serum p53 in assessment of response to therapy and as prognostic factors were studied in the CRT group.

Materials & Methods: Two groups of esoph. Ca patients each compromized 40 patients were studiedú A prospective GI patients were randomly allocated to receive either Conc. CRT with CDDP, 5FU & MIT.C (20 patients GIA) or the same CRT + α-INF (20 patients GIB). Responding patients at 40 Gy, received further RT of 25 Gy as a boost. Non-responders (NR) were submitted to transhiatal esophagectomy. We compared this prospective CRT GI to a retrospective GII of 40 patients treated with RT (65 GY).

Results: Patients characteristics were as follows: Squamous Ca 70% vs 75%, weight loss $\geq$10% of body weight 52.5% vs 60%, PS scale $\geq$ 70 was 60% vs 70% while scale 60 was 35% vs 30%, stage II 40% vs 25%, stage III 60% vs 75%, T2 15% vs 7.5%, T3 70% vs 65%, T4 15% vs 27.5%, N1 category was 62.5% vs 55% in GI and GII respectivelyú In group I (CRT) diploid tumors constituted 79.4% and aneuploid tumors 20.6%, high SPF tumors 26.4%, while low SPF 73.5%. The mean pretreatment serum value of p53 was 0.44 and 0.12 in a control group. The recorded overall response rate (CR + PR) was 72.5% in CRT:GI and 50% in RT:GII ($p < 0.05$ S). CR was achieved in 37.5% in GI (40% in GIA & 35% in GIB) vs 7.5% in GII. NR constituted 27.5% vs 50% in both CRT & RT groups. Diploid tumors responded much better than aneuploid tumors (77.8% vs 42.87%). There was rapid decline in the mean pre-treat. value of SPF at 40 Gy & at end of all treatment in responders. We found a statistically sign. rise in p53 antibodies in sera of NR. The 2-year OS was 37.5% for (CRT) GI vs 7.5% for RT alone ($p < 0.001$ HS). The 2-year progressive free survival (PFS) was 20% vs 2.5 in both groups ($p < 0.001$-HS), while mean survival was 14.5 $\pm$ 9.04 mo for CRT vs 7.07 $\pm$ 5.81 mo for RT. ($p < 0.001$ HS). There was no diff. regarding OS, PFS and mean duration of survival in subgroup GIA & GIB. The addition of α-IFN improved response rate in patients with adeno Ca, those with diploid tumors (11/13) and those with low SPF (9/12). P.S., initial weight loss prior to therapy, stage of disease and response to therapy were the only statistically sign. factors which affectd the OS and PFS

Conclusion: Conc. CRT approach is superior to RT alone in treatment of non-met-esoph. Ca. The addition of α-IFN improved results in adeno Ca, low SPF and those with diploid patternú Diploid tumors responded much better to CRT than aneuploid tumors. Rapid decline in mean pretreat. value of SPF is predictive of good response to CRT, while elevated serum levels of mutant p53 is indicative of poor response at 40 Gy.

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Prognostic value of tumor suppressor gene (P53) and multiple drug resistance transport protein (P170) in hepatocellular carcinoma (HCC)

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Purpose: P53 and p170 was studied in HCC in an attempt to clarify their prognostic value and their role in the pathogenesis & resistance to therapy.

Methods: Liver biopsies from 47 unresectable HCC patients were examined for grades (G), HBV marker, staining for p53 and p170 using specific monoclonal antibodies. Treatment was systemic, intrahepatic and supportive only in 13, 19 and 15 patients respectively.

Results: Patients were 40 and 7 females with median age of 55 y. Tumor grades were GI in 10 (21%), GII in 22 (47%), GIII in 15 (32%) patients. Cirrhosis was found in 27 and AFP was elevated in 39 patients. HBsAg positive was found in 14 (30%) and Orcein stain was positive in 27 (57.4%) patients. Positive p53 was detected in the nuclei of 18 cases (38%) and 39 (83%) showed expression of p170. There was no significant correlation between p53 expression and age, sex, liver cirrhosis, positive HBsAg, AFP or response to chemotherapy. Positive p53 was directly related to tumor grade as 10% of GI, 22.7% of GII and 80% of G III showed positive p53. Patients with p53 positive had poor 1-year survival ($p = 0.01$) and p170 showed a strong parallel relation to short, survival ($p = 0.002$).

Conclusion: It was concluded that p53 and p170 expressions were directly related to short survival and poor prognosis in patients with HCC. P53 expression was related to the tumor grades and could be a late event in hepatocarcinogenesis.

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3D-conformal radiotherapy (3D-CRT) for pancreatic cancer: Acute toxicity and quality of life in the experience of the European Institute of Oncology

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Purpose: To evaluate tolerability and acute toxicity of 3D-CRT in pancreatic carcinoma.

Patients & Methods: Between December 1995 and February 1999, 25 patients with locally advanced pancreatic adenocarcinoma were treated with 3D-CRT. All patients were treated in a supine position with a 4-field technique (4 coplanar beams at 0°, 90°, 180°, 270°). For reproducible positioning, custom-made polyurethane foam casts were produced for each patient. The shaping of the beam apertures was realized by a multi-leaf collimator. The total target dose of the first part of the treatment was prescribed at the ICRU point and was 45 Gy for the pancreatic tumor delivered by a 15 MV linear accelerator in 25 fractions and days. A boost to the tumor with a margin of 1 cm around the target on BEV (16.2 Gy, 9 fractions) raised the total dose up to 61.2 Gy.

Results: The treatment was very well tolerated. No worsening of the initial performance status was observed, except for a patient who died after two weeks of treatment due to rapid progression of the disease in the liver. 7 patients who were complaining of severe abdominal pain at the beginning of radiotherapy got a remarkable improvement after the third week of radiation treatment and for 4 patients the pain disappeared completely. A transient diarrhoea was observed in 4 patients: the symptoms lasted no more than five days and resolved with medications. 5 patients suffered of transient nausea during the fourth-fifth week of treatment, but no vomit episodes were observed.

Weight loss of more than 10% of the initial weight was observed in 3 patients.

Conclusion: 3D-CRT on pancreas has an excellent acute toxicity profile even in patients with usually poor performance status.

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A randomised trial of brachytherapy before (BRYB) and after (BRYA) external beam irradiation (XRT) for carcinomas of the oesophagus and cardia

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Purpose: To compare the results of BRYB and BRYA XRT in treatment of carcinoma of oesphagus and cardia.

Methods: From 1988–92 194 patients were prospectively randomised to BRYB or BRYA. Assessment included oesophagoscopy and biopsy, CT, barium studies and bronchoscopy, where indicated. Between groups, the distribution of patient/tumour characteristics were similar. The radiation dose was: XRT: 40 Gy/15#/3 weeks and brachytherapy: 15 Gy at 1 cm from the central axis, with no chemotherapy used.

Results: 50% of BRYB and 56% of the BRYA group received esophagectomy. Histology showed 15/59 (25%) of the BRYB and 20/61 (33%) of the BRYA group with no viable tumour ($p = 0.38$). Overall, 23/64 (36%) of squamous cancers and 12/56 (21%) of adenocarcinomas were considered sterilised. Actuarial cancer specific survival rates were identical (19% at 5 years), however for T3 tumours, there was a trend towards better survival in the BRYA patients (5 yr rate 14 v 9%, $p = 0.12$).

Conclusions: The resection rate, the sterilisation rate of preoperatively treated tumours and the survival rate for T3 tumours was slightly higher in BRBA patients, but these differences did not reach statistical significance.