

# The Canadian Observational Cohort (CANOC): Canada's largest multi-province study of people living with HIV on antiretroviral therapy

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## Abstract

**Background:** The Canadian Observational Cohort (CANOC) is a longitudinal study of people living with HIV (PLHIV) on antiretroviral therapy (ART). This descriptive profile overviews the updated CANOC dataset (2000-2016).

**Methods:** At enrolment, CANOC participants must have a documented HIV infection, reside in Canada, be ≥ 18 years of age, and be ART naïve. Select demographic and clinical variables were summarized using N (%) for binary/categorical variables or median (Q1-Q3) for continuous variables.

**Results:** Between January-2000 and December-2016, CANOC enrolled 11,748 participants, contributing a median of 5.59 years (2.49-9.18) of follow-up time. Participants were enrolled in five provinces: 51% in British Columbia, 30% in Ontario, 17% in Québec, 1% in Saskatchewan, and 1% in Newfoundland and Labrador. Most participants were men (83%) and Caucasian (52%). Nine percent were African-Caribbean-Black, 7% were Indigenous, 14% were of other ethnicities, and 18% had missing information on this variable. Regarding HIV acquisition risk groups, 40% were men who have sex with men (MSM), 17% were persons who inject drugs (PWID), 4% were both MSM-PWID, 14% were in other categories (blood transfusion, heterosexual, vertical transmission), and 25% had missing information. Twenty-four percent of participants were lost to follow-up (≥ 18 months with no visit) and 10% died. The distribution of ART initiation era was: years 2000-2003 (18%), 2004-2007 (22%), 2008-2011 (31%), and 2012-2016 (29%). Among the 10,060 participants followed for ≥ 1 year, 77% had achieved HIV viral suppression (two consecutive measures < 50 copies/mL) within their first year. Lastly, 24% of participants had been co-infected with hepatitis C virus in their lifetimes; 4% had missing information.

**Conclusion:** CANOC is the largest multi-province study of PLHIV on ART in Canada. Moving forward, we will continue to leverage CANOC's large sample size, considerable duration of follow-up, and geographic representation to generate novel evidence that may improve the clinical care of PLHIV.

## What is CANOC?

- Longitudinal cohort study of PLHIV who are ART naïve at enrolment (2000-2016)
- N = 11,748 participants (BC = 5,969 SK = 112 ON = 3,506 QC = 2,054 NL = 107)
- Median follow-up time: 5.59 years (Q1: 2.49, Q3: 9.18), 24% lost to follow-up, 10% died
- Goals:** 1) Improve treatment quality, health outcomes, and engagement with evidence-based programs for PLHIV across Canada; prioritizing approaches to care that are sensitive to the health needs of key populations 2) Train and support students (MSc, PhD, postdoctoral fellows) and community investigators to complete HIV research

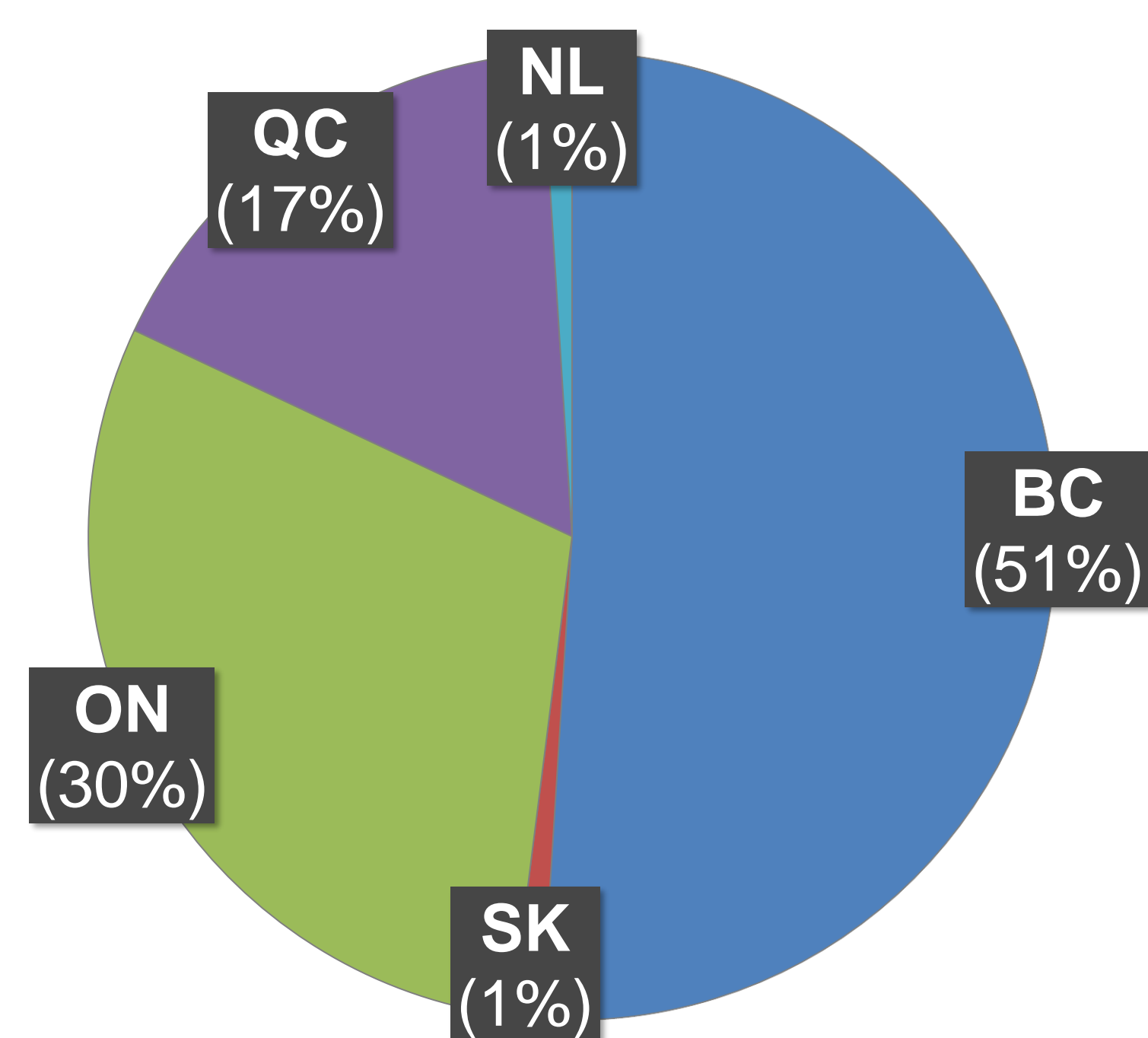


Figure 1. Participant enrolment by province

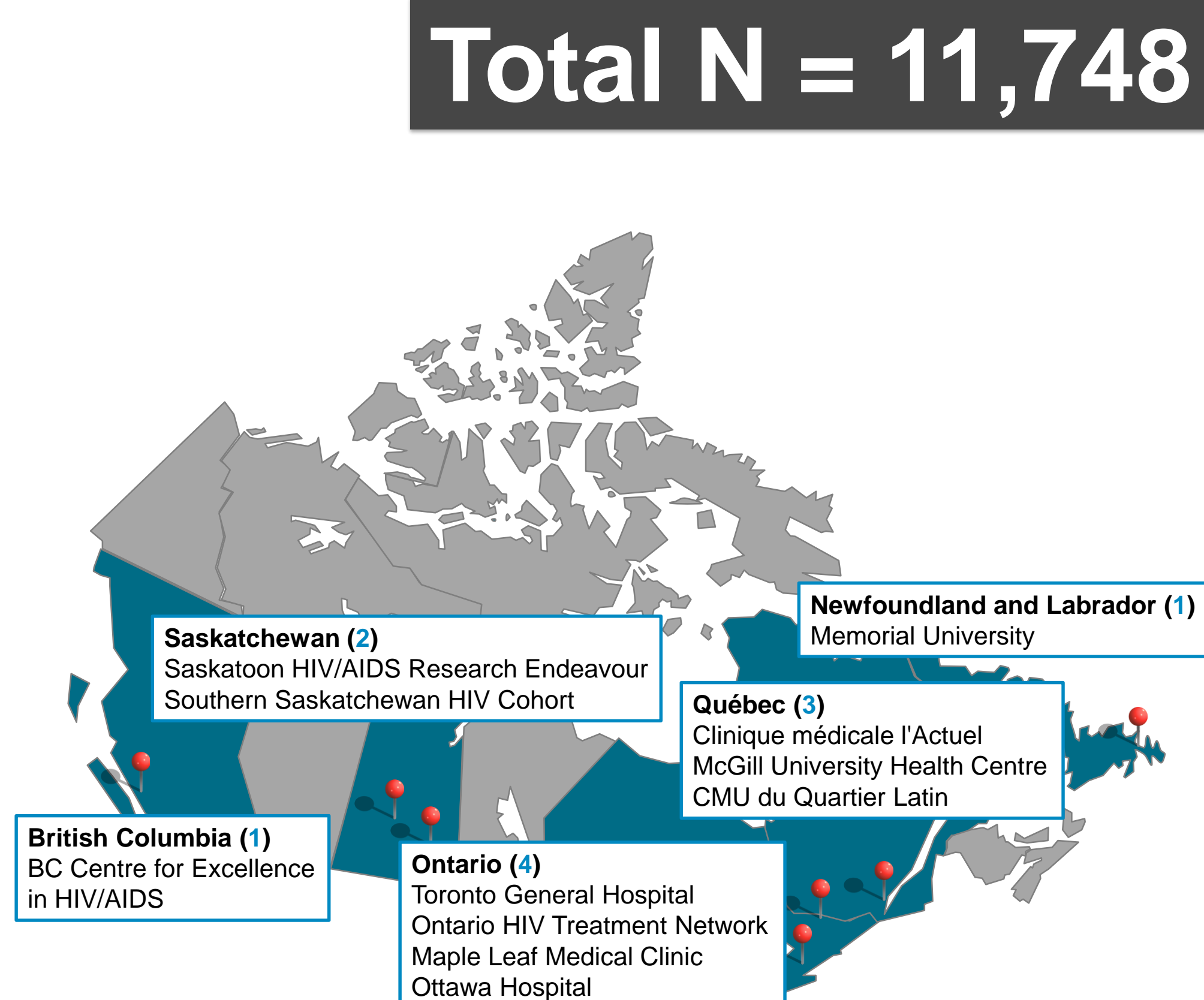


Figure 2. Eleven CANOC sites in five provinces

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**Conflicts of interest:** none to declare.

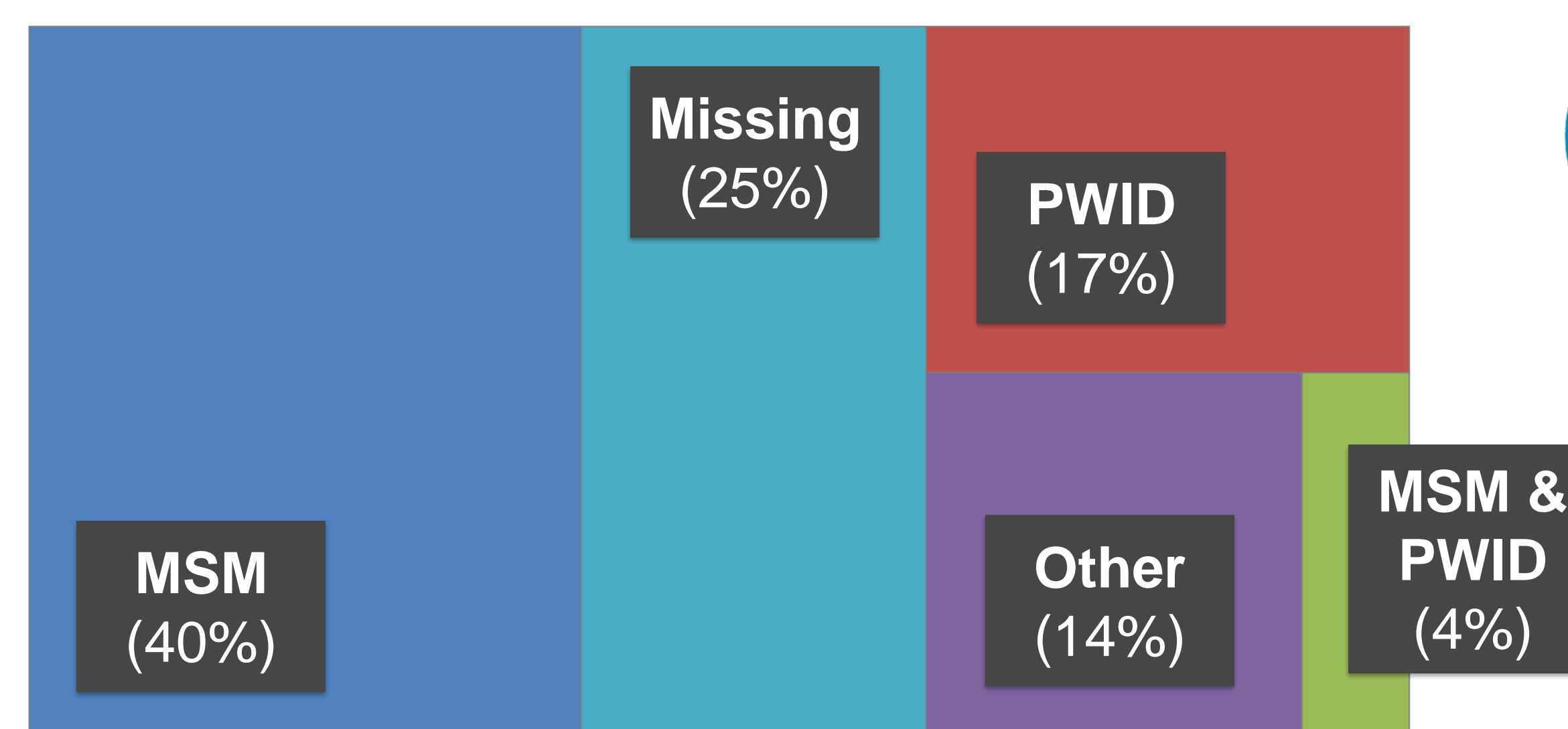


Figure 3. HIV acquisition risk groups

MSM = Men who have sex with men  
 PWID = Person who injects drugs

Other = blood transfusion, heterosexual, vertical transmission

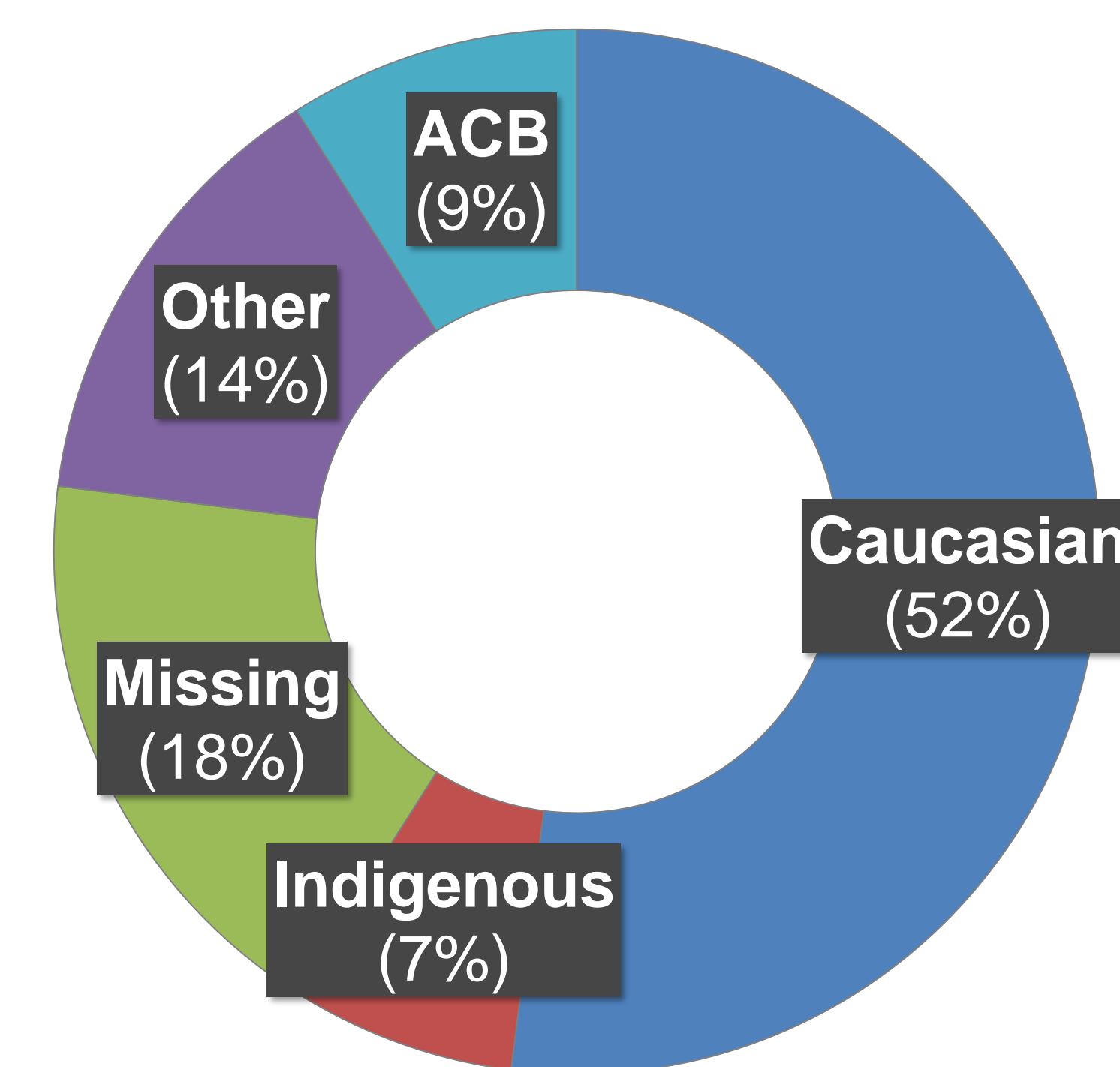


Figure 4. Participant ethnicities  
 ACB = African-Caribbean-Black

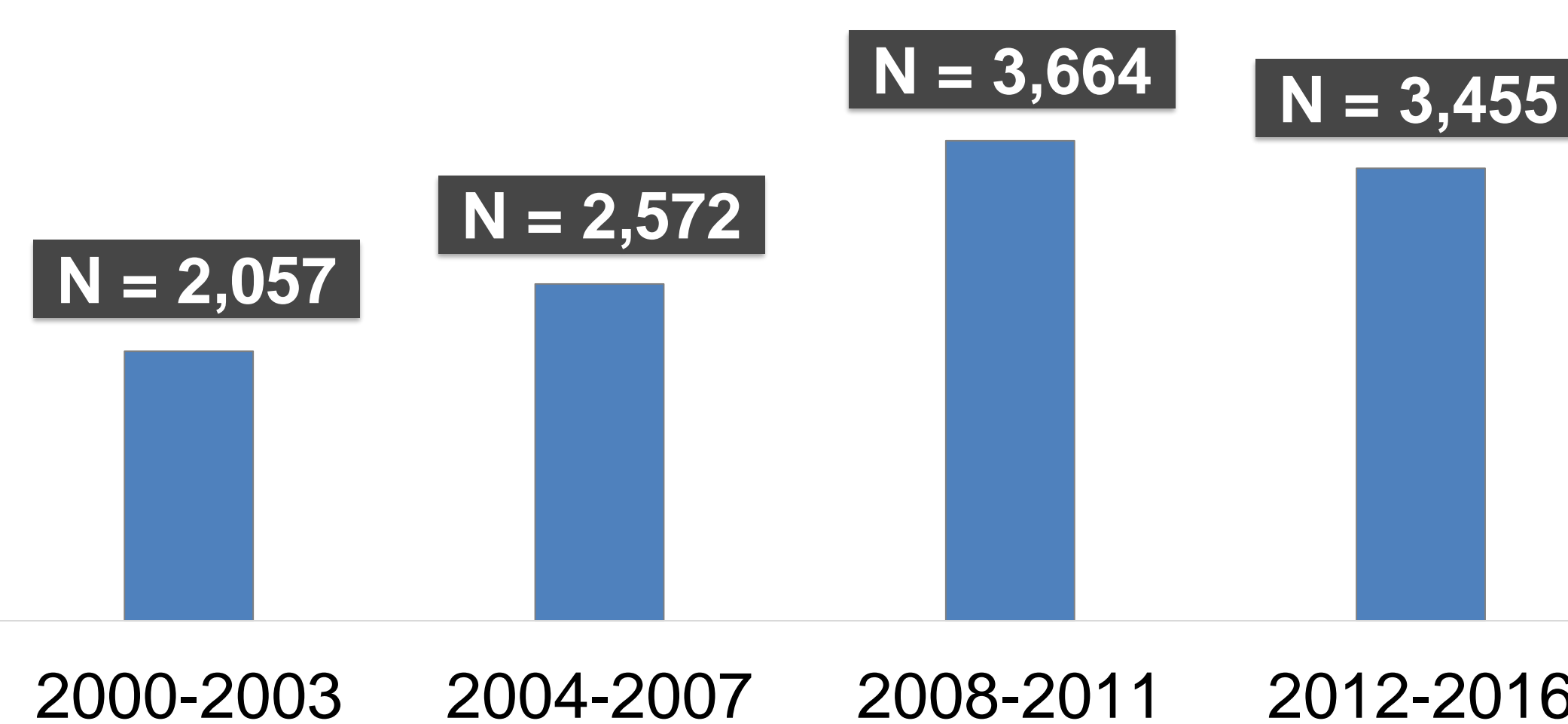


Figure 5. Year of antiretroviral therapy initiation

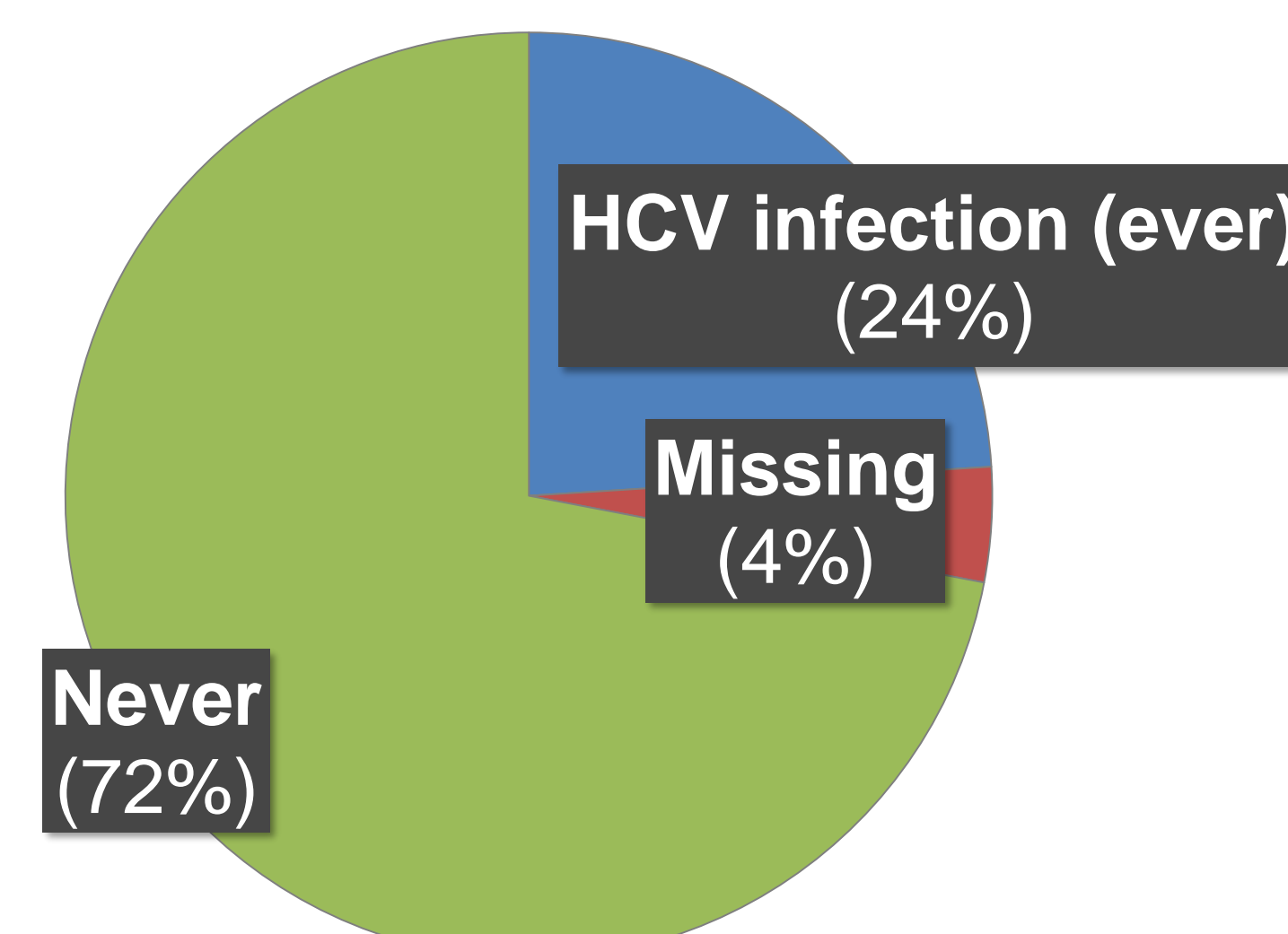


Figure 6. Hepatitis C virus co-infection (ever)

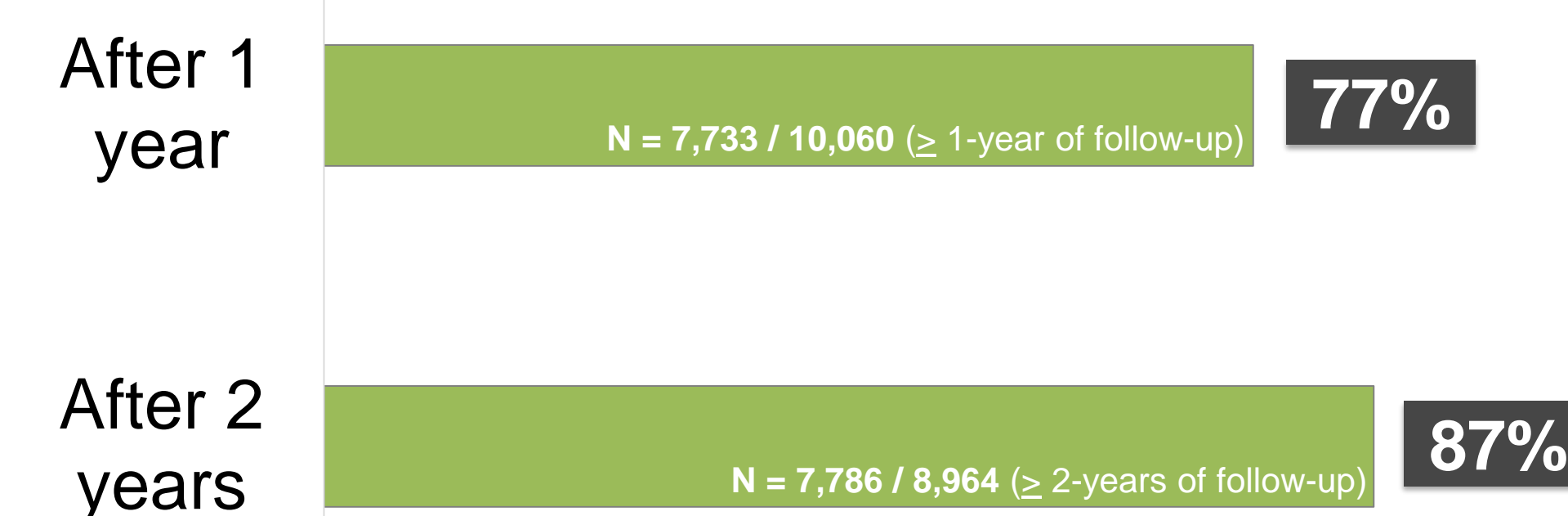


Figure 7. Proportion achieving HIV viral load suppression (two consecutive measures < 50 copies/mL)



**For more information:**  
 🌐 [www.canoc.ca](http://www.canoc.ca)  
 🐦 CANOCresearch

## Investigators

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