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Purpose or Objective: Acute urinary unwished effects of pelvic irradiation may impact on quality of life of patients undergoing radiation therapy on the pelvis. Neoplasms such endometrial, cervical, rectal, and anal cancer requires irradiation of relevant pelvic volumes. In this study we tested Cystoman, a dietary integrator of D-mannosium, cranberry and vitamin C, as prophylactic therapy for the development of acute urinary side effects.

Material and Methods: Fifty five patients undergoing pelvic irradiation were randomly assigned to take 2 tablets/day of Cystomann or not from the beginning of radiation therapy. Radiation therapy consisted of 45 - 50.4 Gy on the pelvis given by 1.8 Gy daily fractions with 3D conformal radiation therapy. The patients were weekly checked for urinary symptoms. Urine colture was performed before and after the treatment.

Results: Between November 2014 and September 2015, 55 consecutive patients were enrolled in the study. Median age was 65 year, 11 were affected by cervical cancer, 9 endometrial, 31 rectal, and 4 anal cancer. Twenty two patients were treated preoperatively and 33 postoperatively. Urinary toxicity appeared at the second week in 3/28 patients in Cystoman group and 11/27 in the control group (p=0,02). However by the end of the treatment 8/28 and 13/27 patients had urinary toxicity in the Cystoman and control group, respectively (p=0.1).

Conclusion: Our study suggests that Cystomann delays the radio-induced acute urinary toxicity presentation and could ameliorate the toxicity profile of the pelvic irradiation.

Electronic Poster: Clinical track: Skin cancer / malignant melanoma

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Total skin irradiation using helical tomotherapy: a novel experience and report of three cases

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Purpose or Objective: Description of three cases of total skin irradiation for cutaneous T-cell lymphoma using helical TomoTherapy (Accuray, Sunnyvale, CA).

Material and Methods: In 2015, three patients with refractory T-cell lymphoma underwent total skin irradiation using invers-planned helical tomotherapy. The first case was a 25-year-old man diagnosed as mycosis fungoides with multiple tumors occurring on the extremities, face, and trunk. The second case was a 73-year-old woman diagnosed as primary cutaneous gamma delta T-cell lymphoma. She had received 24 Gy of irradiation in 12 fractions with total skin electron beam irradiation technique 10 years ago, and some parts of her skin were irradiated with 24 Gy in 12 fractions with local electron beam irradiation within 3 years. The third case was a 52-year-old man diagnosed as mycosis fungoides. No bolus was added around the body. Because of the long length of treatment of the body in TomoTherapy, treatments were delivered to three parts of the body (trunk, head and neck, and legs). Irradiation was not performed in two or three parts on the same day. Each plan was generated with a prescription dose of 10 Gy in 10 fractions. The planning target volume (PTV) was the body surface with 5mm margins of internal and external lesions of the skin. The third patient had several swelling lymph nodes, so the PTV was the body surface and swelled lymph nodes with their margins.

Results: TomoTherapy technique was created that enabled delivery of the prescription dose to PTV with a relatively sharp drop-off of dose at depth. The calculated mean doses for the organs at risk were 1.96, 2.08, 2.12, 2.19, and 2.27 Gy for the lung, heart, liver, kidneys, and bones, respectively. Using the couch-indexed Vac-Lok cushion and head mask, inter- and intra-fractional patients motions were minimized. All three patients experienced edemas of fingers and toes, and lost much of their hair. Myelosuppression occurred in two of the three patients. Because of grade 4 myelosuppression, the second patient who was treated total skin electron beam irradiation 10 years ago, was treated with blood transfusion during the treatment. All tumors were reduced during and after the treatment.

Conclusion: Using the TomoTherapy technique in total skin irradiation, we were able to achieve good coverage of the PTV and good sparing of organs at risk, including the bones. This treatment method, including the prescription dose and treatment duration, will be needed further research.

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The abscopal effect:efficacy of radiotherapy in patients on progression after ipilimumab 3 mg/kg

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Purpose or Objective: After more than 30 years, Ipilimumab was the first agent which showed a survival benefit for the treatment of metastatic melanoma. However, only about the 20% of patients have a long-term survival benefit. The combination of ipilimumab with other therapies might improve its efficacy. Abscopal effect refers to a regression of metastatic lesions distant from the primary site of radiotherapy (RT). This systemic response is observed in patients who received ipilimumab. Here we reported the outcomes from patients treated in the ipilimumab Italian expanded access program (EAP) who received RT after ipilimumab progression.

Material and Methods: Patients with advanced melanoma who had received RT after ipilimumab progression were eligible for analysis. Radiotherapy was available upon physician request for patients who failed ipilimumab therapy and for whom no other therapeutic options were available.

Results: 21 out of 95 patients treated with ipilimumab in the Italian EAP were eligible for the analysis. The median age was of 58 years (range 21-77); the progression free survival (PFS) from ipilimumab treatment was 4 months (range 3-6), while the time from the end of treatment with ipilimumab and RT was of 5 months (range 4-8). RT was performed on brain in 13 patients: 8 were treated with whole-brain RT and 5 patients with stereotactic RT. Other RT treatment included bone, metastatic distant lymph nodes, sub-cutaneous metastasis, spinal cord metastatis. The median doses was 30 Gy (range 30-50). A local response to RT was detected in 13 patients while 8 patients did not show any local regression. The abscopal response has been detected in 11/21 patients: in details, we observed 9 abscopal partial response , 2 abscopal stable disease , and 10 progression . The median of occurrence of the abscopal response was of 1 month (range 1-4). The median overall survival (OS) for all the 21 patients was of 13 months (range 6-26). The median OS for patients