



LAST₂ CH₂ANCE: A Summary of Selection Criteria for Thrombectomy in Acute Ischemic Stroke

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In 2015 and 2016, six randomized controlled trials (MR CLEAN, ESCAPE, SWIFT PRIME, REVASCAT, EXTEND-IA, and THRACE), which focused on the endovascular treatment of patients with acute ischemic stroke caused by large vessel occlusion, were published in *The New England Journal of Medicine*¹ and *Lancet Neurology*.² All of these trials favor thrombectomy for patients with acute ischemic stroke with large vessel occlusion, which can significantly improve patients' 90-day outcomes. The impact of these trials is huge. Cerebrovascular physicians all over the world have started putting more efforts on thrombectomy. However, there are many indications and contraindications for thrombectomy, which are a challenge for the physician to remember and may cause potential errors and delays in the process of selecting candidates.

To handle this problem, we carefully reviewed the literature and guidelines^{3,4} and summarized the indications and contraindications as "LAST₂ CH₂ANCE," which represents different aspects of patient selection. The details of "LAST₂ CH₂ANCE" are shown in the Table.

We have used this to do many training sessions in China. During the posttraining survey, most physicians were impressed by this summary. They can remember complex patient selection criteria in a few minutes even though they knew very little before the training. Therefore, we feel it is better to let the entire community know this system to make rapid and accurate patient selection for

thrombectomy. Because thrombectomy is the last chance for patients with acute ischemic stroke with large vessel occlusion to recover, we hope this patient selection summary, "LAST₂ CH₂ANCE," will be helpful.

REFERENCES

1. Goyal M, Menon BK, van Zwam WH, et al. **Endovascular thrombectomy after large-vessel ischaemic stroke: a meta-analysis of individual patient data from five randomised trials.** *Lancet* 2016;387:1723–31 CrossRef Medline
2. Bracard S, Ducrocq X, Mas JL, et al. **Mechanical thrombectomy after intravenous alteplase versus alteplase alone after stroke (THRACE): a randomised controlled trial.** *Lancet Neurol* 2016;15:1138–47 CrossRef Medline
3. Franssen PS, Beumer D, Berkhemer OA, et al. **MR CLEAN, a multi-center randomized clinical trial of endovascular treatment for acute ischemic stroke in the Netherlands: study protocol for a randomized controlled trial.** *Trials* 2014;15:343 CrossRef Medline
4. Powers WJ, Derdeyn CP, Biller J, et al. **2015 American Heart Association/American Stroke Association focused update of the 2013 guidelines for the early management of patients with acute ischemic stroke regarding endovascular treatment: a guideline for healthcare professionals from the American Heart Association/American Stroke Association.** *Stroke* 2015;46:3020–35 CrossRef Medline

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Details of LAST₂ CH₂ANCE

Symbol	Meaning	Details
L	Large vessel occlusion	Internal carotid artery or proximal MCA ^a
A	Age	≥18 yrs ^a
S	Symptom	NIHSS score ≥6 ^a
T	Time	Onset to groin puncture time <6 h ^a
T ₂	Thrombocytopenia	PLT ≥40*10 ⁹ /L ^b
C	Crippled/disabled	mRS <2 ^a
H	Hypoglycemia	CBG ≥2.7 mmol/L ^b
H ₂	Hypertension	BP ≤185/110 mmHg ^b
A	Anticoagulation	INR ≤3.0 ^b
N	Nonsalvageable brain tissue	ASPECTS ≥6 ^a
C	Collateral	ACG >1 ^c
E	Expectancy of life	>90 d ^b

Note:—ACG indicates American Society of Interventional and Therapeutic Neuroradiology collateral grading; BP, blood pressure; CBG, capillary blood glucose; INR, international normalization ratio; PLT, platelet count.

^a Criterion from the American Heart Association/American Stroke Association guidelines.

^b Criterion from the protocol of MR CLEAN trial.

^c Criterion we use in our daily practice but without consensus in the literature.