

Adherence to HIV infection care at IRCCS San Raffaele Hospital: current status and Re-stART project

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Introduction

Adherence to antiretroviral therapy and, more broadly, to care is a complex phenomenon considered as a foundation of staying healthy with HIV¹. Despite improvements in treatments, adherence remains suboptimal in a still significant proportion of PLWH due to multiple factors², representing a critical aspect both for individual health and for achieving global control of the infection³.

Study Design

- Retrospective analysis conducted on all PLWH in care at the Infectious Disease Unit of IRCCS San Raffaele Hospital in November 2023, included in the Centro San Luigi (CSL) HIV Cohort.
- Included PLWH are categorized as fully adherent or demonstrating one, two, or three (fully nonadherent) criteria of nonadherence. This determination is based on three elements assessed within the past 12 months: not attending any visits, not undergoing any monitoring tests and/or not picking-up any antiretrovirals.
- These criteria, along with the identification of nonadherent individuals, serve as the basis for launching the Re-start Antiretroviral Therapy (Re-stART) project, with the aim to enhance adherence by establishing a dedicated outpatient clinic.

Methods

- Data are reported as medians (first-third quartile) or frequency (%) and compared using Kruskal-Wallis and Chi-Square tests.

Results

- 5263 people were included in the analysis, and characteristics are reported in Figure, Panel A, with 4440 fully adherent people (84.4%), 422 (8%), 221 (4.2%) and 180 (3.4%) individuals with 1, 2 and 3 nonadherence criteria, respectively (Panel B).
- Among the 422 PLWH with one criterion, visits are the more frequently missed element (210; 49.8%), while among 221 people with 2 criteria, monitoring tests are the mostly missed (179; 81%). Drug pickup was the more preserved element in both groups (missed in 71; 16.8% and 106; 48% PLWH, respectively) (Panel C).
- HIV-RNA resulted >50 cp/mL in 5.4% of all included PLWH, 4.5% of fully adherent PLWH, 9.3, 11.8, and 14.4% of individuals with 1, 2 and 3 criteria, respectively (Panel D).
- ART regimens for each group are reported in Panel E, showing that dual regimens are more common in fully adherent PLWH vs each group of nonadherent people (40.5% vs 25.5, 21.8 and 24.6%, respectively).

Panel A

	ALL N=5263	Full adherence N=4440	Nonadherence 1 criterion N=422	Nonadherence 2 criteria N=221	Nonadherence 3 criteria N=180	p value
Age, years	56 [46;61]	56 [47;61]	53 [45;60]	52 [41;59]	49 [40;59]	0.001
Sex						0.005
Female	972 (18.5%)	841 (18.9%)	64 (15.2%)	48 (21.7%)	19 (10.6%)	
Male	4291 (81.5%)	3599 (81.1%)	358 (84.8%)	173 (78.3%)	161 (89.4%)	
Dropout						<0.001
No	5173 (98.3%)	4440 (100%)	422 (100%)	184 (83.3%)	127 (70.6%)	
Yes	90 (1.71%)	0 (0.00%)	0 (0.00%)	37 (16.7%)	53 (29.4%)	
Visits						<0.001
Yes	4716 (89.6%)	4440 (100%)	212 (50.2%)	64 (29.0%)	0 (0.00%)	
No	547 (10.4%)	0 (0.00%)	210 (49.8%)	157 (71.0%)	180 (100%)	
Blood exams						<0.001
Yes	4763 (90.5%)	4440 (100%)	281 (66.6%)	42 (19.0%)	0 (0.00%)	
No	500 (9.50%)	0 (0.00%)	141 (33.4%)	179 (81.0%)	180 (100%)	
Drugs pickup						<0.001
Yes	4906 (93.2%)	4440 (100%)	351 (83.2%)	115 (52.0%)	0 (0.00%)	
No	357 (6.78%)	0 (0.00%)	71 (16.8%)	106 (48.0%)	180 (100%)	
HIV-RNA, cp/mL						<0.001
HIV-RNA=TND	2931 (57.0%)	2564 (57.8%)	210 (54.1%)	93 (50.0%)	64 (48.5%)	
HIV-RNA<50	1936 (37.7%)	1674 (37.7%)	142 (36.6%)	71 (38.2%)	49 (37.1%)	
HIV-RNA≥50	275 (5.35%)	198 (4.46%)	36 (9.28%)	22 (11.8%)	19 (14.4%)	
On therapy						<0.001
No	142 (2.70%)	4 (0.09%)	42 (9.95%)	42 (19.0%)	54 (30.0%)	
Yes	5121 (97.3%)	4436 (99.9%)	380 (90.0%)	179 (81.0%)	126 (70.0%)	

Panel B

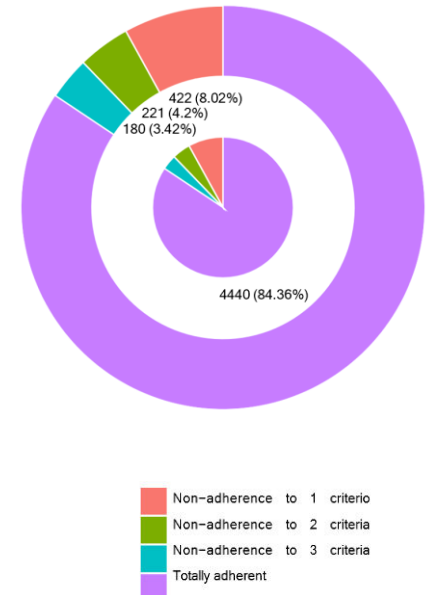
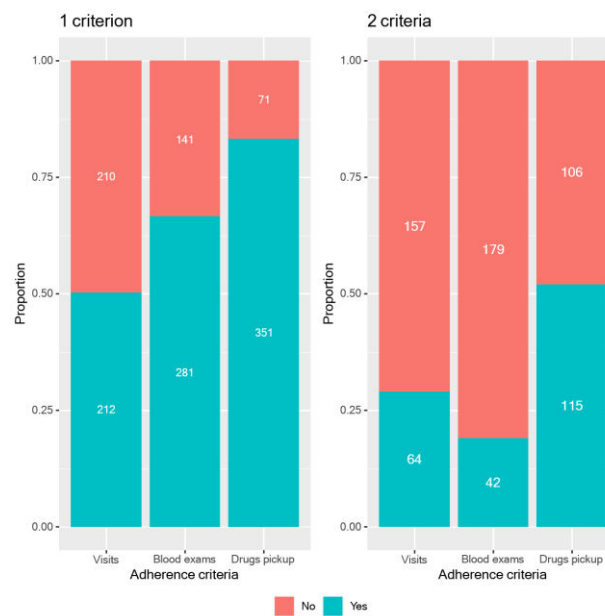
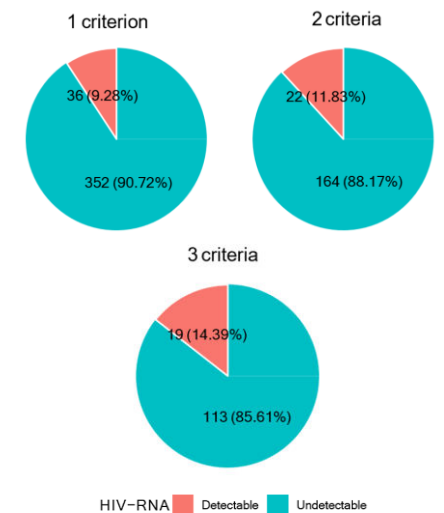


Figure. Panel A, characteristics of all subjects in care, adherent subjects and nonadherent subjects according to 1, 2 or 3 nonadherence criteria among failure to attend visits, and/or failure to undergo blood exams and/or failure to pick-up antiretroviral therapy in the last 12 months. Panel B, prevalence of different adherence and nonadherence groups. Panel C, proportion of the criteria of nonadherence among different nonadherent groups. Panel D, detectability of HIV-RNA among different nonadherent groups. Panel E, proportion of ART regimens among different adherent and nonadherent groups. Abbreviations: TND, target not detectable, NRTI, Nucleoside Reverse Transcriptase Inhibitor, INSTI, Integrase Strand Transfer Inhibitor; NNRTI, Non-Nucleoside Reverse Transcriptase Inhibitor; PI, Protease Inhibitor; Mono, monotherapies; Dual, dual therapies.

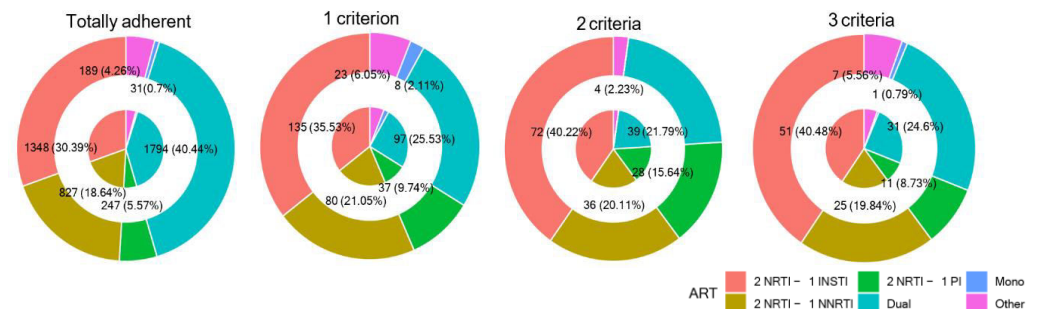
Panel C



Panel D



Panel E



Conclusions

- In our centre, 84% of PLWH were found to be fully adherent to HIV care in the last year, while 3.4% were fully nonadherent. Visits and monitoring tests showed the lowest adherence compared to drug pick-up. Less adherent individuals were less likely to have HIV-RNA <50 cp/mL and were also less likely to be on dual therapies compared to more adherent ones.
- Based on these data, the Re-stART project aims to enhance treatment adherence by actively reaching out to PLWH with lower adherence levels. This involves identifying and managing factors contributing to nonadherence while also promoting empowerment and participation in care.

References

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