Table 1: Patient, tumour and treatment characteristics

	Total Group (n=2157)	Cohort <60 (n=575)	Cohort ≥60 (n=1582)
Age: Median (Range)	64.5 (37-84.9)	57.9 (47.8-59.9)	69.0 (60.5-84.9)
Initial PSA: Median (Range)	6.90 (0.4-73)	6.00 (1.5 – 73)	7.10 (0.4 – 63)
Risk Group:			
Low	1118 (51.8%)	341 (59.3%)	777 (49.1%)
Intermediate	804 (37.3%)	181 (31.5%)	623 (39.4%)
High	192 (8.9%)	43 (7.5%)	149 (9.4%)
Unknown	43 (2.0%)	10 (1.7%)	33 (2.1%)
D90: Median (Range)	140.5 (59.0-199.9)	140.63 (59.0-195.1)	140.25 (60.2-199.9)

Conclusions: In this unscreened European population of men with low risk prostate cancer, outcomes were better in the under the age of 60 cohort. Younger age should not be considered a contraindication for brachytherapy as opposed to surgery

PO-0735

SBRT is safe and effective in low- intermediate risk prostate cancer. Results of a phase II study

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Purpose/Objective: Stereotactic Body Radiation Therapy (SBRT) is emerging as a promising modality treatment in the management of genitourinary malignancies. The delivery of very high radiation doses in few fractions with a steep dose gradient may improve the therapeutic ratio in the treatment of prostate cancer. In this phase II study we tested the efficacy and the impact on toxicity of SBRT in patients with low or intermediate risk prostate cancer.

Materials and Methods: Patients with low or intermediate risk prostate cancer histologically confirmed were enrolled in this phase II study. The treatment schedule was 35 Gy in 5 fractions on alternate days, delivered with RapidArc in FFF modality. Toxicity was defined according to CT-CAE criteria v3.0 and classified as acute if occurring within 90 days from treatment and as late after 90 days. Patient-reported quality of life (QOL) relative to urinary, sexual and gastrointestinal symptoms was evaluated through EPIC questionnaires.

Results: Between January 2012 and March 2014 73 patients were enrolled (46 low risk, 27 intermediate risk). At a median follow up of 18 months (range 3-30 months) all patients experienced a complete biochemical response. Acute toxicity was mild; only 8 % of patients presented a rectal G2-toxicity, while a maximum G2-GU toxicity was recorded in 43% of patients, mainly represented by urgency, dysuria and stranguria. Regarding late toxicity, a G1 proctitis was recorded in 6% of patients and a G1-GU (urgency, cystitis) in 31%; only 1 event of G2 urinary toxicity was observed (transient urethral stenosis). No heavier adverse events occurred. EPIC questionnaires revealed a slight worsening in the urinary domains during treatment, with a return to baseline three months after treatment. No significant modifications in any of the other domains explored were reported.

Conclusions: Stereotactic Body Radiotherapy appears to be an effective therapeutic option in low and intermediate risk prostate cancer patients, associated with a good compliance and tolerance of the treatment modality, and a low profile of late toxicity.

PO-0736

Bladder and trigone surface doses are related to acute urinary toxicity in focally dose-escalated prostate IMRT

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Purpose/Objective: To determine the relationship between acute genitourinary (GU) toxicity and dose distributions of GU pelvic structures in patients who received focal dose-escalation IMRT for localized prostate cancer. To develop a methodology of assessing planned dose to the bladder trigone using dose surface maps (DSM).

Materials and Methods: 50 patients with intermediate/high risk localized prostate cancer underwent radiotherapy (RT) within a prospective study (DELINEATE, ISRCTN04483921) which involved image-guided IMRT of 74Gy/37# to the prostate and 82Gy/37# to the dominant intra-prostatic nodule. The whole bladder and catheterized urethra were prospectively delineated. A bladder trigone surrogate structure was retrospectively contoured as a triangle-shaped region between the transition of the urethra into the bladder wall caudally and the transition of the ureters in the bladder cranially. Axially, the posterior of the contour described the extent of the bladder trigone. The contour was expanded anteriorly from the bladder wall (Fig. 1 red contour). A copy of this structure was created and the contour enlarged anteriorly and laterally only (Fig. 1 green contour). DSM were generated for both structures using dosimetric analysis software, VODCA (MSS GmBH, Hagendorn, CH). A subtraction method was developed using MATLAB (Mathworks, Natwick, MA) to establish the dosimetric region of coincidence between the two DSMs, defining the bladder trigone surface (Fig. 1c). Cumulative dose surface histograms (DSH) were generated for bladder trigone (BT). In addition, whole bladder (WB) DSH and DVH for urethra were created in VODCA.