Safety and Efficacy of Epcoritamab in Relapsed, Refractory B-cell Non-Hodgkin Lymphoma: A Systematic Review and Meta-Analysis

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Introduction

Epcoritamab is approved for the treatment of adults with different types of relapsed or refractory lymphomas. There are limited data regarding its safety and efficacy. In this meta-analysis, we evaluated the efficacy and safety of epcoritamab in relapsed, refractory B-cell non-Hodgkin lymphoma (DLBCL and Follicular lymphoma).

Methods

We reviewed several databases from inception to April 29, 2025, to identify studies that evaluated the efficacy and safety of epcoritamab in relapsed, refractory B-cell non-Hodgkin lymphoma (DLBCL and Follicular lymphoma). Our outcomes of interest were overall response rate (ORR), complete response, partial response, cytokine release syndrome (CRS), neutropenia, and Immune effector cell-associated neurotoxicity syndrome (ICANS). We calculated pooled rates with 95% confidence intervals (CI) for our outcomes of interest within a random-effects model.

Results

We included 8 studies with 560 patients (DLBCL 415, FL 145) in our final analysis. The mean age of the patients was 66.2 (3.9) years. Pooled rates (95% CI) of ORR of epcoritamab in B-cell non-Hodgkin lymphoma were 73% (64.4%, 80.2%), p=0.003, I^2 =67.8%(Figure 1A). Further subgroup analysis of studies that reported the data on Diffuse large B cell lymphoma and follicular B cell lymphoma, showed the pooled rates (95% CI) of overall response of epcoritamab in diffuse large B cell lymphoma were 71.7% (61.5%, 80.1%), p=0.093, I^2=49%(figure 1B), and pooled rates (95% CI) of overall response of epcoritamab in follicular B cell lymphoma (FL) were 82.5% (75.2%, 88%), p=0.52, I^2 =0%(Figure 1C). Pooled rates (95% CI) of any grade CRS were 57.3% (48.5%, 65.7%), any grade neutropenia 34.8% (20.5%, 52.5%), and any grade ICANS 5.6% (3.9%, 7.9%), p=0.82, I^2 =0%. (Figure 1D,1E, IF)

Figure 1A: Pooled Analysis of Overall Response in B-cell Non-Hodgkin Lymphoma

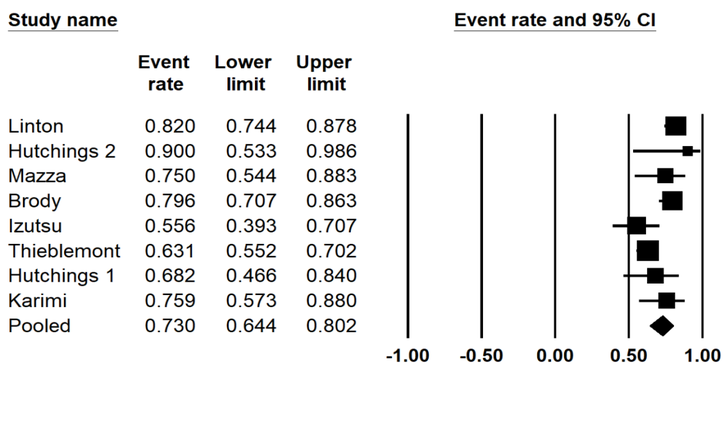


Figure 1B: Pooled Analysis of Overall Response to Diffuse Large B Cell Lymphoma

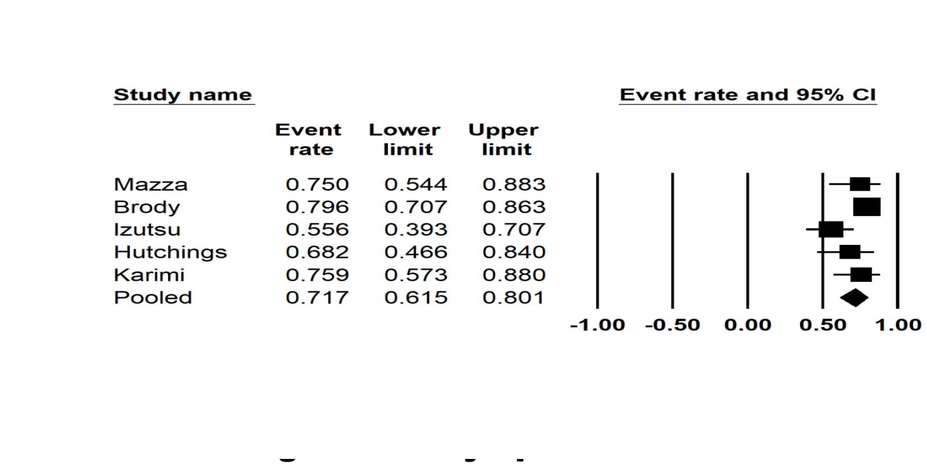


Figure 1C: Pooled Analysis of Overall Response in Follicular Lymphoma

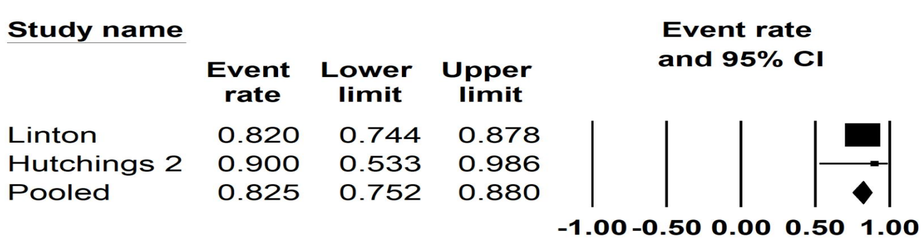


Figure 1D: Pooled Analysis of Cytokine Release Syndrome

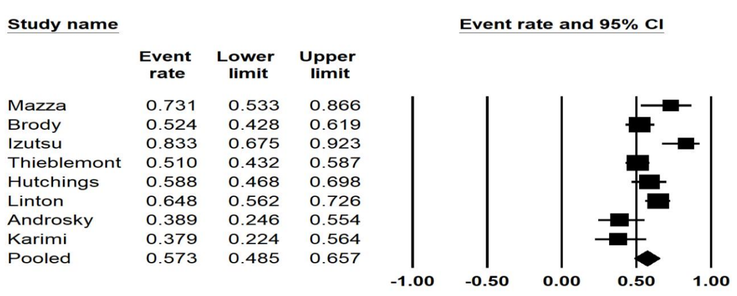


Figure 1E: Pooled Analysis of Neutropenia

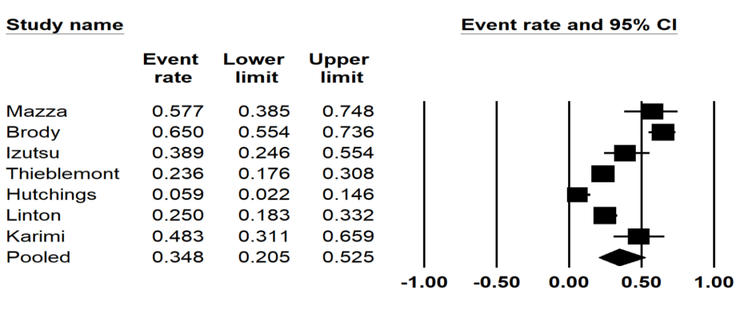
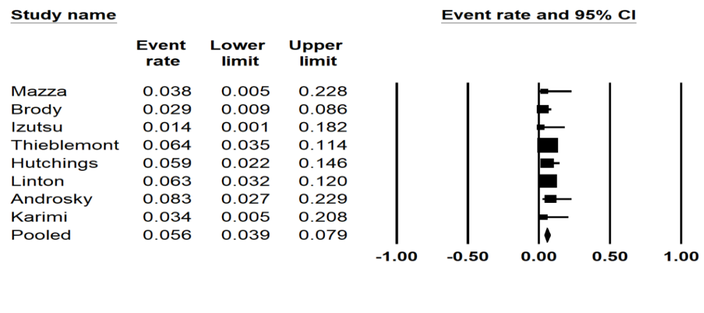


Figure 1F: Pooled Analysis of ICANS



Conclusion

Our study demonstrated 73% pooled rates of overall response in patients with relapsed or refractory B-cell non-Hodgkin lymphoma, 71.7% for DLBCL and 82.5% of FL. However, epcoritamab was associated with 57.3% pooled rates of any grade CRS and 34.8% pooled rates of any grade neutropenia. These findings suggest epcoritamab represents a valuable treatment option for this difficult-to-treat population, though the risk-benefit profile must be carefully considered for each patient.