

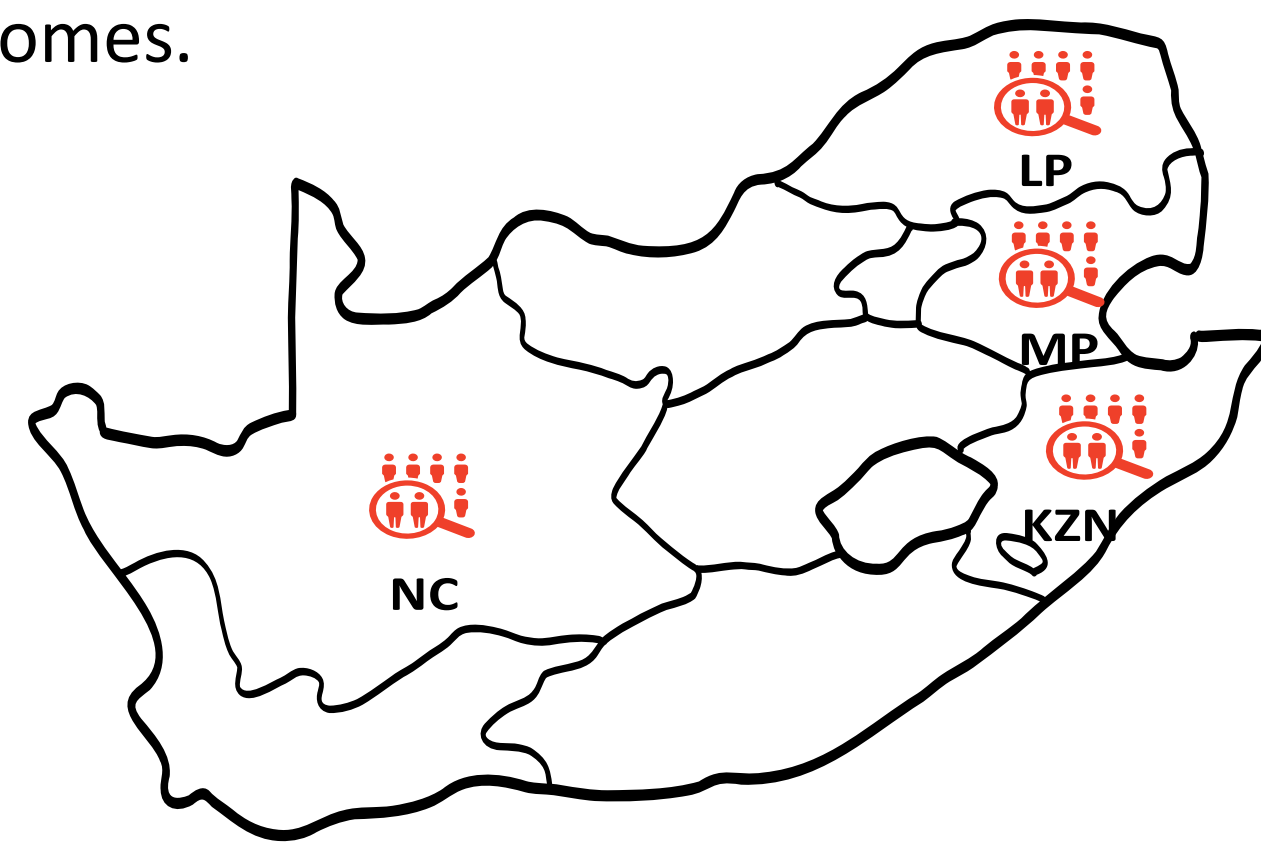
Evolving Trends in early ART Initiation in South Africa: An Analysis of Integrated HIV Program Data

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BACKGROUND

- South Africa (SA) faces a significant burden of HIV infection, and the country has progressively improved HIV treatment guidelines to ensure rapid and sustained viral suppression.
- However, despite the implementation of the Universal Test and Treat (UTT) policy, challenges persist in achieving optimal antiretroviral therapy (ART) initiation rates and treatment outcomes.
- We describe the trends of the time between HIV diagnosis and the initiation of antiretroviral therapy (ART) for patients entering HIV care between 2010 and 2017.



KZN: KwaZulu-Natal; LP: Limpopo; MP: Mpumalanga; NC: Northern Cape

METHODS



Study design

We conducted a retrospective cohort study, utilizing integrated data from the clinic-based Three Integrated Electronic Registers (TIER.net) and the National Health Laboratory Service (NHLS) databases across four SA provinces (KwaZulu Natal, Mpumalanga, Limpopo and Northern Cape).



Study population

Individuals diagnosed with HIV between January 2010 and September 2017. Entry into care date was defined as a first CD4 date (from bloods collected at HIV diagnosis) from the NHLS data or an HIV diagnosis date from the TIER data.



Outcome

Timing of ART initiation was classified into two broad categories: 1) early initiation: same-day (HIV diagnosis), 2-6 days, 7-89 days and; 2) late initiation: ≥ 90 days after entry into care.



Statistical analysis

A trend analysis of the number of patients and proportions initiated by these subgroups was compared over six months after entry into care (HIV diagnosis).

RESULTS

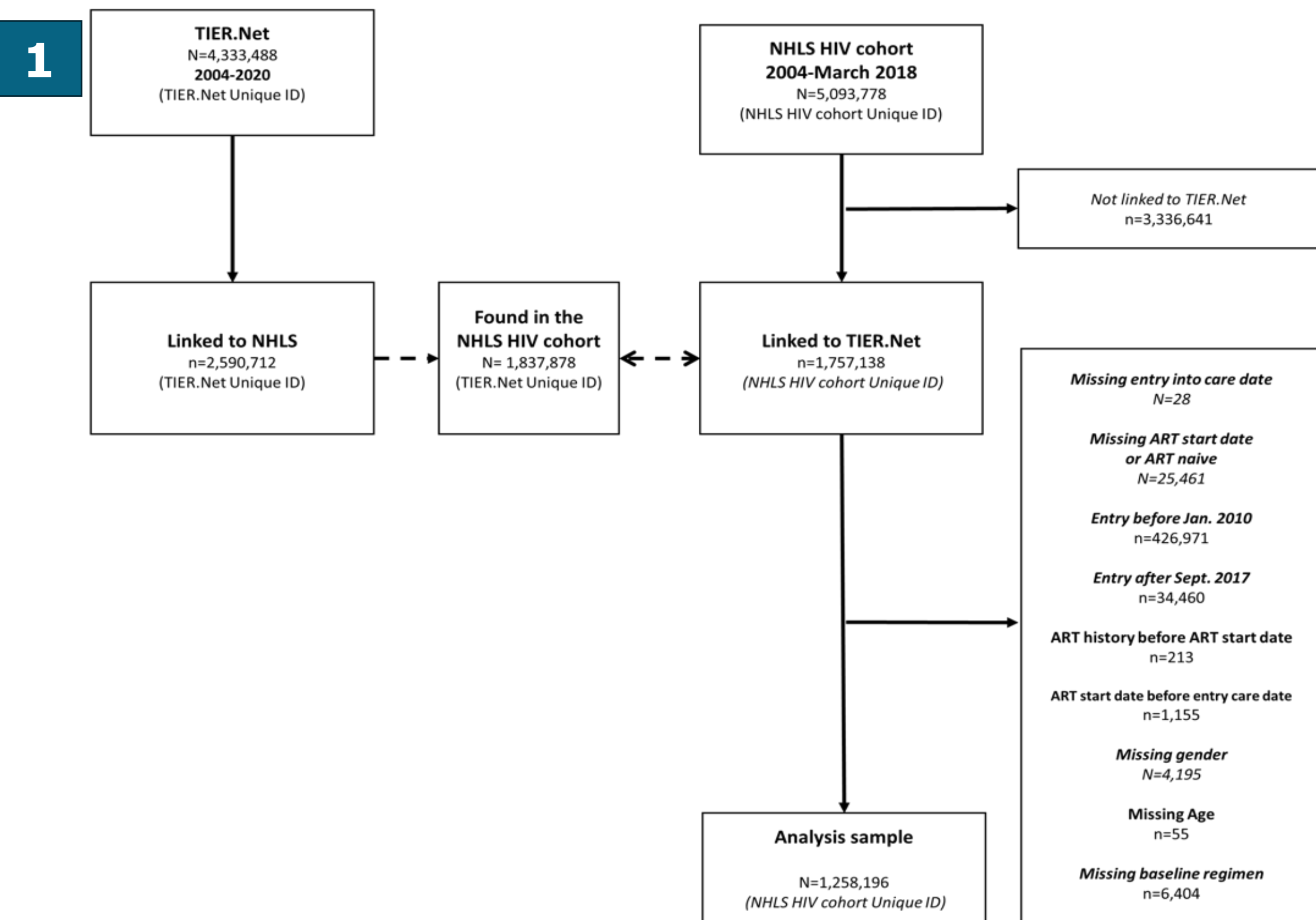


Figure 1. Participant selection flow diagram

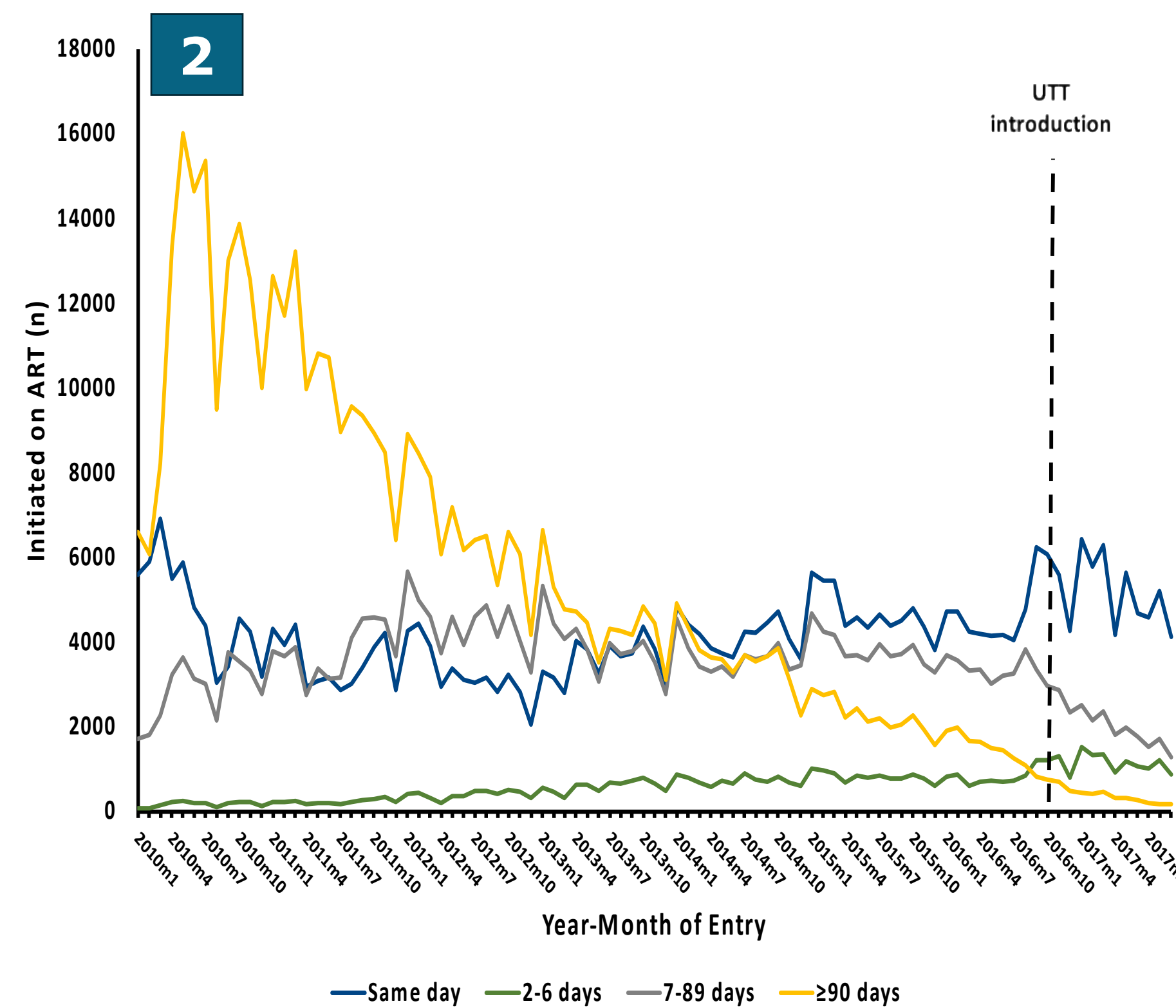


Figure 2. Absolute number (a), proportion (b) of individuals and first CD4 count by timing of ART initiation.

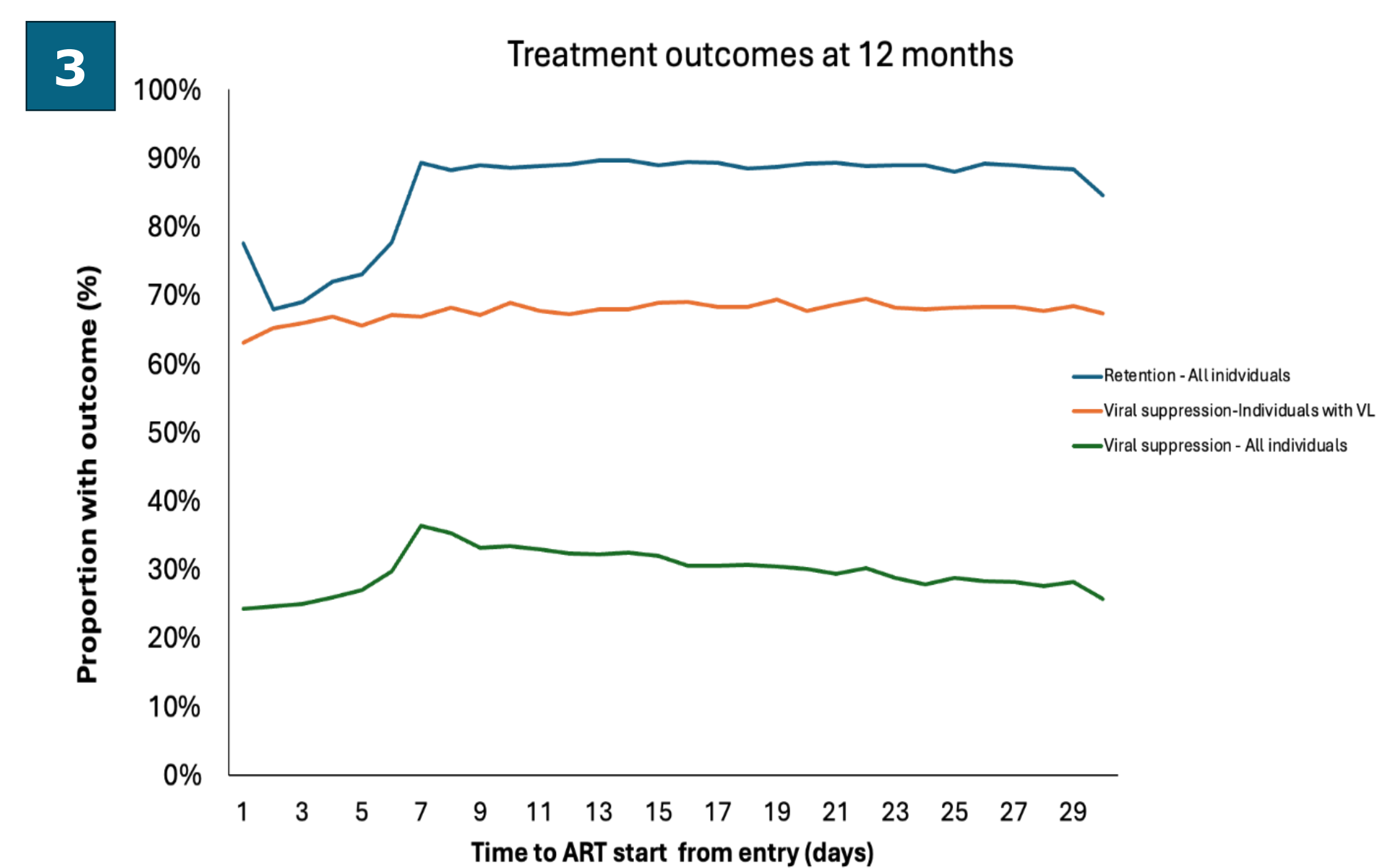
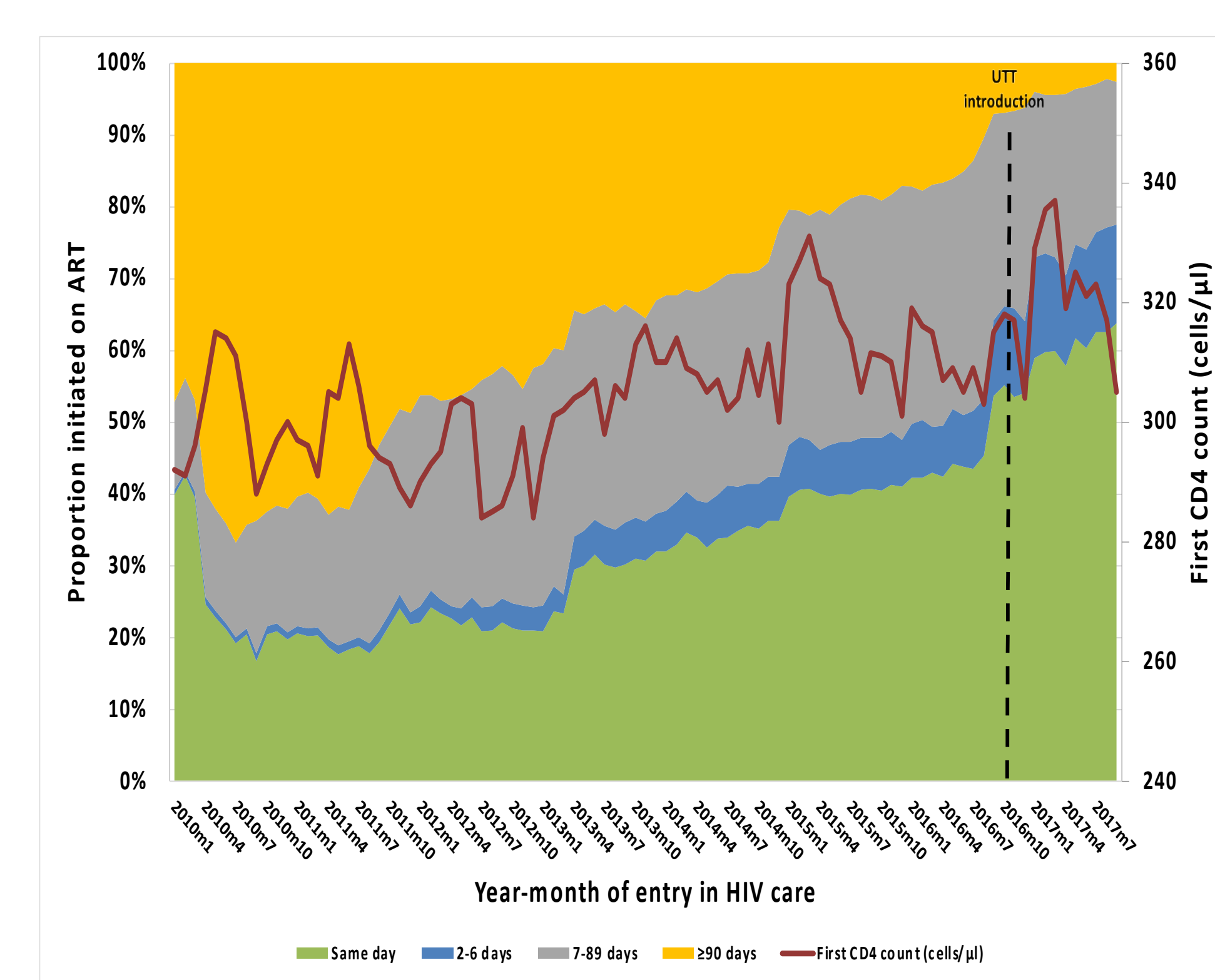


Figure 3. Retention and viral suppression at 12 months by time to ART start

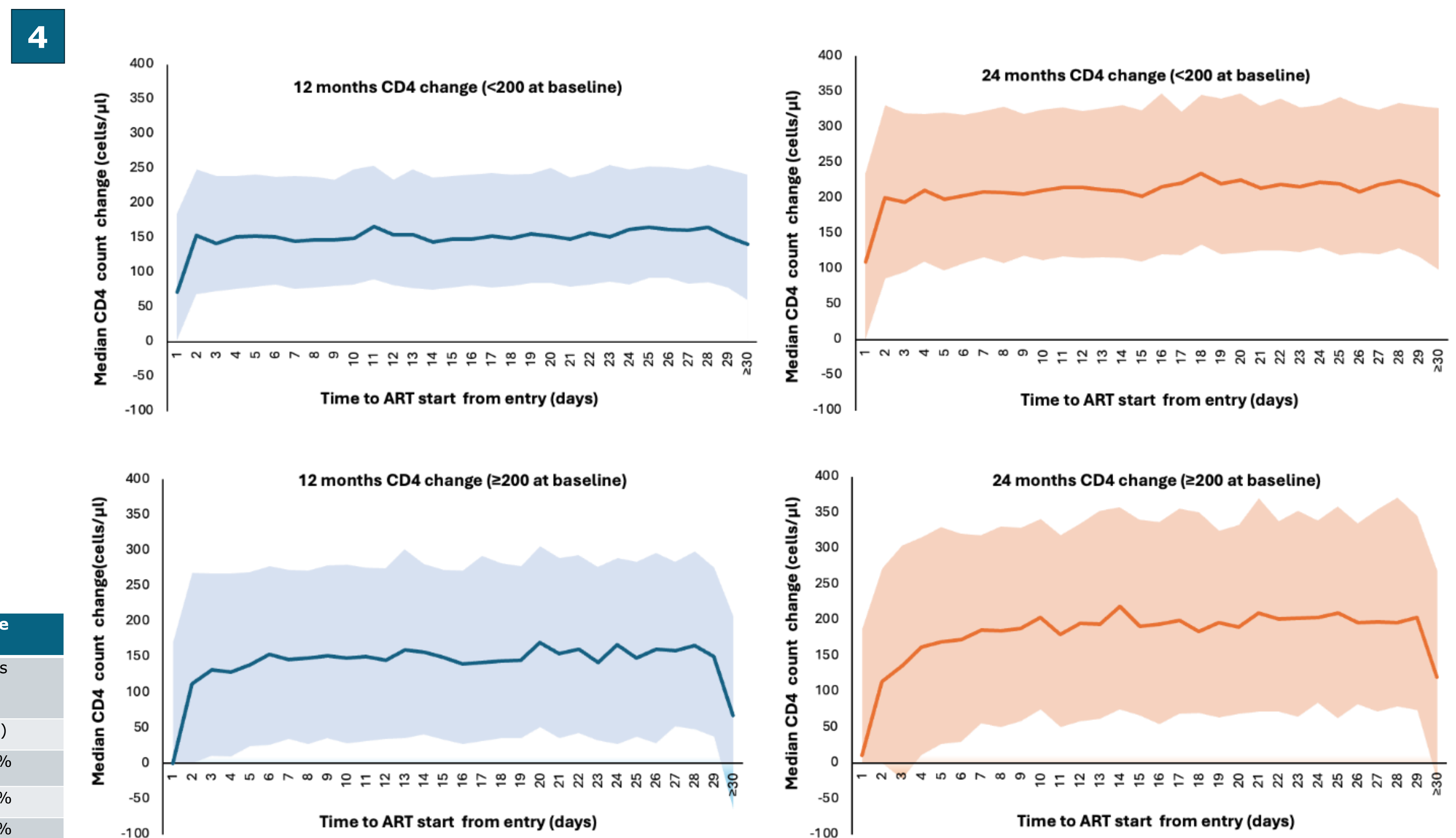


Figure 4. Change in CD4 count from baseline to 12 months or 24 months grouped by baseline CD4 count (<200 or ≥ 200 cells/ μ l)

Timing of ART initiation	Total N (A)	12months VL present		Viral suppression (<50 cells/micro)			Retention in care	
		n (B)	%	n (C)	Among all patients % (C/A)	Among tested % (C/B)	Among all patients % (D/A)	n (D)
Same day	392,321	150,743	38%	95,035	24.2%	63.0%	304,453	77.6%
6 days	56,746	22,809	40%	15,110	26.6%	66.2%	41,032	72.3%
7-89 days	325,441	140,283	43%	95,157	29.2%	67.8%	287,267	88.3%
≥ 90 days	483,688	218,986	45%	148,668	30.7%	67.9%	405,678	83.9%
Overall	1,258,196	532,821	42%	353,970	28.1%	66.4%	1,038,430	82.5%

CONCLUSIONS

Rapid ART initiation has significantly increased in South Africa due to policy changes and healthcare worker efforts. However, the expected benefits of rapid ART initiation—such as improved viral load suppression and CD4 count recovery—have been less pronounced in real-world settings. This may be attributed to the ongoing issues of late entry into care and challenges with adherence, which need to be addressed to fully optimize the outcomes of rapid ART initiation.