inoperable locally advanced pancreatic masses on imaging. Details recorded were: age, body mass index (BMI), co-morbidity including cardiovascular, diabetes mellitus, chronic airway disease and anticoagulation. Also recorded were the World Health Organisation (WHO) performance status, position of the tumour and the requirement of a biliary stent. Patients who received chemotherapy were identified from the chemotherapy registry data. The diagnosis of PDAC was based on histological diagnosis or with clinical progression compatible with the diagnosis or death from malignancy.

**Results** In total 104 underwent EUS-FNA [55 men, mean age 68.5 years SD ±9.1]. All patients had a performance status of <3. Of these patients 50 (48.1%) went onto start palliative chemotherapy. None of the 8 patients ≥80 years old who underwent EUS-FNA received chemotherapy compared to 50 out of 96 (52.1%) patients <80 years old (p=0.0014). There were no other significant differences or predictors of chemotherapy uptake in patients when analysing presence of comorbidity, position of tumour, jaundice at presentation, WHO performance status and BMI <20.

**Conclusion** In this study, no patients over 80 years old having undergone EUS-FNA went on to receive palliative chemotherapy for PDAC. We would advise an initial oncology consultation first in these patients to avoid unnecessary EUS procedures. In patients under 80 years old clinical assessment should be considered when referring patients for suspected inoperable PDAC for EUS-guided FNA as only half go on to receive treatment, however no factors apart from age seemed to predict the uptake of palliative chemotherapy. Further validation of these outcomes could form a decision tool to decide who should be triaged to oncology clinics before EUS-FNA performed.

**Abstracts**

**PTU-025 PANCREATIC CYSTS – CAN INVESTIGATIONS BE SAFELY RATIONALISED?**

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**Introduction** Pancreatic cysts are a frequent incidental finding on cross-sectional imaging of the abdomen. We examined the decision making and outcome of patients with a pancreatic cyst(s) discussed at the Royal Derby Hospital HPB cancer MDT and compared practice against the 2015 American Gastroenterology Association (AGA) and 2017 International Association of Pancreatology (IAP) guidelines on the management of pancreatic cysts.

**Methods** A search of HPB MDT meeting reports, from January 2016 to October 2017 (n=1144) identified 88 patient (51 female) reports relating to the first discussion of a pancreatic cyst. Electronic medical records were examined to collect data pertaining to subsequent investigations and outcome. Details of medical comorbidities were used to calculate a Charlson comorbidity index.

**Results** The median age was 72 years (range 32-87) and the median estimated 10 year survival based on the Charlson Comorbidity Index was 53% (range 0%-98%).

86% of pancreatic cysts were judged to be an incidental finding. The median cyst diameter was 19.5 mm (range 4–110 mm). 43/88 (49%) patients proceeded to endoscopic ultrasound (EUS), with 33 having a fine needle aspiration (FNA). 4/88 (5%) patients had probably malignant (C4) or malignant (C5) cytology. All 4 patients had “high risk stigmata” on their initial CT/MRI. The final outcome for most patients was no further intervention (56%) or follow-up imaging (36%), with 5 (6%) patients offered surgery.

Applying the 2017 IAP management algorithm, 13 (15%) patients had “high-risk stigmata” on CT/MRI and except where their performance status or co-morbidity precluded further investigation/treatment (5), were recommended for surgery (1) or EUS (7). Of the remaining 75 patients, 45 (60%) had no worrisome features on CT/MRI and so would not have required EUS, 21/45 (47%) of these patients in our practice underwent EUS, but none demonstrated definite mural nodules, main duct involvement or suspicious/positive cytology.

The 2015 AGA management algorithm could only be applied to those patients who had undergone initial radiological assessment with MRI (n=11). None of these patients had two positive features on MRI, indicating a need for EUS. 6/11 (55%) patients did, however, have an EUS, with none identifying positive features or concerning cytology.

**Conclusions** These findings suggest that a significant proportion (24%) of patients with pancreatic cysts underwent unnecessary EUS. Application of international guidelines can reduce the number of patients who require an endoscopic ultrasound.
Conclusions Our study indicates that EUS FNA microcore biopsy is more sensitive than endobiliary biopsy in the diagnosis of malignant pancreaticobiliary lesions. Because lesions are visualised, sampling is targeted and this provides high tissue yield enabling a malignant histological diagnosis to be rendered and reduces the need for repeated sampling. The tissue sample is also amenable to immunohistochemical staining which is important in characterising suspected metastases. EUS FNA microcore biopsy has been demonstrated to be useful in sampling suspected primary biliary neoplasm. As such, we believe that EUS FNA should be the standard method of tissue sampling in suspected malignant pancreaticobiliary lesions.

PTU-026 SURGICAL MANAGEMENT OF DUODENAL NEUROENDOCRINE TUMOURS

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Introduction Duodenal neuroendocrine tumours (D-NETs) are rare tumours. The management of D-NETs is complex due to the lack of understanding of the natural course of disease. We present a single centre experience in the surgical management of these tumours with long term follow up.

Methods Retrospective single arm observational study of D-NETs treated at our institution between January 2010 until August 2017.

Results Twenty four patients (13 male), with a mean age of 60.33±13.6 were treated for D-NETs during the study period. The patients either underwent pancreaticoduodenectomy (7 patients-29.2%), segmental duodenal resection (7 patients-29.2%) or Endoscopic Mucosal Resection (10 patients-41.7%). The mean overall survival was 96.08±3.82 months (95% CI: 88.58–103.58); 6 patients presented recurrence at 23.41±8.65 months. There was no statistical significant difference in either disease free survival (Mantel-Cox Log Rank p=0.327) or overall survival (Mantel-Cox Log Rank p=0.317) between patients undergoing each type of resection. Among patients who underwent surgical resection (pancreaticoduodenectomy or segmental resection) we were unable to correlate the size of the primary tumour.

Conclusions Formal oncological surgical resection should be considered in patients with locally advanced disease if patients are fit and wish to undergo surgery. In patients with localised disease (pT1) endoscopic resection can be considered with evidence of good long term survival.

PTU-027 IS METABOLIC BONE DISEASE ROUTINELY TESTED FOR IN CHRONIC PANCREATITIS?

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Introduction Chronic pancreatitis is associated with metabolic bone disease which increases the risk of fragility fractures. The National Institute of Clinical Excellence (NICE) guidelines recommends that all patients aged 50 or over should be considered for DEXA scanning if at risk. Previous data has shown underutilisation of DEXA scanning in this population despite increased risk of osteoporosis. The aim of this study was to assess compliance with metabolic bone assessment in patients with chronic pancreatitis, assess the prevalence of abnormal DEXA scans and the impact of this assessment on appropriate management.

Patients and methods Retrospective analysis of outpatient coding for “chronic pancreatitis” was performed over a 2 year period. Patient demographics, aetiology of chronic pancreatitis, prescription of pancreatic enzyme replacement therapy (PERT), vitamin D levels, DEXA scan result, history of fracture and bone protection medications were noted. Univariate and multivariable analysis were performed to explore why DEXA scanning was not performed as well as factors associated with abnormal scans. The impact of DEXA scanning on prescription of bone protection was also assessed.

Results 134 chronic pancreatitis patients (mean age 57.6 years, 88 males) were included with aetiology recorded as alcohol (n=68), idiopathic (n=52), hypertriglyceridaemia (n=5), autoimmune (n=4), hereditary (n=3), anatomical (n=1) and biliary (n=1). 102/134 (76.1%) had vitamin D levels tested of which 82/104 (78.8%) were low. 62/134 (46.3%) had been sent for DEXA scanning of which 8 results were unavailable, 19 (30.6%) were normal, 24 (38.7%) showed osteopenia and 11 (17.7%) osteoporosis. 46/62 (74.2%) who had a DEXA scan were on bone protection compared to 30/72 (41.7%) who did not have a DEXA scan (p=0.002). Lack of DEXA scanning was associated with female sex (adjusted OR 0.22, 95% CI 0.09–0.57, p=0.0017) and not requiring PERT (adjusted OR 0.44, 0.20–0.95, p=0.035). Not requiring PERT was also independently associated (protective) with abnormal DEXA scan results (adjusted OR 0.17, 95% CI 0.03–0.98, p=0.047).

76 patients were prescribed bone protection with a higher proportion in those that had undergone a DEXA scan (46/62 with DEXA vs 30/72 without DEXA, p=0.002). 21/134 (15.7%) had a previous fracture of which 10 had DEXA scanning. 8/10 were on bone protection compared to 2/11 who had not had a DEXA scan (p=0.03).

Conclusions Despite a high prevalence of metabolic bone disease, less than half of chronic pancreatitis patients were assessed. Not requiring PERT and females were less likely to have a DEXA. Interestingly, DEXA scanning was associated with appropriate prescription of bone protection. Whether a standardised proforma would improve rates of metabolic bone assessments needs to be studied.

PTU-028 LINKED COLOUR IMAGING INCREASES THE DIAGNOSTIC YIELD AND ACCURACY OF TYPE 1 GASTRIC CARCINOIDs

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Introduction Type 1 Gastric carcinoid tumours (GCTs) are the most common neuroendocrine tumours arising from enterochromaffin cell hyperplasia and hypergastrinaemia on a background of atrophic gastritis. Endoscopic diagnosis of Type 1 GCTs remains a challenge. White light endoscopy (WLE) and