

AI based software- RAPID AI

Why stroke matters

A stroke can happen to anyone, at anytime and anywhere. Today stroke is the leading cause of disability worldwide and the second leading cause of death, but almost all strokes could be prevented.

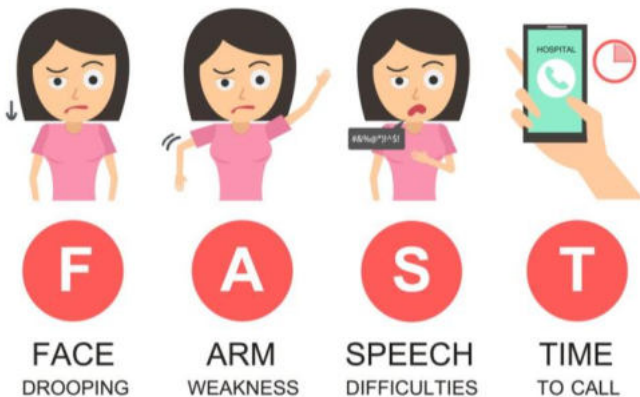
Reduced blood flow and perfusion caused by a thrombus/embolus or hemorrhage

1min lost = 1.9 million neurons lost.

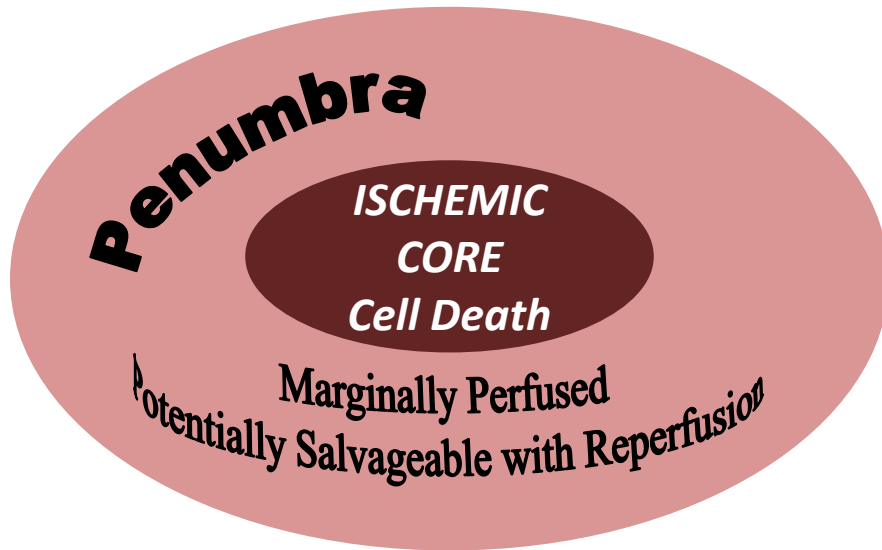
STROKE

Timely intervention is the key

**CODE WHITE
HAS BEEN
ACTIVATED**



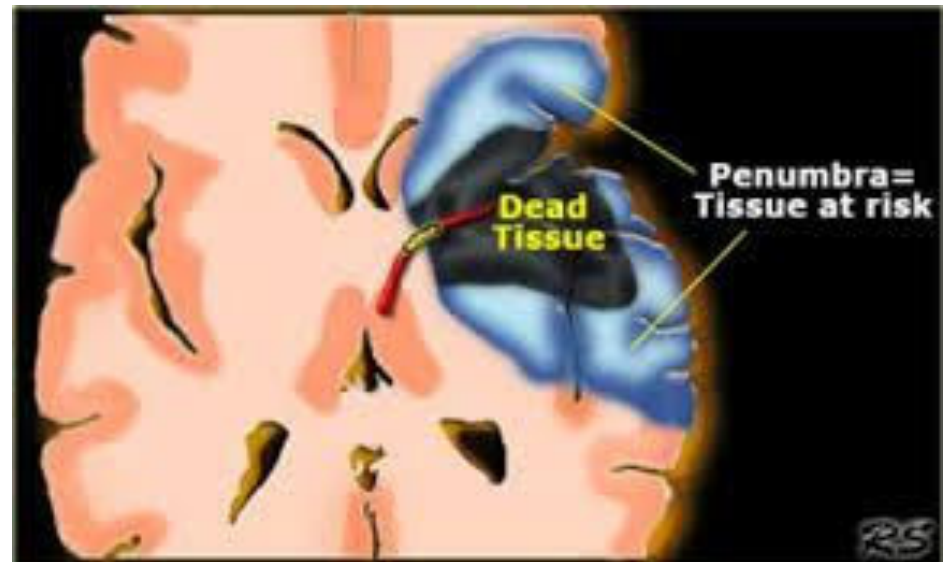
ZONES OF ISCHEMIC INJURY



Reduced blood flow and perfusion caused by a thrombus/embolus or hemorrhage

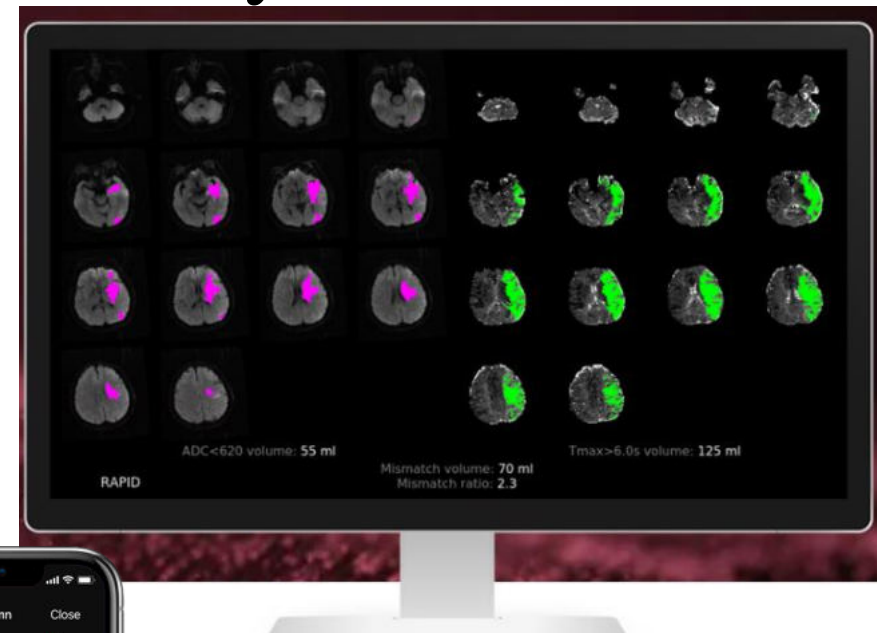


- Ischemia – when CBF falls below threshold (18-20 ml/100g/min) required to maintain cellular activity
- Infarct – CBF remains < threshold for enough time to cause irreversible cell damage



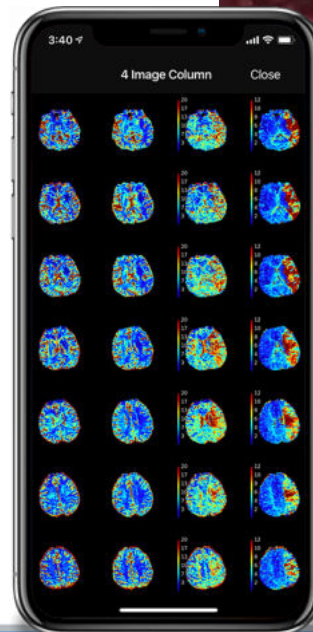
Rapid AI: automated analysis

- AI based tool
- Quantitative , rapid assessment of penumbra volume.
- Advanced MR diffusion and perfusion image analysis to help in the assessment of salvageable brain tissue.
- Helps to assess patients who would benefit from mechanical thrombectomy ,even beyond window period

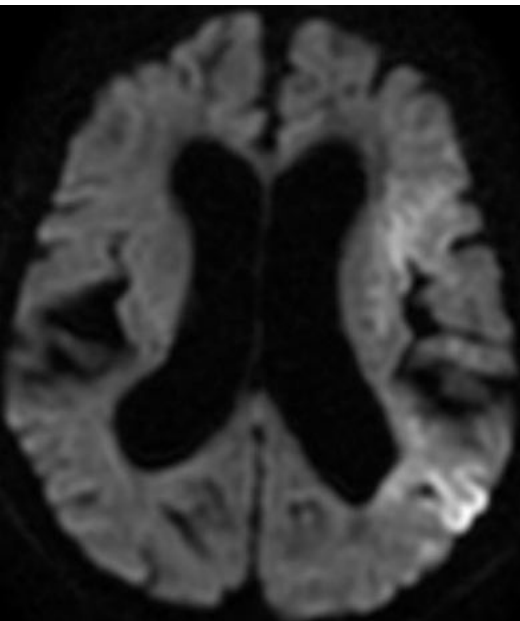


Parameters assessed:

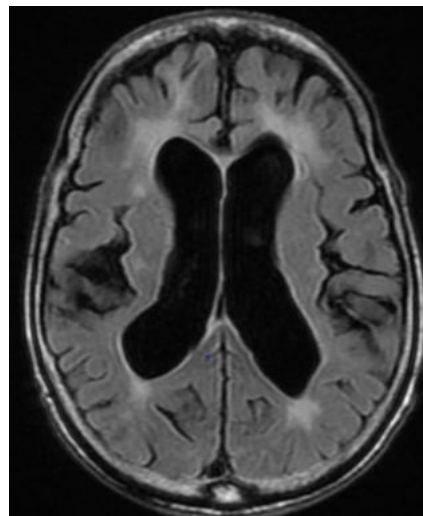
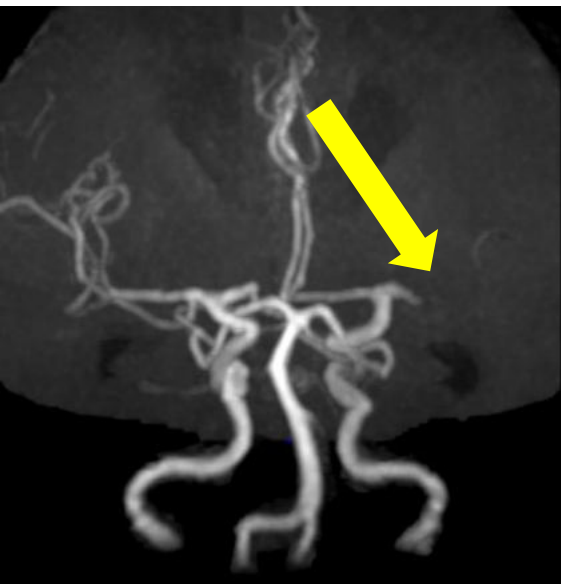
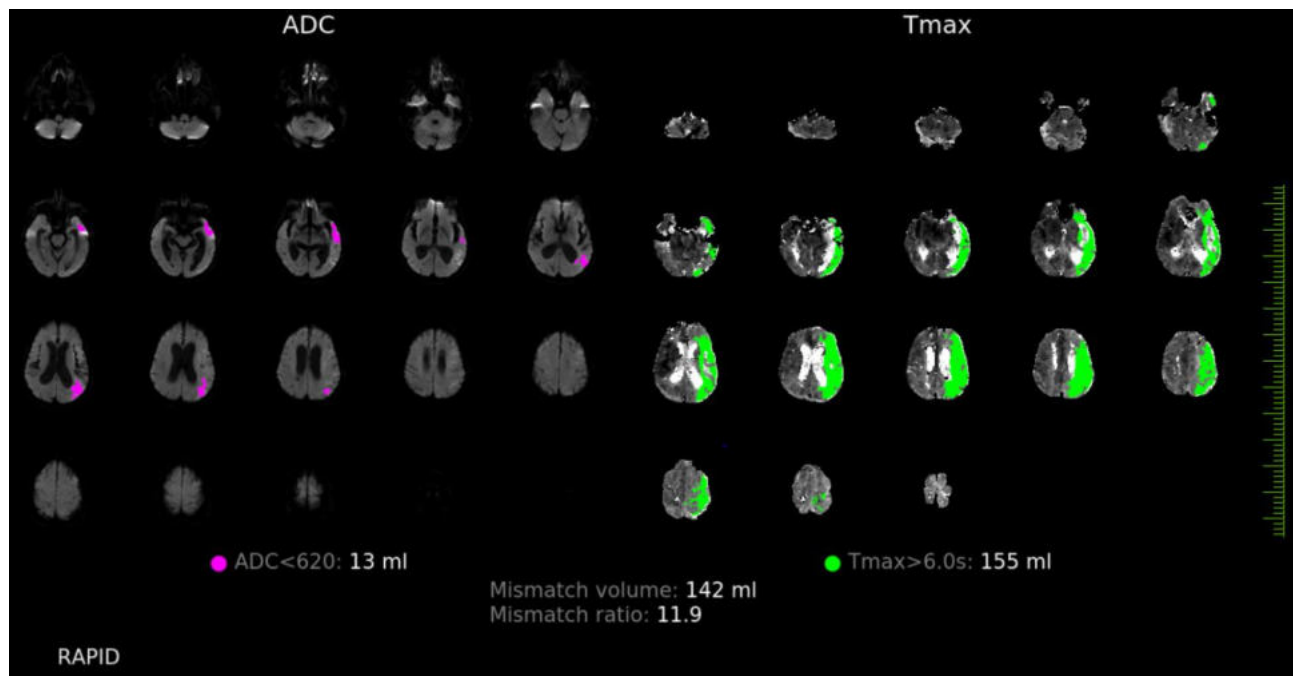
Mismatch volume based on ADC value at < 620 and T_{max} at $> 6.0\text{sec}$
 Mismatch ratio
 Hypoperfusion index



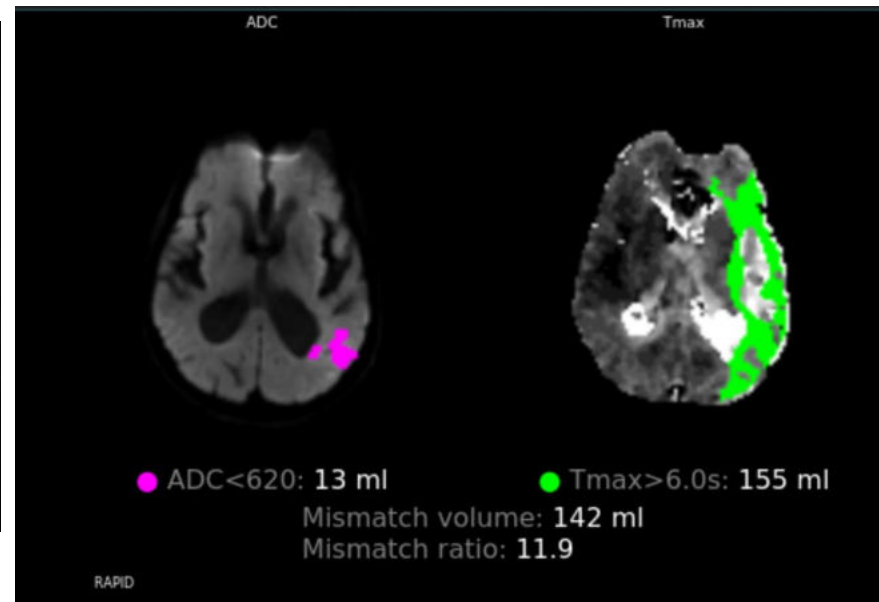
RAPID_{AI}



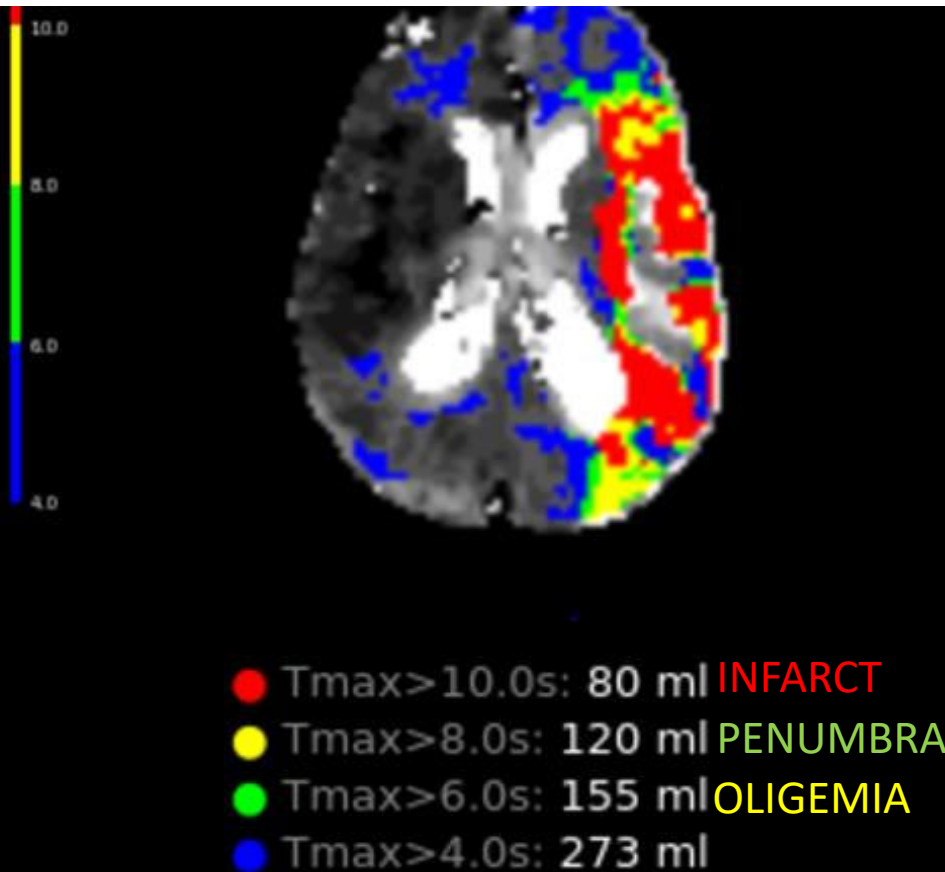
DWI



FLAIR

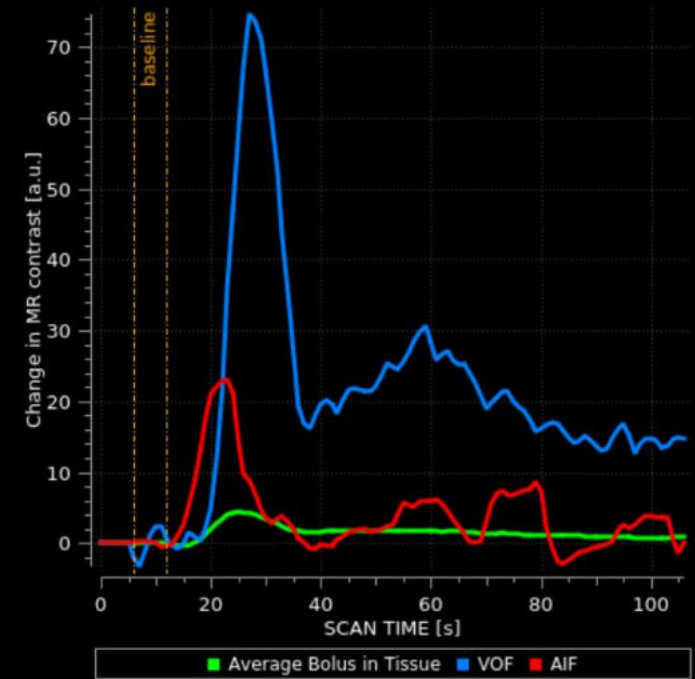


Time taken for study - 1.50 Seconds



Hypoperfusion Index (Tmax>10s/Tmax>6s): 0.5

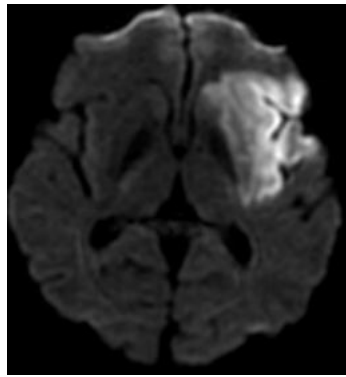
RAPID



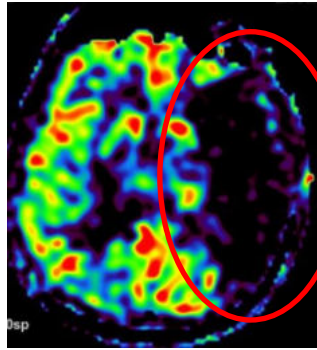
RAPID

Mechanical Thrombectomy for left MCA Infarct

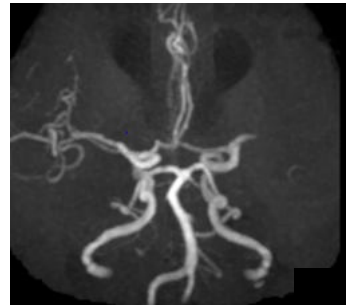
Pretreatment



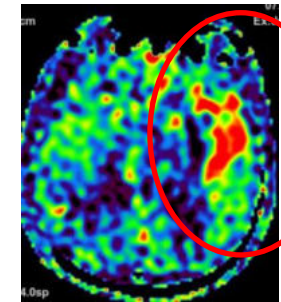
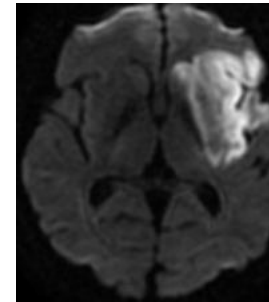
Brain Injured



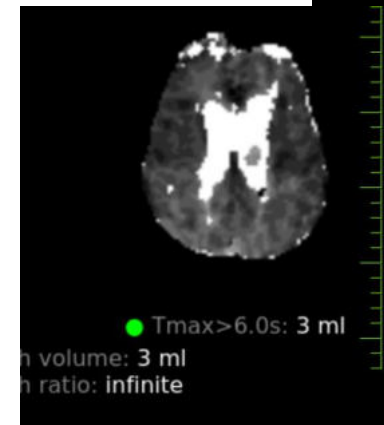
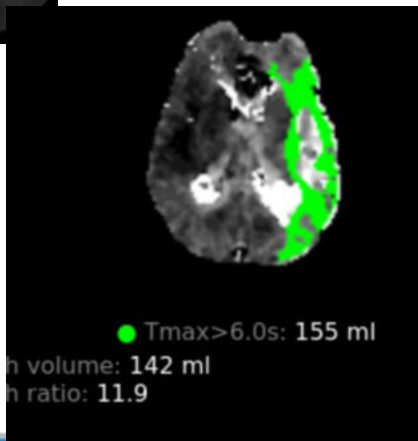
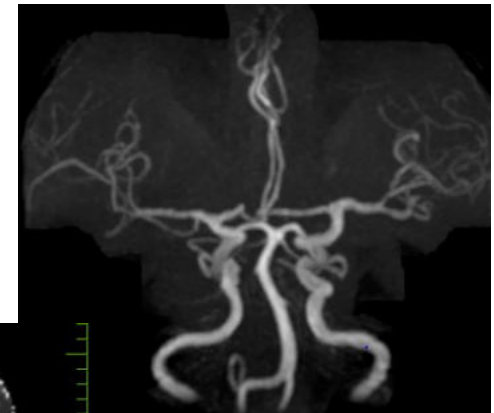
Brain starved for nutrients



Post thrombectomy

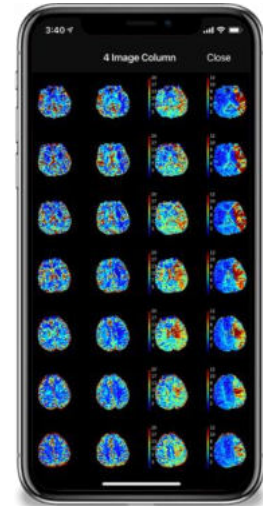


Blood flow returns with luxury perfusion



Rapid MR Perfusion

SUMMARY



- ❖ Quick and Precise volumes
- ❖ Convenient - Available in a mobile format
- ❖ Automated-Avoids Interoperator variability
- ❖ Triage of Patients –Procedure/ICU(Post MRI)
- ❖ Augments Radiologists