The URICO-ICTUS Study: A randomized trial of efficacy and safety of uric acid administration in acute stroke

**History:** In the experimental ischemic brain setting, uric acid (UA) is neuroprotective.

**Questions to answer:** Is functional outcome improved for patients who have experienced an ischemic stroke?

<table>
<thead>
<tr>
<th>Trial Design</th>
<th>Phase IIb-III, randomized, multicenter, double blindered trial. 10 Spanish sites. N=411 Acute ischemic stroke patients treated with thrombolytic within 4.5 hours of symptoms randomized to 1:1 placebo or uric acid infusion.</th>
</tr>
</thead>
</table>
| Primary Endpoint | • % favorable outcome at 90 days using a modified Rankin scale (mRS) -- mRS 0-1= excellent outcome  
• Secondary Outcomes: Worsening Ischemia @3 days; Barthel Index 95-100 @ 90 days  
• Safety end points: death, symptomatic intracranial hemorrhage, gout |
| Trial Results | **Primary Outcome** - mRS 0-1 (or 2 if pre-morbid mRS=2): 33%/39.3% p=0.099  
**Secondary Outcome** - worsening @ 3 d, 9.0%/3.3% p=0.021; Barthel >94 @ 90 days = 9.0%/3.3% p=0.021  
**Safety Outcomes @ 90 days**: gout – 2.0%/4.3% p=0.489; death – 15.5%/13.3$ p=0.518 |
| Placebo/UA | **Take Away:** uric acid in addition to thrombolytic therapy did not increase results by the goal of a 14% absolute increment for an excellent outcome. Safety was demonstrated; worsening of stroke at 3 days was improved. The results suggested that certain patients might have greater benefits than others. |