



Randomized control tests (RCT) are the gold standard in clinical trials



Many patients get an inferior treatment.

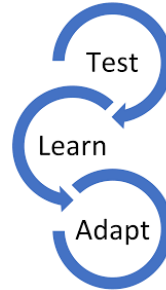


GOALS

- ❖ Save lives and improve positive outcomes with day-to-day adaptations in patient assignment to arms.
- ❖ Evaluate strengths and weaknesses when there are delayed endpoints.



What if two large trials (GUSTO-1 and EUROPA) had been adapted in real time?



Reanalyze trials using real-time adaptive randomization (RTAR) of clinical trials.

- ❖ day-to-day adaptation
- ❖ delayed outcomes
- ❖ patient beneficence
- ❖ statistical properties

RESULTS

- ❖ RTARs save lives and reduce adverse events
- ❖ no increase in false positives
- ❖ learn superior treatment with tighter CIs
- ❖ some statistical measures improve; others are worse
- ❖ variants finetune tradeoffs
- ❖ RTARs adapt to some changes in outcome rates

