

What carcinoembryonic antigen level should trigger further investigation during colorectal cancer follow-up? A systematic review and secondary analysis of a randomised controlled trial

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Plain English summary

Follow-up of the FACS RCT

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Plain English summary

Carcinoembryonic antigen (CEA) is a chemical found in the bloodstream. Its level tends to be raised in people with cancer of the colon and rectum. It is routinely measured to check for recurrence of cancer after successful surgical treatment. If the blood CEA level is high, the patient is referred back to hospital by their general practitioner for further investigation, usually a computerised tomography (CT) scan (a form of radiography).

This study had two elements: a formal review of all previous studies describing the diagnostic accuracy of blood CEA levels in identifying recurrent colorectal cancer and an analysis of new data recently collected by a large multicentre UK trial of follow-up after surgery for colorectal cancer.

The results confirm current advice that measuring blood CEA levels should not be the only method of post-surgery follow-up; adding a CT scan and colonoscopy during the first 12–18 months will help to avoid missed cases of recurrence (although there appears to be no additional benefit from regular CT scans).

The results also suggest that the decision to refer for further investigation should be made on the basis of the trend in CEA levels over time rather than the individual test results. This approach appears to be much more accurate, reducing the number of missed cases of recurrence and the number of patients referred to hospital for further investigation who prove not to have a recurrence.

Smokers should also quit or think twice about CEA follow-up – they are at significant risk of multiple false alarms that would result in unnecessary investigations.

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