mos. Out of 481 fixed and paraffin-embedded primary tumors, HER 2 and topo IIα were evaluable by IHC on 442 and 348 specimens, respectively (HER 2+ by m-abs CB11 or 4 D5: >1% + cells; topo IIα+ by clone KiS 1, Boehringer: >10% + cells). Results are reported below:

	CMF		EC		HEC	
	n	5 yrs EFS%	n	5 yrs EFS%	n	5 yrs EFS%
All pts	255	66	267	60	255	70
HER 2+*	23	48	19	53	14	81
HER 2–	133	75	131	62	122	70
Topo IIα+°	52	61	57	61	52	74
Topo IIα–	64	74	67	56	65	

*HEC vs CMF: p = 0.10; °HEC vs CMF: p = 0.18

In the overall results on 777 pts, EC or HEC are not better than CMF. An interesting improvement in EFS was hypothesized and observed with HEC in HER 2+ or Topo IIα+ pts and is being further explored by: a) using a more sensitive assay for HER 2; b) elaborating a predictive model correlating HER 2 and Topo IIα.

803 POSTER

Late treatment related morbidity in breast cancer patients randomized to postmastectomy radiotherapy and systemic treatment versus systemic treatment alone

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Purpose To assess the type, prevalence and degree of late treatment-related morbidity after mastectomy and adjuvant systemic treatment with and without postoperative irradiation (RT).

Patients and Methods: A historical prospective study including patients randomized in the Danish Breast Cancer Cooperative Group (DBCG) Trials 82 b and c and living in the county of Aarhus. We intended to study patients alive and without recurrence. Of the 331 patients originally treated in our department 104 met the inclusion criteria and 84 patients accepted to participate in the study. Forty-two patients were irradiated and 42 were non-irradiated patients. A structured interview and physical examination, using a standardized assessment sheet, was used. The assessment sheet was constructed on the basis of the late effects normal tissues (LENT) scoring system.

Results: The median length of follow-up from mastectomy was 9 years (range 6–13 years). Lymphedema (defined as a difference between ipsilateral and contralateral arm volume greater than or equal to 200 ml) was measured in 14% of the RT patients versus 3% of the no RT patients (NS). Slightly decreased shoulder morbidity was measured in 45% of the RT women versus 15% of the no RT patients, but moderate or more severe impairment of the shoulder morbidity was only seen in 5% of the irradiated and none of the non-irradiated patients (P = 0.004). Seventeen percent of the RT patients and 2% of the no RT patients found that impairment of shoulder movement caused symptoms (P = 0.001).

A multivariate analysis of factors possible contributing to lymphedema and impaired shoulder movement was performed. Factors included in the analyses were radiotherapy, chemotherapy, endocrine treatment, number of nodes removed, number of positive nodes removed, tumor size, age, obesity and smoking. The number of axillary lymph nodes removed and the age of the patient were found to increase the risk of lymphedema. Radiotherapy was the only factor shown to reduce shoulder movements.

Conclusions: Mild arm and shoulder morbidity was a common late complication to breast cancer treatment and was increased by the use of radiotherapy.

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TC-99M tetrofosmin (T) pinhole-spect (P-SPECT) in breast cancer (BC) axillary lymph node staging

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Purpose: The number of metastatic axillary nodes represents in BC pts the most important prognostic factor, with more than 3 nodes indicating a worse prognosis. Since all conventional diagnostic methods are limitative, we propose Tetrofosmin P-SPECT as a new method in axillary lymph node metastasis detection.

Methods: After 740 MBq T injection, 180° P-SPECT imaging was performed around the involved axilla in 64 female pts, 55 with primary BC and 9 with benign lesions (B), using a circular HR single head gamma camera equipped with a pinhole collimator.

Results: Tetrofosmin P-SPECT was true positive in 28/28 BC pts with axillary lymph node metastases and true negative in 26/27 BC pts without metastases and in 9/9 B pts. P-SPECT identified 51% of the total removed metastatic nodes, determining the exact number in 6/6 pts with 1 node, in 2/2 pts with 2 nodes, in 3/6 pts with 3 and in 2/3 pts with 4 and showing more than 3 focal areas in 10 of the remaining 14 pts with over 4 nodes. P-SPECT thus correctly categorized 24/28 pts (≥3 or >3 metastatic nodes) for prognostic purposes.

Conclusion: Tetrofosmin P-SPECT appears a very accurate method in BC preoperative axillary lymph node staging and also gives useful prognostic information.

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Phase II study of neaodajuvant chemotherapy combining epirubicin cyclophosphamide and vinorelbine (NEC) in locally advanced breast cancer (LABC): Preliminary results

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Purpose: Small size phase II have reported NEC in breast cancer. Our on going and larger phase II trial assess the clinical and pathological efficacy of NEC in patients (pts) with LABC.

Patients: Since 01/97, 20 pts have been enrolled. Planned treatment was: Vinorelbine 25 mg/m^2/d, d1&3, Cyclophosphamide 350 mg/m^2/d, d1–3 and Epirubicin 30 mg/m^2/d d1–3, every 15 days with GCSF support d5–10. Pts had 4 (13 pts) or 5 courses (3 pts) before surgery. Post operative treatment was no chemotherapy (3), NEC (4), anthracycline (3), paclitaxel (6) combined with radiothrepy and hormonotherapy when necessary.

Response: 17 pts are evaluable. 13 had an objective clinical response. There were 5 complete histological response, 5 partial response and 5 persistent tumor. 6 pts had positive nodes. Median follow up is 12 months. 1 pt had metastatic relapse. Further results will be presented in september 1999. Toxicity: All pts are evaluable for toxicity. WHO grade 3–4 neutropenia is the most frequent besides GCSF but require rarely hospitalisation. Grade >2 thrombopenia is uncommon. 4 patients suffer from abdominal pain but no ileus is observed.

Conclusion: These preliminary results with intensified neoadjuvant NEC are promizing. We try to increase response rate with two further courses before surgery without preventive GCSF. A longer follow up is required to assess survival data.

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Infiltrating lobular carcinoma (ILC) treated with breast conservation: A retrospective study of the BCNIRTOG-Italy

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Purpose: There is no general agreement on the prognosis of ILC. In particular the possibility of a higher risk of local recurrence following conservative methods of treatment is reported due to the frequent multilocality of the lobular pattern. The aim of this retrospective study is to quantify the risk of local recurrence and distant metastatization in a population of patients with early-stage ILC suitable for breast conservation treated in some Centers collaborating at the Breast Cancer North Italy Radiation Therapy Oncology Group (BCNIRTOG).

Methods: 300 cases of ILC registered in 9 Radiation Oncology Depts. collaborating at the BCNIRTOG between 1980 and 1992 with a minimum 5-years of follow-up were collected. All the patients with stage I–II had been treated with conservative surgery, axillary dissection and postoperative irradiation. On the basis of the nodal status, 61 cases, received adjuvant chemotherapy and 67 hormonal therapy

Results: An overall local recurrence crude rate of 4.66% (14 cases; 13 invasive and 1 in situ) was observe. 32 patients developed distant metastases. The actuarial 10-year disease-free survival for T1 and T2 is 83.5% and 76.6%, respectively. The actuarial 10-year disease-free survival for N0 and N1 is 84.5% and 70.9%, respectively.

Conclusion: The results of this survey show that the outcome of ILC treated in our Centers is similar to that reported in the literature. In our experience the conservative approach to patients with early-stage ILC of the breast is safe and useful.