Purpose or Objective: To evaluate biochemical progression-free survival (BDFS) in men 60 years of age or younger with prostate cancer who underwent exclusive permanent brachytherapy.

Material and Methods: 528 patients (p) with LR/IR. T1: 423p T2: 105p; Gleason 6: 520p, gleason 7: 8p; neoadjuvant hormonotherapy: 48p.; initial PSA: 492p, > 10: 36p. Md follow-up 63m (1-173m). BDFS was defined as ASTRO definition. Patients were selected from RECAP database, helped by URONCOR and GEG groups.

Results: Dosimetry: pD90: md147 Gy (45-215 gy); pD90 > 165 Gy: 19.8%; pD100: md86.2 Gy; pV150: md54.6% prostate years of age or younger have a high probability of 10-year BDFS. There is a trend to get better results with D90> 165 Gy.

Conclusion: This is one of the biggest series at the moment in younger men with permanent brachytherapy. Patients 60 years of age or younger have a high probability of 10-year BDFS. There is a trend to get better results with D90> 165 Gy.

EP-2008

Robustness of the OARs recommendations made by GEC-ESTRO according to inter-observer variability

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Purpose or Objective: To investigate the interobserver variability in contouring of rectum in high-dose rate brachytherapy (HDRBT) for the treatment of prostate carcinoma. The HDV dosimetric parameters are obtained and reported in accordance with the GEC/ESTRO recommendations.

Material and Methods: Four blinded observers retrospectively contoured the rectum of five patients treated with HDRBT in the radiation oncology department. A contouring consensus was previously established to agree in the anatomical limits determination in the rectal contouring. HDV dosimetric parameters analyzed were the included on the GEC-ESTRO recommendations: D0.1cc, D1cc and D2cc and the rectal volume were calculated. These endpoints were compared between and within the observers. The coefficient of variation (CV) defined as a measure of the spread of data as a proportion of its mean (expressed as a percentage), was estimated to assess the interobserver variation. For each parameter, the mean and SD of the two measurements recorded (taken with one week apart) from the treatment planning planning study made by transrectal ultra-sonogram (TRUS) were estimated for each of the 4 observers. The effect of interobserver variation in the total dose recorded was analyzed by estimating the accumulative dose (EQD2) for the rectum. For our study, the dosimetric parameter to rectum was evaluated regarding to single 15Gy prostate HDRBT plan and assuming that rectum received full-dose EBRT (46 Gy). The total EQD2 (equivalent dose in 2 Gy per fraction, assuming alpha/beta ratio of 3) doses were estimated.

Results: The patient data are represented in Table 1 showing the results of the mean reported D0.1cc, D1cc and D2cc for the rectum contoured twice for each case. The interobserver coefficient of variation for reported D0.1cc, D1cc and D2cc was 5.7%(SD 6.28), 4.5%(SD 1.94) and 4%(SD 2.24), respectively. The total D2cc parameter for the patients with the highest interobserver variation in rectum delineation, may result in recorded rectum dose difference up to 2.6 Gy by EQD2.

<table>
<thead>
<tr>
<th>Case</th>
<th>D0.1cc (Gy)</th>
<th>D1cc (Gy)</th>
<th>D2cc (Gy)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>12.12 (0.28)</td>
<td>10.61 (0.59)</td>
<td>9.42 (0.15)</td>
</tr>
<tr>
<td>2</td>
<td>12.28 (0.37)</td>
<td>10.48 (0.53)</td>
<td>9.04 (0.33)</td>
</tr>
<tr>
<td>3</td>
<td>12.39 (0.30)</td>
<td>10.93 (0.43)</td>
<td>8.65 (0.32)</td>
</tr>
<tr>
<td>4</td>
<td>11.43 (0.16)</td>
<td>11.43 (0.16)</td>
<td>10.82 (0.40)</td>
</tr>
<tr>
<td>5</td>
<td>12.51 (2.82)</td>
<td>12.38 (0.79)</td>
<td>10.86 (0.84)</td>
</tr>
</tbody>
</table>

Conclusion: Interobserver variations in reported parameters were high for the D0.1cc (CV: 16%) in a worst-case scenario. Even if the D2cc parameter corresponds to low interobserver variation, we found that the greatest variation is present in high prostate volume cases. Variation in delineation of the rectum may be a potential source of uncertainty in the BT planning and delivery process. Nevertheless, in our study the impact of interobserver variation on the total dose (EQD2) for the reported D2cc has a mean of +/- 1.5 Gy. This study represents a small analysis of a single center experience, but it will be completed with a multicenter study in a second part.

EP-2009

Feasibility and early toxicity of HDR alone in pts with recurrent/locally advanced prostate cancer

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Purpose or Objective: To evaluate the feasibility and early toxicity of HDR-BT as stand-alone treatment is gaining popularity as salvage strategy for patients (pts) with an isolated, intraprostatic Prostate Cancer (PCa) recurrence after External Beam Radiotherapy (EBRT) and may represent the only treatment available for the management of pts diagnosed with PCa and challenging clinical scenarios (for ex, pts previously irradiated in the pelvis for other primaries). We present a retrospective analysis of our series of pts managed with HDR-BT alone with particular emphasis on dosimetry and early toxicity results.

Material and Methods: From March 2014 to June 2015, 13 pts have been treated with HDR-BT alone in our centre: nine with salvage intent for an intraprostatic relapse after EBRT, and four for primary management after pelvic EBRT for other malignancies (follicular lymphoma, rectal cancer and B-cell