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REAL-WORLD SURVIVAL OUTCOMES WITH PIRTOBRUTINIB VS BENDAMUSTINE/RITUXIMAB IN CHRONIC LYMPHOCYTIC LEUKEMIA: A PROPENSITY SCORE-MATCHED ANALYSIS

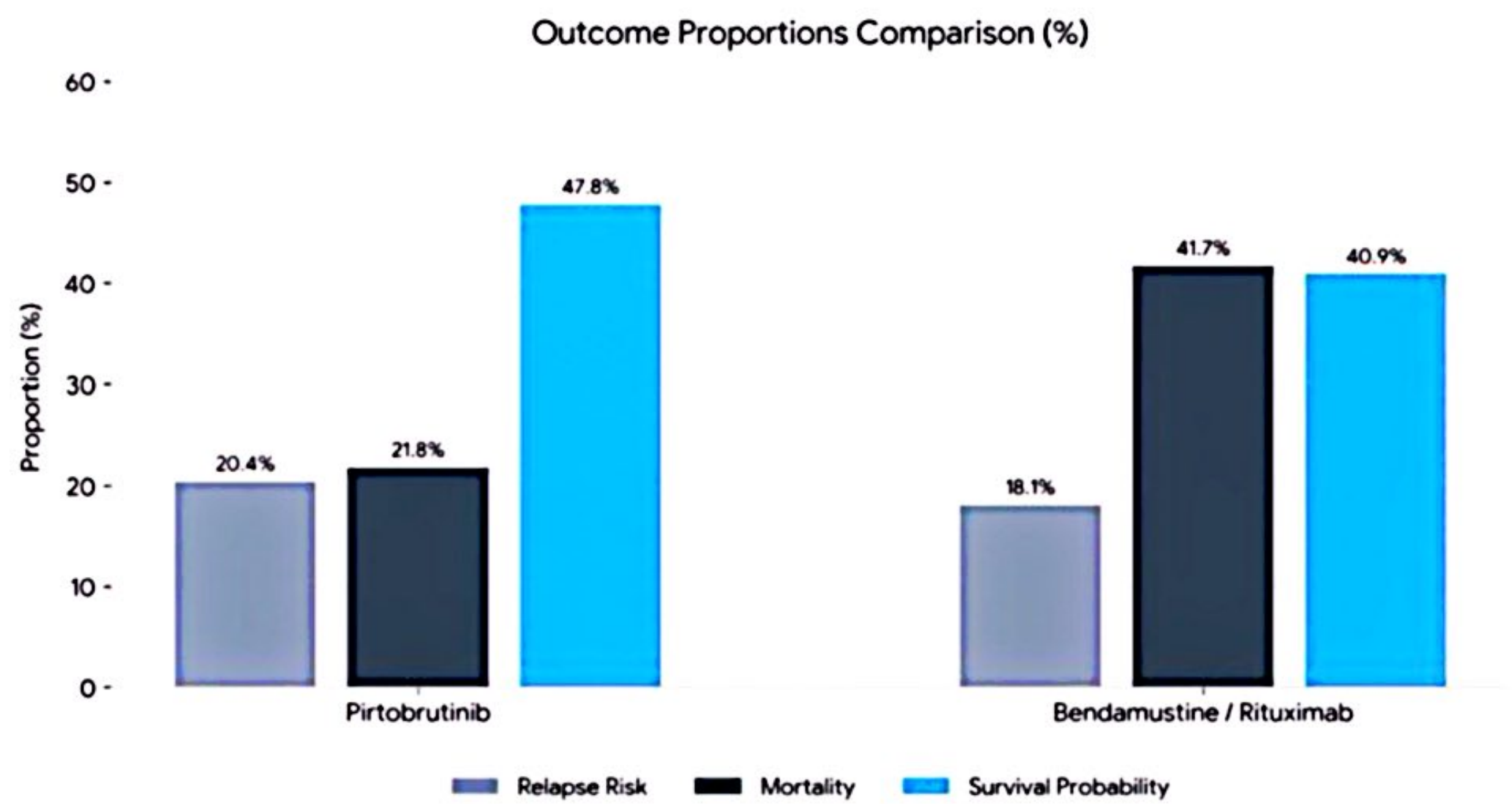
OBJECTIVE

This study aimed to compare the clinical outcomes of patients with chronic lymphocytic leukemia (CLL) treated with either pirtobrutinib (cohort 1) or a combination of bendamustine and rituximab (cohort 2).

CONCLUSION

- **Pirtobrutinib significantly reduced mortality risk** compared with bendamustine–rituximab after adjustment for baseline characteristics.
- **Relapse risk was comparable** between the two treatment groups.
- **Survival outcomes were significantly improved** with pirtobrutinib.
- Findings suggest a **potential clinical advantage of pirtobrutinib** in patients with CLL.

RESULTS



In this comparative study, patients receiving **Pirtobrutinib** demonstrated a substantially lower overall mortality rate of **21.8%** compared to **41.7%** in the Bendamustine / Rituximab cohort ($P < 0.001$), representing a **19.9%** absolute reduction in mortality risk.

Additionally, end-of-study overall survival probability favored Pirtobrutinib (**47.8% vs. 40.9%**). While overall relapse risk remained comparable between groups (**20.4% vs. 18.1%**, $P = 0.328$), time-to-event dynamics favored Pirtobrutinib ($HR = 2.372$, 95% CI: 1.746–3.224).

METHODS

Data source & Population

- Global Collaborative Network
- Cohort 1: N=586, Cohort 2: N=2270

Propensity Score Matching

- PSM performed to minimize selection bias and improve comparability.
- 568 patients per cohort matched.
- Matched for age, sex, race, hypertension, diabetes and heart disease.

Outcomes

- CLL relapse
- All-cause mortality

Statistical Analysis

- measure of associations (Odds Ratio and Risk Ratio)
- Kaplan-Meier survival analysis with Log-Rank test.

KEYWORDS

CLL, chronic lymphocytic leukemia, pirtobrutinib, bendamustine/rituximab, real-world outcomes, propensity score matching