Appendix

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Figure S1. Flow diagram of participant selection from CASCADE database

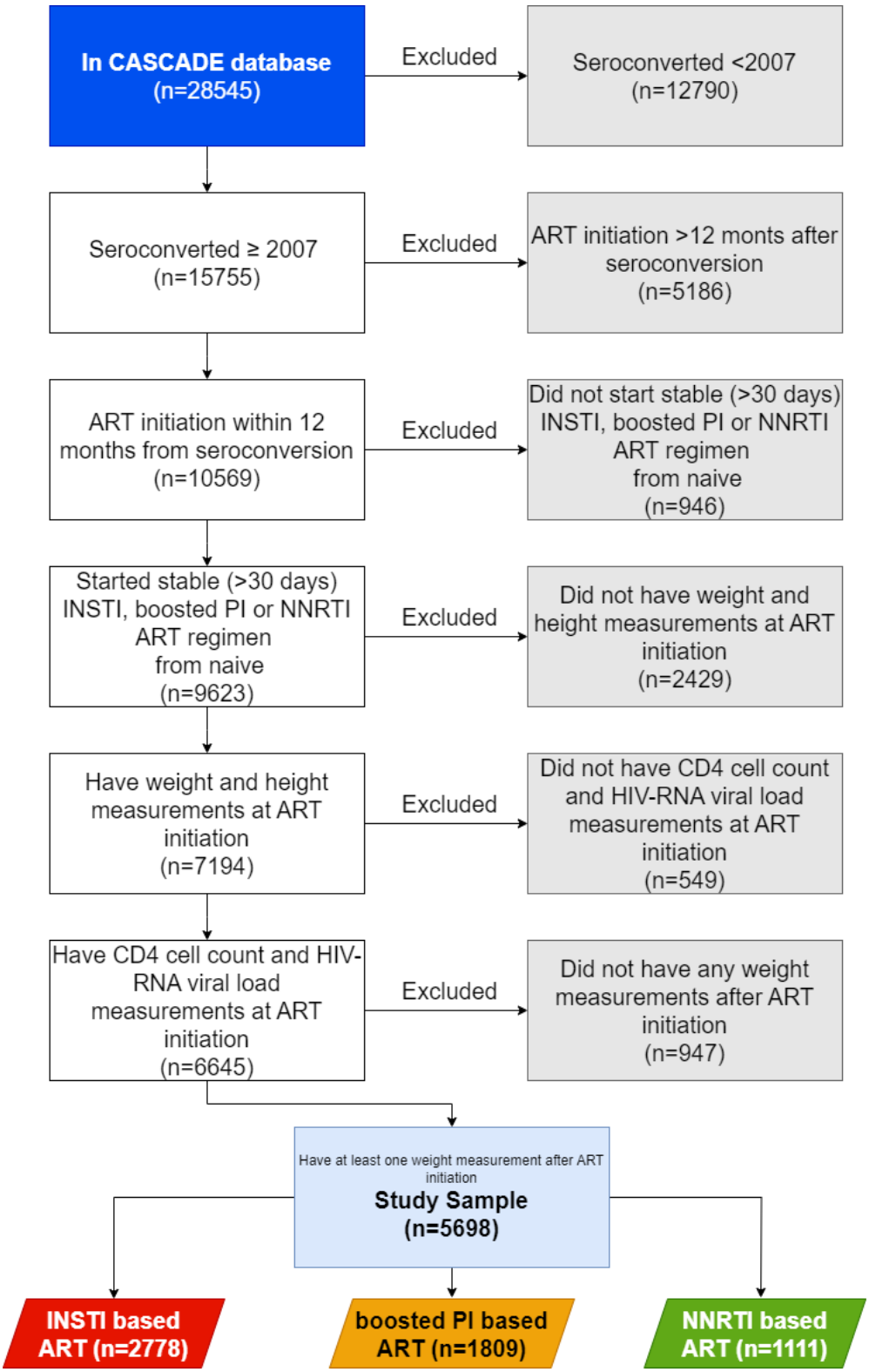
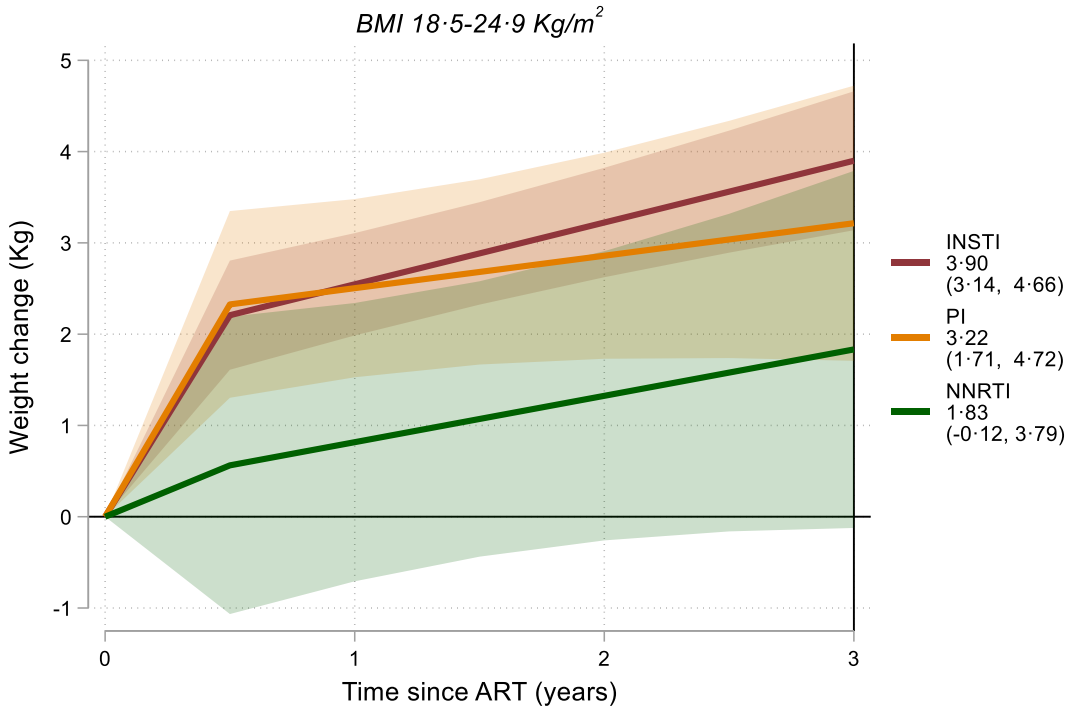


Figure S2. Estimated weight changes after ART initiation by ART class after exclusion of individuals initiating a TDF or efavirenz containing regimen. Shaded areas represent 95% CIs. Estimates derived from a mixed model similar to the one used in the main analysis. Results shown only for individuals with BMI in the 18.5-24.9 Kg/m2 range due to the small size of the remaining BMI groups.



Estimates shown for men having sex with men, aged 30-39 at seroconversion, originating from Europe or North America, with average height, baseline CD4 cell count and HIV-RNA.

Table S1. Demographic, clinical and anthropometric characteristics of 5698 individuals included in the study and 1496 individuals excluded due to lack of available weight and height measurements at baseline.

Variable	Included	Excluded	p-value
Age at diagnosis, years	33·9 (27·0, 43·4)	34·0 (27·6, 43·3)	0·42
Sex at birth and probable exposure route			<0·0001
Men having sex with men	4519 (79·3%)	1150 (76·9%)	
Injecting drug use	31 (0·5%)	36 (2·4%)	
Men having sex with women	469 (8·2%)	95 (6·4%)	
Women having sex with men	492 (8·6%)	118 (7·9%)	
Unknown	187 (3·3%)	97 (6·5%)	
Region of origin			<0·0001
Europe/N· America	4338 (76·1%)	1102 (73·7%)	
Sub-Saharan Africa	474 (8·3%)	82 (5·5%)	
Latin America/Caribbean	457 (8·0%)	142 (9·5%)	
Other	429 (7·5%)	141 (9·4%)	
Unknown	0 (0·0%)	29 (1·9%)	
Year of estimated seroconversion	2015 (2012, 2017)	2016 (2013, 2018)	<0·0001
Baseline CD4 (cells/µL)	459 (328, 620)	470 (339, 635)	0·032
Baseline HIV-RNA (log_{10} copies/mL)	4·9 (4·3, 5·5)	5·0 (4·3, 5·7)	0·0039

Table S2. Main drug in ART regimen and backbone for 5698 HIV seroconverters in CASCADE

Main drug	NRTI Backbone drugs				
	Emtricitabine + TDF (n=3424)	**Emtricitabine + TAF** (n=829)	**Abacavir + Lamivudine** (n=692)	**Other + TDF** (n=20)	**Other (w.o. TDF/TAF)** (n=103)
INSTI (n=2778)					
Dolutegravir	525 (45·0%)	40 (3·4%)	527 (45·2%)	5 (0·4%)	70 (6·0%)
Elvitegravir	452 (62·1%)	276 (37·9%)	0 (0·0%)	0 (0·0%)	0 (0·0%)
Bictegravir	0 (0·0%)	558 (100·0%)	0 (0·0%)	0 (0·0%)	0 (0·0%)
Raltegravir	275 (84·6%)	4 (1·2%)	15 (4·6%)	3 (0·9%)	28 (8·6%)
PI (n=1809)					
Darunavir	1196 (89·1%)	37 (2·8%)	108 (8·0%)	1 (0·1%)	1 (0·1%)
Atazanavir	251 (90·0%)	0 (0·0%)	25 (9·0%)	1 (0·4%)	2 (0·7%)
Other PI	124 (66·3%)	0 (0·0%)	20 (10·7%)	0 (0·0%)	43 (23·0%)
NNRTI (n=1111)					
Efavirenz	534 (96·7%)	0 (0·0%)	15 (2·7%)	0 (0·0%)	3 (0·5%)
Rilpivirine	430 (84·6%)	71 (14·0%)	7 (1·4%)	0 (0·0%)	0 (0·0%)
Other NNRTI	30 (58·8%)	1 (2·0%)	8 (15·7%)	11 (21·6%)	1 (2·0%)

Table S3. Timing and frequency of weight measurements for 5698 HIV seroconverters in CASCADE

a) by ART class

Variable	INSTI	PI	NNRTI	Overall	p-value
	n=2778 (48.8%)	n=1809 (31.7%)	n=1111 (19.5%)	N=5698 (100%)	
Interval between seroconversion and baseline measurement (years)	0·3 (0·1, 0·4)	0·3 (0·1, 0·5)	0·4 (0·2, 0·6)	0·3 (0·1, 0·5)	<0·0001
Number of measurements	5·0 (3·0, 8·0)	5·0 (3·0, 8·0)	7·0 (3·0, 12·0)	5·0 (3·0, 9·0)	<0·0001
Average interval between measurements (months)	5·4 (3·2, 8·1)	3·3 (2·1, 5·1)	5·7 (3·8, 8·5)	4·7 (2·8, 7·3)	<0·0001
Interval between ART initiation and last measurement (years)	2·1 (0·8, 4·1)	1·1 (0·5, 2·5)	3·2 (1·1, 6·1)	1·9 (0·7, 4·0)	<0·0001

b) by baseline BMI category

Variable	<18.5	18.5-24.9	25-29.9	≥30	Overall	p-value
	n=339 (5.9%)	n=4043 (71.0%)	n=1070 (18.8%)	n=246 (4.3%)	N=5698 (100%)	
Interval between seroconversion and baseline measurement (years)	0·3 (0·1, 0·5)	0·3 (0·1, 0·5)	0·3 (0·2, 0·5)	0·3 (0·2, 0·5)	0·3 (0·1, 0·5)	0·034
Number of measurements	5·0 (3·0, 8·0)	5·0 (3·0, 9·0)	5·0 (3·0, 9·0)	5·0 (3·0, 9·0)	5·0 (3·0, 9·0)	0·21
Average interval between measurements (months)	4·3 (2·3, 6·7)	4·7 (2·8, 7·4)	4·7 (2·9, 7·2)	4·6 (3·0, 7·3)	4·7 (2·8, 7·3)	0·11
Interval between ART initiation and last measurement (years)	1·6 (0·5, 3·6)	1·9 (0·6, 4·0)	2·0 (0·8, 4·2)	1·8 (0·7, 3·6)	1·9 (0·7, 4·0)	0·057

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