interaction between calendar time, age, and treatment (Likelihood Ratio Test p=0.0001). Stratum specific estimates of the increase in incidence for each age group from 2000 to 2013 showed the greatest increase, 49%, in those aged under 45 years who were treated conservatively without surgery (Incidence Rate Ratio 1.49, 95% CI 1.36–1.61) adjusting for sex and region. This increase was seen in conjunction with an increased use of diagnostic imaging especially in the younger age groups. One year survival was highest in those under the age of 65 years who were treated conservatively (96.4%). In those over 65 years one year survival was lower and varied as to whether patients were treated operatively or not (71.4% vs. 50.7%).

Conclusions The incidence of perforated diverticular disease has increased from 2000 to 2013 with the greatest increase in younger age groups who also had the highest one year survival. The increase in incidence in younger groups in part may be due to the identification of patients with localised perforations more frequently identified due to an increase in the use of CT scans.

PTU-071 RISK STRATIFICATION OF SYMPTOMATIC PATIENTS USING FAecal BIOMARKERS AND URINARY VOLATILE ORGANIC COMPOUNDS

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Introduction There remains an urgent need for non-invasive, low cost methods for diagnosis of colorectal cancer (CRC). We undertook a diagnostic accuracy study using faecal haemoglobin (F-Hb), faecal calprotectin (FCP) and urinary volatile organic compounds (VOCs) in patients presenting with lower gastrointestinal symptoms referred via Two Week Wait colorectal pathway.

Methods Of 1850 patients approached, 1016 were recruited prospectively. Of these, 562 with complete colonic investigations returned matched urine and stool samples and were included in the final statistical analysis.

Results The specificity and sensitivity for CRC using F-Hb were 0.80 (95% confidence interval (CI): 0.66–0.93) and 0.93 (CI: 0.91–0.95) respectively. The negative predictive value (NPV) was 0.99 (CI: 0.98–1.0). Using urinary VOCs the sensitivity and specificity were 0.63 (CI: 0.46–0.79) and 0.63 (CI: 0.59–0.67) respectively and the NPV was 0.96 (CI: 0.94–0.98). For those with F-Hb negative CRC (false negatives), adding urinary VOCs revealed the sensitivity of 0.97 (CI: 0.90–1.0) and specificity of 0.72 (CI: 0.68–0.76) with the NPV of 1.0 (CI: 0.99–1.0).

Conclusions Urinary VOCs applied to a F-Hb negative group excludes CRC with the NPV of 1.0. Thus, the addition of urinary VOCs shows promise as a second stage test in investigating symptomatic population.

PTU-072 BREATH TESTING FOR COLORECTAL POLYPS AND CANCER: A LOAD OF HOT AIR?

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Introduction Colorectal cancer (CRC) is the 2nd most common UK cause of cancer death. The bowel cancer screening programme (BCSP) targets those aged 60–74, but is depend-ent upon uptake. Some colonoscopies may be unnecessary and are not without risk. A breath test could be a useful