

Results: Four children, female, ages 3.7, 5.2, 5.4 and 12 years (patients 1 to 4), were diagnosed between February and July 2013 with DIPG. They were treated initially with radiochemotherapy. Patients 1, 2 and 4 have received 54 Gy of conformal RT including the primary tumor with margins. The third patient initiated RT as scheduled but had to interrupt it after the administration of 14.4 Gy due to a severe CNS infection (ventriculitis). RT was withheld until the event of clinical progression. Patients 2 and 4 received weekly carboplatin and vincristine as first line treatment. Patient 1 received temozolomide during and after RT. Patient 3 was scheduled to receive high dose chemotherapy (cisplatin, vincristine and etoposide) during RT, but only completed the first cycle of the planned treatment. The progression-free survival after first line treatment was 10.3, 6.7, 10.4 and 15.1 months. The doses of the re-irradiation were 45, 27, 45 and 18 Gy. Second-line chemotherapy was temozolomide for patients 1 and 4. Overall survival after re-irradiation was 4.9, 4.2, 9.9 and 4.4 months. All patients had some degree of clinical benefit with re-irradiation, ranging from stopping steroids to minor symptom amelioration. Patients 2 and 4 had stable disease in image evaluation (MRI) after re-irradiation. The other patients were not evaluated with imaging. No patient had side effects related to re-irradiation therapy.

Conclusions: In this small case series report, re-irradiation for pediatric patients with progressive DIPG was feasible, safe, and associated with clinically meaningful results. As no other treatment modality can offer any possibility of response in this subset of patients, re-irradiation is a good candidate to be rapidly incorporated into routine clinical practice for progressive DIPG. A phase I-II trial should be planned to test the best dose range.

Electronic Poster: Clinical track: Elderly

EP-1275

Treatment compliance in elderly patient with advanced cervical cancer during concurrent chemoradiotherapy

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Purpose/Objective: The number of elderly people with cervical cancer is increasing and elderly patients have age-related problems related to morbidity. In this study, we evaluate pelvic radiation treatment tolerance of elderly cervical cancer patients treated with concurrent chemoradiotherapy.

Materials and Methods: We retrospectively reviewed electric medical records of 102 cervical cancer patients treated with chemoradiotherapy from April 2007 to Feb 2014. Patients received concurrent radiation therapy with weekly cisplatin chemotherapy followed by intracavity radiotherapy. Patients were divided into nonelderly (ages < 70) (n = 65) and elderly (ages > 70) (n = 37) groups. The patient Charson comorbidity index, treatment factor and clinical parameters including pretreatment complete blood count were analyzed to identify treatment tolerance.

Results: Elderly patients had a higher comorbidity index than younger patients. (p = 0.002) But, there was no significant difference in treatment compliance (treatment interruption \geq 2 days) to chemoradiotherapy between two groups. There was no significant difference in treatment related toxicity between the groups. In univariate and multivariate analyses, comorbidity index was significantly associated with treatment compliance (p = 0.011).

Conclusions: Comorbidity index rather than age would be a predictive factor for pelvic treatment tolerance. Personalized supportive care considering patient status for cervical cancer is needed during treatment.

EP-1276

Does old age matter in the treatment of locally advanced rectal cancer? A single center experience

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Purpose/Objective: Oncological treatment of older population has many unresolved questions, mainly due to low accrual of these patients into clinical trials. However, in everyday clinical practice an oncologist has to decide which treatment-guidelines are applicable for these patients. In this study, the treatment approach and rate of complications in elderly patients with locally advanced rectal cancer were evaluated.

Materials and Methods: A retrospective review of medical records of patients who were treated with a curative intent for rectal carcinoma between January-2005 and December-2011 was conducted. Two age groups were included: group-A: \geq 80-years (the study group), group-B: 65-75 years-old (a control group). Extracted data included demographics, comorbidities, treatment protocols, toxicity and time of death. Results: A total of 71 patients (35-group A, 36-group B) were included. Mean age was group A=83.5-years (range 80-96) and group B=70-years (range 65-75).The groups were well-balanced with regards to co-morbidities, blood-tests, TRUS T-stage, tumor location and timing of surgery with regards to radiotherapy. Radiotherapy without chemotherapy was given to 69% of group A compared to 22% of patients in group B (p<0.0001). During radiotherapy there were no significant difference with regards to early discontinuation, treatment interruptions, total dose and treatment toxicity. This treatment was given during planned hospitalization in 26% in group A compared to 5.4% in group B (p=0.022). Chemotherapy was given in 31% of patients in group A: 82% of initial 5-fluorouracil dose was less than 75%; additional dose-reduction was needed in 63%, and in 45% of the patients the treatment was prematurely stopped, only 2 patients received capecitabine. In group B more patients received chemotherapy (78%), and in 93% of the patients the initial dose was more than 75%. There were no significant differences in a type of surgical procedure. The median survival in group A was 36.4 months and 31.2 months in group B (p=0.49). The mortality rate was 77% and 54% (p=0.05) respectively.

Conclusions: Old age has significant implications on the treatment decision for initial chemotherapy-dose and need of

planned hospitalization. Full course of radiotherapy can be safely used in older patients but they have a low tolerance to chemotherapy and frequently require dose-reduction; the effect of this chemotherapy is uncertain.

EP-1277

Effect of age on rectal toxicity following radical radiotherapy to prostate cancer

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Purpose/Objective: Various guidelines, including UK NICE guidance recommend a minimum of 74 Gy for prostate cancer radiotherapy. So we escalated prostate radiation dose to 74 Gy (2Gy per #) in our department. We previously found that elderly patients were able to tolerate radiotherapy (RT) very well when median RT dose was 70 Gy (Data published 2006). Following RT dose escalation, we analysed our prospectively collected, rectal toxicity data in our department.

Materials and Methods: All patients (pts) treated with prostate radiotherapy between August 2010 and July 2011, were identified from MOSAIC Software (Elekta). Pts who had prostate-bed radiotherapy, whole pelvis RT or HDR boost were excluded. The regional ethics committee advised that formal ethics approval was not necessary.

Results: 132 patients were identified; median age was 70.5 years, (range 53 to 81 yrs). Median PSA was 13 (range 4.2 to 133). Gleason scores: G6 4.5%, G7 51.5%, G8 21.2%, G9 18.2% G10 2.3% (missing data 2.3%). Tumour stage: T1 8.3%, T2 55.3%, T3 32.6%, T4 0% (missing data 3.8%). Median total radiation dose was 74Gy (range 66Gy to 78Gy). (66 Gy is an outlier due to dosimetric problems caused by bilateral hip replacement). Age was significantly associated with rectal toxicity. Patients aged over 75 were almost 3.5 times more likely to develop \geq grade 2 toxicity ($p=0.026$). Absolute total rectal volume outlined (in cc) was also significantly associated with rectal toxicity. Pts having maximum rectal volume of more than 46cc were 3.8 times more likely to develop \geq grade 2 toxicity ($p=0.03$ chi squared test). The rectal DVH parameters for 30Gy, 50Gy, and 60Gy were significantly associated with rectal toxicity ($p=0.038$; $p=0.016$ and $p=0.002$ respectively). The absolute-volume parameters were consistently and better correlated with rectal toxicity than percentage-volume parameters. Median absolute rectal volume for patients with \geq grade 2 acute rectal toxicity was significantly higher than for those with grade 0/1 toxicity ($p=0.018$). By contrast, the difference between median percentage-Volume was not significant ($p=0.345$). The following Absolute-volume DVH constraints were most significantly correlated with rectal toxicity. $V30 \leq 42cc$, $V50 \leq 40cc$, $V60 \leq 35cc$.

Conclusions: Our real world data, from an unselected population of pts indicate elderly pts (> 75 years) are at increased risk of rectal toxicity. If rectal DVH parameters are not optimal, elderly prostate pts should be considered for radiation dose reduction as patient preference studies indicate that lot of patients prefer lower toxicity over efficacy. (van Tol-Geerdink et al. J Clin Oncol. 2006: 24: 4581).

EP-1278

Radiotherapy treatment for the very elderly: a retrospective analysis 2012-2013

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Purpose/Objective: The incidence of cancer in the elderly is expected to rise . For example in the USA it is estimated that it will rise by 67% between 2010 to 2030. This is a retrospective analysis audit on radiotherapy to the very elderly defined as patients above 80 years old from Jan 2012 until Dec 2013. We hope to analyse the radiotherapy intent; tumour site analysis and median survival days from the last fraction of radiotherapy. With these understanding, we hope to be able to further better or understanding and plan management for our very elderly who are under our care in future.

Materials and Methods: We retrospectively collected and analysed the data from our Aria database for all patients above 80 years old on the day they finished treatment from January 2012 until Dec 2013.

Results: We treated 1571 patients who were very elderly during these analysed 2 years. 40% of our very elderly were treated with radical intent. Nearly 25% of them were patients treated for Breast Cancer followed by Lung Cancer (20%). There was nearly an equal distribution with 51% of them being male patients. The median days from time of last fraction of radiotherapy to death was 129 days with a maximum of 826 days at time of analysis. Palliative treatments to the very elderly were mainly palliation for bone metastases and lung/ chest palliation.

Conclusions: There is a high proportion of the very elderly treated with radical intent with radiotherapy; with Breast and Lung Cancer being the highest malignant cause. There was a fairly equal sex distribution between those treated for radiotherapy in the very elderly. We need to further analyse these data to provide a more meaning insight in order to improve and adequately support our very elderly requiring treatment.

EP-1279

Outcome of preoperative chemoradiation followed by esophagectomy in patients of older age or with an extended tumors

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Purpose/Objective: the incidence of esophageal cancer is increasing. Additionally, an increasing number of patients are older than 75 years. Since the publication of the CROSS trial in 2012, preoperative chemoradiation (CRT) followed by