

METHODS FOR ESTIMATING SURVIVAL BENEFITS IN THE PRESENCE OF TREATMENT CROSSOVER: A SIMULATION STUDY

Latimer N¹, Lambert P², Crowther M², Abrams K², Wailoo A¹, Morden JP³.

¹ School of Health and Related Research, University of Sheffield, Sheffield, UK;

² Department of Health Sciences, University of Leicester;

³ Clinical Trials and Statistics Unit, Division of Clinical Studies, The Institute of Cancer Research, Sutton, UK

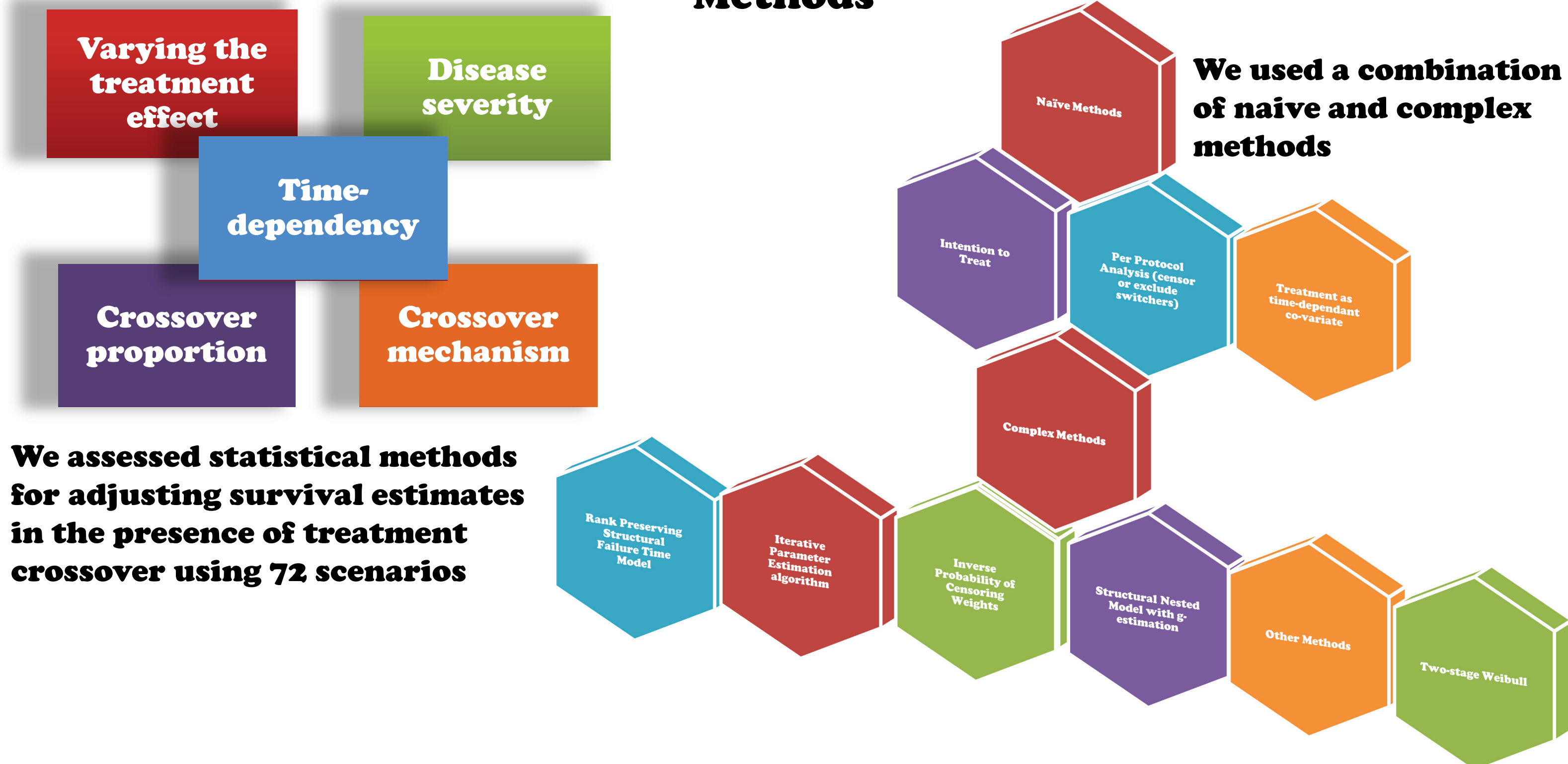
Problem

How do you decide which method to use to adjust for treatment crossover?

Issues

- **Problems in estimating true size of efficacy gain**
- **ITT analysis can underestimate true survival benefit**
- **Simple methods for adjustment prone to selection bias**

Methods



Outcomes of our study

Fig.1 Bias in scenarios with common treatment effect

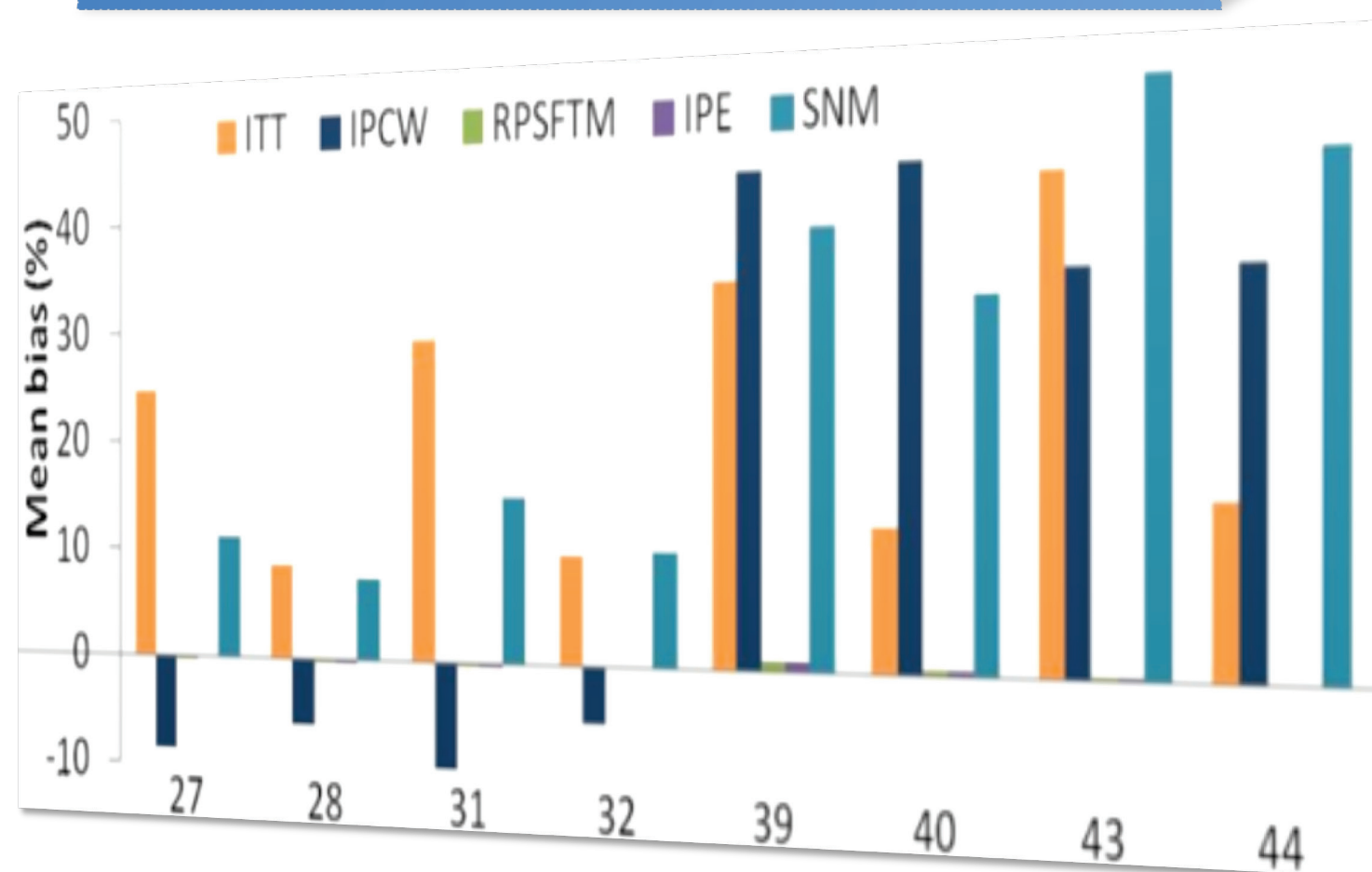


Fig.3 Bias by crossover proportion - common treatment effect

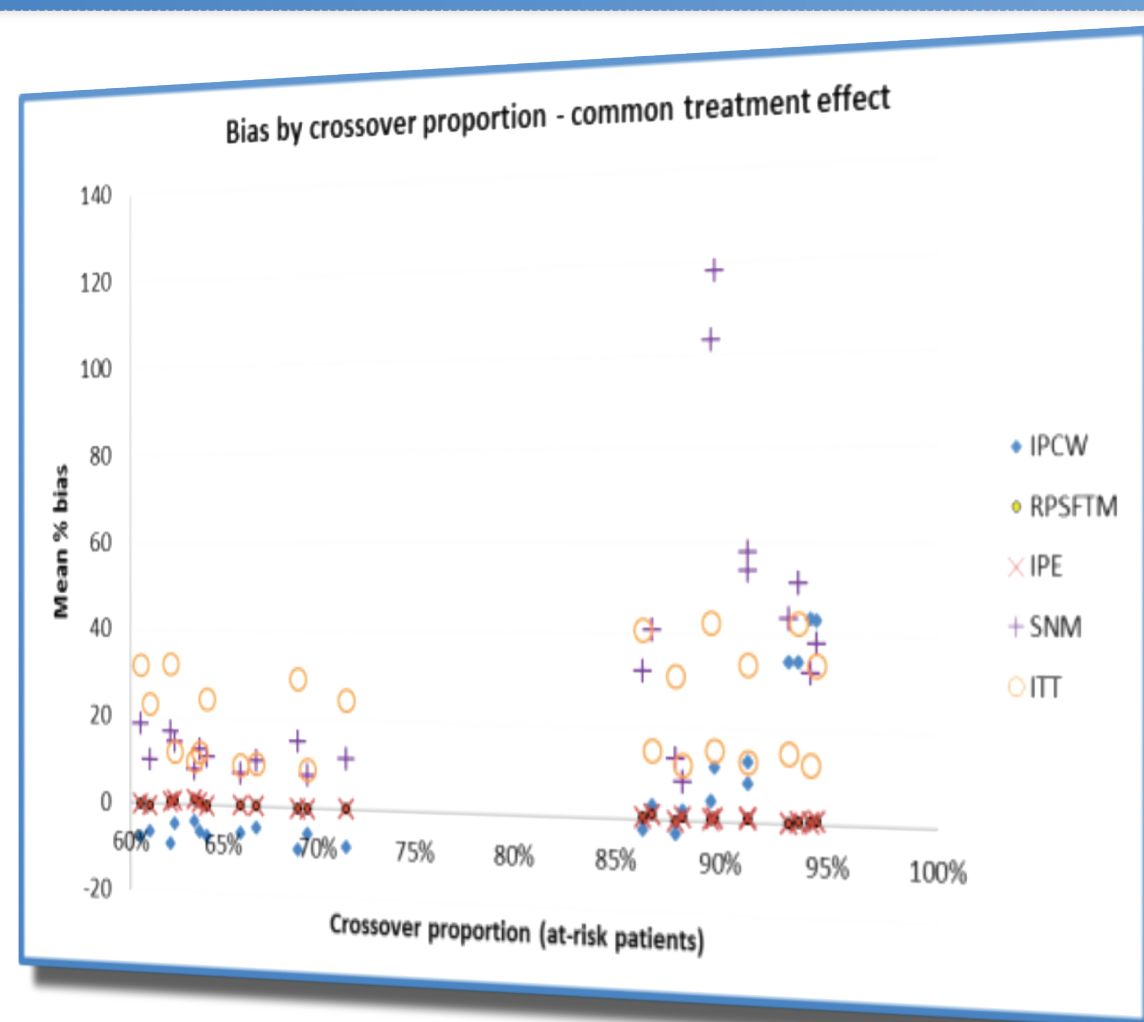
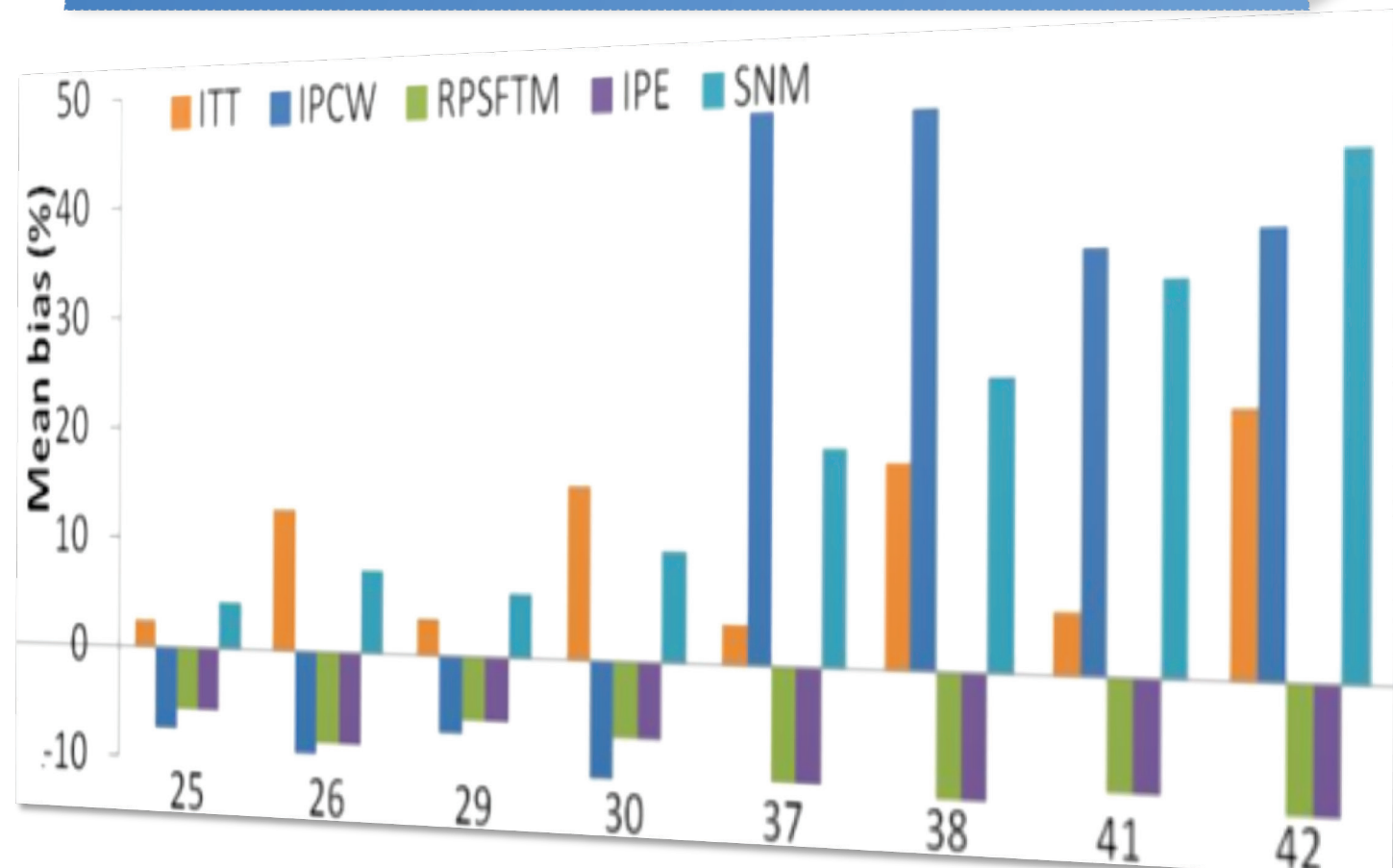


Fig.2 Bias in scenarios with a changing treatment effect



Solution

Analysts should consider:

- **treatment crossover mechanism**
- **control group crossover proportion**
- **treatment effect of different patient groups**
- **data availability**

Contact Us: N.Latimer@shef.ac.uk

 @scharrheds

www.sheffield.ac.uk/heds

www.scharrheds.blogspot.co.uk

