most undergo endoscopic investigations or have reason not to. We plan to identify areas to improve and implement change in individual sites.

P297 YIELD OF INVESTIGATIONS FOR FAST-TRACK IRON DEFICIENCY ANAEMIA REFERRALS IN YORKSHIRE: A MULTI-SITE TRAINEE-LED AUDIT

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Introduction Patients with iron deficiency anaemia are commonly referred to gastroenterology for exclusion of significant pathology. Some of these patients will have been previously investigated. We aimed to ascertain how often a cause of anaemia is found and subsequent action if no cause found.
Methods Retrospective audit across 10 sites in Yorkshire, by a trainee-led research network. We included patients referred on a suspected cancer pathway with IDA in November 2018. Data on referral criteria, investigations, diagnosis and follow-up were collected. Anonymised data was pooled for comparative analysis in Excel and SPSS.
Results 508 patients were included: median age 72 years (range 24–97); 55% female. 48% of these patients were asymptomatic. 42 cancers (8%) were diagnosed: 25 colorectal (5%), 6 oesophageal/gastric (1%), 2 renal, 1 bladder, 2 pancreatic, 2 hepatobiliary, 1 prostate, 2 lung and 1 unknown primary.

There was no correlation between patient and age and likelihood of malignancy, but an association was seen with mean Haemoglobin (Hb) and gastrointestinal cancer diagnosis.

Other pathology was found in 33% of those investigated: erosive gastritis 8%, oesophagitis 5%, erosive duodenitis 1%, peptic ulcer 3%, gastric polyp 1%, gastric antral vascular ectasia 1%, angiodysplasia 1%, coeliac disease 2%, colonic polyp >10 mm 2%, colonic polyp <10 mm 8% and inflammatory bowel disease (1%). 22% patients had undergone previous endoscopic investigations in the past 5 years (indication unknown).

Where no significant pathology was found, 43% patients were discharged without clinic review, 30% patients were discharged following discussion of results, 9% were seen again in clinic with no further investigations requested and 16% required ongoing follow-up or further investigations. Advice regarding Hb monitoring (with timeframe) was given in 11%, vague advice was given in 19% and no advice was given to general practitioners (GPs) in 48%.
Conclusions An expected rate of significant pathology was found. 1 in 5 patients had undergone gastrointestinal investigations previously. 1 in 3 patients were seen in clinic following normal investigations. Better advice to GPs regarding Hb monitoring and subsequent management is needed and may reduce unnecessary re-referrals. Further exploratory work to identify additional predictors of significant pathology is planned.

P298 CHECKPOINT INHIBITOR COLITIS: INSIGHTS FROM BENCH AND BEDSIDE

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Aims Immune checkpoint blockade (ICB) is the mainstay of treatment for metastatic melanoma and lung adenocarcinoma, and their use is growing in cancer. Immune checkpoint blockade induced colitis (ICB colitis) presents a management challenge and its mechanisms remain poorly elucidated.
Methods We performed next generation single-cell RNA sequencing of immune cells from patients given ICB. We validated findings using confocal microscopy, drawing comparisons bioinformatically with ulcerative colitis. In parallel, we conducted a review of 1,074 patients given checkpoint inhibitors across two tertiary centres between 2011–2018 to discover patterns in incidence and predictors of clinical outcome.
Results Using single-cell RNA sequencing, we discovered excessive local CD8 T cell proliferation was a key feature of ICB colitis, and we were able to visualise higher numbers of replicating CD8 T cells in gut tissue sections of patients with colitis than those without ICB colitis. The degree of replication was greater than seen in ulcerative colitis by bioinformatic analysis.

From our clinical review, age, gender and smoking status did not alter the risk of developing colitis, whereas type of immunotherapy did (incidence 9% in PD-1 Monotherapy vs 32% Combination Therapy). Having prior IBD did not guarantee the development of ICB Colitis. Systemic markers of inflammation (C-Reactive Protein, Albumin) did not predict outcome, whereas local markers of inflammation (endoscopic UCEIS scoring, histological Nancy Index) did.
Conclusions We putatively link novel insights from bench science to clinical trends. ICB colitis may be driven more by a gut localised inflammation response in comparison to ulcerative colitis. As we also demonstrate, this may explain why endoscopic and histological scoring may have better prognostic value than systemic measures of inflammation.

P299 EVALUATION OF MOLECULAR CHARACTERISTICS OF EARLY ONSET COLORECTAL CANCER IN A POPULATION-BASED COHORT STUDY

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Introduction The reported increase in early onset colorectal cancer (EOCRC) incidence remains unexplained and is likely to be multifactorial. Understanding the molecular characteristics of EOCRC may give insights into aetiology, and inform potential treatment strategies that may be distinct from late onset disease. The aim of this analysis was to compare the molecular characteristics and survival of EOCRC with older colorectal cancer (CRC) patients in a population-representative cohort.

Methods Clinicopathological data from 661 patients with Stage II or III colon adenocarcinoma diagnosed between 2004 and 2008 in Northern Ireland were analysed. Tissue blocks were retrieved, DNA extracted and microsatellite instability (MSI) and targeted gene mutation status ascertained. Chi-squared tests were used to compare molecular characteristics of EOCRC (<50 years old) versus older age groups (50–59, 60–69, 70–79 and ≥80 years old). Cox proportional hazards models were used to calculate hazard ratios and 95% confidence intervals (CI) for survival outcomes.

Results EOCRC represented 5.8% of all Stage II and III colon cancer patients in this cohort. EOCRC patients did not have any BRAF or NRAS-mutant tumours, which was significantly different from older patients (p=0.004 and p=0.009, respectively). EOCRC tumours were more likely to have PIK3CA mutations compared to older patients (23.7% versus 15.6–19.7% in patients aged over 50 years old), and be MSI-high (33.3% versus 13.6–25.9% in patients aged over 50 years old), but these differences were not statistically significant. Compared to CRC patients aged 50–60 years old, EOCRC did not have a significantly increased risk of CRC specific death (adjusted HR 1.33; 95%CI 0.62–2.87).

Conclusions This population-representative study found that EOCRC patients had no BRAF or NRAS-mutant tumours. PIK3CA-mutant and MSI-high tumours were overrepresented in EOCRC patients but this was not statistically significant. EOCRC patients were not at an increased risk of death, however further research in larger cohorts is required to investigate if differences in molecular characteristics, for example MSI status, may have implications for survival or novel adjuvant treatment strategies.

P300 THE ROLE OF FMT IN REDUCING HOSPITAL ADMISSIONS AND LENGTH OF STAY

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Introduction Clostridium difficile infection (CDI) is the most common healthcare associated infection in the NHS with 12,275 cases reported in England in 2018/19. Recurrent Clostridium Difficile infection (rCDI) is an increasingly common problem; the recurrence rate is approximately 20% after a first episode and 45–60% after a second episode of *C difficile* infection, with mortality approaching 25% in elderly patients. Thus, rCDI is associated with significant healthcare costs and hospital admissions.[1]

Faecal microbiota transplant (FMT) is a NICE approved treatment for rCDI when treatments such as antibiotics have failed. FMT cure rates are consistently reported in the range of 80–90%.[2]

The aim of this audit was to assess the 6 week success rate of FMT procedures performed at Whiston Hospital for rCDI, and to evaluate the impact of FMT on preventing further hospital admissions.

Methods Data was collected retrospectively on all patients undergoing FMT for rCDI between April 2015 to November 2019. Data was collected from electronic case notes and the local FMT database. Success rates were defined as resolution of diarrhoea 6 weeks post FMT. The number of CDI related admissions and days in hospital prior to and post FMT were also analysed.

Results Twenty eight FMTs were performed on 20 patients (13 Females: 7 Males). FMT was performed via NG tube (19) gastroscopy (2), colonoscopy (2), NJ tube (4) and via enema (1). 6 patients (30%) required a second FMT and 1 patient required a third FMT.

The 6 week success rate after the first FMT procedure was 12/20 (60%), second FMT 19/20 (95%) and third FMT 20/20 (100%).

Within the 12 months prior to FMT the 20 patients had a median of 2 CDI related hospital admissions (range 0–13) and a median total length of stay of 29.5 days (range 0–104 days). 12-month post FMT data showed a reduction in the median number of hospital admissions (median 1, range 1–7) and in total length of stay (median 17 days, range 0–33 days).

Conclusions Our data shows that FMT is a highly effective treatment for rCDI. All patients were diarrhoea free at 6 weeks, although our 1st FMT success rates are lower than previously reported in RCTs.

FMT resulted in a reduction in the subsequent number of hospital readmissions and length of stay, thus reducing the financial burden on the NHS.

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P301 INNOCENT OR GUILTY POLYPS ? A NOVEL CONCEPT OF A SIMPLIFIED 'RESECT AND DISCARD' STRATEGY

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Introduction Optical Diagnosis (OD) based strategy (PIVI criteria) in the management of colorectal polyps has been a revelation in modern endoscopic therapy, however, studies have shown that OD in non- expert hands have not meet PIVI criteria, for both ' diagnose and leave' and 'resect and discard' strategies. We aim to create a simplified optical strategy which could accurately identify covert cancer as well as reduce the number of pathological examinations based on prevalence of cancer in 6–10 mm polyps.

Methods We analysed outcomes of all patients who underwent screening colonoscopy between January 2007 to December 2018 and were found to have polyps. Data was prospectively collected on an online endoscopy reporting system and