

## Answer to Referees

I would like to thank the referees for having let Authors ameliorate at large this manuscript and the Editor for this unique opportunity.

## Comments

There are studies showing a higher prevalence of metabolic syndrome in patients with psoriasis In this paper the authors wishes to say that SLD of obese patients is greater in psoriatic patient and normal in non obese individuals. This is an interesting study reflecting the role of BMI in Psoriasis.

My few comments:

### 1comment

The authors has classified Hepatic steatosis based on ultrasound iam concerned about it as Unfortunately, ultrasound cannot rule out steatohepatitis or fibrosis .A biopsy can correctly rule out the stages based on scoring .

Answer:

This is a very important point to elucidate.

I perfectly agree with the referee' s comment but ethical reasons and patients' strong denial to undergo invasive procedure have limited our diagnostic procedure.

2comment. I am concerned about the statistics .A statistician should be consulted to infer the results.

Answer:

I have followed the well-known chart, i.e., Choosing the correct statistical test at <http://bama.ua.edu/~jleeper/627/choosestat.html>

3comment. Representative photographs of SLD by ultrasound evaluation can be included.

Answer:

Patients did not show a clear splenomegaly and for this reason it is difficult to catch any visual difference with normal sized spleen.

Anyway, if it is necessary, Authors will prepare a Figure.

4comment. Results (mean and SD) can be displayed in Tabular form for each subjects for clear understanding

Answer:

I accept this suggestion but as stated in methods..... SLD and HOMA were not normally distributed when analyzed by Shapiro-Wilk (S-W) test,  $p < 0.05$ , and were expressed as median plus 25-75 inter-quartile range (IQR). Age, PASI, derived from a normally distributed population (S-W,  $p > 0.05$ ), were articulated as mean plus SD. Grade of HS being an ordinal variable was analysed by a non-parametric method.....the results are shown differently, i.e., means, medians, grade etc.and for this reason the clarity in a table would be partially reduced .

Anyway, if it is necessary, Authors will prepare a complex table.

This is a well designed study demonstrating the usefulness of ultrasound techniques for determining correlations between spleen size, NASH, and the degree of psoriasis.

However, while this study can predict the severity of the psoriasis based on spleen size and HS via ultrasound it doesn't address any biochemical tests confirming this observation.

1comment.What were the AST/ALT levels of these patients?

Answer:

The values of transaminases were included in the results section.

What serum markers of inflammation were increased in this cohort (IL6, CRP, TNF).

Answer:

Precious comment to take into serious consideration. This point will be the content of next research.

2comment.Do they correlate with spleen size and HS?

Answer: This crucial point has been evaluated and the results have been evidenced in the text.

3comment.Were the patients evaluated for any viral or bacterial infections and cancer?

Answer:

These were Exclusion criteria.

This point is ameliorated in the text, i.e., Population section.....into the Methods

This could increase spleen size and skew the results.

Answer:

I agree

The paper is interesting and confirms that psoriasis is not just a skin disease; it is a systemic disease that is linked with an increased risk of cardiovascular and metabolic disorders.

1comment. However, authors should provide information on drugs possibly used by studied patients, such beta-blockers, lithium, and antimalarials, which can provoke or exacerbate psoriasis

Answer:

This precisation was included in the text.

Giovanni Tarantino, MD on behalf of all the Authors.

September 23, 2014

Dear Distinguished Editor,

I am terribly sorry for not having properly answered to the referee about the ultrasound detection of Hepatic Steatosis, and the lack of determinations of CRP and IL-6.

I have put these points as limitations, see below, to the study in the revised Text, adding proper references.

Please, let me know whether there are other comments to be answered or further points to be discussed, because I am always at your complete disposal down the line.

Please, accept my frank apologies.

Kind regards,

G Tarantino, MD

#### Limitations

The lack of liver biopsy to better define the entity of HS, even though the US determination of HS of moderate-high grade is quite reliable<sup>[25]</sup>.

Furthermore, had we detected the levels of serum inflammatory markers, clues of both psoriasis and NAFLD, would have strengthened the impact of our results. Anyway, there a large body of evidence in literature that confirms the main role of CRP and IL-6 as main mechanisms of psoriasis and NAFLD, evidenced by high serum levels of this acute phase reactant and cytokine, respectively<sup>[11, 12]</sup>.