

Providing Choice & Value

Generic CT and MRI Contrast Agents





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

P. Yang, Y. Zhang and J. Liu

This information is current as of July 23, 2025.

AJNR Am J Neuroradiol 2017, 38 (9) E58-E59 doi: https://doi.org/10.3174/ajnr.A5249 http://www.ajnr.org/content/38/9/E58

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

n 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, "LAST $_2$ CH $_2$ ANCE," will be helpful.

REFERENCES

- 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
- 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. Fransen PS, Beumer D, Berkhemer OA, et al. MR CLEAN, a multicenter 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

©P. Yang
©Y. Zhang
©J. Liu
Department of Neurosurgery
Changhai Hospital
Second Military Medical University
Shanghai, China

http://dx.doi.org/10.3174/ajnr.A5249

Details of LAST, CH, ANCE

Symbol	Meaning	Details
L	Large vessel occlusion	Internal carotid artery or proximal MCA ^a
A	Age	≥18 yrs ^a
S	Symptom	NIHSS score $\geq 6^a$
T	Time	Onset to groin puncture time <6 ha
T_2	Thrombocytopenia	$PLT \ge 40*10^9/L^{b}$
C	Crippled/disabled	$mRS < 2^a$
Н	Hypoglycemia	$CBG \ge 2.7 \text{ mmol/L}^{b}$
H ₂	Hypertension	$BP \leq 185/110 \text{ mmHg}^{b}$
A	Anticoagulation	INR ≤3.0 ^b
N	Nonsalvageable brain tissue	$ASPECTS \ge 6^a$
С	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.

 $^{^{\}rm b}$ Criterion from the protocol of MR CLEAN trial.

 $^{^{\}rm c}$ Criterion we use in our daily practice but without consensus in the literature.