Prognostic Assay for Breast Cancer

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Technology Description

Researchers at WFUBMC have developed an extraordinary 2-gene based assay for breast cancer prognosis. The assay can identify patients from a clinical subset (ER+) of breast cancer who could be spared overly aggressive and toxic treatments. The survival value predicted by the 2-gene signature (n=518, 10 year survival=89%) is comparable to that of ER+/node negative patients classified into good outcome group by the Oncotype Dx 21-gene panel and better than Mammaprint 70-gene panel (n=151, 10 year survival=87%). The assay is independent of other important outcome predictors used in the clinic such as tumor size, grade and age. In addition, it can predict the metastasis-free survival of breast cancer patients even in lymph node positive patients, unlike Mammaprint and Oncotype Dx.

Breast cancer is the most common cancer among American women, except for skin cancers. The chance of developing invasive breast cancer at some time in a woman's life is a little less than 1 in 8 (12%). About 192,370 new cases of invasive breast cancer will be diagnosed in women in 2009. Breast cancer patients may be treated with adjuvant tamoxifan monotherapy or adjuvant chemotherapy which is highly toxic to patients. This assay can be used to identify patients who could be spared toxic adjuvant chemotherapy

Commercial Applications

- Microarray based/high-throughput technology
- Assay score used as a prognostic indicator
- Adds significant prognostic and predictive information to standard outcome parameters of breast cancer
- Treatment decision: Tamoxifen monotherapy or Tamoxifan plus chemotherapy for ER+ patients

Additional Information

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