

The area of high-signal intensity correlated with the pathological size of metastases for nodes with metastases  $\geq 4$  mm in this series.

530

Poster

### When Mastectomy is Needed – is the Nipple Sparing Procedure a New Standard with Very Few Contraindications ?

L. Fortunato<sup>1</sup>, A. Loreti<sup>1</sup>, R. Andrich<sup>1</sup>, L. Costarelli<sup>2</sup>, M. Amini<sup>2</sup>, M. Farina<sup>1</sup>, C.E. Vitelli<sup>1</sup>. <sup>1</sup>Ospedale S. Giovanni Addolorata, Surgery, Rome, Italy; <sup>2</sup>Ospedale S. Giovanni Addolorata, Pathology, Rome, Italy

**Background:** Nipple sparing mastectomy (NSM) has been recently introduced in surgical practice to improve the esthetic results after breast reconstruction, and to diminish the sense of mutilation for women necessitating mastectomy.

**Materials and Methods:** 99 NSM were performed in 91 patients (eight cases bilateral) from 2003 to 2011, and were retrospectively analyzed. 81/99 cases were performed since 2009. All patients necessitating mastectomy without clinical evidence of nipple-areola complex (NAC) invasion or retraction, and with a minimal 1 cm clinical and radiological distance of the tumor from the NAC were considered eligible. The NAC was radically dissected, and an intra-operative serial histologic exam of the retro-areolar tissue was performed. No intraoperative radiotherapy was considered.

**Results:** Median age was 46 years (29–64) and median tumor diameter 1.9 cm (0.5–7). NSM was performed for multifocality (n=57), locally advanced disease (n=31), bilateral cancer (n=3), prophylactic contralateral surgery (n=2), or strong familial history of breast cancer (n=6). Histology was invasive ductal (n=63) or lobular (n=15), in situ (n=7), phylloloides (n=5). A positive N status was present in 34/91 cancer cases (37%). Neoadjuvant chemotherapy was administered to 21/78 invasive cancer patients (27%), while additional 43 patients received adjuvant systemic treatment/ (55%), and 10 patients post-operative chest-wall radiotherapy (13%). NAC was removed for neoplasia after intra-op or post-op histologic exam of the retro-areolar tissue in 14 and in 3 cases, respectively (17%). Only 5/17 of these removed NAC showed histologic evidence of neoplasia (29%), while there was one false-positive of intra-operative exam. Total NAC necrosis occurred in 4 cases (4%), while 10 additional patients (10%) showed minimal necrosis or superficial desquamation, without permanent aesthetic consequences. Breast reconstruction was performed with immediate prostheses (n=61) or with expander-prostheses (n=38). Patients judged their aesthetic result (intention to treat analysis) as excellent (n=28), good (n=51), sufficient/fair (n=16) or insufficient (n=4). At a median follow-up of 23 months there were no loco-regional recurrences, while four patients developed systemic relapse.

**Conclusions:** With a limited follow-up, NSM appears to be safe when performed by a dedicated team. It can offer improved esthetic results, even in heavily treated or advanced tumors, if there is no evidence of cancer in the retroareolar tissue. Eligible patients can retain their NAC in about 80% of cases even if non-restrictive indications are implemented.

531

Poster

### Image-guided Radiofrequency Ablation in Patients with Primary Breast Carcinoma-a Multicenter Study of 40 Patients-

T. Kinoshita<sup>1</sup>, H. Tsuda<sup>2</sup>, T. Hojo<sup>1</sup>, S. Asaga<sup>1</sup>, J. Suzuki<sup>1</sup>, K. Jimbo<sup>1</sup>, N. Yamamoto<sup>3</sup>, T. Fujisawa<sup>4</sup>, D. Takabatake<sup>5</sup>, N. Wada<sup>6</sup>. <sup>1</sup>National Cancer Center Hospital, Surgical Oncology Division, Tokyo, Japan; <sup>2</sup>National Cancer Center Hospital, Pathology Division, Tokyo, Japan; <sup>3</sup>Chiba Cancer Center, Breast Surgery Division, Chiba, Japan; <sup>4</sup>Gumme Prefectural Cancer Center, Breast Surgery Division, Gumma, Japan; <sup>5</sup>Shikoku Cancer Center, Breast Surgery Division, Matsuyama, Japan; <sup>6</sup>National Cancer Center Hospital East, Breast Surgery Division, Kashiwa, Japan

**Background:** The authors performed a multicenter study of ultrasound-guided percutaneous radiofrequency ablation (RFA) in patients with T1 and T2 breast tumors 1) to confirm complete thermal injury of tumor tissue and 2) to determine the safety and complications related to this treatment.

**Materials and Methods:** Forty patients with core-biopsy proven invasive breast cancer, T<2 cm in diameter on ultrasound and MRI were enrolled in this trial. Under ultrasound guidance, the tumor and at least a 5 mm margin of surrounding breast tissue were ablated with saline-cooled RF electrode followed by surgical resection. Pathologic and immunohistochemical stains were performed to assess tumor viability.

**Results:** Thirty-eight patients completed the treatment. The mean tumor size on ultrasound was 1.38 cm. The mean ablation time was 12 minutes using mean power of 80.0 watts. During ablation, the tumor became progressively echogenic that correspond with the region of severe electrocautery injury at pathologic examination. Of the 38 treated patients, H&E and NADPH viability staining was available for 21 patients and in 21

(100%), there was no evidence of viable cancer cells. H&E and or ssDNA staining were available for another 17 patients. In total, complete thermal injury to the target lesions was recognized in 32 of 38 treated patients (84.2%).

No severe adverse effect on the skin and chest wall were noted.

**Conclusion:** RF ablation is a promising minimally invasive treatment of small breast carcinomas, as it can achieve effective cell killing with a low complication rate. We are planning a multicenter observational study for RF ablation of small breast carcinomas.

532

Poster

### Is Axillary Dissection Still Useful in Node-negative Early Breast Cancer?

F. Petrelli<sup>1</sup>, M. Cabiddu<sup>1</sup>, M. Ghilardi<sup>1</sup>, K. Borgonovo<sup>1</sup>, S. Barni<sup>1</sup>.

<sup>1</sup>Azienda Ospedaliera Treviglio, Medical Oncology, Treviglio, Italy

**Background:** Axillary lymph node dissection has traditionally been a routine component of the staging and management of early breast cancer. However, sentinel lymph node biopsy is now accepted as the initial approach for women with early stage breast cancer with clinically node-negative disease. We performed a meta-analysis of contemporary trials comparing axillary lymph node dissection to sentinel lymph node biopsy in patients with early stage breast cancer and pathologically negative sentinel lymph node.

**Material and Methods:** A systematic review with MEDLINE and EMBASE was conducted with no date restriction and with the following keywords: 'breast cancer', 'axillary dissection', and 'sentinel lymph node'. The search was further limited to randomized, controlled trials published in English. We identified five randomized trials of axillary dissection versus sentinel lymph node biopsy in clinically lymph node-negative early stage breast cancer patients. Meta-analyses were performed for overall and cancer-specific survival, disease-free survival, axillary recurrence, metastatic disease and ipsilateral breast recurrence.

**Results:** Meta-analyses found no significant difference in overall survival (Relative risk [RR] 1.14; p=0.17; 95% CI, 0.94–1.38), breast cancer-specific survival (RR 1.03; p=0.86; 95% CI 0.75–1.41) and disease-free survival (RR 1.07; p=0.3; 95% CI, 0.94–1.21), distant metastases (RR 1; p=0.98; 95% CI, 0.76–1.32), and ipsilateral breast recurrence (RR 1.64; p=0.34; 95% CI, 0.60–4.47) associated with sentinel lymph node biopsy. In particular a similar rate of axillary and other regional nodal recurrences was seen after sentinel lymph node biopsy (RR 1.37; p=0.34; 95% CI, 0.72–2.60).

**Conclusions:** Axillary dissection does not confer a survival benefit nor prevent further nodal relapses in the setting of early stage, pathological lymph node-negative breast cancer. Node negativity after standard pathological examination is no longer considered an indication for axillary lymph node dissection.

533

Poster

### Patient Counselling and Socioeconomic Deprivation – Two Factors That Profoundly Influence Immediate Breast Reconstruction Rate After Mastectomy

M. Chakrabarti<sup>1</sup>, C.S. Fitzgerald<sup>1</sup>, C. Obondo<sup>1</sup>, E. Weiler-Mithoff<sup>2</sup>, I.M. Reid<sup>1</sup>, S. Stallard<sup>3</sup>, L. Romics Jr.<sup>1</sup>. <sup>1</sup>Victoria Infirmary, Surgery, Glasgow, United Kingdom; <sup>2</sup>Glasgow Royal Infirmary, Plastic and Reconstructive Surgery, Glasgow, United Kingdom; <sup>3</sup>Western Infirmary Glasgow, Surgery, Glasgow, United Kingdom

**Introduction:** Majority of breast cancer patients are still treated with mastectomy alone despite the recommendations of current guidelines. It has also been suggested that women from more deprived areas are less likely to undergo immediate reconstruction (IR). We investigated potential pitfalls in patient counselling and consequent decision making contributing to present IR rate in combination with the effect of socioeconomic deprivation.

**Methods:** 89 consecutive mastectomy patients' data was prospectively collected in a single centre in Glasgow between August 2010 and March 2011. Consultations about IR and patients' acceptance of counselling were analysed in combination with socioeconomic deprivation (Scottish Index of Multiple Deprivation; Fischer's exact test).

**Results:** While IR was offered to 46% of patients only, the actual IR rate was 27%. Reasons for refusal of IR: lack of interest (10), not feeling ready (2), preference of delayed procedure (2) and fear of delaying adjuvant therapy (2). Reasons were documented in 24% of those whom IR was not offered, while there was no reference at all in 36%. Reasons for not even discussing IR: age (15), co-morbidities (18), both (5), locally advanced cancer (2) with age (2). 26% of patients whom IR was offered were from affluent but 20% from deprived areas. 18% were from affluent but 29% from deprived areas of those who were not offered (p<0.05). 59% of patients