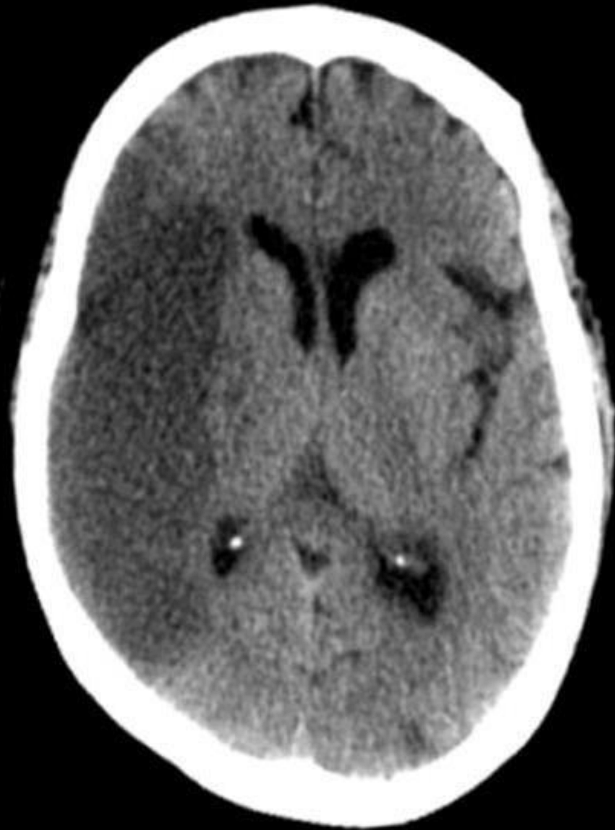
CẬP NHẬT LẤY HUYẾT KHỐI CƠ HỌC TRONG ĐỘT QUỴ THIẾU MÁU NÃO CẤP VÀ CASE LÂM SÀNG

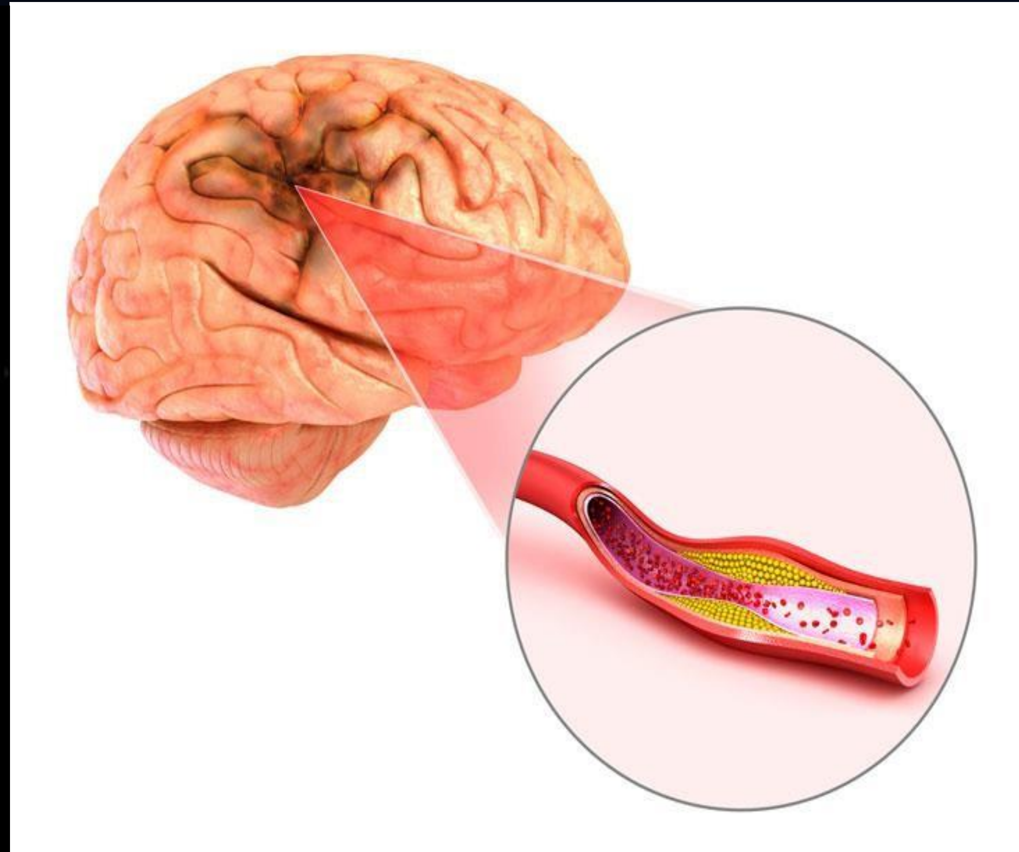
BS.CKI PHẠM NGUYÊN BÌNH
BỆNH VIỆN ĐA KHOA AN GIANG

NỘI DUNG

- Tổng quan đột quỵ và điều trị tái tưới máu
- Điều trị tiêu sợi huyết tĩnh mạch
- Can thiệp lấy huyết khối và case lâm sàng

TỔNG QUAN ĐỘT QUỴ VÀ ĐIỀU TRỊ TÁI TƯỚI MÁU

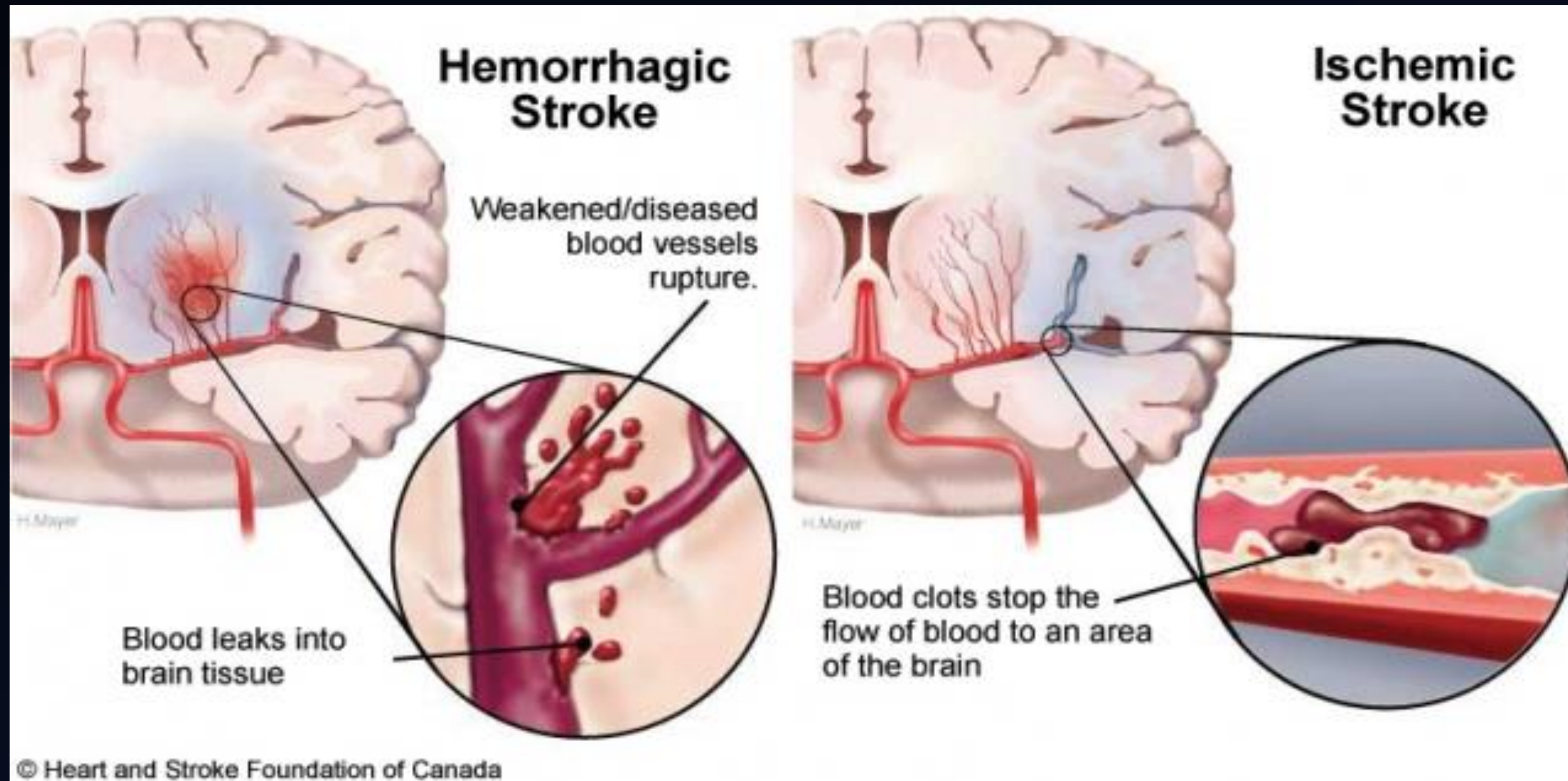




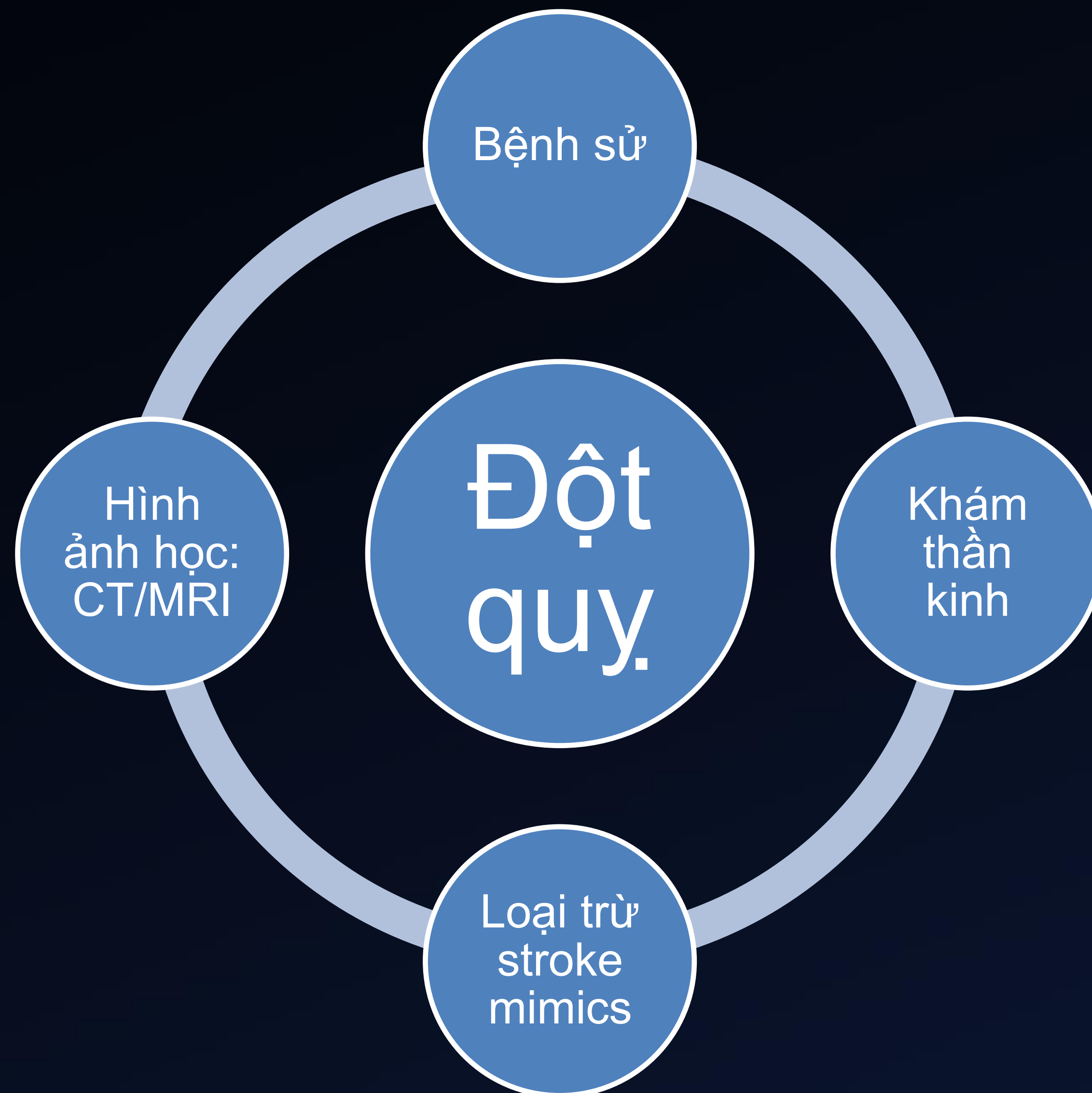
Feigin VL, Brainin M, Norrving B, Martins SO, Pandian J, Lindsay P, F Grupper M, Rautalin I. World Stroke Organization: Global Stroke Fact Sheet 2025. Int J Stroke. 2025 Feb;20(2):132-144. doi: 10.1177/17474930241308142. Epub 2025 Jan 3. PMID: 39635884; PMCID: PMC11786524.

TỔNG QUAN ĐỘT QUỴ NHỒI MÁU NÃO

- 80-85% là đột quỵ thiếu máu cục bộ
- 15-20% là đột quỵ xuất huyết não



CHẨN ĐOÁN



ĐIỀU TRỊ ĐỘT QUỴ NHỒI MÁU NÃO

Tái tưới máu

Chăm sóc điều trị cấp

PT mở sọ

Dự phòng tái phát

VLTL PHCN

PT/Stent ĐM cảnh

ĐIỀU TRỊ TÁI TƯỚI MÁU

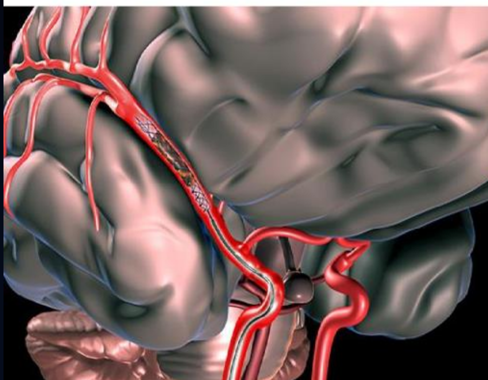
- Yếu tố quan trọng nhất trong điều trị tái tưới máu thành công là tái thông sớm => kết quả tốt " Time is tissue brain".
- Hình ảnh học đóng vai trò quan trọng.
- Điều trị tái tưới máu đột quỵ cấp cần một hệ thống phối hợp giữa cấp cứu trước viện, BS CC, BS Thần kinh đột quỵ, BS HSCC, BS CĐHA, BS Can thiệp thần kinh và BS Phẫu thuật thần kinh để đưa ra điều trị tối ưu => TEAMWORK.
- Các lựa chọn điều trị tái tưới máu đã được chứng minh là hiệu quả bao gồm tiêu sợi huyết tĩnh mạch (IVT) và can thiệp lấy huyết khối cơ học (MT).

TIÊU SỢI HUYẾT ĐƯỜNG TĨNH MẠCH(IVT)

Là điều trị vàng

rtPA (Alteplase) đường TM

- Cửa sổ 4.5 giờ
- Cửa sổ mở rộng: 9 giờ (ít sử dụng)



Can thiệp lấy huyết khối cơ học

- Cửa sổ 6 giờ
- Cửa sổ mở rộng: 6-24 giờ

AHA/ASA GUIDELINES 2018 – UPDATED 2019

	COR	LOE
1. In patients eligible for IV alteplase, benefit of therapy is time dependent, and treatment should be initiated as quickly as possible.	I	A

Door-to-needle time of ≤60 min

0 min

Suspected stroke patient arrives at ED

≤10 min

Initial evaluation by physician including:

- Medical stabilization
- Hx: time last known well, eligibility for tPA, etc.
- Focused exams
- Examine using NIHSS
- Initiate labwork

≤15 min

Stroke team notified

≤25 min

Head CT or MRI scan

≤45 min

Interpretation of neuroimaging scan

- Review patient's eligibility for tPA
- Review labs if available

≤60 min

Start of IV alteplase treatment ≤60 min elapsed

Sh.Lahouti@RECAPEM

AHA/ASA GUIDELINES 2018 – UPDATED 2019

1. IV alteplase (0.9 mg/kg, maximum dose 90 mg over 60 minutes with initial 10% of dose given as bolus over 1 minute) is recommended for selected patients who can be treated within 3 hours of ischemic stroke symptom onset or patient last known well or at baseline state. Physicians should review the criteria outlined in Table 8 to determine patient eligibility.	I	A
2. IV alteplase (0.9 mg/kg, maximum dose 90 mg over 60 minutes with initial 10% of dose given as bolus over 1 minute) is also recommended for selected patients who can be treated within 3 and 4.5 hours of ischemic stroke symptom onset or patient last known well or at baseline state. Physicians should review the criteria outlined in Table 8 to determine patient eligibility.	I	B-R
3. IV alteplase (0.9 mg/kg, maximum dose 90 mg over 60 minutes with initial 10% of dose given as bolus over 1 minute) administered within 4.5 hours of stroke symptom recognition can be beneficial in patients with AIS who awake with stroke symptoms or have unclear time of onset >4.5 hours from last known well or at baseline state and who have a DW-MRI lesion smaller than one-third of the MCA territory and no visible signal change on FLAIR.	IIa	B-R

A Systematic Review of the Efficacy and Safety of Tenecteplase Versus Alteplase in Acute Ischemic Stroke: A Time to Pass the Torch

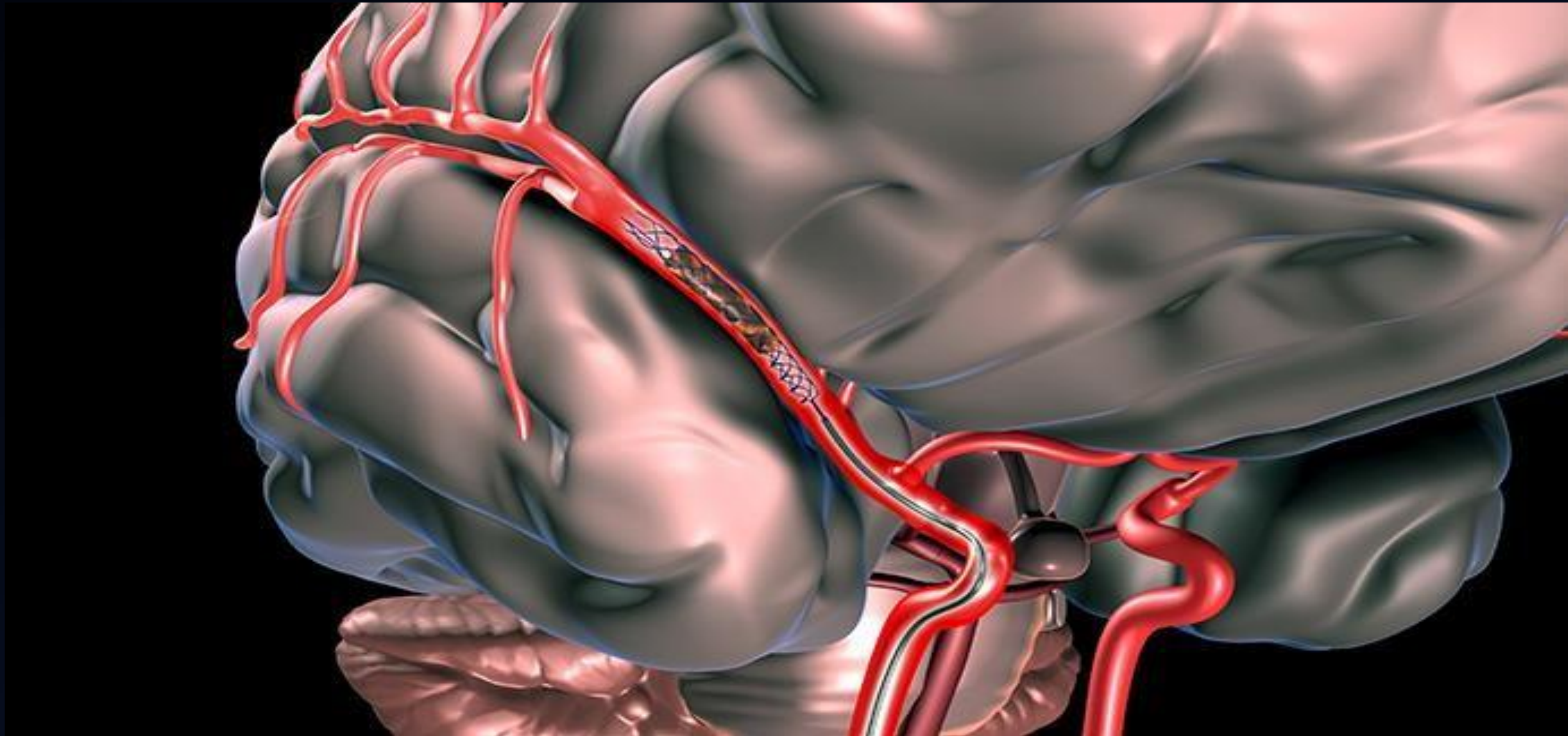
Miguel Rodriguez, BA, Christian Sidebottom, MD, Drew A. Wells, PharmD, BCPS, Thirumalaivasan Dhasakeerthi, MBBS, Lisa Hayes, PharmD, BCCCP, Cheran Elangovan, MD, and Balaji Krishnaiah, MD

Conclusions

The recent advances in the literature suggest TNK 0.25 mg/kg as a reasonable alternative to r-tPA for thrombolysis in AIS management. The practical advantages associated with administration and the noninferiority in safety and efficacy compared with r-tPA support this conclusion. TNK will likely continue to gain traction across many comprehensive stroke centers and institutions treating patients with AIS as additional data are published.

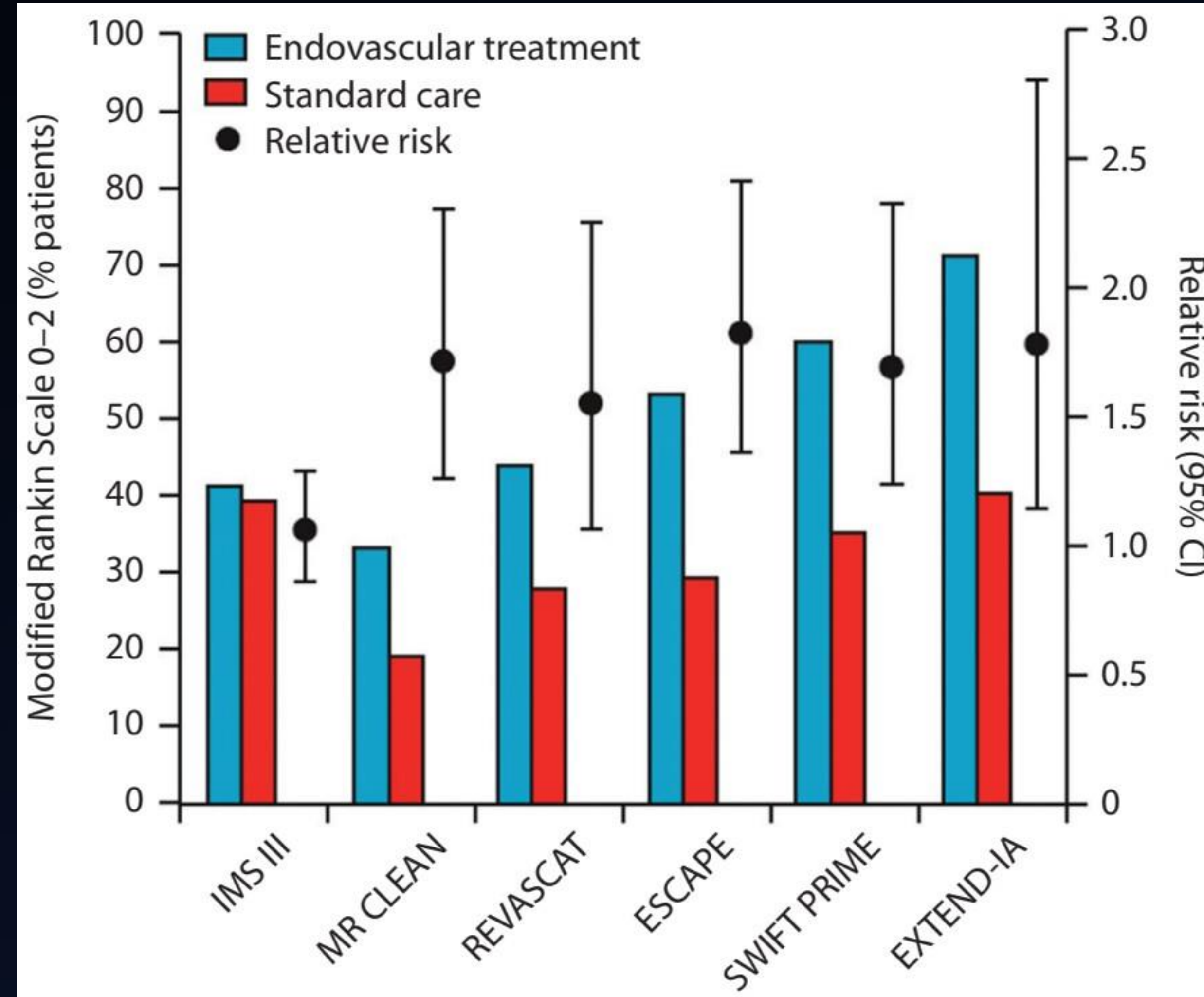
https://doi.org/10.1161/SVIN.123.001110

LẤY HUYẾT KHỐI CƠ HỌC

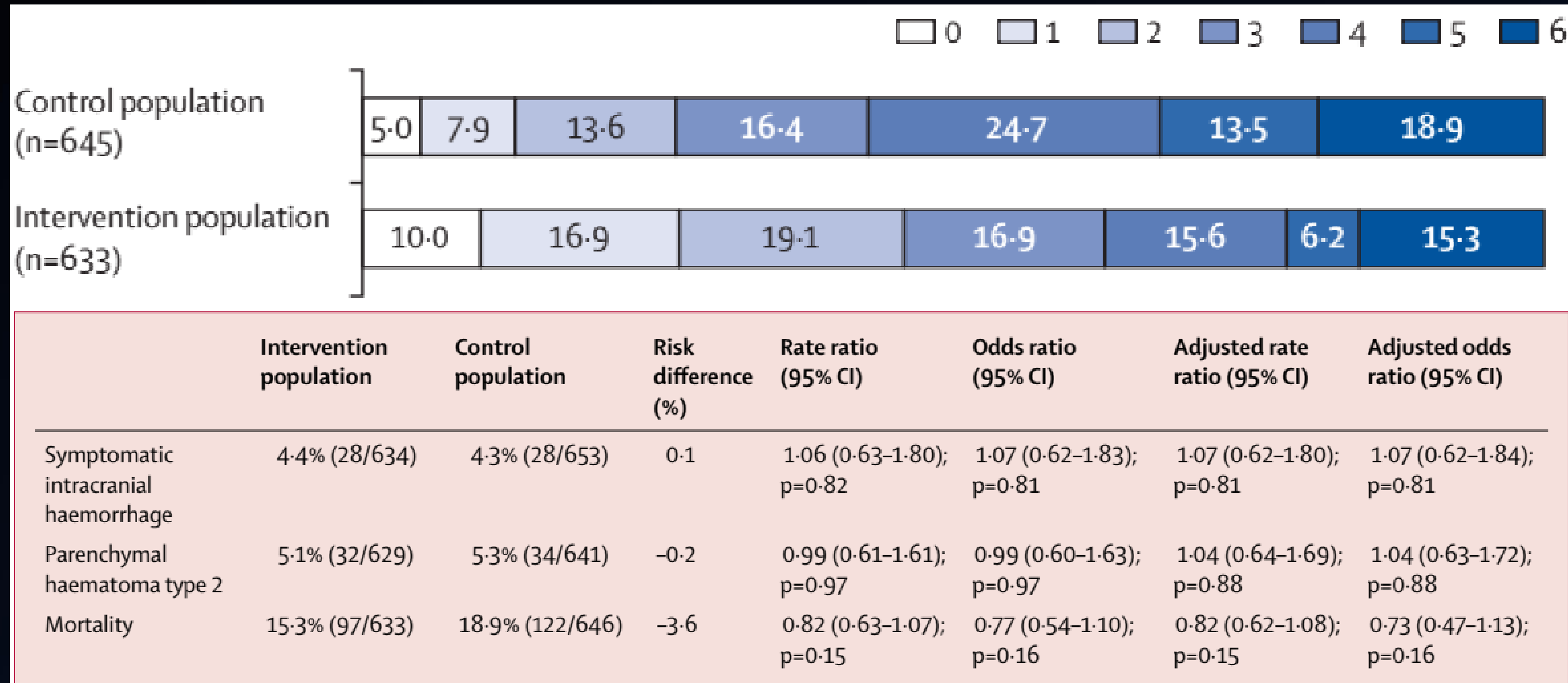


Các thử nghiệm lấy huyết khối cơ học

Kết cục chức năng của BN trong các thử nghiệm



Phân tích gộp HERMES từ 5 NC



	Intervention population	Control population	Risk difference (%)	Rate ratio (95% CI)	Odds ratio (95% CI)	Adjusted rate ratio (95% CI)	Adjusted odds ratio (95% CI)
Symptomatic intracranial haemorrhage	4·4% (28/634)	4·3% (28/653)	0·1	1·06 (0·63–1·80); p=0·82	1·07 (0·62–1·83); p=0·81	1·07 (0·62–1·80); p=0·81	1·07 (0·62–1·84); p=0·81
Parenchymal haematoma type 2	5·1% (32/629)	5·3% (34/641)	−0·2	0·99 (0·61–1·61); p=0·97	0·99 (0·60–1·63); p=0·97	1·04 (0·64–1·69); p=0·88	1·04 (0·63–1·72); p=0·88
Mortality	15·3% (97/633)	18·9% (122/646)	−3·6	0·82 (0·63–1·07); p=0·15	0·77 (0·54–1·10); p=0·16	0·82 (0·62–1·08); p=0·15	0·73 (0·47–1·13); p=0·16

- Tỷ lệ BN đạt kết quả chức năng tốt (độc lập/mRS 0-2 tại 90 ngày) là 46% so với 26.5%
- NNT để giảm mRS từ 1 điểm trở lên là 2.6
- Tỷ lệ tử vong và xuất huyết não có triệu chứng không khác nhau

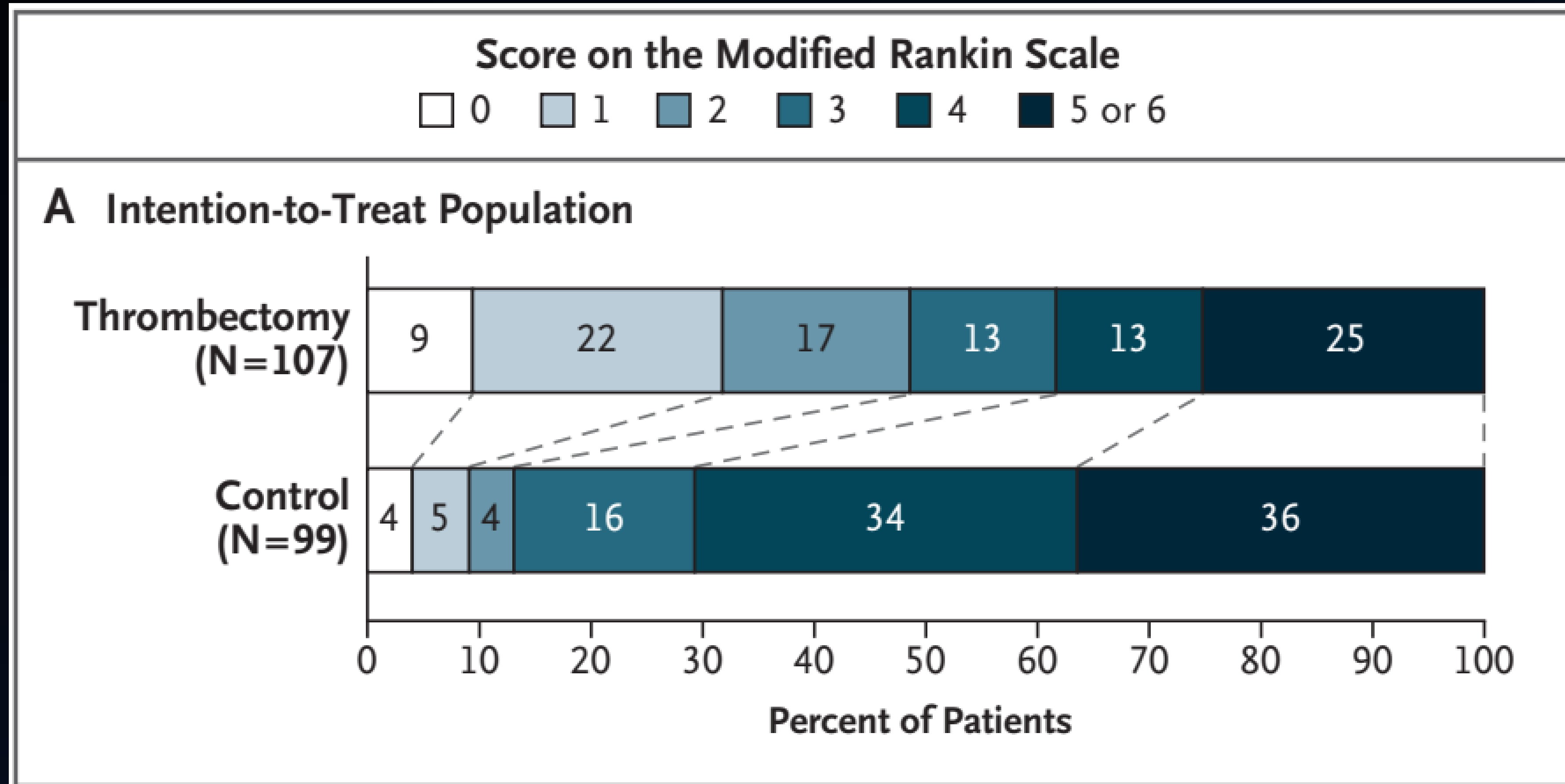
AHA/ASA GUIDELINES 2018 – UPDATED 2019

Recommendation	COR	LOE
1. Patients should receive mechanical thrombectomy with a stent retriever if they meet all the following criteria: (1) prestroke mRS score of 0 to 1; (2) causative occlusion of the internal carotid artery or MCA segment 1 (M1); (3) age ≥18 years; (4) NIHSS score of ≥6; (5) ASPECTS of ≥6; and (6) treatment can be initiated (groin puncture) within 6 hours of symptom onset.	I	A
1. Patients eligible for IV alteplase should receive IV alteplase even if mechanical thrombectomy is being considered.	I	A
2. In patients under consideration for mechanical thrombectomy, observation after IV alteplase to assess for clinical response should not be performed.	III: Harm	B-R

Nghiên cứu DAWN: 6-24 giờ

- Age ≥18
- NIHSS ≥10
- Prestroke mRS ≤1
- Infarct <1/3 of the territory of the MCA on CT or MRI
- Occlusion of the intracranial ICA and/or MCA-M1, by CTA or MRA
- Last known to be normal 6-24 hours previously
- Clinical Imaging Mismatch (CIM) defined as one of the following on MR-DWI or CTP-rCBF maps:
  - 0-20 cc core infarct and NIHSS ≥10 (and age ≥80)
  - 0-30 cc core infarct and NIHSS ≥10 (and age <80)
  - 31 cc to <51 cc core infarct and NIHSS ≥20 (and age <80)

Nghiên cứu DAWN: 6-24 giờ



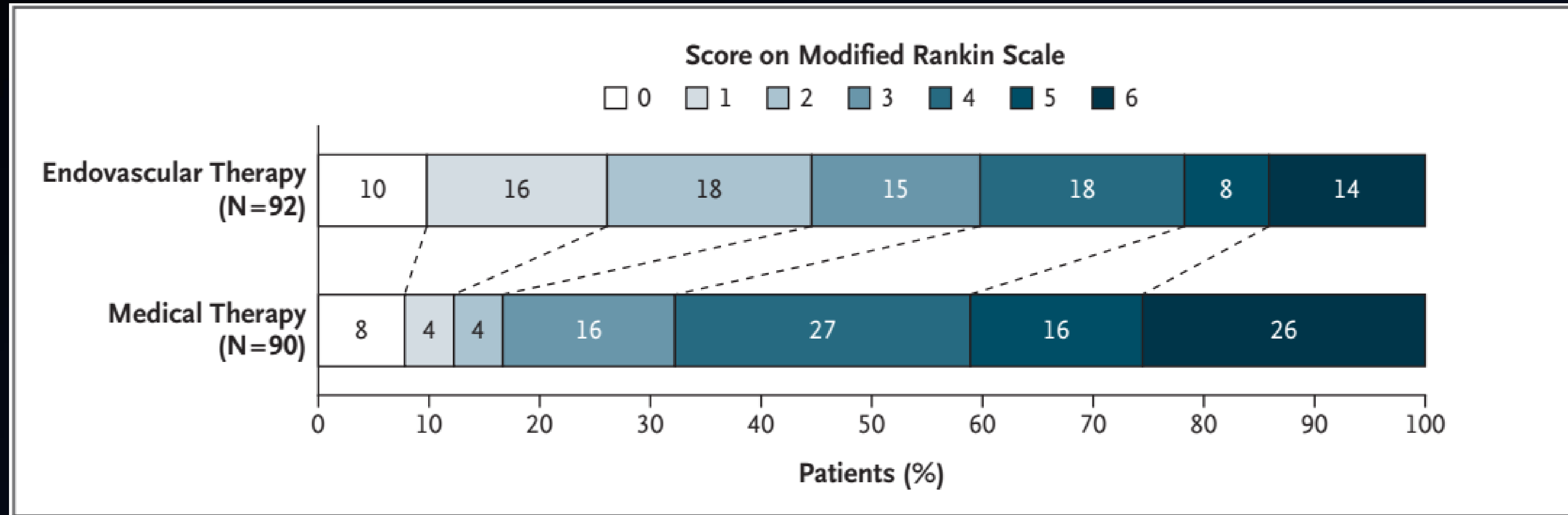
Kết cục tốt mRS 0-2 tại 90 ngày: 48% vs 13%

NNT =2.8

Nghiên cứu DEFUSE 3: 6-16 giờ

- Age ≥18-90
- NIHSS ≥6
- Prestroke mRS ≤2
- Endovascular treatment can be initiated (femoral puncture) between 6 and 16 hours of stroke onset
- ICA or MCA-M1 occlusion by MRA or CTA
- Target Mismatch Profile on CT perfusion or MRI (ischemic core
  volume <70 ml, mismatch ratio ≥1.8 and mismatch volume ≥15 ml)

Nghiên cứu DEFUSE 3: 6-16 giờ



- Kết cục tốt mRS 0-2 tại 90 ngày: 44% vs 16% □ NNT =3.6
- Tử vong có xu hướng thấp hơn ở nhóm can thiệp 14% vs 26%
- XHN có triệu chứng không khác biệt

AHA/ASA GUIDELINES 2018 – UPDATED 2019

American Heart Association | American Stroke Association

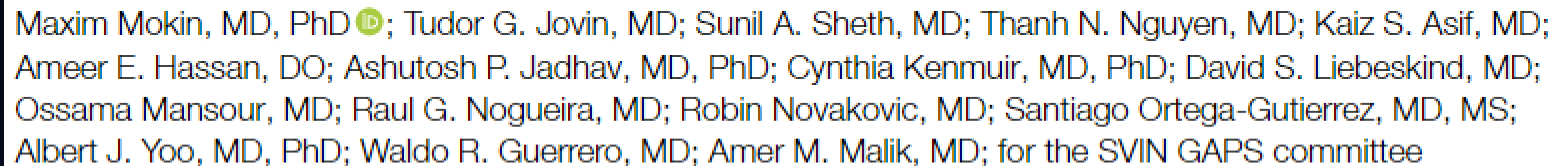
Recommendation	COR	LOE
1. In selected patients with AIS within 6 to 16 hours of last known normal who have LVO in the anterior circulation and meet other DAWN or DEFUSE 3 eligibility criteria, mechanical thrombectomy is recommended.	I	A
2. In selected patients with AIS within 16 to 24 hours of last known normal who have LVO in the anterior circulation and meet other DAWN eligibility criteria, mechanical thrombectomy is reasonable.	IIa	B-R

NHỒI MÁU NÃO LÕI LỚN

Stroke: Vascular and Interventional Neurology

REVIEW ARTICLE

Endovascular Therapy in Patients With Acute Ischemic Stroke With Large Infarct: A Guideline From the Society of Vascular and Interventional Neurology



Maxim Mokin, MD, PhD; Tudor G. Jovin, MD; Sunil A. Sheth, MD; Thanh N. Nguyen, MD; Kaiz S. Asif, MD; Ameer E. Hassan, DO; Ashutosh P. Jadhav, MD, PhD; Cynthia Kenmuir, MD, PhD; David S. Liebeskind, MD; Ossama Mansour, MD; Raul G. Nogueira, MD; Robin Novakovic, MD; Santiago Ortega-Gutierrez, MD, MS; Albert J. Yoo, MD, PhD; Waldo R. Guerrero, MD; Amer M. Malik, MD; for the SVIN GAPS committee

NHỒI MÁU NÃO LÕI LỚN

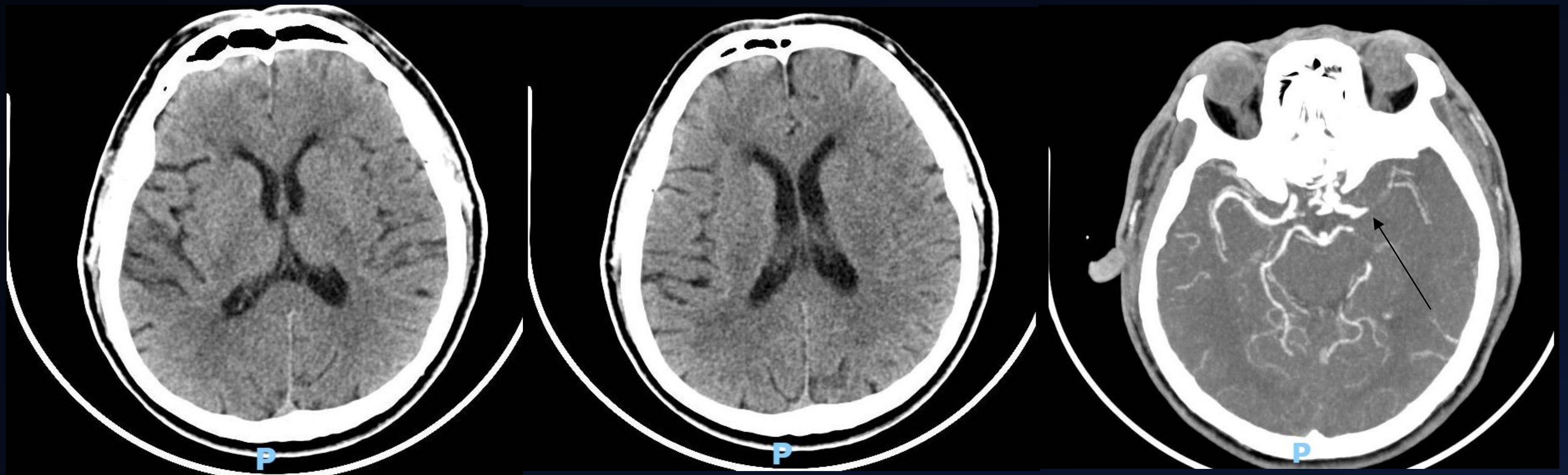
EVT within 0–6 hours of stroke onset	Class of recommendation	Level of evidence
In patients with anterior circulation stroke presenting within 0–6 h from symptom onset, baseline mRS score 0–1, age 18–80 y old, occlusion of the ICA or MCA M1 segment, and ASPECTS of 0–5 on noncontrast CT or MRI, EVT is recommended. (Evidence: LASTE trial; meta-analyses AlMajali et al, Roman et al, Winkelmeier et al)	1	A

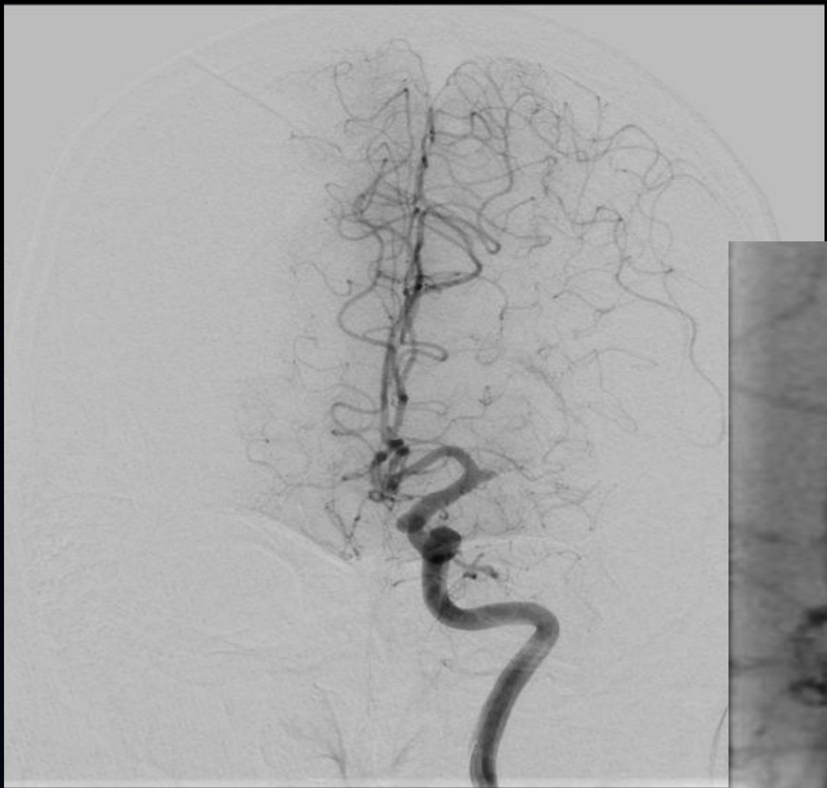
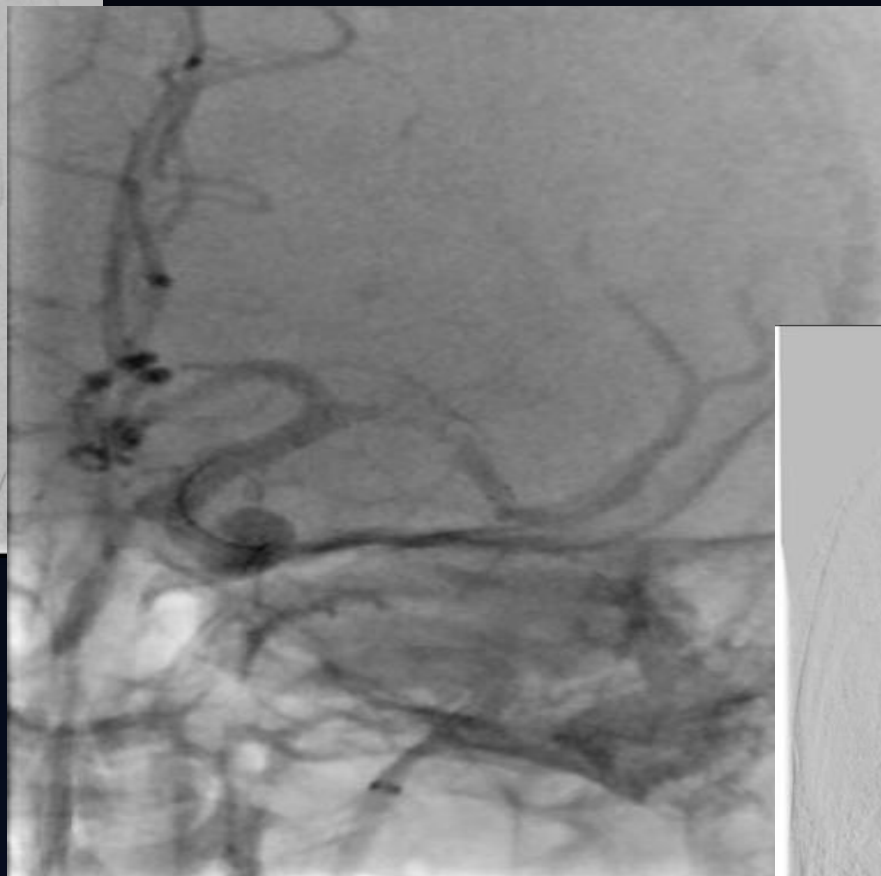
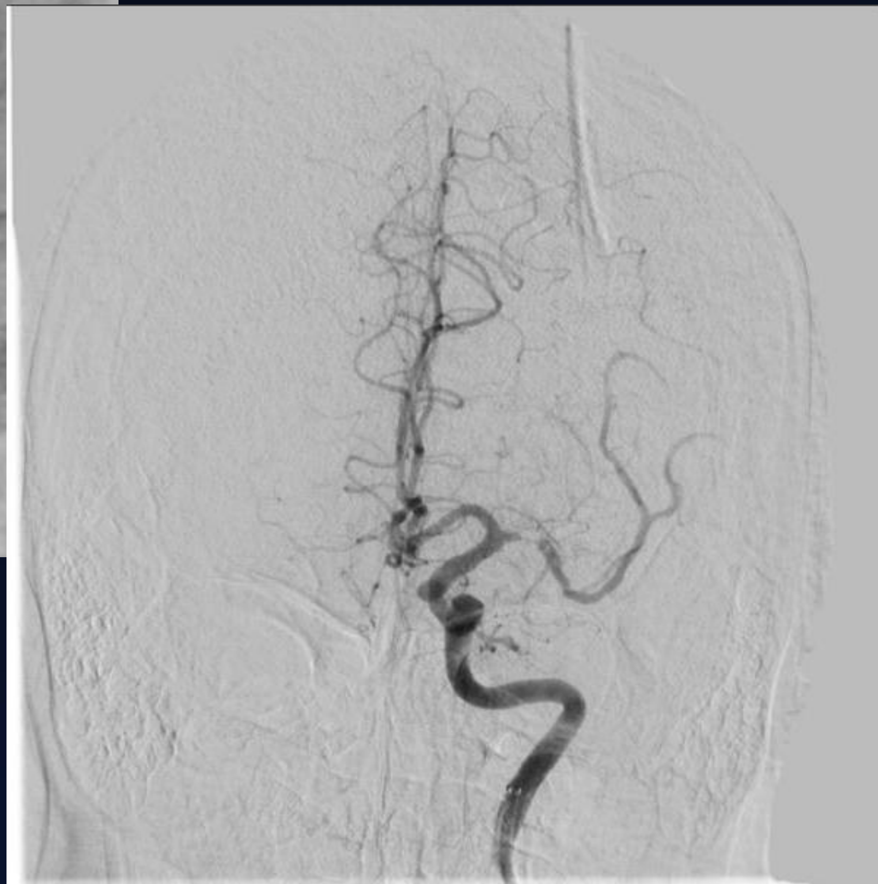
NHỒI MÁU NÃO LÕI LỚN

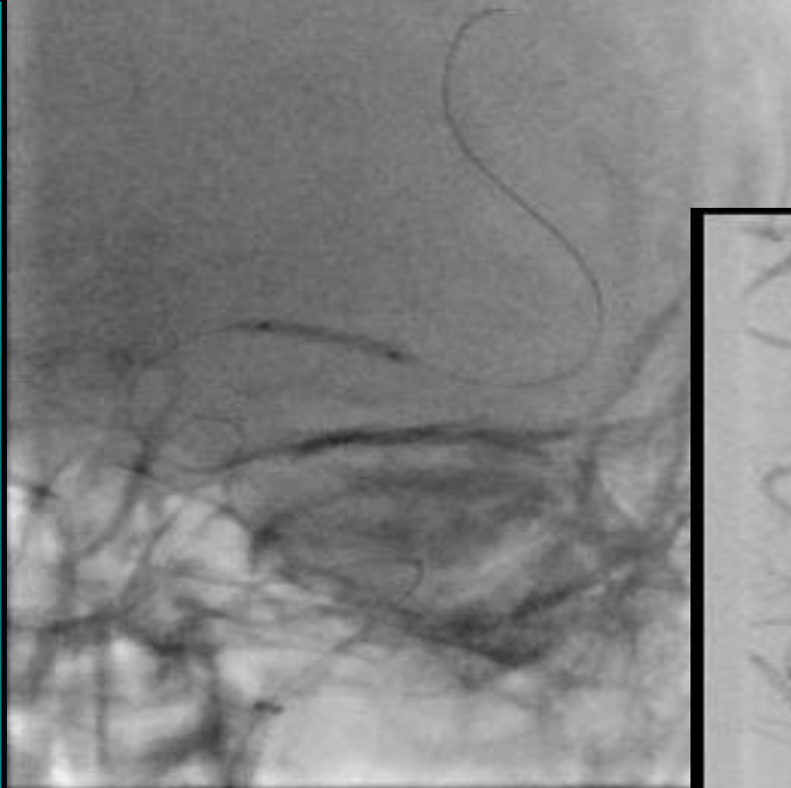
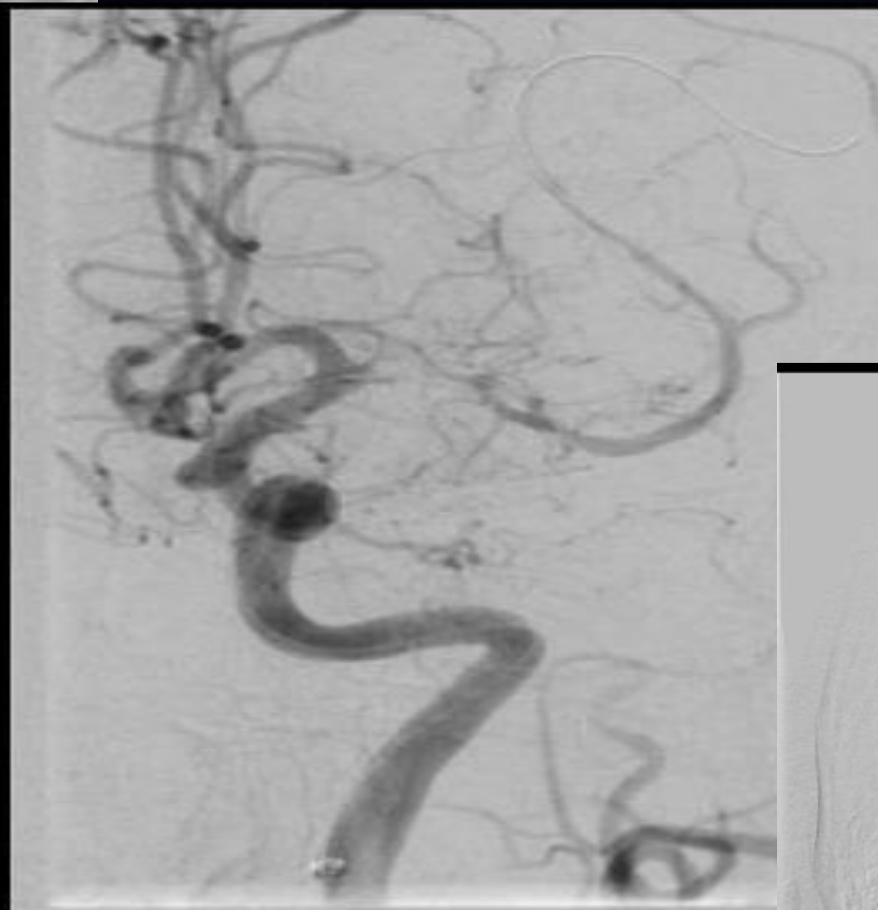
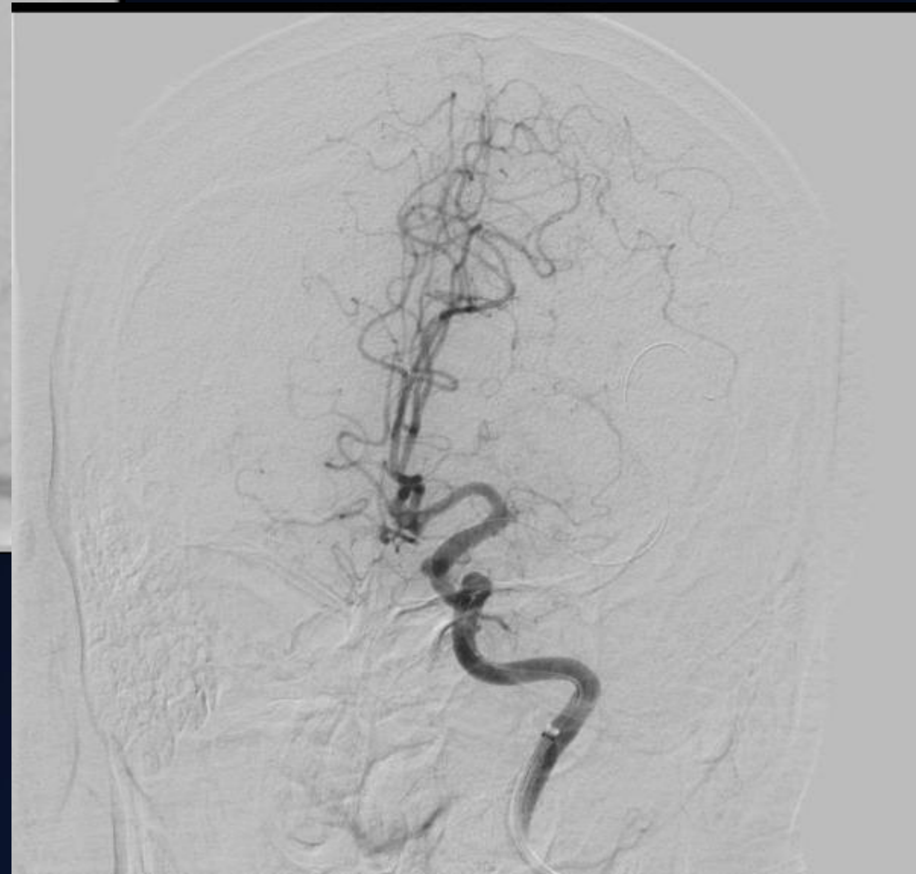
EVT within 6–24 hours of stroke onset	Class of recommendation	Level of evidence
In patients with anterior circulation LVO presenting within 6–24 h from symptom onset, baseline mRS score 0–1, age 18–80 years old, occlusion of the ICA or MCA M1 segment, and ASPECTS of 3–5 on noncontrast CT or MRI, EVT is recommended. (Evidence: ANGEL-ASPECT, RESCUE-Japan LIMIT; meta-analyses Palaiodimou et al, Wei et al, and Li et al)	**1**	**A**
In patients with anterior circulation LVO presenting within 6–24 h from symptom onset, baseline mRS score 0–1, age 18–80 years old, occlusion of the ICA or MCA M1 segment with CTP imaging according to the SELECT2 and ANGEL-ASPECT eligibility criteria, EVT is recommended. (Evidence: ANGEL-ASPECT, SELECT2)	**1**	**A**
In patients with anterior circulation LVO presenting within 6–24 h from symptom onset, baseline mRS score 0–1, age 18–80 years old, occlusion of the ICA or MCA M1 segment, and ASPECTS of 0–2 on noncontrast CT or MRI, the benefit of EVT is uncertain.	**2b**	**B-R**

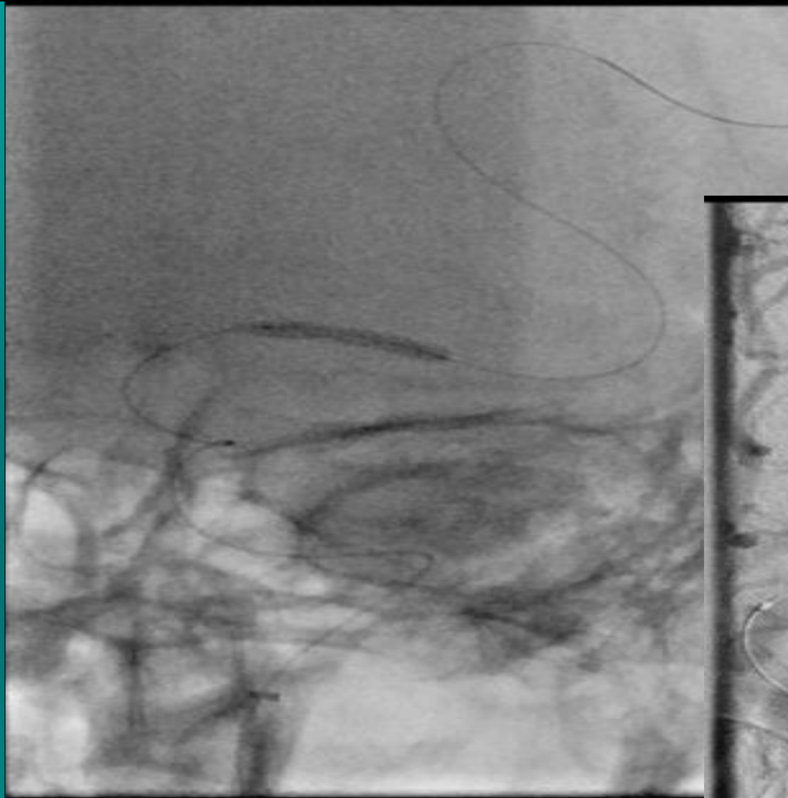
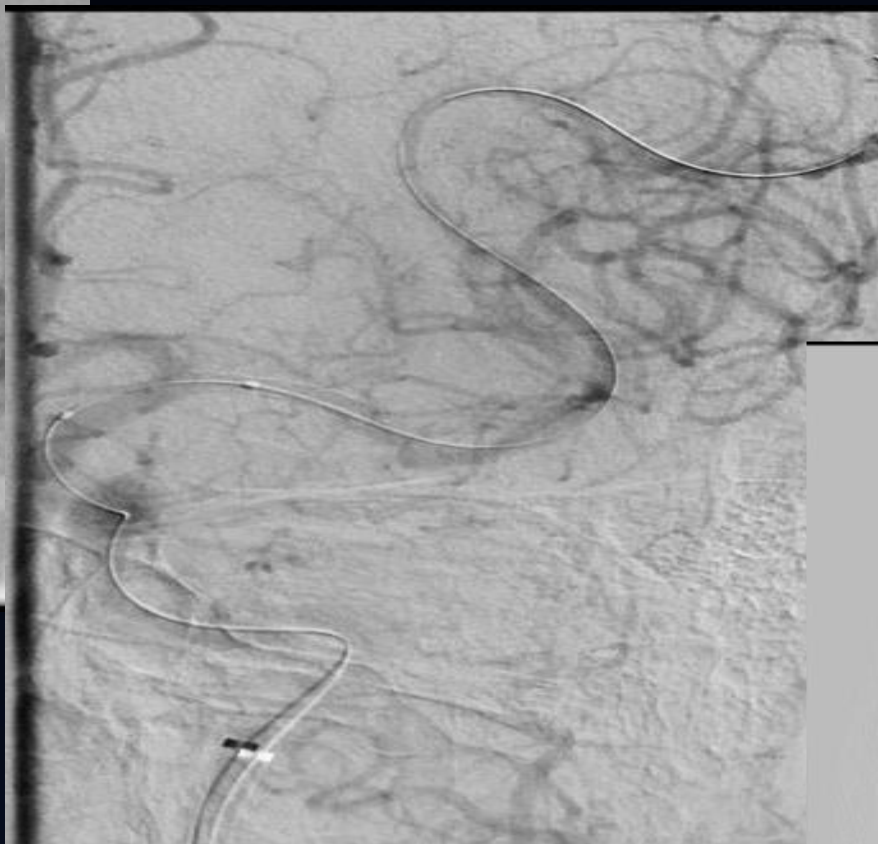
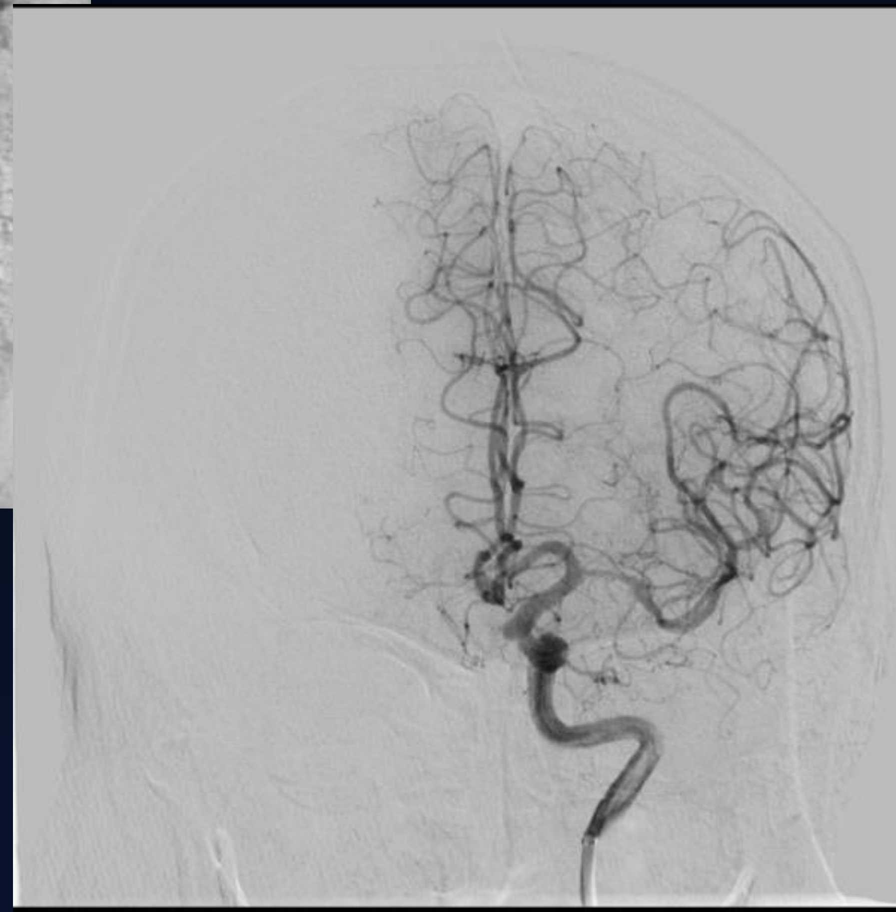
Case lâm sàng

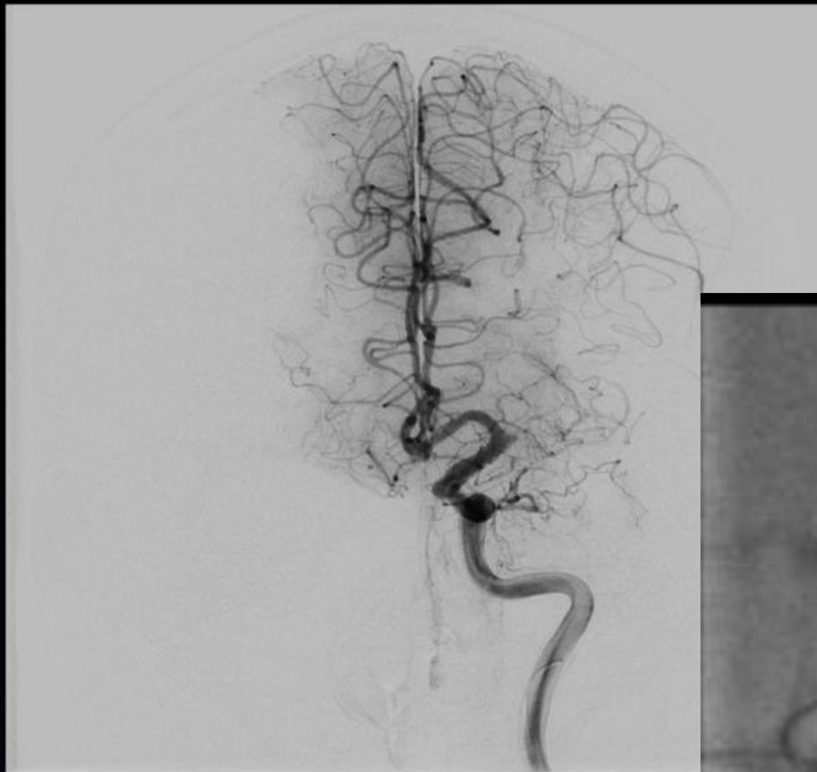
BN: Nam, 62 tuổi.
Vào viện vì liệt ½ người phải, sức cơ 3/5
Chẩn đoán: Nhồi máu não bán cầu trái tắc MCI trái giờ thứ 10
NIHSS: 14 điểm. ASPECTS: 7 điểm.

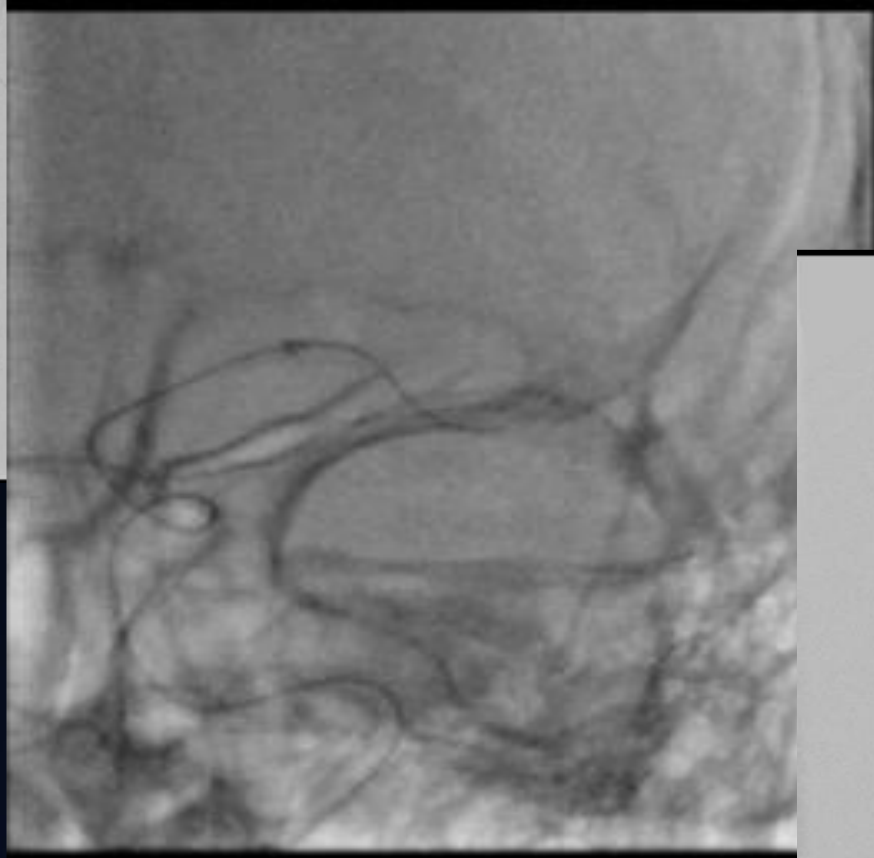


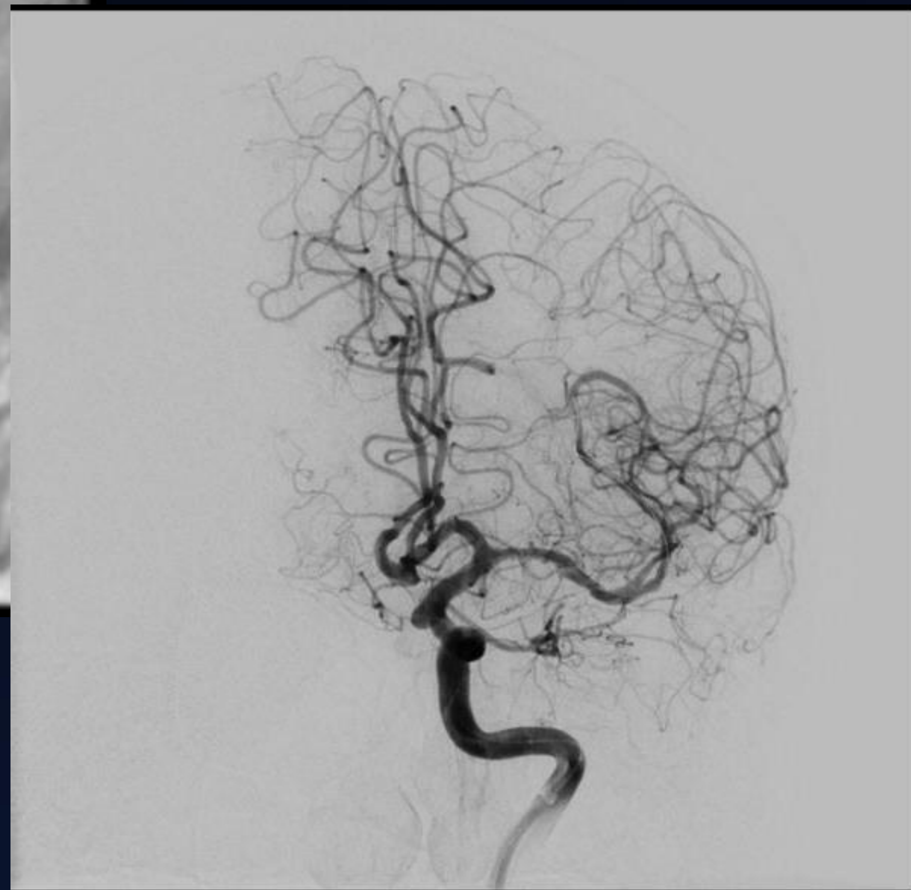










Indications for the Performance of Intracranial Endovascular Neurointerventional Procedures: A Scientific Statement From the American Heart Association

Clifford J. Eskey, MD, PhD, Chair, Philip M. Meyers, MD, FAHA, Co-Chair, Thanh N. Nguyen, MD, FRCPc, Sameer A. Ansari, MD, PhD, Mahesh Jayaraman, MD, Cameron G. McDougall, MD, J. Kevin DeMarco, MD,

1. For 50% to 69% intracranial stenosis, treatment with medical therapy (not angioplasty or stenting) is recommended.

2. For 70% to 99% stenosis, optimal medical therapy, which should include aspirin, clopidogrel for 90 days, maintenance of systolic BP <140 mm Hg, statin therapy, and aggressive risk factor modification, is recommended.

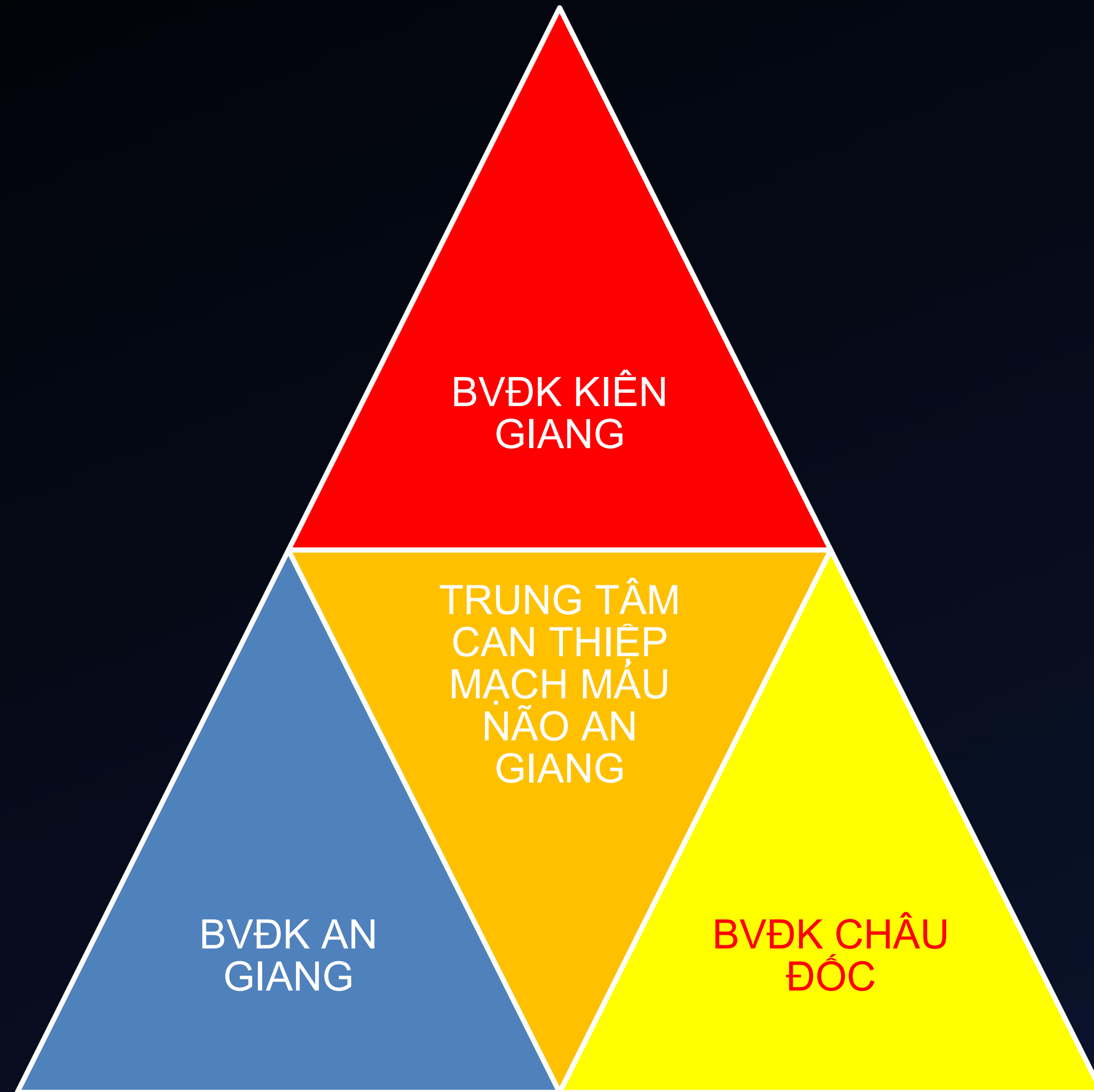
https://doi.org/10.1161/CIR.0000000000000567

3. For 70% to 99% stenosis, intracranial stenting with the Wingspan or Pharos stent system should not be used as initial treatment, even in patients on antithrombotic medications at the time of stroke or TIA.

4. For patients with severe stenosis (70%–99%) of a major intracranial artery who have progressing symptoms, recurrent TIA, or stroke despite treatment with dual antiplatelet therapy, achievement of systolic BP <140 mm Hg and high-intensity statin therapy, angioplasty alone, or placement of a Wingspan stent may be warranted.

5. The utility of angioplasty alone or placement of stents other than Wingspan or Pharos is unknown and is considered investigational.

https://doi.org/10.1161/CIR.0000000000000567


BVĐK KIÊN GIANG
TRUNG TÂM CAN THIỆP MẠCH MÁU NÃO AN GIANG
BVĐK AN GIANG
BVĐK CHÂU ĐỐC

KẾT LUẬN

- ✓ Thời gian là não.
- ✓ rTPA + MT vẫn là điều trị tiêu chuẩn.
- ✓ Can thiệp lấy huyết khối cơ học an toàn và hiệu quả cao trong đột quỵ thiếu máu não cấp có tắc mạch lớn trong cửa sổ 24 giờ.
- ✓ Intracranial stenting in the future ???

THANK YOU FOR YOUR ATTENTION !