Be Informed: Updates to the 2026 AHA/ASA Guidelines for Early Management of Acute Ischemic Stroke

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Disclosure Statement

- None of the planners for this activity have relevant financial relationships to disclose with ineligible companies

Abbreviations

- AHA: American Heart Association
- ASA: American Stroke Association
- CT/CTA: Computed Tomography/Computed Tomography Angiography
- DAPT: Dual Antiplatelet Therapy
- DWI: Diffusion-Weighted Imaging
- EVT: Endovascular Therapy
- FLAIR: Fluid Attenuated Inversion Recovery
- IV: Intravenous
- IVT: Intravenous thrombolysis
- LKW: Last Known Well
- LVO: Large Vessel Occlusion
- MRI/MRA: Magnetic Resonance Imaging/Magnetic Resonance Angiography
- NIHSS: National Institutes of Health Stroke Scale

Learning Objectives

- Summarize evidence-based guideline updates for the management of patients presenting with acute ischemic stroke

- Compare changes between the 2019 and 2026 AHA/ASA guidelines for acute ischemic stroke

Pre-Test Question

- **True or False**: According to the 2026 AHA/ASA guidelines, use of alteplase and tenecteplase in eligible patients have equivalent levels of recommendation

Guideline Key Updates

- Thrombolytic therapy
- Extended time window
- Blood pressure and glucose management
- Pediatric stroke guidance

Thrombolytic Therapy – within 4.5 hours

- Disabling deficits (regardless of NIHSS score) = **TREAT**
- Avoid delays associated with additional neuroimaging (CTA/MRA or CT/MR perfusion imaging)
- Non-disabling deficits = no benefit, **DAPT** preferred
- Choice: alteplase (0.9 mg/kg) **OR** tenecteplase (0.25 mg/kg)

Class I recommendations

Prabhakaran S, et al. AHA/ASA Acute Ischemic Stroke Guideline. *Stroke*. 2026.

Extended time window – 4.5 to 9 hours

- ***Who is eligible for IVT now?***

Class 2a recommendation			Class 2b recommendation
Unknown onset time	Wake up stroke within **9 hours** from midpoint of sleep		
Within **4.5 hours** (symptom recognition)		**4.5 to 9 hours** from LKW	**4.5 to 24 hours** (symptom onset or LKW)
Guidance from advanced neuro-imaging	Salvageable brain tissue via CT perfusion imaging	Salvageable brain tissue via CT perfusion imaging	LVO + salvageable brain tissue via CT perfusion imaging
			Cannot receive EVT

Prabhakaran S, et al. AHA/ASA Acute Ischemic Stroke Guideline. *Stroke*. 2026.

Blood Pressure/Glucose Management

- Avoid aggressive blood pressure management (<140 mmHg) after IVT, **does not** improve functional outcomes **(No Benefit)**
- Avoid aggressive blood pressure management (<140mmHg) first 72 hours after successful endovascular therapy **(Harm)**
- Avoid intensive blood glucose control (80-130 mg/dL) to avoid risk of severe hypoglycemia **(No Benefit)**

Class 3 recommendations

Pediatric Stroke Guidance

- Patients aged **28 days to 18 years** presenting within 4.5 hours + disabling deficits = **consider** alteplase
- Use alteplase at adult dosing (0.9 mg/kg) - suggestion
- Considered safe but efficacy is still uncertain

Class 2b recommendation

Prabhakaran S, et al. AHA/ASA Acute Ischemic Stroke Guideline. *Stroke*. 2026.

Key Comparisons with Management

Feature	2019	2026	Key Trials/Studies
Drug of choice	Alteplase	Alteplase or Tenecetplase	AcT, NOR-TEST 2, EXTEND-IA TNK
Window of time	Within 4.5 hours	Up to 24 hours	WAKE-UP, EXTEND, TRACE-III, TIMELESS, CHABILIS-T II
Blood Pressure (after IVT)	Target <180/105 mmHg within first 24 hours	<140 mmHg not recommended	ENCHANTED
Glucose	Target 140-180 mg/dL	80-130 mg/dL not recommended	SHINE
Population	No guidance on pediatric patients	Formal pediatric guidance	TIPSTER, AHA/ASA scientific statement

Prabhakaran S, et al. AHA/ASA Acute Ischemic Stroke Guideline. *Stroke*. 2026.
Powers WJ, et al. AHA/ASA Acute Ischemic Stroke Guideline. *Stroke*. 2019.

Post-Test Question

- **True or False**: According to the 2026 AHA/ASA guidelines, use of alteplase and tenecteplase in eligible patients have equivalent levels of recommendation

Post-Test Question

- **True** or False: According to the 2026 AHA/ASA guidelines, use of alteplase and tenecteplase in eligible patients have equivalent levels of recommendation

- **Why?**

  - Multiple large phase 3 RCTs has shown noninferiority of tenecteplase versus alteplase with similar safety outcomes

  - Ease of administration of tenecteplase

References

- Powers WJ, Rabinstein AA, Ackerson T, et al., on behalf of the American Heart Association Stroke Council. Guidelines for the Early Management of Patients With Acute Ischemic Stroke: 2019 Update to the 2018 Guidelines for the Early Management of Acute Ischemic Stroke: A Guideline for Healthcare Professionals From the American Heart Association/American Stroke Association. *Stroke.* 2019 Oct 30. doi: 10.1161/STR.0000000000000211.

- Prabhakaran S, Gonzalez NR, Zachrison KS, et al; Peer Review Committee. 2026 Guideline for the Early Management of Patients With Acute Ischemic Stroke: A Guideline From the American Heart Association/American Stroke Association. *Stroke*. 2026 Jan 26. doi: 10.1161/STR.0000000000000513.