Supplementary Table S1. No association of HLA-B8-DR3-specific haplotypes with serum heat shock protein 70 in the years preceding the diagnosis of all (AIDS-defining plus post-AIDS) non-Hodgkin lymphoma in the Multicenter AIDS Cohort Study

Extended MHC haplotypes controls (n=142)\*\* cases (n=133)

Haplotype (total number\*) beta¶ SE p† beta¶ SE p†

1) **m34-m39** (3)

G-A -0.083 0.093 0.376 -0.056 0.027 0.279

2)  ***HLA\_B*-m34-m39** (14)

B\*0801-G-A -0.078 0.099 0.434 -0.028 0.111 0.799

3) **m67-m70-m71-m75** (7)

A-G-A-C -0.068 0.098 0.491 0.034 0.112 0.764

4) **m67-m70-m71-m75-*HLA\_DRB1*** (8)

A-G-A-C-DRB1\*0301 -0.051 0.105 0.627 0.0002 0.113 0.998

5) **m34-m39-m67-m70-m71-m75** (10)

G-A-A-G-A-C -0.069 0.097 0.486 0.023 0.113 0.838

6) ***HLA\_B***-**m34-m39-m67-m70-m71-m75-*HLA\_DRB1*** (3)

B\*0801-G-A-A-G-A-C-DRB1\*0301 -0.052 0.105 0.620 -0.026 0.114 0.817

Mixed linear models with random intercept for variation in serum level of heat shock protein 70(Hsp70) in carriers vs. non carriers of

HLA-B8-DR3-specific haplotypes in the 4 years preceding the time of diagnosis of AIDS-related non-Hodgkin lymphoma (AIDS-NHL).

Haplotypes formed by single nucleotide polymorphism (SNP) m34 in lymphotoxin-α (*LTA*); m39 in tumor necrosis factor-alpha (*TNFA*); m67 and m70 in complement factor B (*CFB*); m71 in RD RNA binding protein (*RDBP*) and m75 in cytochrome P450, family 21 or steroid 21 hydroxylase (*CYP21A2*). Only haplotypes marking the HLA-B8-DR3 lineage are shown. Note that HLA typing was performed at 4-digit resolution but failed in a small number of subjects at *HLA-B* (2) and *HLA-DRB1* (6). (**\***) Total number of common (frequency ≥ 2%) haplotypes. (\*\*) Total numbers with available SNP and HLA genotypes. (¶) Beta coefficient and (†) p-value for difference in logarithm of Hsp70 (ng/ul) between carriers and non-carriers of HLA-B8-DR3-specific haplotypes in models adjusted for immune suppression and age at diagnosis.

Supplementary Table S2.No association of HLA-B8-DR3-specific haplotypes with serum heat shock protein 70 serum in the years

preceding the diagnosis of post-AIDS non-Hodgkin lymphoma in the Multicenter AIDS Cohort Study

Extended MHC haplotypes controls (n=84)\*\* cases (n=82)\*\*

Haplotype (total number\*) beta¶ SE p† beta¶ SE p†

1) **m34-m39** (3)

G-A -0.230 0.206 0.267 0.048 0.149 0.749

2)  ***HLA\_B*-m34-m39** (14)

B\*0801-G-A -0.281 0.349 0.190 -0.193 0.154 0.212

3) **m67-m70-m71-m75** (7)

A-G-A-C -0.143 0.221 0.519 -0.165 0.155 0.289

4) **m67-m70-m71-m75- *HLA\_DRB1*** (8)

A-G-A-C-DRB1\*0301 -0.135 0.221 0.543 -0.171 0.154 0.270

5) **m34-m39-m67-m70-m71-m75** (10)

G-A-A-G-A-C -0.143 0.224 0.525 -0.165 0.155 0.289

6) ***HLA \_B***-**m34-m39-m67-m70-m71-m75- *HLA\_DRB1*** (3)

B\*0801-G-A-A-G-A-C-DRB1\*0301 -0.135 0.222 0.544 -0.194 0.154 0.209

Mixed linear models with random intercept for variation in serum level of heat shock protein 70(Hsp70) in carriers vs. non carriers of HLA-B8-DR3-specific haplotypes in the 4 years preceding the diagnosis of post-AIDS non-Hodgkin lymphoma (post-AIDS-NHL). Haplotypes formed by single nucleotide polymorphism (SNP) m34 in lymphotoxin-α (*LTA*) ; m39 in tumor necrosis factor-alpha (*TNFA*); m67 and m70 in complement factor B (*CFB*); m71 in RD RNA binding protein (*RDBP*) and m75 in cytochrome P450, family 21 or steroid 21 hydroxylase (*CYP21A2*). Only haplotypes marking the HLA-B8-DR3 lineage are shown. (**\***) Total number of common (frequency ≥ 2%) haplotypes. (\*\*) Total numbers with available SNP and HLA genotypes. (¶) Beta coefficient and (†) p-value for difference in logarithm of hsp70 (ng/ul) between carriers and non carriers of HLA-B8-DR3-specific haplotypes in models adjusted for immune suppression and age at diagnosis.

Supplementary Table S3. No association of serum heat shock protein 70 with all non-Hodgkin lymphoma by HLA-B8-DR3

carriage status among HIV-infected men in the Multicenter HIV Cohort Study

mixed model\*\*

Extended MHC haplotypes

B8-DR3 non-B8-DR3

haplotype (total number\*)(n=67-91) (n=128-218)

beta¶  p† beta p

1. **m34-m39** (3)

G-A 0.137 0.039 -0.042 0.500

1. ***HLA\_B*-m34-m39** (14)

B\*0801-G-A 0.106 0.212 0.043 0.323

1. **m67-m70-m71-m75** (7)

A-G-A-C 0.111 0.133 0.032 0.525

1. **m67-m70-m71-m75-*HLA\_DRB1*** (8)

A-G-A-C-DRB1\*0301 0.103 0.275 0.044 0.307

1. **m34-m39-m67-m70-m71-m75** (10)

G-A-A-G-A-C 0.106 0.162 0.035 0.490

1. ***HLA\_B***-**m34-m39-m67-m70-m71-m75-*HLA\_DRB1*** (3)

B\*0801-G-A-A-G-A-C-DRB1\*0301 0.095 0.319 0.055 0.252

(\*\*) adjusted for immunosuppression and age at diagnosis. (¶) coefficients estimated in mixed models

with the control groups serving as references. Note that non-B8-DR3 means any haplotype other than those listed under the “Extended MHC Haplotypes” column .

Supplementary Table S4. No association of serum heat shock protein 70 with post-AIDS non-Hodgkin lymphoma

by HLA-B8-DR3 carriage status among HIV-infected men in the Multicenter HIV Cohort Study

mixed model\*\*

Extended MHC haplotypes

B8-DR3 non-B8-DR3

haplotype (total number\*)(n=20-67) (n=95-136)

beta¶  p† beta p

1. **m34-m39** (3)

G-A 0.126 0.294 0.039 0.624

1. ***HLA\_B*-m34-m39** (14)

B\*0801-G-A 0.087 0.505 0.047 0.506

1. **m67-m70-m71-m75** (7)

A-G-A-C 0.048 0.695 0.052 0.471

1. **m67-m70-m71-m75-*HLA\_DRB1*** (11)

A-G-A-C-DRB1\*0301 0.041 0.753 0.055 0.449

1. **m34-m39-m67-m70-m71-m75** (11)

G-A-A-G-A-C 0.045 0.719 0.052 0.473

1. ***HLA\_B***-**m34-m39-m67-m70-m71-m75-*HLA\_DRB1*** (4)

B\*0801-G-A-A-G-A-C-DRB1\*0301 0.048 0.684 0.110 0.303

(\*\*) adjusted for immunosuppression and age at diagnosis. (¶) coefficients estimated in mixed models with the control groups serving as references. . Note that non-B8-DR3 means any haplotype other than those listed under the “Extended MHC Haplotypes” column .

Supplementary Table S5. Stratification of non-Hodgkin’s lymphoma (NHL) in the Multicenter AIDS Cohort Study sample by AIDS-defining and post-AIDS NHL outcomes, histologic type and anatomical location

total NHL cases (n=152)

NHL outcomes systemic NHL (n= 103 ) central nervous system NHL (n=49 )

LBC DLBC other\* unknown LBC DLBC other unknown

AIDS-defining & post-AIDS NHL 21 28 46 8 49

AIDS-defining NHL 6 18 25 6 11

Post-AIDS NHL 15 10 21 2 38

(\*) Most of the developed tumors in this category are either of the Burkitt lymphoma type or reported as non-Hodgkin Lymphoma.

MHC-I

MHC-III

MHC-II

***A***

***C***

***B***

***TNF-A***

***LT-A***

***HSP70***

***CFB***

***DRB1***

***DQ***

***(A1, B1)***

1365

95

230

350

645

150

Supplementary Figure S1