acceptable incidence of side effects was recorded. Furthermore, it was possible to avoid colostomy in a significant proportion of patients.

EP-1425

Phase I study on hypofractionated accelerated radiotherapy for bone metastases from prostate cancer

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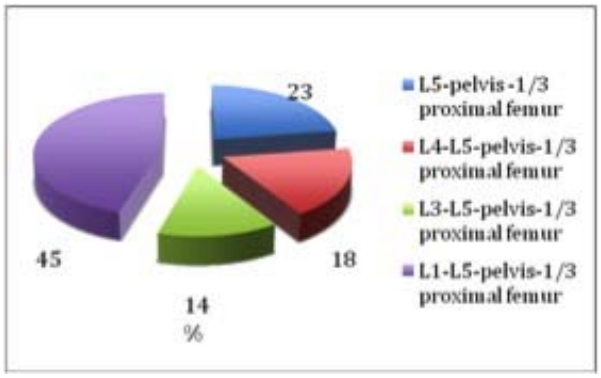
Purpose or Objective: To define the Maximum Tolerated Dose (MTD) of Middle Half Body (MHB) Radiotherapy (RT) delivered with a conformal 3D technique and twice daily fractionation in prostate cancer (PC) multiple bone metastases.

Material and Methods: A phase I trial was designed with two level of dose: 13 Gy (3.25Gy *per* fraction) and 15 Gy (3.75 Gy *per* fraction). Eligibility criteria were: histological confirmed PC, symptomatic and or impending for fracture multiple bone metastases, ECOG performance status 0-4, expected survival >3 months, and adequate bone marrow function. Radiotherapy was delivered using a 3D conformal technique twice daily in 2 sequential days, with at least 8 hours interval between fractions. Cohort of 6-12 patients were recruited in order to define the MTD (any acute toxicity > grade 3 of RTOG scale). Pain and quality of life were recorded using analogue-visual scales (VAS and CLAS). Clinical target volume was defined as pelvic bones, involved femurs + lumbar spine. Planning target volume was defined as the CTV + 1 cm.

Results: From June 2010 to November 2014, 22 patients (median age 73 years; range 58-86) were enrolled. In Figure 1 treatment volumes are described.



At diagnosis, all patients (100%) reported pain. Clinical pain remission (complete or partial) was observed in 95% of patients. Six patients (27.3%) had a complete symptoms resolution and 15 (68.2%) had a partial symptom control. Pain worsening after radiation treatment was recorded only in 1 patient. On the basis of analogue-visual scales a significant decrease of pain was recorded (mean VAS pre RT *versus* post RT: 4.6 *versus* 3,0; p=0.034; mean pain score pre RT *versus* post RT: 3.1 *versus* 1,9; p=0.069; mean drug score pre RT *versus* post RT: 3.9 *versus* 2,5; p=0.088). Skin and gastrointestinal acute toxicities were only grade 1-2. With a median follow up of 6 months (range 1-26) no late toxicity was recorded.

Conclusion: An accelerated MHB RT treatment with twice daily fraction on bone metastases from PC was well tolerated up to 15 Gy. A phase II study is ongoing to confirm efficacy on pain control and quality of life.

EP-1426

Analysis of treatment response and survival of patients with superior vena cava syndrome (SVCS)

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Purpose or Objective: To evaluate the factors associated with treatment response (relieve of SVCS) and overall survival.

Material and Methods: Thirty one patients with SVCS between 2012-2015 were analyzed. The end points were: overall survival and SVCS resolution. SVCS resolution was determined as the absence of symptoms related to the compression of superior vena cava. The variables tested were: sex (male vs female), age (<50 years vs > 50 years), primary site (lung vs others), KPS (<70 vs >/= 70), previous palliative RT (no vs yes), BED Gy10 dose (<25 vs > 25), more than 1 year of the initial diagnosis (no vs yes), tumor size (<10 cm vs >/= 10 cm), and number of previous chemotherapy (CT) lines (0 or 1 vs 2 or more), presence of: bone mets (no vs yes), central nervous system (SNC) mets (no vs yes), lung mets (no vs yes), liver mets (no vs yes), lymph node mets (no vs yes) and SVCS resolution (no vs yes).

Results: The mean follow-up time of the patients alive was 376 days (median 241 days). The 6-months and 1-year OS survival were 31.5 % and 18 %, respectively. Factors influencing positively the survival in univariate analysis were: KPS >/= 70 (p=0.001), 0 or 1 previous CT lines (p=0.012), diagnosis <1y (p=0.007), no bone mets (p=0.010), no lung mets (p=0.011), no liver mets (p=0.031) and SVCS resolution (p<0.001). In multivariate analysis only SVCS resolution (p=0.005) remained significant and no lung metastasis was marginally related (p=0.060). The overall SVCS resolution rate was 84% (12/25 cases). Nineteen patient were treated with radiotherapy (RT), four patient with chemotherapy and 2 patients with RT + CT. Six cases receive no treatment (3 because of extremely low KPS and 3 because of the risks of re-irradiation) and were excluded from the efficacy and multifactorial analysis. None of the variables tested influenced the treatment response rate.

Conclusion: Treatment response rate was more than 80 % and it was the strongest factor associated with overall survival. This fact encourages the indication of treatment even in patients with low performance status or previous cervico-thoracic radiotherapy, after a risk-benefit analysis.

EP-1427

Vertebral compression fracture of spinal metastasis from colorectal cancer after radiotherapy

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Purpose or Objective: The aim of this analysis was to determine the risk of vertebral compression fracture (VCF) following spine radiotherapy (RT) specific to colorectal cancer (CRC) spinal metastases, and to determine clinical predictors

Material and Methods: We retrospectively reviewed 267 spinal segments (176 metastatic and 91 non-metastatic vertebras) in 66 patients, which were irradiated for pain palliation between 2007 and 2014. The primary endpoint was development of a VCF following RT, either a de novo VCF or