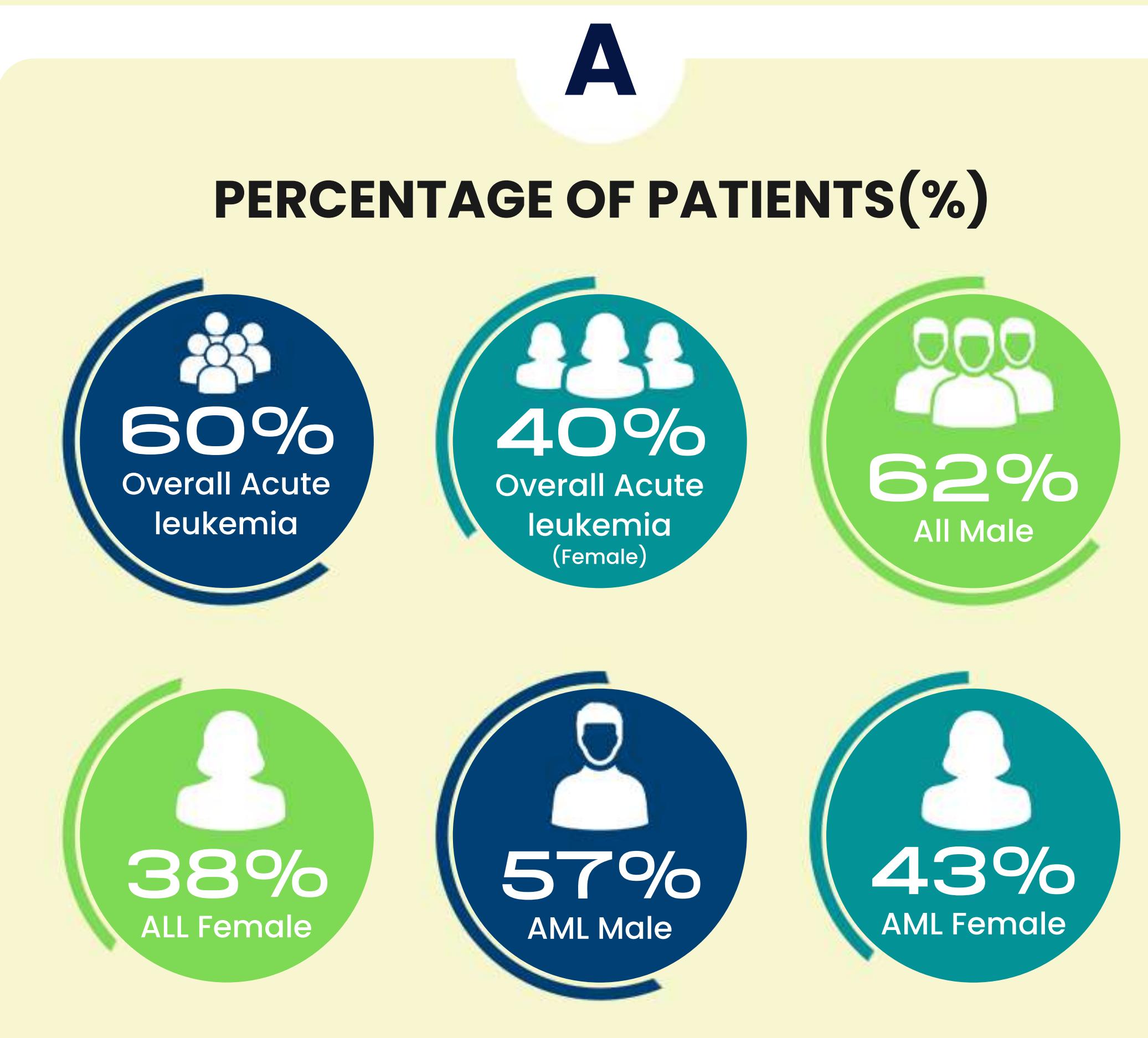
**DATA COLLECTION**  
Utilised Structured Proforma for data collection in terms of Gender , Referring unit , Age , clinical examination findings



**INCLUSITIONAL CRITERIA**  
Newly diagnosed acute leukaemia patients regardless of Gender , Age , Geography , Socioeconomic status



**EXCLUSATIONAL CRITERIA**  
Remission and non leukemic cases



**D**

PHYSICAL EXAMINATION FINDINGS AND STATISTICAL SIGNIFICANCE

COMPARISON OF ORGAN ENLARGEMENT FREQUENCIES BETWEEN ALL AND AML WITH CLINICAL IMPLICATIONS

PHYSICAL FINDING	ALL (%)	AML (%)	p-value
HEPATOMEGLAY	71%	26	1.0
SPLENOMEGLAY	66%	29	0.5
LYMPHADENOPATHY	71%	11	0.1
ALL 3 ENLARGED (H, S, LN)	31%	Lower	0.004*
NO ORGAN ENLARGEMENT	Less	More	<0.001*

### 5 CONCLUSION :

This study highlights distinct epidemiological and clinical features of acute leukemias. ALL is predominant in younger, pediatric populations with more organ enlargement, while AML often affects adults with fewer physical exam abnormalities. Understanding these differences aids in accurate diagnosis and effective patient management strategies.