Results: Comparing m/c and lat the survival parameters were highly significant in favour of the lateral tumours (p-values: OS 0.0011, DSS 0.009, DFS 0.0001, LC 0.051). Cosmetic results after surgery were 1.65 in lat and 2.15 in m/c ($p < 0.005$). These values hadn't changed 5 years after RT with 1.69 and 2.13 respectively ($p < 0.025$).

Conclusion: The medial and central tumour location in the breast is associated with lower survival rates and unfavourable cosmetic results. The reason may lie in the fact that the pathological stage of the internal mammary chain is unknown, while in lateral tumours all patients with positive axillary nodes underwent systemic therapy and (in part) supraclavicular irradiation. The difference in the cosmetic outcome may lie in the fact that the medial part presents with a smaller tissue volume than the lateral half.

300 PUBLICATION

Relationship between insulin-like growth factor 1 (IGF-1), prolactin (PRL), human growth hormone (hGH) and steroid receptors in breast cancer patients

L. Delgado[1], O. Alonso[2], I. Alonso[1], N. Artagaveytia[3], B. Alvarez[2], G. Sabini[1], R. Roca[3], I.M. Musé[1]. [1]*Clinical Hospital of the University of Uruguay, Department of Clinical Oncology, Montevideo;* [2]*Clinical Hospital of the University of Uruguay, Department of Nuclear Medecine, Montevideo;* [3]*Clinical Hospital of the University of Uruguay, Department of Medicine, Montevideo, Uruguay*

IGF-1, PRL and hGH, seem to play an important role in the growth regulation of breast cancer.

The aim of this study was to evaluate if estrogen and progesterone receptors contents (ER, PR) of breast carcinomas were related to serum levels of PRL, hGH, and IGF-1. We studied 90 patients with primary breast cancer. Preoperative serum measurements of PRL, hGH, and IGF-1 were performed by RIA. ER and PR tumor levels were determined by binding assay using radioactive ligands (DCC method). Statistical association was assessed by the Spearman test. We found a significant negative correlation between PRL and ER levels ($p = 0.011$). Furthermore, a significant negative correlation was also observed between IGF-1 and ER levels ($p = 0.002$), and with PR levels ($p = 0.018$). This findings are in favour of the importance of PRL in ER regulation and suggest a possible role for IGF-1 in the regulation of both receptors in breast cancer patients. Therefore, both PRL and IGF-1 serum levels may be factors to be considered when evaluating hormone sensitivity in breast cancer patients.

301 PUBLICATION

Expression of cyclin dependent kinase inhibitor protein p27kip in localized invasive ductal carcinoma of the breast

H. Kourea[1], A. Koutras[1], V. Zolota[1], M. Marangos[1], E. Tzorakoeleutherakis[1], D. Koukouras[1], H. Kalofonos[1]. [1]*University of Patras, Medical School, University Hospital, Patras, Greece*

Purpose: Expression of p27KIP cyclin-dependent kinase inhibitor, a negative cell cycle regulator, was studied in a series of localized invasive ductal breast carcinoma and correlated with clinicopathological parameters and outcome.

Methods: 103 invasive ductal breast carcinomas, T1 and T2, N0, M0 were reviewed. Formalin-fixed, paraffin-embedded normal (n = 87) and neoplastic (n = 103) tissue samples were studied by immunohistochemistry for p27KIP. Samples were considered positive if >/= of 50% of tumor nuclei showed immunoreactivity. The findings were correlated to standard clinicopathological parameters and outcome.

Results: 43% of cases were T1 and 57% were T2. Disease free survival (DFS) and overall survival (OS) were both 5–144 months (mean 47 and 49 months, respectively), p27KIP expression in tumor and normal tissue was noted in 35% and 62% of cases respectively ($P = 0.045$). P27KIP expression was positively correlated with estrogen (ER) and progesterone (PR) receptor status ($P = 0.0004$ and $P = 0.05$, respectively). Loss of p27KIP was associated with higher tumor grade ($p = 0.02$). No association with tumor size, DFS and OS was observed.

Conclusions: Localized, early stage invasive ductal carcinomas tend to lose p27KIP expression compared to benign breast epithelium. Although loss of p27KIP is correlated with higher tumor grade and negative ER and PR status in these tumors, loss of p27KIP does not appear to adversely affect their prognosis. This finding is contrary to previously reported series of invasive breast carcinoma of all stages, emphasizing the biological differences among the various tumor stages.

302 PUBLICATION

Circulating antibodies against a breast tumor antigen

R. Pasquinelli[1], I. Capasso[2], M. D'Aiuto[2], P. Barba[3], A.M. Anzisi[1], G. D'Aiuto[2], J. Guardiola[3]. [1]*INT – Oncologia E;* [2]*INT – Chirurgia A, Senologia;* [3]*CNR, Istituto Internazionale di Genetica e Biofisica, Napoli, Italy*

Purpose: Determination of circulating antibodies against tumor neoantigens is important for the development of preventive or therapeutic vaccines. We report here the finding of antibodies against the breast tumor antigen, GCDFP-15gp 17.

Methods: An ELISA assay in which GCDFP-15/gp17 was used as a substrate was developped. Sera from three groups of patients were then examined (Group A including 73 breast carcinoma patients; Group B including 38 patients carrying benign breast conditions and Group C including 16 controls.

Results: Patients were considered positive when the amount of anti-GCDFP-15gp17 circulating Ab present was above the average value observed for control group C + 3× standard deviation. 5.5% of patients with breast carcinoma and 2% of patients with benign diseases expressed these antibodies. The specificity of circulating Ab was determined by competition with an anti-GCDFP-15gp17 mAb and their IgG and IgM isotypes were also assessed.

Conclusions: Patients with breast carcinoma or benign lesions secreting GCDFP-15gp17 exhibit a humoral immune reaction against the tumor antigen. The presence of IgM and IgG isotypes indicates that this response is mediated by T helper cells and suggests an approach to breast tumor vaccination.

303 PUBLICATION

Correlation between proliferating cell nuclear antigen (PCNA) and p53 protein expression in breast carcinomas. Can they have a prognostic value?

L. Lazar[1], Ioana Berindan[2], O. Balacescu[2], Rodica Risca[2], E. Neagoe[1], G. Lazar[1]. [1]*Surgical Department – Oncological Institute, Cluj-Napoca;* [2]*Tumor Biology Department-Oncological Institute, Cluj-Napoca, Romania*

Purpose: The correlation between overexpression of PCNA and p53 protein in different stages of breast carcinomas together with histopathological parameters were studied, for establishing a prognostic value.

Methods: 93 patients with in situ and invasive breast carcinomas were studied for both PCNA and p53 overexpression. Correlation with tumor size, histological and malignancy grade and the lymph node status was done. The study was made on paraffin-embedded tissues; (MoAb DO-7 from Dako, for p53 and MoAb PC10 for PCNA) from Boehringen-Mannheim,. The scale of positive PCNA tumor cells was between 0–3.

Results: a number of 52/93 (55.9%) revealed in different grades positive reaction for PCNA, and 80/93 (86%) revealed overexpression of p53 protein. Positive reaction for PCNA was associated with invasive tumor size, lymph-node metastasis and high malignancy grade. 54% from invasive carcinomas were p53 positive. We had 20% from positive PCNA cases marked on scale 1 (SI: weak) 18% on scale 2 (SI: moderate) and 12% on scale 3 (SI: strong).

Conclusion: our results reveal that high PCNA immunoreactivity and overexpression of p53 can be associated with poor prognosis (PCNA and p53 distributed in invasion areas). This study demonstrate that both PCNA and p53 protein have no independent prognostic significance but if they are correlated with histological parameters, they can become of great interest in the prognosis.

304 PUBLICATION

Increased E-cadherin and keratin 18 expression is associated with better prognosis in patients with human breast cancer

Y. Glienke, I. Fuchs[1], H. Bühler, A. Lorenz, F. Opri, H. Voss[2], G. Schaller. [2]*Dep. of Gyn. and Inst. of Pathology of the Medical Center, Free University Berlin and Dep. of Gyn.;* [1]*Charité Humboldt University Berlin, Germany*

Purpose: Besides classical prognostic factors in Human Breast Cancer i.e. lymph node status, tumor size/grading and estrogen (ER) and progesterone (PE) status, the value of adhesion and cytoskeletal proteins as inhibitors of metastasis are largely underestimated. Therefore an immunohistochemical examination for E-cadherin (E-cad) and keratin 18 (K18) was performed to