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REVIEWER'S REPORT

Manuscript No.: IJAR-57768

Title: A Bibliometric Evaluation of Radionuclide Imaging Applications in Temporomandibular Joint Disorders

Recommendation:

Accept as it is .....

Accept after minor revision.....Yes.....

Accept after major revision .....

Do not accept (*Reasons below*) .....

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

Reviewer's ID: JPR-Dr. Sireesha Kuruganti

Detailed Reviewer's Report

Here is a detailed, in-depth peer review for the submitted manuscript titled "A Bibliometric Evaluation of Radionuclide Imaging Applications in Temporomandibular Joint Disorders".

Peer Review Report

1. Overall Evaluation

The manuscript presents a timely bibliometric analysis of the conceptual structure and thematic evolution of nuclear medicine applications in dentistry, specifically focusing on the temporomandibular joint (TMJ). The study is well-structured, utilizing robust bibliometric tools (Bibliometrix/RStudio) and data sourced from the Web of Science Core Collection (WoSCC). It provides valuable quantitative insights into a niche but expanding clinical domain. However, minor clarifications regarding database filtering, technical terminology, and data visualization alignment are needed to elevate the manuscript to publication standards.

2. Section-by-Section Review and Specific Comments

Title and Abstract

General Impression: The abstract provides a concise summary of the study's objectives, methodology, and key outcomes.

Lines 16–17: The phrase "condylar hyperplasia and temporomandibular joint metabolic activity" accurately reflects the findings, but it would be beneficial to state the total number of analyzed articles (167) directly in the abstract to give immediate context to the study's scale.

Introduction

Lines 46–48: The authors state, "there is limited information in the literature regarding the conceptual structure and thematic evolution of this field." This establishes a clear, justified research gap for executing a bibliometric study.

Lines 23–24 (Technical Precision): The text mentions that Positron Emission Tomography (PET) utilizes "positron-emitting radioisotopes instead of gamma-emitting radioisotopes." For absolute technical clarity, it is worth briefly noting that PET scanners ultimately detect the coincident 511\text{ keV} gamma photons resulting from positron annihilation events.

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Materials and Methods

Lines 52–55: The search string utilized is highly comprehensive. However, the authors must clarify the exact date the search was executed (e.g., "Search conducted on Month, Year"), as WoSCC indexing is dynamic and continually updated.

Line 57: The authors note that the dataset spans from 1995 to 2025. Given that 2025 data may still be actively indexing or incomplete depending on when the query was run, please explicitly mention whether 2025 was included as a full or partial year.

Line 58: Versioning details like R (version 4.6.0) and Bibliometrix package (version 5.3.0) ensure excellent scientific reproducibility.

Results

Lines 83–85 & Figure 1: The text highlights that the lowest annual scientific production was in 2004 and the highest was in 2023. However, looking closely at the x-axis labels on Figure 1 (Page 3), the labels appear crowded and overlapping (e.g., "1993", "1957", "2003-2005").

Correction required: The x-axis text rendering in Figure 1 needs to be cleaned up in production so that single years are clearly legible without overlapping digits.

Lines 93–94 & Figure 2: The global citation metrics are clearly depicted. There is a small typo in the spelling of the journal name for the third entry in Figure 2 text/labels: "BR J ORAL MAXILLOFAC SURG" is correct in the text, but check label spacing in the high-resolution chart.

Lines 97–100 & Figure 3: In the Author Keywords Co-occurrence Network, several words overlap or contain typographical artifacts. Specifically, the node text reads "compated tomography" instead of "computed tomography", and "bone scanstechitis" / "tmi facial asymmetry" look merged or misspelled.

Correction required: Clean up the keyword clean-up/thesaurus file in Bibliometrix to merge duplicate/misspelled terms (e.g., fixing "compated" to "computed") and regenerate the network figure.

Lines 105–110 & Figure 4: The classification into motor, basic, niche, and emerging/declining themes follows standard Callon's centrality/density mapping perfectly. However, inside the plot, the term "troj" appears in the emerging quadrant. This seems to be a typographical artifact for "TMJ". Please correct this in the source data.

Discussion and Conclusion

Lines 131–136: The interpretation of the rising trend from 2004 onwards—attributing it to an increased clinical focus on functional imaging for condylar hyperplasia and metabolic activity over pure morphology—is excellent and well-supported by dental literature.

Lines 173–175: The authors accurately and transparently acknowledge the study's core limitations (searching only the WoSCC database and limiting queries to English-language terms).

Lines 180–182: The final recommendation to incorporate alternative databases (such as Scopus or PubMed/MEDLINE) and multiple languages in future studies provides an actionable roadmap for subsequent researchers.

3. Minor Typographical and Formatting Corrections

1. Page 4, Line 100 / Figure 3 Label: Change "compated tomography" to "computed tomography".

2. Page 5, Figure 4 Label: Change the quadrant keyword "troj" to "tmj".

3. Page 5, Figure 5 Label: In the 2011–2025 column, ensure "temporomandibulantoint" is separated/corrected to "temporomandibular joint".

Final Recommendation

The manuscript is conceptually sound and well-written. Once the graphical text overlaps and keyword typos in Figures 1, 3, 4, and 5 are corrected, this paper will be highly suitable for publication.