

Supplemental Table S1. RH of discontinuation due to toxicity-Fine & Grays

	Relative hazards of discontinuation due to toxicity (Fine & Grays approach)				Global p-value
	Unadjusted RH (95% CI)	p-value	Adjusted RH (95% CI)	p-value	
Gender, n(%)					
Female vs. male	1.04 (0.77, 1.40)	0.803	1.06 (0.48, 2.37)	0.885	
Mode of HIV Transmission, n(%)					
IDU	1.00		1.00		0.719
Homosexual contacts	0.81 (0.53, 1.26)	0.360	0.58 (0.21, 1.57)	0.283	
Heterosexual contacts	0.84 (0.54, 1.29)	0.417	0.37 (0.14, 0.95)	0.040	
Other/Unknown	0.99 (0.55, 1.78)	0.976	0.37 (0.09, 1.61)	0.186	
Nationality, n(%)					
Immigrant vs. Italian	0.79 (0.56, 1.11)	0.167	1.05 (0.43, 2.56)	0.919	
AIDS diagnosis, n(%)					
Yes vs. No	1.22 (0.85, 1.75)	0.283	1.25 (0.48, 3.25)	0.647	
CVD diagnosis, n(%)					
Yes vs. No	2.51 (0.94, 6.74)	0.068	1.43 (0.16, 12.99)	0.750	
Hepatitis co-infection*, n(%)					
No	1.00		1.00		0.522
Yes	0.97 (0.65, 1.44)	0.876	1.02 (0.39, 2.70)	0.963	
Not tested	1.20 (0.86, 1.67)	0.275	1.17 (0.52, 2.63)	0.708	
Calendar year of baseline					
per more recent year	1.07 (0.97, 1.17)	0.164	1.27 (1.00, 1.61)	0.049	
Age					
per 10 years older	1.38 (1.24, 1.53)	<.001	1.04 (0.74, 1.45)	0.825	
CD4 count					
per 100 cells/mm3 higher	0.96 (0.89, 1.03)	0.262	0.54 (0.24, 1.20)	0.132	
CD4 count nadir					
per 100 cells/mm3 higher	0.94 (0.87, 1.01)	0.079	1.68 (0.72, 3.91)	0.228	
CD8 count					
per 100 cells/mm3 higher	0.95 (0.88, 1.03)	0.223	0.99 (0.87, 1.14)	0.903	
Viral load					
per log10 copies/mL higher	1.07 (0.94, 1.21)	0.323	0.80 (0.61, 1.05)	0.112	
Diabetes, n(%)					
Yes vs. No	2.14 (1.14, 4.02)	0.018	1.93 (0.28, 13.11)	0.502	
Total cholesterol					
per 100 mg/dL higher	1.10 (0.77, 1.57)	0.617	0.96 (0.46, 2.01)	0.915	
HDL cholesterol					
Altered* vs. normal	0.73 (0.54, 0.98)	0.038	0.51 (0.26, 1.00)	0.049	
Use of statins, n(%)					
Yes vs. No	2.23 (1.45, 3.42)	<.001	1.07 (0.29, 3.92)	0.914	
Use of blood pressure lowering drugs, n(%)					
Yes vs. No	1.77 (0.84, 3.76)	0.134	1.65 (0.28, 9.64)	0.579	
Time from HIV diagnosis to date of starting cART					
per year longer	0.97 (0.94, 1.00)	0.088	0.99 (0.93, 1.04)	0.603	
egfr (CKD_Epi formula)					
per 60 ml/min/1.73m higher	1.62 (0.98, 2.67)	0.058	0.63 (0.10, 4.12)	0.633	
Blood glucose					

per 100 mg/dL higher	2.69 (1.80, 4.01)	<.001	3.41 (1.51, 7.68)	0.003
<i>NRTI started, n(%)</i>				
Tenofovir/Emtricitabine	1.00		1.00	<.001
Zidovudine/lamivudine	2.16 (1.40, 3.34)	<.001	2.94 (0.91, 9.47)	0.070
Abacavir/Lamivudine	0.68 (0.40, 1.14)	0.144	0.60 (0.18, 2.07)	0.421
Other NRTI pair	0.68 (0.13, 3.73)	0.661	0.99 (0.06, 16.97)	0.997
<i>3rd drug started, n(%)</i>				
NNRTI (Yes vs. No)	0.74 (0.09, 5.93)	0.778	8.22 (0.52, 129.8)	0.135
PI or PI/r (Yes vs. No)	1.66 (0.21, 13.06)	0.632	15.07 (0.93, 245.3)	0.057
Other class (Yes vs. No)	1.15 (0.16, 8.52)	0.890	1.81 (0.11, 28.82)	0.673
<i>Mental health disorders/depression</i>				
Yes vs. No	1.01 (0.42, 2.44)	0.988	2.96 (0.79, 11.15)	0.109
* >40 mg/dl for males and >50 mg/dl for females				

Supplemental Table S2 RH of discontinuation due to intolerance-Fine & Grays

	Relative hazards of discontinuation due to intolerance (Fine & Grays approach)			
	Unadjusted RH (95% CI)	p-value	Adjusted RH (95% CI)	p-value
Gender, n(%)				
Female vs. male	1.31 (1.01, 1.70)	0.046	1.43 (0.73, 2.78)	0.297
Mode of HIV Transmission, n(%)				
IDU	1.00		1.00	0.835
Homosexual contacts	1.21 (0.76, 1.95)	0.421	0.88 (0.28, 2.70)	0.817
Heterosexual contacts	1.22 (0.76, 1.96)	0.400	0.99 (0.34, 2.89)	0.992
Other/Unknown	1.30 (0.71, 2.38)	0.394	1.15 (0.30, 4.48)	0.839
Nationality, n(%)				
Immigrants vs. Italian	0.84 (0.62, 1.14)	0.262	1.07 (0.52, 2.23)	0.847
AIDS diagnosis, n(%)				
Yes vs. No	0.86 (0.58, 1.27)	0.442	0.28 (0.06, 1.26)	0.097
CVD diagnosis, n(%)				
Yes vs. No	1.56 (0.50, 4.86)	0.444		
Hepatitis co-infection*, n(%)				
No	1.00		1.00	0.523
Yes	0.83 (0.56, 1.24)	0.367	0.91 (0.34, 2.46)	0.851
Not tested	1.09 (0.80, 1.48)	0.579	1.67 (0.85, 3.29)	0.135
Calendar year of baseline				
per more recent year	1.04 (0.96, 1.12)	0.384	1.00 (0.83, 1.21)	0.994
Age				
per 10 years older	1.06 (0.95, 1.18)	0.275	1.10 (0.82, 1.47)	0.521
CD4 count				
per 100 cells/mm3 higher	1.04 (0.98, 1.10)	0.203	1.01 (0.64, 1.59)	0.982
CD4 count nadir				
per 100 cells/mm3 higher	1.03 (0.97, 1.10)	0.310	1.10 (0.66, 1.81)	0.720
CD8 count				
per 100 cells/mm3 higher	1.02 (0.95, 1.11)	0.572	1.09 (0.96, 1.23)	0.198
Viral load				
per log10 copies/mL higher	1.13 (0.99, 1.28)	0.062	1.25 (0.96, 1.64)	0.101
Diabetes, n(%)				
Yes vs. No	1.04 (0.46, 2.33)	0.925	0.55 (0.04, 6.70)	0.636
Total cholesterol				
per 100 mg/dL higher	0.85 (0.61, 1.18)	0.331	0.55 (0.28, 1.11)	0.098
HDL cholesterol				
Altered* vs. normal	0.93 (0.71, 1.21)	0.588	1.38 (0.81, 2.33)	0.237
Use of statins, n(%)				
Yes vs. No	1.49 (0.93, 2.40)	0.100	2.86 (1.10, 7.45)	0.031
Use of blood pressure lowering drugs, n(%)				
Yes vs. No	1.88 (0.93, 3.79)	0.079	1.42 (0.26, 7.83)	0.685
Time from HIV diagnosis to date of starting cART				
per year longer	0.99 (0.96, 1.01)	0.317	0.97 (0.92, 1.03)	0.361
egfr (CKD_Epi formula)				
per 60 ml/min/1.73m higher	1.11 (0.60, 2.06)	0.742	0.90 (0.15, 5.29)	0.911
Blood glucose				
per 100 mg/dL higher	1.52 (1.00, 2.32)	0.049	2.09 (0.99, 4.38)	0.052

NRTI started, n(%)

Tenofovir/Emtricitabine	1.00		1.00	<.001
Zidovudine/lamivudine	2.48 (1.59, 3.87)	<.001	1.97 (0.70, 5.56)	0.200
Abacavir/Lamivudine	1.46 (1.00, 2.13)	0.048	0.15 (0.02, 1.13)	0.065
Other NRTI pair	0.78 (0.20, 3.04)	0.718	2.80 (0.73, 10.80)	0.135

3rd drug started, n(%)

NNRTI (Yes vs. No)	4.00 (0.99, 16.21)	0.052	3.12 (0.35, 27.41)	0.306
PI or PI/r (Yes vs. No)	2.59 (0.64, 10.45)	0.181	2.08 (0.24, 17.98)	0.507
Other class (Yes vs. No)	1.21 (0.31, 4.69)	0.779	1.19 (0.19, 7.36)	0.849

Mental health disorders/depression

Yes vs. No	0.18 (0.02, 1.25)	0.083
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* >40 mg/dl for males and >50 mg/dl for females

Supplemental Table S3. RH of discontinuation due to simplification-Fine & Grays

	Relative hazards of discontinuation due to simplification (Fine & Grays approach)			
	Unadjusted RH (95% CI)	p-value	Adjusted RH (95% CI)	p-value
Gender, n(%)				
Female vs. male	0.84 (0.66, 1.09)	0.186	1.25 (0.70, 2.22)	0.447
Mode of HIV Transmission, n(%)				
IDU	1.00		1.00	0.005
Homosexual contacts	2.08 (1.30, 3.34)	0.002	3.42 (1.05, 11.17)	0.042
Heterosexual contacts	1.83 (1.14, 2.93)	0.013	4.37 (1.35, 14.09)	0.014
Other/Unknown	1.24 (0.65, 2.33)	0.515	5.24 (1.32, 20.81)	0.019
Nationality, n(%)				
Not Italian vs. Italian	0.64 (0.48, 0.85)	0.002	0.36 (0.17, 0.80)	0.012
AIDS diagnosis, n(%)				
Yes vs. No	0.87 (0.63, 1.21)	0.411	1.71 (0.78, 3.76)	0.180
CVD diagnosis, n(%)				
Yes vs. No	0.74 (0.18, 2.95)	0.664	5.41 (0.61, 47.75)	0.129
Hepatitis co-infection*, n(%)				
No	1.00		1.00	0.992
Yes	0.98 (0.72, 1.34)	0.918	1.37 (0.64, 2.93)	0.413
Not tested	1.01 (0.76, 1.33)	0.958	0.70 (0.33, 1.45)	0.335
Calendar year of baseline				
per more recent year	0.94 (0.87, 1.00)	0.056	0.89 (0.76, 1.03)	0.116
Age				
per 10 years older	0.97 (0.88, 1.06)	0.445	0.94 (0.73, 1.23)	0.664
CD4 count				
per 100 cells/mm3 higher	1.03 (0.98, 1.09)	0.233	0.76 (0.52, 1.11)	0.158
CD4 count nadir				
per 100 cells/mm3 higher	1.07 (1.02, 1.12)	0.008	1.64 (1.09, 2.48)	0.018
CD8 count				
per 100 cells/mm3 higher	1.03 (0.96, 1.10)	0.435	0.91 (0.83, 1.01)	0.075
Viral load				
per log10 copies/mL higher	1.00 (0.90, 1.10)	0.961	0.94 (0.76, 1.15)	0.532
Diabetes, n(%)				
Yes vs. No	0.73 (0.33, 1.64)	0.449		
Total cholesterol				
per 100 mg/dL higher	0.89 (0.67, 1.18)	0.424	1.25 (0.71, 2.21)	0.444
HDL cholesterol				
Altered* vs. normal	1.13 (0.91, 1.41)	0.258	1.12 (0.73, 1.72)	0.602
Use of statins, n(%)				
Yes vs. No	0.86 (0.51, 1.43)	0.553	1.24 (0.40, 3.82)	0.705
Use of blood pressure lowering drugs, n(%)				
Yes vs. No	0.95 (0.43, 2.14)	0.910	0.77 (0.09, 6.66)	0.813
Time from HIV diagnosis to date of starting cART				
per year longer	0.99 (0.97, 1.01)	0.347	1.02 (0.97, 1.07)	0.437
egfr (CKD_Epi formula)				
per 60 ml/min/1.73m higher	0.56 (0.28, 1.12)	0.098	0.62 (0.13, 2.89)	0.547
Blood glucose				
per 100 mg/dL higher	0.93 (0.65, 1.33)	0.700	0.67 (0.30, 1.47)	0.315

NRTI started, n(%)

Tenofovir/Emtricitabine	1.00		1.00	<.001
Zidovudine/lamivudine	0.80 (0.44, 1.47)	0.481	0.46 (0.10, 2.05)	0.308
Abacavir/Lamivudine	0.44 (0.26, 0.74)	0.002	1.00 (0.47, 2.13)	0.996
Other NRTI pair	2.21 (1.08, 4.55)	0.031	1.85 (0.29, 11.71)	0.516

3rd drug started, n(%)

NNRTI (Yes vs. No)	1.98 (0.70, 5.62)	0.199	2.10 (0.17, 25.63)	0.560
PI or PI/r (Yes vs. No)	0.97 (0.34, 2.73)	0.951	1.10 (0.09, 13.27)	0.937
Other class (Yes vs. No)	0.67 (0.26, 1.75)	0.417	0.67 (0.06, 6.92)	0.737

Mental health disorders/depression

Yes vs. No	0.52 (0.19, 1.39)	0.193	0.27 (0.04, 1.98)	0.196
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* >40 mg/dl for males and >50 mg/dl for females

Supplemental Figure S1 Overall Kaplan-Meier estimates of viral suppression

