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Abstract (eposter session)

**African ethnicity can influence immunological responses to highly-active antiretroviral therapy (HAART) and immunological success at 48 months: a retrospective pilot cohort study**

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Study design: Retrospective cohort epidemiological study. Objective: To assess whether African ethnicity was independently associated with a poorer CD4 reconstitution with Highly Active Antiretroviral Therapy (HAART), comparatively to Caucasian. Methods: Inclusion criteria: All 575 HIV-1 adult patients previously treated by HAART on 31/12/2011 in Reims University hospital centre (France), who gave informed consent for the digitization of their medical records, were included. In addition to socio-demographical data, blood CD4 lymphocyte counts and HIV-1 viral loads were collected at baseline and from 6 to 48 months after the beginning of HAART. (CNIL declaration number 1585477) Primary outcome: Immunological success was defined as the presence of blood CD4 lymphocyte counts above 500 cells/mm<sup>3</sup> in more than 50% of the values collected from 6 to 48 months after the beginning of HAART. Exclusion criteria: Patients with HIV-1 viral load > 200 copies/ml or more than one HIV-1 viral load between 20 and 200 copies/ml during follow up were excluded. Patients with a blood CD4 lymphocyte counts above 500 cells/mm<sup>3</sup> at the beginning of HAART were also excluded. Statistical analysis: Quantitative variables were compared using the Mann Whitney U-test and qualitative variables were compared using Fisher's exact test or Pearson's Chi-square test, as appropriate. All variables with a p value < 0.20 were entered into a multiple logistic regression model. Results: Two hundred and eighty patients met inclusion criteria and no exclusion criteria. After 48 months of HAART, blood CD4 lymphocyte counts were lower in African than in Caucasian patients: 449 [65-975] versus 569 [131-1698] cells/mm<sup>3</sup> (p=0.02). Immunological success was present in 142/220 (64.5%) Caucasians versus 29/60 (48.3%) African patients (p=0.02). African ethnicity was independently associated with the absence of immunological success (OR=2.22, 95% CI=1.097-4.504, p=0.02) despite similar baseline blood CD4 lymphocyte counts (219 versus 204 cells/mm<sup>3</sup>, p=0.72). Conclusion: Our findings suggested that African ethnicity influences significantly rates of CD4 cell count recovery at 48 months after the initiation of HAART and therefore immunological success.