to total mesorectum and pelvic lymphatic drainage with simultaneous integrated boost (SIB) to the tumor bed and adjacent mesorectum. Fluoropirimidine-based CT was administered. The acute toxicity was evaluated according to CTCAE 4.0 scale.

Results: Pts characteristics: median age 63.5yy (range 29-84), median tumor distance-IAS 50 mm (range 0-100), median tumor size 50 mm (range 25-120), MRF involvement 24 pts, Stage IIA 7 pts – III 62 pts. All of the pts completed the RT; 45 Gy were delivered to total mesorectum and lymphatic drainage with median SIB dose of 55 Gy (range 52.5-57.5). Forty-nine (71%) pts received concomitant CT with capecitabine alone and 17 (25%) capecitabine plus oxaliplatin. Globally, 16/69 (23%) pts did not complete CT for haematological (5) or, gastrointestinal toxicities (5) and other causes (6). Fourteen (20%), 33 (48%) and 23 (33%) pts experienced grade 1-2 haematological, gastrointestinal and genitourinary toxicity, respectively. Two out of 69 (3%) pts developed grade 3 haematological toxicity and 9/69 (13%) grade 3 gastrointestinal toxicity. Forty-three pts underwent surgery (LAR 28, APR 10, local excision 5 pts) but definitive histology is not yet available in 7 pts. Twenty-six pts are waiting for surgery. The tumor downstaging was documented in 29/36 (80.5%) pts. Forty-four rate (16/36) of surgical cases achieved pathologic complete response.

Conclusion: Despite the limitations related to the heterogeneity of the treatment delivery (SIB dose and concomitant CT), the RT dose-escalation in the preoperative treatment of LARC seems feasible, well tolerated and effective in terms of tumor downstaging and pathological complete response. Nevertheless, this results need to be confirmed on a larger cohort.

EP-1304

Image guided intensity modulated radiotherapy for anal cancer: a multi institutional study

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Purpose or Objective: To report the results of a retrospective pooled analysis of anal carcinoma (AC) patients treated with IMRT, VMAT, helical tomotherapy (HT) and daily image-guided RT (IGRT) in 3 Swiss radiotherapy centers.

Material and Methods: Local control (LC) and grade 3 or more toxicity rate (CTCAE v.4.0) were the primary endpoints. Overall (OS), disease-free (DFS), distant metastasis-free (DMFS) and colostomy-free survival (CFS) were also studied. Volumes were defined as follows: CTV1 : Anal canal, mesorectal, pelvic, and inguinal nodes. CTV2 : anal tumor and clinically positive nodes. Planning target volumes were obtained by adding 5-mm margin to the CTV (PTV1 and PTV2, respectively). PTV1 received 36 Gy (1.8 Gy/fraction) delivered with IMRT (n = 44), VMAT (n = 16) or HT (n = 100), while PTV2 received a sequential boost up to a total dose of 59.4-60 Gy (1.8-2 Gy/fr), delivered with IMRT (n = 16), VMAT (n = 18) , HT (n = 59) or 3D-conformal RT (CRT, n = 67).

Results: From 03.2006 to 04.2015, 160 patients were treated; 30, 68, 60 and 2 patients presented stage I, II, III, and IV, respectively. Median age was 62 years (range: 35-89). A planned gap was used in 130 patients. Median gap duration was 10 days (range, 5-24). Concomitant chemotherapy (CTX) was delivered in 149 patients, mainly using mitomycine C combined with fluoropyrimidines (i.v. or oral, n = 139). Median follow-up was 45 months (range: 3-97). Four-year LC, OS, DFS, DMFS and CFS rates were 83.6%, 82.3%, 82.7%, 93.4% and 88%, respectively. Time to progression for relapsing patients was 29 months (range: 1-78). A total of 24 patients presented a recurrence (local only in 14, locoregional in 1, locoregional and distant in 1, local and distant in 3, regional only in 2, and distant only in 3 patients). Fourteen patients underwent a colostomy because of local recurrence (n = 12) or pretreatment anal sphincter dysfunction (n = 2). Grade 3 acute toxicity was observed in 30 patients (18.4%), usually as erythema (23/30) or diarrhoea (10/30). No late G3 cutaneous toxicity was recorded. At the time of analysis, 150 patients presented more than 6 months of follow-up and were considered evaluable for late toxicity. Data about late toxicity were not available for 6 patients, followed in other Institutions. Looking at the final 144 patients, 3 of them patients presented a late G3 gastrointestinal toxicity (anal incontinence). No G4 acute or late toxicity was recorded. No significant differences were observed in terms of local control or acute G3 toxicity between IMRT and 3D-CRT boost techniques.

Conclusion: A total dose of 59.4/60 Gy to the anal tumor and involved nodes, including 36 Gy to the elective nodal regions , is effective and safe when delivered using modern IMRT techniques and daily IGRT. Thus, VMAT or HT and concurrent CTX are the standard of care in our institutions.

EP-1305

Impact of time from neoadjuvant treatment and surgery in rectal cancer: a monoinstitutional report

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Purpose or Objective: The aim of the study was to analyze if time from neo-adjuvant chemoradiotherapy (CTRT) to radical surgery influences oncologic outcomes in locally advanced rectal cancer.

Material and Methods: We performed a retrospective analysis of 132 consecutive patients with rectal cancer treated at our Institute from March 2006 to March 2013 who underwent to neoadjuvant therapy followed by radical resection. Of these, 12 patients were excluded as lost at follow up, 3 patients for peritoneal carcinosis detection at surgery time and 3 patients refused surgery after neoadjuvant treatment. The remaining patients were analyzed and divided into two groups according to time to surgery (group A≤ 8 weeks and group B > 8 weeks) after completion of CTR

Results: A total of 114 patients underwent total mesorectal excision (TME) after neoadjuvant treatment for stage II and III rectal cancer between 0 and 15 cm from anal verge. There were 51 (45%) patients in group A (interval ≤ 8 weeks) and 63 (55%) in group B (interval > 8 weeks). Median time from chemo-radiotherapy and surgery was 7 weeks (range 1-8) and 12 weeks (range 9-17), respectively, in group A and B. In group B there was a major number of patients with no involvement of circumferential resection margin (CRM), 60 vs 48, and a higher number of major pathologic responce (pT0 – pT1), 19 vs 9. Disease free survival (DFS) at 5 years was 85.7% vs 75.9% and overall survival (OS) at 5 years was 83.7% vs 92% in group A vs group B.

Conclusion: In our analysis we did not reach statistical significance difference as regards DFS and OS in the two groups of patients; however we observed a favorable trend in the group of patients that underwent to surgery after 8 weeks from neoadjuvant treatment in terms of pathological responce and free radial margin.