### Box 4.1: Criteria for Acute Thrombolytic Therapy

These criteria are designed to guide clinical decision-making; however, the decision to use tPA in these situations should be based on the clinical judgment of the treating physician. The relative benefits of tPA therapy versus any potential risks or contraindications should be weighed on an individual basis.

**Intravenous tPA remains the first-line standard of care. Consideration for intravenous tPA plus endovascular therapy should not delay treatment with intravenous tPA for eligible patients.**

Criteria adapted in accordance with the criteria identified in National Institute of Neurological Disorders and Stroke (NINDS) tPA Stroke Study.

### IV tPA Treatment Inclusion Criteria

- Diagnosis of ischemic stroke causing measurable neurologic deficit in a patient who is 18 years of age or older.
  - For adolescents, decision to administer tPA should be based on clinical judgment, presenting symptoms, and patient age; and, if possible, consultation with a paediatric stroke specialist.

- Time from last known well (onset of stroke symptoms) less than 4.5 hours before tPA administration.

### Absolute Exclusion Criteria

- Any source of active hemorrhage or any condition that could increase the risk of major hemorrhage after tPA administration.
- Any hemorrhage on brain imaging.

### Relative Exclusion Criteria (requiring clinical judgement based upon the specific situation)

#### Historical

- History of intracranial hemorrhage.
- Stroke or serious head or spinal trauma in the preceding three months.
- Major surgery, such as cardiac, thoracic, abdominal, or orthopedic in the preceding 14 days. Risk varies according to the procedure.
- Arterial puncture at a non-compressible site in the previous seven days.

#### Clinical

- Symptoms suggestive of subarachnoid hemorrhage.
- Stroke symptoms due to another non-ischemic acute neurological condition such as seizure with post-ictal Todd's paralysis or focal neurological signs due to severe hypo- or hyperglycemia.
- Hypertension refractory to aggressive hyperacute antihypertensive treatment such that target blood pressure less than 180/105 cannot be achieved.

#### Laboratory

- Blood glucose concentration below 2.7 mmol/L or above 22.2 mmol/L.
- Elevated activated partial-thromboplastin time.
- International Normalized Ratio greater than 1.7.
- Platelet count below 100,000 per cubic millimetre.

#### CT or MRI Findings

- CT showing early signs of extensive infarction, represented by a score of less than 6 on the Alberta Stroke Program Early CT Score (ASPECTS), or MRI showing an infarct volume greater than 150 cc on diffusion-weighted imaging.