



ADJUVANT TREATMENT OF VULVAR CANCER WITH IMRT

Mota, A.¹, Leite, R.¹, Pimenta, A.¹, Ribeiro, F.¹, Sousa, M.¹, Fortunato, M.¹, Santos, F.¹, Roldão, M.¹

¹ Radiotherapy Department of Instituto Português de Oncologia de Lisboa Francisco Gentil, E.P.E. - Portugal

BACKGROUND

There are very few studies regarding IMRT (Intensity Modulated Radiation Therapy) and the treatment of vulvar cancer. Therefore, we will present our experience on IMRT treatment in adjuvant vulvar cancer, at our Department.

MATERIAL AND METHODS

This work is based on a retrospective analysis of vulvar cancer treated with surgery and adjuvant IMRT between January 2009 and February 2012.

All patients were treated with IMRT (sliding window), in a Clinac 2100CD (linear accelerator), with photon energy 6MV. For dosimetry, the inversed planning system was used. It was evaluated the Planning Target Volume (PTV) coverage, the dose's homogeneity distribution and the dose tolerance of the organs at risk – rectum (V40), bladder (V40), small bowel (V35) and bone marrow (V20).

The acute toxicity (intestinal, genitourinary and skin) was evaluated according to the Radiation Therapy Organization Group criteria.

30 patients
 AGE: 32 to 88 years (median: 75)
 HISTOLOGY: Squamous cells carcinoma
 ALL COMPLETED TREATMENT
 MEAN DOSE: 62.32Gy (50-66Gy)
 FOLLOW-UP: 13 to 50 months

RESULTS

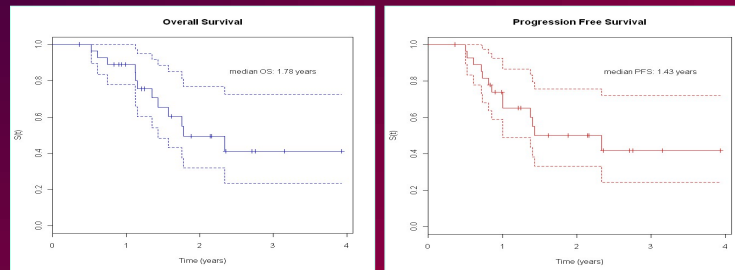
OAR	AVERAGE DOSE	OAR	AVERAGE DOSE
V40 Rectum	28.40 Gy	Rectum	33.04 Gy
V40 Bladder	26.09 Gy	Bladder	31.51 Gy
V35 Small bowel	26.40 Gy	Small bowel	23.85 Gy
V20 Bone marrow	48.59 Gy	Bone marrow	22.27 Gy

Table 1 and 2: OAR average doses

2.12% cases: PTV <95% of the prescribed dose
 1 case: PTV >107% of the prescribed dose

Treatment Response

50% patients alive at the present analysis
 30% patients had loco-regional relapse
 1 patient had distant metastasis



Graphics 1 and 2: Overall Survival and Progression Free Survival (Kaplan Meier)

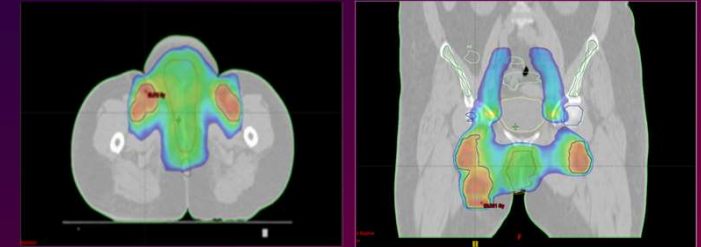


Fig. 1 and 2: PTV coverage - 95% isodoses curve

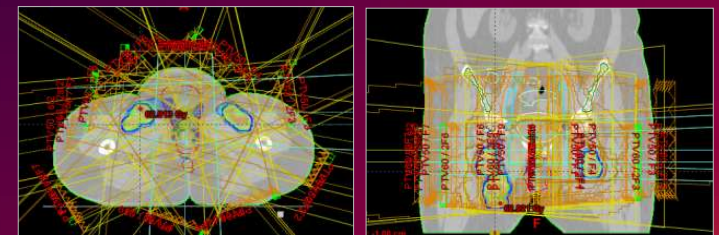
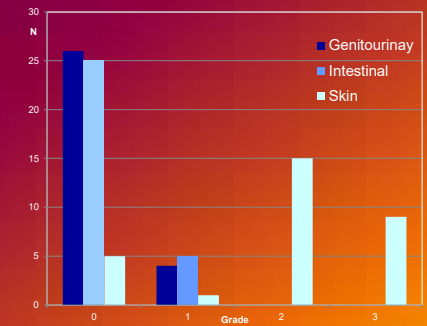


Fig. 3 and 4: IMRT Dosimetry



Graphic 3: Toxicities

CONCLUSIONS: IMRT seems to be a promising treatment in vulvar cancer. IMRT planning has a proper PTV coverage with considerable sparing of organs at risk and is well tolerated by patients. We also achieve with IMRT a low loco-regional relapse, as mentioned in literature.