

and after colonoscopy. Of these, 28% (n = 58) had a history of CKD. Overall, there was no statistically significant difference in the change in eGFR before and after colonoscopy for patients without CKD compared to those with CKD (p = 0.18). There were only five patients with eGFR of <30 mL/min and in this subgroup there was no significant renal impairment after colonoscopy. There were no acute kidney injuries in both groups.

**Conclusions** The data show that 2L PEG solution is safe in patients with impaired renal function. Routine screening for CKD in patients undergoing bowel preparation for colonoscopy may not be justified.

### P35 OPINIONS OF UK GASTROENTEROLOGY CONSULTANTS IN THE APPLICATION OF ARTIFICIAL INTELLIGENCE IN ENDOSCOPY

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**Introduction** Recent advances in artificial intelligence (AI) have resulted in new AI applications for endoscopy. The aim of this study is to provide insight into the opinions of key leaders in Gastroenterology in the UK of these technologies.

**Methods** An anonymous quantitative questionnaire was administered to 22 UK Gastroenterology consultants at a dedicated AI in Gastroenterology national consensus conference. Baseline demographic data and previous colonoscopy experience for each participant was collected. The questionnaire explored the following topics:

- How AI in endoscopy might impact on an endoscopist's pattern recognition of lesions if they are a novice or an expert
- Likelihood that endoscopists might lose the competence to override AI diagnosis
- Support for using AI in endoscopy if it improves clinical patient outcomes but remains a black box
- Apportionment of liability for misdiagnosis if a lesion is 'missed' during colonoscopy assisted by an AI polyp detection system
- The perceived risk of a two-tier healthcare system emerging in the NHS between those hospitals which do and do not use AI support

**Results** The questionnaire was completed by 22 participants. Two incomplete forms were excluded. Participants' demographic data and colonoscopy experience are shown in table 1.

**Abstract P35 Table 1** Participants' demographic data and colonoscopy experience

Total number of participants	20
Male	90% (18/20)
Female	10% (2/20)
Average Age	44 years old
JAG accredited	20/20 (100%)
BCSP accredited	9/20 (45%)
Average number of colonoscopies performed	8094 (range = 1,000 – 30,000)
Previous experience in using AI device in endoscopy	12/20 (60%)

Most participants think AI would improve endoscopist visual pattern recognition skills, more for novices (75%) than for experts (55%). The majority (65%) recognised the risk that in future, endoscopists may lose the competence to override AI diagnoses, but only a minority of 15% thought this was likely.

There was a strong consensus (60% for, 20% against) that an unexplainable but clinically efficacious AI system would be acceptable, but there were concerns of a two-tier healthcare system emerging with a quarter thinking this was likely and the majority of 60% recognising that this was possible. A clear majority of 70% thought that the endoscopist should be liable for any misdiagnosis, with 10% considering that liability should lie with the hospital and 5% with the AI manufacturer; 15% were uncertain about how to apportion liability.

**Discussion** Consultants in this study support the use of clinically efficacious AI systems in endoscopy regardless of 'explainability' but careful consideration is required to prevent a two-tier healthcare system emerging and to determine liability in the event of misdiagnosis.

Consideration is needed on how to monitor endoscopist skills given concerns that use of AI could result in endoscopist losing the competence to override AI diagnoses.

### P36 VALIDATING THE POST-COLONOSCOPY COLORECTAL CANCER (PCCRC) RATE AS A METRIC OF ENDOSCOPY QUALITY

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**Introduction** Endoscopists PCCRC rates have been shown to inversely correlate with their adenoma detection rates. The World Endoscopy Organisation (WEO) has recently published methodology for comparing unadjusted PCCRC rates between different organisations. These whole system rates may not reflect endoscopists' performance. This study aimed to produce a validated PCCRC rate for individual endoscopists.

**Methods** All cases of Colorectal cancer (CRC) diagnosed between 2010 and 2018 at our Trust were ascertained from Somerset Cancer Database using ICD10 codes C18–20. From the Endoscopy reporting system all colonoscopies performed in the same years were identified. By SQL queries within a MS Access database the following were determined for the 6 years 2010–December 2015.

- unadjusted PCCRC cases i) True +ve CRC diagnoses by colonoscopy ii) Cases with 2 colonoscopies within 6/12 of diagnosis.

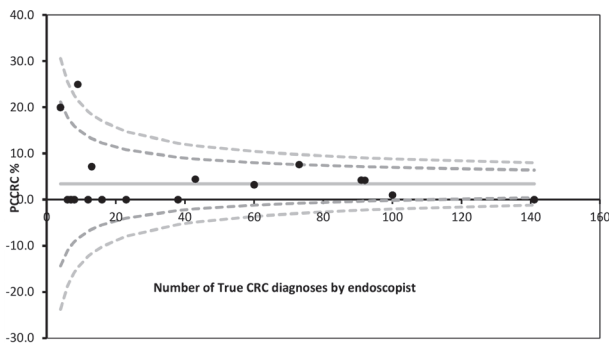
Cases reviews took place for group i) and iii). The following variations in the WEO method were used to produce an Endoscopy-related PCCRC rate.

#### Exclusions

- Genetic syndromes, IBD and follow-up recurrent EMR cases.
- Delays in management not due to failure of endoscopic assessment
- Errors in recorded timings for date of CRC diagnosis.
- Inaccurately coded cases

**Results** From 2010–2015, 21267 colonoscopies were performed. From 2010–2018 1916 CRC cases diagnosed, 1246 (65%) were diagnosed by colonoscopy.

39 unadjusted PCCRC cases were identified. After case review 18 cases were excluded by the criteria above, a (5), b



**Abstract P36 Figure 1** Endoscopy -related PCCRC rate, unit mean, 95% & 99% confidence limits

(1), c (9), d (3). However, in reviewing cases with 2 colonoscopies within 6/12 of diagnosis 3 additional misses were found making a total of 24 endoscopy related PCCRC.

The unadjusted PCCRC was 5.1% vs Endoscopy-related 3.1%

The funnel plot of Endoscopy related PCCRC rates (figure 1) indicated 3 outlying endoscopists

**Conclusions** The limitation of this study was only locally diagnosed CRC were ascertained. Around 5% of our colonoscopies were on patients from a neighbouring trust and additionally patient migration is possible. However, the Audit released by Bowel Cancer Intelligence for 2011–2013 recorded our unadjusted PCCRC at a similar 3.8%.

The case reviews identified 12/39 cases that were clearly not PCCRC (category c & d). This is a substantial barrier to the non-case reviewed PCCRC methodology if used to critique endoscopist's practice. 46% of unadjusted PCCRC cases were not related to endoscopic recognition.

3 Endoscopists (2 locums) were identified with statistically higher PCCRC rates.

Approximately 1 in 1000 colonoscopies may miss a lesion leading to a PCCRC. For individual endoscopist with >200 colonoscopies in this period, PCCRC cases per colonoscopy varied from 3/419 to 0/3176.

### P37 COMPLICATION RATES IN FIRST 30 DAYS POST PEG AND RIG INSERTION: SINGLE TERTIARY CENTRE EXPERIENCE

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**Introduction** Gastrostomy tubes for enteral nutrition are most commonly inserted via percutaneous endoscopic gastrostomy (PEG) or radiologically inserted gastrostomy (RIG) techniques. However, there is no consistent evidence of the safety and efficacy of PEG compared to RIG. 30-day mortality has become considered as the most important surrogate index for evaluating the safety and efficacy of percutaneous gastrostomy.<sup>1</sup> Prophylactic antibiotics have become standard of care in PEGs but not for RIGs. The British Society of Gastroenterology (BSG) has recommended that antibiotic prophylaxis should be given to patients undergoing PEG insertion.<sup>2</sup> The aim of this Audit was to compare the first 30-day complication rates between PEGs and RIGs following their insertion.

**Method** 1 year retrospective analysis of total 200 procedures, PEGs (n=100) and RIGs (n=100) undertaken within the Newcastle Hospitals NHS FT (Freeman Hospital & Royal Victoria Infirmary) between September 2019 and August 2018. Relevant information was obtained from endoscopy records, patient e-records, radiology and microbiology results.

**Results** The main indication for PEG was CVA/Neurodegenerative disorders. However, the most common indication for RIG placement was Head and Neck cancers. Gender split in PEGs (57 M & 43 F), whereas in RIGs (78 M & 22 F). Average age for PEGs 66 years and RIG it was 62 years. In RIG, infection rate was significantly higher (23/100, 23%) compared to PEG (4/100, 4%,  $p < 0.001$ ). Additional complications associated with a RIGs were dislodgement (5/100, 5%), leak 2% (2/100), severe pain requiring imaging 2% (2/100), migration 2% (2/100) and perforation 1% (1/100). In contrast PEG had fewer complications; infection 4/100 (4%), persistent pneumoperitoneum 1/100 (1%) and persistent pain requiring imaging 1/100 (1%). Out of 100 PEGs procedures 99 received prophylactic antibiotic where as in RIGs none received any prophylactic antibiotics.

**Conclusion** We have identified that RIG is associated with more complications especially higher rate of infection (gastrostomy site infection) 23% versus 4%. RIG was associated with other complications as well namely migration, perforation & severe pain, however the incidence was low. We suspect that the high incidence of infection rate in RIGs is associated with their non-use of prophylactic antibiotics. Therefore, we recommend using prophylactic antibiotics in RIG placement similar to its wide use in PEG procedures.

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### P38 HIGH PREVALENCE OF LIVER DISEASE AND OBESITY AMONGST A COLONOSCOPY POPULATION

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**Introduction** Western populations demonstrate a growing burden of obesity and Non-Alcoholic Fatty Liver Disease (NAFLD).<sup>1 2</sup> Our aim was to assess the burden of liver disease, obesity and metabolic syndrome amongst a population attending for colonoscopy.

**Methods** The OSCAR study was a cross sectional study recruiting eligible patients from 12 sites attending for colonoscopy. Patients' completed a medical history and lifestyle questionnaire (including AUDIT-C [screening questionnaire;  $\geq 5$  requires further assessment for alcohol excess]), provide blood samples, and had height/weight/waist circumference measured. Age-adjusted FIB-4 score, Fatty Liver Index<sup>3</sup> (FLI) were measured (>60 highly predictive of hepatic steatosis).

Here we report the prevalence of liver disease, obesity and metabolic syndrome.

**Results** 1430 patients were recruited (BCSP 410 [29%]; symptomatic 1020 [71%]).