



## Prevalence of metabolic syndrome and estimated Framingham risk score among Brazilian HIV-infected patients

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**Body: Background:** Recent studies suggest that HIV infection itself or combination ART (cART) were both associated with increased risk for cardiovascular disease (CVD). The 10-year Framingham risk score (FRS) is used to predict cardiovascular events in the non-HIV-infected patients, and its application in the HIV-infected subjects is under discussion. We evaluated the traditional CVD risk factors and metabolic syndrome (MS) components among HIV-infected patients ART-treated and ART-naïve.

**Methods:** This was a cross-sectional study of HIV-infected subjects ART-treated (n=29), HIV-infected patients ART-naïve (n=28) and controls without previous CVD events (n=32). Subjects were selected for common age range (20 to 69 years) from the Instituto de Infectologia Emílio Ribas, São Paulo. We assessed cardiovascular risk factors, HIV viral load, nadir CD4 count, high-sensitivity C-reactive protein (hs-CRP) and plasma lipid concentrations. MS components included low LDL cholesterol, high triglycerides, high BMI, hypertension and diabetes. The statistical analysis were done using a SPSS 16.0.

### Results:

Characteristic	ART-naïve Patients (n= 28)	ART-treated patients (n= 29)	Control subjects (n= 32)	P
<b>Age in years</b>				
Mean	42.0	43.6	42.8	0.77
Female sex (%)	35.7	31	46.8	0.42
HIV duration, mean years	6	10	—	—
Nadir CD4 cell count, mean cells/ $\mu$ L	449	208	—	<0.0001
Current HIV-1 RNA level (copies/mL)	13.683	<50	—	0.005
hs-CRP	3.3	2.6	2.2	0.39
HDL cholesterol, mean mg/dL	42.2	47.1	49.5	0.07
LDL cholesterol, mean mg/dL	114	120	119	0.66
Total cholesterol, mean mg/dL	182	209	198	0.02
Triglycerides, mean mg/dL	137	234	147	0.02
Systolic blood pressure, mean mm Hg	121	126	120	0.001
Diastolic blood pressure, mean mm Hg	70	79	77	0.007
Metabolic syndrome (%)	25	41.4	28.1	0.0001
High FRS(%)	0	27.6%	0	0.0001

NOTE: hs-CRP, high-sensitivity C-reactive protein; HDL, high-density lipoprotein; LDL, low-density lipoprotein; FRS, Framingham Risk Score.

**Conclusion:** Our results shows a high prevalence of MS and high FRS in HIV-patients under treatment, which can be used to predict cardiovascular risk stratification in this population

**Keywords:** cardiovascular risk

metabolic syndrome

HIV-patients

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