TPA trials

Trial	Inclusion criteria	Treatment arms	Results
ECASS 1 (1995) **European Cooperative Acute Stroke Study**	Moderate to severe neurologic deficit and without major early infarct signs on initial CT.	Placebo versus 1.1mg/kg tPA in first 6 hours.	- Significant difference in the mRS in favor of tPA-treated patients (P = .035) - Shorter in-hospital stay for rt-PA treatment arm - No statistically significant difference in mortality rate at 30 days or in the overall incidence of ICH - **Increased occurrence of large parenchymal hemorrhages in the tPA group, therefore use was discouraged**
NINDS (1995)	Onset in 3 hours, absence of hemorrhage on CT and measurable deficit on NIHSS	Placebo versus 1.1mg/kg tPA in first 3 hours.	- Clear benefit of iv tPA over placebo within 3 hours of symptom onset; FDA approval - 30% more likely to have no or minimal disability at 3 mo in tPA treated group - No significant difference in mortality - Symptomatic ICH more common in tPA group **(6% vs 0.6)** - No difference in the rate of recurrent stroke in 3 months
ECASS 2 (1999)	Onset in 3 hours, absence of hemorrhage on CT and measurable deficit on NIHSS	Placebo versus 0.9mg/kg tPA in first 6 hours	- No significant difference in mRS in both groups, however post hoc analysis showed favorable trend with tPA - ICH occurred in 8.8% of tPA vs 3.4% in placebo
ECASS 3 (2008)	Onset in 3-4.5 hours Exclusions: >80 years old NIHSS score >25 those on oral anticoagulants (even if their INR was <1.7) Combination of a previous stroke and diabetes mellitus.	Pooled analysis from previous 4 trials. Placebo versus 0.9mg/kg tPA in first 3-4.5 hours	- tPA was associated with more frequent excellent 90-day outcome on the mRS. -