

A plain language summary of:

[Variation in post-colonoscopy colorectal cancer across colonoscopy providers in the English National Health Service](#) Nicholas E Burr, Edmund Derbyshire, John Taylor, Simon Whalley, Venkataraman Subramanian, Paul J Finan, Matthew D Rutter, Roland Valori, Eva J A Morris, *British Medical Journal*, 2019.

Background

Around 40,000 people are diagnosed with bowel cancer every year in England. As well as being the main test to detect cancer, colonoscopies can also prevent cancer. Unfortunately, colonoscopies are not perfect and sometimes a person develops bowel cancer after having a colonoscopy. This is referred to as a post-colonoscopy colorectal cancer (PCCRC).

What did we do?

We looked at all individuals who had undergone a colonoscopy in the English NHS between 2005 and 2013 who then went on to be diagnosed with bowel cancer within the three years following the colonoscopy. Cancers diagnosed 6-36 months after a colonoscopy were categorised as PCCRC.

To see if some individuals were more at risk of developing a PCCRC, we looked at the rates in relation to age, sex, socio-economic status and whether they had any pre-existing health conditions, including a history of inflammatory bowel disease or diverticular disease, whether they had ever previously had bowel cancer and whether they had previously undergone a colonoscopy.

The rate of PCCRC was then calculated for each colonoscopy provider in the English NHS.

What did we find?

The overall rate of PCCRC has fallen from 9% in 2005 to 6.5% in 2013. PCCRCs were more frequent in females, those with pre-existing health conditions, in people with inflammatory bowel disease and diverticular disease, in people who had undergone multiple colonoscopies and in people with a previous diagnosis of bowel cancer. PCCRCs were also more common in older patients.

The lowest rates of PCCRC were found in those performed as part of the Bowel Cancer Screening Programme. Colonoscopies performed at private providers for the NHS had much higher rates.

In the years 2011-2013 the rate of PCCRCs varied substantially across NHS Trusts with rates ranging from 3.3% in the best performing to 13.4% in the worst performing.

If all providers during the eight years of the study period had achieved the same rate of PCCRC as the colonoscopies performed as part of the Bowel Cancer Screening Programme, 3900 cases of colorectal cancer could have been diagnosed earlier or even prevented.

Conclusion

Although the rates of PCCRC are improving, significant difference between providers exists. There is a need for all providers of colonoscopy to examine their cases of PCCRC, and local reasons for them.

From this, providers may be able to identify measures which once put into practice will lead to improved rates and improved outcomes for patients.

The lower rates of PCCRC found in the Bowel Cancer Screening Programme colonoscopies is noteworthy. All colonoscopies performed as part of the Bowel Cancer Screening Programme take place within accredited screening centres by colonoscopists who have undergone an accreditation test and who adhere to strict performance criteria. This shows that where strict standards are applied, quality is better.

Key Findings

- There is significant variation in the rate of post-colonoscopy colorectal cancers (PCCRCs) in the English NHS from 13.4% in the worst performing to 3.3% in the best.
- Colonoscopies performed as part of the Bowel Cancer Screening Programme have the lowest rate of PCCRCs.
- If all providers during the eight years of the study period had achieved the same rate of PCCRC as the colonoscopies performed as part of the Bowel Cancer Screening Programme, 3900 cases of colorectal cancer could have been diagnosed earlier or even prevented.
- High risk groups were identified: patients with a previous diagnosis of cancer, patients who have had multiple colonoscopies, and patients with inflammatory bowel diseases.