

## Inclusion and Exclusion Criteria for IV Alteplase (tissue plasminogen activator, IV-tPA) Treatment of Ischemic Stroke

***For consideration of eligibility within 0-4.5 hours of Time Last Known Well***

### **INCLUSION CRITERIA – Patients who should receive IV alteplase**

- Symptoms suggestive of ischemic stroke that are deemed to be disabling, regardless of improvement (See Reference Table at end of document)
- Able to initiate treatment within 4.5 hours of Time Last Known Well (document clock time)
- Age 18 years or older

### **EXCLUSION CRITERIA – If patient has any of these, do not initiate IV alteplase**

- CT scan demonstrating intracranial hemorrhage
- CT exhibits extensive regions (> 1/3 MCA Territory on CT) of clear hypoattenuation
- Unable to maintain BP <185/110 despite aggressive antihypertensive treatment
- Blood glucose <50 mg/dL (*however should treat if stroke symptoms persist after glucose normalized*)
- Laboratory (*results not required before treatment unless patient is on anticoagulant therapy or there is another reason to suspect the patient may have an abnormality*):
  - INR >1.7
  - Platelet count <100,000
  - PT >15 sec
  - aPTT >40 sec
- Medications:
  - **\*\*Full dose low molecular weight heparin (LMWH) within last 24 hours (patients on prophylactic dose of LMWH *should NOT be excluded*)**
  - Received novel oral anticoagulant (NOAC) within last 48 hours (assuming normal renal metabolizing function)
  - Commonly prescribed NOACs: apixaban (Eliquis), dabigatran (Pradaxa), rivaroxaban (Xarelto), edoxaban (Savaysa)
- Severe head trauma within last 3 months
- Active internal bleeding
- Arterial puncture at non-compressible site within last 7 days
- Infective endocarditis
- Gastrointestinal or genitourinary bleeding within last 21 days or structural GI malignancy
- Intracranial or spinal surgery within last 3 months

**CONSIDERATION for EXCLUSION – For any of these situations, seek neurology consultation from a Stroke Expert**

- Mild stroke with non-disabling symptoms (see Reference Table below)
- Pregnancy
- Major surgery or major trauma within 14 days
- Seizure at onset and postictal impairment without evidence of stroke
- Myocardial infarction within last 3 months
- Acute pericarditis
- Lumbar puncture within 7 days
- Ischemic stroke within last 3 months
- Any other condition or history of bleeding diathesis which would pose significant bleeding risk to patient
- History of intracranial hemorrhage
- Presence of known intracranial conditions that may increase risk of bleeding (arteriovenous malformation, aneurysms >10mm, intracranial neoplasm)
- High likelihood of left heart thrombus (e.g. mitral stenosis with atrial fibrillation)
- Blood glucose > 400 mg/dL (*however should treat with IV alteplase if stroke symptoms persist after glucose normalized*)

Improvement to a mild stroke such that any remaining deficits seem nondisabling. The following typically should be considered disabling deficits:

- Complete hemianopsia ( $\geq 2$  on NIHSS question 3) or severe aphasia ( $\geq 2$  on NIHSS question 9), or
- Visual or sensory extinction ( $\geq 1$  on NIHSS question 11) or
- Any weakness limiting sustained effort against gravity ( $\geq 2$  on NIHSS question 6 or 7) or
- Any deficits that lead to a total NIHSS score  $> 5$  or

Any remaining deficit considered potentially disabling in the view of the patient and the treating practitioner. Clinical judgment is required.\*\*

\*\*This is a sample based on current best practices for hospitals to implement and operationalize. Specific criteria may vary by hospital.

Reference: Scientific Rationale for the Inclusion and Exclusion Criteria for Intravenous Alteplase in Acute Ischemic Stroke: A statement for Healthcare Professionals From the American Heart Association/American Stroke Association. Demaerschalk et al, 2015.

*This document was developed by the Minnesota Primary and Comprehensive Stroke Coordinators Group*

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