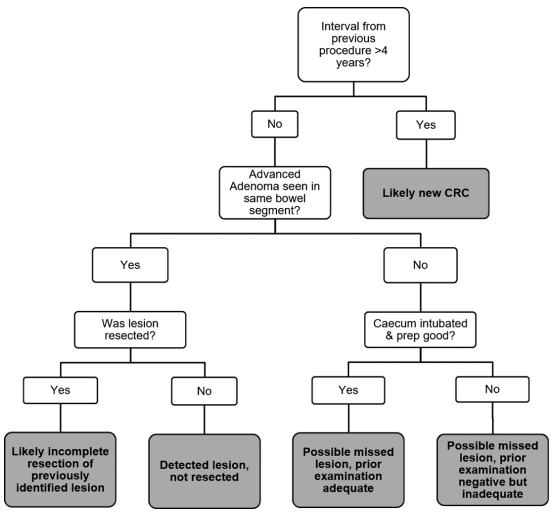
Abstract PTU-031 Table 1 PCCRC subtypes

	Interval type	Non-interval type		
		type A	type B	type C
	Detected prior to recommended screening/ surveillance interval	*Detected at recommended screening/ surveillance interval*	*Detected after recommended screening/ surveillance interval*	*Where no screening/ surveillance interval had been recommended*
Examples	Patient with 2 small adenomas is advised to return for surveillance in 5 years; 4 years later develops anaemia; colonoscopy reveals CRC	Patient with a 15 mm adenoma is advised to return for surveillance in 3 years; at 3 years, a CRC is found	Patient with 3 adenomas is advised to return for surveillance in 3 years. Patient misses this, returns 4 years later with CRC	Patient investigated for change in bowel habit – colonoscopy normal. No further investigation recommended. 5 years later patient develops symptoms and a colonoscopy reveals CRC



Abstract PTU-031 Figure 1 Proposed algorithm for aetiology attribution of PCCRC cases

Conclusions This is the first consensus aiming to standardise terminology around PCCRC/PICRC, presenting a methodology for analysis of causation of PCCRC/PICRC and defining its potential role as a key quality indicator.

PTU-032 POST-COLONOSCOPY COLORECTAL CANCER RATES IN IBD ARE HIGH AND VARY BY NHS TRUST IN ENGLAND

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Introduction Colorectal cancer (CRC) risk is increased in those with inflammatory bowel disease (IBD). Guidelines advocate surveillance colonoscopy for patients with long-standing IBD. Post-colonoscopy colorectal cancer (PCCRC) is a key quality indicator of colonoscopy. There is limited data exploring the rate of PCCRC in those with IBD and potential risk factors associated with IBD-related PCCRC.

This study explored national and individual hospital rates of IBD-related PCCRC in England since 2006. Further analysis explored potential associations with IBD-related PCCRC in order to inform future quality improvement interventions.

Methods We identified all those who had undergone a colonoscopy between 1/1/2006 and 31/12/2012 and developed a CRC before 31/12/2015 using linked national Hospital Episode Statistics and National Cancer Registration and Analysis Service data. IBD cases were identified by relevant ICD-10 codes. Using international consensus guidelines[1,2] the rate of PCCRC within 3 years (PCCRC-3 yr) was calculated as the number of false negative colonoscopies (within 6–36 months of CRC) divided by the sum of the true positive (within 6 months of CRC) and false negative colonoscopies. The IBD-associated PCCRC-3 yr rate in each NHS hospital trust in England was ranked and trusts were separated into quintiles. Factors associated with IBD-related PCCRC were investigated.

Results Between 2006 and 2012 we identified 7781 PCCRC, 800 (10%) with a diagnosis of IBD. Nationally, the IBD-PCCRC-3 yr rate was 35%, and varied between hospital trusts with those in the lowest quintile having a mean, unadjusted rate of 19% (SD ±7%) compared to 52% (SD ±7%) in the highest quintile. PCCRC cases were younger at diagnosis (60 years compared to 66 years), were less likely to have diverticular disease (10% compared to 16%), and had undergone more previous colonoscopies when compared to detected cases (within 6 months of colonoscopy). There was no significant difference for sex, bowel location, deprivation score, or metachronous tumours.

Conclusion PCCRC-3 yr in those with IBD is high, and accounted for 10% of all PCCRC-3 yr in England between 2006 and 2012. There is a wide variation in the unadjusted rates between NHS trusts in England that is unlikely to be explained by natural variation. There is an urgent need to investigate avoidable reasons for cancers in those with IBD to optimise surveillance and prevention of CRC in IBD.

PTU-033 COLORECTAL CANCER AND EXPERIENCE IN TESTING FOR LYNCH SYNDROME IN A WEST LONDON HOSPITAL

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Introduction Colorectal cancer (CRC) is diagnosed in over 46 000 people in the UK annually, and is the second most common cause of cancer death. NICE guideline DG27 recommends universal testing for Lynch Syndrome (LS) at diagnosis of colorectal cancer, by testing the CRC for mismatch repair (MMR) status, a hallmark of the disease.

Methods We collected data prospectively from November 2016 to December 2017 of consecutively diagnosed CRC

patients at West Middlesex University Hospital (WMUH) in London. CRCs were universally screened for tumour features suggestive of LS (Defective MMR, or dMMR) with immunohistochemistry. We also collected clinicopathological data including age at diagnosis, stage, tumour site, histological findings and MMR tumour-status. Statistical analysis was performed using chi-square test and 2 tailed T test for binary and continuous variables respectively.

Results A cohort of 123 consecutive CRC patients were universally tested for dMMR. Twelve patients (9.8%) were MMR-deficient of which only 6 (50%) were predicated by the Bethesda Criteria. 11/12 dMMR CRCs were early stage tumours (Dukes' A or B, p=0.002), and in 20 Dukes' B CRCs in patient under 70 years of age, the result was directly relevant to personalised treatment with 5-FU based chemotherapy. The median age in patients with normal or abnormal MMR IHC was 64.6 years and 68.3 years respectively (p 0.41). With regard to histological features: mucinous tumours were more frequently manifested dMMR (p 0.0052), with the presence of this, signet ring cells or a lymphocytic response predictive of dMMR CRC (p 0.023). In all 12 patients with dMMR the cancer was located in the right colon (p 0.00001). MMR germline mutations were found in a total of 4 patients of which 2 (50%) had mutation of *MLH1*, in 1 case (25%) of *MSH2* and in 1 case (25%) of *MSH6*.

Conclusions Our results demonstrate that universal testing is feasible and effective in the UK. There were significant differences with regard to dMMR CRC site, stage and histological features compared to proficient MMR CRCs. Our data also indicates the importance of genetic testing and personalised oncological care as we were able to identify patients that may have not be selected for MMR testing by the Bethesda criteria.

PTU-034 GETTING THE BEST OUT OF FAECAL IMMUNOCHEMICAL TESTS AND FAECAL CALPROTECTIN

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Introduction NICE DG30 recommends the use of quantitative faecal immunochemical tests (FIT) in patients at 'low risk' for colorectal cancer (CRC). No lower age limit is advised. Colorectal cancer (CRC) is rare under the age of 50 years representing 6% of all cases, whilst inflammatory bowel disease (IBD), is much more prevalent. In support of NICE DG11 we have successfully introduced a pathway for the use of faecal calprotectin (FC) to support the diagnosis of IBD. It is not known what the relative roles of FIT and FC are in this 'low risk' for CRC population.

Methods We analysed pre-existing clinical outcome data on FC from diagnostic accuracy studies and pathway evaluations performed at York Hospital. We identified those that did not fulfil criteria for the 'two week wait' referral (NICE NG12: recommendations 1.3.1 to 1.3.3) and stratified them based on age and symptomatology. We calculated sensitivity and specificity of FC in each cohort and compared it with a published FIT comparator (Mowat et al 2015).

Results 2917 patient outcomes were reviewed. 1229 presented with a change in bowel habit under the age of 60 years, so fulfilling DG30 criteria. The prevalence of CRC was 0.5%. The sensitivity and specificity of FC as used in the York Faecal Calprotectin Care Pathway (≤100 mcg/g) is presented below both for CRC and for CRC, high risk adenomatous polyps and IBD combined, aged stratified. This is compared with FIT ≥10 mcg/g outcomes.

Abstract PTU-034 Table 1

	Age range (yrs)	Sensitivity (CI)	Specificity (CI)	NPV (CI)	PPV (CI)
CRC					
FIT≥10 mcg/g*		89.3	79.1	99.5	14.2
FC≤100 mcg/g	50–59	50 (14–86)	83 (78–86)	99 (97–100)	5 (1–14)
	40–49	N/A	N/A	N/A	N/A
	30–39	100 (5–100)	89 (84–92)	100 (98–100)	3 (1–20)
	18–29	N/A	N/A	N/A	N/A
CRC, polyps and IBD					
FIT≥10 mcg/g*		68.6	83.6	94.4	39.8
FC≤100 mcg/g	50–59	65 (41–84)	85 (81–89)	98 (95–99)	21 (12–34)
	40–49	89 (64–98)	90 (86–93)	99 (97–100)	33 (20–48)
	30–39	100 (63–100)	92 (87–95)	100 (98–100)	31 (16–51)
	18–29	100 (83–100)	89 (85–93)	100 (98–100)	47 (34–61)

* Mowat C, et al. Gut 2015;0:1–7. doi:10.1136/gutjnl-2015–3 09 579

Similar outcomes were obtained when combining all patients fulfilling DG30 criteria (that is including those with unexplained weight loss, abdominal pain and iron deficiency anaemia).

Conclusion Despite the large numbers evaluated, the small numbers of patients with CRC make it difficult to draw any conclusions for a lower age limit upon which to apply DG30 and use FIT instead of FC. However when looking at combined CRC, high risk adenomatous polyps and IBD in this 'low risk' cohort, FC behaves similarly or better than FIT in those <50 years. As FIT is introduced in support of DG30 its performance should be benchmarked against existing FC pathways

PTU-035 THE BSG POSITION STATEMENT ON SESSILE SERRATED LESIONS WILL HAVE LIMITED IMPACT ON SURVEILLANCE WORKLOAD

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Introduction There is a lack of evidence to inform guidelines for the management of pre-malignant colorectal sessile serrated lesions (SSL). Northern Ireland (NI) is the only UK region where pathologists have diagnosed SSL (or synonyms) during reporting of Bowel Cancer Screening (BCS) specimens since inception of the programme. The aim of this study is to profile SSL diagnoses, and their risk stratification for surveillance, within BCS in NI.