Reviewer’s report

Title: The risk of AIDS-defining events is decreasing over time in the German HIV-1 Seroconverter Cohort

Version: 3 Date: 5 November 2011

Reviewer: Patrizio Pezzotti

Reviewer’s report:

The study evaluates the change on the risk of AIDS by 4 different calendar periods, defined on the basis of the availability of combination antiretroviral therapy, in a German cohort of HIV-positive individuals. The cohort includes only individuals with well estimated date of seroconversion.

The study question is well defined and overall I have a positive opinion of the manuscript. However, the manuscript should be improved in several sections before acceptance.

Major Compulsory Revisions

The methods section is lacking information about death cases without AIDS and lost to follow-up and details should be given to better understand the magnitude of these problems that can bias the obtained results. Furthermore, in my past experience with similar data I used different ways to define the date of "administrative" censoring for those alive and still AIDS-free and there was debate in the past in literature on how to deal with these problems (see for example: Cozzi Lepri A, Phillips AN, Pezzotti P, Rezza G. Is the clinical course of HIV infection changing? Study’s censoring strategy may be source of bias. BMJ 1997;315(7117):1237).

Information about influence of censoring strategies and death without AIDS should be given in the results section and in the discussion section.

Another aspect not discussed is the change of risk by calendar period due to change in the characteristic of the circulating virus. By the way I highlight that the cohort is characterized by a surprising very large number of enrolled seroconverters in the most recent calendar period. Is this due to the inclusion in the cohort of new clinical centres or due to other reasons. Please provide information about this point and in case add some comments in the discussion section.

The authors should also discuss their results comparing with those reported for other cohorts not based on seroconverters.

The results section would be improved if data about specific drugs and combinations mainly used in the different calendar periods were given.

I suggest to use as reference category the 1997-2000 period instead of pre-1997. This will permit to highlight the most important results.
Minor Essential Revisions

Abstract

I suggest to add a sentence in the results section that the effect of age (although not statistically significant) is decreasing over time.

For documented seroconverters in the methods section is described that the cohort may include individuals with an interval between negative and positive test up to three years; however, in the results section it is reported that this interval varied between three and 12 months. This is not substantial for the manuscript but unusual in practice.

HIV exposure categories (rows 149-152)

I suggest to revise the sentence that sounds inappropriate combining behaviours with origins of patients. I feel that some readers could find it not very nice.

Results section: AIDS defining events (rows 186-189)

Are they only the first ADEs or all those observed? Please specify. It will be useful to provide numbers of ADEs per period and the percentages of some of them to provide information about the change of the AIDS spectrum

Methods and results section

It is written in the methods that documented seroconverters may have an interval between negative a positive test up to three years. In the results you reported that the enrolled documented seroconverters had an interval between 3 and 12 months. This is not substantial for the manuscript but unusual in practice. Please provide clarifications.

Level of interest: An article of importance in its field

Quality of written English: Acceptable

Statistical review: Yes, and I have assessed the statistics in my report.

Declaration of competing interests:

I have no competing interests