

Supplementary Table I: List of Neurocognitive Tests Categorized into Domains.

Neurocognitive Domain	Neurocognitive Tests
Motor Skill and Dexterity	Grooved Pegboard, dominant and non-dominant hand (sec)
Learning and Memory	RAVLT SumTrials 1-5; Immediate Recall, Delayed Recall
Executive Function	Stroop Task, Interference Trial Trailmaking Test, Part B
Psychomotor Speed and Attention	CALCAP-Mean Simple Reaction time (1) and Mean Complex Reaction Time (3,4,14) Symbol-Digit Modalities Test
Neurocognitive Summary Score (NPZ16)	Symbol-Digit Modalities Test Trailmaking Test, Part A and Part B Grooved Pegboard, dominant and non-dominant hand RAVLT SumTrials 1-5; Interference List, Immediate Recall, Delayed Recall Stroop Task (Color, Word, Interference) CALCAP-Mean Simple Reaction time (1) and Mean Complex Reaction Time (3,4,14)

Neurocognitive test scores were scored for each test using HIV-control groups (age 30-39) matched for education level as the reference group. Composite domain scores were calculated as the mean of the component z-scores only when all component scores were available. The signs for some timed tests were changed so that higher z-scores always denote better performance. Z-scores for 16 tests were used to create the cognitive summary score.

Abbreviations: RAVLT= Rey Auditory Verbal Learning Test; CALCAP= California Computerized Assessment Package
<http://www.calcaprt.com/calcap.htm>

Supplementary Table II: Baseline Mean CES-D and Neurocognitive Raw Scores by HIV Serostatus and Cocaine Use

	HIV- Controls (n=94)		HIV- Cocaine (n=53)		HIV+ Controls (n=112)		HIV+ Cocaine (n=82)	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
CES-D (total score)	11.09	10.78	16.08	12.75	12.31	10.62	16.93	12.69
Stroop Task, Color Naming (sec)	63.78	13.14	67.26	14.74	68.96	15.11	63.92	13.31
Stroop Task, Interference Trial (sec)	119.39	26.67	131.38	34.93	126.74	32.75	121.9	26.83
Stroop Task, Word Reading (sec)	49.5	12.99	50.97	8.92	52.26	12.79	47	8.11
Stroop Task, Interference Trial Errors	0.83	1.87	1.38	2.31	1.24	2.85	1.52	2.26
Grooved Pegboard, dominant hand (sec)	75.54	28.51	80.35	17.43	73.23	19.05	75.27	13.76
Grooved Pegboard, non-dominant hand (sec)	81.08	27.03	86.59	18.95	81.76	21.79	83.9	20.02
RAVLT Sum of Trials 1-5 (score)	48.32	11.77	49.44	10.33	49.88	11.95	52.71	10.16
RAVLT 6 (score)	5.35	1.8	4.97	2.08	5.26	2.35	5.56	1.82
RAVLT 7 (score)	8.58	2.79	8.59	3.33	8.6	3.37	8.98	2.81
RAVLT 8 (score)	7.85	3.29	8	3.31	8.4	3.32	8.58	3.32
Symbol-Digit Modalities Test (sec)	47.94	12.66	44.42	13.12	44.73	11.89	46.61	9.61
Trailmaking Test, Part A (sec)	28.59	9.62	32.53	10.03	29.46	12.67	26.78	9.07
Trailmaking Test, Part B (sec)	80.01	49.74	74.03	28.64	84.73	49.31	66.22	31.53
CalCAP MSRT1 (msec)	383.89	129.77	424.3	231.59	387.13	157.6	374.64	118.59
CalCAP MCRT14 (msec)	615.2	126.04	612.81	121.58	624.68	130.17	618.74	113.45
CalCAP MCRT3 (msec)	421.63	63.61	420.06	58.93	427.28	72.92	418.7	57.21
CalCAP MCRT4 (msec)	539.35	117.92	568.82	104.19	555.43	117.9	554.26	108.26

Bold- two-way ANOVA, $p = 0.03$. Analyses included two-way ANOVA followed by pairwise t-tests between HIV- controls vs. HIV- cocaine and HIV+ controls vs. HIV+ cocaine groups. Abbreviations: CalCAP, California Computerized Assessment Package (<http://www.calcaprt.com/calcap.htm>); CES-D, Center for Epidemiological Studies Depression Scale; MCRT, mean complex reaction time; MSRT, mean simple reaction time; RAVLT, Rey-Auditory Verbal Learning Test ; SD, standard deviation.

Supplementary Table III: Latent Class Mixed Models Parameter Estimates for CES-D Trajectories

	CES-D		
Parameter	3 Classes	4 Classes	5 Classes
Number of Participants	253	252	179
Bayesian Information Criteria (BIC)	8002	8013	8028
Posterior probability (n)			
Class A	0.85 (6)	0.89 (6)	0.94 (6)
Class B	0.89 (71)	0.92 (70)	0.83 (33)
Class C	0.93 (176)	0.92 (171)	0.85 (66)
Class D	-	0.85 (5)	0.77 (61)
Class E	-	-	0.90 (13)

An *a priori* requirement for latent class modeling required subjects to meet the posterior probability threshold cut-off (65%) and population threshold of $\geq 5\%$ under their respective modeling parameters to be classified into latent classes and included in group counts for logistic regression.