The odds of an increase in overall bowel bother were reduced (compared to the 74Gy control arm) by 11% (odds ratio (OR) 0.89; 99% CI: (0.62-1.27), p=0.4) and 8% (OR 0.92 (0.77-1.10), p=0.24) in the 60Gy and 57Gy groups respectively. For overall urinary bother, odds of an increase were increased by 31% (OR 1.31, (0.93-1.85) p=0.04) and 2% (OR 1.02 (0.86-1.20), p=0.79) for the 60Gy and 57Gy groups respectively.

Conclusions: Overall bowel bother and overall urinary bother was low in the CHHiP trial, cross sectional and longitudinal analysis found no evidence of differences between either hypofractionated arm and the 74Gy control arm to 24 months of follow up.

PO-0721
Short vs protracted urethra-sparing prostate SBRT: feasibility and early toxicity from a randomized phase II trial
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Purpose/Objective: To evaluate the feasibility and preliminary toxicity results of a prospective randomized multicenter phase II trial of short vs. protracted urethra-sparing stereotactic body radiotherapy (SBRT) for localized prostate cancer.

Materials and Methods: A total of 93 cT1-3a NO MO prostate cancer patients with a lymph-node involvement risk ≤ 20% were randomized between September 2012 and October 2014 to be treated with an SBRT protocol of 36.25 Gy in 5 fractions of 7.25 Gy either over 9 days (Arm A, n=45) or over 28 days once-a-week, the same week-day (Arm B, n=48). The dose to the prostatic urethra with a surrounding margin of 3 mm (urethral planning risk volume, uPRV) was reduced to 32.5 Gy in 5 fractions (NTD50 of 74 and 62 Gy for an α/β ratio of 1.5 and 3 Gy, respectively). Tolerance to the treatment was scored using the Common Toxicity Criteria for Adverse Events version 4.0 grading scale, the International Prostate Symptom Score (IPSS) and the EORTC QLQ-PR25 quality of life (QoL) questionnaire. Thirty-seven patients in Arm A and 38 patients in Arm B have completed treatment. Their follow-up (FU) extended up to 18 months and in Arm A 70% has reached their six month evaluation, while 60% of the patients in Arm B did.

Results: SBRT was delivered to all patients as planned with no treatment interruptions. Overall genitourinary and gastrointestinal toxicities were below the stopping rule established for the study, with grade 2 toxicity reported in 6 patients for each arm mostly after the 5th fraction. Only one patient experienced late grade 3 rectal toxicity, with the need of blood transfusion and endoscopic coagulation for the bleeding, between the 7th and 12th month FU. Mean IPSS scores increased significantly between baseline and the 5th fraction (p<0.01) in both treatment arms, returning to baseline at week 12. Mean IPSS values at baseline, after the 5th fraction and after 12 weeks were 7.5, 14 and 7.5 for Arm A and 8.1, 12.7 and 8.9 for Arm B, respectively. No significant differences were observed in EORTC QLQ-PR25 QoL endpoints between baseline and week 12 in either study arm.

Conclusions: Preliminary results demonstrated the feasibility and the acceptable toxicity rates of this short vs. protracted urethra-sparing prostate SBRT phase II trial. Three months after randomization complete recovery from side effects and return to baseline IPSS scores was observed in both treatment schedules.

PO-0722
Impact on radio-induced toxicity of adjuvant hormone therapy in prostate cancer: a “pooled analysis”
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Purpose/Objective: The combination of adjuvant hormone therapy (HT) with radiotherapy (RT) improves prognosis in patients with intermediate-high risk prostate cancer (PCa).
However, some studies showed that adjuvant HT may be associated with worse radio-induced toxicity although this topic remains controversial. Therefore, the purpose of this study was to evaluate the impact of the HT (in terms of drug type and duration) on acute and late toxicity in patients undergoing RT for PCa.

**Materials and Methods:** We collected data from 8 clinical trials on RT of PCa. Acute toxicity was assessed according to the RTOG scale and late toxicity according to RTOG-EORTC scale. The results in terms of acute toxicity were compared with the chi-square test. Late toxicity actuarial cumulative incidence was calculated by Kaplan-Meier method and the comparison between survival curves was performed using log-rank test (univariate analysis) and Cox’s Proportional Hazard Method (multivariate analysis using as covariates: RT dose, fractionation and prophylactic lymph node irradiation).

**Results:** Overall 346 patients were included in this analysis (median age: 72 years, range: 50-82; median RT dose: 70 Gy, range: 65-80; LH-RH analogue: 51.4%, high-dose antiandrogen [bicalutamide 150 mg/die]: 48.6%; HT for 6 months: 50.3%, HT for 24 months: 49.7%). The results of the statistical analysis are shown in the table.

The higher incidence of GI late toxicity in patients receiving adjuvant hormone therapy with LH-RH analogue was confirmed by multivariate analysis (p: 0.038).

**Conclusions:** In an evaluation of radiation-induced toxicity in patients undergoing RT plus adjuvant HT, a higher incidence of late GI toxicity was recorded in patients treated with LH-RH analogues compared with patients treated with antiandrogen. This result warrants further studies to optimize adjuvant therapies in patients with PCa.

**PO-0723**

Early toxicity outcomes: A single 15Gy fraction HDR brachytherapy as pre-treatment EBRT boost in prostate cancer.

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**Purpose/Objective:** To assess the toxicity of combined therapy between external beam radiation therapy (EBRT) plus high dose rate brachytherapy (HDBR) as a boost in patients with intermediate or high risk prostate cancer.

**Materials and Methods:** From 2010 to August 2014, a total of 221 patients diagnosed as intermediate or high-risk prostate cancer were treated with EBRT plus HDRB. Median age was 72 years (range 52-85). Most patients (68%) were classified as high-risk (stage T2c-T3b or PSA >20ng/dl or GS>7), and 70 patients (32%) were considered intermediate risk. The stage of tumor was determined in every case by magnetic resonance imaging (MRI). Every patient received first HDRB as boost and 4 gold fiducials were implanted. Finally, all patients received EBRT by intensity modulated radiotherapy technique with imaging guided by CBCT. The patients received HDRB asore than single 15 Gy implant, followed by EBRT to 46 Gy in 23 fractions. Thirty percent of the high-risk patients presented seminal vesicles invasion receiving a single 9.5 Gy implant, followed by EBRT to 60 Gy in 30 fractions. A total of 117 patients (52%) received a dose of 46 Gy to the true pelvis. In all brachytherapy plans, the constraints indicated in the GEC/ESTRO recommendations have been respected (Rectum D2cc £75Gy EQD2; Urethra D10£ 120Gy EQD2). Most patients (120; 54%) were prescribed complete androgen deprivation therapy (ADT), 66 (29%) received incomplete ADT and 28 (13%) did not receive ADT. GI and GU toxicity was evaluated utilizing the RTOG criteria. Median follow-up was 26 months.

**Results:** No treatment failure has been observed to the last follow-up. The incidences of any acute ≥ Grade 2 GI or GU toxicities were 0% and 9% respectively. Dysuria and urgency was prevalent symptoms in acute GU toxicity. Late genitourinary toxicity included 2 patients (0.9%) with urine obstruction requiring intermittent/permanent catheter. One case of grade 2 gastrointestinal late toxicity presented actinic rectitis event.

**Conclusions:** The use of a single 15Gy fraction HDRB as pre-treatment EBRT boost provides early-term and good outcomes in treatment-related toxicity. These data can help physicians to assess this scheme of radiotherapy as an acceptable option in the prostate carcinoma treatment.

**PO-0724**

Hypofractionated RT, radiosurgical boost, hormone therapy for prostate cancer: a dose escalation study (ISIDE-P3)


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**Purpose/Objective:** The use of hypofractionation allows to reduce the duration of radiotherapy (RT) and is theoretically associated with an improved probability of cure in patients with prostate cancer (CAP). However, hypofractionated RT could be associated to an higher incidence of late side effects. Several studies are in progress to evaluate efficacy of this irradiation modality but there are no definitive indications about tolerability and efficacy of this...