Methods: Ethics for the project was approved WACHS HREC to proceed with a retrospective audit of a prospectively kept database from July 2012 to July 2021 which followed outcomes of patients who received a low tension pre-gerotatal fat patch renorrhaphy at partial nephrectomy. Patient Demographics, intraoperative measures, histological outcomes, and post-operative complications were recorded and analysed.

Surgical technique utilised was a tip of 12th rib flank incision. Following mobilisation of peritoneum anteromedially, the pre-gerotatal fat was mobilised, keeping a vascularized pedicle to the direction the defect. Subsequently it was tucked behind a retractor to be utilised at renorrhaphy. Definition of the renal mass and hilum, application of a cross clamp and dissection of mass was routine. Vessels on resection surface were oversewn using 2-0 G123 chronic gut and collecting system defects were closed with 5-0 PDS. When confident of watertight closure and haemostasis following removal of clamps, the earlier harvested pre-gerotatal fat patch was untucked and placed over the defect. Low tension renorrhaphy to secure the fat pad was completed with 2-0 G123 chronic gut. A two-layer muscular closure with placement of a drain was routine.

Results: 52 consecutive patients underwent open partial nephrectomy at our institution. Mean age of 60.4±2.8 years, 37 men and 22 women, 30 right and 22 left partial nephrectomies. Preoperative renal biopsy performed in 21.2%. Mean mass size was 31.9 ±4.2mm, collecting system was breached in 36.5% of cases and 4 patients had a resection margin in contact with the cancer. Histology was 57.7% clear cell; 19.2% papillary; 11.5% oncocytoma; 3.8% chromophobe; and 3.8% AML. One patient (1.9%) suffered a Clavien-Dindo IIIb complication requiring return to theatre and transfusion. There were no renal bed bleeds, urine leaks or urine fistulas detected. Mean intraoperative blood loss was 355 ±121.7ml and mean postoperative creatinine increased 10.7±3.2umol/L. Mean follow up of 40.2 ±8.4. Two patients have had recurrence. Conclusions: Utilisation of an anatomical pre-gerotatal fat patch at open partial nephrectomy is an effective haemostat with the added benefit of prevention of urine leak. It takes only minutes, can aid in post-operative imaging surveillance, reduces intraoperative cost, minimizes risk of cut through at high tension renorrhaphy and may prevent rare complications.

Villis Marshall Presentations

Presentation Type: Villis Marshall

Theme: Other

Urological imaging trends in Australia and the impact of COVID-19: A ten-year analysis of national data

EMMA CLAREBROUGH1, ANDREW O’BRIEN1, ROHAN HALL1

1Bendigo Hospital, Bendigo, Australia

Introduction & Objectives: During the COVID-19 pandemic there has been a drastic shift in access and utilisation of healthcare resources globally. There has been widespread implementation of social distancing policies, isolation to homes and reduced non-essential activities within communities. These public health measures coupled with reductions in non-urgent elective surgeries and a transition to telehealth may have affected presentations of common urological conditions. We hypothesised there may be an impact on the number of common urological imaging studies carried out over this time frame. We have retrospectively analysed the number of CT KUB, US renal tract and mpMRI prostate studies done during the first three months of the COVID-19 outbreak in Australia and compared them to the previous decade.

Methods: Australian Medicare Benefit Schedule item statistics reports for US renal tract and CT KUB usage were generated for the months of March, April and May from the Department of Health and Human Services website from 2010 to 2020. Data for 2019 and 2020 was examined for mpMRI prostate. Data was then analysed using GraphPad Prism 8 (La Jolla, CA, USA), one-way ANOVA with Fisher’s-LSD post hoc test utilised and statistical significance set at p-value <0.05.

Results: From 2010 through to 2019 there was a year-on-year increase in the number of CT KUB and US Renal tract studies performed across Australia. An average increase of 6.0% (±3.6%) for CT KUB and 5.2% (±3.3%) for US Renal tract. A statistically significant decrease was seen in the corresponding months of 2020 of 10.4% and 20.9%, respectively. There was no significant reduction in the number of mpMRI prostate studies performed from March to May 2020.

Conclusion: There was a statistically significant decline in the number of some common urological imaging studies across the first 3 months of the COVID-19 pandemic in Australia. We may well see an associated trend of reduced referrals or potentially a spike in delayed diagnoses during and after COVID-19 crisis due to reduced presentations and investigations throughout lockdown periods. Reassuringly, we have not seen a decline in the number of mpMRI prostate studies undertaken during this same time frame.
Introduction & Objectives: Worldwide, prostate cancer is the second most commonly diagnosed malignancy in men and is the sixth most common cause of cancer death. The pathological grade of prostate cancer is the strongest predictor for progression and metastases. Currently, the overall “composite” grade and well as the highest grade “index” lesion are commonly reported. We aimed to determine which is a better predictor of biochemical recurrence (BCR).

Methods: Retrospective cohort study of all patients who underwent radical prostatectomy for prostate cancer at our institution between 2009 and 2020 where an index and composite score was reported. Patients who underwent a salvage prostatectomy or received neoadjuvant chemotherapy, androgen deprivation therapy or radiotherapy were excluded.

Results: Radical prostatectomy was performed in 2024 patients during the study period; 29 were excluded due to a lack of post-operative followup or receipt of neoadjuvant treatment. The mean pre-operative PSA was 5.9 and mean follow up was 56 months. 54% were classified as pathological tumour stage one or two and 76% of patients had multifocal disease. In 257 (12.9%) cases the index and composite scores were discordant.

We analysed the 1605 patients with ISUP 2 or 3 prostate cancer. Patients with discordant pathology had a higher chance of BCR (HR 2.22, p<0.0001). The prevalence of BCR in the discordant pathology group at the one, three, five and seven year time points was almost double that in the control group. Other significant predictors included higher grade disease, more advanced stage, and positive surgical margin status. However, after multivariate analysis, discordant pathology was no longer statistically significant.

Conclusions: Our study demonstrated high rates of multifocal prostate cancer and 12% of cases with discordant index and composite scores. Discordant index and composite scores was associated with a higher risk of BCR, however this was no longer statistically significant in multivariate analysis.
Table 1: Average prostate cancer detection tests nationally 2015-2019 and tests in 2020

| Test Type          | Average 2015-2019 (95% CI) | 2020       | Difference (95% CI; and % of average) | Significance |
|--------------------|----------------------------|------------|--------------------------------------|--------------|
| PSA tests          | 678,082 (660,114–704,283)  | 657,687    | −20,395 (−41,991–1200, 97)           | p = 0.059    |
| Prostate MRI       | 34,364†                   | 34,061     | −307 (−6; 99)                        | N/A          |
| Prostate biopsies   | 19,573 (18,285–20,980)    | 20,463     | +890 (314–2,094; 105)                | p = 0.109    |

*Full year data only available for 2019-2020
†Statistical analysis not possible owing to limited data set

relatively modest. A modelling exercise was also performed in order to estimate test usage in 2020 based on population. The predicted test usage was similar to the average use, & the actual testing rate fell within the Predictive Interval.

A subgroup analysis for Victoria only did show a statistically significant difference with regards to PSA tests (8% less than average, p = 0.002), however an analysis of testing by month shows that the vast majority of this reduction coincided with the first Melbourne lockdown (March to May 2020).

Conclusions: On the available evidence, the rates of testing for prostate cancer in 2020 did not differ significantly from previous years with the exception of prostate biopsies & MRI conducted within Victoria, & this may be at least partly artifactual. As such there is no basis to believe that there will be a stage migration in prostate cancer in Australia owing to the COVID pandemic.

Prostate cancer screening may improve outcomes for Maori men in New Zealand

BASHAR MATTI1, KAMRAN ZARGAR-SHOSHTARI1
1University of Auckland, Auckland, New Zealand

Introduction & Objectives: Ethnic disparities in Prostate cancer (Pca) statistics are well documented in New Zealand (NZ). Māori men tend to have lower cancer incidence but significantly higher mortality when compared to non-Māori. Considering the emerging evidence that regular Prostate Specific Antigen (PSA) based screening is associated with improved cancer-specific survival, we aimed to assess the impact of such practice on Pca mortality among Māori men in the country.

Methods: We collected data from all Māori men who had a PSA test in NZ between 1st of January 2006 and 1st of January 2018. Men with prior history of Pca or aged < 40 years at the time of the test were excluded. We compared outcomes between two groups: a) High PSA testing (screening) group which included men who received two or more PSA tests that were at least one year apart and b) Low PSA testing group. The outcomes of interest were the risk of Pca diagnosis estimated with binary logistic regression, and risk of Pca death estimated with Cox proportional hazard regression.

Results: The final cohort included 63,927 men of whom 37,971 (59.4%) were in the high PSA testing group. Median age and follow-up for the entire cohort were 53 and 6.3 years, respectively. Men in the high PSA testing group received on average of four PSA tests in the 12 years study period. They were generally older (54 vs 51 years, p < 0.001) and lived in lower deprivation (p < 0.001). Men in the low PSA testing group were at lower risk of Pca detection (adjusted odds ratio = 0.84, p < 0.001). However, they had five times increase in the risk of death from Pca when compared to the high PSA testing group (adjusted hazard ratio = 5.04, p < 0.001).

Conclusions: PSA based screening in Māori men may increase the risk of Pca detection but significantly reduces the risk of dying from this disease.

Impact of time delay on post-operative outcome in patients presenting with penile fracture: A 10 year prospective observational study

SHESHANG KAMATH1
1Kem Hospital, Mumbai, Mumbai, India

Introduction & Objectives: The study aims to share our clinical experience in management of penile fracture and its complications and specifically highlights the impact of time delay on post-operative outcome in patients presenting with penile fracture.

Methods: The study is a prospective observational study conducted from July 2007 till January 2017. All the patients presenting to the emergency with a clinical presentation of penile fracture and a tear in the tunica albuginea of the penile cavernosal tissue, confirmed on ultrasound were included in this study and intraoperative and postoperative data was analysed

Results: The most common cause for fracture noted was coitus. The average time delay from the time of insult to presentation to the emergency department was 25.11 ± 12.48 hours. The parameters that have significantly been altered by a time delay of more than 24 hours include post-operative wound infection, erectile dysfunction at 1 year, post-operative hospital stay. Two patients develop chordee at 6 and 9 months respectively and both patients presented beyond 24 hours. Also all patients with hematoma size on color Doppler of more 10cc and intraoperative tear >10mm had developed post-operative wound
infection. Patients with urethral injury or post-operative cavernositis or wound infection had significant association with erectile dysfunction. **Conclusions:** Penile fracture although a rare urologic emergency, it has a significant impact on sexual health of a young man. An early intervention along with identifying and managing early complications factors would definitely help patients of fracture penis lead an almost normal sexual life.

**Impact of LDR Brachytherapy on erectile function: a subgroup analysis of 417 patients with normal pre-treatment erectile function**

AITHOS KATELARIS1,2, ASHAN CANAGASINGHAM1, OLIVER BEST1, CHING HO PANG1, LOIS SYDNEY, Australia; 2Bond University, Gold Coast, Australia; 3Cancer Care Centre, Sydney, Australia

**Objective:** To assess incidence and severity of erectile dysfunction (ED) following LDR Brachytherapy (LDRBt) monotherapy for prostate cancer in men with normal baseline function in a tertiary referral centre. **Methods:** Patients who underwent LDRBt as monotherapy in our institution between 2002 -2020 were included in our retrospective observational cohort study. We interrogated our prospectively maintained database, identifying those with normal erectile function, defined as IIEF5 > 22 at baseline. We analysed change in erectile function over time for up to 8 years. Our primary outcome was mean difference between IIEF-5 score at baseline and at regular time intervals. A secondary outcome was the proportion of patients in each IIEF5 category at each timepoint: severe ED (<12), moderate ED (12-16), mild ED (17-21) and no ED (22-25).

**Results:** The median age of our cohort was 64 (41-84). 1017 patients baseline IIEF-5 scores recorded. Of these, 431 patients had IIEF5 >22, with a mean score of 23.9. During follow up the mean IIEF-5 score was 15, 14.3, 15.7, 15.9, 15.2, 15.1 and 15.2, at 6 weeks, 6 months, 1 year, 2 years, 3 years, 5 years and 8 years respectively. A mean reduction of 8.9 was seen at 6 weeks, 9.6 at 6 months, and between 8 and 8.8 at each time point for up to 8 years. These results are illustrated in table 1. The proportion of men who maintained normal erectile function was 34.6% at 6 weeks, 25.6% at 6 months and between 29.2% and 34.5% for the remainder of the follow up period. The proportion of men with varying degrees of ED is illustrated in figure 1. ConclusionPatients who underwent LDR brachytherapy experienced an early decline in sexual function, which may be explained by the implantation procedure. There is a peak of dysfunction at 6 months, and a small degree of functional recovery at 1 year which does not change significantly for the remainder of the follow up period. At 8 years, approximately half of the men retained erectile function with only mild impairment or no impairment. Patients should be counselled accordingly.

**Presentation Type:** Poster Podium

**Theme: Endourology/Stones**

**Supine vs prone PCNL: A Gold Coast Hospital Experience**

GERARD BRAY1, DEREK MAO2, CHRISTOPHER TRACEY1

1Gold Coast University Hospital, Southport, Australia; 2Bond University, Gold Coast, Australia

**Introduction & Objectives:** Percutaneous nephrolithotomy (PCNL) is the preferred approach for treatment of large renal stones. The prone position was first developed largely intuitively however recently supine positioning is becoming more popular. The current literature has reported comparable stone free rates however some evidence indicates the supine position may be associated with quicker operative times and less significant bleeding. In other peri-operative outcomes, there has not been clear advantages of either positioning. Further comparative studies in this

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**Table 1 differences between IIEF at baseline and at follow up**

| Timepoint | n   | Mean difference in IIEF |
|-----------|-----|-------------------------|
| 6 weeks   | 329 | 8.9                     |
| 6 months  | 316 | 9.6                     |
| Year 1    | 294 | 8.2                     |
| Year 2    | 238 | 8.0                     |
| Year 3    | 178 | 8.6                     |
| Year 5    | 166 | 8.9                     |
| Year 8    | 87  | 8.8                     |

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**Fig. 1 Proportion of patients with ED over time**