

Results: Twenty (30.3%) of 66 patients were luminal, 20 (30.3%) were HER2+, and 26 (39.4%) were TN. Time interval from initial diagnosis to distant metastases of luminal, HER2+, and TN were 30.0, 17.0, and 17.9 months, respectively ($p=0.040$). Median time interval from distant metastasis to brain metastasis were 20.6, 19.5, and 9.0 months, respectively ($p=0.012$). Overall survival from diagnosis to death were 52.9, 33.6, and 25.5 months, respectively ($p=0.026$). However, Time from brain metastasis to death was not significantly different ($p=0.276$).

Conclusions: Patients with TN disease were more likely to develop distant metastasis earlier, and poor overall survival. Triple receptor status may be used as a prognostic marker for the breast cancer patients with brain metastasis.

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POSTER

Brain metastasis in advanced breast cancer: high risk in HER2 positive but not in triple negative patients

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Background: Central nervous system (CNS) metastasis occurs in about 20% of women with disseminated breast cancer. Triple negative (TN) patients (estrogen receptor (ER), progesterone receptor (PR), and HER2 negative) have a poor prognosis compared to the general breast cancer population, with an increased risk of recurrence, distant metastasis, and death. Also patients with HER2 pos tumors are known to have aggressive disease and several studies has reported a high incidence of cerebral metastasis among this group of patients. Our aim was to evaluate the incidence, pattern and timing of cerebral metastases among patients with advanced breast cancer and compare HER-2 pos patients with HER-2 neg patients including the TN patients.

Material and Methods: Two patient cohorts were examined. The first group consisted of 32 HER-2 pos patients diagnosed with advanced breast cancer and measurable disease, who entered a phase 2 study with 1. line Trastuzumab and weekly paclitaxel. Patients were included between Nov 2001 and Oct 2005. None of these patients had received adjuvant Herceptin. The second group consisted of 59 patients included within the same time period, with normal HER2 status and diagnosed with advanced breast cancer with the same inclusion criteria as above, except they were HER2 neg. (40 ER pos patients and 19 TN patients). They were randomized between first line docetaxel or docetaxel and gemcitabine in a 3 weekly schedule.

Results: All patients have now been followed to death. Eighteen of the 32 HER2 pos patients were diagnosed with cerebral metastases (0.56), compared to 12 patients in the ERpos group (0.30) and only 3 in the TN group (0.16). Median time to cerebral metastases from inclusion was 0.8 years (range 0.5–2.7) for HER2 pos patients. The brain metastases were seen earlier among patients with HER2 over-expression than among HER2 negative patients, though not significant.

Conclusion: Our study shows that HER2 over-expression increases the risk of cerebral metastases significantly as compared to patients without HER2 over-expression. TN patients although having poor prognosis, does not seem to have a high risk of brain metastases. Since more than half of the HER2 pos patients developed brain-metastases, close surveillance (clinical and/or imaging) seems necessary even during effective systemic treatment.

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POSTER

Survival of breast cancer patients with brain metastases

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Study objective:

- To study survival of breast cancer patients with brain metastases.
- To study predictive value of tumor size, lymph node involvement and hormone receptor status on the occurrence of brain metastases and survival of patients with breast cancer.

Materials and Methods: 805 patients were diagnosed with breast cancer between Jan. 2000 till June 2008 and registered in Oncology Department in Tripoli Medical Center. 44 (5.5%) patients were included in this study that developed brain metastases diagnosed by CAT scan or brain MRI.

Results: Mean age of these patients were 43.6 years. 72.7% were premenopausal. These patients had large tumor size on diagnosis T3+T4 76.7%. 81.5% were node positive. 72.7% were stage III and IV. 72.7% has negative hormone receptor status. (6/44) 37.5% had isolated brain metastases on presentation. (38/44) 86.4% had recurrence at median duration of 16.5 months. (26/38) 68.4% had brain metastases, out of these (14/26) 53.8% had only brain metastases and (12/26) 46% had brain and soft tissue or bone metastases. (12/38) 31.5% had only visceral metastases as first site of recurrence. (14/44) 31.8% presented as second relapse, with

only brain metastases in (10/14) 71.4% and (2/14) 14.3% with brain and soft tissue as liver and lung. All patients received cranial radiotherapy to metastases.

Median duration of survival from first recurrence was 5.8 months. Median duration of follow up was 24.5 months. 25% (11/44) are alive.

Conclusion: Patients with brain metastases are premenopausal and have large tumor size, more node positive, and negative estrogen receptor status.

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POSTER

Demographic clinical and pathologic features of breast cancer in males

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Introduction: Male breast cancer comprises 1% of breast cancer cases. The incidence is approximately 1/100.000 per year. Due to the rarity of the disease, the treatment choices are based on the female breast cancer data.

Aim: The study of demographic, clinical and histological characteristics of men with breast cancer that have been monitored, during the last decade, in our department.

Patients and Methods: Patient characteristics were extracted from their medical records and the breast cancer data bank of our department. The registered data concerned age, initial presentation, medical and family history, the histological features of the neoplasms and the TNM staging.

Results: Seventeen men with breast cancer were examined, with median age at diagnosis 65 years (53–79 years old). The initial presentation was a palpable lump in 7 patients, a retraction of the nipple in 3 patients, nipple discharge in 2 patients, scaling of the skin in 2 patients, sub-nipple lump in 2 and lumbar pain in one patient. According to the medical history information, 7 patients were smokers, one did alcohol abuse, 3 were overweight and 8 suffered from hypertension. Positive medical history for familiar or hereditary breast cancer had 3 (17.6%) patients. All tumours were ductal invasive carcinomas, nine of which (53%) exhibited moderate differentiation grade II and the rest, 8 (47%) low differentiation, grade III. Moreover, based on immunohistochemical analysis, 8 cases (47%) were triple negative ER(-) PR(-) HER-2(-), 7 (41%) were ER(+) PR(+) HER-2(-) and 2 (12%) ER(+) PR(-) HER-2(-). The stage of the disease in 7 cases (41%) was IIA, in 3 cases (18%) IIA, in 3 (18%) IIB, in 2 (12%) IV, in 1 (5.5%) IIB and in 1 case (5.5%) was stage I. The patients were treated accordingly with anthracyclines and taxanes based chemotherapy, radiotherapy and hormonal therapy (tamoxifen – aromatase inhibitors).

Conclusion: The study indicates that the male breast cancer cases were all HER-2 negative. All tumours were ductal invasive carcinomas and 47% were poorly differentiated. Most patients (53%) were positive for the expression of hormonal receptors while a relatively large percentage (47%) was triple negative.

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POSTER

Breast cancer brain metastases – significant differences in biological markers in early vs. late relapse

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Background: HER2 over-expression, negative steroid receptor status, and recently, triple negative status are recognized as factors contributing to the higher incidence of brain metastases (BM). It is also known that BM develops more frequently in young patients. However, it is not known whether these characteristics are the same in the primary breast cancer (BC) that develops early vs. late BM.

Materials and Methods: During 1 year period, 61 patients with BC BM were identified. Median time to BM is 24 months (0–252 months), and median time to BM after other metastatic sites is 24 months (0–252).

Pts were then divided in 2 subgroups: early BM relapse (BM < 5 yrs after BC) and late BM relapse (no relapse at all within 5 yrs and BM ≥ 5 yrs after BC).

Biological markers were analyzed only on the primary BC specimens.

Results: Results are presented in the table.

There is highly statistically significant difference regarding biological markers of primary BC: negative steroid receptors, HER2 over-expression, and triple negative status are more often in the early BM relapse vs. late BM relapse group ($p < 0.001$; $p = 0.032$; $p = 0.029$)