

ONLINE SUPPLEMENTARY MATERIALS

Online supplementary table 1. Hypothetical worse performance and costs of mechanical thrombectomy, ICER (CNY/QALY)

Additional cost of mechanical thrombectomy	Outcome of mechanical thrombectomy		
	Base Case (OR=2.046)*	Unfavourable (OR=1.745)	Worse unfavourable (OR=1.692)
+10%, CNY 66903	69,421	90,340	95,839
Base case, CNY 60821	63,010	82,120	87,123
-10%, CNY 54739	56,612	73,883	78,425
-25%, CNY 45616	47,003	61,553	65,360
-50%, CNY 30410	30,995	40,987	43,596

ICER, incremental cost-effectiveness ratio; QALY, quality-adjusted life-year; OR, Odds ratio.

* OR: OR of modified Rankin Scale 0-2 at day 90 for mechanical thrombectomy.

Online supplementary table 2. Distributions and parameters used in model inputs

Model Input	Distribution	α	β	mean	standard error
Efficacy and safety outcome inputs					
Proportion of outcomes at 90 days in IV tPA group					
mRS 0-2	beta	60.7	126.0		
Death (mRS 6)	beta	65.7	325.5		
sICH	beta	13.5	218.7		
Odds ratio at 90 days					
mRS 0-2	lognormal*			2.046	0.097
Death (mRS 6)	lognormal*			0.871	0.123
sICH	lognormal*			0.965	0.190
Probabilities inputs					
Proportion of patients received mechanical thrombectomy	beta	817.0	131.9		
Proportion of patients arrived within 4.5 hours	beta	1817.2	310.7		
Recurrent rate of stroke (per patient year)					
mRS 0-2	beta	833.0	7286.0		
mRS 3-5	beta	496.8	3006.6		
Relative risk of stroke recurrence per life year	lognormal*			1.03	0.005
Death with recurrent stroke	beta	290.9	1093.7		
Hazard ratio of non-stroke death for mRS 3-5	lognormal*			1.78	0.103
Cost inputs (2013 Chinese Yuan Renminbi)					
Additional costs of mechanical thrombectomy	lognormal			60821	4594
Additional costs of IV tPA treatment	lognormal			11179	325
Additional costs of sICH	lognormal			2374	65
One-time hospitalisation costs					
mRS 0-2	lognormal			10055	76
mRS 3-5	lognormal			13729	155
mRS 6	lognormal			11121	475
Annual post-hospitalisation costs					
mRS 0-2	lognormal			7385	118
mRS 3-5	lognormal			11350	323
Utility inputs					
mRS 0-2	beta	125.3	39.6		
mRS 3-5	beta	65.9	247.8		
Recurrent stroke	beta	732.4	1421.7		
sICH	beta	21.3	4.1		
Discount rate inputs					
Costs	beta	5.3	172.5		
Outcomes	beta	93.1	3011.2		

IV tPA, intravenous tissue plasminogen activator; mRS, modified Rankin Scale; sICH, symptomatic intracerebral haemorrhage.

*Correction is implemented in the Ersatz function $ErRelativeRisk(RR, SE[\ln(RR)])$.

Online supplementary figure 1. Cost-effectiveness acceptability curve. The curve presents the probability that mechanical thrombectomy within 6 hours to be cost-effective against willingness-to-pay threshold. The solid line represents the willingness-to-pay threshold of CNY 125,700 per QALY. The dashed line represents CNY 41,900 per QALY.

