Reviewer's report

Title: Increase in transmitted resistance to non-nucleoside reverse transcriptase inhibitors among newly diagnosed HIV-1 infections in Europe

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Reviewer: SABINE YERLY

Reviewer's report:

The study of Frentz et al. evaluates the prevalence of transmitted drug resistance (TDR) in 4317 newly HIV-diagnosed individuals from 2002 to May 2007 using the pan-European SPRAD programme including 26 European countries and Israel. The overall prevalence of TDR was 8.9% with the highest prevalence observed for NRTI (5%) then for NNRTI, 2.9% and PI, 2.5%. The overall prevalence of TDR was stable over time. However a significant increase was found between 2002 and 2007 for NNRTI TDR whereas PI TDR decreases significantly during the same period.

Major comments

The study includes newly HIV diagnosed individual from 2002 to 2007. My main concern is related to the date of the data presented that are pretty old. Moreover the first part of the data collected between 2002 and 2005 was already published in 2009. Since these data were collected among 26 countries with probably large differences in AIDS epidemiology, prevalence of TDR but also in ART usage, the analyses should include the country as potential confounder. The conclusions of the study might be not applicable to all countries and in particular in 2013.

Minor comments

Methods p 4. The authors should described which laboratory parameters were used to state that for 506 patients primary HIV infection was documented based on laboratory data.

Results p 6. It is state that several factors were associated with an overall increase in TDR however the analysis performed show the factors associated with TDR and not with the increase in TDR. In this section it will be more appropriate to report the results of the multivariate analysis.

Level of interest: An article of limited interest

Quality of written English: Acceptable

Statistical review: No, the manuscript does not need to be seen by a statistician.
Declaration of competing interests:

'I declare that I have no competing interests