Conclusion: In total 60 of 94 pts (63.8%) with homogenously pT3a pN0/cN0 R1 resected PCA received radiotherapy highlighting the need of adjuvant/salvage treatment in those pts. The efficacy of radiotherapy is documented by the fact that the median PSA of all irradiated pts at 80 months of follow up was 0.01ng/ml (0.0 - 204.9). This may be blurred by the influence of ADT (15 pts). However, even our small retrospective cohort demonstrates a biochemical recurrence rate of originally postoperatively PSA negative pts of 49.2%. Furthermore, 65.7% of these pts could be rendered at least temporarily PSA-free by postoperative radiation.

EP-1357 Moderately hypofractionated IGRT / IMRT-SIB in prostate carcinoma: toxicity and QoL in 300 patients

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Purpose or Objective: Aim of this study was to evaluate the safety, in terms of acute and late toxicity and QoL in patients (pts) with prostate carcinoma (PCa) treated with moderately hypofractionated IGRT/IMRT-SIB using fiducial markers.

Material and Methods: Three-hundred consecutive PCa pts were treated with daily on-line IGRT based on 2D (6MV) orthogonal images. Low risk pts received 62.1 Gy in 23 fractions to PT1V (prostate). Intermediate risk pts with probability < 15% of lymph nodes involvement (Roach’s equation) received 67.5 Gy and 56.25 Gy in 25 fractions to PT1V and PT2V (seminal vesicles). In high risk patients with probability > 15% of lymph nodes involvement, pelvic lymph nodes (PTV3) received 50 Gy. Acute and late toxicities were prospectively recorded using RTOG-EORTC scale and AUA score. Survival curves were calculated using the Kaplan-Meier method. Androgen suppressive therapy was prescribed based on risk categories.

Results: GI and GU G ≥ 3 acute toxicity were 0.7 % and 2.0 %, respectively. With a median follow-up of 30 months (range: 12-72), late GI ad GU toxicity were recorded in 4 and 18 pts, respectively. Based on IPSS score, no pts reported severe urinary symptoms, and 7.7% of pts reported moderate symptoms only. In terms of QoL, 91.3% declared to be “pleased”, 5.7% “mostly satisfied” and 1.3% “mixed” (1.7% not evaluable).

Conclusion: Our experience confirms the safety of moderate hypofractionation delivered with IGRT/IMRT-SIB and a moderate impact on QoL in pts with PCa. Prolonged follow-up is needed to evaluate the results in terms of patient outcome.

EP-1358 Prospective evaluation of PSA kinetics during salvage radiotherapy as a predictor for outcome

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Purpose or Objective: The aims of this prospective observational trial was to study early PSA kinetics by weekly PSA measurements during salvage radiotherapy (RT) for patients with recurrent prostate cancer in order to develop a predictive model for treatment outcome.

Material and Methods: This prospective study included patients with a biochemical recurrence after prostatectomy referred for curative salvage RT. No previous or present anti-hormonal treatment was allowed. All patients were prescribed 70 Gy in 35 fractions to the prostate bed. PSA was measured at baseline and then weekly during RT. A PSA follow-up was scheduled at 3, 6, 12, 18 and 24 months after RT and yearly thereafter. Treatment response was defined as PSA <0.1 ng/ml at these time points (PSA_RESP_3/6/12/18/24). Bivariate analyses of the association between response and clinical factors as well as PSA during RT were performed. Here we report the results for end-point PSA_RESP_6.

Results: Since Sept 2012, 151 patients have reached six months follow-up after RT. PSA_RESP_6 was achieved in 89 (59%) of the cases. Significant predictive clinical factors were proportion of positive biopsies, Gleason score, lymph node extirpation and surgical borders. However PSA during therapy was the single strongest predictive factor for PSA_RESP_6 with a ROC AUC up to 0.92 (95% CI 0.86 - 0.95).

Conclusion: We propose that PSA monitored during salvage RT can be used as a predictive factor for treatment outcome and subsequently for personalized patient management.

EP-1359 A randomized trial comparing bladder volume consistency during EBRT in postoperative prostate cancer

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Purpose or Objective: There are different guide lines about delineating the post-operative prostatic fossa before EBRT. They all recommend that the patients should have a half full or comfortably filled bladder at the planning CT and at each treatment fraction in order to ensure a consistent bladder volume throughout the whole treatment course. The aim of this study was to compare bladder volume variations between 1) a specific bladder filling protocol and 2) a simple instruction to the patients to keep a comfortably filled bladder before each treatment fraction.

Material and Methods: Twenty-nine patients (median 65 y) with PSA-relapse planned for salvage radiation therapy were randomised in two groups, with different preparation instructions: 1. Drinking 300 ml and emptying the bladder one hour before planning CT and treatment fractions. (13 patients) 2. A comfortably filled bladder before planning CT and treatment fractions. A pre-treatment drinking volume according to patient’s preferences. (16 patients) Treatment was prescribed to 70 Gy/35/2. As a complement to positioning to bony anatomy a CBCT was performed once a week to calculate the bladder volumes.