

Impact of immigration on diagnosis and prognosis of HIV in Catalonia and the Balearic Islands: The PISCIS Cohort

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BACKGROUND

- HIV infection remains a major public health concern.
- In Catalonia and in Spain there have been an increase of new HIV diagnosis among migrants
- Late presentation is a main concern
- Migration and late presentation
- There is a lack of studies about late presentation

OBJECTIVES

1. To calculate migrant status percentage of new HIV diagnosis enrolled into the PISCIS Cohort and its evolution over the period 2004-2011.
2. To describe socio-demographic, clinical, and epidemiological characteristics among migrants, and compare them with natives
3. To determinate late presentation percentage in migrants and natives and compare its evolution trough the study period.
4. To identify socio-demographic, clinical, and epidemiological characteristics of late presenters among migrants.
5. To determine prognosis, defined as progression to AIDS/death.

Methods

PISCIS Cohort

- Open multicentric observational cohort study (14 hospitals)
- Inclusion criteria:
 - patients VIH +
 - aged ≥ 16 years
 - newly attended in the participating centers
- Dataset updated until Dec2011:
 - N=14,675 HIV infected patients
 - 73.726 person-years of follow-up
- Records of demographic, clinical, laboratory and treatment data

Methods

Study population

- New HIV diagnosis between 2004 and 2011 were analyzed (4708 patients).

Variables definition

- Migrants: born outside Spain and classified in different regions (Latin-America, West Europe and East Europe, Sub-Saharan and North Africa, North America, Asia and Others)
- Late presentation/advanced HIV disease

Methods

Other variables

- HIV transmission group: MSM, heterosexual men, heterosexual woman, IDU and others

- Educational level: illiteracy, primary education not finished, primary education finished, secondary education finished, and upper studies

- Other variables: socio-demographic (day of birth, gender), follow-up variable (date of loss to follow up), employment status employed, unemployed), period (2004-2007, 2008-2011), Hepatitis B and C virus infection, and clinical outcomes (AIDS or death).

Methods

Statistical analysis

- Median values and interquartile ranges, and percentages.

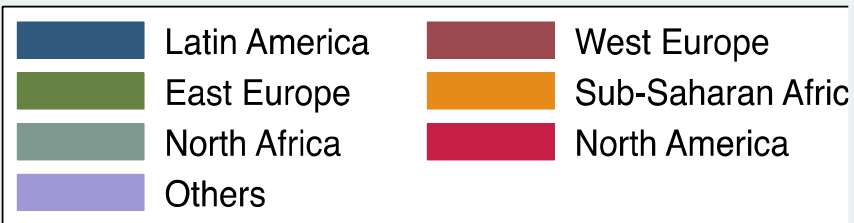
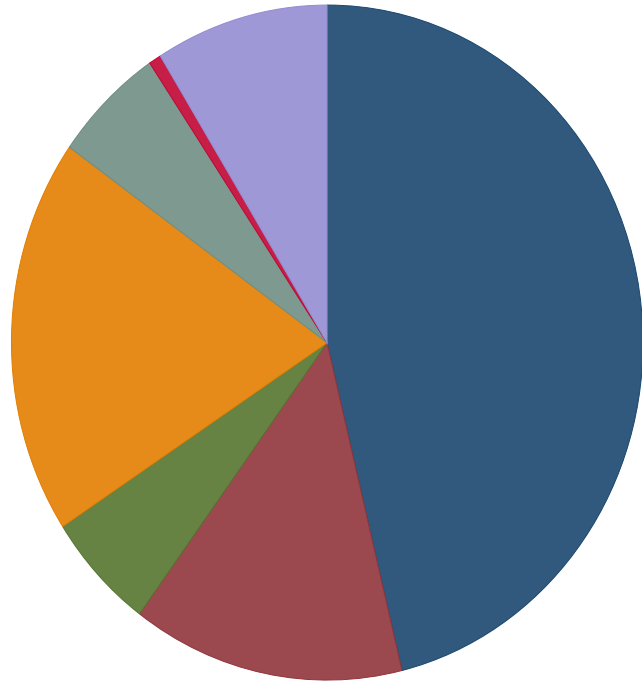
- Pearson's chi-squared test for categorical variables and Kruskal–Wallis test

- Logistic regression models

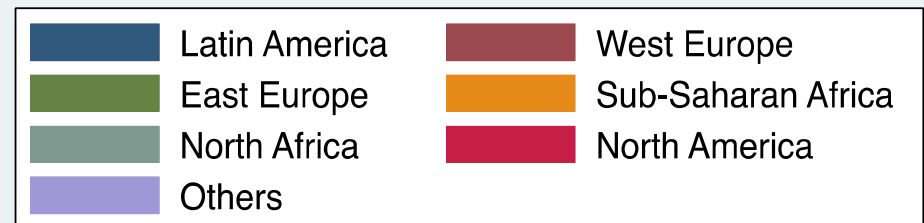
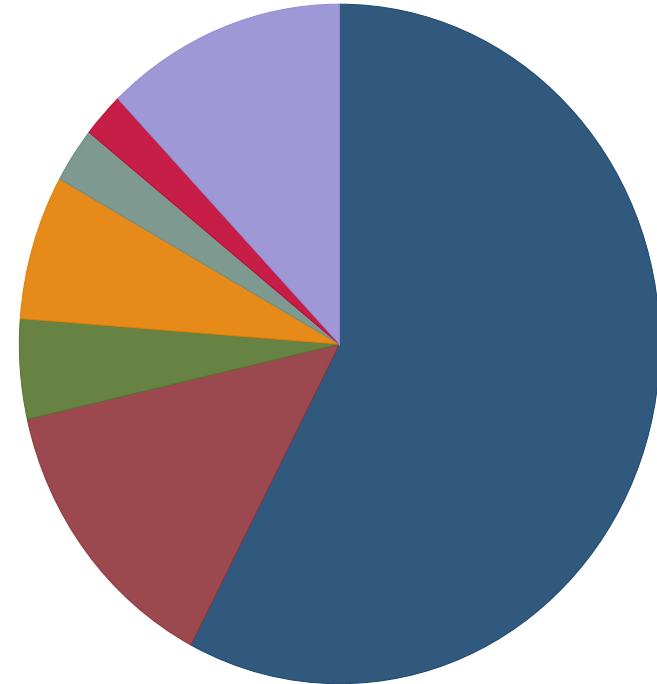
- Survival analysis techniques
 - Kaplan-Meier estimator and long-rank test.
 - Cox regression models

Results

Percentages of migrants by region of origin (2004)

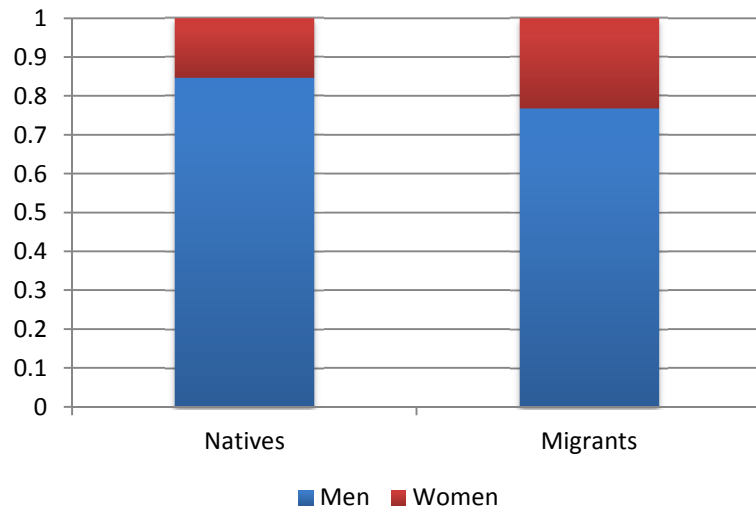


Percentages of migrants by region of origin (2011)



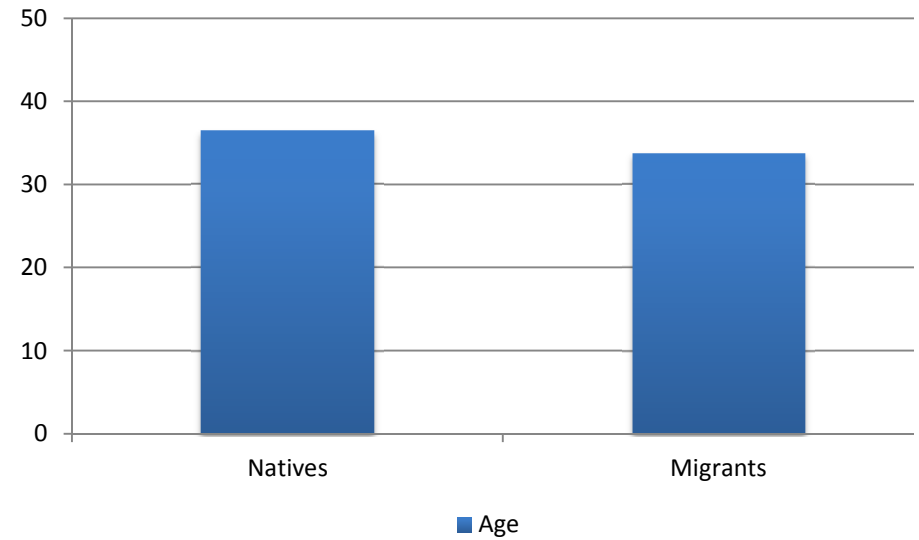
Comparison between natives and migrants

Gender



P<0.005

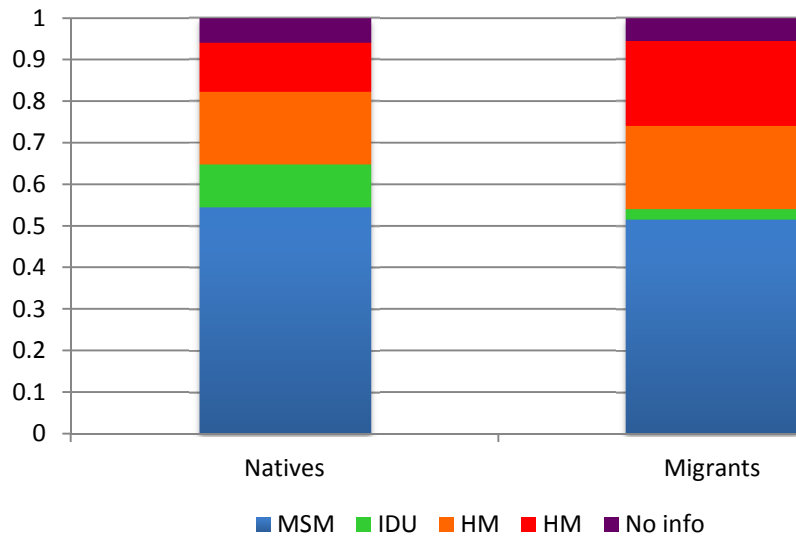
Age



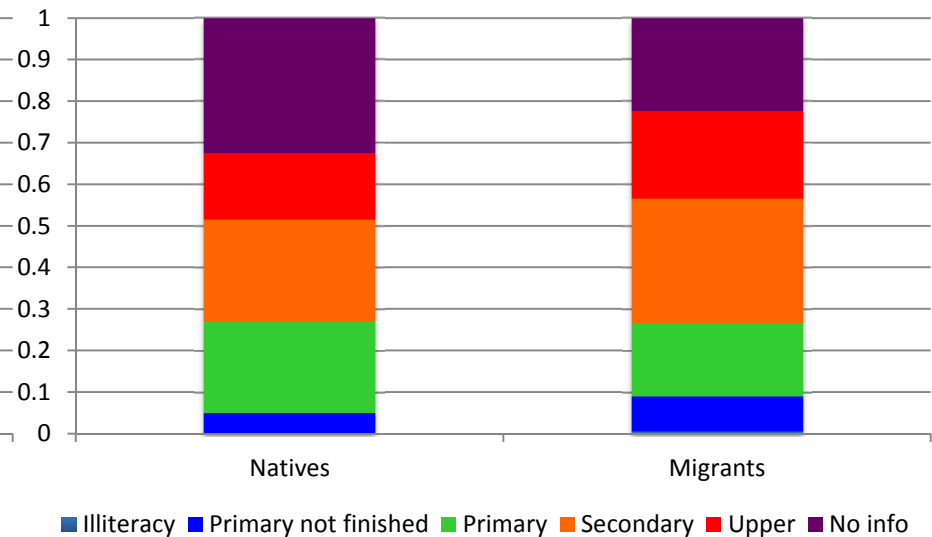
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Comparison between natives and migrants

Transmission group



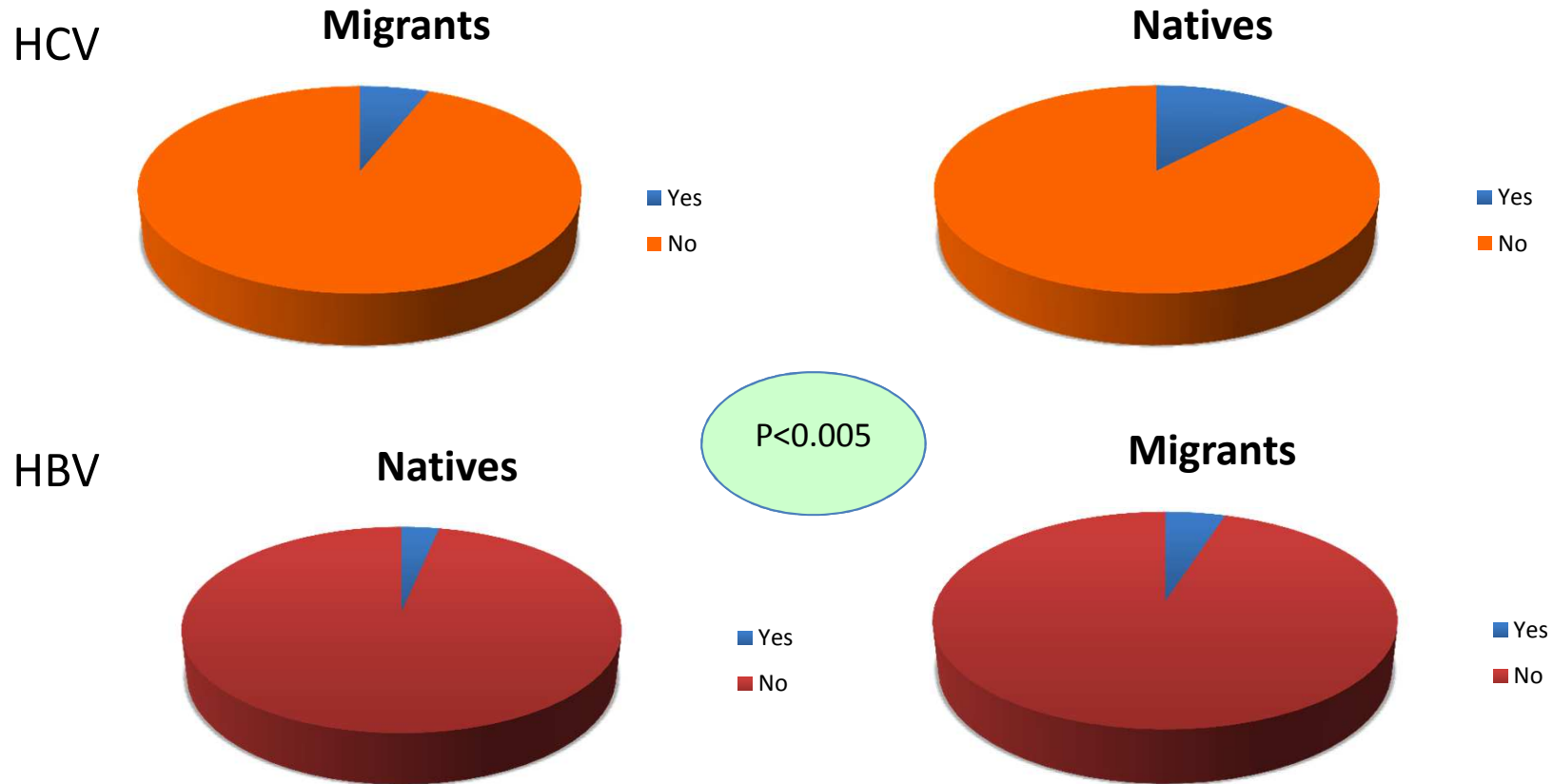
Educational level



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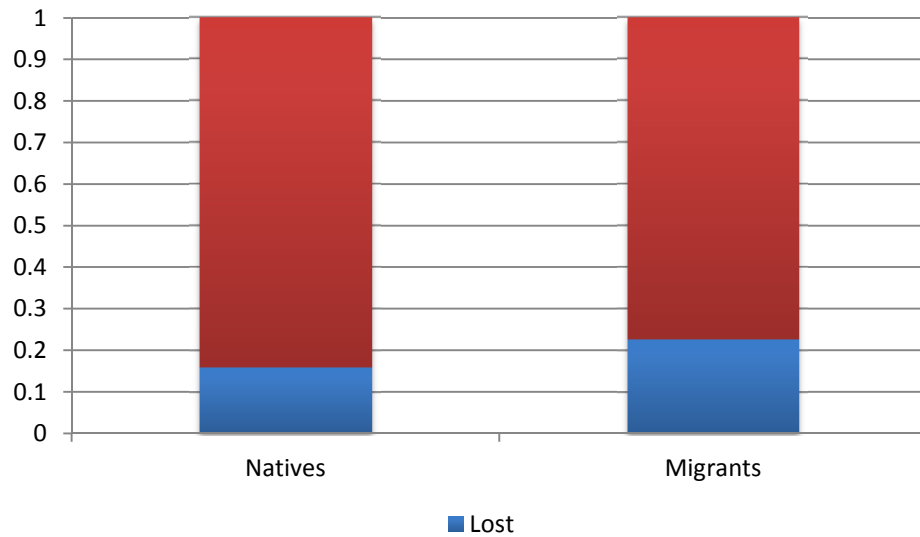
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Comparison between natives and migrants

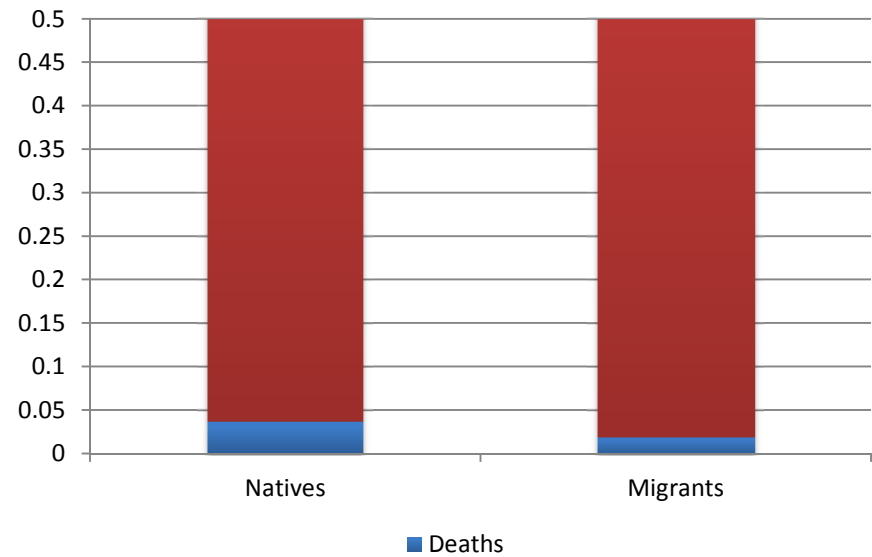


Comparison between natives and migrants

Lost to follow up



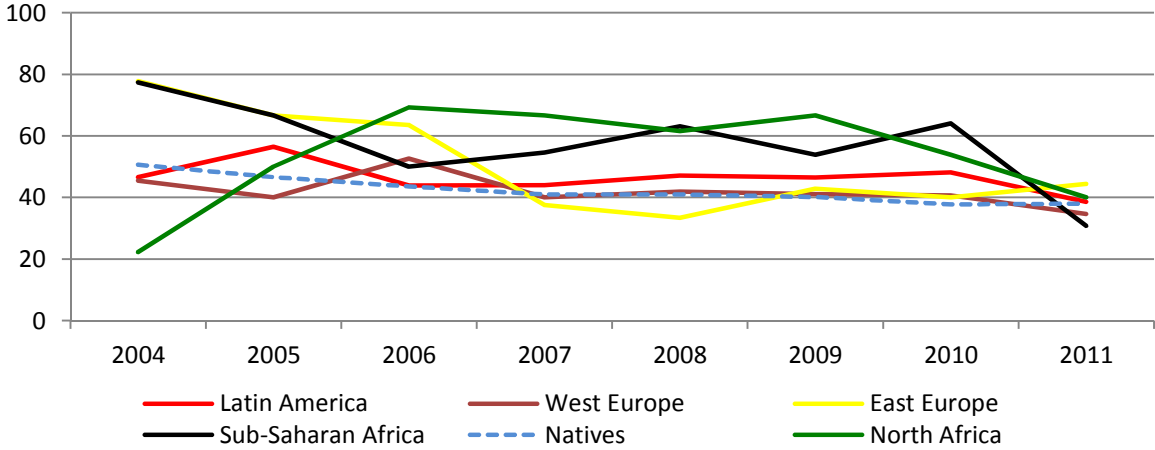
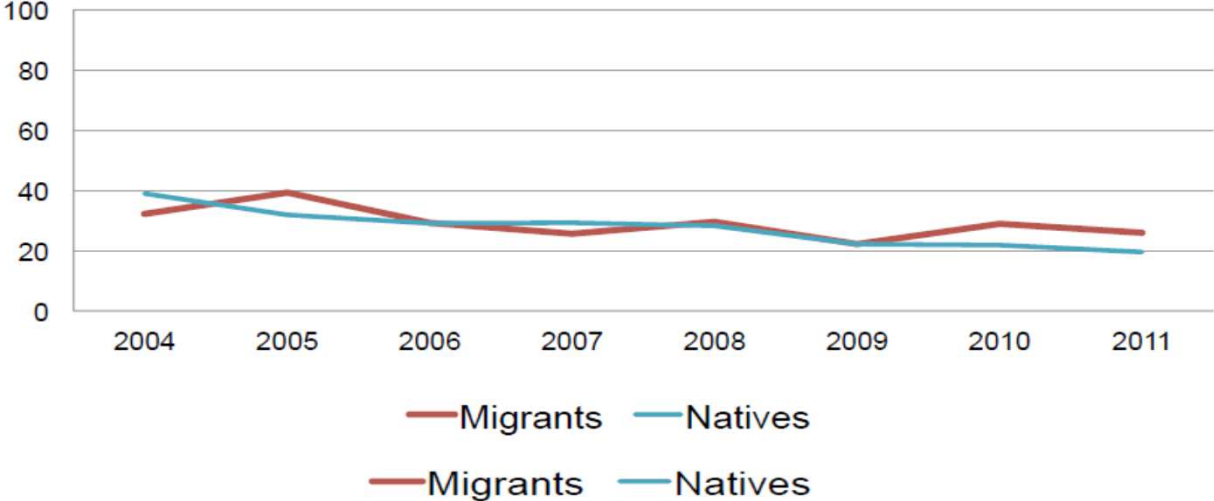
Deaths



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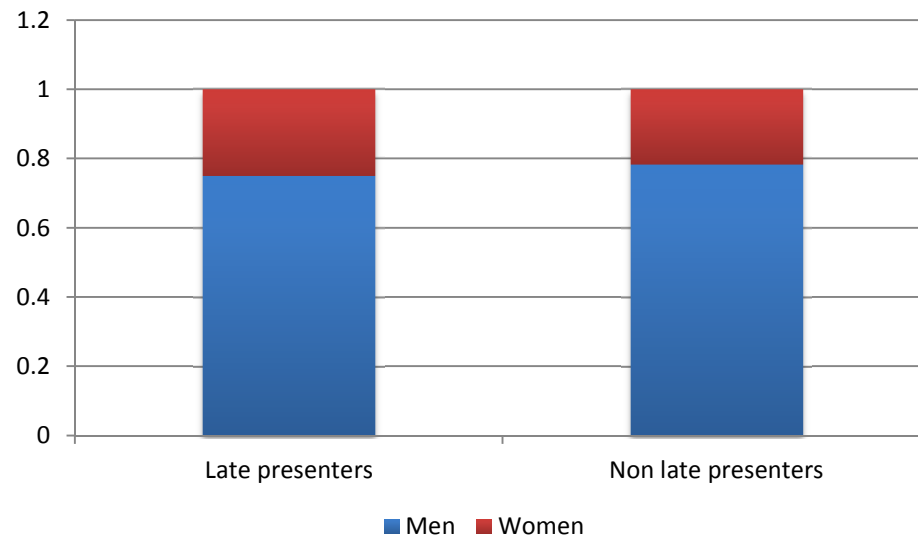
Results

Figure 4: Graphic of advanced HIV disease percentage by migrant status and year



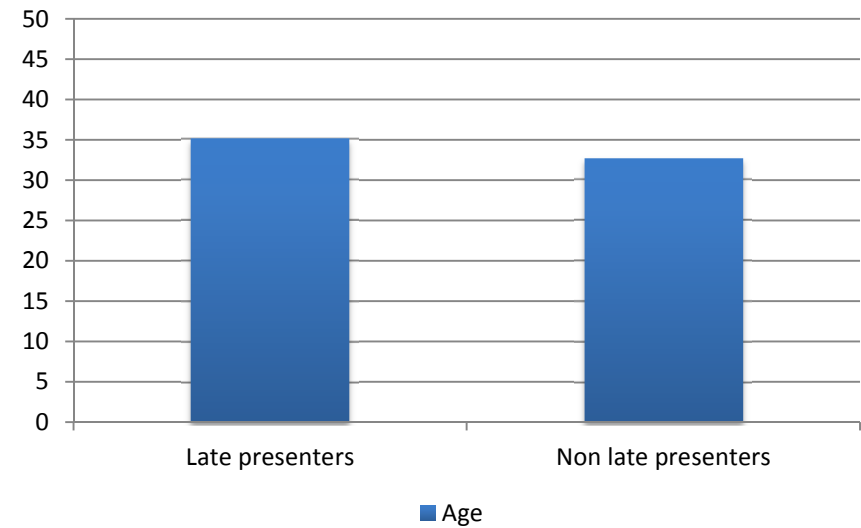
Comparison among migrants

Gender



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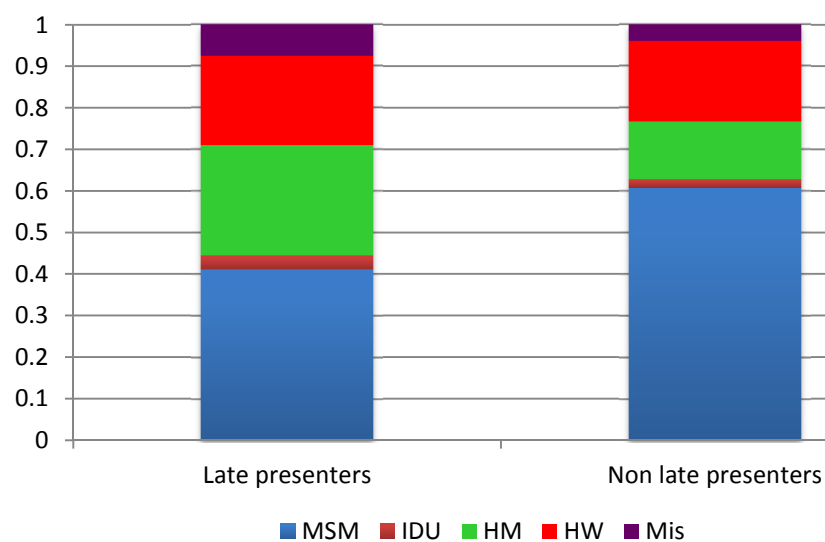
Age



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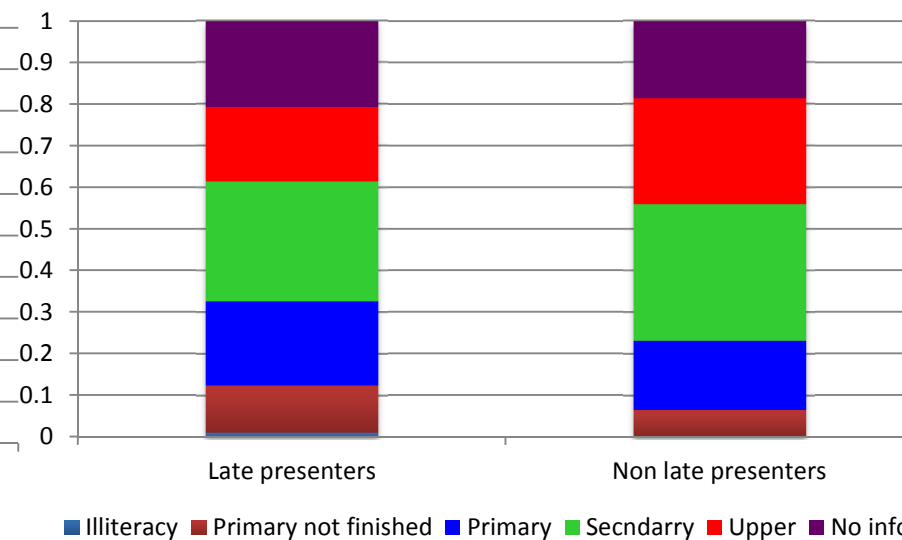
Comparison among migrants

Transmission group



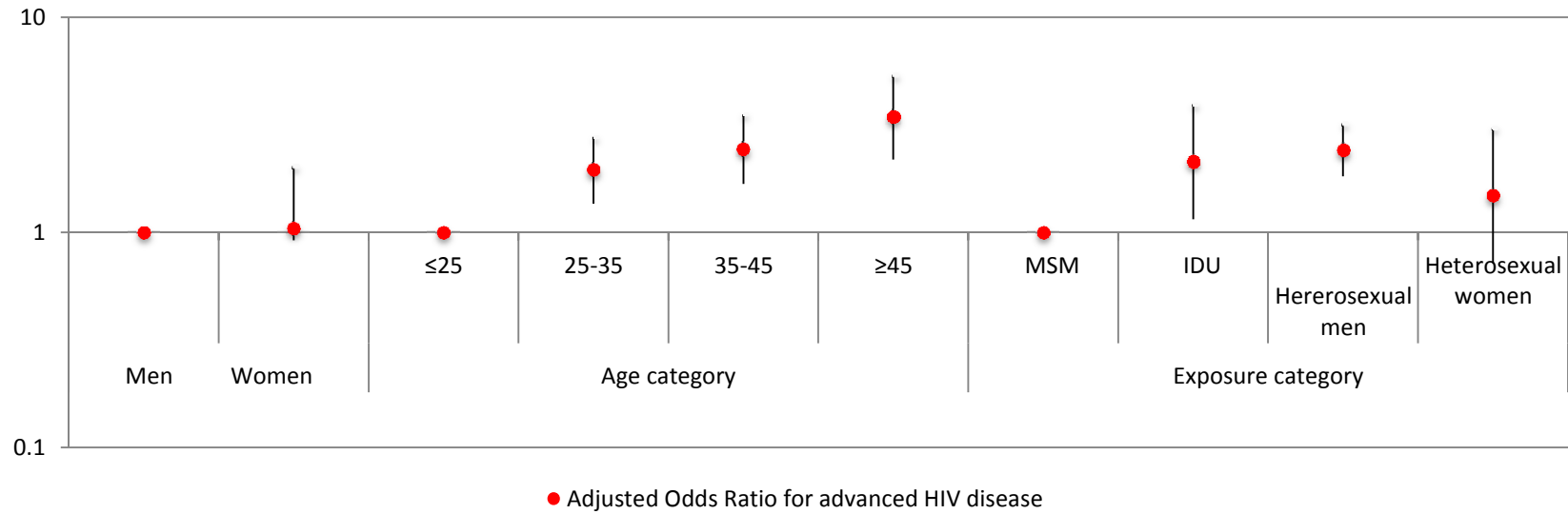
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Educational level

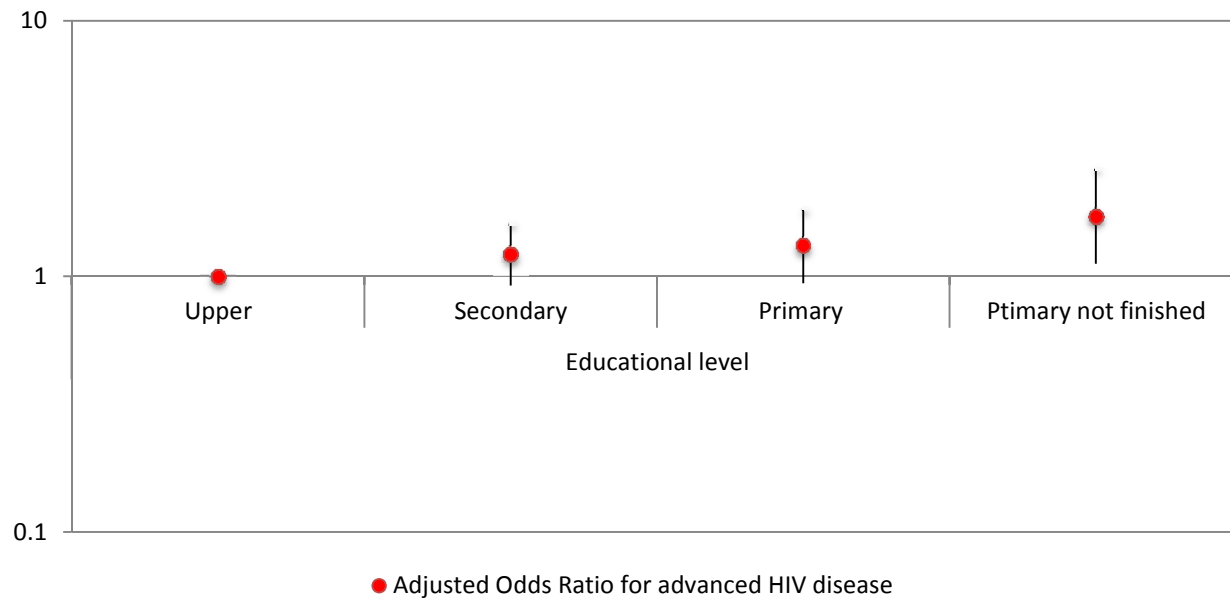


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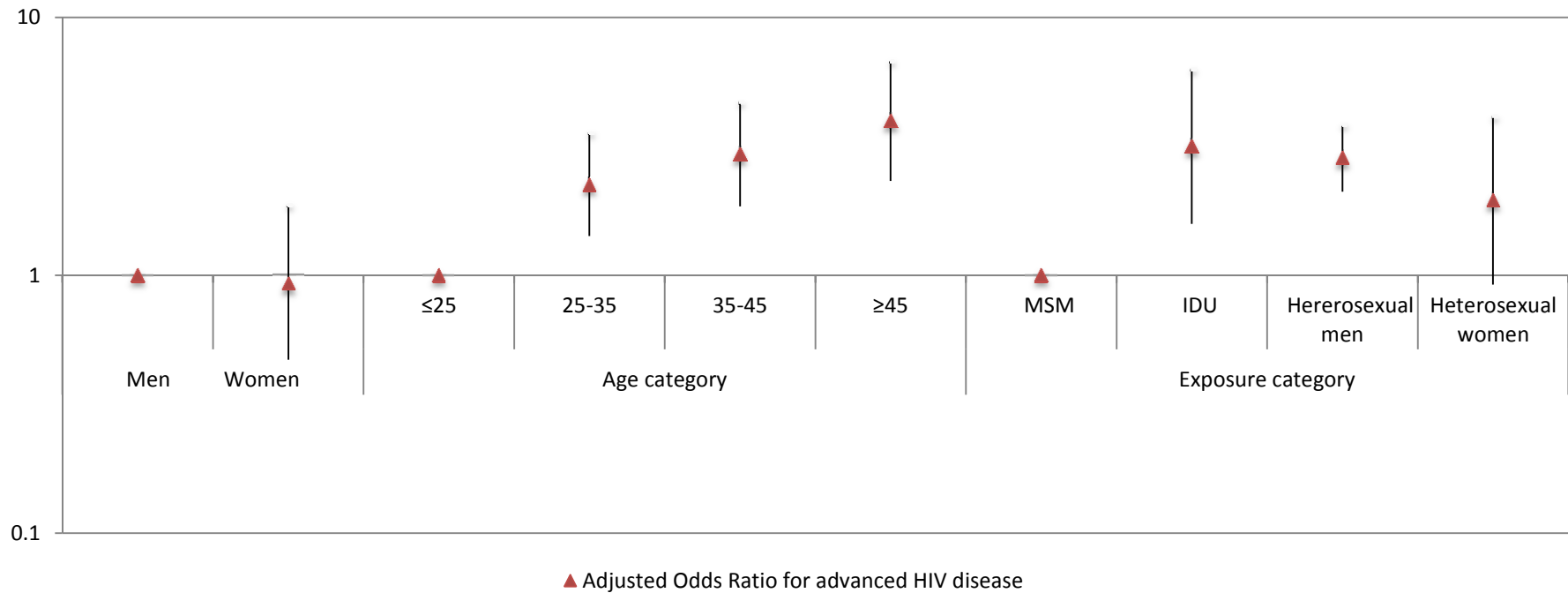
Risk factors associated with late presentation among migrants



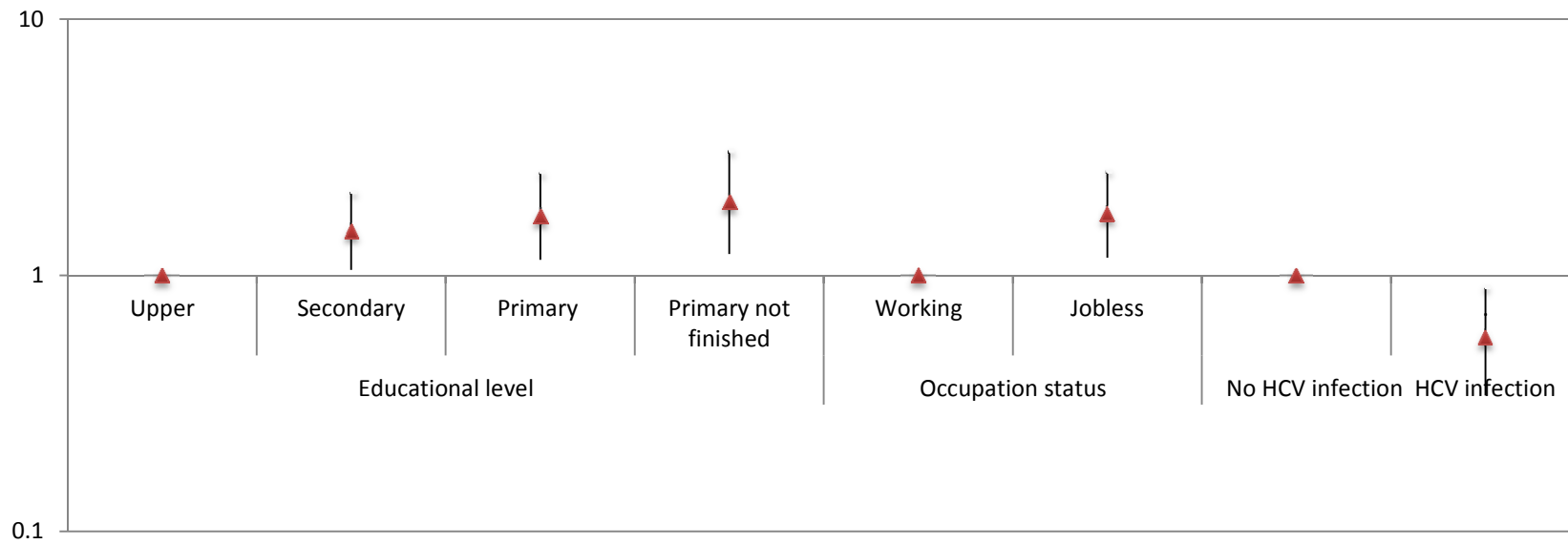
Risk factors associated with late presentation among migrants



Risk factors associated with advanced HIV disease



Risk factors associated with advanced HIV disease



▲ Adjusted Odds Ratio for advanced HIV disease

Kaplan-Meier survival estimates for AIDS /death and for death in migrants and natives

Figure 6: Kaplan-Meier survival estimates for AIDS or death by migrant status

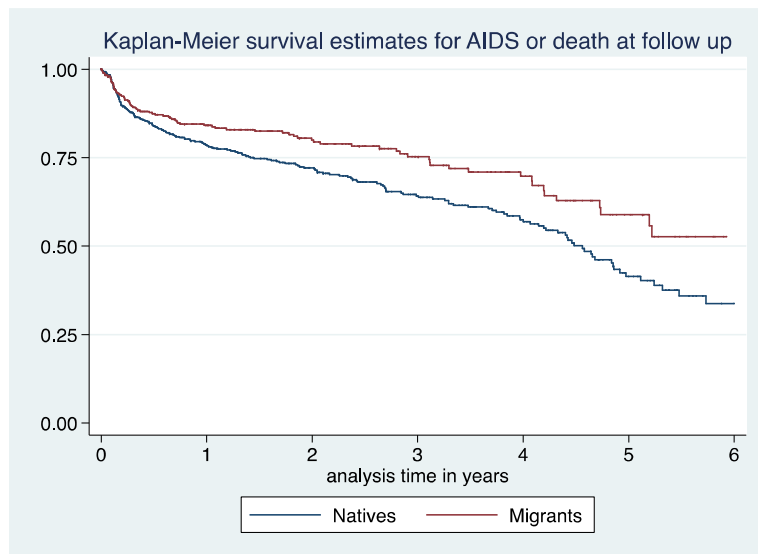
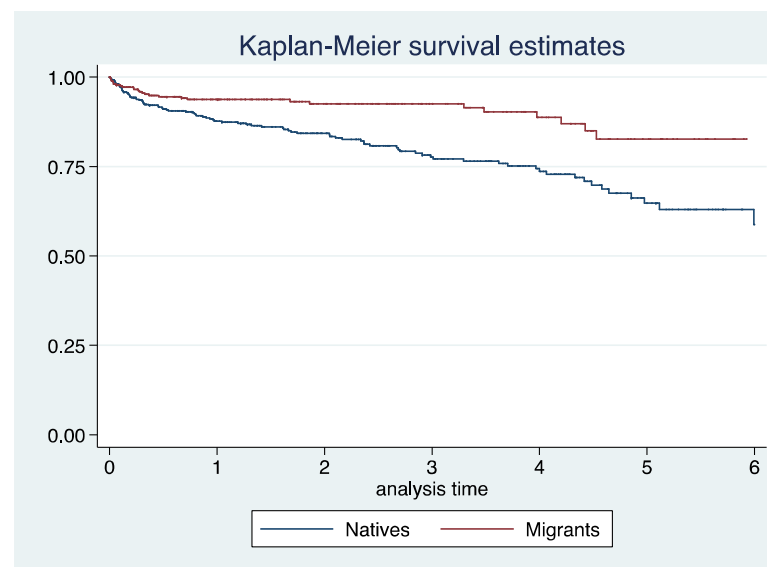
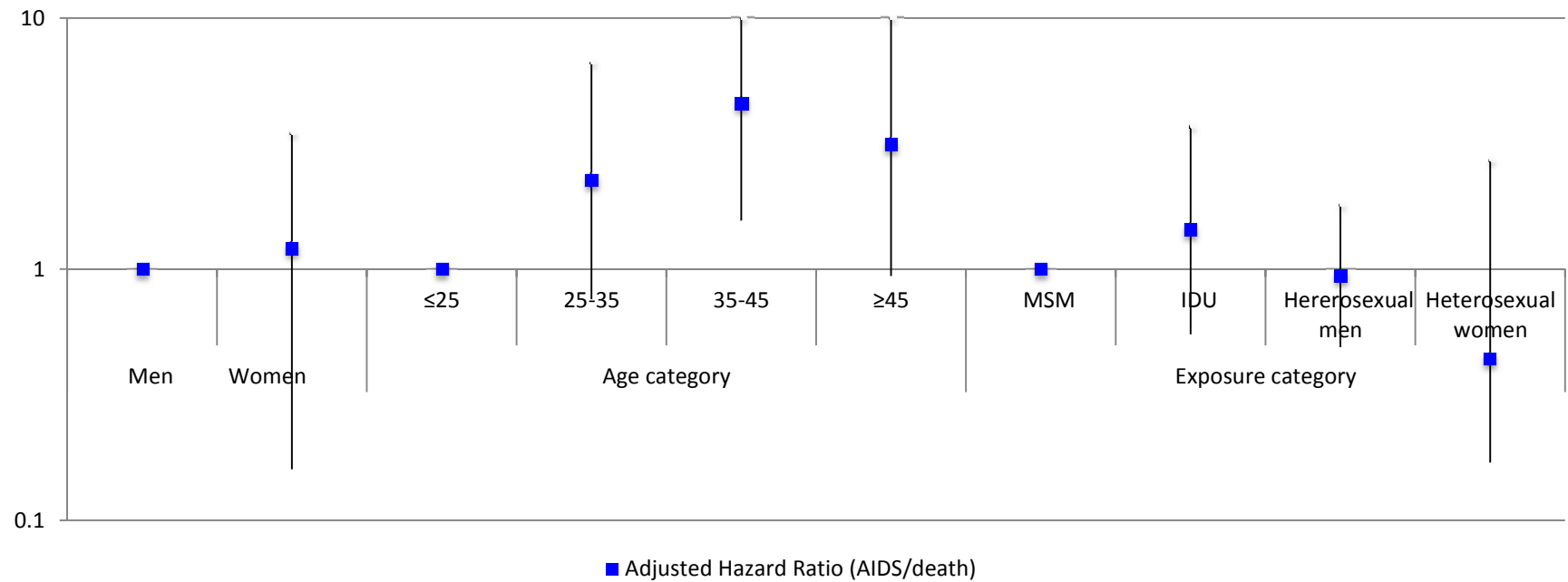


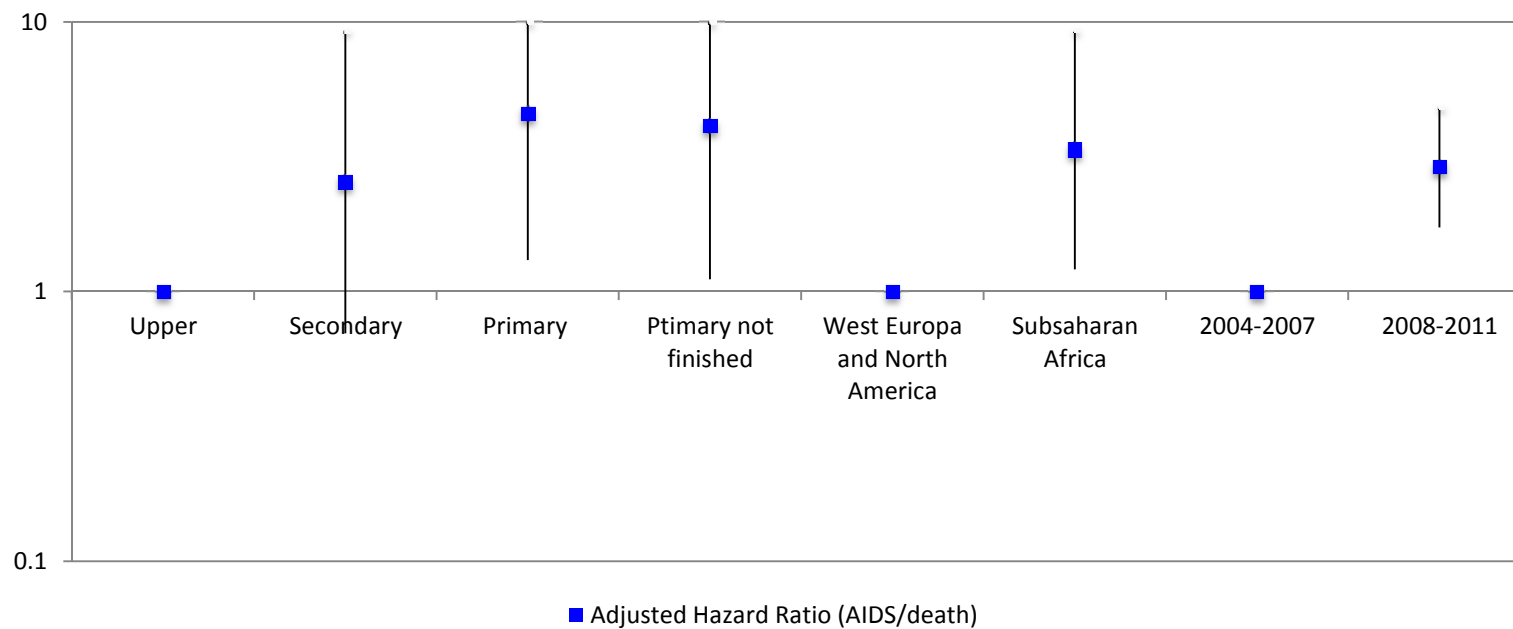
Figure 7: Kaplan-Meier survival estimates for death by migrant status



Cox model for AIDS or death at follow up among migrants



Cox model for AIDS or death at follow up among migrants



CONCLUSIONS

- This is one of few studies on migration and new HIV diagnosis which considers factors associated with both late presentation and prognosis.
- Most results are similar to other studies
- The better outcomes reported for migrants in this study may be attributable to bias in the differential loss to follow-up and under-ascertainment of deaths in migrants.
- This highlights the key importance of access to data sources beyond those used in traditional surveillance systems.

Thanks

Anna Esteve: statistician of CEEISCAT