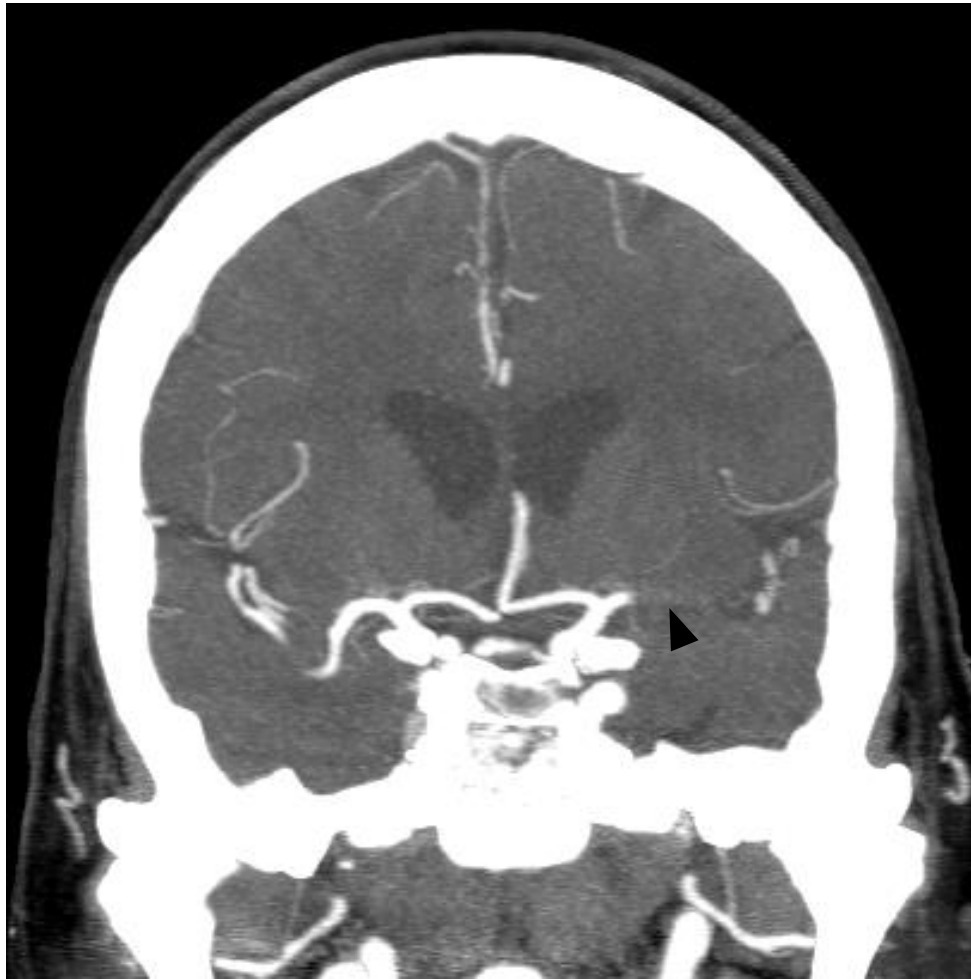


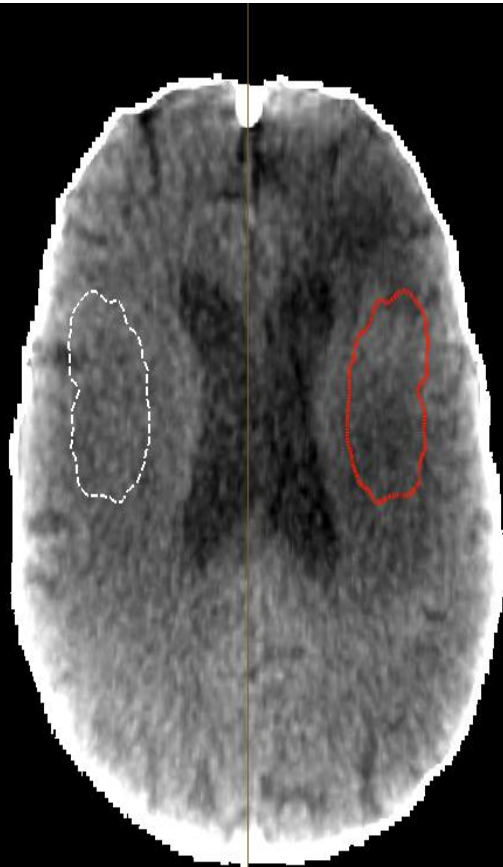
MCA Stroke treatment at UMASS

- 83 y/o female with acute onset of aphasia, right hemiplegia, right facial droop, and leftward deviation of gaze.
- Noncontrast CT of the head negative for acute bleed.
- Received tissue plasminogen activator (tPA) with no significant improvement of her stroke symptoms.
- Transferred to Umass and admitted to the Neurology Stroke Service.
- Interventional Neuroradiology consulted for possible intervention.

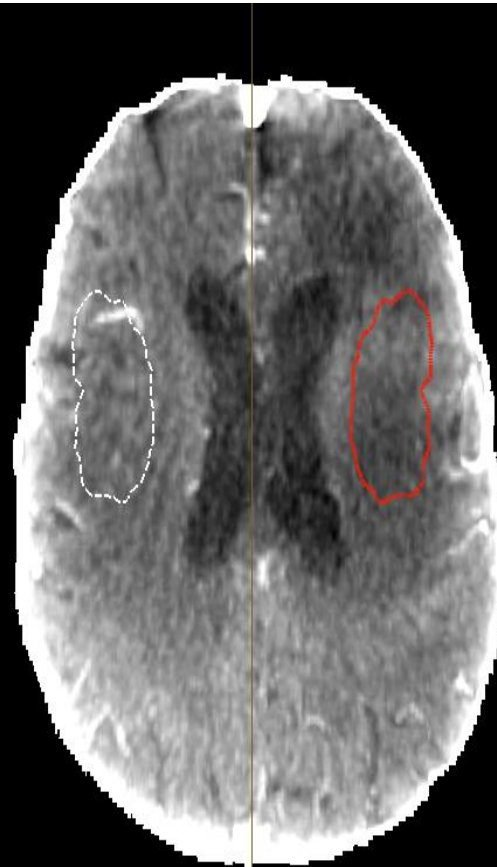


Coronal reformatted image of the CTA of the brain demonstrating abrupt truncation of the proximal M1 segment of the left MCA (black arrow head)

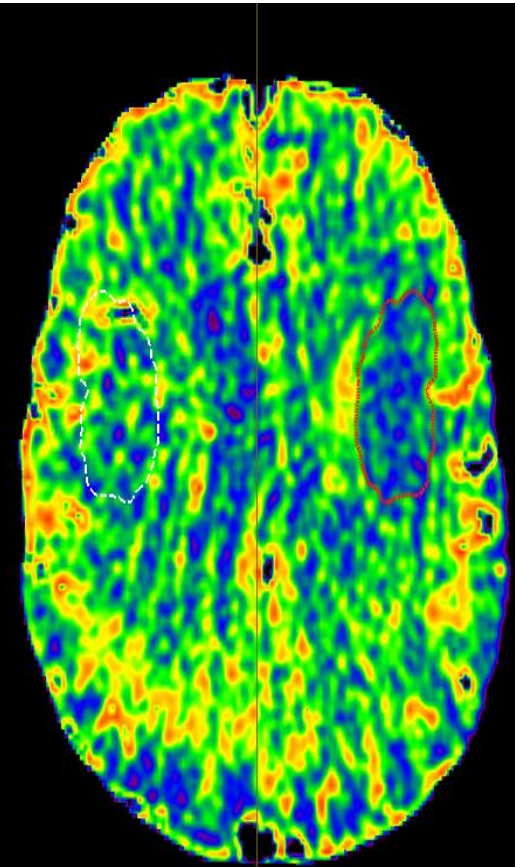
Non-contrast XperCT



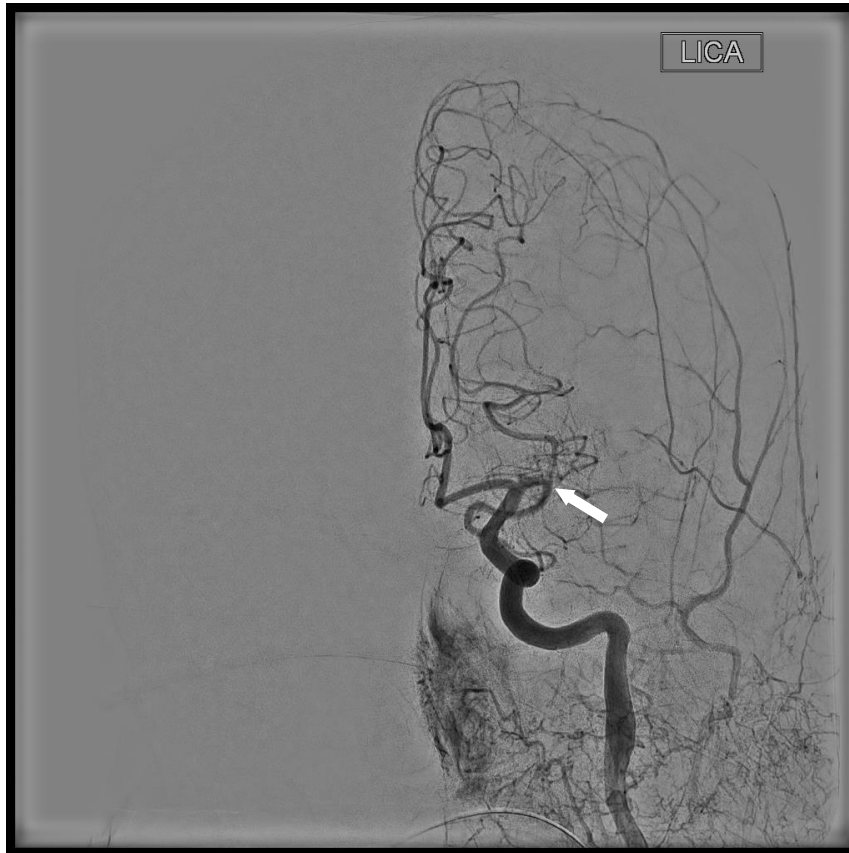
Contrast- enhanced XperCT



C-arm CBV map



Clinical Application currently undergoing research at Umass: Rotational C-arm pre-intervention cerebral perfusion exam demonstrating an area of demarcated decreased cerebral blood volume (outlined with red) in the left middle cerebral artery territory, with an estimated lesion volume of 8.6 ml. This lesion volume corresponds to the infarcted tissue, considered to be less than 1/3 of the left MCA territory. C-arm CBV values are 20% lower in lesion vs. contralateral control area (outlined in dashed white line).

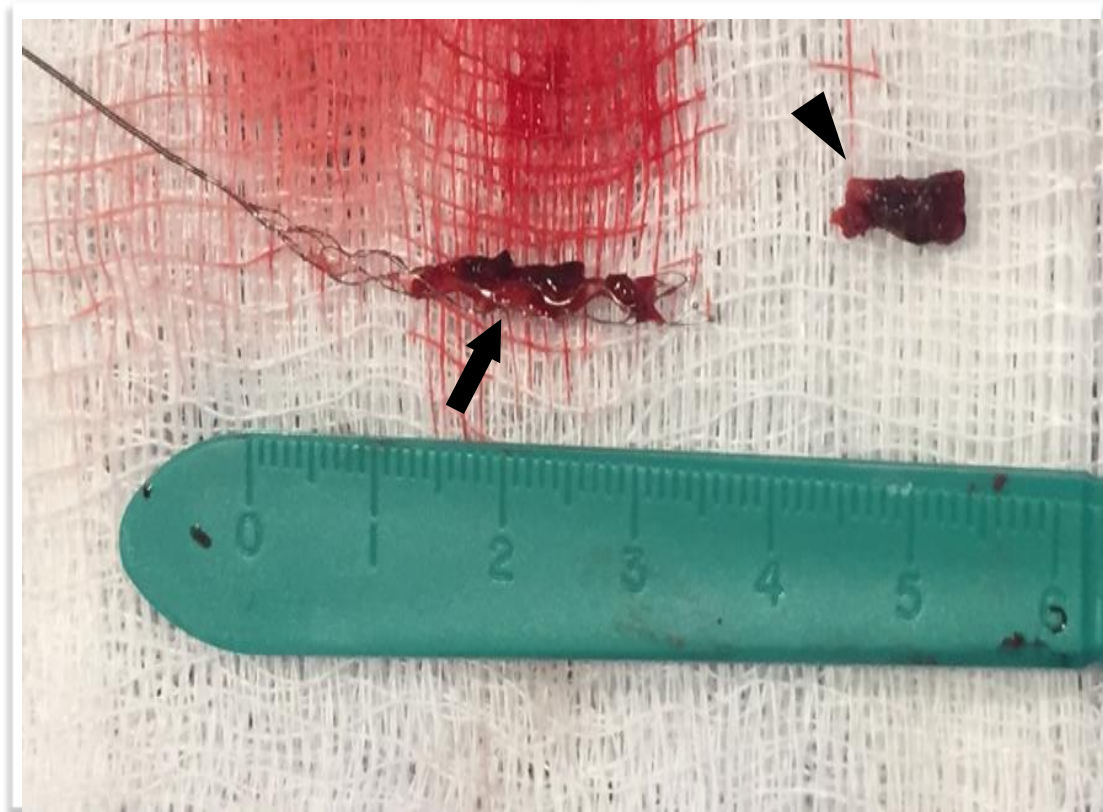


Pre-intervention DSA demonstrating complete Occlusion of the proximal M1 segment of the left MCA (white arrow)



Post mechanical thrombectomy DSA with Complete recanalization of the occluded site with excellent outflow into more distal branches.

- Time to reperfuse the left MCA after initial diagnostic angiogram demonstrating the occlusion: 32 minutes
- Time to complete recanalization of the left MCA from symptom onset: 5 hours 25 minutes



Stent retriever device demonstrating a fragment of the occlusive clot that was extracted from the left MCA (black arrow). A second fragment of occlusive clot was extracted by the aspiration catheter (black arrowhead)

- The patient regained most of her strength in her right upper and lower extremity (4/5)
- Facial droop significantly improved.
- At 24 hours post intervention, a component of dysarthria remained, however no aphasia.
- At 3 days post intervention, the patient continued to positively progress and was transferred to a rehabilitation facility for further supervised recovery.