

OC-060

THE COST IMPACT OF IN VIVO DIAGNOSIS OF DIMINUTIVE POLYPS: EXPERIENCE FROM A SCREENING ENDOSCOPY PROGRAMME

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Introduction The histological evaluation of diminutive polyps is time consuming and expensive. Recent developments in endoscopic techniques have enabled the prediction of histology in vivo using vascular enhancement techniques and dye sprays. This study aims to evaluate the cost effectiveness of in vivo histology prediction using white light (WLI) FICE and indigo carmine (IC) dye spray in the bowel cancer screening programme.

Methods Patients undergoing screening on the national bowel cancer screening programme (BCSP) were prospectively evaluated. Polyps were examined using WLI, FICE and IC prior to removal and histological examination. The accuracy of the in vivo histology prediction was calculated. Using a histology cost of £58.90 per polyp the cost of histological analysis for the cohort was calculated. Cost savings for sending neoplastic polyps (Portsmouth protocol) or just polyp cancers (modified Portsmouth protocol) was then calculated. Finally the cost per missed adenoma was assessed for WLI, FICE and IC dye spray.

Results 141 patients were examined, with 305 diminutive polyps <10 mm found in 106 patients (mean 2.9 polyps per patient). When using HD endoscopes a sensitivity for adenomas of 76% with WLI, 93% with FICE and 94% with IC

was achieved. This is in keeping with similar results from the DISCARD study using narrow band imaging. No polyp cancers were mis-diagnosed. Rescope interval as determined by BSG guidelines would have been correct in 97% of cases using either FICE or IC for in vivo histology prediction. The potential costs for each strategy are shown in table 1. Based on our data a potential cost saving of £109 per person undergoing screening colonoscopy could be made. Within the national BCSP 12153 colonoscopies are performed per annum with 11,619 benign polyps <10 mm removed per year. Using this data we have calculated that in vivo diagnosis could represent a potential saving of £684,339.47 per annum for histology related costs.

Conclusion (1) In vivo diagnosis of polyps and retrieving and sending only adenomas can lead to a 1.5–2-fold reduction in pathology costs. (2) In vivo diagnosis where only diminutive cancers are sent for histology can lead to an 75–113-fold reduction in pathology costs. (3) A simple change in practice (after appropriate training) with in vivo polyp diagnosis can significantly reduce the work load for extremely stretched and busy endoscopy and pathology departments.

Competing interests None.

Table 1 OC-060 Evaluation of histopathology costs by biopsy protocol

	Whole Cohort (n = 305)	Per polyp	Nationally per annum for BSCP
polyps <10 mm sent to histology	£17,964.50	£58.90	£684,319.51
Proposed Portsmouth Protocol (Retrieve and send adenomas but not hyperplastic polyps to histology)	£11,662.20	£38.24	£318,766.8
Futuristic Protocol (Discard all diminutive adenomas and HP <10 mm and only send diminutive cancers to histology)	£235.6	£0.77	£6066.7