

# Results of mortality cohort study of problem drug users in Poland.

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# The goals of the study

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- to estimate mortality rate among problem drug users
- to identify risk factors of deaths related to problem drug use
- to formulate recommendations for mortality prevention addressed to problem drug using population

# Definition of problem drug use

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- Regular, frequent drug use and experiencing serious drug related problems
  - All drugs included
  - Dependencies and harmful use covered
- Justification:
  - Data availability – individual data from residential treatment only, lack of information on types of drugs used (the ICD diagnose only)
  - Dominating patterns of drug use – polydrug use
  - Research traditions
  - Demand from policy makers and professionals

# Population under study

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- Residential treatment psychiatric facilities in whole Poland including specialized drug dependence treatment like therapeutic communities
- All patients diagnosed with ICD 10 code F11-F16, F18, F19
- Enrolment period 2000-2014
- Follow up period: 2000-2016

# Method

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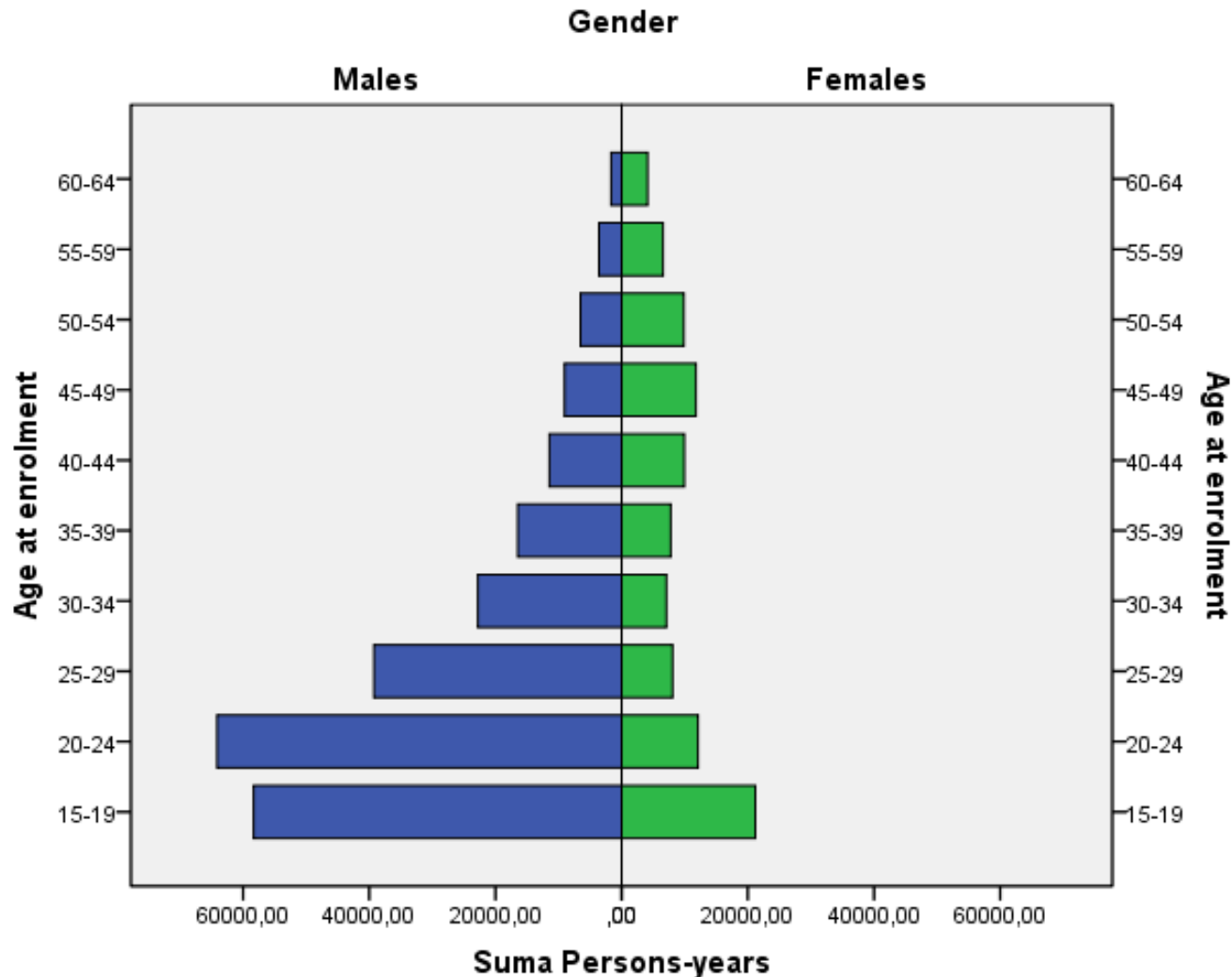
- Data collection procedure
  - Preparing data base of treated drug users – eliminating double counting
  - Checking vital status using national electronic population register
  - Identification of cause of deaths
- Analyses:
  - Crude Mortality Rate (MR), Standardized Mortality Ratio (SMR), Potential Years of Life Lost (PYLL), Kaplan-Meier survival analysis and Cox regression

# Research material

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- Size of initial group – 140 604
  - Vital status identified – 42 771 (30.4%)
- Mean age at enrolment – 32,1 years
- Percent of males – 68.7
- Mean observation time – 8.1 years
- Number of person-years – 346 735

# Distribution of persons-years by age band and gender



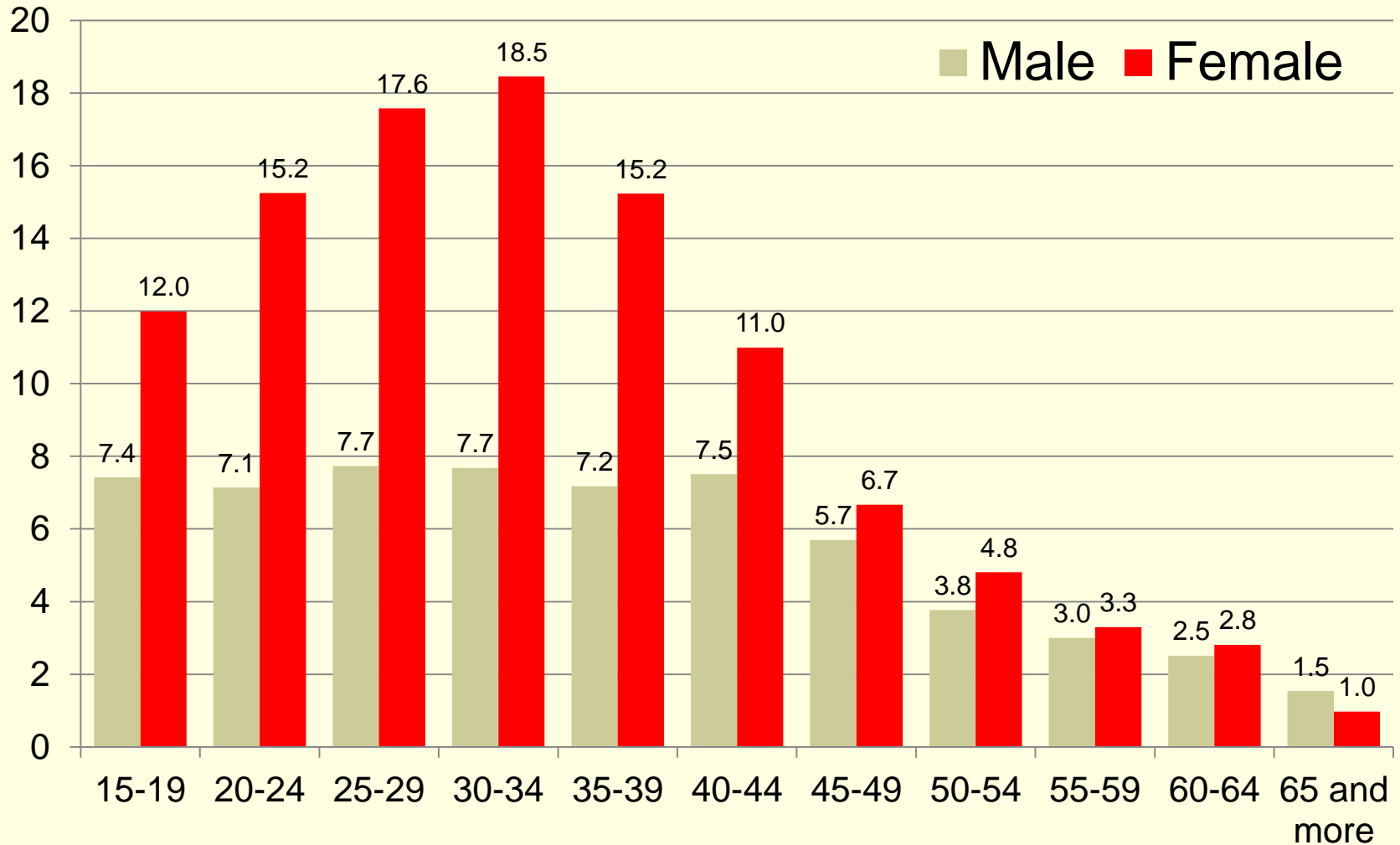
# Findings

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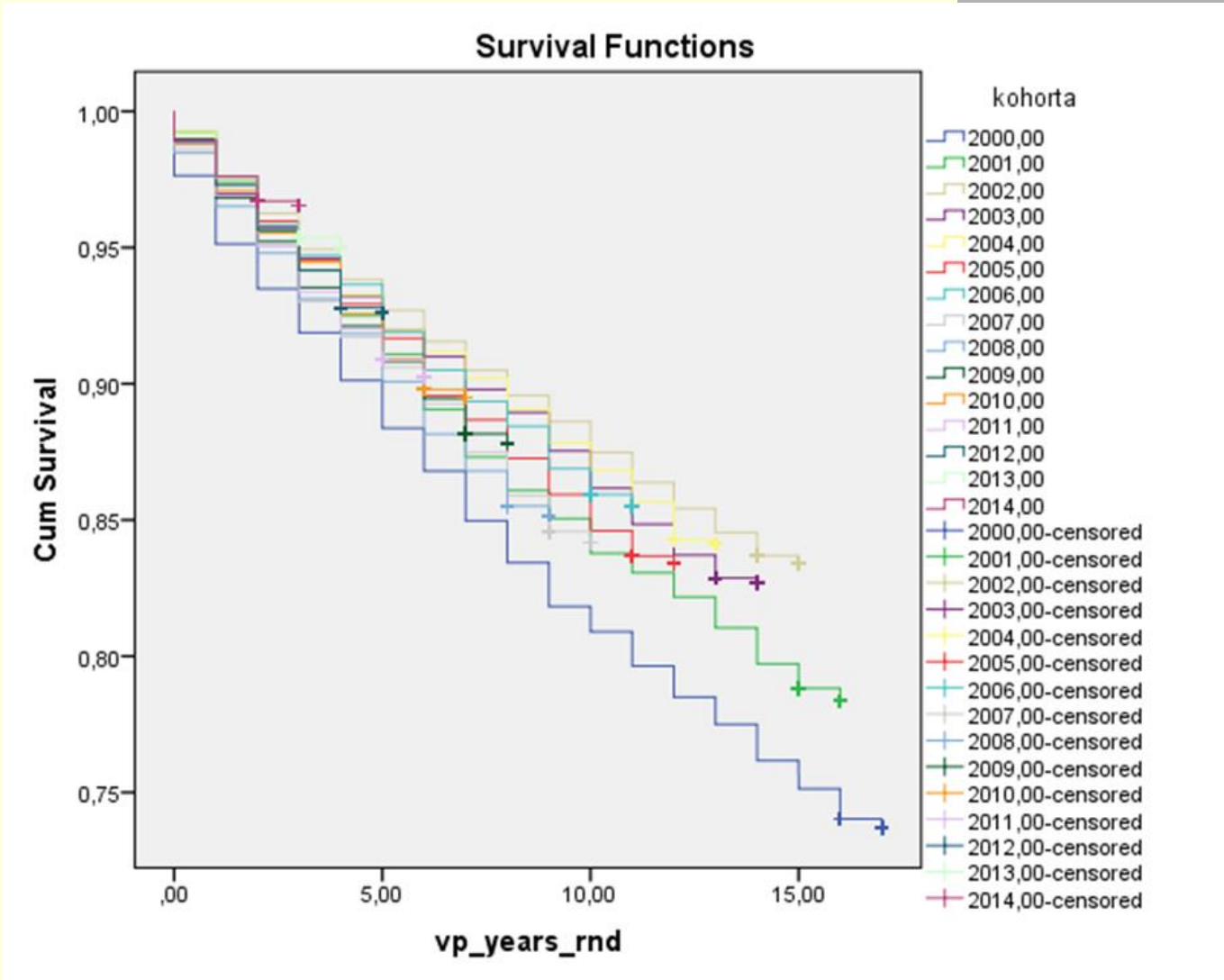
- Number of deaths – 5 489 (12.8%)
- Crude Mortality Rate (MR) per 1000 person/years
  - Total 15.8 (95% CI: 15.4 – 16.3)
  - Male 16.6 (95% CI: 15.5 – 16.5)
  - Female 15.5 (95% CI: 14.8 – 16.3)
- Standardized Mortality Ratio (SMR)
  - Total 3.4 (95% CI: 3.3 – 3.5)
  - Male 4.6 (95% CI: 4.5 – 4.7)
  - Female 2.1 (95% CI: 2.0 – 2.2)



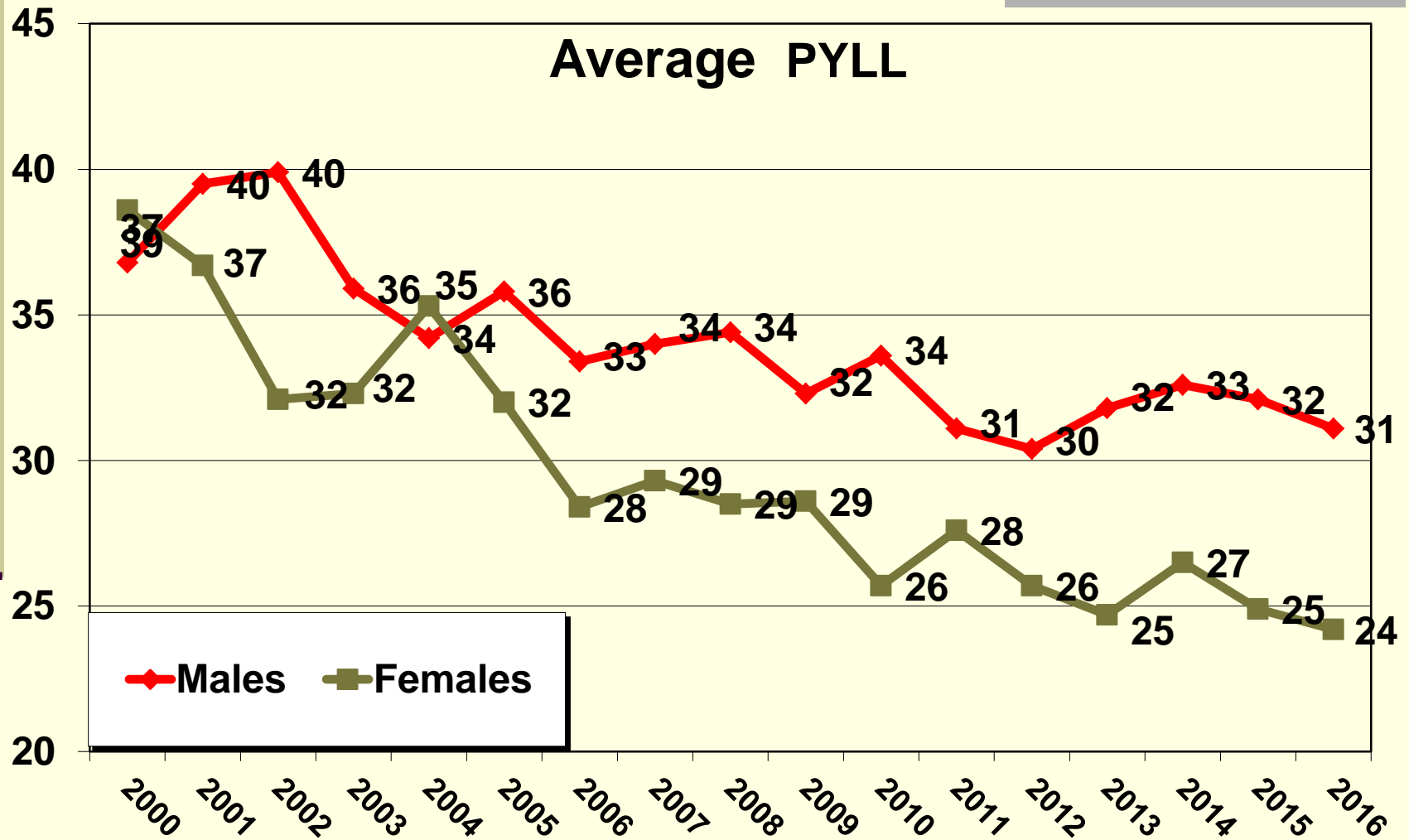
# Standardized mortality ratio (SMR) by age and gender



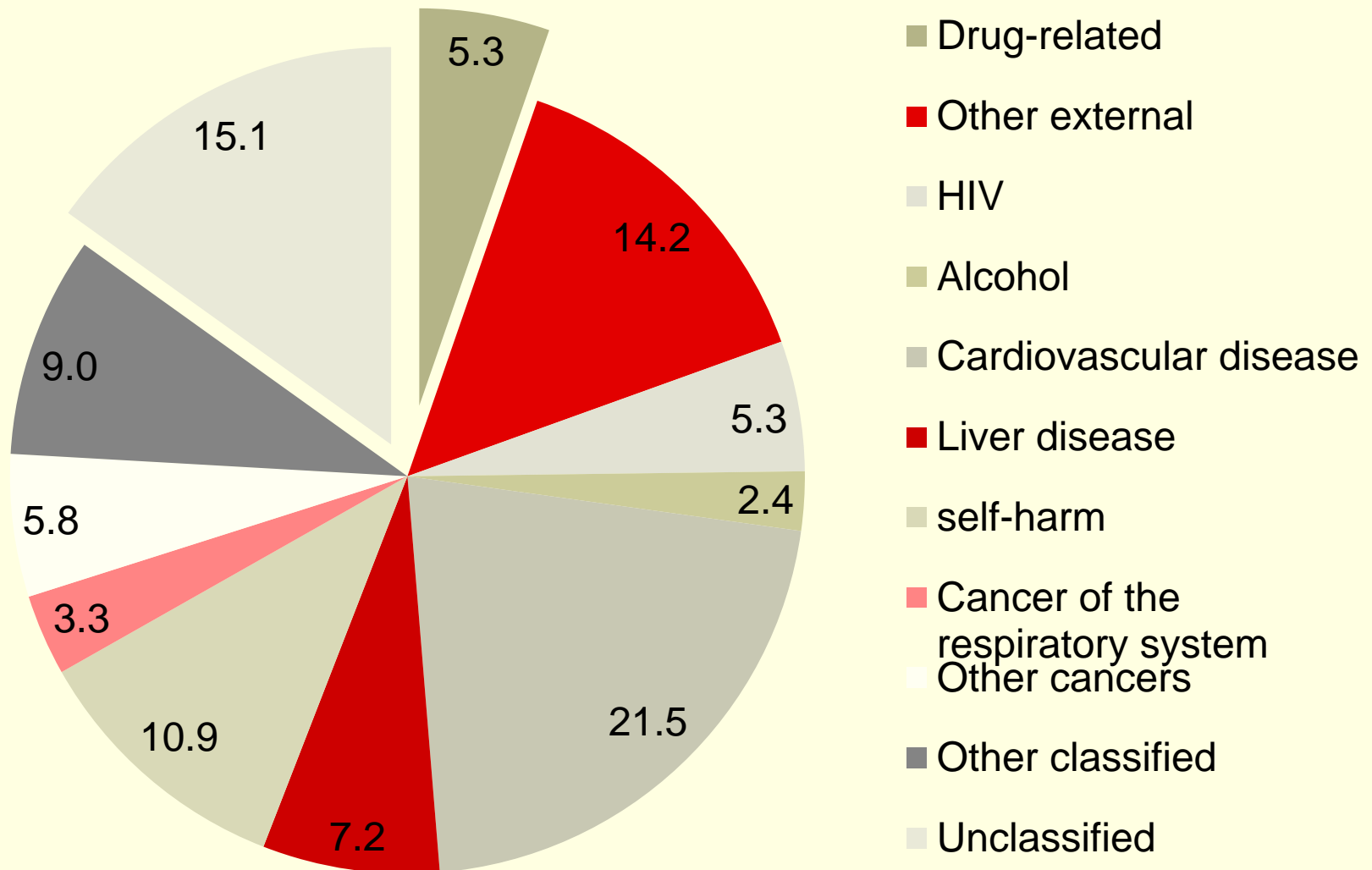
# Survival functions for particular cohorts (Kaplan-Meier survival analysis)



# Potential years of life lost (PYLL)



# Distribution of deaths causes (N = 3117)



# Factors of risk of deaths – Cox regression

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- The results of Cox regression show that risk of deaths is increasing with increasing age and it is higher:
  - for males than females,
  - low educated people,
  - homeless or staying alone,
  - having basic income from sources other than permanent job,
  - having F11 diagnoses at the moment of entry to the cohort
  - finishing unsuccessfully treatment episode.

# Conclusions

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- Decreasing trend in PYLL
- Increase of survival rate comparing cohorts
- Decreasing trend in mortality can be related to changes in drug use pattern and development in harm reduction measures.
- Low share of drug related deaths in distribution of causes of deaths
- Low social and economic position is an important factor of mortality among problem drug users

# Restrictions and limitations

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- High share of cases with unidentified vital status
  - ID code (initials, date of birth, gender) not always stable and unique
  - Data quality in treatment data base and population register not perfect
- Limited scope of information available in:
  - treatment data base
  - national register of deaths
- Data protection issues – causes of deaths hardly available