# Pathologic response prediction of survival aided by tumor type

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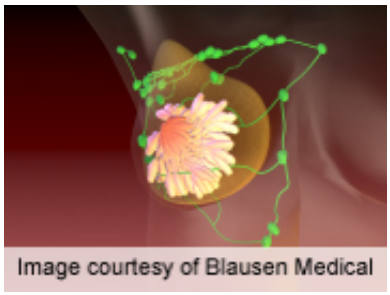
Image courtesy of Blausen Medical

(HealthDay) -- Pathologic complete response (pCR) is more highly predictive of recurrence-free survival (RFS) when specific breast cancer tumor type is factored in, according to a study published online May 29 in the *Journal of Clinical Oncology*.

To investigate the association between pCR and RFS overall and within receptor subsets, Laura J. Esserman, M.D., from the University of California at San Francisco, and colleagues assessed clinical, imaging, and genomic data from 221 patients with a tumor of ?3 cm (median, 6.0 cm) who had received neoadjuvant chemotherapy.

The researchers found that, based on a 70-gene prognosis profile, 91 percent of participants were classified as poor risk. Of the participants, 41 percent were hormone receptor (HR) negative and 31 percent were human epidermal growth factor receptor 2 (HER2) positive. Among the 190 patients not treated with neoadjuvant trastuzumab, pCR was highest for patients with HR-negative/HER2-positive tumors (45 percent) and lowest for patients with HR-positive/HER2-negative tumors (9 percent). Achieving pCR was predictive of improved RFS. For 172 patients treated without trastuzumab, patients with pCR had a hazard ratio of 0.29 for RFS when compared to patients with no pCR. On multivariate analysis, when subtype was factored in, pCR was more predictive of RFS, with lower hazard ratios for HR-positive/HER2-negative (hazard ratio, 0.00), HR-negative/HER2-negative (hazard ratio, 0.25), and HER2-positive (hazard ratio, 0.14) subtypes. The predictive value of pCR within subsets was further improved with Ki67.

"pCR is more highly predictive of RFS within every established receptor subset than overall, demonstrating that the extent of outcome advantage conferred by pCR is specific to tumor biology," the authors write.

Several authors disclosed financial ties to the pharmaceutical and medical device industries.

**More information:** Abstract
Full Text (subscription or payment may be required)