

Real-world safety and efficacy of polatuzumab vedotin plus R-CHP versus R-CHOP as first-line therapy in diffuse large B-cell lymphoma: Systematic Review and Meta-Analysis

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BACKGROUND

Pola-R-CHP (polatuzumab vedotin plus R-CHP) has emerged as a potential first-line treatment for DLBCL based on the POLARIX trial. Its effectiveness and safety in routine clinical practice remain uncertain because available real-world data are heterogeneous.

METHODS

Databases: PubMed, Embase, Scopus, Web of Science, ClinicalTrials.gov, Cochrane CENTRAL.
Search: inception-June 2026.
Eligibility: untreated adults with DLBCL/high-grade B-cell lymphoma; first-line Pola-R-CHP or R-CHOP.
Design: RCTs and cohort studies.
Analysis: random-effects; HRs for time-to-event outcomes; RRs for dichotomous outcomes; 95% CIs.

OBJECTIVE To evaluate the real-world effectiveness and safety of first-line Pola-R-CHP versus R-CHOP in adults with newly diagnosed DLBCL.

RESULTS

16 STUDIES

7,945 Patients

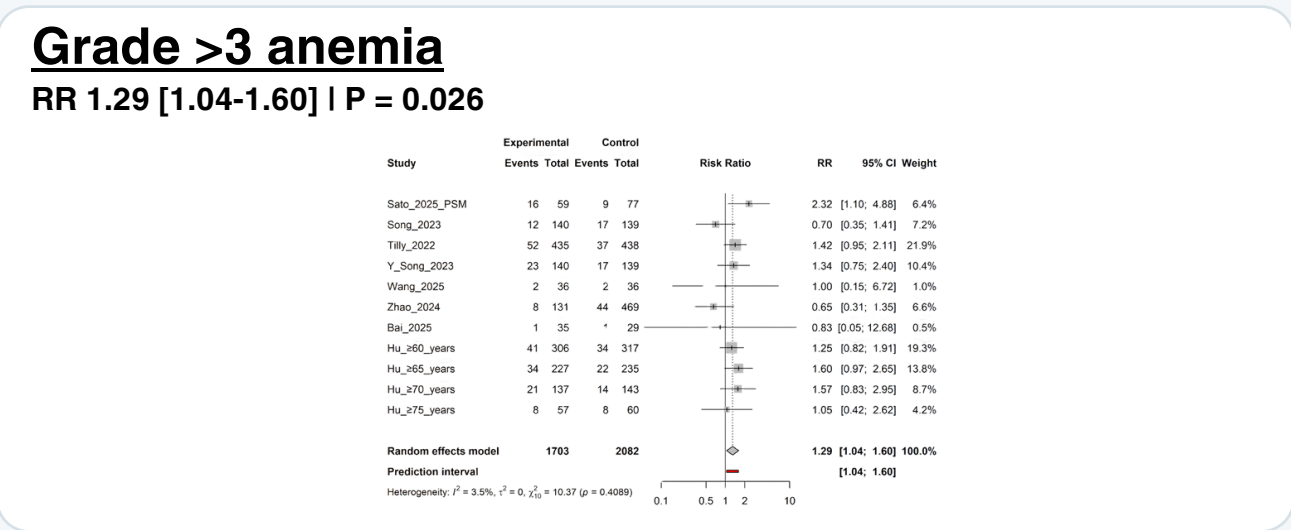
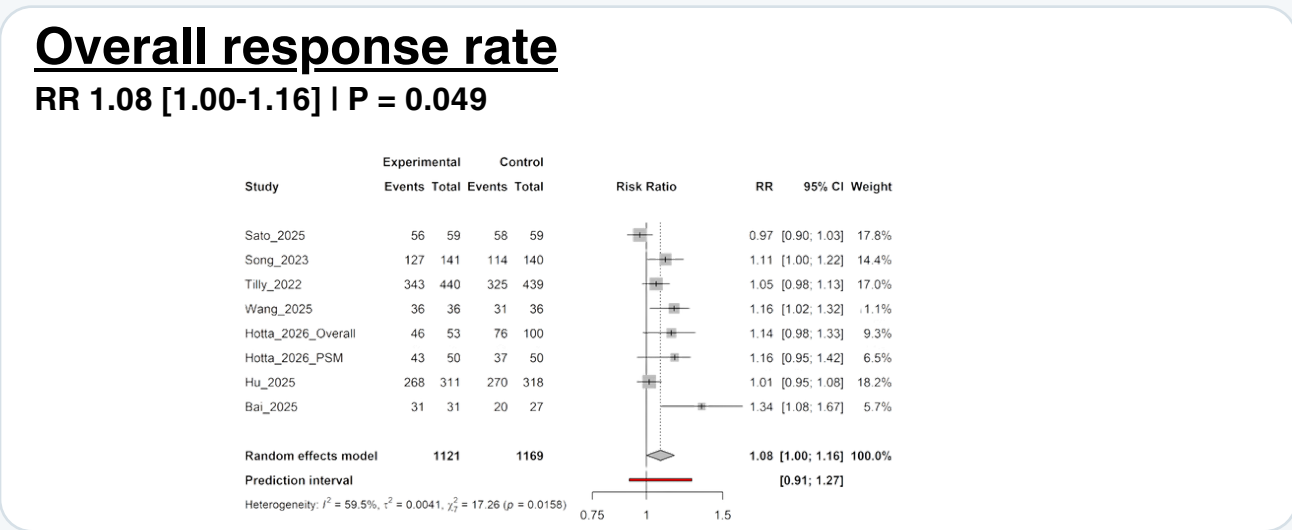
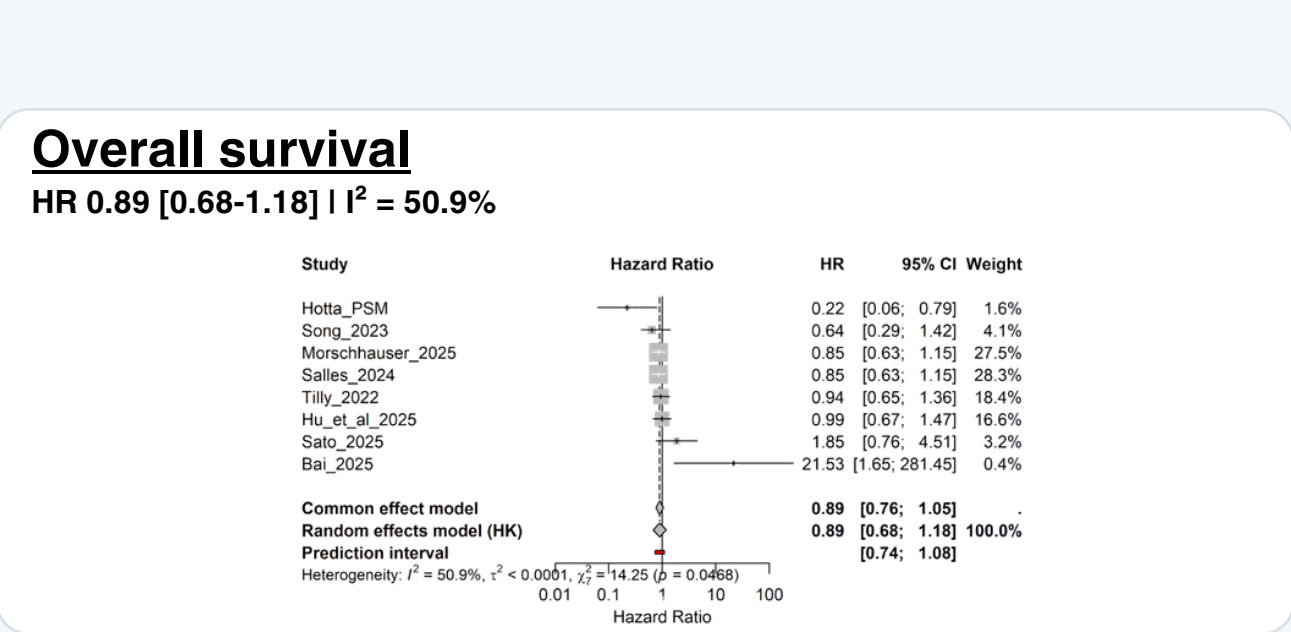
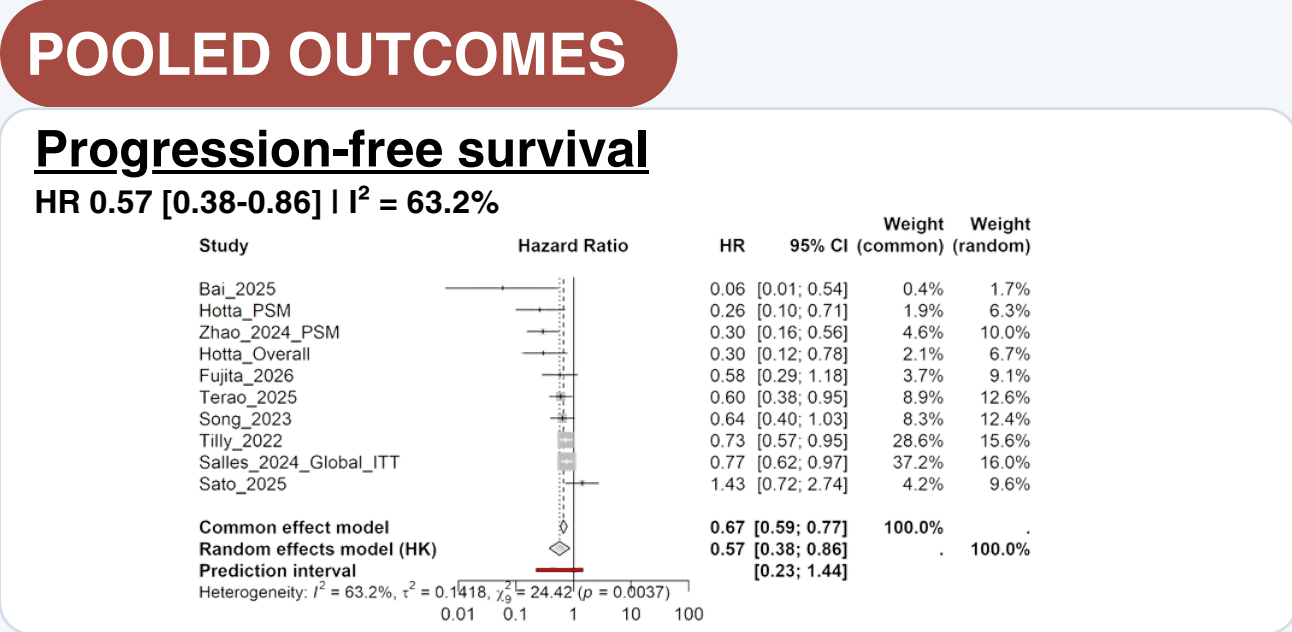
0.57 PFS HR

0.89 OS HR

1.08 ORR RR

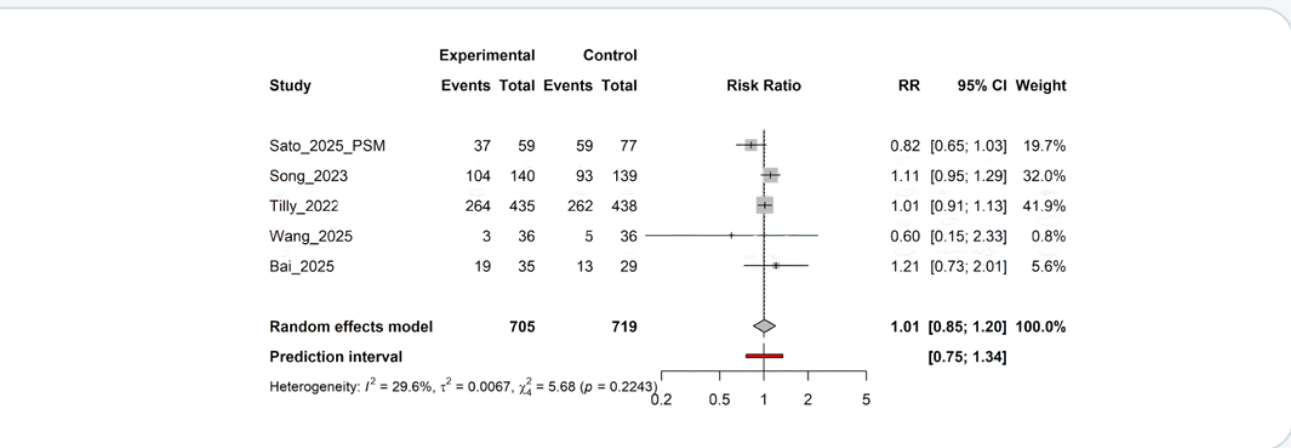
1.29 G3 ANEMIA RR

Effectiveness: PFS improved and ORR was higher with Pola-R-CHP ; OS and complete response were similar between groups.
Safety: grade 3 anemia was more frequent; other assessed grade 3 safety outcomes did not differ significantly.



Overall Grade >3 adverse events
RR 1.01 [0.85-1.20] | P = 0.922

Safety summary: Overall grade 3 adverse events were similar between groups. Pooled RR 1.01 (95% CI 0.85-1.20; I²=29.6%).



CONCLUSION In real-world settings, first-line Pola-R-CHP demonstrated better progression-free survival and overall response rates than R-CHOP, while overall survival and complete response rates were similar. The safety profile was generally manageable, with a higher frequency of grade 3 anemia; other assessed grade 3 safety outcomes did not differ significantly.