the 'best' response). No questions had floor effects. For three questions, more than 5% of respondents failed to answer. The highest was 8.6%. The mean number of questions missed was 1.2; this was higher in older patients. Eight questions correlated poorly with others (rho<0.3) and were excluded from EFA. EFA showed seven factors, explaining 61.5% of the variance. All factors had Cronbach's α >0.6, indicating good reliability.[3]

Conclusions The Newcastle ENDOPREM™ has good psychometric properties. This analysis has enabled refinement of some questions and item reduction, resulting in a PREM, derived from patients' reports, which comprehensively assesses patient experience across GI investigative modalities.

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P53 DOES POLYP DETECTION RATE ACCURATELY REFLECT ADENOMA DETECTION RATE?

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Introduction Thorough mucosal examination at colonoscopy is essential to detect pathology and ensure high quality procedures. Adenoma detection rate (ADR), defined as the number of colonoscopies where at least one adenoma is detected, is the most important marker of colonic mucosal visualisation and therefore of colonoscopy quality. Histology results are required, making the use of ADR challenging. Polyp detection rate (PDR) is more readily available as it can be collected directly on endoscopy reporting systems. The use of PDR as a substitute for ADR has been deemed acceptable providing it accurately reflects ADR.[1] We aim to investigate whether PDR can be reliably used as an alternative to ADR and therefore as a marker of colonoscopy quality.

Methods Data were collected from independent endoscopists in eight hospitals in England over a six-month period, including; ADR, PDR, PDR excluding rectal hyperplastic polyps (RHP), mean patient age. The ADR:PDR ratio (APDRQ) per endoscopist and Pearson correlation between ADR and PDR were computed, including and excluding rectal hyperplastic polyps. Multiple linear regression analysis was used to develop a model to predict an endoscopist's ADR from their PDR.

Results 9265 colonoscopies performed by 118 endoscopists were included. Mean ADR and PDR per endoscopist were 17% (range 0–36.3, sd 7.37) and 27.2% (range 0–57.5, sd 9.3), respectively. The mean APDRQ was 0.60 (range 0–1.00, sd 0.21); this was 0.64 (range 0–1.17, sd 0.21) when RHPs were excluded. ADR and PDR were strongly correlated (rho=0.75, p<0.001; rho=0.80, p<0.001 after excluding RHP). Colonoscopists who scoped patients with mean age ≥60 years had higher mean ADRs (≥60 years: 17.4%, sd 7.4; <60 years: 26.5%, sd 8.9). A similar pattern was seen for PDR (mean patient age <60 years: 26.5%, sd 8.9; ≥60 years: 27.7%, sd 9.5). ADR was more accurately predicted by a combination of PDR and mean age of patients (ADR=0.54*PDR+0.26*mean patient age).

Conclusions This study demonstrates that PDR can accurately be used as a marker of ADR as long as age is also considered.

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P54 LOW COLONOSCOPY NUMBERS CORRELATE WITH POOR QUALITY COLONOSCOPY: TIME TO IMPLEMENT NATIONAL STANDARDS

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Introduction UK key performance indicators (KPI) and quality assurance standards for colonoscopy have been established in order to ensure minimal standards and reduce unacceptable variation in quality.[1] Included within these standards is the requirement for a minimum of 200 colonoscopies to achieve competence and 100 per annum to maintain competence. We investigated the link between number of procedures and the minimal standards for two other KPIs- caecal intubation rate (CIR) and adenoma detection rate (ADR).

Methods Data were collected from independent colonoscopists in eight hospitals in England over a six-month period. Gastroenterologists, surgeons and nurse endoscopists were included. The link between three KPIs was investigated; ≥100 colonoscopies in 12 months (as six-month data was collected, ≥50 procedures in this timeframe were used); CIR ≥90% and ADR ≥15%. Associations between pairs of KPIs were tested. Multiple logistic regression was used to investigate inter-relationships between KPIs and additional factors (including endoscopist grade, mean patient age, patient sex, hyoscine butylbromide use), with low ADR as the outcome variable.

Results 118 endoscopists undertook 9,265 colonoscopies in six months. The mean number of colonoscopies conducted in six months was 78.5 (range 4–334, standard deviation (sd) 61). The mean ADR and CIR were 17% (range 0–36.6, sd 7.37) and 91.2% (range 55.5–100, sd 6.6), respectively.

61% of endoscopists achieved ADR ≥15%, 65% had CIR ≥90% and 64% performed ≥50 colonoscopies in six months. Of those who performed ≥50 colonoscopies in six months, 68% met ADR and 69% met CIR performance metrics. 29% of colonoscopists met all three KPIs.

36% of colonoscopists performed <50 colonoscopies in six months (mean 27.6 procedures, sd 12.5). In this group, mean ADR was 13.2% (sd 8.1) and mean CIR was 89% (sd 9.6). 49% had ADR ≥15% and 58% had CIR ≥90%. 33% met both KPIs for ADR and CIR.

Total number of colonoscopies and ADR were significantly associated (p=0.04), but total colonoscopies and CIR were not. In multiple regression analyses, undertaking fewer colonoscopies and using hyoscine butylbromide less frequently was significantly associated with ADR <15%. CIR, endoscopist grade,% male patients, mean patient age and CIR were not significantly related to ADR<15.

Conclusions Colonoscopists who perform less than the nationally stipulated minimum of 100 procedures per year have significantly lower ADRs. National guidance should be followed with all colonoscopists performing > 100 procedures per year.

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P55 TIMING OF ERCP AND OUTCOMES IN PATIENTS WITH ACUTE GALLSTONE CHOLANGITIS GRADED BY SEVERITY

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Introduction The optimal timing of endoscopic retrograde cholangiopancreatography (ERCP) in the management of acute gallstone cholangitis is not known. Severity of cholangitis can be classified with the Tokyo 2018 criteria. The European Society of Gastrointestinal Endoscopy published guidance on the recommended timing of ERCP guided by the severity of cholangitis; stipulating that biliary drainage should occur within the following timeframes: mild – elective, moderate – within two to three days and severe – as soon as possible. We aim to analyse the clinical outcomes of patients with acute cholangitis who have been admitted to a tertiary hepatobiliary centre when categorised by severity.

Methods A retrospective analysis of patients admitted to our hospital with acute cholangitis over a 3 year period from June 2016 to June 2019 was carried out. Patients were identified via coding department and endoscopy reporting tool. All patients met 2018 Tokyo criteria for definite cholangitis. Only patients with choledocholithiasis without concurrent biliary pathology were included for analysis. Case notes and electronic database interrogation yielded information for calculation of severity of cholangitis. Statistical analyses were carried out with Kruskall-Wallis test or chi-squared tests where appropriate.

Results A total of 218 patients were identified and 199 patients who underwent ERCP during the index admission were included for analysis. There was a female preponderance (55.8%) and the median age was 73 years (range 19–96). The proportion of severity of cholangitis at presentation was as follows: 51.3% (n=102) mild, 32.6% (n=65) moderate and 16.1% (n=32) severe. The median time taken from admission to ERCP for the 199 patients was 4.8 days (mild 4.4 days, moderate 5.4 days, severe 4.8 days; p=0.31). The median length of stay 7.8 days (mild 7.2 days, moderate 7.8 days, severe 9.5 days; p=0.009). 31.3% of patients with severe cholangitis (n=10) were admitted to intensive care (ITU); 6 of whom required urgent ERCP. For patients with severe cholangitis, the median time in those who required urgent ERCP was 1.5 days vs 5.6 days in those who did not. The overall 30-day all-cause mortality amongst the 199 patients was 1% (n=2; both with severe cholangitis who underwent successful ERCP at 23 hours and 42 hours). 30-day all-cause mortality was 6.3% in the severe group and 0% in both mild and moderate groups (p=0.005).

Conclusions Our results demonstrate no difference in timing to ERCP in patients with acute gallstone cholangitis when categorised by severity. Deaths were observed only in patients with severe cholangitis although the majority of patients with severe disease did not require urgent ERCP. Provision for urgent ERCP has to be available especially for those admitted to intensive care.

P56 SELF-EXPANDING METAL STENTS IMPAIR ENDOSCOPIC ULTRASOUND (EUS) VASCULAR STAGING OF HEAD OF PANCREAS MASSES

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Introduction Endoscopic ultrasound (EUS) is indicated for vascular staging of pancreatic ductal adenocarcinoma (PDAC) when CT is equivocal. The reported sensitivity of EUS for vascular invasion ranges from 42% to 91%. The presence of a biliary stent may impair EUS assessment of the vascular interface of head of pancreas (HOP) masses due to imaging artefacts. This may be worse with self-expanding metal stents (SEMS). Previous studies of stent effect have been small with conflicting results. The aim of the study was to assess the influence of stents on EUS vascular staging in patients with a HOP mass undergoing surgery with curative intent.

Methods All patients with a solid HOP mass undergoing EUS staging and surgery with curative intent between January 2010 and December 2017 were included. Exclusion criteria included; neoadjuvant chemotherapy, EUS for biopsy only, finding of metastatic disease at laparotomy and surgery > 60 days after staging. Intraoperative surgical assessment was the primary reference standard. When vascular resection was performed histology was additionally correlated. Analysis was performed on an intention to stage basis. Factors with possible impact on diagnostic performances were analysed using logistic regression.

Results 158 patients with prior EUS underwent surgery. 58 cases were excluded and 100 formed the study group. 56 were male, 99 were malignant of which 76 were PDAC. Median age[IQR] 68 years [59–74] median tumour size [IQR] 27.5 mm [20–32]. Median Interval between EUS and surgery [IQR] was 29 days [22–42]; 50 (50%) had an indwelling biliary stent (36 plastic, 14 SEMS). In 7(14%) (6 SEMS, 1 plastic) staging was not possible due to stent artefact. 22 (22%) were found to have some degree of vascular involvement at surgery of which 2 were unresectable, 20 underwent vascular resection of which 10 met histological criteria for vascular invasion. There was a significant difference in accuracy of vascular assessment (p=0.042) among patients without a stent (86%) plastic stent (69.4%) and SEMS (57.1%). On multivariable analysis both plastic OR (0.37 95% CI [0.13–1.07]) and SEMS OR (0.21, 95% CI [0.057–0.81]) reduced accuracy. Sensitivity for vascular involvement (surgical reference) was 13/22 (59%). Using histology as the reference, sensitivity was 7/10 (70%) ; p=0.7.