Methods This was a single-centre clinical outcome study of pathological variables, including elastica detected venous invasion, in stage I-III electively resected colorectal cancer specimens.

Results 631 resection specimens, excised between 1997–2009, were analysed (176 retrospectively and 455 prospectively). The median follow up was 73 months (24–178) and during this time there were 238 deaths (134 from cancer). Venous invasion was detected in 56% of cases and was a stronger predictor of poor long term cancer-specific survival than other pathological features on univariate and multivariate analyses. On multivariate analysis of all cases the hazard ratio (HR) for failure to survive 5 years for venous invasion = 3.94 (95%CI 2.35–6.65, P < 0.001); HR for lymph node involvement = 1.81, (95% CI 1.48–2.30, P < 0.001) and HR for TVI stage = 1.64 (95%CI 1.16–2.30, P = 0.005). In node negative cases the HR for failure to survive 5 years for venous invasion on multivariate analysis = 3.55 (95%CI 1.81–6.97, P < 0.001) and for TVI stage was 2.03 (95%CI 1.26–3.28, P = 0.004). Venous invasion strongly related to other high-risk pathological variables. In cases with no venous invasion, no pathological characteristic related to survival other than T stage. When T stage and venous invasion were considered together, patients could be stratified by risk of 5-year cancer mortality from 100–54% in node negative disease and 100–53% in node positive disease.

The importance of elastica detected venous invasion can be appreciated from the development of a novel staging system based only on T stage and venous invasion (TVI). This simple TVI system was at least as predictive as the gold standard TNM system when considering all cases, and provided increased prognostic value in both T1 and T2 tumours, as well as in node negative disease.

Conclusion Sensitive, accurate detection of venous invasion on elastica stained sections improves its prognostic importance such that it becomes a key pathological characteristic, arguably of more importance than nodal status, in determining outcome in patients with colorectal cancer. TVI staging provides a novel and simple method by which venous invasion coupled with T stage can be utilised to predict survival.

Disclosure of Interest None Declared

PWE-006 HOW OFTEN IS BOWEL CANCER DETECTED FROM A POSITIVE 3RD KIT IN THE ENGLISH BCSP?

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Introduction In the English Bowel Cancer Screening Programme (BCSP) subjects returning a weak positive kit (1–4 of the 6 windows positive) are invited to do a 2nd kit and if none of the windows are positive they are invited to complete a 3rd kit. If any windows are then positive subjects are referred for possible investigation; if no windows are positive subjects are discharged from that screening round. This testing algorithm has been criticised for making the screening process too prolonged thereby producing anxiety and drop-outs and the Scottish BCSP has abandoned asking for a 3rd kit on the grounds that the yield was negligible.

Methods We have analysed the outcomes from the 3rd kits returned to the Eastern BCSP Hub from subjects invited for screening between 1 Jan 2011 and 31 March 2012.

Results Over this period over 850,000 subjects aged 60–74 yrs were invited for screening. 4% (20,021) completed 3 kits and of these 16% (3192) had a positive 3rd kit and were referred for further investigation. Of those investigated (2830) 4.4% (125) were found to have bowel cancer compared with 17.8% (298) with cancer found after a single kit and 8.1% (483) with cancer found after completing 2 kits. A further 7% and 12% completing 3 kits were found to have high and intermediate risk adenomas. The mean time from selection for screening to obtaining a definitive result for those completing 3 kits was 65 days compared to 54 days for those completing a single kit (95% of all subjects returning kits) and 49 days for those completing 2 kits (1% of all subjects returning kits).

Conclusion A significant number (14%,125/906) of bowel cancers are detected in those completing 3 kits but this is at the cost of having a screening episode prolonged to almost twice that for subjects obtaining a definitive result after one kit. The intended introduction of faecal immunochemical tests to replace guaiac faecal occult blood tests should allow the use of a simpler and shorter testing algorithm.

Disclosure of Interest None Declared