CCASAnet Caribbean, Central and South America network

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Prevalent and Incident Cancers in a Cohort of People With HIV in Latin America

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BACKGROUND

- Cancer is a leading cause of morbidity and mortality among people with HIV (PWH).
- With antiretroviral treatment (ART), PWH experience longer life expectancies, and increased aging-related comorbidity, including non-AIDS-defining cancers (NADC).
- **We evaluated the prevalence, incidence, and factors associated with NADC and AIDS-defining cancers (ADC) within the Caribbean, Central and South America network for HIV epidemiology (CCASAnet)**

METHODS

Population: PWH ≥18 years old enrolled at CCASAnet sites in Argentina, Brazil, Chile, Honduras, Mexico and Peru from 2000-2019

Outcomes:

- **Prevalent** NADC and ADC: diagnosed any time before or <90 days after clinic entry.
- **Incident** NADC and ADC: diagnosed ≥90 days after clinic entry.

Statistical approach:

Cancer temporal trends: Poisson regression models with calendar year as the exposure, age at entry as a covariate, and log-transformed person-years as an offset. The age-standardized incidence was calculated using the WHO standard population.

Cancer risk factors: Multivariable logistic regression and multi-state Cox proportional hazards models for prevalent and incident cancers, respectively, including age, sex, HIV acquisition risk, site, year of cohort entry, and time-updated ART, CD4 cell count, and history of other respective cancer type (NADC/ADC).

RESULTS

Cohort description: 26613 PWH were included. At clinic entry, median age was 33 years (IQR: 27-41), 78% were male, 35% had previous ART, and median CD4 cell count was 255)cells/ ml (IQR: 95-454), median follow-up 3.6 years (IQR: 0.9-8.8)

Prevalent Cancers

- ADC: 760 PWH; NADC: 100 PWH: ADC and NADC: 7 PWH
- Most frequent prevalent cancers: Kaposi's sarcoma (n=597), Non- Hodgkin´s lymphoma (n=159), Hodgkin's lymphoma (n=27), skin cancer (n=24), invasive cervical cancer (n=11) and anal cancer (n=9).

Incident Cancers

- ADC: 297 cancers; NADC: 262 cancers
- Most frequent incident cancers: Kaposi's sarcoma (n=168), Non- Hodgkin's lymphoma (n=112), skin cancer (n=54), anal cancer (n=40), Hodgkin's lymphoma (n=28) and invasive cervical cancer (n=23).

Figure 1: NADC and ADC prevalence at clinic entry

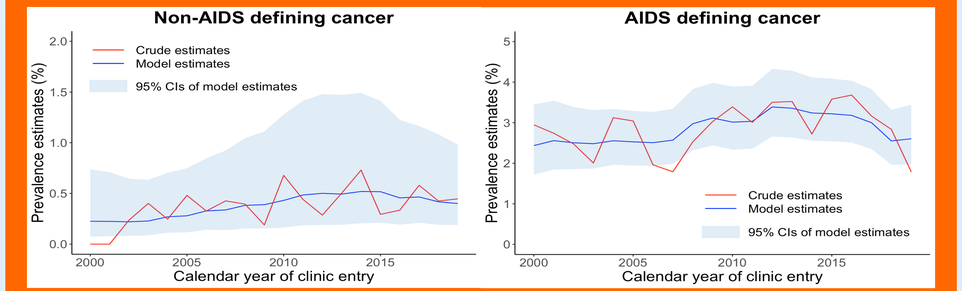
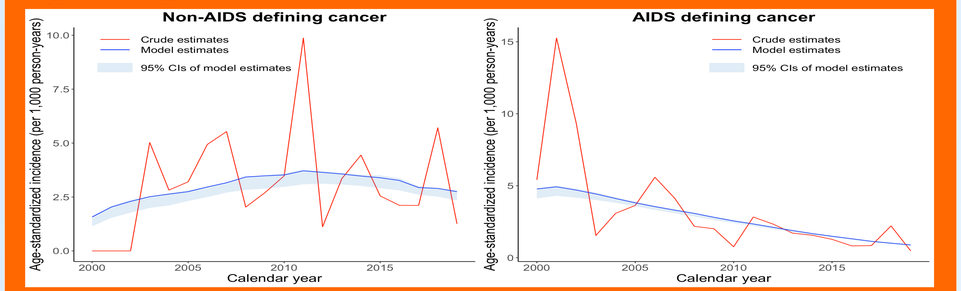


Figure 2: Age-standardized incidence of NADC and ADC



- Risk of prevalent and incident ADC and NADC varied by site.
- Higher risk of **prevalent ADC** and **NADC** was associated to older age, lower CD4 count, and non heterosexual contact HIV acquisition (p<0.05).
- Higher risk of **prevalent ADC** was associated to male sex, earlier year of entry and prior ART (p<0.05).
- Higher risk of **incident ADC** was associated to older age, earlier year of entry, lower CD4 count, non heterosexual contact HIV acquisition and prior NADC (p<0.05).

Figure 3: Risk factors for prevalent NADC and ADC

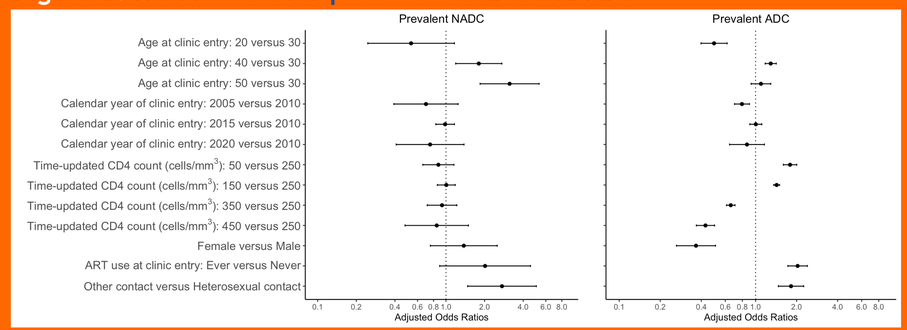
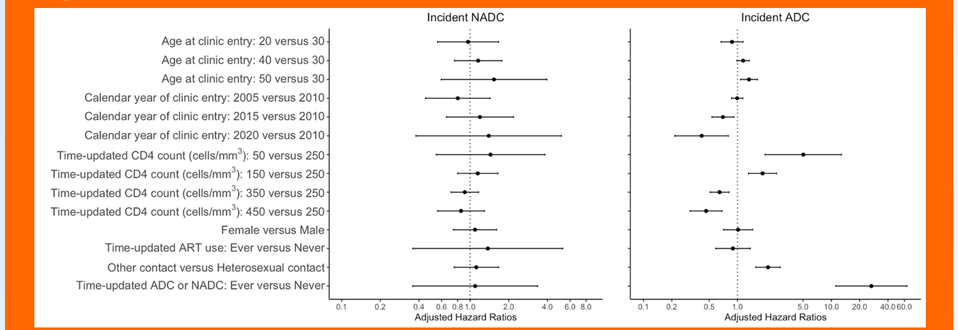


Figure 4: Risk factors for incident NADC and ADC



CONCLUSIONS

- ADC remain more frequent than NADC in CCASAnet though ADC incidence decreased in more recent calendar years.
- Older age and lower CD4 were associated with prevalent & incident ADC and prevalent NADC.
- Recent year of cohort entry and higher CD4 count were associated with decreased risk of prevalent & incident ADC.

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