Despite improved life expectancy with antiretroviral therapy (ART), persons living with HIV (PLWH) have higher rates of noninfectious comorbid diseases (NCDs) than do uninfected individuals.

Chronic inflammation and immune activation due to persistent low-level viral replication may contribute to the heightened risk of NCDs among some PLWH.

Objective: To characterize the risk of several NCDs among PLWH with undetectable plasma viral load, persistently low-level viremia (pLLV), and virologic failure in the African Cohort Study (AFRICOS).

METHODS: The ongoing African Cohort Study (AFRICOS) enrolls HIV-infected and uninfected participants at 12 clinical sites in Uganda, Kenya, Tanzania, and Nigeria.

Enrollment began in 2013 and is ongoing.

Clinical and laboratory assessments are conducted every 6 months.

As of December 1, 2019, 1,697 participants were enrolled in AFRICOS and did not have any NCDs at enrollment.

Results: Of the 1,697 participants enrolled in AFRICOS and did not have any NCDs at enrollment, 825 participants developed an NCD during the course of follow-up.

The majority of participants had an undetectable viral load (57%) and were female (58%, Table 1).

Virologic failure was not significantly associated with any outcome.

LIMITATIONS:

- Unable to account for diet or exercise that may play a role in development of the NCDs.
- PLLV could provide additional risk as it reflects prolonged inflammation vs. virologic failure defined at one visit only.
- Future directions: Explore relationship to cognitive impairment
- Better understanding of the factors of virologic failure that might mitigate NCDs.

CONCLUSIONS:

- Virologic failure was not significantly associated with any outcome.

Key findings:

- Persistent low level viremia <1000 copies/mL was associated with a significantly increased risk of any NCD as well as elevated BP, hypercholesterolemia, and hyperglycemia.

- Persistent low level viremia (pLLV) defined as at least two consecutive virologic failure in the African Cohort Study (AFRICOS).

- Mostly participants had an undetectable viral load (57%) and were female (58%, Table 1).

- Virologic failure was not significantly associated with any outcome.

- Missed ARV Drugs
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