second treatment. The serum concentration of 5-fluorouracil was measured with HPLC and related to the modification of the splanchnic circulation with lypressin. Tumour effects was analyzed with repeated CT scans.

**Results:** In one patient a limited tumour regression was observed and in four patients the disease was stable for for 3 months or more. The median survival time was 6 months (2–16 months). 5-FU in plasma was lower when lypressin was administered.

**Conclusion:** 5-FU i.p. has an effect on pancreatic cancer.

1281 PUBLICATION

## Combination bendamustin (B), mitomycin (M), 5-FU (FU) and prednisolon (P) in advanced gastrointestinal tumours with progress under chemotherapy

K. Ridwelski, St. Rudolph, J. Fahlke, Th. Gebauer, H. Lippert. *Clinic of Surgery, University of Magdeburg, Germany*

We developed a new chemotherapy treatment regime especially for those patients with gastrointestinal tumours, which were progressed under the accepted protocols for this kind of tumour. The protocol based on Bendamustin, a Benzimidazol – derivate with a N-Lost group. Patients: Between 10/92 and 10/96 28 patients with a median age of 57 years were included. The Karnofsky index ranged between 50 and 80%. The primary tumor was located: 19x colon/rectum, 4x pancreas, 3x stomach and 2x gall bladder. All patients had a wide spread metastatic disease by primary "standard" chemotherapy. 18 patients had also second line chemotherapy this included also high dose 5-FU infusion. Measurable lesions were assessed by ultrasound and computed tomographic scans, repeated every 3 cycles or sooner, if there was any evidence of progression on clinical or biochemical grounds. The tumour-markers were measured after every cycle.

**Protocol:** Our treatment regimen consists of 8 mg/m$^2$ Mitomycin C i.v. (30'), 100 mg/m$^2$ Bendamustin i.v. (30') and 800 mg/m$^2$ 5-FU (i.v. over 2 h), given as an outpatient treatment. To avoid toxic side effects in the lung a premedication with 50 mg Prednison p.o. was given 30 min before treatment started. Cycle was repeated at day 29.

**Toxicity:** Regimen was always well tolerated, no toxicity greater WHO 2° occurred.

**Results:** We saw 1 CR (4%) and 4 PR (14%). 9 patients (32%) have had a SD for 6 months. The other 14 patients (50%) have had a primary progressive disease.

**Summary:** The regimen is active (CR + PR = 18%, SD = 32%) in patients with disseminated metastatic gastrointestinal cancer under accepted standard chemotherapy protocols. Now we estimate this protocol in a first line therapy.

1282 PUBLICATION

## Etoposide, leucovorin and fluorouracil (ELF) in advanced gastric cancer: Our experience

A. Scimone, V. Adamo[1], A. Altavilla[1], G. Chillè, G. Chiofalo, A. Laudani[1], R. Maisano, G. Toscano, S. Pergolizzi, G. Ferraro[1]. *Istituto Nazionale per la Ricerca sul Cancro, Genova, Sez. Dec. Messina; [1]Istituto di Clinica Oncologica Università di Messina, Italy*

**Purpose:** To evaluate the efficacy and toxicity of ELF regimem in patients (pts) with histologically-proven advanced or metastatic gastric cancer.

**Methods:** between 1/94 and 7/96, 26 pts (19 M and 7 F) median age 62 years (range 49–75), 5 locally advanced and 21 metastatic, received ELF regimen: VP-16 100 mg/mq, LV 150 mg/mq, 5FU 500 mg/mq; d 1–3; q: 3 w. According to the Lauren classification 15 pts had diffuse-type, 8 intestinal-type and 5 mixed-type gastric cancer. 5 pts were treated in the adjuvant setting (Stage IIIa or b). 21 were treated for metastatic disease. Metastatic sites were: liver, peritoneum, lymph nodes and bone. 95 cycles (range 1–6 per pts., median = 3.5) were administered.

**Results:** of 19 pts valuable with metastatic disease 5 pts (29%) had partial response (PR), 6 pts (31%) had stabilization of disease (SD) and 8 had progression disease (PD). Responsive sites were liver (2/8), lymph nodes (2/12), and peritoneum (1/4). Median survival (months) in this setting of pts. was: 7 (range 3–15) in RP pts, 4 (range 2–7) in SD pts. Median overall survival was 7 months (range 2–15). Five pts with stage III a or b disease completed six cycles and none have relapsed at 8, 10, 14, 14 and 18 months. Toxicity was acceptable: grade III leukopenia in 20% of pts, grade III mucositis in 5% of pts, grade III alopecia in 40% of pts. No treatment related death occurred.

**Conclusion:** the ELF regimen is an effective, well tolerated and safely administered combination in advanced gastric cancer

1283 PUBLICATION

## Helicobacter pylori associated stomach cancer elicits specific germline encoded IgM response

F. Hensel, J. Dämmrich, B. Illert[1], W. Burghardt[2], H.K. Müller-Hermelink, H.P. Vollmers. *Institut für Pathologie, [1]Chirugische Klinik, [2]Medizinische Klinik, Universität Würzburg, Denmark*

**Purpose:** *H. pylori* infections of the stomach mucosa are believed to be involved in generation of stomach cancer. We investigated the humoral response to *H. pylori* infection on the IgM level, by selecting those crossreacting with *H. pylori* and stomach cancer cell line 23132.

**Methods:** We isolated monoclonal IgM antibodies from stomach cancer patients and selected them for reaction with *H. pylori* lysats in Western-Blots. The antibodies were tested in proliferation assays and analyzed by sequencing the antibody variable regions. Also we examined the IgM fraction from sera of stomach cancer patients by proliferation assay and Western Blots analyses.

**Results:** The monoclonal antibodies showed a strong reaction with *H. pylori* lysats. We found a predominantly expression of IgMs homolog to germline gene DP-49. Stimulation of gastric cancer cells was observed by the MTT-proliferation assay. Western Blotting and proliferation assay with sera from gastric cancer patients revealed similar properties.

**Conclusion:** Our data indicate a functional role of IgM antibodies and we believe that these antibodies play an important role in the initiation and progression of stomach cancer and can also be used as a marker of disease.