ZANUBRUTINIB PLUS R-CHOP IN DIFFUSE LARGE B-CELL LYMPHOMA: A META-ANALYSIS OF EFFICACY AND SURVIVAL OUTCOMES

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Introduction

Diffuse large B-cell lymphoma (DLBCL) is the most common non-Hodgkin lymphoma, with R-CHOP being the standard first-line treatment. However, a significant proportion of patients experience relapse/resistance, associated with poor outcomes, especially double-expressor and non-germinal center B-cell (Non-GCB) like phenotypes.
Recent studies have demonstrated superior efficacy and safety profile of BTK inhibitors in B-cell malignancies management.
Zanubrutinib, a next-generation BTK inhibitor, offers improved selectivity and reduced off-target toxicity compared to other BTK inhibitors

Aim

To evaluate the pooled proportion of overall survival (OS) and progression-free survival (PFS) following ASCT with HDC in Hodgkin's lymphoma patients for a minimum follow-up of 2 years to assess therapeutic efficacy.

Objectives

- Systematic search of PubMed, Google Scholar, and Scopus databases
- Include studies reporting OS and PFS outcomes following ASCT/HDC
- Assess pooled survival proportions using random-effects meta-analysis
- Evaluate study heterogeneity using I^2 statistics
- Minimum 2-year follow-up for outcome assessment

Methods

Search Strategy: A systematic search was conducted across PubMed, Embase, and Cochrane databases to identify studies evaluating the outcomes of zanubrutinib and R-CHOP combined therapy in newly diagnosed DLBCL patients.
Primary Outcomes:
Overall response rate (ORR)
Complete response (CR) rate
Secondary Outcomes:
Progression-free survival (PFS)
Overall survival (OS)

Statistical Analysis: Meta-analyses of pooled proportions were conducted using a random-effects model. Statistical heterogeneity was assessed using the I^2 statistic. All analyses were performed in R version 4.5.0.

Results

91.10%
Overall Response Rate
95% CI: 83.18–95.49

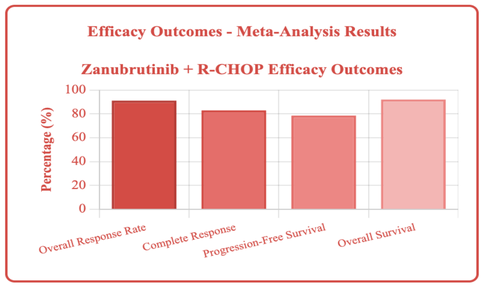
82.98%
Complete Response Rate
95% CI: 74.00–89.30

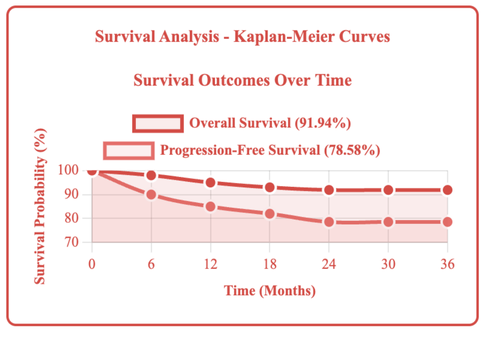
78.58%
Progression-Free Survival
95% CI: 69.06–85.75

91.94%
Overall Survival
95% CI: 83.99–96.12

3 studies comprising 94 patients included in meta-analysis

Key Finding: No heterogeneity was observed across all outcomes with $I^2 = 0\%$, indicating consistent results across studies.





Discussion

Primary Findings: Combined Zanubrutinib plus R-CHOP therapy shows promising and consistent efficacy in DLBCL patients across all measured outcomes.
Clinical Significance: The high overall response rates (91.10%) and complete response rates (82.98%), combined with excellent survival outcomes (OS: 91.94%, PFS: 78.58%), suggest that this combination may represent a significant
Statistical Robustness: The absence of heterogeneity ($I^2 = 0\%$) across all outcomes demonstrates remarkable consistency and reliability of the treatment effect.
Future Directions: These findings warrant further validation in large-scale randomized controlled trials to establish Zanubrutinib plus R-CHOP as a potential new standard of care for newly diagnosed DLBCL patients.