Conclusions: The new convective model is a marked improvement over the current HTPS. Explicit modelling of fluids is particularly important when the bladder or its direct surroundings are part of the treatment target area.

PO-0728
Postoperative hypofractionated-accelerated radiotherapy in prostate cancer: a phase I-II study (ISIDE-PP-2)
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Purpose/Objective: The prognosis of patients with high risk prostate cancer (PCa) is improved by adjuvant radiotherapy (RT) after radical prostatectomy (RP), although the 5 year biochemical recurrence free survival (bRFS) does not exceed 75-80%. Hypofractionated RT allows shorter treatment time and is theoretically associated with an improvement in the probability of cure in patients with PCa. However, hypofractionated RT may be associated with a higher incidence of long-term adverse effects. To date, definitive indications on safety and efficacy of this fractionation are not available, especially in patients undergoing RP. Therefore, aim of this study was to evaluate safety and efficacy of postoperative hypofractionated RT with based on SIB-IMRT technique.

Materials and Methods: Patients with high-risk resected PCa (R1, pT3, Gleason Score > 7) were enrolled in the study. The dose to the prostate was 62.5 Gy (2.5 Gy / fraction). In patients with dissection of < 7 lymph nodes and with a risk of nodal involvement > 15%, prophylactic irradiation of pelvic lymph nodes was performed. Furthermore, according to the NCCN risk categories, adjuvant hormone therapy (HT) was prescribed (intermediate risk: 6 months; high risk: 24 months); bRFS (PSA 0.2 ng/ml), local control, disease-free and overall survival were assessed using the Kaplan-Meier method. Survival curves were compared by log-rank test (univariate analysis) and Cox Proportional Hazard Method (multivariate analysis, considering as covariates: stage, pretreatment PSA, Gleason Score, RT treatment modalities, HT duration). Patients were classified according to the NCCN 2014 risk categories.

Results: A total of 127 patients were enrolled in the study (R1: 83.3%, pT3-4: 81.6%, Gleason score > 7: 38.9%). The results of the analysis are shown in the table.

<table>
<thead>
<tr>
<th>Node</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>acute OG G ≥ 3</td>
<td>0.0</td>
</tr>
<tr>
<td>acute OG G ≥ 3</td>
<td>0.8</td>
</tr>
<tr>
<td>late OG G ≥ 3</td>
<td>2.3</td>
</tr>
<tr>
<td>late OG G ≥ 3</td>
<td>12.4</td>
</tr>
<tr>
<td>Prosthetic alterations G ≥ 3</td>
<td>11.1</td>
</tr>
</tbody>
</table>

Conclusions: In a phase I-II study on postoperative hypofractionated-accelerated RT plus HT based on risk factors, an acceptable incidence of acute and long-term side effects and an improved bRFS compared to standard postoperative RT were recorded.

PO-0729
The neutrophil-to-lymphocyte ratio is prognostic factor in prostate cancer patients treated with radiotherapy
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Purpose/Objective: Recent studies have expanded the concept that the systemic inflammatory response has an important role in the progression of several solid tumours. The neutrophil-to-lymphocyte ratio (NLR), an easily determinable marker of systemic inflammation, has been associated with clinical outcome in various cancer entities. In the present study, we validated the prognostic relevance of an elevated pre-treatment NLR in a cohort of European patients with non-metastatic prostate cancer treated with 3D conformal radiotherapy.

Materials and Methods: Data from 415 consecutive non-metastatic prostate cancer patients treated with 3D conformal radiotherapy at a single tertiary academic center from 1999-2007 were included in this retrospective study. Clinical disease-free survival (DFS), distant metastases-free survival (DMFS), and overall survival (OS) were assessed using the Kaplan-Meier method. To evaluate the prognostic relevance, univariate and multivariate Cox regression models were performed for each endpoint.

Results: Based on previous studies, an NLR cut-off value of 5 was applied to differentiate between a low (<5) and high (≥5) NLR. In univariate analysis, the elevated NLR was significantly associated with decreased clinical PFS (HR 1.87, 95% CI 1.05-3.32, p=0.033) that remained significant in the multivariate analysis (HR 2.53, 95%CI 1.40-4.59, p=0.002). Additionally,
we detected a significant correlation between an elevated NLR with decreased DMFS in univariate (HR 1.95, 95% CI 1.07-3.54, p=0.029) and in multivariate analysis (HR 2.79, 95% CI 1.49-5.19, p=0.001). In OS analysis, the elevated NLR was significantly associated with decreased OS in univariate analysis (HR 1.79, 95% CI 1.04-3.04, p=0.036) and multivariate analysis (HR 1.98, 95% CI 1.13-3.47, p=0.018).

Conclusions: The NLR seems to represent an independent prognostic marker and should be considered for future individual risk assessment in patients with prostate cancer.

PO-0730
Urinary and erectile function in prostate cancer patients: radical radiotherapy vs active surveillance
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Purpose/Objective: International Prostate Symptom Score (IPSS) and International Index Erectile Function (IIEF-5) were assessed in prostate cancer (PCa) patients (pts). We here compare IPSS/IIEF in active surveillace (AS) vs radical radiotherapy (RT).

Materials and Methods: Questionnaires filled in at 4 followup (fup) times: T0=enrollment in AS/RT; T1=10 mos after diagnosis (fairly corresponding to 3 mos from RT end); T2=12 mos from diagnosis/6 mos from RT and T3= 24 mos from diagnosis/18 mos from RT. RT population also had measurement at RT end.

In the RT population the subset of pts without androgen deprivation (AD) was selected for IIEF analysis. IPSS was divided into 3 classes: =0-7 (mild symptoms, symp), 8-19 (moderate symp), 20-35 (severe symp). IIEF was divided into 3 classes: 8-19 (moderate symp), 20-35 (severe symp). Significant changes over time were investigated with Z-test for proportions.

Results: Cohorts: 247 pts (AS), 494 pts (RT IPSS), 202 pts (RT no AD). Median age: 64 (AS) vs 72 (RT) yrs.

IPSS showed a significant worsening in RT at short fup (acute phase of radioinduced toxicity). Due to the timing of onset of late urinary toxicity, these results (limited to 18 mos fup) cannot be considered conclusive for this endpoint.

Greater worsening of ED in RT, especially when younger pts are considered. For older pts effect of ageing sums up with dose, especially for initially potent pts. Comparison between AS and RT allows evaluation of confounding factors (ageing, psychological aspects) when studying ED after RT, thus allowing a more confident estimation of the role of RT in the onset of this kind of morbidity.

PO-0731
A miRNA-based predictive model in prostate cancer patients
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Conclusions: IPSS showed a significant worsening in RT at short fup (acute phase of radioinduced toxicity). Due to the timing of onset of late urinary toxicity, these results (limited to 18 mos fup) cannot be considered conclusive for this endpoint.

Greater worsening of ED in RT, especially when younger pts are considered. For older pts effect of ageing sums up with dose, especially for initially potent pts. Comparison between AS and RT allows evaluation of confounding factors (ageing, psychological aspects) when studying ED after RT, thus allowing a more confident estimation of the role of RT in the onset of this kind of morbidity.