

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), extraskelatal 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 clinicaltrials.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 extraosseous soft tissue component, 4 neuropathic pain, 2 post-surgical intervention, and 2 impending fracture in weight bearing bone. The most common primary cancer sites were breast (n = 7) and lung/prostate (n = 4 each). The most commonly irradiated areas were lumbosacral spine (n = 10),

pelvis/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

**Palliative short-course radiotherapy in rectal cancer: a phase II study.**

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**Purpose or Objective:** The aim of this phase II study was to evaluate the symptomatic response rate of short course radiation therapy (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