The median follow-up was 18 months (range, 1-36 months).

Results: In prostate sector dosimetry, V100 (95.3% vs. 89.7%; P = 0.014) and D90 (169.7 Gy vs. 152.6 Gy; P = 0.013) in the anterior base sector were significantly higher in the IBCL seed group than in the loose seed group. Other post-implant DVH parameters did not differ significantly between the two groups. The seed migration rate was significantly lower in the IBCL seed group than in the loose seed group (6% vs. 66%; P < 0.001). There was no significant difference in mean operation time between the two groups; however, mean operation time per seed was significantly longer in the IBCL seed group than in the loose seed group (1.31 min vs. 1.13 min; P = 0.003). The median follow-up was 18 months (range, 1-36 months). No significant differences in toxicities were seen between the two groups.

Conclusion: Our study showed more dose coverage post-operatively in the anterior base prostate sector and less seed migration in IBCL seeds implantation compared to loose seeds implantation.

EP-2000
Template guided saturation biopsy of prostate: what is the optimal volume for brachytherapy?
N.N. Petrov Institute Oncology, Radiation Oncology & Nuclear Medicine, Saint-Petersburg, Russian Federation

Purpose or Objective: To evaluate results of saturation biopsy in candidates for focal, hemigland high dose rate (HDR) brachytherapy or irradiation with “low-dose tunnel for urethra”

Material and Methods: Template guided saturation biopsy was performed in 52 primary patients with suspicion to prostate cancer and PSA below 10 ng/ml. Biopsy was performed under US control with the help of brachytherapy grid and 5mm distance between samples. During positioning and biopsy procedure we put special attention for accurate sampling of prostate in periregional region. The number of cores varied from 17 to 50 (average 33 cores). Finally in 31 patients with confirmed prostate cancer results of biopsy were used for brachytherapy planning.

Results: Saturation biopsy revealed prostate cancer in 31 of 52 evaluated patients. Involved volume ranged from 5% to 100% (average - 57%). Focal nature of PC diagnosed in 6 (19.4%), multifocal finding was present in 25 (80.6%) patients. Hemigland invasion mentioned in 10 cases. Saturation biopsy detected PC in periregional cores in 22 (70.9%) of 31 evaluated patients: invasion of one core revealed in 1, 2 cores - in 6, 3 and more cores - in another 14 cases. In 10 patients extent of involvement in periregional cores varied between 10% and 50%, in another 12 observations exceeded 50%. According to results obtained on saturation biopsy we performed HDR brachytherapy with “urethra low dose tunnel” (D10DBO80) in 9 patients with noninvolved periregional cores. Theoretically hemigland brachytherapy was possible in 10 of 31 evaluated patients.

Conclusion: in low risk patients with prostate cancer results of template guided saturation biopsy can significantly influence strategy of HDR brachytherapy

EP-2001
Radical salvage brachytherapy (BT) for local recurrences after previou radiation treatment
1Clinica Benidorm, Radiotherapy Department, Benidorm, Spain
2Hospital Marina Baixa, Urology Department, Villajoyosa-Alacante, Spain

Purpose or Objective: We presented a retrospective analysis in 11 patients with histological proven local-recurrent prostate cancer, undergoing salvage BT, treated between February 2009 and December 2014.

Material and Methods: The previous radical treatments were: 3 Low dose rate BT (LDR-BT) (145 Gy), one combined treatment with external radiotherapy (EBRT) (45 Gy) and LDR-BT (100 Gy), and 7 EBRT (68-74 Gy). Four patients have been rescued with LDR-BT and seven with High-Dose-Rate-BT (HDR-BT). All patients have a complete study with abdominal CT scan, pelvic MRI, and bone scan to diagnose local disease exclusively. LDR-BT patients received 145 Gy with 125I. HDR patients, has been treated with 30 Gy in 3 fractions of 10 Gy separated ten days. Median time to Biochemical failure (BF) from the first treatment was 48 months (12-114). All patients received previous hormonotherapy. Median time to rescue was 69 months (33-156). Toxicities were evaluated according with CTCAE scale (version 4.0).

Results: Median follow-up: 26.5 months (3-72 m). The overall survival time was 98 months (65-174). At the end of the follow up, March of 2015, all patients are alive, nine (82%) without evidence of disease, one patients had a retropertoneal failure 7 months after the salvage-BT and another patient was diagnosed of a solitary bone metastases at 12 months. Median PSA nadir post-salvage-BT was 0.1 ng/ml (0-0,29). There were not grade 3 GU or GI toxicities. 100 % of LDR-BT patients presented acute GU-toxicity grade 2. Fifty-seven % of the HDR-BT patients had GU-toxicity grade 1 (0 % grade 2).

Conclusion: Prostate BT is an effective and well tolerated reirradiation treatment in local-recurrent prostate cancer patients, with, few long-term toxicities, mainly in those treated with HDR-BT.

EP-2002
Focal prostate brachytherapy: aspects of multi-modality registration and dosimetry feasibility
1Cancer University Institute of Toulouse Oncopoie, DIMP, Toulouse, France

Purpose or Objective: The different conventional treatments for prostate cancer are multiple and for low-risk tumors, focal brachytherapy can be a therapeutic alternative option to active surveillance. However, this focal treatment remains still under evaluation and within the frame of the focal brachytherapy project conducted in Toulouse, we will present in this study two parts of the project: first, the contribution of multi-modal rigid and non-rigid registrations for localization and delineation of the treated volume, then the dosimetry evaluation after registration.

Material and Methods: First step of prostate brachytherapy at our institute consists in a contour-based non-rigid registration between MRI and US performed with Koels software where positive biopsy trajectory is retrieved and a fiducial non-radioactive marker is implanted to localize the tumor focus. As a result of this localization, dosimetry was performed using Variseed software, dose prescription is...