PTU-13 Learning curve of optical diagnosis with a resect and discard strategy for screening colonoscopy

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Introduction Advanced endoscopic imaging allows optical diagnosis of diminutive polyps. Performance thresholds for optical diagnosis have been set to allow a 'resect and discard strategy' which may streamline patient care and reduce histopathology need. Aim: to assess early implementation and quality assurance of this strategy in a bowel cancer screening unit setting (1.1 million population).

Methods In this prospective feasibility study, 8 bowel cancer screening endoscopists completed a validated optical diagnosis training module and performed all procedures during Feb-Oct 2020. All ≤5mm polyps had white-light and narrow-band images. Endoscopists classified the optical diagnosis as high or low confidence. All polyps had standard histopathology.

Performance was analysed in 2 month time periods with active feedback given. There was repeat histology review of inaccurate high confidence optical diagnoses.

Results In the 8 months to date, 639 polyps were optically diagnosed (468 high confidence and 171 low confidence) from 283 patients who were divided into 4 time periods.

The proportion of low confidence diagnoses increased from 15% in periods 1-2 to 29% in period 4.

In periods 1-2, 1/8 endoscopists achieved the 90% accuracy threshold. In periods 3 and 4, 2/8 and 4/8 endoscopists achieved the threshold respectively. Overall, accurate diagnoses increased from 81% to 86% (period 1 to 4). Of those who reached the threshold by period 4 the mean number of high confidence calls was 60 (range 41-99).

For periods 1-4, the positive and negative predictive values for optical diagnosis of an adenoma were 89.3% and 64.4% respectively:

<table>
<thead>
<tr>
<th>Histology</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adenoma</td>
<td>322</td>
</tr>
<tr>
<td>Non-adenoma</td>
<td>146</td>
</tr>
<tr>
<td>Total</td>
<td>468</td>
</tr>
</tbody>
</table>

Conclusions The learning curve for optical diagnosis in a bowel cancer screening setting varies between individual operators. Over time, and with feedback, there is a gradual increase in optical diagnosis accuracy and in the number of endoscopists achieving the 90% threshold accuracy target, with a corresponding decrease in the percentage of high confidence calls.

PTU-14 Patient acceptability of diminutive polyp optical diagnosis with resect and discard strategy in screening colonoscopy

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Abstract

Introduction Colonoscopy with polypectomy reduces the rate of subsequent colorectal cancer and associated mortality. Most polyps resected are diminutive and have a low cancer risk. Currently, these diminutive polyps are resected and examined histologically. Using advanced imaging technologies some studies show we can distinguish adenomas from non-adenomas optically. This could potentially avoid unnecessary polypectomies and associated histology costs in cases where there is high confidence in the diagnosis of the polyps allowing polyps to be resected and discarded. The aim of this study is to assess the acceptability of such a strategy for patients in real life clinical practice.

Methods Two hundred and fifty patients undergoing a bowel cancer screening colonoscopy procedure, where optical diagnosis was used as part of the DISCARD3 study, were invited to participate in a patient experience survey. This was carried out over February - October 2020 at a London bowel cancer screening centre (screening population 1.1 million) with 209 patients included (41 patients excluded: 33 did not complete, 8 did not consent).

Patients were asked to rate the following questions (responses: 5 point scale from strongly disagree to strongly agree):

1. My colonoscopy was comfortable
2. My colonoscopy was comfortable
3. My colonoscopy was comfortable
4. My colonoscopy was comfortable
5. My colonoscopy was comfortable

Results Most patients found their procedure comfortable (85.2%; 178/209) and were satisfied with their procedure (97.6%; 204/209). Most agreed or strongly agreed that they would be happy for polyps to be assessed optically (78.9%;