Methods The operation and technical performance of each system was assessed and compared with manufacturers' claims using the manufacturers' recommended sample collection tube loaded with haemoglobin (Hb)-spiked faecal samples or Hb in buffer.

Results All collection tubes and analysers were considered useable, although the BioMajesty was unnecessarily complex for a single analyte. The use of re-usable cuvettes by NS-PLUS, OC-SENSOR DIANA and BioMajesty increases the volume of water waste, but reduces plastic clinical waste. HM-JACKarc and NS-PLUS were the most analytically sensitive (accurately measures to the lowest concentration). Imprecision with NS-PLUS was inconsistent with manufacturers' claims; imprecision for OC-SENSOR DIANA and BioMajesty could not be compared directly with manufacturers' claims due to differences between mean concentrations of the samples. All analysers except BioMajesty demonstrated good linearity. Precision (variation of measurement) was good for HM-JACKarc and for OC-SENSOR DIANA within the manufacturers' recommended range. Automated or semi-automated dilution of highly concentrated samples was available with all analysers, except HM-JACKarc, which has a limited measurement range. The NS-PLUS and BioMajesty did not alert the user to a hook/prozone effect (erroneously low values at exceptionally high concentrations). Sample stability over a range of temperatures was similar to manufacturers' claims for all analysers and much improved from previous studies. Whilst fewer staff may be required for screening, they will need further laboratory training to process FIT samples.

Conclusion This evaluation provides essential information to guide the BCSP through the usual tendering procedure.

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Disclosure of Interest None Declared.

PWE-020 DIAGNOSING MICROSCOPIC COLITIS – IS COLONOSCOPY NECESSARY?

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Introduction Microscopic colitis is a common cause of chronic diarrhoea, particularly in older people, and the incidence is increasing. As the endoscopic appearance is typically normal, diagnosis of the two subtypes, collagenous and lymphocytic colitis, relies upon specific histology findings. When suspected, guidelines advise colonoscopy with full biopsy series due to reports of a patchy disease distribution, with false negative rates of up to 40% reported with flexible sigmoidoscopy.¹ However,

more recent data has challenged this assumption, leaving considerable uncertainty.² We report one of the largest consecutive case series to date, examining whether flexible sigmoidoscopy alone is sufficient.

Methods A retrospective review of all cases of microscopic colitis diagnosed at colonoscopy over a 12-year period (2001–2013) at our hospital was performed. Only colonoscopies with both right (proximal to splenic flexure) and left sided colonic biopsies were included. The diagnostic criteria for microscopic colitis were lymphocytic infiltration in the lamina propria and either >20 intraepithelial lymphocytes per 100 epithelial cells (lymphocytic colitis) or a collagenous layer >10 mm (collagenous colitis). The primary aim was to assess the proportion of patients in which microscopic colitis could be diagnosed on left sided biopsies alone.

Results 84 patients were included in the study. 58 (69.0%) were female with a median age of 62 years. 44 (52.4%) had collagenous colitis and 40 (47.6%) lymphocytic colitis. 76 (90.5%) had features of microscopic colitis on both right and left sided biopsies, 7 (8.3%) right side only and 1 (1.2%) left side only. Hence a diagnosis of microscopic colitis could be made in 77 (91.7%) on left sided biopsies alone. Age, sex and histopathological subtype did not significantly alter the sensitivity of left sided biopsies.

Conclusion Flexible sigmoidoscopy would have correctly diagnosed microscopic colitis in a very high proportion of patients (92%). Given that flexible sigmoidoscopy is less expensive, better tolerated, and can be combined with CT scanning to exclude a proximal malignancy, this may have important implications for the investigation of non-bloody diarrhoea.

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PWE-021 MTORC1 MEDIATED TRANSLATIONAL ELONGATION IS LIMITING FOR INTESTINAL TUMOUR INITIATION AND GROWTH

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Introduction The loss of Apc, causing Wnt-mediated epithelial proliferation, is an early event in colorectal cancer (CRC) development. This hyperproliferative state requires signalling through the mTOR pathway, with the current paradigm suggesting that upregulation of translation initiation via phosphorylation of 4EBP1 is crucial. This model predicts that the mTOR inhibitor rapamycin, which does not efficiently inhibit 4EBP1 function, would be ineffective in limiting development and progression of intestinal adenomas.

Methods The inducible *in vivo* mouse models *Lgr5Cre^{ER}* and *VillinCre^{ER}* were used to selectively flox genes from intestinal stem cells and crypts respectively. mTOR complex 1 signalling was inhibited in *Apc^{fl/fl}* mice either by rapamycin treatment or

Abstract PWE-020 Table 1 Patient demographics and histopathological findings

	Collagenous colitis	Lymphocytic colitis
n	44	40
Median age (yrs)	61	62.5
Female	36 (81.8%)	22 (55.0%)
Left sided biopsies diagnostic	41 (93.2%)	36 (90.0%)