EndoPredict®

Breast Cancer Prognostic Test

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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
• Primary breast cancer • ER+, HER2- • Node positive and negative • Postmenopausal	5 years endocrinetherapy only	Distant relapse-free survival	928	10 years

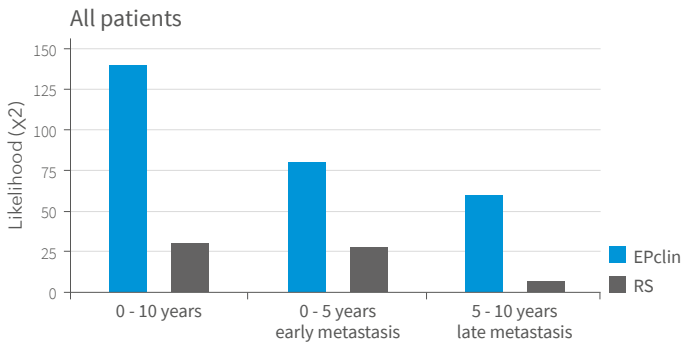
Results

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

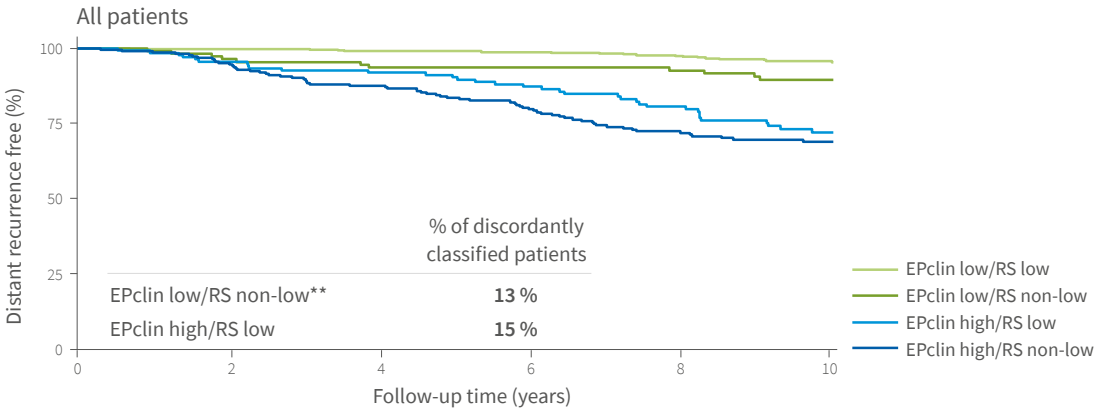
EPclin provides substantially more prognostic information than RS

EPclin and RS prognostic ability to detect metastasis

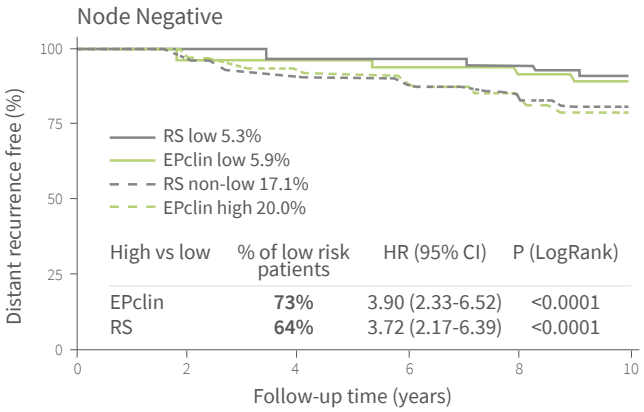


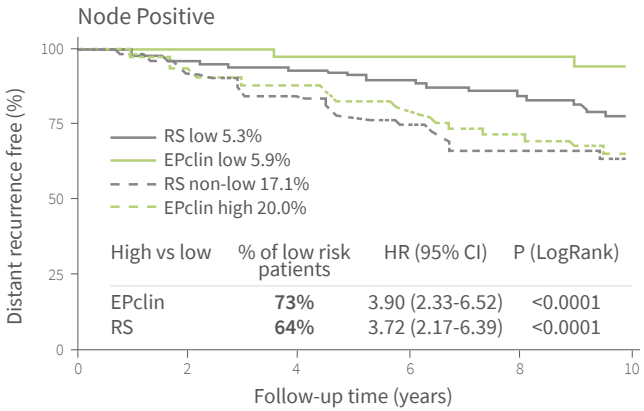
*The χ2-value is a standard statistic for prognostic power that is used to compare prognostic accuracy of different tests. The greater the χ2-value, the better is the prognostic power of a test. The χ2-value reflects the prognostic power of the continuous score independent from cutoff values.

The classification by EPclin aligns more closely with the patient outcomes



EPclin outperforms RS in accurately identifying low risk patients





EPclin identifies 9% more patients at low risk than RS with excellent outcomes at 10 years

EPclin shows significantly less 10-year recurrence rates than RS in the low risk group (5.0% for EPclin vs 25.1% for RS)

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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