

Cost-Effectiveness of Ginkgo Diterpene Lactone Meglumine Injection for Patients with Acute Ischemic Stroke in China Jingkai Zha¹, Minghui Li², Zhuorui Hu¹, Kevin Z. Lu³, Jing Zhao⁴, Jing Yuan¹

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INTRODUCTION

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- > Stroke is ranked as the leading cause of death in China and the second leading cause of death globally.¹
- > Ginkgo diterpene lactone meglumine (GDLM), made of extracts from ginkgo biloba L., has been widely used as an adjuvant therapy for treating acute ischemic stroke (AIS) in China.²⁻³
- This study aimed to evaluate the cost-effectiveness of GDLM injection

RESULTS CONT'D

Table 1 Base case cost-effectiveness results

	Total cost (¥)	Incremental cost (¥)	QALYs	Incremental QALYs	ICER
GDLM	¥174,227.47		5.08		
Placebo	¥174,788.45	¥-560.98	4.96	0.12	¥-4,638.39
(A) Tornado Diagram -30,000 Post-hospitalization annual costs (mRS 2–5)		0 -10,00	0 10,000) 30,000	
Relative risk of mRS 0-1 One-time hospitalization costs (mRS 0-1) Non-stroke death hazard ratios (mRS 4-5) Non-stroke death hazard ratios (mRS 0-1) Non-stroke death hazard ratios (mRS 2-3) Utility (mRS 4-5) Relative risk of recurrence per life year Death rate with recurrent stroke One-time hospitalization costs (mRS 6) (B) Cost-effectiveness acceptability plane					
7,000 5,000	- - - - - - -				

versus placebo among AIS patients in China from a healthcare system perspective.

METHODS

- The decision tree and Markov model were developed to simulate costeffectiveness of GDLM injection versus placebo over lifetime (Figure 1).
- > The modied Rankin scale score (mRS) at 90 days, which was derived from a randomized control trial (NCT02526225), was used to de ne health states.⁴
- Transition probabilities and healthcare costs were obtained from the China National Stroke Registry.⁴
- Sensitivity analyses were performed to test the robustness of the results.
- Threshold analysis assumed a willingness-to-pay (WTP) value of 89,358 CNY/QALY gained.



 \succ In the base case, the GDLM injection provided 5.08 quality-adjusted life years (QALYs) compared to 4.96 QALYs in the placebo group, with 0.12 QALYs gained across 30-year time horizon. The mean costs in the GDLM group were 174,227.47 CNY compared with 174,788.45 CNY for placebo (Table 1).

- > The ICER was negative at -4638.39 CNY/QALY, and the GDLM injection dominated placebo.
- > One-way sensitivity analysis revealed ICER being lower than the WTP threshold. The parameters with the greatest influence on the ICER were time horizon, post-hospitalization costs, relative risk of functional independence (Figure 2A).
- Probabilistic sensitivity analysis results demonstrated that the GDLM injection is cost effective relative to placebo ranged from 61.3% to 100%, suggesting that the results were generally robust (Figure 2B & 2C).

> The GDLM injection was associated with markedly gains in qualityadjusted life expectancy and decreased healthcare costs. GDLM adjuvant therapy is a cost-effective choice for AIS patients in China.



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