Use of chemotherapy for early stage breast cancer declines, study says

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A study of nearly 3,000 women with early stage breast cancer indicates a recent, significant decline in the use of chemotherapy despite the lack of any change in national treatment recommendations or guidelines, according to researchers at the Stanford University School of Medicine and the University of Michigan.

The findings reflect a growing acknowledgement by oncologists and patients that for some women, the harms of chemotherapy may outweigh its potential benefits. The study also revealed that physicians are more likely to turn to tumor genomic testing when a patient expresses a treatment preference that doesn't match her physician's recommendations.

"For patients with early stage breast cancer, we've seen a significant decline in chemotherapy use over the last few years without a real change in evidence," said Allison Kurian, MD, associate professor of medicine and of health research and policy at Stanford. "This likely reflects a change in the culture of how physicians are practicing, and a move toward using tumor biology to guide treatment choices rather than solely relying on clinical measures."

Kurian is the lead author of the study, which will be published online Dec. 11 in the *Journal of the National Cancer Institute*. Steven Katz, MD, MPH, professor of medicine and of health management and policy at the University of Michigan, is the senior author.

"Our study shows how breast cancer is a model for how doctors have driven advances in personalized medicine into the exam room to reduce overtreatment," said Katz.

Surveying women, oncologists

The researchers surveyed 5,080 women treated for early stage breast

cancer between 2013 and 2015 in Georgia and Los Angeles. Among them, 2,926 had stage-1 or -2 breast cancers that were positive for estrogen receptor expression and negative for human epidermal growth factor receptor-2 expression. (Receptor expression status is often used to guide treatment recommendations for women with breast cancer.)

After categorizing the women based on the involvement of neighboring lymph nodes, the researchers asked them whether their oncologists had recommended chemotherapy and whether they had received it. The researchers also surveyed 504 of the oncologists treating these early stage breast cancer patients about how they decided whether to recommend chemotherapy for the patients.

Kurian and her colleagues found that from 2013 to 2015, there was a decrease from 34.5 percent to 21.3 percent in chemotherapy use in study participants. During the same period, the participants reported a decline in chemotherapy recommendations by their oncologists from 44.9 percent to 31.6 percent.

Chemotherapy use in patients with no lymph node involvement declined from 26.6 percent to 14.1 percent; in patients with lymph node involvement, it declined from 81.1 percent to 64.2 percent.

Finally, 67.4 percent of oncologists surveyed indicated they would order tumor genomic testing to estimate a lymph node-positive woman's risk of cancer recurrence if the woman disagreed with her doctor's recommendation to receive chemotherapy. In contrast, only 17.5 percent would order the test if the patient and doctor were in agreement about her course of treatment.

"We believe this study indicates that physicians are attempting to be more selective in their recommendations and to spare patients toxicity when possible," said Kurian. "As personalized medicine becomes more

widely available, doctors are using test results as part of their dialogue with patients about their preferences and overall treatment goals. But the long-term outcomes of these recent changes in chemotherapy use are uncertain."

Provided by Stanford University Medical Center