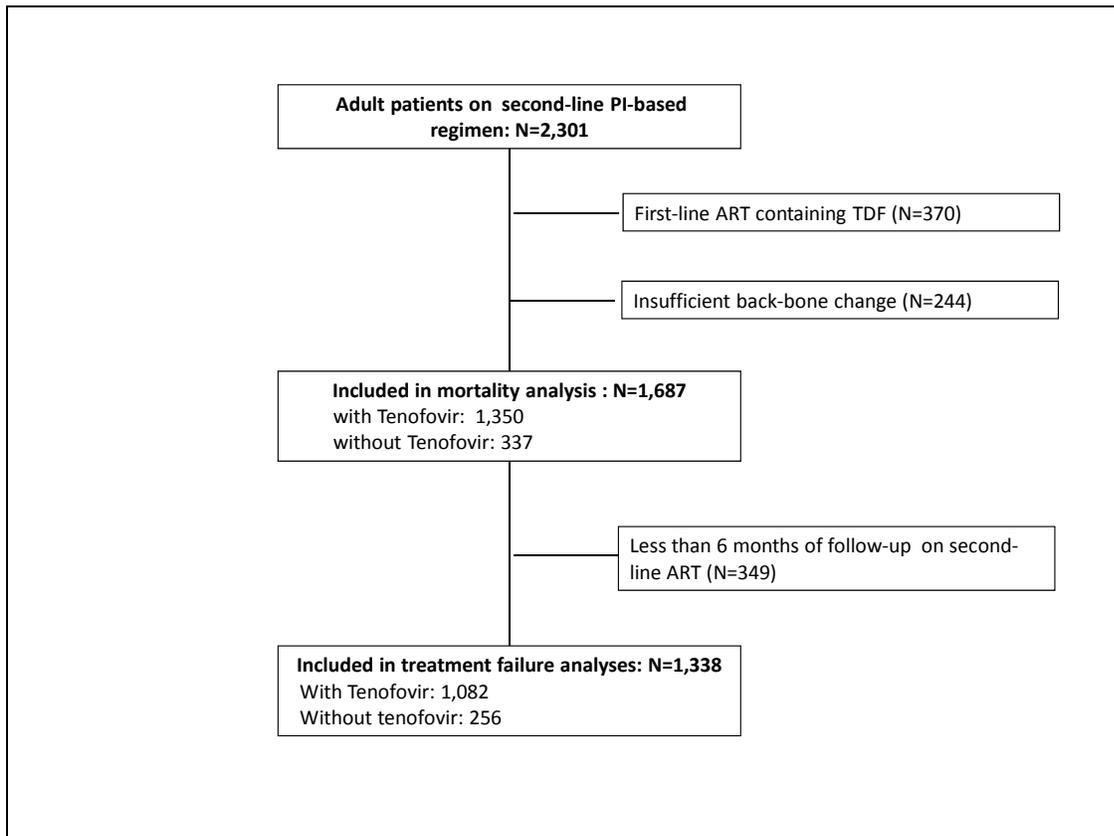


FIGURE S1: Selection of study participants in Zambia



SUPPLEMENTAL DIGITAL CONTENT

FIGURE S2: Selection of study participants in the Republic of South Africa

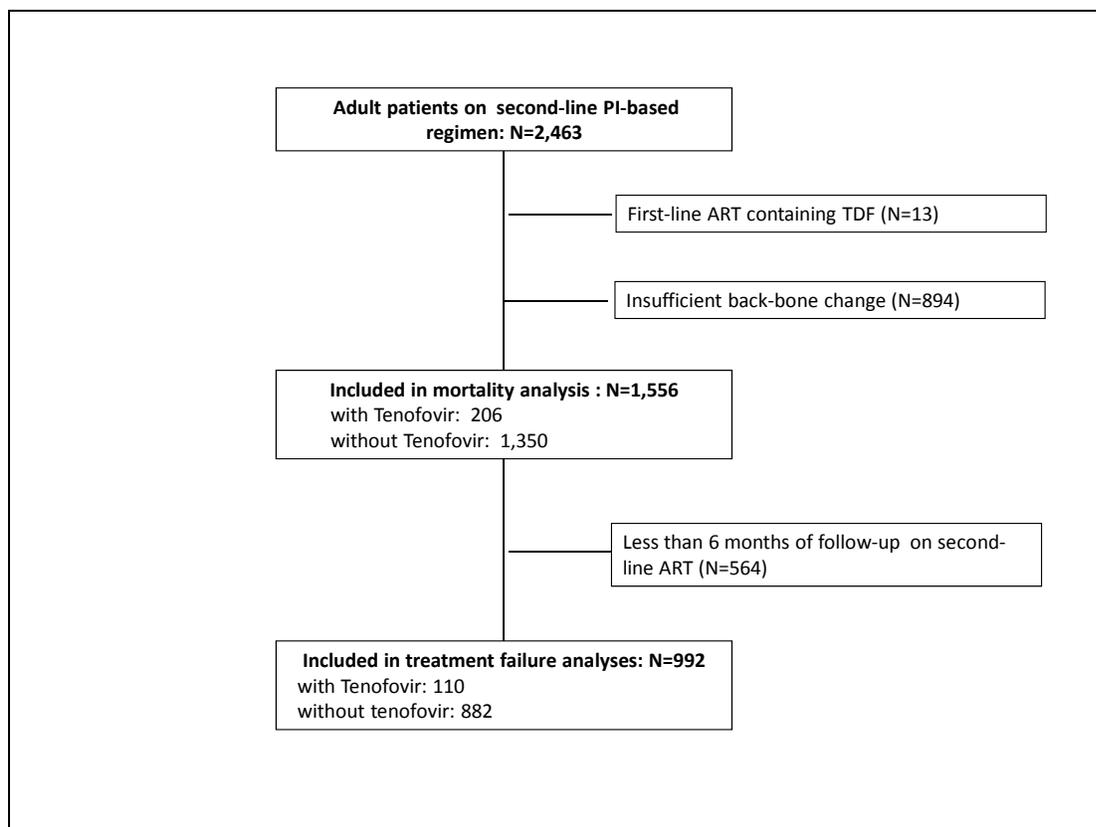


TABLE S1: Clinical outcomes of second-line antiretroviral therapy in Zambia.

	Mortality ^a (N=1,687)		Immunological failure ^b (N=1,338)	
	Sub-hazard Ratio (95% CI)	P	Hazard Ratio (95% CI)	P
Tenofovir		0.02		0.02
No	1		1	
Yes	0.49 (0.26-0.90)		0.60 (0.39-0.92)	
Age (years)		0.26		0.06
16-29	1		1	
30-39	0.56 (0.27-1.14)		0.74 (0.45-1.22)	

SUPPLEMENTAL DIGITAL CONTENT

≥ 40	0.74 (0.37-1.49)		0.53 (0.31-0.91)	
Sex		0.10		0.03
Male	1		1	
Female	0.65 (0.38-1.09)		0.66 (0.45-0.96)	
CD4 count at start of second-line ART (cells/μl)		0.49		<0.001
0-49	1		1	
50-99	0.96 (0.43-2.14)		1.80 (0.74-4.40)	
100-199	0.59 (0.27-1.30)		2.15 (0.95-4.85)	
≥ 200	0.56 (0.25-1.27)		3.45 (1.55-7.66)	
Not measured	0.76 (0.29-1.97)		0.46 (0.12-1.78)	
Time on first-line ART (months)		0.41		0.82
<18	1		1	
18-36	0.78 (0.40-1.50)		1.04 (0.64-1.70)	
>36	1.20 (0.55-2.63)		1.18 (0.67-2.05)	
Calendar year of second-line ART start		0.33		0.45
Before 2007	1		1	
2007	0.71 (0.29-1.71)		1.02 (0.43-2.39)	
2008	0.54 (0.20-1.51)		1.42 (0.59-3.45)	
2009	0.39 (0.13-1.14)		1.02 (0.39-2.71)	
2010	0.26 (0.06-1.14)		2.68 (0.28-25.23)	

^a From competing risk multivariable regression analysis adjusted for all variables in the table.

^b From Cox multivariable regression analysis adjusted for all variables in the table.

SUPPLEMENTAL DIGITAL CONTENT

TABLE S2: Clinical outcomes of second-line antiretroviral therapy in the Republic of South Africa.

	Mortality ^a		Immunological failure ^b		Virological failure ^b	
	(N=1,556)		(N=992)		(N=992)	
	Sub-hazard Ratio (95% CI)	P	Hazard Ratio (95% CI)	P	Hazard Ratio (95% CI)	P
Tenofovir		0.80		0.19		0.03
No	1		1		1	
Yes	1.13 (0.45-2.79)		0.60 (0.28-1.29)		0.28 (0.09-0.90)	
Age (years)		0.13		0.05		0.13
16-29	1		1		1	
30-39	1.06 (0.46-2.45)		0.53 (0.31-0.90)		0.53 (0.28-0.98)	
>=40	1.76 (0.77-3.98)		0.71 (0.41-1.23)		0.59 (0.31-1.11)	
Sex		0.74		0.09		<0.001
Male	1		1		1	
Female	0.90 (0.50-1.63)		0.70 (0.47-1.05)		0.34 (0.21-0.55)	
CD4 count at start of second-line ART (cells/μl)		<0.001		0.94		0.15
0-49	1		1		1	
50-99	0.46 (0.23-0.92)		0.71 (0.33-1.54)		0.66 (0.30-1.45)	
100-199	0.13 (0.06-0.27)		0.83 (0.44-1.58)		0.63 (0.33-1.19)	
>=200	0.13 (0.07-0.26)		0.82 (0.44-1.52)		0.47 (0.25-0.90)	
Not measured	0.32 (0.12-0.87)		N/A		0.70 (0.28-1.77)	
Time on first-line ART (months)		0.97		0.30		0.44
<18	1		1		1	
18-36	0.94 (0.55-1.59)		1.26 (0.85-1.88)		1.11 (0.72-1.71)	
>36	0.94 (0.41-2.15)		1.54 (0.83-2.87)		0.65 (0.28-1.49)	
Calendar year of second-line ART start		<0.001		<0.001		<0.001
Before 2007	1		1		1	
2007	0.65 (0.34-1.22)		0.50 (0.29-0.86)		2.20 (1.20-4.40)	
2008	0.69 (0.36-1.34)		2.14 (1.36-3.35)		30.35 (14.25-64.64)	
2009	0.35 (0.09-1.34)		3.80 (1.41-10.25)		202.73 (68.37-601.14)	
2010	<0.01 (<0.01-<0.01)		N/A		N/A	

^a From competing risk multivariable regression analysis adjusted for all variables in the table.

^b From Cox multivariable regression analysis adjusted for all variables in the table.