Conclusion: A complication rate of 18% was found after less invasive surgery for the treatment of spinal metastases. Promising clinical outcomes were demonstrated in terms of minimal blood loss, high rates of early post-operative ambulation and few wound complications, which may allow earlier administration of adjuvant oncological treatments.

EP-1440

Tokuhashi Scoring and Karnofsky Scale: correlated with prognosis in spinal cord compression?

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Purpose or Objective: Functional evaluation is crucial in the approach of patients, and the most commonly used functional evaluation tool in cancer patients has been the Karnofsky Scale (KS). A KPS of less than 50% suggests a high mortality risk within 6 months. The Tokuhashi scoring system (TS) is a survival prediction in patients with spinal metastasis. For patients with total TS of 8 or less points, TS predicts a survival of 6 months or less. This study aims to compare KPS and TS for life expectancy in palliative patients with spinal cord compression.

Material and Methods: A sample of 79 patients with cord compression diagnosed from 2007 to 2014 was obtained by consecutive sampling, and KPS and TS were calculated for each patient. The analysis was performed retrospectively, with survival data registered until October 2014. Percentage of patients with KPS ≤ 50% and TS ≤ 8 are shown and compared with the survival percentage.

Results: With an average follow up of 4 months (range 0-45), 52.5% of the sample showed KPS ≤ 50% and 80.8% TS ≤ 8. At dead line, 10.3 % continued walking, 2.6 % needed wheelchair, 7% died and 38.5% were lost in follow up. For patients with follow up, 90% with TS ≤ 8 lived less than 6 months and 90% of patients with KPS ≤ 50% lived less than 6 months.

Conclusion: Both prognostic scoring systems show similar survival rates in groups KPS≤50% and TS≤ 8, adding evidence to the Tokuhashi scale as a predictor of survival.

Electronic Poster: Clinical track: Elderly

EP-1441

IMRT in elderly woman with breast cancer: are comorbidities related to toxicity?

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Purpose or Objective: To investigate the feasibility, the tolerability and the impact of comorbidity assessment on the compliance of adjuvant Intensity Modulated Radiation Therapy (IMRT) and simultaneous integrated boost (SIB) in elderly patients with a diagnosis of breast cancer after breast-conserving surgery (BCS).

Material and Methods: Between 09/2011 to 02/2014, 40 consecutive women with a diagnosis of early stage breast cancer were treated with SIB-IMRT after BCS in our Institution. Inclusion criteria were: age ≥ 70 years, pT1 -2 disease, pN0-1, no neoadjuvant chemotherapy, non-metastatic. 7 patients had a dose prescription of 50 Gy in 25 fractions was prescribed to the whole breast (PTVbreast) and an additional dose of radiation on the tumour bed was prescribed (PTVboost). A dose prescription of 60 Gy in 25 fractions to PTVboost was used in patients with negative margins after surgery, whereas if the margins were close (< 1 mm) or positive (without a new surgical resection) a dose of 64 Gy was prescribed. Charlson Comorbidity Index (CCI) was used for comorbidity scoring. All patients were followed with periodic clinical evaluation. Acute and late toxicity were scored using the EORTC/RTOG radiation morbidity score system. Both patient and physician recorded cosmetic outcome evaluation with a subjective judgment scale at the time of scheduled follow-up.

Results: Median follow-up was 36 months. At the time of the analysis, OS and LC rates were 100%. All patients completed the SIB-IMRT without interruptions. Acute skin toxicity was recorded as follow: grade 0 in 5 patients (12.5%), grade 1 in 25 cases (62.5%), grade 2 in 10 patients (25%). Regarding late adverse events, skin toxicity was registered as follow: grade 0 in 27 patients (67.5%), grade 1 in 13 cases (32.5%). No toxicity ≥ grade 2 was registered. At statistical analysis, the presence of comorbidities and the breast volume > 700cc were related to skin grade 2 acute toxicity (p=0.01, p=0.04). In terms of cosmetic results, 98% and 2%of patients considered the result as good /excellent and as fair after RT, respectively. No patients had a poor cosmetic outcome.

Conclusion: These data support the feasibility and safety of SIB-IMRT in elderly patients with a diagnosis of breast cancer following BCS with acceptable acute and late treatment-related toxicity. Moreover, the absence of comorbidity reduced the risk of acute radiation side effects.

EP-1442

Oligometastatic colorectal cancer in elderly patients: role of stereotactic body radiation therapy

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Purpose or Objective: To report about clinical outcome of stereotactic body radiation therapy (SBRT) in the treatment of oligometastasis in elderly patients affected by colorectal cancer.

Material and Methods: Patients with 1-4 inoperable metastases were treated with SBRT. Dose prescription ranged from 40 to 75Gy in 3-8 fractions. SBRT was delivered using the volumetric modulated arc therapy technique with flattening filter-free photon beams. The primary end points were in-field local control (LC) and toxicity. Secondary end points was overall survival (OS).

Results: 52 patients with 57 total metastases were treated. Mean age was 79.85 years (range 73.57-88.56). 47 patients (90.4%) had a single lesion; the remaining had 2 lesions. 34 lesions (59.6%) were located in the liver, 18 (31.6%) in the lungs and the remaining 5 (8.8%) were nodal or adrenal metastases. Local response was observed for 35 lesions (61.4%), with 19 complete responses and 16 partial responses, while local progression in 18 lesions (31.6%) stable disease was recorded in 4 cases (7%). Actuarial 1, 2 and 3 year LC was 92%, 78 % and 71%. At time of analysis, with a mean follow up of 2.2 years (range 0.2-4.9), 38 patients (73,1%) were still alive, while 14 (26.9%) died (11 patients died for disease progression). Actuarial 1, 2 and 3 year OS were 98%, 89% and 61,1% respectively. Treatment-related Grade 2 toxicity was observed in two patients (3.8%); Grade 1 toxicity in five patients (9.6%) and no toxicity was observed in 86.6% of the cases. No G3-4 toxicity was recorded.

Conclusion: SBRT is a safe and effective therapeutic option for the treatment of oligometastatic disease in the elderly affected by colorectal cancer with acceptable rates of LC and low treatment related toxicity. The use of SBRT for oligometastatic disease in the elderly can be considered as a valuable approach, particularly for patients with fragile status or refusing other approaches.
Radical high fractionated VMAT RA for stage III NSCLC in the elderly: feasibility and toxicity

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Purpose or Objective: To analyze feasibility and toxicity of radical hypofractionated RT schedules in elderly patients with NSCLC

Material and Methods: Material and methods: Elderly patients (70 years old) affected by stage III inoperable NSCLC were treated in our institution with radical IMRT (VMAT RA) according to moderately hypofractionated schedules: 56 Gy/20 fractions or 55 Gy/22 fractions or 50 Gy/20 fractions depending on dose constraints of adjacent organs at risk. Patients underwent simulation CT in supine position, immobilized with a thermoplastic mask. PET CT was performed for simulation and coregistered with CT. Primary end point of this analysis were acute and late toxicities, secondary end points were local control and overall survival.

Results: Results: 41 patients, treated between January 2013 and April 2015, were included in this analysis. Mean age was 78.59 years (range 70-86). 22 patients were staged IIIA, 19 patients IIIB. All but one patient had pathological nodal involvement (N1.5; N2: 24; N3: 11). Most of patients were unsuitable for chemotherapy for comorbidities and poor general conditions. 15 patients received chemotherapy before RT, concomitant RT-CHT was not allowed. Acute G1-2 toxicity was recorded in 25 patients(61), mostly esophagitis, dyspnea and dry cough. Late toxicity was recorded in 13 patients, the most reported side effects were pneumonitis and dyspnea. No G3 or G4 acute or late toxicity were recorded. A complete response was obtained in two patients, 26 showed a partial response, while progressive disease was recorded in 2 cases. At time of analysis, with a mean follow up of 9.89 months (range 1.08-25.43), 17 patients died for disease progression, one patient died for other causes, 8 patients were alive with distant metastases and 15 were alive without distant progression. Actuarial OS at 1 and 2 years were 51.3% and 35.1% respectively. Mean estimated OS was 15.12 months (range 12.02-18.22). 17 patients died for disease progression, one patient died for other causes, 8 patients were alive with distant metastases and 15 were alive without distant progression. Actuarial OS at 1 and 2 years were 51.3% and 35.1% respectively. Mean estimated OS was 15.12 months (range 12.02-18.22). Actuarial local control at 1 and 2 years were 72%. 10 patients experienced local progression. Mean estimated LC was 12.4 months (range 9.6-15.1).

Conclusion: Conclusion: Radical hypofractionated IMRT (VMAT RA) is a valid treatment for locally advanced inoperable NSCLC in elderly frail patients. Our study shows that this approach is safe and feasible also in a fragile elderly population. Survival data are satisfactory.

References:

EP-1444
Short-course accelerated palliative radiation therapy for advanced solid cancers in elderly patients
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Purpose or Objective: To assess the efficacy and safety of a Short-course Accelerated RadioTherapy (SHARON) regimen in the palliative treatment of locally advanced or metastatic cancers in elderly patients.

Material and Methods: Eligibility criteria of this analysis (pooled analysis of 3 phase II studies) were: patients with histologically confirmed solid cancers, age 80 years, patients with an expected survival > 3 months and Eastern Cooperative Oncology Group (ECOG) performance status of 3. The primary endpoint was to evaluate the symptoms response rate produced by a radiotherapy regimen based on the delivery of 4 radiotherapy fractions (5 Gy per fraction) with a twice daily fractionation in two consecutive days.

Results: Twenty-four patients were included in this analysis. Characteristics of the patients were: male/female: 17/7; median age: 87.0 years (range: 80-98). ECOG performance status was 3 in 16 patients (66.7%). Six patients (25.0%) had locally advanced thoracic cancers, 3 patients (54.2%) had advanced primary or metastatic H&N tumors and 5 patients (20.8%) had complicated bone metastases. With a median follow-up time of 5.0 months (range, 1 to 8 months), eleven G1-G2 acute skin (45.9%) and G1-2 mucositis (12.5%) toxicities were recorded. One patient (4.2%) experienced G1 acute gastro-intestinal toxicity and only 1 patient (4.2%) experienced G3 acute mucositis. Of 24 symptomatic patients, 19 showed an improvement or resolution of baseline symptoms (overall palliative response rate: 79.2%). Three-months overall survival was 89.7% (median survival time: 7.0 months; 95CI 5.4-8.6 mo). Median survival without symptoms progression was 5.0 months (95CI: 2.5-7.5 mo). In 23 patients with pain, a significant reduction of this symptom was recorded in terms of VAS (mean baseline VAS vs mean VAS after treatment: 3.9 versus 1.7, p=0.001).

Conclusion: Short-course accelerated radiotherapy in locally advanced or metastatic cancers is effective in terms of symptom relief and well tolerated even in older patients.

References:

EP-1445
The role of radiotherapy in the conservative treatment in bladder cancer elderly patients
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Purpose or Objective: The optimal treatment of bladder cancer has been a subject of continuous controversy. In North America, as well as in Europe, the radical cystectomy as the standard option for invasive bladder cancer. In the western countries the elderly ones constitute the part of the population in more rapid growth and, insofar, the group to