Scheduled use of CEA and CT follow-up to detect recurrence of colorectal cancer: 6-12 year results from the FACS randomised controlled trial

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Background: The FACS trial examined the use of CT imaging and carcinoembryonic antigen (CEA) measurements in the follow-up of patients with curatively treated colorectal cancer (R0 resection, stages I-III). The interim analysis showed that all intensive strategies (CEA, CT and CEA + CT) identified more recurrences treatable surgically with curative intent compared to minimum follow-up. There was no advantage in using both CT and CEA. This mature analysis reports overall survival (OS) results up to 12 years post randomisation comparing intensive (INT) to minimum (MIN) follow-up.

Methods: 1202 participants were randomised to 1 of 4 groups: regular CEA, regular CT imaging (chest abdomen pelvis), CEA + CT or minimum follow-up (symptomatic follow-up +/- single CT). Primary endpoint: surgical treatment of recurrence with curative intent. Follow-up concluded at 5 years, thereafter OS monitoring continued using registry data (median follow-up 8.7 years).

Results: Intensive follow-up identified more recurrences treatable with curative intent (INT 68/901 7.5% vs MIN 8/301 2.7%, p = 0.003). There was no difference in OS between groups (p = 0.45) but numerically more patients with recurrence were still alive in intensive groups (INT 43/901 4.8% vs MIN 7/301 2.3%, p= 0.07). Analysis by site of primary tumour revealed a similar proportion of curatively treatable recurrences in those with rectal tumours irrespective of follow-up (INT 27/275 9.8% vs MIN 6/87 6.9% p = 0.41). By contrast in those with a colonic tumour treatable recurrence was more commonly detected by intensive follow-up (left colon INT 24/327 7.3% vs MIN 1/108 0.9% p = 0.01; right colon INT 14/282 5.0% vs MIN 0/104 0% p = 0.02). In participants with recurrence, OS benefit was only seen in those with a left colonic tumour (median OS: INT 4.4 years vs MIN 3.1 years p = 0.03).

Conclusions: Intensive follow-up increased the detection of treatable recurrence although further analysis suggested this was only the case for colonic tumours. Furthermore, only patients with recurrence from a left colonic tumour derived a survival advantage. This highlights the heterogeneous biology of colorectal cancer. It is unlikely that a survival benefit for the whole cohort will ever be shown.

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