Reviewer's report

Title: Disease Activity Flares and Pain Flares in an early rheumatoid arthritis inception cohort; characteristics, antecedents and sequelae

Version: 0 Date: 02 Jul 2019

Reviewer: Ram Bajpai

Reviewer's report:

I have completed the statistical review of the manuscript titled 'Disease Activity Flares and Pain Flares in an early rheumatoid arthritis inception cohort; characteristics, antecedents and sequelae'. My comments are given below:

In abstract, results section should have some quantitative information. For example, authors may add the proportion of DAS28 and pain flares in their subgroups after latent class analysis (LAC), or any other useful quantitative information can be added here.

Authors already mentioned that only complete case analysis was performed for this purpose. However, some additional justification will be useful.

It is mentioned that time-to-event analysis was done for first DAS28 flare and first plain flare and summarised by Kaplan-Meier plot. However, it is not mentioned in the statistical analysis plan. It should have been explained in the analysis plan.

In table 1, possible range (i.e., Yes/No) for categorical variables such as gender and smoking is confusing as it is not clear that the value reports for yes or no. Authors may consider '% Female', '% Current smoker', and '% Ex-smokers' and report their exact proportions, and remove 'Yes/No' from possible range.

In table 2 & 3, what data are presented in these tables? If it is 'mean (SD)' then it is suggested to add 'data presented as mean (SD)' in the footnote. Authors may be aware that univariate ANOVA is strictly follow normal distribution. Authors need to explain this as many of these variables are not normal. What is the Bonferroni corrected p-value cut-off? It should be mentioned in footnote indicating for pairwise comparison.

In table 4 % 5, same as mentioned in the previous point for data presentation. Independent 't' test is also sensitive to normality. This should have been taken care during the analysis.
Are the methods appropriate and well described?  
If not, please specify what is required in your comments to the authors. 

Yes

Does the work include the necessary controls?  
If not, please specify which controls are required in your comments to the authors. 

No

Are the conclusions drawn adequately supported by the data shown?  
If not, please explain in your comments to the authors. 

Yes

Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?  
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors. 

I am able to assess the statistics

Quality of written English  
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Acceptable

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