REFERENCE
Gupta S, Miskovic D, Bhandari P, *et al*. SMSA scoring system: a novel scoring system for determining the level of difficulty of a polypectomy. *Gastrointestinal Endoscopy* 2011;73(4S):AB418–9

Disclosure of Interest None Declared.

PWE-065 COLONOSCOPY PERFORMANCE IN A DISTRICT GENERAL HOSPITAL. HAS THE STANDARDISATION OF TRAINING STANDARDISED PERFORMANCE?

TM El Menabawey*, J O'Donohue, R Srirajaskanthan. *Gastroenterology, University Hospital Lewisham, London, UK*

10.1136/gutjnl-2014-307263.325

Introduction Since the introduction of the JAG endoscopy training system (JETS) for trainees in 2003 there have been demonstrable improvements in the key performance indicators (KPIs) of colonoscopy performance. Caecal intubation, polyp detection and polyp retrieval rates are audited KPIs for departments. Terminal ileum (TI) intubation rates are also recorded. The national colonoscopy audit has shown a disparity between medical and surgical performance, but little has been studied to assess if this has improved over time.
Methods We retrospectively audited these KPIs between 2004 and 2012, analysing for variations in performance for all colonoscopists encompassing both trainees and Consultants. We compared the performance of medics and surgeons for each year, the performance in 2004 with 2012 and the overall performance for 9 years using the Chi-squared test.
Results 10055 colonoscopies were performed over 9 years: 8938 by medics and 1117 by surgeons. Completion rates improved significantly from 2004 to 2012 for all colonoscopists (80.3 to 92.0%, $p < 0.001$). A significant improvement in both specialties' completion rates was seen (medics: 84.1 to 93.0%, surgeons: 74.8 to 88.5%, $p < 0.001$). Over 9 years the overall completion rate for medics was higher (90.2 vs. 86.0%, $p < 0.001$). Between 2007 and 2011 there was no significant difference in completion rates. Both specialties' TI intubation rate improved between 2004 and 2012 (medics: 46.3 to 64.1%, surgeons: 10.41 to 42.0%, $p < 0.001$). Overall surgeons were better at polyp detection (28.5 vs. 24.8%, $p < 0.001$). Surgical performance has not improved since 2004 (29.02 to 23.2% in 2012), whereas medics improved from 14.4 to 29.7% ($p < 0.001$) to a standard in line with surgical colleagues. Over 9 years there was no significant difference in polyp retrieval rates between specialties (74.9 vs. 76.7% respectively, $p = 0.3$) and the performance of both improved from 2004 to 2012 (medics: 44.2 to 90.9%, surgeons: 57.6 to 80.2%, $p < 0.001$).
Conclusion There has been an overall improvement in colonoscopists' performance in all KPIs between 2004 and 2012. When performance is sub-divided into specialties, one can see that there were significant discrepancies in performance between physicians and surgeons in 2004. With the exception of TI intubation, performance has converged to a similar and higher standard in 2012. This coincides with the introduction of JETS and suggests standardised training may have served to normalise and improve the standard of colonoscopy across both specialties.

REFERENCES
Gavin DR *et al*. The national colonoscopy audit: a nationwide assessment of the quality and safety of colonoscopy in the UK. *Gut* 2012
Kelly NM, *et al*. Is the 'driving test' a robust quality indicator of colonoscopy performanceA*World J Gastrointest Endosc* 2010

Disclosure of Interest None Declared.

PWE-066 ENDOSCOPIC VERSUS HISTOLOGICAL ASSESSMENT OF COLONIC POLYP SIZE

WJ Gashau*, C Kong, HY Lee, R Willert. *Central Manchester Foundation Trust, Manchester, UK*

10.1136/gutjnl-2014-307263.326

Introduction Colonic polyp size is a factor in determining management and prognosis of patients. Polyp diameters greater than 9 mm require ongoing colonoscopic surveillance.[1] Accurate endoscopic estimation of polyp size can be affected by depth perception and parallax errors. We compared endoscopic versus histological size assessments to determine if accurate estimation was operator-dependent.
Methods Symptomatic and asymptomatic (bowel screening) patients were identified from hospital databases. Endoscopic and histological polyp diameters were reviewed. Agreement levels between these were analysed by deriving intraclass correlation coefficient (ICC) using SPSS software (Version 20).
Results Sixteen colonoscopists were included: 5 bowel screening, 7 non-bowel screening and 4 trainees. Five hundred and ten polyps ($n = 510$) were found among 299 patients (186 males, 104 females). Two hundred eighteen polyps were enbloc resected, retrieved whole and analysed. Overall accuracy of polyp size assessment was good (ICC > 0.70) with variability between skill levels (Table 1).

Accuracy was best among polyps ≥20 mm diameter (ICC 0.99, $p < 0.001$); all removed by bowel screening colonoscopists. Polyps between 8 to 12 mm demonstrated poor correlation (ICC (absolute agreement) 0.535, $P = 0.002$).
Conclusion While endoscopic estimation of polyp diameter is accurate, variability exists. Estimations are more accurate among bowel screening endoscopists suggesting experience and/or colonoscopy workload contribute to this skill. Poor diameter estimations among polyps 8–12 mm has implications for polyp surveillance intervals. Standardising diameter using against closed or open biopsy forceps (width 2.2 and 8 mm respectively) to optimise accuracy should be used.

REFERENCE
1 Cairns, *et al*. Guidelines for colorectal cancer screening and surveillance in moderate and high risk groups (update from 2002). *Gut* 2010;59:666–690

Disclosure of Interest None Declared.

Abstract PWE-066 Table 1 Reliability analysis of polyp assessment according to aolonoscopist

	Intraclass correlation coefficient	p-value
All	0.95	p < 0.001
Bowel screening colonoscopists	0.96	p < 0.001
Non-bowel screening colonoscopists	0.74	p < 0.001
All trainees (consultant-supervised)	0.86	p < 0.001

PWE-067 DOES ENDOCUFF-VISION IMPROVE ADENOMA DETECTION

ZP Tsiamoulos*, K Patel, T Elliott, R Misra, S Thomas-Gibson, C Fraser, A Haycock, BP Saunders. *Wolfson Unit for Endoscopy, St Mark's Hospital/Academic Institute, London, UK*

10.1136/gutjnl-2014-307263.327

Introduction Although colonoscopy is considered the optimal procedure for bowel cancer screening, it remains an imperfect tool for cancer prevention, due to missed adenomas and early cancers. Optimal imaging modalities, innovative scopes and accessories (cap-assisted colonoscopy) have attempted to decrease the adenoma miss rate. Adenoma detection rates (ADR) have been shown to be a key performance indicator

Methods Endocuff-vision is a simple accessory mounted at the end of the scope with a proximal row of 6mm length soft plastic, finger-like projections. During scope insertion, these projections invert towards the shaft of the tube and during withdrawal they evert to hold back the colonic folds augmenting the forward endoscopic views. ADRs were recorded and evaluated for screening colonoscopy procedures before and after introduction of Endocuff-vision.

Results To date, four screening endoscopists (BPS, STG, CF, AH) have used the Endocuff-vision as part of a clinical evaluation process form August 2013 until November 2013. From our local Bowel Cancer Screening Program database, the figures of caecal intubation rate (CIR) and the ADRs of the screening endoscopists during April 2013 to July 2013 before Endo-cuff were retrieved:

BPS: CIR-100%/ADR-62.72%,
STG: CIR-95.84%/ADR-40.03%,
CF: CIR-93%/ADR-36.76%,
AH: CIR-96.25%/ADR- 55.35%.

Prior to the introduction of the Endocuff-vision, the cumulative CIR was 96.27% and ADR was calculated to be **48.71%**.

The total number of procedures where Endocuff-vision has been mounted was in 30 occasions (BPS-10, STG-11, CF-3, AH-6) with similar CIR rates but increased cumulative ADR of **65.5%.** On 3 patients the Endocuff-vision was electively removed from the scope due to insertion difficulties through fixed sigmoid colonic segments secondary to severe diverticular disease. There were no adverse events reported during the trial evaluation period.

Conclusion In this small pilot study, use of the Endocuff appeared to improve the ADR by 17%. There were no complications from the use of the cuff although it was electively removed in 3 cases with severe sigmoid colon diverticulosis. Further randomised evaluation of this simple novel device is warranted.

Disclosure of Interest None Declared.

PWE-068 ENDOSCOPIC RESECTION OF COMPLEX COLONIC POLYPS – WHERE DO THE BOUNDARIES LIE?

T Elliott, ZP Tsiamoulos*, N Suzuki, BP Saunders. *Wolfson Unit for Endoscopy, St Mark's Hospital/Academic Institute, London, UK*

10.1136/gutjnl-2014-307263.328

Introduction The role of endoscopic resection for colonic polyps previously destined for surgery is expanding. However, surgery remains appropriate in some cases. The aim of this study was to examine tertiary polyp referrals that did not undergo endoscopic polypectomy. The objectives were to determine (i) the proportion of polyps referred for polypectomy that were not endoscopically resected, (ii) the primary reason in this decision-making and (iii) factors associated with polyps that were not endoscopically resected.

Methods A prospective observational study of all polyps referred for endoscopic resection (ER) to a tertiary centre between January 2010 and August 2012 was performed. For each case, ER was either completed, abandoned or not attempted. The primary reason for abandoning or not attempting ER was documented. Demographics, polyp characteristics and histology were recorded and a comparative analysis (using chi-square test and independent-samples T test) was made between patients in whom ER was abandoned or not attempted with those in whom ER was completed.

Results ER was either abandoned (n/29) or not attempted (n/55) in 84 of 423 polyp referrals. This was most commonly because of suspected invasive cancer (45/84). Of these 45 polyps, 12 had characteristic macroscopic features of cancer on inspection. In 24/45, invasive cancer was suspected after advanced endoscopic examination (including surface morphology (Paris/NICE/Kudo) classification and forceps palpation). In 9/45, invasive cancer was only suspected during attempted ER, which was then abandoned. The remaining 41/84 polyps for which ER was abandoned or not attempted appeared benign. The positive and negative predictive values of endoscopic evaluation for the diagnosis of invasive cancer were 86% and 96% respectively. The benign-appearing polyps were not endoscopically resected because of (i) a high risk location (ie. overlying the appendix, IC valve or a diverticulum), n = 12; (ii) difficult access, n = 12; (iii) size ≥ 5 cm combined with other factors, n = 8; (iv) age/comorbidities, n = 4 or (v) poor tolerance of colonoscopy, n = 2. Forty-six percent of these benign polyps were in the caecum. In comparison with patients who underwent complete ER, those in whom ER was abandoned or not attempted were more likely to be female (56 vs. 37%, $P < 0.001$), had larger mean polyp size (4.7 cm vs 3.7 cm $P < 0.001$), and had a higher incidence of polyp cancer on histology (47 vs. 2.7% $P < 0.001$).

Conclusion Twenty percent of polyps referred to a tertiary institution for polypectomy may not be suitable for endoscopic resection. This is most commonly due to the presence of invasive cancer which can usually be recognised by endoscopic examination.

Disclosure of Interest None Declared.

PWE-069 COMPARISON OF MICROWAVE WITH MONOPOLAR AND BIPOLAR COAGULATION IN A PORCINE MODEL

[1]ZP Tsiamoulos*, [2]C Hancock, [3]PD Sibbons, [1]BP Saunders. *[1]Wolfson Unit for Endoscopy, St Mark's Hospital/Academic Institute, London, UK; [2]Department of Electronic Engineering, Bangor University, Bangor, UK; [3]Department of Surgical Sciences, Northwick Park Institute for Medical Research, London, UK*

10.1136/gutjnl-2014-307263.329

Introduction Intra-procedural bleeding is considered an immediate serious adverse event and a major concern for the endoscopist and the patient. Current endoscopic devices utilise monopolar or bipolar energy to treat acute bleeding vessels and/or pre-coagulate visible vessels but there are no *ex vivo* comparative studies assessing the safety profile with histology.

Methods The optimal time of application for the microwave modality of a new endoscopic device "Speedboat-RS2, Creo Medical Ltd, UK" was initially assessed compared to a standard mono-polar endoscopic device, Coagrasper, Olympus, USA. After histological assessment of the optimal time range, a comparison of the Speedboat RS2 to a standard bipolar endoscopic device, Gold Probe, Boston Scientific, USA, and to standard monopolar device, Coagrasper, was performed to assess the safety profile of coagulation with histology and the endoscopic performance of pre-coagulation in the porcine colon. The Speedboat-RS2 blade delivered microwave coagulation (5.8 GHz) for