The second goal is to search for and identify metachronous colorectal cancers. In regard to detection of recurrences of the initial primary cancer, serial measurements of carcinoembryonic antigen are widely used. In addition, recent meta-analyses of randomized controlled trials suggest that annual chest x-rays and computed tomography (CT) scans of the liver can improve survival from the original primary cancer by early detection of surgically curable recurrences.

The answer to the question posed is simply that neither individual randomized controlled trials of intensive surveillance with colonoscopy, nor meta-analyses of these trials, have demonstrated a survival benefit from the original primary tumor by performing colonoscopy at annual or shorter intervals. The rationale that yearly colonoscopy for patients with resected colorectal cancer will identify anastomotic or intraluminal recurrences that are amenable to curative therapy has simply not been borne out to be true. Several studies have shown that the low rate of these recurrences after resection do not merit surveillance colonoscopy and that even when such an unfortunate event occurs, the disease is usually already extended into the abdomen or pelvis and can rarely be resected for cure. Thus, the performance of annual colonoscopy for the purpose of detecting recurrent disease does not have an established survival benefit for patients with colorectal cancer. The more immediate goal of surveillance is to detect metachronous cancers.

An exception to the above occurs in the case of rectal cancer. In contrast to the anastomotic recurrence rate of 2% to 4% seen with colon cancer, the rate of anastomotic recur-

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**Table 9-1**

**Current Postcancer Resection Surveillance Guidelines**

- Patients with colon and rectal cancer should undergo high-quality perioperative clearing. In the case of nonobstructing tumors, this can be done by preoperative colonoscopy. In the case of obstructing colon cancers, computed tomography colonography with intravenous contrast or double contrast barium enema can be used to detect neoplasms in the proximal colon. In these cases, a colonoscopy to clear the colon of synchronous disease should be considered 3 to 6 months after the resection if no unresectable metastases are found during surgery. Alternatively, colonoscopy can be performed intraoperatively.
- Patients undergoing curative resection for colon or rectal cancer should undergo a colonoscopy 1 year after the resection (or 1 year after the performance of the colonoscopy that was performed to clear the colon of synchronous disease). This colonoscopy at 1 year is in addition to the perioperative colonoscopy for synchronous tumors.
- If the examination performed at 1 year is normal, then the interval before the next subsequent examination should be 3 years. If that colonoscopy is normal, then the interval before the next subsequent examination should be 5 years.
- Following the examination at 1 year, the intervals before subsequent examinations may be shortened if there is evidence of hereditary nonpolyposis colorectal cancer or if adenoma findings warrant earlier colonoscopy.
- Periodic examination of the rectum for the purpose of identifying local recurrence, usually performed at 3- to 6-month intervals for the first 2 or 3 years, may be considered after low anterior resection of rectal cancer. The techniques utilized are typically rigid proctoscopy, flexible proctoscopy, or rectal endoscopic ultrasound. These examinations are independent of the colonoscopic examinations described above for detection of metachronous disease.