EndoPredict®
One Test – Three Clinical Answers

How is EndoPredict Different?

EndoPredict is a prognostic and predictive molecular in vitro diagnostic test to determine the risk of distant metastases up to 15 years and the 10 year absolute chemotherapy benefit for patients with ER+/HER2- primary cancer. The second generation test is available as a CE-IVD kit that can be run locally and as a service performed by Myriad Genetics.

		EndoPredict®	Oncotype DX®	MammaPrint®	Prosigna®
TEST	Inclusion of Clinical Parameters	**Yes (T+N)**	No	No	Yes (T)
	Local Implementation	**Yes**	No	Yes (different technique)	Yes
REPORT	Risk of Recurrence	**10 Years**	9 Years	Group Risk 5 Years	10 Years
	Chemotherapy Benefit	**Individual Chemotherapy Benefit**	Group Chemotherapy Benefit	–	–
	Risk of Late Recurrence	**5 – 15 Years Late Recurrence**	–	–	–
	Risk Categories	**Low, High**	No Risk Categories	Low, High	Low, Intermediate, High
TRAINING AND VALIDATION	Subgroup of Patients in Training Cohort	**ER+ HER2− N0 N+[1]**	ER+ HER2+/− N0[2]	ER+/− HER2+/− N0[3]	ER+/−, HER2+/− N0/N+[4]
	Prediction of Late Recurrence (>5 Years)	**Yes**	No (N+)	No	Yes
	Therapy Regimens in Chemopredictive Studies	**FEC±P FAC±wP[5]**	CMF or MF[6], CAF[7]	–	–
	Consistent Cutoffs	**Yes**	No	Yes	No
	Prospective Trials	**UNIRAD (ongoing) RESCUE (ongoing) ABCSG34 (neoadjuvant)**	TAILORx (N0)[8] RxPonder (ongoing) planB/ADAPT (ongoing)	MINDACT[9]	Optima (ongoing)
GUIDELINES	Medical Guideline Inclusion	**NCCN[10], ASCO[11], St. Gallen[12], ESMO[13]**	NCCN[10], ASCO[11], St. Gallen[12], ESMO[13]	NCCN[10], ASCO[11], St. Gallen[12], ESMO[13]	NCCN[10], ASCO[11], St. Gallen[12], ESMO[13]
	HTA Guideline Inclusion	**NICE[14], HAS/RIHN[15]**	NICE[14], HAS/RIHN[15]	HAS/RIHN[15]	NICE[14], HAS/RIHN[15]

T: tumor size   **N**: lymph node status   **F**: fluorouracil   **E**: epirubicin   **C**: cyclophosphamide   **P**: paclitaxel   **A**: doxorubicin   **wP**: weekly paclitaxel   **M**: methotrexate

According to Simon, Hayes and Paik, studies using archived tissue from prospective studies meet level 1 evidence when they are validated in at least one or more similarly designed studies with consistent results.[16]

- EndoPredict was validated in **three similarly designed prospective-retrospective studies** with consistent results
- Guidelines accept prospective-retrospective data as **high standard of evidence**
- Published prospective data **confirm** existing retrospective-prospective data[8]
- EP is a recently developed optimized **latest generation test**, but first prospective data confirming the prospective retrospective data are already available[19, 20]
- EndoPredict has shown **superior clinical accuracy** which is most important for outcome of patients.
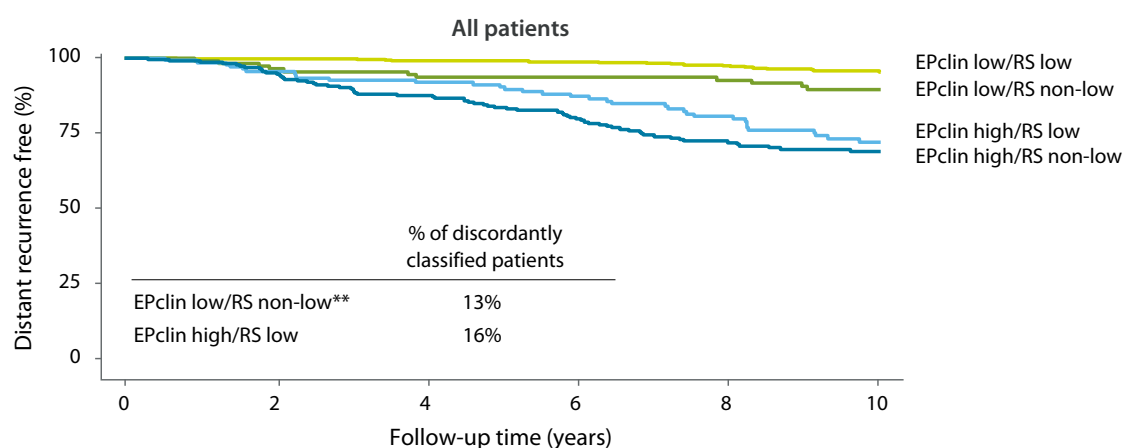
EndoPredict in Direct Comparison
Superior Clinical Accuracy - Largest "true" Low Risk Group

EndoPredict® vs. Oncotype Dx® (RS):[17]

Patients	Treatment	Primary Endpoint
928 ER+, HER2-, N0 or N+	5 years endocrine therapy only	Distant recurrence free survival

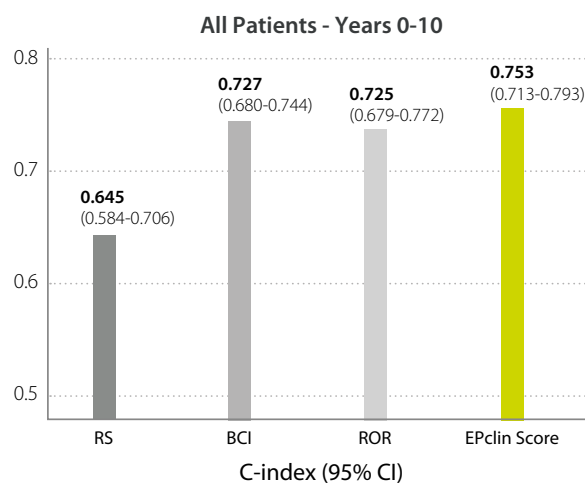The classification by EndoPredict aligns more closely with the patient outcomes

All patients

- EPclin low/RS low
- EPclin low/RS non-low
- EPclin high/RS low
- EPclin high/RS non-low

% of discordantly classified patients	
EPclin low/RS non-low**	13%
EPclin high/RS low	16%

Distant recurrence free survival of ER+, HER2− patients within different risk groups from transATAC [1]

EndoPredict vs. other prognostic signatures:[18]

Patients	Treatment	Primary Endpoint
774 ER+, HER2-, N0 or N+	5 years endocrine therapy only	Distant recurrence (DR)

The C-Index is standard statistic for prognostic power. The greater the C-Index, the better is the prognostic power of a test. The C-Index reflects the prognostic power of the continuous score **independent from cutoff values**.

EndoPredict shows superior prognostic accuracy

All Patients - Years 0-10

- RS: 0.645 (0.584-0.706)
- BCI: 0.727 (0.680-0.744)
- ROR: 0.725 (0.679-0.772)
- EPclin Score: 0.753 (0.713-0.793)

C-index (95% CI)

Prognostic accuracy of different tests [2]
EndoPredict (EPclin Score), Prosigna (ROR), Breast Cancer Index (BCI), Oncotype DX (RS)

REFERENCES: **1.** Filipits et al.: Clin Cancer Res 2011 **2.** Paik et al.: N Engl J Med 2004 **3.** van't Veer et al: Nature 2002 **4.** Wallden et al.: BMC Medical Genomics 2015 **5.** Sestak et al.: Breast Cancer Res Treat 2019 **6.** Palik et al.: J Clin Oncol 2006 **7.** Albain et al.: Lancet Oncol 2010 **8.** Sparano et al.: N Engl J Med 2018 **9.** Cardoso at al.: N Engl J Med 2016 **10.** National Comprehensive Cancer Network. Breast Cancer (Version 4.2018) **11.** Harris et al.: J Clin Oncol 2016 **12.** Burstein et al. Ann. Oncol. 2019 **13.** Cardoso et al. Ann Oncol 2019 **14.** NICE https://www.nice.org.uk/guidance/dg34 **15.** HAS https://www.has-sante.fr **16.** Simon et al.: J Natl Cancer 2009 **17.** Buus et al.: J Natl Cancer Inst 2016, **18.** Sestak I et al.: JAMA Oncol 2018 **19.** Dubsky Cancer Res. 2018 Abstr. SABCS 2017 **20.** Ettl et al. SABCS 2018

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