



Supplementary figure 1. Flow chart of exclusion in this observational cohort study.

Supplementary table 1. Mortality rates among HIV patients who initiated ART between 2011 and 2013 in Guangxi, China, by year post-ART initiation

Variable	Number of HIV patients	Deaths	Person years	Deaths/100 person years (95% CI)
Overall	25732	2062	78137.47	2.64(2.53-2.75)
Year post-ART initiation				
First year	25732	1164	23746.03	4.90(4.62-5.18)
Second year	22012	427	21711.84	1.97(1.78-2.15)
Third year	20852	273	18183.13	1.50(1.32-1.68)
Fourth year	13867	153	10697.61	1.43(1.20-1.66)
Fifth year	6505	45	3714.04	1.21(0.86-1.57)

Supplementary table 2. Attrition rates among HIV patients who initiated ART between 2011 and 2013 in Guangxi, China, by year post-ART initiation

Variable	Number of HIV patients	Attritions	Person years	Attritions /100 person year (95% CI)
Overall	25732	3893	78137.47	4.98(4.83-5.15)
Year post-ART initiation				
First year	25732	3105	23746.03	13.08(12.62-13.54)
Second year	22012	1136	21711.84	5.23(4.93-5.54)
Third year	20852	727	18183.13	4.00(3.71-4.29)
Fourth year	13867	342	10697.61	3.20(2.86-3.54)
Fifth year	6505	124	3714.04	3.34(2.75-3.93)

Supplementary table 3. Death + drop-out rates among HIV patients who initiated ART between 2011 and 2013 in Guangxi, China, by year post-ART initiation

Variable	Number of HIV patients	Deaths + drop-out	Person years	Deaths + drop-out /100 person years (95% CI)
Overall	25732	5955	78137.47	7.62(7.43-7.81)
Year post-ART initiation				
First year	25732	4269	23746.03	17.98(17.44-18.52)
Second year	22012	1563	21711.84	7.20(6.84-7.56)
Third year	20852	1000	18183.13	5.50(5.16-5.84)
Fourth year	13867	495	10697.61	4.63(4.22-5.03)
Fifth year	6505	169	3714.04	4.55(3.86-5.24)

Supplementary table 4. Effects of initial ART regimen on death + drop-out in HIV-infected patients who started ART between 2011 and 2013 in Guangxi, China

Variable	Number	Deaths+ drop-out	Person years	Deaths + drop-out /100 person years (95% CI)	AHR* (95%CI)	P-value	AHR* (95%CI)	P-value
Total	25732	5955	78137.47	7.62(7.43-7.81)				
Initial ART regimen								
D4T-based regimen	5483	1531	17384.21	8.81(8.37-9.25)	Reference			
AZT-based regimen	12018	2385	38705.61	6.16(5.91-6.41)	0.79(0.74-0.85)	<0.001	Reference	
TDF-based regimen	5352	1109	14315.82	7.75(7.29-8.20)	0.85(0.78-0.92)	<0.001	1.07(1.00-1.15)	0.06
LPV/r-based regimen	2879	930	7731.82	12.03(11.26-12.80)	1.32(1.22-1.44)	<0.001	1.67(1.54-1.81)	<0.001

* AHR=adjusted hazard ratio; covariates of the adjusted model included: age, sex, marital status, route of HIV infection, CD4 count before ART, WHO clinic stage before ART.

Supplementary table 5. Effects of initial ART regimen on death in HIV-infected patients who started ART between 2011 and 2013 in Guangxi, China

Variable	Number	Deaths	Person years	Deaths /100 person years (95% CI)	AHR* (95%CI)	P-value	AHR* (95%CI)	P-value
Total	25732	2062	78137.47	2.64(2.53-2.75)				
Initial ART regimen								
NNRTI-based regimen	22853	1739	70405.65	2.47(2.35-2.59)	Reference			
PI-based regimen	2879	323	7731.82	4.18(3.72-4.63)	1.51(1.33-1.71)	<0.001		
NNRTI-based regimen								
D4T-based regimen	5483	656	17384.21	3.77(3.48-4.06)	Reference			
AZT-based regimen	12018	695	38705.61	1.80(1.66-1.93)	0.64(0.57-0.71)	<0.001	Reference	
TDF-based regimen	5352	388	14315.82	2.71(2.44-2.98)	0.79(0.70-0.90)	<0.001	1.24(1.09-1.41)	<0.001
PI-based regimen								
LPV/r+3TC+D4T	280	45	717.04	6.28(4.44-8.11)	Reference			
LPV/r+3TC+AZT	863	39	2471.79	1.58(1.08-2.07)	0.62(0.40-0.97)	0.03	Reference	
LPV/r+3TC+TDF	1736	239	4542.99	5.26(4.59-5.93)	0.96(0.70-1.32)	0.81	1.54(1.09-2.48)	0.01

* AHR=adjusted hazard ratio; covariates of the adjusted model included: age, sex, marital status, route of HIV infection, CD4 count before ART, WHO clinic stage before ART.

Supplementary table 6. Effects of initial ART regimen on drop-out in HIV-infected patients who started ART between 2011 and 2013 in Guangxi, China

Variable	Number	Drop-out	Person years	Drop-out /100 person years (95% CI)	AHR* (95%CI)	P-value	AHR* (95%CI)	P-value
Total	25732	3893	78137.47	4.98(4.83-5.14)				
Initial ART regimen								
NNRTI-based regimen	22853	3286	70405.65	4.67(4.51-4.83)	Reference			
PI-based regimen	2879	607	7731.82	7.85(7.23-8.48)	1.55(1.42-1.70)	<0.001		
NNRTI-based regimen								
D4T-based regimen	5483	875	17384.21	5.03(4.70-5.37)	Reference			
AZT-based regimen	12018	1690	38705.61	4.37(4.16-4.57)	0.88(0.80-0.95)	<0.001	Reference	

TDF-based regimen	5352	721	14315.82	5.04(4.67-5.40)	0.88(0.79-0.97)	<0.001	1.00(1.05-1.24)	0.002
PI-based regimen								
LPV/r+3TC+D4T	280	71	717.04	9.90(7.60-12.21)	Reference			
LPV/r+3TC+AZT	863	163	2471.79	6.59(5.58-7.61)	1.00(0.74-1.33)	0.97	Reference	
LPV/r+3TC+TDF	1736	373	4542.99	8.21(7.38-9.04)	0.85(0.66-1.09)	0.20	1.00(0.92-1.09)	0.99

* AHR=adjusted hazard ratio; covariates of the adjusted model included: age, sex, marital status, route of HIV infection, CD4 count before ART, WHO clinic stage before ART.

Supplementary table 7. Effects of initial ART regimen on death and drop-out in HIV-infected patients who started ART between 2011 and 2013 in Guangxi, China

Variable	Number	Deaths + drop-out	Person years	Deaths + drop-out /100 person years (95% CI)	AHR* (95%CI)	P-value	AHR* (95%CI)	P-value
Total	25732	5955	78137.47	7.62(7.43-7.81)				
Initial ART regimen								
NNRTI-based regimen	22853	5025	70405.65	7.14(6.94-7.33)	Reference			
PI-based regimen	2879	930	7731.82	12.03(11.26-12.80)	1.54(1.44-1.66)	<0.001		
NNRTI-based regimen								
D4T-based regimen	5483	1531	17384.21	8.81(8.37-9.25)	Reference			
AZT-based regimen	12018	2385	38705.61	6.16(5.91-6.41)	0.78(0.73-0.83)	<0.001	Reference	
TDF-based regimen	5352	1109	14315.82	7.75(7.29-8.20)	0.84(0.77-0.91)	<0.001	1.07(1.00-1.15)	0.06
PI-based regimen								
LPV/r+3TC+D4T	280	116	717.04	16.18(13.23-19.12)	Reference			
LPV/r+3TC+AZT	863	202	2471.79	8.17(7.05-9.30)	0.89(0.70-1.13)	0.32	Reference	
LPV/r+3TC+TDF	1736	612	4542.99	13.47(12.40-14.54)	0.89(0.73-1.09)	0.25	1.00(0.85-1.19)	0.97

* AHR=adjusted hazard ratio; covariates of the adjusted model included: age, sex, marital status, route of HIV infection, CD4 count before ART, WHO clinic stage before ART.