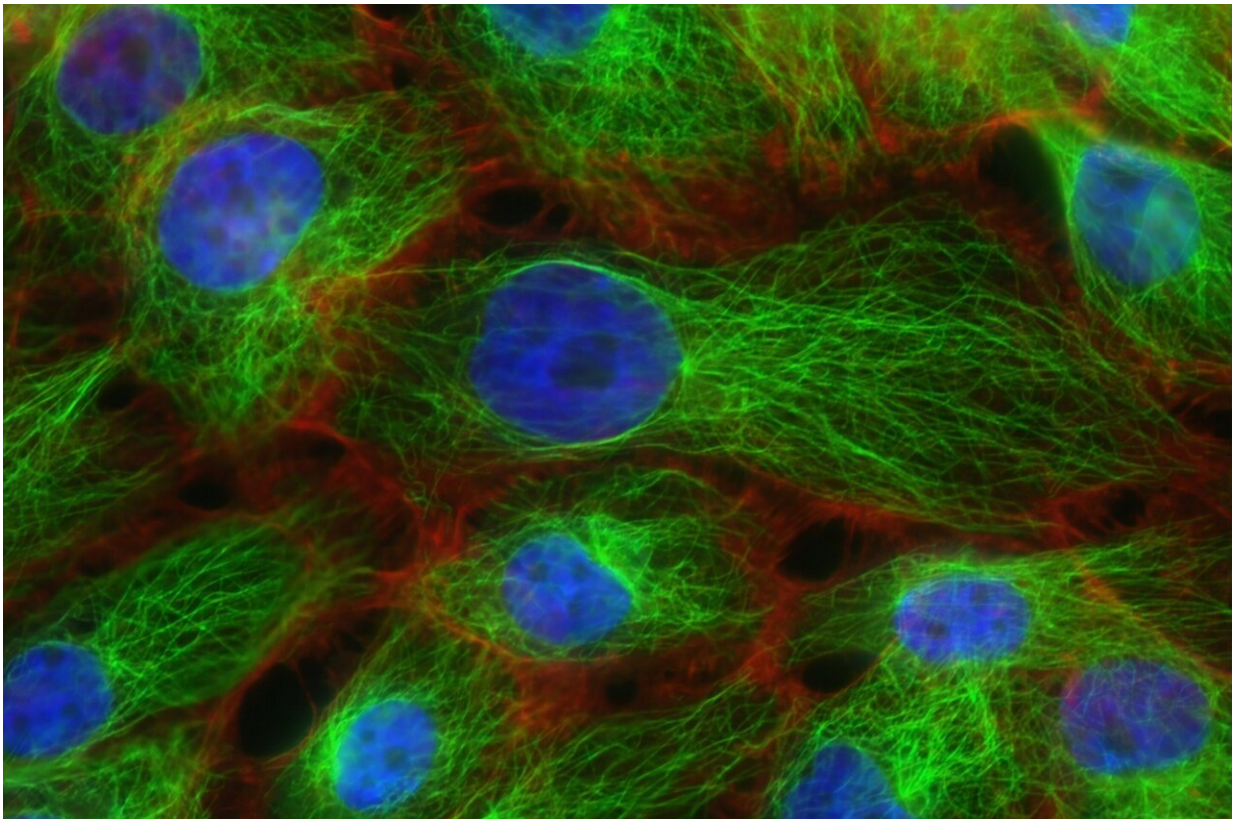


# Analysis of radiotherapy and locoregional recurrence in RxPONDER patients

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An analysis of data on the use of radiation therapy in a large clinical trial of patients with HR+, HER2- breast cancer who had one to three involved lymph nodes and a 21-gene recurrence score of 25 or less found

that rates of locoregional recurrence of the disease were low regardless of whether a patient had received regional node irradiation (RNI). The results suggest that a randomized clinical trial is required to answer the question of whether these favorable-risk patients can safely skip RNI.

The analysis was performed using patient data from the S1007 RxPONDER trial conducted by the SWOG Cancer Research Network. The work will be presented in an oral scientific session at the 2022 annual meeting of the American Society for Radiation Oncology (ASTRO) in San Antonio on October 24.

The work was led by Reshma Jagsi, MD, DPhil, a SWOG investigator who is Newman Family Professor of Radiation Oncology at the University of Michigan.

"We've known for a very long time that treating regional lymph nodes with [radiation](#) in patients with node-positive breast cancer can improve locoregional recurrence rates and overall survival," said Jagsi, "but we haven't known whether all patients with node-positive breast cancer need this or whether—especially with modern therapies and our ability to use prognostic scores—certain patients may safely forego regional node irradiation."

Regional node irradiation for breast cancer is radiation therapy applied to the lymph nodes that drain the region around a tumor—for example, near the collarbone or breastbone. It is often given after mastectomy or breast-conserving surgery for breast cancer. But there are not extensive data on how frequently RNI is used or in what circumstances when patients have favorable-risk breast cancer with one to three involved lymph nodes. Data are also scarce on how the use of RNI in these patients is associated with a patient's risk of locoregional recurrence.

To answer these questions, Jagsi's team looked at data on almost 5,000

patients who took part in the S1007 RxPONDER trial. This study randomized patients with hormone receptor-positive, HER2-negative breast cancer with an OncotypeDX 21-gene recurrence score of 25 or lower to either chemotherapy followed by endocrine therapy or endocrine therapy alone. The primary clinical results of the study were reported in the *New England Journal of Medicine* in December 2021.

The authors of the ASTRO analysis evaluated how often RNI was used in these patients and analyzed the associated patterns of locoregional recurrence and invasive disease-free survival (IDFS) from one to five years after a patient's randomization to the trial. They found that practice was almost evenly divided on the use of RNI and that rates of locoregional recurrence were quite low, even in patients who had not received RNI.

The larger question the researchers hoped to find clues to is whether patients with recurrence scores of 25 or less, indicating they are at lower risk of their cancer recurring, may be at such a low level of risk for locoregional recurrence that it would be reasonable to consider foregoing RNI.

Jagsi says their findings reveal that "patients and radiation oncologists are voting with their feet to say there's not really a clear answer" to this larger question of whether favorable-risk patients can skip RNI. Instead, she says, their findings make clear that results from a randomized clinical trial focused on this specific question will be needed to answer it definitively. Such a trial is currently underway—the TAILOR RT trial (NCIC MA-39) being led by the Canadian Cancer Trials Group.

"It's encouraging to see these results," Jagsi said. "They suggest the TAILOR RT trial is very important. Hopefully our results will encourage physicians and patients alike to enroll to the trial to get an answer."

Provided by SWOG Cancer Research Network

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