



# ACUTE STROKE CT/CTA PROTOCOL

## ADVANCED CARE OF PATIENTS WITH CEREBROVASCULAR DISEASE

### Background

Given advances in endovascular therapy in eligible patients with acute ischemic stroke, and the time-dependent nature of optimizing outcomes after stroke, there is an urgent need to revise the workflow of acute stroke workup (See American Heart Association publication here - [Stroke](#). 2015 Oct;46(10):3020-35). A rapid CT angiography (CTA) of the head and neck should accompany the initial CT in acute stroke patients in order to identify those patients with large vessel occlusions who would be candidates for endovascular therapy. We note that the majority of stroke patients already obtain vascular imaging during hospitalization, even if not candidates for endovascular therapy. Thus, this protocol only shifts into the acute evaluation time period imaging that would otherwise occur in many patients during the hospital stay.

### Criteria for CTA HEAD and NECK

1. Acute stroke presenting to your facility within twelve hours of onset (may defer CTA if stroke is low in the differential):
  - a. **Please call UC Stroke Team immediately (before imaging) - 513-844-7686**
  - b. No need for NIHSS - We would prefer treating clinicians focus on identifying disabling symptoms rather than precisely recording the NIHSS.
2. Beyond tPA - patients not eligible for IV tPA may still be eligible for endovascular therapy. This protocol is aimed at all patients who may be eligible for endovascular therapy, even if not eligible for tPA.
3. Age  $\geq 18$  years old.
4. Time from symptom onset or last seen well  $\leq 12$  hours.

### Protocol:

- Take patient straight for non-con head CT and CTA head and neck.
- DO NOT DELAY intravenous tPA in eligible patients:
  - a. If IV access takes more than 5 minutes, get a non-contrast head CT and, if appropriate, start IV tPA. Then attempt appropriate IV access for CTA head and neck.
  - b. Serum creatinine is not necessary prior to contrast administration (see YouTube video for further detail).

- Obtain CTA Head and Neck - CTA of the head only is an inadequate study for stroke. Please ensure the order is for CTA head and neck.
- Minimum CTA Specifications
  - a. Thin section source images of CTA required: 0.625 -1.25 mm thin axial source images (minimum 1.25 mm).
  - b. MIP reconstructions - Axial thick MIPs - 24 mm thickness and 4 mm intervals.
- Video overview of this protocol may be found at: <https://www.youtube.com/watch?v=Yj71vXaZkJo>

### 24-hour Stroke Team consultations:

**513-844-7686**

**24-hour transfers: 513-584-BEDS (2337)**

For additional information, please contact:

**Dawn Kleindorfer, MD FAHA**

**Opeolu Adeoye, MD FACEP FAHA**

Co-Directors, UC Stroke Team

University of Cincinnati

513-558-5478

[Dawn.Kleindorfer@uc.edu](mailto:Dawn.Kleindorfer@uc.edu)

[Opeolu.Adeoye@uc.edu](mailto:Opeolu.Adeoye@uc.edu)

**Emily Goodall**

Stroke Program Manager

513-558-3072

[Emily.Goodall@uc.edu](mailto:Emily.Goodall@uc.edu)

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