ug/mg protein, p < 0.03) than pain-free premenopausal women. After Zo-ladex and Tamoxifen treatment, pS2 levels fell, (both p < 0.02) and Apo D rose significantly (p ≤ 0.03 and p < 0.02 respectively). Apo D and pS2 may prove useful intermediate markers of antioestrogen action in the breast. Zoladex = luteinising hormone releasing hormone analogue. Stats: Mann Whitney, Kruskal Wallis tests.

PP-1-23   Expression of Thymidine Phosphorylase in Mammary Carcinomas and its Relationship to Angiogenesis

H. Yoshida*, F. Yonenaga, Y. Ohi, T. Takasaki, Y. Sagara, H. Yoshinaka, T. Aikou, S. Akiba, S. Akiyama. *Departments of Pathology, Surgery and Public Health and Institute for Cancer Research, Faculty of Medicine, Kagoshima University, Kagoshima 890, Japan*

Human thymidine phosphorylase (dThdPase) activity is indispensable for the angiogenic activity of the plateletderived endothelial cell growth factor. dThdPase has been reported to increase in some types of malignant tumor, and the role of dThdPase in the progression of tumors is unknown. In this study, we examined dThdPase expression and angiogenesis in 139 mammary carcinomas and 54 benign mammary disorders, using biochemical and immunohistochemical methods. dThdPase expression was much common in mammary carcinomas, compared with benign mammary disorders, and dThdPase expression of mammary carcinoma cells was correlated with microvessels density of stroma in mammary carcinomas of 3–4 cm in diameter, in p53 negative mammary carcinomas. In c-erbB-2 negative mammary carcinomas and in mammary carcinomas of premenopausal women.

PP-1-24   Prediction of the Effect OF 5′-Deoxy-5-Fluorouridine (5′-DFUR) by the Status of Angiogenic Enzyme Thymidine Phosphorylase Expression in Advanced Breast Cancer Patients

T. Tominaga*, Y. Yamamoto, M. Toi. *Department of Surgery, Tokyo Metropolitan Komagome Hospital, 3-18-22 Honkomagome, Bunkyo-ku, Tokyo 113, Japan*

5′-DFUR is known to appear antitumor activity through the conversion to 5 Fu by thymidine phosphorylase (TP). Recently, TP was demonstrated to be identical to angiogenic molecule PD-ECGF. The relationship between the clinical response of 5′-DFUR and TP/PD-ECGF expression was determined in 24 advanced breast cancer patients. 13 were TP/PD-ECGF positive and 11 were TP/PD-ECGF negative. In 13 TP/PD-ECGF positive patients, 4 showed objective response (OR) and 3 showed stable disease (SD) by 5′-DFUR, however only one case showed OR and no case showed SD in 11 TP/PD-ECGF negative patients, suggested that 5′-DFUR was likely to be effective for TP/PD-ECGF positive patients. An angiogenic enzyme TP/PD-ECGF expression might be a predictor of the effect of 5′-DFUR treatment in breast cancer.

PP-1-25   Subclinical Thyroid Dysfunction in Patients with Breast Cancer

J. Millán*, A. Mangas [1], A. Morán [1], F. Torres, J.R. Gorostiza, B. Pinilla, J. del Toro. *Department of Internal Medicine, University General Hospital "Gregorio Marañón", Madrid, Spain;* [1] *Department of Medicine, University of Cádiz, Spain*

It has been recognized several syndromes of thyroid dysfunction in patients with solid malignancies. The aim of this study has been to evaluate the thyroid hormonal profile in breast cancer patients and to correlate the findings with stage of disease to know the usefulness as a potential prognostic factor. We have studied 33 patients with breast cancer (100% women; age: 49 ± 10 years) previously to any type of treatment. Ria was used to stablish hormonal levels: T3 (normal range = 86–187 ng/ml), T4 (nr = 4.50–12.50 mg/dl), TSH (nr = 0.4–4.0 mU/ml), rT3 (nr = 20–50 ng/dl) and TBG (n.r. = 12.90–13.30 mg/ml). Results are summarize as follows (mean ± sd): T3 = 125.3 ± 48.5; T4 = 9.7 ± 4.8; TSH = 2.3 ± 4.5; rT3 = 53.4 ± 29.7; TBG = 23.7 ± 9.1. The 37% of patients had a low T3 and the 35% of patients had increased rT3. Patients with hipoproteinemia and/or hipoalbuminemia show higher proportion of low T3 (60%) and or increased rT3 (58%)(p < 0.05). TBG was not different in the groups. According with stage of disease, patients with local disease show low T3 (22%) and/or increased rT3 (25%) that were significantly different from those found in loco-regional disease (28% and 20%, respectively) or metastatic disease (48% and 60%, respectively). In conclusion: we have found a high proportion of low T3 syndrome

(euthyroid syndrome) and this feature was related with the progression of disease and decrease of proteins.

PP-1-26   Polymorphism of Estrogen Receptors from Primary Breast Cancers

Y. Maaroufi, S. Hadiy, G. Leclercq, L. Lespagnard, D. Larsimont*. *Laboratoire J.C. Heuson de Cancérologie Mammaire & Département d'Anatomie Pathologique, Institut Jules Bordet, Brussels, Belgium*

Altered (clived) ERs are extremely abundant in breast cancer cytosols. Whether such a frequency have some biological relevance or is a biochemical artefact is unknown. Studied reported here analyse these questions. *(1)* To assess the frequency of altered ER in primary breast cancers, ER-positive samples (*DCC* assays) were submitted to hydroxylapatite (*HAP*) adsorption and immunohistochemical (*ER1D5* MAb) assays. Our study relies on the observation that ER1D5 positivity and strong salt-adsorbed receptor to HAP relate to ER molecules with functional AB/C domains. In a series of 18 mammary tumors, HAP assays always reveal an absence of AB/C ER domains as reflected by a permanent low adsorption with 0.5 M KCl; on the contrary, presence of such domains was clearly demonstrated by nuclear immuno-staining (ER1D5) on tissue sections. Hence, apparent high frequency of cleaved ERs lacking N-terminal region in primary breast cancer cytosols seems to be a biochemical artefact due to proteolysis at the time of tissue processing and not an index of high amount of altered (variant) receptors in these tissues. Whether such a property also holds for metastases is unknown (such tumors are characterized by peculiar ERs without E2 binding affinity but recognized by anti-ER monoclonal antibodies and [^{3}H] tamoxifen aziridine). *(2)* On the other hand, gel shift experiments suggested that E and/or F domains may impede the association of the C domain to [^{32}P] ERE: ER immunoextraction with H222 (epitope in E) increases the intensity of the radiolabeled band corresponding to ERE bound to A/BC domains (cleavage products).

PP-2. Surgical Aspects (September 11)

ORAL PRESENTATIONS

PP-2-1   Localisation of Impalpable Breast Lesions — A Surgical Approach

G. Querci della Rovere [1], M. Morgan [2], R. Warren [2], A. Patel [2], J.R. Benson [1]. *The Royal Marsden Hospital, Sutton, SM2 5PT and St. Margaret's Hospital, Epping CM16 6PT*

The conventional approach to localisation of impalapable breast lesions employing a hooked wire with either stereotaxis or a perforated plate has potential disadvantages for the operating surgeon. Often the entry point of the wire lies some distance from the site of projection of the lesion on the skin. The guide-wire should pierce the skin at or close to the site of any proposed surgical incision and proceed along the shortest and most direct course towards the lesion. Ideally, the wire should lie within a radial distance of between 1 and 2 cm from its target. A method is described which achieves these objectives and involves both radiological and clinical measurements. A total of 665 guide-wire localised biopsies have been carried out at the above institutions over the periods 1-11-87 to 31-3-95[2] and 1-1-94 to 3-3-96[1]. In only 4% of cases was re-positioning of the wire required. Excision of the radiological lesion was obtained with a single biopsy in 99% of cases. A second or third biopsy was indicated in 0.7% and 0.3% of cases respectively. Migration of the wire occurred in 2 patients and no cases of wire transection or pneumothorax were reported. This method of localisation facilitates subsequent excision and permits the most appropriate incision consistent with optimal cosmesis.

PP-2-2   A Prognostic Index for Breast Ductal Carcinoma in Situ (DCIS)

M.J. Silverstein, P.H. Craig*, M.D. Lagios, J.R. Waisman, W.J. Colburn, D.N. Poller. *The Breast Center, Van Nuys, CA, 91405, USA*

We have developed a prognostic index (PI) for patients with DCIS utilizing three statistically significant predictors (by multivariate analysis) of local