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present acute toxicity data for patients treated with SBRT for prostate cancer where on-treatment prostate tracking was carried out.
Methods: 15 patients received SBRT for low to intermediate risk prostate cancer at the Edinburgh Cancer Centre through participation in the PRINToUT study (REC number 18/SS/0083). Radiotherapy planning was assisted using the Micropos Medical Raypilot transperineal prostate tracking device in 9 patients before being replaced by the Raypilot Hypocath System® transurethral tracking device in 6 patients. The PACE-B outlining protocol (CTV to PTV expansion of 5 mm anteriorly and laterally and 3 mm posteriorly) and dosing schedule (36.25 Gy to ≥95% of PTV and 40 Gy to ≥95% of CTV in 5 fractions over 7 days) was used. Acute gastrointestinal (GI) and genitourinary (GU) toxicities were assessed using Radiation Therapy Oncology Group toxicity criteria immediately, 6 and 12 weeks after treatment.
Results: In the 12-week follow-up period, the worst reported GU toxicity in all patients was grade 1 in 33% ($n = 5$) of patients, grade 2 in 53% ($n = 8$) and grade 3 in 13% ($n = 2$). The worst reported GI toxicity in all patients was grade 0 in 20% ($n = 3$) of patients, grade 1 in 46% ($n = 7$) and grade 3 in 13% ($n = 2$). All grade 2 and 3 toxicities had resolved by 12 weeks.
Conclusion: SBRT to the prostate assisted with tumour tracking devices was well-tolerated in our cohort. We are currently investigating whether a further reduction in acute GU toxicity may be achieved through urethral sparing when using the HypoCath system.

Reference
[1] Brand DH, Tree AC, Ostler P, van der Voet H, Loblaw A, Chu W et al. Intensity-modulated fractionated radiotherapy versus stereotactic body radiotherapy for prostate cancer (PACE-B): acute toxicity findings from an international, randomised, open-label, phase 3, non-inferiority trial. Lancet Oncol 2019;20:1531–43.

Impact of COVID-19 on Management of MIBC: a Quantitative and Temporal Analysis

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Purpose: The COVID-19 pandemic forced oncologists to balance the risk of cancer progression with the immunosuppressive effects of treatment. We assessed if the treatment received by muscle invasive bladder cancer (MIBC) patients during the pandemic was different from the treatment decision discussed in the clinic and how that changed compared to pre- and post-pandemic.
Methods: We retrospectively collected data of patients treated for MIBC in our institute from January to June 2020 (first wave of COVID-19). We assessed if the patients' treatment plans were changed and compared the proportion across similar time periods (January to June) in 2019 and 2021. Change of treatment was defined as premature termination due to any cause, change of agents/modality and omission of planned treatment. Kruskall–Wallis test was used to compare the proportions over the three time periods. Mann–Whitney U-test was used to compare treatment between any two years.
Results: In total, 115, 79 and 110 patients were treated for MIBC in 2019, 2020 and 2021, respectively. Treatment received was altered in 30.4%, 32.9% and 20.9% of patients in the corresponding years ($P = 0.13$). The proportion of patients with chemotherapy changes was significantly different across 2019–2021 ($P = 0.01$). There was a higher proportion of chemotherapy changes in 2020 (50%) when compared to 2019 (25.5%; $P = 0.02$) and 2021 (20%; $P = 0.009$). There was no significant difference between 2019 and 2021 ($P = 0.55$). No significant difference was noted in the proportion of patients who had altered treatment schedules in terms of radiotherapy ($P = 0.10$) or use of radiosensitisers ($P = 0.71$) across all three years.
Conclusion: There was a significant impact of the first wave of the pandemic for planned chemotherapy. By January to June 2021, patterns of practice had recovered to those of 2019. The pandemic did not affect radiotherapy and radiosensitisation practice.

Kent Oncology Centre Early Experience in the use of Biodegradable Prerectal Hydrogel in External Beam Radiotherapy or Brachytherapy

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Purpose: To assess early and late toxicities in patients who had external beam radiotherapy (EBRT) or brachytherapy (BT) following biodegradable prerectal hydrogel (SpaceOAR) insertion at Kent Oncology Centre between May 2018 and January 2021.
Methods: Patients at high risk of late rectal toxicity were selected for SpaceOAR insertion. Records were retrospectively reviewed on a prospectively maintained database. Bladder and bowel toxicity were graded at 3 months and 12 months after treatment using CTCAE criteria [1]. Rectal doses were assessed.
Results: In total, 70 patients had SpaceOAR inserted prior to EBRT and 46 prior to BT. 66% of EBRT patients had Gleason ≤7 disease and all in the BT group. 55% had T1/T2 disease in the EBRT group and 96% in the BT group. The mean presenting PSA was 14.9 for EBRT and 6.2 for BT. Neither group had grade 3+ toxicity at 3 months. The EBRT group had 29% grade 2 bladder toxicity and only one patient had grade 2 bowel toxicity at 3 months compared with 87% and 36.9% in the BT group. At 12 months, 1 EBRT patient had grade 3 bladder toxicity with no other grade 3 toxicity. The EBRT group had 20% grade 2 bladder toxicity with 54% in the BT group. At 12 months, 1 EBRT patient had grade 2 bowel toxicity. The mean rectal dose was 28.9 Gy in the EBRT group and the mean dose to 2cc of rectum was 70 Gy in the BT group.
Conclusion: Despite the limitations of retrospective data and using patient reported outcomes, these data support the use of SpaceOAR in patients at high risk of bowel toxicity and allows their treatment to be optimised to limit the dose to the bowel. Further follow-up will help to determine longer term toxicity.
Reference
[1] Common Terminology Criteria for Adverse Events (CTCAE) Version 5.0. U.S. Department of health and human services; 2017.

Real-world Outcomes of Bladder Carbogen and Nicotinamide (BCON) in Muscle-invasive Bladder Cancer (MIBC)

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Purpose: Bladder carbogen and nicotinamide (BCON), combined with radiotherapy, is a standard of care in the bladder-preserving treatment of muscle-invasive bladder cancer (MIBC). With evidence of survival advantage, NICE recommends neoadjuvant chemotherapy (NAC) before bladder preservation. However, in the definitive trial, patients did not receive NAC. This study assessed real-world outcomes of BCON alone or with NAC (NAC-BCON).
Methods: With institutional approval, demographics and treatment parameters were obtained for a retrospective cohort study of BCON patients (2017–2021). Clinician-reported toxicity was assessed using RTOG grading during radiotherapy, and 6 weeks and 12 months after. Cross-sectional imaging and cystoscopy determined local control, metastasis-free survival (MFS) and overall survival (OS). Subgroup differences were compared using Mann–Whitney U- and chi-squared tests. Survival was analysed by Kaplan–Meier, log-rank and multivariate Cox regression. Analysis was conducted using R (R Core Team (2022)).
Results: 209 patients were treated with BCON; 42 (20%) received NAC-BCON. The median follow-up was 34 months (6–66 m). 198 (95%) had transitional cell carcinoma; 190 (91%) were T2–T3. NAC-BCON patients were younger (median 71 versus 78.5 years, $P < 0.05$), with better PS ($P = 0.012$) and ACE-27 ($P = 0.022$). 199 (95%) completed BCON whereas 35/42 (83%) completed 3 cycles of NAC. There was no significant increased grade 3 acute or late bowel or bladder toxicity with NAC. 3-month cystoscopy demonstrated complete response in 190 (91%). 90 (43%) developed metastases and 78 (37%) died of