Conclusions: Preoperative FNAC of palpable ALNs is a simple, minimally invasive, and reliable technique for the initial evaluation of ALNs status in patients with breast cancer. 75% of the patients with ALNs metastases could accurately diagnosed with FNAC, and SLNB could be avoided. Nearly half of the patients with clinical palpable axillary nodes and negative FNAC had no metastases in the ALNs, and ALND could be avoided with SLNB.

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Accuracy of MRI in predicting pathologic residual disease after neoadjuvant chemotherapy

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Background: The purpose of this study was to assess the accuracy of magnetic resonance imaging (MRI) in predicting residual disease after neoadjuvant chemotherapy.

Methods: A retroapective review from June 2006 to October 2007 included 44 patients with invasive breast cancer treated with neoadjuvant chemotherapy. In these patients MRI was performed after completing chemotherapy and operated less than four weeks after imaging. MRI results were classified as "no response", "partial response" or "complete response". Pathologic response was classified following the Miller and Payne grading and in order to compare it with MRI, G1 and G2 cases were considered as "no response", G3 and G4 as "partial response" and G5 as "complete pathological response". Results of both, MRI and pathology, were classified as coincident or not coincident. Patients' age, pathologic classification, use of taxanes, Her2Neu status and receptor status were investigated as possible factors influencing coincidence between MRI and pathologic diagnosis. The biggest tumoral diameter on MRI was compared to pathologic size of the reamining tumour, when available. SPSS was used for statistical analysis and Chi2 and Fisher's test applied when appropriate.

Results: MRI results were coincident with pathologic results in 23/44 patients (52.27%). MRI sensibility and specifity for detecting complete pathological response were 57% and 75% respectively. Patients age (<50 or >50), use of taxanes and hormonal receptor status did not influence coincidence significantly. However pathologic type (coincidence in invasive ductal carcinoma 61.7%, in lobular invasive carcinoma 20%, $p = 0.02$) and Her2Neu status (coincidence in Her2Neu positvity 88%, in Her2Neu negativity 42.57%, $p = 0.023$) were factors influencing MRI accuracy. A tumoral diameter was given in 30 patients in both MRI and pathology. The median difference between MRI size and pathologic size was 9.4 mm (sd +31.66), p25 = −2, p50 = 11 and p75 = 25 mm.

Conclusion: MRI is able to predict residual breast disease in 52.27% of patients. The coincidence was significantly higher for invasive ductal carcinoma than invasive lobular carcinoma and for Her2Neu positive tumours than Her2Neu negative tumours. MRI tends to overestimate the size of residual tumours with a wide range of uncertainty.

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Role of hypovitaminosis D in bone loss in postmenopausal women receiving adjuvant aromatase inhibitors for EBC: results from a prospective Hospital del Mar Bone Health Breast Cancer Study (HMBHBCS)

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Background: In postmenopausal women, aromatase inhibitors (AI) induce alterations of bone mass density (BMD) and bone turnover markers (BTM). The HMBHBC study is an ongoing phase IV study evaluating the characteristics and the effect of bisphosphonates (BP) on BTM, BMD, bone fractures and quality of life in postmenopausal women receiving AI for EBC with previous tamoxifen (TMX+) or without (TMX−) [upfront AI] treatment (Tt).

Material and Methods: Patients are stratified by lumbar spine, femoral neck and total hip to receive open-label Tt with BP, alendronate or risedronate (if osteoporosis [T-score < −2.5] or osteopenia [T-score < −2.0] and 1 major risk factor) or standard calcium and vitamin D (VitD) supplementation (if normal BMD or T-score > −2.0 and no major risk factor). Levels of 25-OH-VitD, N-telopeptide (NTx), bone alkaline phosphatase (bALP) and osteocalcin (OC) are measured at baseline, 3, 12 and 24 months. BMD and thoracic and lumbar spine X-rays are performed at baseline, 1 and 2 years.

Results: One hundred thirty one women have been included so far. 86.5% had low VitD levels(<30 ng/ml), that are known to induce secondary PTH and hence bone loss. These patients received additional VitD supplements, and 81.7% of them achieved normal values at 3 months, increasing the vitD concentration from 15.5 6.2 to 52.1 3.02 ($p = 0.0001$). Patients TMX+ (n = 98) vs. TMX− (n = 33) had BMD values of osteoporosis in 32.2% vs. 32.3%, osteopenia 52.2% vs. 64.5% and normal 15.6% vs. 3.2% respectively. Patients TMX+ had differences in baseline BTM, with lower values of NTx ($p = 0.0001$) and higher values of OC ($p = 0.003$). BTM at baseline and 3 months are shown in the table.

Patients who received Ca plus VitD experienced an increase in BTM, that reached significance for bALP ($p = 0.026$). Patients who received BP and Ca plus VitD had a significant decrease in NTx and bALP.

Conclusions: This study strongly suggests that VitD status should be routinely assayed before starting AI because hypovitaminosis D is highly prevalent in our series. Importantly, additional supplementation of VitD is needed to reverse hypovitaminosis-induced bone loss. Tt with BP clearly decreases BTM whereas untreated AI shows tendency to increase. BMD and fractures at 1 and 2 years will provide more data to further support the need for BP in patients on AI.

Bone turnover markers	Ca-VitD group (n = 51)	p	BP group (n = 32)	p
NTx basal	41.4±15.1	0.067	53.4±26.1	0.001
NTx 3 months	45.9±19.7		38.9±21.6	
bALP basal	12.3±4.2	0.026	13.4±6.9	0.009
bALP 3 months	13.9±4.9		11±3.8	
OC basal	5.5±4.1	0.25	7.6±6.4	0.6
OC 3 months	6.9±3.7		7.2±6.1	

expressed in mean±SD

Thursday, 17 April 2008 12:30–14:30

POSTER SESSION

Ductal and lobular carcinoma in situ

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Detection of disseminated tumor cells in bone marrow in patients with ductal carcinoma in situ

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Background: Haematogenous spread of disseminated tumor cells (DTCs) is considered to be the cause of systemic disease progression and is associated with poor prognosis. It is assumed that only invasive cancers shed isolated tumor cells into the bloodstream. However, latest studies indicate that tumor cell dissemination may occur before stroma invasion, i.e. in ductal carcinoma in situ (DCIS) (Husemann et al., Cancer Cell, 2008). Therefore, the purpose of the present study was to assess tumor cell dissemination in bone marrow in patients with DCIS.

Materials and Methods: 152 bone marrow aspirates from DCIS patients were processed with immunocytochemistry. After Ficoll enrichment of 10 ml bone marrow, cytospins were prepared and stained using the A45-B/B3 primary antibody for pancytokeratin. Cytospins were analyzed by experienced cytologists using the ACIS system (Chromavision) according to the ISHAGE evaluation criteria.

Results: 152 patients could be included into this study. 13% of these patients had detectable tumor cells in bone marrow. The number of detected cells ranged between 1 and 2 cells per 2×10^6 mononuclear cells. There was no correlation found between Van Nuys prognostic index or hormone receptor status and tumor cell dissemination. The bone marrow positivity rates in group with Her-2 positive and Her-2 negative tumors were 14% and 11%, respectively.

Conclusions:

1. Tumor cell dissemination occurs as an early step in the metastatic cascade;
2. Isolated tumor cells may already disseminate from preinvasive mammary lesions;
3. The clinical relevance of these cells has to be further evaluated.