

BC CARMA CHIWOS COLLABORATION

Confirming Self-Reported Data about Chronic/Latent Viral Infections and Key HIV-related Health Parameters in Cohort Studies: the British Columbia CARMA-CHIWOS Collaboration (BCC3) Study Experience

Tetiana Povshedna, Shayda A Swann, Amber R Campbell, Sofia LA Levy, Melanie Lee, Elizabeth M King, Valerie Nicholson, Angela Kaida, Melanie CM Murray, Helene CF Cote, on behalf of the BCC3 (CIHR, CTN 335) study team

I respectfully acknowledge that the land I work, learn, and live on is the traditional, ancestral, unceded territories of the Coast Salish Peoples, including the xʷməθkʷəy̓əm (Musqueam), Skwxwú7mesh (Squamish) and səl̓ilwətaʔ (Tseil-Waututh).

Contact: Tetiana Povshedna
t.povshedna@alumni.ubc.ca



THE UNIVERSITY
OF BRITISH COLUMBIA



SIMON FRASER
UNIVERSITY



Background

An estimated **19.9 million women** were living with HIV (**WLWH**) globally in 2020 (53% of all adults). In Canada, 23% of people living with HIV are women.

About **50%** of estimated 1.5 million **new HIV infections** were among women (2020).



successful antiretroviral therapy

increased life expectancy

In Canada, **WLWH** have ~ **7 years shorter** life expectancy than men living with HIV and HIV-negative women

Accelerated/accentuated aging?

CARMA: Children and Women AntiRetrovirals Therapy and Markers of Aging (2008-2018)



CHIWOS: Canadian HIV Women's Sexual and Reproductive Health Cohort Study (2011-2019)



= BC CARMA CHIWOS Collaboration

Currently enrolling **WLWH** and controls in BC

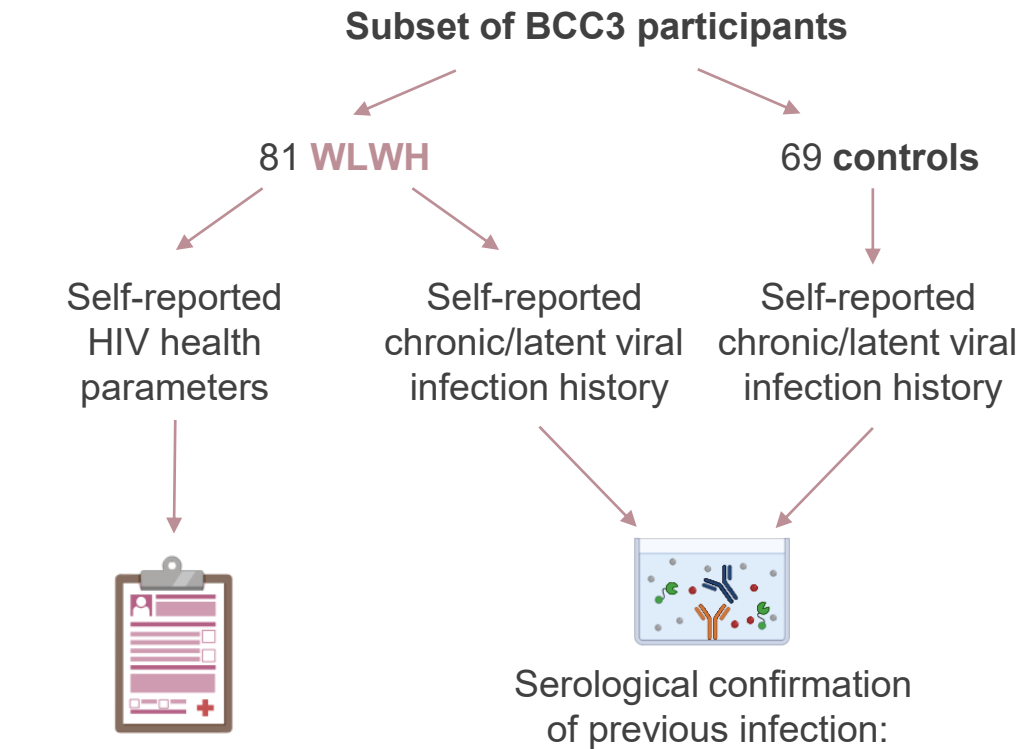
- Holistic analysis of aging and health:
- Cellular and biological markers of aging
 - Prevalence of chronic/latent viral infections
 - Hormonal health
 - Comorbidities, mental health
 - Structural, psycho-social, socio-behavioral parameters
 - Chronic pain





Methods and Sample Size



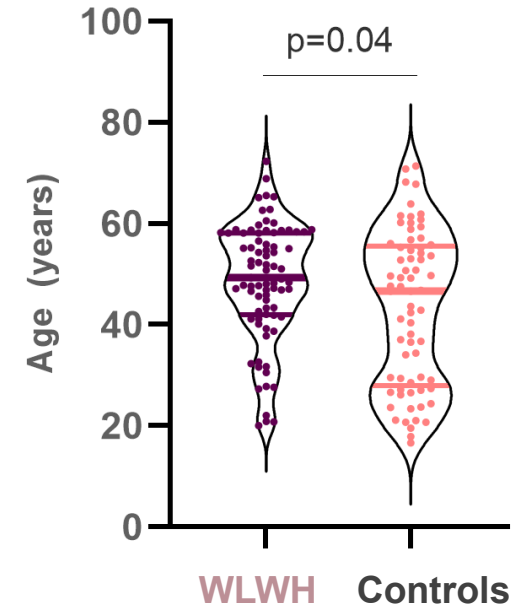
BCC3 is a community-based cohort study that **relies** on **self-reported** data about HIV-related health parameters and chronic/latent viral infections.

How does self-reported health information compare to data obtained from clinical chart review and laboratory testing?



- anti-hepatitis B virus (HBV) core 
- anti-hepatitis C virus (HCV) 
- anti-herpes simplex virus (HSV)-1 
- anti-herpes simplex virus (HSV)-2 

Age of participants included in analysis

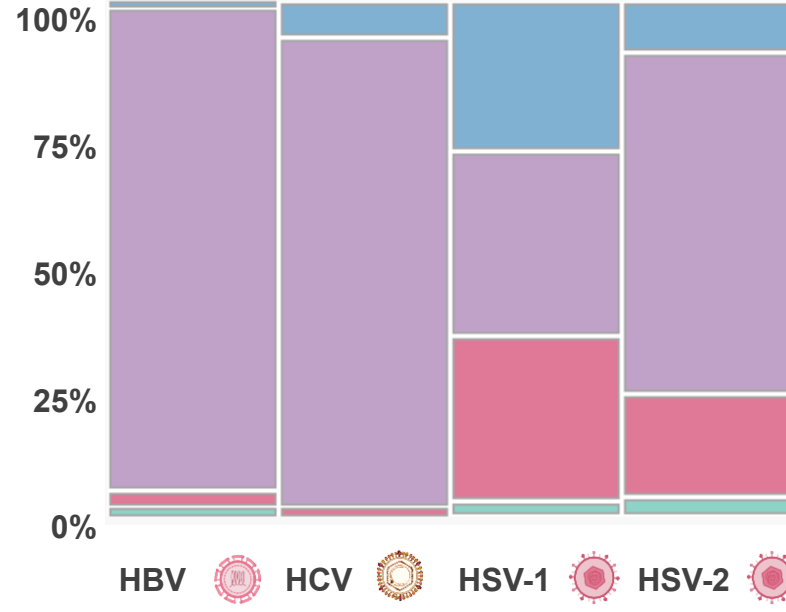
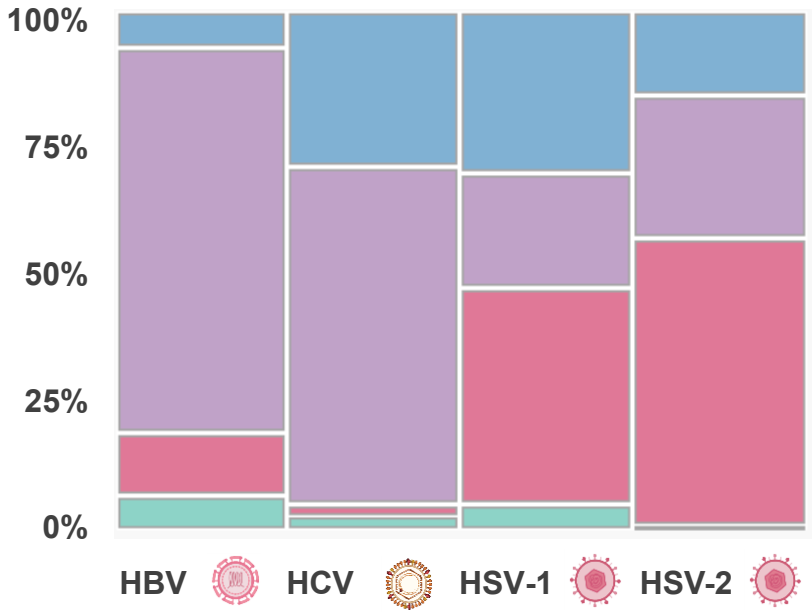


WLWH were **older** than controls – median (IQR) age 49.3 (41.9 – 58.2) vs 46.6 (27.9 – 55.5), p=0.04; Mann-Whitney test

Results: Chronic/Latent viral infections

WLWH (n=81)

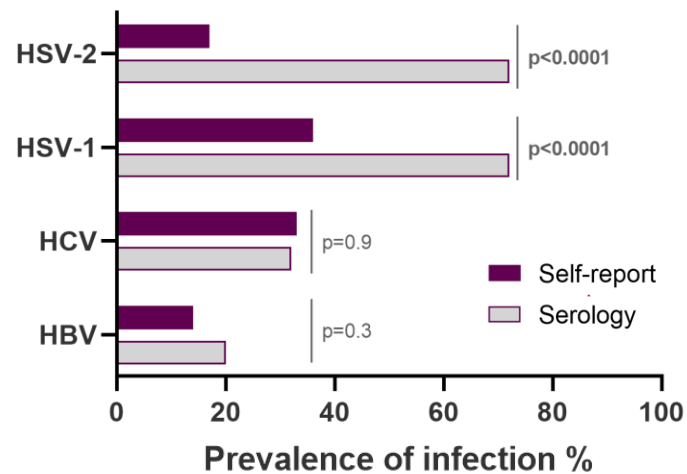
Controls (n=69)



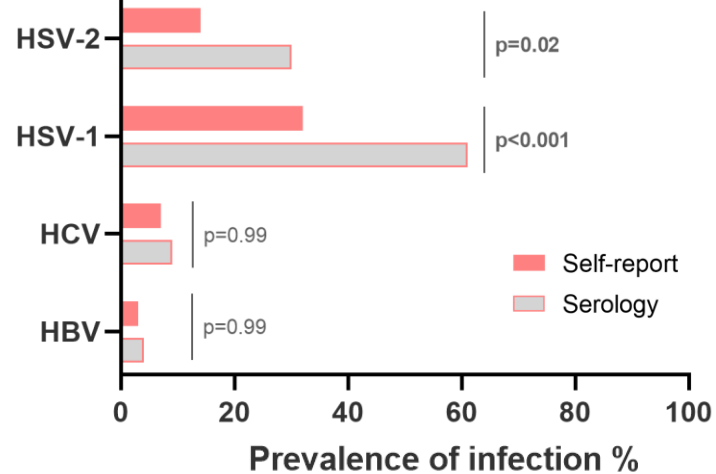
- True positive** – self-reported past infection confirmed by serology
- True negative** – both self-report and serology negative
- False negative** – participant not aware of past infection
- False positive** – participant reported past infection that was not confirmed

Self-reported vs serological prevalence of viral infections

WLWH



Controls



- Awareness about previous **HSV-1** and **HSV-2** infections appears to be low for both groups.
- Self-reported and serological prevalence **did not differ** for **HBV** and **HCV** for both **WLWH** and controls.

Results: HIV-related variables

HIV-specific health parameter	WLWH (n=88)
Self-reported CD4 nadir confirmed by chart review ¹	52/66 (79%)
Self-reported recent CD4 count confirmed by chart review ²	48/61 (79%)
Self-reported undetectable (n=74/84) not confirmed by chart review	8/74 (11%)

¹CD4 counts from self-report and chart review (when available) were compared based on WHO HIV CD4-based staging.

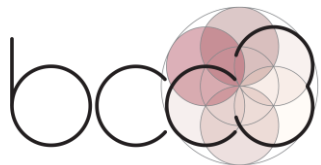
²The term “recent” refers to the most recent test result before the study visit.

- A high proportion of **WLWH** were able to estimate CD4 nadir (66/88), recent CD4 count (61/88), and recent HIV viral load (88/84)
- 11% of **WLWH** were **unaware** that they recently had a **detectable** (>40 copies/ml) viral load. Of those, 5/8 **WLWH** had viral load <200 copies/ml

Conclusions

- Self-reported prevalence of **HBV** and **HCV** are **reliable** indicators in cohort studies.
- A high proportion of **WLWH** were aware of HIV-related health parameters.
- It is important to clearly communicate CD4/viral load information to **WLWH**, to best inform their care and actions.

Acknowledgements



study team, participants, investigators, and staff; Côté Lab members



the CTN
CIHR Canadian
HIV Trials Network