

Pooled incidence of ARM lymph node metastasis was 5.7% (Range 0–8.5%). Axillary recurrence rate with median follow up of 37 months was 1.03% (8/778) in the ARM group, which was identical to 1.03% (9/870) in the AD group ($p = 1$).

Conclusion(s): ARM resulted in decreased incidence of lymphedema. ARM node metastasis was identified in 5.7% of patients, however, there is no significant increase in axillary recurrence at 37 months post-operation.

Conflict of Interest: No significant relationships.

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Clinical significance of discordances in sentinel lymph node reactivity between radioisotope and indocyanine green fluorescence in cN0 breast cancer patients

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Goals: Both radioisotopes (RI) and indocyanine green fluorescence (ICG) are the standard tracer of detecting sentinel lymph node (SN) in SN biopsy (SNB). However, there is some discordances in the reactivity of SN between the two methods. In this study, we aimed to retrospectively evaluate the usefulness of combined method of RI and ICG and unveil the clinical significance of discordances in SN reactivity between RI and ICG in cN0 breast cancer patients.

Methods: Subjects comprised of consecutive 338 cN0 primary breast cancer patients who underwent SNB using RI and ICG concurrently, and who underwent axillary lymph node dissection (ALND). We defined SN that reacts to RI as SN(RI), SN that reacts to ICG as SN(ICG), and SN that reacts both RI and ICG as SN(RI+ICG). We estimated metastatic SN detection rate and concordance/discordance rate of each method. We also evaluated the correlation of discordances in SN reactivity with the post-operative N staging.

Results: Out of 338 patients, 331 patients (97.9%) had SN(RI) and 334 patients (98.8%) had SN(ICG). Combined method of SN(RI+ICG) had a higher metastatic SN detection rate than others (SN(RI+ICG): 99.7%, SN(RI): 91.7%, SN(ICG): 96.4%; $p < 0.01$). The discordance rate between SN(RI) and SN(ICG) of detecting metastatic SN was 38 cases (11.2%), and 11 cases were positive in SN(RI) only and 27 cases were positive in SN(ICG) only. Out of these, SN(RI) was not confirmed in 8 patients. In multivariate analysis, absence of SN(RI), cT stage (cT2-3), higher histological grade and histological special type were identified as risk factors of pN2-3.

Conclusion(s): Discordances in SN reactivity between RI and ICG attributes to the prevention of overlooking SN metastasis. Although absence of SN(RI) is rare, it is one of the significant signs of advanced axillary LN metastases and ALND should be considered for accurate nodal staging in such cases.

Conflict of Interest: No significant relationships.

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The effect of primary surgery in patients with stage IV breast cancer with bone metastasis only (protocol bomet MF14-01); a multi-center, registry study

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Goals: More evidence shows that primary surgery for *de novo* metastatic breast cancer (BC) prolongs overall survival (OS) in selected cases. The aim of this study was to evaluate the role of locoregional treatment (LRT) in BC patients with *de novo* stage IV bone only metastasis (BOM).

Methods: The prospective, multicenter registry study BOMET MF14-01 was initiated in May 2014. Patients with *de novo* stage IV BC with BOM were divided mainly into two groups: those receiving systemic treatment (ST group) and those receiving LRT (LRT group). Patients who received LRT were further divided into two groups: ST after LRT (LRT+ST group) and ST before LRT (ST+LRT group).

Results: We included 505 patients in this study; 240 (47.5%) patients in the ST group and 265 (52.5%) in the LRT group. Median follow-up period was 34 months. Eight-five (32%) patients in the LRT group had received ST prior to primary breast surgery and 181 (68%) patients underwent breast surgery followed by ST. There were no differences between the three groups in terms of median follow-up time, tumor type and biological subtypes, hormone therapy, and intervention to metastatic site. However, the solitary bone metastasis rate was higher in the LRT group than in the ST only group (52% vs. 32%, respectively, $p < 0.0001$). One hundred and thirty-three patients (26.3%) died in the 34-month median follow-up; 85 (35.4%) in the ST group and 28 (10.5%) in LRT group. Local progression was observed in 39 (16.2%) of the patients in the ST group and 18 (6.7%) in the LRT group ($p: 0.001$). Hazard of death was 60% lower in the LRT group compared to the ST group [HR: 0.40 (95%CI, 0.30–0.54, $p < 0.0001$)].

Conclusion(s): In this prospectively maintained registry study, we found that LRT prolonged survival and decreased locoregional recurrence in the median three-year follow-up. Timing of primary breast surgery either at diagnosis or after ST had similar survival benefit compared to ST alone in *de novo* stage IV BOM BC patients.

Conflict of Interest: No significant relationships.