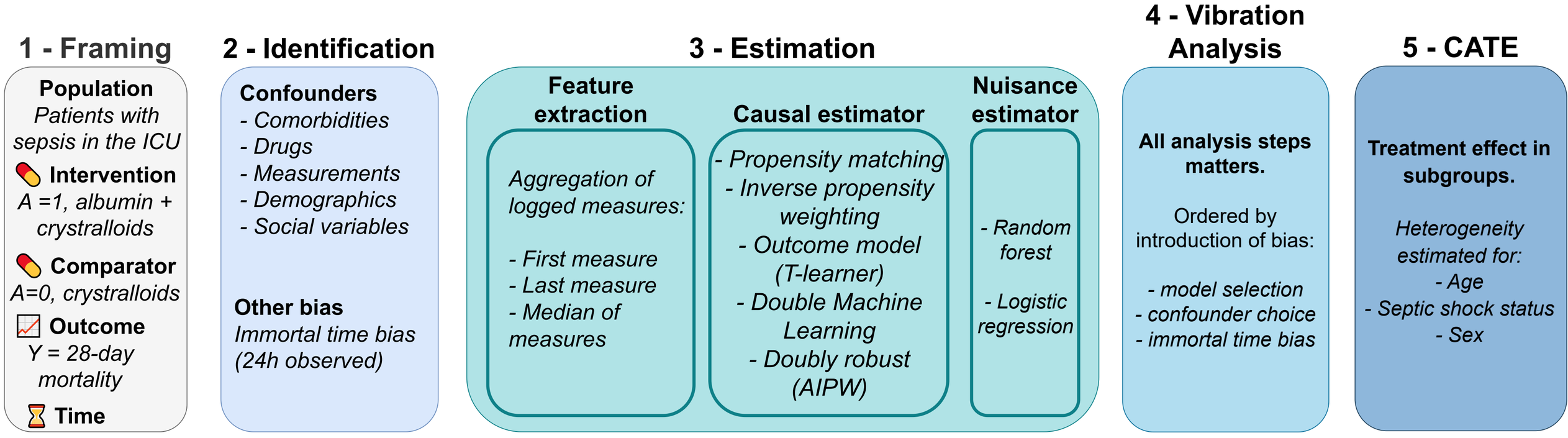
1 - Framing
Population
Patients with sepsis in the ICU
Intervention
A =1, albumin + crystralloids
Comparator
A=0, crystralloids
Outcome
Y = 28-day mortality
Time
2 - Identification
Confounders
- Comorbidities
- Drugs
- Measurements
- Demographics
- Social variables
Other bias
Immortal time bias (24h observed)
3 - Estimation
Feature extraction
Aggregation of logged measures:
- First measure
- Last measure
- Median of measures
Causal estimator
- Propensity matching
- Inverse propensity weighting
- Outcome model (T-learner)
- Double Machine Learning
- Doubly robust (AIPW)
Nuisance estimator
- Random forest
- Logistic regression
4 - Vibration Analysis
All analysis steps matters.
Ordered by introduction of bias:
- model selection
- confounder choice
- immortal time bias
5 - CATE
Treatment effect in subgroups.
Heterogeneity estimated for:
- Age
- Septic shock status
- Sex