MVC ($p = 0.0365$), and node metastasis ($p = 0.0418$) were independent prognostic indicators. However, we cannot confirm PCNA, p53 as significant independent prognostic factors.

PP-9-16 Low and High Molecular Weight Cytokeratins Express the Differentiation of Invasive Breast Carcinoma

H. Takei*[1], Y. Iino[1], T. Yokoe[2], J. Horiguchi[1], M. Maemura[1], Y. Morishita[1]. [1] *2nd Dept. of Surgery, Gunma University School of Medicine, Maebashi, Gunma, Japan;* [2] *Emergency and Critical Care Medicine, Gunma University School of Medicine, Maebashi, Gunma, Japan*

Low molecular weight cytokeratin (LCK) and high molecular weight cytokeratin (HCK) were determined by immunohistochemistry in 90 operable invasive breast carcinomas (IBCs). Fifty nine (65.6%) of 90 tumors were LCK-positive, and 19 (21.1%) HCK-positive. The incidence of LCK positivity was inversely correlated with nuclear grade. Whereas, the incidence of HCK positivity was positively correlated with nuclear grade. The positive correlation between the incidence of LCK positivity and that of estrogen receptor (ER) positivity was found. Whereas the inverse correlation was found between the incidence of HCK positivity and that of ER positivity. The mean level of ER contents (101.9 fmol/mg protein) in LCK-positive tumors was significantly higher than that (20.8 fmol/mg protein) in LCK-negative tumors. However, the mean level of ER contents (10.1 fmol/mg protein) in HCK-positive tumors was significantly lower than that (91.2 fmol/mg protein) in HCK-negative tumors. From the results of this study, the inverse correlation is observed between the immunoreactivity of LCK and that of HCK as the differentiation markers of IBC.

PP-9-17 PCNA Labeling Index and Expression of pS2 and c-*erbB*-2 Protein in Primary Breast Cancer

Jun Horiguchi*, Yuichi Iino, Hiroyuki Takei, Michio Maemura, Takayuki Kano, Yoshio Horii, Masahiro Nagasawa, Hiroshi Matsumoto, Takao Yokoe, Yasuo Morishita. *Second Department of Surgery, Gunma University School of Medicine, Japan*

Proliferating cell nuclear antigen (PCNA) labeling index and expression of pS2 estrogen inducible protein and c-*erbB*-2 protein were examined by immunohistochemistry in 99 primary breast carcinomas. PCNA labeling index ranged from 2 to 76 (mean 25.9). Immunohistochemical positivity with pS2 and c-*erbB*-2 was 57.6% and 17.2%, respectively. There was no relationship between PCNA labeling index and age, tumor size, or lymph node involvement. PCNA labeling index was elevated in high ER level (more than 100 fmol/mg cytosol protein) tumors, compared with low ER level ones. PCNA labeling index was not associated with pS2 immunostaining, however, PCNA labeling index was higher in c-*erbB*-2 positive tumors than negative ones. Patients were divided into two groups according to PCNA labeling index: Low ($\text{PCNA} < 25\%$) and high proliferating group ($\text{PCNA} \geq 25\%$). The high proliferating group had a significantly worse overall and disease-free survival rate than the low group.

PP-9-18 French Association of Cytometry Quality Control Report on FCM-DNA Content and S-phase Fraction

J.-L. D'Hautcourt[1], F. Spyratos*[2], P. Vago[3], A. Chassevent[4], On behalf of the Association Française de Cytométrie (AFC). [1] *Clinique St-Joseph, Mons, Belgique, France;* [2] *Centre R. Huguenin, St-Cloud, France;* [3] *INSERM U 254, Montpellier, France;* [4] *Centre P. Papin, Angers, France*

The objective of the first AFC quality control trial was to assess the role of computer software in interpreting FCM-DNA data. Two diskettes, containing 10 files acquired in list mode (LM) and 10 histogram files (H) derived from analyses of various unfixed tumour specimens, were sent to 32 French, Belgian and Swiss laboratories with varying degrees of expertise. 610 responses were obtained from three different computer softwares: Cellfit (44%), Multicycle (44%), and Modfit (12%). 31% of responses were excluded from the final analysis due to inadequate training in how to use the software, or failure to grasp the biological significance of the results. Responses obtained from laboratories that complied with consensus recommendations were remarkably homogeneous, thus demonstrating the feasibility of standardization. A second quality control trial has been carried out in February 1996, and a second set of diskettes, together with a standardized procedure of treatment, has been sent to 58 laboratories willing to participate. The results of both trials will be reported and discussed.

PP-10. Miscellaneous Posters

PP-10-1 Communicating the Results of Breast Biopsies Over the Telephone and in Person. Is there a Difference?

L. Campbell*, R.M. Watkins, C. Teasdale. *Directorate of Surgery, Derriford Hospital, Plymouth PL6 8DH*

Current BASO guidelines suggest that the results of breast biopsy should be given to patients in person. This retrospective study investigates the opinions of patients given their result over the telephone shortly after their biopsy or told in person at a later date. 202 women who had biopsies of impalpable lesions between September 1993 and September 1994 were sent questionnaires. 171 (84%) were returned. 52 (30%) of these patients lived more than 20 miles from the hospital. 76 patients were telephoned with their results. 70 (92%) felt they preferred this. Only three patients with malignant disease said that they would have preferred to wait and hear in person. (Three patients did not know.) 95 patients were told their result in person. 59 (62%) found this satisfactory, but 18 (19%) would rather have heard earlier over the telephone, including 11 patients with malignant disease. (18 did not know.) Overall 91% of patients telephoned with benign results were happy with this. 88% of patients telephoned with malignant results were also satisfied. 19% of patients told personally would have preferred to hear results earlier by telephone, including eleven patients with malignant disease. Telephoning patients may be acceptable in selected cases. A larger prospective trial is required to assess these findings in detail.

PP-10-2 Evaluation of Quality of Life After Conservative Treatment for Intraductal Carcinoma of the Breast

O. Caffo*[1], M. Amichetti[1], M. Arcicasa[2], M. Roncadin[2], A. Rigon[3], O. Lora[3], G. Zini[4], F. Coghetto[5], P.L. Zorat[5]. [1] *Dept. of Radiation Oncology of Trento,* [2] *Dept. of Radiation Oncology of Aviano,* [3] *Dept. of Radiation Oncology of Padova,* [4] *Dept. of Radiation Oncology of Reggio Emilia,* [5] *Dept. of Radiation Oncology of Treviso, Italy*

Purpose: To retrospectively evaluate quality of life (QoL) in patients with ductal carcinoma in situ of the breast (DCIS) treated with conservative surgery plus radiotherapy.

Patients and method: We used a self-compilative validated questionnaire listing a series of 34 items, exploring physical and psychological well-being, sexual adjustment, body image changes, relational life, general life adjustment and level of information about treatment. 82 questionnaires were mailed to DCIS patients treated from 1981 to 1990. To state, 51 questionnaires (62%) has been returned.

Results: The physical well-being was good for most of the patients: only 10% felt ill. In the field of psychological well-being more than 50% of the patients declared to be well, excepting for anxiety found in 55% of the sample. Ten percent of the sexually active women experienced some sexual change. Only 20% of the sample felt a change in body image, but 65% thought that their treated breast was not similar to the untreated one. Very few women experienced a limitation in relational life. About 70% of the sample declared to have a good information about therapies.

Conclusion: In our experience, QoL after CT for DCIS was generally good. This finding can be of value in patient counselling the appropriate treatment.

PP-10-3 Psychologic Impact of Breast Cancer Diagnosis: Coping Strategies

F. Cousson*[1], J.M. Dilhuydy[2], M. Bruchon-Schweitzer[1]. [1] *Université de Bordeaux II, 33076 Bordeaux, France;* [2] *Institut Bergonié, Regional Cancer Center, 33076 Bordeaux, France*

The aim of this prospective research is to investigate and clarify the structure of coping strategies set up by patients just after the announcement of breast cancer diagnosis and to know if the preexisting psychosocial and medical patient characteristics have an effect on the development of their coping strategies. From March 1993 to June 1995, 80 breast cancer patients ($T2 > 30$ mm, T3 and T4) (age: 30–70 y) treated with neoadjuvant chemotherapy and adjusted locoregional treatment have been included. The data relative to sociobiographical and personality trait factors (anxiety, body image) are collected before pathologic confirmation and announcement of the treatment plan. The data relative to the coping strategies (perceived stress, controlability, social support, coping) are evaluated few days after diagnosis confirmation. A principal component analysis followed by varimax rotations shows four coping strategies. Two are active: problem solving and social support satisfaction and the others are passive: guilt with avoidance, helplessness-distress. The regression analysis shows: age is associated with the problem solving strategy, high trait anxiety, children's poor health and patient's poor health are significatively predictive of the use of guilt and avoidance strategy ($p < 0.05$). The use of helplessness-distress strategy is very significantly associated with an unfavorable body perception and with young age ($p < 0.01$). The results also show that the absence of psychological problems such as depression and nevrose, a high number of life events and young age predict significantly social support satisfaction ($p < 0.05$).

PP-10-4 Breast Care Nursing Intervention Survey

P. Cotton, C. Richards. *Breast Test Wales, 18 Cathedral Road, Cardiff*

A survey of 99 patients was carried out to seek patients views on the timing of intervention and the type of information they needed between diagnosis and hospitalization. 83% response rate: average age 58.41 years.

95% wanted information on treatment options, possibility of recurrence, radiotherapy, prosthesis, post-operative exercises and reconstruction.

54% wanted intervention for up to 8 weeks, 18% for up to 6 months.

This kind of survey would enable the breast care nursing service to respond to the needs of all women with breast cancer, not just those who suffer psychological morbidity.

PP-10-5 Involving a Trained Psychologists at the Time of Breast Cancer (BC) Surgery: Effects on Communication and Psychosocial Adjustment

M. Aimont*, F. Liebens, N. Cluydts, A. Pastijn, J. Vandromme,
S. Rozenberg, M. Degueldre. *Dept. Gynaecology, Senology Unit, Saint-Pierre Hospital, University of Brussels (ULB), Brussels, Belgium*

This study examines how BC patients rate psychosocial support and medical information received from health professionals in a single senology unit which includes a trained psychologist. In addition to conventional medical care, all BC patients in our unit meet with the clinical psychologist at least three times during their hospital stay. *Methods:* Opinion was seeked by means of questionnaire from 98 consecutive BC patients, 6 months after discharge from hospitalization for BC surgery. All patients were considered to have operable disease at the time of diagnosis. Specific questions were asked about the level of satisfaction with medical information and psychological support received during and after hospitalization. *Results:* The response rate was high (71 patients, i.e., 72%). Forty-one patients had undergone a modified radical mastectomy and 30, a lumpectomy with auxiliary dissection. Tumors were rated as Tis (6%), T1 (37%), T2 (48%), T3 (6%), or T4 (4%). Nodes were negative in 72% and positive in 28%. A vast majority of women (97.2%) expressed satisfaction about the amount and quality of medical information received at the time of diagnosis; 91.4% were also satisfied with the empathy they had perceived in their physician. However, the percentage of patients who remained satisfied with the medical information they were given during the 6 months of follow-up dropped to 67.1%. A parallel should be drawn with the fact that during hospitalization BC patients addressed 84% of their medical questions to the medical team, whereas before and after hospitalization they addressed respectively only 65% and 76% of their questions to the medical team. Sixty-five percent of women reported they had been effectively supported by their meetings with the psychologist, whereas 11.3% thought they had received insufficient psychological support at the time of surgery. Specifically, 69% of BC patients estimated that an early psychological support is useful. *Conclusion:* These data confirm the necessity to provide BC patients with continuous medical support and information, especially during the critical periods before and after hospitalization for surgery. Psychological support.