Materials and Methods: Median age was 85 years (range 68-97 years). There were 31 males and 24 females. Four deaths occurred during radiotherapy unrelated to treatment (3 from pneumonia and 1 from urinary sepsis).

Genito-urinary grade 2 and grade 3 acute toxicity was seen in 20% and 10% respectively. Gastro-intestinal grade 2 and grade 3 acute toxicity was seen in 9.5 % and <1% respectively. No grade 4 genito-urinary or gastro-intestinal toxicity was seen. 16% reported other grade 2 acute toxicity and <1% reported other grade 3 acute toxicity.

Grade 2 late toxicity (any) at 6 and 12 months was seen in 19% and 10.5% respectively. Any grade 3 late toxicity at 6 and 12 months was seen 6.5% and 5% respectively.

Local control at 3 months following radiotherapy was 88% (95%CI 64%-99%). Local progression free survival at 1 year was 88% (95%CI 77%-100%) and overall survival at 1 year was 64% (95% CI 50%-77%).

Conclusions: Hypofractionated radiotherapy delivered with a plan of the day IGART approach offers good local control with acceptable toxicity in a patient population not suitable for radical bladder treatment. This strategy is now being evaluated in a randomised multi-centre trial (HYBRID study; hypofractionated bladder radiotherapy with or without image guided adaptive planning).

EP-1241
SBRT for localised prostate cancer: an evaluation of toxicity with frequent prospective assessment
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Purpose/Objective: Stereotactic body radiotherapy (SBRT) is used increasingly for the treatment of localised prostate cancer (LPC). Although there is a significant body of data on efficacy, few published studies have assessed toxicity more than once during the first 12 weeks after treatment, potentially underestimating acute toxicity. This information is essential for informed patient consent. We aimed to accurately define the toxicity profile by prospective two-weekly assessment.

Materials and Methods: Patients were treated using the Cyberknife® system with a dose of 36.25Gy / 5# (PTV V36.25 Gy > 95%; prostate V40 Gy > 95%). Patients were treated on alternate or consecutive week days (range: 5-12 days). No patients received hormonal therapy. IPSS and RTOG toxicity was prospectively assessed at 2, 4, 6, 8, 10 and 12 weeks from start of treatment. Thereafter, patients were assessed every 3 months for the first 2 years, then 6 monthly. This study was given prospective approval by our institutional Clinical Research Committee.

Results: Forty consecutive patients were treated; 5 low, 34 intermediate, and 1 high NCCN risk. Median follow up was 21 months (range: 3-38). Median IPSS score at baseline was 6 (IQR: 4-11). Peak median IPSS score was recorded at two weeks (17; IQR: 8-22), returning to baseline by 4-6 weeks. The incidence of acute grade 2+ RTOG GU and GI toxicity was 25% (10) and 20% (8), respectively, peaking at 2-3 weeks. Forty eight percent (19) received an α-blocker, either prophylactically (13%, 5 patients) or for urinary symptoms. One case of grade 3 GU toxicity occurred at 8 weeks due to mild transient haematuria. A single case of grade 3 GI toxicity occurred at 4 weeks due to a small amount of faecal incontinence. All acute toxicity had settled to grade 0-1 by week 10. No difference in acute toxicity was observed between patients having daily or alternate daily treatment.

Incidence of late grade 2+ toxicity was 5% (2) for GU domain and 5% (2) for GI domain. Median PSA at baseline, 12 months and 24 months was 9, 0.96 and 0.65, respectively.

Conclusions: Acute toxicity from SBRT for LPC peaks earlier than that of conventionally fractionated radiotherapy, but resolved rapidly and completely. Infrequent assessment risks underestimation of toxicity in this emerging treatment. SBRT should be evaluated in randomised trials, such as the PACE study, against current standards of care.

EP-1242
Stereotactic body radiotherapy boost after whole pelvis radiotherapy in intermediate or high risk prostate cancer
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Purpose/Objective: Clinical data suggest that large radiation fractions are biologically superior to smaller fraction sizes in prostate cancer radiotherapy. Hypofractionated prostate stereotactic body radiotherapy aims to minimize the dose to the surrounding critical normal structures while delivering a large dose to the target volume. The CyberKnife is an appealing delivery system for hypofractionated radiosurgery due to its ability to deliver highly conformal radiation and to track and adjust for prostate motion in real-time. We compared outcomes in intermediate to high risk prostate cancer patients treated with CyberKnife for boost after intensity modulated radiation therapy (IMRT) or three-dimensional conformal radiation therapy (3-DRT).

Materials and Methods: This study was based on a retrospective chart review analysis of the 46 patients treated with CyberKnife radiotherapy for localized prostate cancer. 27 patients treated with 3DRT to a dose of 45 Gy in 25 fractions and 19 patients with IMRT to same dose and all patients received a boost by the CyberKnife at dose of 21 Gy in 3 fractions. The acute toxicities were recorded using the RTOG acute toxicity scale and the Common Terminology Criteria for Adverse Events, version 3.0.

Results: All 46 patients finished planned radiation therapy without any severe complication. The median follow-up for patients was 38 months (range 6 - 56 months). There were two biochemical failures in high risk patients in 3-DRT+CK and one in IMRT+CK group. The 3-year actuarial biochemical progression-free survival was 92.3% for 3-DRT+CK and 94.8% for IMRT+CK (p=0.752). There were no acute Grade 3 or 4 GI toxicities. Late Grade 3 GI toxicity, rectal bleeding, was noted in 2 patient in high risk group (7.4%) only in 3-DRT+CK group. The 3-year actuarial 3-year actuarial biochemical progression-free survival was 92.3% for 3-DRT+CK and 94.8% for IMRT+CK (p=0.752). There were no acute Grade 3 or 4 GI toxicities. Late Grade 3 GI toxicity, rectal bleeding, was noted in 2 patient in high risk group (7.4%) only in 3-DRT+CK group. The 3-year actuarial biochemical progression-free survival was 92.3% for 3-DRT+CK and 94.8% for IMRT+CK (p=0.752). There were no acute Grade 3 or 4 GI toxicities. Late Grade 3 GI toxicity, rectal bleeding, was noted in 2 patient in high risk group (7.4%) only in 3-DRT+CK group. The 3-year actuarial biochemical progression-free survival was 92.3% for 3-DRT+CK and 94.8% for IMRT+CK (p=0.752). There were no acute Grade 3 or 4 GI toxicities. Late Grade 3 GI toxicity, rectal bleeding, was noted in 2 patient in high risk group (7.4%) only in 3-DRT+CK group. The 3-year actuarial biochemical progression-free survival was 92.3% for 3-DRT+CK and 94.8% for IMRT+CK (p=0.752). There were no acute Grade 3 or 4 GI toxicities. Late Grade 3 GI toxicity, rectal bleeding, was noted in 2 patient in high risk group (7.4%) only in 3-DRT+CK group. The 3-year actuarial biochemical progression-free survival was 92.3% for 3-DRT+CK and 94.8% for IMRT+CK (p=0.752). There were no acute Grade 3 or 4 GI toxicities. Late Grade 3 GI toxicity, rectal bleeding, was noted in 2 patient in high risk group (7.4%) only in 3-DRT+CK group. The 3-year actuarial biochemical progression-free survival was 92.3% for 3-DRT+CK and 94.8% for IMRT+CK (p=0.752). There were no acute Grade 3 or 4 GI toxicities. Late Grade 3 GI toxicity, rectal bleeding, was noted in 2 patient in high risk group (7.4%) only in 3-DRT+CK group. The 3-year actuarial biochemical progression-free survival was 92.3% for 3-DRT+CK and 94.8% for IMRT+CK (p=0.752). There were no acute Grade 3 or 4 GI toxicities. Late Grade 3 GI toxicity, rectal bleeding, was noted in 2 patient in high risk group (7.4%) only in 3-DRT+CK group. The 3-year actuarial biochemical progression-free survival was 92.3% for 3-DRT+CK and 94.8% for IMRT+CK (p=0.752). There were no acute Grade 3 or 4 GI toxicities. Late Grade 3 GI toxicity, rectal bleeding, was noted in 2 patient in high risk group (7.4%) only in 3-DRT+CK group. The 3-year actuarial biochemical progression-free survival was 92.3% for 3-DRT+CK and 94.8% for IMRT+CK (p=0.752). There were no acute Grade 3 or 4 GI toxicities. Late Grade 3 GI toxicity, rectal bleeding, was noted in 2 patient in high risk group (7.4%) only in 3-DRT+CK group. The 3-year actuarial biochemical progression-free survival was 92.3% for 3-DRT+CK and 94.8% for IMRT+CK (p=0.752). There were no acute Grade 3 or 4 GI toxicities. Late Grade 3 GI toxicity, rectal bleeding, was noted in 2 patient in high risk group (7.4%) only in 3-DRT+CK group. The 3-year actuarial biochemical progression-free survival was 92.3% for 3-DRT+CK and 94.8% for IMRT+CK (p=0.752). There were no acute Grade 3 or 4 GI toxicities. Late Grade 3 GI toxicity, rectal bleeding, was noted in 2 patient in high risk group (7.4%) only in 3-DRT+CK group. The 3-year actuarial biochemical progression-free survival was 92.3% for 3-DRT+CK and 94.8% for IMRT+CK (p=0.752). There were no acute Grade 3 or 4 GI toxicities. Late Grade 3 GI toxicity, rectal bleeding, was noted in 2 patient in high risk group (7.4%) only in 3-DRT+CK group. The 3-year actuarial biochemical progression-free survival was 92.3% for 3-DRT+CK and 94.8% for IMRT+CK (p=0.752).