

# Epidemiology of infection with high risk HPVs, risk factors in different population groups

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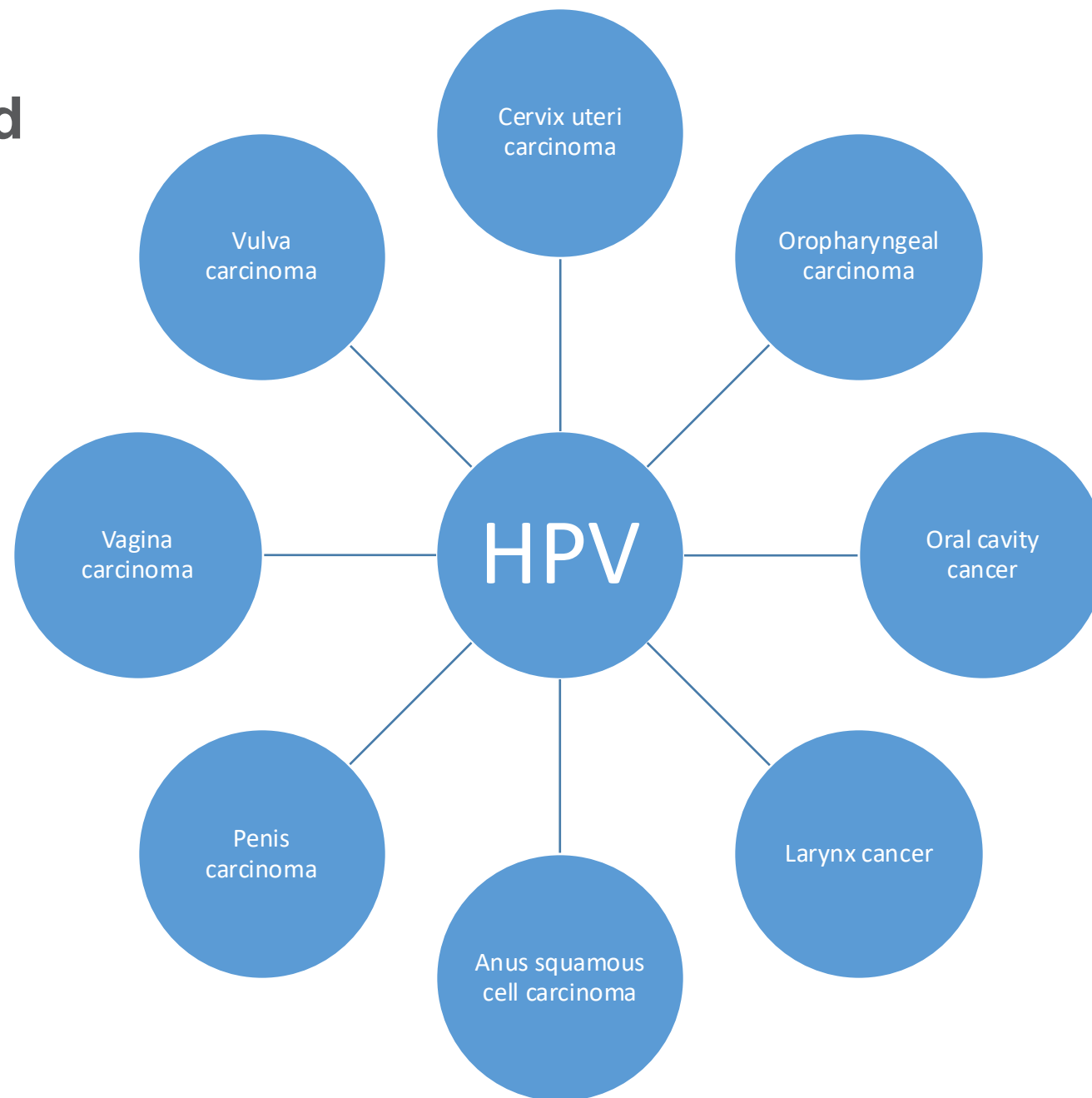
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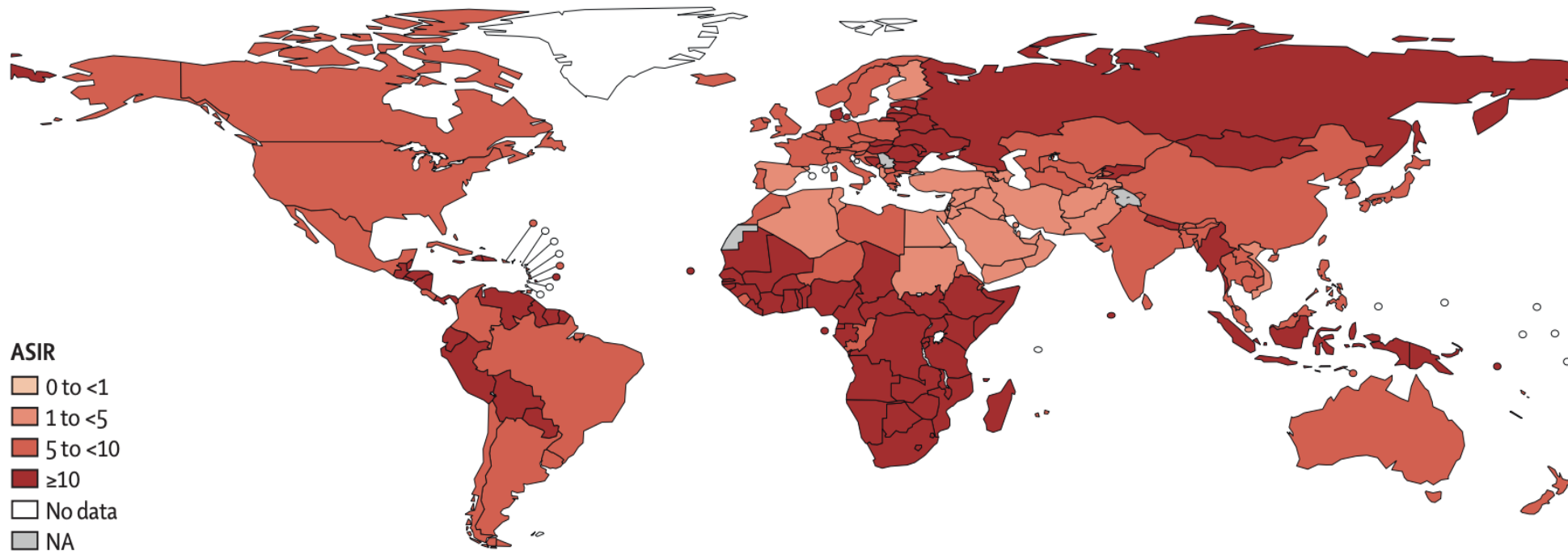
# Background



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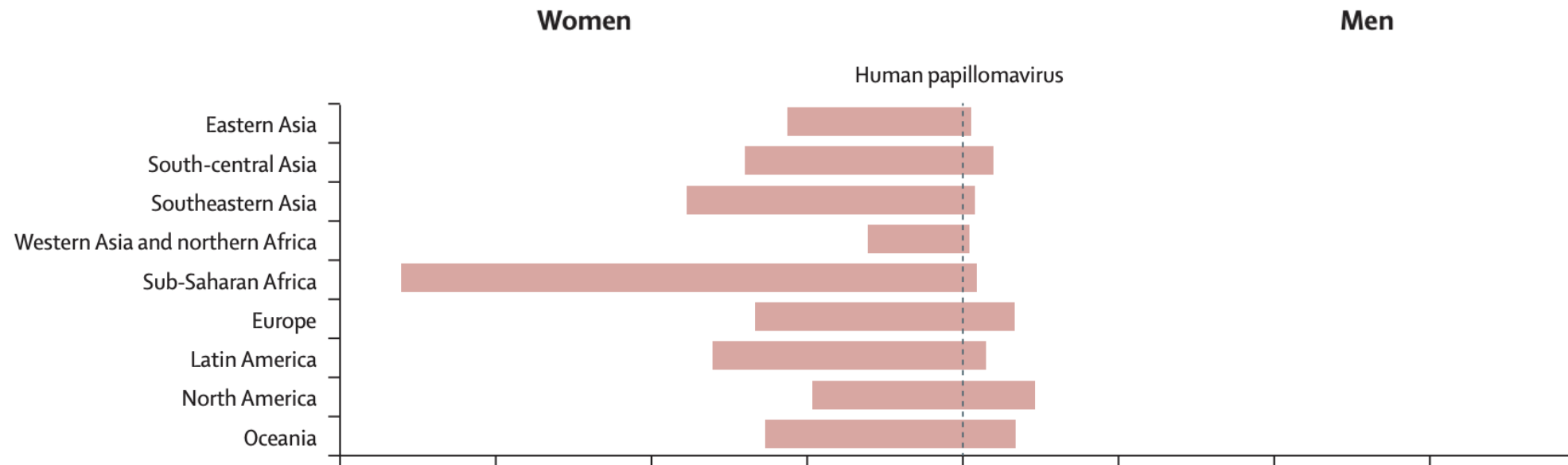
Country-specific ASIR (age-standardised incidence rate) per 100,000 person-years of cancer attributable to the four main infectious pathogens on the same categorical scale

Human papillomavirus (690 000)



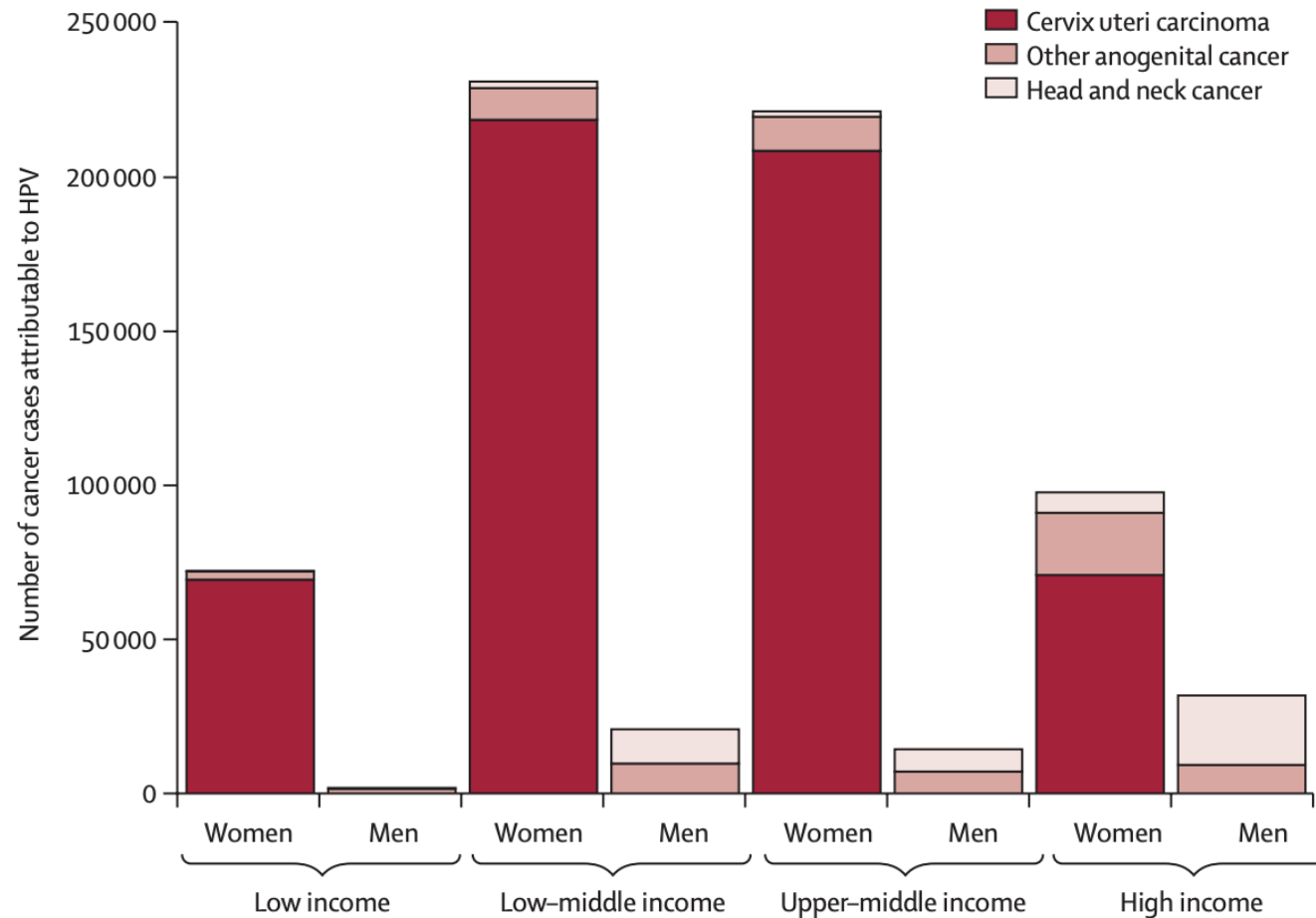
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ASIR (age-standardised incidence rate) per 100,000 person-years of infection-attributable cancers in 2018 in nine geographical regions by sex and infectious pathogen



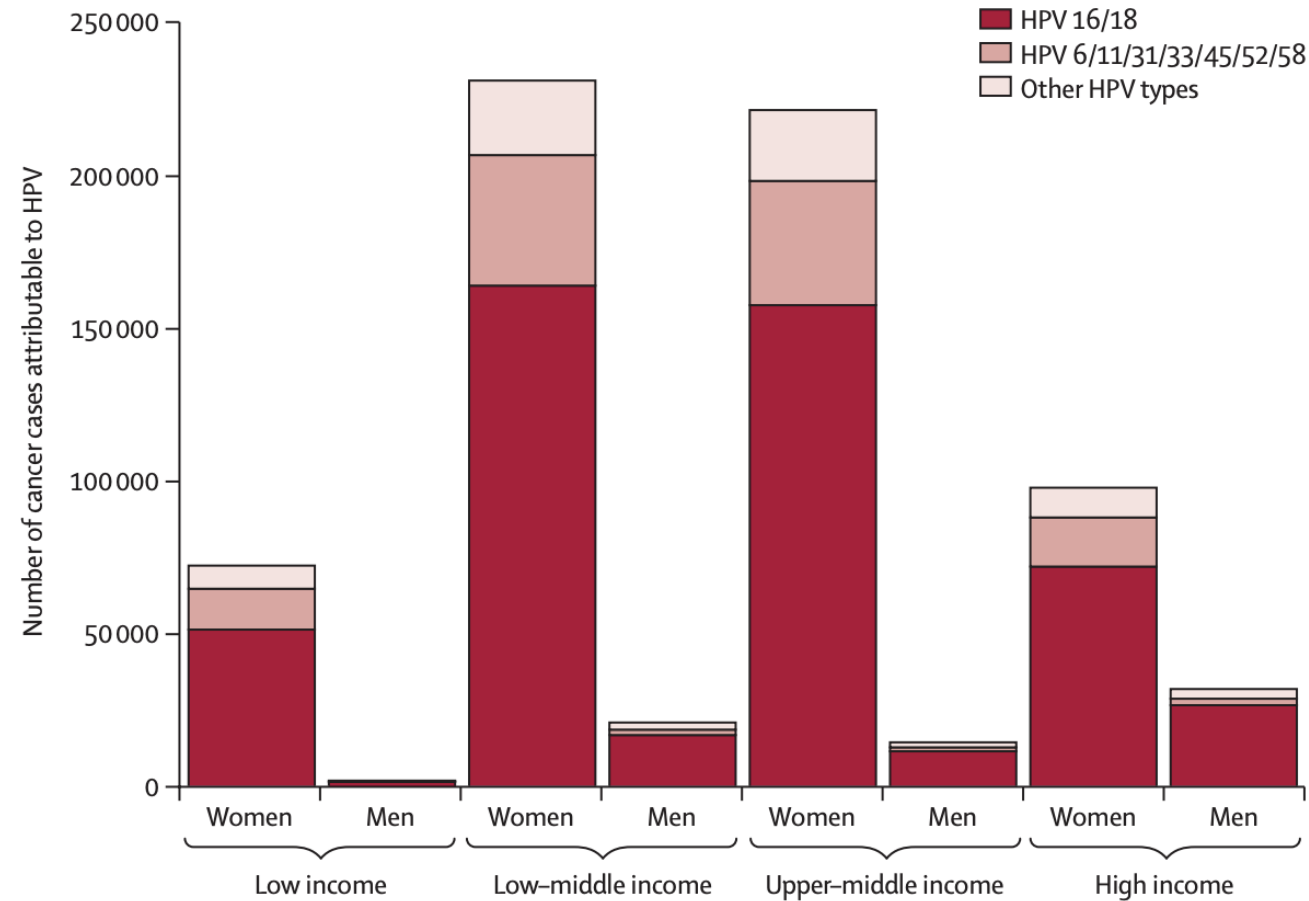
# Background

HPV-attributable cancer by sex and World Bank income groups, according to anatomical cancer site



# Background

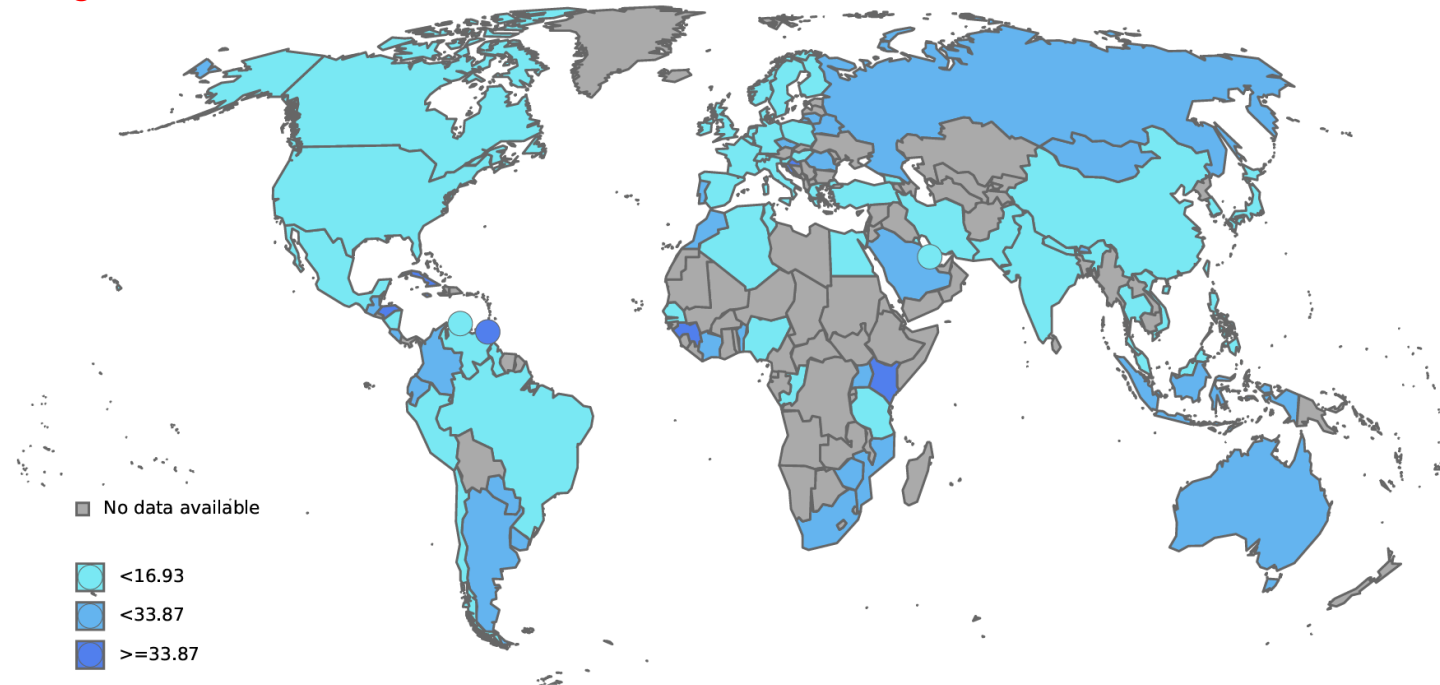
HPV-attributable cancer by sex and World Bank income groups, according to HPV type



# Epidemiology

## Prevalence of HPV among women with normal cervical cytology in the World

Average = 12%



Data updated on 22 May 2023 (data as of 30 Jun 2015)

# Epidemiology

Women living with HIV

Men who have sex  
with men

Immunocompromised  
individuals

People with co-  
infection with other  
sexually transmitted  
infections (STI)

People who receive  
immunosuppressive  
medications

Children who have  
been through sexual  
abuse



# Epidemiology

Tobacco smoking

High parity

Long-term hormonal  
contraceptive use

Co-infection with  
HIV

Co-infection with  
Chlamydia  
trachomatis

Co-infection with  
herpes simplex virus  
type-2

Immunosuppression

Certain dietary  
deficiencies

# Understanding the high-risk human papillomavirus prevalence and associated factors in the European country with a high incidence of cervical cancer

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# EEA Financial Mechanism 2014-2021 Baltic Research Programme

Project EMP416 «Towards elimination of cervical cancer: intelligent and personalised solutions for cancer screening»

2019-2023

*Aim of the project: To use existing registry and health data to personalise cervical cancer screening for the benefit of citizens and society to create algorithms that can deliver personalized cervical cancer screening recommendations*

Iceland   
Liechtenstein  
Norway grants

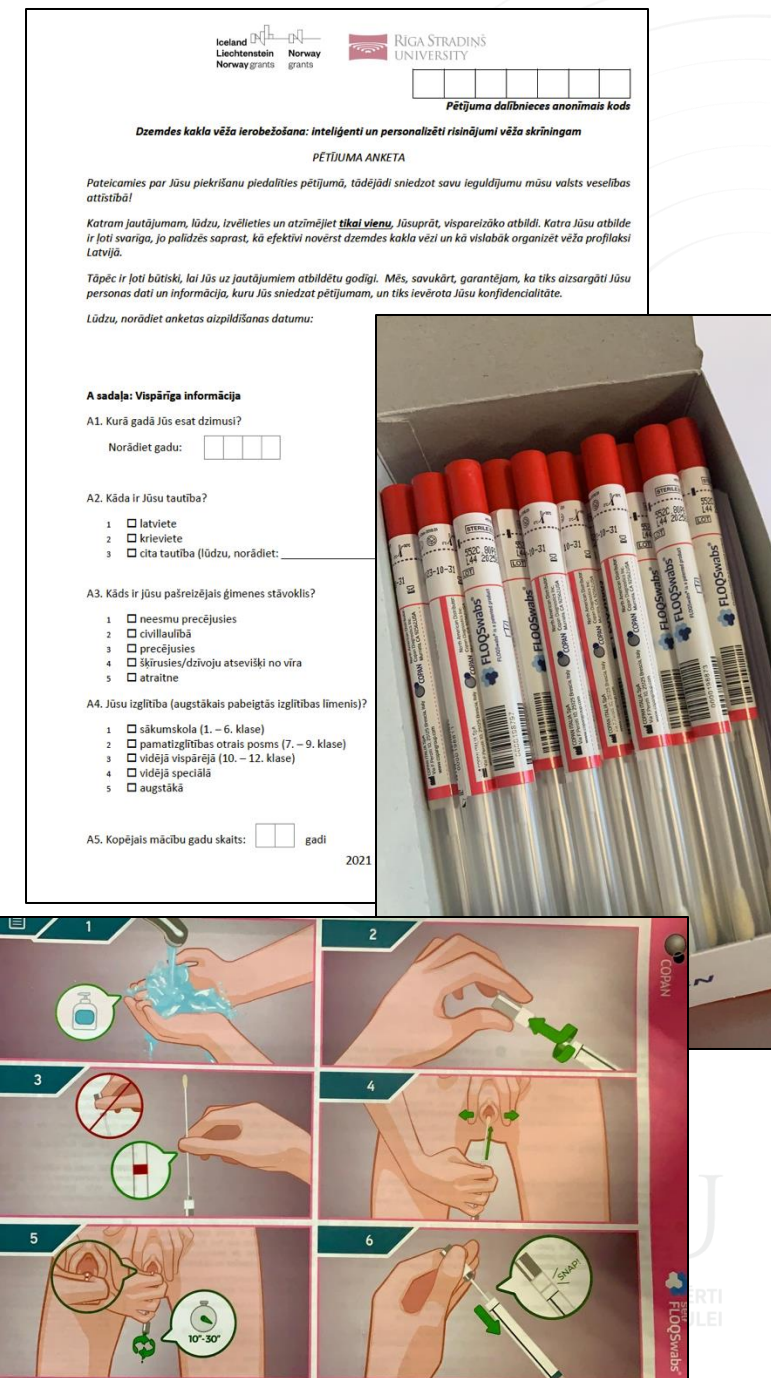


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# Methods

- cross-sectional study
- field work - February 2021 to February 2022
- **1313** women aged 25-70 years recruited
  - a) via the colposcopy specialists of the Outpatient Department of the Riga East Clinical University Hospital (RAKUS) – n=545
  - b) via 10 general practitioners' practices (2 in each of the Regions of Latvia) – n=768
- self-filled questionnaire + self-collected vaginal sample for HPV testing (*FLOQSwabs*, *COPAN* + *Cobas 4800 System*, *Roche*)



# Methods

- SPSS 26.0 software
- multivariate logistic regression analysis
- results considered as statistically significant if  $p < 0.05$

## Sociodemographic, economic factors:

- Age
- Nationality
- Marital status
- Education
- Employment
- Income
- Self-assessment of financial situation

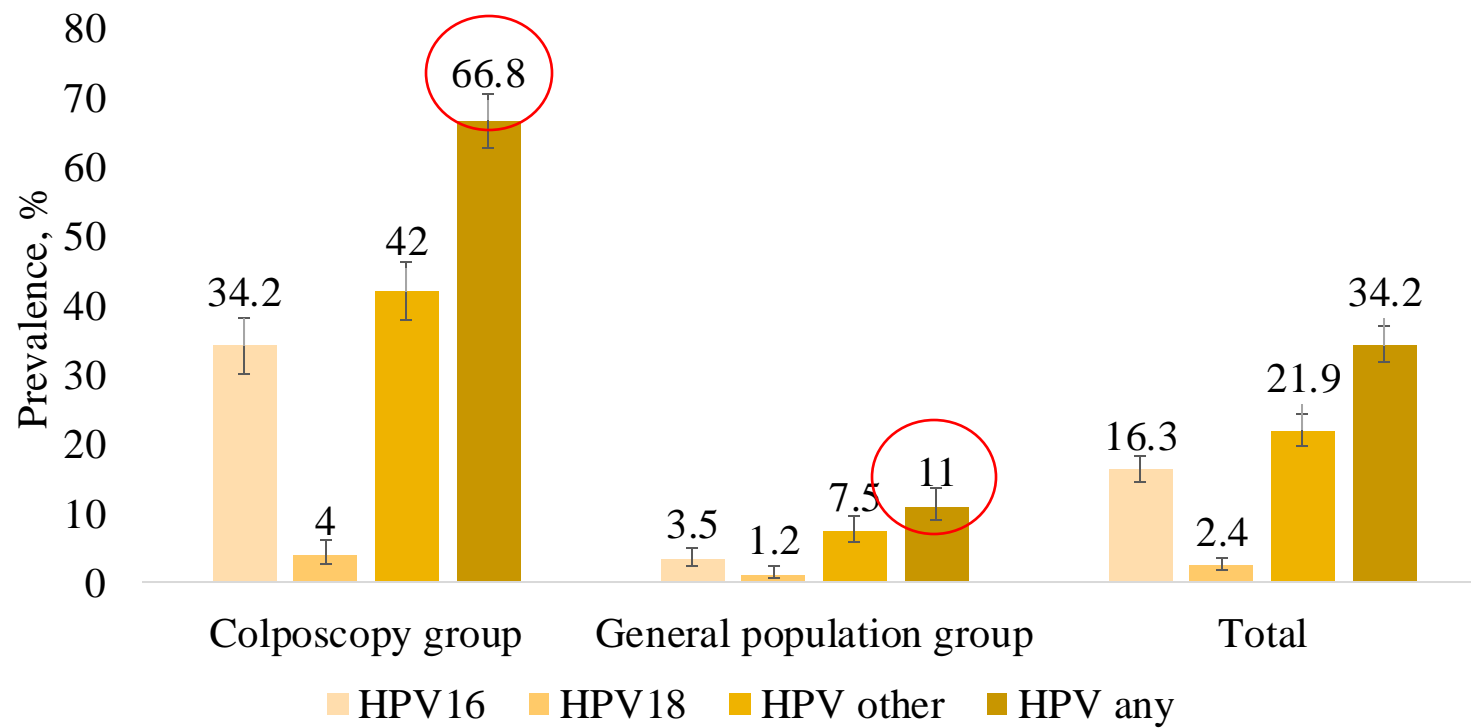
## Overall health:

- Self-rated health
- Chronic conditions
- BMI
- Smoking
- Alcohol use

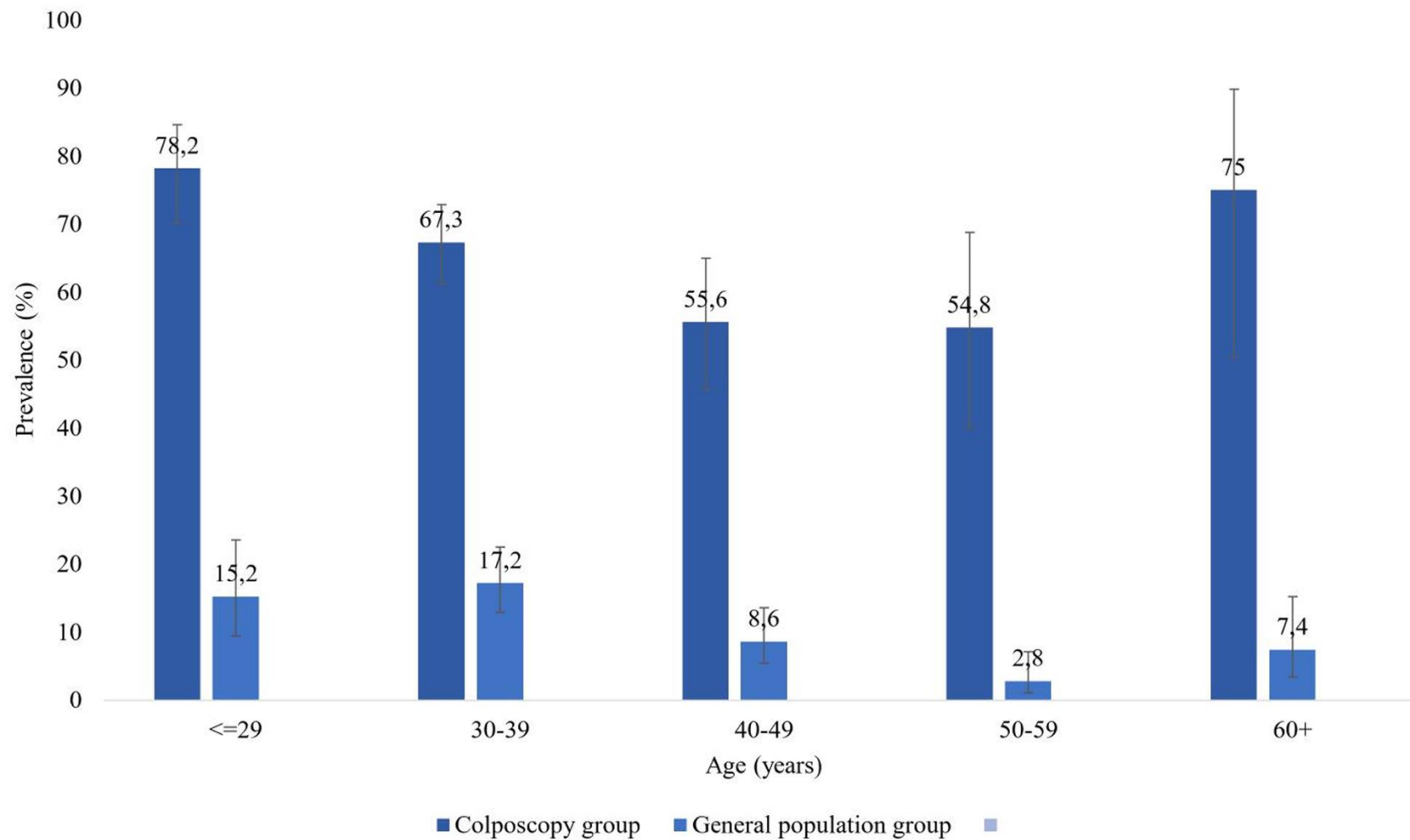
## Sexual and reproductive health:

- Current sexual activity
- No of lifetime sex partners
- Most recent visit to gynaecologist
- Hormonal contraceptives lifetime
- No of pregnancies
- Self-assessed STI risk
- STI in anamnesis
- Knowledge of screening
- HPV vaccination status
- Family anamnesis

# HPV prevalence

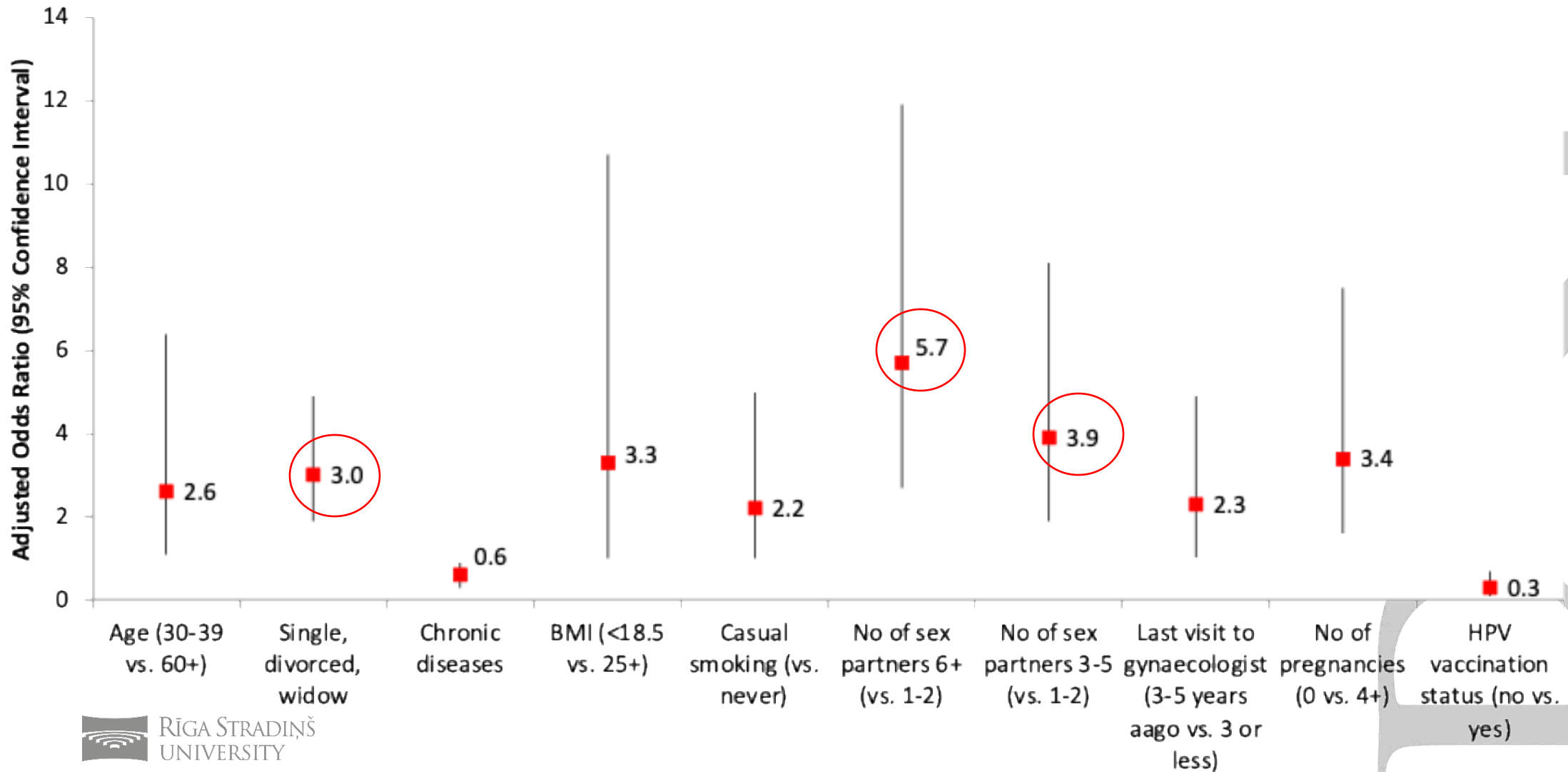


# HPV prevalence



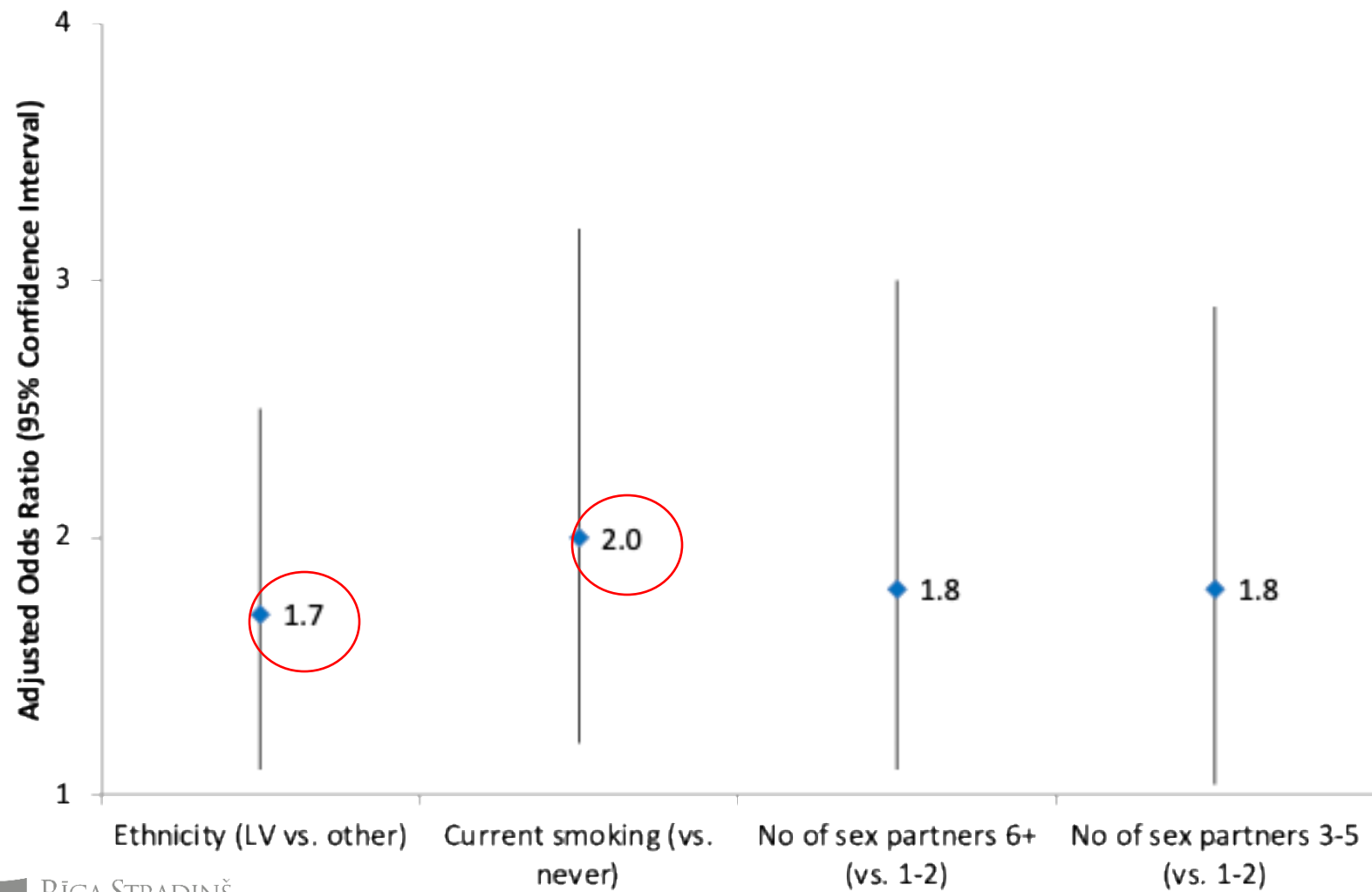


# Results – general population group





## Results – colposcopy group



# Conclusions

- ❖ In Latvia, the burden of HR-HPV infection is comparable to that observed in other European Union countries.
- ❖ HR-HPV positivity in Latvia is strongly associated with sexual and other health-related behaviors.

# Thank you!

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<https://www.rsu.lv/en/institute-public-health>

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