Long-term immunologic response to antiretroviral therapy in low-income countries: a collaborative analysis of prospective studies.

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Appendix

The table below shows the mixed-effects model for CD4 (square-root transformed). CD4 response with time on treatment in individual patients (level-1 random effect) from different cohorts (level-2 random effect). Time t was modelled using a second order fractional polynomial function transforming t to the power of -0.5 and using the natural logarithm of t. The fractional polynomial function was fitted for each of the CD4 categories using interaction terms. We further allowed for random variation in slope of the fractional polynomial function between individuals. Fixed-effects included age at start of HAART, gender and year of HAART initiation. Note that time on treatment was in years from start of treatment, but adding one year as to allow flexible and accurate modelling of CD4 response close to the start of treatment. Thus, entering t=2 into the equation yields estimates for the CD4 response at 1 year, t=3 for estimates at 2 years, and so forth.

Predictor variable	Category	Estimate (95% CI)	P-value
Constant		86.92 (83.33 to 90.52)	
Baseline CD4 (cells/µL)	< 25	- reference -	< 0.0001
	25-49	-8.18 (-16.1 to -0.25)	
	50-99	-16.71 (-21.17 to -12.25)	
	100-149	-24.75 (-29.73 to -19.77)	
	150-199	-27.63 (-32.34 to -22.92)	
	200-299	-36.04 (-41.51 to -30.58)	
	300+	-49.25 (-55.65 to -42.85)	
Time t to power -0.5	CD4 < 25	- reference -	< 0.0001
	CD4 25-49	11 (3.05 to 18.96)	
	CD4 50-99	21.98 (17.47 to 26.49)	
	CD4 100-149	32.48 (27.45 to 37.51)	
	CD4 150-199	37.33 (32.58 to 42.09)	
	CD4 200-299	48.03 (42.53 to 53.53)	
	CD4 300+	64.71 (58.25 to 71.17)	
Natural log time t	CD4 < 25	- reference -	< 0.0001
	CD4 25-49	2.22 (-1.02 to 5.46)	
	CD4 50-99	4.78 (2.98 to 6.57)	
	CD4 100-149	7.59 (5.57 to 9.61)	
	CD4 150-199	8.78 (6.88 to 10.69)	
	CD4 200-299	12.08 (9.87 to 14.29)	
	CD4 300+	16.8 (14.22 to 19.37)	
Age	15-29	- reference -	< 0.0001
	30-39	-0.18 (-0.26 to -0.1)	
	40-65	-0.25 (-0.34 to -0.16)	
Sex	Male	- reference -	
	Female	0.23 (0.16 to 0.3)	< 0.0001
Year of HAART initiation	< 2001	- reference -	< 0.0001
	2001	-0.08 (-0.31 to 0.16)	
	2002	0.05 (-0.17 to 0.27)	
	2003	0.06 (-0.15 to 0.28)	
	2004	0.27 (0.07 to 0.47)	
	2005	0.53 (0.33 to 0.73)	
	2006-2007	0.71 (0.48 to 0.93)	