age (HR 0.96, p = 0.014), and treatment with both Tam and RT (HR 0.28, p < 0.0001) were significant factors for IBR on multivariate analysis.

A planned subgroup analysis of low-risk patients who were ER or PR positive/unknown and tumour size ⩽2 cm (n = 611), showed an IBR of 4.3% at 10 years with Tam/RT vs 11.7% with Tam alone, (HR 0.30, p = 0.0006). A further subgroup of women aged 70 and older with T1, hormone-receptor positive tumours showed an IBR of 2.9% at 10 years with Tam/RT (n = 135) vs. 7.5% with Tam alone (n = 120, HR 0.32, p = 0.094).

There were no significant differences in 10-year rates of axillary nodal (2.2% vs 3.8%) or distant relapse (10.4 vs. 6.7%), death (16 vs 15%) or second malignancy (17.6 vs 17.2%) between Tam and RT vs. Tam alone.

Conclusions: The addition of RT to tamoxifen continues to show a significant benefit in terms of IBR when compared to tamoxifen alone in women over 50 with T1 and T2 node negative breast cancer. Tumour size, age and hormone-receptor status are also significant independent risk factors for local relapse. A low-risk group of older women with T1 tumours showed similar benefit from breast RT (HR 0.32 vs. 0.30 overall), and had a similar relapse rates to women who participated in the CALGB randomized trial. These data support the role for breast radiation for women who wish to minimize the risk of breast relapse.

232 Poster discussion

Safety and routine feasibility of nipple sparing mastectomy

B. Ballardini[1], L. Regolo[1], E. Gallarotti[1], I. Sosnovskikh[1], A. De Simone[1], E. Scocia[1], V. Zanini[1]. *[1]Clinica del lavoro Fondazione Salvatore Maugeri, Breast Surgery, Pavia, Italy*

Background: Nipple Sparing Mastectomy (NSM) is being increasingly used by breast cancer surgeons. Oncological safety is the major concern of this surgical option, but open issues are also surgical approaches and indications. Our experience with NSM starts in 2003 and here we describe our results and we show that, according to the literature, in selected cases, NSM is a safe procedure.

Materials and Methods: From June 2003 and April 2009 we have performed 175 NSM (147 for breast cancer and 28 prophylactic) according to this indications: multicentric breast cancers, large DCIS, patients with unfavourable lesion volume to breast ratio and prophylactic purpose. The average age is 44.4 years.

In the first 35 patients the surgical approach was by a periareolar incision, in 10 patients we utilized a pre-existent incision whereas in the remaining 127 we performed the NSM by an incision on the lateral aspect of the breast. During surgery in all cases we removed the nipple core up to the dermis and this specimen was sanded to the pathologist for a frozen section. In 7 cases we have the frozen section positive for neoplasia or high grade hyperplasia and in 5 of these cases we removed the nipple. In all mastectomies we analyzed also the retroareolar margin on the all breast specimen: in 26 cases we had a histological exam positive for infiltrating carcinoma, in situ neoplasia and atypical hyperplasia. Of these cases apart from the 5 nipple removed during surgery 11 patients received radiotherapy, the remaining 10 patients have a follow up.

Results: Median follow-up is 41.4 months (range 6−81). We observed 5 local relapses (3.4% considering the therapeutic mastectomies): only one in the nipple-areola complex (a Paget's disease after 31 month for a original cancer of the upper-outer quadrant). None of the patients with a positive retroareolar histology develop a local relapse.

We observed 9 total necrosis: 3 in the periareolar incision group (8.6%), 5 in the lateral incision group (3.9%) and 1 in the other incision group. The partial necrosis were 15 (42.9%), 6 (4.7%) and 1 respectively and this results led us to improve the use of incisions in the lateral aspect of the breast.

Conclusions: These results suggest that MNS is an oncologically safe technique, with an acceptable rate of complications. It can be offered to patients on a routine basis. However further data and longer follow up are necessary to define appropriate indications and improve surgical techniques.

233 Poster discussion

Patient request for contralateral prophylactic mastectomy is due to a false perception of increased risk at time of intial diagnosis

A. Chaudhry[1], A. Sahu[1]. *[1]Frenchay Hospital, Breast Care Cnetre, Bristol, United Kingdom*

Background: Patient choice influences treatments offered by surgeons. Newly diagnosed unifocal and unilateral breast cancer patients often ask for bilateral (contralateral prophylactic) mastectomy at the time of initial diagnosis because they feel that improves their life chances. This is often due to a perception of high risk of ipsilateral relapse and development of contralateral breast cancer and the notion that mastectomy offers the best chance of survival. There is no evidence to suggest that mastectomy for unifocal lesion and contralateral prophylactic mastectomy in women with low to moderate risk of developing breast cancer offers any survival benefit. Yet these procedures are increasingly accepted as patient choice and offered by clinicians who do not address the possibility of an inaccurate perception of risk as the reason behind their patient's request. We carried out a study to determine if the patient's request for bilateral surgery was based on cancer worry rather than an actual calculated risk ratio.

Methods: Consecutive patients between April 2008 and Oct 2009 diagnosed with breast cancer undergoing surgery for unilateral breast cancer who requested bilateral mastectomy were included in the study. Patients were questioned on their perception of risk of cancer relapse and of developing contralateral breast cancer. Women were counselled and had their options discussed by breast care nurses. Patient's were offered a "cooling" period of twelve months in which to reconsider their decision.

Results: A total of 27 patients (age range of 31−65) were included in the study. The reasons given by patients were young age but without family history (3 patients), lobular cancers (7 patients), family history which was deemed low risk by the surgeon (12 patients), bad experience of treatment outcome in family or friends (4 patients) and a desire to avoid radiotherapy (1 patient). A patients felt that they will not live more than 5 years. All overestimated their risk of contralateral breast cancer by a factor of 5 to 10. Twelve months later all were less anxious about their risk. 4 patients (3 family history and 1 lobular) were happy with the actual risk but still asked for prophylactic surgery. The rest 23 patients were pleased about the opportunity to rethink.

Conclusion: Breast cancer risk perception by patients at the time of initial diagnosis is always over-estimated. Therefore women requesting bilateral mastectomy should receive adequate counselling of actual risk and be encouraged to defer such measures if they fall into the low to moderate risk group, so as to not undergo unnecessary, irreversible procedures. Given time to rethink patients are able to have a better understanding of their actual risk and fewer then request bilateral or prophylactic mastectomy. Healthcare professionals should take into account patient choice but where this might be based on false perception of risk should offer a cooling off period to facilitate appropriate decision making.

234 Poster discussion

Patient preference for choosing intra-operative or external-beam radiotherapy following breast conservation

M. Alvarado[1], J. Connolly[1], M. Oboite[2], D. Moore[1], C. Park[1], L. Esserman[3]. *[1]University of California San Francisco, Department of Surgery, San Francisco CA, USA; [2]Duke University, School of Medicine, Durham NC, USA; [3]University of California San Francisco, Department of Surgery, San Francisco CA, USA*

Background: The international TARGIT trial is currently studying Intraoperative Radiotherapy (IORT) for equivalence to External Beam Radiotherapy (EBRT) following lumpectomy for invasive breast cancer; this study hypothesizes that patients would choose IORT because of various benefits, even if IORT is not shown to be equivalent to EBRT in reducing the risk of local recurrence.

Materials and Methods: We used a validated tradeoff technique to quantify how much additional risk, if any, patients are willing to accept in order to undergo IORT instead of EBRT. Eligible patients were current or past candidates for breast conserving radiation. Factors studied that would possibly affect patients' preference included age at diagnosis, time since diagnosis, working status (full-time, part-time), type of therapy (chemo and/or hormone), ER, PR and HER2 status, tumor grade, and, if applicable, time since treatment, ability to continue working, type of treatment (IORT or EBRT) or radiation tolerance.

We initially presented patients with a slideshow comparing EBRT with IORT, including a slide on the possible link between local recurrence and survival. Patients were then asked whether they would chose to have EBRT or IORT given hypothetical recurrence risks. Two initial Tradeoff Slides were used. The first stated both forms of radiotherapy lead to a 10%, 10 year risk of local recurrence, while the second stated EBRT leads to a 10% risk versus an IORT risk of 20%. These two conditions were used to assess whether the initial risk comparison had an effect on patients' switch points. Subsequent tradeoff slides incrementally increase or decrease the hypothetical rate of recurrence associated with IORT until the subject's preference changes.

Results: Data from 58 patients were used to determine the additional risk of 10-year recurrence that patients would accept in order to have IORT instead of EBRT. The median switch point was 12%, or 2% additional risk. There were two outliers, one accepting 45% risk and the other 50% risk for IORT compared to 10% for EBRT. Only 4 patients had switch points <10%; 6 had switch points = 10%, the remaining 48 chose switch points >10%.

None of the factors studied affected the median switch point or the percentage of patients selecting higher than 10% risk for IORT. Factors studied included age at diagnosis, time since diagnosis, working status (FT or PT), type of therapy (chemo and/or hormone), ER, PR and HER2