Reviewer’s report

Title: Analysis of treatment persistence with Glatiramer Acetate in treatment-naive patients and after treatment failure with Interferons.

Version: 1  Date: 6 January 2015

Reviewer: Alessandra Lugaresi

Reviewer’s report:

A. Major Compulsory Revisions
I have no major compulsory revisions to suggest

B. Minor Essential Revisions
There are several mistakes to be corrected, highlighted in the attached pdf

  e.g. the use of end-point to indicate end of observation, loss to follow-up instead of lost to follow up (highlighted in the revised text). etc

1. Is the question posed by the authors well defined?
  Partially: although the stated aim is persistence in GA treatment, effectiveness would me more relevant.

2. Are the methods appropriate and well described?
  Partially: the definition of treatment failure and partial response should appear in the methods

3. Are the data sound?
  Yes, but giving a partial perspective. It would have been interesting both to know if differences between naive vs switchers are in the rate of discontinuations due to side effects, rather than lack of efficacy.

4. Do the figures appear to be genuine, i.e. without evidence of manipulation?
  Not applicable

5. Does the manuscript adhere to the relevant standards for reporting and data deposition?
  Yes

6. Are the discussion and conclusions well balanced and adequately supported by the data?
  Partially. Real conclusions have not be drawn. Authors should present a more articulate discussion about factors contributing to higher persistence. Are patients more readily shifted to a second first line drug, looking for NO DISEASE ACTIVITY, whereas subsequently a partial response is accepted, especially by
patients scared by second line treatment risks? Might this change with the availability of new first line oral drugs? Are patients sticking to the safest drug waiting for new treatments not available at the end of the observation period?

7. Are limitations of the work clearly stated?
Not completely (see above): nothing is said about the changing panorama of second line and first line treatment from 2004 to 2013

8. Do the authors clearly acknowledge any work upon which they are building, both published and unpublished?
Yes, but useful ref.s might be added:
Comparative efficacy of interferon # versus glatiramer acetate for relapsing-remitting multiple sclerosis.
PMID: 25550414 [PubMed - as supplied by publisher]
Interferons-beta versus glatiramer acetate for relapsing-remitting multiple sclerosis.
Comparative effectiveness of glatiramer acetate and interferon beta formulations in relapsing-remitting multiple sclerosis.
Mult Scler. 2014 Dec 5. pii: 1352458514559865. [Epub ahead of print]
9. Do the title and abstract accurately convey what has been found?
Not completely. It gives an hint on the aim, rather than the results

10. Is the writing acceptable?
English needs some revision
1. The manuscript might incorporate at least the hint that comparison to interferon beta might shed light on the differential persistence in treatment.

2. Some speculations about effectiveness or the risk-benefit considerations made when proposing a shift to GA rather than to a second line drug might be added

**Level of interest:** An article of limited interest

**Quality of written English:** Needs some language corrections before being published

**Statistical review:** Yes, but I do not feel adequately qualified to assess the statistics.

**Declaration of competing interests:**

Prof Lugaresi has served as a Bayer, Biogen Idec, Genzyme/Sanofi, Merck Serono, Novartis Advisory Board Member. She received travel grants and honoraria from Bayer, Biogen Idec, Genzyme, Merck Serono, Novartis, Sanofi and Teva and her institution received research grants from Bayer, Biogen Idec, Merck Serono, Novartis, Sanofi and Teva. Prof Lugaresi has also received travel and research grants from the Associazione Italiana Sclerosi Multipla and was a Consultant of “Fondazione Cesare Serono”.