



# Tuberculosis in Switzerland

## Treatment outcome monitoring 2016 and 2017

March 27th, 2019



# Outline

- Introduction
- Epidemiology of tuberculosis in Switzerland
- Treatment outcomes
  - Surveillance system
  - Definitions
  - Results
- Discussion and open questions
- Acknowledgements



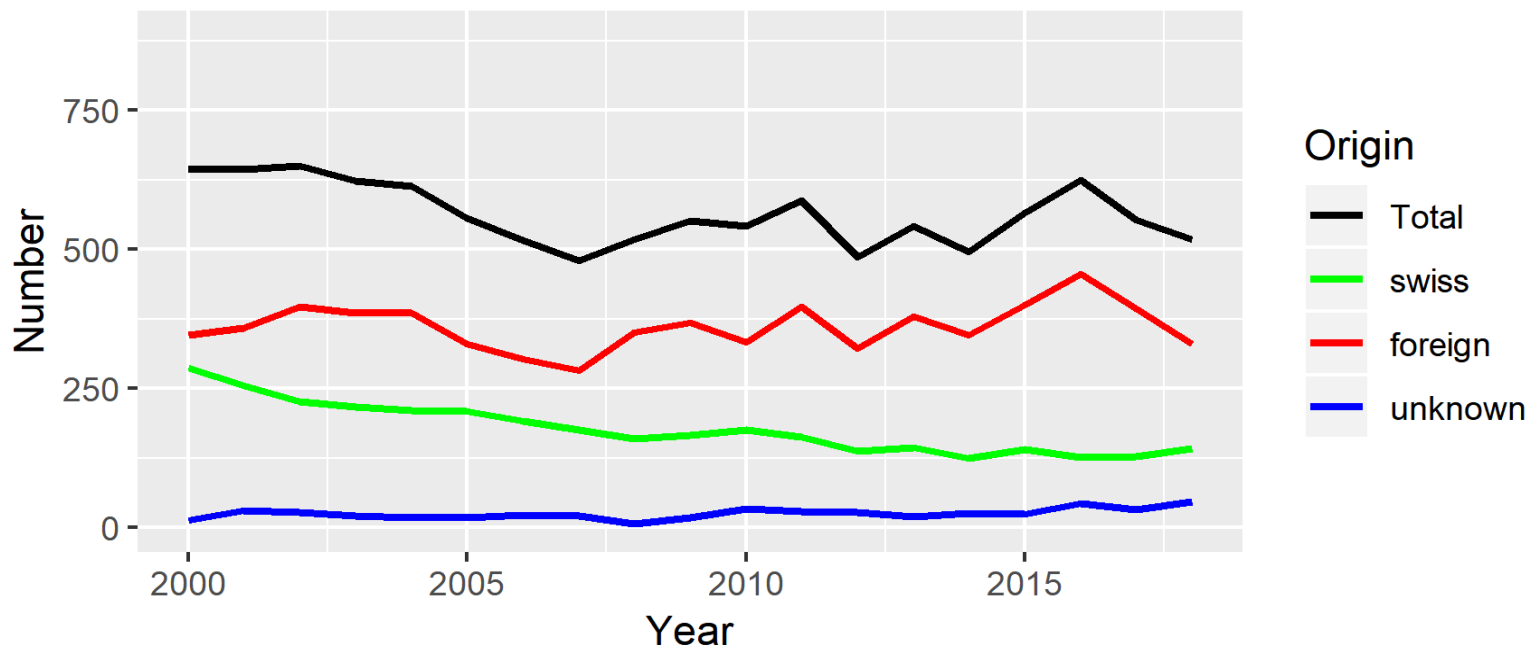
# Introduction:

## Why do we monitor treatment outcome?

- Do we successfully treat TB in Switzerland?
- Do we treat patients correctly in order to prevent resistance?
- Do we control TB in Switzerland?
- Do we have potential to improve TB control?
- Do we reach the WHO target of 85% treatment success?

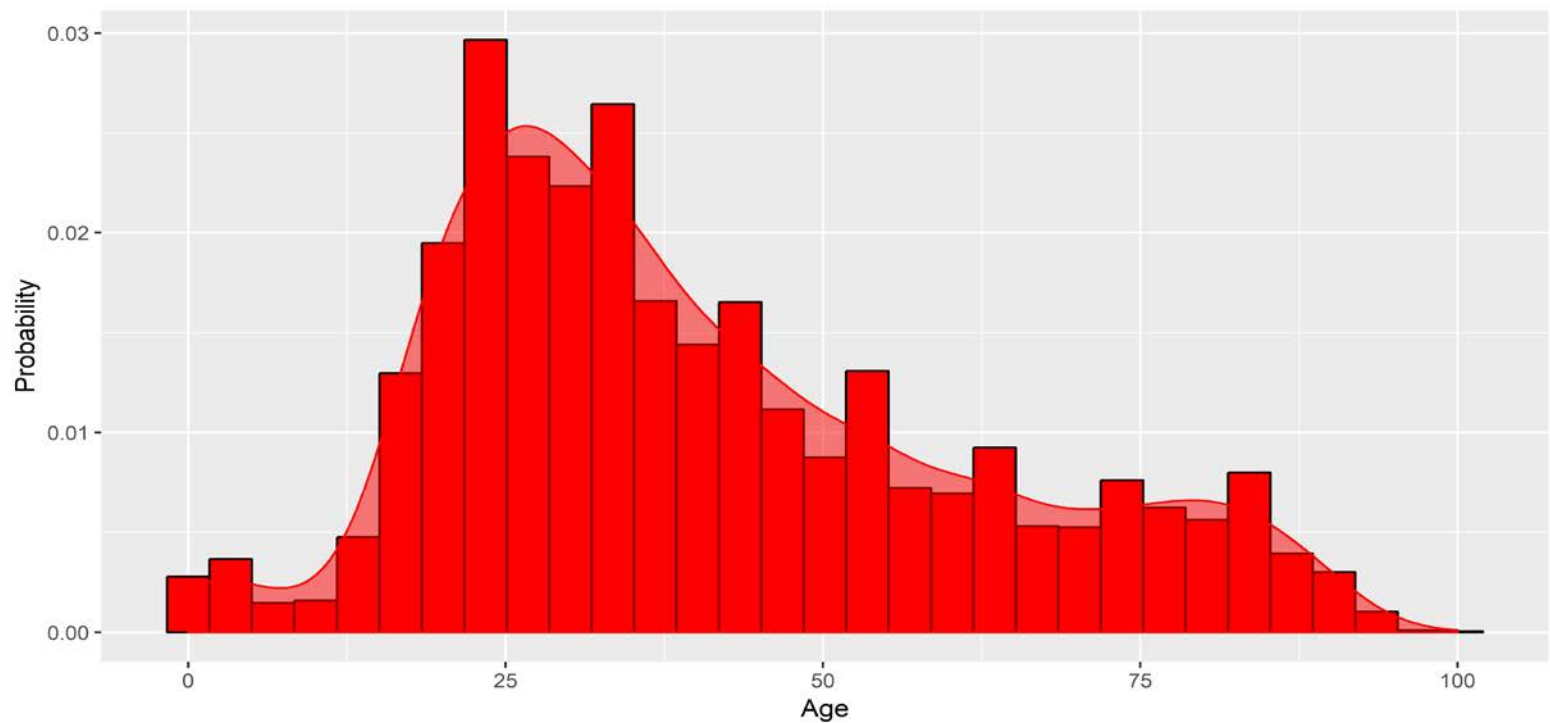


# Number of notified TB cases, 2000-2018



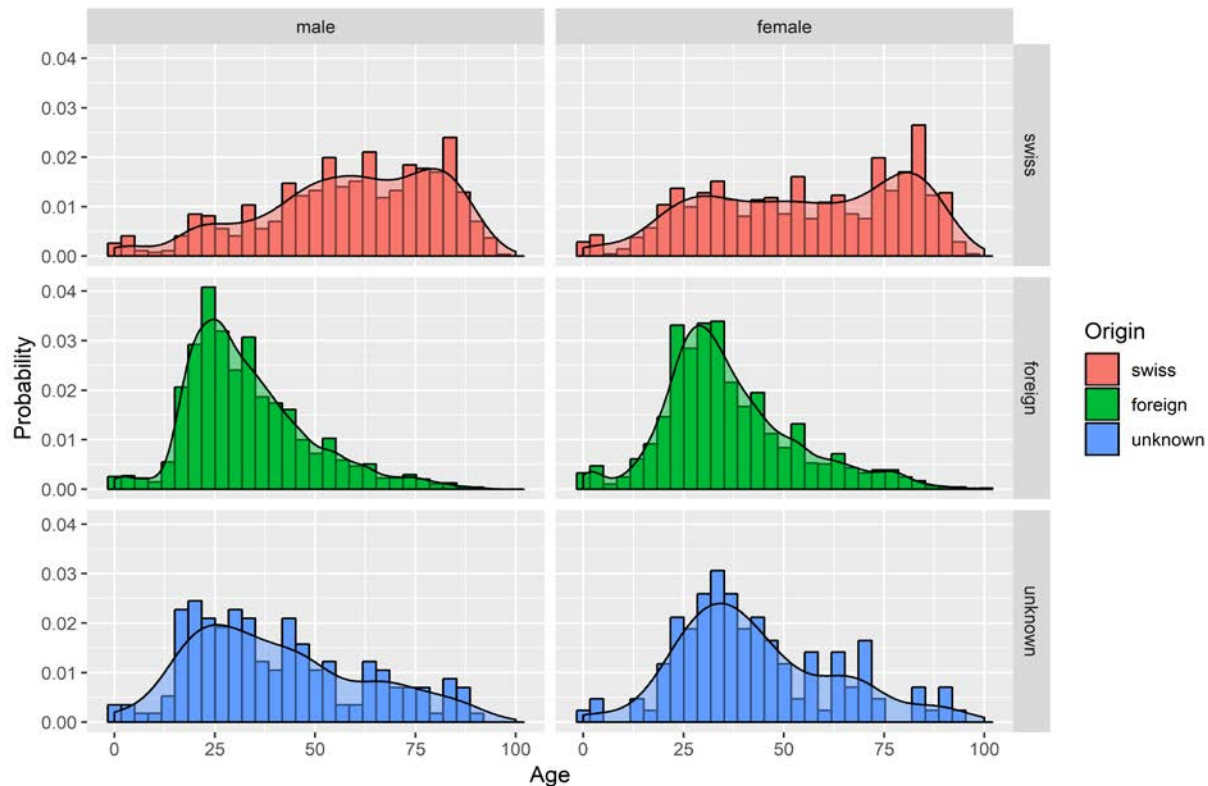


# Age distribution of TB cases 2009-2018



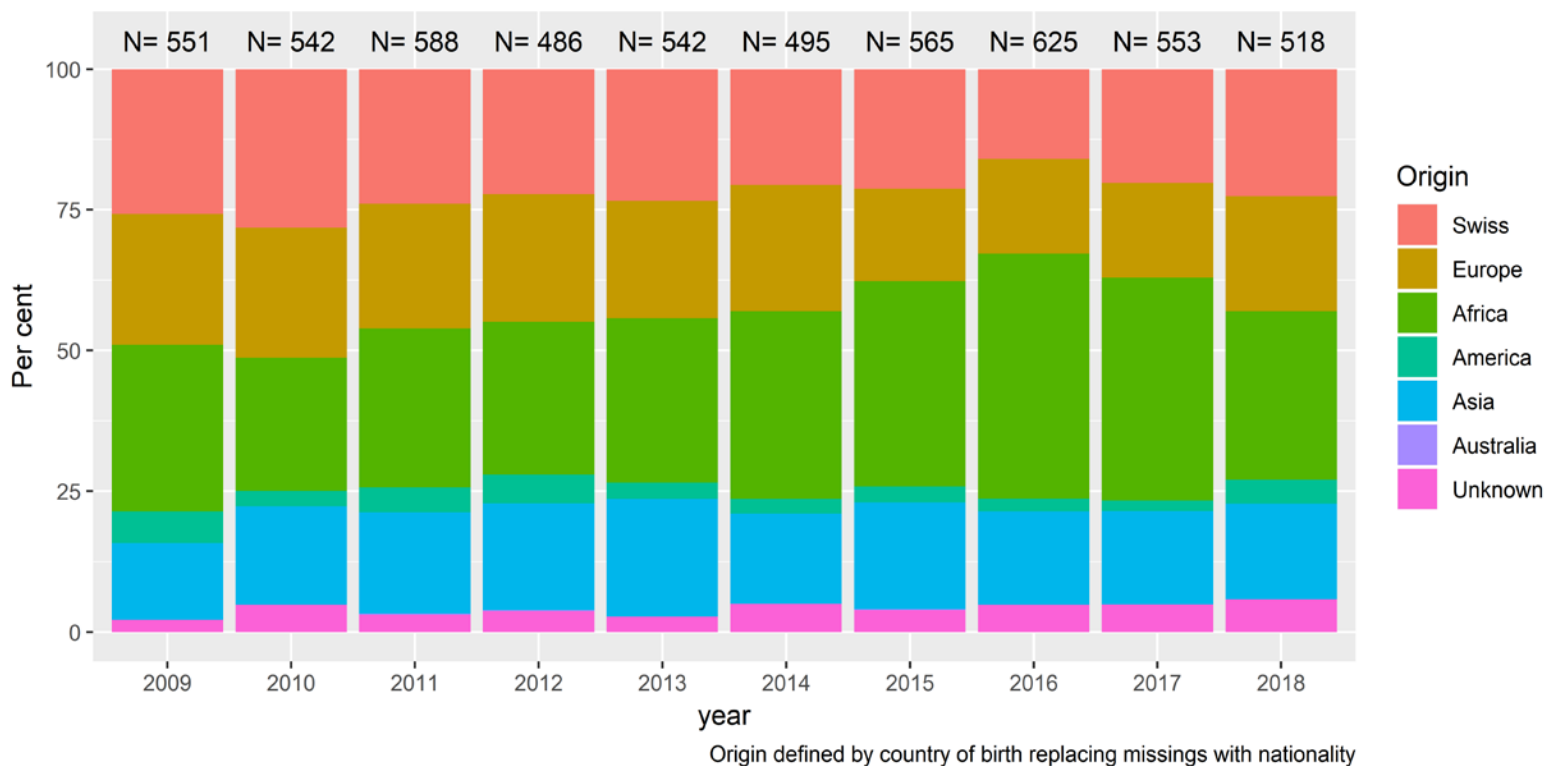


# Age distribution of TB cases by gender and origin 2009-2018



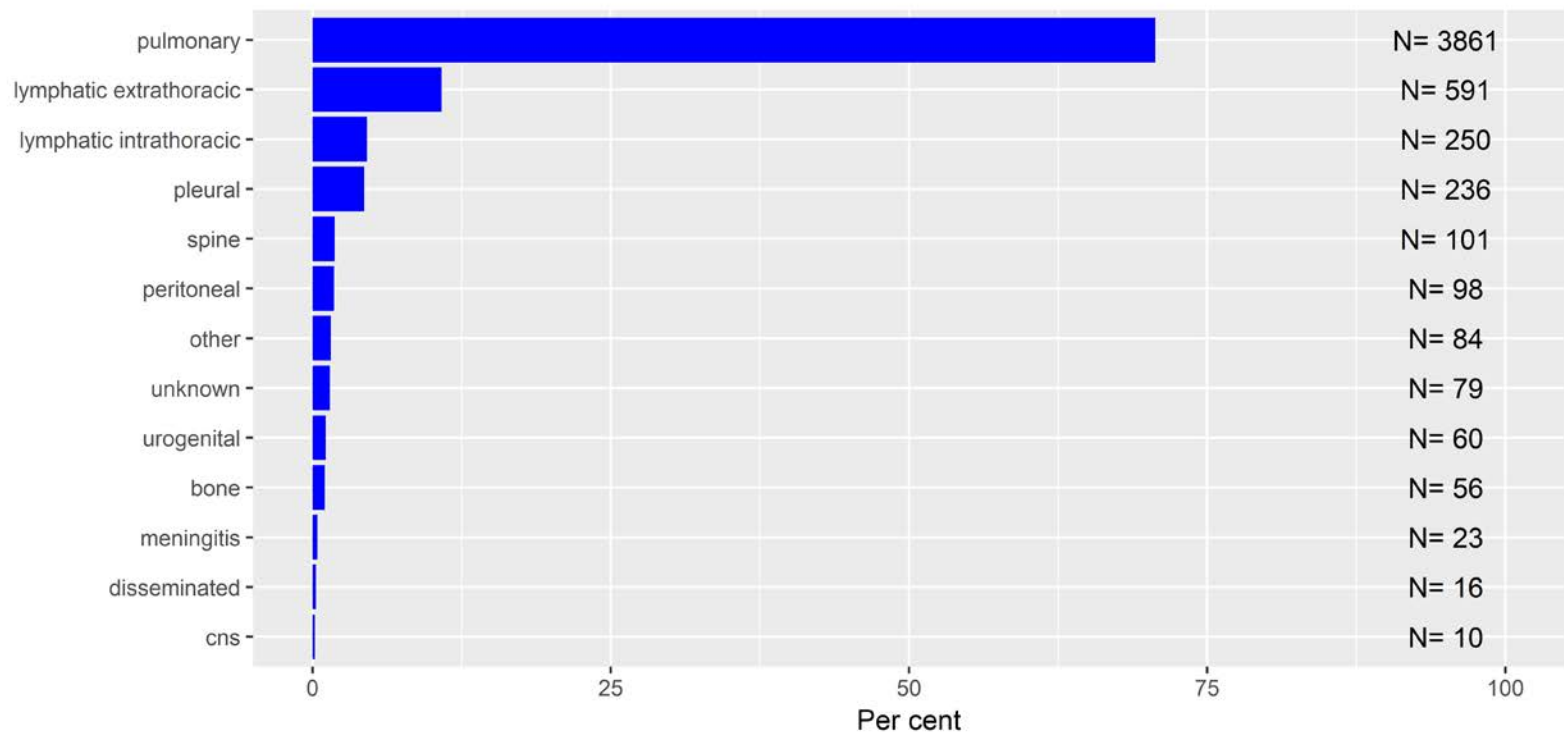


# TB cases by origin (Switzerland vs. other countries by continent) 2009-2018





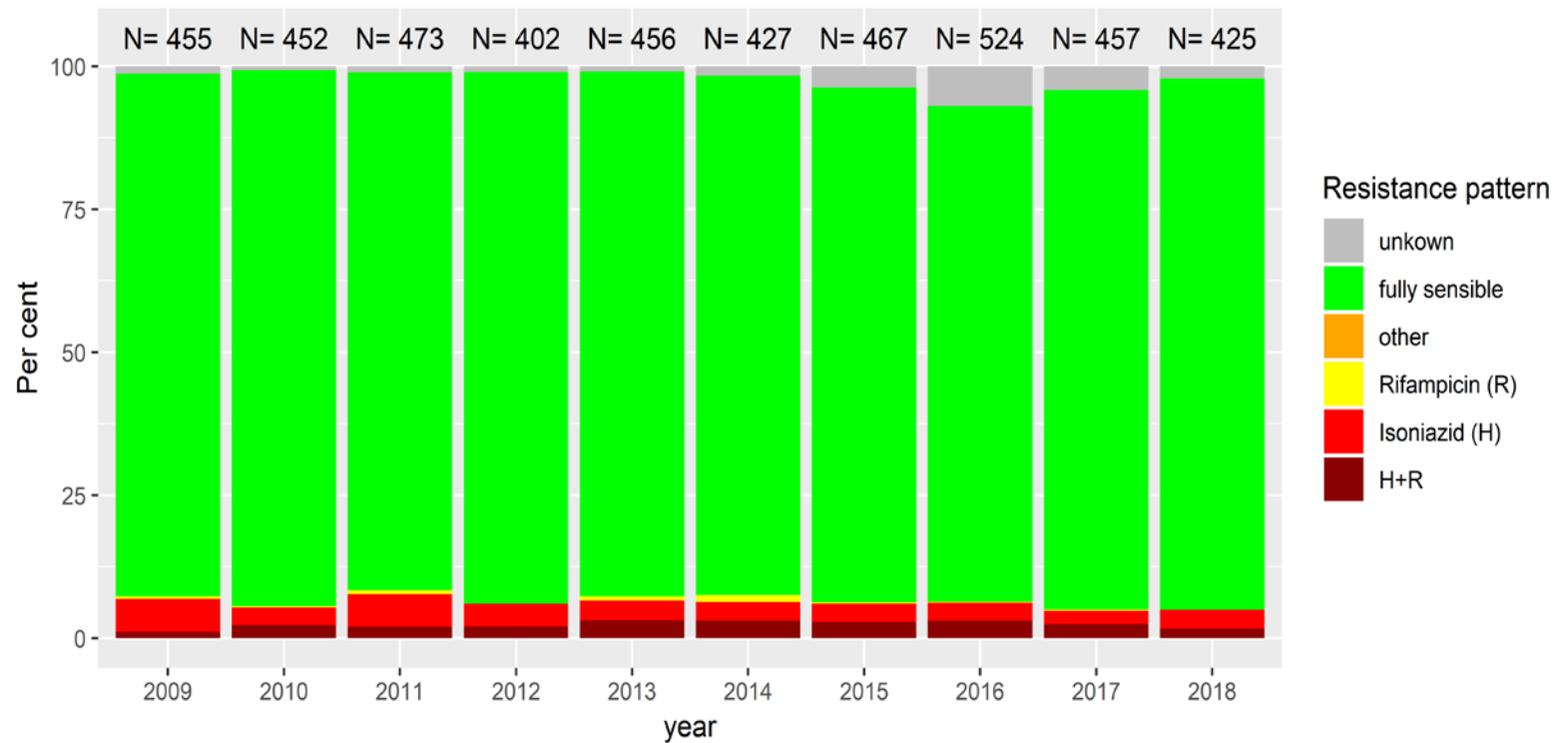
# Clinical picture of TB cases 2009-2018





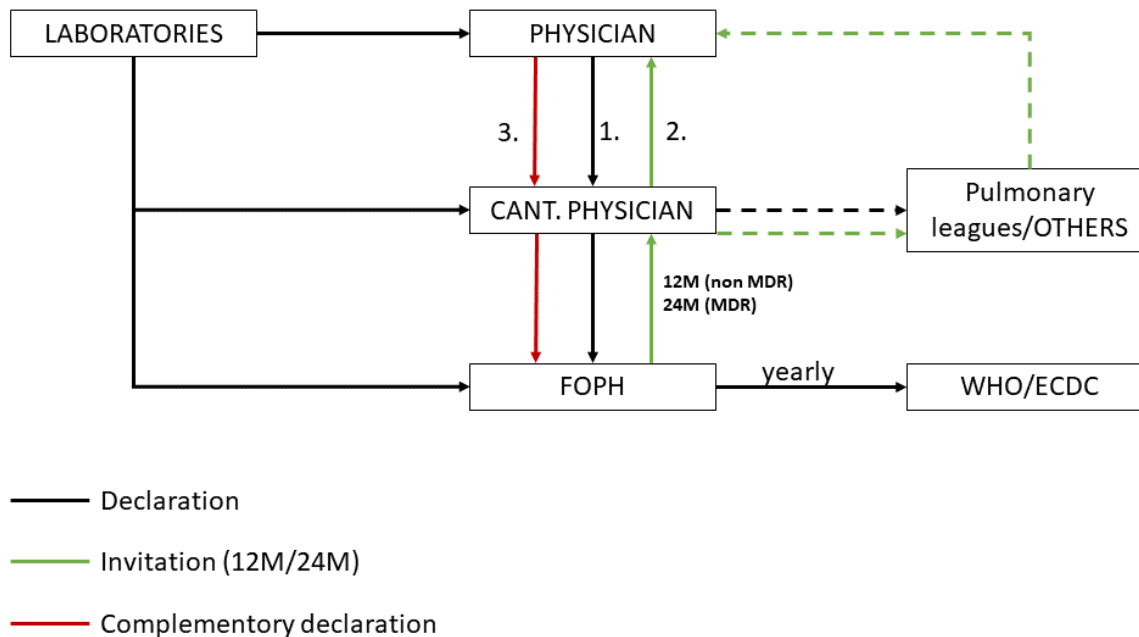


# TB: Resistance against Isoniazid and Rifampicin (2009-2018)





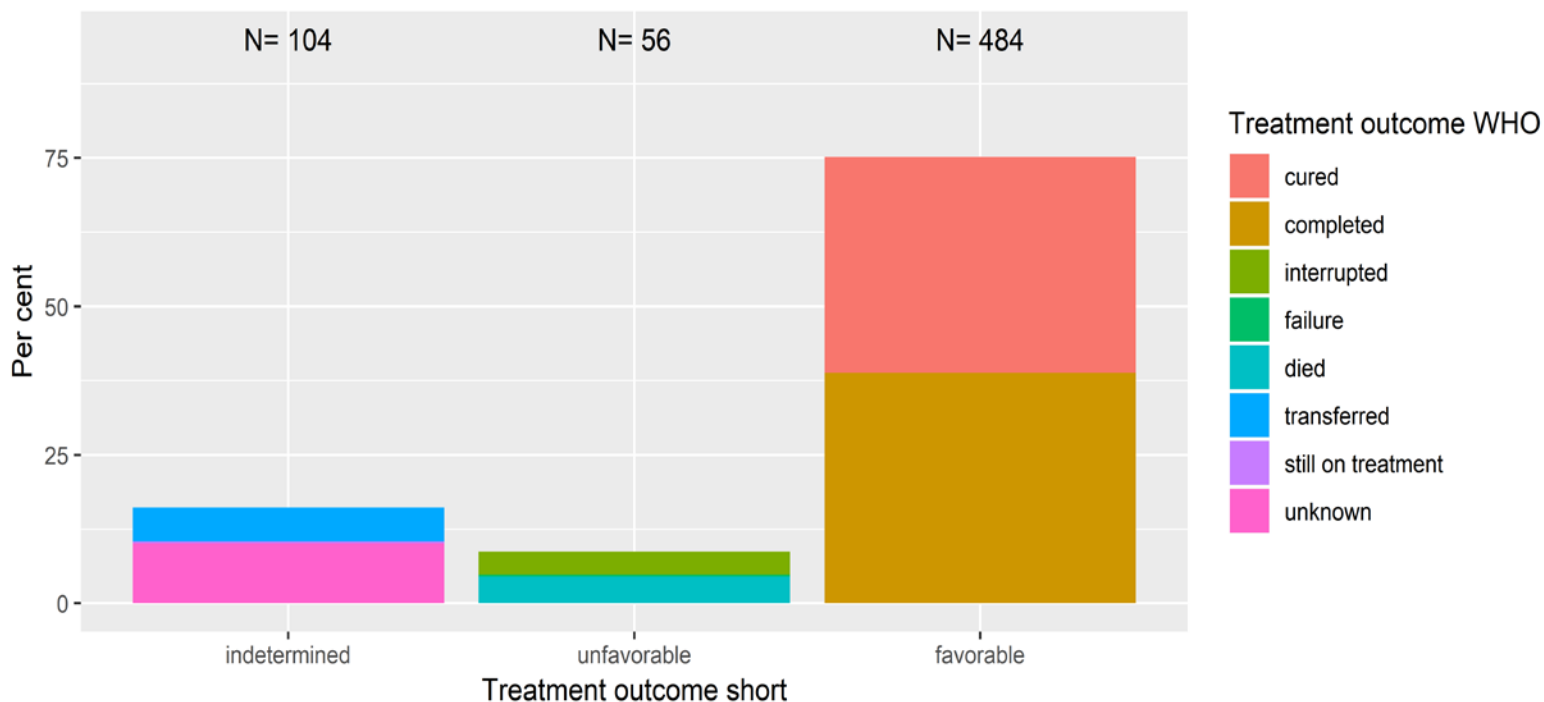
# National Surveillance System for TB



## Treatment outcome monitoring became mandatory in 2016



# Treatment outcome monitoring of culture positive pulmonary TB (cPTB) cases 2016/2017



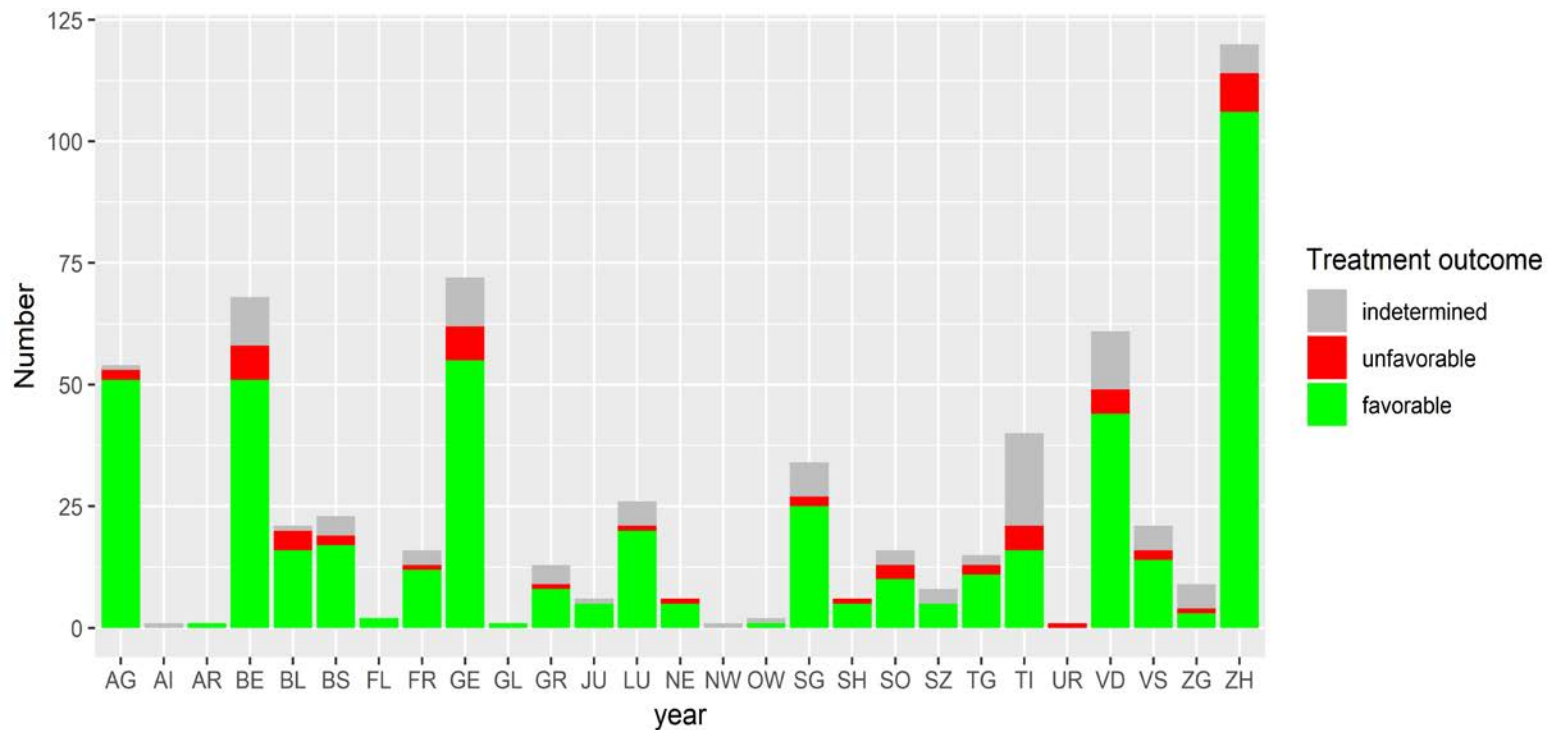


# Treatment outcome monitoring of cPTB cases 2016/2017 by year



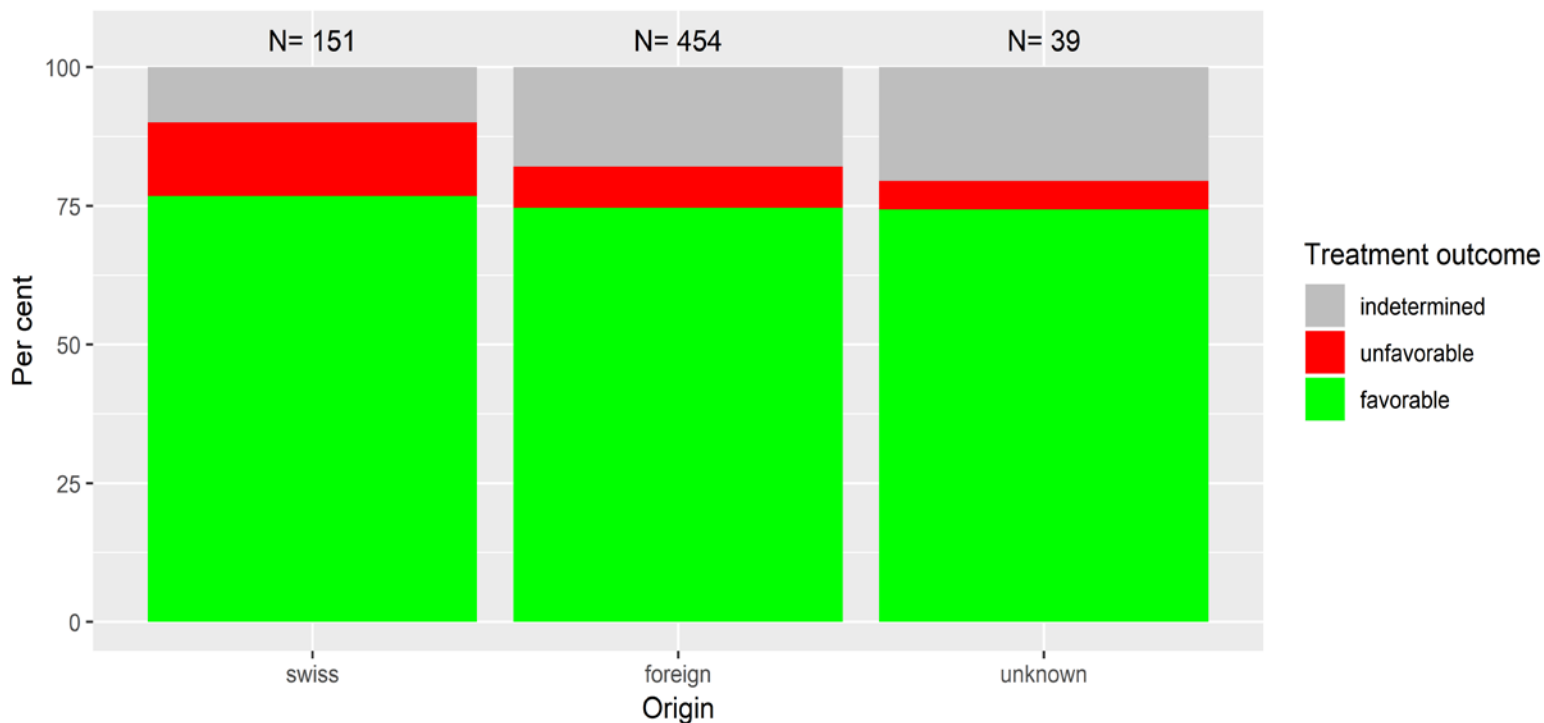


# Treatment outcome monitoring of cPTB cases 2016/2017 by canton



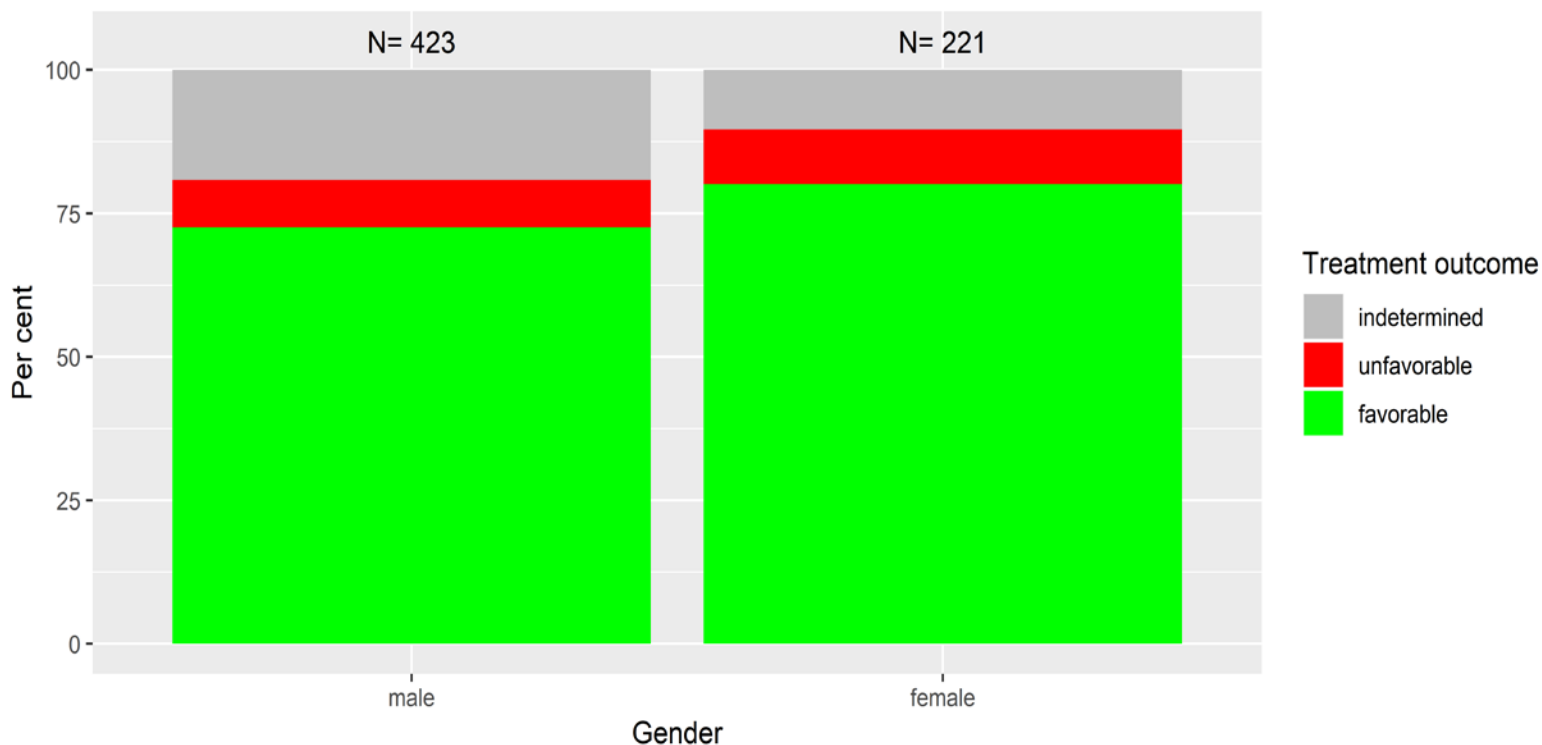


# Treatment outcome monitoring of cPTB cases 2016/2017 by origin



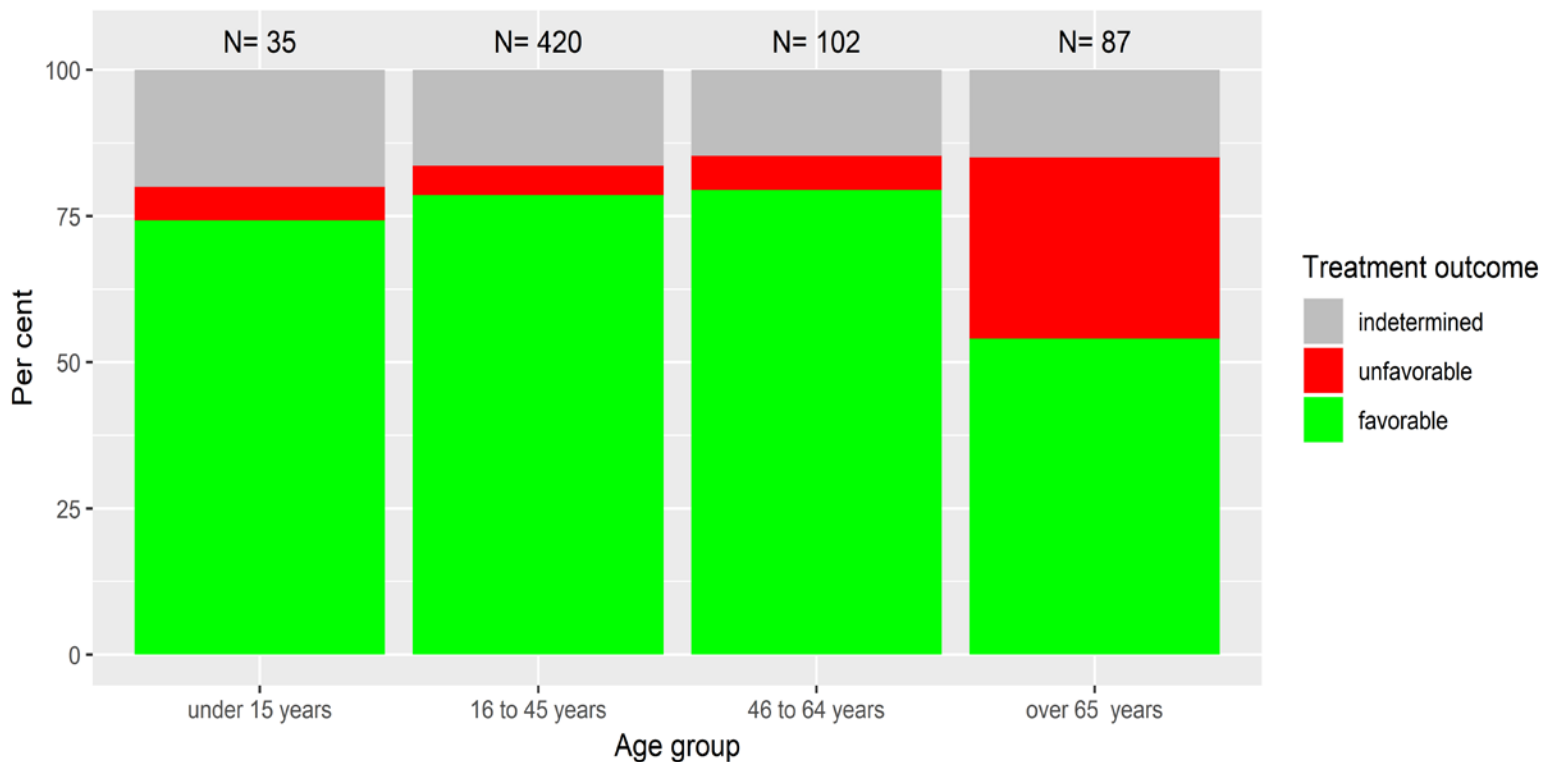


# Treatment outcome monitoring of cPTB cases 2016/2017 by gender





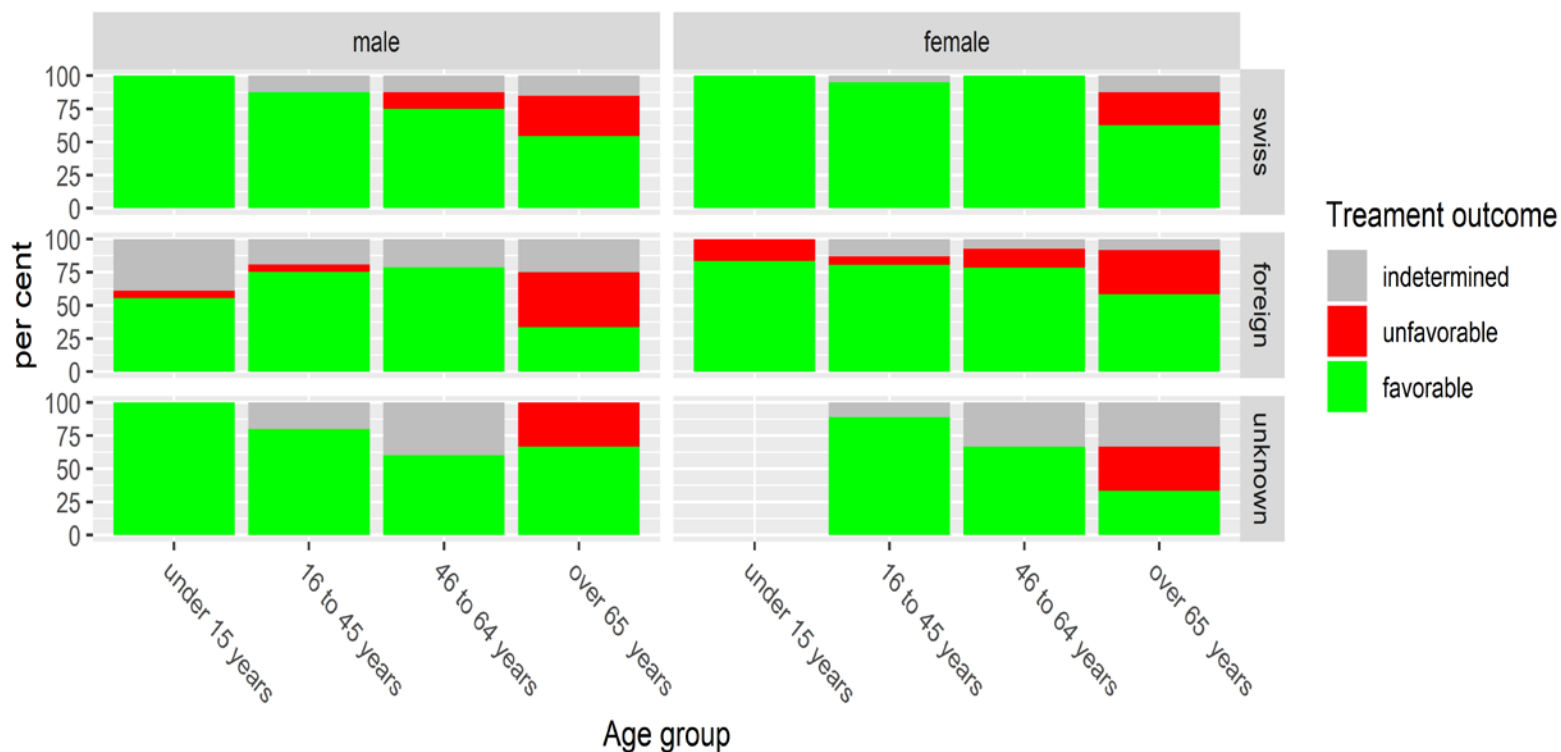
# Treatment outcome monitoring of cPTB cases 2016/2017 by age







# Treatment outcome monitoring of cPTB cases 2016/2017 by age, gender and origin

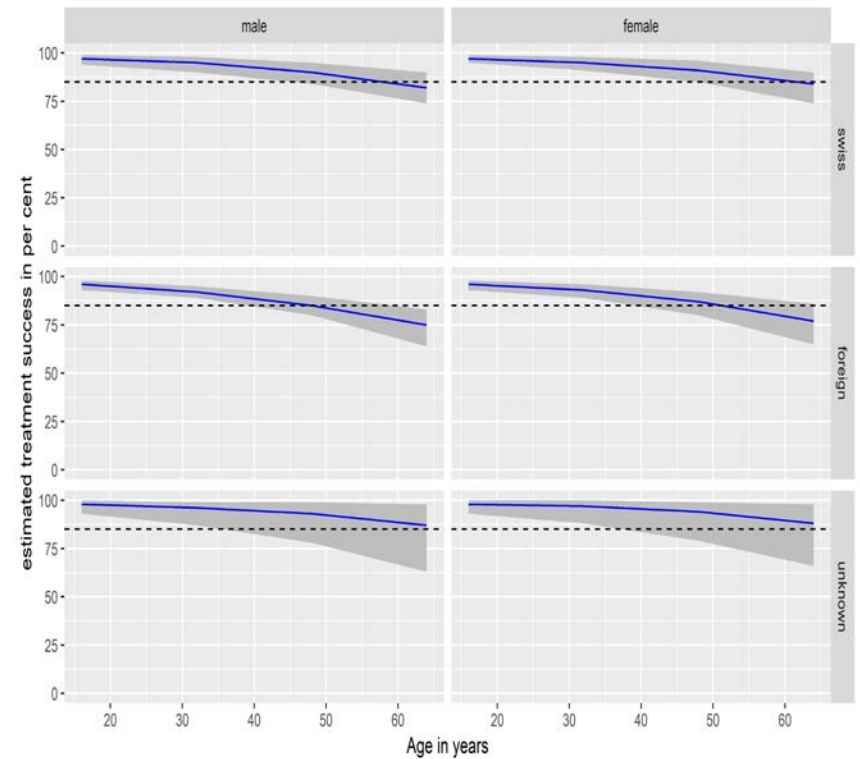
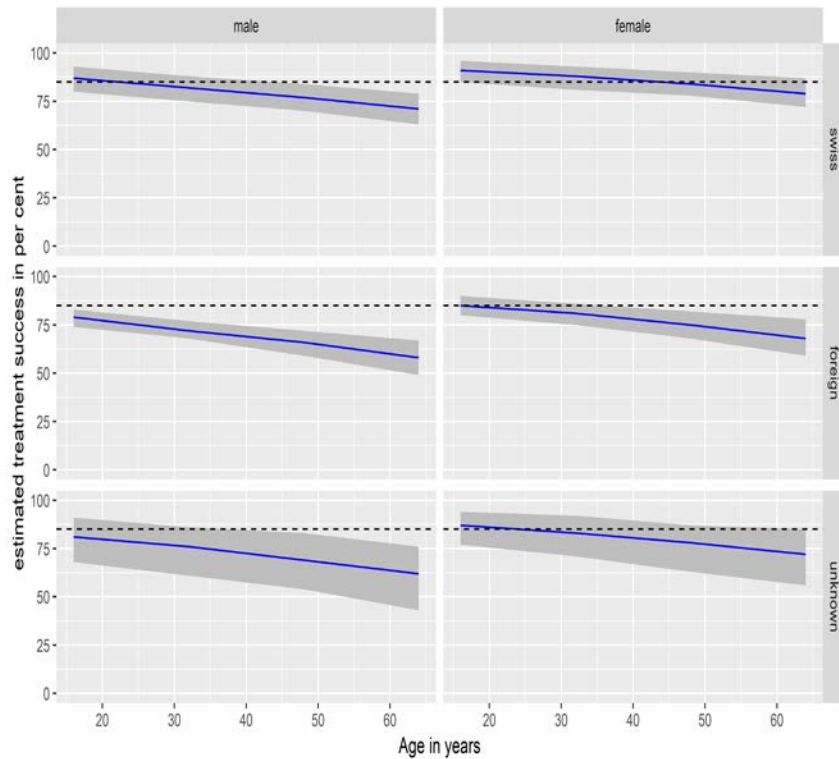




# Treatment outcome monitoring of cPTB: favorable outcomes by age, gender and origin

including «indetermined» outcomes

excluding «indetermined» outcomes





# Summary I

- Overall the number of TB cases has remained stable in Switzerland since the year 2000.
- TB mostly affects young adult men of foreign origin
- The number of TB cases is declining in persons of Swiss origin.
- TB is a pulmonary disease in about 75% of the cases.  
CAVE: extrapulmonary TB in 25%!



## Summary II

- Overall treatment outcome of culture confirmed pulmonary TB is successful in 75%, however regional differences do exist.
- There is no change between 2016 and 2017.
- It is less likely to be favorable in patients of foreign or unknown origin
- It is more likely to be favorable in women than in men.
- It is less likely to be favorable in elderly patients.
- Switzerland does not (yet) reach the WHO target of an overall 85% treatment success.



# Discussion and open questions

- Monitoring is important and shows that treatment is successful in about 75%.
- There are cantonal/regional differences. We hypothesize that
  - improving transmission of information between cantons and within the same canton improves treatment outcome.
  - use of tools like «*Informationssystem Meldungen (ISM)*» that are readily available facilitate information transfer and treatment outcome monitoring
  - collaboration with or mandating partner organisations will improve the monitoring.



# Acknowledgements

- physicians in Switzerland
- cantonal physicians
- Swiss Lung Association and the cantonal pulmonary leagues
- My colleagues at the FOPH for their support