

Internal mammary lymph node management – further direction

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Dear editor

We read the article titled “Internal mammary sentinel lymph node biopsy: abandon or persist?” by Qiu et al with high interest. This was an excellent paper regarding the contemporary management of internal mammary lymph nodes (IMLN) in early-stage breast cancer¹ and we would like to take this opportunity to comment on this paper.

There are several unresolved questions regarding early-stage breast management including axillary staging, clear resection margin, or IMLN.²⁻⁴ We have been focusing on the issues of IMLN for almost a decade and just recently published our data regarding IMLN management. We absolutely agree that one has to carefully balance the benefit and potential risks of biopsy or radiotherapy of IMLN. Our current practice is not to do biopsy/not to irradiate IMLN unless they are clinically enlarged. However, we are always cautious about the visualization of sentinel lymph nodes by sentinel lymph node biopsy (SLNB) in internal mammary chain. We reviewed all breast cancer patients who underwent SLNB in our department from 2008 to 2012 to achieve 5 years median follow-up and to figure out whether IMLN drainage acts as a negative prognostic factor in case if they are left without any management. Our trial included more than 700 patients and the results obtained concluded no detrimental effect of IMLN drainage during SLNB procedure. There was no statistically significant difference in overall survival and local or distant recurrence rate.⁵ Our findings are in contrast to that of other trials⁶ recommending radiotherapy for IMLN; even trials such as MA.20 or EORTC 22922 that focused on axillary lymph node radiotherapy have recommended radiotherapy for IMLN. However, we believe that the difference observed might be due to the difference in the enrollment period. Our trial enrolled patients in the era of targeted therapy, taxanes, and dose-dense chemotherapy as a standard for breast cancer patients. These chemotherapy regimens may potentially compensate for uncertainties in the local management of IMLN. We believe these results are in line with the generally accepted contemporary trend toward less-radical locoregional treatment of the early-stage breast cancer, and further trials have to be carried out to confirm our findings.

Disclosure

The authors report no conflicts of interest in this communication.

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Authors' reply

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Dear editor

We appreciate the letter from Professors Vrana and Gatek regarding our article titled "Internal mammary sentinel lymph node biopsy: abandon or persist?".¹ We have been following their publications regarding internal mammary lymph nodes (IMLN) management since the publication of their article titled "Prognostic influence of internal mammary node drainage in patients with early-stage breast cancer" in December 2016² and we share their interest on this topic.

Their trials retrospectively reviewed patients with breast cancer who underwent sentinel lymph node biopsy (SLNB), and IMLN drainage was assessed as a potential risk factor for local and distant disease recurrences. We agree that the drainage of IMLN is unlikely to have a detrimental effect on patient outcome. However, their results did not mean that IMLN does not need any management, because presence of IMLN drainage should not be interpreted as having IMLN metastasis and absence of IMLN drainage as not having IMLN metastasis. We believe that the assessment of prognostic influence should be based on IMLN metastasis rather than only on IMLN drainage. Moreover, their study population had been limited to the clinically axilla lymph node (ALN)-negative patients, and the incidence of IMLN metastasis in these patients is only about 10% as reported.³ Therefore, the difference was small even if there was a difference between the patients with and without IMLN drainage.

It was recognized that the benefit of systemic therapy on locoregional control had transformed the pattern of breast cancer therapy, and within the changing treatment approach – more systemic therapy, less locoregional therapy – clinicians should deliberate the application of regional IMLN therapy. The absolute benefit of internal mammary radiotherapy (IMRT) has been decreased with the applications of effective systemic treatments, but it still exists.⁴ The 2016 NCCN Guidelines recommend IMRT for patients with MLN therapy. The absolute be and strongly consider IMRT for patients with 1–3 positive ALN (category 2A). Studies

of extended radical mastectomy reported that 36.8%–46.2% patients with ≥ 4 positive ALN and 18.8%–26.7% patients with 1–3 positive ALN identified with IMLN metastases.^{5,6} Therefore, IMRT should be tailored and balanced between the benefit and potential risks, and internal mammary sentinel lymph node biopsy (IM-SLNB) might be a minimally invasive staging technique that guides the tailored IMRT. In our recent study, we tried injecting radiotracer with a modified technique (periareolar intraparenchymal, high volume and ultrasound guidance) and obtained a high IM-SLN detection rate of 75.1%. We found that the IM-SLN metastasis rate was only 8.1% in clinically ALN-negative patients whereas it was 20.5% in clinically ALN-positive patients, and individual IMRT strategy could be guided based on IM-SLNB results.^{7–10} We recommend that IM-SLNB should be performed in all clinically ALN-positive patients and selectively in high-risk (upper inner quadrant tumor and/or ALN-positive) clinically ALN-negative patients.

Finally, we encourage that IM-SLNB study should still be performed in breast cancer patients, especially for high-risk IMLN involvement, and prognostic assessment of IM-SLNB metastasis is essential in order to improve diagnosis and provide a more individual IMRT and a more accurate prognosis.

Disclosure

The authors report no conflicts of interest in this communication.

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