

REVIEWER'S REPORT

Manuscript No.: JNHM- 166

Title: Evaluation of serum IL-6, IL-17, and TNF- α as Potential Immunological Biomarkers in Patients with Vitiligo

Recommendation:

Accept after minor revision

Rating	Excel.	Good	Fair	Poor
Originality			✓	
Techn. Quality			✓	
Clarity		✓		
Significance	✓			

Reviewer's Name: -Bilqees Hamza

Detailed Reviewer's Report

This manuscript evaluates serum levels of **Interleukin-6 (IL-6)**, **Interleukin-17 (IL-17)**, and **Tumor Necrosis Factor-alpha (TNF- α)** in patients with vitiligo compared to healthy controls, assessing their correlation with disease severity and diagnostic performance.

- **Study Design & Setting:** Cross-sectional case-control study conducted at Al-Diwaniya Teaching Hospital, Iraq (January–May 2026).
- **Study Population:** 180 total participants (88 vitiligo patients and 92 matched healthy controls).
- **Key Findings:**
 - **Elevated Cytokines:** Serum levels of IL-6, IL-17, and TNF- α were significantly higher in vitiligo patients than in controls ($P < 0.001$ for all).
 - **Correlation with Severity:** IL-6 was the only biomarker that showed a statistically significant progressive rise across severity groups (Mild: 10 ± 6 pg/mL, Moderate: 15 ± 6 pg/mL, Severe: 15 ± 6 pg/mL; $P = 0.030$). IL-17 ($P = 0.163$) and TNF- α ($P = 0.247$) trended higher with severity but did not achieve statistical significance.
 - **Diagnostic Performance (ROC Analysis):** IL-6 demonstrated the highest area under the curve ($\text{AUC} = 0.810$, Sensitivity 78.4%, Specificity 75.0%), followed by IL-17 ($\text{AUC} = 0.790$) and TNF- α ($\text{AUC} = 0.740$).

Critical Revisions & Improvements Required

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Before final acceptance, the following methodological, statistical, and formatting inconsistencies in the manuscript must be addressed:

1. Table 3 Data Inconsistencies (Major)

- Duplicate Values:** Table 3 lists identical values for "Mild" and "Severe" groups across all three biomarkers (10 ± 6 pg/mL for Mild vs 15 ± 6 pg/mL for Moderate vs 10 ± 6 pg/mL for Severe). This appears to be a copy-paste clerical error in the manuscript layout. The actual means/SDs for the severe group must be verified and updated.
- Typographical Errors in Headers:** The header for the "Moderate" group column contains a typo (" $\text{Wean} \pm \text{SD}$ ") instead of (" $\text{Mean} \pm \text{SD}$ ").

2. Figure 1 vs. Text Inconsistencies (Minor)

- Discrepancy in Percentages:**
 - The text states: Mild = 38%, Moderate = 48%, Severe = 14%.
 - Figure 1 labels show: Mild = 37%, Moderate = 50%, Severe = 13%.
 - Actual mathematical breakdown ($N=88$):* 42 mild (47.7%), 33 moderate (37.5%), 13 severe (14.8%). The text, chart, and sample sizes (n) need to be recalculated and aligned consistently.

3. Out-of-Context Citations & Literature Alignment

- Inappropriate Citation:** Line 263 cites a study on Rheumatoid Arthritis (Wei et al., 2015) when describing Cox regression for vitiligo prognosis. This reference should be replaced with relevant vitiligo literature or removed.
- Duplicate References:** References #1 and #2 (Acharya & Mathur, 2020) as well as References #8 and #9 (Gomes et al., 2018) are identical duplicates in the reference list.

4. Methodological & Typographical Polish

- Key Keywords Typo:** Line 32 lists L-6; IL-7; TNF-a instead of IL-6; IL-17; TNF- α .
- ELISA Kit Typo:** Line 170 refers to "ELIAS kits" instead of "ELISA kits".
- Table 1 Terminology:** The table header row contains gender and female genitalia ratio phrasing that should be standard, appropriate demographic terminology ("Sex / Gender" and "Female percentage").

Revision Recommendation Matrix

Section	Required Action	Priority
Table 3	Correct identical values for Mild and Severe groups; fix "Wean" typo.	High

Jana Nexus: Journal of Health and Medicine

Publisher's Name: Jana Publication and Research LLP

<https://www.jananexushm.com>

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Section	Required Action	Priority
Figure 1 & Text	Harmonize patient counts (\$N=88\$) and group percentages across text and chart.	High
References	Remove duplicate citations (#1/#2, #8/#9) and remove irrelevantly cited Cox regression study (#24).	Medium
Abstract & Intro	Correct typos in keywords (IL-7 \$\rightarrow\$ IL-17) and ELISA kit name.	Low

Decision: Accept Pending Minor Revisions (upon correction of Table 3 data, percentage alignment, and reference cleanup).