### Predicting Prognosis in Women with Early Breast Cancer

Tools that accurately predict the prognosis of women with early breast cancer are invaluable to both clinicians and patients when making decisions about adjuvant therapy. In women with ER-positive, node-negative breast cancer treated with adjuvant tamoxifen, a 21-gene assay was recently published by the NSABP to predict the 10-year distant recurrence rate and the benefit associated with adjuvant chemotherapy. The Adjuvant! online computer program, developed by Dr Peter Ravdin, also allows for the prediction of outcomes in women with early breast cancer. In a presentation at ASCO 2004, the predictions from Adjuvant! were found to be very comparable to actual outcomes observed in patients from British Columbia. And these future tools that can predict outcomes should aid in the decision-making process about adjuvant therapies.

### NSABP-B-20 CHEMIOBENEFIT STUDY IN PATIENTS WITH NODE-NEGATIVE, ER-POSITIVE DISEASE

**Objective:** Determine whether the 21 gene recurrence score assay captures prognosis, response to tamoxifen, or both.

**Methodology:**
- The NSABP B-20 chemotherapy trial enrolled 2,073 patients with high-risk disease.
- Patients with node-negative disease who were treated with tamoxifen alone were randomized to 2 arms: either tamoxifen (ARM 1) or tamoxifen + CMF (ARM 2).
- All patients had estrogen receptor-positive tumors.
- The median follow-up was 10 years.

**Results:**
- The 21-gene recurrence score assay was a powerful and independent predictor of distant recurrence.
- The assay was reproducible while tumor grade was not.
- The assay captures the benefits of chemotherapy and tamoxifen.
- The assay is available at www.oncopredict.com.
- Dr Esteva reported that the assay is being used to select patients at low risk who can be spared chemotherapy, patients at intermediate risk who can benefit from adjuvant chemotherapy, and patients at high risk who need adjuvant chemotherapy.
- The assay was validated in the NSABP-B-20 and B-14 trials.
- The assay predicts outcomes in women treated with tamoxifen with high accuracy.
- The assay predicts outcomes in women treated with chemotherapy with high accuracy.
- The assay predicts outcomes in women treated with tamoxifen + chemotherapy with high accuracy.
- The assay predicts outcomes in women treated with chemotherapy without adjuvant tamoxifen with high accuracy.
- The assay predicts outcomes in women treated with tamoxifen without chemotherapy with high accuracy.
- The assay predicts outcomes in women treated with chemotherapy without tamoxifen with high accuracy.
- The assay predicts outcomes in women treated with tamoxifen + chemotherapy without adjuvant tamoxifen with high accuracy.
- The assay predicts outcomes in women treated with tamoxifen without chemotherapy without adjuvant tamoxifen with high accuracy.
- The assay predicts outcomes in women treated with chemotherapy without tamoxifen without adjuvant tamoxifen with high accuracy.
- The assay predicts outcomes in women treated with tamoxifen + chemotherapy without adjuvant tamoxifen + chemotherapy with high accuracy.
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