

# Characteristics of newly diagnosed HIV positive individuals between 1983 and 2019: a clinic-based study in Montréal (Clinique médicale l'Actuel)

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# Background and Methods

## Background

- ❖ HIV diagnosis is the necessary first step in the HIV care cascade
- ❖ With different vulnerable populations facing diverse HIV testing and prevention challenges, it is imperative to properly characterize the most affected populations in order to inform the public health response to HIV
- ❖ We aim to describe how the demographic profiles and exposure categories of newly diagnosed individuals evolved over time since the beginning of the HIV epidemic

## Methods

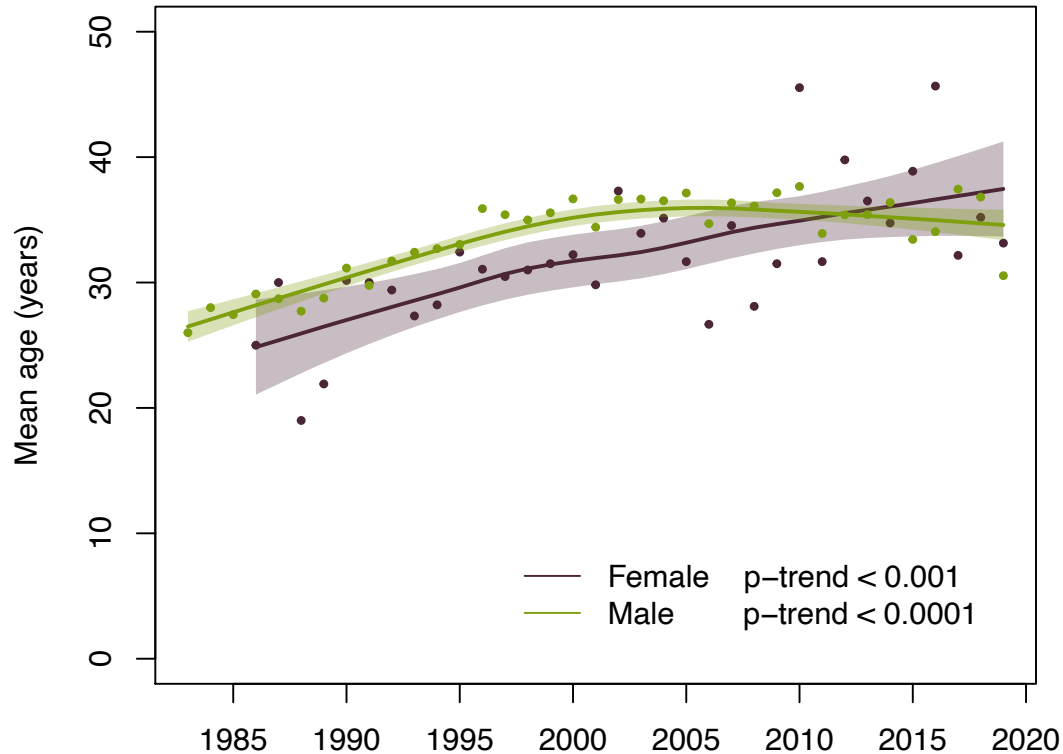
- ❖ Close to four decades of HIV diagnosis data from l'Actuel's clinical cohort was used to assess the distribution of HIV exposure categories by gender and year of diagnosis (1983-2019)
- ❖ Time trends in the mean age and mean CD4 count at diagnosis were assessed through meta-regressions, using calendar year as a continuous independent variable (linear)

# Trends in mean age and CD4 count at diagnosis

## Mean age increased from 26 to 31 years

between 1983 and 2019

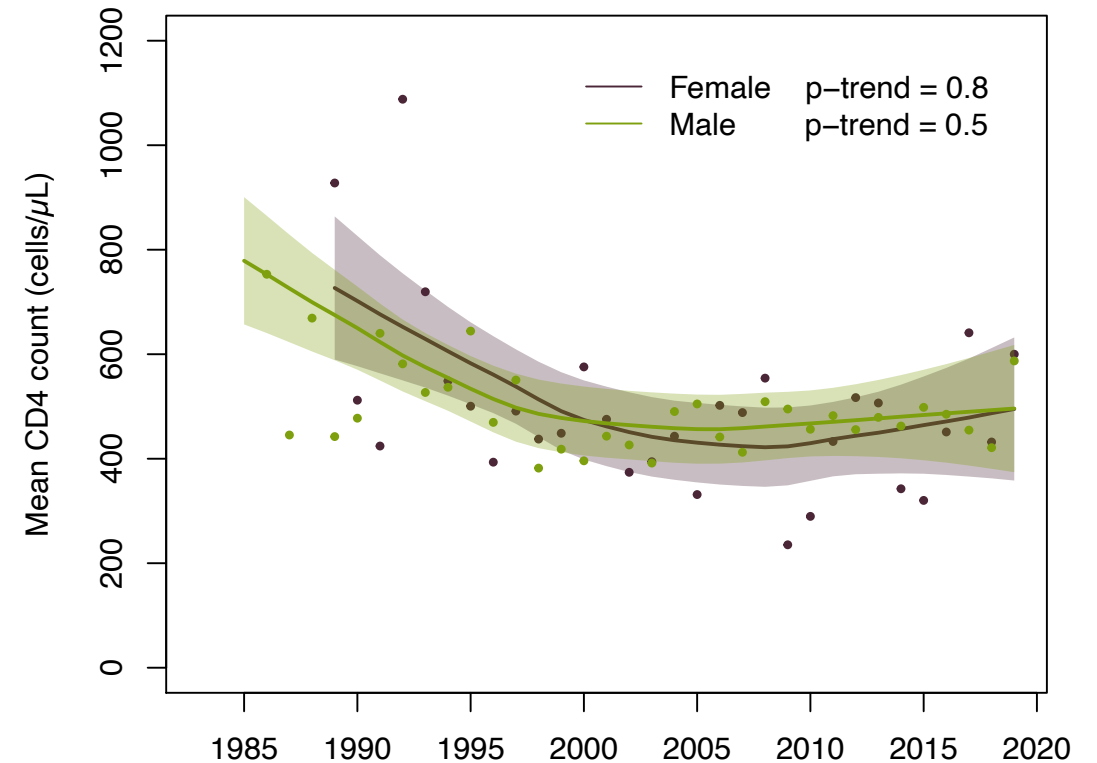
(N = 3,457; overall p-trend < 0.0001)



## CD4 count decreased from 1,381 to 590 cells/ $\mu$ L

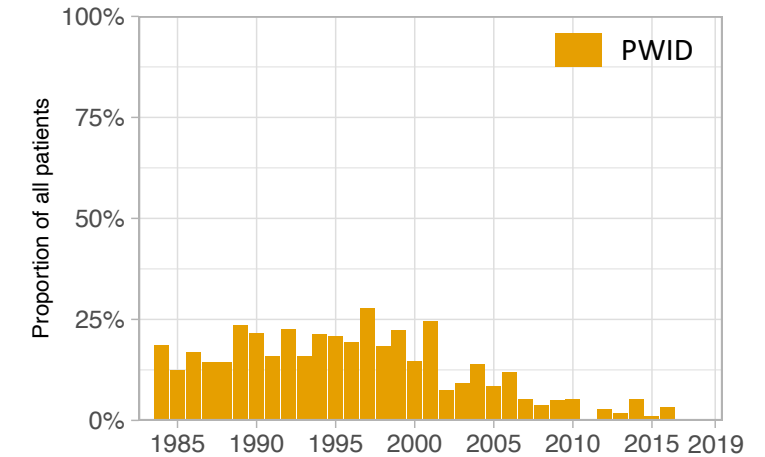
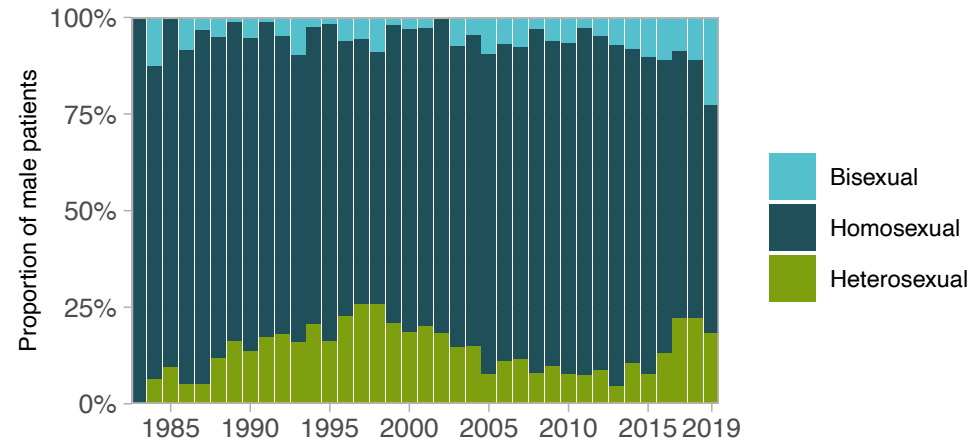
between 1985 and 2019 although the negative trend was not statistically significant

(N = 2,128; overall p-trend = 0.3)

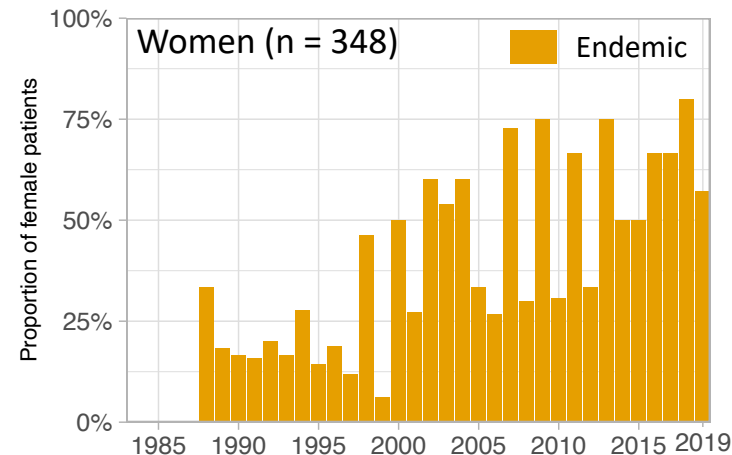
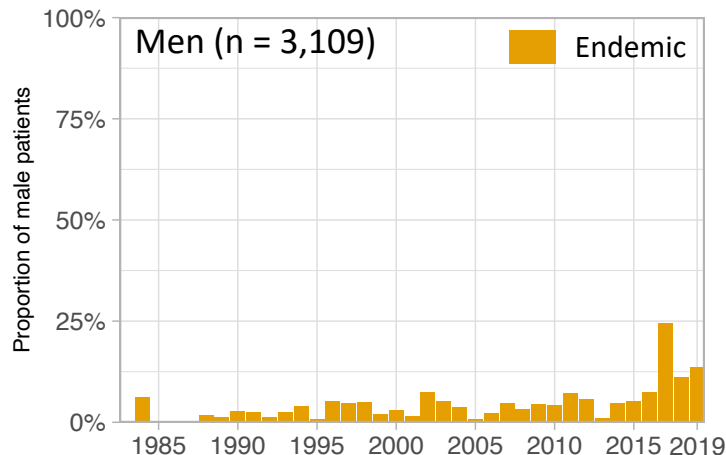


# Shifts in HIV exposure categories among new diagnoses

- ❖ Although MSM<sup>1</sup> consistently accounted for the highest proportion of new diagnoses (77%), their proportion decreased since 2013 (n = 3,109 male patients)
- ❖ There was also a concomitant decrease in the proportion of PWID<sup>2</sup> (n = 3,457)



- ❖ There was an important increase in the proportion of new diagnoses from endemic countries (24% in 2019), especially among women (63% over 2015-2019).



- ❖ Newly diagnosed patients from endemic countries were characterized by higher proportions of women and of heterosexuals, and lower CD4 count at diagnosis.

	Non-endemic		Endemic	
	n = 3,207		n = 250	
	n	(%)	n	(%)
Mean age, years (SD)	34	(10)	34	(10)
Women	220	(7)	128	(51)
Heterosexual	558	(17)	221	(88)
*Mean CD4 count, cells/ $\mu$ L (SD)	484	(285)	374	(266)

\*n=2,128; SD: standard deviation

<sup>1</sup>MSM: men who have sex with men (Bisexual + Homosexual men), <sup>2</sup>PWID: people who inject drugs

# Interpretation

## Limitations

- ❖ Some subgroup analyses relied on small number of HIV diagnoses leading to imprecise estimates
- ❖ The high amount of missing data for the CD4 count at diagnosis led to high variability of yearly estimates that could have affected trends assessment
- ❖ Results may not be generalizable to the whole population of newly diagnosed individuals in Montréal

## Conclusions

- ❖ The HIV epidemic is aging with a mean age at diagnosis that increased from 26 to 31 years
- ❖ In absolute numbers, MSM continue to account for the largest HIV exposure category
- ❖ Patients from HIV-endemic countries constitute an increasing proportion of new diagnoses
- ❖ Tailoring HIV testing strategies and other prevention interventions to these individuals is warranted

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