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2 **Table S1. Baseline characteristics of participants included in the HIV reservoir analysis.**

<b>Characteristic</b>	<b>Total (N=124)</b>	<b>Chronic (N=104)</b>	<b>Acute/Early (N=20)</b>
Sex, male, N (%)	109 (88%)	93 (89%)	16 (80%)
Age, median yrs (Q1, Q3)	42 (38, 48)	43 (39, 50)	36 (27, 43)
Race/ethnicity, N (%)			
White, non-hispanic	85 (69%)	72 (69%)	13 (65%)
Black, non-hispanic	19 (15%)	18 (17%)	1 (5%)
Hispanic	15 (12%)	11 (11%)	4 (20%)
Other	5 (4%)	3 (3%)	2 (10%)
CD4+ count, median cells/mm <sup>3</sup> (Q1, Q3)	839 (673, 1023)	843 (688, 1029)	828 (735, 980)
NNRTI-based ART	65 (52%)	65 (63%)	0 (0%)
IVDU, ever use, N (%)	9 (7%)	9 (9%)	0 (0%)
Source study, N (%)			
A5170	62 (50%)	62 (60%)	
A5197	23 (19%)	23 (22%)	
A5068	12 (10%)	12 (12%)	
A5024	7 (6%)	7 (7%)	
ACTG 371	20 (16%)		20 (100%)

NNRTI, non-nucleoside reverse transcriptase inhibitor; ART, antiretroviral therapy; IVDU, intravenous drug use; ACTG, AIDS Clinical Trials Group

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5 **Table S2. Predictors of more rapid viral rebound to 1,000 HIV-1 RNA copies/mL by the 2-**  
6 **covariate Cox model that includes CA-RNA with six other factors.**

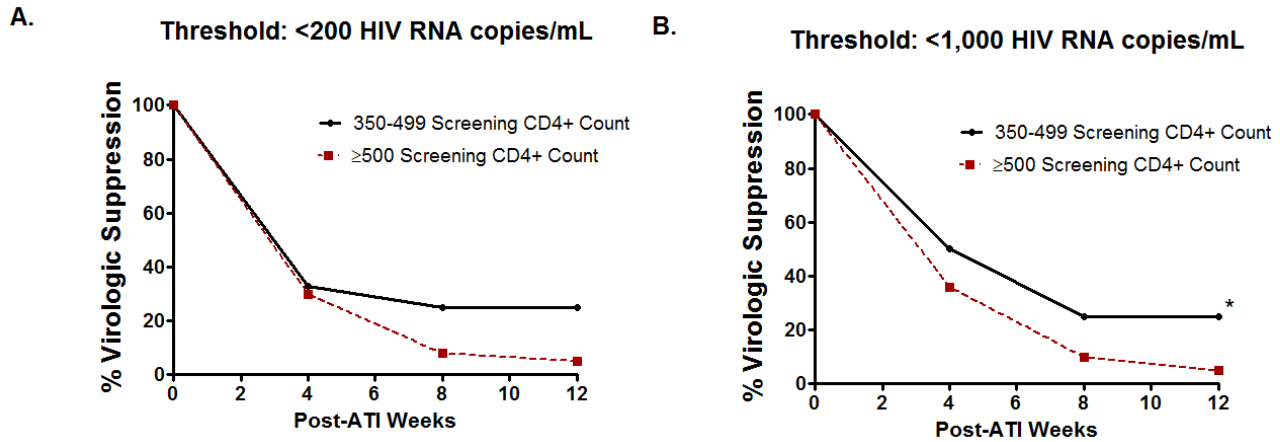
Model	Predictor	N	OR	95% CI	P-value
1	CA-RNA (log <sub>10</sub> copies/10 <sup>6</sup> CD4+ cells)	123	2.2	1.2, 3.8	<b>&lt;0.01</b>
	CA-DNA (log <sub>10</sub> copies/10 <sup>6</sup> CD4+ cells)		1.2	0.8, 1.8	0.36
2	CA-RNA (log <sub>10</sub> copies/10 <sup>6</sup> CD4+ cells)	94	3.0	1.5, 6.0	<b>&lt;0.01</b>
	RV (≥1 copy/mL)		2.1	0.97, 4.6	0.06
3	CA-RNA (log <sub>10</sub> copies/10 <sup>6</sup> CD4+ cells)	123	2.7	1.5, 4.7	<b>&lt;0.01</b>
	Timing of ART Initiation (Acute/early infection)		0.4	0.2, 0.99	<b>0.048</b>
4	CA-RNA (log <sub>10</sub> copies/10 <sup>6</sup> CD4+ cells)	123	2.2	1.2, 3.8	<b>&lt;0.01</b>
	Sex (Female)		0.8	0.3, 2.0	0.65
5	CA-RNA (log <sub>10</sub> copies/10 <sup>6</sup> CD4+ cells)	95	2.6	1.4, 4.9	<b>&lt;0.01</b>
	Nadir CD4+ count (per 50 cells)		1.0	0.9, 1.1	0.73
6	CA-RNA (log <sub>10</sub> copies/10 <sup>6</sup> CD4+ cells)	103	2.7	1.5, 4.9	<b>&lt;0.01</b>
	ART regimen (NNRTI)		0.4	0.2, 0.8	<b>0.02</b>

CA-RNA, cell-associated HIV RNA; CA-DNA, cell-associated HIV DNA; RV, residual viremia; ART, antiretroviral therapy; NNRTI, non-nucleoside reverse transcriptase inhibitor; Cox models with nadir CD4+ count and ART regimen were restricted to participants treated during chronic infection.

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% Suppressed 350-499 CD4+ Count:	33%	25%	25%	% Suppressed 350-499 CD4+ Count:	50%	25%	25%
≥500 CD4+ Count:	30%	8%	5%	≥500 CD4+ Count:	36%	10%	5%

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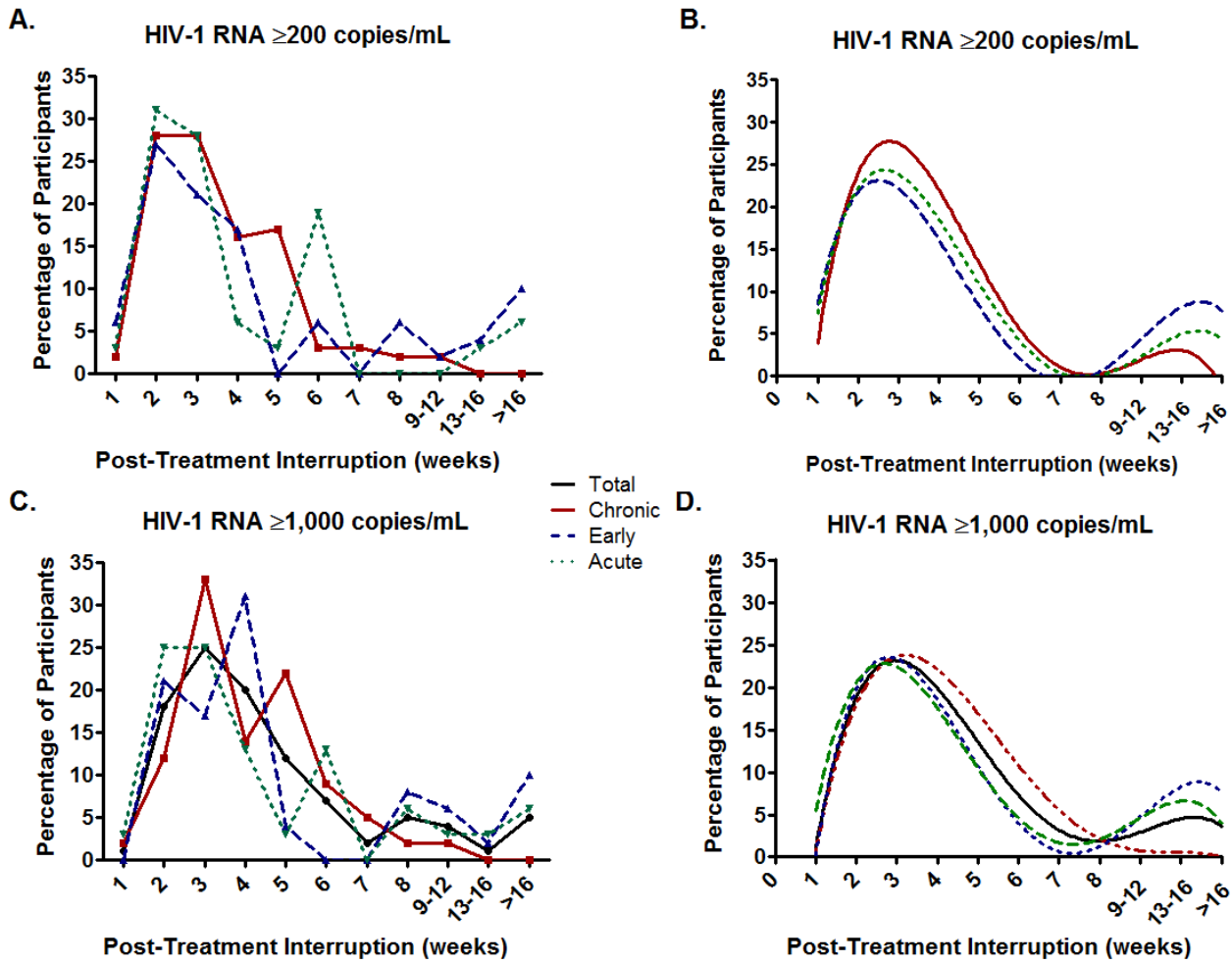
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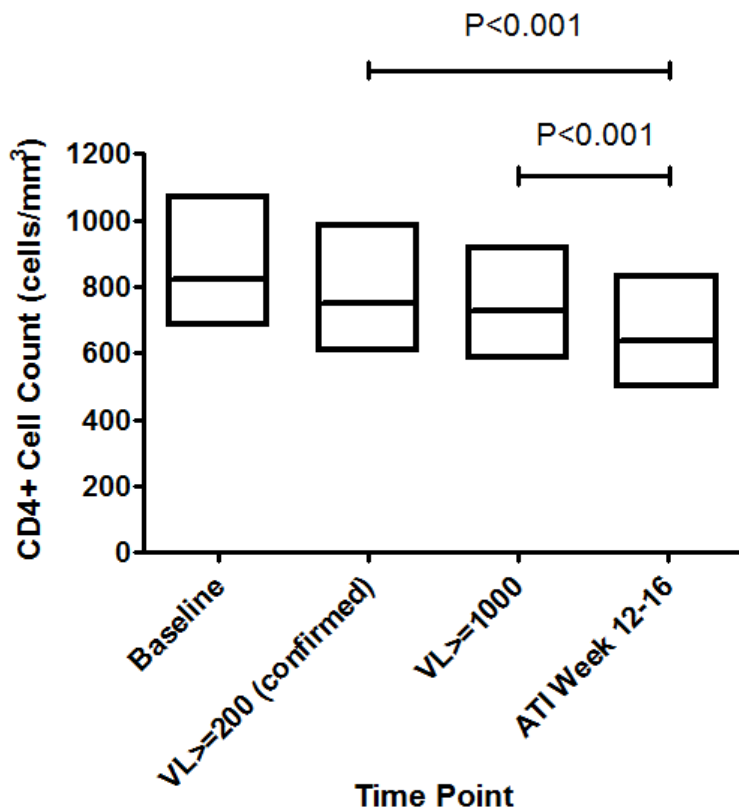
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**Fig. S1. Virologic suppression after treatment interruption stratified by screening CD4+ cell counts.** Cumulative percentage of participants who remained virologically suppressed at the (a) 200 HIV RNA copies/mL and (b) 1,000 HIV RNA copies/mL viral rebound thresholds and stratified by screening CD4+ cell counts of 350-499 cells/mm<sup>3</sup> or ≥500 cells/mm<sup>3</sup>. The 200 HIV RNA copies/mL threshold required a subsequent confirmatory viral load ≥200 HIV RNA copies/mL. \*P-value <0.05 by Fisher's exact testing.



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**Fig. S2. Timing of HIV rebound in a subset of participants with more frequent viral load measurements.** Proportion of participants with confirmed viral rebound  $\geq 200$  copies/mL by (a) actual percentages or (b) non-linear regression modeling. Proportion of participants with viral rebound  $\geq 1,000$  copies/mL by (c) actual percentages or (d) non-linear regression modeling.



**Median CD4:** 825      753      727      638 cells/mm<sup>3</sup>  
**Q1-Q3:** 684-1073    607-986    584-919    498-833 cells/mm<sup>3</sup>

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**Fig. S3. CD4+ cell counts at study entry, upon reaching the 200 and 1,000 HIV RNA copies/mL thresholds, and at the end of the traditional 12-16 week analytical treatment interruption (ATI) period.** Median and interquartile range are shown in the box plots. P-values by 2-sample signed rank test. VL, viral load.