

What should be the optimal imaging to select patients for thrombectomy beyond 3 hours, is CTA enough or should CTP be added

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Recanalization of main stem cerebral arteries may lead to a good clinical outcome, but also may increase the risk of clinical deterioration. The time between stroke onset and artery reopening has been shown to be the most important determinant of hemorrhagic transformation. In US according to the AHA and ASO recommendation therapeutic window for intravenous thrombolysis in severe stroke is 3 hours and in mild stroke 4.5 hours, in Europe (ESO recommendation) 4.5 hours. These recommendations were created on the basis of experimental studies and available statistical data of patients with good clinical outcome treated in the different time of stroke onset. These are statistical data, but in the real life each patient is different. Size of ischemic brain tissue which may be salvage with reperfusion depends not only of stroke onset time. Efficiency of collateral circulation has a significant impact on the volume of infarct area. The DAMN study has shown that on the basis of neuroimaging examination we may prolong the time up to 24 hours. The mismatch between the severity of clinical deficit and the infarct volume seems to be a good indicator for thrombectomy above statistical 6 hours. Is CTA sufficient to evaluate the effects of cerebral circulation or should we additionally perform CTP according to DAMN study?