Reviewer’s report

Title: Effects of ethnicity and CD4 count on glucose metabolism among HIV patients on highly-active antiretroviral therapy (HAART)

Version: 2 Date: 5 February 2013

Reviewer: Federica Carli

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Major Compulsory Revisions

I appreciate the revision made by the authors and the improvements in statistical result reports, in particular post-hoc analyses and regression coefficients reported for ethnic categories.

However, I have to underline some major concerns in my opinion not well clarified by dr. Misra and coll.

1. Limitations of the study are not sufficiently explained, i.e. cumulative exposure to ARV classes and to single drugs are not reported and, consequently, not included in multivariate analyses.

2. I do not know SPSS result reports, but using other statistical software packages (like STATA) interactions between categorical and continuous variables are reported as:
   category1*continuum (or other category variable)
   category2*continuum (or other category variable)
   ...

Authors reported interactions between ethnicity and FBS (table 2a) and CD4 (2b) in one single raw. In my opinion, this is confusing and readers cannot well understand the role of AA and/or Hispanic ethnicity with high or low CD4 category.

3. One more concern is about collinearity between variable outcomes and covariates. I apologize with authors for not having mentioned this in my previous referee. In my opinion fasting glucose and HOMA-IR (table 2a) are highly related because glucose is included in the formula, and therefore this is not a variable to include in the analysis. The same problem was present in table 2b where insulin was included as covariate. Could the authors perform a collinearity test before to include variables in the model? Did the authors perform a postestimation analysis after modeling?

Level of interest: An article of limited interest

Quality of written English: Acceptable
**Statistical review:** Yes, and I have assessed the statistics in my report.