correlation ($p = 0.04$) was observed between expression p65 and a low grade I and II of malignancy according to Bloom and Richardson. Estimation of p65 antigen may be usefull in the identification of precancerous changes and more differentiated ductal carcinoma of the breast. The results indicate the possibility for p65 to be helpfull in the screening examinations of women who have a high risk of cancer development.

502 POSTER

Prognosis of the typical medullary carcinoma of the breast

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Purpose: Medullary carcinoma is very rare type of breast cancer. It's suspected, that prognosis in typical medullary cancer greatly differs from other NOS types.

Methods: A study was carried out based on 52 women with typical medullary carcinoma treated by radical surgery; 17 women with involved axillary lymph nodes were irradiated postoperatively.

Results: Twelve patients were stage I, 35 stage II and 5 stage III TNM. 10-year survivals in these groups were 83.3%, 85.7%, 80.0% respectively. Pathological tumour size (pT) where tumours were under 2 cm was found in 12 patients, tumours from 2.1 to 4 cm in 34 patients, and tumours bigger than 4 cm in 6 patients. 10-year survival in these groups were 83.3%, 85.3%, and 83.3% respectively. Disease-free 10-year survival was noted in 84.6% of the patients. The only independent prognostic factor was the microscopical status of axillary lymph nodes: 97.1% patients without metastases survived 10 years disease free, compared to 58.8% patients with metastases. There was no significant effect of other clinical and histopathological factors.

Conclusion: The criteria defined by Ridolfi et al. are as before basic for the diagnosis of typical medullary carcinoma of the breast.

503 POSTER

R2: Index of biological aggressive breast cancer

M. Cherubini, P. Baxa, M. Sustersich, G. Mustacchi. *University Hospital of Cattinara (Trieste); Istituto di Clinica Chirurgica, Italy*

Purpose: indicators of biological aggressive breast cancers are taken into consideration, through the deepening of R2 (macroscopic recurrence after breast cancer therapy) biological effects.

Methods: 160 patients operated for breast carcinoma are considered and a comparison is performed with a subgroup of 44 R2, examined in a follow-up (1–6 years after operation).

Results: in the subgroup the disease free interval is on average 55 months. Recurrence is more often noted after mastectomy and increased in patients operated at advanced Stages (IV 80%; III 40%; II 22%; I 7%) and may have been caused by neoplastic vascular or lymphatic embolization. A wide surgical excision defines: ER/PR ratio, which results significantly different (12.7) in R2, compared to Stage I, II (range 4.44–4.86; $p < 0.01$) and III (5.12; $p < 0.03$). In Stage I, ER+ (estrogen receptors) predominance in G1–2 (histologic grade) is observed; in R2, ER+ reduction in G2–3. In R2, ER+PR+ and ER−PR− decrease and ER+RP− increase. The average survival rate from R2 appearance is 50 mo.

Conclusions: This study clearly shows the features of R2 biological aggressive breast cancer, which may represent initial widespread disease and is more frequent when the Stage at the diagnosis is more advanced, when the cells are more indifferentiated, when the age is lower, often after total mastectomy and when an adequate radiotherapy may not have been followed. The cause may be vascular or lymphatic neoplastic microembolism, often with different hormonal receptor characteristics (ER/PR ratio, different receptor phenotypes).

504 POSTER

Receptor findings and menstrual status at radical operations due to breast carcinoma

M. Kocić, M. Inić, M. Juškić, J. Pralica, V. Nikolić, B. Marjanović. *Institute for Oncology and Radiology of Serbia, Department of Surgery, Belgrade, Yugoslavia*

Purpose: Examination of significance between receptor findings and menstrual status at radical operations due to breast carcinoma.

Methods: In the period from 1.1.1988 until 31.3.1989. on our Institute we operated 596 radical mastectomy in I and II stadium of breast carcinoma. In 566 cases we analysed state of the hormonal tumor receptor. From total number 257 patients (45.65%) were in pre-menopause, and 309 (54.35%) were in postmenopause. We assumed that menopause is starting in age of 55 years approximately, althea we have data for every single patient particularly. Status of receptors for ER and PGR were analysed in classical biochemical methods. Middle value is 51.42 and rang is from 1909–1960.

Results: From analysed 566 receptors status we have following results:

$$\text{ER+ } (\leq 10) = 219\ (36.74\%),\ \text{ER− } (>10) = 117\ (19.63\%). \quad (1)$$

In 43.96% status of ER receptors weren't examined (no data):

$$\text{PRG+ } (\leq 20) = 421\ (70.64\%),\ \text{PRG− } (>20) = 175\ (29.36\%). \quad (2)$$

Conclusion: We analyse hormonal dependence of tumor in regard of menstrual status, or age, which were taken as base, together with other prognostic factors, in order to choose kind of adjuvant therapies.

505 POSTER

Intratumoral beta-radiometry is an universal test of breast cancer (BC) activity

S.M. Portnoj, K.P. Lactionov, R.I. Gaboonia, V.P. Godin, S.V. Shiriaev. *N.N. Blokhin Cancer Research Centre RAMS, Moscow, Russia*

In 130 stage I–III BC patients before any treatment were investigated ^{32}P relative uptaking into primary tumor ($^{32}PRUT_1$). In 62 BC patients ^{32}P relative uptaking into residual tumor were detected after any treatment ($^{32}PRUT_2$). $^{32}PRUT$-detecting was performed intratumoraly by means of the needleform semiconductor beta-detector.

Low $^{32}PRUT_1$ level influenced on the actuarial disease free survival in BC stage I–II patients as a factor of good prognosis, and high and middle $^{32}PRUT_1$ levels – as a factor of poor one. 6-year disease free survival in first group was 90% and in second group – 50% ($p = 0.03338$).

In stage III BC patients after preoperative treatment $^{32}PRUT_2$ had significance as criterion of operability, 2-years actuarial survival without locoregional relapse in patients group with high $^{32}PRUT_2$ level was 31 ± 18%, and in patients group with low $^{32}PRUT_2$ level – 96+/8% ($p < 0.01$).

33 stage I–IV BC patients had been treated with part effect and stabilisation. $^{32}PRUT_2$ was detected in residual tumor and 6 months later patients were re-evaluated by the WHO criteria. Mean $^{32}PRUT_2$ in patients groups were: complete remission – 103 ± 13%, part effect – 269 ± 36%, stabilisation – 580 ± 260%, progression – 3138 ± 843% (all differences except "part effect" versus "stabilisation" are sufficient, $p < 0.01$).

So, level of the $^{32}PRUT$ has prognostic information in any clinical cases.

Friday, 2 October 1998 16:00-18:00

PARALLEL SESSION

Pathology

509 INVITED

Mammary mucin secretion: A modern revisitation and review

J.D. Davies. *Regional Breast Pathology Unit, University of Bristol, Southmead Hospital, Bristol BS10 5NB, UK*

Mucin secretion is well known in many forms of breast cancer. Despite surveys of benign breast tissue mucin conducted in Perugia 50 years ago, the findings have been largely ignored. In conjunction with the Mucin Research Group (head: Dr A T Corfield) at the University of Bristol an extensive re-examination of benign and malignant breast tissue has been undertaken using mRNA and immunohistochemical probes directed again the class-specific amino-acid tandem repeat domains. The eight currently sequenced distinct mucins (MUC1 to 7) display quite different patterns of expression. MUC1 (epithelial membrane antigen) shows increased expression in secretory breast and most carcinomas. MUC2 (and to a lesser degree MUC6) show enhanced expression in mucin-filled ducto-lobular units, including mucocoele-like lesions and mucinous carcinomas. MUC4 expression is limited to epithelium displaying secretory cytoplasmic vacuoles (including pregnancy, "adenomas of pregnancy", focal lactational change and a few, mostly better differentiated carcinomas). MUC7 is expressed in approximately 50% of breast carcinomas, and possibly showing positive correlation with tumour progression. MUC3, 5B, and 5AC were not detected in any functional or pathological breast conditions; conversely apocrine and