

# IV Thrombolytic Administration for Acute Ischemic Stroke

## Contraindications & Considerations Checklist

### Inclusion Criteria for Patient Selection:

- ☐ (1) Age 18 or over
- ☐ (2) Clinical Diagnosis of Ischemic Stroke with a measurable focal neurologic deficit **NIHSS:** \_\_\_\_\_
- ☐ (3) Time of “**Last Known Well**” (LKW) established less than 4.5 hours before treatment began. **LKW Date:** \_\_\_\_\_ **LKW Time:** \_\_\_\_\_  
*\*\*\*Unless facility has capacity & protocols for extended window IV Thrombolytic based on DWI-FLAIR or perfusion-based mismatch imaging criteria (4.5 hrs - 9 hrs from LKW [OR] a wake-up stroke)*
- ☐ (4) Disabling stroke symptoms <sup>1</sup>

### Exclusion Criteria:

- ☐ IV or IA Thrombolytics given at outside hospital
- ☐ Patient/Family refused treatment

**If all inclusion criteria are met AND no exclusion criteria are present, review the table below to confirm IV thrombolytic eligibility...**

| In the setting of stroke-like symptoms...                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
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| Absolute Contraindications                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Considerations:<br>Benefits <b>May</b> Outweigh Risks                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <p><b>Do NOT administer IV Thrombolytics if the patient has one or more of the following:</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> SBP &gt;185 or DBP &gt;110 mmHg despite treatment <sup>1,2</sup></li> <li><input type="checkbox"/> Moderate to severe traumatic brain injury (TBI) within 14 days <sup>1</sup></li> <li><input type="checkbox"/> CT findings of ICH or SAH <sup>1,2</sup></li> <li><input type="checkbox"/> CT findings of frank hypodensity or extensive early ischemic changes suggesting established infarct (<i>severe hypoattenuation; consider ASPECTS 0–2</i>)<sup>1</sup></li> <li><input type="checkbox"/> Infectious endocarditis <sup>1</sup></li> <li><input type="checkbox"/> Aortic arch dissection <sup>1</sup></li> <li><input type="checkbox"/> Intracranial or spinal surgery within 14 days <sup>1</sup></li> <li><input type="checkbox"/> Acute spinal cord injury within 3 months <sup>1</sup></li> <li><input type="checkbox"/> Intra-axial intracranial neoplasm <sup>1</sup></li> <li><input type="checkbox"/> Severe coagulopathy or thrombocytopenia: Platelets &lt;100,000/mm<sup>3</sup>, INR &gt;1.7, aPTT &gt;40s, or PT &gt;15s <sup>1</sup></li> <li><input type="checkbox"/> Patient currently taking anti-amyloid immunotherapy (e.g., <i>lecanemab, donanemab</i>): <ul style="list-style-type: none"> <li>• <b>FYI:</b> Screen patients on anti-amyloid immunotherapy prior to IV thrombolytic</li> <li>• IV thrombolytics should be avoided if ARIA present <sup>1,4</sup></li> </ul> </li> </ul> | <p><b>Individualized consideration with expert guidance required:</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Care team unable to determine eligibility <sup>1</sup></li> <li><input type="checkbox"/> Pre-existing disability and/or frailty (<i>benefit vs. risk uncertain - individualized assessment required</i>) <sup>1</sup></li> <li><input type="checkbox"/> DOAC exposure within 48 hours (direct thrombin inhibitors or factor Xa inhibitors) OR therapeutic-dose LMWH within 24 hours <sup>1</sup></li> <li><input type="checkbox"/> History of prior intracranial hemorrhage (ICH) <sup>1</sup></li> <li><input type="checkbox"/> History of ischemic stroke within 3 months <sup>1</sup></li> <li><input type="checkbox"/> Moderate to severe TBI ≥14 days to 3 months <sup>1</sup></li> <li><input type="checkbox"/> Intracranial or spinal surgery ≥14 days to 3 months <sup>1</sup></li> <li><input type="checkbox"/> Recent major non-CNS trauma between 14 days and 3 months <sup>1</sup></li> <li><input type="checkbox"/> Recent major non-CNS surgery within 10 days <sup>1</sup></li> <li><input type="checkbox"/> Recent GI or GU bleeding within 21 days <sup>1</sup></li> <li><input type="checkbox"/> Systemic active malignancy (<i>consider type, stage, and active complications</i>) <sup>1</sup></li> <li><input type="checkbox"/> Recent STEMI within 3 months <sup>1</sup></li> <li><input type="checkbox"/> Acute pericarditis <sup>1</sup></li> <li><input type="checkbox"/> Left atrial or ventricular thrombus <sup>1</sup></li> <li><input type="checkbox"/> Intracranial arterial dissection <sup>1</sup></li> <li><input type="checkbox"/> Intracranial vascular malformations - unruptured/untreated (e.g., <i>AVM, cavernous malformation, dural AVF</i>), safety unknown<sup>1</sup></li> <li><input type="checkbox"/> Pregnancy and post-partum period <sup>1</sup></li> <li><input type="checkbox"/> Recent dural / lumbar puncture within 7 days <sup>1</sup></li> <li><input type="checkbox"/> Arterial puncture of a non-compressible blood vessel within 7 days <sup>1</sup></li> <li><input type="checkbox"/> Recent internal bleeding <sup>1,2</sup></li> <li><input type="checkbox"/> Increased risk of bleeding due to co-morbid conditions (e.g., hemorrhagic diabetic retinopathy, liver/renal disease) <sup>1</sup></li> <li><input type="checkbox"/> Symptoms suggest subarachnoid hemorrhage <sup>1</sup></li> <li><input type="checkbox"/> Life expectancy &lt;1 year or severe co-morbid conditions <sup>1</sup></li> <li><input type="checkbox"/> Cerebral microbleeds &gt;10 <sup>1</sup></li> </ul> |
| Considerations:<br>Benefits <b>Likely</b> Outweigh Risks                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <p><b>IV thrombolytics should be considered in the following conditions as benefits are generally greater than risk of bleeding:</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Extracranial cervical arterial dissection (known or suspected) <sup>1</sup></li> <li><input type="checkbox"/> Extra-axial intracranial neoplasm (e.g., meningioma) <sup>1</sup></li> <li><input type="checkbox"/> Angiographic procedural stroke (<i>during or immediately post-angiography</i>) <sup>1</sup></li> <li><input type="checkbox"/> Unruptured intracranial aneurysm <sup>1</sup></li> <li><input type="checkbox"/> Remote (&gt;21 days) history of stable GI or GU bleeding <sup>1</sup></li> <li><input type="checkbox"/> Remote history of myocardial infarction (MI) <sup>1</sup></li> <li><input type="checkbox"/> Known recreational drug use <sup>1</sup></li> <li><input type="checkbox"/> Uncertainty of stroke diagnosis / stroke mimics <sup>1</sup></li> <li><input type="checkbox"/> Moya-Moya disease <sup>1</sup></li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |

### Abbreviations:

- **SBP:** Systolic blood pressure
- **DBP:** Diastolic blood pressure
- **mmHg:** Millimeters of mercury
- **TBI:** Traumatic brain injury
- **CT:** Computed tomography
- **ICH:** Intracranial hemorrhage
- **SAH:** Subarachnoid hemorrhage
- **ASPECTS:** Alberta Stroke Program Early CT Score
- **ARIA:** Amyloid-related imaging abnormalities
- **INR:** International normalized ratio
- **aPTT:** Activated partial thromboplastin time
- **PT:** Prothrombin time
- **DOAC:** Direct oral anticoagulant
- **LMWH:** Low-molecular-weight heparin
- **CNS:** Central nervous system
- **GI:** Gastrointestinal
- **GU:** Genitourinary
- **STEMI:** ST-elevation myocardial infarction
- **AVM:** Arteriovenous malformation
- **AVF:** Arteriovenous fistula
- **MI:** Myocardial infarction

### Citations:

1. Prabhakaran, S., Gonzalez, N. R., Zachrison, K. S., Adeoye, O., Alexandrov, A. W., Ansari, S. A., Chapman, S., Czap, A. L., Dumitrascu, O. M., Ishida, K., Jadhav, A. P., Johnson, B., Johnston, K. C., Khatri, P., Kimberly, W. T., Lee, V. H., Leslie-Mazwi, T. M., Mac Grory, B., Madsen, T. E., ... Yaghi, S. (2026). 2026 guideline for the early management of patients with acute ischemic stroke: A guideline from the American Heart Association/American Stroke Association. *Stroke*. Advance online publication. <https://doi.org/10.1161/STR.0000000000000513>
2. Tsivgoulis, G., Kargiotis, O., De Marchis, G., Kohrmann, M., Sandset, E. C., Karapanayiotides, T., Sousa, D. A. de, Sarraj, A., Safouris, A., Psychogios, K., Vadikolias, K., Leys, D., Schellinger, P. D., & Alexandrov, A. V. (2021). Off-label use of intravenous thrombolysis for acute ischemic stroke: A critical appraisal of randomized and real-world evidence. *Therapeutic Advances in Neurological Disorders*, 14, 1756286421997368. <https://doi.org/10.1177/1756286421997368>
3. Greenberg, S. M., Aparicio, H. J., Furie, K. L., Goyal, M. S., Hinman, J. D., Kozberg, M., Leonard, A., & Fisher, M. J. (2025). Vascular neurology considerations for anti-amyloid immunotherapy: A science advisory from the American Heart Association. *Stroke*, 56(1), e1–e34. <https://doi.org/10.1161/STR.0000000000000480>