Protocol for Endovascular Treatment (EVT) of Acute Ischemic Stroke

Adapted from 2018 AHA/ASA Guidelines for Acute Ischemic Stroke

1. **Patient selection for EVT:** *Evidence for optimal patient selection is evolving very rapidly. The following is only a general guideline.*

- **Patients should be considered for EVT if they meet all the following criteria:**
  - No significant prestroke disability
  - NIHSS 6+ or disabling deficit
  - Large vessel occlusion (LVO)
    - *Internal carotid artery [ICA], middle cerebral artery [MCA], or basilar artery [BA]*
  - Age ≥18 years
  - CT without substantial early ischemic changes (CT ASPECTS ≥6)
  - EVT (i.e., arterial puncture) can be initiated ≤24 hours from stroke onset

    If within 6 to 24 hours of last known well, then **CT perfusion with automated perfusion processing software** (ex: RAPID or equivalent) is required to assess for presence of Target Mismatch (TMM).

    Target Mismatch Profile

    - *Core infarct (CBF<30%) volume is < 70 ml*
    - *Mismatch ratio between core infarct and penumbra (Tmax>6 seconds) volumes is >/= 1.8*
    - *Mismatch volume* is >/= 15 ml*

- Additional patients might be considered based on individual circumstances.

2. **Process considerations for EVT:**

- **Faster IV alteplase and faster EVT = better outcomes**
  - Patients eligible for IV alteplase should receive it rapidly, even if EVT is being considered. Prepare/administer as soon as CT scan confirms no bleed (ICH).
  - EVT should not be delayed to assess for clinical response from IV alteplase.
- Emergency dept neuroimaging protocols should include **baseline CTA of head/neck** (at same me as noncontrast CT if possible) for all potential ischemic stroke patients
- The UC stroke team should be activated **prior to** obtaining baseline neuroimaging.
- If CTA is not performed due to unforeseen circumstances, and NIHSS is ≥10 or hyperdense large vessel is seen on CT, patient may go directly to EVT (i.e., forego CTA).
- **Transfer EVT-eligible patients as rapidly as possible** to EVT-ready hospital.
  - Call **(513) 584-BEDS** to initiate transfer; ask for a **"Code Stroke"** transport.
  - Consider **most rapid mode** of hospital-to-hospital transportation
    - By ambulance, if nearby hospital (<15 minutes) and at lower traffic density times, especially if an ambulance is available at the shipping hospital.
    - By AirCare, Mobile Care, or local air ambulance service, otherwise.
      - AirCare: Call **(513) 584-CARE (2273)** and requesting a "**Code Stroke**" transport (if not already done by the transfer center).