

# Addition of intensive follow-up procedures to standard follow-up did not improve survival in patients with colorectal cancer

Schoemaker D, Black R, Giles L, Toouli J. Yearly colonoscopy, liver CT, and chest radiography do not influence 5-year survival of colorectal cancer patients. *Gastroenterology*. 1998 Jan; 114:7-14.

## Question

In patients who have curative resections for colorectal cancer, is intensive follow-up better than standard follow-up for improving 5-year survival?

## Design

Randomised controlled trial with 5-year follow-up.

## Setting

University hospital in South Australia.

## Patients

325 patients (age range 29 to 84 y, 64% men) who had curative resections for newly diagnosed colorectal cancer. Of 238 patients with colon cancer, 17% had Dukes stage A tumours, 51% had Dukes stage B, and 32% had Dukes stage C; of 87 patients with rectal cancer, 36% had Dukes stage A, 36% had

Dukes stage B, and 29% had Dukes stage C. Patients were excluded if they were unlikely to complete 5 years of follow-up, lived in a remote area, were > 85 years of age, refused to participate in the trial, or had evidence of residual or distant malignancy.

## Intervention

After stratification for the site and stage of the tumour, patients were allocated to receive either intensive follow-up ( $n = 167$ ) or standard follow-up ( $n = 158$ ). Standard follow-up consisted of a regular clinical review (history, examination, and screening investigations) every 3 months for 2 years and every 6 months thereafter; intensive follow-up consisted of standard follow-up plus annual chest radiography, computed tomography of the liver, and colonoscopy.

## Main outcome measure

5-year survival rate.

## Main results

The unadjusted results showed a non-significant trend for prolonged survival in patients who received intensive follow-up compared with those who re-

ceived standard follow-up (26% vs 33% [ $P = 0.08$ ]\*). When the results were adjusted for prognostic factors that had been shown to influence survival (Dukes staging and adherence of tumour to other structures), the 5-year survival rate did not differ between groups ( $P < 0.20$ ). The study had > 90% power to detect a 15% difference at a 0.05 level of significance.

## Conclusion

The addition of annual colonoscopy, computed tomography of the liver, and chest radiography to standard follow-up did not improve survival for patients with colorectal cancer after curative resection.

Sources of funding: Anti-Cancer Foundation, the Universities of South Australia and Flinders, Commonwealth Health and Medical Research Council of the Department of Veterans' Affairs.

For correspondence: Prof. J. Toouli, Gastrointestinal Surgical Unit, Flinders Medical Centre, Bedford Park, Adelaide, South Australia 5000, Australia. FAX 61-8-8204-5966. E-mail: Jim.Toouli@flinders.edu.au.

\* $P$  value calculated from data in article.

## Commentary

To study patients after resection of colorectal cancer is to believe that asymptomatic recurrence can be detected and cured. Since this strategy began with "second-look" operations 50 years ago, several investigational tactics have been compared for their success (and expense) in detecting recurrence, but a change in survival has not been proved (1). With symptomatic recurrence having only about 1 chance in 20 of resection (2, 3), many physicians choose to follow patients intensively after surgery.

In this study by Schoemaker and colleagues, annual chest radiography, computed tomography of the liver, and colonoscopy did not alter survival rates in asymptomatic patients—only 1 successful resection of metastatic disease resulted from 674 computed tomographic scans and another from 633 chest radiographs. One unexpected tumour was found on colonoscopy, but not until 40 months of follow-up. (Of course, these patients are at

increased risk for metachronous polyps, but after a careful perioperative colonoscopy, they should not need reexamination for polyps more frequently than the usual 3- to 5-year interval.) Note that carcinoembryonic antigen was not analysed in this report, and patients were given plenty of opportunity to show symptoms with 14 office visits over the first 5 years of follow-up.

Why didn't the sophisticated technology help? Perhaps if we used the term "re-emergent" for "recurrent," we could better conceptualise the widespread and aggressive nature of metastases (4). If colorectal tumour biology is destiny, then we must look to molecular rather than surgical scalpels to track down disease that is inapparent at initial surgery. Annual chest radiography, computed tomography of the liver, and colonoscopy have no place in routine follow-up of colorectal cancer; vigorous advocacy of healthy diet and colon screening

remain the greatest primary care imperatives for this disease.

Joseph Alcorn, MD  
University of New Mexico  
Albuquerque, New Mexico, USA

## References

1. Arhelger SW, Jensen CB, Wangensteen OH. Current status of the second-look procedure in the management of cancer of the gastrointestinal tract. *Proc Natl Cancer Conf*. 1957;3:1-32.
2. Safi F, Link KH, Beger HG. Is follow-up of colorectal cancer patients worthwhile? *Dis Colon Rectum*. 1993;36:636-43.
3. Bolm B, Schwenk W, Hucke HP, Stocker R. Does methodic long-term follow-up affect survival after curative resection of colorectal carcinoma? *Dis Colon Rectum*. 1993;36:280-4.
4. Sugarbaker PH, Gianola FJ, Dwyer NE, Neuman NR. A simplified plan for follow-up of patients with colon and rectal cancer supported by prospective studies of laboratory and radiologic test results. *Surgery*. 1990;102:79-87.