pleural metastases/effusion, normal serum hemoglobin, CRP, LDH and albumin (surrogate markers of disease extent), early PRT within 6 months from diagnosis of metastases, age <65 years, and good performance status (ECOG PS). Biological subtype (Her2 and hormone receptors), comorbidity and reirradiation to a previously treated volume did not correlate with fractionation. Rate of LC PRT remained unchanged over time. In line with imbalances in prognostic factors, survival was significantly longer after LC PRT in univariate analysis. However, after correcting imbalances in multivariate analysis no survival difference was found. Prognosis was influenced by biological subtype (worse for triple negative status), extraskeletal disease extent, presence of anemia and abnormal CRP. Even patients with PS3 had median survival of 3 months, which indicates that they live long enough to experience clinical benefit after PRT.

Conclusion: The likelihood of receiving LC PRT was significantly higher in younger patients, those with good PS, limited disease extent, and shorter time interval after diagnosis of metastatic disease. Educating physicians about these factors might contribute to optimal resource utilization. The limited need for reirradiation after single fraction PRT might encourage physicians to prescribe this convenient regimen, which is also suitable for PS3 patients.

EP-1423
Hypofractionated radiotherapy for complicated bone metastases in patients with poor performance
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Purpose or Objective: To evaluate the efficacy of hypofractionated radiotherapy (16 Gy in 2 fractions one week apart) in pain relief in patients with complicated bone metastases and poor performance status.

Material and Methods: This was a phase 2 multicenter study of patients with complicated bone metastases and Karnofsky performance status from 30 to 60 who underwent 2 fractions of radiotherapy with 8 Gy each one week apart. Pain response and quality of life (QOL) were measured using the International Consensus on Palliative Radiotherapy Endpoints and EORTC QOL Pal 15 and BM 22 questionnaires. Complete response was defined as a pain score of 0 at treated site with no concomitant increase in daily oral morphine equivalent (OMED). Partial response was defined as pain reduction of 2 or more on a scale of 0 to 10 scales without analgesic increase, or analgesic reduction of 25% or more from baseline without an increase in pain. Pain progression as an increase in pain score of 2 or more above baseline with stable OMED, or an increase of 25% or more in OMED compared with baseline with the pain score stable or 1 point above baseline, and others were indeterminate. The study was registered on clinicaltrial.gov (NCT02376322).

Results: Thirty patients were enrolled from 4 centres in Brazil, Italy and Canada during July 2014 to September 2015. There were 14 male and 16 female patients. The median age was 58 years old (range 26 - 79). Twenty-two (73%) had thoracic spine (n = 11), pelvic/hips (n = 8), thoracic spine (n = 7), cervical spine (n = 3), and superficial bones (n = 2). The median pre-treatment worst pain score was 8 (range 1 to 10) and the median daily OMED was 40 mg (range 0 to 360). The median follow up was 3.7 months (range 0.3 to 9.6). At 2 months, 20 patients were alive (66%). Eleven (55%) had complete or partial response, 4 (20%) progressive disease and 5 (25%) indeterminate response. A statistically significant improvement (p < 0.0001) was seen in the painful sites and physical functioning for the BM22 while the other items in BM 22 and C15-PAL remained stable. No patient suffered from spinal cord compression or pathologic fracture, and re-irradiation was not required.

Conclusion: The 2 fractions of radiotherapy with 8 Gy each one week apart appears to be well tolerated without serious side effects in patients with complicated bone metastases and poor performance status. QOL remained stable. The efficacy was similar in patients with uncomplicated bone metastases treated with hypofractionated radiotherapy.

EP-1424
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Purpose or Objective: The aim of this phase II study was to evaluate the symptomatic response rate of short course radiotherapy (SCRT) in patients with advanced rectal cancer not amenable for curative treatment and with obstructive symptoms.

Material and Methods: Patients unfit for surgical resection due to synchronous metastases, age and/or comorbidities, were eligible. The sample size was calculated based on the two-stage design by Simon. SCRT was delivered with an isocentric four-field box technique (total dose: 25 Gy; 5 Gy per fraction in 5 days). No chemotherapy was allowed during SCRT. Clinical outcome measures were symptomatic response rate, toxicity, colostomy-free survival and overall survival.

Results: From October 2003 to November 2012, 18 patients (4 females and 14 males; mean age 77.5 years) were enrolled. The median follow up was 57 months (range: 23-132 months). Symptomatic response was: 5.5% no change, 66.7 % partial response, 27.8% complete response. No patients stopped treatment for gastrointestinal or genitourinary toxicities: 27.8% patients had grade 1-2 toxicity and 16.7% had grade 3 toxicity; only 1 patient had haematological grade 2 toxicity. One and 2-year colostomy-free survival were 100% and 71.4% (median: 30 months), respectively. Reduction/resolution of pain and bleeding was 87.5 % and 100 %, respectively. One and 2-year actuarial overall survival were 66.3% and 53% (median: 25 months), respectively.

Conclusion: In this phase II study based on SCRT in patients with symptomatic rectal cancer not eligible for curative treatment an improvement of initial symptoms with
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 (3.25 Gy 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 6-12 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 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 (relineve 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=0.002). In multivariate analysis only SVCS resolution (p=0.002) remained significant and no lung metastasis was marginally related (p=0.067). 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 multifactoral 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 vertebrae) 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