Indications for individual internal mammary node irradiation

Authors' reply

We thank Peng-Fei Qiu and colleagues for their interest in our study.[1] We fully agree that, apart from optimising treatment techniques for dose coverage of target volumes and avoidance of healthy tissues, precise patient selection is the key topic of interest.

Indeed, the internal mammary node (IMN) involvement rate depends on the site of the tumour within the breast and, subsequently, on the stage as indicated by tumour size and by axillary nodal involvement. However, most routinely used sentinel node biopsy procedures do not identify the IMN due to the lymphatic drainage pattern, which fundamentally differs between the IMN and the axillary nodes.[2] The IMN identification rate primarily depends on the method of lymphoscintigraphy, with intratumoral and peritumoral injections (leading to tracing of the deep lymphatic system) having a much higher likelihood of IMN drainage than subareolar or subdermal injections, which drain mainly via the superficial lymphatic system. Single-photon emission CT–CT images might further increase the IMN identification rate.[3]

Most surgical teams continue to use superficial subareolar and subdermal injections. These injections, combined with the reluctance of surgical teams to take biopsy samples of the IMN, lead to very low rates of identification of IMN involvement. Studies that show interesting pathways to improved visualisation of IMN drainage, including those from Qiu and colleagues, should be validated in studies with larger cohorts.[4] Thereafter, the key question about the clinical relevance of IMN involvement should be answered.[5] Fortunately, our trial supports evidence of the low rates of side-effects and the absence of treatment-related mortality up to 15·7 years of follow-up after IMN irradiation, thereby offering the opportunity to do future studies like those suggested by Qiu and colleagues.

PMP reports being medical adviser for Sordina IORT Technologies, starting from April 1, 2020. All other authors declare no competing interests.

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