standard FNA needle. We hereby present data on yield of 20G Cook EchoTip Procore™ FNB needle.

Aim To compare the diagnostic yield of 20G FNB needle and compare the incremental yield of histological over cytological preparation of tissue acquired.

Methodology Prospective non-blinded randomised study. All patients undergoing EUS guided FNA/FNB from January 2016 to January 2018, for all upper GI and HPB lesions were included. FNB was performed using Cook Echotip Procore 20GTM needle, Olympus EU-ME2TM processor and linear echoendoscopes was used. All patients had 2 or 4 passes done with the same needle, specimens from each pass were randomly collected in BD Cytotrich™ or Formalin. Each preservative had either 1 or 2 passes of material. Only C5 malignancy diagnosis from the primary pathologist or from second expert opinion with MDT acceptance was considered positive for cancer, other non-malignant conditions was considered as positive for statistical purposes only when clear diagnosis was offered by pathologist.

Results In total, 147 patients had EUS guided sampling and 111 patients had EUS FNB with 20G FNB needle. 68 M: 43 F. Average age was 66.7 years (± 11.3). Of these, 102 had samples both for cytology and histology. Final diagnosis was made in 92 (90.2%) patients. Pancreatic cancer was seen in 52 (51%) patients, cholangiocarcinoma in 7 (6.7%), NET/GIST in 11 (10.8%), Lymphoma in 11 (10.8%), malignant nodes in 6 (5.9%), other cancers (e.g. rhabdomyosarcoma) in 6 (5.9%), benign (e.g. chronic pancreatitis, autoimmune pancreatitis, paraganglioma, reactive nodes etc) in 8 (7.7%), and no diagnosis was made in 10 (9.8%).

Histological processing provided answers in 87 (78.3%) patients with combined cytological and histological processing providing diagnosis in the rest of 15 (13.5%) with overall diagnostic yield of 91.9% (102 patients).

Conclusion Our study results show that adequate samples can be obtained for histological processing with Cooke Procore™ FNB needles with good cumulative diagnostic yield (92%) and significant diagnostic yield from preferentially processing samples for histological assessment rather than standard cytology, possibly due to better preservation of tissue architecture and cell morphology. Limitations include non-specialist reporting cytopathologist and non-randomised retrospective design.

PTH-042 COLORECTAL STENTING AS A BRIDGE TO SURGERY: A DECADE OF SINGLE CENTRE SUCCESS

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Introduction Colonic stenting in obstructing left sided colorectal cancer (CRC) using self-expanding metallic stents has been utilised as a conservative management intervention, as well as a bridge to definitive surgery. Despite high reported success rates technically and clinically of stent deployment, as well as improved rates of primary anastomosis, controversy remains about the use of this procedure as a bridge to surgery. We report on a decade of single centre experience.

Methods Retrospective analysis of patients requiring urgent colorectal cancer stenting as a bridge to surgery between 2006 and 2017. Primary outcomes measured were clinical and

technical success. Secondary outcomes recorded were survival, complications, primary anastomosis and stoma formation

Results 36 patients underwent CRC stenting with the intention of being a bridge to elective surgery, of whom 44% were female. Mean age was 65.7 years. The majority of cases (84%) were undertaken by one of the 3 main operators. At staging, 9 patients (25%) were T3; 17 (47.3%) T4. 25% of patients were ASA 3. Technical success was reported in 89% of cases and clinical success 86%. At elective surgery primary anastomosis was achieved in 61%. 5 reported early complications, including 2 clinical perforations and 2 radiological perforations. Mean survival post stenting procedure was 24 months (range 3–55 months), with death due to metastatic CRC. There were no deaths within 30 days.

Conclusions We demonstrate excellent technical success with this treatment modality. By temporising patients using endoscopic stenting, patients are optimised for elective surgery by colorectal surgeons with good primary anastomosis rates, and excellent post procedure mortality.

PTH-043 ADULT COELIAC DISEASE REMISSION ASSESSMENT: DOES A D1 BIOPSY INCREASE THE DETECTION OF VILLOUS ATROPHY?

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Introduction The duodenal bulb (D1) has been shown to be a sensitive site for detecting villous atrophy (VA) in newly diagnosed coeliac disease (CD), however there is a scarcity of data from those with established CD. In patients with established CD, we aim to establish whether D1 biopsies improved the identification of VA compared to biopsies from the second part of the duodenum (D2) alone.

Methods 251 patients with established CD were prospectively recruited from the endoscopy department at the Royal Hallamshire Hospital between 2013 and 2017. These patients were undergoing repeat gastroscopy to assess dietary adherence. All patients underwent a gastroscopy, with one biopsy taken from the duodenal bulb and four from D2. Biopsies were classified according to Marsh criteria. We assessed concordance of histology between the D1 and D2 sites, and 95% confidence intervals were calculated for all results using a binominal distribution.

Results 251 patients were recruited (70.5% female, age range 17–81 years, median age 53 years) having been on a gluten-free diet for a median duration of 6 years. Concordant results: 35.1% (n=88, 95% CI: 29.16 to 40.96) had normal duodenal biopsies in both D1 and D2; 32.3% (n=81, 95% CI: 26.49 to 38.05) had VA in D1 and D2; 18.3% (n=46, 95% CI: 13.54 to 23.11) had raised intra-epithelial lymphocytes (IELs) only in both D1 and D2. Discordant results: 4.4% (n=11, 95% CI: 1.85 to 6.91) had VA in D1 but not D2; 2.4% (n=6, 95% CI: 0.50 to 4.28) had raised IELs in D1 but normal histology in D2. 2.8% (n=7, 95% CI: 0.75 to 4.83) had VA in D2 but normal histology in D1; 4.8% (n=12, 95% CI: 2.14 to 7.42) had IELs in D2 but normal histology in D1.

Conclusions VA was confined to the duodenal bulb in 4.4% of patients with established CD. Thus a D1 biopsy in addition

to distal duodenal biopsies increases the likelihood of detecting VA, although the significance of isolated VA in the bulb in patients on a gluten-free diet is yet to be determined.

PTH-044 IMPROVING SAFETY AND REDUCING ERROR IN ENDOSCOPY (ISREE) – A JAG INITIATIVE

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Introduction JAG is committed to providing universal high quality and safe endoscopy as embedded in the Global Rating Scale. This requires acknowledgement that error is common, may not result in harm or complications, but that addressing latent risk can prevent patient safety incidents. Many errors relate to failures in human factors, ENTS and teamwork, which require training and assessment.

Medical error is more prevalent in situations of complexity. Though generally safe, endoscopy is a complex task, performed in teams. As population demographics evolve, straight-to-test pathways become embedded and complex therapeutic options extended; endoscopists need to develop a proactive culture towards safety and learning from error.

Aims JAG aims to develop a work stream to Improve Safety and Reduce Error in Endoscopy (ISREE). A 1 day workshop was designed to develop an implementation plan to achieve this goal.

Methods 35 multi-disciplinary clinicians and a patient with specific expertise in this area were invited to ISREE workshop. Participants were asked to recall as many endoscopy adverse events or errors as possible.

Key presentations highlighted the background to medical error, how to investigate it, development of non-technical skills frameworks (anaesthetics and endoscopy), safe sedation, human factors training and implementation science. A patient recounted her experiences of endoscopy.

Facilitated group sessions focused on 5 key areas – improving training in ENTS and human factors, error prevention, reporting error, learning from error and managing underperformance (endoscopists, teams or units). Wider discussion synthesised a list of feasible actions that JAG could prioritise for staged implementation.

Results Multiple errors were reported by all delegates and recurrent themes were common. Examples related to wrong patient for procedure (n=4), histology mislabelling (n=5), drug errors (n=3) and failure to follow MDT advice (n=1). 23 key priorities were agreed and formulate an implementation strategy for JAG (table 1):

Abstract PTH-044 Table 1

Theme	Training in ENTS	Preventing Error	Error Reporting	Learning from Error	Managing Underperformance
Priority	Safety	Anaesthetic lead for every endoscopy service	Optimise use of current IT systems to report error e.g NED	Optimise use of current ERS to capture errors pre and post procedure	Use of endoscopy specific 360 degree tool to identify underperformance
1	Champion in every unit				

Summary JAG plans to develop a 5 y ISREE Implementation Strategy reflecting the identified priorities to 1) improve endoscopists training in effective error reporting and learning and 2) implement system level approaches to safety and performance improvement. JAG also aims to improve its communication to disseminate learning and support endoscopy services in the UK.

PTH-045 A MISSED OPPORTUNITY ? COLONOSCOPY WITHDRAWAL TIMES IN A LARGE DGH

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Introduction Colonoscopy is the gold standard investigation for identification of colorectal pathology. Published evidence has confirmed that a higher adenoma detection rate (ADR) is associated with lower rates of post colonoscopy cancer detection. The ADR increases when withdrawal times from the caecum to the rectum are ≥ 6 min. Even the most experienced endoscopists (defined as performing >1000 colonoscopies) will miss adenomas if their withdrawal times are <6 min.

Aim This audit was designed to evaluate compliance with current guidelines on colonoscopy withdrawal times across three East Kent Hospitals.

Guidelines National guidelines recommend a mean colonoscopy withdrawal time of ≥ 6 min from caecum to rectum as per the Bowel Cancer Screening colonoscopy quality indicators.

Methods Over a period of two weeks in 2017, endoscopy nurses across the three Hospitals recorded withdrawal times from the caecum to the rectum for all colonoscopy procedures. The endoscopists were unaware that withdrawal times were being recorded.

Results 138 colonoscopies were performed. 29 were less than 6 min (21%) (table 1).

Abstract PTH-045 Table 1 Overview of results

Total number of procedures	138
Total procedures with withdrawal times <6 min	21% (n=29)
Frequency of procedures <6 min	5 min 13 4 min 10 3 min 3 2 min 2 1 min 1
Overall average withdrawal times $\pm$ SD (minutes)	10.1 $\pm$ 7.0
Total procedures performed by gastroenterologists	Total procedures performed by surgeons
58.7% (n=82)	41.4% (n=56)
Procedures <6 min	Procedures <6 min
12.2% (n=10)	33.9% (n=19)
Mean withdrawal time for gastroenterologists $\pm$ SD (minutes)	Mean withdrawal time for surgeons $\pm$ SD (minutes)
11.7 $\pm$ 7.9	8.1 $\pm$ 4.9
Range of withdrawal times (minutes)	Range of withdrawal times (minutes)
40 to 2	30 to 1

Only 1 procedure performed by a bowel cancer screening colonoscopist was <6 min