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ANAL FUNCTION AFTER LOW ANTERIOR RESECTION IN RECTAL CANCER.

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Anal function, following low anterior resection, can be altered due to impaired reservoir capacity and direct or indirect injury to the internal anal sphincter innervation. Anal manometry and EMG, to evaluate the electrical activity in the external anal sphincter, was performed 6 and 12 months after operation, on 12 patients affected by cancer of the middle thyrd of the rectum who had undergone low anterior resection with stapled anastomosis and on 15 patients who had a perianaly handsewen anastomosis. Surgery did not influence the amplitude of the maximum squeeze pressure, while resting anal pressure decreased significantly after coloanal anastomosis. EMG showed that electromyografic activity of the external sphincter was influenced by pelvic sepsis and not by surgery. The results suggest that all the normal physiological mechanism of the continence are present even if the rectum has been almost completely excised.

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EVALUATION OF PROGNOSTIC FACTORS WITH RESPECT TO SURVIVAL OF COLORECTAL CANCER PATIENTS

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In the present study, 220 colorectal cancer patients were analyzed to determine the prognostic factors. Survivals were analyzed with reference to age group, sex, smoking habit, first symptom, and stage of tumour. Survival curves have been constructed by Logrank test. We found that there was no correlation between the sex, age, smoking habits and survival. The survival of patients presented with rectal bleeding was longer than patients without rectal bleeding (median 33 vs 14 months, $p<0.05$). The survival of patients admitted to the hospital due to classic symptoms of obstruction were shorter than patients without occlusive symptoms (median 10 vs 34 months $p<0.05$). The survival of patients in distant stage was found to be shorter than patients who were in localized or regional stages (median 8 vs 60 and 44 months, $p<0.01$).

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TREATMENT OF GASTROINTESTINAL MALIGNANCIES WITH METHOTREXATE (MTX) FOLLOWED BY L-FOLINIC ACID (LFA) AND 5-FLUOROURACIL (5FU).

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In a preliminary study we demonstrated that the dosage of MTX required to achieve a MTX serum level above 1 µmol/L for at least 24 h was 500 mg/sqm i.v. (ECCO 7, Abs. No. 525). We subsequently treated 88 consecutive patients with advanced gastrointestinal malignancies with MTX 500 mg/sqm i.v. followed 24 h later by LFA 250 mg/sqm i.v. + 5FU 600 mg/sqm i.v. every 2 weeks. Median age of pts (M=54, F=34) was 62 years. To date, 71 are evaluable for response. 34 were previously treated, mainly with fluoropyrimidine ± LFA. Primary was colon-rectum in 36, stomach in 28, gall-bladder in 6 and pancreas in 1 case. 17/71 (24%) responses were observed, regardless of site of primary and previous treatment. Indeed, response rate was 18% in pretreated and 30% in previously untreated pts. Median length of duration of response was 10.5 months. Overall survival median was 7.6 months for pretreated and 11.8 for untreated pts. Among 560 evaluated courses, diarrhea occurred in 7% (G3-4=2.5%), nausea/vomiting in 4% and mucositis in 3%. This approach of treatment showed an activity comparable to other biochemical modulations of 5FU, with an acceptable toxicity.

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MEASUREMENT OF GENETIC DAMAGE IN COLORECTAL TUMORS BY DNA FINGERPRINTING.

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We have used Arbitrarily Primed Polymerase Chain Reaction (AP-PCR), a DNA fingerprinting technique, to identify sequences that have been altered in the tumor cells versus the corresponding normal tissue. The method is based on the amplification by PCR of multiple and anonymous sequences by using an arbitrary primer. We have analyzed by AP-PCR 70 colorectal tumors with three different arbitrary primers. Losses, gains, and new bands have been taken into account for the measurement of genetic damage, mobility shifts were not considered. We classified the tumors into two groups, tumors containing zero or one alteration (low genetic damage) and tumors with more than one (high genetic damage). The number of alterations was significantly higher in more advanced tumors (classified according to the Duke's stage). When tumors were separated depending on the presence of mutations in the *ras* oncogene (K-*ras* and N-*ras*) this tendency was only manifested in those cases negative for *ras* mutation. Our data indicate that genetic alterations detected by AP-PCR directly reflect the genomic damage sustained by the tumor cell and, consequently, quantification of these alterations may be a reliable indicator of genomic instability.

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IS THERE A SURGEON-RELATED INFLUENCE ON LONG TERM PROGNOSIS AFTER RESECTION OF COLORECTAL CANCER?

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Aim of the Study: We tried to determine whether there are significant surgeon-related differences in recurrence rate and long-term survival after radical resection of colorectal carcinoma.

Methods: Review of the data from the follow-up register of the department of general surgery of the Marien-Hospital Düsseldorf with univariate and multivariate statistical analysis .

Results: From 1980 to 1992 630 patients (358 women, 272 men) treated by 4 different consultant surgeons were included in a follow-up program after resection of colorectal cancer. The average age was 67.7 years. 257 patients presented with rectal carcinoma and 373 patients with colon carcinoma. According to the TNM-staging system there were 34,1% stage I, 38,9% stage II and 27,0% stage III tumors. During a mean follow-up period of 42.3 months the following results were found:

	all	surg 1	surg 2	surg 3	surg 4	
resections	630	234	214	91	91	
recur. (%)	25.1	23.1	23.8	23.1	35.2	p=0.12 (chi²)
5 yr-surv. (%)	72.8	75.4	73.8	70.1	67.4	p=0.76(log-rank)

Multivariate regression analysis did not reveal the surgeon to be an independent riskfactor for recurrence or survival.

Conclusion: There are surgeon-related variabilities in recurrence rate and survival after colorectal cancer resection, but these differences were insignificant in our unselected general hospital population. There may be no need to stratify between different surgeons following the same operative principles in department in future prospective studies.

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COLORECTAL CANCER: A 10-YEAR SURGICAL EXPERIENCE.

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A consecutive mono-institutional series of 708 pts (361M, 347F; mean age 66 yrs, range 27-96) surgically treated for colorectal malignancy (488 elective and 220 on emergency, 4% and 14% operative mortality respectively) during a ten-year period (1980- 1989) and followed-up for a median of 36 months (range 1-159) is analized.
The site of the primary tumor, radical resection rate and operative mortality was: right & transverse colon 38.5%, 72.8%, 4.0%; splenic flexure 4.7%, 69.7%, 15.2%; left colon 40.8%, 72.3%, 9.0%; rectum 26.0%, 80.4%, 6.0%.
Dukes' Stage stratification was: A 4%; B 45%; C 21% with a median survival of 75mos, 63mos and 39mos respectively.
210 Dukes' D pts had synchronous distant diffusion to the: liver (157pts, 26 radically resected, 12% op mortality, mean survival 22mos), lung (11 pts), intrabdominal (42pts, radicalized 13, op mortality 23%, mean surv 28mos). To the opposite 171 pts had surgical palliation only (9% op mortality, mean survival 15mos).
The 496 radically resected pts.developed: local recurrence 83 pts (metachronous resection 52%, 16.1 mos survival), liver metastases 38pts (metachronous resection 21%, 16.2 mos survival), lung 25 pts (metachronous resection 12%, 45 mos survival), diffuse recurrences 57 pts (metachronous resection 17.5%, 25.6 mos survival). These results support the role of adjuvant treatment, particularely after metachronous resection.