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Ga-68 PSMA PET-CT is fast becoming the most sensitive imaging study for evaluation of metastatic prostate cancer and may have a role in initial staging of primary high-grade tumors. It also allows assessment for Prostate specific membrane antigen (PSMA) receptor status for assessing patients suitable for targeted therapy with Lu-177 PSMA. Since 2015, Oceanic Molecular, based at Hollywood Private Hospital in Perth, has performed over 300 Gallium-68 PET CT scans in prostate cancer patients. Interim analysis confirms high sensitivity for diagnosing metastases in patients with rising Prostate specific antigen (PSA). Our interim results indicate sensitivity of 90% in diagnosing metastases from prostate cancer in patients with rising PSA greater than 1.5 ng/L and 72% in patients with rising PSA between 0.5 and 1.5. In patients with isolated small volume nodal disease found by Ga-PSMA PET CT suitable for salvage radiotherapy than intervention with radiotherapy have shown a decrease in almost all patients in PSA. Since 2015, Theranostics Australia (based at Diagnostic Nuclear Imaging, Hollywood Private Hospital) in Perth has treated 20 prostate cancer patients with either progressive and/or metastatic prostate cancer where other therapies have not been possible or have failed (e.g. Androgen Deprivation Therapy (ADT) and chemotherapy) with Lu-177 PSMA. Our initial results mimic the findings in the limited literature with 70–80% response rates (based on imaging or PSA reduction). This is with very low toxicity and with a minimal side effect profile. Responses have been evident with small volume (e.g. nodal disease) to widespread disease (i.e. extensive nodal and bone disease). Initial progression-free survival data suggest prolonged remission compared with other salvage therapies. The emerging role of Ga-68 PSMA PET CT and molecular-targeted therapy with Lu-177 PSMA in prostate cancer, based on our growing experience in Perth, will be discussed with a view to developing more formal trials utilizing these techniques.

abs#12

SAFETY AND EFFICACY OF STEREOTACTIC ABLATIVE BODY RADIOTHERAPY FOR PRIMARY RENAL CELL CARCINOMA (RCC): PRINCIPAL ANALYSIS OF THE FASTRACK CLINICAL TRIAL

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Purpose: Safety and efficacy of stereotactic ablative body radiotherapy (SABR) is an emerging therapy for inoperable primary RCC.¹ The purpose of the FASTRACK clinical trial was to evaluate feasibility and safety of this approach. Secondary objectives were to describe freedom from local progression (FFLP) and freedom from distant progression (FFDP), overall survival (OS) and change in renal function.²

Methods: FASTRACK was a prospective phase Ib study recruiting patients between 2012 and 2014 with localized inoperable RCC of ECOG performance 0–2. Tumors of <5 cm were prescribed 26Gy in a single fraction, while those of ≥5 cm were prescribed 42Gy in three fractions.³ Tumor progression was defined using RECIST 1.1 criteria. Toxicities were recorded using CTCAE v4.0. Time-to-event outcomes were calculated using Kaplan–Meier method and Glomerular Filtration Rate (GFR) loss using paired t-test.

Results: Thirty-seven patients were recruited, with 28 males and nine females participating. In total, 33 patients and 34 kidneys received SABR (89% feasibility). The median age was 78 years and median follow-up was 24 months (12–36 months). Histology was confirmed in 89%. Median tumor diameter was 4.8 cm (2.1–7.5 cm), with equal proportion of tumors prescribed single-fraction and three-fraction SABR. Treatment-related grade 1–2 toxicities were sustained in $n = 26$ (78%) and grade 3 toxicity in $n = 1$ (3%). No grade 4–5 toxicities were recorded, and $n = 6$ (18%) reported no treatment-related toxicities. The FFLP, FFDP and OS at 2 years were 100%, 89% (95% confidence intervals [CIs] [78–100]) and 92% (95% CIs [81–100]), respectively. One patient progressed locally at 28 months post-SABR. The mean pretreat-

ment GFR was 92 mL/min, which decreased at 1 year by 19 mL/min (95% CIs [10–28], $n = 29$, $P < 0.001$). No patient underwent dialysis.

Conclusion: Despite treatment of predominantly large renal tumors, one- and three-fraction SABR for primary RCC was well tolerated. We observed highly encouraging cancer control, OS and preservation of renal function in an inoperable cohort.

References

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abs#13

A RANDOMIZED CONTROLLED TRIAL OF ROBOTIC VERSUS OPEN RADICAL PROSTATECTOMY: EARLY OUTCOMES

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Background: The lack of trial data comparing robot-assisted laparoscopic prostatectomy (RALP) and open radical retropubic prostatectomy (RRP) is a critical knowledge gap in uro-oncology. A randomized controlled trial (RCT) compared these two approaches on functional and oncological outcomes.

Method: A phase III RCT compared RRP with RALP: 326 men with localized prostate cancer were randomized (RRP $n = 163$ and RALP $n = 163$), 18 withdrew and 151 and 157, respectively, proceeded to surgery. Primary outcomes were urinary and sexual function. Secondary outcomes included bowel function and health-related quality of life, pain, time to return to usual activities up to 12 weeks postsurgery and positive surgical margins.

Findings: The results at 6 and 12 weeks postsurgery and time to return to work will be presented.

Registration: The trial was registered with the Australian New Zealand Clinical Trials Registry, number ACTRN12611000661976.

Funding: Cancer Council Queensland.

abs#14

STATE OF THE ART IN PENILE CANCER MANAGEMENT

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Overview of current best practice in management of penile cancer focusing on:

Update on guidelines

Penile preservation surgery