

ACUTE ISCHEMIC STROKE

Clinical diagnosis of ischemic stroke causing measurable neurologic deficit

Age ≥ 18 years

Intravenous Thombolysis (IVT)
Mechanical Thrombectomy (MT)



UNKNOWN TIME

Imaging-based selection:
IVT with intravenous alteplase and /or MT**.

Ischemic lesion that is diffusion [DWI] positive and fluid-attenuated inversion recovery on MRI.[FLAIR] negative.

LESS THAN 3 HOURS

Recommend IVT with intravenous alteplase for eligible patients.

Should be evaluated to determine if they are candidates for MT.**

3-4.5 HOURS

Suggest IVT with intravenous alteplase for eligible patients.

Should be evaluated to determine if they are candidates for MT.**

4.5-6 HOURS

Should not receive IVT because harm may exceed benefit.

Should be evaluated to determine if they are candidates for MT.**

MORE THAN 24 HOURS

Routine care only.
Not eligible for treatment with intravenous alteplase or MT

6-24 HOURS

Not eligible for treatment with IVT.

MT is an option at specialized stroke centers using imaging-based selection of patients with anterior circulation stroke.

CONTRAINDICATIONS FOR IVT

- Ischemic stroke or severe head trauma in the previous three months.
- Previous intracranial hemorrhage.
- Intra-axial intracranial neoplasm.
- Gastrointestinal malignancy or hemorrhage in the previous 21 days.
- Intracranial or intraspinal surgery within the prior 3 months.
- Persistent blood pressure elevation (systolic ≥ 185 mmHg or diastolic ≥ 110 mmHg).
- Suspected aortic arch dissection.
- Active internal bleeding or bleeding diathesis.
- Platelet count $< 100,000/\text{mm}^3$.
- Current anticoagulant use with an INR > 1.7 or PT > 15 seconds or aPTT > 40 seconds.
- Therapeutic doses of LMWH within 24 hours.
- Current use (within 48 hours) of a direct thrombin inhibitor or direct factor Xa inhibitor.
- Extensive findings or irreversible injury on CT.

GENERAL WARNINGS FOR IVT

- Only minor and isolated neurologic signs or rapidly improving symptoms.
- Serum glucose < 50 mg/dL (< 2.8 mmol/L).
- Serious trauma in the previous 14 days.
- Major surgery in the previous 14 days.
- History of gastrointestinal bleeding (remote) or genitourinary bleeding.
- Seizure at the onset of stroke with postictal neurologic impairments.
- Pregnancy.
- Arterial puncture at a noncompressible site in the previous seven days.
- Large (≥ 10 mm), untreated, unruptured intracranial aneurysm.
- Untreated intracranial vascular malformation.

** GENERAL CRITERIA FOR MT

- Persistent and potentially disabling symptoms.
- Small infarct core on imaging (CT or DWI-MRI) with no hemorrhage.
- Proximal large artery occlusion (LAO) on angiography (CTA or MRA).
- Treatment within 24 hours of onset.

*WARNINGS FOR 3 TO 4.5 HOURS

- Age > 80 years.
- Oral anticoagulant use regardless of INR.
- Severe stroke (NIHSS score > 25).
- Combination of both previous ischemic stroke and diabetes mellitus.