Follow-up tests improve colorectal cancer recurrence detection

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Among patients who had undergone curative surgery for primary colorectal cancer, the screening methods of computed tomography and carcinoembryonic antigen each provided an improved rate of surgical treatment of cancer recurrence compared with minimal follow-up, although there was no advantage in combining these tests, according to a study in the January 15 issue of *JAMA*.

Colorectal cancer is the third most common cancer worldwide, with 1.24 million cases reported to the International Agency for Research on Cancer in 2008. Traditionally, patients who have had curative surgery for colorectal cancer undergo regular follow-up for at least 5 years to detect recurrence, a common practice based on limited evidence, according to background information in the article.

John N. Primrose, M.D., F.R.C.S., of the University of Southampton, England, and colleagues assessed detection of recurrence using two common screening methods: measurement of blood carcinoembryonic antigen (CEA; a glycoprotein used as a tumor marker), and computed tomography (CT). They randomized 1,202 patients from 39 hospitals in England to 1 of 4 groups: CEA only (n = 300), CT only (n = 299), CEA+CT (n = 302), or minimum follow-up (n = 301).

Cancer recurrence was detected in 199 participants (16.6 percent) during the period of observation for recurrence (average 4.4 years), and 5.9 percent of participants with recurrence underwent surgery for cure (recurrence detected early enough via follow-up test that surgery can still

be performed for cure). The researchers found that surgical treatment of recurrence with curative intent was higher in each of the 3 more intensive follow-up groups compared with the minimum follow-up group. Compared with minimum follow-up, the absolute difference in the number treated with curative intent in the CEA group was 4.4 percent, 5.7 percent in the CT group, and 4.3 percent in the CEA+CT group.

The number of deaths was nonsignificantly higher in the more intensive follow-up groups compared with the minimum follow-up group, as was the number of disease-specific colorectal cancer deaths. "More than two-thirds of the patients treated surgically with curative intent were still alive at a median [midpoint] follow-up of just over 4 years postrecurrence, suggesting that 5-year survival may be more than the 40 percent previously reported," the authors write. They note that if there is a survival advantage to any strategy, it is likely to be small, but either test is better than no follow-up testing.

"The benefits of follow-up appear to be independent of diagnostic stage (because although there are fewer recurrences with better-stage tumors, they are more likely to be curable), suggesting that stage-specific follow-up strategies may not be necessary. However, thorough staging investigation at the end of primary treatment to detect residual disease is still important because a large number of 'recurrences' reported in routine series are probably residual disease that should be detected and treated before embarking on follow-up."

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