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OC-022

COLONIC LESION HISTOLOGY PREDICTION: COMPARISON BETWEEN EXPERTS, REGISTRARS, CONSULTANTS, BCS NURSES AND ENDOSCOPY RESEARCH FELLOWS

doi:10.1136/gut.2011.239301.22

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Introduction Studies of in vivo diagnosis have shown accuracy of 68–83% using conventional white light endoscopy and up to 94–96% with chromoendoscopy/zoom endoscopy in expert hands. Specific training in lesion recognition, use of advanced imaging techniques and chromoendoscopy is not widespread amongst UK trainees. We aimed to assess the competence of UK registrars' and consultants' polyp recognition skills plus the impact of a dedicated lesion recognition intervention.

Methods We developed a library of paired endoscopic pictures of 37 lesions (15 adenomas, 13 hyperplastic and 9 cancers) with and without dye spray. In a previous study using the same image library Japanese and UK expert endoscopists demonstrated histology prediction accuracy of 92% and 87%, respectively. Subjects were classified into 4 groups; Consultants (n = 5), Gastroenterology Registrars (n = 8) and Endoscopy Research Fellows (n = 3). Bowel Cancer Screening Nurse Practitioners (BCSN, n = 4) with no previous training in polyp recognition were used as controls. All subjects aside from the BCSN group were performing colonoscopy on a regular basis. Endoscopy Research Fellows had received specific training in lesion recognition using Kudo's pit patterns, Paris Classification and a novel polyp classification system (NAC) described previously.

Results Mean accuracy scores compared to histology were BCSN 59%, Registrar 62.7%, Consultant 69.0% and Fellows 82%. The mean accuracy score for Fellows was significantly higher than each of the other three groups ($p < 0.05$ for all 3 comparisons). There was no significant difference in accuracy between the

BCSN and Registrar groups ($p = 0.139$). Consultants had significantly higher accuracy scores than Registrars ($p < 0.05$). Senior gastroenterology registrars (Year 4 or above) were not significantly more accurate than more junior registrars (Year 1–3) (63.5% vs 62.0%, $p = 0.612$). Similarly, there was no difference in accuracy between those registrars who had achieved JAG independence in colonoscopy, and those who had not (63.4% vs 62.3%, $p = 0.751$).

Zoom chromoendoscopy reduced accuracy in all doctor groups (70.6% WL vs 63.4% Zoom), but increased accuracy in BCSN (51.3% WL vs 63.5% Zoom).

Conclusion High accuracy in lesions recognition can be achieved in expert hands. Greater experience and independence in colonoscopy do not appear to increase accuracy in lesion recognition amongst registrars. Zoom endoscopy is intended to improve lesion recognition skills but our results suggest a paradoxical effect suggesting a lack of familiarity with this modality. Dedicated training improves lesion recognition skills amongst registrars. This calls for a dedicated lesion recognition skills programme for all colonoscopists.

Competing interests None.

Keywords chromoendoscopy, in vivo diagnosis, kudo, polyp.