

Sentinel nodes: A convergence of knowledge from different trials

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One of the most important incremental steps in breast cancer has been to lessen the amount of axillary surgery that is needed to stage breast cancer. Sentinel node biopsy appears to lead a much lower risk of lymphedema compared to a standard axillary node dissection. (Axillary node dissection is the removal of some of the lymph nodes in the underarm area to determine the extent to which the cancer has moved outside the breast. This information helps determine staging of the cancer and could impact treatment choices. A sentinel lymph node biopsy only removes the closest one or few nodes to which cancer are likely to spread from the primary tumor.)

However, sentinel node biopsy was a genie that got out of the bottle too early and was widely adopted before it was formally proven to be as effective and accurate as axillary dissection.

Nevertheless, credit is due to several cooperative trial groups that conducted important randomized studies informing us of several points. Those findings were announced at this year's annual meeting of the American Society of Clinical Oncology.

First of all, there was a general confirmation that not only was a negative sentinel node status indicative of no further positive nodes remaining, but that omitting a dissection does not lead to higher recurrence rates.

A second finding was not only reassuring but possibly "practice changing"--that is, even if the sentinel node is positive, omitting dissection still leads to an equivalent and low recurrence risk. This will change practice patterns over time; although for now, it can only be considered to apply to patients who were eligible for this study--namely, patients with two or fewer positive sentinel nodes, breast tumors under 5 cm, and who had lumpectomy and radiation (which covers most of the area of a dissection). However, the trial only accrued a third of its expected enrollment and this weakens the conclusions. On the other hand, the trend was actually better on the sentinel node-only arm, making it very improbable that there would be significantly more recurrences in that arm if the trial had fully enrolled.

A third finding was that the detection of microscopic deposits of tumor cells that measure less than 0.2 mm does not seem to indicate a higher risk of recurrence. This contradicts other studies, but is very compelling coming from a large trial that did enroll its target number of 4,000 patients. The commentator for this presentation at ASCO affirmed that this trial puts an end to the need to test for these deposits that require antibody staining and analysis.

A fourth finding addressed the very old controversial question as to whether

nodal dissection actually carries a therapeutic value in addition to providing valuable prognostic information that affects medical and radiation therapy decisions. At least in patients who have a sentinel node dissection, the answer appears to be "no"--there is no added benefit of a node dissection in terms of disease-free or overall survival. In addition, there are less social and work restrictions, arm swelling, numbness, and tingling, as well as better mobility with sentinel node biopsy compared to axillary dissection.

So, this very notable milestone in treatment advance--in this case, primarily to improve quality of life and functionality--is now quite solidified and even raises the number of eligible patients for sentinel node-only surgery. These trials will certainly generate more important clinical and scientific information as their data and tissue banks continue to be analyzed and explored.

You can read more about these two studies presented at ASCO in "[Sentinel Lymph Node Studies Considered Practice-Changing.](#)"