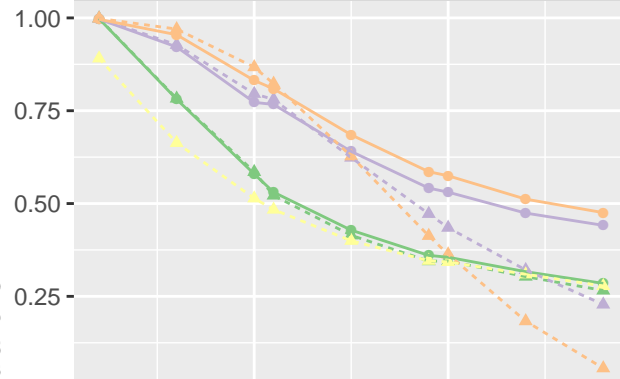


Proportion of simulations

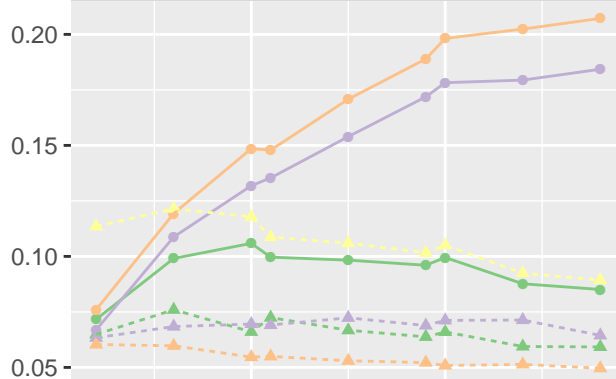
Proportion detected at $p < 0.05$

Causal model



Proportion detected at $p < 0.05$

Null model

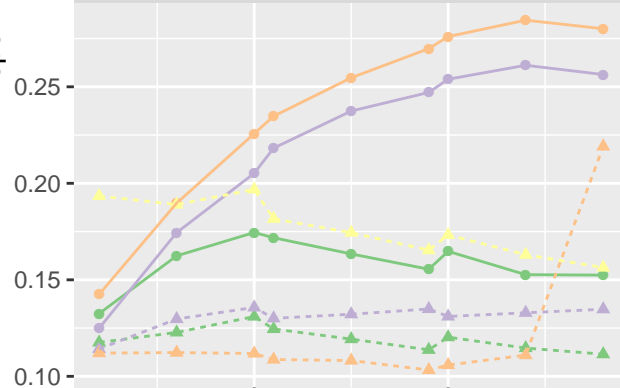


Outlier detection

- Pleiotropy detected
- Pleiotropy known

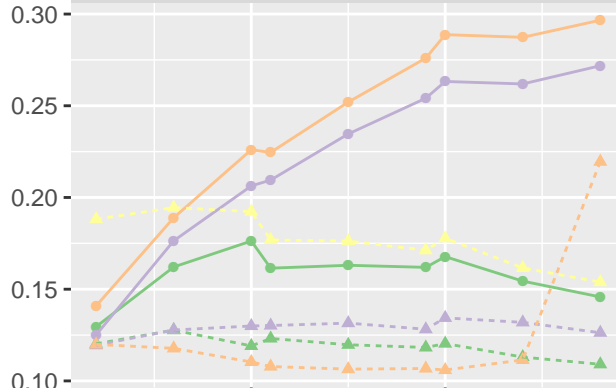
Proportion with bias

Causal model



Proportion with bias

Null model



Method

- Outliers adjusted
- Outliers removed (all)
- Outliers removed (candidates)
- Raw

Number of SNPs with pleiotropic effects