three-pronged 22G FNB needle introduced from July to December. Standardised tissue sampling technique was undertaken with 3 samples obtained, each with 5 passes made using a fanning technique. Samples were placed directly into cytorich red fixative. Patients were excluded if the needle size was not recorded, alternate size needle used, or biopsy protocol not followed. Accuracy was calculated and compared between those with and without SEMs and between FNA and FNB procedures. Patients had a confirmed benign diagnosis if there was no progression or an improvement in mass appearance after at least 3 months of follow up.

Results After exclusions, 128 patients undergoing 145 pancreatic biopsies were recruited (10 patients had 2 procedures and 4 patients had 3 procedures). A final diagnosis of malignancy was made in 93.8% (136/145). Overall accuracy of pancreatic biopsy was 84.1% (122/145). FNB accuracy was significantly higher compared to FNA (89.9% [80/89] versus 75.0% [42/56], $p=0.02$, Odds Ratio [OR] 2.96, 95% confidence interval [CI] 1.18–7.41). The overall accuracy in the presence of SEMs was 82.5% (52/63) which was not significantly different than those without SEMs 85.4% (70/82) (OR 1.23 95% CI 0.50–3.01 $p=0.64$). The accuracy of sampling pancreatic solid lesions when a SEMs was present with FNB () was not significantly higher compared to FNA (82.9% [34/41] versus 81.8% [18/22], $p=0.91$, OR 0.92 95% CI 0.24–3.60).

Conclusions The accuracy of EUS-FNA for pancreatic solid lesions exceeds the current recommendations and is increased with use of FNB. National standards should take improved accuracy with FNB into account when being updated. In our experience use of FNB does not improve the accuracy of pancreatic tissue sampling in the presence of a SEMs.

OWE-33 CAN MODERATE ALCOHOL CONSUMPTION DECREASE PANCREATIC DUCTAL ADENOCARCINOMA (PDAC) RISK? A SYSTEMATIC REVIEW AND META-ANALYSIS

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Introduction PDAC is increasing in incidence and has the worst survival of any malignancy. Lifestyle choices to reduce risk, based on robust evidence, are required. There are plausible biological mechanisms for how a *moderate* intake of alcohol (UK recommendations of ≤ 14 units/week) could prevent PDAC. These are alcohol: mitigating against pathological effects of KRAS genetic mutations, decreasing excess mitogenic insulin secretion, and the effects of antioxidants in alcoholic drinks. These mechanisms must be supported by robust epidemiological data to infer causality.

The aim of this work is to systematically review prospective cohort studies, selected according to predefined criteria, to assess if a *moderate* alcohol consumption is inversely associated with PDAC risk. Cohort studies minimise biases inherent in other observational methodologies.

Methods Medline, PubMed and EMBASE electronic databases were searched for prospective cohort studies investigating a *moderate* alcohol consumption and PDAC up to January 2019. The inclusion criteria were: >100 PDAC cases, definition of *moderate* consumption within UK guidelines, clear description of the comparator group, reporting effect sizes as risk/hazard ratios (RR/HR) and adjustment for covariates

including: age, sex, smoking, body mass index and diabetes mellitus. Pooled effect sizes were calculated using an inverse variance random-effects model.

Results Four prospective cohort studies meeting inclusion criteria were identified (9,090 PDAC cases, 57.5% female, mean age at diagnosis was 61.1 years). The cohorts were in the Netherlands, UK, pan-European and the US. The pooled effect size showed no association between a *moderate* alcohol consumption and PDAC risk (HR = 0.97, 95% CI; 0.91–1.03, I^2 for heterogeneity 0.0%). There was no evidence of publication bias (Egger's $p = 0.404$). Three cohorts investigated moderate intake of different beverages, reporting no association with either: wine (HR = 0.95, 95% CI; 0.83–1.09, $I^2 = 0.0\%$) beer (HR = 0.96, 95% CI; 0.79–1.17, $I^2 = 0.0\%$) or liquor (HR = 1.18, 95% CI, 0.89–1.57, $I^2 = 71.7\%$). There was no biological gradient within the moderate range.

Conclusions The plausible biological mechanisms for a protective effect of alcohol are not supported by the epidemiological work. Drinking alcohol *moderately* cannot be recommended to decrease PDAC risk in the general population. Further research in a large prospective cohort which investigates risk in specific groups such as smokers and according to body mass index is required to see if alcohol may be beneficial in high risk groups for PDAC.

Posters

PWE-063 SINGLE SESSION EUS-ERCP; AN EFFECTIVE APPROACH

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Introduction The primary objective of this study was to look at the safety and efficacy of single session endoscopic ultrasound (EUS) and endoscopic retrograde cholangiopancreatography (ERCP) procedures at a tertiary care hospital.

Methods We retrospectively reviewed patient data from a prospectively maintained EUS-ERCP database from October 2017 to January 2019. Descriptive statistics were performed on Microsoft excel. We evaluated the reasons for the planned combined procedures, procedural characteristics and outcomes.

Results 55 patients were included in this study. Majority were females (35 vs 20) and median age was 69 years. 58% of patients (32) were referred for ERCP only but requests were reviewed by the consultant with expertise in performing both procedures and vetted for combined procedures instead. Most common reason for booking patients on combined slot was inability to identify cause of biliary obstruction (58%) on prior imaging followed by small (<5 mm) non-obstructing stone in asymptomatic patients (15%) and fine needle aspiration/biliary drainage (15%). 25 (45%) patients did not require ERCP as no pathology was identified on EUS. Average total time required for the combined procedure was 30 minutes (range: 20–50 minutes). Two patients had propofol and the median dose of fentanyl and midazolam used in the remaining patients were 100 mcg (50–200 mcg) and 4 mg (2–5 mg) respectively. One serious complication of ERCP was experienced.

Although the patients who were symptomatic on the day of the procedure were more likely to require ERCP following

EUS as compared to asymptomatic patients (78% vs 22%), but this difference was not found to be statistically significant. **Conclusion** Performing EUS and ERCP in single sessions is a safe and effective strategy. Careful selection of patients for single session EUS-ERCP can avoid unnecessary high risk ERCP procedures. Patients who had planned combined procedure for suspected stone disease did not require significant extra time as compared to ERCP alone. We suggest that all ERCP requests should be reviewed by experienced endoscopists and prior EUS should be considered in selected patients.

PWE-064 BONE DENSITY ASSESSMENT IN CHRONIC PANCREATITIS (CP) : ARE WE SCREENING OUR PATIENTS APPROPRIATELY?

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Patients with CP are at increased risk of low bone density because of multiple factor including malabsorption of vitamin D and calcium, poor diet, alcoholism and smoking [1]. Recent NICE guidelines recommend offering bone density assessment to all patients with CP every 2 years [2]

Aims and methods A retrospective audit was carried out to investigate the incidence of bone density abnormality in all patients diagnosed with chronic pancreatitis between September 2014 and April 2018 in our organisation. Data was collected on patient demographics, social history, DEXA scan assessment and laboratory investigations.

Results 123 patients [median age 62 years, male-female ratio 1.7:1] were diagnosed with CP during this period. The aetiology of CP were as follows: alcohol 16.9% (n=26), smoking 4.8% (n=6), smoking and alcohol combined 40.6% (n=50), gallstone disease 7.3% (n=9), hereditary pancreatitis 1.6% (n=2) and idiopathic in 23.5% (n=29).

Abstract PWE-064 Table 1

DEXA Scan Results	Normal (n=13)	Osteopaenia (n=21)	Osteoporosis (n=25)
Vitamin D (25-OH D): Adequate/ optimum (>50 nmol/L)	77% (n = 10)	81% (n= 17)	72% (n= 18)
Insufficient Deficient (<25nmol/L)	33% (n= 3)	9.5% (n= 2)	16% (n = 4)
Not measured	0% (n = 0)		
PTH	7.7% (n = 1)	24% (n =5)	52% (n = 13)
Normal (12 – 72 ng/L)		4.8% (n = 1)	0% (n = 0)
High	7.7% (n = 1)	71.2% (n=15)	48% (n = 12)
Not Measured	84.6% (n =11)		
Calcium:	100% (n = 13)	95.2% (n = 20)	100% (n = 25)
Normal (2.1 – 2.6 mmol/L)			0% (n = 0)
High	0% (n = 0)	4.8% (n = 1)	

60 (48.8%) patients underwent a baseline DEXA scan [23.3% (n=13) had normal bone density, 35% (n=21) had osteopenia and 41.7% (n=25) had osteoporosis]. One (0.8%) patient had an established diagnosis of osteoporosis prior to presentation and did not undergo a DEXA scan.

Serum biochemistry levels including PTH, vitamin D and calcium levels in patients who underwent DEXA scans are summarized in the table enclosed:

Conclusion In our study only 50% of patients underwent investigation for bone density measurement. There was a significantly high (76.7%) incidence of bone density abnormality in patients who underwent DEXA scan highlighting the importance of this test in the long term management of CP patients. Following this audit, emphasis has been placed on DEXA scan assessment in all CP patients in our trust with plans for a re-audit in a year's time.

REFERENCE

1. . High prevalence of osteoporosis in patients with chronic pancreatitis: A systematic review and meta-analysis. Duggan S.N., Smyth N.D., Murphy A., MacNaughton D., O'Keefe S.J.D., Conlon K.C. (2014) Clinical Gastroenterology and Hepatology, 12 (2), pp. 219–228.
2. . Guidelines, N. (2018). Pancreatitis | Guidance and guidelines | NICE. [online] Nice.org.uk. Available at: <https://www.nice.org.uk/guidance/ng104>

PWE-065 FOUR YEARS' EXPERIENCE OF THE USE OF ENDOSCOPIC ULTRASOUND FOR THE DIAGNOSIS OF PANCREATIC MALIGNANCY

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Introduction EUS guided tissue acquisition is an extensively used investigation to confirm the histopathological diagnosis in PB lesions. The Joint Advisory Group (JAG) suggests an adequacy rate of more than 75% for EUS-Fine Needle Aspiration cytology (FNAC) [1]. The aim of this study was to determine the diagnostic performance, adequacy of tissue acquisition and safety of EUS-FNA in PB lesions in a non-HPB centre in the UK.

Methods We carried out a retrospective audit of all patients (identified from endoscopy and pathology database) who underwent EUS-FNA between 1st January 2015 and 31st December 2018. Data collected include patient demographics, cross-sectional imaging, cytopathological diagnoses (Panc 1 to 5 based on European cytopathology classification of PB terminology[2]; neuroendocrine tumours were included in Panc 5), treatment modality, complications and 30 day procedure related mortality. Final diagnoses were confirmed from EUS FNAC, surgical resection specimen or cross-sectional imaging discussed in a MDT setting (if histology negative).

Results A total of 152 patients [mean age 66.9 years, 53.9% females] underwent 161 PB EUS-FNAC procedures. 135 patients had a final diagnosis of cancer.

144 (89.4%) samples were deemed adequate for analysis. Sensitivity, specificity, overall accuracy, positive predictive value (PPV) and negative predictive value (NPV) were 87.7%, 100%, 88.9%, 100%, and 46.7% respectively [with Panc3 included as false negative in patients with cancer as final diagnosis]. These figures would improve to 94.2%, 100%, 94.8%,