Reply to: sentinel node biopsy after neoadjuvant chemotherapy for breast cancer in patients with pre-treatment node-positive: recommendation to optimize the performance

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European Journal of Surgical Oncology 46 (2020) 218–219

Contents lists available at ScienceDirect

European Journal of Surgical Oncology

journal homepage: www.ejso.com

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Keywords:
Axillary lymph node dissection
Axillary staging
Breast cancer
Neoadjuvant systemic therapy
Node-positive
Treatment-response

We appreciate the opportunity to provide a reply to the letter by G. Franceschini. In his letter, some advices to optimize the performance of sentinel lymph node biopsy (SLNB) are proposed for clinically node positive (cN+) patients treated with neoadjuvant chemotherapy (NAC). When a cN + patient achieves a pathologic complete response (pCR) of the axilla after NAC, a completion ALND may not be necessary. The main issue is the lack of an accurate less invasive staging procedure to safely replace ALND to identify such patients.

We agree with Franceschini that removing SLNs together with a marked node seems crucial to accurate staging of the axilla. Our group performed a systemic review and meta-analysis to evaluate the diagnostic accuracy of currently available less invasive staging procedures [1]. In this review, we compared the diagnostic accuracy of SLNB, MARI and of procedures in which SLNB and MARI are combined (i.e. excision of SLNs and a marked node). We found the following:

- 17 studies on the diagnostic accuracy of SLNB: overall false negative rate (FNR) of 17% and negative predictive value (NPV) ranging from 57% to 86%
- 1 study on MARI: FNR 7% and NPV 83%
- 2 studies on a combination procedure (like Targeted Axillary Dissection): FNR 2–4% and NPV 92–97%

SLNB has been studied extensively compared to MARI or the combination procedure. Although our systematic review shows that a combination procedure (in which SLNs and a marked node are removed) appears most accurate, the evidence to support this is very limited. A similar procedure is being validated in the prospective multicenter Dutch RISAS trial [2]. Regarding SLNB, the overall FNR appears to be fairly high and the NPV never exceeds 86%. This means that residual axillary disease is missed in 1 out of 6 patients with a negative SLNB. This is highly undesirable, since positive lymph nodes found after NAC indicate therapy resistant disease. In case such disease is missed, patients may not receive appropriate adjuvant treatment. Accurate staging is therefore not only important to prevent overtreatment in patients with a pCR, but also to provide adjuvant regional treatment in case of residual disease. More research is needed to further shape patient-tailored axillary management for cN + patients treated with NAC, with de-escalation and escalation of treatment when necessary.

References

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DOIs of original article: https://doi.org/10.1016/j.ejso.2019.10.020, https://doi.org/10.1016/j.ejso.2019.08.012.

https://doi.org/10.1016/j.ejso.2019.10.022

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14 October 2019
Available online 22 October 2019