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PWE-186 **ISCAN IN THE EVALUATION OF SMALL COLONIC POLYPS: OUTCOMES, LEARNING CURVE FROM A LARGE PROSPECTIVE SERIES**

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Introduction Indigocarmine (IC) and narrow-band imaging have been shown to be effective in the in vivo diagnosis of small colonic polyps. The learning curve for achieving high level of accuracy with a new technology for real-time diagnosis of small colonic polyps has not been determined.

Methods We aimed to assess the learning curve of a novel electronic in vivo diagnosis technology (Pentax iScan) for an expert endoscopist. Patients presenting for screening colonoscopy through the UK Bowel Cancer Screening Programme were prospectively recruited. All colonoscopies were performed by a single expert endoscopist, with extensive experience in in vivo diagnosis, using Pentax EC-3890Li 1.2 Megapixel HD colonoscopes and EPKi processor. Polyps <10 mm in size were assessed sequentially using three modalities (1) White light HD endoscopy (WL), (2) Pentax iScan surface and tone enhancement, (3) IC chromoendoscopy. Optical magnification was not used. Predicted histology (non-neoplastic, adenoma, cancer) was recorded for each modality and compared to the final histopathological diagnosis. Results were analysed for sensitivity and specificity for neoplasia, and overall accuracy. To assess any learning effect results were analysed in three sets of 100 consecutive polyps.

Results A total of 309 polyps were eligible for inclusion in the study. Mean polyp diameter was 4.1 mm, median 3 mm. 133 polyps were in the proximal colon and 176 in the distal colon. 109 polyps were non-neoplastic, 199 were adenomatous and one contained adenocarcinoma. Sensitivity and overall accuracy improved significantly for all three imaging modalities in the 3rd set of polyps as compared to sets 1 and 2 (p<0.05). In Set 3 overall accuracies of 92.7%, 93.6% and 93.6% were achieved with WL, iScan and IC respectively. There were no significant differences in overall accuracy between the three modalities in Set 3. Negative predictive values for adenomatous histology of recto-sigmoid polyps ≤5 mm for the entire study were 96.5%, 93.4% and 98.3% for WL, iScan and IC respectively.

Abstract PWE-186 Table 1

	WL	iScan	IC
Set 1 (Polyps 1–100)			
Sensitivity	0.788	0.868	0.904
Specificity	0.708	0.766	0.729
Accuracy	0.750	0.820	0.820
Set 2 (Polyps 101–200)			
Sensitivity	0.866	0.851	0.881
Specificity	0.758	0.758	0.788
Accuracy	0.830	0.820	0.850
Set 3 (Polyps 201–309)			
Sensitivity	0.964	0.988	0.976
Specificity	0.808	0.769	0.808
Accuracy	0.927	0.936	0.936

Conclusion (1) Even in expert hands there is a significant learning curve for using a new technology for the in vivo diagnosis of small colonic polyps, with improvement in performance over the first 200 polyps assessed. (2) Excellent results can be achieved once the new technology has been mastered. (3) This is the first report of results achieved with high-definition white light endoscopy which are comparable with electronic chromoendoscopy and IC chromoendoscopy.

Competing interests None declared.

PWE-187 **COLONIC BIOPSIES TO DETECT MICROSCOPIC COLITIS IN PATIENTS WITH DIARRHOEA AND “NORMAL” COLONOSCOPY: WORTH THE EFFORT?**

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Introduction Patients investigated for diarrhoea often have macroscopically normal colonoscopies. Biopsies are, however, required in order to diagnose microscopic colitis (MC). Obtaining colonoscopic biopsies for persistent diarrhoea is an auditable JAG standard. The aim of this study, carried out in a single large NHS Teaching Hospitals Trust was (1) To measure the incidence of MC in patients with diarrhoea who had a “normal” colonoscopy. (2) To examine whether the discipline of the colonoscopist affected whether biopsies were taken in this situation or not. (3) To assess which biopsy protocols were being used.

Methods An analysis was performed of all colonoscopies with the indication of diarrhoea, with normal findings, undertaken in 2010. Interrogation of the endoscopy recording system (ERS), looked at endoscopist discipline, if biopsies were taken, biopsy sites and histology results.

Results A total of 4753 colonoscopy records were examined, of which 750 (15.8%) were performed for diarrhoea. 313/750 (41.7%) were described as being entirely normal. Of the 313 “normal” colonoscopies, 132 (42.2%) were performed by physicians; 40 (12.8%) surgeons; 124 (39.6%) nurses; 17 (5.4%) not specified. 294 (93.9%) colonoscopies had biopsies taken and MC was confirmed histologically in 14 (4.8%). Among the different professional groups, there was variation in the frequency of obtaining biopsy specimens: physicians 126/132 (95.5%), surgeons 35/40 (87.5%) and nurses 118/124 (95.2%). The difference between physicians and surgeons was not statistically significant ($\chi^2=3.55$, p=0.06). Positive biopsy for MC was similar between the different groups: physicians 5 (3.8%), surgeons 2 (5.0%), nurses 5 (4.0%) (p=NS). Of the patients who did have biopsies performed, 274/294, (93%) had both right and left colon sampled.

Conclusion The vast majority (93.9%) of patients presenting with diarrhoea and a normal colonoscopy in our unit are having colonic biopsies performed to exclude a diagnosis of microscopic colitis. The histology positivity rate was 5%, comparable to similar published series. A majority of all professional colonoscopists perform colonic biopsies appropriately in the setting of diarrhoea and normal colonoscopy. There is variability, but this is not statistically significant.

Competing interests None declared.

PWE-188 **USING A “CONVERSION FACTOR” TO ESTIMATE ADENOMA DETECTION RATE**

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