

Reply to Comment on 'Diagnosis of pathological complete response to neoadjuvant chemotherapy in breast cancer by minimal invasive biopsy techniques'

Joerg Heil^{*,1}

¹University Women's Hospital, University of Heidelberg, Im Neuenheimer Feld 440, 69120 Heidelberg, Germany

Sir,

Thank you for reflecting on our work! You raised important questions we wish to address as best as possible, even though our data are insufficient to provide comprehensive answers.

1. *cT stage*: Unfortunately we do not have reliable information on this variable in the majority of cases. We agree that cT is at least theoretically an important variable for an *a priori* estimation of the risk of a possible sampling error based on the idea of a skip lesion pattern of residual tumour cells after neoadjuvant chemotherapy. Still, principally assuming biologically homogenous tumours, even in large or multicentric appearance, response to chemotherapy should be homogenous as well in the vast majority of cases. The ycT stage however is a very insecure variable to predict pCR, as shown in different studies (e.g. Schaeffgen *et al*, 2015). The inclusion criterion for all patients in this analysis (Heil *et al*, 2015) was a complete response by imaging (=ycT0), but the used imaging methods varied considerably. pCR was diagnosed in only 57% of the cases, demonstrating again the suboptimal performance of imaging.
2. *Guidance of the minimal invasive biopsy (MIB)/representativity of MIB*: We totally agree with your criticism, that the main shortcoming of this retrospective analysis is the non-standardised guidance of the MIB and hence the unclear representativity of the MIB. On the basis of this finding we conducted a prospective, monocentre pilot study (NCT02575612) using vacuum-assisted MIB

(*n* = 50) at the Heidelberg Breast Unit, Germany, with very promising results that will be presented in full text in the near future. We included cases with a relevant response in multimodal breast imaging, yielding a pCR rate in that study of ~50%.

Thank you for hinting at your ongoing trial at MD Anderson. We are looking forward to reading about your results soon.

CONFLICT OF INTEREST

The author declares no conflict of interest.

REFERENCES

- Heil J, Kummel S, Schaeffgen B, Paepke S, Thomssen C, Rauch G, Ataseven B, Große R, Dreesmann V, Kühn T, Loibl S, Blohmer JU, von Minckwitz G (2015) Diagnosis of pathological complete response to neoadjuvant chemotherapy in breast cancer by minimal invasive biopsy techniques. *Br J Cancer* **113**(11): 1565–1570.
- Schaeffgen B, Mati M, Sinn HP, Golatta M, Stieber A, Rauch G, Hennigs A, Richter H, Domschke C, Schuetz F, Sohn C, Schneeweiss A, Heil J (2015) Can routine imaging after neoadjuvant chemotherapy in breast cancer predict pathologic complete response? *Ann Surg Oncol*; e-pub ahead of print 14 October 2015.

*Correspondence: Professor J Heil; E-mail: joerg.heil@med.uni-heidelberg.de

Published online 19 April 2016

© 2016 Cancer Research UK. All rights reserved 0007 – 0920/16



<http://creativecommons.org/licenses/by-nc-sa/4.0/>

