

Intro

- HRA offers improved sensitivity in detecting HSIL, which leads to an increased number of patients requiring care
- actual numbers vary according to risk factors within the population and screening strategy
- increase in patient interactions may overwhelm even the most affluent healthcare settings

Methods

- set of assumptions about disease progression
- two screening strategies
- progression assumptions and screening strategy can be altered as needed
- Monte Carlo simulation gives a range of possible outcomes

Results

In the sample case a more sensitive screening method led to:

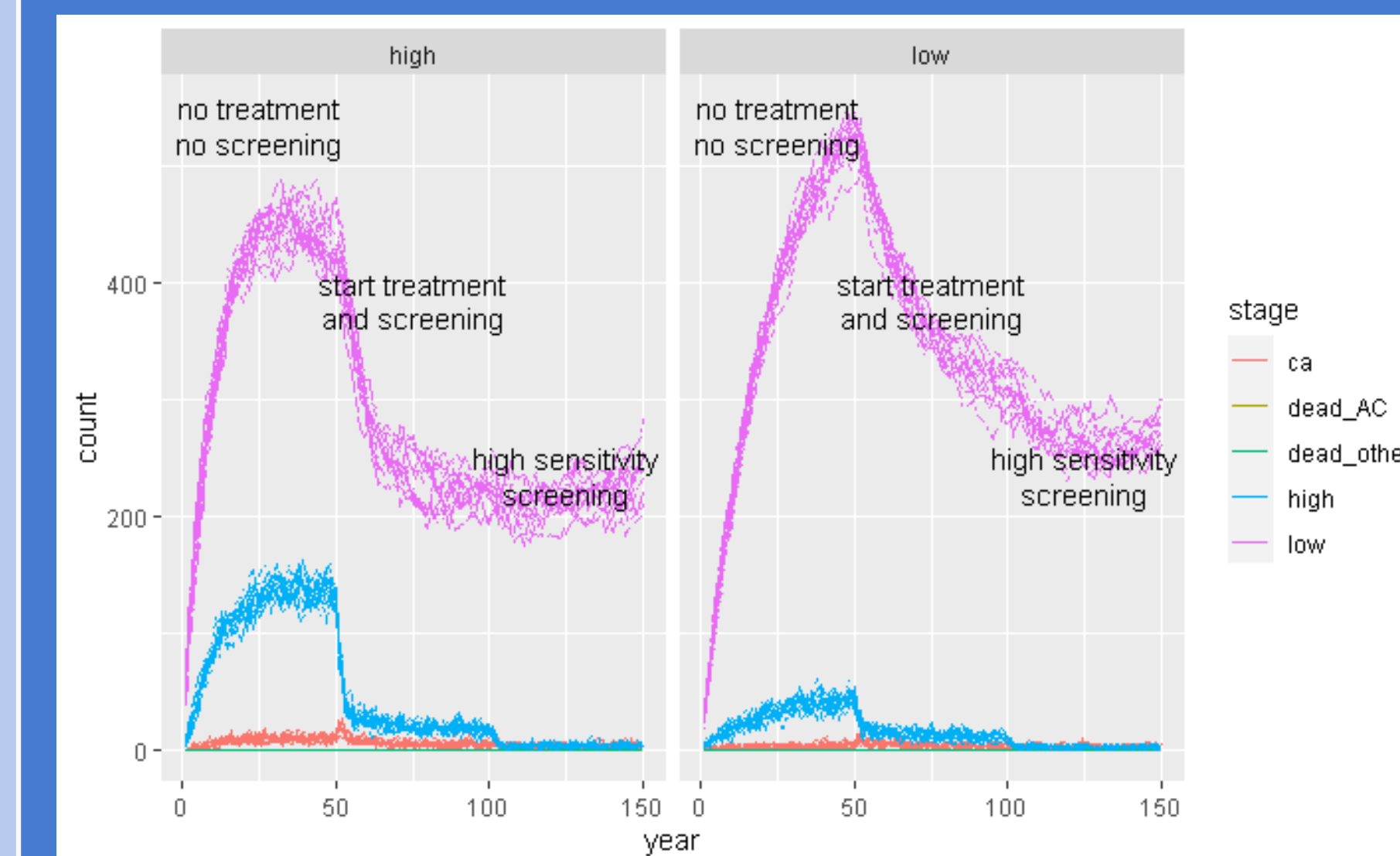
- increased number of patients with known disease
- increased number of required patient encounters
- decreased number of patients with active disease

Monte Carlo simulation can be used to estimate changes in patient flow when risk factors and screening methods change.



Take a picture to see the simulation code.

Extra Tables & Figures:



Conclusions

- improved screening leads to better results for patients, but increases the burden on the healthcare system
- Monte Carlo simulations can be used to anticipate these effects ahead of time
- modelling different risk groups by varying population parameters
- modelling screening strategies by varying screening parameters
- finding an appropriate balance before implementing changes to guidelines
- identifying appropriate modifications for specific settings