Box 4A – 4D

Box 4A: Alteplase Selection Imaging Exclusion Criteria: CT Findings

1. CT showing early signs of extensive infarction.
2. Signs of hemorrhagic stroke on CT imaging.

Refer to Section 5 for additional intravenous alteplase clinical inclusion and exclusion criteria.

Box 4B: Endovascular Selection Imaging Criteria for Patients Arriving within 6 Hours of Stroke Onset

1. A small-to-moderate ischemic core (which may be estimated as an ASPECT score of 6 or higher).
   - For patients with a large ischemic core, such as with an ASPECT score less than 6, the decision to treat should be based on the potential benefits and risks of the treatment, made by a physician with stroke expertise in consultation with the neuro-interventionalist, and patient and/or family/substitute decision-makers.
2. Intracranial artery occlusion in the anterior circulation, including proximal large vessel occlusions in the distal internal carotid artery (ICA) or middle cerebral artery (MCA) and immediate branches.
3. For patients with basilar artery occlusions, the decision to treat with endovascular thrombectomy should be based on the potential benefits and risks of the therapy, made by a physician with stroke expertise in consultation with the neuro-interventionist, and the patient and/or decision-makers. *Note: there are ongoing randomized trials in this area and this issue will be reviewed once the results become available.*

Refer to Section 5 for additional endovascular thrombectomy clinical inclusion and exclusion criteria.

Box 4C: Advanced CT Imaging Criteria for Endovascular Thrombectomy Selection

1. Sites using CT perfusion imaging should utilize software that provides reproducible objective measurements of ischemic core and penumbra.
2. An occluded proximal intracranial artery (carotid artery, M1 segment of the MCA, or proximal M2 divisions) of the anterior circulation, which is a target lesion amenable to endovascular thrombectomy. The location of occlusion is defined by an arterial phase CTA from ascending aorta to the vertex of the head. Inclusion of the aortic structures allows planning and assessment of the technical feasibility of an endovascular approach to the occluded intracranial artery.
3. There is evidence to suggest that moderate-to-good pial collateral filling (as defined by CTA), or evidence of CT perfusion mismatch predict a better response to endovascular thrombectomy.
4. Stroke imaging on-site with 24-hour access, seven days a week, including a computed tomography (CT) scanner (i.e. 3rd generation or higher helical scanner) with programming for CT angiography (CTA); multiphase or dynamic CTA or CT perfusion (CTP) imaging can also be used if available on-site.

Note: ASPECTS score is one tool to estimate core: A small-to-moderate ischemic core can be defined by an ASPECTS score of 6 or higher on non-contrast computed tomography (NCCT) or areas of low cerebral blood volume (CBV) or cerebral blood flow (CBF) maps on CT perfusion

imaging.

Box 4D: Endovascular Selection Imaging Criteria for Patients Arriving Later than 6 Hours of Stroke Onset

1. Sites using CT perfusion imaging should utilize software that provides reproducible objective measurements of ischemic core and penumbra.
2. An occluded proximal intracranial artery (carotid artery, M1 segment of the MCA, or proximal M2 divisions) of the anterior circulation, which is a target lesion amenable to endovascular thrombectomy. The location of occlusion is defined by an arterial phase CTA from ascending aorta to the vertex of the head. Inclusion of the aortic structures allows planning and assessment of the technical feasibility of an endovascular approach to the occluded intracranial artery.
3. Imaging and clinical evidence of small core and large area at risk, defined in the trials as either:
    a. NIHSS ≥10 and either 0-21 ml core infarct (≥80 years old) or 0-31 ml core infarct (<80 years old), or NIHSS ≥20 and 31 to <51 ml core infarct and <80 years old (DAWN trial criteria).

    OR

    b. Ischemic core volume is < 70 ml, mismatch ratio is >/= 1.8 and mismatch volume* is >/= 15 ml (DEFUSE3 trial criteria).

Adapted from: **DAWN Imaging Criteria (up to 24 hours):** (Nogueira RG et al; N Engl J Med. 2018 Jan 4;378(1):11-21); **DEFUSE3 Imaging Criteria (up to 16 hours):** **h**ttps://clinicaltrials.gov/ct2/show/NCT02586415