

	n	LR		% survival		Death from breast cancer	
		no.	%	No LR	LR	Relative risk	p
EPG	144	21	15	99	81	19×	0.001
GPG	188	23	12	96	81	5×	0.089
MPG I	218	19	9	82	53	3×	0.003
MPG II	84	7	8	70	43	2×	0.085
PPG	42	9	21	65	7	2×	0.001
Total	676	79	12	87	63	3×	<0.001

LR rates (actuarial) are given to 108 months. Survival was analysed with/without LR.

Conclusions:

1. Cases which suffered prior LR had a worse survival (63% at 10 years) than those which did not (87%).
 2. In all NPI groups survival was worse in those suffering LR.
 3. The risk of death after LR in every prognostic group and the relative risk being higher in the best NPI groups, give strong evidence that it is the occurrence of LR rather than poor prognostic features coding for both death and LR.
 4. The higher rates of LR in the EPG & GPG were brought about by the majority receiving neither RT nor Tamoxifen in these groups.
- Local control is as important as the application of systemic therapies in improving survival.

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Poster

Measurement of residual tumour size after neo-adjuvant chemotherapy for locally advanced breast cancer: accuracy of clinical examination, mammography, ultrasound and magnetic resonance imaging

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Introduction: In locally advanced breast cancer, neo-adjuvant chemotherapy is used to downsize the tumour and responders can undergo breast-conserving surgery instead of mastectomy. It is important therefore to have an accurate assessment of the residual disease after chemotherapy in order to plan the extent of surgery. Clinical assessment, mammogram and ultrasound are frequently used but the accuracy is not satisfactory. Magnetic resonance imaging (MRI) is increasing used to assess tumour extent in breast cancer. We examine the accuracy of residual tumour size measurement with these modalities by comparing with the pathological size after tumour resection.

Method: Patients with locally advanced breast cancer were prospectively recruited for neo-adjuvant chemotherapy. Chemotherapy consisted of an anthracycline-based regime. After chemotherapy, residual tumour was assessed by clinical examination, mammogram, ultrasound and MRI followed by definitive surgery.

Pathological size of residual tumour was correlated with the size measured by clinical examination, mammogram, ultrasound and MRI. Degree of correlation was measured by correlation analysis.

Result: Thirty-eight patients were recruited with a mean age of 43 (range 27 to 58). Mean tumour size was 69mm (range from 37 to 130mm). Eighteen patients (47%) had palpable axillary lymph node at presentation.

Clinical response was achieved in 30 patients (79%). Complete clinical response was seen in 7 patients (18%). Four patients (11%) had successful breast-conserving surgery and 29 underwent mastectomies. Two patients refuse operation after chemotherapy.

Clinical examination and MRI were significantly associated with pathological size (Pearson's correlation coefficient: 0.43 and 0.75 respectively). MRI gave better assessment than clinical examination. There was no significant correlation between pathological size and the size measured by mammogram or ultrasound.

Conclusion: Clinical examination and MRI gave significant correlation with residual tumour size. MRI was the best assessment of residual tumour size after neo-adjuvant chemotherapy.

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Poster

Potential role of [18F]FDG-PET/CT in the evaluation of therapy response after neoadjuvant chemotherapy

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Background: [18F]FDG-PET/CT is useful for staging of locally advanced breast cancer (LABC). In metastatic breast cancer, it is accurate in the evaluation of chemotherapy response. This study evaluates the accuracy of PET-CT in predicting residual invasive tumour in the breast and axillary lymph nodes following neoadjuvant chemotherapy.

Patients and Methods: Twenty women with non-metastatic LABC with [18F]FDG-PET/CT positive breast cancers and a clinical response on chemotherapy were evaluated post-chemotherapy for residual disease. Residual tumour as estimated from clinical breast examination (CBE) and breast imaging (ultrasound, mammography, MRI) was compared with [18F]FDG-PET/CT. Pathologic assessment provided the reference for pathologic tumor response.

Results: see the table.

	Breast pathology		Nodes pathology			
	CBE/Imaging	PET/CT	CBE/Imaging	PET/CT	CBE/Imaging	PET/CT
	Macro	Micro	Macro	Micro	Macro	Micro
Sensitivity	64.2%	60%	71.4%	66.7%	100%	46.2%
Specificity	83.3%	80%	100%	100%	86.7%	93.3%
+ pred. value	90%	90%	100%	100%	71.4%	85.7%
- pred. value	50%	40%	60%	50%	100%	50%

Conclusion: PET/CT is not of great help in the evaluation of efficacy of neoadjuvant chemotherapy. All 4 efficacy parameters are unsatisfactory to replace histopathology.

In 9/20 patients the result of the PET-CT did not match with residual disease in breast or axilla.

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Poster

Breast cancer patients preferences for oral versus intravenous second-line anticancer therapy

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Background: several oral (PO) analogues of existing intravenous (IV) chemotherapeutic agents as well as more clinically efficient endocrine therapies (both oral and parenteral) are currently available to treat breast cancer patients with recurrent disease. Establishing patient perception regarding the route of anticancer therapy (ACT) may provide very useful information to help selecting from treatment alternatives that offer only small differences in survival, but might be less acceptable for patients. The study is aimed to elicit preferences for the route of eventual second-line ACT in women with early breast cancer.

Material and Methods: 528 consecutive cancer patients recruited in 3 centers fulfilled the following eligibility criteria to enter the study: 1) age between 20-75 years, 2) proper psychosomatic state to complete independently a therapy questionnaire preference, 3) at least 6 months interval between last course of chemotherapy and entering the study. The above group consisted of 263 breast cancer women (median age: 56, range: 27-75 years) without any evidence of disease, who completed their radical ACT 2-226 months (median: 36) before were interviewed. All the patients were directly asked about their preferences for the route of second-line ACT administration when the clinical efficacy and toxicity profiles are expected to be similar. Demographic and treatment-related data were collected by interviewers.

Results: 1) of 263 patients, 207 (78.7%) preferred PO ACT, 49 (18.6%) had not any preference (NP) and 7 (2.7%) wanted to be treated IV; 2) the most important reasons for this choice were convenience (limited ability to visit cancer center on regular basis), problems with IV access, and toxicity considerations (increased risk of IV-transmitted diseases) of the patients; 3) patients' choice was significantly associated with some clinical and

demographic variables: 3.1. those who declared not any preference were significantly older ($p < 0.045$) and less educated ($p < 0.03$) in comparison to PO/IV group; 3.2. patients who preferred PO route of ACT were more experienced with adjuvant anticancer IV chemotherapy ($p = 0.001$) and more frequently subjected to locoregional adjuvant radiotherapy ($p = 0.02$) as well as employed in the full-time ($p < 0.025$) that those representing IV/INP group; 4) marital status and duration of interval between the diagnosis of breast cancer and completing the questionnaire as well as current adjuvant endocrine therapy did not influence the patients' choice.

Conclusion: Our results demonstrate a striking breast cancer patients preference for oral compared with IV ACT and indicate that some demographic and disease-related factors might influence patients' decision on this point.

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Poster

Locoregional recurrence after initial therapy for breast cancer

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Background: The ten-year incidence of locoregional recurrence (LRR) after treatment for breast cancer is about 13%. LRR has traditionally been regarded as predictor of subsequent distant metastasis. Clemons reported approximately 35% of LRR had simultaneous or antecedent distant metastasis. But in the case of being thought as LRR only, local management including surgery and radiotherapy have presented survival gain. We thought the case of operable LRR would show the better survival compared inoperable LRR. This study is designed to achieve survival rate, disease progress of patients have LRR only, and to compare the survival rates among operable group and inoperable.

Methods: We reviewed the records of all patients with LRR after initial treatment at Asan Medical Center between 1989 to 2003. They were classified LRR only group and simultaneous distant metastasis group. And again, LRR only group was divided as operable group and inoperable group. This data was analysed by SPSS 11.0.

Result: Two hundred twenty-three patients who were diagnosed LRR were included in this study. (we excepted patients who didn't visit our hospital after diagnosis of LRR.) Among these patients, the number of LRR only patients was 152 and that of simultaneous distant metastasis group was 71. And 105 of LRR only was operable case. The 5-year survival rates from initial operation of LRR was 42.5%, but in LRR only group, that was 66.8% which was comparable for survival of stage III. The 5-year survival rates from initial operation of operable group and inoperable group had a surprising difference as 78.3% and 41.8%, that of operable group showed that of between stage II and stage III. About 38% (41/105) had a secondary failure during 29.6 months that was mean follow up duration after reoperation for LRR. their mean interval between reoperation and secondary failure was 19.7 months, this interval was shorter than initial disease free interval (24.5 mo). 32 patients (78%) of secondary failure group had distant metastasis finally.

Conclusion: Although many of their disease progression is going to distant metastasis, relatively good survival rate measured between stage II and stage III is expected in the operable LRR group. Thus we suggest active multimodality treatment for LRR is required.

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Poster

Local recurrence after breast conservation treatment for invasive central or retroareolar breast cancer

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Background: Although breast conservation with quadractectomy and radiation treatment has become a commonly used treatment for breast cancer, there are little data to support the use of quadractectomy for central or retroareolar breast cancers. In this study, we investigate the local and distant recurrence rates of patients with central or retroareolar breast cancers treated with quadractectomy compared with mastectomy.

Methods: Data of 45 patients were collected from breast cancer registers from Clinic for Oncology Nis between 1990–2004.

Results: The overall frequency of local recurrence was 4 of 45 (8.88%) in the entire group, 2 of 31 (6.45%) and 2 of 14 (14.28%) of patients who underwent mastectomy and lumpectomy, respectively ($P > 0.69$). Overall, 3 patients experienced a distant recurrence as a first event, with 2 patients (14.28%) in the quadractectomy group and 1 patient (3.22%) in the mastectomy group ($P > 0.5$). Median time to local recurrence of 4.7 years for the mastectomy patients and 2.9 years for quadractectomy patients. Of the patients with central tumors who underwent mastectomy none had developed local recurrences compared with those who had a lumpectomy, 1 of 9 (11.11%). For retroareolar tumors, the local recurrence rate was 1

of 15 (6.66%) for patients undergoing mastectomy and 2 of 11 (18.18%) for those undergoing quadractectomy ($P > 0.69$).

Conclusions: In this study there was no significant difference in local or distant failure rates of those patients with central or retroareolar tumors treated with mastectomy versus lumpectomy. We conclude lumpectomy to be a reasonable treatment option for selected patients with central or retroareolar breast cancers

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Poster

Breast cancer in young women (35 years or younger): features of disease presentation in a developing country

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Introduction: The aim of this study was to review patients aged 35 years or younger with operable breast cancer from 1999 to 2001: the characteristics of the disease, the first presentation, the management and the follow-up of this particular population.

Results: Breast cancer is the most common female malignancy in the national cancer institute, cairo university. It represents about 38% of all new cancer cases. The median age at presentation is 47.2 y, almost one decade younger than in developed countries. This study includes all patients with operable breast cancer aged 35y or younger from 1999 to 2001. The total number of this group of patients is 272 patients.

The mean age at presentation was 30.2 years, median was 32 years (S.D. ± 6.44) with a range of 23y to 35 y. Late presentation of most patients is a characteristic feature and the inflammatory type of breast cancer is relatively more frequent. Thus, in an NCI series [9], clinical T2 and T3 were found in the majority of cases, 57% of patients. The mean tumour size was 4.5 cm. The frequency of axillary lymph node metastases was 71%. The number of positive nodes was 1–3 in 23%, 4–10 in 22% and more than 10 in 17% of patients. The most common tumour was invasive duct carcinoma (87.4%). Pathologic grading showed a low incidence of grade I (3.4%). Grades II and III tumours were 71.0% and 25.6% respectively.

The profile of hormone receptors as determined by immunohistochemistry was positive for estrogen receptors (ER) in 43.9%, for progesterone receptors (PR) in 31.4% and for both receptors in 27.2% of cases.

Conclusion: This group of patients has a more aggressive disease. Hormone receptors status, and number of positive axillary lymph nodes were a major prognostic factor in the DFS and OS. We believe that this category of patients warrants a more special attention, and a more tailored multidisciplinary management.

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Poster

Re-irradiation and hyperthermia for loco-regional recurrent breast cancer; its therapeutic effect and side effects

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Background: We retrospective analysed a cohort of 51 patients to evaluate the therapeutic effect and side effects of adjuvant re-irradiation and hyperthermia for loco-regional breast cancer recurrence in previously irradiated area, after excision or CR after chemotherapy.

Patients and Methods: All 51 patients, 50 female and 1 male (median age 51 years), were previously irradiated to a equivalency ≥ 50 Gy in 5 weeks. Previous radiotherapy consisted of local irradiation in 47%, loco-regional irradiation in 47% and only regional irradiation in 6%. 63% of recurrences were first recurrences, 25% were second ones and 12% had more than 2 recurrences before re-irradiation and hyperthermia were given. The majority received one or more lines of systemic therapy. At start of RT/HT there was no macroscopically detectable tumor. This was achieved by minor surgery in 49%, by major surgery in 47% and by chemotherapy in 4% of the patients. Time interval between first diagnosis and current recurrence was < 24 months in 12%, < 60 months in 55% and < 96 months in 75% of patients. RT/HT consisted of 20–40 Gy/3–5 weeks, twice a week, and 3–6 sessions of superficial hyperthermia with 434 Hz microwave antennas to a temperature of 42 °C during one hour. 13 patients received hormonal therapy during treatment. At time of treatment 5 patients had a contralateral breast cancer and 3 patients had distant metastases.

Results: Median survival, after salvage treatment, of the entire group was 24 months. Fourteen patients (27%) suffered a subsequent loco-regional recurrence, 5 of which were outfield, 9 were infield. Actuarial local control stabilized at 20 months (71%). Significant predictors for local control were: time interval to the current loco-regional recurrence, histology of the primary tumor, original TNM classification and number of hyperthermia fractions given. Most cited late toxicity consisted of pigmentation 37%, fibrosis 20%, frozen shoulder 14%, arm oedema 12%, and telangiectasia