

# Impact of an HCV Test and Treat Campaign on Hepatitis C Incidence in the ANRS PREVENIR PrEP study

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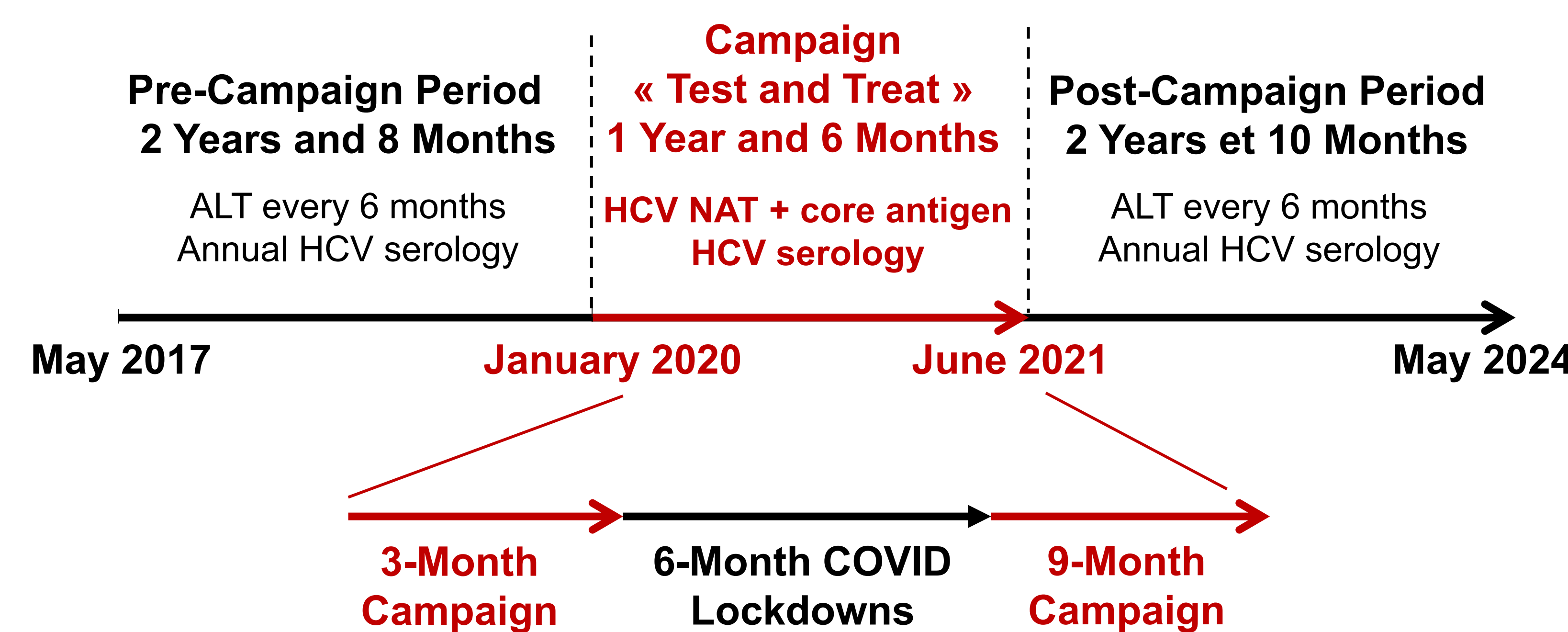
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## BACKGROUND

Men who have sex with men (MSM) on HIV pre-exposure prophylaxis (PrEP) have an increased risk of hepatitis C virus (HCV) infection. Early detection of HCV infection through HCV nucleic acid testing (NAT) and core antigen (cAg) may significantly reduce the time to treatment initiation among PrEP users, potentially preventing further HCV infections at the community level. We evaluated the impact of a direct HCV test and treat campaign on hepatitis C incidence in the ANRS PREVENIR PrEP study.

## METHODS

The ANRS PREVENIR study, launched on May 2017, is an ongoing prospective cohort study of oral PrEP implementation at 26 sites in the Paris region in France. From January 1st, 2020, to June 30th, 2021, all participants were invited for HCV testing using HCV NAT and core antigen, with positive cases immediately treated with direct-acting antivirals (DAAs).



### Study objectives:

- To evaluate the incidence of acute HCV infection before and after implementation of the "Test and Treat" strategy.
- To evaluate the time to treatment initiation before and after the implementation of the "Test and Treat" strategy and treatment outcomes.
- To understand the socio-demographics and behavioral factors associated with acute HCV infection.

### Analysis:

- We included in the analysis all MSM enrolled in the ANRS PREVENIR study before the initiation of the testing campaign (01<sup>st</sup> January 2020).
- Descriptive statistics were used to describe the study population at baseline.
- We used the Kaplan-Meier method to analyze time to treatment initiation and compared it across the three study periods using a Cox model.
- We used a Poisson model to assess factors associated with incident HCV infections, including campaign period, Monkeypox period, COVID-19 lockdown, number of sexual partners in the past 6 months, number of condomless anal sex in the past month, perception of sexual risk-taking, intravenous drug use, chemsex practice, and meeting casual partners at sex parties. Only variables with univariable p-value < 0.20 were included in the multivariable model.

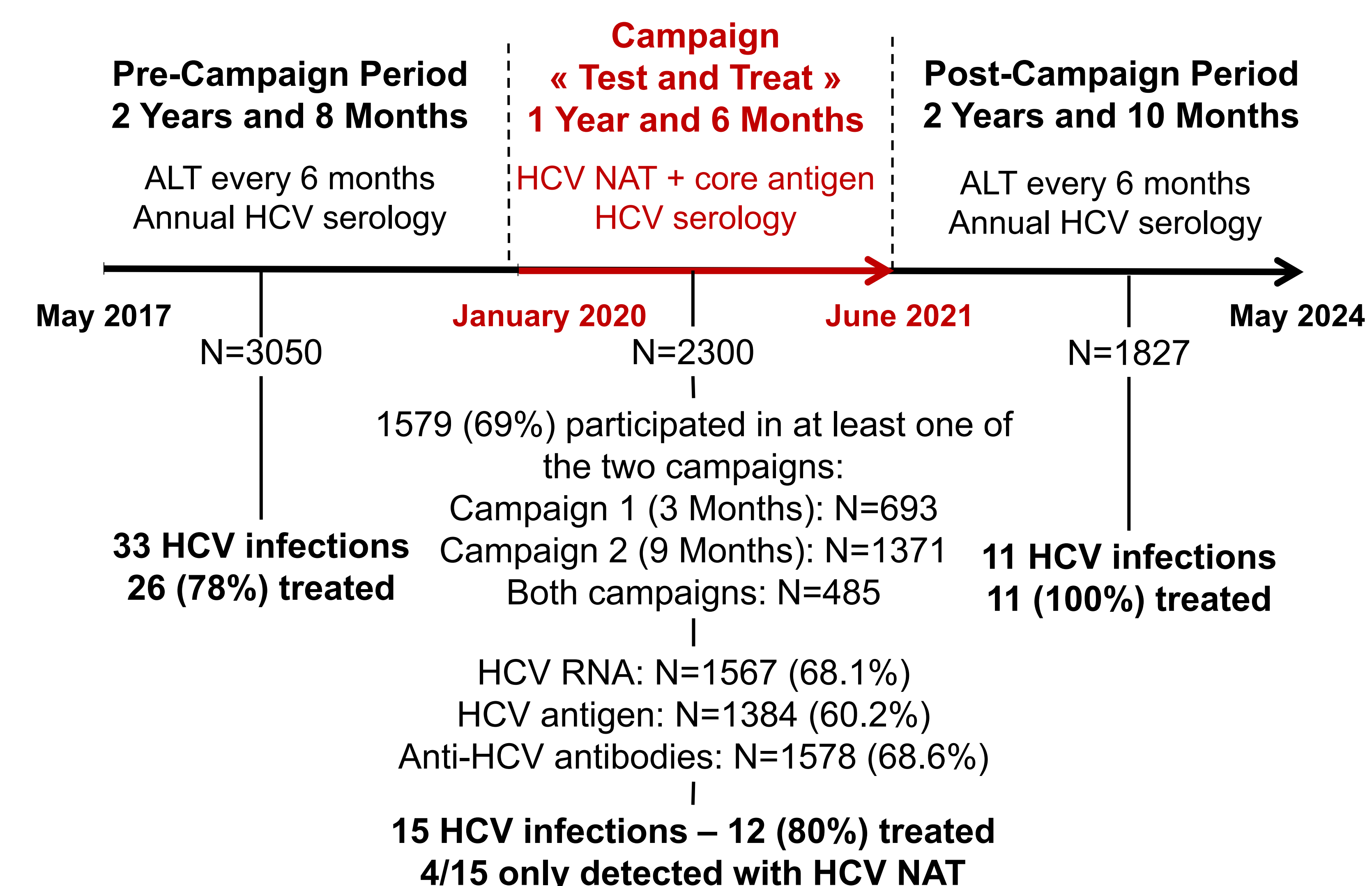
**We observed a significant reduction in HCV incidence among MSM using PrEP following an HCV test and treat campaign. Additional factors, such as concurrent epidemics (COVID-19, monkeypox), shifts in sexual and drug use behaviors, and new recommendations for early treatment of acute HCV infection, may also have contributed to this trend.**

## RESULTS

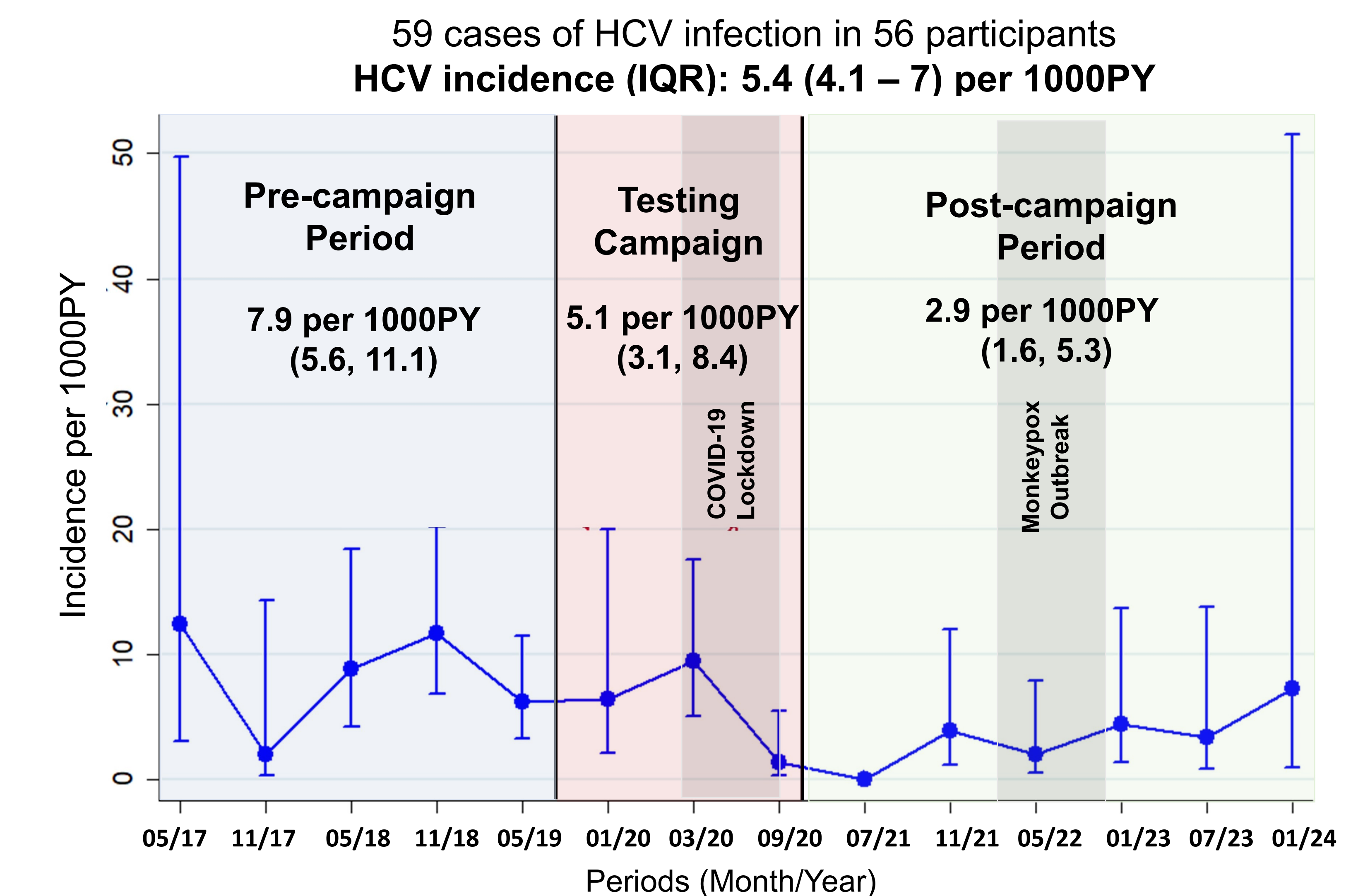
### Characteristics of participants at baseline (N=3215):

- Median age: 36 years (IQR 29-43)
- 84.8% born in France
- 85.9% with a university degree
- 85.8% employed
- 41.7% are PrEP-naïve.
- 45% have a regular sexual partner.
- Median of 10 partners in the last 3 months (IQR: 5-20).
- Median of 2 condomless sexual intercourse in the past month
- 34.8% used a condom during the most recent sexual intercourse
- 14.3% practiced chemsex
- 1.9% used intravenous drug
- 22.4% participated in sex parties
- 8 (0,2%) with a HCV infection at baseline

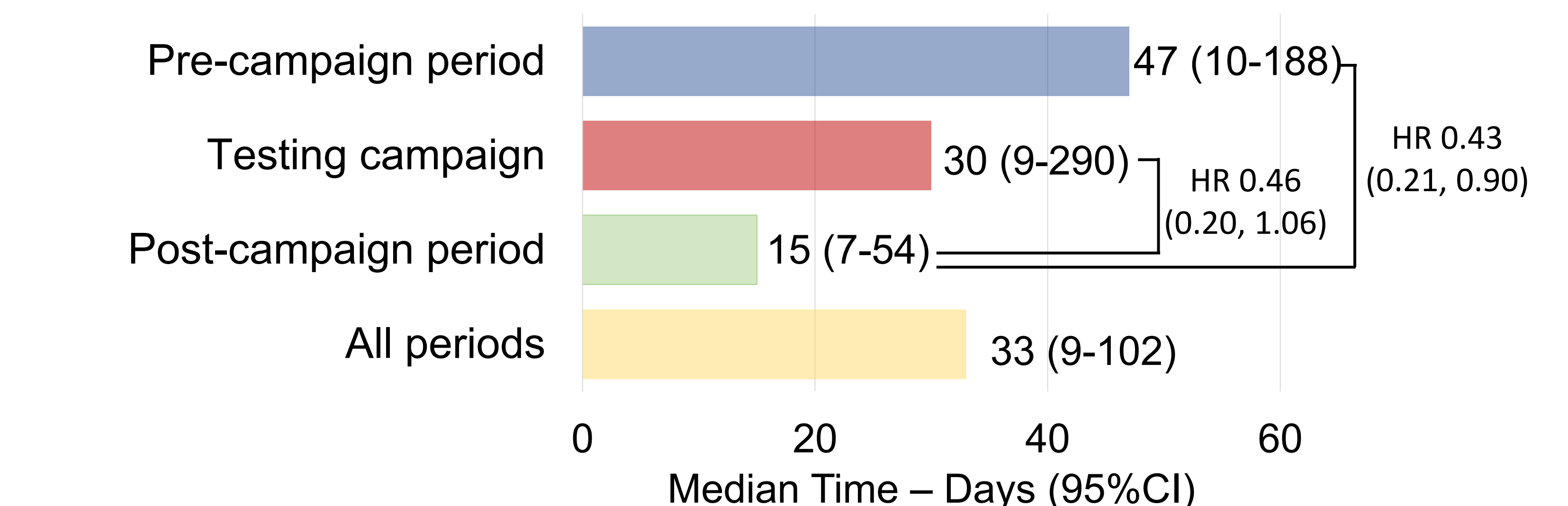
### Testing campaign and incident HCV infections:



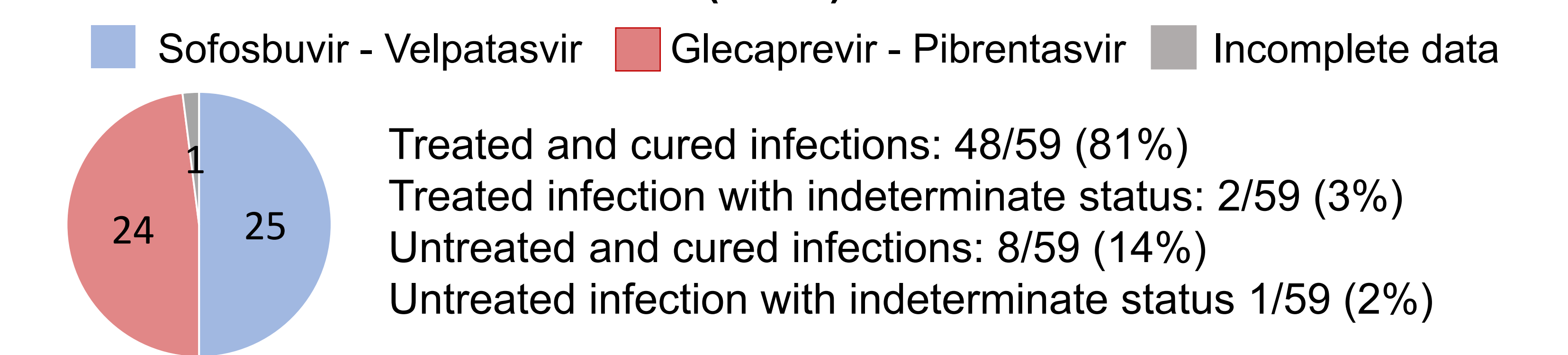
### Incidence of HCV infection during the study:



### Time to treatment initiation:



### HCV treatment and outcomes (N=59):



### Factors associated with HCV incident cases:

Multivariate Model (Poisson model)	Incidence Rate Ratio (95%CI)	P-value
Post-campaign vs. pre-campaign	0.47 (0.22, 0.98)	0.043
During campaign vs. pre-campaign	0.69 (0.37, 1.27)	0.240
During the Monkeypox Period vs. Outside	0.62 (0.13, 2.86)	0.516
Perception of Sexual Risk-Taking vs. No Perception	1.37 (0.80, 2.35)	0.242
Chemsex during last intercourse vs. None	1.69 (0.95, 2.98)	0.080
Use of intravenous drugs vs. No use	4.51 (1.96, 10.37)	0.003
Meeting casual sexual partners at sex parties vs. Not	2.14 (1.25, 3.66)	0.006