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LETTER TO THE EDITOR

Association between pre-operative magnetic resonance imaging (MRI) and surgical outcomes in breast cancer: not yet determined

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To the Editor,

We have reviewed with great interest the article by Houssami et al. entitled "Meta-analysis of pre-operative magnetic resonance imaging (MRI) and surgical treatment for breast cancer" [1], which evaluated the association between pre-operative magnetic resonance imaging (MRI) and surgical outcomes in breast cancer (BC). The authors concluded that pre-operative MRI is associated with increased odds of receiving ipsilateral mastectomy and contralateral prophylactic mastectomy as surgical treatment in newly diagnosed BC patients. We appreciate for the contribution of the authors. Meanwhile, we found several worthwhile issues that need to be resolved by the authors before drawing firm conclusions.

1. In the section of literature search and eligibility criteria, the authors claimed that they only searched two electronic databases (MEDLINE and Cochrane Database). At least three online databases should be retrieved for a meta-analysis, thus searching only two databases may lead to incomplete search results.
2. Although the authors provided search terms and number of citations selected or excluded in appendix documents, detailed manual search protocol was not clearly stated. We suggest that the authors provide a more detailed search protocol for replication of the work.
3. The sample size of some studies was too large for a meaningful assessment of association between pre-operative MRI and surgical outcomes in breast cancer. Actually, the sample size of the trial by Arnaout et al. was 53,015 [2], while the trial by Peters et al. was 149 [3]. Difference between sample sizes may affect the conclusions of this meta-analysis.
4. Heterogeneity of seven analyses in this article was more than 50%, while the authors failed to explore the source of heterogeneity.
5. We can not find the results of quality assessment in this meta-analysis. The lack of quality assessment may be considered a drawback of this meta-analysis.
6. Sensitivity analysis was also ignored by the authors, which may lead to instability of the combined results.

To conclude, Nehmat Houssami and colleagues evaluated an interesting issue, but the stability and accuracy of their conclusions were weakened due to the limitations mentioned above. We hope our comments could help contribute to a more accurate elaboration of the results.

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Compliance with ethical standards

Conflict of interest All authors declare no conflict of interest for this study.

Ethical approval This article does not contain any studies with human participants or animals performed by any of the authors.

Informed consent For this type of study, formal consent is not required.

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