

## Endoscopy II

PTH-001

**POLYP DETECTION IS IMPROVED BY MEGAPIXEL WHITE LIGHT HIGH RESOLUTION COLONOSCOPY IN THE UK NATIONAL BOWEL CANCER SCREENING PROGRAM**

doi:10.1136/gut.2011.239301.402

M Banks,<sup>1</sup> R Haidry,<sup>1\*</sup> L Whitley,<sup>1</sup> J Stein,<sup>1</sup> L Langmead,<sup>1</sup> S Bloom,<sup>1</sup> A O'Bichere,<sup>1</sup> S McCartney,<sup>1</sup> K Basherdas,<sup>1</sup> M Rodriguez-Gusto,<sup>2</sup> L Lovat<sup>3</sup> <sup>1</sup>*Gastroenterology, London, UK;* <sup>2</sup>*Histopathology, London, UK;* <sup>3</sup>*UCLH, London, UK*

**Introduction** Colorectal cancer (CRC) is one of the most common cancers worldwide. Detection of CRC at an early stage, as well as detection and removal of polyps is likely to decrease mortality from the disease. Colonoscopy is established as the gold standard for identification of CRC and polyps and accuracy of the procedure is therefore very important. The UK bowel cancer screening program has been established to reduce deaths from CRC using colonoscopy for patients screened positive by faecal occult blood tests. The authors aim to investigate whether there were differences in performance between standard high resolution colonoscopy system (Olympus Lucera, UCLH, London) with a megapixel high resolution system (PentaxHiLine) in the National UK Bowel Cancer Screening Program and in particular polyp detection rates.

**Methods** All patients undergoing colonoscopy in the bowel cancer screening program at University College London Hospitals NHS Foundation Trust between August and November 2009 were included in this prospective study. Bowel cancer screening colonoscopies are performed in our unit with the Olympus Lucera series colonoscopes (CF-Q260DL colonoscopes and CLV 260-SL processor) but during the study period, one screening list was performed with Pentax HiLine colonoscopes (EC-3890i). A specialist bowel cancer screening nurse collected data on completeness of insertion to caecum or terminal ileum, duration of insertion and withdrawal of colonoscope and total length of procedure in real time. In addition the nurse noted the amount of sedation used, the level of conscious sedation (awake, drowsy, asleep) and degree of discomfort suffered by the patient during the procedure (minimal, mild, moderate, severe using nurse evaluated score in line with the National Bowel Cancer Screening standards).

**Results** Data was collected for 269 procedures performed by 5 colonoscopists over 3 months. Adenoma detection rate was significantly higher in the Pentax group (median 1 vs 0 for Olympus,  $\chi^2$  test for trend  $p=0.01$ ). Most extra polyps detected

were flat or sessile adenomas with low grade dysplasia. There were no differences in procedure duration, caecal intubation rates, level of consciousness or sedation use. Mild discomfort was more common in the Pentax group but patients did not suffer more moderate or severe discomfort.

**Conclusion** This study demonstrates that higher definition colonoscopes improve adenoma detection without compromising other measures of endoscope performance. Increased polyp detection rates may improve the outcomes of the Bowel Cancer Screening Program.

**Competing interests** None.

**Keywords** bowel cancer screening, colonoscopy, polyp detection rate.