

Table S1. HIV drug resistance mutations and antiretroviral drugs detected by city.

	Men with DRMs detected ^a					Men with ARV drugs detected		
	Total	Any	NRTI	NNRTI	PI	Any	Recommended ART ^b	Other ^c
Overall	169	48 (28%)	22 (13%)	39 (23%)	8 (5%)	60 (36%)	31 (18%)	29 (17%)
Atlanta	30	5 (17%)	3 (10%)	3 (10%)	2 (7%)	8 (27%)	4 (13%)	4 (13%)
Boston	14	7 (50%)	3 (21%)	5 (36%)	1 (7%)	6 (43%)	3 (21%)	3 (21%)
Los Angeles	41	17 (41%)	8 (20%)	15 (37%)	2 (5%)	15 (37%)	9 (22%)	6 (15%)
New York City	50	10 (20%)	2 (4%)	9 (18%)	1 (2%)	16 (32%)	8 (16%)	8 (16%)
San Francisco	10	5 (50%)	3 (30%)	5 (50%)	0	3 (30%)	1 (10%)	2 (20%)
Washington, DC	24	4 (17%)	3 (13%)	2 (8%)	2 (8%)	12 (50%)	6 (25%)	6 (25%)

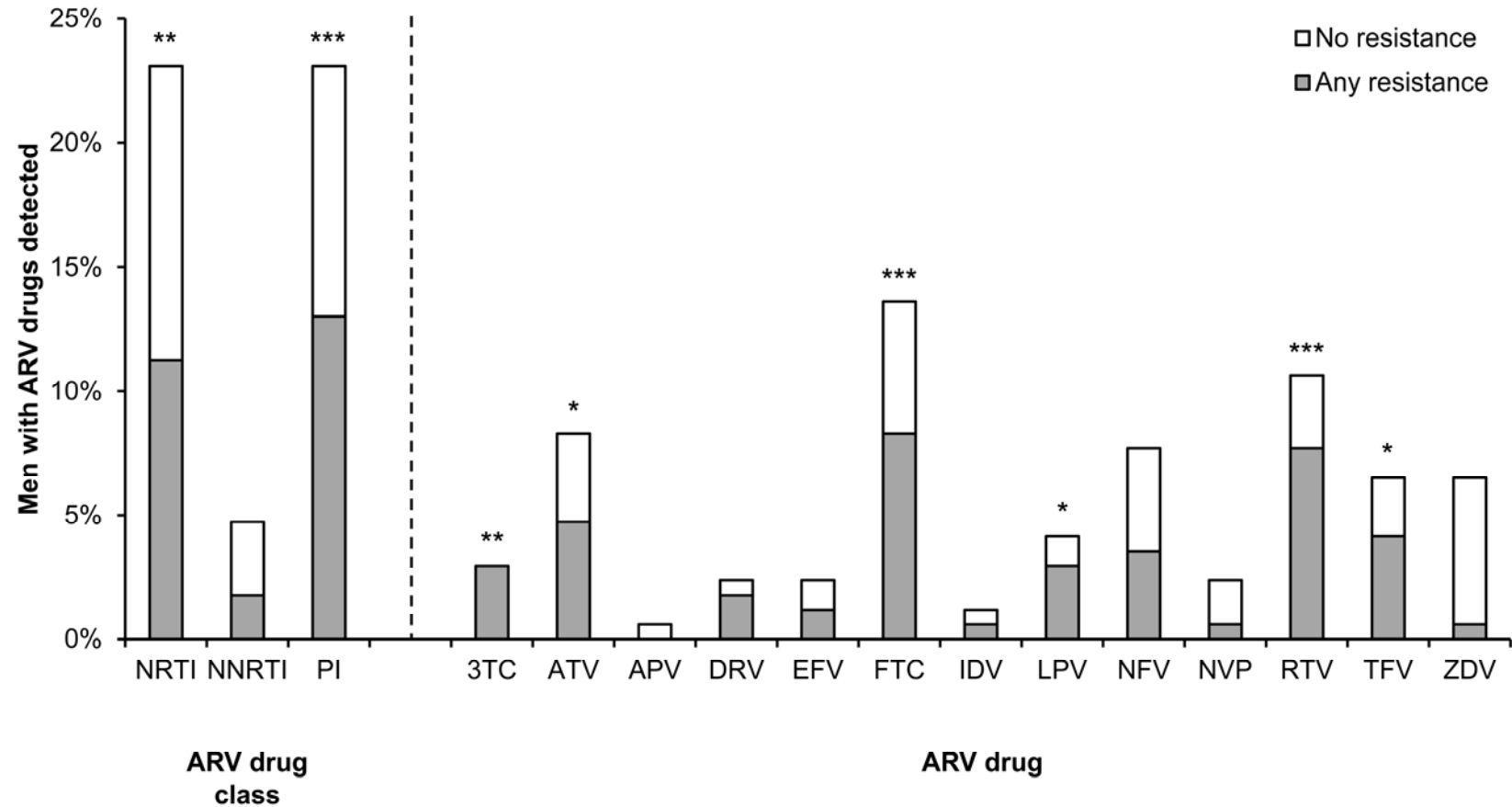
HPTN 061 enrolled men at eight sites in six cities in the United States. The table shows the number of men in each city with drug resistance mutations (DRMs) and antiretroviral (ARV) drugs detected by ARV drug class and pattern of drug detection, respectively. Abbreviations: NRTI: nucleoside/nucleotide reverse transcription inhibitor; NNRTI: non-nucleoside reverse transcription inhibitor; PI: protease inhibitor; ART: antiretroviral treatment.

^a The following DRMs were detected: NRTI-associated resistance mutations detected: M184V/I (N=19); K219E (N=6); D67N, K70E/R (N=4); L74I/V, T215F/Y (N=3); M41L, T69N, L210W (N=2); K65R (N=1). NNRTI-associated resistance mutations detected: K103N/S (N=28); Y181C (N=8); G190A/E/S (N=5); A98G, Y188H/L, M230L (N=2); K101E, V106M, V108I, V179E, P225H, F227L; K238T (N=1). PI-associated resistance mutations detected: I54M/V, L90M (N=4); L10F, L33F, M46I/L, Q58E (N=3); V32I, I47V, V82A, I84V, L89V (N=2); L24I, G73S, N88S (N=1).

^b Criteria used to characterize ARV drugs as consistent with recommended ARV treatment (ART) regimens are described in the text.

^c This category includes patterns of ARV drug detection that were not consistent with recommended ART regimens (see Table 2).

Figure S1. Association between antiretroviral drug detection and HIV drug resistance.



The figure shows the frequency that specific antiretroviral (ARV) drugs were detected in samples from men who were tested for HIV drug resistance. Fisher's exact and chi-squared tests were used to compare the proportion of men who did vs. did not have drug resistance (any resistance, defined as detection of at least one drug resistance mutation). P values for these comparisons are

indicated (* $P < 0.05$; ** $P < 0.01$; *** $P < 0.001$). Abbreviations: NRTI: nucleoside/nucleotide reverse transcription inhibitor; FTC: emtricitabine; TFV: tenofovir; ZDV: zidovudine; 3TC: lamivudine; PI: protease inhibitor; RTV: ritonavir; ATV: atazanavir; NFV: nelfinavir; LPV: lopinavir; DRV: darunavir; IDV: indinavir; APV: amprenavir; NNRTI: non-nucleoside reverse transcription inhibitor; EFV: efavirenz; NVP: nevirapine.

Table S2. Relationship between detection of specific HIV drug resistance mutations and detection of antiretroviral drugs.

#	ARV drugs detected	HIV drug resistance mutations		
		NRTI	NNRTI	PI
1	FTC	M41L, L74V, M184V , L210W, T215Y	A98G, Y181C, M230L	L10F, V32I, L33F, I47V, I54M, Q58E, A71V, G73S, L89V, L90M
2	EFV		K103N	
3	NVP	M184V	K101E, G190S	
4	LPV		K103N	<i>L10V, L90M</i>
5	3TC , LPV, RTV	M184V	K103N	<i>L10I</i>
6	3TC , LPV, RTV	M184V	K103N	
7	FTC, EFV	K70E , L74I, M184V	K103N, F227L, M230L	
8	FTC, TFV , NFV	K65R , L74I, L74V, M184V^a	K103N, Y181C	
9	FTC , TFV, ATV, RTV	M184V^a	G190E	<i>Q58E</i>
10	FTC, TFV, ZDV, LPV, NFV, RTV	M184V^a, T215Y		<i>L10I, L24I, L33F, M46L, I54V, Q58E, A71V, V82A, I84V</i>
11	FTC	<i>V118I</i> , M184V , K219E	K103N, Y181C	
12	RTV^b		<i>V179D</i> , V179E, G190S	<i>L10V, M46I, I54V, A71V, V82A</i>
13	3TC , ATV	<i>V118I</i> , M184V		
14	FTC, DRV, RTV	K70E, M184V		L10F, V11I, V32I, L33F, M46I, I47V, I54M, Q58E, A71V, I84V, L89V
15	FTC, DRV, RTV	M184V		
16	FTC , TFV, LPV, RTV	M184V^a		
17	ATV	M184V		<i>A71T</i>
18	3TC, NFV		K103N	
19	3TC, ATV, RTV		K103N	
20	FTC, ATV, RTV		K103N, K238T	
21	FTC, TFV, ATV, RTV		K103N	<i>A71T</i>
22	ATV		Y181C	
23	NFV		K103N	
24	NFV		K103N	
25	FTC, DRV, RTV			<i>A71T, N88S</i>
26	FTC, TFV, ATV, RTV		V106M	
27	FTC, TFV, IDV, NFV		K103S, G190A	

The table shows the specific HIV drug resistance mutations (DRMs) and antiretroviral (ARV) drugs detected in samples from the 27 men who had at least one DRM and at least one ARV drug detected. DRMs that are associated with the ARV drugs detected are bolded. Italicized text indicates amino acid polymorphisms that may impact drug susceptibility but may not have been selected for by ARV drugs. Fifteen (56%) of the 27 men reported that they were in HIV care at the time of study enrollment. Abbreviations: NRTI: nucleoside/nucleotide reverse transcriptase inhibitor; NNRTI: non-nucleoside reverse transcriptase inhibitor; PI: protease inhibitor; FTC: emtricitabine; EFV: efavirenz; NVP: nevirapine; LPV: lopinavir; 3TC: lamivudine; RTV: ritonavir; TDF: tenofovir; NFV: nelfinavir; ATV: atazanavir; ZDV: zidovudine; DRV: darunavir; IDV: indinavir.

^a M184V also increases HIV susceptibility to TDF.

^b The mutations listed are associated with resistance to ritonavir-boosted protease inhibitors.