Reviewer's report

Title: Virologic versus immunologic monitoring and the rate of accumulated genotypic resistance to first-line antiretroviral drugs in Uganda

Version: 1 Date: 20 August 2012

Reviewer: Mauro Zaccarelli

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The manuscript entitled “Virologic versus immunologic monitoring and the rate of accumulated genotypic resistance to first-line antiretroviral drugs in Uganda” aims at assessing whether viral load monitoring brings an advantage for the probability of developing genotypic resistance. This happens in addition to simple immunological monitoring of HIV patients in treatment in a limited resource setting.

My comments

1. Main issue. The two samples of patients are not selected consistently. The IM sample is the routinely followed group without any selection criteria, thus including patients with possible logistic or adherence problems and without strict follow-up. On the other hand, the IDI research cohort has inclusion criteria in order to select patients who can be better followed in a research study. This difference in the selection process can influence the results: for example, low adherence can result in high risk of resistance. This should be clearly stated in the methods and, as limitation, in the discussion.

2. Methods: IDI routine care clinic IM group. The authors declare that “A more detailed description of this population is presented elsewhere.”. However, a description of how treatment failure is assessed should be added.

3. Methods: page 6, first paragraph. The reference for Figure 1 should be removed from the methods and indicated only in the Results.

4. Table 1. The p values should be preferentially indicated in the table, rather than in the text.

5. Results. In general, number, percentages, p values reported in tables, should not be repeated in the text. The text should briefly describe the main findings of the analysis done and data non present in tables or figures.

6. Figure 1b. The overall number of patients screened should be added, as in figure 1a.

7. Discussion: limitations section. The last limitation “Finally, some countries....” Should be removed because not related to the topics presented in the study.

8. Discussion. Still, numbers, percentages and p values, already previously
reported, should not be included in the discussion. In general the discussion could be shortened, in particular, reducing the last two paragraphs on page 10 and page 11, where some concepts are repeated.

**Level of interest:** An article whose findings are important to those with closely related research interests

**Quality of written English:** Acceptable

**Statistical review:** No, the manuscript does not need to be seen by a statistician.