



# Replication and extrapolation from RCTs to observational data to predict treatment effects: Why, What, How

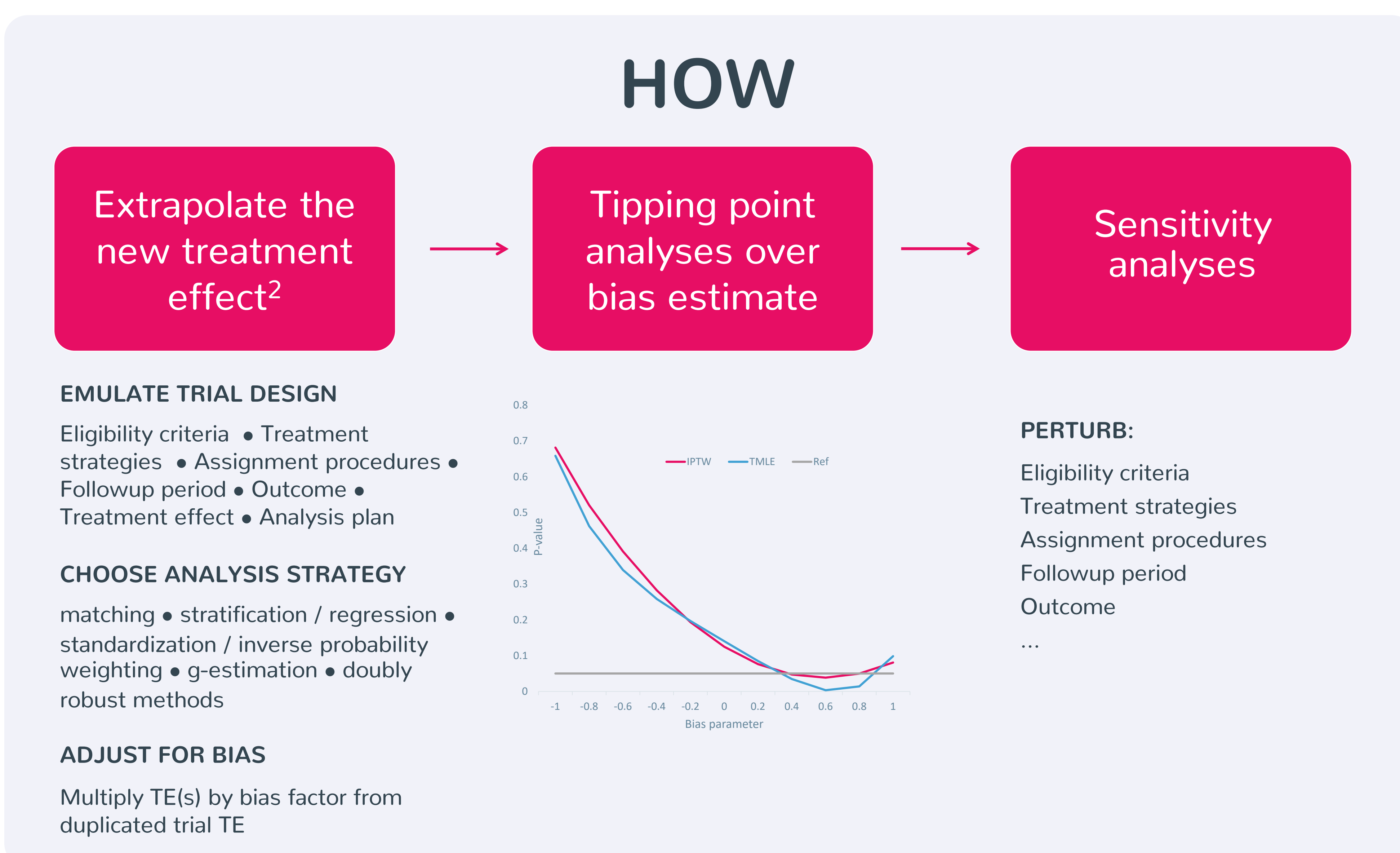
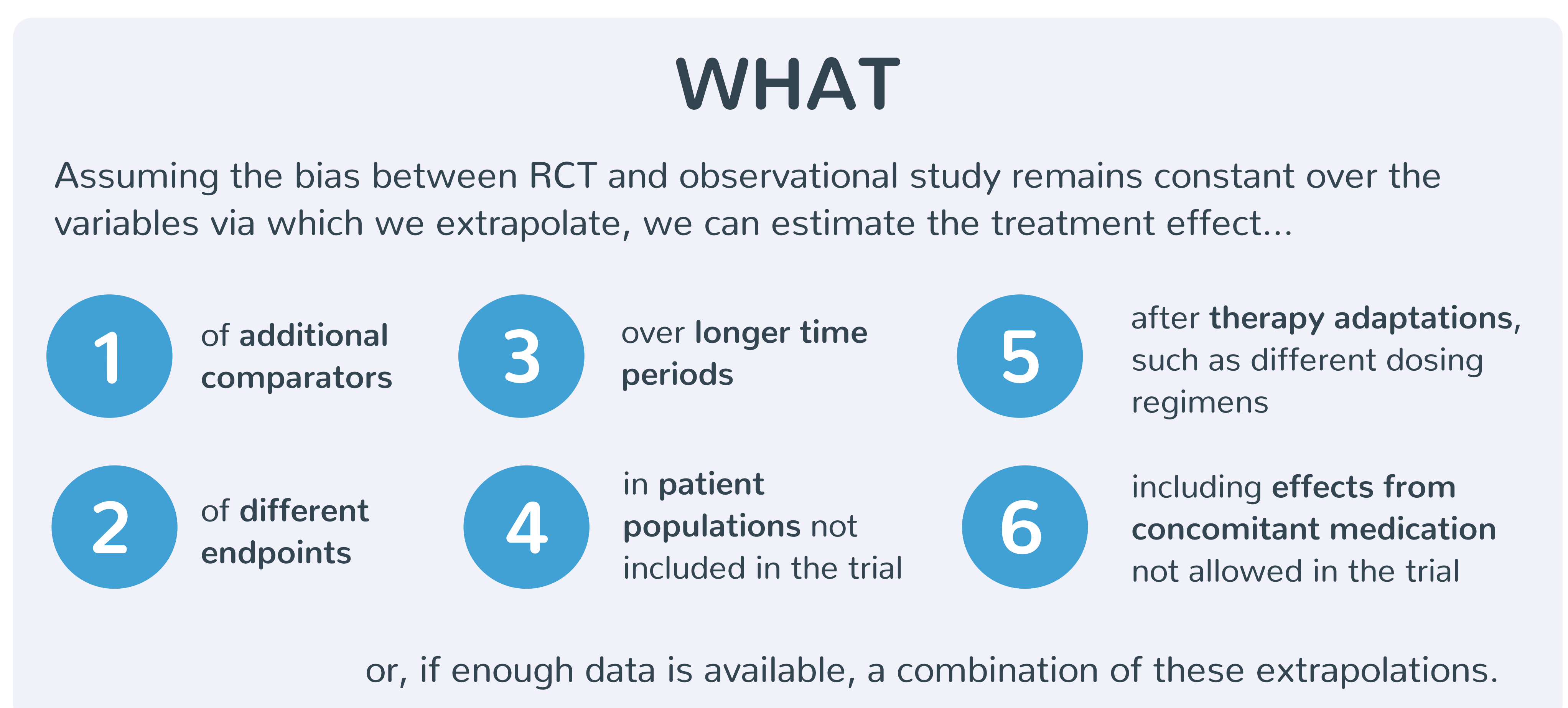
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## Introduction

RCT Duplicate<sup>1</sup> has shown that it is possible to replicate the results of an RCT using real-world, observational data. Where such a replication is possible, it provides

- 1) trust in the evidence coming from the observational data, and
- 2) an estimation of bias introduced by moving from trial to observational data.

Building from this support, we can go beyond the scope of the trial, leveraging the richness of real-world data and extrapolating findings beyond what was initially reported in the trial.



## Concluding Remarks

Combining replication of existing clinical trials with the strengths of real-world data through extrapolation leads to increased trustworthiness of the results from real-world studies.

Real-world analyses offer cheaper, faster routes to evidence than traditional RCTs.

Appropriate tipping point and sensitivity analyses elucidate the robustness of conclusions and help decision makers best exploit the potential of new and existing treatments.