



CORRESPONDENCE

Reply to ‘Comment on ‘Addition of ultrasound to mammography in the case of dense breast tissue: systematic review and meta-analysis’’

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<https://doi.org/10.1038/s41416-018-0247-y>

Sir,

Zhu et al.¹ express concern about the strength of the conclusions we drew in our meta-analysis assessing the effect of adding ultrasound to mammography in breast screening.² Below, we have addressed the three issues that they raised.

First, Zhu and colleagues note that only one bibliographic database was searched. As we reported in our meta-analysis, additional detection with ultrasound was observed in all but one underpowered study. To change this conclusion, several new large studies would need to be identified. We performed our search in PubMed, the central medical database, and we supplemented this by perusing the reference lists of all identified studies and more than 100 items of secondary literature such as guidelines, reviews and news items, without language restriction. While this supplementary search produced a handful of new references, the pool of the relevant studies—particularly those of high quality and large size—was not increased. Hence, it is likely that we would draw the same conclusion after additional searching from bibliographic resources other than PubMed.

Second, our observation that all identified studies but one showed a positive effect of ultrasound screening is of relevance also for the second issue of study heterogeneity. Our subgroup analysis was based on what could be considered important for homogeneity when collecting information from each study. We indeed identified a high level of heterogeneity between the studies even with our relatively tight inclusion criteria, but this was expected as the studies were undertaken in different populations and with a varying level of prior screening. If anything, this points to a high degree of generalisability of our conclusion.

Finally, while we do not feel that meta-regression would change the conclusions we drew for the factors we analysed in the subgroup analysis, we would welcome Zhu and colleagues to report and compare the outcomes of additional statistical analyses. The factors that could be of interest for this meta-regression were reported in detail in our manuscript.

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AUTHOR CONTRIBUTIONS

All authors contributed to drafting the manuscript.

ADDITIONAL INFORMATION

Competing interests: The authors declare no competing interests.

Availability of data and material: The study was based entirely on previously published data.

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REFERENCES

- Zhu, M., Li, M., Liu, J., & Lu, B. Comment on “Addition of ultrasound to mammography in the case of dense breast tissue: systematic review and meta-analysis”. *Br. J. Cancer*, (2018). <https://doi.org/10.1038/s41416-018-0237-0>.
- Rebolj, M., Assi, V., Brentnall, A., Parmar, D. & Duffy, S. W. Addition of ultrasound to mammography in the case of dense breast tissue: systematic review and meta-analysis. *Br. J. Cancer* **118**, 1559–1570 (2018).

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