



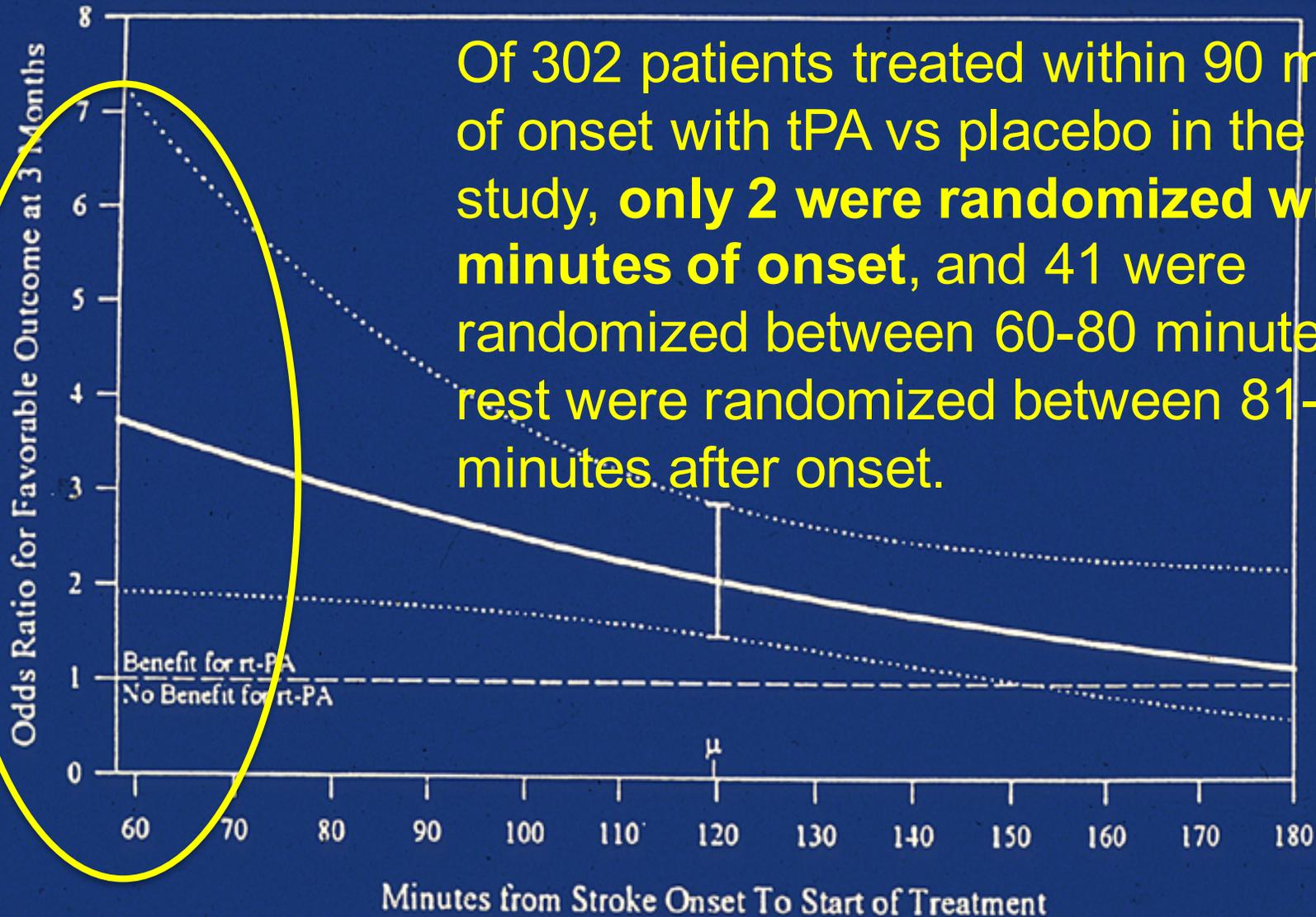
THE UNIVERSITY
of TEXAS
HEALTH SCIENCE CENTER
AT HOUSTON

The Future of EMS Stroke Care

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Will ultra early treatment make patients better?

Relation of Time to Treatment to Odds of Ratio of Favorable Outcome



Of 302 patients treated within 90 minutes of onset with tPA vs placebo in the NINDS study, **only 2 were randomized within 60 minutes of onset**, and 41 were randomized between 60-80 minutes. The rest were randomized between 81-90 minutes after onset.

Data From 622 Patients. Odds Ratio of Minimal or No Disability At 3 Months For rt-PA Compared to Placebo-Treated patients. With 95% Confidence Interval (-----). Range of times from 58 to 180 minutes. Mean time to treatment (μ) was 119.7 minutes.

Steps in Establishing the MSU

Staffing

Who is inside?

- Licensed Vascular Neurologist
with an ACLS
Certification
- Critical Care/ER trained
Registered Nurse
with ACLS
certification
- Licensed Paramedic
with ACLS
certification
- Licensed CT radiology
technician with
BLS certification
- Telemedicine Doc!!



BEST-MSU enrollments- First Two Years

(as of December, 2016)

- **190** Treated with rt-PA (2.85/wk, 135/yr)
- 90 More Transported (but not treated)
 - ICH
 - Sz
 - Too mild
 - Uncertain onset time
 - Other (tumor, cerv. spond.)
- Avg. on-scene time- **21 min**
- Symptom onset to t-PA treatment
 - **42%** 0-60 min (vs 0% control)
 - **37%** 61-80 min (vs 20% control)
 - 21% 81-270 min (vs 80% control)



Cost Projection

Cost of CT Scanner	\$ 375,000
Ambulance Retrofit	\$ 60,000
TM equipment	\$ 30,000
<u>Cost of added paramedic and TM coverage X 5 yrs</u>	<u>\$1,000,000</u>
Total fixed and continuing costs for 1 MSU X 5 yrs	\$1,465,000



VS



Less than the cost to sustain an endovascular program!

Lifetime cost per stroke: \$ 200,000

Therefore, cost neutral if:

1 MSU results in 7 more patients completely recovering over 5 yrs