Supplementary Materials

Supplementary Table S-1 Baseline demographics, HIV & metabolic parameters for HIV-infected non-Hispanic black women, at Index visit, stratified by haplogroups.

	L0L1 (N: 219)	L2 (N: 269)	L3 (N: 351)	African Other (N: 94)	P value[a]
Year of first glucose/A1c	2002(2001, 2004)	2002(2001, 2004)	2002(2001, 2003)	2002(2001, 2003)	0.2301
Age/birth year	41.2(35.5, 47.2)	39.2(32.9, 46.2)	41.2(34.7, 46.7)	39.0(32.8, 44.1)	0.0513
BMI	27.3(23.8, 32.4)	27.7(23.6, 32.7)	28.1(23.8, 33.8)	26.6(23.6, 32.9)	0.6208
CD4 at first glucose/A1c	477.0(264.0, 611.0)	422.0(265.0, 618.0)	448.5(306.0, 653.0)	428.5(264.5, 665.5)	0.4185
Detectable (>400 cps/mL) plasma HIV RNA	116 (54)	142 (53)	194 (56)	53 (56)	0.9293
On ART at index visit	125 (58)	144 (54)	183 (53)	48 (51)	0.6256
Plasma HIV RNA	580.0(80.0, 9900.0)	740.0(80.0, 11000.0)	930.0(80.0, 8300.0)	1300.0(80.0, 14000.0)	0.0600
Total cholesterol	175.0(153.0, 205.0)	177.0(152.0, 201.0)	170.0(148.0, 203.0)	173.0(146.0, 197.0)	0.6557
LDL cholesterol	98.5(79.0, 130.0)	103.0(81.0, 126.0)	98.0(78.0, 124.0)	96.0(78.5, 118.5)	0.8255
HDL cholesterol	47.5(38.0, 62.0)	49.0(37.0, 62.0)	48.0(38.0, 59.0)	44.5(35.0, 60.0)	0.3741
Triglycerides	104.0(76.0, 154.0)	99.0(72.0, 142.0)	102.0(73.0, 151.0)	108.0(80.0, 168.0)	0.2022
Glucose	84.0(79.0, 91.0)	84.0(78.0, 91.0)	84.0(79.0, 91.0)	82.0(77.0, 90.0)	0.6474
Insulin	10.0(7.0, 18.0)	10.0(7.0, 16.0)	10.0(6.0, 17.0)	8.0(5.0, 17.0)	0.6459
HOMA IR	2.2(1.4, 3.7)	2.1(1.3, 3.3)	2.1(1.3, 3.7)	1.8(1.0, 3.8)	0.7723
HOMA B	180.0(114.5, 288.0)	189.5(117.0, 300.0)	172.8(114.9, 280.0)	164.2(108.0, 248.3)	0.4321

[a]**p value tested by ANOVA**

Supplementary Table S-2 Baseline demographics, HIV & metabolic parameters for HIV-uninfected non-Hispanic black women, at Index visit, stratified by haplogroups.

	L0L1 (N: 81)	L2 (N: 98)	L3 (N: 127)	African Other (N: 49)	P value[a]
Year of first glucose/A1c	2002(2001, 2003)	2002(2001, 2003)	2002(2001, 2004)	2002(2002, 2004)	0.6643
Age/birth year	38.8(31.6, 46.9)	40.3(32.3, 45.9)	37.4(27.4, 43.3)	37.6(28.5, 42.3)	0.0586
BMI	27.6(24.3, 31.9)	29.1(23.3, 34.5)	28.2(23.4, 34.5)	27.8(23.8, 34.6)	0.9057
CD4 at first glucose/A1c	997.0(832.0, 1248.0)	911.5(734.5, 1226.5)	855.0(707.0, 1184.0)	986.0(681.0, 1153.0)	0.3891
Total cholesterol	170.0(152.0, 199.0)	175.0(150.0, 203.0)	178.0(153.0, 201.0)	190.0(166.0, 206.0)	0.5875
LDL cholesterol	97.0(86.0, 116.0)	94.0(75.0, 120.0)	106.5(79.0, 131.0)	99.0(88.0, 123.0)	0.6091
HDL cholesterol	56.0(47.0, 67.0)	57.0(47.0, 68.0)	54.0(44.0, 63.0)	59.0(48.0, 76.0)	0.0202
Triglycerides	76.0(53.0, 97.0)	82.5(58.0, 130.0)	73.0(53.0, 108.0)	81.0(58.0, 114.0)	0.5502
Glucose	81.0(77.0, 90.0)	84.0(77.0, 92.0)	83.0(77.0, 90.0)	83.0(74.0, 91.0)	0.6014
Insulin	8.0(5.0, 15.0)	9.0(5.0, 16.0)	8.0(4.0, 13.0)	8.0(5.0, 13.0)	0.6916
HOMA IR	1.6(1.0, 2.7)	1.8(1.1, 3.5)	1.7(0.9, 3.1)	1.7(0.9, 3.0)	0.7023
HOMA B	160.0(90.0, 240.0)	164.7(103.9, 257.1)	144.0(101.5, 240.0)	144.0(102.9, 231.4)	0.8184

[a]**p value tested by ANOVA**

Supplementary Table S-3. Longitudinal change in HOMA-IR by mtDNA haplogroups

Models	Variables	HIV seronegative						HIV seropositive					
		Crude Estimation			Full Estimation[a]			Crude Estimation			Full Estimation[b]		
		Estimates	SE	P-value	Estimates	SE	P-value	Estimates	SE	P-value	Estimates	SE	P-value
L0L1 vs. non-L0L1	AGE	-0.0089	0.0027	0.0011	0.0067	0.0021	0.0015	-0.0011	0.0018	0.5410	0.0081	0.0014	<.0001
	L0L1	-0.0619	0.2582	0.8106	0.2420	0.1916	0.2070	0.3702	0.1790	0.0386	0.1347	0.1355	0.3205
	AGE*L0L1	0.0038	0.0056	0.4943	-0.0049	0.0042	0.2435	-0.0077	0.0038	0.0441	-0.0020	0.0029	0.4995
L2 vs. non-L2	AGE	-0.0083	0.0028	0.0035	0.0048	0.0022	0.0259	-0.0033	0.0019	0.0780	0.0083	0.0015	<.0001
	L2	-0.0581	0.2391	0.8082	-0.0685	0.1777	0.6998	-0.0871	0.1592	0.5843	0.0431	0.1198	0.7189
	AGE*L2	0.0014	0.0052	0.7830	0.0023	0.0039	0.5531	0.0019	0.0035	0.5751	-0.0018	0.0026	0.4881
L3 vs. non-L3	AGE	-0.0082	0.0030	0.0054	0.0038	0.0023	0.0936	-0.0039	0.0020	0.0561	0.0075	0.0016	<.0001
	L3	-0.0485	0.2206	0.8261	-0.2201	0.1642	0.1805	-0.0984	0.1497	0.5109	-0.0047	0.1131	0.9666
	AGE*L3	0.0011	0.0050	0.8219	0.0052	0.0038	0.1622	0.0028	0.0032	0.3803	0.0007	0.0024	0.7738

[a] Models adjusted for BMI and time-varying HOMA-B

[b] Models adjusted for BMI, time-varying HOMA-B, CD4 counts, detectable HIV RNA, and cART use.

Supplementary Table S-4. Association between mitochondrial DNA haplogroups and diabetes mellitus incidence among non-Hispanic black women by HIV status in WIHS

	HIV seropositive						HIV seronegative					
	Crude Estimation			Full Estimation[a]			Crude Estimation			Full Estimation[b]		
	HR	95% CI	P-value	HR	95% CI	P-value	HR	95% CI	P-value	HR	95% CI	P-value
L0L1 vs. non-L0L1	0.925	(0.60,1.41)	0.7177	0.967	(0.62,1.51)	0.8818	0.934	(0.47,1.84)	0.8437	0.885	(0.45,1.74)	0.7227
L2 vs. non-L2	0.546	(0.35,0.85)	0.0076	0.514	(0.32,0.82)	0.0058	1.37	(0.76,2.47)	0.2943	1.384	(0.76,2.52)	0.2891
L3 vs. non-L3	1.602	(1.13,2.27)	0.0079	1.563	(1.09,2.24)	0.0157	1.111	(0.63,1.97)	0.7171	1.203	(0.67,2.15)	0.5323

[a] Models adjusted for age, BMI, cART, CD4 cell counts and detectable plasma RNA

[b] Models adjusted for age and BMI

Supplementary Table S-5. Longitudinal change of HOMA-B by mtDNA haplogroups adjusted for genetic ancestry components*.
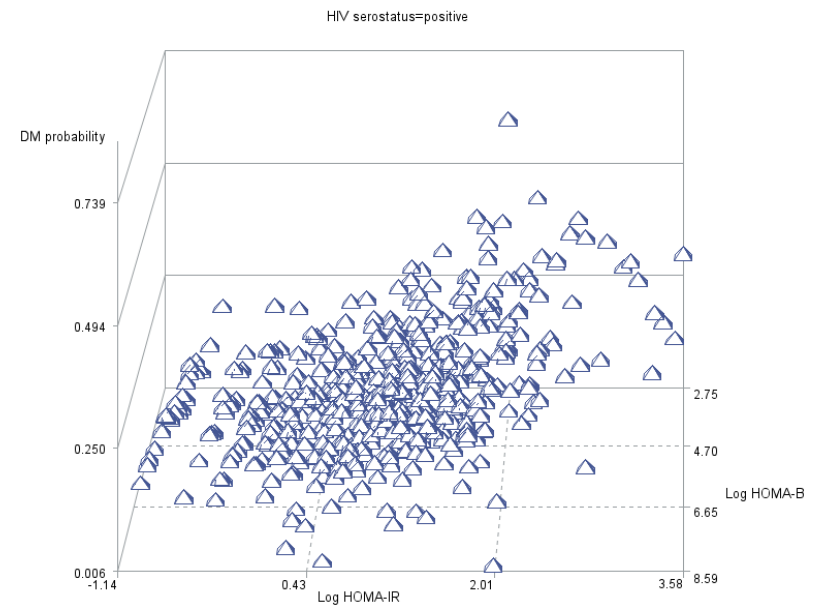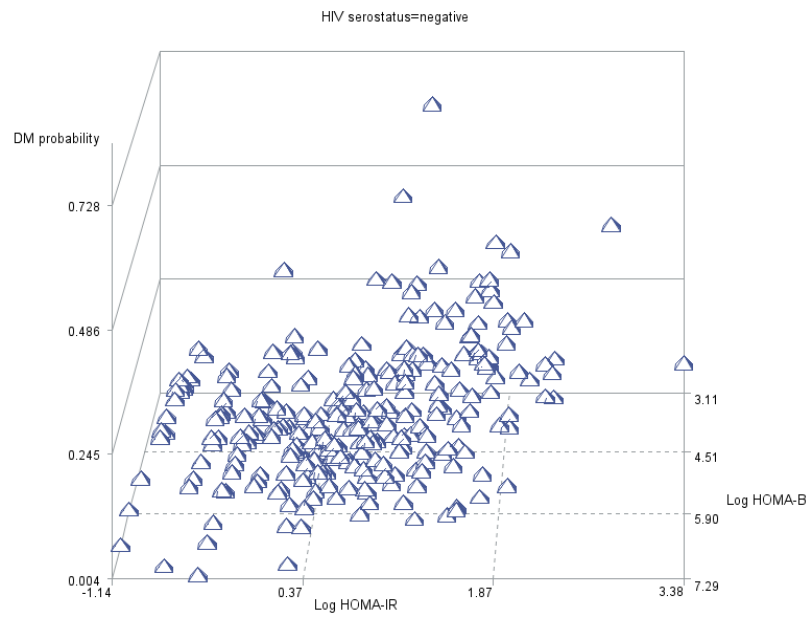
Models	Variables	HIV Negative						HIV Positive					
		Crude Estimation			Full Estimation			Crude Estimation			Full Estimation		
		Estimates	SE	P-value	Estimates	SE	P-value	Estimates	SE	P-value	Estimates	SE	P-value
L0L1 vs. Other	AGE	-0.0306	0.0025	<.0001	-0.0252	0.0020	<.0001	-0.0196	0.0016	<.0001	-0.0156	0.0014	<.0001
	L0L1	-0.4572	0.2324	0.0494	-0.4602	0.1862	0.0136	0.2987	0.1660	0.0721	0.1118	0.1343	0.4051
	AGE*L0L1	0.0141	0.0051	0.0055	0.0125	0.0041	0.0026	-0.0061	0.0035	0.0837	-0.0022	0.0029	0.4309
L2 vs. Other	AGE	-0.0268	0.0026	<.0001	-0.0216	0.0021	<.0001	-0.0231	0.0017	<.0001	-0.0177	0.0014	<.0001
	L2	0.0439	0.2172	0.8400	0.0720	0.1713	0.6742	-0.2918	0.1476	0.0481	-0.2231	0.1189	0.0608
	AGE*L2	-0.0012	0.0048	0.7933	-0.0019	0.0038	0.6094	0.0078	0.0032	0.0146	0.0062	0.0026	0.0159
L3 vs. Other	AGE	-0.0247	0.0027	<.0001	-0.0197	0.0022	<.0001	-0.0206	0.0019	<.0001	-0.0154	0.0015	<.0001
	L3	0.2699	0.2002	0.1780	0.2942	0.1590	0.0645	-0.0071	0.1387	0.9590	0.0269	0.1114	0.8089
	AGE*L3	-0.0076	0.0045	0.0927	-0.0076	0.0036	0.0374	-0.0006	0.0030	0.8460	-0.0016	0.0024	0.5060

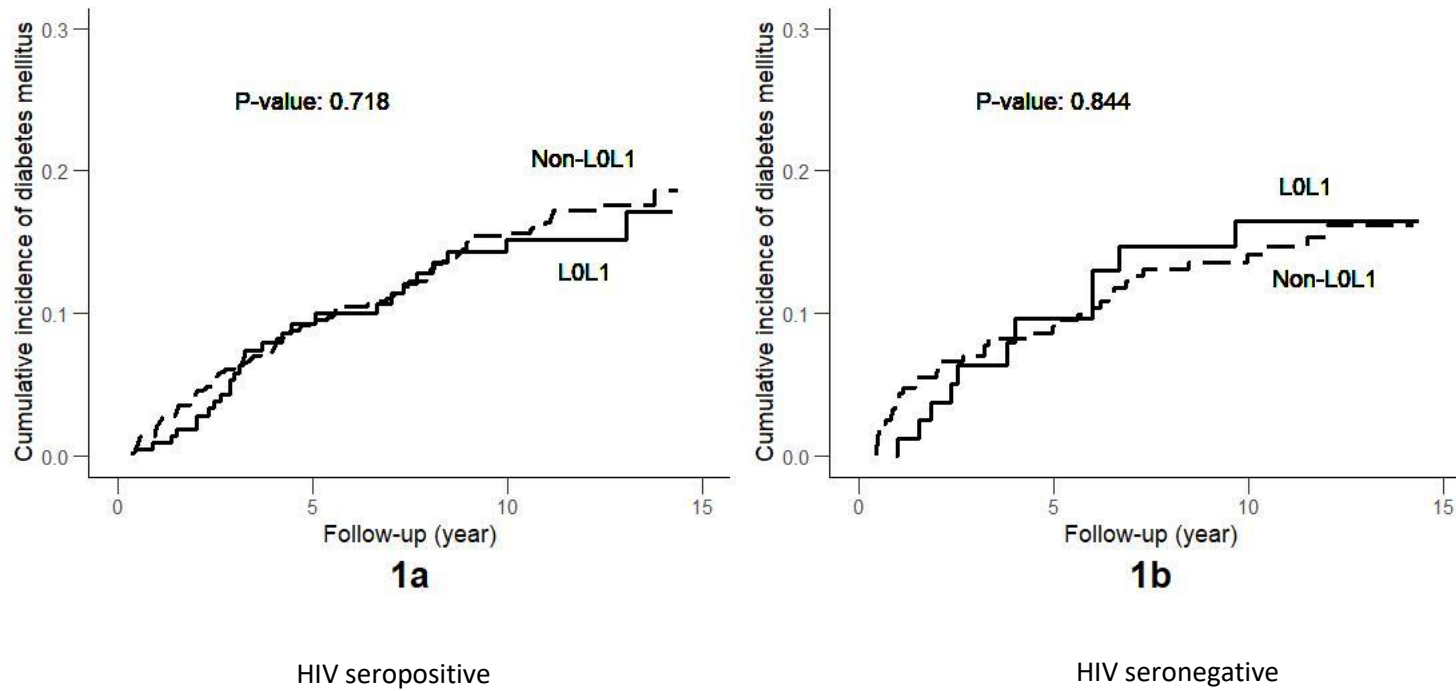[a] **Models adjusted for BMI, time-varying HOMA-IR, and genetic ancestry components**

[b] **Models adjusted for BMI, time-varying HOMA-IR, CD4 counts, detectable HIV RNA, cART use, and genetic ancestry components**

***Genetic ancestry components were evaluated with principal component analysis using 168 ancestry informative markers and the first 2 components were adjusted for in the models.**
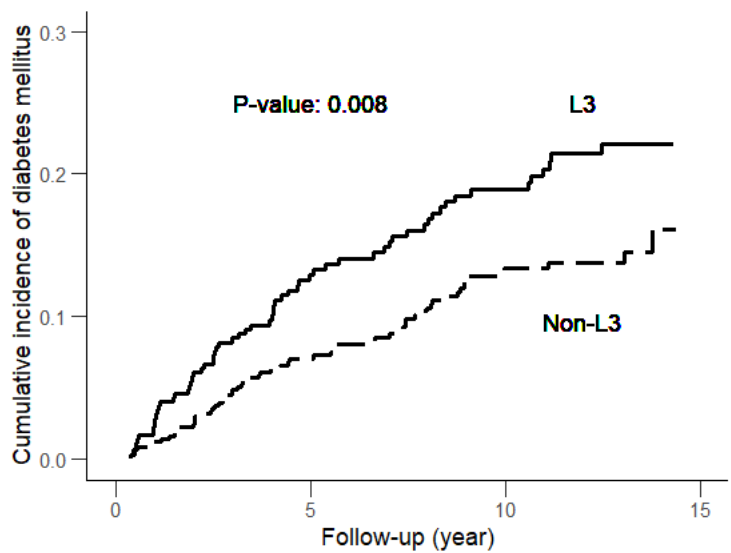
Supplementary Figure F-1. HOMA-B, HOMA-IR at Index Visit and Probability of Diabetes Mellitus during follow-up in WIHS by HIV status

Supplementary Figure F-2. Cumulative Incidence of Diabetes Mellitus by Mitochondrial DNA Haplogroups L1L0 and HIV serostatus in WIHS
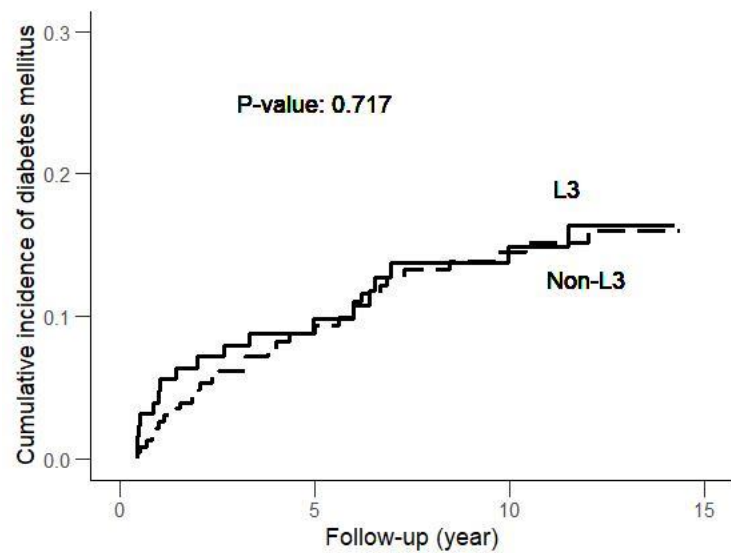

1a

HIV seropositive

1b

HIV seronegative

Supplementary Figure F-3. Cumulative Incidence of Diabetes Mellitus by Mitochondrial DNA Haplogroups L3 and HIV serostatus in WIHS

1a

HIV seropositive

1b

HIV seronegative