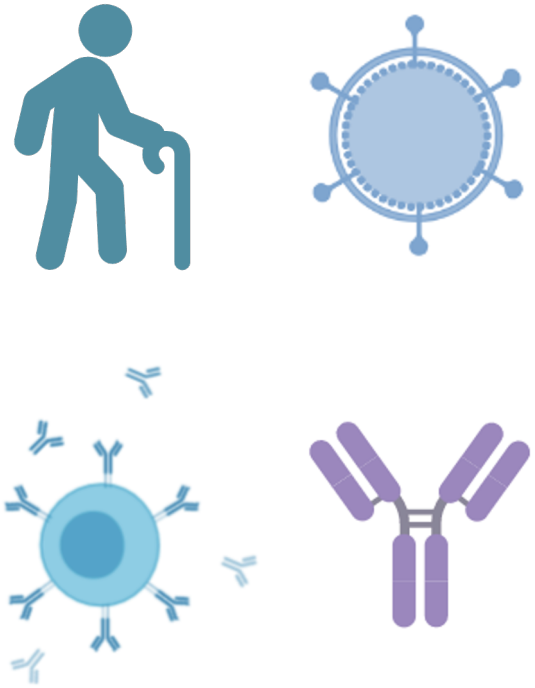
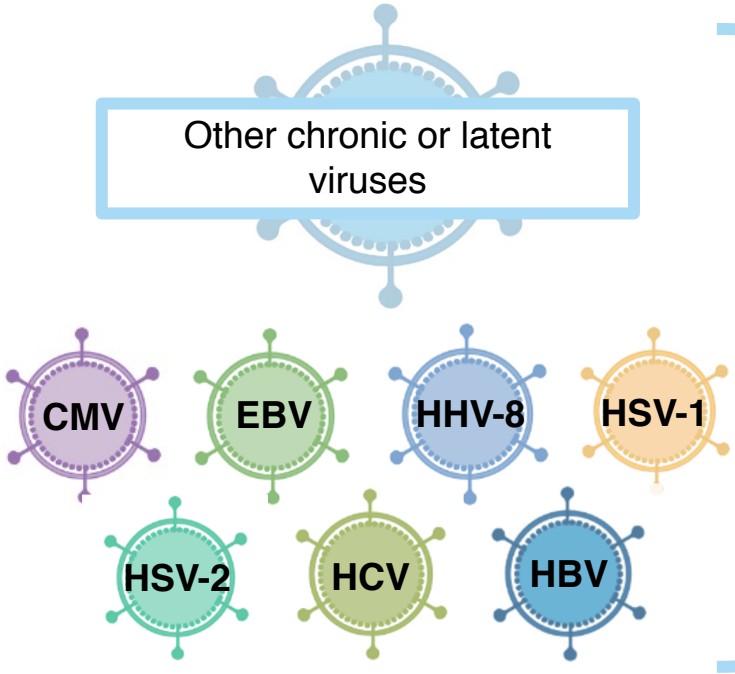
THE PREVALENCE OF CHRONIC/LATENT VIRAL INFECTIONS IN A COHORT OF PEOPLE LIVING WITH HIV IN CANADA

NANCY Y YANG, ANTHONY YY HSIEH, AMBER R CAMPBELL, MELANIE CM MURRAY, HÉLÈNE CF CÔTÉ



INTRODUCTION AND METHODS



All these viruses have been associated with immunological aging and/or age-related diseases

People living with HIV:

Chronic inflammation and immunological aging

Accelerated/accentuated aging → age-associated diseases **earlier** in life

Study sample:
CARMA cohort
female participants

carma

Age (y)	**HIV+** (n)	**HIV-** (n)
0-10	15	12
10-20	15	14
20-30	14	15
30-40	14	15
40-50	15	15
50-60	15	15
>60	15	15
total	103	101

Data collection method:

BC Centre for Disease Control

Serology:
- CMV
- EBV
- HHV-8
- HSV-1
- HSV-2

Self-report:
- HIV
- HCV
- HBV

RESULTS 1: INCREASED PREVALENCE OF VIRAL INFECTIONS IN HIV+ GROUP

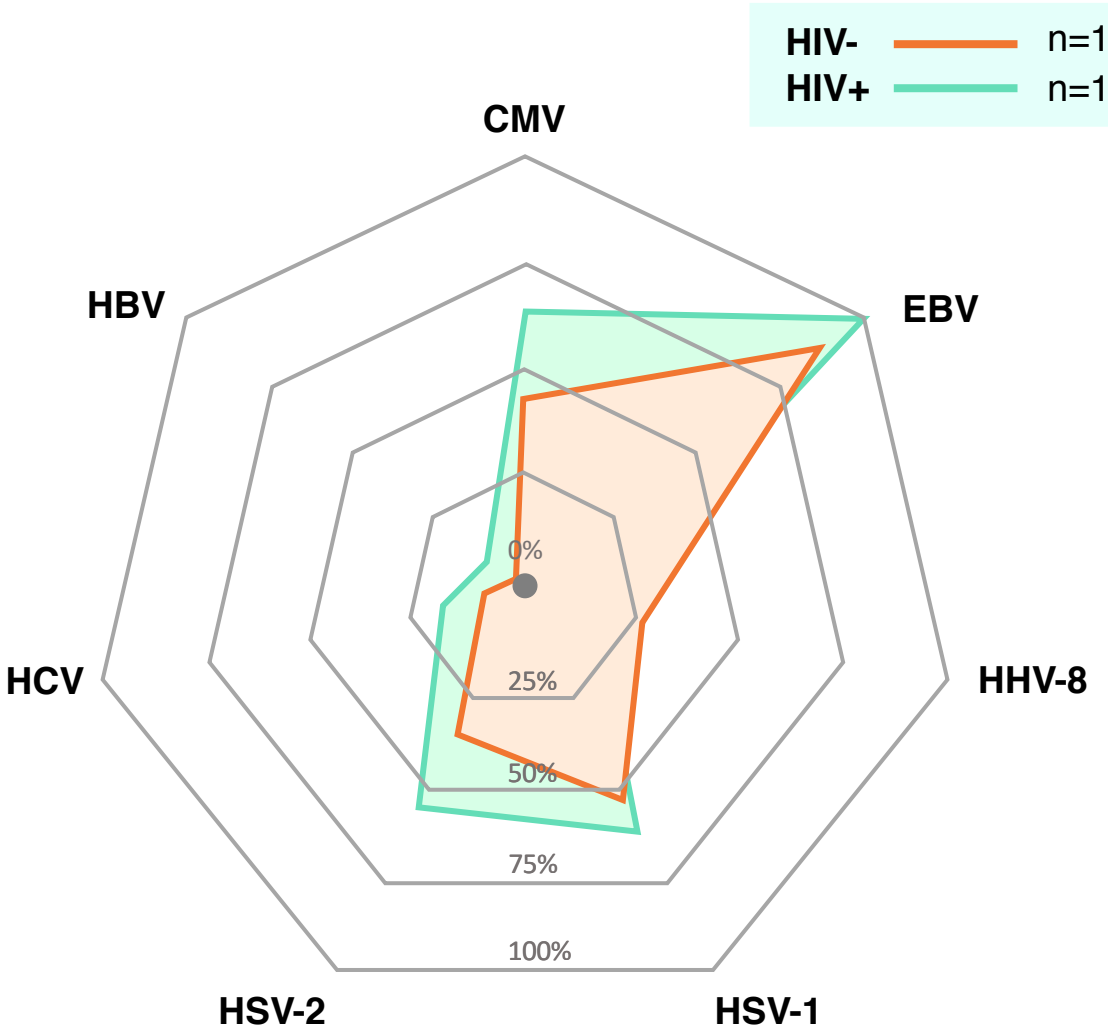
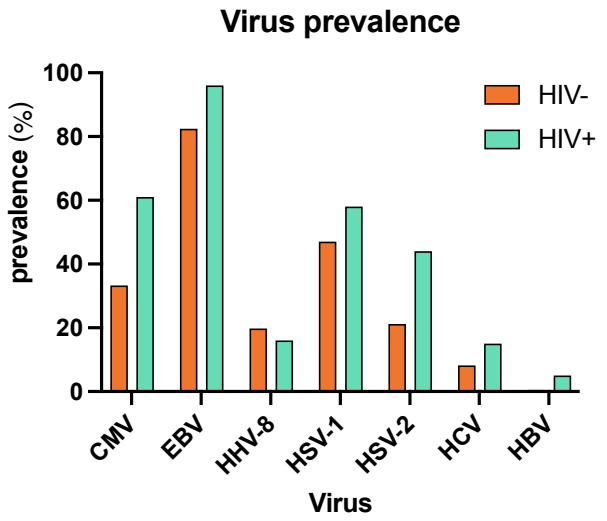


Figure 1. Radar plot and bar graph map depict the percentage of participants who have been infected with each virus.



HIV positive status is associated with having a **greater** number of non-HIV viruses

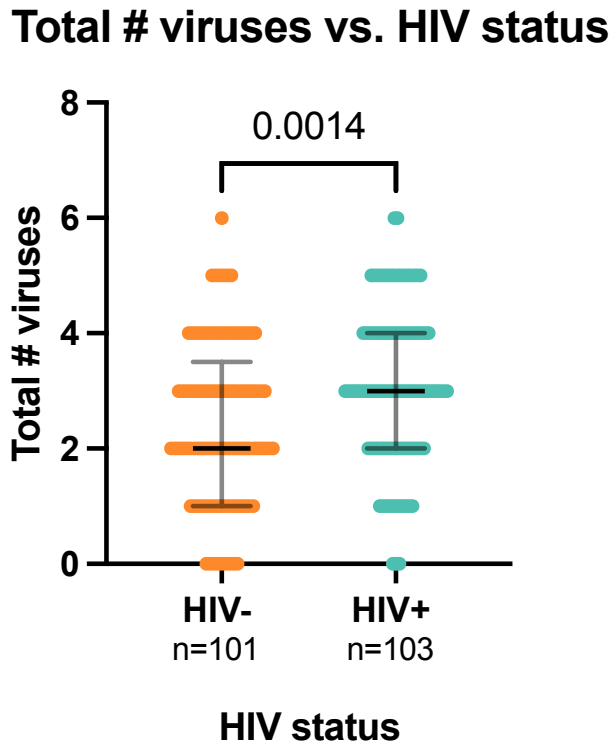


Figure 2. Column dot graph depicting total # of viral infections between HIV groups (p=0.0014). Bars depict median + IQRs; Mann-Whitney test.

RESULTS 2: INCREASED PREVALENCE OF VIRAL INFECTIONS WITH AGE

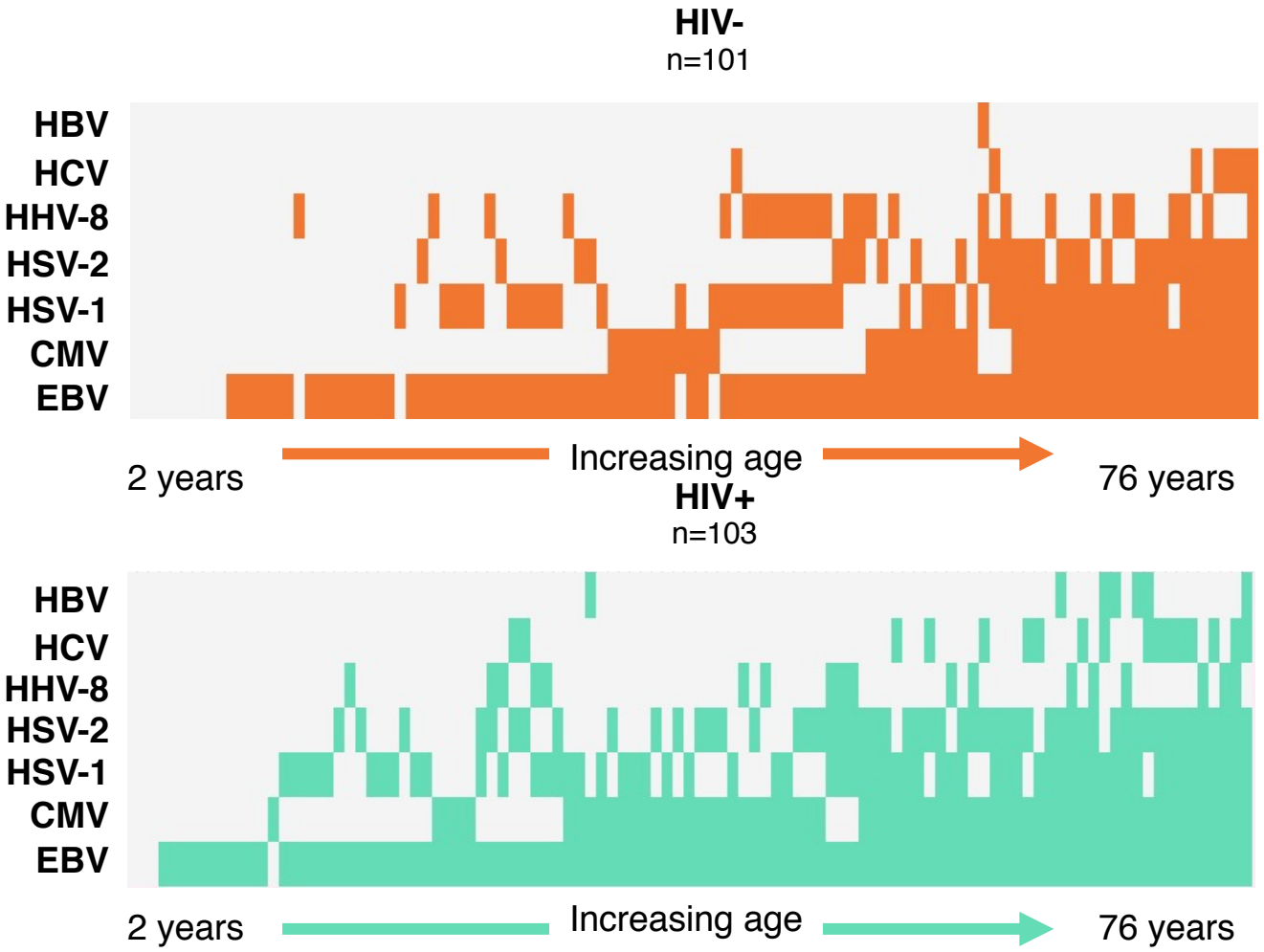


Figure 3. Virus prevalence within the study sample. Rows depict virus type; each column depicts one participant.

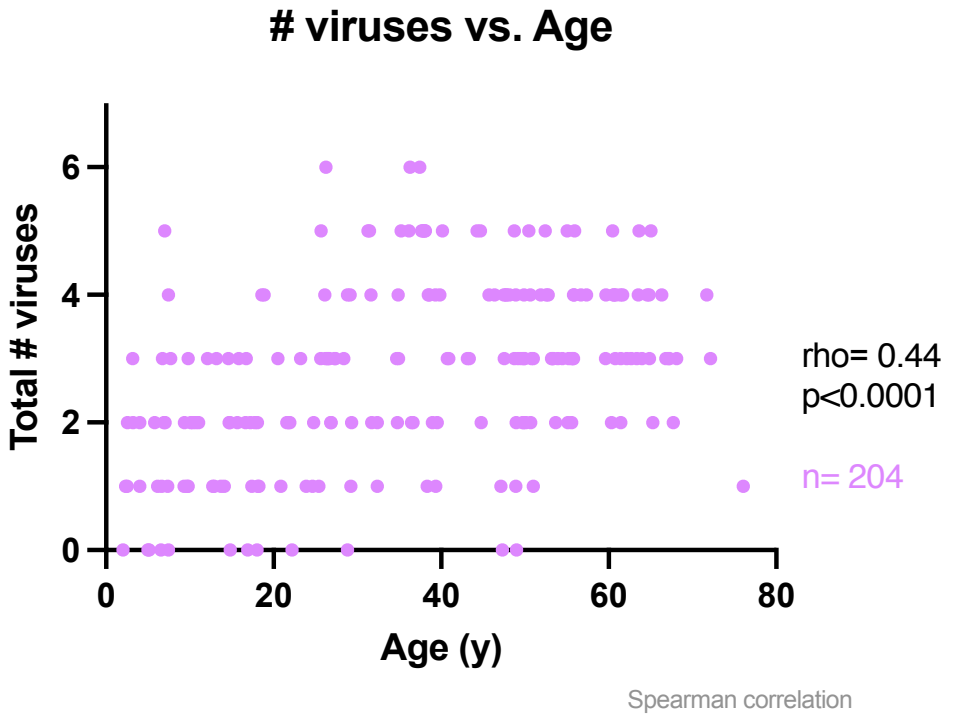
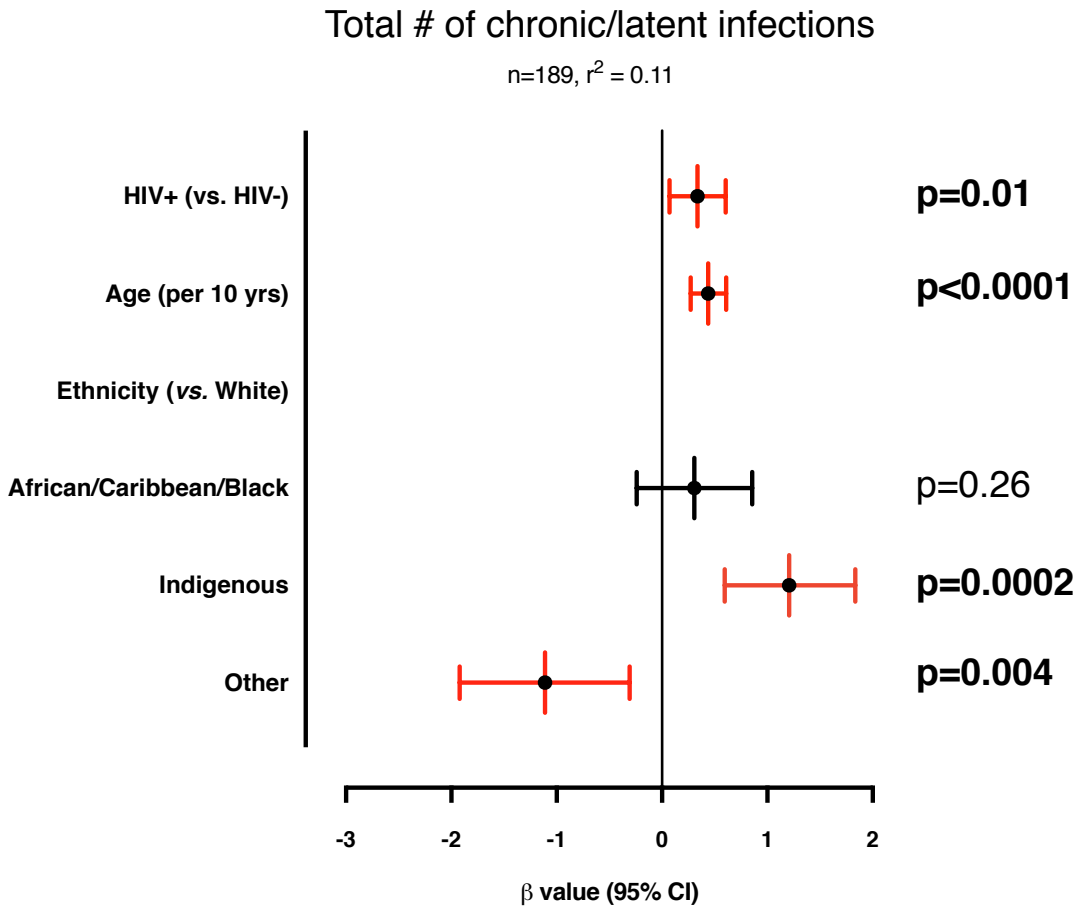


Figure 4. Scatterplot depicting all participants. The total # of viruses increases as age increases (rho=0.44, p<0.0001).

Older age is associated with having a **greater** number of non-HIV viruses

CONCLUSIONS



Other = Asian, South Asian, Hispanic, Other

Figure 5. Forest plot depicting multivariable ordinal logistic regression modelling for total # of non-HIV viral infections. HIV+ status is independently associated with having a greater number of viruses (β=0.34, p=0.01).

After adjustment for age and ethnicity, **positive HIV status** remains independently associated with having **more** chronic/latent viral infections.

FUTURE DIRECTIONS & SIGNIFICANCE

We will investigate associations between chronic/latent viral infections and markers of immune aging.

Understanding how the burden of multiple persistent viruses may affect aging can inform future treatment or prevention strategies for people living with HIV.

ACKNOWLEDGEMENTS

We thank all Côté lab members, CARMA study participants and staff, and the BC Centre for Disease Control.

Funding for this project is provided by the CIHR and CBR. We have no conflicts of interest to report.

Some images from Biorender.

Contact: nancyyang6@outlook.com