

and 7%; neutropenia 13% and 3%; thrombocytopenia 13% and 0%; anaemia 57% and 13%; nausea and vomiting 27% and 0%; diarrhea 3% and 0%; asthenia 7% and 0%; and peripheral oedema 3% and 0%. Regarding the haematological toxicity of anaemia, 1 grade 4 anaemia was probably a drug related toxicity, and the remainder all probably disease related. These initial findings of gemcitabine as single agent therapy in advanced cervix carcinoma are encouraging and should be investigated further. The study is ongoing.

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POSTER

#### 10 YEAR RESULTS OF EXTERNAL BEAM AND HDR INTRACAVITARY IRRADIATION IN THE PRIMARY TREATMENT OF CANCER OF THE UTERINE CERVIX

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From August 1980 to December 1990, 303 patients with cancer of the uterine cervix underwent primary irradiation in a combination of external beam and HDR intracavitary treatment at the Department of Radiation Oncology at the Sisters of Mercy Hospital in Linz, Austria. All patients were classified according to the FIGO rules: Stage I 54 patients, stage II 171, stage III 75 and stage IV 3 patients. 8 patients were lost to follow up. The mean follow up time of survivors is 110 months. A complete remission could be achieved in 282 patients, which is 93%; persistent turnout was found in 21 patients at the first follow up check 3 to 5 months after completion of irradiation. The actuarial overall survival probability for all patients at 5 and 10 years is 62% and 42% respectively, the disease specific survival probability is 68% and 64%. The local control rate at 5 and 10 years is 73% and 72% respectively. According to stage, disease specific survival lies at 90% for stage I, 69% for stage II, and 48% for stage III and IV at 5 years, and at 10 years 87%, 66% and 41% respectively. The actuarial local control probability for stages I, II, and III/IV is 90%, 74%, 60% respectively at 5 years, and 88%, 74%, and 56% at 10 years. (Kaplan-Meier calculations). From all 303 patients 34 suffered from 40 severe and moderate side effects (glossary of Chassigne and Sismondi). The rate for grade II complications is 10% and for grade III 3%. We conclude that HDR after loading in addition to external beam radiotherapy is a very effective tool for primary irradiation of cervical cancer, and a safe one in experienced hands.

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POSTER

#### THERAPY OF PSEUDOMYXOMA PERITONEI BY A MOAB

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Pseudomyxoma peritonei is a rare clinical diagnosis of massive abdominal swelling by a gelatinous material, produced from an ovarian or appendiceal primary. It is histologically benign, but behaves in a malignant fashion with recurrent growth. Treatment is usually unsuccessful and the prognosis is poor. The disease remains localized to the peritoneal cavity and the clinical course consists of repeated episodes of intestinal obstruction caused by extrinsic compression, that seems only to be relieved by surgical debulking. We used monoclonal antibody imaging to provide accurate evaluation of the progression of disease and the region involved within the peritoneal cavity. In this study, we injected I-131-labeled monoclonal antibody B72.3 recognizing TAG-72 antigen on epithelial carcinomas, eventually, also present within pseudomyxoma cells. Gamma imaging was performed at 1, 3, 7 and 14 days after iv-injection (2 patients). It revealed targeting of all known lesions. Estimated tumor dose for intraperitoneal tumor (MIRD formalism) was 1 Gy/75 MBq. The MoAb was also injected intraperitoneally (1 patient) and most of the activity retained in the peritoneal cavity, while maximum blood radioactivity was measured between 8–20 hrs. Digital autoradiography of diagnosed pseudomyxoma tissues (5 patients) demonstrated specific targeting of the antibody as well. Our results indicate that this anti-TAG antibody can be used for targeting of intraperitoneal pseudomyxoma, and may be useful in radioimmunotherapy.

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POSTER

#### THE VALUE OF CERVICOGRAPHY IN CERVICAL CANCER SCREENING

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It has been suggested that cervicography is suitable for use as a screening procedure for cervical cancer. Studies have shown it to be considerably more sensitive than cytology.

Asymptomatic population of 1700 women was involved in a screening programme. They were investigated by cytology, colposcopy and cervicography. Sensitivity, specificity, as well as positive and negative predictive value of the three methods were determined.

CIN was revealed in 114 (6.7%) and invasive cancer in 12 (0.72%) of patients.

Sensitivity of cervicography was 0.89, specificity 0.92, positive predictive value 0.58 and negative predictive value 0.96.

Compared with other methods, cervicography was more effective than cytology and as effective as Colposcopy in screening for cervical cancer.

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POSTER

#### THE PROGNOSTIC SIGNIFICANCE OF NM23, CATHEPSIN-D, EGFR AND C-ERBB-2 IN CERVICAL CANCER

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The prognostic significance of the expression of NM23, Cathepsin-D, EGFR and C-erbB-2 was evaluated by immunohistochemistry on 176 cases of cervical carcinoma stage IB. All were treated by radical hysterectomy with pelvic lymphadenectomy during 1987 to 1990 and followed-up until 311294. Expression of NM23 was less common in adenocarcinoma (14/28 = 50%) than in squamous cell (97/132 = 74%) or adenosquamous cell carcinoma (13/19 = 81%). Expression of Cathepsin-D was seen in 49% of tumors with no difference between histologic types. Overexpression of EGFR was seen in 26% of squamous cell tumors but only in 4% and 6% of adeno and adenosquamous cell tumors.

In univariate analysis of survival, NM23 expression was associated with a RH of 3.3 ( $P = 0.027$ ), Cathepsin-D expression with a RH of 3.6 ( $P = 0.002$ ), EGFR overexpression with a RH of 2.0 ( $P = 0.07$ ), while c-erbB-2 expression had no prognostic significance. In multivariate analysis including tumor size, vessel invasion, grade of differentiation and tumor invasion into parametria, Cathepsin-D expression and EGFR overexpression were significant, while NM23 was of marginal significance ( $P = 0.07$ ).

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POSTER

#### P53 AND EPIDERMAL GROWTH FACTOR RECEPTOR (EGF-R) IN CERVICAL EPITHELIUM: RELATIONSHIP TO HUMAN PAPILLOMAVIRUS (HPV) INFECTION

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Paraffin sections of 66 cervical tissues with histology ranging from normal through HPV infection (warts) to cervical intraepithelium neoplasia (CIN) were examined for p53 and EGF-r expression, by immunohistochemistry (IHC). Sections were examined for HPV with non isotopic *in situ* hybridization using probes against non-oncogenic HPV 6, 11 (12.5% positive) and oncogenic HPV 16, 18 (40.0% positive, WV or CIN pts) and 31, 33, 35 (5.0% positive, CIN pts). P53 nuclear positivity was detected in a small number of cells in normal tissue, warts and CIN of all degrees. This was predominantly basal and parabasal but extended through the epithelium in more severe degrees of CIN. EGF-r was detected mainly in basal and parabasal regions of normal tissue and warts, but increased in CIN to include more superficial regions, paralleling the degree of CIN. In HPV related neoplasia, wild type (WT) p53 is degraded by binding to E6 protein and rendered non functional. We suggest that the p53 demonstrated in normal tissue, HPV infection and CIN is persistent WT rather than the mutated form. Data will be presented on a further 100 pts attending a G.U.M. clinic.