

Fewer women need repeat breast cancer surgeries with new service at University of Michigan

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This is the intra-operative pathology suite at the University of Michigan. Credit: University of Michigan Comprehensive Cancer Center

Nearly one in three women who have breast cancer surgery will need to return to the operating room for additional surgery after the tumor is evaluated by a pathologist.

A new service at the University of Michigan Comprehensive Cancer Center cuts that number drastically by having pathologists on-site in the operating suite to assess tumors and [lymph nodes](#) immediately after they are removed. Meanwhile, the surgeon and patient remain in the [operating room](#) until the results are back, and any additional operating can be done immediately.

This cut the number of second surgeries needed by 64 percent, to one of every 10 women.

U-M began offering the service about two years ago at its East Ann Arbor Ambulatory Surgery Center, where the majority of outpatient breast cancer surgeries now occur. A study evaluating 271 patients treated eight months before and 278 treated eight months after this program began appears in the *American Journal of Surgery*.

"The frequent need for second surgeries among patients undergoing [breast cancer surgery](#) represents a tremendous burden for patients. Beyond the inconvenience and additional time away from work, additional surgeries can result in worse cosmetic outcomes and increased complication rates. Our experience shows that offering on-site pathology consultation has a substantial impact on quality of care," says lead study author Michael S. Sabel, M.D., associate professor of surgery at the U-M Medical School.

Patients must return to the operating room for two primary reasons: to remove additional tissue when the [cancer cells](#) are too close to the margin of tissue removed; and in some cases, to remove additional lymph nodes if the initial sentinel lymph node biopsy tests positive for cancer.

Before the on-site pathology, 25 percent of patients needed a second operation to remove more tissue, compared to 11 percent after the service began. Among patients with cancerous lymph nodes, 93 percent of them avoided a second surgery with on-site pathology.

In addition to reducing second surgeries, the study found that assessing the margins in the OR allowed more women to conserve their breasts. The study authors suggest that women who have positive margins requiring additional surgery are more likely to choose mastectomy

because they fear their cancer will return or that they'll need a third operation.

Establishing on-site pathology requires a different technique for preserving and evaluating the cells, called frozen section analysis. After this is completed, U-M pathologists then process the tumors for standard testing using traditional methods. The study showed consistent results across both types of analysis.

On-site pathology using frozen tissue sections is offered at a handful of academic medical centers across the country.

"In large part, routine intraoperative analysis of lumpectomy margins is rare because of logistical issues, especially as breast surgery is more commonly performed at outpatient surgical centers," Sabel says.

Obstacles include transporting the tissue samples, building a pathology facility, and staffing it appropriately at an offsite surgical center.

"Despite these obstacles, we found that not only is this beneficial for our patients, but it reduced the costs of caring for patients with [breast cancer](#)," Sabel adds.

The study authors also considered new guidelines that suggest fewer women need to have their lymph nodes removed if the [sentinel lymph node biopsy](#) is positive. The authors factored in that reduction and still found that intraoperative analysis was highly cost-effective.

"Establishing an intraoperative pathology consultation service is feasible, highly efficient and extremely beneficial to patients, surgeons and reducing the costs of cancer care," Sabel says.

More information: Reference: American Journal of Surgery,

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