compared to other conditions and thereby determine its use in the pathway for the investigation of EoE patients.

Method The electronic records of patients with EoE who also had a BRAVO were examined retrospectively between June 2008 and January 2018 at a single centre. The total time of recording of the BRAVO capsule was noted and whether reflux was significant. In addition the number of eosinophils per high power field on the oesophageal biopsies taken prior to or at the same time as the BRAVO study was recorded.

Results Ten patients with EoE underwent 12 BRAVO studies (M: F 1:1, age range 18–56). One study detached within one day, three after two days and eight after four days. The patient whose capsule detached early went on to have a second BRAVO study lasting 4 days. Detachment times were compared to those for non-EoE in our department for a single calendar year (December 2016-December 2017). There was no significant difference in detachment rates between these two groups ($p<0.1$). The range of eosinophils per HPF was 20 to 71 (average 38.1, standard deviation 20.5).

Conclusion Bravo pH manometry is a useful investigation in patients with EoE and beneficial to the patient; reducing the number of invasive procedures by allowing the attachment of the BRAVO capsule at the same time as taking post-PPI biopsies. The detachment was not significantly greater in patients with EoE although the numbers are small. There was no correlation between eosinophil count per HPF and attachment times. The only drawback is that patients are expected to stop PPI 7 days prior to the BRAVO being placed with a theoretical risk of a recrudescence of oesophageal eosinophilia in that time although the standard time for redevelopment of EoE is around 6–8 weeks.

Can you give a more precise definition of outcomes such as

Primary outcome: surface regression at 3/12

Secondary outcomes: stricture rate and EoT CRD and CRIM

Pancreas

OTU-017 DOES IGG4 LEVEL AT THE TIME OF DIAGNOSIS CORRELATE WITH OUTCOME IN IGG4-RELATED DISEASE?

Manu Nayar*, Kofi Oppong, John Leeds, Noor Bekkali, Patrick Tsang. *HPB Unit, Freeman Hospital, Newcastle Upon Tyne, UK*

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Introduction IgG4-related disease (IRD) is a multisystem disease where raised serum IgG4 may predict relapse and multi-organ involvement.[1] The aim of this study was to compare demographics, multi-organ involvement, response to treatment, relapse rate and end organ damage in patients with versus those without a raised serum IgG4 level at the point of diagnosis.

Methods Patients diagnosed with IgG4 disease between January 2005 and September 2016 according to the ICD Criteria formed the study population. Patients were divided into two groups – Group 1: patients with elevated serum IgG4 and Group 2: normal serum IgG4. Patients' demographics, other organs involvement, response to steroid treatment, relapse rate and long-term complications (organ dysfunction, exocrine and endocrine insufficiency) were compared between the 2 groups. For this study, we analysed the data based on 2 levels of IgG4 A:>than upper limit of normal and B: Twice the upper limit of normal as reported in literature.[1] The patients were followed up for at least 12 months from the time of diagnosis.

Results Of the 47 patients identified, 31 (66%) patients had elevated serum IgG4 at diagnosis. There was no statistically significant difference between the 2 groups in age (median age 66 vs 63, $p=0.116$) and sex (male 85.7% vs 58.8%, $p=0.072$); other organs involvements (85.7% vs 94.1%, $p=0.635$), response to steroids (92.6% vs 87.5%, $p=0.062$), relapse rate (32.1% vs 11.8%, $p=0.165$) and organ dysfunction (10.7% vs 5.9%, $p=1.0$).When the serum IgG4 cut-off was twice the upper limit of normal (ULN), more patients had exocrine insufficiency (78.9% vs 46.2%, $p=0.035$). However other organs involvement (89.4% vs 88.5%, $p=1.0$), response to steroids (94.4% vs 88.0%, $p=0.628$), relapse rate (36.8% vs 15.4%, $p=0.160$), organ dysfunction (10.5% vs 7.5%, $p=1.0$) and endocrine insufficiency (42.1% vs 46.2%, $p=0.973$) showed no statistically significant difference. Median follow-up was 40 months (range 12–140 months).

Conclusions This single centre observational study shows that a raised serum IgG4 at the point of diagnosis greater than ULN did not affect prognosis in patients with IRD. However a raised serum IgG4 greater than two times the ULN was significantly associated with pancreatic exocrine insufficiency and relapse in patients with IgG4-RD. Larger multicentre studies with longer follow-up are required to corroborate these findings and define the role and cut-off value of serum IgG4 in outcomes of IgG4-RD.

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OTU-018 ENDOSCOPIC ULTRASOUND FINE NEEDLE BIOPSY IS SUPERIOR TO FNA FOR ASSESSING PANCREATIC NEUROENDOCRINE TUMOURS

John Leeds*, Manu Nayar, Sarah Johnson, Colin Wilson, Noor Bekkali, Beate Haugk, Antony Darne, Kofi Oppong. *Newcastle Upon Tyne Teaching Hospitals NHS Foundation Trust, Newcastle Upon Tyne, UK*

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Introduction Pancreatic neuroendocrine tumours (PanNET) are a distinct tumour type with outcomes dependent, in part, upon grading by Ki67. Endoscopic ultrasound (EUS) guided fine needle aspiration (FNA) shows variable accuracy to determine Ki67 or grading. Our aim was to assess whether Ki67 and grade can be more accurately determined using fine needle biopsy (FNB) compared to FNA using surgical excision histology as the gold standard.

Methods Retrospective analysis of all pancreatic pathology for neuroendocrine tumours was performed for the period Jan 2009 – Jun 2017. Patients were included if they had undergone EUS guided sampling of the lesion prior to surgical resection. Patient demographics, lesion size and location were noted. FNA and FNB results were examined and Ki67 and grade recorded. Surgical histology reports were examined and time from EUS to surgery, operation performed, Ki67 and grade recorded and compared using correlation coefficient and Cohen's Kappa.

Results 162 patients were diagnosed with PanNET in our centre over the study period of which 57 underwent surgical resection (mean age 55.6, 30 males). 22 lesions (mean size 24.5 mm) were located in the head, 10 in the body and 25 in the tail of the pancreas. 35 lesions underwent FNA and 26 FNB (4 lesions underwent both) all of which confirmed PanNET on cytology or histology respectively. On surgical histology 33 lesions were grade 1, 22 were grade 2, 1 was grade 3 and 1 was mixed neuroendocrine-acinar. 23/35 FNA samples could report Ki67/grading compared to 26/26 FNB samples (p=0.0006). Ki67 on FNA showed a weak correlation with surgical pathology (R=-0.08, p=0.74) whereas Ki67 on FNB showed a moderate correlation (R=0.65, p=0.0004). With respect to tumour grading, FNA samples showed a poor correlation (kappa=0.026) and FNB samples showed a moderate correlation (kappa=0.474). Excluding cystic lesions gave similar results. 12 samples had been obtained using the Procore needle and 13 samples obtained using the Sharkcore needle. Procore correlation of Ki67 to surgical resection histology was moderate (r=0.521, 95% confidence interval −0.07–0.84, p=0.08). Sharkcore correlation of Ki67 to surgical resection histology was good (r=0.788, 95% confidence interval 0.42–0.93, p=0.0013). With respect to tumour grading, both Procore and Sharkcore showed moderate correlation (kappa=0.47 and 0.435 respectively).

Conclusion Both FNA and FNB can be used to confirm a diagnosis of PanNET. However, FNB samples were significantly more likely to provide adequate material for Ki67/grading and showed a closer match to Ki67/grading of the final surgical histology.

OTU-019 PANCREATIC ENZYME SUPPLEMENTATION IS ASSOCIATED WITH IMPROVED SURVIVAL IN INOPERABLE PANCREATIC CANCER

Rohit Sinha*, Sarah Manning, Charlotte Morrison, John R Greenaway, Debasis Majumdar, Darren G Craig, Syed Zubair, Jeremy Dean, Vikramjit Mitra. *James Cook University Hospital, South Tees NHS Foundation Trust, Middlesborough, UK*

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Introduction In the UK, 85% of pancreatic cancer (PC) patients are inoperable at presentation with a median survival of 6–9 months1. BSG guidelines recommend that patients with PC should receive pancreatic enzyme supplementation to maintain bodyweight and improve quality of life1. It is not known whether pancreatic enzyme supplementation prolongs survival. In this study, we examined the impact of pancreatic enzyme supplementation in inoperable pancreatic cancer.

Methods This was a single-centre retrospective study between January 2016 and June 2017. Consecutive patients deemed inoperable in the MDT were identified. Patients were subdivided in two cohorts, pancreatic enzyme supplement (PES) and Non-PES. Date of diagnosis was determined by the date of cross-sectional imaging. Use of pancreatic enzymes was determined through patient summary care records. All cases were followed up from the date of diagnosis until the date of death or censor date (31 st December 2017). Primary outcomes were all-cause mortality.

Results 62 patients were included (51 had histological confirmation, 11 were radiological diagnosis). Adenocarcinoma was the commonest histological finding. Anatomical distribution of tumours was – head/uncinate (27), neck (5), body (18) and tail (12). MPD dilatation was noted in 33 patients. The mean age among the PES and Non-PES groups were comparable at 70.9 (±9.9) and 72.2 (±9.5) years respectively. 48% were female in PES group compared with 40% in non-PES group. Median follow up was 133 days (IQR 187). Unadjusted median survival days in PES group was 221 [95% CI 107.4, 334.6] compared with 61 [95% CI 35.5, 86.5] in non-PES group. Cox regression models were fitted to adjust for effects of baseline characteristics. Survival was significantly better in PES group (Log Rank p=0.004) than that seen in non-PES group (figure 1). The survival difference remained significant after adjusting for gender, age, histology of pancreatic cancer, neutrophil to lymphocyte ratio and presenting body-mass index (n=53). Lack of pancreatic enzyme supplementation was associated with significant mortality risk, adjusted hazard ratio of 2.7 [95% CI 1.38, 5.31; p=0.004]. 21 (78%) and 17 (49%) patients in PES group (n=27) and non-PES group respectively were treated with palliative chemotherapy and the rest were treated with best supportive care.

Conclusions Our study concludes that pancreatic enzyme supplementation is associated with improved survival in inoperable pancreatic cancer. Further prospective studies are required to confirm our findings.

OTU-020 ALTERED FC AND FAB GLYCOSYLATION STATUS IN PATIENTS WITH IGG4-RELATED SCLEROSING CHOLANGITIS AND AUTOIMMUNE PANCREATITIS

[1]Emma Culver*, [2]Fleur Sanne van de Bovenkamp, [2]Ninotska Derksen, [1]Tamsin Cargill, [3]Carolien Koeleman, [3]Lisa Neef, [1]Eleanor Barnes, [2]Rob Aalberse, [3]Manfred Wuhrer, [2]Theo Rispens. *[1]Translational Gastroenterology Unit, John Radcliffe Hospital and Nuffield Department of Medicine, University of Oxford, Oxford, UK; [2]Sanquin Research, Department of Immunopathology and Landsteiner Laboratory, Academic Medical Centre, University of Amsterdam, Amsterdam, The Netherlands; [3]Center for Proteomics and Metabolomics, Leiden University Medical Center, Leiden, The Netherlands*

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Introduction IgG4-related disease (IgG4-RD) is a systemic fibro-inflammatory condition characterised by an abundance of $IgG4^+$ antibodies in the serum and tissue of involved organs. IgG glycosylation plays an important role in many chronic inflammatory and autoimmune conditions. We sought to assess the glycosylation status in patients with IgG4-RD and correlate with disease activity, damage and response to treatment.

Methods IgG Fc and Fab glycosylation status was assessed in patients with IgG4-RD involving the bile ducts (IgG4-sclerosing cholangitis, IgG4-SC) and pancreas (autoimmune pancreatitis) (n=22), disease controls with primary sclerosing cholangitis (DC n=22) and healthy controls (HC n=22). Disease activity, organ damage and response to treatment were assessed serially using the IgG4-responder index. Serum IgG and subclasses were quantified using an ELISA and nephelometry. IgG and subclass Fc glycosylation was analysed by mass spectrometry and Fab glycosylation by lectin (SNA) affinity chromatography. Statistics were performed using Prism.

Results IgG4-SC and AIP patients exhibited reduced total IgG Fc galactosylation and IgG1 Fc bisection, and increased IgG4 Fc fucosylation and IgG2/3 Fc hybrid compared with HC. There was recovery of IgG1 Fc bisection (increase) and IgG2/3 Fc hybrid (decrease) upon corticosteroid treatment. IgG Fc galactosylation and IgG2/3 Fc hybrid correlated with disease activity. IgG Fab glycosylation was higher in IgG4-RD patients, with an increase in IgG4-specific, and to a lesser extent IgG1-specific, Fab glycosylation compared to HC and DC.

Conclusions In the first study to assess glycosylation status in IgG4-RD, we demonstrated alterations in both IgG Fc and Fab glycosylation, which may play a role in pathophysiology and serve as a biomarker of disease.

PTU-022 WHAT IS THE YIELD AND CLINICAL UTILITY OF EUS IN PATIENTS WITH PRIOR NON-DIAGNOSTIC MRCP?

Noor Bekkali*, Fahd Rana, Manu Nayar, John Leeds, Kofi Oppong. *Freeman Hospital, Newcastle, UK*

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Introduction The most effective investigation for suspected gallstones between MRCP and EUS is unclear. A 2015 Cochrane systematic review of their performance in common bile duct (CBD) stones concluded that the tests were of comparable accuracy. Conversely, a 2017 meta-analysis found EUS to be more sensitive. Any superiority of EUS may be due to better accuracy in detecting small stones. MRCP is routinely favoured as the 2nd line test following a non-diagnostic abdominal ultrasound and EUS subsequently performed as the 3rd line test when suspicion remains after a non-diagnostic MRCP. The yield and clinical utility of EUS in this setting is unclear. The aim was to identify the yield of EUS in patients with prior non-diagnostic MRCP undergoing EUS in our tertiary service.

Methods All EUS reports from 2017 were reviewed along with the electronic patient records to identify cases with prior MRCP. Indication for the procedure, symptoms, liver blood tests and interval between MRCP and EUS were recorded. Findings of sludge, microlithiasis (stones<2 mm) and discrete stones were categorised together as stones. Subsequent ERCP or cholecystectomy was identified. Yield was defined as a finding that would lead to a change in management.

Results A total of 1058 diagnostic EUS were screened of whom 253 (24%) had prior MRCP and formed the study group. Median age was 58 (16–88) years, 179 (71%) were female and 91 (36%) had a cholecystectomy. Median interval between EUS and MRCP was 5.2 (0.1–37) months. Indications for EUS were: n=76 (30%) dilated CBD, n=65 (26%) query CBD stones, n=54 (21%) unexplained acute pancreatitis (AP), n=23 (9%) right upper quadrant pain, n=17 (6.7%) abnormal LFTs, n=16 (6.3%) double duct sign and n=2 (1%) dilated PD. There was a yield from EUS in 30 (12%) patients with no significant difference between those with (n=11) or without cholecystectomy (n=19). Stones were identified in 24 cases with median size of 4 mm (range 2–8) in: CBD (n=16), cystic duct (n=1) and GB (n=7). Three had abnormal CBD without stones (calcification CBD wall, thick walled CBD, polyp), 1 patient with possible stone on MRCP had no stone seen on EUS, 1 had a pancreatic mass, and 1 had chronic pancreatitis. All patients in whom EUS findings indicated an intervention (26/30) have been referred: ERCP in 13, cholecystectomy in 9, ERCP and cholecystectomy in 3 and chemotherapy in 1.

Conclusion EUS following non-diagnostic MRCP is a sizeable workload accounting for 24% of diagnostic activity in our unit with a clinically significant yield in 12% of predominantly small stones. Further prospective studies are required to ascertain the most cost-effective way to incorporate EUS into the investigation of suspected gallstone disease.

PTU-023 ENDOSCOPIC ULTRASOUND BIOPSY PRIOR TO PALLIATIVE TREATMENT FOR PANCREATIC CANCER: CAN WE PREVENT UNNECESSARY PROCEDURES?

Mustafa Jalal*, Jonathan Wadsley, Andrew Hopper. *Gastroenterology department and Weston Park Hospital, Sheffield Teaching Hospitals, Sheffield, UK*

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Introduction Pancreatic adenocarcinoma (PDAC) has a very poor prognosis with most patients presenting with advanced incurable disease. Palliative chemotherapy can have a significant improvement in survival, but given the potential severe complications patient assessment and histological confirmation with endoscopic ultrasound fine needle aspiration (EUS-FNA) is required. The rapid progression of PDAC can result in patients urgently travelling to tertiary centres and undergoing EUS-FNA (which is an invasive, sedated procedure with associated morbidity) prior to formal assessment in patients where the chemotherapy is subsequently not given. We aimed to see if there are pre-test prediction factors for non-uptake of palliative chemotherapy in PDAC in our cancer network.

Methods We retrospectively reviewed consecutive patients referred for EUS-FNA over a 2 year period for evaluation of 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 form 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.

PTU-024 PANCREATIC CYSTS – CAN INVESTIGATIONS BE SAFELY RATIONALISED?

Claire Deakin*, Gillian Flynn, Kate Wheeler, Pete Thurley, Imran Bhatti, Andrew Austin, Adam Lawson. *Derby Teaching Hospitals NHS Foundation Trust, Derby, UK*

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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 Charleson comorbidity index.

Results The median age was 72 years (range 32–87) and the median estimated 10 year survival based on the Charleson 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.

PTU-025 EUS FNA MICROCORE BIOPSY IS SUPERIOR TO ENDOBILIARY BIOPSY IN DIAGNOSING MALIGNANT PANCREATICOBILIARY LESIONS

ReeNee Tiam*, Ban Jalil, Justin Cooke. *Hull and East Yorkshire Hospitals NHS Trust, Hull, UK*

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Introduction The ability to provide definitive and timely histological diagnosis of malignancy in suspected malignant pancreaticobiliary lesions depends on high quality tissue sampling. We conducted a study to evaluate the diagnostic utility of endobiliary biopsy versus endoscopic ultrasonography-guided fine needle aspiration (EUS FNA) microcore biopsy.

Methods We performed a retrospective search of our laboratory information management system for patients with clinically suspected malignant pancreaticobiliary lesions who had endobiliary and EUS FNA microcore biopsies. The haematoxylin and eosin-stained slides were retrieved and reviewed. All biopsies were categorised into whether a definitive diagnosis can be established (diagnostic) or not (non-diagnostic).

Results The search yielded 94 endobiliary biopsies and 78 EUS FNA microcore biopsies. 77 out of the 94 endobiliary biopsies were deemed adequate, and out of this 54 was diagnostic of malignancy (sensitivity 57%). In 11 cases where the endobiliary biopsy was not diagnostic, subsequent EUS FNA microcore biopsies provided a malignant diagnosis in 9. 96% of EUS FNA microcore biopsies were adequate and in 62 a malignant diagnosis could be established (sensitivity 83%). Cholangiocarcinoma was the pathological diagnosis in the majority of the endobiliary biopsies and there were two metastases from lung and two neuroendocrine tumours. The main malignant diagnosis in the EUS FNA microcore biopsies was adenocarcinoma of pancreaticobiliary-type, but also included neuroendocrine tumours, solid pseudopapillary neoplasm and adenosquamous carcinoma. There were also three metastases from the colorectum, kidney and breast.

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

Michail Pizanias*, Elissaios Kontis, Omar Barbouti, Evangelos Prassas, John Ramage, Andreas Prachalias, Rajaventhan Srirajaskanthan. *King's College Hospital, London, UK*

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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 60.33No entity13.6 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 96.08No entity3.82 months (95% CI: 88.58–103.58); 6 patients presented recurrence at 23.41No entity8.65 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 tumour with presence of nodal disease at the time of resection. Among those patients who presented with metastatic liver lesions, those were of the same or lower grade compared to 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?

Fahd Rana*, Noor Bekkali, Richard Charnley, Jennifer Logue, Manu Nayar, Kofi Oppong, John Leeds. *Freeman Hospital, Newcastle Upon Tyne, UK*

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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) guidance 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 fractures 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

Shraddha Gulati*, Rajaventhan Srirajaskanthan, Andrew Emmanuel, John Ramage, Amyn Haji, Bu'Hussain Hayee. *King's College Hospital, London, UK*

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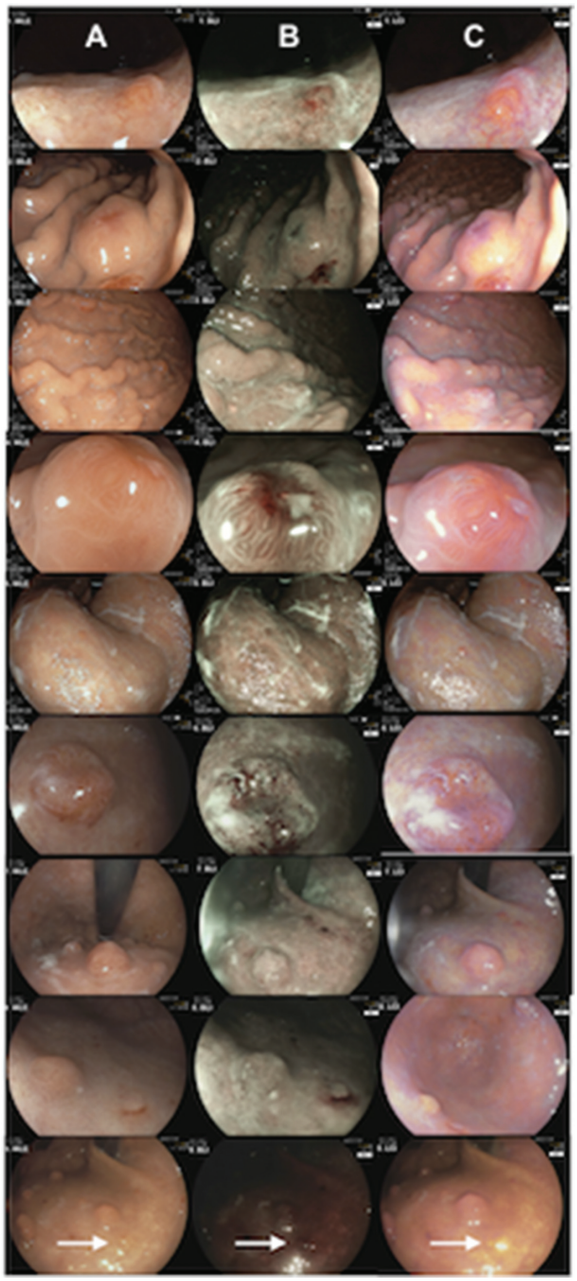
Introduction Type 1 Gastric carcinoid tumours (GCTs) are the most common neuroendocrine tumours arising from enterchromaffin cell hyperplasia and hypergastrinaemia on a background of atrophic gastritis. Endoscopic diagnosis of Type 1 GCTs remains a challenge. White light endoscopy (WLE) and Narrow Band Imaging (NBI) have failed to demonstrate reliable endoscopic signs of carcinoid which are often misdiagnosed as hyperplastic, adenomatous or neoplastic lesions, warranting histopathological diagnosis. Furthermore, microcarcinoids are usually an incidental diagnosis during routine gastric biopsy. Here we evaluate the use of Linked Colour Imaging (LCI); the latest Fujifilm post- processing digital technology for the endoscopic diagnosis of Type 1 GCTs.

Methods Consecutive patients undergoing endoscopic surveillance of Type 1 GCTs were included. Patient baseline demographics were recorded. Endoscopic examination was performed using Fujifilm ELUXEO^{TM} EG-760Z gastroscopes and simethicone/saline irrigation with imaging performed in the following sequence; WLE, blue laser imaging (BLI) and finally LCI. Lesion number, visibility using a known endoscopic scale (1–4; poor-excellent), endoscopic diagnosis were recorded for each imaging modality. Lesion demarcation and surface pattern features using LCI were recorded. High quality images of histopathologically confirmed Type 1 GCTs were selected for independent review by 2 further endoscopists blinded to histopathological diagnosis and inter-observer agreement calculated.

Results 3 patients (2 F), mean age 51.6 years were included. The total number of gastric lesions identified by WLE, BLI and LCI were 14, 8 and 24 respectively. LCI identified an additional 10 and 16 gastric lesions compared to WLE and BLI respectively. Mean lesion size was 6.5 (2–15) mm. Atrophic gastritis was confirmed histopathologically in all patients. Nine lesions with optimal image quality were selected for further review (Figure.1). Endoscopic features included, villous/inflammatory surface pattern (n=9, 100%), dense vasculature (n=9, 100%) and an amber hue (n=9,100%). Diagnostic accuracy for Type 1 GCTs using WLE, BLI, and LCI were 22%, 22% and 100% respectively. Median visibility of all lesions for both WLE and BLI were 2 (1–4) and 4 (3–4) using LCI. All lesions were well demarcated using LCI, 44% with WLE and 22% with BLI. Inter-observer agreement for the LCI diagnosis of Gastric NET was 100%.

Conclusions LCI increases diagnostic yield and accuracy compared to both WLE and BLI and provides consistent endoscopic features;a novel feature over the challenges of prior imaging modalities. Lesion demarcation is clearer using LCI;an important factor to guide successful and complete endoscopic resection.



Abstract PTU-028 Figure 1 Type 1 GCT seen in WLE (A), BLI (B) and LCI (C)

PTU-029 ARE EXTRA-PANCREATIC MALIGNANCIES MORE PREVALENT IN PATIENTS WITH INTRADUCTAL PAPILLARY MUCINOUS NEOPLASM OF THE PANCREAS?

[1]Trevor Tabone*, [2]Kelvin Cortis, [3]Neville Azzopardi. [1]*Department of Medicine, Mater Dei Hospital, Msida, Malta*; [2]*Department of Radiology, Mater Dei Hospital, Msida, Malta*; [3]*Department of Gastroenterology, Mater Dei Hospital, Msida, Malta*

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Introduction The association between the presence of an intraductal papillary mucinous neoplasm (IPMN) of the pancreas and the prevalence of extra-pancreatic malignancies (EPM) remains unclear. This is important with regards to determining suitable follow-up plans for IPMN patients. This single-centre, retrospective study aims to determine whether the prevalence of EPM is higher in IPMN patients as compared to the general Maltese population.

Methods A cohort of 175 patients with an incidental radiological diagnosis of IPMN on magnetic resonance imaging between 2010 and 2017 were recruited from a single, main centre in Malta. The prevalence of a previous history or synchronous diagnosis of EPM was recorded by reviewing electronic histopathology results of biopsies or resection specimens. EPM was defined as per ICD-10 (International Statistical Classification of Diseases and Related Health Problems) C00–80, thus excluding non-melanoma skin cancer and haematological malignancies. All EPMs were based on a tissue diagnosis. The prevalence of EPM was calculated and statistically compared with the lifetime prevalence of developing EPM (ICD-10, C00-C80) in the general Maltese population. Data regarding population demographics was obtained from the National Statistics Office and the National Cancer Platform.

Results 36 out of a total of 175 IPMN patients were found to have an EPM resulting in a prevalence of 20.57%. The commonest malignancies were breast 30.6% (n=11), colorectal 25.0% (n=9), and renal cell carcinoma 11.1% (n=4) respectively. The calculated lifetime prevalence (risk) of developing an EPM (Adjusted for Multiple Primaries – AMP method) in the general Maltese population is 19.5% (1 in 5). This was not found to be statistically significantly different when compared to the IPMN patient cohort (p=0.86).

Conclusions A previous history or synchronous histological diagnosis of EPM was not shown to be more prevalent in patients diagnosed with an IPMN of the pancreas, as compared to the general Maltese population. Given these findings, there is currently no rationale for undergoing further thorough investigations for an EPM in IPMN patients. The need for prospective, long-term follow-up studies in such patients is paramount to establish incidence rates for EPMs following an IPMN diagnosis.

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OWE-019 MECHANISMS OF CHEMOTHERAPY-INDUCED DIARRHOEA

Stephanie French, Andrea Davies, Munir Pirmohamed. *University Of Liverpool, Liverpool, UK*

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