Significant reductions in bladder dose. Acute toxicity levels. GU toxicity was not reduced despite toxicity, as a result of lower doses to OARs and reduced late side effects. For that purpose we used prospective data of two randomized trials.

Material and Methods: A total of 242 IG-IMRT patients from a hypofractionation trial (2007-2010) and 189 3D-CRT patients from a dose escalation trial (1997-2003) with ≥2 completed questionnaires were selected. All patients received 78 Gy in 2 Gy fractions. Applied margins were 10 mm for 3D-CRT and 5-8 mm for IG-IMRT, all with 0 mm margin towards the rectum for the 10 Gy boost. The mean dose to the anorectum was 34.4 Gy vs. 47.3 Gy, 23.6 Gy vs. 46.6 Gy for the anal canal and 33.1 Gy vs. 43.2 Gy for the bladder (all significantly reduced with IG-IMRT). Late toxicity was scored using identical questionnaires and case report forms according to RTOG/EORTC scoring criteria. Study endpoints were grade ≥2 (G≥2) gastrointestinal (GI) and genitourinary (GU) toxicity. Cumulative incidences of G≥2 endpoints were calculated. Cox regression was used to determine Relative Risks (RR) for IG-IMRT, adjusted for baseline factors. RRs of acute toxicity as a predictor for late G≥2 endpoints were also calculated.

Results: Median follow-up was 60 months. The five-year (5y) cumulative incidence of late G≥2 GI toxicity was 25.4% for IG-IMRT compared to 36.4% for 3D-CRT (RR=0.62, p=0.009) (Figure 1). This resulted from significantly lower incidences of increased stool frequency ≥6/day (4.3% vs 16.5%, RR=0.24, p<0.001) and non-significant lower incidences of ≥2 G gastrointestinal (GI) and genitourinary (GU) toxicity. Cumulative incidences of G≥2 endpoints were calculated. Cox regression was used to determine Relative Risks (RR) for IG-IMRT, adjusted for baseline factors. RRs of acute toxicity as a predictor for late G≥2 endpoints were also calculated.

Conclusion: IG-IMRT for prostate cancer was beneficial since it significantly reduced the incidence of long-term GI toxicity, as a result of lower doses to OARs and reduced acute toxicity levels. GU toxicity was not reduced despite significant reductions in bladder dose.

PO-0743

Stereotactic body radiotherapy in recurrent lymph nodes metastases from prostate cancer

F. Tripa1, E. Maranzano1, F. Ponti2, A. Carosi2, F. Arcidiacono1, L. Draghini1, L. Di Murro2, A. Lancia1, P. Anselmo1, R. Santoni1, G. Ingrosso2
1Radiation Oncology Centre, Oncology- “S.Maria”- Hospital, Terni, Italy
2Radiation Oncology Centre, Diagnostic Imaging- Molecular Imaging- Interventional Radiology and Radiotherapy- Tor vergata- Hospital, Rome, Italy

Purpose or Objective: To assess outcome and toxicity of stereotactic body radiotherapy (SBRT) in prostate cancer patients (pts) with recurrent isolated lymph node metastases (LNM).

Material and Methods: Between September 2008 and December 2014, 40 prostate cancer pts with 47 recurrent isolated LNM, were treated with SBRT. Median age was 74 yrs (range, 58-83), median Gleason score at the primary diagnosis was 7 (range, 5-10). Median and mean time from primary treatment to SBRT were 37.45 and 62.6 m, respectively (range 11.16-216.03). Diagnosis was performed with choline (ch) PET/CT, and the mean and median PSA values before SBRT were 5.6 and 4.2 ng/ml, respectively. Six (15%) pts were treated in different sessions for metachronous metastases, and one (2%) underwent SBRT for two synchronous metastases. 21 (52.5%) pts underwent only SBRT, remaining 19 (47.5%) received also androgen deprivation therapy (ADT). Gross tumor volume (GTV) was delineated using choline uptake and planning target volume (PTV) was defined as the GTV plus a 5-8 mm isotropic margin. Mean and median volume of GTV and PTV were 6.63 cc and 3 cc and 25.03 and 15.03 cc, respectively. In 90% of cases 5 fractions of 6-8 Gy were delivered. Response was assessed with PSA evaluation scheduled every 3 m during the first year and then every 6 m. Pts with a reduction or a stability of PSA level were considered responders. Being evaluation of response with ch-PET-CT not mandatory, it was done in 23 (57.5%) pts.

Results: Mean and median follow-up were 30.18 and 23.8 m, respectively (range 3.73-79.8). Mean time of biochemical progression from the end of SBRT was 15.54 m (range 1.16 - 48.86), and the 2-years biochemical progression free survival (b-PFS) was 44%. We registered a complete concordance between PSA increase and progression of disease shown at ch-PET/CT. Gross tumor volume (GTV) was delineated using choline uptake and planning target volume (PTV) was defined as the GTV plus a 5-8 mm isotropic margin. Mean and median volume of GTV and PTV were 6.63 cc and 3 cc and 25.03 and 15.03 cc, respectively. In 90% of cases 5 fractions of 6-8 Gy were delivered. Response was assessed with PSA evaluation scheduled every 3 m during the first year and then every 6 m. Pts with a reduction or a stability of PSA level were considered responders. Being evaluation of response with ch-PET-CT not mandatory, it was done in 23 (57.5%) pts.

Conclusion: SBRT resulted effective and generally well tolerated by pts. PSA level is a valid tool for response evaluation and ch-PET/CT can be useful for pts with documented biochemical progression.

PO-0744

Effects of IMRT or radical prostatectomy (RP) on serum testosterone in patients with prostate cancer

A. Giraldo Marin1, X. Maldonado1, J. Planas2, M. Hermida1, M. J. Manas1, S. Mico1, J. Morote1, J. Giral1
1Hospital Universitario Vall d’Hebron, Radiotherapy Department, Barcelona, Spain
2Hospital Universitario Vall d’Hebron, Urology Department, Barcelona, Spain

Purpose or Objective: Subtle changes in serum testosterone have been noted in prostate cancer patients, without androgen blockade, treated with radiotherapy as well as radical prostatectomy (RP). The significance of these changes