Peer reviewed
Gandhi, Rohan, Heather Yannuzzi, and Melissa Sanders. 2024. “Delay in Biologic Therapy and Patient Outcomes in Patients with Rheumatological Conditions.” *Journal of High School Science* 8 (4): 414–26.

1.Why were patients who received Abatacept therapy within 1 year prior to treatment initiation period excluded ?

2.I would like to see the following data for those patients who were late >33%….>200% compared against the cohort of patients who were on time: attributes that are presented table 2, figure 2 and table

3 of this manuscript: https://doi.org/10.1007%2Fs40744-015-0019-6, to determine whether there were not any other factors (besides the delay in treatment) that contributed to their exacerbation of symptoms and conditions. Please present this data in the manuscript. Without the availability of this data, it becomes impossible to attribute exacerbation of symptoms or disease to a delay of treatment.

3.In addition, I also want to see comparison of data between the late and the on time cohort for the following attribute: the time between initial diagnosis and the time that treatment with Abatacept was initiated.

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1. Why were patients who received Abatacept therapy within 1 year prior to treatment initiation period excluded ?

These patients were intentionally excluded because we wanted to focus on patients who were initiating therapy and follow them forward. Allowing 1 year of “buffer period” with no abatacept therapy was our operational definition of patients who were starting new treatment.

*Revised under Inclusion and Exclusion Criteria

2. I would like to see the following data for those patients who were late >33%….>200% compared against the cohort of patients who were on time: attributes that are presented table 2, figure 2 and table 3 of this manuscript: https://doi.org/10.1007%2Fs40744-015-0019- 6 (https://doi.org/10.1007%2Fs40744-015-0019-6), to determine whether there were not any other factors (besides the delay in treatment) that contributed to their exacerbation of symptoms and conditions. Please present this data in the manuscript. Without the availability of this data, it becomes impossible to attribute exacerbation of symptoms or disease to a delay of treatment.

We appreciate the reviewer’s comment. We have added Table 1 in the manuscript that summarizes age, gender and diagnosis distribution of visits by on-time and delayed status (based on 100% delay definition). We have chosen to present the 100% delay data as it represents a delay equivalent to skipping a visit. The data across 33%, 50%, and 200% definitions of delay showed similar patterns and that is now reported in the manuscript in the text under Table 1.

We have not added information on other variables e.g., Flares, Pain, Swelling, Stiffness, and ADLs as these are rarely captured during the first infusion therapy visit and the data reported at the 2nd visit may have already been impacted by the on-time versus delayed status. However, we thank the reviewer for suggesting to add this data to the extent possible within the study design constraints.

*Revised under Results in Table 1

3. In addition, I also want to see a comparison of data between the late and the on time cohort for the following attribute: the time between initial diagnosis and the time that treatment with Abatacept was initiated.

Unfortunately, we were not in a position to reliably assess the date of diagnosis due to change of Electronic Health Record System prior to our study initiation. We appreciate the reviewer's suggestion and have noted it as a limitation in the discussion section.

*Revised under Discussion

Thank you for addressing my comments. The manuscript is much improved from its original version. However, your calculations in Table 1 need to be group specific. You also need to justify ratios. I have revised your manuscript. The revisions are in the body of the manuscript (attached to this review). Please check and revise your manuscript per the comments and resubmit.

Summary of Revisions Based on Reviewer Suggestions

Page 1

Introduction - All references changed to curved parenthesis. Removed any hyperlink to references to the reference section

Page 4

Study Objective: IV Infusion is specified

Page 5

Statistical Analysis Plan

Percentage of visits with >33%, >50%, >100% and >200% delay (these percentages are presented in days as well)

Page 5

Results

No changes were made to the first sentence.

A total of 128 patients were identified as eligible for study inclusion; of these 81% were females.

(please note that the number of 128 patients is accurate. It is specified that these patients contributed 1103 visits in the next paragraph).

Table 1. The table is revised to include all Delay periods.

Page 6

Excellent suggestions from the reviewer are now incorporated in the discussion section with references added as suggested. Thank you.

Page 8

Excellent suggestion from the reviewer in the limitations section is incorporated. The suggested limitation of not mentioning IV or SC is removed as IV is now specified in the text.

Page 9

2 suggested references are added in the references section. They are numbered 25 and 26

Thank you for addressing my comments. I recommend accept.