

## **Mechanical Thrombectomy: patient selection**

Mechanical thrombectomy (MT) is benefit to patients with acute ischemic stroke (AIS) caused by large arterial occlusion with ischemic penumbra. Therefore, the selection criteria would be based on physical examination and imaging studies which help to demonstrate location of occlusion and provide information of salvageable brain tissue.

The 2018 AHA/ASA guidelines for early management AIS by MT are

1. NIHSS  $\geq 6$ , ASPECT score  $\geq 6$ , if procedure can be performed within 6 hours of onset. CTA or MRA is recommended to look for large vessel occlusion, but the study should not delay treatment with IV tPA, if indicated.
2. Occlusion in anterior circulation 6-16 hours after onset, infarct volume  $<70$  ml and ratio of ischemic volume to infarct volume  $\leq 1.8$  (DIFFUSE)
3. Occlusion in anterior circulation 6-24 hours after onset with a mismatch between the severity of the clinical deficit and the infarct volume;  $>80$  years, NIHSS  $\geq 10$ , infarct volume  $<21$  ml or  $<80$  years, NIHSS  $\geq 10$ , infarct volume  $<31$  ml, or  $<80$  years NIHSS  $\geq 20$ , infarct volume 31-51 ml (DAWN)

Currently, no guideline for candidate selection in posterior circulation stroke is recommended.

Recently, there are several publications suggesting that patients with a low ASPECTS (3-5) may benefit from mechanical thrombectomy (HERMES, Goyal et al., Roman et al.) with respect to the occurrence of malignant infarctions and death.

Our institute, we used criteria from ASPECT score and multiphase CTA to select patients for MT in anterior circulation stroke, and MRI if available, to evaluate core infarction in posterior circulation stroke.