Abstract: Cardiovascular disease risk is elevated among HIV infected individuals with traditional and not traditional risk factors. Although various risk stratification models are available and currently being used, the performance of these models in different populations is still controversial. The aim of the study was to compare the predictions of five popular cardiovascular disease (CVD) risk prediction models in a colombian HIV patient cohort.

Methods: A cross-sectional design was used to compare the cumulative CVD risk predictions of the models. We made a retrospective 10 years cohort follow up in HIV infected individuals, we identified the occurrence of cardiovascular events and calculated by official online calculator: Framingham score (2008/ATP3 y 2013), Framingham score adjusted for Colombia, SCORE (Systematic Coronary Risk Evaluation), PROCAM (prospective cardiovascular munster study) and ASCVD (Atherosclerotic Cardiovascular Disease - Risk Algorithm) to predict the cardiovascular events, defined as acute myocardial infarction, stroke, aortic aneurism, peripheral artery disease and carotid stenosis. We calculated 5 risk scores in each patient and ROC (receiver operating characteristic curve).

Results: A total of 257 HIV-infected patients were included in the study: 93% were male and they had a mean age of 40 years, a known duration of HIV infection of 6.8 (IQR 3.7-10.9) years. The primary end point (cardiovascular event) occurred in 7 patients (2.72 %), the ROC value to Framingham score 2013 was: 0.84, Framingham score 2008/ATP3: 0.889, Framingham score adjusted for Colombia: 0.889, SCORE: 0.864, PROCAM: 0.8949, ASCVD 0.890.

Conclusions: In a colombian HIV patient 10 years cohort, a good capacity for prediction and discrimination of the scales was observed, possibly due to the fact that the majority of the cohort was composed of patients with low or very low risk and their event rate was low and there were no significant differences in the ROCs.