were pure DCIS. The majority showed high grade (64.2% and 69.7% respectively) disease. Lymphovascular invasion was present in 34% and 45% had nodal involvement. 67.4 %, 54.8 % and 27.3% were oestrogen (ER), progesterone (PR) and human epidermal growth factor receptor-2 (HER−2) positive respectively. Adjuvant chemotherapy was administered in 63.5 % of surgically treated patients. Statistically significant univariate factors adversely associated with overall survival were nodal positivity, tumour recurrence, ER negativity and high tumour grade (p < 0.05). 94.3% (132/140) were alive at a median follow up of 29 months (range 7−70 months) and 90.9% (120/132) remained disease-free.

Conclusion: Increased duration of symptoms and T staging at presentation were not found to be significantly associated with an adverse prognosis. Our study suggests factors related to an aggressive tumour biology are predictive of a poor outcome even at a relatively short follow-up period. MRI is useful in pre-operative planning.

59   Poster
The Effects of Daily Living Activity Levels On Prognosis in Elderly Patients with Breast Cancer

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Background: The aim of this study was to evaluate the patient characteristics of elderly breast cancer patients and effect of treatment schedules and functional capacities on survival.

Material and Methods: Between 1999−2011, medical records of 137 women older than 65 years diagnosed with non-metastatic breast carcinoma were evaluated retrospectively. Basic Activities of DailyLiving Scale (BADL) and Instrumental Activities of Daily Living Scale (IADL) were administered by the patient oncologist. Patients were grouped according to BADL and IADL results as dependent, hemi-dependent and independent.

Results: Median age of the patients was 71 years(range: 65−91). Median follow up period for whole study group was 28 (range:6−141) months. Common histologic type was invasive ductal karsinoma (88.3%). Estrogen receptor and progesteron receptor cerb-B2 were positive in 75.5%, 64.5% and 30.4% respectively. 78 (56.9%) patients were axillary lymph node positive. 96 (70.1%) patients was given adjuvant chemotherapy(mostly anthracycline). 22 patients received trastuzumab and 95 patients received adjuvant hormonotherapy.BADL assesments indicated that independent(ID), hemidependent(HD) and dependent(D) patients were 106 (77.4%), 28(20.4%) and 3(2.2%) respectively. IADL assesments resulted that ID, HD and D patients were 63 (43.4%), 53 (39.3%) and 19 (14.1%) respectively. As a result of BADL assesments disease free(DFS) and overall survival(OS) was better in ID patients than HD and D ones (p = .001 and p = .002 respectively).As a result of IADL assesments DFS was better in ID patients (p = 0.031) than HD and D ones. There was also a trend for better OS in ID group than HD and D groups (p = .089).There was no difference between age groups (less than or older than median 71 years) in terms of OS. Kaplan-Meier survival analysis estimated that 5 year OS was 90.7% and 76.1% and 60.4% in ID, HD and D patients respectively.Triple negative phenotype and stage at diagnosis were related with poor survival (p = 0.023 ve p = 0.016,respectively). In multiple regression analysis, stage at diagnosis, triple negative phenotype and BADL subgroup were significant [p = 0.008, HR: 3.17(CI: 1.35−7.44), p = 0.027, HR:2.78 (CI:1.172−6.91) and p = 0.006 HR:0.29 (CI:0.12−0.70) respectively].

Conclusion: In elderly breast carcinoma patients, daily living activity levels are as important as subgroup of breast cancer or stage and to determine the probability of overall survival can be useful for selecting the most appropriate adjuvant treatment options.

60   Poster
Outcome of Young Patients with Breast Cancer Outside of Clinical Trials

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Background: Age is a bad prognostic factor for patients with breast cancer. Young patients tend to have more aggressive tumors and worse survival. Statistics of outcome outside of clinical trials provides real life data.

Patients and Methods: Patients diagnosed and treated uniformly for breast cancer at a single academic practice at the American University of Beirut Medical center were studied. Patients' demographics, clinical characteristics and survival were collected. We combined data from two retrospective studies looking at patients diagnosed between 1997−2007

and 2004–2010. Studies were approved by IRB. Data was entered and analyzed on SPSS program. Survival was estimated using Kaplan–Meier Method.

Results: The total number of patients analyzed was 531. Patients were divided in three groups: ⩽35, between 35 and 50, and ⩾ 50 years. All patients had multimodality therapy including breast conserving therapy or mastectomy, radiation therapy, adjuvant chemotherapy, targeted therapy, and hormonal therapy as per stage, pathology and receptor status, according to international respective guidelines. Survival was estimated for the three age groups and stages at diagnosis and results are presented in the inserted table.

	Number of cases			5-year Overall Survival		
Stage	Age⩽35	Age 35−50	Age⩾50	Age⩽35	Age 35−50	Age⩾50
I & II	22	162	162	76.6%	94.7%	92.2%
III	13	70	69	83.9%	73.5%	63.5%
IV	1	14	18	0%	55.4%	32.1%

Five-year Overall Survival of very young patients (⩽35 years) with stage I was 100% and Stage II was 71.4%. Combined overall survival for Early Breast Cancer stages I and II was 76.6% for patients ⩽35 years versus 92.2% for patients ⩾50 years, with a significant p-value 0.044.

Conclusions: Outcome of patients treated outside of clinical trials in our series shows that very young patients (⩽35 years) with early breast cancer have a worse 5-year survival than patients ⩾50 years of age.

Wednesday, 21 March 2012   **12:00–13:15**

POSTER SESSION
Diagnosis and Imaging

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61   Poster discussion
Functionalized and Structured Medical Wire as a Device for In-vivo Isolation of Circulating Tumor Cells in Breast Cancer Patients

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Background: In breast cancer (BC) circulating tumor cells (CTCs) can provide information on patient prognosis and treatment efficacy. Also they can serve as a source for biomarkers to improve the treatment course. Currently CTCs are mostly isolated *in vitro* from small volumes of patient blood samples which is limited in volume. The aim of the study was to assess the functionalized and structured medical wire (FSMW) for *in vivo* isolation of CTCs directly from the blood of BC patients.

Material and Methods: We enumerated CTCs in 42 stage I-IV BC patients. CTCs were detected by utilization of FSMW, which was inserted in a patient's cubital region vein for thirty minutes. The interaction of target CTCs with the FSMW was mediated by an antibody directed against the epithelial cell adhesion molecule (EpCAM). To confirm the CTCs binding to the wire the immunohistochemical staining against EpCAM as well as against CD45 for negative cell selection was performed. There were 54 applications of the wire, 30 single applications and 12 double applications for evaluation of the wire precision. Clinical results from 37 subjects with 49 wire applications (5 failed down streaming analysis) were assessed. The detection rate of the FSMW for 23 patients was compared with FDA-approved Cell Search analysis.

Results: Global FSMW sensitivity for *in vivo* isolation of CTCs in BC patients was 89.7 % vs. 19% with Cell Search. The sensitivity for early and non-early stage BC was 91,7 % and 82,3 %, respectively. The median (range) of isolated EpCAM-positive CTCs was 5 (0–515) for FSMW and 0 (0−10) for Cell Search. In 100% of paired samples the number of CTCs detected with the FSMW was higher than or equal to the Cell Search method, regardless of the disease stage. Linear regression of the data of the double application of the FSMW showed a very good concordance ($r^2 = 0.97$, p < 0.0001).

Conclusions: The CTCs detection rate in BC patients with the FSMW is >4 times higher than the Cell Search analysis (especially for early stages of BC). Double application of the device in the same patient indicates very