



CHRONIC LYMPHOCYTIC LEUKEMIA IN A RESOURCE-LIMITED SETTING: EXPERIENCE FROM NORTHERN MOROCCO

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INTRODUCTION

Chronic lymphocytic leukemia (CLL) is the most common adult leukemia in Western countries (1). It is defined by the clonal accumulation of mature CD5+/CD19+/CD23+ B lymphocytes exceeding $5 \times 10^9/L$ in peripheral blood, with a highly heterogeneous clinical course ranging from indolent disease to rapidly progressive forms (2).

Prognosis is strongly influenced by biological markers (TP53 disruption, IGHV mutational status), whose assessment remains challenging in resource-limited settings (2). Access to novel targeted agents is severely limited in low- and middle-income countries, where chemo-immunotherapy remains the backbone of treatment (2),(3). Due to the limited data from North African centres this study aims To describe the clinical, biological, therapeutic, and outcome characteristics of patients diagnosed with CLL in northern Morocco.

METHODS

This retrospective study included patients diagnosed with CLL according to iwCLL 2018 criteria, managed at the Clinical Hematology Department of the University Hospital Center Mohamed VI of Tangier, between July 2021 and April 2025.

RESULTS

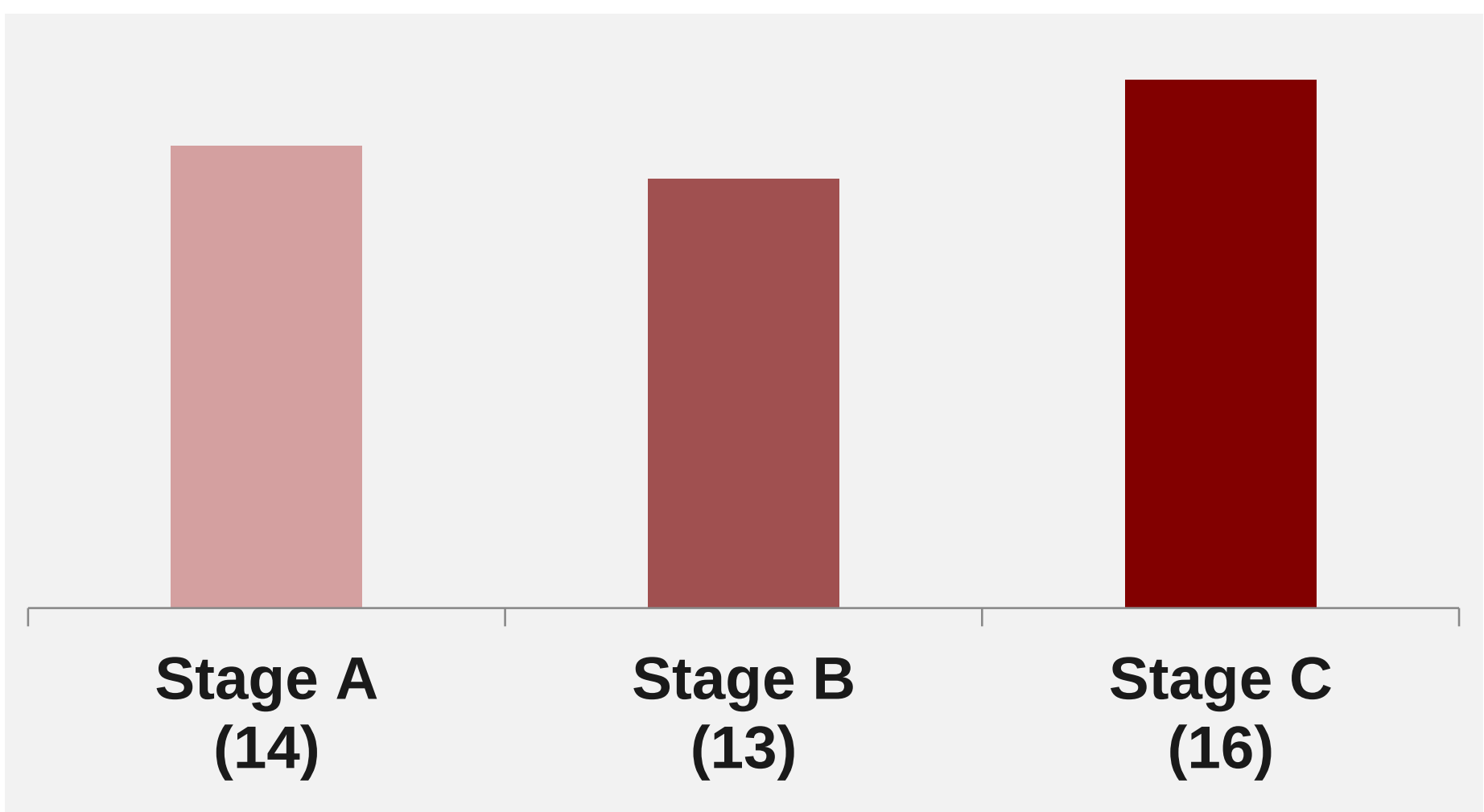
PATIENT CHARACTERISTICS

43 Patients	M/F 30/13	Mean age 66.5 Years	WHO PS 0-1 90% of patients
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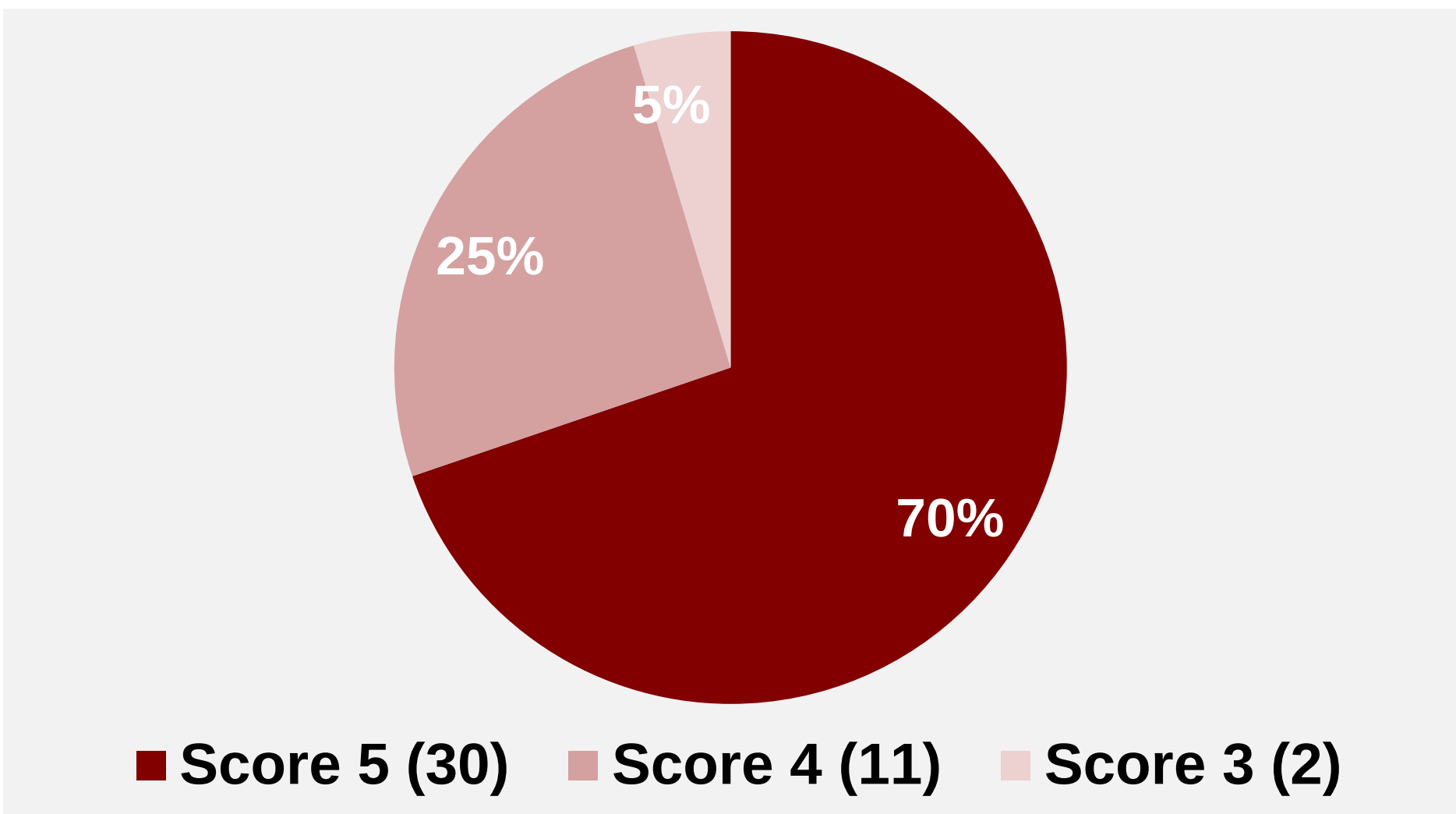
CLINICAL PRESENTATION

Feature	n	%
Incidental discovery	21	49%
Peripheral lymphadenopathy	36	84%
Splenomegaly	20	47%
Hepatomegaly	4	9%
Anemia	15	35%
Thrombocytopenia	6	14%

BINET STAGE



MATUTES SCORE



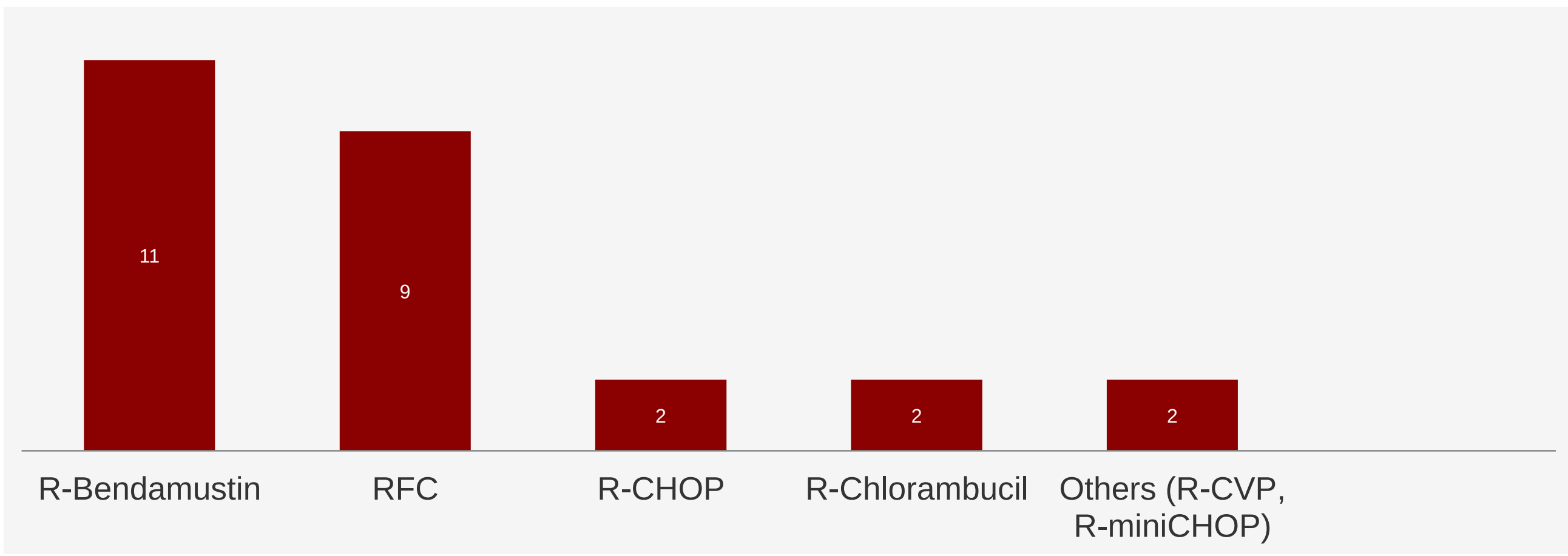
BIOLOGICAL DATA

Mean lymphocyte count: $120 \times 10^9/L$
TP53 tested: 17 patients (40%) — positive in 3 (18%)
Anemia mechanism: Bone marrow infiltration (main)
LDH elevated: 14/43 patients (33%)

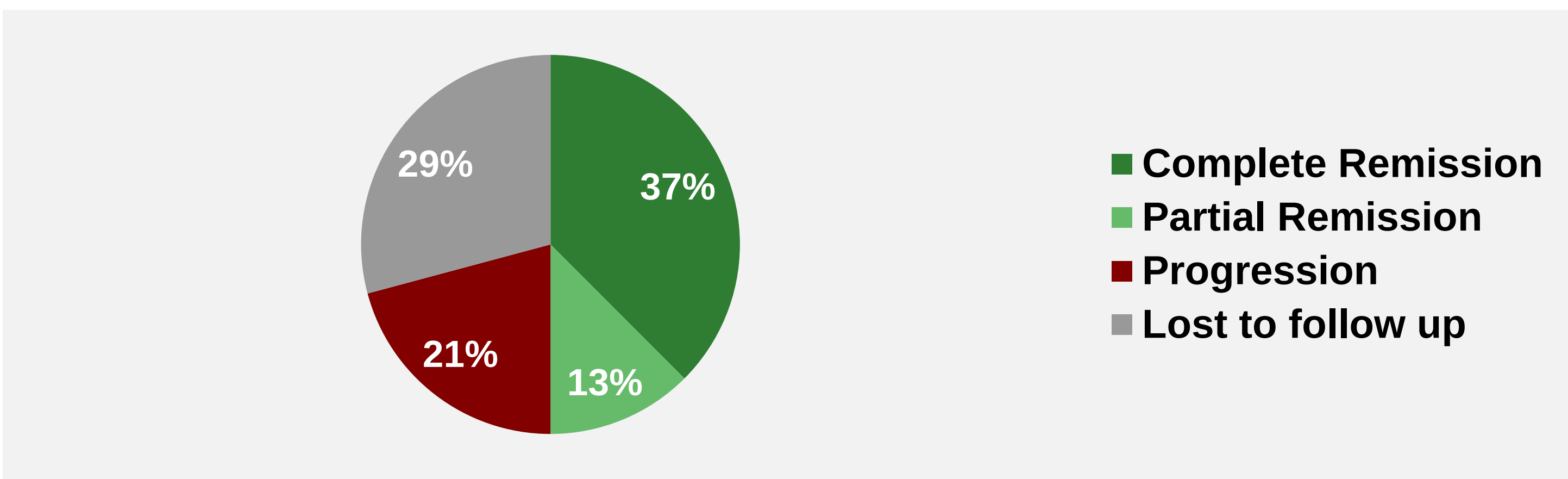
INITAIL TREATMENT STRATEGY

14 Patients (33%) Active surveillance	18 Patients (42%) Treated	Lost to Follow-up 11 Patients (26%) before any treatment
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1st LINE PROTOCOLS (N=26 TREATED)



TREATMENT RESPONSE TO 1st LINE



OUTCOMES

6 Deaths 14% Mortality	4 Richter Transformations	19 Patients Lost to Follow-up
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DISCUSSION

The mean age of 66.5 years and male predominance are consistent with Western series (2). The balanced BINET stage distribution with a high proportion of advanced-stage disease (C: 37%) suggests delayed diagnosis, likely related to limited specialist referral in our region. TP53 testing was performed in only 40% of patients, directly impacting treatment individualization — as TP53-disrupted patients ideally require targeted therapy (4). Chemo-immunotherapy (R-Bendamustin, RFC) remained the backbone of first-line treatment given the unavailability of BTK inhibitors in our setting. The high loss to follow-up rate remains a major challenge, driven by socioeconomic barriers — a pattern widely reported across North African oncology centers (3).

CONCLUSION

This real-world Cohort highlights the marked clinical and biological heterogeneity of CLL in northern Morocco. Limited access to cytogenetic and molecular testing significantly influences therapeutic strategies, with most patients receiving chemo-immunotherapy. These findings emphasize the need for resource-adapted management approaches and improved access to prognostic testing to optimize CLL care in low- and middle-income settings.

BIBLIOGRAPHY

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- (2) Hallek M et al. iwCLL guidelines for diagnosis and treatment of CLL. Blood. 2018;131(25):2745–2760.
- (3) Boussetta A et al. CLL in developing countries: challenges and perspectives. Hematol Oncol. 2021;39(3):298–305.
- (4) Stilgenbauer S et al. Blood. 2014;123(21):3247–3254.