

## Surveillance After Colorectal Cancer Surgery: More or Less?

Rodriguez-Moranta F, Salo J, Arcusa A, et al. Postoperative surveillance in patients with colorectal cancer who have undergone curative resection: a prospective, multicenter, randomized, controlled trial. *J Clin Oncol* 2006;24:386–93.

### Study Overview

**Objective.** To compare the efficacy of 2 surveillance strategies for colorectal cancer.

**Design.** Prospective, multicenter, randomized controlled trial.

**Setting and participants.** Patients with resected stage II or III colon or rectal cancer were randomized to either a “simple” surveillance strategy, which included clinical examination, routine laboratory testing, and carcinoembryonic antigen (CEA) monitoring, or an “intensive” surveillance strategy, which included computed tomography (CT) scanning (abdomen/pelvis) or ultrasonography (abdomen), chest radiography, and colonoscopy. Where appropriate, patients in both groups received adjuvant chemotherapy and/or radiation.

**Main outcome measures.** Disease recurrence and overall survival. A noninferiority statistical design was used.

**Main results.** Of 259 patients, 132 were randomized to simple surveillance and 127 were randomized to intensive surveillance. Baseline characteristics were similar between groups. Median follow-up was approximately 4 years. Overall survival was no different between groups (hazard ratio [HR], 0.87 [95% confidence interval {CI}, 0.49–1.54]). However, for patients with stage II tumors or rectal primary tumors, the intensive strategy was associated with improved survival (HR, 0.34 [95% CI, 0.12–0.98] and HR, 0.09 [95% CI, 0.01–0.81], respectively). There were no differences in the probability of tumor recurrence, time to relapse, or type of recurrence. 44% of resectable recurrences in the intensive surveillance group were detected by colonoscopy

**Conclusion.** Intensive surveillance after resection for non-metastatic colorectal cancer improves survival in patients with stage II disease or rectal primary tumors.

### Commentary

The majority of patients with stage II or III colorectal cancer are cured after definitive resection with or without adjuvant chemotherapy (where appropriate). However, in general,

30% to 40% of patients will experience recurrent disease. Some patients can be cured with surgery for local recurrences, but other patients with distant, incurable disease can benefit from systemic chemotherapy, which prolongs survival, delays disease progression, and controls symptoms of advanced disease.

The optimal surveillance strategy continues to be debated [1]. Despite significant advances in CT imaging, it remains unclear whether “more” surveillance is better than “less.” Intensive screening can be costly and creates unnecessary anxiety for the patient, and there is no conclusive evidence that finding recurrences earlier leads to improved outcomes for patients who might otherwise have recurrences discovered (and treated) at a later date.

In this trial, Rodriguez-Moranta et al compared 2 surveillance strategies for patients with resected stage II or III colorectal cancer in which imaging and endoscopy were used in the intensive cohort. The authors concluded that these extra measures did not improve survival when all patients were considered in the analysis, although there were survival advantages in a subset of patients with stage II disease or rectal cancer.

The strength of this analysis was the prospective, randomized design involving multiple centers, which helps to minimize biases in regional or local care and mitigates potential imbalances due to confounding factors. However, limitations of this study include enrollment of patients with both colon and rectal cancers and a small sample size with limited numbers of events over the 4 years of follow-up. It is possible that with more events over a longer period, intensive surveillance may have impacted survival for all patients. Another limitation is that this study was performed in Spain, where, unlike in the United States, colonoscopy is not considered a standard modality in postoperative surveillance, thus complicating the applicability of these results to U.S. patients [2].

In the end, these results are provocative and seem in line with “minimalist” surveillance strategies for patients with resected breast cancer, in which “more” has not proven to be better than clinical evaluation and routine screening. As imaging technology improves and becomes more widespread (and expensive), these analyses become more challenging to complete but more important to perform.

### Applications for Clinical Practice

Colonoscopy, CEA monitoring, and clinical evaluation should be a part of a routine surveillance strategy in patients with resected colorectal cancer.

*—Review by David R. Spigel, MD*

### References

1. Pfister DG, Benson AB 3rd, Somerfield MR. Clinical practice. Surveillance strategies after curative treatment of colorectal cancer. *N Engl J Med* 2004;350:2375–82.
2. Desch CE, Benson AB 3rd, Smith TJ, et al. Recommended colorectal cancer surveillance guidelines by the American Society of Clinical Oncology. *J Clin Oncol* 1999;17:1312.

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