Purpose/Objective: To evaluate acute and late injury of kidney in radiotherapy of patients with gastric cancer.

Materials and Methods: Twenty patients with gastric cancer that were treated with post operative chemoradiation were prospectively evaluated. Chemoradiotherapy was done with 5FU and LV (400 mg/m2 5FU, 30 mg/m2/m2 LV) in 4 in 3 and 3 last days of radiotherapy. Total radiation dose of 45 Gy was delivered in 25 fractions (5 days a week) with 1.8 Gy dose per fraction by 2 opposed fields. In this study, decrease of glomerular filtration rate (GFR) value was used for definition of toxicity. The GFR value was measured using 99mTc-diyethylene triaminepentaacetic acid (DTPA) scan that was done for all of the patients before, during (in 15th session of radiotherapy) and 3 to 9 months after radiotherapy. The imaging was done using dual head gamma camera.

Results: There was a significant reduction in the GFR values of irradiated kidneys.

Conclusions: 99mTc-DTPA scan can be a suitable modality for determining of renal toxicity after radiotherapy of gastric cancers.

EP-1066 CyberKnife treatment in liver tumours: Initial experience from India

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Purpose/Objective: We report initial experience with CyberKnife (CK) in patients hepatocellular carcinoma (HCC), liver metastasis (LM) and Klastkin tumour (KT).

Materials and Methods: Seventeen consecutive patients (mean age 57.5 years, range 35-81 yrs; 82% male) treated with fiducial based robotic radiosurgery. Nine patients had HCC (n=9) and four each had LM (n=4) and KT (n=4). 11/17 patient (70%) were with Child Pugh A/B, 8/9 with HCC had infective hepatitis (4 each with hepatitis B & C), 5/17(29%) had diffuse cirrhosis, 70%(12/17) had single lesion in liver and target volume 90 cc in 6(35%)patients respectively. 13/17 (75%) patients had prior treatment [chemotherapy/13 (61%), TACE 5/13 (39%)] and treated with SBRT on progression. All patients were treated with 3 fractions (21-450y/3f; mean dose 33Gy, prescription isodose84%, target coverage 94%); fiducial tracking based CK. Mean CI, nCI, HI was 1.1, 1.28 and 1.19 respectively. Mean liver dose was 4.7 Gy, 800cc liver dose 8.2 Gy; 2% small intestine dose 10.6 Gy. Mean nodal, beams, monitor units and treatment time 69, 174, 46919 and 60.4 min respectively.

Results: At mean follow up of 11.3 months (range 1.9-26.5), 12/17 (70%) patients expired 5/17 (30%) alive (3 patient with controlled primary, one each with local progression and metastasis). Median overall survival (OS) in HCC patients was11.9 months (2.1-26.5 months), MT 8.3 months (1.9-13.3 months) and KT was 12.8 months (7.4-25 months) respectively. 5/17 (30%) patients had grade I-II Gl toxicities, no grade III-IV toxicities were observed and only one patient (12%) had anicteric ascites with high serum alkaline phosphatase two months after CK and recovered with supportive care. Median OS (months) were significantly influenced by factors such as performance status (KPS 70-80 vs 90-100: 8.3 vs 15.4; p=0.034), Child Pugh A/B vs C: 13.3 vs 4.9; p=0.039, cirrhosis (only fatty liver vs diffusecirrhosis: 13.3 vs 9.4; p=0.005), prior treatment (No Rx vs prior Rx: 16.6 vs8.3; p=0.006), dose (39Gy: 9.5 vs 15.4; p=0.02) and target volume (90 cc: 15.7 vs 7.7; p=0.011) respectively. There was no fiducial related toxicity or migration.

Conclusions: CyberKnife is safe and effective local treatment modality in selected patients with liver malignancies with minimal adverse events. Factors such as performance status, Child Pugh classification, cirrhosis status, prior treatment, RT dose and target volume significantly influence survival function.

EP-1067 Non metastatic esophagus cancer: outcome according to therapeutical strategy

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Purpose/Objective: To assess the outcome of non metastatic esophagus cancer according to therapeutical strategy: evolution of esophagus cancer after curative treatment, results and toxicities of combined treatments and factors which can influence disease local control, disease-free and overall survival.

Materials and Methods: 120 patients with exclusive radiochemotherapy (RC) and possibly surgery between 2004 and 2010 treated esophagus cancer were retrospectively studied. The first site of relapse was classified as follows: local (tumor), locorregional (tumor and nodal: coeliaq, mediastinal, sus-clavicular) or metastatic. RC was performed after exploratory surgery, respectively. The distribution on basic initial parameters was similar. The total dose of at least 50 Gy delivered to
Dolinska M, Pobijakova. Local recurrence after rectal cancer treatment revealed. Further recruitment to this randomized study is warranted.

**Conclusions:** The trend towards better survival and lower rate of distant metastases for CRT compared to CT in IALGC has been revealed. Further recruitment to this randomized study is warranted.

**EP-1069**

Local recurrence after rectal cancer treatment

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Purpose: To analyze local recurrence rates in our patients treated with preoperative radiotherapy with/without chemotherapy followed by TME or non TME surgery.

Materials and Methods: Two hundred fifty patients were enrolled between January 2004 and December 2010. Median age was 62 years (min=26, max=83). There were 83 female and 167 male. To be eligible, patients had to have histologically confirmed adenocarcinoma of the rectum, without evidence of distant metastases, and the inferior margin of the tumor had to be located not farther than 15 cm from the anal verge. Initially, 96% of patients had locally advanced stage of disease (T3/T4,N0, any T,N). All patients had preoperative radiotherapy (RT) with/without chemotherapy (5-fluorouracil or capecitabine). The patients assigned to preoperative RT received a total dose of 45-50.4Gy in 25-28 fractions for 5 to 5.5 weeks followed by TME (118 pts) or non TME surgery (132 pts). The overall recurrence rate and the recurrence rates from different surgical approaches were calculated in our retrospective analysis. Also, we evaluated influence of tumor distance from the anal verge, type of chemotherapy, postoperative stage of disease, resection margins, presence of lymph-angioinvasion and KRAS mutation status on the rate of local recurrence (LR).

Results: Median follow-up time was 48 months (range, 12 to 96 months). The cumulative proportion of local recurrence was 6.8% for all group of patients (0.8% in the group with TME and 6% in the group with non TME, p=0.0022, Fisher's exact test). The 5 year DFS was 86% in the group of pts with TME and 71% in the group of pts with non TME (p=0.0025). The 5 year OS was 87% in the group of pts with TME and 77% in the group of pts with non TME (p=0.0012). There was very statistically significant difference between two groups of pts regarding DFS and OS.

Conclusions: Radiotherapy followed by TME has been shown to significantly reduce local recurrence rates in our patients. The strong criteria for identifying low risk group of pts for LR were: TME and significant reduction of local recurrence rates in the group of pts with TME and non TME.

**EP-1071**

SIB method using VMAT-IMRT in preoperative chemoradiation for 16 patients with locally-advanced rectal cancer

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Purpose/Objective: We are conducting a simultaneous integrated boost (SIB) method using volumetric modulated arc therapy (VMAT)-intensity- modulated radiotherapy (IMRT) in preoperative chemoradiation for locally-advanced rectal cancer. We report the initial experience in our department.

Materials and Methods: The object is rectal cancer with invasion to the Rb (rectum below the peritoneal reflection) in stages II-III. It started to register from January, 2012. It is finished in 16 cases up to operative treatment (Total Mesorectal Excision) as of October, in the supine position, 45Gy/25Fr to the whole pelvis and 55Gy/25Fr to the gross tumor volume were given using SIB method of VMAT-IMRT. The combined chemotherapy is multiple drug combination including UFab (1,250mg/m2) + UDEL + CPT-11.

Results: The anal preservation rate was 13/16 case. In the grade by the histologic effect measurement criteria, grade 1 was 8 cases, grade 2 was 2 cases, and grade 3 (= complete response) was 3 cases. The response rate was 47% and it was a good result. The frequency of diarrhea during radiotherapy was low.

Conclusions: It is a treatment method tolerated enough. It continues as this regimen.

**EP-1072**

EBRT after radical prostatectomy in localized prostate cancer: a 5-years single-institution experience


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Purpose/Objective: To evaluate the series of patients treated with adjuvant- or salvage-External Beam Radiotherapy (EBRT) after radical prostatectomy (RP) in localized prostate cancer, and to revise the determination criteria from the urology departments.

Materials and Methods: A total of 159 patients diagnosed from localized prostate cancer, remitted from 4 different urology departments, were included retrospectively in the study. Patients were treated with radical prostatectomy and posterior EBRT, and were recruited from 2007 to 2012. Clinical and pathological data were collected, including the risk group (before and after RT), parameters needed for the decision of treatment selection (adjuvant vs. rescue), time to androgen deprivation and dose administered in RT. Response to EBRT in terms of BPS was also evaluated, defining biochemical failure as PSA level post-EBRT > 0.20 ng/ml.

Results: Mean Age: 60.9y (SD: 6.5), Pre-RP Risk Group: Low: 28 (17.6%), Intermediate: 69 (43.3%), High 27 (16.9%) and unknown 32 (20.6%). Post-RP Risk Group: Low: 5 (3.1%), intermediate: 38 (23.9%), high: 109 (68.5%) and unknown: 7 (4.4%). Margin status: Positive: 93 (58.4%), negative: 54 (33.9%) and unknown 12 (7.5%).

**EP-1070**

Outcome of gastric lymphoma in elderly patients with reduced dose chemotherapy followed by IFRT

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Purpose/Objective: NHL arises often in extra nodal tissues. Gastrointestinal lymphoma represents the largest group of extra nodal lymphoma. It accounts for approximately 40 percent of them. The most frequent type of non-Hodgkin’s lymphoma is diffuse large-B-cell lymphoma. More than half of patients with diffuse large-B-cell lymphoma are over 60 years of age and the treatment of these elderly patients is a difficult challenge.

Materials and Methods: This study included 18 patients from 2008 to 2010 of age more than 60 years. All patients were subjected to six cycles of R CHOP followed by involved field radiotherapy. Radiation (45 Gy/25Fr/5 weeks) was given with linear accelerator(energies used 6, 15 MV) by 3DCRT technique. With Keeping in mind the toxicities associated with these drugs and the KPS of the patient, drug dosage was reduced. In most cases it was reduced by 20-25%.

Results: The completion rate of patients with this regimen was 100%. 5 year local control rate was 96%. Five year disease free survival was 74%. Grade III neurotoxicity was seen in one patient.

Conclusions: The concept of chemotherapy with reduced dosage followed by involved field radiotherapy is safe and effective in managing the Gastric lymphomas even in patients with associated geriatric co morbidities.