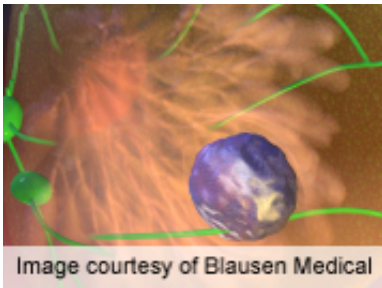


# PR+ cells add prognostic value in luminal A breast cancer

December 17 2012

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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*.

(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*.

Alex 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.

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