frequently reported as bothersome; however, women who completed the survey expressed high levels of satisfaction with their lives and relationships demonstrating a resilient ability to cope with their disease.

5089   POSTER
Radiosensitized Treatment of Advanced Breast Cancer

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Background: Currently the methodologies that are used in oncology are quite of limited possibilities Therefore, there is a constant search for new perspective treatment methods, which could prolong the lives of cancer patients and would make them more qualitative One of such methods is sensitized tumour therapy based on quite selective porphyrin accumulation in tumour. This study presents our primary results in − radiosensitized advanced breast cancer therapy using derivatives of hematoporphyrin as a radiosensitizers.
Material and Methods: From 2001 to 2010 a total of 54 female patients with advanced breast cancer underwent radiosensitized treatment (RST). All patients underwent chemotherapy and/or radiotherapy and surgical treatment until RST. In all cases any radical method of treatment was impossible. Multiplex metastatic lesions were established in 53 patients. Brain multiplex metastases were diagnosed in 19 patients, multiplex bones metastases in 27 patients. However 9 patients had both metastases − bones and brain. Lung, liver or soft tissues metastatic lesions were obtained in the rest 17 patients. Hematoporphyrin derivative was injected intravenous; 24, 48 and 72 hours after an injection of the sensitizer tumours were irradiated with gamma rays from radioactive ^{60}Co 2 Gy at a time (6 Gy per course).
Results: As the result of RST complete regression of all treated tumours was observed in 5 patients after two or more RST courses. A significant response − regression of more than 50% of all brain metastases and remission of the disease for over 6 months was established in 17 patients. A partial response was observed in 18 patients with malignant brain tumours. For the rest 14 patients treatment was ineffective. The Karnofsky performance scale index increased immediately in 33 patients following RST treatment. RST was especially effective in the treatment of brain and bones metastatic lesions. As regards brain metastases in one patient all 3 brain metastatic lesions fully disappeared and there were no evidence of any recurrence in brain for 8 months. In 6 patients − regression of more than 50% of all brain metastases and remission of the disease for over 6 months was established. The median survival of 19 patients with multiplex brain metastases was 12 months from the moment of brain metastases detection. As regards bone metastases as the result of RST, all metastatic lesions fully disappeared in 7 patients.
Conclusion: Radiosensitized advanced metastatic breast cancer treatment is a hopeful method, especially when lesions involve the brain and bones.

5090   POSTER
Circulating Tumour Cells or Stem Tumour Cells From Periferal Blood as a Prognostic Marker for the Clinical Course of Patients With Breast Cancer?

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Background: Recently it has been proved and recognized the value of the circulating tumour cells as a predictive entity and marker for various types of neoplasm. This analysis has as a unique purpose to induce the exploration of an entity which is a subgroup of whole cancer disease in a patient called circulating tumour cells which include stemness features, with final purpose their exploitation as a predictive and possible diagnostic marker with relevant value.
Materials and Methods: For the reason of the specific analysis of blood samples from 58 patients with breast cancer has been used in different stages according TNM classification system (between II and IV). From these samples we have perform identification, isolation, quantitation and quality analysis of the circulating tumour cells as well as of the presence of cancer stem cell like cells. The assays that have been followed were on pairs in order to form double platform method in order to avoid false positive or negative results. Parallely, we have requested from the medical centers where the patients were being treated their clinical assessment so far according the commonly accepted response rate classification. From

these two groups of data (laboratory and clinical) we have performed a static correlation in order to accept or reject the relevance of the cancer stem cell like cells with the clinical assessment and progress of the disease.
Results: From the whole of the patients a statistic analysis of data has been performed and those samples with enough data have been selected in order to avoid statistical error type I. The statistic analysis showed that there is a strong static correlation and relevance between the existence and the concentration of the cancer stem cell like cells in the blood sample of a patient with breast cancer in relation with the progress of the disease and the response to treatment. The immunphenotype of the cancer stem cell like cells has an additional role to the prognosis of cancer patient, equally important with the previous parameters.
Conclusions: From the present analysis it is shown that the detection of cancer stem cell like cells can have an accurate role as a prognostic marker of the clinical development of the cancer patient disease.

5091   POSTER
Prognostic Significance of Breast Cancer Phenotypes in Patients for Operated Stage IIIC Breast Carcinoma

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Background: Breast cancer is a heterogenous disease with varied clinical behaviour. Aim of this retrospective study was to evaluate prognostic significance of phenotypes in patients for operated breast carcinoma who had ⩾10 lymph node positive before approval of trastuzumab for adjuvant use.
Material and Method: Medical records of 136 breast cancer patients with ⩾10 axillary lymph node involvement diagnosed between 1994–2009 years were evaluated retrospectively. 111 patients whose tumours were known hormon receptor(HR) and HER2 status are included in the study. None of these patients had received neoadjuvant systemic therapy.
Results: Median age was 48 (21−77)years. Median follow-up was 42 (3–155) months. 63 patients were premenopausal. 87% of the patients had invasive ductal carcinoma. Only 9.2% of primary tumours were <2 cm. 95% of the patients had grade 2 or 3 tumours. The proportion of breast cancer phenotypes was 56.8% HR+/HER2−, 32.4% HER2+ and 10.8% triple negative (TN). Nearly all patients underwent modified radical mastectomy and adjuvant radiotherapy. 84 patients received taxan-based adjuvant chemotherapy. At the time of analysis, 75 patients had recurrent disease and 53 patients died due to breast cancer. The percentage of recurrent disease in patient subgroups were as follows: 63.5% for luminal A, 77.8% for HER2+, and 58.3% for TN. Five-year overall survival (OS) and disease-free survival (DFS) rate for entire group was 55% and 22% respectively. Tumour size has shown a negative correlation with OS and DFS (log-rank $p < 0.0001$ and $p = 0.07$ respectively). Although DFS of luminal A was relatively longer than others, it did not reach statistically significance (log-rank $p = 0.2$). Patients with HR+/HER2− tumour had a significantly longer survival time as compared with HER2+ and TN groups (65%, 35% and 37%, respectively; log-rank $p = 0.05$). Univariate analysis showed that larger tumour size, HER2+ and TN subtypes had a negative impact on overall survival. In multivariate analysis these parameters were found independent prognostic factor with a significant negative influence on overall survival in patients who had ⩾10 axillary lymph node metastasis also.
Conclusion: HR+/HER2− breast cancer had better prognosis than TN and HER2+ ones even if they had entensive axillary lymph node metastasis. Prognosis of HER2+ breast cancer was similar TN groups in the absence of adjuvant trastuzumab treatment.

5092   POSTER
DNa Toxicity of Pt(II) and Pd(II) Polyamine Complexes in Human Breast Cancer Cells

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Background: Since the discovery of cisplatin [1], Pt(II) and Pd(II) complexes have become of increasing importance in the design of new anticancer drugs. Among these second and third-generation agents, polyamine chelates have been the target of intense research since they yield DNA adducts with long-distance intra- and interstrand cross-links, not available to the conventional mononuclear platinum compounds [2]. The modified spermidine $H_2N(CH_2)_3NH(CH_2)_3NH_2$ (norspermidine, NorSpd) was used as a ligand to synthesize $Pd_3NorSpd_2$ and $Pt_3NorSpd_2$ chelates.
Material and Methods: Normal human breast epithelial cells MCF-10A and breast cancer cells JIMT-1 and L56Br-C1 were treated for several treatment

cycles with either of the two chelates. One treatment cycle consisted of a 72 hours period of treatment with a 25 mM drug concentration followed by 72 hours of cultivation in drug free medium. Cell proliferation was followed for 4 treatment cycles. The Comet assay was used to investigate drug-induced DNA strand breaks and immunofluorescence microscopy and Western blot to investigate proteins involved in DNA repair.

Results: The cells were more sensitive to the Pd chelate than to the Pt chelate. The MCF-10A cells were less sensitive than the breast cancer cells to treatment with the chelates. Drug treatment induced changes in cell cycle kinetics with an S phase prolongation that was more pronounced in the cancer cells than in the normal cells. The normal cells were blocked in the G_1 phase of the cell cycle. There was more DNA damage in the cancer cells than in the normal cells. Western blot and immunofluorescence microscopy showed activation of Chk1 and gH2AX in drug-treated cells.

Conclusions: The breast cancer cell lines JIMT-1 and L56Br-C1 were more sensitive to treatment with $Pd_3NorSpd_2$ or $Pt_3NorSpd_2$ than the normal human MCF-10A cells. The compounds should be tested in animal models for their anticancer activity and they may have low genera toxicity.

5093 POSTER

The Estimated Cost of Trastuzumab for 25 Patients With Metastatic Breast Cancer − Methodology and Results of an Audit in Royal Wolverhampton New Cross Hospital NHS UK

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Background: This study was designed to accurately audit the duration of trastuzumab treatment in metastatic breast cancer in a single institution. Trastuzumab in combination with chemotherapy as first line treatment has increased the time to progression from 4.6 to 7.4 months and overall survival from 20.3 to 25.1 months. NICE approved the use of Trastuzumab for metastatic breast cancer in the UK in 2002. By the time the patients of this audit were treated, no data to justify treatment beyond progression had been reported.

Materials and Method: The data of patients on treatment with trastuzumab were provided by the New Cross Hospital pharmacy, for a 2-month period, January/February 2008, 1 year before the audit. A database was produced for the audit and patients were divided into adjuvant and metastatic (MBC). The details of treatment ware recorded for patients with MBC, from the initiation until the decision to stop, or death, or 09/02/2010, last date of audit follow up. The information was retrieved and cross-checked from all available sources: chemotherapy unit's electronic database (MOSAIC), the pharmacy data base, clinical letters and hospital notes. The patients on trastuzumab in the adjuvant setting were not followed further. For each patient with MBC we recorded: Demographics, previous adjuvant trastuzumab, total duration and doses of trastuzumab, chemotherapy type and duration, a cost estimation for trastuzumab for the whole period of treatment.

Results: During the 2-month period (Jan/Feb 2008), 46 patients were identified, 25/46 with MBC. The median age was 58.5 yrs (34.50–75.17). 15/25 were still alive at the cut-off date (9/02/2010) and 12 /15 continued treatment with trastuzumab. The reasons for discontinuation were: Poor PS or death:9/25, heart failure: 2/25, patient's decision 1/25, unclear MBC 1/25. No patient was discontinued from treatment because of disease progression only. The median duration of trastuzumab treatment was 30 months (3−50) and 20/25 patients were treated for >20 months. The median number of doses/patient was 44 and 9/25 patients were treated with different chemotherapeutic drugs concurrently with trastuzumab. The estimated cost of trastuzumab for 25 patients was £1,321,601. None of the patients was offered other HER2 targeted drugs.

Conclusion: This retrospective study shows that despite lack of hard evidence, the trend of clinical decision was to offer trastuzumab beyond progression to HER2 positive patients with MBC. The cost of this decision is unprecedented.

	Total	Min	Max	Median
Age(years)		34	75	58
Alive	15			
Continue Trast	12			
Duration of Trast (months)	751	3	50	30
3/weekly doses (number)	1085	5	72	44
Dose per pt(mgr)				450
Estimated cost for 25 pt (£)	1,321,601			

5094 POSTER

Prognostic Factors of Triple Negative Breast Cancer − Still a Lot to Know

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Background: Triple negative breast cancer (TNBC) is defined as a subtype that is negative for estrogen receptor, progesterone receptor, and human epidermal growth factor receptor 2 (HER2). There is a growing evidence of the heterogeneity of such entity on the molecular level that may cause discrete outcomes. The aim of this study is to determine prognostic factors in such type of breast cancer.

Methods: We retrospectively analyzed the clinicopathologic features of 363 TNBC cases which were diagnosed in Kuwait from July 1999 to June 2009. The disease-free survival (DFS) and overall survival (OS) were analyzed by Kaplan–Meier method and correlated with known prognostic factors in univariate and multivariate analysis.

Results: The median age of was 48 years in which 24.2% were under 40 years. 57.2% had lymph nodes (LN) metastasis, 56.9% of grade III tumour and 21.5% of family history of breast cancer. 41.9% had stage II disease while 37.1% had stage III and 7.1% had IV. Lymphovascular invasion (LVI) was documented in 58.6% of patients. Menopausal status, tumour size, pathological subtype, nodal metastasis, type of surgery, number of dissected LN and LVI and type of chemotherapy were correlated with the DFS and OS. However, all these prognostic factors lost their significance in multivariate analysis.

Conclusion: Being TNBC in such is a bad prognostic factor. Other prognostic factors in cancer breast lost their significance in TNBC patients. There is a great need to identify new clinicopathologic and molecular prognostic factors in TNBC.

5095 POSTER

Prognostic Factors for Breast Cancer in Young Women

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Background: To study the relevance of certain clinical-morphological indicators for the prognosis of the disease.

Material and Methods: Data to be presented in the study are based on observation of 68 female patients with breast cancer diagnosis under 35, who underwent surgeries in the National Oncological Center of the Republic of Armenia in the period between 1995 and 2005. The youngest female patient was aged 23.

Results: The data demonstrate that the survival rate over 5 years is lower among patients with regional lymph node metastases (27.6% and 66.7% respectively, $P < 0.002$). This information allows us to identify the damage of regional lymph nodes as an extremely important predictor of the progression of the disease. The 5-year survival rate is also strongly correlated with tumour size. Tumours smaller than 2 cm were correlated with higher survival rates than tumours ranging from 2 to 5 cm (80%, 57.1%, and 33.3% respectively, $P < 0.05$). The most common histological type was invasive ductal carcinoma which made up (61.8%) in 42 out of 68 patients. Invasive lobular carcinoma in its pure form was detected in 10 patients (14.7%), mixed type of lobular and ductal carcinoma was detected in 16 women (23.5%). We observed such prognostically favorable histological types as mucinous carcinoma of the breast and glandular carcinoma that can be considered as one of the features for breast cancer in women under 35. The study also focused on the grade of gystological malignance for the prognosis of the disease. Its increase significantly shortened 5-year-long survival rate of the patients (88.1%, 48.2%, 23.3% respectively, $P < 0.05$).

Conclusions: To summarize, metastatic damage of the regional lymph nodes, the size of the tumour exceeding 2 cm, and the high grade of gystological malignance are very important predictors of the 5-year survival rate for young women with breast cancer. More than half of the patients in the study had metastatic damage of the regional lymph nodes, 54.4% of the young began treatment course with tumours larger than 2 cm. These numbers indicate also the low probability that patients will seek medical attention at early stages of disease, which is something characteristic of Armenia.