

# Projet de recherche : Abstract results

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Temps pour faire le preprocessing: **14 minutes 55 secondes**

## 1. **Cluster avec les titres, réduction linéaire avec SVD, clustering avec k-Means, pondération des mots avec la moyenne**

The cystine-cystine chemokine receptor 5 (CCR5) is the primary HIV co-receptor involved in the viral entry process into human cells. Pre-exposure prophylaxis (PrEP) reduces HIV acquisition risk by 90% and is a critical lever to reduce HIV incidence. The observation that HIV-1 subtype D progresses faster to disease than subtype A prompted us to examine cytokine levels early after infection within the predominant viral subtypes that circulate in Uganda and address the following research questions: (1) Do cytokine levels vary between subtypes A1 and D? Human immunodeficiency virus (HIV) and hepatitis B virus (HBV) are endemic in South Africa while hepatitis C virus (HCV) infection is rare. To study the structure of human immunodeficiency virus (HIV)-1 drug resistance (DR) in patients with newly diagnosed infection. Define the clinical presentation of acute human immunodeficiency virus infection (AHI) among men and women from 2 continents to create a clinical scoring algorithm. Comparison of incident sign and symptom between those with and without AHI. At-risk human immunodeficiency virus (HIV) negative men and women in Thailand, Kenya, Tanzania, and Uganda underwent twice-weekly testing for HIV. Blood donations in South Africa are tested for HIV RNA using individual donation NAT (ID-NAT), allowing detection and rapid antiretroviral therapy (ART) of acute HIV infections. Broadly neutralizing antibodies (bNAbs) for HIV-1 prevention or cure strategies must inhibit transmitted/founder and reservoir viruses.

*Execution time: 1.13 s.*

## 2. **Cluster avec les titres, réduction linéaire avec SVD, clustering avec k-Means, pondération des mots avec SVD**

There was a trend towards lower levels of CD4+ T cells in HIV-negative individuals with active and latent TB. The Deferral/Test strategy averted the most HIV infections. Sensitivity, specificity, predictive values, and agreements were compared among the EIA kits using PCR-confirmed HIV-positive and negative samples. Establishment of persistent human immunodeficiency virus type 1 (HIV-1) reservoirs occurs early in infection, and biomarkers of infected CD4+ T cells during acute infection are poorly defined. Following an information session on HIVSS, interested participants were offered one of three methods of HIVSS testing: supervised, semi-supervised, and unsupervised. Wealth-related inequality in early uptake of HIV testing was measured

using the Erreygers concentration index (CI) further adjusted for inequality introduced by predicted healthcare need (ie, need-standardised). From July 2005 to June 2006, women were offered HIV testing following group information and education on HIV and STDs in the clinic waiting area. Acute HIV infection lasts approximately 3 weeks and early HIV infection, which includes acute HIV infection, lasts approximately 7 weeks.

*Execution time: 1.30 s.*

### 3. **Cluster avec les titres, réduction linéaire avec SVD, clustering avec HDBSCAN, pondération des mots avec la moyenne**

The observation that HIV-1 subtype D progresses faster to disease than subtype A prompted us to examine cytokine levels early after infection within the predominant viral subtypes that circulate in Uganda and address the following research questions: (1) Do cytokine levels vary between subtypes A1 and D? Broadly neutralizing antibodies (bNAbs) for HIV-1 prevention or cure strategies must inhibit transmitted/founder and reservoir viruses. The cystine-cystine chemokine receptor 5 (CCR5) is the primary HIV co-receptor involved in the viral entry process into human cells. Detection of acute and prevalent HIV infection using point-of-care nucleic acid amplification testing (POC-NAAT) among outpatients with symptoms compatible with acute HIV is critical to HIV prevention, but it is not clear if it is cost-effective compared with existing HIV testing strategies. HIV and AIDS continue to be major public health concerns globally. Post-partum loss to follow-up and lack of early HIV infant diagnosis (EID) can significantly affect the efficiency of programs for the prevention of mother-to-child transmission. We describe tuberculosis (TB) disease among antiretroviral treatment (ART) eligible children living with HIV (CLHIV) in South Africa to highlight TB prevention opportunities.

*Execution time: 0.58 s.*

### 4. **Cluster avec les titres, réduction linéaire avec SVD, clustering avec HDBSCAN, pondération des mots avec SVD**

Here, we assessed CD8+ T cell functional evolution from primary to chronic HIV infection. Sensitivity, specificity, predictive values, and agreements were compared among the EIA kits using PCR-confirmed HIV-positive and negative samples. The Defer/Test strategy averted the most HIV infections. The overall HIV prevalence was 37.3% [95% confidence interval (CI) 34.3–41.3]. Because window-period donations are the most important source of residual HIV contamination and arise from incident infections, research to develop risk factor exclusion strategies must focus on predictors of HIV seroconversion. Failing and non-failing patients had comparable median time [interquartile] on ART (69.5 [23.0–89.5] vs 64.0 [34.0–99.0] months; At decentralized urban settings, there is need for enhanced virological monitoring and adherence support. Following an information session on HIVSS, interested participants were offered one of three methods of HIVSS testing: supervised, semi-supervised, and unsupervised.

*Execution time: 0.74 s.*

### 5. **Cluster avec les titres, réduction non-linéaire avec UMAP, clustering avec k-Means, pondération des mots avec la moyenne**

Detection of acute and prevalent HIV infection using point-of-care nucleic acid amplification testing (POC-NAAT) among outpatients with symptoms com-

patible with acute HIV is critical to HIV prevention, but it is not clear if it is cost-effective compared with existing HIV testing strategies. The observation that HIV-1 subtype D progresses faster to disease than subtype A prompted us to examine cytokine levels early after infection within the predominant viral subtypes that circulate in Uganda and address the following research questions: (1) Do cytokine levels vary between subtypes A1 and D? In South Africa, women continue to face a high burden of Human Immunodeficiency Virus (HIV) infection and the possible complications thereof during pregnancy. Broadly neutralizing antibodies (bNAbs) for HIV-1 prevention or cure strategies must inhibit transmitted/founder and reservoir viruses. Multi-assay algorithms (MAAs) are used to estimate population-level HIV incidence and identify individuals with recent infection. Pre-exposure prophylaxis (PrEP) reduces HIV acquisition risk by  $\sim 90\%$  and is a critical lever to reduce HIV incidence. Information on treatment failure (TF) in People living with HIV in a data-poor setting is necessary to counter the epidemic of TF with first-line combined antiretroviral therapies (cART) in sub-Saharan Africa (SSA). Blood donations in South Africa are tested for HIV RNA using individual donation NAT (ID-NAT), allowing detection and rapid antiretroviral therapy (ART) of acute HIV infections.

*Execution time: 9.49 s.*

#### 6. **Cluster avec les titres, réduction non-linéaire avec UMAP, clustering avec k-Means, pondération des mots avec SVD**

These cells were dramatically increased in chronic HIV infection. Fourth-generation HIV assays detect both antigen and antibody, facilitating detection of acute/early HIV infection. HIV is a major contributor to infant mortality. The Defer/Test strategy averted the most HIV infections. Following an information session on HIVSS, interested participants were offered one of three methods of HIVSS testing: supervised, semi-supervised, and unsupervised. From July 2005 to June 2006, women were offered HIV testing following group information and education on HIV and STDs in the clinic waiting area. To estimate the effect of ART on TB incidence while accounting for time-dependent confounders affected by exposure, a Cox proportional hazards marginal structural model was used. Despite high neutralizing potential and cross-reactivity, anti-V3 antibodies do not contribute to autologous neutralization.

*Execution time: 5.09 s.*

#### 7. **Cluster avec les titres, réduction non-linéaire avec UMAP, clustering avec HDBSCAN, pondération des mots avec la moyenne**

To study the structure of human immunodeficiency virus (HIV)-1 drug resistance (DR) in patients with newly diagnosed infection. Blood donations in South Africa are tested for HIV RNA using individual donation NAT (ID-NAT), allowing detection and rapid antiretroviral therapy (ART) of acute HIV infections. Broadly neutralizing antibodies (bNAbs) for HIV-1 prevention or cure strategies must inhibit transmitted/founder and reservoir viruses. Multi-assay algorithms (MAAs) are used to estimate population-level HIV incidence and identify individuals with recent infection. Information on treatment failure (TF) in People living with HIV in a data-poor setting is necessary to counter the epidemic of TF with first-line combined antiretroviral therapies (cART) in sub-Saharan Africa (SSA). Declines in HIV incidence have been slower than expected during the roll-out of antiretroviral treatment (ART)

services in sub-Saharan African populations suffering generalized epidemics. Pre-exposure prophylaxis (PrEP) reduces HIV acquisition risk by  $\geq 90\%$  and is a critical lever to reduce HIV incidence.

*Execution time: 4.21 s.*

**8. Cluster avec les titres, réduction non-linéaire avec UMAP, clustering avec HDBSCAN, pondération des mots avec SVD**

Acute and chronic HIV were associated with lower frequencies of CD161++CD8+ T cells, which did not correlate with CD4 count or HIV viral load. By age 1 year, an estimated 35.2% infected and 4.9% uninfected children will have died; by 2 years of age, 52.5% and 7.6% will have died, respectively. Fourth-generation HIV assays detect both antigen and antibody, facilitating detection of acute/early HIV infection. Following an information session on HIVSS, interested participants were offered one of three methods of HIVSS testing: supervised, semi-supervised, and unsupervised. The HPTN 071 (PopART) trial evaluated the impact of an HIV combination prevention package that included "universal testing and treatment" on HIV incidence in 21 communities in Zambia and South Africa during 2013-2018. Individuals with acute (pre-seroconversion) HIV infection (AHI) are important in the spread of HIV. We sought to study the survival of newborn children according to HIV status of the mother, that of the child and the timing of infection. Mobile HIV screening may facilitate early HIV diagnosis.

*Execution time: 4.31 s.*

**9. Cluster avec les abstracts, réduction linéaire avec SVD, clustering avec k-Means, pondération des mots avec la moyenne**

Multi-assay algorithms (MAAs) are used to estimate population-level HIV incidence and identify individuals with recent infection. Although certain individuals with HIV infection can stop antiretroviral therapy (ART) without viral load rebound, the mechanisms under-pinning 'post-treatment control' remain unclear. Detection of acute and prevalent HIV infection using point-of-care nucleic acid amplification testing (POC-NAAT) among outpatients with symptoms compatible with acute HIV is critical to HIV prevention, but it is not clear if it is cost-effective compared with existing HIV testing strategies. The observation that HIV-1 subtype D progresses faster to disease than subtype A prompted us to examine cytokine levels early after infection within the predominant viral subtypes that circulate in Uganda and address the following research questions: (1) Do cytokine levels vary between subtypes A1 and D? Pre-exposure prophylaxis (PrEP) reduces HIV acquisition risk by  $\geq 90\%$  and is a critical lever to reduce HIV incidence. To study the structure of human immunodeficiency virus (HIV)-1 drug resistance (DR) in patients with newly diagnosed infection. Broadly neutralizing antibodies (bNAbs) for HIV-1 prevention or cure strategies must inhibit transmitted/founder and reservoir viruses. Blood donations in South Africa are tested for HIV RNA using individual donation NAT (ID-NAT), allowing detection and rapid antiretroviral therapy (ART) of acute HIV infections.

*Execution time: 1.17 s.*

**10. Cluster avec les abstracts, réduction linéaire avec SVD, clustering avec k-Means, pondération des mots avec SVD**

Following an information session on HIVSS, interested participants were of-

ferred one of three methods of HIVSS testing: supervised, semi-supervised, and unsupervised. The Defer/Test strategy averted the most HIV infections. Matched preinfection and postinfection samples were available from 13 individuals. Reactivity with all HIV genotypes was 100%. Sensitivity, specificity, predictive values, and agreements were compared among the EIA kits using PCR-confirmed HIV-positive and negative samples. HIV transmission risk is higher during acute and early HIV infection than it is during chronic infection, but the contribution of early infection to the spread of HIV is controversial. These cells were dramatically increased in chronic HIV infection. Data from a prospective cohort study conducted during 1989-1990 of HIV serology and from a retrospective review of laboratory records of 727 patients presenting for superficial lymph node biopsy at the University Teaching Hospital in Lusaka, Zambia, were analyzed to determine the relative significance of HIV-associated lymphadenopathy among patients undergoing lymph node biopsy.

*Execution time: 1.40 s.*

**11. Cluster avec les abstracts, réduction linéaire avec SVD, clustering avec HDBSCAN, pondération des mots avec la moyenne**

The inflammasome pathway is an important arm of the innate immune system that provides antiviral immunity against many viruses. The cystine-cystine chemokine receptor 5 (CCR5) is the primary HIV co-receptor involved in the viral entry process into human cells. Multi-assay algorithms (MAAs) are used to estimate population-level HIV incidence and identify individuals with recent infection. Rapid initiation of antiretroviral therapy (ART) in early HIV infection is important to limit seeding of the viral reservoir. Human immunodeficiency virus (HIV)-1 genetic diversity increases during infection and can help infer the time elapsed since infection. Pre-exposure prophylaxis (PrEP) reduces HIV acquisition risk by  $\sim 90\%$  and is a critical lever to reduce HIV incidence.

*Execution time: 0.91 s.*

**12. Cluster avec les abstracts, réduction linéaire avec SVD, clustering avec HDBSCAN, pondération des mots avec SVD**

Sustained viremia after acute HIV infection is associated with profound CD4. These cells were dramatically increased in chronic HIV infection. Most point-of-care HIV assays have poor sensitivity to diagnose acute HIV infection as they only detect antibodies against HIV-1 and HIV-2 (HIV-1/2). The Defer/Test strategy averted the most HIV infections. Following an information session on HIVSS, interested participants were offered one of three methods of HIVSS testing: supervised, semi-supervised, and unsupervised.

*Execution time: 1.10 s.*

**13. Cluster avec les abstracts, réduction non-linéaire avec UMAP, clustering avec k-Means, pondération des mots avec la moyenne**

Pre-exposure prophylaxis (PrEP) reduces HIV acquisition risk by  $\sim 90\%$  and is a critical lever to reduce HIV incidence. To study the structure of human immunodeficiency virus (HIV)-1 drug resistance (DR) in patients with newly diagnosed infection. Multi-assay algorithms (MAAs) are used to estimate population-level HIV incidence and identify individuals with recent infection. Detection of acute and prevalent HIV infection using point-of-care nucleic acid amplification testing (POC-NAAT) among outpatients with symptoms com-

patible with acute HIV is critical to HIV prevention, but it is not clear if it is cost-effective compared with existing HIV testing strategies. The cystine-cystine chemokine receptor 5 (CCR5) is the primary HIV co-receptor involved in the viral entry process into human cells. Blood donations in South Africa are tested for HIV RNA using individual donation NAT (ID-NAT), allowing detection and rapid antiretroviral therapy (ART) of acute HIV infections. Broadly neutralizing antibodies (bNAbs) for HIV-1 prevention or cure strategies must inhibit transmitted/founder and reservoir viruses. Post-partum loss to follow-up and lack of early HIV infant diagnosis (EID) can significantly affect the efficiency of programs for the prevention of mother-to-child transmission.

*Execution time: 4.43 s.*

**14. Cluster avec les abstracts, réduction non-linéaire avec UMAP, clustering avec k-Means, pondération des mots avec SVD**

The proportions of subtype A, D, or recombinants showed no significant increasing or decreasing trend over this time period ( $p=0.51$ ). Following an information session on HIVSS, interested participants were offered one of three methods of HIVSS testing: supervised, semi-supervised, and unsupervised. These cells were dramatically increased in chronic HIV infection. To estimate the effect of ART on TB incidence while accounting for time-dependent confounders affected by exposure, a Cox proportional hazards marginal structural model was used. Fourth-generation HIV assays detect both antigen and antibody, facilitating detection of acute/early HIV infection. To determine the availability of the gp120 V3 loop for neutralizing antibody binding on SHIV-89.6 and KB9 virions, we have constructed immunogenic C4-V3 peptides from these SHIVs and induced anti-V3 antibodies in guinea pigs and rhesus monkeys. From July 2005 to June 2006, women were offered HIV testing following group information and education on HIV and STDs in the clinic waiting area. HIV transmission risk is higher during acute and early HIV infection than it is during chronic infection, but the contribution of early infection to the spread of HIV is controversial.

*Execution time: 5.01 s.*

**15. Cluster avec les abstracts, réduction non-linéaire avec UMAP, clustering avec HDBSCAN, pondération des mots avec la moyenne**

Multi-assay algorithms (MAAs) are used to estimate population-level HIV incidence and identify individuals with recent infection. Persons with acute HIV infection (AHI) are highly infectious and responsible for a disproportionate share of incident infections. HIV/*Mycobacterium tuberculosis* (Mtb) co-infected individuals have an increased risk of tuberculosis prior to loss of peripheral CD4 T cells, raising the possibility that HIV co-infection leads to CD4 T cell depletion in lung tissue before it is evident in blood. Pre-exposure prophylaxis (PrEP) reduces HIV acquisition risk by  $\geq 90\%$  and is a critical lever to reduce HIV incidence. Post-partum loss to follow-up and lack of early HIV infant diagnosis (EID) can significantly affect the efficiency of programs for the prevention of mother-to-child transmission. The inflammasome pathway is an important arm of the innate immune system that provides antiviral immunity against many viruses. Accessing family planning is a key investment in reducing the broader costs of health care and can reduce a significant proportion of maternal, infant, and childhood deaths.

*Execution time: 4.40 s.*

16. **Cluster avec les abstracts, réduction non-linéaire avec UMAP, clustering avec HDBSCAN, pondération des mots avec SVD**

Fourth-generation HIV assays detect both antigen and antibody, facilitating detection of acute/early HIV infection. Individuals with acute (preseroconversion) HIV infection (AHI) are important in the spread of HIV. These cells were dramatically increased in chronic HIV infection. Following an information session on HIVSS, interested participants were offered one of three methods of HIVSS testing: supervised, semi-supervised, and unsupervised. Data were collected by using pretested and structured extraction tool. Interrupting this mode of passage would provide protection for children.

*Execution time: 5.07 s.*