The Royal College of Pathologists
Pathology: the science behind the cure

UK National Screening Committee Bowel Cancer Consultation

The Royal College of Pathologists' written submission

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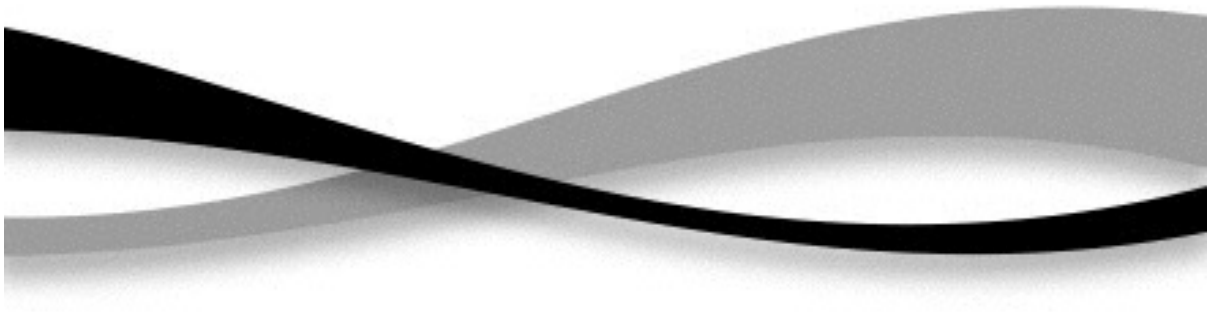

1 About the Royal College of Pathologists

1.1 The Royal College of Pathologists (RCPath) is a professional membership organisation with charitable status. It is committed to setting and maintaining professional standards and to promoting excellence in the teaching and practice of pathology. Pathology is the science at the heart of modern medicine and is involved in 70 per cent of all diagnoses made within the National Health Service. The College aims to advance the science and practice of pathology, to provide public education, to promote research in pathology and to disseminate the results. We have over 10,000 members across 19 specialties working in hospital laboratories, universities and industry worldwide to diagnose, treat and prevent illness.

1.2 The Royal College of Pathologists comments on the UK National Screening Committee Bowel Cancer Consultation. The following comments were made by Fellows of the College during the consultation which ran from 21st August until 16th July 2015.

2 General consultation responses:

2.1 RCPath Fellows overwhelmingly supported the recommendations and considered that the case for the CRC screening programme to move from gFOBt to FIT was simple and clear. This was for several reasons.

2.2 Problems with the currently used guaic-based test were cited. The FOBt produces a colour change based on peroxidase if the globin part of Hb is present in the stool and comes as a 3 sample test kit which is unpleasant to use and may need to be repeated. It is also not specific to human Hb. A manual and subjective method of measuring the haem moiety of Hb and therefore it is nonspecific and the simple redox reaction used for detection is crude and subject to a myriad of potential dietary and drug interfering substances. Specifically it gives false positives due to peroxidise in the diet.

2.3 In contrast FIT is an automated objective means of measuring the quantity of Hb in faeces. It uses an antibody against the globulin moiety of Hb and, as such, is specific for human haemoglobin.

2.4 RCPath Fellows cited the literature published on the topic including a large number of clinical trials which compare FIT with gFOBt. These have been greatly supported by the evidence from the FIT pilot performed during 2014/5 in England. All of these studies demonstrate predictable improvement in the detection of bleeding due to CRC but importantly also from the precursor lesions, advanced adenomas both at high and intermediate risk. These studies demonstrate that FIT can be both diagnostic and preventative in its role as a screening biomarker.

2.5 Additional benefits of the FIT test were mentioned. FIT provides additional opportunities not possible with gFOBt because it provides quantitative results. This important enhancement means that the cut-off concentration can be selected to ensure the programme works within its endoscopy capacity but of equal importance, it means that FIT can be be used as one of several risk factors for CRC and that it can be used similarly to how cholesterol is used in the assessment of CHD. The other risk factors can be age, sex, screening history all of which are held in the screening database but others like BMI, smoking, drinking and family history could also enhance a multivariate risk algorithm with FIT at the centre. This development is now under investigation in the UK and several other countries.

2.6 In regard to future developments in the field it was noted that whilst much work has been done, and continues to be done, in the search for other biomarkers, the only development of proven significance has been with combining a panel of DNA markers in faeces with FIT. This test is being marketed as Cologuard, it currently requires a full stool sample, costs about £500 and has a much higher false positive rate than we have with gFOBt. It points the way for the future but it is a long way away from it having value in a population-based screening programme. No blood marker has been found which is as sensitive and specific as FIT but the search continues.

2.7 Therefore the response from the College is that we believe that FIT is clearly the way forward for CRC screening in the UK, that if we are to benefit from its full potential the positivity rate (referral to colonoscopy) needs to be greater than that used currently for gFOBt and to do so the NHS needs to increase its endoscopy capacity closer to that enjoyed in most other developed countries.

2.8 With regard to implementation, it was noted by the Fellows of the RCPath that the change to FIT in the Scottish Bowel Screening Programme had already been approved and announced by the Scottish Health Secretary in February 2015. Work was on-going to progress this change over the next 18 months or so in Scotland and the Welsh and Northern Irish programmes had yet to announce any changes to their screening programmes.

2.9 Finally, the Fellows remarked that the value of FIT to CRC screening is such that early implementation will bring substantial clinical benefit and should therefore be considered a high priority.