



**Neurovascular**  
EPM/UNIFESP

# Novidades que mudam a prática no AVCi agudo em 2026

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# Disclaimers

- Nenhum conflito de interesse relacionado à apresentação
  
- Uso de IA para geração de **ALGUNS** gráficos
- Uso de IH para confecção da apresentação... ;)



# 2026 Guideline for the Early Management of Patients With Acute Ischemic Stroke: A Guideline From the American Heart Association/American Stroke Association

*Endorsed by the American Association of Neurological Surgeons/Congress of Neurological Surgeons, Neurocritical Care Society, the Society for Academic Emergency Medicine, the Society of NeuroInterventional Surgery, and the Society of Vascular and Interventional Neurology.*

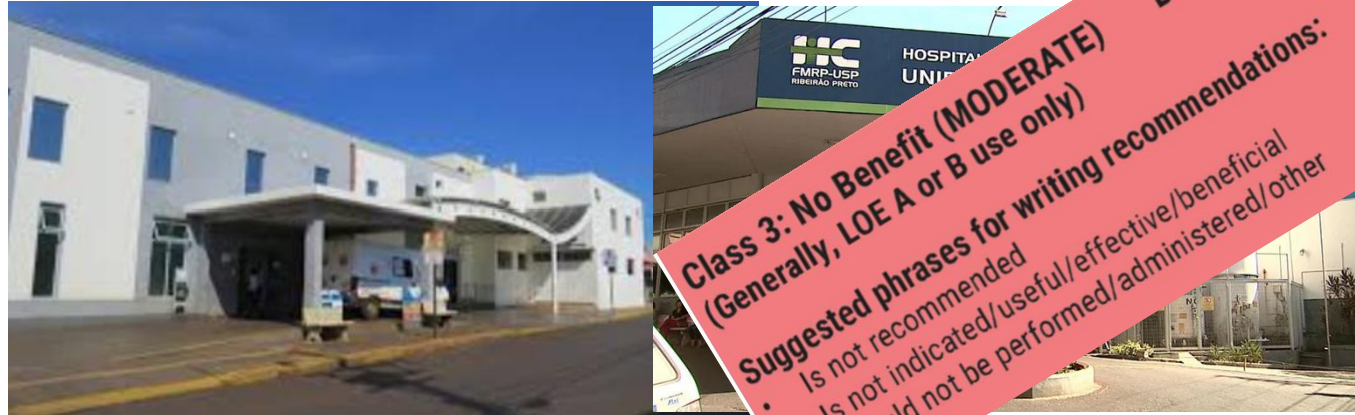
*The American Academy of Neurology affirms the value of this statement as an educational tool for neurologists.*

- **Já está desatualizado...**
    - Inibidores do Fator XI no AVCi
    - Trials sobre AVCi, FA e fechamento de apêndice atrial
    - Novos dados sobre Trombectomia em vasos médios e distais
- ... E estamos contando...



# Pré-Hospitalar

Levar o caso suspeito para hospital menor?



**Class 3: No Benefit (MODERATE)** Benefit = Risk  
 (Generally, LOE A or B use only)  
**Suggested phrases for writing recommendations:**

- Is not recommended
- Is not indicated/useful/effective/beneficial
- Should not be performed/administered/other

Levar o caso suspeito **DIRETO** para hospital avançado  
 \*Trombectomia

COR	LOE	Recommendations
<b>3: No Benefit</b>	<b>B-R</b>	4. In areas with well-coordinated SSOC and local hospital(s) proficient in thrombolysis delivery and secondary interhospital transfer, direct transport of patients with suspected LVO to a distant (eg, 45–60 min) TSC compared with transport to a local stroke center does not improve 3-month clinical outcomes. <sup>10–14</sup>



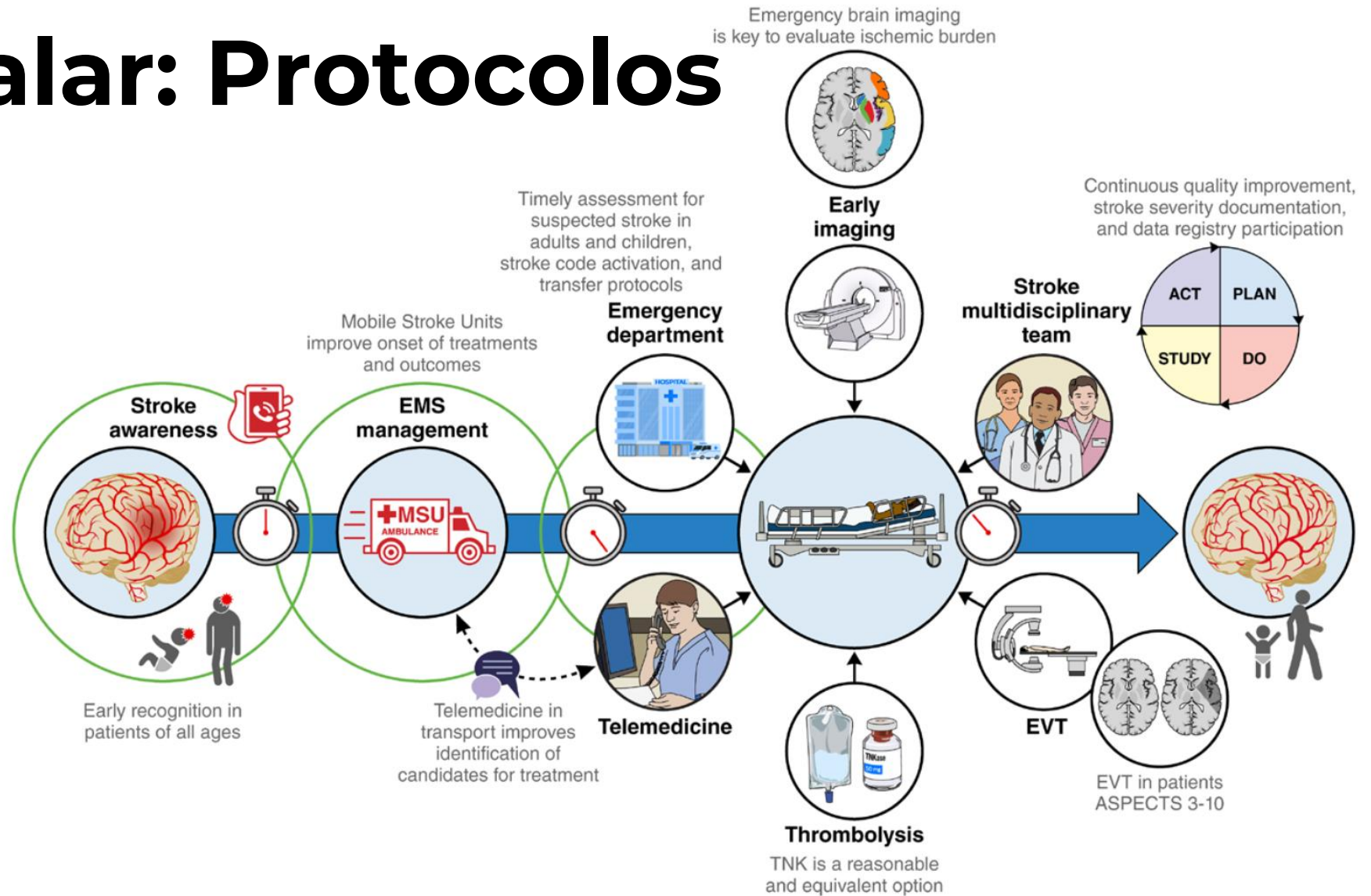
# Pré-Hospitalar: Protocolos

- Integração
- Pactuação

**Class 1 (STRONG)** Benefit >>> Risk

**Suggested phrases for writing recommendations:**

- Is recommended
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- Should be performed/administered/other
- Comparative-Effectiveness Phrases†:
  - Treatment/strategy A is recommended/indicated in preference to treatment B
  - Treatment A should be chosen over treatment B



# Mobile Stroke Unit – Ambulância com tomógrafo

- COR 1
- Custo-efetividade no Brasil ???
- Redução de tempos - COMPROVADO



**Class 1 (STRONG)**

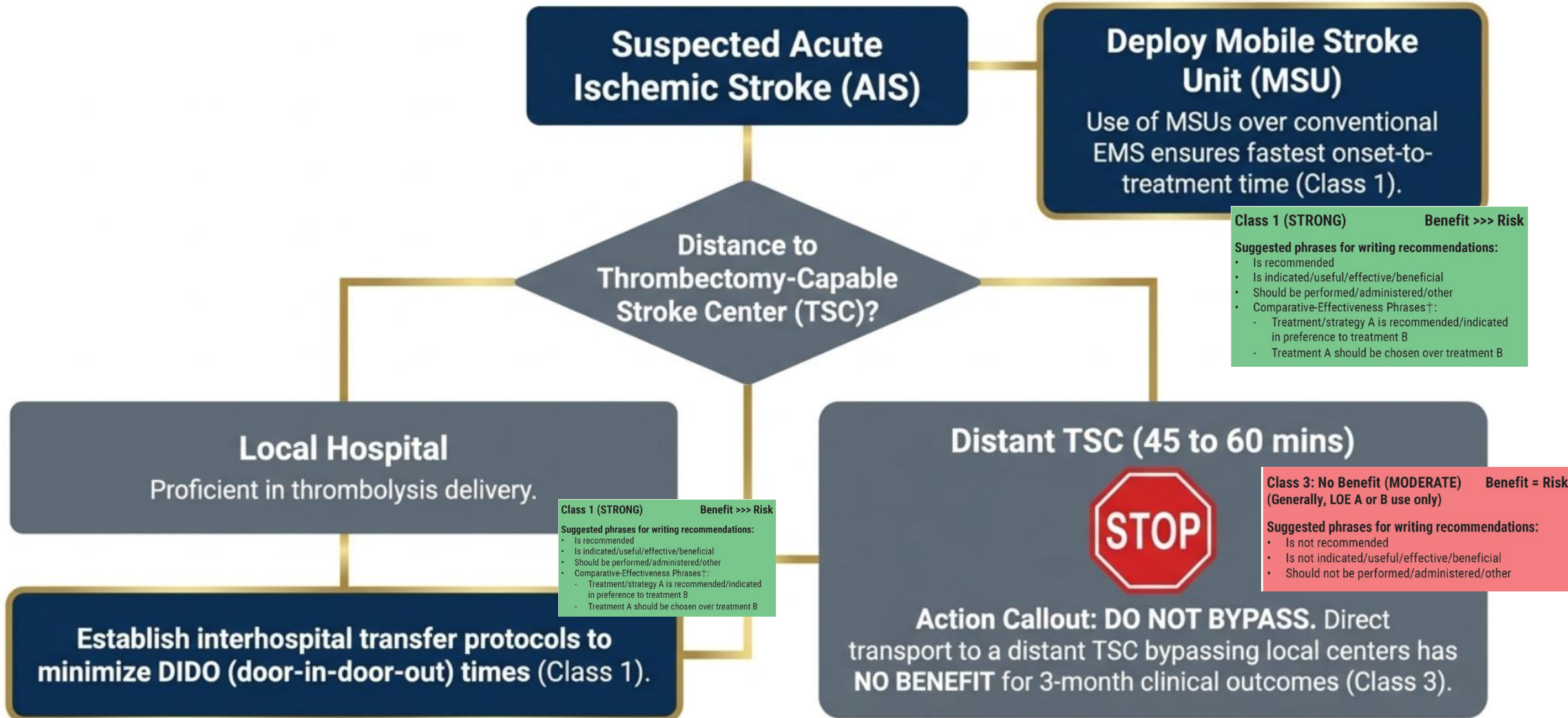
**Benefit >>> Risk**

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# Pré-Hospitalar e MSU



# Organização e Implementação da Rede de AVC

- Medir indicadores de qualidade
- Prover treinamento e certificação aos médicos neurointervencionistas

**Class 1 (STRONG) Benefit >>> Risk**

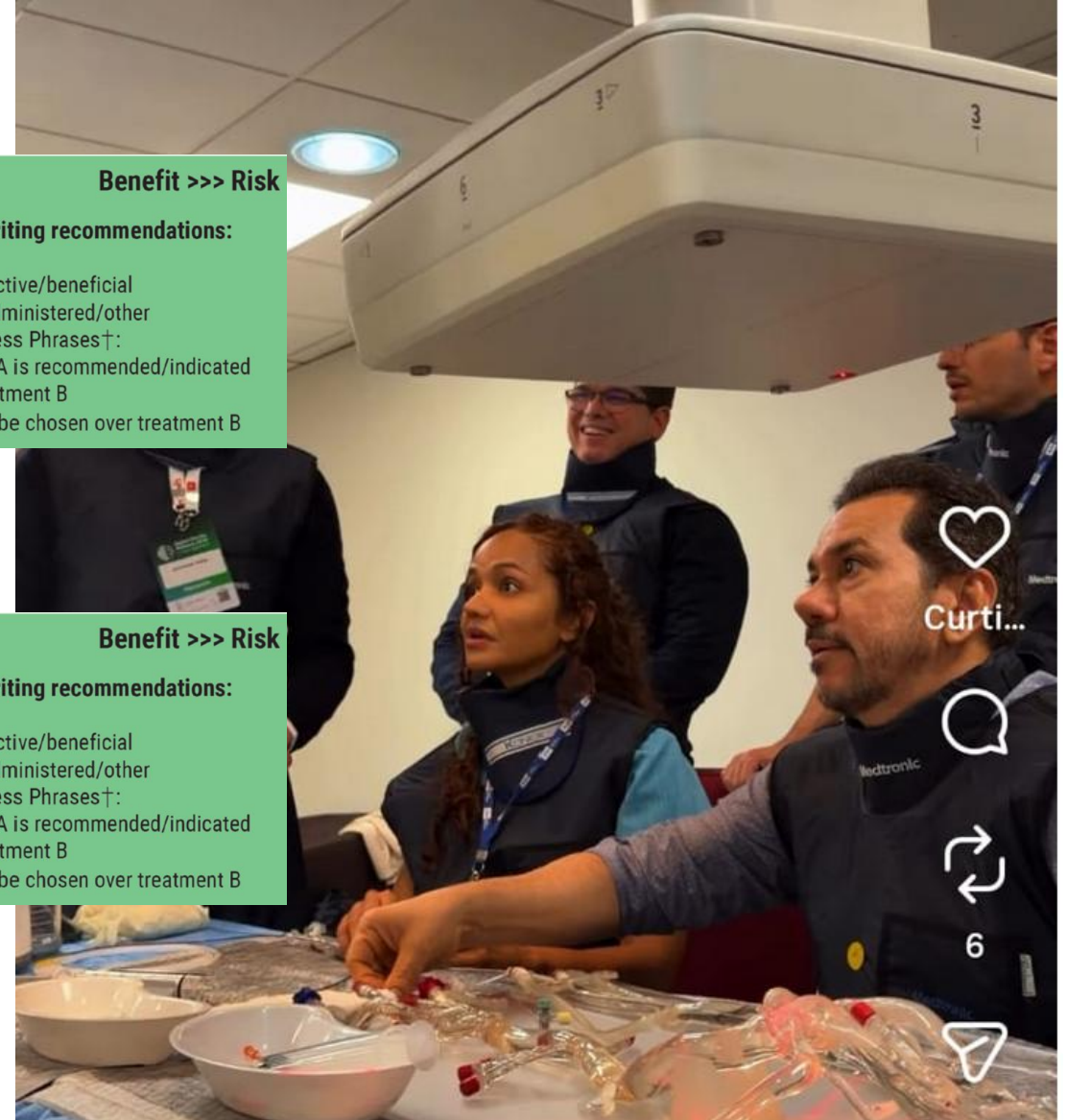
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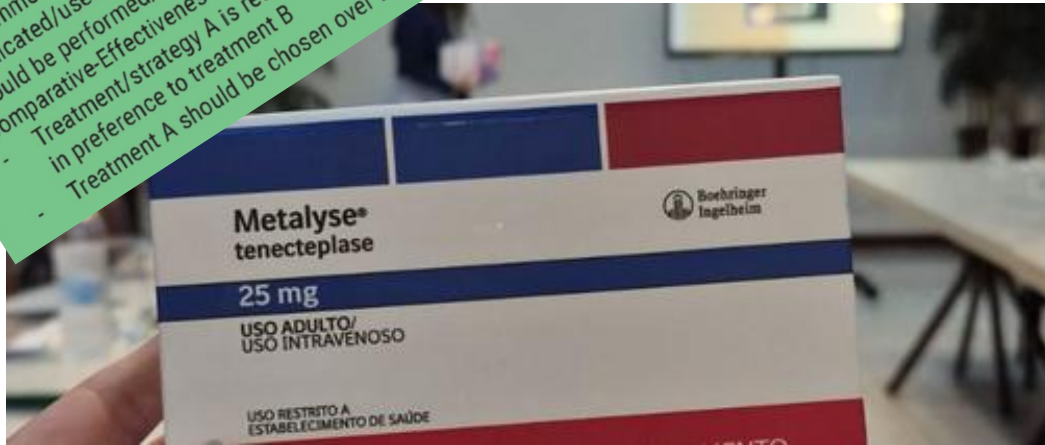


# Trombólise: Qual trombolítico usar?

**Class 1 (STRONG)** Benefit >>> Risk

**Suggested phrases for writing recommendations:**

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Dose: Bolus 0,25mg/kg

OU



Dose: Bolus + infusão 1h  
0,9mg/kg



# TNK: Tabela com faixas de peso

## Doses: TENECTEPLASE (TNK)



INFARTO AGUDO DO MIOCÁRDIO (IAM) - Doses de 30 a 50 mg

FAIXA DE PESO	VOLUME A ADMINISTRAR (mL)	DOSE TOTAL (mg)
< 60 kg	6,0 mL	30 mg
60 a < 70 kg	7,0 mL	35 mg
70 a < 80 kg	8,0 mL	40 mg
80 a < 90 kg	9,0 mL	45 mg
≥ 90 kg	10,0 mL	50 mg



ACIDENTE VASCULAR CEREBRAL (AVC) - Doses de 15 a 25 mg

FAIXA DE PESO	VOLUME A ADMINISTRAR (mL)	DOSE TOTAL (mg)
< 60 kg	3,0 mL	15,0 mg
60 a < 70 kg	3,5 mL	17,5 mg
70 a < 80 kg	4,0 mL	20,0 mg
80 a < 90 kg	4,5 mL	22,5 mg
≥ 90 kg	5,0 mL	25,0 mg

As doses para AVC são baseadas na faixa de peso do paciente, com a dose máxima de 25 mg.

**⚠ ATENÇÃO:** As apresentações de TNK para Infarto e AVC são diferentes - TNK 40 e 50mg (IAM) e TNK 25mg (AVC).



# Trombólise EV: AVC não-incapacitante

*Exemplos:*

- Déficit sensitivo puro
- Paresia facial isolada
- Disartria muito leve



**Trials não mostraram benefício da Trombólise.**

**Nova diretriz: Trombolítico é COR 3**

**Class 3: No Benefit (MODERATE) Benefit = Risk**  
(Generally, LOE A or B use only)

**Suggested phrases for writing recommendations:**

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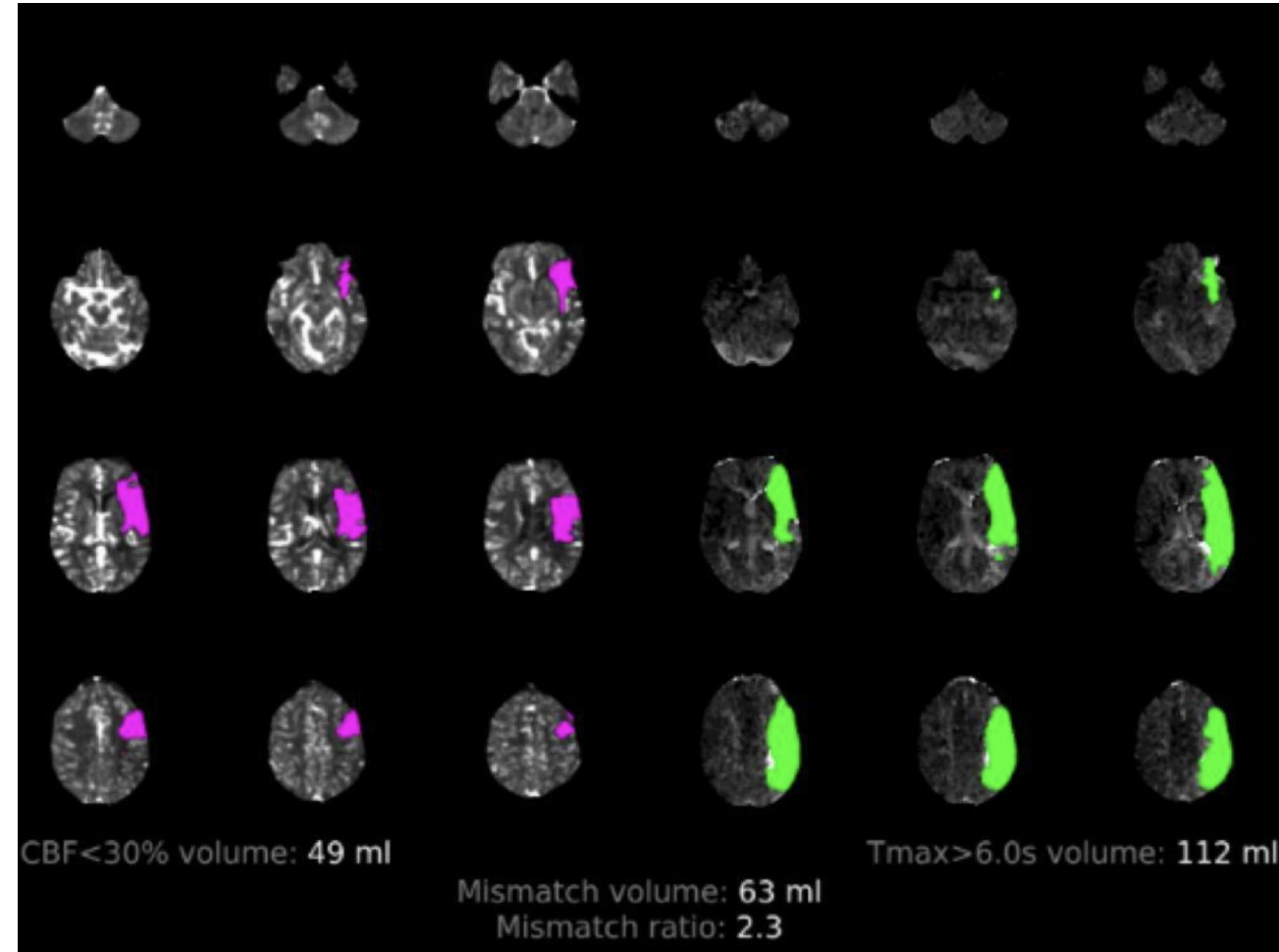
# Trombólise EV: Janela estendida

- Janela: Entre 4,5 - 9h ou Wake-up
- Papel da Neuroimagem avançada
- Penumbra presente
  - CT perfusão
  - RM FLAIR DWI Mismatch

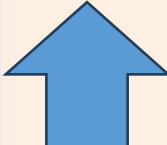

**Class 2a (MODERATE) Benefit >> Risk**

**Suggested phrases for writing recommendations:**

- Is reasonable
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# Trombólise EV: Contraindicações

Conditions That are Relative Contraindications	
Pre-existing disability	The benefits vs risks of offering IV thrombolysis in patients with pre-existing disability and/or frailty remain uncertain. Treatment should be determined on an individual basis.
DOAC exposure 	In patients with disabling symptoms and recent DOAC exposure (<48 hours) who are within the window for alteplase/tenecteplase, the safety of IV thrombolysis is unknown. Emerging but limited observational data suggest IV thrombolysis may be considered after a thorough benefit vs risk analysis on an individual basis. Benefit vs risk assessments should include considering the timing of the last DOAC administration, renal function, stroke severity, and availability of endovascular thrombectomy as well as availability of DOAC reversal agents and DOAC-specific anti-factor Xa/thrombin time assays acknowledging the potential for delay in thrombolysis and potential increased thrombotic risk. All aspects of DOAC management (timing, reversal agent use, assay results), should be recorded carefully to facilitate ongoing safety analyses. Definitive clinical trials are needed to establish the safety of IV thrombolysis in DOAC patients.
Ischemic stroke w/ in 3 months	Use of IV thrombolysis in patients presenting with AIS who have had a prior ischemic stroke within 3 months may be at increased risk of intracranial hemorrhage. Potential increased risk as a result of the timing and size of the stroke should be weighed against the benefits of offering IV thrombolysis in an individualized manner in such patients.
Prior ICH 	IV thrombolysis administration in patients who have a history of ICH may increase the risk of symptomatic hemorrhage. Patients with known amyloid angiopathy may be considered as having higher risk than patients with ICH due to modifiable conditions (e.g. HTN, coagulopathy). IV thrombolysis may be considered if the potential for greater treatment benefit than risk in these latter patients. Treatment should be determined on an individual basis.

Conditions that are Considered Absolute Contraindications	
CT with extensive hypodensity	IV thrombolysis should not be administered to patients whose brain imaging exhibits regions of clear hypodensity that appear to be responsible for the clinical symptoms of stroke. Clear hypodensity is when the degree of hypodensity is greater than the density of contralateral unaffected white matter.
CT with hemorrhage	IV thrombolysis should not be administered to patients whose CT brain imaging reveals an acute intracranial hemorrhage.
Moderate to severe traumatic brain injury <14 days	IV thrombolysis is likely contraindicated in AIS patients with recent moderate to severe traumatic brain injury (within 14 days) that incurred >30 minutes of unconsciousness and Glasgow Coma Scale of <13 OR evidence of hemorrhage, contusion, or skull fracture on neuroimaging.
Neurosurgery <14 days	For patients with AIS and a history of intracranial/spinal surgery within 14 days, IV thrombolysis is potentially harmful and should not be administered.
Acute spinal cord injury within 3 months	IV thrombolysis is likely contraindicated in AIS patients with spinal cord injury within 3 months.
Intra-axial neoplasm	For patients with AIS who harbor an intra-axial intracranial neoplasm, treatment with IV thrombolysis is potentially harmful and should not be administered.
Infective endocarditis	For patients with AIS and symptoms consistent with infective endocarditis, treatment with IV thrombolysis should not be administered.
Severe coagulopathy or thrombocytopenia	The safety and efficacy of IV thrombolysis for AIS in patients with platelets <100,000/mm <sup>3</sup> , INR>1.7, aPTT>40s, or PT>15s is unknown though may substantially increase risk of harm and should not be administered.  In patients without recent use of warfarin or heparin, treatment with IV thrombolysis can be initiated before availability of coagulation test results but should be discontinued if INR >1.7, PT, or PTT is abnormal by local laboratory standards.
Aortic arch dissection	For patients with AIS and known or suspected aortic arch dissection, treatment with IV thrombolysis is potentially harmful and should not be administered
Amyloid-related imaging abnormalities (ARIA)	The risk of thrombolysis related ICH in patients on amyloid immunotherapy or with ARIA is unknown and IV thrombolysis should be avoided in such patients.

# Trombectomia em Large Core

- ASPECTS 0-2  
→ até 6h

**Class 1 (STRONG)** Benefit >>> Risk

**Suggested phrases for writing recommendations:**

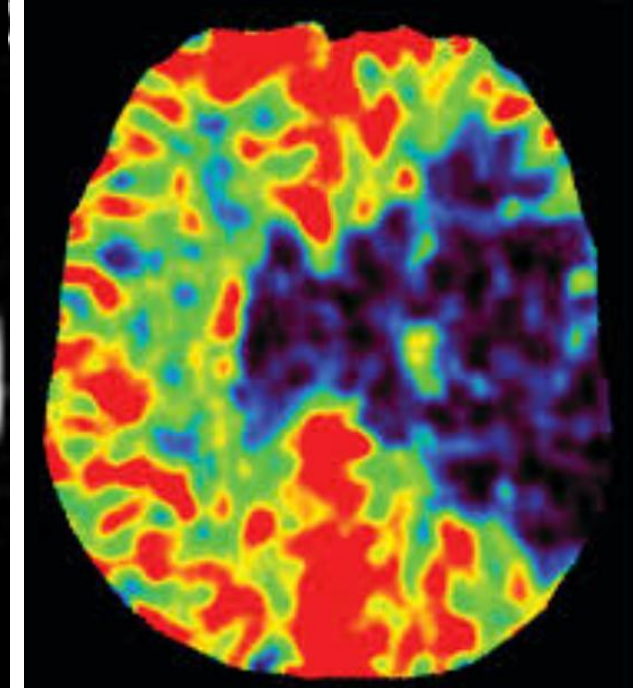
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- ASPECTS  $\geq 3$   
→ de 6-24h

**Class 2a (MODERATE)** Benefit >> Risk

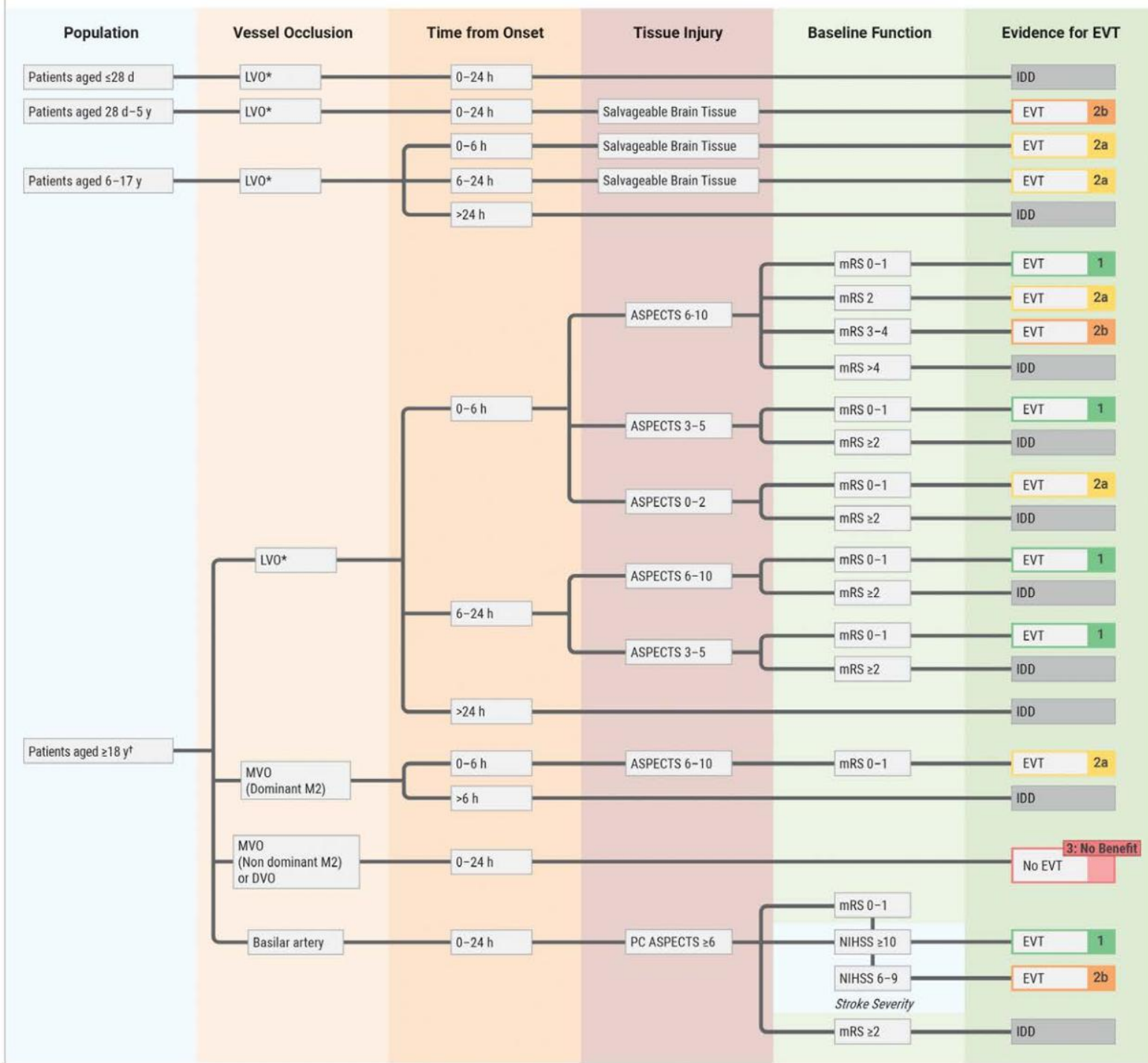
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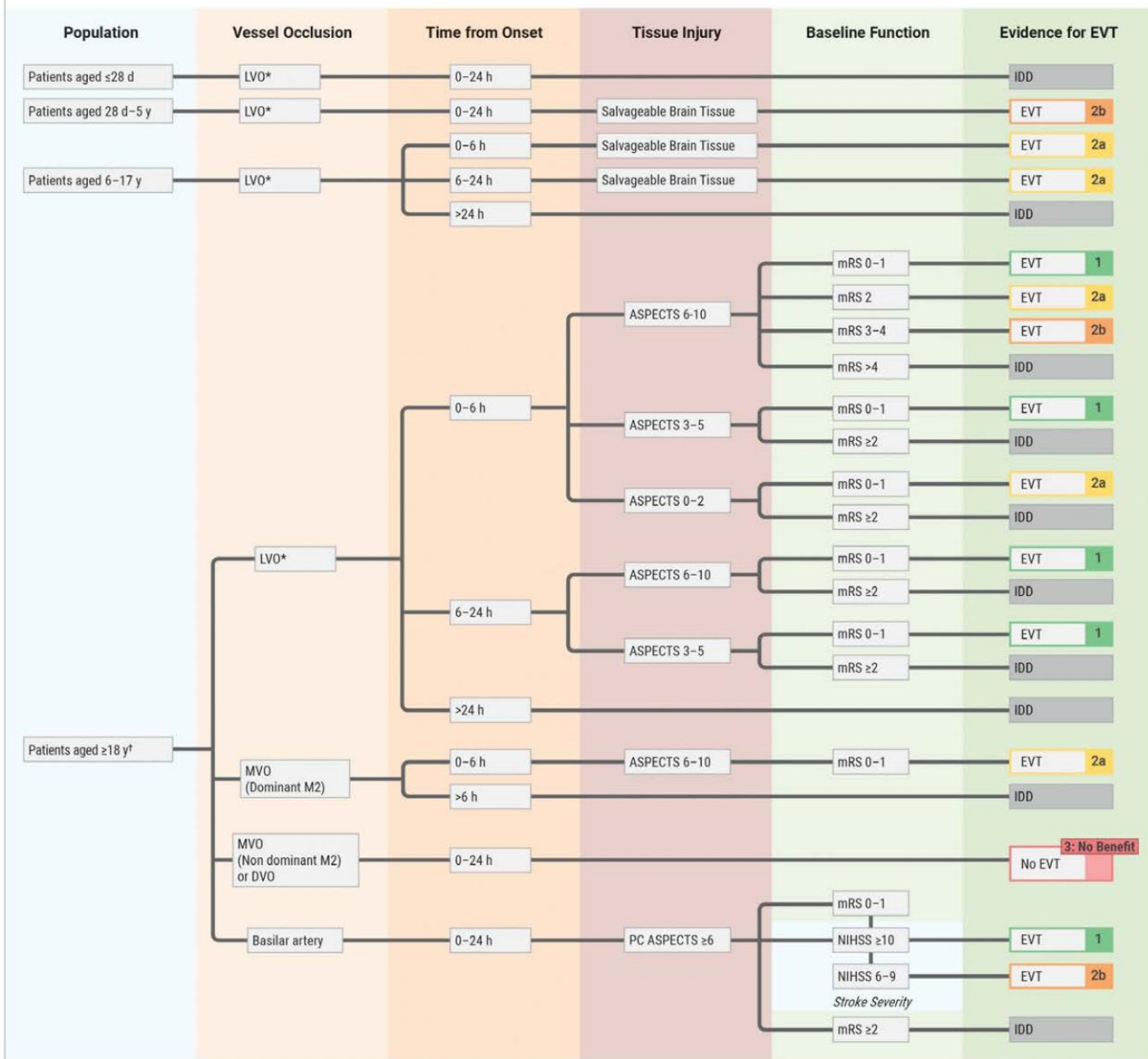
# Trombectomia no AVCi agudo

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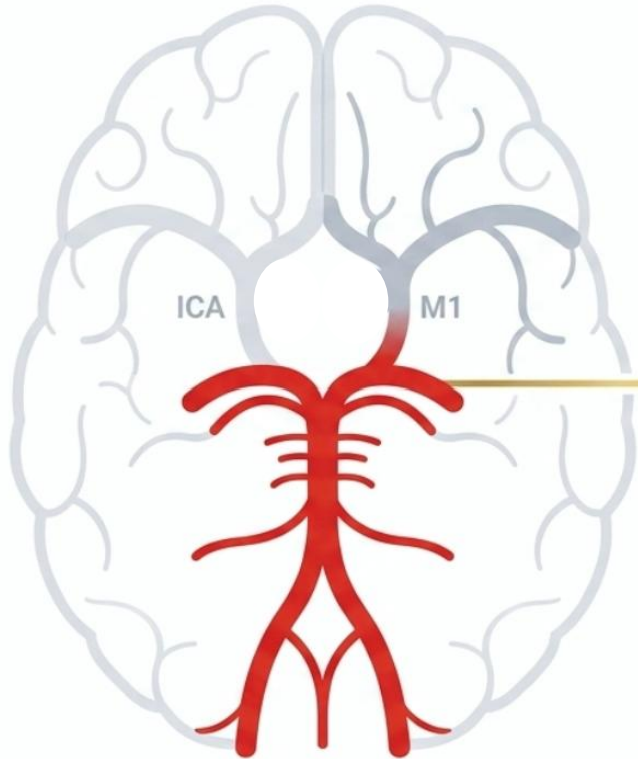


# Trombectomia no AVCi agudo

...



# Trombectomia em Trombose da Artéria Basilar



## Critérios:

- 🕒 Janela:  $\leq 24h$
- 👤 mRS basal - 0 ou 1
- 🧠 NIHSS > 10 pontos
- 🧠 PC-ASPECTS > 6 pts

**Obs.: Trombólise geralmente mais eficaz em BAO; Pctes com NIHSS <10pts não foram avaliados nos trials**

**Class 1 (STRONG)**

**Benefit >>> Risk**

### Suggested phrases for writing recommendations:

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- Should be performed/administered/other
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# Manejo durante e pós-Trombectomia

- Dar Tirofiban = sem benefício

**Class 3: No Benefit (MODERATE)** Benefit = Risk  
(Generally, LOE A or B use only)

**Suggested phrases for writing recommendations:**

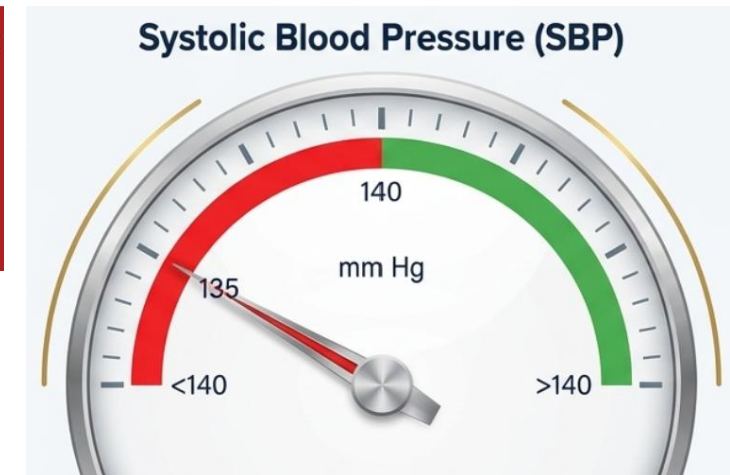
- Is not recommended
- Is not indicated/useful/effective/beneficial
- Should not be performed/administered/other

- Manter PAS  $\leq$  140mmHg

**Class 3: HARM (STRONG)** Risk > Benefit

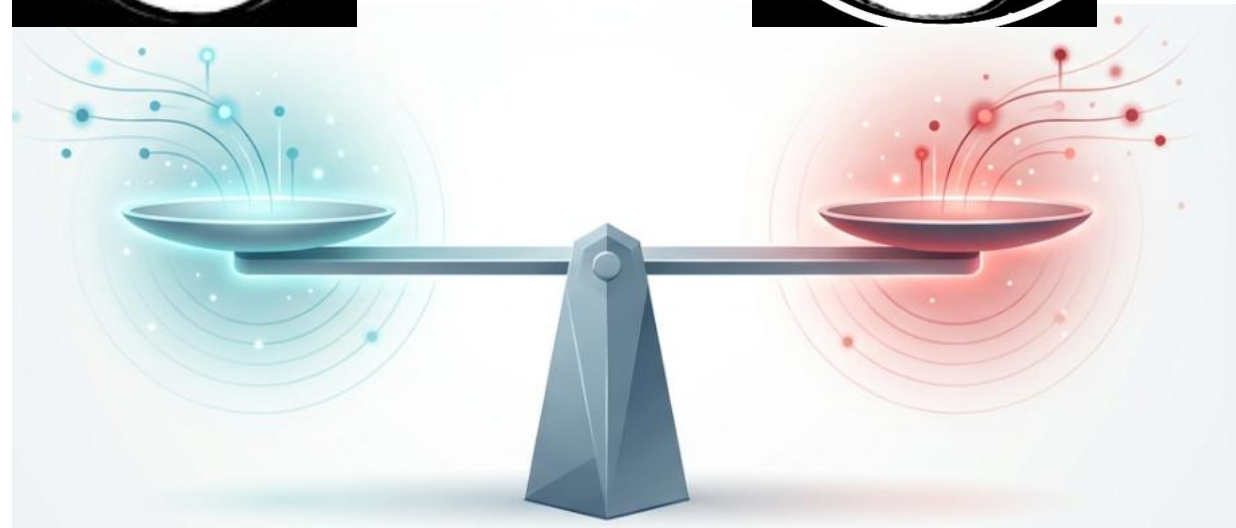
**Suggested phrases for writing recommendations:**

- Potentially harmful
- Causes harm
- Associated with excess morbidity/mortality
- Should not be performed/administered/other



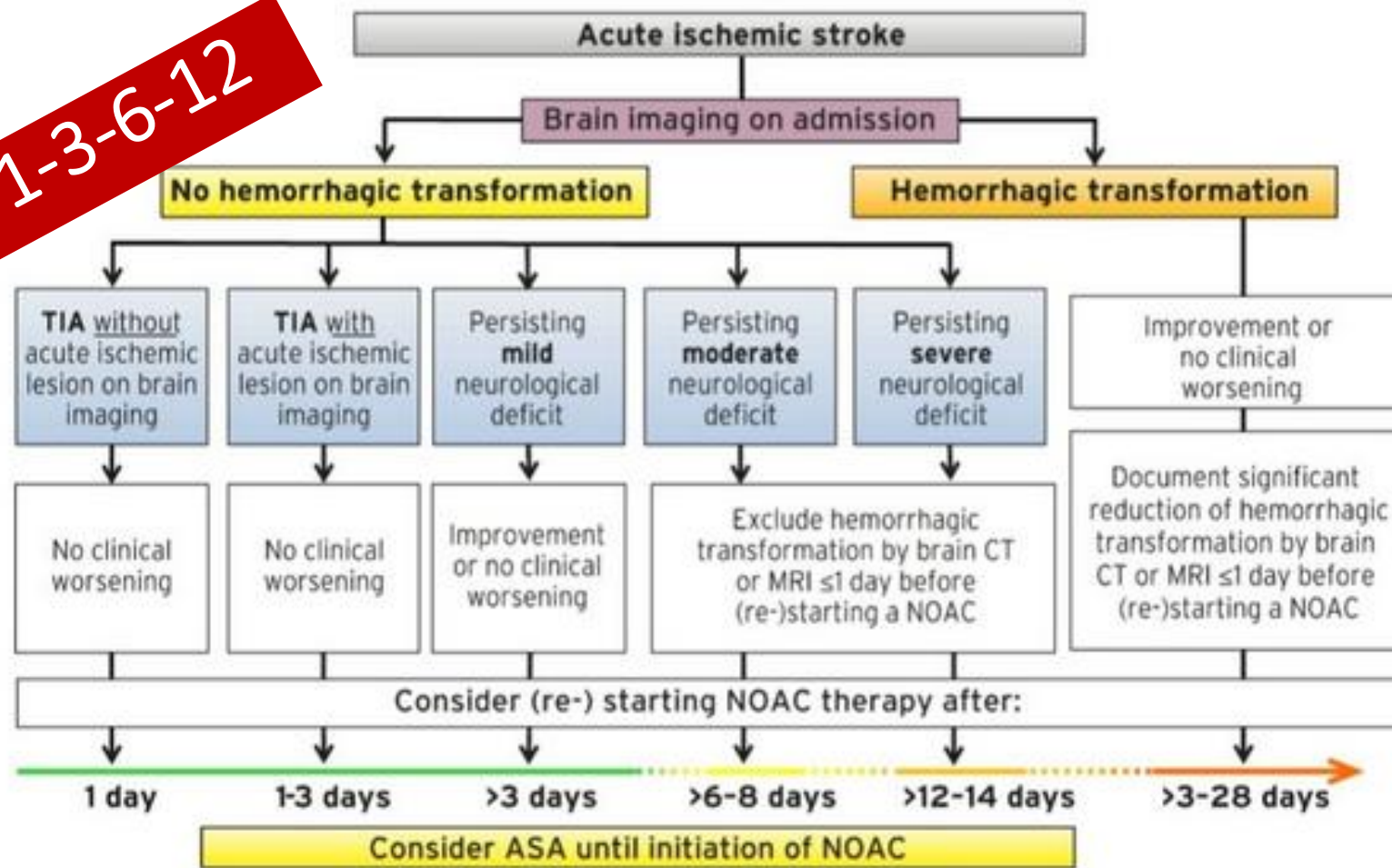
# Timing para iniciar ACO após AVCi

- Quando voltar com ACO/DOACs após AVCi agudo?
- AVCi + FA e indicação de ACO



# Re-starting NOAC after acute IS – EHRA guideline

**Rule 1-3-6-12**



Based on expert opinion! No RCT data available yet

Característica	START	ELAN	OPTIMAS	TIMING	CATALYST
<b>Tipo de estudo</b>	RCT fase 2, US (Texas, multicêntrico)	RCT internacional	RCT, UK, multicêntrico	RCT, Suécia, não- inferior	Individual-participant metanálise
<b>n</b>	200	2013	3621	888	5441
<b>Grupos</b>	3-4d 6d / 10d / 14d	<48h 3-4/6-7/12-14d	≤4d 7-14d	≤4d 5-10d	<4d >5d
<b>Desfecho primário</b>	Composite: evento isquêmico (AVC/embolia) ou hemorrágico (sICH ou hemorragia maior) em 30d	Composite: AVC, embolia, sangramento ou morte CV em 30d  → 2,9 x 4,1%	Composite: AVC, sICH ou embolia em 90d  → 3,3% ambos	Composite: AVC recorrente, sICH ou morte CV em 90d  → 6,9 x 8,7%	Composite: AVC recorrente, sICH ou AVC não classificado em 30d  → 2,1 x 3%
<b>Sangramento intracraniano (sint.)</b>	1 caso cada grupo 1/2/3 0 grupo 4	0,2% ambos os grupos	0,6 x 0,7%	Zero, ambos os grupos	0,4% ambos os grupos
<b>Achados principais</b>	DOACs iniciados dentro das 1as. 2 Semanas foi melhor do que tardiamente após o AVCi.	Incidência de desfechos variou de -2,8 to +0,5% com início mais precoce.	Início precoce ≤4d de DOACs foi não- inferior ao início tardio, após AVCi agudo com FA.	Início precoce ≤4d de DOACs foi não- inferior ao início tardio, após AVCi agudo com FA.	Início precoce ≤4d reduziu significativamente os desfechos primários combinados, em AVCi agudo no cenário de FA.

# Timing para iniciar ACO após AVCi

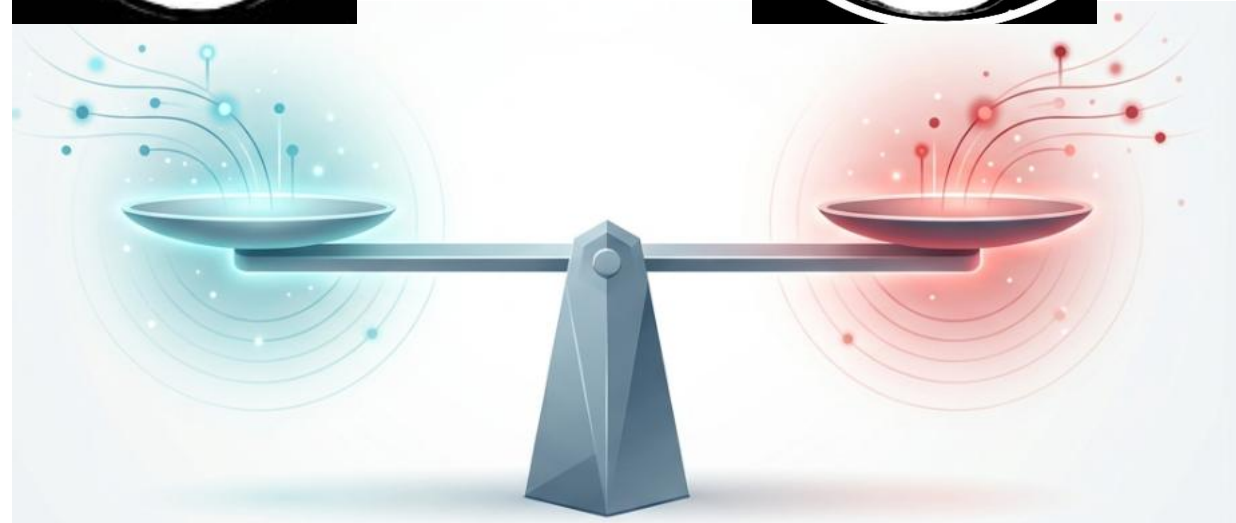
- Quando voltar com ACO/DOACs após AVCi agudo?
- AVCi + FA e indicação de ACO
- Janela  $\leq 4$  dias – **CATALYST metanalysis**



**Class 2a (MODERATE)**      **Benefit >> Risk**

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# Timing para iniciar ACO após AVCi

- Esqueçam regra ANTIGA e parâmetro NIHSS → 1-3-6-12d...
- Re-iniciar anticoagulantes (DOACs) em FA →  $\leq 4$  dias
  - Sempre repetir Neuroimagem e avaliar risco
  - Considerar tamanho do infarto, transformação hemorrágica, fonte embólica responsável e risco de recorrência



# AVCi agudo pediátrico

Idades: 28 dias até 18 anos

Agora: Razoável: trombólise e trombectomia

**Mais factível:** > 6 anos para trombectomia

→ TM <6 anos = 2b WEAK

## Class 2a (MODERATE)

Benefit >> Risk

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## Class 2b (WEAK)

Benefit ≥ Risk

### Suggested phrases for writing recommendations:

- May/might be reasonable
- May/might be considered
- Usefulness/effectiveness is unknown/unclear/uncertain or not well-established



# Obrigada!



@maramd



@maramelia



Neurovascular  
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