



# The role of bibliometric analyses in plastic surgery – advantages and disadvantages

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The bibliometric analysis by Zhang *et al.* (1) aimed to establish current trends in complications after breast augmentations. Based on approximately 3,000 citations, the authors found that the trending topics in the breast augmentation literature were capsular contracture and postoperative nausea. Furthermore, the authors proposed that Breast Implant-Associated Anaplastic Large Cell Lymphoma (BIA-ALCL) could be a topic of growing interest in the future.

Bibliometric analysis is a relatively new method for analyzing the current literature in specific research fields. In contrast to a systematic review and meta-analysis, a bibliometric analysis uses large-scale, quantitative methods to compile meta-data on research publications including title, abstract, authors, institutions, journals, and citations, but does not involve full-text analysis or data synthesis. The analysis outputs are descriptive measures such as number of citations and publications as well as associative measures such as co-citation analysis.

Bibliometric analysis has several advantages. It is an inexpensive and feasible way to summarize a large amount of data, as it does not include full-text analysis, which can be time-consuming. Moreover, it does not rely on access

to journals, because it only uses title and abstracts which is widely available. Bibliometric analysis is a great tool for mapping trends over time, identifying gaps in current literature and comparing publication trends e.g., between countries and institutions.

The bibliometric analysis has some shortcomings which should be considered. First, the analysis is performed on a meta-level, and therefore qualitative measures such as outcome-measures, study design and risks of bias are not considered. Consequently, there is a risk of including studies of low quality, severe bias, or studies out of scope. Second, there are several types of clinical research questions that the bibliometric analysis cannot answer e.g., treatment effects or risk factors for certain diseases. Finally, meta-data such as citations do not necessarily correlate with clinical significance. As an example, even though BIA-ALCL is a hot topic in research, the incidence of BIA-ALCL is extremely low, and therefore has a less impact on the absolute number of affected patients with breast implants compared with more common severe complications.

In conclusion, the bibliometric analysis provides a valuable supplement to the traditional meta-analysis, as

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the bibliometric analysis can be used to identify gaps in the current literature and provide directions for future studies.

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aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

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