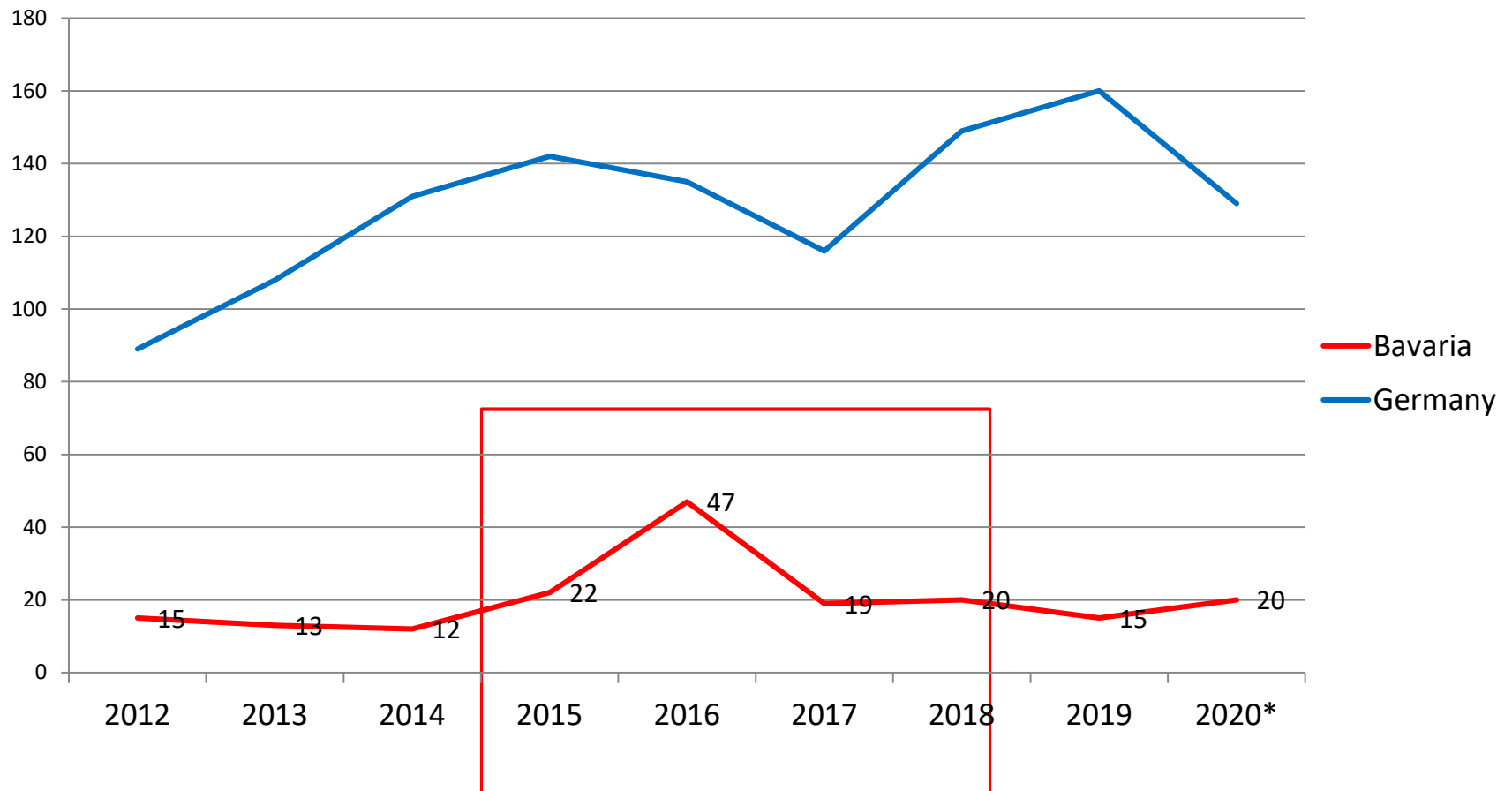ROBERT KOCH INSTITUT

Lessons learned from previous HIV outbreaks among PWID - Germany

Ruth Zimmermann
Robert Koch Institute

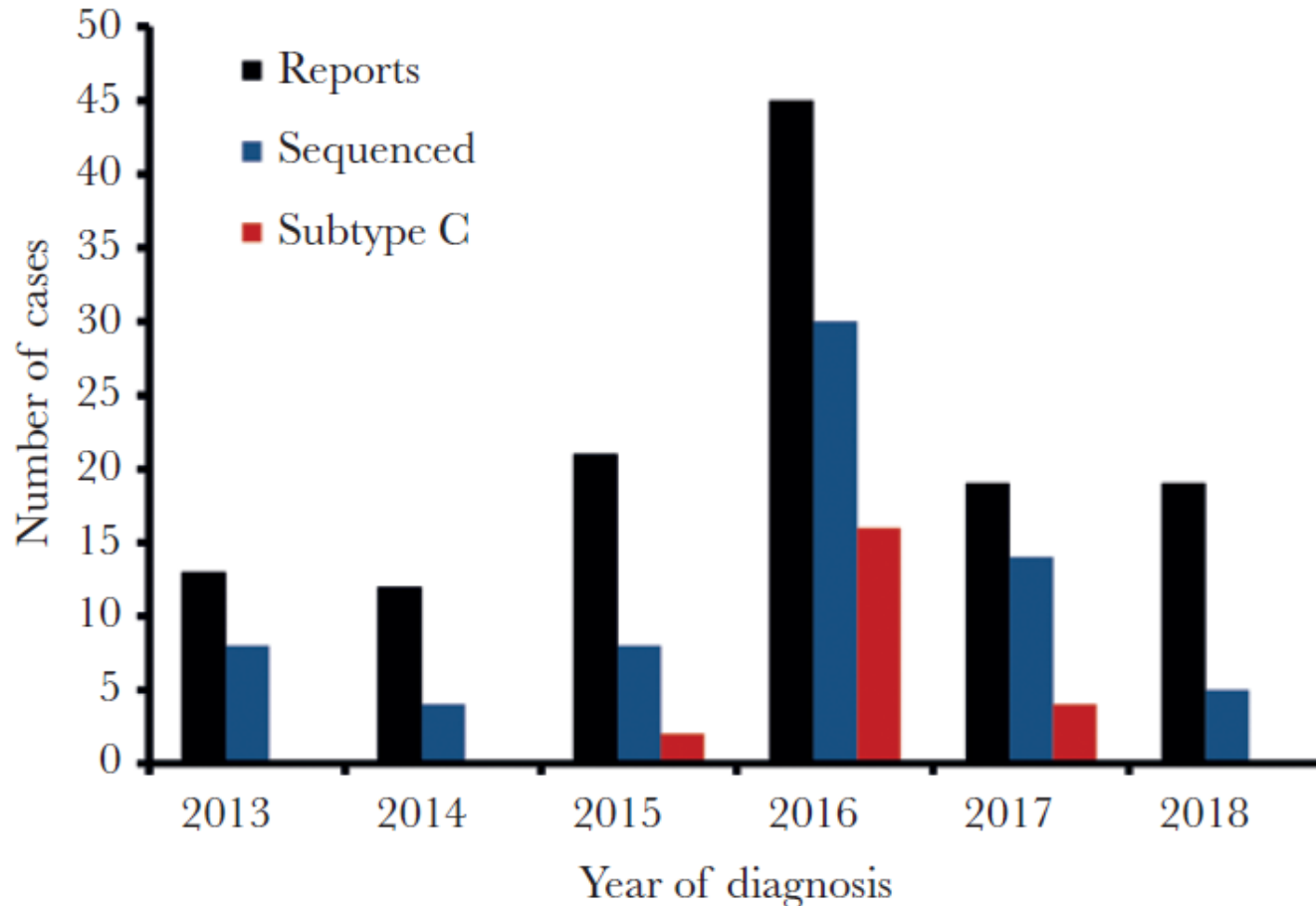DRID meeting, EMCDDA Lisbon
23.10.2020

HIV notifications with Injecting drug use as probable way of transmission,
Germany and Bavaria, 2012 - 2020*
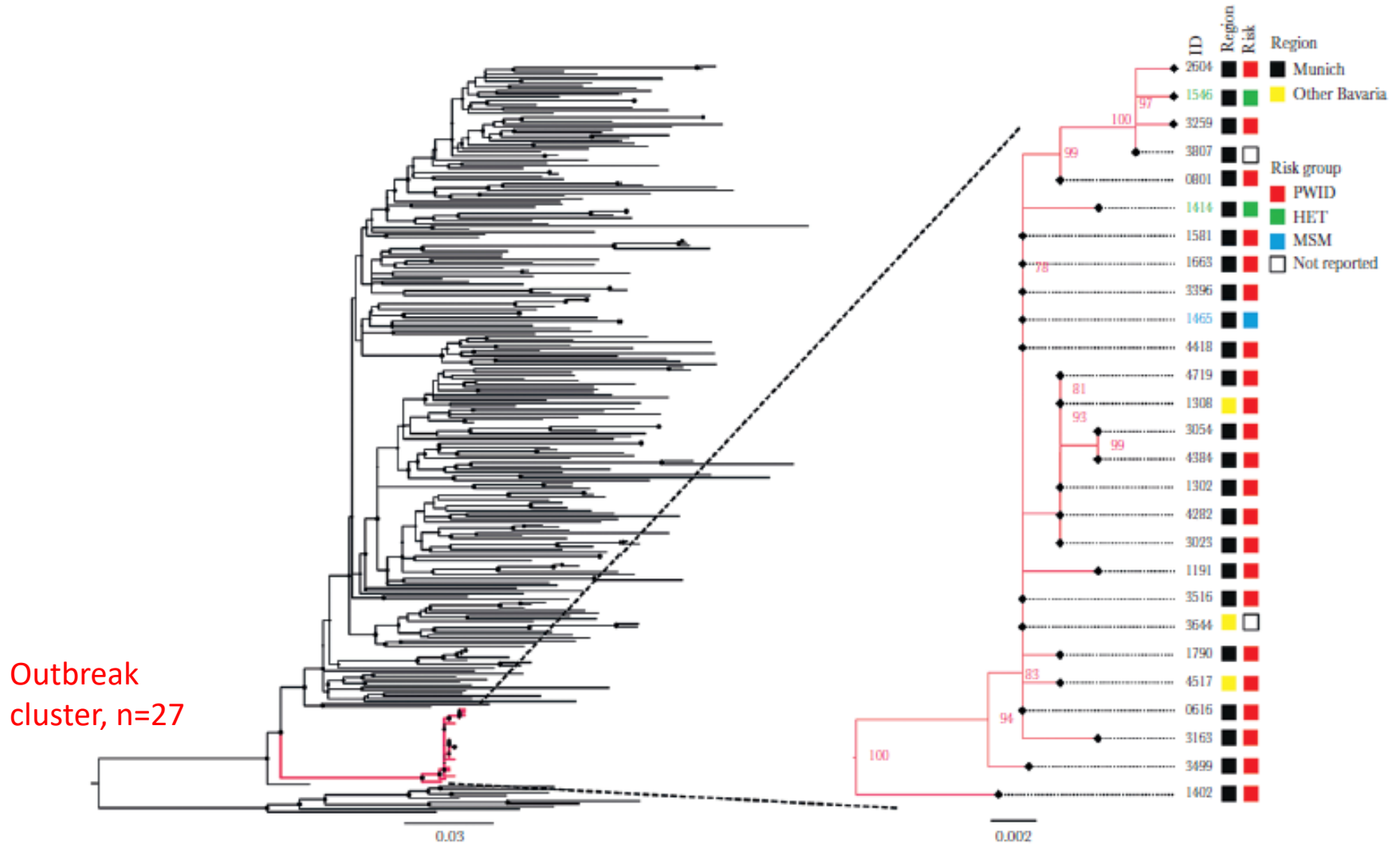
* as of October 21, 2020

Proportion of Subtype C in HIV new diagnoses in PWID in Bavaria, 2013-2018

Hanke et al, 2020
DOI 10.1093/ofid/ofaa192

Maximum likelihood analyses of 263 German subtype C sequences collected between 2012 and 2019
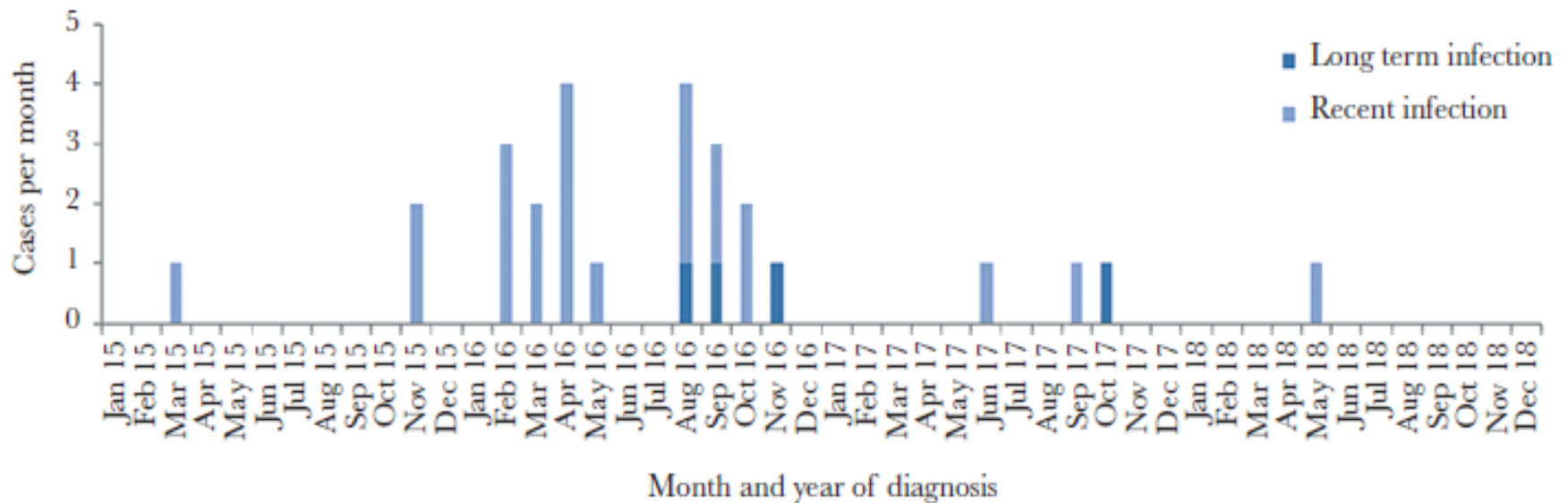

Outbreak cluster, n=27

Hanke et al, 2020
DOI 10.1093/ofaa192

Analysis of Dried Serum Spots for Recency of HIV infection

- DBS available for ~60% of HIV notifications
- Recency of HIV infection was analyzed with a BED-CEIA assay
- Mean proportion of recent infection ~30% (29-33%)
- 85% (23/27) of outbreak cases were recent infections

Hanke et al, 2020
DOI 10.1093/ofid/ofaa192

Analysis of DSS for NPS and Opioids

- Testing of DSS of outbreak cases and "controls" for 155 NPS and 72 opioids by LC-ESI-MS/MS

- In 8 of 18 (44%) cases, α-PVT and/or PV8 were detected
    - a-PVP: α- Pyrrolidinopentiophenone
    - PV8: α- Pyrrolidinoheptiophenone)

- none of the control samples tested positive for these stimulants

→ **Probable association with synthetic cathinones a-PVP/PV8**

Lessons learnt

- Change of consumption habits/ substances used may lead to increased injection frequency and unsafe use in subpopulations
  - probable association of the outbreak cases with frequent NPS consumption (a-PVP/PV8; synthetic cathinone)

- Close collaboration needed between regional and national level to early identify potential regional/local HIV outbreaks
  - Mailing lists to alert authorities

- Establish a real-time molecular surveillance (in preparation)
  - to earlier identify outbreaks

- Future monitoring system for Infectious diseases among PWID