Sexual practices before treatment ranged from masturbation, oral sex, and anal sex in order of frequency, and remained the same after treatment. Overall sexual satisfaction decreased, especially for participants with urinary incontinence and erectile dysfunction. Many men described orgasms after treatment as feeling 'incomplete' due to lack of ejaculation. Some single men or men in open relationships reported a loss of confidence or difficulty meeting other men after treatment. More information from physicians could have prepared participants to better cope with side effects; however, participants showed resilience by continuing to engage in sexual activities and had a positive view of their life after treatment.

Conclusions: The adverse impact of PCa treatments on sexual function for MSM can be a barrier to developing new relationships. To fulfill the principle of informed consent, MSM should be made aware of how PCa treatments can affect their sex lives. We intend to continue this research in order to develop a validated questionnaire to study sexual quality of life in MSM with prostate cancer and help guide the best treatment choices when MSM are diagnosed with PCa.

EP-1246
Effect on anemia of hormonal and radiation therapy in prostate cancer
L. Giaccherini1, A. Muraglia1, G. Frezza2, G. Nuzzo1, G.C. Mattiucci1, G. Macchia3, S. Cammelli1, F. Deodato3, V. Valentini1, A.G. Morganti1
1Polliclinico Universitario S. Orsola-Malpighi, Radiotherapy Department, Bologna, Italy
2Ospedale Bellaria, Radiotherapy Department, Bologna, Italy
3Fondazione "Giovanni Paolo II" Catholic University of Sacred Heart, Radiation Oncology Unit, Campobasso, Italy

Purpose/Objective: The association of androgen deprivation therapy (ADT) to radiotherapy (RT) improves prognosis in patients with high-intermediate risk prostate cancer (PC). Luteinising hormone-releasing hormone (LHRH) agonists are the standard of care in these patients even if this treatment is associated with several side effects. Chronic anemia due to ADT with LHRH agonists is one of these. However, analyses focused on the impact of adjuvant ADT on chronic anemia in patients with PC are lacking. In particular only few studies on the impact of different hormonal treatments (LHRH agonists vs antiandrogen) or different durations of hormone therapy (6 months vs. 2 years).

Results: One hundred eighty-six patients were evaluated. Hemoglobin mean values were calculated and these were compared using t-test based on type of hormone therapy and then at 2 and 5 years after radiotherapy. The results of statistical analysis are shown in the Table.

<table>
<thead>
<tr>
<th>type of hormonal therapy</th>
<th>Hb (2 years)</th>
<th>p value</th>
<th>Hb (5 years)</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td>LHRH agonists</td>
<td>13.4 +/- 1.4 (107)</td>
<td>&lt; 0.001</td>
<td>13.5 +/- 1.7 (35)</td>
<td>0.131</td>
</tr>
<tr>
<td>Antiandrogen</td>
<td>14.2 +/- 1.2 (79)</td>
<td>0.139</td>
<td>13.9 +/- 1.8 (23)</td>
<td>0.799</td>
</tr>
<tr>
<td>duration of hormonal therapy</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6 months</td>
<td>13.9 +/- 1.5 (89)</td>
<td></td>
<td>13.6 +/- 1.8 (23)</td>
<td></td>
</tr>
<tr>
<td>24 months</td>
<td>13.6 +/- 1.3 (96)</td>
<td></td>
<td>13.9 +/- 1.7 (36)</td>
<td></td>
</tr>
</tbody>
</table>

Conclusions: In patients undergoing radiotherapy plus adjuvant hormonal therapy for PC, hemoglobin levels were significantly lower in the group treated with LH-RH agonists after 2 years. Similar values were recorded after 5 years but the difference was not statistically significant, probably because of the smaller sample size. In contrast, no difference was observed based on duration of adjuvant therapy.

EP-1247
Comparison of two systems to calculate the margins for expansion from CTV to PTV in prostate cancer patients
J. Pardo1, J. González2, S. Montemuiño3, M. Sintes4, I. Alastuey5, A. Guerrero1, L. Bodí1, J. Font4, I. Ortiz4, E. Jiménez5
1Hospital Universitari Son Espases. Hospital General de Catalunya IDCsalud. IdISpa. Institut d’Investigació Sanitaria de Palma, Radiation Oncology, Palma de Mallorca, Spain
2Hospital General de Catalunya IDCsalud. IdISpa., Medical Physics, Sant Cugat del Valles & Palma de Mallorca, Spain
3Hospital Universitari Son Espases., Radiation Oncology, Palma de Mallorca, Spain
4Hospital Universitari Son Espases., Medical Physics, Palma de Mallorca, Spain
5Hospital Universitari Son Espases. IdISpa. Institut d’Investigació Sanitaria de Palma, Radiation Oncology, Palma de Mallorca, Spain

Purpose/Objective: To compare two systems to calculate the lateral, longitudinal and vertical margins for expansion from CTV to PTV in prostate cancer patients.

Materials and Methods: 29 consecutive prostate cancer patients treated with IMRT were included. A Cone Beam CT was performed the first 4 days of treatment. The average of the displacements regarding the reference image was determined and was checked by another CBCT in the fifth day. Subsequently a weekly CBCT test was performed For each patient the deviations values were obtained in the three directions and the average value and standard deviation of these errors was calculated (S̅). To deal with random errors, the first 5 CBCT errors were corrected by subtracting the mean value of the systematic errors.
corrected for each patient. With the new 'corrected' errors and the other errors measured during follow-up CBCT, standard deviation was determined for each patient. Then they were added quadratically, i.e. each individual overall deviation was squared, added all squares and from the result the standard deviation of random errors ($\sigma$) was obtained. Finally, for each direction, the formulas of Van Herk & de Stroom were applied.

**Results:** The mean values of the systematic errors of the first 5 CBCT were: $S_{ver}$: 0.3, $S_{long}$: 0.2 y $S_{lat}$: 0.2. The standard deviation of the random errors was: $\sigma_{ver}$: 1.43, $\sigma_{long}$: 0.77 y $\sigma_{lat}$: 0.96. The results of applying the formulas of Van Herk and Stroom are shown in Table 1.

**Conclusions:** No statistically significant differences were found between the values obtained for each of the systems for calculating margin expansion. Therefore, we will evaluate which of the two will be applied in our patients, considering that Stroom formula obtains a margin assuring that 99% of CTV is within the 95% isodose and Van Herk formula obtains a margin which ensures that 90% of the population receives at least 95% of the prescribed dose to the CTV.

**EP-1248**
Comparison between two fractionation in hormono-radiotherapy of prostate cancer
A. Milani1, A. Arcelli1, E. Ippolito2, V. Picardi1, G. Mantini1, G. Macchia1, S. Cammelli2, F. Deodato1, V. Valenti2, G. Frezza1
1Policlinico Universitario S. Orsola-Malpighi, Radiotherapy Department, Bologna, Italy
2Campus Biomedico University, Radiation Oncology Unit, Roma, Italy

Purpose/Objective: The application of hypofractionated regimen allows to reduce the treatment time of radiotherapy (RT) and is theoretically associated with an improvement of the probability of cure in patients affected by prostatic carcinoma (CAP). However, hypofractionated RT could be associated with a higher incidence of late side effects. Many studies are currently in progress to assess the effectiveness of this irradiation modality, but definitive indications about tolerance and efficacy of this method are still missing. The aim of this study was the comparison of the therapeutic results recorded in two different studies of CAP RT, based on different dose fractionation.

Materials and Methods: In this analysis were included patients enrolled in: 1) an observational study on RT of prostate +/- seminal vesicles with IGRT-IMRT-SIB technique and a dose of 65 Gy (2.6 Gy/fraction) +/- radiosurgical boost (5 Gy in single fraction). Biochemical recurrence-free survival (according to Phoenix-criteria), local control, disease-free and overall survival were evaluated using the Kaplan-Meier method. Survival curves were compared by logrank test (univariate analysis) or Cox Proportional Hazard Method (multivariate analysis, considering as covariates: risk class, RT-treatment modalities, length of hormonal therapy). Patients were classified according to NCCN 2014 risk categories.

Results: 326 patients have been included in this comparison. The results of the analysis have been reported in the table. Also the multivariate analysis showed no difference in terms of biochemical and clinical outcomes between the two groups of patients (p: NS).

Conclusions: Comparing two prospective studies, a hypofractionated treatment +/- stereotactic boost showed comparable results in terms of toxicity and biochemical outcome to the standard treatment.

**EP-1249**
LH-RH analogue vs antiandrogen plus adjuvant RT in high risk prostate cancer: a pooled analysis
I.V. Mascia1, F. Monari1, M. Massaccesi1, V. Picardi1, V. Frascino1, G. Macchia1, S. Cammelli2, F. Deodato1, V. Valenti1, A.G. Morganti1
1Policlinico Universitario S. Orsola-Malpighi, Radiotherapy Department, Bologna, Italy
2Catholic University of Sacred Heart, Radiation Oncology Unit, Roma, Italy

Purpose/Objective: Postoperative radiotherapy improves prognosis in high risk prostate cancer patients. However, 5-year biochemical recurrence free survival does not exceed 75 - 80%. On the basis of several randomized trials, showing a