THE LANCET

Supplementary webappendix

This webappendix formed part of the original submission and has been peer reviewed. We post it as supplied by the authors.

Supplement to: May M, Boulle A, Phiri S, et al, for the IeDEA Southern Africa and West Africa. Prognosis of patients with HIV-1 infection starting antiretroviral therapy in sub-Saharan Africa: a collaborative analysis of scale-up programmes. *Lancet* 2010; published online July 16. DOI:10.1016/S0140-6736(10)60666-6.

Estimates from CD4 model:

Cumulative mortality at 3, 6, and 12 months after starting combination antiretroviral therapy according to CD4 count, age, disease stage and weight.

a) Women

Weight (kg)	Month	CD4 count (cells/μL)				
		<25	25-49	50-99	100-199	≥200
Age <40 years WHO stage I/II						
<45	3	7.8 (5.2-11.8)	5.8 (3.7- 9.0)	3.2 (2.0- 5.0)	2.1 (1.4- 3.3)	1.8 (1.1- 2.8)
	6	10.1 (6.7-15.1)	7.7 (5.0-11.9)	4.5 (2.9- 7.0)	3.3 (2.1- 5.0)	2.7 (1.7- 4.3)
	12	12.2 (8.1-18.0)	9.5 (6.2-14.4)	5.8 (3.7- 8.9)	4.4 (2.9- 6.7)	3.7 (2.4- 5.8)
45-49	3	4.7 (3.1- 7.0)	3.5 (2.3- 5.3)	1.9 (1.2- 2.9)	1.3 (0.8- 1.9)	1.1 (0.7- 1.7)
	6	6.1 (4.1- 9.1)	4.6 (3.1- 7.0)	2.7 (1.8- 4.1)	1.9 (1.3- 2.9)	1.6 (1.1- 2.5)
	12	7.4 (5.0-10.9)	5.7 (3.8- 8.6)	3.5 (2.3- 5.2)	2.6 (1.8- 3.9)	2.2 (1.4- 3.4)
50-59	3	3.2 (2.1- 4.7)	2.3 (1.5- 3.5)	1.3 (0.8- 1.9)	0.8 (0.6- 1.3)	0.7 (0.5- 1.1)
	6	4.1 (2.8- 6.1)	3.1 (2.1- 4.7)	1.8 (1.2- 2.7)	1.3 (0.9- 1.9)	1.1 (0.7- 1.7)
	12	5.0 (3.4- 7.3)	3.9 (2.6- 5.7)	2.3 (1.6- 3.5)	1.8 (1.2- 2.6)	1.5 (1.0- 2.2)
≥60	3	1.9 (1.3- 2.9)	1.4 (0.9- 2.1)	0.8 (0.5- 1.2)	0.5 (0.3- 0.8)	0.4 (0.3- 0.7)
	6	2.5 (1.7- 3.7)	1.9 (1.3- 2.9)	1.1 (0.7- 1.6)	0.8 (0.5- 1.2)	0.7 (0.4- 1.0)
	12	3.0 (2.1- 4.5)	2.3 (1.6- 3.5)	1.4 (0.9- 2.1)	1.1 (0.7- 1.6)	0.9 (0.6- 1.4)
WHO stage III/IV						
<45	3	19.8 (16.4-23.9)	14.9 (11.8-18.8)	8.3 (6.4-10.8)	5.7 (4.4- 7.3)	4.8 (3.6- 6.3)
	6	25.2 (21.1-29.9)	19.6 (15.8-24.3)	11.7 (9.2-14.8)	8.6 (6.8-10.9)	7.3 (5.5- 9.5)
	12	29.7 (25.1-35.0)	23.7 (19.2-29.0)	15.0 (11.9-18.7)	11.5 (9.2-14.4)	9.8 (7.5-12.6)
45-49	3	12.3 (10.0-14.9)	9.1 (7.2-11.5)	5.0 (3.9- 6.4)	3.4 (2.7- 4.3)	2.9 (2.2- 3.8)
	6	15.8 (13.1-19.0)	12.1 (9.7-15.1)	7.1 (5.6- 8.9)	5.2 (4.2- 6.5)	4.4 (3.3- 5.7)
	12	18.8 (15.7-22.5)	14.8 (12.0-18.2)	9.1 (7.3-11.4)	7.0 (5.7- 8.6)	5.9 (4.5- 7.6)
50-59	3	8.4 (6.9-10.1)	6.2 (4.9- 7.8)	3.4 (2.7- 4.3)	2.3 (1.9- 2.8)	1.9 (1.5- 2.5)
	6	10.9 (9.1-13.0)	8.3 (6.7-10.2)	4.8 (3.9- 6.0)	3.5 (2.9- 4.3)	2.9 (2.3- 3.8)
	12	13.0 (11.0-15.5)	10.1 (8.3-12.3)	6.2 (5.1- 7.6)	4.7 (3.9- 5.7)	4.0 (3.1- 5.1)
≥60	3	5.1 (4.0- 6.5)	3.8 (2.9- 4.9)	2.1 (1.6- 2.7)	1.4 (1.1- 1.8)	1.2 (0.9- 1.6)
	6	6.7 (5.3- 8.4)	5.1 (4.0- 6.5)	2.9 (2.3- 3.8)	2.1 (1.7- 2.7)	1.8 (1.3- 2.4)
	12	8.1 (6.4-10.1)	6.2 (4.9- 7.9)	3.8 (3.0- 4.8)	2.9 (2.3- 3.6)	2.4 (1.8- 3.2)
Age ≥40 years WHO stage I/II						
<45	3	11.0 (7.2-16.6)	8.2 (5.2-12.7)	4.5 (2.8- 7.1)	3.0 (1.9- 4.7)	2.5 (1.6- 4.1)
	6	14.2 (9.4-21.1)	10.9 (7.0-16.7)	6.4 (4.1- 9.9)	4.6 (3.0- 7.2)	3.9 (2.5- 6.1)
	12	16.9 (11.3-25.0)	13.2 (8.6-20.1)	8.2 (5.3-12.6)	6.2 (4.0- 9.6)	5.3 (3.3- 8.2)
45-49	3	6.7 (4.4-10.0)	4.9 (3.2- 7.6)	2.7 (1.7- 4.1)	1.8 (1.2- 2.8)	1.5 (1.0- 2.4)
	6	8.6 (5.8-12.9)	6.6 (4.3-10.0)	3.8 (2.5- 5.8)	2.8 (1.8- 4.2)	2.3 (1.5- 3.6)
	12	10.4 (7.0-15.4)	8.1 (5.3-12.2)	4.9 (3.2- 7.5)	3.7 (2.5- 5.6)	3.1 (2.0- 4.8)
50-59	3	4.5 (3.0- 6.7)	3.3 (2.2- 5.0)	1.8 (1.2- 2.7)	1.2 (0.8- 1.8)	1.0 (0.7- 1.6)
	6	5.9 (3.9- 8.7)	4.5 (2.9- 6.7)	2.6 (1.7- 3.9)	1.9 (1.2- 2.8)	1.6 (1.0- 2.4)
	12	7.1 (4.8-10.5)	5.5 (3.6- 8.2)	3.3 (2.2- 5.0)	2.5 (1.7- 3.7)	2.1 (1.4- 3.2)
≥60	3	2.7 (1.8- 4.1)	2.0 (1.3- 3.1)	1.1 (0.7- 1.7)	0.7 (0.5- 1.1)	0.6 (0.4- 0.9)
	6	3.6 (2.4- 5.4)	2.7 (1.8- 4.1)	1.6 (1.0- 2.4)	1.1 (0.8- 1.7)	0.9 (0.6- 1.4)
	12	4.3 (2.9- 6.5)	3.3 (2.2- 5.0)	2.0 (1.3- 3.0)	1.5 (1.0- 2.3)	1.3 (0.8- 1.9)
WHO stage III/IV						
<45	3	27.1 (22.2-32.8)	20.7 (16.2-26.1)	11.7 (9.0-15.2)	8.0 (6.2-10.4)	6.8 (5.1- 9.0)
	6	34.0 (28.3-40.5)	26.9 (21.5-33.3)	16.4 (12.8-20.8)	12.1 (9.5-15.3)	10.2 (7.8-13.4)
	12	39.6 (33.3-46.7)	32.0 (25.9-39.2)	20.7 (16.4-25.9)	16.1 (12.7-20.2)	13.7 (10.5-17.7)
45-49	3	17.1 (13.8-21.0)	12.8 (10.0-16.3)	7.1 (5.5- 9.2)	4.8 (3.8- 6.2)	4.1 (3.1- 5.4)
	6	21.8 (17.8-26.5)	16.9 (13.4-21.1)	10.0 (7.9-12.7)	7.3 (5.8- 9.2)	6.2 (4.7- 8.1)
	12	25.8 (21.3-31.1)	20.4 (16.4-25.2)	12.8 (10.2-16.0)	9.8 (7.9-12.2)	8.3 (6.4-10.8)
50-59	3	11.8 (9.5-14.5)	8.8 (6.9-11.1)	4.8 (3.8- 6.2)	3.3 (2.6- 4.1)	2.7 (2.1- 3.6)
	6	15.2 (12.4-18.5)	11.7 (9.3-14.5)	6.8 (5.4- 8.5)	5.0 (4.0- 6.1)	4.2 (3.2- 5.4)
	12	18.1 (14.9-21.9)	14.2 (11.4-17.5)	8.8 (7.1-10.9)	6.7 (5.5- 8.2)	5.6 (4.4- 7.3)
≥60	3	7.3 (5.6- 9.3)	5.4 (4.1- 7.1)	2.9 (2.2- 3.9)	2.0 (1.5- 2.5)	1.7 (1.2- 2.2)
	6	9.4 (7.4-12.0)	7.2 (5.5- 9.3)	4.2 (3.2- 5.4)	3.0 (2.4- 3.8)	2.5 (1.9- 3.4)
	12	11.3 (8.9-14.3)	8.8 (6.8-11.3)	5.4 (4.2- 6.9)	4.1 (3.2- 5.1)	3.4 (2.6- 4.5)

b) Men

Weight (kg)	Month	CD4 count (cells/μL)				
		<25	25-49	50-99	100-199	≥200
Age <40 years						
WHO stage I/II						
<45	3	11.3 (7.2-17.5)	8.4 (5.2-13.4)	4.6 (2.8- 7.5)	3.1 (1.9- 5.1)	2.6 (1.6- 4.3)
	6	14.6 (9.4-22.2)	11.2 (7.0-17.6)	6.5 (4.0-10.5)	4.8 (2.9- 7.6)	4.0 (2.4- 6.5)
	12	17.4 (11.3-26.3)	13.6 (8.6-21.2)	8.4 (5.2-13.4)	6.4 (4.0-10.2)	5.4 (3.3- 8.8)
45-49	3	6.8 (4.5-10.4)	5.1 (3.2- 7.9)	2.8 (1.7- 4.3)	1.9 (1.2- 2.9)	1.6 (1.0- 2.5)
	6	8.9 (5.8-13.4)	6.8 (4.4-10.5)	3.9 (2.5- 6.1)	2.8 (1.8- 4.4)	2.4 (1.5- 3.8)
	12	10.7 (7.1-16.0)	8.3 (5.4-12.7)	5.1 (3.3- 7.8)	3.8 (2.5- 5.9)	3.2 (2.0- 5.1)
50-59	3	4.6 (3.1- 6.9)	3.4 (2.2- 5.2)	1.9 (1.2- 2.8)	1.2 (0.8- 1.9)	1.0 (0.7- 1.6)
	6	6.0 (4.1- 9.0)	4.6 (3.0- 6.9)	2.6 (1.7- 4.0)	1.9 (1.3- 2.9)	1.6 (1.0- 2.5)
	12	7.3 (4.9-10.7)	5.6 (3.7- 8.5)	3.4 (2.3- 5.2)	2.6 (1.7- 3.9)	2.2 (1.4- 3.3)
≥60	3	2.8 (1.9- 4.2)	2.1 (1.3- 3.2)	1.1 (0.7- 1.7)	0.8 (0.5- 1.1)	0.6 (0.4- 1.0)
	6	3.7 (2.5- 5.5)	2.8 (1.8- 4.2)	1.6 (1.0- 2.4)	1.2 (0.8- 1.7)	1.0 (0.6- 1.5)
	12	4.5 (3.0- 6.6)	3.4 (2.3- 5.2)	2.1 (1.4- 3.1)	1.6 (1.0- 2.3)	1.3 (0.9- 2.0)
WHO stage III/IV						
<45	3	27.8 (22.2-34.4)	21.2 (16.2-27.5)	12.0 (8.9-16.1)	8.3 (6.1-11.1)	7.0 (5.0- 9.6)
	6	34.8 (28.3-42.4)	27.6 (21.5-35.0)	16.8 (12.7-22.0)	12.4 (9.3-16.4)	10.5 (7.7-14.3)
	12	40.5 (33.2-48.8)	32.8 (25.9-41.1)	21.3 (16.3-27.5)	16.5 (12.5-21.6)	14.0 (10.4-18.8)
45-49	3	17.5 (14.2-21.6)	13.1 (10.2-16.9)	7.3 (5.6- 9.6)	5.0 (3.8- 6.5)	4.2 (3.1- 5.7)
	6	22.4 (18.3-27.2)	17.4 (13.7-21.8)	10.3 (8.0-13.2)	7.5 (5.9- 9.7)	6.4 (4.8- 8.5)
	12	26.5 (21.8-31.9)	21.0 (16.7-26.1)	13.2 (10.4-16.7)	10.1 (7.9-12.9)	8.6 (6.4-11.3)
50-59	3	12.1 (10.0-14.6)	9.0 (7.2-11.3)	5.0 (3.9- 6.3)	3.4 (2.7- 4.2)	2.8 (2.1- 3.7)
	6	15.6 (13.1-18.5)	12.0 (9.7-14.7)	7.0 (5.6- 8.7)	5.1 (4.1- 6.3)	4.3 (3.3- 5.6)
	12	18.6 (15.7-22.0)	14.6 (12.0-17.7)	9.0 (7.3-11.1)	6.9 (5.6- 8.4)	5.8 (4.5- 7.5)
≥60	3	7.5 (6.0- 9.4)	5.5 (4.3- 7.1)	3.0 (2.3- 3.9)	2.0 (1.6- 2.6)	1.7 (1.3- 2.3)
	6	9.7 (7.8-12.0)	7.4 (5.8- 9.4)	4.3 (3.3- 5.5)	3.1 (2.5- 3.9)	2.6 (2.0- 3.5)
	12	11.7 (9.4-14.4)	9.0 (7.2-11.4)	5.5 (4.4- 7.0)	4.2 (3.4- 5.3)	3.5 (2.7- 4.7)
Age ≥40 years						
WHO stage I/II						
<45	3	15.8 (10.1-24.1)	11.8 (7.3-18.6)	6.5 (4.0-10.6)	4.4 (2.7- 7.2)	3.7 (2.3- 6.1)
	6	20.2 (13.1-30.3)	15.6 (9.8-24.2)	9.2 (5.7-14.7)	6.7 (4.2-10.8)	5.7 (3.5- 9.2)
	12	23.9 (15.7-35.5)	18.9 (12.0-28.9)	11.8 (7.4-18.6)	9.1 (5.7-14.3)	7.6 (4.7-12.3)
45-49	3	9.6 (6.3-14.6)	7.1 (4.6-11.1)	3.9 (2.5- 6.2)	2.6 (1.7- 4.1)	2.2 (1.4- 3.5)
	6	12.5 (8.2-18.7)	9.5 (6.2-14.6)	5.6 (3.6- 8.6)	4.0 (2.6- 6.3)	3.4 (2.1- 5.4)
	12	14.9 (9.9-22.2)	11.6 (7.6-17.7)	7.2 (4.6-11.0)	5.5 (3.5- 8.4)	4.6 (2.9- 7.2)
50-59	3	6.6 (4.4- 9.8)	4.8 (3.2- 7.4)	2.6 (1.7- 4.1)	1.8 (1.2- 2.7)	1.5 (1.0- 2.3)
	6	8.5 (5.7-12.6)	6.5 (4.3- 9.8)	3.8 (2.5- 5.7)	2.7 (1.8- 4.1)	2.3 (1.5- 3.5)
	12	10.3 (6.9-15.1)	8.0 (5.3-11.9)	4.9 (3.2- 7.3)	3.7 (2.5- 5.5)	3.1 (2.0- 4.8)
≥60	3	4.0 (2.7- 6.0)	2.9 (1.9- 4.5)	1.6 (1.0- 2.5)	1.1 (0.7- 1.6)	0.9 (0.6- 1.4)
	6	5.2 (3.5- 7.8)	4.0 (2.6- 6.0)	2.3 (1.5- 3.5)	1.6 (1.1- 2.5)	1.4 (0.9- 2.1)
	12	6.3 (4.2- 9.4)	4.9 (3.2- 7.4)	3.0 (2.0- 4.5)	2.2 (1.5- 3.3)	1.9 (1.2- 2.9)
WHO stage III/IV						
<45	3	37.3 (30.1-45.4)	28.9 (22.3-36.9)	16.8 (12.5-22.2)	11.6 (8.6-15.5)	9.8 (7.1-13.4)
	6	45.8 (37.7-54.7)	36.9 (29.2-46.0)	23.1 (17.7-29.9)	17.3 (13.1-22.6)	14.7 (10.9-19.7)
	12	52.5 (43.8-61.7)	43.4 (34.8-53.1)	29.0 (22.5-36.8)	22.7 (17.5-29.3)	19.5 (14.6-25.7)
45-49	3	24.1 (19.6-29.4)	18.3 (14.3-23.2)	10.3 (7.9-13.4)	7.0 (5.4- 9.1)	5.9 (4.4- 7.9)
	6	30.4 (25.0-36.6)	23.9 (19.0-29.7)	14.4 (11.3-18.3)	10.6 (8.3-13.5)	9.0 (6.8-11.8)
	12	35.6 (29.6-42.4)	28.6 (23.0-35.1)	18.3 (14.5-23.0)	14.2 (11.2-17.8)	12.0 (9.1-15.7)
50-59	3	16.9 (13.9-20.3)	12.6 (10.1-15.8)	7.0 (5.5- 8.9)	4.8 (3.8- 6.0)	4.0 (3.1- 5.2)
	6	21.5 (18.0-25.6)	16.7 (13.6-20.4)	9.9 (8.0-12.3)	7.2 (5.9- 8.9)	6.1 (4.7- 7.9)
	12	25.5 (21.5-30.1)	20.2 (16.6-24.4)	12.7 (10.3-15.5)	9.7 (7.9-11.9)	8.2 (6.4-10.5)
≥60	3	10.5 (8.4-13.1)	7.8 (6.0-10.0)	4.3 (3.3- 5.6)	2.9 (2.3- 3.7)	2.4 (1.8- 3.2)
	6	13.6 (10.9-16.8)	10.4 (8.2-13.2)	6.1 (4.8- 7.7)	4.4 (3.5- 5.6)	3.7 (2.8- 4.9)
	12	16.2 (13.2-19.9)	12.7 (10.1-15.9)	7.8 (6.2- 9.9)	6.0 (4.8- 7.4)	5.0 (3.8- 6.6)

Estimates from total lymphocyte and haemoglobin model:

Cumulative mortality at 3, 6, and 12 months after starting combination antiretroviral therapy according to degree of anaemia, total lymphocyte count, weight, age and clinical stage.

a) Women

Age<40 years		Severe anaemia (Hb <5 mmol/L)			Moderate anaemia (Hb 5 to <6.2 mmol/L)			Mild or no anaemia (Hb ≥6.2 mmol/L)		
WHO I or II		Total lymphocyte count<800	Total lymphocyte count 800-1199	Total lymphocyte count ≥1200	Total lymphocyte count<800	Total lymphocyte count 800-1199	Total lymphocyte count ≥1200	Total lymphocyte count<800	Total lymphocyte count 800-1199	Total lymphocyte count ≥1200
Wt (kg)	month									
<45	3	10.0 (6.1-16.4)	6.5 (4.0-10.5)	4.9 (3.1- 7.8)	6.4 (3.6-11.2)	4.1 (2.5- 6.7)	3.1 (1.9- 5.0)	4.3 (2.2- 8.3)	2.8 (1.6- 4.8)	2.1 (1.2- 3.6)
	6	12.4 (7.6-19.8)	8.4 (5.3-13.3)	6.4 (4.0- 9.9)	8.2 (4.8-14.0)	5.6 (3.5- 8.8)	4.2 (2.6- 6.6)	5.5 (2.9-10.4)	3.7 (2.2- 6.3)	2.8 (1.6- 4.8)
	12	12.7 (7.9-20.1)	9.2 (5.8-14.3)	6.9 (4.4-10.7)	9.2 (5.5-15.2)	6.6 (4.2-10.3)	5.0 (3.2- 7.8)	6.2 (3.4-11.3)	4.5 (2.7- 7.4)	3.3 (2.0- 5.6)
45-49	3	5.0 (3.1- 8.2)	3.2 (2.0- 5.2)	2.4 (1.5- 3.8)	3.2 (1.9- 5.4)	2.0 (1.3- 3.2)	1.5 (1.0- 2.4)	2.1 (1.1- 3.9)	1.3 (0.8- 2.2)	1.0 (0.6- 1.7)
	6	6.7 (4.1-10.8)	4.5 (2.8- 7.2)	3.4 (2.2- 5.3)	4.4 (2.6- 7.3)	3.0 (1.9- 4.6)	2.2 (1.4- 3.4)	3.0 (1.6- 5.3)	2.0 (1.2- 3.2)	1.5 (0.9- 2.4)
	12	8.0 (5.0-12.7)	5.7 (3.6- 9.1)	4.3 (2.7- 6.7)	5.8 (3.5- 9.3)	4.1 (2.7- 6.4)	3.1 (2.0- 4.7)	3.9 (2.2- 6.8)	2.8 (1.7- 4.4)	2.1 (1.3- 3.3)
50-59	3	3.3 (2.0- 5.6)	2.1 (1.3- 3.5)	1.6 (1.0- 2.6)	2.1 (1.2- 3.6)	1.3 (0.8- 2.1)	1.0 (0.6- 1.6)	1.4 (0.8- 2.6)	0.9 (0.5- 1.5)	0.7 (0.4- 1.1)
	6	4.5 (2.7- 7.5)	3.0 (1.9- 4.9)	2.3 (1.4- 3.6)	2.9 (1.7- 5.0)	2.0 (1.3- 3.1)	1.5 (1.0- 2.3)	2.0 (1.1- 3.6)	1.3 (0.8- 2.1)	1.0 (0.6- 1.6)
	12	5.4 (3.2- 8.8)	3.8 (2.4- 6.2)	2.9 (1.8- 4.5)	3.9 (2.3- 6.4)	2.7 (1.8- 4.3)	2.1 (1.3- 3.1)	2.6 (1.4- 4.6)	1.8 (1.1- 2.9)	1.4 (0.9- 2.2)
≥60	3	2.1 (1.2- 3.6)	1.4 (0.8- 2.3)	1.0 (0.6- 1.6)	1.3 (0.8- 2.3)	0.8 (0.5- 1.4)	0.6 (0.4- 1.0)	0.9 (0.5- 1.7)	0.6 (0.3- 0.9)	0.4 (0.3- 0.7)
	6	2.9 (1.7- 4.8)	1.9 (1.2- 3.1)	1.4 (0.9- 2.3)	1.9 (1.1- 3.2)	1.2 (0.8- 2.0)	0.9 (0.6- 1.5)	1.2 (0.7- 2.3)	0.8 (0.5- 1.4)	0.6 (0.4- 1.0)
	12	3.4 (2.0- 5.7)	2.4 (1.5- 4.0)	1.8 (1.1- 2.9)	2.4 (1.5- 4.1)	1.7 (1.1- 2.7)	1.3 (0.8- 2.0)	1.6 (0.9- 2.9)	1.2 (0.7- 1.9)	0.9 (0.5- 1.4)
WHO III or IV										
<45	3	26.9 (20.3-35.1)	18.1 (13.4-24.1)	13.8 (10.4-18.1)	17.8 (12.4-25.2)	11.7 (8.8-15.4)	8.9 (6.7-11.6)	12.2 (7.5-19.5)	7.9 (5.5-11.4)	6.0 (4.1- 8.7)
	6	32.3 (25.0-41.1)	22.9 (17.6-29.7)	17.7 (13.8-22.5)	22.4 (16.1-30.7)	15.6 (12.0-20.1)	11.9 (9.2-15.3)	15.5 (9.8-24.0)	10.7 (7.5-15.0)	8.1 (5.6-11.5)
	12	33.1 (26.1-41.4)	24.8 (19.3-31.5)	19.1 (15.1-24.0)	24.9 (18.6-33.0)	18.4 (14.4-23.2)	14.0 (11.1-17.7)	17.3 (11.4-25.9)	12.6 (9.1-17.3)	9.6 (6.8-13.4)
45-49	3	14.1 (10.4-18.9)	9.2 (6.6-12.8)	6.9 (5.1- 9.4)	9.1 (6.4-12.7)	5.9 (4.4- 7.7)	4.4 (3.4- 5.7)	6.1 (3.9- 9.4)	3.9 (2.8- 5.4)	2.9 (2.1- 4.1)
	6	18.6 (14.0-24.4)	12.8 (9.4-17.4)	9.7 (7.4-12.8)	12.5 (9.1-17.0)	8.5 (6.6-11.1)	6.4 (5.1- 8.2)	8.5 (5.6-12.7)	5.8 (4.2- 7.8)	4.3 (3.2- 5.9)
	12	21.8 (16.7-28.2)	16.0 (11.8-21.4)	12.2 (9.3-15.9)	16.1 (12.1-21.2)	11.7 (9.1-14.9)	8.8 (7.0-11.1)	11.0 (7.5-15.9)	7.9 (5.9-10.6)	6.0 (4.4- 8.0)
50-59	3	9.6 (6.8-13.3)	6.2 (4.4- 8.8)	4.7 (3.4- 6.3)	6.1 (4.2- 8.8)	3.9 (3.0- 5.2)	2.9 (2.3- 3.7)	4.1 (2.6- 6.4)	2.6 (1.9- 3.6)	2.0 (1.4- 2.7)
	6	12.7 (9.2-17.4)	8.7 (6.3-12.0)	6.6 (4.9- 8.7)	8.5 (6.0-11.9)	5.7 (4.4- 7.4)	4.3 (3.4- 5.4)	5.7 (3.7- 8.7)	3.9 (2.9- 5.2)	2.9 (2.2- 3.9)
	12	15.0 (11.1-20.2)	10.9 (7.9-14.9)	8.2 (6.2-10.9)	11.0 (8.1-14.8)	7.9 (6.1-10.1)	5.9 (4.8- 7.4)	7.4 (5.0-11.0)	5.3 (4.0- 7.1)	4.0 (3.0- 5.3)
≥60	3	6.1 (4.2- 8.9)	3.9 (2.7- 5.8)	3.0 (2.1- 4.2)	3.9 (2.6- 5.8)	2.5 (1.8- 3.4)	1.9 (1.4- 2.5)	2.6 (1.6- 4.2)	1.7 (1.2- 2.3)	1.2 (0.9- 1.7)
	6	8.2 (5.7-11.7)	5.6 (3.8- 8.0)	4.2 (3.0- 5.8)	5.4 (3.7- 7.9)	3.6 (2.7- 4.9)	2.7 (2.0- 3.6)	3.6 (2.3- 5.7)	2.4 (1.8- 3.4)	1.8 (1.3- 2.5)
	12	9.7 (6.8-13.7)	7.0 (4.9-10.0)	5.3 (3.7- 7.4)	7.0 (5.0- 9.9)	5.0 (3.7- 6.8)	3.8 (2.9- 5.0)	4.7 (3.1- 7.1)	3.4 (2.5- 4.6)	2.5 (1.8- 3.5)

a) Women (continued)

Age ≥40 years		Severe anaemia (Hb <5 mmol/L)			Moderate anaemia (Hb 5 to <6.2 mmol/L)			Mild or no anaemia (Hb ≥6.2 mmol/L)		
WHO I or II		Total lymphocyte count<800	Total lymphocyte count 800-1199	Total lymphocyte count ≥1200	Total lymphocyte count<800	Total lymphocyte count 800-1199	Total lymphocyte count ≥1200	Total lymphocyte count<800	Total lymphocyte count 800-1199	Total lymphocyte count ≥1200
Wt (kg)	month									
<45	3	13.4 (8.1-21.7)	8.8 (5.4-14.0)	6.6 (4.1-10.4)	8.6 (4.9-14.9)	5.6 (3.4- 9.0)	4.2 (2.6- 6.7)	5.8 (3.0-11.1)	3.7 (2.1- 6.5)	2.8 (1.6- 4.9)
	6	16.4 (10.1-26.1)	11.3 (7.1-17.7)	8.5 (5.5-13.3)	11.0 (6.4-18.6)	7.5 (4.7-11.9)	5.6 (3.6- 8.9)	7.5 (3.9-13.9)	5.1 (3.0- 8.6)	3.8 (2.2- 6.5)
	12	16.9 (10.5-26.4)	12.3 (7.8-19.0)	9.3 (6.0-14.3)	12.4 (7.4-20.3)	8.9 (5.7-13.9)	6.7 (4.3-10.4)	8.4 (4.6-15.2)	6.0 (3.6-10.0)	4.5 (2.7- 7.6)
45-49	3	6.7 (4.1-11.0)	4.3 (2.7- 7.1)	3.3 (2.1- 5.1)	4.3 (2.5- 7.3)	2.7 (1.7- 4.4)	2.1 (1.3- 3.2)	2.9 (1.5- 5.3)	1.8 (1.1- 3.0)	1.4 (0.8- 2.2)
	6	9.0 (5.6-14.5)	6.1 (3.8- 9.8)	4.6 (2.9- 7.1)	6.0 (3.6- 9.9)	4.0 (2.6- 6.3)	3.0 (2.0- 4.6)	4.0 (2.2- 7.2)	2.7 (1.6- 4.4)	2.0 (1.2- 3.3)
	12	10.7 (6.6-17.0)	7.7 (4.8-12.2)	5.8 (3.7- 9.0)	7.7 (4.7-12.5)	5.5 (3.6- 8.6)	4.2 (2.7- 6.4)	5.2 (3.0- 9.1)	3.7 (2.3- 6.0)	2.8 (1.7- 4.5)
50-59	3	4.5 (2.7- 7.6)	2.9 (1.8- 4.8)	2.2 (1.4- 3.5)	2.9 (1.6- 4.9)	1.8 (1.1- 2.9)	1.4 (0.9- 2.1)	1.9 (1.0- 3.5)	1.2 (0.7- 2.0)	0.9 (0.6- 1.5)
	6	6.1 (3.6-10.1)	4.1 (2.5- 6.6)	3.1 (1.9- 4.8)	4.0 (2.3- 6.8)	2.7 (1.7- 4.2)	2.0 (1.3- 3.1)	2.7 (1.5- 4.9)	1.8 (1.1- 2.9)	1.3 (0.8- 2.2)
	12	7.2 (4.4-11.8)	5.2 (3.2- 8.3)	3.9 (2.5- 6.1)	5.2 (3.1- 8.6)	3.7 (2.4- 5.8)	2.8 (1.8- 4.2)	3.5 (2.0- 6.2)	2.5 (1.5- 4.0)	1.9 (1.2- 3.0)
≥60	3	2.9 (1.7- 4.9)	1.8 (1.1- 3.1)	1.4 (0.8- 2.2)	1.8 (1.0- 3.2)	1.2 (0.7- 1.8)	0.9 (0.5- 1.4)	1.2 (0.6- 2.2)	0.8 (0.5- 1.3)	0.6 (0.3- 0.9)
	6	3.9 (2.3- 6.5)	2.6 (1.6- 4.3)	1.9 (1.2- 3.1)	2.5 (1.5- 4.3)	1.7 (1.1- 2.7)	1.3 (0.8- 2.0)	1.7 (0.9- 3.1)	1.1 (0.7- 1.8)	0.8 (0.5- 1.4)
	12	4.6 (2.7- 7.7)	3.3 (2.0- 5.4)	2.5 (1.5- 3.9)	3.3 (2.0- 5.5)	2.4 (1.5- 3.7)	1.8 (1.1- 2.7)	2.2 (1.2- 3.9)	1.6 (1.0- 2.5)	1.2 (0.7- 1.9)
WHO III or IV										
<45	3	34.7 (26.3-44.7)	23.7 (17.6-31.5)	18.3 (14.0-23.7)	23.4 (16.3-32.8)	15.6 (11.7-20.6)	11.9 (9.1-15.4)	16.2 (10.0-25.7)	10.6 (7.3-15.3)	8.0 (5.5-11.6)
	6	41.2 (32.1-51.7)	29.8 (22.9-38.3)	23.2 (18.3-29.2)	29.2 (21.1-39.6)	20.6 (15.8-26.5)	15.8 (12.3-20.2)	20.5 (13.1-31.3)	14.2 (10.0-19.9)	10.8 (7.6-15.2)
	12	42.1 (33.3-52.1)	32.1 (25.0-40.5)	25.0 (19.9-31.2)	32.3 (24.1-42.4)	24.1 (18.9-30.5)	18.6 (14.7-23.3)	22.8 (15.1-33.6)	16.8 (12.1-23.0)	12.8 (9.2-17.7)
45-49	3	18.7 (13.8-24.9)	12.3 (8.8-17.1)	9.3 (7.0-12.5)	12.1 (8.5-17.0)	7.9 (5.9-10.5)	5.9 (4.6- 7.6)	8.2 (5.3-12.7)	5.3 (3.8- 7.4)	4.0 (2.9- 5.4)
	6	24.4 (18.4-31.8)	17.0 (12.4-23.1)	13.0 (9.9-16.9)	16.6 (12.1-22.6)	11.4 (8.7-14.9)	8.6 (6.8-10.9)	11.4 (7.5-17.0)	7.7 (5.7-10.5)	5.8 (4.3- 7.8)
	12	28.4 (21.7-36.6)	21.1 (15.6-28.1)	16.2 (12.4-20.9)	21.2 (15.9-28.0)	15.5 (12.0-20.0)	11.8 (9.4-14.7)	14.6 (10.0-21.2)	10.6 (7.9-14.2)	8.0 (6.0-10.6)
50-59	3	12.8 (9.1-17.9)	8.3 (5.8-11.8)	6.3 (4.6- 8.5)	8.2 (5.6-11.8)	5.3 (4.0- 7.1)	4.0 (3.1- 5.1)	5.5 (3.5- 8.7)	3.6 (2.6- 4.9)	2.7 (2.0- 3.6)
	6	16.9 (12.2-23.1)	11.6 (8.3-16.1)	8.8 (6.6-11.6)	11.3 (8.0-15.9)	7.7 (5.9-10.1)	5.8 (4.6- 7.3)	7.7 (5.0-11.7)	5.2 (3.8- 7.1)	3.9 (2.9- 5.2)
	12	19.9 (14.6-26.7)	14.5 (10.5-19.8)	11.0 (8.4-14.5)	14.6 (10.7-19.8)	10.6 (8.1-13.7)	8.0 (6.4- 9.9)	10.0 (6.7-14.7)	7.2 (5.3- 9.6)	5.4 (4.1- 7.1)
≥60	3	8.2 (5.6-12.0)	5.3 (3.6- 7.8)	4.0 (2.8- 5.7)	5.2 (3.5- 7.8)	3.4 (2.4- 4.6)	2.5 (1.9- 3.4)	3.5 (2.2- 5.6)	2.2 (1.6- 3.2)	1.7 (1.2- 2.3)
	6	11.0 (7.6-15.7)	7.5 (5.2-10.7)	5.6 (4.0- 7.8)	7.3 (5.0-10.6)	4.9 (3.6- 6.7)	3.7 (2.8- 4.9)	4.9 (3.1- 7.6)	3.3 (2.4- 4.6)	2.5 (1.8- 3.4)
	12	13.0 (9.1-18.3)	9.4 (6.5-13.4)	7.1 (5.1- 9.8)	9.5 (6.7-13.3)	6.8 (5.0- 9.1)	5.1 (3.9- 6.7)	6.4 (4.2- 9.6)	4.6 (3.3- 6.2)	3.4 (2.5- 4.6)

b) Men

Weight	Month	Severe anaemia (Hb <5 mmol/L)			Moderate anaemia (Hb 5 to <6.8 mmol/L)			Mild or no anaemia (Hb ≥6.8 mmol/L)		
		Total lymphocyte count (cells/ µL)			Total lymphocyte count (cells/ µL)			Total lymphocyte count (cells/ µL)		
		<800	800-1199	≥1200	<800	800-1199	≥1200	<800	800-1199	≥1200
Age <40 years WHO stage I/II										
<45 kg	3	16.1 (9.6-26.4)	10.6 (6.3-17.4)	8.0 (4.8-13.1)	10.4 (5.9-18.2)	6.8 (4.1-11.1)	5.1 (3.1- 8.4)	7.0 (3.6-13.7)	4.5 (2.5- 8.0)	3.4 (1.9- 6.1)
	6	19.7 (11.9-31.5)	13.6 (8.3-21.8)	10.3 (6.3-16.6)	13.3 (7.7-22.5)	9.1 (5.6-14.6)	6.9 (4.2-11.1)	9.0 (4.7-17.0)	6.1 (3.5-10.6)	4.6 (2.6- 8.1)
	12	20.2 (12.4-31.9)	14.8 (9.2-23.3)	11.2 (6.9-17.9)	14.9 (8.8-24.4)	10.8 (6.7-17.0)	8.1 (5.0-13.0)	10.1 (5.4-18.5)	7.3 (4.2-12.4)	5.5 (3.1- 9.5)
45-49 kg	3	8.2 (4.9-13.4)	5.3 (3.2- 8.7)	4.0 (2.4- 6.5)	5.2 (3.0- 8.8)	3.3 (2.1- 5.4)	2.5 (1.6- 4.0)	3.5 (1.9- 6.4)	2.2 (1.3- 3.8)	1.7 (1.0- 2.8)
	6	10.9 (6.6-17.6)	7.4 (4.5-12.0)	5.6 (3.5- 8.9)	7.2 (4.3-12.0)	4.9 (3.1- 7.7)	3.7 (2.3- 5.8)	4.9 (2.7- 8.8)	3.3 (2.0- 5.4)	2.5 (1.5- 4.1)
	12	12.9 (7.9-20.6)	9.3 (5.7-15.0)	7.0 (4.4-11.2)	9.4 (5.7-15.2)	6.7 (4.3-10.5)	5.1 (3.2- 7.9)	6.3 (3.6-11.1)	4.5 (2.8- 7.4)	3.4 (2.0- 5.6)
50-59 kg	3	5.5 (3.2- 9.3)	3.5 (2.1- 5.9)	2.6 (1.6- 4.3)	3.5 (2.0- 6.0)	2.2 (1.4- 3.5)	1.7 (1.1- 2.6)	2.3 (1.2- 4.3)	1.5 (0.9- 2.5)	1.1 (0.7- 1.8)
	6	7.4 (4.4-12.2)	5.0 (3.0- 8.1)	3.7 (2.3- 6.0)	4.8 (2.9- 8.2)	3.3 (2.1- 5.1)	2.4 (1.6- 3.8)	3.2 (1.8- 5.9)	2.2 (1.3- 3.6)	1.6 (1.0- 2.7)
	12	8.7 (5.3-14.3)	6.3 (3.8-10.2)	4.7 (2.9- 7.5)	6.3 (3.8-10.4)	4.5 (2.9- 7.0)	3.4 (2.2- 5.2)	4.2 (2.4- 7.5)	3.0 (1.9- 4.9)	2.3 (1.4- 3.7)
≥60	3	3.5 (2.0- 6.0)	2.2 (1.3- 3.8)	1.7 (1.0- 2.8)	2.2 (1.3- 3.8)	1.4 (0.9- 2.3)	1.0 (0.7- 1.7)	1.5 (0.8- 2.7)	0.9 (0.6- 1.6)	0.7 (0.4- 1.2)
	6	4.7 (2.8- 7.9)	3.2 (1.9- 5.2)	2.4 (1.4- 3.9)	3.1 (1.8- 5.2)	2.1 (1.3- 3.3)	1.5 (1.0- 2.4)	2.1 (1.1- 3.8)	1.4 (0.8- 2.3)	1.0 (0.6- 1.7)
	12	5.6 (3.3- 9.3)	4.0 (2.4- 6.6)	3.0 (1.8- 4.9)	4.0 (2.4- 6.7)	2.9 (1.8- 4.5)	2.1 (1.4- 3.4)	2.7 (1.5- 4.8)	1.9 (1.2- 3.1)	1.4 (0.9- 2.3)
WHO stage III/IV										
<45	3	40.5 (30.5-52.4)	28.2 (20.5-38.0)	21.8 (16.0-29.4)	27.7 (19.4-38.7)	18.7 (13.8-25.0)	14.3 (10.6-19.2)	19.4 (11.9-30.8)	12.8 (8.7-18.8)	9.7 (6.5-14.5)
	6	47.7 (36.9-59.8)	35.1 (26.4-45.7)	27.6 (20.8-36.0)	34.4 (24.9-46.2)	24.5 (18.6-31.9)	18.9 (14.3-24.9)	24.4 (15.5-37.2)	17.1 (11.8-24.3)	13.0 (8.8-19.0)
	12	48.7 (38.3-60.1)	37.6 (28.8-48.1)	29.7 (22.7-38.2)	37.9 (28.4-49.2)	28.6 (22.2-36.4)	22.2 (17.1-28.6)	27.1 (17.9-39.8)	20.1 (14.2-27.9)	15.4 (10.7-21.9)
45-49	3	22.3 (16.5-29.8)	14.8 (10.5-20.8)	11.3 (8.1-15.5)	14.6 (10.4-20.2)	9.5 (7.2-12.7)	7.2 (5.5- 9.4)	9.9 (6.4-15.3)	6.4 (4.6- 9.0)	4.8 (3.4- 6.8)
	6	28.9 (21.9-37.6)	20.4 (14.7-27.8)	15.6 (11.6-20.9)	19.9 (14.6-26.7)	13.8 (10.5-17.9)	10.4 (8.1-13.4)	13.7 (9.1-20.4)	9.4 (6.8-12.9)	7.1 (5.1- 9.8)
	12	33.5 (25.7-42.8)	25.1 (18.5-33.5)	19.4 (14.5-25.6)	25.2 (19.2-32.8)	18.6 (14.5-23.8)	14.2 (11.2-18.0)	17.6 (12.1-25.3)	12.8 (9.4-17.2)	9.7 (7.1-13.2)
50-59	3	15.4 (11.0-21.2)	10.1 (7.1-14.3)	7.6 (5.5-10.5)	9.9 (7.0-14.0)	6.4 (4.9- 8.4)	4.8 (3.8- 6.2)	6.7 (4.3-10.4)	4.3 (3.1- 5.9)	3.2 (2.4- 4.4)
	6	20.2 (14.8-27.3)	14.0 (10.1-19.3)	10.6 (7.9-14.2)	13.7 (9.9-18.7)	9.3 (7.2-12.0)	7.1 (5.6- 8.8)	9.3 (6.1-14.0)	6.3 (4.7- 8.5)	4.7 (3.5- 6.4)
	12	23.7 (17.7-31.3)	17.4 (12.7-23.7)	13.3 (9.9-17.7)	17.5 (13.2-23.2)	12.8 (10.0-16.2)	9.7 (7.8-12.0)	12.0 (8.2-17.5)	8.7 (6.5-11.5)	6.5 (4.9- 8.7)
≥60	3	10.0 (6.9-14.3)	6.5 (4.4- 9.4)	4.9 (3.4- 7.0)	6.4 (4.3- 9.3)	4.1 (3.0- 5.5)	3.1 (2.3- 4.1)	4.3 (2.7- 6.8)	2.7 (2.0- 3.8)	2.0 (1.5- 2.9)
	6	13.2 (9.3-18.6)	9.1 (6.3-12.9)	6.8 (4.8- 9.6)	8.8 (6.2-12.5)	6.0 (4.5- 8.0)	4.5 (3.4- 5.9)	6.0 (3.8- 9.2)	4.0 (2.9- 5.5)	3.0 (2.2- 4.2)
	12	15.6 (11.2-21.6)	11.3 (7.9-16.0)	8.6 (6.1-12.0)	11.4 (8.3-15.6)	8.2 (6.2-10.8)	6.2 (4.7- 8.1)	7.7 (5.2-11.5)	5.5 (4.1- 7.5)	4.2 (3.0- 5.7)

b) Men (continued)

Weight	Month	Severe anaemia (Hb <5 mmol/L)			Moderate anaemia (Hb 5 to <6.8 mmol/L)			Mild or no anaemia (Hb ≥6.8 mmol/L)		
		Total lymphocyte count (cells/ µL)			Total lymphocyte count (cells/ µL)			Total lymphocyte count (cells/ µL)		
		<800	800-1199	≥1200	<800	800-1199	≥1200	<800	800-1199	≥1200
Age ≥40 years WHO stage I/II										
<45	3	21.3 (12.8-34.1)	14.1 (8.5-22.8)	10.7 (6.6-17.3)	13.9 (7.9-23.9)	9.1 (5.5-14.8)	6.8 (4.2-11.1)	9.5 (4.8-18.1)	6.1 (3.5-10.7)	4.6 (2.6- 8.1)
	6	25.8 (15.9-40.2)	18.1 (11.2-28.4)	13.8 (8.6-21.7)	17.6 (10.3-29.3)	12.1 (7.5-19.3)	9.2 (5.7-14.7)	12.1 (6.3-22.4)	8.2 (4.7-14.1)	6.2 (3.5-10.8)
	12	26.4 (16.5-40.7)	19.5 (12.2-30.3)	14.9 (9.4-23.3)	19.7 (11.8-31.7)	14.4 (9.0-22.4)	10.9 (6.8-17.1)	13.5 (7.3-24.2)	9.8 (5.7-16.4)	7.4 (4.3-12.6)
45-49	3	10.9 (6.6-17.8)	7.1 (4.3-11.7)	5.4 (3.3- 8.6)	7.0 (4.1-11.8)	4.5 (2.8- 7.2)	3.4 (2.1- 5.3)	4.7 (2.5- 8.6)	3.0 (1.8- 5.0)	2.3 (1.4- 3.8)
	6	14.5 (8.9-23.1)	9.9 (6.1-16.0)	7.5 (4.7-11.9)	9.7 (5.8-16.0)	6.6 (4.2-10.3)	5.0 (3.2- 7.7)	6.6 (3.6-11.7)	4.4 (2.7- 7.3)	3.3 (2.0- 5.5)
	12	17.1 (10.6-26.9)	12.4 (7.7-19.7)	9.4 (5.9-14.8)	12.5 (7.7-20.0)	9.0 (5.8-14.0)	6.8 (4.4-10.5)	8.5 (4.8-14.8)	6.1 (3.7- 9.9)	4.6 (2.8- 7.5)
50-59	3	7.4 (4.4-12.4)	4.8 (2.9- 7.9)	3.6 (2.2- 5.8)	4.7 (2.7- 8.1)	3.0 (1.9- 4.8)	2.3 (1.4- 3.5)	3.1 (1.7- 5.8)	2.0 (1.2- 3.3)	1.5 (0.9- 2.5)
	6	9.9 (5.9-16.2)	6.7 (4.1-10.9)	5.0 (3.2- 8.0)	6.5 (3.9-11.0)	4.4 (2.8- 6.9)	3.3 (2.1- 5.1)	4.4 (2.4- 8.0)	3.0 (1.8- 4.8)	2.2 (1.4- 3.6)
	12	11.7 (7.1-18.9)	8.4 (5.2-13.6)	6.4 (4.0-10.0)	8.5 (5.1-13.8)	6.1 (3.9- 9.4)	4.6 (3.0- 7.0)	5.7 (3.2-10.1)	4.1 (2.5- 6.6)	3.1 (1.9- 4.9)
≥60	3	4.7 (2.8- 8.0)	3.0 (1.8- 5.0)	2.3 (1.4- 3.7)	3.0 (1.7- 5.1)	1.9 (1.2- 3.0)	1.4 (0.9- 2.2)	2.0 (1.1- 3.7)	1.3 (0.8- 2.1)	0.9 (0.6- 1.6)
	6	6.3 (3.8-10.6)	4.3 (2.6- 7.0)	3.2 (2.0- 5.1)	4.2 (2.4- 7.0)	2.8 (1.8- 4.4)	2.1 (1.3- 3.3)	2.8 (1.5- 5.0)	1.9 (1.1- 3.0)	1.4 (0.9- 2.3)
	12	7.5 (4.5-12.4)	5.4 (3.3- 8.8)	4.0 (2.5- 6.5)	5.4 (3.3- 8.9)	3.9 (2.5- 6.0)	2.9 (1.9- 4.5)	3.6 (2.1- 6.4)	2.6 (1.6- 4.2)	1.9 (1.2- 3.1)
WHO stage III/IV										
<45	3	50.7 (39.0-63.5)	36.2 (26.8-47.7)	28.5 (21.3-37.4)	35.7 (25.4-48.7)	24.5 (18.4-32.3)	18.9 (14.2-24.9)	25.4 (15.9-39.3)	17.0 (11.7-24.6)	13.0 (8.8-19.0)
	6	58.6 (46.6-71.0)	44.5 (34.1-56.4)	35.5 (27.5-45.1)	43.6 (32.2-57.0)	31.8 (24.5-40.7)	24.8 (19.1-31.9)	31.7 (20.5-46.8)	22.5 (15.8-31.4)	17.3 (11.9-24.6)
	12	59.6 (48.2-71.4)	47.4 (37.1-58.9)	38.0 (29.8-47.6)	47.6 (36.5-60.2)	36.8 (28.9-46.0)	28.9 (22.7-36.4)	34.9 (23.5-49.8)	26.2 (18.9-35.8)	20.3 (14.4-28.3)
45-49	3	29.0 (21.7-38.1)	19.6 (14.0-27.1)	15.0 (11.1-20.2)	19.3 (13.9-26.5)	12.8 (9.6-16.8)	9.7 (7.5-12.4)	13.3 (8.6-20.1)	8.7 (6.2-12.0)	6.5 (4.7- 9.0)
	6	37.1 (28.5-47.2)	26.6 (19.5-35.6)	20.6 (15.6-26.9)	26.0 (19.4-34.4)	18.2 (14.1-23.5)	13.9 (11.0-17.5)	18.2 (12.2-26.6)	12.5 (9.2-17.0)	9.5 (7.0-12.8)
	12	42.6 (33.3-53.2)	32.5 (24.3-42.5)	25.4 (19.4-32.8)	32.7 (25.2-41.7)	24.4 (19.2-30.9)	18.8 (15.1-23.4)	23.1 (16.1-32.6)	17.0 (12.7-22.6)	13.0 (9.7-17.3)
50-59	3	20.3 (14.7-27.7)	13.5 (9.5-18.9)	10.2 (7.5-13.8)	13.2 (9.4-18.6)	8.6 (6.6-11.3)	6.5 (5.2- 8.1)	9.0 (5.8-13.9)	5.8 (4.3- 8.0)	4.4 (3.3- 5.9)
	6	26.4 (19.6-35.1)	18.6 (13.4-25.3)	14.2 (10.7-18.6)	18.1 (13.2-24.6)	12.5 (9.7-16.0)	9.5 (7.7-11.7)	12.4 (8.2-18.6)	8.5 (6.3-11.4)	6.4 (4.8- 8.5)
	12	30.8 (23.2-40.1)	22.9 (16.9-30.7)	17.6 (13.4-23.0)	23.1 (17.4-30.2)	16.9 (13.4-21.4)	12.9 (10.6-15.8)	16.0 (11.0-23.0)	11.6 (8.7-15.3)	8.8 (6.7-11.5)
≥60	3	13.3 (9.3-18.8)	8.7 (6.0-12.5)	6.5 (4.6- 9.2)	8.5 (5.9-12.4)	5.5 (4.1- 7.4)	4.1 (3.2- 5.4)	5.8 (3.7- 9.0)	3.7 (2.7- 5.1)	2.8 (2.0- 3.8)
	6	17.6 (12.5-24.3)	12.1 (8.5-17.1)	9.2 (6.6-12.6)	11.8 (8.3-16.6)	8.0 (6.1-10.6)	6.1 (4.7- 7.8)	8.0 (5.2-12.2)	5.4 (4.0- 7.3)	4.1 (3.0- 5.5)
	12	20.6 (14.9-28.1)	15.1 (10.7-21.1)	11.5 (8.3-15.7)	15.2 (11.1-20.6)	11.0 (8.4-14.4)	8.3 (6.5-10.7)	10.4 (7.0-15.2)	7.5 (5.6-10.0)	5.6 (4.2- 7.5)

Mortality hazard ratios for CD4 model and total lymphocyte and haemoglobin model for those remaining in care or for all patients (including patients lost to follow-up), based on imputed datasets or based on complete case analysis.

	Those remaining in care		All patients	
	CD4 model			
	Multiple imputation N=10,331	**Complete case N = 7876**	**Multiple imputation N=11,153**	**Complete case N = 8515**
Age ≥ 40 years (v. < 40 years)	1.43 (1.23-1.66)	1.33 (1.14-1.55)	1.42 (1.23-1.64)	1.32 (1.13-1.54)
Female (v. male)	0.68 (0.58-0.79)	0.67 (0.58-0.79)	0.71 (0.61-0.82)	0.71 (0.60-0.83)
Advanced stage (v. less adv)	2.72 (1.87-3.95)	2.63 (1.73-4.01)	2.76 (1.91-3.99)	2.63 (1.73-4.01)
CD4 count (cells/μL)				
<25	1	1	1	1
25-49	0.76 (0.62-0.94)	0.80 (0.65-0.99)	0.77 (0.63-0.94)	0.80 (0.65-0.99)
50-99	0.46 (0.38-0.57)	0.48 (0.39-0.60)	0.47 (0.38-0.57)	0.49 (0.39-0.60)
100-199	0.35 (0.28-0.42)	0.37 (0.30-0.45)	0.36 (0.29-0.43)	0.38 (0.31-0.46)
≥200	0.29 (0.22-0.38)	0.28 (0.22-0.37)	0.29 (0.23-0.38)	0.28 (0.22-0.37)
Weight (kg)				
<45	1	1	1	1
45-49≥	0.59 (0.48-0.72)	0.57 (0.46-0.71)	0.62 (0.51-0.76)	0.60 (0.49-0.74)
50-59	0.40 (0.33-0.48)	0.37 (0.30-0.45)	0.43 (0.36-0.52)	0.40 (0.33-0.49)
≥60	0.24 (0.19-0.30)	0.22 (0.18-0.28)	0.27 (0.22-0.33)	0.25 (0.20-0.31)
	Total lymphocyte and haemoglobin model			
	Multiple imputation N=10331	**Complete case N = 4085**	**Multiple imputation N=11153**	**Complete case N = 4369**
Age 40 years (v. <40 years)	1.36 (1.12-1.64)	1.19 (0.95-1.49)	1.36 (1.14-1.62)	1.17 (0.94-1.47)
Female (v. male)	0.60 (0.50-0.73)	0.59 (0.47-0.75)	0.63 (0.53-0.75)	0.62 (0.50-0.79)
Advanced stage (v. less adv)	2.96 (1.83-4.78)	2.24 (1.37-3.68)	3.05 (1.95-4.76)	2.29 (1.39-3.75)
Weight (kg)				
<45	1	1	1	1
45-49	0.61 (0.47-0.79)	0.45 (0.33-0.61)	0.64 (0.50-0.82)	0.47 (0.35-0.64)
50-59	0.40 (0.32-0.51)	0.33 (0.25-0.44)	0.44 (0.35-0.55)	0.36 (0.27-0.47)
≥60	0.25 (0.19-0.33)	0.22 (0.16-0.30)	0.28 (0.22-0.37)	0.24 (0.17-0.33)
Total lymphocyte count (cells/μL)				
0-799	1	1	1	1
800-1199	0.71 (0.55-0.91)	0.52 (0.39-0.70)	0.71 (0.56-0.91)	0.56 (0.42-0.75)
≥1200	0.53 (0.43-0.65)	0.44 (0.34-0.55)	0.55 (0.45-0.67)	0.46 (0.36-0.58)
Categories of anaemia Haemoglobin (g/dl)				
Severe (<8)	1	1	1	1
Moderate (m 8-10.9, f 8-9.9)	0.71 (0.56-0.91)	0.72 (0.55-0.95)	0.73 (0.57-0.94)	0.77 (0.58-1.02)
Mild or none (m ≥11, f ≥10)	0.47 (0.37-0.61)	0.50 (0.37-0.67)	0.48 (0.37-0.62)	0.55 (0.41-0.74)

Method of imputation of missing data

We used imputation by chained equations method implemented using the ice command in Stata.[1,2] Prognostic variables were imputed conditional on other correlated variables. All prediction equations included cohort, log age at start of ART, sex, square root transformed CD4 count, indicators for dead (and lost in sensitivity analysis) and the Nelson-Aalen cumulative hazard function of time (cumhazt). Other variables were included in equations if they were associated with the dependent variable. Weight was interval censored to ensure that imputed values were within the range in the available data. Continuous variables that were right skewed were log transformed in the imputation (age, weight, HIV-1 RNA). Continuous variables were imputed from the posterior predicted distribution except for total lymphocyte count, which was imputed by matching as this variable was not Normally distributed. The interaction between haemoglobin and sex was included in the imputation since females had lower haemoglobin levels. 25 imputed datasets were created. Comparing the distributions of variables in the imputed data with those in the observed data, log total lymphocyte count (p difference = 0.62) and log weight (p = 0.78) were similar, haemoglobin was slightly lower (mean 10.21 (95% CI 9.90-10.52) v. 10.52 (10.47-10.57) p = 0.049), there was a higher proportion of advanced disease stage (95 v. 85%) and a higher proportion with HIV1-RNA ≥ 5 (55 v. 50%). The prognostic model was fitted using the imputed datasets and estimated coefficients combined by averaging. Appropriate standard errors were calculated using the within and between imputation standard errors of the estimates using Rubin's rules.[3]

Equations in multiple imputation command `ice` in Stata

```
local complete = "cohort1 cohort2 cohort3 lnage sqrtcd4 female lost dead cumhazt"
ice `complete' ///
        stage lnweight lwt uwt ///
        haem haemXfemale lnlymp rna_cat rna1 rna2 ///
        using mi_data ///
        ,m(25)  orderasis genmiss(M) seed(101) replace  ///
        match(lnlymp) ///
        passive(haemXfemale: haem*female \ ///
                rna1: rna_cat==1 \ rna2: rna_cat==2)  ///
        substitute(rna_cat: rna1 rna2) ///
        int(lnweight: lwt uwt) ///
        eq(stage: `complete' haem haemXfemale lnlymp lnweight rna1 rna2, ///
          lnweight: `complete'  stage haem haemXfemale lnlymp rna1 rna2, ///
          haem: `complete'  stage lnlymp lnweight rna1 rna2, ///
          lnlymp: `complete'  stage haem haemXfemale lnweight rna1 rna2, ///
          rna_cat: `complete' stage haem haemXfemale lnweight )
```


1. Royston P. Multiple imputation of missing values. Stata Journal 2004;4(3):227-41.

2. Royston P. Multiple imputation of missing values: further update of ice, with an emphasis on interval censoring. Stata Journal 2009;7:445-64.

3. Rubin DB. Multiple imputation for Nonresponse in Surveys. New York: John Wiley & Sons; 1987.