Methods 80 datasets of clinical images were reviewed by 3 assessors yielding a median RIQI score from 30 observations for 8 independently practising colonoscopists. This was correlated against annual KPI data for each colonoscopist – including CIR (%), PDR (%) and median WDT (mins). Pearson Rank correlation was performed.

Results Median RIQI scores for the 8 colonoscopists ranged from 2 to 10 (<5=poor; 6–8=moderate, 9–10=high image quality). Unadjusted CIR ranged from 81.6% to 95.0%; PDR from 24.2% to 64.5% and median WDT from 7 to 19 min. Median RIQI scores had a moderate to good positive correlation with existing KPIs – correlation values: CIR $r=0.59$; PDR $r=0.53$; WDT=0.54.

Conclusions The RIQI score is a novel KPI assessing the recording of image quality. This is a surrogate marker of both tip control and ability to identify, wash and assess lesions. We have demonstrated that the RIQI score shows positive correlation with other commonly used KPIs in colonoscopy and further work is anticipated in exploring its role in upper GI endoscopy aligned to the BSG Quality Standards.¹

REFERENCE

1. Beg S, Ragunath K, Wyman A, et al. Quality standards in upper gastrointestinal endoscopy: a position statement of the British Society of Gastroenterology (BSG) and Association of Upper Gastrointestinal Surgeons of Great Britain and Ireland (AUGIS). *Gut* 2017 Sep 13;gutjnl-2017.

PTH-071 OUTCOMES OF ENDOSCOPIC RESECTION OF LARGE COLORECTAL LESIONS IN VERY ELDERLY (≥ 85 YEARS) PATIENTS

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10.1136/gutjnl-2018-BSGAbstracts.92

Background Endoscopic resection (ER) provides organ conserving treatment for large colorectal superficial neoplastic lesions (CSNL), allowing many patients to avoid surgery. Although ER is widely practised, little is known about outcomes in very elderly patients who may benefit the most from avoiding major surgery. The few studies examining outcomes in the elderly originate from eastern expert centres using ESD or use a relatively young definition of elderly. We aimed to compare outcomes of ER in very elderly compared to younger patients.

Methods Colorectal ERs of large (≥ 2 cm) CSNL performed at a tertiary institution were included. ER was performed for all lesions without overt invasive cancer regardless of size or location. Surveillance colonoscopy was performed at 3 months (SC1) and 12 months (SC2). Very elderly was defined as age ≥ 85 years. Outcomes were compared between patients aged ≥ 85 years and those <85 years.

Results 570 ERs of lesions ≥ 2 cm were included. Very elderly patients ($n=57$) had a mean age of 88 years *vs* 70 years for younger patients. There were no significant differences in mean lesion size (61 mm *vs* 52 mm, $p=0.19$) or location ($p=0.74$). The proportion of ERs using ESD/Hybrid ESD was similar (25% *versus* 26%, $p=0.81$). More patients ≥ 85 years had covert invasive adenocarcinoma, although this was not significant (12% *vs* 7%, $p=0.13$).

More patients ≥ 85 years experienced post procedure bleeding (8% *vs* 1%, $p<0.001$), but there was no difference in perforation rates (3% *vs* 3%, $p=0.83$) and no patients ≥ 85 years

required surgery for a complication. Recurrence was similar (15% *vs* 13%, $p=0.79$). Similar proportions underwent surgery for covert invasive adenocarcinoma (3.5% *vs* 2.9%, $p=0.79$) and for recurrence (2.4% *vs* 1.3%, $p=0.55$). Although they were equally likely to complete SC1 ($p=0.42$), patients ≥ 85 years were significantly less likely to complete SC2 (OR 0.43, $p=0.013$), probably because of a lack of medical fitness or unwillingness to undergo further surveillance (OR 24.3, $p<0.001$) but not necessarily due to death (OR 1.13, $p=0.87$).

Conclusions ER for large CSNL is safe and effective in very elderly patients, who can be treated using similar techniques to younger patients with similar short term recurrence. Serious complications are rare. If surgery is indicated for covert adenocarcinoma or recurrence, it appears very elderly patients are equally likely to undergo surgery. However, significantly fewer very elderly patients are eligible for long-term follow up and therefore treatment should be tailored according to each patient's specific lesion characteristics, symptoms and physiological fitness.

PTH-072 TRAINING FUTURE INTERVENTIONAL ENDOSCOPISTS: OUTCOMES OF TRAINEE PERFORMED COLORECTAL COMPLEX EMR/PEMR IN A TERTIARY CENTRE

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10.1136/gutjnl-2018-BSGAbstracts.93

Introduction Despite the widespread use of endoscopic mucosal resection (EMR) and piecemeal EMR (pEMR) to treat large colorectal superficial neoplastic lesions, training and competence in complex endoscopic resection (ER) in western centres takes place almost exclusively during specialist practice after the completion of residency. There are no accredited western training programs in advanced ER and no reports of outcomes of complex EMR performed by trainees. However, as the use of advanced ER to treat CSNL increases, it is conceivable that training in complex EMR takes place during residency for selected trainees. Our tertiary referral unit has been training 2 residents in advanced colorectal lesion assessment and EMR since January 2016. We evaluated the outcomes of complex EMR performed by trainees during this period.

Methods All EMR and pEMR of large (≥ 2 cm) CSNL performed from January 2016 to October 2017 were included. Lesions resected using ESD were excluded. ER were performed by 2 specialist interventional endoscopist trainers and 2 residents. The residents were already accredited for independent practice for diagnostic colonoscopy and polypectomy <2 cm. Patient and lesion characteristics were described and outcomes including failed ER, complications and recurrence for EMR performed by residents and trainers were compared.

Results 238 ER of colorectal lesions ≥ 2 cm were performed during the study period. After excluding procedures for recurrent lesions ($n=16$) and procedures using ESD/Hybrid ESD ($n=78$), 144 lesions resected using EMR/pEMR were included. 60 ER were performed by residents (42%). The mean patient age was 69.5 years (male=40). The mean size of resident performed EMR was 34.3 mm ± 10.7 mm (range 20 mm–60 mm) *versus* 52.6 mm ± 32.3 mm for ER performed by trainers ($p<0.001$). Lesions were located in the right colon ($n=33$),

left colon (n=20) and rectum (n=7). Compared to ER performed by trainers, there were no differences in failure to achieve endoscopic clearance (p=0.09), complications (p=0.67), intraprocedural bleeding (p=0.32) or recurrence (p=0.42).

Conclusions These results show that, in a specialist unit with experienced trainers, it is safe to train residents in complex EMR/pEMR who can perform the techniques safely in large CSNL with good outcomes. Significant prior experience in diagnostic colonoscopy is important but the skills for advanced assessment and EMR can subsequently be acquired in the right setting.

PTH-073 RADIOLOGICAL STAGING INVESTIGATIONS BEFORE ENDOSCOPIC RESECTION OF LARGE COLORECTAL LESIONS: SIGNIFICANT BURDEN WITH NO BENEFIT

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10.1136/gutjnl-2018-BSGAbstracts.94

Introduction Endoscopic resection (ER) is increasingly used for curative treatment of large colorectal superficial neoplastic lesions (CSNL). Experts believe that accurate lesion assessment and *in vivo* diagnosis should guide treatment decisions for such lesions, however in western practice skills in lesion assessment are less robust and patients frequently undergo biopsy sampling and pre-procedure radiological staging investigations as for any suspected colorectal cancer. For large rectal lesions, many consider pelvic MRI obligatory. The value of such investigations in this context is not clear.

Methods All ER of large (≥ 20 mm) CSNLs referred to a tertiary unit were included. Data was collected from clinical letters, endoscopy and radiology reports from the referring department as well as the lesion assessment, treatment and final histopathology at our institution. Details of the findings of computed tomography (CT) scans, need for subsequent imaging and potential staging of rectal tumours by MRI were recorded.

Results 579 CSNLs ≥ 20 mm were treated with ER. 177 patients (31%) had received a staging CT of the thorax, abdomen and pelvis prior to referral. Of 163 rectal tumours, 67 (41%) had received a staging MRI. The findings of the CT scan did not change the management of the CSNL in any patients. Incidental findings were reported in 28 patients (16%). As a result 25 (89%) went on to require further imaging or referral to other clinicians which resulted in treatment for only one patient who required a ureteric stent for an asymptomatic obstructing stone. No MRI was reported as less than T1 and 31 (30%) were reported as at least T2 or greater, of which only 3 had invasive adenocarcinoma: 2 were T1 with minimal submucosal invasion and one was recognised during the ER as having deep invasion but was unfit for surgery. MRIs in 10 patients were reported as N1-2 (positive lymph node metastases), only 3 had proven adenocarcinoma of which only one eventually agreed to surgery: there was a T3N2 adenocarcinoma but surgery was performed more than 3 years after the initial MRI.

Conclusions Traditional staging radiological investigations have no value in the management of either colonic or rectal large CSNL assessed as likely non-invasive using endoscopic

assessment. Instead, they are a significant burden on resources, expose patients to unnecessary radiation, are likely to contribute to unfounded increased anxiety for patients and clinicians and lead to a significant number of additional investigations or specialist consultations without meaningful outcome.

PTH-074 SMSA SCORE NOT AN INDEPENDENT PREDICTOR OF OUTCOMES IN A LARGE SERIES OF ENDOSCOPIC RESECTIONS

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10.1136/gutjnl-2018-BSGAbstracts.95

Introduction A predictive score to stratify the difficulty of endoscopic resection (ER) of large colorectal superficial neoplastic lesions (CSNL) and predict outcomes would be valuable. The SMSA score assigns a numerical score based on size, morphology, site and ease of access and stratifies lesions into 4 groups of increasing complexity. It has been recommended in several guidelines on colorectal ER and SMSA level 4 is reportedly associated with incomplete resection and increased complications. Despite this, it has not been widely validated in large series of ER for large CSNLs using standardised techniques. We applied the SMSA score to a large series of ER of lesions ≥ 2 cm at a tertiary centre.

Methods ER of large (≥ 2 cm) CSNL were included. Surveillance colonoscopy was performed at 3 months and 12 months. SMSA score was calculated and SMSA level 4 compared with level 2-3 for outcomes including failed ER, ≥ 2 ER to achieve clearance, complications and recurrence. Multivariate logistic regression was performed to determine independent predictors of complications and recurrence.

Results ER was performed for 542 lesions (mean size 53.7 mm). SMSA level 4 was not associated with an increased risk of failed ER (OR 0.06, 95% CI 0.007-0.44, p<0.001) or requirement of ≥ 2 ER to achieve clearance (OR 3.96, 95% CI 0.49-31.9, p=0.16). Although SMSA level 4 was associated with complications (OR 5.25, 95% CI 1.58-17.5, p=0.002), it was not associated with perforation and a simple assessment of either large lesion size (≥ 50 mm) or difficult access was similarly associated with complications (OR 4.27, 95% CI 1.47-12.4, p=0.004). Multivariate logistic regression revealed only age (p<0.001), prior heavy manipulation (p=0.03), and ESD/Hybrid ESD (p=0.02) were independently associated with complications but not SMSA level 4 (p=0.06).

SMSA level 4 was associated with recurrence (OR 10.8, 95% CI 2.59-45.2, p<0.001), as was either large lesion size or difficult access (OR 6.35, 95% CI 2.47-16.33, p<0.001). On multivariate logistic regression only large size/difficult access (p=0.03) and piecemeal resection (p=0.003) were associated with recurrence but not SMSA level 4.

Conclusion SMSA level 4 was not associated with failed ER or multiple ERs to achieve clearance. It was not an independent predictor of complications or recurrence on multivariate logistic regression. Although relatively simple, the SMSA score is somewhat difficult to rapidly calculate and stratify lesions. For practical purposes when making a judgement during a procedure, it may be as useful to use a simple assessment of large lesion size or difficulty in accessing the lesion.