

# CARCINOMA OF THE COLON: WHAT ARE THE OPTIONS FOR SCREENING?



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Colorectal cancer is the second most common cause of cancer related death and the third most common cancer in the UK. It affects more than 30,000 people each year and has an average five year survival rate of 40%.

Currently 80% of cases are not diagnosed until the cancer has spread through the bowel wall or beyond, and these cases have a much worse prognosis than cancers confined to the bowel wall. As many patients with colorectal cancer do not develop symptoms until the cancer is advanced, the detection of a greater proportion of cases at an earlier stage can only be achieved by the screening of asymptomatic persons.

Risk stratification can be accomplished by asking several questions aimed at uncovering the risk factors for colorectal cancer:

- Has the patient had colorectal cancer or an adenomatous polyp?
- Does the patient have an illness (e.g. inflammatory bowel disease) that predisposes him or her to colorectal cancer?
- Has a family member had colorectal cancer, or an adenomatous polyp? If so, how many? Was it a first degree relative (parent, sibling or child)? At what age was the cancer or polyp first diagnosed?

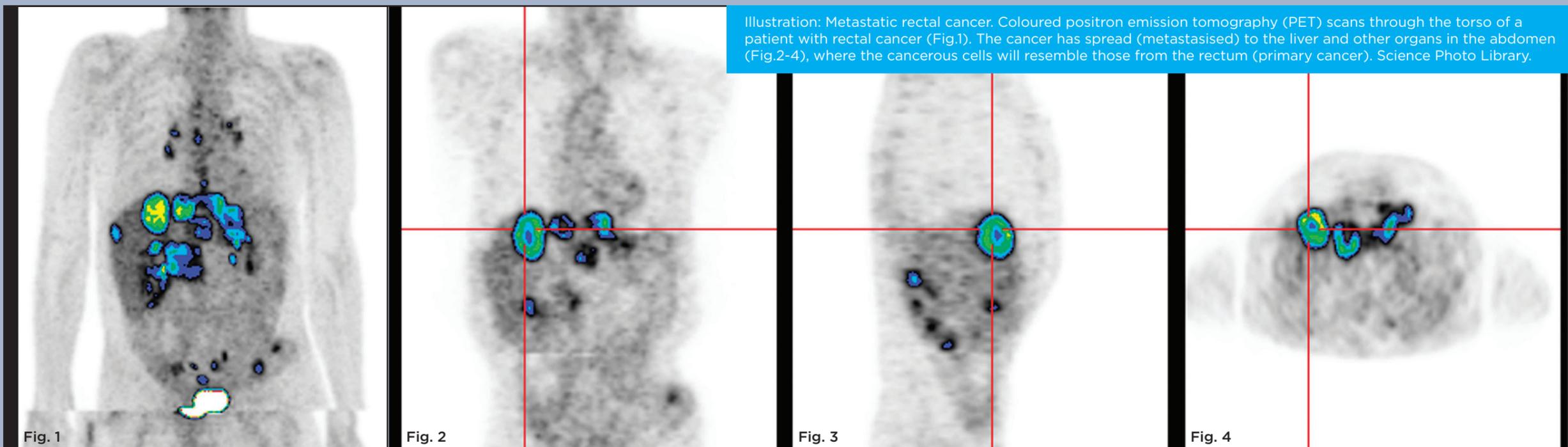


Illustration: Metastatic rectal cancer. Coloured positron emission tomography (PET) scans through the torso of a patient with rectal cancer (Fig.1). The cancer has spread (metastasised) to the liver and other organs in the abdomen (Fig.2-4), where the cancerous cells will resemble those from the rectum (primary cancer). Science Photo Library.

Screening for those at moderate or high risk of colorectal cancer should be a priority, as it should for those with symptoms, such as rectal bleeding, weight loss, abdominal pain or change in bowel habit. But what about the average risk patient? There are a number of options available for screening patients at average risk of colorectal cancer:-

## 1. Guaiac Faecal Occult Blood tests

Testing two samples from each of three consecutive stools has been shown to reduce the risk of death from colorectal cancer. However, sensitivity of a single Faecal Occult Blood test is low, in the region of 30 - 50%. There is evidence that offering yearly Faecal Occult Blood tests with rehydration reduces colorectal cancer death by 33% after 13 years. Colonoscopy is recommended for all those who have a positive Faecal Occult Blood test.

## 2. Faecal Immuno-Chemical Testing

These too have a fairly limited value, with a wide range of colorectal cancer detection from single sample ranging from 6 - 46%.

## 3. CT Colonography.

This can detect more than 90% of polyps larger than 10mm. False positives occur in around 14% of reports. Small polyps less than 5mm can be left and monitored, but larger ones need to be referred for colonoscopy and polypectomy. CT Colonography may be a viable option in those not wanting to consider more invasive testing, but drawbacks include the need for specialist radiologists as well as the risk of missing flat lesions. There is also concern about radiation exposure. It has been estimated that up to 2% of cancers in the USA may be induced by diagnostic CT examinations.

## 4. Flexible Sigmoidoscopy

A recent controlled study of 170,000 individuals followed for 11 years showed a 43% reduction in mortality and a 33% reduction in colorectal cancer incidents. A five-yearly assessment with flexible sigmoidoscopy seems reasonable, but it should be pointed out that only left sided lesions will be detected and polyps on the right side can clearly be missed. All patients found to have a polyp on the left side are subsequently recommended to undergo a full colonoscopy to exclude right sided lesions. The government is shortly to launch a national flexible sigmoidoscopy screening programme in asymptomatic individuals, probably from the age of 50 years onwards. This is, of course, separate and different to the current bowel cancer screening programme, which offers Faecal Occult Blood testing to individuals from the age of 60 onwards, with a subsequent colonoscopy being offered to those with a positive stool test.

## 5. Colonoscopy

This is the gold standard, but of course is more invasive and more inconvenient for the patient. It is also costly, and requires a highly skilled operator. Nevertheless, screening colonoscopy studies have shown

that colorectal cancer was detected in 0.5 - 1%, and polyps with advanced neoplasia in 5 - 10% of those screened individuals. Serious adverse effects, including perforation and bleeding, are thankfully very rare in expert hands, and occur in up to 0.3% of cases. Newer methods of polyp and cancer detection at colonoscopy (including chromoendoscopy, high-definition/magnification endoscopy, narrow band imaging, right sided retroflexion and rear-view mirror techniques) are now coming online and will improve detection rates even further.

There is now strong evidence to support the recommendation that colorectal cancer screening should be offered to all average risk individuals at 50 years of age. The rationale for prescribing multiple options is that no single test is of unequivocal superiority and that giving patients a choice allows them to apply personal preferences and may increase the likelihood that screening will occur. ■