Three-Node Limit Urged for Breast Cancer Biopsy

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SAN DIEGO — Limiting sentinel lymph node biopsy to removal of three nodes might cut costs without sacrificing the accuracy of the procedure in breast cancer patients, Dr. Michael S. Sabel said at a symposium sponsored by the Society of Surgical Oncology.

Dr. Sabel and his colleagues reviewed SLN biopsies performed in 729 patients at the University of Michigan, Ann Arbor, from October 1998 to December 2004. The investigators included only patients who underwent biopsies using a combination of Tc-99 isotope and blue dye. Patients were excluded if no sentinel nodes were detected or only blue dye was used, said Dr. Sabel of the surgery department at the university.

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DR. SABEL

Surgeons defined a sentinel node as "any node that was clinically suspicious, was blue, had blue afferent, or had 10% of the counts per minute of the highest node removed ex vivo," said Dr. Sabel. The surgeons also recorded the order in which the nodes were removed. Patients had 2.5 lymph nodes removed on average. Nearly half the patients had three or more lymph nodes removed, and a quarter had four or more removed.

Most patients had ductal carcinomas. All told, 596 patients (82%) were node negative. The investigators determined that only one positive node had been discovered after removal of three nodes showed no disease. It was the fourth node taken from one patient. Two-thirds of positive nodes were the first nodes examined. Another 21% of positive nodes were the second node taken, and 12% of positive nodes were the third node. If the procedures had been stopped at three nodes, 99% of positive nodes would have been examined and identified. "There was only one case where going past the third lymph node had any significant impact on the accuracy of the procedure," Dr. Sabel said.

Using the Medicare reimbursement figure of $178.06 for CPT 88307 in Michigan outside of Detroit, Dr. Sabel estimated that limiting lymph node removal to a three-node threshold would have saved about $51,000 at bare minimum for 729 patients—or $7,000 annually if extrapolated to 100 cases per year.

The actual savings would be higher, he added, because the reimbursement did not take into account operating room costs of $600 per hour or the cost of immunohistochemistry staining. "And it doesn't reflect the surgeon's time and effort, the impact on OR scheduling, the time the pathologist takes to examine slides, or the pathology tests to prepare the slides," said Dr. Sabel.

He suggested that reducing the number of nodes also might reduce morbidity associated with the procedure. He cited lymphedema, seroma, infection, and paresthesias as adverse events associated with node removal.

The presentation generated considerable discussion about SLN biopsy procedures used at the University of Michigan Health System and elsewhere. One surgeon objected to the emphasis on cutting costs in a life-threatening disease.

Dr. Sobel disagreed, citing escalating health costs and calling on physicians to make the most productive use of new technology. "It is up to us to be responsible in bringing down health care costs," he said.

In an interview, Dr. Sabel said he was not suggesting that hospitals drop their thresholds on the basis of the Michigan experience.

"Technique varies," he noted. "Other institutions should take a look and see if there is a need to do so much," he said. "You can never base wide-world practices on a single institution's retrospective experience."

Physicians should think about cost-effectiveness, he repeated, arguing for the best use of resources. "If you save a million dollars, will one more person die from cancer?" he asked, phrasing the issue rhetorically. "If you are a patient you know the answer, and if you are an accountant you know the answer. We as oncologists are in the middle," he said. ■