



Background

- Adenomas are precursors of colorectal cancer and polypectomy reduces mortality by 40-60%.
- Currently all diminutive polyps are resected and examined histologically.
- Real time optical diagnosis is now possible with image enhancing technologies and offers potential for a 'resect and discard' strategy.

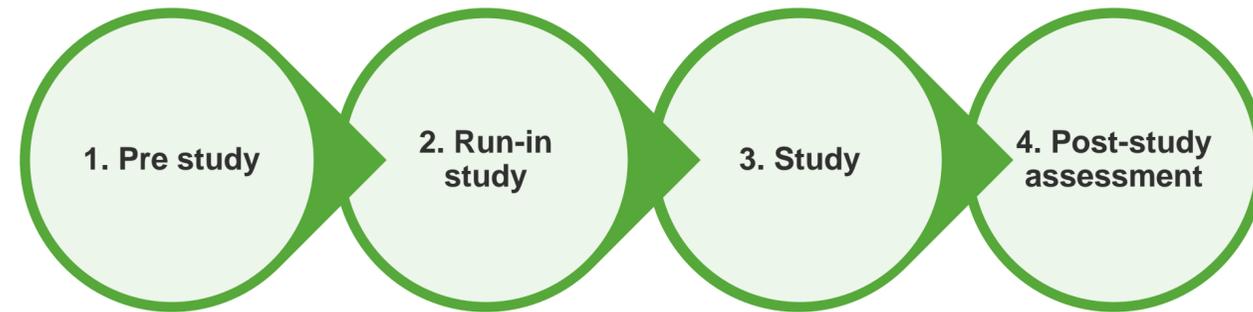
Aim

- Assess early implementation and quality assurance of a resect and discard strategy in a bowel cancer screening unit setting.

Methodology

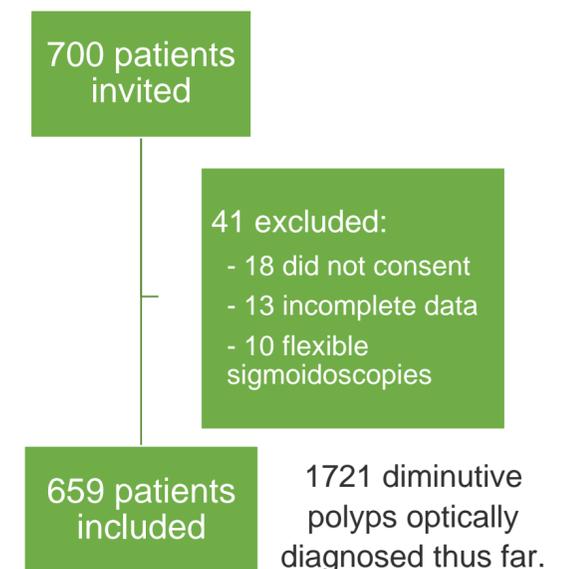
- **Duration:** Feb 2020 - Oct 2021.
- **Site:** London bowel cancer screening centre (screening population 1.1 million).
- **Participants:** Age 60-74 and positive FIT test (>120) or surveillance colonoscopy.
- Histology remained the reference standard and informed actual surveillance.

Figure 1 Study design



- Eight screening colonoscopists completed a validated training module.
- Real-time optical diagnosis performed with active feedback.
- Real-time optical diagnosis performed blinded to histopathology.
- Optical diagnoses review process established for regular review of optical diagnoses and to allow early intervention.

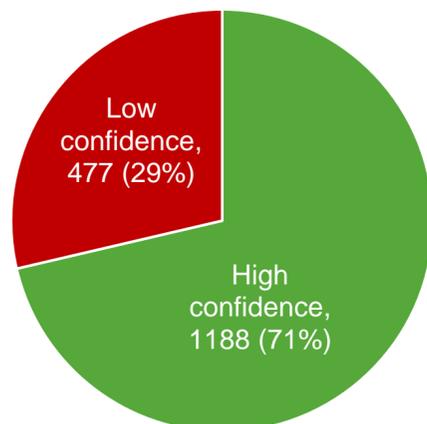
Figure 2 Participants



Results

Optical diagnosis confidence levels

Figure 3 Optical diagnosis confidence levels



Optical diagnosis accuracy level

Figure 4 Optical diagnosis performance by endoscopist

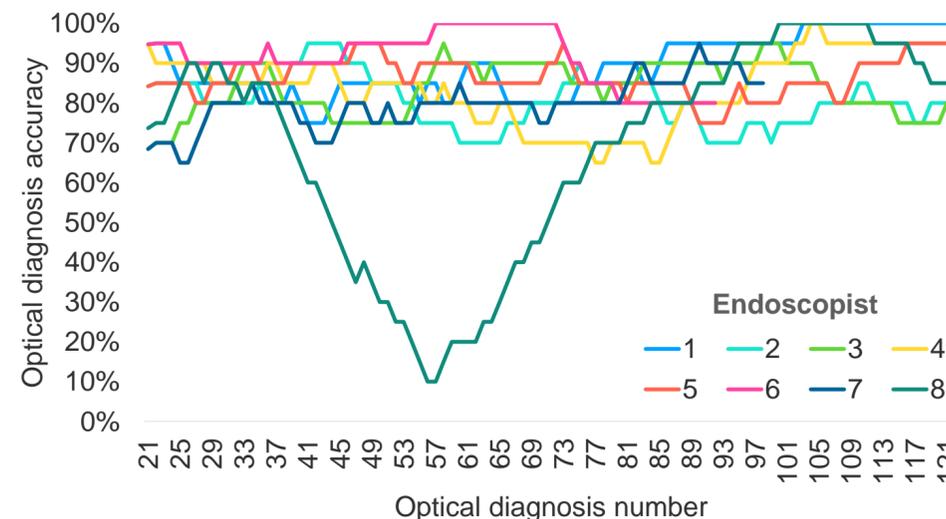
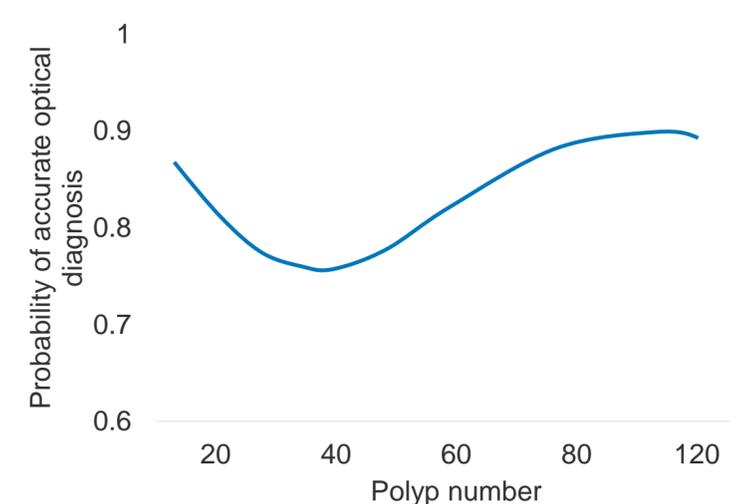


Figure 5 Overall optical diagnosis performance



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 achievement of 90% accuracy threshold.
- DISCARD3 will also evaluate the economic and environmental impact of a resect and discard strategy.