Conclusion CE in patients >80 years of age has high DY, but sinister pathology in this cohort is rare. Furthermore, small-bowel CE has limited impact on the final patient outcome in this patient group.

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Disclosure of Interest None Declared.

PTU-018 | **AUTOMATIC DETECTION OF 'SUSPICIOUS' CAPSULE ENDOSCOPY VIDEO SEGMENTS**

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Introduction Manual review and annotation of a capsule endoscopy (CE) video requires a considerable amount of reviewing time. The diagnostic accuracy of this process may decrease over time due to reviewer tiredness. Recent studies showed an average detection rate – for the clinically significant findings – as low as 40%.[1] We present a generic computational framework for automatic detection of abnormalities in CE videos.

Methods A CE video (MiroCam®, InrtoMedic Co Ltd, Seoul, Korea), depicting inflammatory changes (aphthae, mucosal breaks, ulcers, erythema) was reviewed and manually annotated by experienced CE reviewer. A total of 1984 frames, containing any pathology, were thumbnailed. The proposed framework considers video frames as members of a vector space represented by their colour information. An unsupervised data reduction algorithm,[2] which does not require any prior knowledge about the data, was then applied on each segment. This algorithm clusters together frames that exhibit similar characteristics e.g., colour distributions. Its output is a subset of video frames extracted from each cluster by applying a threshold to the clustering result. The extracted frames are characteristic of the particular video segment and as a result representative of possible lesions.

Results The evaluation of the proposed framework aimed to determine its accuracy, in terms of the ratio of the neighbourhoods represented by at least one frame in the system's output and the neighbourhoods that were manually annotated as suspicious for containing lesions. The parameters considered include clustering from 2 to 6 clusters and thresholds[2] varying from 0.004 to 0.6. The obtained accuracy ranged between 76% to 98% depending on the desired sensitivity level of the algorithm, controlled by the threshold. Furthermore, the automatic selection of the representative CE video segments performed by the proposed approach, the number of video frames to be thoroughly examined can be reduced from 30% to 60% of the original video, depending on the clustering and threshold settings.

Conclusion The application of the proposed framework to the evaluation of CE videos may reduce the rate of false negative evaluations by attracting the attention of the reviewer to automatically identified video segments (or single frames) of interest which are likely to contain lesions.

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PTU-019 | **ANTITHROMBOTIC VS. ULCER EFFECTS IN NON-VARICEAL BLEEDING IN USERS OF ANTITHROMBOTIC DRUGS**

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Introduction The use of antithrombotic drugs (ATDs) remains a considerable challenge in the aetiology and management of non-variceal upper gastrointestinal bleeding (NVUGIB). In the upper gastrointestinal tract, ATD use may result in bleeding by mucosal damage (ulcer effect) or through its basic antithrombotic effect. The clinical significance of these effects is unclear.

In this controlled analysis, we AIMED to clarify the significance of the antithrombotic effect as compared with the ulcer effect in patients with NVUGIB using ATDs.

Methods We previously found that ATD users tended to be older and to have higher comorbidity and different endoscopy findings. To overcome these confounding factors, we compared 202 patients with NVUGIB using ATDs (ATD Group) with 202 patients with NVUGIB but not using ATDs (Controls), having matched both groups in a pairwise manner for age, Charlson comorbidity score and a composite endoscopic score covering the oesophagus, stomach, and duodenum. Antithrombotic drugs included low-dose aspirin, clopidogrel, dipyridamole, warfarin, and heparin. Patients using NSAIDs were excluded. Characteristics of the groups were compared using the Wilcoxon signed rank test and McNemar's test. Continuous variables are reported as median (IQR).

Results The characteristics of the two matched study groups are shown in Table 1.

Conclusion After matching for age, comorbidity, and composite endoscopy score, patients with NVUGIB and using ATDs had significantly lower haemoglobin level, higher Blatchford risk score, and were 1.5 times more likely to be transfused. These effects are most likely to be due to the antithrombotic activity of

Abstract PTU-019 Table 1 The characteristics of patients with NVUGIB using antithrombotic drugs as compared with matched controls not using these drugs

	ATD (n = 202)	Control (n = 202)	P-value
Age, years, median (IQR)	72 (60–79)	71 (60–79)	Equal by design
Charlson comorbidity score	1 (1–2)	1 (1–2)	Equal by design
Endoscopy score	1 (0–2)	1 (0–2)	Equal by design
Males	125/202 (62%)	105/202 (52%)	0.06
Smoking	53/200 (27%)	55/199 (28%)	1.00
Haemoglobin, g/dl	10.3 (8.0–12.8)	12.2 (9.4–13.8)	0.02
Urea, mmol/l	9.8 (6.1–14.2)	7.9 (5.5–12.5)	0.04
Blatchford score	8 (4–11)	5 (2–9)	<0.001
Transfusion	79/200 (40%)	52/198 (26%)	0.006