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<mark>Reviewer A</mark>

1. Page 2, line 38: Please insert the word "alternating", i.e.: "… a weak alternating current…"

Response: We insert the word "alternating" in line 38.

2. Page 2, line 41: You illustrate the increasing interest in EIT using two relevant reviews published in 2009 and 2014 (references 16 and 17). Maybe you could also insert recent review articles from the later time period (e.g.which both address the use of EIT in guiding the ventilator settings during mechanical ventilation).

Response: We replaced references 16 and 17 with PMID: 38085866 and PMID: 37888742(Line 41) .

3. Page 6, lines 162-167: I wonder if this assessment, regarding the EIT research in China, is not too harsh. Does the observed intermediary centrality value necessarily mean that "the quantity" dominates over "the quality"? Maybe this rather reflects the lower cooperation of Chinese groups with other groups worldwide. This need not mean that Chinese groups generate low quality EIT research.

Response: We deleted "China primarily contributes to the quantity of academic research rather than its quality". End up as "Although China ranked third in terms of publication volume, its intermediary centrality remained at 0, implying that the lower cooperation of Chinese groups with other groups worldwide. (Figure 3). "(Line 162-167)

4. Page 7, line 171: Please replace "his" with "her". (Professor Frerichs is a woman.)

Response:We changed "his" to "her"(Line 169).

5. Page 7, lines 169-174: This paragraph is dedicated to the roles of two leading scientists in the EIT field, Professor Frerichs and Professor Amato. However, in the Results (page 5, lines 109-111) you did mention the first three highest ranked authors. Therefore, I think that also the Discussion should refer to all three top EIT researchers, including Professor Zhao. Especially because the difference between the second and the third rank is only minimum. (The "gold, silver and bronze medalist" should all be

mentioned, like in Olympic games.)

Response:We added "Zhao from China ranks third in terms of publication volume and fourth in terms of citation frequency."in lines172.

6. Page 7, line 179. Please insert at the end of the sentence "Additionally, it provides …from the lung." the following: "and unified EIT terminology."

Response: We made the following changes: "Additionally, it provides a detailed description of the analysis of the electrical impedance data obtained from the lung and unified EIT terminology"(Line 178).

7. Page 7, lines 189-190: References 29-33. I do not think that the reference 32, presenting the image reconstruction algorithm using the Calderon method, is appropriate to document "the facilitation of ventilation strategies and occurrence of VILI". You might insert other recent references documenting the clinical use of EIT (e.g. PMID: 33361553, PMID: 36137548, PMID: 38176102).

Response: we replaced references 31 and 32 with PMID: 33361553 and PMID: 36137548 .(Line 197)

8. A bibliometric analysis on the applications of EIT in clinical lung monitoring was published in 2022 (PMID: 35174185), with a similar title like the present manuscript. Could the authors briefly address in the Discussion what the added value of their manuscript is in comparison to this earlier analysis?

Response: The articlel(PMID: 35174185) explored the emerging trends and hot topics concerning applications on EIT in clinical lung monitoring.The search strategy was TS = ("electrical impedance tomography") AND ("lung"). Our article focuses on the application of EIT in mechanical ventiation. We used the following search strategy containing the search terms (TS). TS = ("electrical impedance tomography") OR TS = ("electrical impedance imaging") OR TS = ("electric impedance tomography") OR TS = ("impedance imaging") OR TS = ("conductivity imaging") AND TS = ("mechanical ventilation") OR TS = ("mechanical ventilatory") OR TS = ("mechanical ventilate") OR TS = ("mechanical ventilates"). Therefore, our research focus is different.We apologize for any inconvenience in adding this content during the discussion.

9. Table 2. I would recommend to present not only the name of the institution but also insert the town and the country in the table.
For example: University Medical Center Schleswig-Holstein, Kiel, Germany or Fourth Military Medical University, X´ian, China.

Response: We have insert the town and the country , as shown Table 2.

10. Table 3. Adler comes from Canada not England. The first name of Leonhardt is Steffen (not Teffen).

Response: We have made the corresponding modifications,as shown Table 3.

11. Table 4 Why do you use initials in some authors´ names whereas other authors´ names are given in full?
I think Hinz, J comes from Germany (not USA). Again, Adler comes from Canada and not England.
I am not sure why Brower and Gattinoni appear in this table, they are not EIT researchers. (You will not find a single paper on EIT published by Brower and in case of Gattinoni, there exist only two review papers on lung imaging that he co-authored, where EIT is mentioned just as one of many other imaging methods.) Is this because these two authors are linked with EIT researchers? If yes, is it still correct to refer to these two authors in the table where a reader would rather expect EIT researchers only?

Response: The data in Table 4 has some problems and overlaps with that in Table 3. Deleting Table 4 has no significant impact on the whole article. Finally we decided to delete Table 4.

<mark>Reviewer B</mark>

Minor comments:

1. The selection of references is not appropriate. Not that they are totally inappropriate, but there are better references. Ref 1-3 (line 32) should be replaced by more properly references focusing on VILI (e.g. DOI: 10.1186/s40560-023-00706-y, DOI: 10.1186/s13054-023-04572-w) but there are many more

Response: We had replaced reference 1 and 2 to the references(DOI: 10.1186/s40560-023-00706-y, DOI: 10.1186/s13054-023-04572-w)

2. *Reference 7 is a study protocol. There are much better references on permissive hypercapnia (please replace this reference). The same for reference 8, it is a study with dogs in the OR? The sentence is about limiting VILI and withdrawal of ventilation, please use the correct references.*

Response:We had replaced reference 7 to the reference(doi: 10.1155/2019/3903451). and reference 8 to the reference(doi: 10.1186/s40560-023-00706-y).

3.*Line 38: ref 9-13: again not the appropriate references (9, 10 and 12 are intra-operative evaluations of EIT). The most clinical use of EIT is in intensive care rather than OR. (I would suggest to "at least" reference I. Frerichs paper here (DOI: 10.1136/thoraxjnl-2016-208357)*

Response: This study mainly introduces the application of EIT in mechanical ventilation, focusing on the application in anesthesia surgery and intensive care, so I hope to retain the references(9, 10 and 12). The reference I. Frerichs paper (DOI: 10.1136/thoraxjnl-2016-208357) had cited as ref 23.

4. *Methods, line 52: Why have the authors only used Web of Science for their search? PubMed should have been included as well to my opinion (however, I am not sure if whether it would have made such a big difference)*

Response: Bibliometrics can choose a relatively authoritative database such as Web of Science or PubMed.WOS provides the most comprehensive and reliable bibliometric analysis data compared to other databases such as Scopus, Medline and PubMed.The Web of Science (WoS) database is commonly chosen for bibliometric analysis.Our study chosed Web of Science.

5. *Line 60: The search yield 450 citations? Regarding your search terms, I would think there are many more? A simple PubMed search on "electrical impedance tomography" (mentioned in the title) resulted in 1326 hits! Please explain*

Response:This bibliometric analysis summarized the developments in electrical impedance tomography (EIT) for monitoring mechanical ventilation not only EIT. We used the following search strategy containing the search terms (TS). TS = ("electrical

impedance tomography") OR TS = ("electrical impedance imaging") OR TS = ("electric impedance tomography") OR TS = ("impedance imaging") OR TS = ("conductivity imaging") AND TS = ("mechanical ventilation") OR TS = ("mechanical ventilatory") OR TS = ("mechanical ventilate") OR TS = ("mechanical ventilates").

6. Line 171: Inez Frerichs is a women, therefore, "his" (6th word of line 171 should be "her")

Response: We changed "his" to "her"(Line 169*).*

7. Line 190: I think reference 31 is inappropriate, please remove this one

Response:we replaced references 31 with PMID: 33361553(Line 190).

8 Line 198: ad at least one relevant reference

Response: We had added reference 31-32(Line 197).

9. Table 4: are this most-cited authors regarding the search terms, or only regarding EIT. I would suggest only use the most citer authors with EIT publications. Please explain this in the methods section.

Response: The data in Table 4 had some problems and overlaps with that in Table 3. Deleting Table 4 has no significant impact on the whole article. Finally we decided to delete Table 4.

11. Table 5: please arrange the "number of citations" from high to low (as with the other tables)

Response:We have made adjustments accordingly.

Major comments:
1. Line 64: 363 relevant articles out of the 450 citations were identified to be suitable for analysis. Please explain what the criteria are to include (and exclude) articles for analysis. Furthermore, it would be helpful if the authors supply a list of the 363 included papers for analysis (in a supplemental file)

Response: We added"Editorials, letters to the editor, and abstracts were excluded as were any articles not related to the application of EIT in mechanical ventilation." in line 64. We will supply a list of the 363 included papers for analysis in a supplemental file.

2. The methods section should be described in more detail. Figure 5 is not clear to me how the authors analyzed it? For my feeling (I did not do research on it, just a feeling), there are names missing and other names are a bit surprising. I would suggest that the authors explain how this figure is formed, with which data? Did they use the first or last author (or all authors) from a publication? Where only EIT publications included, or all paper from their search terms? This should be described in the methods section.

Response: All authors are included. We described statistical analysis in lines 68-80: CiteSpace 6.2.R3 software was used to conduct bibliometric analysis. CiteSpace is applied to data collection for collation and visual analysis, including developing statistical and descriptive analysis, collaborative network analysis, co-occurrence analysis, citation bursts analysis, and co-citation analysis. We analyzed the research constituents (authors, institutions, countries, and keywords) and generated co-occurrence networks and keyword emergence diagrams. In a co-occurrence network diagram, the node size reflects the frequency of occurrence and the lines between the nodes indicate associations, with thicker lines denoting stronger relationships. The purple outer circle nodes indicate high intermediary centrality (intermediate centrality >0.1), which indicates the importance of nodes in reference relationships or co-reference relationships. Meanwhile, a keyword mutation map indicates a significant change in keyword frequencies in a certain period of time, indicating shifts in research hotspots. The dark blue bar indicates the years in which keywords showed slight increases in co-occurrence, and the red bar indicates the years in which co-occurrence rose sharply. Data are expressed as numbers and percentages.

3. Use the most relevant references for the entire article.

Response: We replaced references 1,2,7,8,16,17,31 and 32.

This article presents a bibliometrics study on electrical impedance tomography. In identifies keywords associated with EIT - titration, oxygenation and defines the

geographic areas associated with the most publications on EIT.

The major concerns are on the bibliometrics analysis. It is unclear what this research offers and its implications for research/clinical practice. EIT is an emerging technology and thus, not surprising that there are more articles being published. EIT devices (Timpel, Draper) are from Brazil and Germany, respectively where this research concentrates. In the US, EIT is approved for mechanical ventilation monitoring, including PEEP titration. Therefore, the keywords (end expiratory pressure, mechanical ventilation) are not surprising.

To warrant publication, the authors need to explain and expand much more about bibliometric analysis and what it provides to medical research. Moreover, are the authors able to expand their analysis beyond the obvious here?

Response:Bibliometrics is the quantitative analysis of research publications. It was first defined in 1969 and gained widespread acknowledgment by the academia11.Bibliometrics can be used to understand key areas of research and to predict future research directions.The aim of this study was to characterize the trends of published papers, identify the key areas of ongoing research and appropriate research directions for future investigations.