Evaluating more lymph nodes may not improve identification of late-stage colorectal cancer

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Surgically removing and evaluating an increasing number of lymph nodes does not appear to identify a greater number of patients with stage III colorectal cancer, according to a report in the July issue of *Archives of Surgery*.

Colorectal cancer is the third most common type of cancer and the third leading cause of cancer-related death in the United States, according to background information in the article. More than 80 percent of newly diagnosed colorectal cancer patients will have locoregional disease (limited to a small region) and will be offered surgery that may cure their illness. The status of lymph nodes near the cancer has been recognized as the most powerful prognostic factor for recurrence and survival in these patients.

"Accurate lymph node staging also is important for determining prognosis and the need for adjuvant chemotherapy," the authors write. "In addition, lymphadenectomy [lymph node removal] may be therapeutic; several studies have shown a positive association between the number of lymph nodes removed and survival for patients with negative and positive lymph nodes."

In 1990, the World Congress of Gastroenterology first proposed a minimum threshold of 12 lymph nodes to be removed during surgery for colorectal cancer. This benchmark has since been adopted as a quality

measure for surgical practice by multiple organizations. Sachin S. Kukreja, M.D., and colleagues at Rush North Shore Medical Center (now Skokie Hospital, NorthShore University HealthSystem), Skokie, Ill., and Rush University Medical Center and Rush Medical College, Chicago, in late 2004 began a multidisciplinary institutional initiative to increase the number of lymph nodes removed during colorectal cancer surgery. The effort involved discussing unacceptably low lymph node counts and reviewing the rationale for increased lymph node evaluation at multidisciplinary cancer committee meetings, along with a program of institutional awareness of the issue and a change in pathologists' lymph node assessment technique.

The researchers then evaluated 701 consecutive colorectal cancer cases treated with surgery from 1996 through 2007. The initiative appeared successful in increasing the numbers of lymph nodes removed—when patients operated on in January 2005 or after were compared with those who had surgery before the initiative began, both the average number of lymph nodes removed (17.3 vs. 12.8) and the percentage of patients who had at least 12 lymph nodes removed (71.6 percent vs. 53 percent) increased.

However, the proportion of patients diagnosed with stage III colorectal cancer did not change, with 204 of 553 (36.9 percent) of the earlier cases and 48 of 148 (32.4 percent) of the late cases having positive lymph nodes.

"Overall, our improvement in lymph node yield demonstrates the value and impact of communication through a multidisciplinary initiative engaged in adherence to recommended standards and improving quality of care," the authors conclude. However, "our data suggest that mandatory harvest of a minimum of 12 lymph nodes as a quality indicator or performance measure appears unfounded."

More information: Arch Surg. 2009;144[7]:612-617.

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