progression was 5.0 months (95%CI: 1.8-8.1). In 22 patients with pain, a significant reduction of this symptom was recorded in terms of VAS (mean baseline VAS vs mean VAS at follow-up: 4.6 versus 3.1, p<0.001).

Conclusion: Short-course accelerated H&N radiotherapy (20 Gy in twice daily fractions for 2 consecutive days) is tolerated and effective in terms of symptom relief. A phase III comparison against a standard palliative regimen (30 Gy in 10 fractions) has been planned in this patient population.

EP-1430

Phase II study of short-course accelerated palliative radiation therapy for advanced thoracic tumors

J. Capuccini[1], L. Caravatta[2], F. Deodato[3], G. Torre[3], A. Farioli[4], M. Buwenge[1], G. Macchia[3], S. Manfrida[5], S. Cilla[6], S. Mignogna[7], W. Tigneh[8], A.F.M.K. Uddin[9], T. Salah[10], D. Dawotola[11], A.A. Woldemariam[8], P.A. Banu[12], M. Moroni[13], A. Veraldi[1], A. Arcelli[1], F. Bertini[1], S. Cammelli[1], V. Valentini[5], A.G. Morganti[1]

[1]*Department of Experimental- Diagnostic and Specialty Medicine - DIMES- University of Bologna, Radiation Oncology Center, Bologna, Italy*

[2]*Centro di Radioterapia e Medicina Nucleare- P.O. Businco, Cagliari, Italy*

[3]*Fondazione di Ricerca e Cura "Giovanni Paolo II"- Università Cattolica del Sacro Cuore, Radiotherapy Unit, Campobasso, Italy*

[4]*S. Orsola-Malpighi Hospital- University of Bologna-, Department of Medical and Surgical Sciences - DIMEC, Bologna, Italy*

[5]*Policlinico Universitario "A. Gemelli"- Università Cattolica del Sacro Cuore, Department of Radiotherapy, Roma, Italy*

[6]*Fondazione di Ricerca e Cura "Giovanni Paolo II"- Università Cattolica del Sacro Cuore, Medical Physics Unit, Campobasso, Italy*

[7]*Fondazione di Ricerca e Cura "Giovanni Paolo II"- Università Cattolica del Sacro Cuore, General Oncology Unit, Campobasso, Italy*

[8]*Black Lion Hospital, Department of Radiotherapy, Addis Ababa, Ethiopia*

[9]*United Hospital Limited, Radiation Oncology Department, Dhaka, Bangladesh*

[10]*Assiut University, Faculty of Medicine, Assiut, Egypt*

[11]*Radiotherapy and Oncology Centre- Abuth- Zaria, Department of Radiotherapy, Abuth- Zaria, Nigeria*

[12]*Delta Medical Center, Radiation Oncology Department, Dhaka, Bangladesh*

[13]*Fondazione Seragnoli, Hospice Bentivoglio, Bologna, Italy*

Purpose or Objective: To assess the effectiveness of a SHort-course Accelerated RadiatiON therapy (SHARON) in the palliative treatment of patients with primary or secondary thoracic neoplasms, symptomatic, and not susceptible of surgery or radical radiotherapy.

Material and Methods: A phase II clinical trial was planned based on optimal two-stage Simon's design. Eligibility criteria included patients with an Eastern Cooperative Oncology Group (ECOG) performance status ≤3 and an expected survival > 3 months. Twenty-five patients were treated with radiotherapy (total dose: 20 Gy, 5 Gy per fraction) in 2 days with twice daily fractionation. The primary endpoint was to evaluate symptoms response rate.

Results: Characteristics of the 25 enrolled patients were: male/female: 18/7; median age: 73 years (range: 46-93). ECOG performance status was <3 in 24 patients (96%). Two G1 skin (8%), 7 G1 haematological (28%) and 4 G1 pulmonary (16%) toxicities were recorded. No patient experienced ≥2 acute toxicities. With a median follow-up time of 6 months (range, 1 to 16 months), of the 25 symptomatic patients, 24 showed an improvement or resolution of baseline symptoms (overall palliative response rate: 96%). Three months overall survival was 87.5% (median survival time: 6 months; 95% CI 5.3-6.6 mo). Median survival without symptoms progression was 3 months (95% CI:2.2-3.7mo). In 24 patients with pain, a significant reduction of this symptom was recorded in terms of VAS (5.0 vs 2.9, p=0.02).

Conclusion: Short-course accelerated thorax radiotherapy (20 Gy in twice daily fractions, 2 consecutive days) is tolerated and effective in terms of symptom relief. A phase III comparison against a standard palliative regimen (30 Gy in 10 fractions) has been planned in this patient population.

EP-1431

SBRT for patients with spine metastases using LINAC

Y. Mironova[1], D. Bentsion[1], S. Bayankin[1]

[1]*Regional Oncology Clinic, Radiotherapy, Ekaterinburg, Russian Federation*

Purpose or Objective: Modern technologies of radiotherapy (SBRT,SABR) are utilized to treat patients with solitary spine metastases. Clinical studies have shown the efficacy of image-guided SBRT for pain control, local tumor control, as well as improvement of the life`s quality for these patients. In our clinic we have been using this method since 2013 for primary and re-irradiation treatment.

Material and Methods: We have treated 32 pts (20 primary, 12 reirradiation), 44 lesions. Eligible criteria were ECOG 1-2, spine metastases confirmed by MRI, the number of lesions were less than 3, adequate control of the primary tumor. Mean age 55.8 y.o. (47-72); gender distribution: 12 men and 20 women. Option of the radiation dose and limit critical organs were installed according to the recommendations Elekta Spine Radiosurgery Research Consortium (ESRRC) and RTOG 0631. The prescribed dose was 12-24 Gy in 1-3 fr. For re-irradiation we have used the recommendations of Nieder et al.(2006): BED of each course - 98Gy, total BED -135.5Gy, the interval between two treatments was more than 6 months. In these cases the prescribed dose was 20Gy in 5 fr. The procedure was performed by VMAT on a linear accelerator Elekta Synergy S, equipped with a 4-mm MLC, image-guided system (Elekta XVI), 6D robotic positioning system table (HexaPod). Overall duration of procedures was 20-45 min. The follow-up was every 3 months from treatment time. It was assessed the pain intensity on a 10-point VAS, analgesics, performed MRI control.

Results: Toxicity of SBRT was assessed by using CTC AE (v.4.0). Nausea gr.1 was observed in 3 (9.4%) pts, vomiting gr.1 - 1 (3.1%) pt. Toxicity gr.3-4 has not been observed. There were no cases of therapy interruption due to poor tolerability. Hematological toxicity during follow-up period was not revealed. In average of the period of 3 weeks all patients showed relief of pain syndrome with moderate (4-6 points) to the minimum (1-3 points). The overall response to treatment (decrease of pain syndrome, local tumor control by MRI) was 90.6%, including a complete pain relief - 8 (25%) pts, stabilization - 21 (65.6%), lack of response to the treatment- 3 (9,4%). One patient had a pathological compression fracture of the vertebra at 4 months after irradiation, which required surgical intervention (installation of the fixing system). According to one patient`s MRI after 3 month of treatment, we have revealed soft tissue component of tumor (MRI).

Conclusion: SBRT was well tolerated. We did not observe any clinically significant toxicity. Reduction of the overall treatment time was comfortable for patients and increase capacity of LINAC. Further research is necessary to evaluate the efficacy and toxicity of the treatment and the development of criteria for the selection of patients.

EP-1432

Predicting pain response after conventional radiotherapy in 1018 patients with bone metastases

J.M. Van der Velden[1], H.M. Verkooijen[1], A.L. Versteeg[2], A.S. Gerlich[3], J.J. Verlaan[2], L. Zhang[3], M. Tsao[3], C. Danjoux[3], E. Barnes[3], M. Van Vulpen[1], E. Chow[3]

[1]*University Medical Center Utrecht, Radiation Oncology, Utrecht, The Netherlands*