

Cost effectiveness of glofitamab for relapsed or refractory diffuse large B-cell lymphoma patients in China

Hanrui Zheng¹, Linke Zou ¹, Ming Hu ^{1 #}
1.West China School of Pharmacy, Sichuan University, Chengdu, China



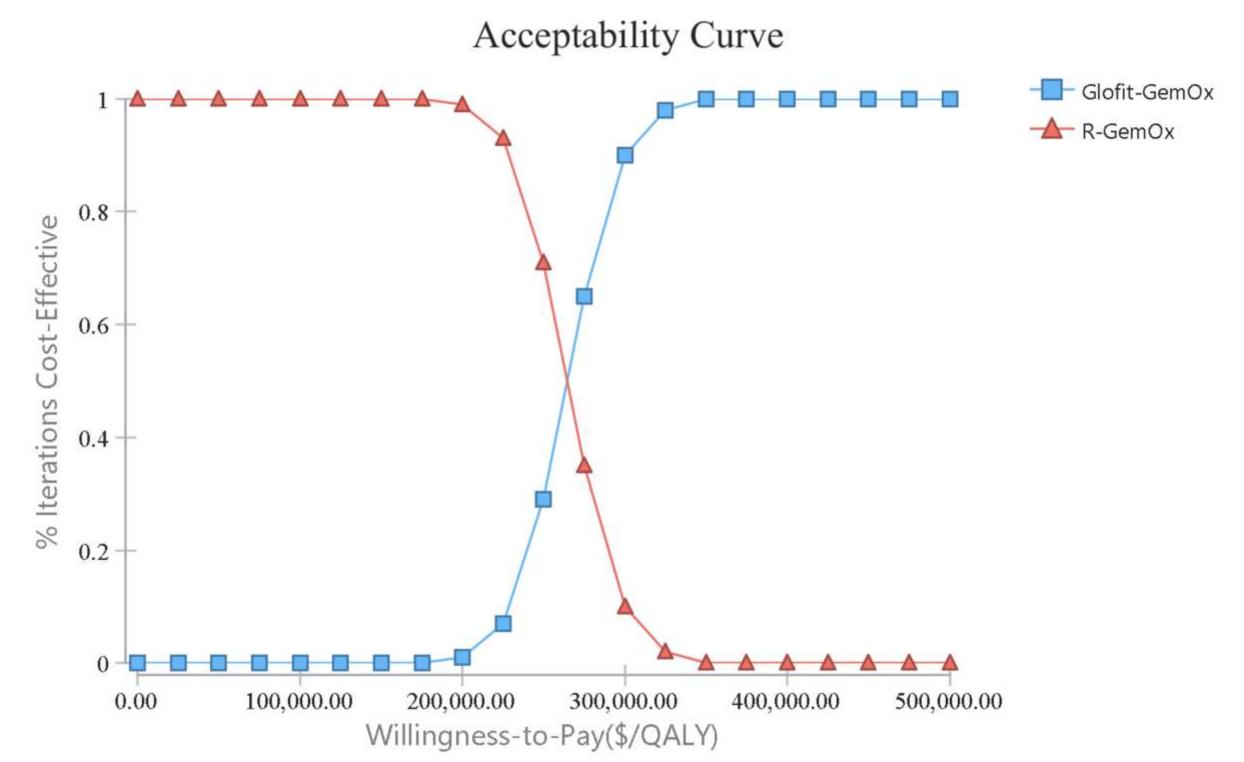


Background and Objective

Glofitamab, a bispecific antibody targeting CD3 and CD20, combined with gemcitabine and oxaliplatin (Glofit-GemOx), has demonstrated efficacy in treating relapsed or refractory diffuse large B-cell lymphoma (DLBCL). This study aimed to assess the economics of Glofit-GemOx compared to rituximab (R)-GemOx from the perspective of the Chinese healthcare system.

Methods

A three-state partitioned survival model (progression-free survival, progressive disease, and death) was constructed based on the STARGLO study. The model was set with a cycle of 28 days and simulated over 10 years. Individual patient data were reconstructed and extrapolated in R software. The Generalized Gamma distribution was chosen as the optimal distribution for progression-free survival and overall survival of Glofit-GemOx and R-GemOx. Quality-adjusted life years (QALYs) were used as the health outcome, and the incremental cost-effectiveness ratio (ICER) was calculated. Direct medical costs including medication expenses, follow-up costs, and costs related to adverse events were considered. Drug prices were obtained from the China Data Platform, while utility values were sourced from published literature. The threshold for willingness-to-pay (WTP) was established at three times the gross domestic product in China(\$38,188/QALY) in 2023. One-way deterministic sensitivity analyses and probabilistic sensitivity analyses were performed on key parameters to assess the robustness of the base analysis results.



Results

The costs in Glofit-GemOx regimen were \$266,518.83, whereas the costs of R-GemOx regimen were \$43,227.09. Compared with the R-GemOx regimen, the Glofit-GemOx regimen resulted in an increase of 0.85 QALYs, yielding an ICER of \$262,696.16 per QALY. The ICER significantly exceeded the WTP threshold and sensitivity analysis revealed the cost of glofitamab had a substantial effect on results.

	Glofit-GemOx	R-GemOx
Total cost (\$)	266,518.83	43,227.09
Incremental costs	22,3291.74	_
Total QALYs	2.0	1.15
Incremental QALYs	0.85	
ICER (\$/QALY)	262,696.16	

Conclusion

Compared with R-GemOx, Glofit-GemOx is not cost-effective compared for relapsed or refractory DLBCL patients in China at current price. A negotiated price reduction for glofitamab could substantially improve its cost-effectiveness profile.

Email: zhruirui212@163.com huming@scu.edu.cn

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Note: In the poster, the model parameters were adjusted, which slightly deviated from the abstract but did not affect the results.