PR+ cells add prognostic value in luminal A breast cancer

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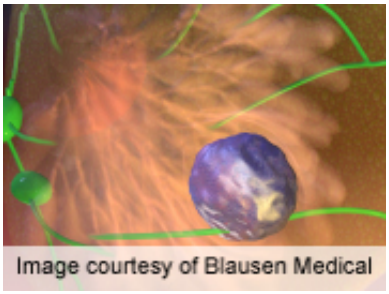

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(HealthDay)—Semiquantitative immunohistochemical expression of progesterone receptor-positive tumor cells improves prediction of survival within luminal A breast cancers, according to a study published online Dec. 10 in the *Journal of Clinical Oncology*.

Aleix Prat, M.D., from the University of North Carolina at Chapel Hill, and colleagues analyzed gene expression and pathologic features in primary tumors across five independent breast cancer cohorts to improve current immunohistochemical subtyping of genomically defined luminal A and B subtypes. The researchers derived and independently tested optimal cut-offs of percentage of PR positive tumor cells to predict survival.

The researchers found that in luminal A tumors there were consistently higher rates of PR positivity, human epidermal growth factor receptor 2 (HER2) negativity, and histologic grade 1, compared to B subtypes. Luminal A tumors also had significantly higher quantitative PR gene and protein expression. Independent of endocrine therapy administration, an empiric cut-off of more than 20 percent of PR-positive tumor cells was significant for predicting survival differences within immunohistochemical-defined luminal A tumors. The immunohistochemical 4 score had no additional prognostic value within hormonal receptor (HR) positive/HER2-negative disease when intrinsic immunohistochemical-based subtypes were used that included more than 20 percent PR-positive tumor cells

"Semiquantitative immunohistochemical expression of PR adds prognostic value within the current immunohistochemical-based luminal A definition by improving the identification of good outcome breast cancers," the authors write. "The new proposed immunohistochemical-based definition of luminal A tumors is HR positive/HER2 negative/Ki-67 less than 14 percent, and PR more than 20 percent."

Several authors disclosed financial ties to BioClassifier.

More information: Abstract
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