**Breast Cancer Prognostic Test** 



# **CLINICAL SUMMARY**

# Comparison of EndoPredict and EPclin with Oncotype DX® recurrence score for prediction of risk of distant recurrence after endocrine therapy

Buus R. et al., JNCI J Natl Cancer Inst (2016) 108(11): djw149

#### Introduction

Decisions on the use of adjuvant chemotherapy in estrogen receptor (ER) positive, HER2-negative primary breast cancer are guided by the risk of distant recurrence. EndoPredict Breast Cancer Prognostic Test and Oncotype DX® are prognostic gene expression tests used for estimating distant recurrence risk.

EndoPredict provides prognostic information from a molecular signature combined with tumor size and nodal status (EPclin Score). Oncotype DX provides prognostic information only from a molecular signature (Recurrence Score-RS).

#### Study aim

The aims of the study were to:

- Validate the prognostic value of EPclin in the TransATAC study
- Compare the prognostic abilities of EPclin with that of RS

### **Clinical cohort description**

Cohort	Treatment	Primary endpoint	Number of women	Median follow-up
<ul> <li>Primary breast cancer</li> <li>ER+, HER2-</li> <li>Node positive and negative</li> <li>Postmenopausal</li> </ul>	5 years endocrinetherapy only	Distant relapse-free survival	928	10 years

# **Results**

#### **EPclin:**

- Is highly prognostic for all patients across 10 years, and in the node negative and positive subgroups
- Accurately predicts early (0-5 years) and late (5-10 years) metastasis
- Identifies a large low risk group with excellent outcomes after 10 years without chemotherapy

### EPclin provides substantially more prognostic information than RS

All patients EPclin and RS prognostic ability 150 -ikelihood (X2) 100 75 50 25 **FPclin** RS 0 - 10 years 0 - 5 years 5 - 10 years

early metastasis

late metastasis

to detect metastasis

\*The  $\chi$ 2-value is a standard statistic for prognostic power that is used to compare prognostic accuracy of different tests. The greater the  $\chi$ 2-value, the better is the prognostic power of a test. The  $\chi$ 2-value reflects the prognostic power of the continuous score independent from cutoff values.

#### The classification by EPclin aligns more closely with the patient outcomes



### EPclin outperforms RS in accurately identifying low risk patients



# Conclusions

- EPclin provides more prognostic information than RS, particularly for late metastasis.
- EPclin provides superior risk stratification compared to RS.
- The superior performance of EPclin compared with RS is due to a superior molecular component that predicts late events (years 5-10) and the inclusion of clinical variables (nodal status and tumor size) in EPclin.

## **Bottom line**

EndoPredict identifies more accurately low risk patients with a low recurrence rate than Oncotype DX



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