

# Persistence and reasons for switching the initial antiretroviral treatment in a cohort of naïve HIV-infected patients

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## Background

Current guidelines recommend starting antiretroviral treatment (ART) in all HIV-infected patients irrespective of the CD4 count<sup>1</sup>. Some studies have described that more than 40% of patients switch their initial ART<sup>2</sup>.

## Purpose

To describe initial ART in naïve patients, its persistence and the reasons leading to an ART switching.

## Material and methods

Retrospective observational study including all ART-naïve adult patients from January 2012-August 2017 from our cohort 2060 HIV-infected patients. Patients restarting ART were excluded.

Data collected: demographic, HIV viral load (VL) and CD4<sup>+</sup> count at baseline, initial ART and persistence.

Reasons for switching were classified as schedule optimization, adverse events, toxicity prevention, drug-drug interactions, low-level viremia, drug resistance and others.

Categorical variables, n (%); quantitative variables, mean±SD.

The probability of switching the initial ART over time was calculated by Kaplan–Meier curves and log-rank test. Relative hazards of switching ART-naïve were calculated by Cox regression (adjusted for age, sex and CD4<sup>+</sup> count).

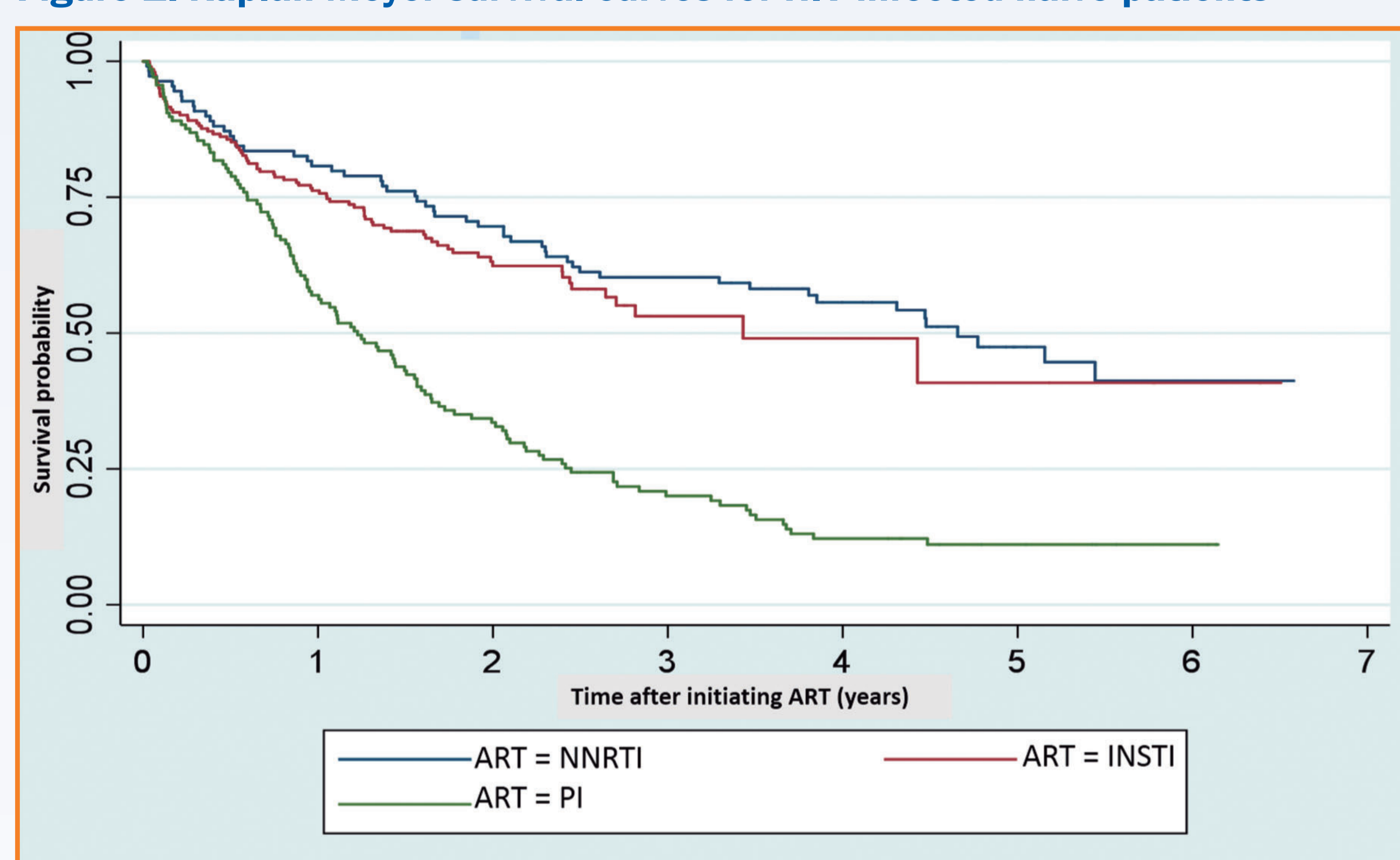
## Results

During this period, 448 naïve-patients started ART: 202(45.1%) INSTI, 137(30.6%) PI and 109(24.3%) NNRTI. ART-naïve was switched in 252 patients (56.3): 215(85.3%) male, age: 39.3±10.0 years, VL≥100,000: 110(43.8%), CD4<200: 86(34.4%). No differences in sex, age, baseline VL and CD4<sup>+</sup> count were observed between patients with and without switching.

Table 1. Type of ART and reasons for switch

	NNRTI n= 109	INSTI n=202	PI n=137	p
Patients switching (n=252)	54(21.4)	80(31.8)	118(46.8)	<0.001
Reasons, n(%)				
Schedule optimization, 92(36.5)	3(5.6)	21(26.3)	68(57.6)	<0.001
Adverse events, 75(29.8)	33(61.1)	20(25.0)	22(18.6)	<0.001
Toxicity prevention, 49(19.4)	9(16.7)	26(32.5)	14(11.9)	0.001
Drug-drug Interactions, 12(4.8)	4(7.4)	2(2.5)	6(5.1)	0.414
Low-level viremia, 9(3.6)	3(5.6)	3(3.8)	3(2.5)	0.610
Others, 9(3.6)	2(3.7)	4(5.0)	3(2.5)	0.657
Drug Resistance, 6(2.4)	0(0.0)	4(5.0)	2(1.7)	0.141

Figure 1. Kaplan-Meier survival curves for HIV-infected naïve-patients



Kaplan-Meier showed differences in the persistence between different ART being the shortest time with the PI (p <0.001). There were statistical significant differences between ART-naïve (Hazard Ratio=2.7, p<0.001, 95%CI: 1.9-3.9).

## Conclusions

During the study period, more than 50% of patients switched their initial ART.

Differences in the persistence were observed between different ART, having the IP the shortest time.

The most common reason for switching IP, INSTI and NNRTI were schedule optimization, the presence of adverse events and toxicity prevention, respectively.

## References

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