Preoperative Radiation Cut Rectal Ca Recurrence

BY TIMOTHY F. KIRN Sacramento Bureau

SEATTLE — Rectal cancer patients who got radiotherapy before their surgery had a lower local recurrence rate—even in T1 and T2 stage tumors—than those who did not receive prior radiotherapy, according to preliminary results of a British trial.

"Meticulous surgery producing clear margins in patients with favorable tumors is simply not enough," Dr. John R.T. Monson said at the annual meeting of the American Society of Colon and Rectal Surgeons.

The prospective Medical Research Council CRO7 trial enrolled 1,350 patients with adenocarcinoma of the rectum, in 80 centers, 69 of which were in the United Kingdom. Patients were enrolled between 1998 and 2005, said Dr. Monson, a surgeon at the University of Hull and Castle Hill Hospital, Cottingham, England.

A total of 674 patients were randomized to receive radiation treatment before surgery (25 Gy), and the remaining 676 received radiation treatment after surgery (45 Gy) if they had a positive margin in their resection. All patients received postoperative chemotherapy, according to accepted protocol, on the basis of their lymph node status. About two-thirds of the patients had a low anterior resection, and one-third had an abdomino-perineal excision.

After a median follow-up of 3.5 years, local recurrence was 5% in the 674 patients who received presurgical radiotherapy, compared with 11% in the 676 subjects who did not. And when the cancers were broken down by T category and analyzed by margin status, the investigators found that for every individual stage, the local recurrence rate was lower with radiation therapy given before surgery. (See chart.)

To date, the local recurrence rate in patients who had a clear circumferential resection margin and received prior radiation is 4%, vs. 14% in the group that didn't receive prior radiotherapy. For those with a positive margin, the rates are 16% and 31%, respectively.

Disease-free survival, a secondary end point in the trial, also was significantly better at 3 years: 80% in the prior-radiotherapy group vs. 75% in the group that did not receive prior radiation. At 5 years, disease-free survival was 75% vs. 67%, but this difference was not statistically significant—a fact that Dr. Monson attributed to the small number of patients (138) who reached 5 years post surgery.

Positive margins were found in about 10% of both groups. However, the rate of positive margins declined consistently over the course of the trial. This indicates that as the surgeons became more experienced, they improved, which suggests that their competence generally was good, Dr. Monson asserted. "The quality of the surgery in this trial was high," he said.

The most common surgical complication in the anterior resection group was anastomotic dehiscence, occurring in 8% of the prior-radiation patients and 7% of the patients who didn't receive prior radiotherapy. The most common complication in the abdomino-perineal excision group was a nonhealing perineum, occurring in 36% and 22% of the patients, respectively. The biological factor that appeared to be of most relevance to local recurrence was extramural vascular invasion. The study found that when patients had extramural vascular invasion, they were four times as likely to have a local recurrence.

"We believe this is likely to be one of the potential explanations for the incidence of local recurrence occurring in those patients with the most favorable tumors," Dr. Monson said.

Stage	Recurrence Rate With Prior Radiation	Recurrence Rate Without Prior Radiation
	0%	6%
11	2%	12%
111	10%	25%

Local Recurrence of Rectal Cancer by Tumor Staging

Note: Based on a median follow-up period of 3.5 years. Source: Dr. Monson

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