**Aim:** Detection of sentinel lymph node (SLN) metastases in breast cancer patients has been determined by conventional histological examination or by molecular biological examination such as one step nucleic acid amplification (OSNA). OSNA is in widespread use because of its simplicity and sample error-resistance. We examine the assessment using a combination of histological examination and OSNA and the possibility of omitting axillary lymph node dissection.

**Methods:** We included 1215 consecutive patients with clinical node-negative cTis-cT3 primary breast cancer who underwent SLN biopsy with intraoperative multi-section histological examination and OSNA between February 2010 and June 2013 at our institution. 315 patients (26%) with positive SLN metastases by either histology or OSNA underwent further axillary lymph node dissection (ALND). We allotted 3 points to macro metastasis by histology, 2 to micro metastasis, and 1 to isolated tumor cells (ITC). We allotted 3 points to 2+ by OSNA, 2 to 1+, 1 to +I. We defined "intraoperative SLN score (ISS)" as the sum total points and predicted the existence of non-SLN metastases intraoperatively.

**Results:** The non-SLN metastases detection rate was high in patients with SLN macro metastases (43%, 70 of 160) and OSNA 2+ patients (46%, 62 of 136). The incidence of non-SLN metastases among patients with micro metastases, patients with ITC in SLNs, OSNA 1+ patients and OSNA +I patients were 28% (15 of 66), 7% (2 of 29), 18% (18 of 101) and 17% (3 of 17), respectively. The rate of non-SLN metastases detection was low in OSNA positive patients without histological metastases (10%, 8 of 73) and OSNA negative patients with histological metastases (14%, 8 of 56). The non-SLN metastases detection rate was low (12%) in patients whose ISS is 3 and below. In patients whose ISS is from 4 to 12 and 13 and above, the non-SLN metastases detection rate was 38% and 80%.

**Conclusions:** The non-SLN metastases detection rate was low in patient with ITC in SLNs, OSNA +I, discordance of the results of both examinations, and ISS 3 and below. We suggests that in these cases we could omit the further ALND. By using a combination of histological examination and OSNA and taking clinical findings into consideration we could decide the cases that we omit the further ALND.

**Disclosure:** All authors have declared no conflicts of interest.