

**Table 1:** Baseline characteristics of patients included in analyses

	All patients (n=19,967)		Men (n=7943)		Women (n=12024)		P <sup>1</sup>
Age (years)							
Median (range)	35	(15-65)	37	(16-65)	33	(15-65)	<0.001
15-24	1189	(6%)	202	(3%)	987	(8%)	
25-29	3468	(17%)	868	(11%)	2600	(22%)	
30-34	5050	(25%)	1835	(23%)	3215	(27%)	
35-39	4263	(21%)	1977	(25%)	2286	(19%)	<0.001
40-44	2826	(14%)	1396	(18%)	1430	(12%)	
45-49	1679	(8%)	844	(11%)	835	(7%)	
50-=<65	1492	(7%)	821	(10%)	671	(6%)	
Weight (kg)							
Median (range)	56	(50-64)	58	(52-65)	55	(48-63)	<0.001
Missing	3947	(20%)	2009	(25%)	1938	(16%)	
19-49	4002	(20%)	1028	(13%)	2974	(25%)	
50-54	3005	(15%)	1095	(14%)	1910	(16%)	<0.001
55-62	4439	(22%)	1904	(24%)	2535	(21%)	
63-180	4574	(23%)	1907	(24%)	2667	(22%)	
CD4 count (cells/uL) <sup>2</sup>							
Median (IQR)	114	(51-84)	104	(45-179)	121	(56-186)	<0.001
Missing	4189	(21%)	1842	(23%)	2347	(20%)	
0-24	2165	(11%)	929	(12%)	1236	(10%)	
25-49	1671	(8%)	734	(9%)	937	(8%)	
50-99	3129	(16%)	1273	(16%)	1856	(15%)	<0.001
100-149	2918	(15%)	1070	(13%)	1848	(15%)	
150-199	2782	(14%)	950	(12%)	1832	(15%)	
200-299	2238	(11%)	832	(10%)	1406	(12%)	
300+	875	(4%)	313	(4%)	562	(5%)	
Stage of HIV disease <sup>3</sup>							
Advanced	11427	(57%)	4671	(59%)	6756	(56%)	
Less advanced	6709	(34%)	2509	(32%)	4200	(35%)	<0.001
Unknown	1831	(9%)	763	(10%)	1068	(9%)	
Year of ART initiation							
<2001	866	(4%)	550	(7%)	316	(3%)	
2001	581	(3%)	314	(4%)	267	(2%)	
2002	1249	(6%)	669	(8%)	580	(5%)	
2003	2412	(12%)	1111	(14%)	1301	(11%)	<0.001
2004	7254	(36%)	2509	(32%)	4745	(39%)	
2005	5117	(26%)	1853	(23%)	3264	(27%)	
2006/7	2488	(12%)	937	(12%)	1551	(13%)	
Initial HAART regimen <sup>4</sup>							
2NRTIs+1NNRTI	18322	(92%)	7081	(89%)	11241	(93%)	
2NRTIs+1PI	1134	(6%)	659	(8%)	475	(4%)	<0.001
Other/unknown	511	(3%)	203	(3%)	308	(3%)	
Location							
Africa (22 sites)	16170	(81%)	5275	(66%)	10895	(91%)	
Asia (2 sites)	2399	(12%)	1755	(22%)	644	(5%)	<0.001
Latin America (3 sites)	1398	(7%)	913	(11%)	485	(4%)	

<sup>1</sup> Comparing males and females (Chi-square test for categorical variables and t-test for continuous variables)<sup>2</sup> Baseline CD4 defined as the CD4 count closest to and within -6 months to + 1 week of the date of ART initiation<sup>3</sup> Less advanced (CDC stage A/B, WHO stage I/II); advanced (CDC stage C, WHO stage III/IV)<sup>4</sup> NRTI=Nucleoside reverse transcriptase inhibitor; NNRTI=non-Nucleoside reverse transcriptase inhibitor; PI=Protease Inhibitor

**Table 2a:** Predicted CD4 response with time on treatment in women, by baseline CD4 category and age at start of ART.

Age group	Baseline CD4 (cells/ $\mu$ L)	Mean CD4 count (cells/ $\mu$ L) with 95% confidence interval					
		At start of HAART	At 1 year	At 2 years	At 3 years	At 4 years	At 5 years
15-29	<25	15 (14 - 17)	202 (196 - 208)	282 (272 - 292)	302 (289 - 316)	298 (280 - 316)	282 (261 - 303)
	25-49	45 (43 - 48)	236 (229 - 243)	303 (291 - 315)	317 (298 - 336)	309 (284 - 334)	292 (262 - 323)
	50-99	84 (81 - 87)	267 (261 - 274)	325 (315 - 334)	335 (322 - 348)	326 (310 - 343)	310 (291 - 330)
	100-149	135 (131 - 139)	313 (306 - 320)	366 (355 - 377)	376 (361 - 392)	370 (350 - 391)	357 (333 - 382)
	150-199	185 (180 - 189)	364 (356 - 371)	415 (404 - 426)	424 (409 - 440)	418 (399 - 438)	406 (383 - 429)
	200-299	252 (247 - 257)	420 (412 - 429)	473 (460 - 486)	489 (470 - 508)	490 (466 - 515)	484 (454 - 515)
	300+	373 (366 - 381)	500 (487 - 513)	545 (525 - 566)	565 (538 - 594)	575 (539 - 612)	579 (535 - 624)
30-39	<25	14 (13 - 15)	197 (191 - 203)	276 (266 - 286)	296 (283 - 310)	291 (274 - 309)	276 (256 - 297)
	25-49	43 (41 - 45)	230 (223 - 238)	297 (285 - 309)	310 (292 - 329)	302 (278 - 328)	286 (256 - 317)
	50-99	81 (78 - 83)	262 (255 - 268)	318 (309 - 328)	328 (315 - 341)	320 (304 - 336)	304 (285 - 323)
	100-149	131 (127 - 134)	307 (300 - 313)	359 (348 - 370)	369 (354 - 385)	363 (343 - 384)	351 (326 - 375)
	150-199	180 (176 - 184)	357 (349 - 364)	407 (396 - 418)	417 (402 - 432)	411 (392 - 430)	399 (376 - 422)
	200-299	246 (241 - 251)	413 (404 - 422)	465 (453 - 478)	481 (463 - 499)	482 (458 - 507)	476 (447 - 507)
	300+	367 (359 - 374)	492 (479 - 505)	537 (517 - 557)	557 (529 - 585)	566 (531 - 603)	570 (527 - 615)
40-65	<25	13 (12 - 15)	195 (189 - 201)	274 (264 - 283)	294 (280 - 308)	289 (272 - 307)	274 (253 - 295)
	25-49	42 (40 - 44)	228 (221 - 236)	294 (282 - 306)	308 (290 - 326)	300 (276 - 325)	284 (254 - 314)
	50-99	79 (77 - 82)	259 (253 - 266)	316 (306 - 325)	325 (313 - 339)	317 (301 - 334)	302 (283 - 321)
	100-149	129 (126 - 133)	304 (297 - 311)	356 (345 - 368)	367 (351 - 383)	361 (341 - 381)	348 (324 - 373)
	150-199	178 (174 - 182)	354 (347 - 361)	404 (394 - 415)	414 (399 - 429)	408 (389 - 428)	396 (373 - 419)
	200-299	244 (239 - 249)	410 (402 - 419)	462 (449 - 475)	478 (459 - 497)	479 (455 - 504)	473 (443 - 504)
	300+	364 (356 - 372)	489 (476 - 502)	534 (514 - 554)	554 (526 - 582)	563 (528 - 599)	567 (524 - 611)

**Table 2b:** Predicted CD4 response with time on treatment in men, by baseline CD4 category and age at start of ART.

Age group	Baseline CD4 (cells/ $\mu$ L)	Mean CD4 count (cells/ $\mu$ L) with 95% confidence interval					
		At start of HAART	At 1 year	At 2 years	At 3 years	At 4 years	At 5 years
15-29	<25	14 (12 - 15)	196 (190 - 202)	274 (265 - 284)	295 (281 - 308)	290 (273 - 308)	274 (254 - 296)
	25-49	42 (40 - 45)	229 (222 - 236)	295 (283 - 308)	309 (290 - 328)	301 (276 - 326)	284 (255 - 315)
	50-99	80 (77 - 83)	260 (253 - 267)	316 (307 - 326)	326 (313 - 339)	318 (302 - 334)	302 (284 - 322)
	100-149	130 (126 - 133)	305 (298 - 312)	357 (346 - 369)	368 (352 - 384)	362 (341 - 382)	349 (325 - 374)
	150-199	178 (174 - 183)	355 (347 - 363)	405 (394 - 417)	415 (400 - 431)	409 (390 - 429)	397 (374 - 420)
	200-299	245 (239 - 250)	411 (402 - 420)	463 (450 - 476)	479 (461 - 497)	480 (456 - 505)	474 (445 - 505)
	300+	365 (357 - 373)	490 (477 - 503)	535 (515 - 555)	555 (527 - 583)	564 (528 - 601)	568 (525 - 613)
30-39	<25	12 (11 - 13)	191 (185 - 197)	268 (259 - 278)	288 (275 - 302)	284 (267 - 301)	269 (249 - 289)
	25-49	40 (38 - 42)	224 (216 - 231)	289 (277 - 301)	302 (284 - 321)	295 (270 - 320)	278 (249 - 309)
	50-99	77 (74 - 79)	254 (248 - 261)	310 (301 - 319)	320 (307 - 332)	312 (296 - 327)	296 (278 - 315)
	100-149	126 (122 - 129)	299 (292 - 306)	351 (340 - 362)	361 (345 - 377)	355 (335 - 375)	342 (318 - 367)
	150-199	174 (170 - 178)	348 (341 - 356)	398 (387 - 409)	408 (393 - 423)	402 (383 - 421)	389 (367 - 413)
	200-299	239 (234 - 244)	404 (395 - 413)	455 (443 - 468)	471 (453 - 489)	472 (448 - 496)	467 (437 - 497)
	300+	358 (350 - 365)	482 (469 - 495)	526 (507 - 546)	546 (519 - 574)	555 (520 - 592)	559 (516 - 604)
40-65	<25	12 (11 - 13)	189 (183 - 195)	266 (257 - 276)	286 (273 - 300)	281 (264 - 299)	266 (246 - 287)
	25-49	39 (37 - 41)	221 (214 - 229)	287 (275 - 299)	300 (282 - 318)	292 (268 - 317)	276 (247 - 306)
	50-99	75 (73 - 78)	252 (246 - 259)	308 (298 - 317)	317 (305 - 330)	309 (293 - 325)	294 (275 - 313)
	100-149	124 (121 - 128)	296 (289 - 303)	348 (337 - 359)	358 (343 - 374)	352 (332 - 373)	339 (316 - 364)
	150-199	172 (168 - 176)	346 (338 - 353)	395 (385 - 406)	405 (390 - 420)	399 (380 - 418)	387 (364 - 410)
	200-299	237 (232 - 242)	401 (392 - 410)	452 (440 - 465)	468 (450 - 486)	469 (445 - 494)	464 (434 - 494)
	300+	355 (348 - 363)	479 (466 - 492)	523 (504 - 543)	543 (516 - 571)	552 (517 - 588)	556 (514 - 600)