SUPPLEMENTAL DIGITAL CONTENT

Table S1. Predictors of non-observance of the August 2006 IAS-USA recommendations in patients continued on cART containing DBPIs in 2007 (one year after guideline publication) and 2010 (four years after guideline publication), by comparing them with patients who switched to another regimen or stopped cART.

Definitions: undetectable viral load: <50 copies/mL; suboptimal adherence: forgetting on ≥1 occasion per month.

Abbreviations: DBPIs, double-boosted protease inhibitors; MSM, men who have sex with men; IDU, injecting drug user; SHCS, Swiss HIV Cohort Study; VL, viral load.

SUPPLEMENTAL DIGITAL CONTENT

Table S1

	2007						2010					
	DBPIs continuation N=75 (73%)	DBPIs switch or discontinuation N=28 (27%)	Factors associated with DBPIs continuation in 2007				DBPIs continuation N=28 (29%)	DBPIs switch or discontinuation N=70 (71%)	Factors associated with DBPIs continuation in 2010			
			Bivariate analysis		Multivariable analysis				Bivariate analysis		Multivariable analysis	
	N (%)	N (%)	OR (95% CI)	P value	OR (95% CI)	P value	N (%)	N (%)	OR (95% CI)	P value	OR (95% CI)	P value
Age, years; mean (sd)	48 (8)	48 (8)	0.99 (0.94-1.05)	0.79			49 (7)	51 (8)	0.97 (0.92-1.03)	0.28		
Male sex	48 (65)	26 (35)	0.14 (0.03-0.62)	0.01	0.14 (0.03-0.71)	0.02	15 (21)	56 (79)	0.29 (0.11-0.74)	0.01	0.372 (0.14-1)	0.05
Caucasian	60 (69)	27 (31)	0.15 (0.02-1.18)	0.07	0.13 (0.01-1.57)	0.11	22 (27)	61 (73)	0.54 (0.17-1.7)	0.29		
Mode of HIV acquisition				0.17						0.06		
Heterosexual	28 (82)	6 (18)	*Ref.*	*Ref.*			13 (39)	20 (61)	*Ref.*	*Ref.*		
MSM	28 (64)	16 (36)	0.38 (0.13-1.1)	0.07			7 (16)	36 (84)	0.3 (0.1-0.87)	0.03		
IDU	19 (76)	6 (24)	0.68 (0.19-2.42)	0.55			8 (36)	14 (64)	0.88 (0.29-2.68)	0.82		
Nadir CD4 cell count ≤ 200	65 (74)	23 (26)	1.57 (0.48-5.17)	0.46			23 (27)	61 (73)	0.6 (0.18-2.04)	0.42		
AID- defining illness	34 (69)	15 (31)	0.72 (0.3-1.72)	0.46			10 (21)	37 (79)	0.5 (0.2-1.22)	0.13		
Suboptimal adherence	17 (68)	8 (32)	0.76 (0.28-2.03)	0.58			10 (40)	15 (60)	2.16 (0.82-5.68)	0.12	2.42 (0.85-6.93)	0.1
Diabetes	4 (50)	4 (50)	0.34 (0.08-1.46)	0.15	0.19 (0.02-1.71)	0.14	0 (0)	9 (100)		0.05		
Cholesterol; mmol/L; mean (sd)	5.1 (1.2)	5 (1.4)	1.14 (0.78-1.66)	0.51			5.2 (0.8)	5.3 (1.2)	0.94 (0.63-1.41)	0.77		
Ldl, mmol/L; mean (sd)	2.6 (0.9)	2.6 (0.9)	0.95 (0.57-1.59)	0.84			3 (0.7)	2.7 (0.9)	1.42 (0.81-2.47)	0.22		
Hdl, mmol/L; mean (sd)	1.3 (0.4)	1.2 (0.5)	1.54 (0.49-4.88)	0.46			1.4 (0.4)	1.2 (0.4)	2.13 (0.69-6.56)	0.19		
Trig, mmol/L; mean (sd)	3.3 (2.6)	2 (1)	1.54 (1.07-2.21)	0.02	1.75 (1.14-2.7)	0.01	2.2 (1.1)	3 (2)	0.95 (0.46-1.01)	0.06		
Previous CV event	1 (25)	3 (75)	0.11 (0.01-1.13)	0.06			0 (0)	5 (100)		0.15		
Intermediate and high CV risk	19 (66)	10 (34)	0.56 (0.22-1.45)	0.24			4 (15.4)	22 (85)	0.35 (0.11-1.13)	0.08		
Centre of follow-up				0.17						0.71		
Nº 1	21 (62)	13 (38)	0.34 (0.13-0.92)	0.03			7 (22)	25 (78)	0.53 (0.19-1.47)	0.22		
Nº 2	1 (33)	2 (67)	0.11 (0.01-1.28)	0.08			1 (33)	2 (67)	0.94 (0.08-11.14)	0.96		
Nº 3	4 (80)	1 (20)	0.84 (0.08-8.4)	0.88			2 (33)	4 (67)	0.94 (0.16-5.67)	0.95		
Nº 4	5 (71)	2 (29)	0.52 (0.09-3.14)	0.48			1 (17)	5 (83)	0.38 (0.04-3.49)	0.39		
Nº 5	43 (83)	9 (17)	*Ref.*	*Ref.*			17 (35)	32 (65)	*Ref.*	*Ref.*		
Nº 6	0 (0)	0 (0)					0 (0)	0 (0)				
Nº 7	1 (50)	1 (50)	0.21 (0.01-3.67)	0.28			0 (0)	2 (100)				
Follow-up in SHCS Centre	62 (76)	20 (24)	2.07 (0.74-5.77)	0.17			22 (29)	54 (71)	1.09 (0.38-3.14)	0.88		
Nº of past regimens; mean (sd)	9 (5)	10 (5)	0.95 (0.87-1.05)	0.31			8 (4)	10 (5)	0.9 (0.81-1)	0.05		
Previous mono or bitherapy	65 (72)	25 (28)	0.78 (0.2-3.07)	0.72			25 (29)	60 (71)	1.39 (0.35-5.48)	0.64		
Detectable viraemia	6 (86)	1 (14)	2.35 (0.27-20.42)	0.44			2 (25)	6 (75)	0.82 (0.16-4.33)	0.82		
CD4, /100 cell/mm^3; mean (sd)	5.6 (2.5)	3.9 (2.5)	1.4 (1.1-1.7)	0.003	1.33 (1.05-1.7)	0.02	6.4 (2.8)	5.3 (3)	1.13 (0.98-1.32)	0.1	1.16 (0.99-1.36)	0.07

SUPPLEMENTAL DIGITAL CONTENT

Table S2. Predictors of non-observance of the August 2006 IAS-USA recommendations in patients continued on cART containing triple-NRTIs in 2007 (one year after guideline publication) and in 2010 (four years after guideline publication), by comparing them with patients who switched to another regimen or stopped cART.

Definitions: undetectable viral load: <50 copies/mL; suboptimal adherence: forgetting on ≥1 occasion per month.

Abbreviations: NRTIs, triple-nucleoside or nucleotide reverse transcriptase inhibitors; MSM, men who have sex with men; IDU, injecting drug user; SHCS, Swiss HIV Cohort Study; VL, viral load.

SUPPLEMENTAL DIGITAL CONTENT

Table S2

	2007						2010					
	3NRTIs continuation	3NRTIs switch or discontinuation	Factors associated with 3NRTIs continuation in 2007				3NRTIs continuation	3NRTIs switch or discontinuation	Factors associated with 3NRTIs continuation in 2010			
	N=366 (86%)	N=61 (14%)	Bivariate analysis		Multivariable analysis		N=204 (52%)	N=187 (48%)	Bivariate analysis		Multivariable analysis	
Factors for guidelines non adherence	N (%)	N (%)	OR (95% CI)	P value	OR (95% CI)	P value	N (%)	N (%)	OR (95% CI)	P value	OR (95% CI)	P value
Age, years; mean (sd)	46 (11)	48 (12)	0.99 (0.96-1.01)	0.23			49 (11)	51 (11)	0.99 (0.97-1)	0.12		
Male sex	254 (85)	44 (15)	0.88 (0.48-1.6)	0.67			143 (52)	133 (48)	0.95 (0.62-1.47)	0.82		
Caucasian	313 (87)	47 (13)	1.76 (0.91-3.42)	0.1			174 (52)	157 (47)	1.11 (0.64-1.92)	0.71		
Mode of HIV acquisition				0.87						0.97		
Heterosexual	169 (86)	28 (14)	*Ref.*	*Ref.*			95 (53)	85 (47)	*Ref.*	*Ref.*		
MSM	146 (86)	23 (14)	1.05 (0.58-1.9)	0.87			83 (52)	77 (48)	0.96 (0.63-1.48)	0.87		
IDU	51 (84)	10 (16)	0.84 (0.38-1.86)	0.68			26 (51)	25 (49)	0.93 (0.5-1.73)	0.82		
Nadir CD4 cell count ≤ 200 cell/mm^3	165 (83)	34 (17)	0.64 (0.37-1.11)	0.11			91 (50)	92 (50)	0.81 (0.55-1.21)	0.31		
AIDS-defining illness	58 (83)	12 (17)	0.77 (0.39-1.53)	0.46			31 (48)	33 (52)	0.84 (0.49-1.43)	0.51		
Suboptimal adherence	54 (86)	9 (14)	0.89 (0.77-1.04)	0.14			33 (57)	25 (43)	1.25 (0.71-2.19)	0.44		
Diabetes	20 (91)	2 (9)	1.71 (0.39-7.49)	0.48			15 (52)	14 (48)	0.98 (0.46-2.09)	0.96		
Cholesterol, mmol/L; mean (sd)	4.8 (1)	4.6 (1)	1.22 (0.92-1.63)	0.17			4.9 (0.9)	4.8 (1)	1.12 (0.9-1.38)	0.31		
Ldl, mmol/L; mean (sd)	2.8 (0.9)	2.6 (1)	1.22 (0.89-1.67)	0.23			2.8 (0.8)	2.7 (0.9)	1.09 (0.85-1.39)	0.49		
Hdl, mmol/L; mean (sd)	1.1 (0.3)	1.2 (0.3)	1.25 (0.54-2.9)	0.6			1.2 (0.3)	1.2 (0.4)	1.77 (0.98-3.21)	0.06		
Trig, mmol/L; mean (sd)	1.9 (1.4)	2 (1.4)	0.98 (0.81-1.18)	0.81			2 (1.7)	2.2 (1.6)	0.93 (0.82-1.05)	0.26		
Previous CV event	15 (68)	7 (32)	0.33 (0.13-0.85)	0.02	0.31 (0.12-0.8)	0.02	8 (28)	21 (72)	0.32 (0.14-0.75)	0.01	0.34 (0.14-0.81)	0.02
Intermediate and high CV risk	70 (80)	18 (20)	0.56 (0.3-1.06)	0.08			51 (53)	45 (47)	0.99 (0.61-1.59)	0.96		
Centre of follow-up				0.01						0.36		
N° 1	84 (88)	12 (13)	0.93 (0.41-2.09)	0.59			44 (48)	47 (52)	0.88 (0.51-1.51)	0.63		
N° 2	11 (73)	4 (27)	0.37 (0.1-1.29)	0.12			5 (33)	10 (67)	0.47 (0.15-1.45)	0.19		
N° 3	42 (84)	8 (16)	0.7 (0.28-1.76)	0.45			27 (57)	20 (43)	1.26 (0.64-2.49)	0.5		
N° 4	103 (83)	14 (12)	0.98 (0.45-2.12)	0.95			58 (57)	43 (43)	1.26 (0.74-2.15)	0.39		
N° 5	113 (88)	15 (12)	*Ref.*	*Ref.*			62 (52)	58 (48)	*Ref.*	*Ref.*		
N° 6	6 (50)	6 (50)	0.13 (0.04-0.47)	0.002			3 (33)	6 (67)	0.47 (0.11-1.96)	0.3		
N° 7	7 (78)	2 (22)	0.47 (0.09-2.45)	0.37			5 (63)	3 (38)	1.56 (0.36-6.82)	0.56		
Follow-up in SHCS Centre	152 (42)	29 (48)	0.8 (0.47-1.38)	0.43			72 (35)	87 (47)	0.63 (0.42-0.94)	0.02	0.73 (0.47-1.11)	0.14
N° of past regimens; mean (sd)	3 (3)	4 (3)	0.88 (0.81-0.96)	0.001	0.88 (0.81-0.96)	0.006	3 (3)	3 (2)	0.96 (0.89-1.03)	0.25		
Previous mono or bitherapy	79 (81)	18 (19)	0.66 (0.36-1.2)	0.17			48 (53)	42 (47)	1.06 (0.66-1.7)	0.8		
Detectable viraemia	12 (57)	9 (43)	0.2 (0.08-0.49)	<0.001	0.2 (0.08-0.51)	0.001	9 (24)	29 (76)	0.25 (0.12-0.55)	<0.001	0.28 (0.13-0.63)	0.002
CD4, /100 cell/mm^3; mean (sd)	7.2 (3.5)	6.15 (3.2)	1.12 (1.02-1.23)	0.02			7.7 (3.5)	6.7 (3.4)	1.09 (1.03-1.16)	0.003	1.08 (1.01-1.15)	0.02

SUPPLEMENTAL DIGITAL CONTENT

Table S3. Predictors of non-observance of the August 2006 IAS-USA recommendations in patients continued on cART containing ddi plus d4T in 2007 (one year after guideline publication) by comparing them with patients who switched to another regimen or stopped cART.

Definitions: undetectable viral load: <50 copies/mL; suboptimal adherence: forgetting on ≥1 occasion per month.

Abbreviations: ddI-d4T, didanosine plus stavudine; MSM, men who have sex with men; IDU, injecting drug user; SHCS, Swiss HIV Cohort Study; VL, viral load.

SUPPLEMENTAL DIGITAL CONTENT

Table S3

	2007			
	ddI-d4T continuation	ddI-d4T switch or discontinuation	Factors associated with ddI-d4T continuation in 2007	
	N=9 (47%)	N=10 (53%)	Bivariate analysis	
Factors for guidelines non adherence	N (%)	N (%)	OR (95% CI)	P value
Age, years; median (IQR)	46 (14)	41 (9)	1 (0.91-1.09)	1
Male sex	6 (75)	7 (64)	1.71 (0.23-12.89)	0.6
Caucasian	5 (63)	8 (73)	0.63 (0.09-4.40)	0.11
Mode of HIV acquisition				0.05
Heterosexual	4 (49)	6 (60)	*Ref.*	*Ref.*
MSM	4 (100)	0 (0)		
IDU	1 (20)	4 (80)	0.38 (0.03-4.71)	0.45
Nadir CD4 cell count ≤ 200 cell/mm^3	7 (88)	8 (73)	2.63 (0.22-31.35)	0.45
AIDS-defining illness	2 (25)	7 (64)	0.19 (0.03-1.43)	0.11
Suboptimal adherence	3 (38)	4 (40)	0.9 (0.13-6.08)	0.91
Diabetes	0 (0)	0 (0)		
Cholesterol total, mmol/L; mean (sd)	5.5 (1)	4.8 (1	10.49 (1.09-100.74)	0.04
Ldl, mmol/L; mean (sd)	3.2 (1)	2.4 (1)	5.29 (1.05-26.66)	0.04
Hdl, mmol/L; mean (sd)	1.4 (0)	1.5 (1)	0.58 (0.13-2.67)	0.49
Trig, mmol/L; mean (sd)	2.6 (2)	1.8 (1)	3.09 (1.01-9.46)	0.05
Previous CV event	0 (0)	0 (0)		
Intermediate and high CV risk	3 (38)	1 (10)	5.4 (0.44-66.67)	0.2
Centre of follow-up				0.81
N° 1	3 (50)	3 (50)	1 (0.8-12.56)	1
N° 2	0 (0)	0 (0)		
N° 3	2 (50)	2 (50)	1 (0.06-15.99)	1
N° 4	2 (67)	1 (33)	2 (0.09-44.35)	0.66
N° 5	2 (50)	2 (50)	*Ref.*	*Ref.*
N°6	0 (0)	1 (100)		
N° 7	0 (0)	1 (100)		
Follow-up in SHCS Centre	5 (56)	7 (78)	0.36 (0.05-2.77)	0.33
N° of past regimens; median (IQR)	2 (3)	4 (9)	0.88 (0.7-1.1)	0.27
Previous mono or bitherapy	1 (13)	6 (55)	0.12 (0.01-1.32)	0.08
Detectable viraemia	2 (22)	3 (30)	0.67 (0.08-5.3)	0.7
CD4, /100 cell/mm^3; median (IQR)	4.4 (3.8)	5.8 (1.6)	0.92 (0.56-1.5)	0.73

SUPPLEMENTAL DIGITAL CONTENT

Table S4. Drug adherence, virological and immunological outcome, cardiovascular events and lipid values prior to, and up to 24 weeks following any treatment switch.

[1] 70 patients stopped DBPIs during the study period and 50 were analysed (2 died, 14 stopped treatment during > 30 days, 4 underwent treatment switch at the end of the study period and so did not have 24-week data by May 2011, date of data extraction).

[2] 187 patients stopped triple NRTIs during the study period and 135 were analysed (2 died, 46 stopped treatment during > 30 days, 4 underwent treatment switch at the end of the study period and so did not have 24-week data by May 2011, date of data extraction).

[3] 18 patients stopped ddI plus d4T during the study period and 14 were analysed (4 stopped treatment during > 30 days).

Abbreviations: HDL, high-density lipoprotein ; LDL, low-density lipoprotein; TG, triglyceride; VL, viral load; SD, standard deviation; DBPI, double-boosted protease inhibitor; NRTI, nucleoside reverse transcriptase inhibitor; ddI-d4T, didanosine plus stavudine.

SUPPLEMENTAL DIGITAL CONTENT

Table S4	Under DBPIs N=50[1] N (%)	24 weeks after switch N=50 N (%)	*P* bivar.	Under triple-NRTIs N=135[2] N (%)	24 weeks after switch N=135 N (%)	*P* bivar.	Under ddI-d4T N=14[3] N (%)	24 weeks after switch N=14 N (%)	*P* bivar.
Detectable HIV VL □	4 (9)	8 (17)	0.16	18 (15)	9 (7)	0.05	3 (21)	1 (7)	0.32
CD4 cell count, cell/mm^3; mean (sd)	576 (310)	569 (39)	0.76	667 (27)	712 (28)	0.008	556 (168)	600 (221)	0.346
Suboptimal adherence[#]	7 (15)	6 (13)	0.74	14 (11)	16 (13)	0.62	5 (36)	2 (14)	0.08
Cholesterol total, mmol/L; mean (sd)	5.4 (0.2)	5.1 (1.4)	0.3	4.7 (0.1)	5.3 (0.1)	<0.001	5 (1)	4.7 (0.9)	0.09
HDL cholesterol, mmol/L; mean (sd)	1.2 (0.3)	1.2 (0.3)	0.49	1.1 (0.03)	1.2 (0.04)	0.21	1.8 (0.8)	1.7 (0.8)	0.31
LDL cholesterol, mmol/L; mean (sd)	2.6 (0.9)	2.6 (0.8)	0.73	2.7 (0.1)	3.1 (0.1)	<0.001	2.4 (0.9)	2.3 (0.9)	0.68
TG, mmol/L; mean (sd)	3.4 (2.5)	2.5 (1.4)	0.01	2.3 (0.2)	2.5 (0.2)	0.01	1.6 (0.8)	1.5 (1)	0.77
Lipid lowering drug	24 (48)	25 (50)	0.32	23 (17)	25 (19)	0.41	2 (14)	2 (14)	1

□ ≥50 copies/mL
[#] forgetting on ≥1 occasion per month