Computed tomographic colonography compared with colonoscopy or barium enema for diagnosis of colorectal cancer in older symptomatic patients: two multicentre randomised trials with economic evaluation (the SIGGAR trials)

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Plain English summary

CTC compared with colonoscopy or BE for diagnosis of colorectal cancer

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Plain English summary

Computed tomographic colonography (CTC) is a relatively new diagnostic test that uses an X-ray scanner to examine the large bowel for cancer and polyps (which can turn into cancer). We did this research to determine if CTC is more accurate than the existing alternatives used in the NHS for patients who have abdominal symptoms: colonoscopy (for which a flexible camera is inserted into the bowel) and barium enema (BE) (where the bowel is filled with barium liquid and radiographs taken). We investigated whether or not patients preferred CTC and whether or not it is cost-effective. CTC also examines the whole abdomen, whereas colonoscopy and BE do not, so we investigated how much disease outside the bowel was found by CTC.

A total of 5384 patients in 21 NHS hospitals participated in two trials: CTC compared with BE (3804 patients) and CTC compared with colonoscopy (1580 patients). We found that CTC detected significantly more cancers and large polyps than BE, but there was no difference between CTC and colonoscopy. However, about one-third of patients having CTC needed a colonoscopy afterwards to check on possible abnormalities. On average, patients preferred CTC to BE or colonoscopy. About two-thirds of patients having CTC had an abnormality outside the bowel, but this was usually unimportant; fewer than 1 in 10 needed further tests to check whether or not the abnormality was important. CTC detected cancers outside the bowel in about 2% of patients. Our analysis of whether or not CTC is better value for money than BE or colonoscopy was very challenging and our results are subject to very considerable uncertainty which suggests further research should be a priority.

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