**Rectal Cancer Trial Supports Preoperative Radiation**

*BY TIMOTHY F. KIRN*  
SACRAMENTO BUREAU

SAN FRANCISCO — Rectal cancer patients who got radiotherapy before their surgery had a lower local recurrence rate—even in T1 and T2 stage tumors—than did those who did not receive prior radiotherapy, according to preliminary results of a British trial. “Metabolic 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 most common complication in the appendectomy 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 appendix-peritoneal excision group was a nonhealing perineum, occurring in 36% and 22% of the patients, respectively.

The biological factor that appeared to be critical to local recurrence was extramural vascular invasion. The study found that when patients had extramural invasion, they were four times as likely to have a local recurrence.

“Even though this is early data, Dr. Monson said. “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.

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**Lab Test Combo Helps Tease Out Pediatric Appendicitis Diagnosis**

*BY ROBERT FINN*  
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SAN FRANCISCO — The diagnosis of appendicitis is notoriously difficult in children, with estimates of misdiagnosis rates ranging from 28% to 57% for children under 12 years of age. But the diagnosis may be made with high specificity using a combination of C-reactive protein and white blood cell levels, suggest the findings of a poster presented by Dr. Karen Y. Kwon and Dr. Alan L. Nager at the annual meeting of the Pediatric Academic Societies.

In particular, a C-reactive protein (CRP) level of 1.0 mg/dL or greater combined with a WBC count of 15,000 cells/mm³ or greater yields a specificity of 90%, a sensitivity of 49%, a positive predictive value of 50%, and a negative predictive value of 59% for confirmed appendicitis.

The study, conducted at the University of Southern California, Los Angeles, involved 209 patients aged 1 to 18 years presenting at a tertiary academic hospital with abdominal pain suggestive of acute appendicitis.

In addition to history, physical exam, x-ray studies, and histopathology, the investigators conducted blood tests for CRP, WBC, D lactate, and procalcitonin.

Two to 6 weeks following discharge from the emergency department, investigators followed up with the patients to determine the ultimate diagnosis. Of the 209 patients, 113 (55%) had confirmed appendicitis and 94 (45%) were negative for appendicitis. Among the diagnoses for children negative for appendicitis, constipation, gas troenteritis, pylonephritis, ovarian torsion, and neoplasm. The mean D-lactate values did not differ between patients who were positive and negative for appendicitis. The values of the other three lab markers did differ significantly, in each case patients with appendicitis had a significantly higher level than patients without.

Using a cutoff value of 1.0 mg/dL of CRP alone would yield a sensitivity of 84% and a specificity of 70%. A combination of CRP cutoff with a WBC cutoff greater than 15,000 cells/mm³ results in a slightly lower sensitivity, a specificity of 90%, and the positive predictive value of 86%.

The investigators noted that there are several reasons to interpret their findings with caution. First, 43% of the patients were Hispanic, and they came from a largely indigent population. In addition, one cannot exclude the possibility that acute or chronic diseases may skew the laboratory values.

The meeting was sponsored by the American Pediatric Society, the Society for Pediatric Research, the Ambulatory Pediatric Association, and the American Academy of Pediatrics.