

sensitivity, specificity and global accuracy at different score thresholds.

**Results** Image processing speed by the algorithm was 33 ms/image. This is much faster than the average human visual response latency which is estimated at 70–100 ms. The algorithm was able to detect Barrett's neoplasia with sensitivity of 93%, specificity of 78% and global accuracy of 83% (see figure (1) below for examples of algorithm detection).

**Conclusions** We developed and validated an early AI algorithm with high sensitivity and reasonable specificity when compared with PIVI criteria. The ultra short image processing time would suggest this algorithm may be suitable for real time detection of Barrett's neoplasia. We will develop this model further for use during real time endoscopy.

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### OUTCOMES FROM THE UK ENDOSCOPIC SUBMUCOSAL DISSECTION (UK ESD) REGISTRY- WHAT HAVE WE LEARNT?

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10.1136/gutjnl-2020-bsgcampus.7

**Introduction** The practice of endoscopic submucosal dissection (ESD) for treatment of early gastrointestinal neoplasia has been increasing in the West, however, the uptake has been slow due to a long learning curve and higher complication rate. We aim to analyse UK ESD practice through the development of the first UK national ESD registry.

**Methods** The UK ESD registry was established in 2016 with 4 major tertiary referral centres which was extended to 6 centres by 2019. Data on different parameters ranging from patient demographics to procedural details were collected on a national web based electronic platform and analysed.

**Results** A total of 309 ESDs were performed with a completion rate of 99.2%. Standard ESD was performed in 73.5% whereas hybrid ESD was performed in 26.5% cases. The mean lesion size was 38 mm (range 10 – 130 mm).

The overall en bloc resection rate was 86.5%, whereas the R0 resection rate was 72.5%.

There were 12 (3.8%) cases with complications ( 7 significant bleeds and 5 perforations).

Majority of the colorectal lesions showed a resection histology of LGD (71%) with cancer demonstrated in roughly 10%

of the lesions, whereas upper GI lesions showed a higher percentage of atleast SM1 invasive cancer (stomach -61% and oesophagus- 67%).

The mean duration between procedure and first follow up endoscopy was 212 days, with visible recurrence occurring in 23 cases (7.4%).

Further details comparing standard ESD technique and hybrid ESD have been outlined in table 1.

**Conclusions** We therefore conclude that En bloc resection rates were higher in standard ESD, than in hybrid ESD, however, the latter was involved with fewer complications. Recurrence rates were higher in hybrid ESD compared with standard ESD, however, still lower than for EMR with similar complication rates (specially for colorectal lesions). Although associated with a lower en bloc resection rate and greater recurrence than ESD, hybrid ESD could be an attractive learning step for western endoscopists to be fully competent in standard ESD.

## Inflammatory bowel disease

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### RANDOMISED CONTROLLED TRIAL OF ANTIBIOTIC/ HYDROXYCHLOROQUINE COMBINATION VERSUS STANDARD BUDESONIDE IN ACTIVE CROHN'S DISEASE (APRICOT)

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10.1136/gutjnl-2020-bsgcampus.8

**Introduction** Mucosal *E. coli* are increased in Crohn's disease (CD). They replicate within macrophages and are then inaccessible to penicillins and gentamicin. Hydroxychloroquine is used with doxycycline to treat Whipple's disease. It raises macrophage intra-vesicular pH and inhibits replication of bacteria that require acidic pH. Ciprofloxacin and doxycycline are also effective against *E. coli* within macrophages.

**Methods** Adult patients with active CD (CDAI>220 plus CRP≥5 mg/l and/or faecal calprotectin >250 ugram/g) were randomised to receive (open label) either oral budesonide

Abstract 07 Table 1

	Standard ESD			Hybrid ESD		
	En bloc	Complication	Recurrence	En Bloc	Complication	Recurrence
Oesophageal (N=88)	76/78=97.4%	Bleed: 2/78 (2.6%) Perforation: 0	11/78=14%	10/10=100%	Bleed: 0 Perforation: 0	2/10= 20%
Gastric (N=87)	76/77=98.7%	Bleed: 1/77 (1.3%) Perforation: 0	1/77= 1.3%	9/10=90%	Bleed: 0 Perforation: 0	1/10= 10%
Duodenal ( N=6)	1/1= 100%	Bleed: 0 Perforation:0	0	4/5= 80%	Bleed: 0 Perforation : 1/5 (20%)	1/5= 20%
Colorectal (N=128)	68/70=97.1%	Bleed: 3/70 (4.3%) Perf: 2/70 (2.9%)	3/70= 4.2%	20/58=34.5%	Bleed: 1/58 (1.7%) Perf: 2/58 (3.4%)	4/58=6.9%