



Response to letter to the editor

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Received: 16 December 2017 / Accepted: 5 March 2018 / Published online: 17 March 2018
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We thank Dr. Altundag for the thoughtful remarks on our recently published article “Changes in volume and incidence of lymphedema during and after treatment with docetaxel, doxorubicin, and cyclophosphamide (TAC) in patients with breast cancer” [1]. Nowadays, in a large proportion of institutions, cytotoxic treatment is administered in the neoadjuvant setting. Indeed, taxanes in a neoadjuvant setting are less likely to induce development of lymphedema, although evidence is scarce. In a sub-analysis of patients treated with taxanes, Cariati et al. compared neoadjuvant treatment with adjuvant treatment [2]. In both settings, patients developed lymphedema. However, in the neoadjuvant setting, 20% of the patients developed lymphedema, compared to 43% in the adjuvant setting [2]. This implies that although the risk of development of lymphedema is decreased in the neoadjuvant setting, still a substantial proportion of patients suffer from lymphedema. Also, a decrease in muscle strength has been described [3]. Importantly, the effects of neoadjuvant breast cancer treatment on other arm and shoulder problems are still largely unknown. Further research in this area, both with respect to short-term and long-term results, is urgently needed.

Janine Hidding and Hanneke van Laarhoven, on behalf of all the authors.

Compliance with ethical standards

Conflict of interest The authors declare that they have no conflict of interest.

References

1. Hidding JT, Beurskens CHG, van der Wees PJ, Bos WCAM, Nijhuis-van der Sanden MWG, van Laarhoven HWM (2017) Changes in volume and incidence of lymphedema during and after treatment with docetaxel, doxorubicin and cyclophosphamide (TAC) in patients with breast cancer
2. Cariati M, Bains SK, Grootendorst MR, Suyoi A, Peters AM, Mortimer P, Ellis P, Harries M, van Hemelrijck M, Purushotham AD (2015) Adjuvant taxanes and the development of breast cancer-related arm lymphoedema. *Br J Surg* 102(9):1071–1078
3. Klassen O, Schmidt ME, Ulrich CM, Schneeweiss A, Potthoff K, Steindorf K, Wiskemann J (2017) Muscle strength in breast cancer patients receiving different treatment regimes. *J Cachexia Sarcopenia Muscle* 8(2):305–316

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