

**STANDING GENETIC VARIATION AND THE EVOLUTION OF DRUG  
RESISTANCE IN HIV - TEXT S2 WITH TABLES S1, S2, S3**

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SUPPLEMENTARY TABLES S1, S2, S3 FOR PENNINGS, P.S., STANDING GENETIC VARIATION AND THE EVOLUTION OF DRUG RESISTANCE IN HIV, PLoS COMP BIOL, 2012

**Table S1.** Number of patients with at least one resistance mutation detected by the end of the first, second and third year of NNRTI-based antiretroviral therapy. Data from [1].

Year	Group	Resistant	Not Resistant
1	TDF	35	264
2	TDF	8	256
3	TDF	9	247
1	d4T	22	279
2	d4T	10	269
3	d4T	11	258

**Table S2.** Overview of clinical trials with single dose nevirapine which reported the number of patients with nevirapine resistance detected 6 to 8 weeks after treatment.

Reference and name trial	Number of patients	Treatment	Treatment code	Est. prob of establishment of resistance	Remarks
Eshleman 2005 [2], Malawi	65	sdNVP	sdNVP	0.69	
Eshleman 2005 [2], Uganda	241	sdNVP	sdNVP	0.26	
Farr 2010 [3], Malawi	65	sdNVP	sdNVP	0.34	
Hudelson 2010 [4], Uganda	30	sdNVP	sdNVP	0.43	
Jackson 2000 [5], Uganda	15	sdNVP	sdNVP	0.20	
Kassaye 2007 [6], Zimbabwe	32	sdNVP	sdNVP	0.35	
Lee 2005 [7], Zimbabwe	32	sdNVP	sdNVP	0.34	
Loubser 2006 [8], South Africa	44	sdNVP	sdNVP	0.54	Results only for K103N mutation
Ly 2007 [9], Cambodia	35	sdNVP	sdNVP	0.23	
Martinson 2009 [10], South Africa, HIVNET 012	108	sdNVP	sdNVP	0.38	
Martinson 2009 [10], South Africa, HIVNET 012	193	sdNVP	sdNVP	0.46	
McIntyre 2009 [11], South Africa	74	sdNVP	sdNVP	0.59	
Rajesh 2010 [12], India	12	sdNVP	sdNVP	0.33	
Toni 2005 [13], Ivorycoast	29	sdNVP	sdNVP	0.21	
Farr 2010 [3], Malawi	120	sdNVP + 7 days 3TC/ZDV	sdNVP/PP	0.017	
McIntyre 2009 [11], South Africa	164	sdNVP + 4 days 3TC/ZDV	sdNVP/PP	0.097	
McIntyre 2009 [11], South Africa	168	sdNVP + 7 days 3TC/ZDV	sdNVP/PP	0.073	
Chaix 2007 [14], Ivorycoast, ANRS/Ditrame Plus	63	ZDV from 36 weeks + sdNVP	ZDV/sdNVP	0.33	
Chalermchokcharoenkit 2009 [15], Thailand	190	ZDV 3rd trimester + sdNVP	ZDV/sdNVP	0.18	
Chi 2009 and 2007 [16, 17], Zambia	166	ZDV 3rd trimester + sdNVP	ZDV/sdNVP	0.25	
Lallemand 2009 [18], Thailand, PHPT2	222	ZDV 3rd trimester + sdNVP	ZDV/sdNVP	0.064	
Ly 2007 [9], Cambodia	16	ZDV from 28 weeks + sdNVP	ZDV/sdNVP	0.19	
Shapiro 2006 [19], Botswana	155	ZDV from 34 weeks + sdNVP	ZDV/sdNVP	0.45	
Van Zijl 2008 [20], South Africa	76	ZDV from 34 weeks + sdNVP	ZDV/sdNVP	0.17	
Arrive 2010 [21], Cambodia/Ivorycoast/South Africa, TEmAA ANRS 12109	33	ZDV from enrollment + sdNVP + 1 week TDF/FTC	ZDV/sdNVP/PP	0.0	
Dabis 2009 [22], Cambodia/Ivorycoast/South Africa, TEmAA ANRS 12109	37	ZDV from enrollment + sdNVP + 1 week TDF/FTC	ZDV/sdNVP/PP	0.0	
Lallemand 2009 [18], Thailand, PHPT4	222	ZDV 3rd trim + sdNVP + 1 month ZDV/DDI	ZDV/sdNVP/PP	0.0	

**Table S3.** Overview of clinical trials with structured treatment interruptions which reported the number of patients with at least one drug resistance mutation detected.

Reference and name trial	% on PI	Number of patients	Patients excluded	Patients with genotypic resistance	Fraction not resistant at end of trial	TI's relevant for calculation	Length of TI (days)	Treatment period (days)	Est. prob of evolution of resistance per TI	Corrected prob of evolution of resistance
<b>Interruption arms</b>										
Reynolds 2009 and 2010 [23, 24], Uganda FOTO arm	2%	57	1 (no genotype)	4	52/56	72	2	5	0	0
Ananworanich 2003 [25], Staccato WOWO arm	0%	36	22 (on boosted PI) 2 (had resistance before trial)	3	9/12	17	7	7	0.02	0.02
Reynolds 2009 and 2010 [23, 24], Uganda WOWO arm	6%	32	3 (left the trial)	9	20/29	18	7	7	0.02	0.02
Yerly 2003 [26] , SSITT trial	100%	87	4 (lost to follow-up) 3 (already resistance before trial)	11	69/80	4	14	56	0.04	0.03
Hoen 2005 [27], ANRS 100 Prim-stop trial	100%	26	4 (resistance before trial) 1 (resistance in first TI)	2	19/21	2	14, 28 (mean 21)	84	0.05	0.04
Palmisano 2007 [28], ISS_PART	25%	136	16 (estimated number that had resistance before)	22	98/120	3	28, 28, 56 (mean 37)	91	0.07	0.06
Danel 2009 [29], Ivory Coast NCT 00158405	10%	325	10 (no genotypes)	76	239/315	4	60	91	0.07	0.06
<b>Continuous arms</b>										
Reynolds 2009 and 2010 [23, 24], Uganda continuous arm	2%	51	0	3	48/51	—	—	504	—	0.043/year
Danel 2009 [29], Ivory Coast NCT 00158405	15%	110	3 (no genotypes)	10	97/107	—	—	728	—	0.048/year

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