

# Prognostic and Predictive Value of the 21-Gene Recurrence Score® for Women with Node-Positive Breast Cancer Receiving Chemotherapy

Presentation discussed in this issue:

Albain KS et al. **Prognostic and predictive value of the 21-gene recurrence score assay in postmenopausal women with node-positive, oestrogen-receptor-positive breast cancer on chemotherapy: A retrospective analysis of a randomized trial.** *Lancet Oncol* 2010;11(1):55-65. [Abstract](#)

Slides from a journal article

## Prognostic and Predictive Value of the 21-Gene Recurrence Score Assay in Postmenopausal Women with Node-Positive, Estrogen-Receptor-Positive Breast Cancer on Chemotherapy: A Retrospective Analysis of a Randomised Trial

**Albain KS et al.**

*Lancet Oncol* 2010;11(1):55-65.

**Albain KS et al.**

San Antonio Breast Cancer Symposium  
2009;Abstract 112.

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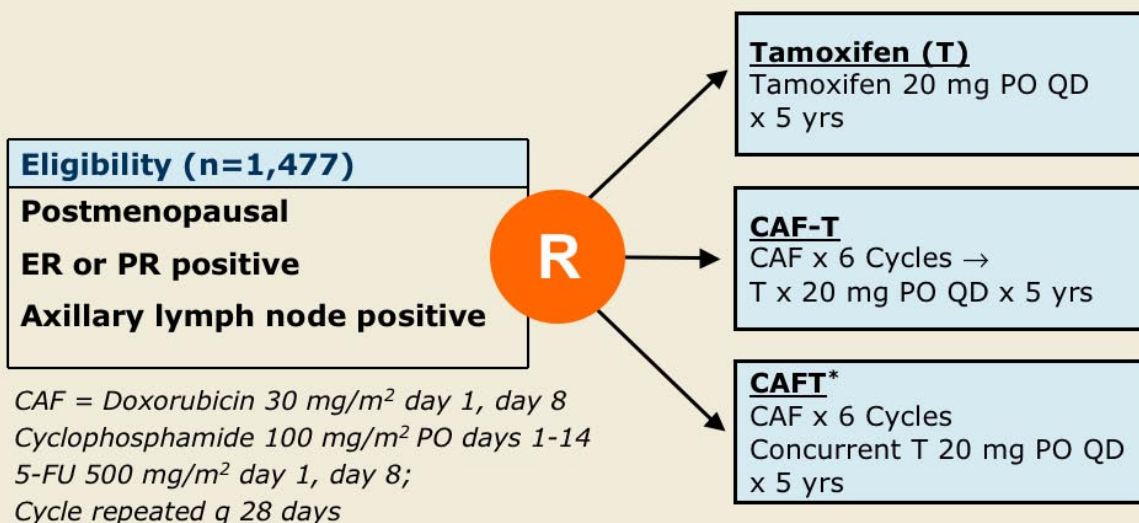
# Introduction

- A low 21-gene recurrence score (RS) in postmenopausal patients with ER-positive, node-negative breast cancer predicts a lack of benefit from the addition of chemotherapy to tamoxifen (T) treatment (*JCO* 2006;24:3726).
- The value of the 21-gene recurrence score assay in patients with ER-positive, node-positive breast cancer that are treated with T alone is unknown.
- **Current study objectives:**
  - Assess prognostic value of the 21-gene recurrence score in patients with node-positive breast cancer treated only with T.
  - Assess whether 21-gene recurrence assay allows for the prediction of a node-positive subset of patients who do not benefit from anthracycline-based chemotherapy.

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## SWOG-8814: Parent Trial Schema

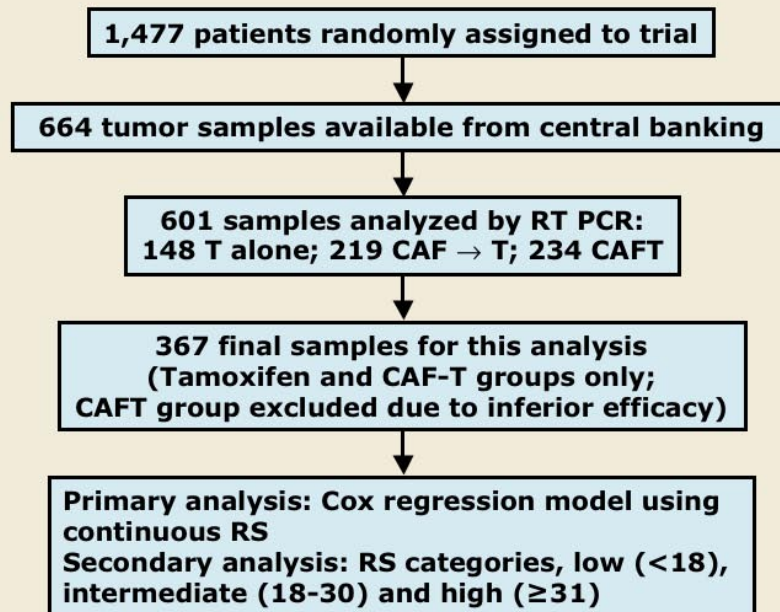


\* Excluded from analysis due to inferior efficacy

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# SWOG-8814: Translational Study



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## Ten-Year Disease-Free Survival (DFS) and Overall Survival (OS) in Tamoxifen Alone Group

RS Group	10-year DFS	DFS p-value*	10-year OS	OS p-value*
Low (<18)	60%	0.017	77%	0.003
Intermediate (18-30)	49%		68%	
High (≥31)	43%		51%	

\*Log-rank p-value stratified according to the number of positive nodes (1-3 vs ≥4 positive nodes).

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## Hazard Ratio: Ten-Year DFS, T versus CAF-T Groups

RS Group	HR (95% CI)	p-value*
Low (<18)	1.02 (0.54-1.93)	0.97
Intermediate (18-30)	0.72 (0.39-1.31)	0.48
High (≥31)	0.59 (0.35-1.01)	0.033
Entire RS sample	—	0.054

\*Log-rank p-value stratified according to the number of positive nodes (1-3 vs ≥4 positive nodes); HR = hazard ratio.

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## Conclusions

- The RS is prognostic for patients with node-positive breast cancer treated with tamoxifen alone.
- A high RS score predicts an improved DFS in patients with node-positive breast cancer treated with anthracycline-based chemotherapy followed by tamoxifen compared to tamoxifen alone.
- A low RS score identifies women with node-positive breast cancer who may not benefit from the addition of anthracycline-based chemotherapy to tamoxifen treatment.

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# Conclusions (Continued)

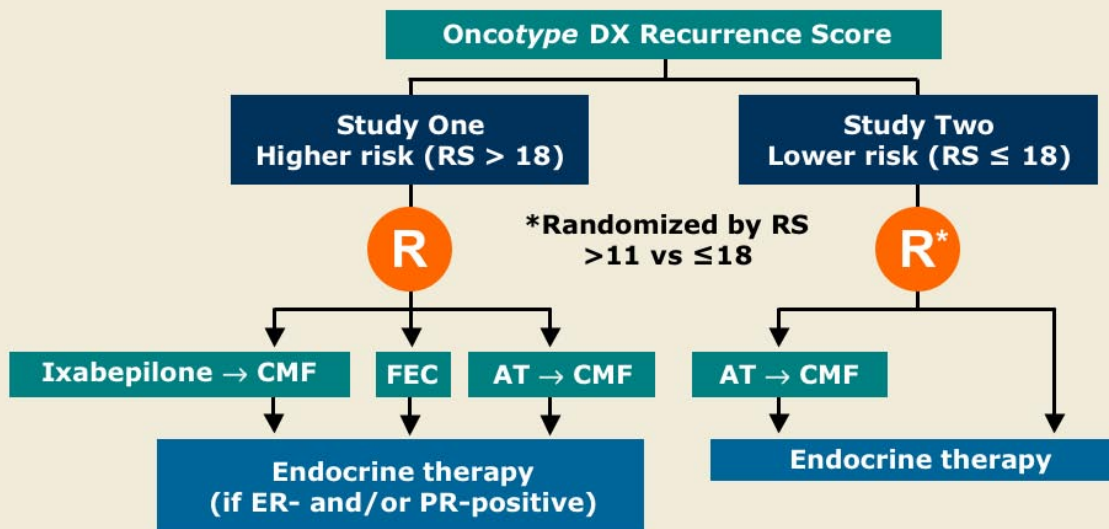
**"Prospective studies with larger sample sizes are essential to establish who benefits most from modern endocrine therapy plus chemotherapy, and whether use of multigene assays affects survival."**

**- KS Albain**

Albain KS et al. *Lancet Oncol* 2010;11(1):55-65.

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## Fondazione Michelangelo Phase III Trial in HER2-Negative Conventionally High-Risk Patients (Node-Positive and/or T2-T3)



Gianni L. Personal Communication. December 2009; Gianni L. Presentation. Research To Practice Satellite Symposium, San Antonio Breast Cancer Symposium 2009; [www.fondazionemichelangelo.org](http://www.fondazionemichelangelo.org)

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