were treated with axillary+supraclavicular (A+S)fields in 95(92.2%) PM patients and in 37(48.1%) patients with BCT. Internal mammarian field was added in 14(13.6%) PM patients and in 11(14.3%) BCT patients. Routine chest x-ray was performed 6 weeks after the completion of RT. Patients with abnormal chest x-ray findings or clinically diagnosed RP had spiral CT of the chest with 40 mAs. Alveolar consolidation, pleural effusion, glassy appearance and BOOP syndrome was accepted as RP in CT. 6 months later CT was repeated. All scans were evaluated by the same radiologist without knowing the clinical status. Patients with clinical symptoms received steroids and antibiotics for 15 days and the treatment results were reported.

Early pulmonary changes (within 6 months after the end of RT) was observed in 20(11.1%) out of 180 patients. 16 patients had clinical symptoms and 11 of them were correlated with radiological findings.4 patients had radiological findings without clinical symptoms.11 patients out of 16 with clinical symptoms received steroid and antibiotic treatment.Clinical response to treatment was 15 days in 8, 20 days in 2 and 30 days in 1 patient.Radiological complete response was observed in all treated patients. 5 patients without treatment had late clinical response and all these patients had signs of pulmonary fibrosis on their CT scans.Observed RP was calculated to be more in PM patients compared to BCT patients(p=0.029) with chi-square test.Electron or photon fields in chest wall RT and A+S field addition was not found to be significant for occurrence of RP.

Early treatment of RP detected by clinical and radiological signs provided faster response with less chronic changes in lung, after adjuvant RT for breast cancer patients. RP occurred more in PM than in BCT patients in our study group.

674 POSTER

Prognosis of chest wall recurrence compared to mammary recurrence: long-term follow-up of a matched pair analysis

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Background: Local recurrence remains a major concern after primary treatment of breast cancer and has a major impact on subsequent survival. While most studies report a poorer survival rate in patients with a local recurrence after mastectomy than after breast conservation, it remains controversial, whether different risk profiles at the time of primary diagnosis may account for this difference.

Methods: Matched pair analysis of 134 patients with newly diagnosed locoregional recurrence of breast cancer without evidence of systemic disease. Matching criteria included the primary surgical treatment, tumor size, nodal status, and age. The significance of various prognostic parameters at the time of primary diagnosis and at the time of recurrence were evaluated, by univariate and multivariate analyses, with respect to survival after recurrence. The median follow-up was 8.4 years.

Results: Risk factors at the time of presentation, such as tumor size and lymph node status, were comparable between both groups. Local recurrence occurred on an average 9 months earlier in patients after mastectomy (P = 0.08). Univariate analysis showed that lymph node status (P = 0.0001) and disease free interval from primary treatment to local recurrence (P = 0.0002) were the most significant single prognostic factors for survival after local recurrence. Breast conservation alone was shown to be of marginal statistical influence (only P = 0.05). However, multivariate analysis demonstrated that the combination of disease free interval and the primary surgical treatment modality is the most significant independent risk factor for cancer related death (P = 0.0001).

Conclusion: Local recurrence after mastectomy seems to be associated with worse survival than after breast conserving therapy. Early onset of chest wall recurrence, moreover, represents the highest independent risk for cancer associated death.

675 POSTER

Breast cancer: locoregional relapse after mastectomy without postoperative radiotherapy

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Purpose: To analyse the pattern of relapse and survival in patients (pts) with breast cancer operated on with radical surgery and not irradiated postoperatively.

Materials: From 1970 to 1998, 2384 pT1-4 breast cancer patients (pts) underwent mastectomy without postoperative radiotherapy(RT). Median age was 55 years (yrs). Premenopausal pts were 909. Distribution by pTNM was the following: T1 690, T2 1294, T3 177, T4 223; N0 1144, N1 1098, N2 60, N3 1. 625 pts had 1-3 positive axillary lymph nodes (N+), 303 4-9 N+, and 235 10+ N+. There was lymphovascular invasion (LVI) in 88 out of 186 pts. Margins were positive in 250 out of 2270 pts. 397 pts were ER and/or PgR positive, 187 pts were ER and PgR negative. 520 pts received chemotherapy; 677 pts were given endocrine therapy.

Results: 517 pts (21.6%) developed a locoregional relapse (LRR). The pattern of first LRR by site was the following: isolated chest wall 227; supraclavicular nodes 139; internal mammary chains 32; axillary nodes only 18; multiple sites 101 (51/101 with involvement of supraclavicular regions). Risk of supraclavicular relapse increased with number of involved axillary nodes (N0: 3%; 1-3 N+: 6%; 4-9 N+: 14%, 10+ N+: 24%). 914 pts developed distant metastases (38%) and 231 had second tumors (including 135 breast cancers). The 10-year actuarial risk of LRR was: pT1 15% vs pT2 25% vs pT3 35% vs pT4 35% (statistically significant: ss); pN0 16% vs pN+ 31% (ss); pT1N0 14%vs pT1N+ 19% (not significant: ns); pT2N0 18% vs pT2N+ 32% (ss); pT3N0 25% vs pT3N+ 37% (ss); pT4N0 9%, vs pT4N+ 42% (ss); N0 (14%) vs 1-3 (N+ 20%) vs 4-9 (N+ 38%) vs 10+ N+ (58%); age: < 35 yrs 39% vs 36-49 yrs 25% vs 50-69 yrs 23% vs 70+ yrs 18% (ss); positive margins 44% vs negative margins 21% (ss); negative receptors 36% vs positive receptors 24% (ss); presence vs absence of LVI (50% vs 30%: ss). The Cox regression analysis confirmed pT, number of N+, pN and age as major indipendent prognostic factors for LRR; receptors status was also significant.

Conclusions: According to the current analysis, pts with pT2-4 and N+ lesions or with 4+ N+ or < 35 year old or with positive margins or negative ER and PgR or with LVI have got a > 30% 10 year actuarial risk of LRR that should be taken into account when planning postoperative RT. The minimal volume of postmastectomy RT should include the whole chest wall but the addition of the supraclavicular/axillary apex region merits consideration, especially for pts with 10+ N+.

676 POSTER

Sentinel node dissection in breast cancer: the Gustave-Roussy institute experience

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Purpose: Sentinel node biopsy (SNB) accurately predicts axillary status, thus avoiding axillary dissection if the sentinel node (SN) is negative. We used this technique during two phases: during the first period, all patients were submitted to axillary dissection; in the second period, among patients with a tumor size below 15mm, only those with positive SN had axillary dissection.

Methods: During the learning phase (1997-1998) localization of SN was achieved with radio-colloid only. Since 1999, we used both radio-colloid with pre-operative lympho-scintigraphy, and per-operative staining with patent blue, with subdermal injections.

Results: In the first series (65 patients) the mean tumor size was 22 mm, the detection rate was 66% with a positive SN in 40% of patients. There was no false negative and the SN was the only metastatic node in 76% of patients. In the second series (109 patients) mean tumor size was 14 mm, the detection rate was 96%. 39% of the SN were metastatic, the SN being the only positive node in 50% of these cases, and bearing micro-metastatis in 10 cases. Per-operative frozen section examination of the SN was used if it was macroscopically suspicious and completion axillary dissection performed only in patients with positive SN.

Conclusion: Our experience confirms that SN mapping using both the radio-colloid and the dye techniques is the procedure of choice for axillary nodes staging in patients with small size (< 15 mm) breast cancer, without palpable axillary node.

677 POSTER

Internal mammary (IM) sentinel lymph node (SN) detection and excision in breast cancer

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Purpose: Identification and dissection of SN can replace axillary dissection in trained centers, in patients where the tumour is less than 3 cm and