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Correlation between 99mTc-DPD bone scan findings and Ca 15–3 values in breast cancer patients after neoadjuvant chemotherapy

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Aim: The aim of this study was to evaluate the correlation of Ca 15–3, bone scan and complementary imaging methods (Rtg, Ct and MRI) in follow up of breast cancer patients after neoadjuvant chemotherapy.
Patients and methods: Sixty three patients with histologically proven breast cancer were included (mean age 58, range 41–82) and followed for having positive bone scan findings. Information was confirmed with other imaging methods: Rtg, Ct and MRI. Ca 15–3 values were measured in the same time with bone scan, using same commercial test over the follow-up period. Bone scan were classified as negative (group 1), diffuse increased uptake in calvaria (group 2), solitary hor spot lesion (group 3), benign disorder (group 4), mixed benign and malignant patterns (group 5), multiple-3 and more metastatic involvement (group 6).
Results: Number of patients in group 1 to 6 were: 13, 5, 18, 6, 4, 17 respectively and had mean Ca 15–3 value U/ml: 17.6 (range 9.2–43.3), 12.7 (range 6.9–18.5), 74.26 (range 7.3–469.2), 92.9 (range 10.0–480.0), 52.8 (range 15.1–150.0), 404.8 (range 8.9–3160.0). Five patients in group 6 had normal Ca 15–3 values. Metastatic involvement: pulmonary, liver, skin was respectively 27.8%, 27.8%, 5.6% in group 3 and 11.8%, 35.3%, 5.9% and brain %.9% in group 6. The statistical difference was not evident in groups 1 vs. 2+3+4+5 but was excellent ($p < 0.01$) in group 6 vs. 2+3+4+5 (Mann-Whitney test). Multiple metastatic bone scan were confirmed with radiology 50% (Rtg 6 in 14, Ct 2 in2(; benign lesions 100% (Rtg); 20% (Rtg) in calvaria; solitary hot spot lesions 53% (ribs 6 in 8, pelvis 2 in3, vertebra 1 in 1 with Rtg and MRI 100% 2 in 2) and 8 of them solitary malignant lesions.
Conclusion: Normal Ca 15–3 value does not exclude bone metastases, and cannot be helpful in confirming solitary lesions. It has excellent specificity, and is good predictor of a progressive disease, during follow up period. Bone scan pathological findings require careful radiographic evaluation, for early diagnosis.

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High-dose chemotherapy and autologous peripheral blood stem cell transplantation in locally advanced breast cancer. Updated results of a single center

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Introduction: High-dose chemotherapy is not standard in the treatment of breast cancer, neither in the adjuvant nor in the metastatic setting. In this retrospective study, we aimed to review the interim data of locally advanced breast cancer patients who underwent high-dose chemotherapy (HDC) and autologous peripheral blood stem cell transplantation (APBSCT) in our BMT center.
Material and methods: Between March 1997 and June 2004, 54 breast cancer patients with at least 10 metastatic axillary lymph nodes were treated with HDC and APBSCT. Their ages ranged from 26 to 66 years with a median age of 43 years. The time from diagnosis to transplant ranged from 60 to 550 days with a median of 131 days. The number of their previous chemotherapy cycles ranged from 3 to 7 with a mean of 4. Their preparative regimens were: CNV (n = 44): Cyclophosphamide 2.4 g/m^2, mitoxantrone 35 mg/m^2, etoposide 250 mg/m^2/d for 6 days; ICE (n = 6): Ifosfamide 2.5 g/m^2/d for 6 days, carboplatin 250 mg/m^2/d for 6 days, etoposide 250 mg/m^2/d for 6 days; CNP (n = 2): Cyclophosphamide 60 mg/kg/d for 2days, mitoxantrone 35 mg/m^2, carboplatin 200 mg/m^2/d for 6 days; TCM (n = 2): Thiotepa 250 mg/m^2/day for 2 days, melphalan 50 mg/m^2/day for 2 days, carboplatin 450 mg/m^2/day for 3 days. In the post transplant period, 35 patients received G-CSF, 12 patients GM-CSF, and 7 patients received no GF.
Results: Recovery to $\geqslant 1 \times 10^9$ leukocyte/L occurred at a median of 10 days, platelet recovery to $\geqslant 20 \times 10^9$/L was 12 days. A mean of 2.7 units of red cell suspensions and a mean of 1 unit of platelet suspension were transfused. The mean hospitalization duration was 12 days. After median follow-up of 925 days (range 5–2580 days), the five-year survival rate was 58%, and disease-free survival rate was 34%. The transplant related mortality was 3.7%.
Conclusion: Our data show that HDC and APBSCT is rather safe treatment in locally advanced breast cancer. The place of this treatment is still unsolved question in this indication. Further randomized studies with more patients and longer follow-up will clarify this issue.

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Phase II study of gemcitabine and cisplatin in women with taxane-failed metastatic breast cancer (MBC)

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Background: Taxanes are considered as one of the most active cytotoxic drugs in breast cancer which often are used as first-line treatment to anthracyclines – failed MBC. Now AC followed by Taxol (T) and TAC (taxotere T) regimens have been standard adjuvant therapy according to NCCN guildline. However, at present there are no standard therapeutic methods when patients relapse following taxane-based chemotherapy. We have desiged this study to evaluate the efficacy and safety of gemcitabine and cisplatin in women with taxane-failed MBC.
Methods: Major eligibility criteria: pathology diagnosis of breast carcinoma, prior taxanes therapy, adequate marrow, hepatic and renal function. Gemcitabine 1000 mg/m^2 was given on day1 and 8 and Cisplatin 100 mg/m^2 was devided into 3 days. Cycles were repeated every 3 weeks. RECIST was used for efficacy evaluation.
Results: From July 2004 until April 2005, 25 patients were enrolled. The median age was 45 years (range 30–69years). 25 qualified for safety analysis, 24 for efficacy assessment. Dominant site of disease was visceral in 60%. 88% pts had previously received anthracyclines and taxanes. A total of 63 cycles were delivered with a median of 2 cycles. 13 patients had PR, 7 patients had SD and 3 patients had PD. Overall response rate was 52%. Median survial and median time to progression has not been reached. Grade 3/4 toxicities were listed in table 1. There were 3 patients who had I-II ototoxicity with tinitus and acouesthesia.

Table 1: Grade 3/4 toxicities

	Grade III, n = 63 cycles		Grade IV, n = 63 cycles	
	cycles	%	cycles	%
Neutropenia	20	31.7	3	4.7
Anemia	2	3.1	1	1.5
Thrombocytopania	7	11.1	3	4.7
Nausea	15	23.8	3	4.7
Vomitting	11	17.4	5	7.9

Conclusions: The gemcitabine-cisplatin regimens appear to have high efficacy and manageable toxicity in women with taxanes-failed MBC.

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Results from a pilot study of goserelin plus fulvestrant in premenopausal women with advanced, hormone-sensitive breast cancer

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Background: Fulvestrant is an oestrogen receptor (ER) antagonist with no agonist effects available for the treatment of postmenopausal women with hormone-sensitive advanced breast cancer (ABC). Our study evaluated the efficacy and safety of fulvestrant in premenopausal women with hormone-sensitive ABC rendered postmenopausal with continuous goserelin treatment.
Materials and methods: This prospective study included 14 patients with ER-positive and/or progesterone receptor-positive ABC; two patients also had human epidermal growth factor receptor 2 (HER2)-positive disease. Patients received at least 3 doses of fulvestrant 250 mg via monthly intramuscular injection plus goserelin 3.6 mg via monthly subcutaneous depot injection. Treatment continued until disease progression or intolerability. Tumour response was assessed every 3 months.
Results: Fourteen patients (median age 41 years, range 28–49 years) were included. One patient received goserelin+fulvestrant as 1st-line endocrine therapy, seven as 2nd-line, five as 3rd-line, and one as 4th-line treatment, respectively. Eleven patients (78.6%) had received adjuvant chemotherapy and eight patients (57.1%) had received adjuvant