

Supplementary Table S1. Baseline characteristics of all participants.

	Day care unit N=413 (52.8%)	2LADY N= 369 (47.2%)	p-value	Total N= 782
Female	302 (73.1)	263 (71.3)	0.564	565 (72.3)
Age (years)	37.0 (31.0-43.4)	38.0 (33.0-47.0)	<0.001	37.4 (32.0-45.0)
BMI (kg/m²)*	20.8 (18.4-23.7)	23.5 (21.2-26.4)	<0.001	22.1 (19.6-25.3)
BMI ≥ 25 kg/m²*	74 (18.1)	126 (34.2)	<0.001	200 (25.7)
CD4 count (cells/μl)*	202 (103-342)	176 (79-288)	0.005	190 (91-310)
CD4 count <200cells/μl*	199 (49.3)	213 (57.7)	0.018	412 (53.3)
eGFR (ml/min/1.73m²)	99.3 (86.1-111.7)	95.7 (80.9-111.2)	0.019	97.5 (83.3-111.5)
eGFR<60 ml/min/1.73m²	8 (1.9)	11 (3.0)	0.344	19 (2.4)
Glycaemia (mmol/ml)	4.8 (4.4-5.2)	4.4 (4.1-4.9)	0.313	4.6 (4.2-5.1)
Creatinine (μmol/ml)	70 (63-82)	71 (62-86)	0.258	71 (62-86)
Diabetes	1 (0.2)	2 (0.5)	0.498	3 (0.4)
Hypertension*	24 (6.0)	27 (7.3)	0.469	51 (6.6)
APOL1 high-risk genotype	22 (5.3)	12 (3.3)	0.156	34 (4.4)

Quantitative variables: median (IQR); Categorical variables: n (%). eGFR: estimated glomerular filtration rate; BMI: body mass index.

Significant pvalues (P<0.05) are in bold.

*Missing value = 3 for BMI; 9 for CD4 cells count; 14 for hypertension

Supplementary Table S2. Baseline characteristics of the day care unit (DCU) cohort participants stratified by *APOL1* risk status.

		<i>APOL1</i> low risk genotype	<i>APOL1</i> high risk genotype	p-value	Total N= 413
		N=391 (94.7%)	N= 22 (5.3%)		
Female		286 (73.2)	16 (72.7)	0.966	302 (73.1)
Age (years)		36.9 (31.0-43.4)	38.1 (30.8-43.7)	0.889	37.0 (31.0-43.4)
Age categories (years)	<30	83 (21.2)	5 (22.7)	0.951	88 (21.3)
	30-39	168 (43.0)	10 (45.5)		178 (43.1)
	40-49	102 (26.1)	6 (27.3)		108 (26.2)
	≥50	38 (9.7)	1 (4.5)		39 (9.4)
BMI (kg/m²)*		20.8 (18.3-23.6)	22.4 (19.5-24.2)	0.094	20.8 (18.4-23.7)
BMI ≥ 25 kg/m²*		69 (17.8)	5 (22.7)	0.569	74 (18.1)
CD4 count (cells/μl)*		199 (99-332)	289 (141-395)	0.146	202 (103-342)
CD4 count <200cells/μl*		192 (50.3)	7 (31.8)	0.092	199 (49.3)
eGFR (ml/min/1.73m²)		99.4 (86.0-112.4)	97.2 (87.4-107.2)	0.499	99.3 (86.1-111.7)
eGFR<60 ml/min/1.73m²		7 (1.8)	1 (4.6)	0.357	8 (1.9)
Glycaemia (mmol/ml)		4.8 (4.4-5.2)	4.9 (4.6-5.4)	0.313	4.8 (4.4-5.2)
Creatinine (μmol/ml)		70 (63-82)	73 (66-82)	0.398	70 (63-82)
Diabetes		1 (0.3)	0	1.000	1 (0.2)
Hypertension*		22 (5.8)	2 (10.5)	0.319	24 (6.0)

Quantitative variables: median (IQR); Categorical variables: n (%). eGFR: estimated glomerular filtration rate; BMI: body mass index

*Missing value = 3 for BMI; 9 for CD4 cells count; 14 for hypertension

Supplementary Table S3. Baseline characteristics of the 2LADY cohort participants stratified by *APOL1* risk status.

		<i>APOL1</i> low risk genotype	<i>APOL1</i> high risk genotype	p-value	Total N= 369
		N=357 (96.7%)	N= 12 (3.3%)		
	Burkina Faso	46 (97.9)	1 (2.1)	1.000	47 (12.7)
Site of inclusion	Cameroon	283 (96.6)	10 (3.4)		293 (79.4)
	Senegal	28 (96.6)	1 (3.4)		29 (7.9)
		254 (71.2)	9 (75.0)	1.000	264 (71.3)
Female					
Age (years)		38.0 (33.0-47.0)	36.0 (31.0-45.5)	0.780	38.0 (33.0-47.0)
Age categories (years)	<30	42 (11.8)	2 (16.7)	0.921	44 (11.9)
	30-39	153 (42.9)	5 (41.6)		158 (42.8)
	40-49	103 (28.8)	3 (25.0)		106 (28.7)
	≥50	59 (16.5)	2 (16.7)		61 (16.5)
BMI (kg/m²)		23.5 (21.3-26.4)	22.0 (20.6-26.5)	0.577	23.5 (21.2-26.4)
BMI ≥ 25 kg/m²		122 (34.2)	4 (33.3)	1.000	126 (34.2)
CD4 count (cells/μl)		176 (78-283)	241 (152-323)	0.350	176 (79-288)
CD4 count <200cells/μl		208 (58.3)	5 (41.7)	0.252	213 (57.7)
Viral load Log₁₀		4.5 (4.1-5.1)	4.2 (3.6-4.7)	0.075	4.5 (4.1-5.1)
Viral load ≥ 5log/ml		96 (26.9)	3 (25.0)	1.000	99 (26.8)
eGFR (ml/min/1.73m²)		95.6 (80.4-110.5)	105.4 (85.2-115.9)	0.188	95.7 (80.9-111.2)
eGFR<60 ml/min/1.73m²		10 (2.8)	1 (8.3)	0.308	11 (3.0)

Total cholesterol (mmol/ml) *	4.8 (4.1-5.5)	4.6 (4.0-5.5)	0.805	4.7 (4.1-5.5)
LDL cholesterol (mmol/ml) *	2.8 (2.1-3.5)	2.3 (2.0-2.9)	0.210	2.8 (2.1-3.5)
HDL cholesterol (mmol/ml) *	1.3 (1.1-1.7)	1.3 (1.1-2.2)	0.721	1.3 (1.1-1.7)
Triglyceride (mmol/ml)*	1.0 (0.7-1.3)	1.2 (0.9-1.9)	0.186	1.0 (0.7-1.4)
Glycaemia (mmol/ml) *	4.4 (4.1-4.9)	4.2 (4.0-4.4)	0.106	4.4 (4.1-4.9)
Creatinine (µmol/ml)	70.7 (61.9-87.5)	68.8 (58.6-75.2)	0.140	71 (62-86)
Diabetes	2 (0.6)	0	1.000	2 (0.5)
Hypertension	25 (7.0)	2 (16.7)	0.216	27 (7.3)
Metabolic syndrome	51 (14.3)	2 (16.7)	0.685	53 (14.4)
Proteinuria ≥ + *	38 (10.8)	0	0.622	38 (10.4)
Duration of 1st line ART (months)	51.7 (34.6-70.6)	54.6 (44.2-75.0)	0.442	51.7 (35.7-70.9)

Quantitative variables: median (IQR); Categorical variables: n (%). eGFR: estimated glomerular filtration rate; BMI: body mass index; ART: antiretroviral treatment
 *Missing values = 1 for total cholesterol, triglycerides and glycaemia; 2 for HDL-cholesterol and LDL-cholesterol; 4 for proteinuria

Supplementary Table S4a. Prevalence of *APOL1* risk alleles.

	<i>APOL1</i> risk alleles				Total
	G1		G2		G0+G1+G2
	N	P [CI ₉₅] (%)	N	P [CI ₉₅] (%)	N
Day care unit cohort	113	13.7 [11.5-16.2]	89	10.8 [8.8-13.1]	826
Burkina Faso	12	12.8 [7.4-21.2]	7	7.4 [3.6-14.8]	94
2LADY cohort					
Senegal	5	8.6 [3.6-19.1]	9	15.5 [8.3-27.2]	58
Cameroon	51	8.7 [6.7-11.3]	52	8.9 [6.8-11.5]	586
Entire 2LADY cohort	68	9.2 [7.3-11.5]	68	9.2 [7.3-11.5]	738
Burkina Faso*	125	13.6 [11.5-16.0]	96	10.4 [8.6-12.6]	920
West Africa*	130	13.3 [11.3-15.6]	105	10.7 [8.9-12.8]	1564

*Burkina Faso=Burkina Faso in 2LADY + Day care unit cohort combined; *West Africa = Burkina Faso + Senegal; N: number of alleles. P: prevalence; CI₉₅: 95% confidence intervals

Supplementary Table S4b. Distribution of *APOL1* genotypes.

	G0/G0	G0/G1	G0/G2	G1/G1	G2/G2	G1/G2
	N	N	N	N	N	N
Day care unit cohort	233	90	68	6	5	11
All sites	245	54	58	3	1	8
2LADY cohort						
Burkina Faso	29	11	6	0	0	1
Senegal	16	4	8	0	0	1
Cameroon	200	39	44	3	1	6
Burkina Faso*	262	101	74	6	5	12
West Africa*	278	105	82	6	5	13

*Burkina Faso=Burkina Faso in 2LADY + Day care unit cohort combined; *West Africa = Burkina Faso + Senegal; N: number of individuals

Supplementary Table S5. Factors associated with eGFR in the 2LADY cohort at baseline.

	eGFR (ml/min/1.73m ²)	CI95%	p-value
Age (years)	-0.8	[-1.0 ; -0.6]	<0.0001
Glycemia	2.3	[-0.0 ; 4.6]	0.0547
Hypertension	-0.7	[-7.8 ; 6.4]	0.8551
HIV viral load ≥5log/ml	7.7	[3.6 ; 11.8]	0.0003
CD4 count <200cells/μl	5.1	[1.5 ; 8.8]	0.0063

eGFR: estimated glomerular filtration rate; CI95%: 95% confidence intervals.
Significant p-values (P<0.05) are in bold.

Supplementary Table S6. Follow-up data by study cohort.

	Day care unit cohort	2LADY cohort
Duration of follow-up in years, median (Interquartile range)	6.1 (4.2-8.2)	4.8 (3.9-5.4)
Number of persons-years of follow-up	2440	1560
Number of medical visits done	6281	7597
Number of creatinine measurements	4824	4919
Average number of creatinine measurements by patient, [CI _{95%}]	1.9 [1.9 ; 2.0]	3.1 [3.0 ; 3.1]
Annual mean change in eGFR (ml/min/1,73m ²), [CI _{95%}]	-0.8 [-1.0 ; -0.6]	2,0 [1,7 ; 2,3]
Number of CKD occurred during follow-up	14	16
Incidence of CKD (number of cases by 1000 persons-years), [CI _{95%}]	5.7 [3.4 ; 9.7]	10.3 [6.3 ; 16.8]

eGFR: estimated glomerular filtration rate; CKD: chronic kidney disease; CI95%: 95% confidence intervals

Supplementary Table S7. Baseline predictors of eGFR annual change in the 2LADY cohort.

	eGFR (ml/min/1.73m ²)/year	CI95%	p-value
Baseline age (year)	-0.4	[-0.5 ; -0.3]	<0.0001
Baseline eGFR (/10ml/min/1.73m ²)	5.4	[4.9 ; 6.0]	<0.0001
Baseline glycemia	2.0	[0.8 ; 3.2]	0.0013
HIHypertention at baseline	-0.6	[-4.3 ; 3.1]	0.7488
Baseline CD4 count <200cells/μl	-1.6	[-3.5 ; 0.3]	0.1075
High risk genotype	-0.7	[-5.9 ; 4.6]	0.8046
Viral load≥5log/ml#time	-1.2	[-2.0 ; -0.4]	0.0018

eGFR: estimated glomerular filtration rate; #: interaction term; CI95%: 95% confidence intervals
Significant p-values (P<0.05) are in bold.

Supplementary Table S8. Baseline predictors of eGFR annual change in the 2LADY cohort by stratifying with the interaction between *APOL1* and baseline HIV viral load.

	eGFR (ml/min/1.73m ²)/year	CI95%	p-value
Baseline age (years)	-0.4	[-0.5 ; -0.3]	<0.0001
Baseline eGFR (/10ml/min/1.73m²)	5.5	[4.9 ; 6.0]	<0.0001
Baseline glycemia	2.0	[0.8 ; 3.2]	0.0014
Hypertention at baseline	-0.8	[-4.5 ; 2.9]	0.6796
Baseline CD4 count <200cells/μl	-1.7	[-3.6 ; 0.3]	0.0901
APOL1#HIV			
LR & VL<5log/ml	Reference	---	---
baseline viral			
HR & VL<5log/ml	-0.4	[-2.8 ; 2.1]	0.7801
load#time			
LR & VL≥5log/ml	-1.1	[-1.9 ; -0.4]	0.0040
HR & VL≥5log/ml	-3.9	[-7.7 ; -0.1]	0.0456

eGFR: estimated glomerular filtration rate; LR: *APOL1* low risk genotype; HR: *APOL1* high risk genotype; VL: HIV viral load;
#: interaction term; CI95%: 95% confidence intervals
Significant p-values (P<0.05) are in bold.