



EndoPredict[®]
One Test - Three Clinical Answers

A breast cancer patient's guide to informed decision making

This guide is intended to help breast cancer patients discuss personalized treatment plans with their healthcare providers





Introduction

With an estimated 2.1 million new cases recorded worldwide in 2018, breast cancer is one of the most frequently diagnosed cancers in the world (www.wcrf.org).

Thanks to intensive research and to the development of new therapies, most patients can now be treated successfully with a combination of surgery, radiotherapy, endocrine (anti-hormone) therapy and/or chemotherapy.

Radiotherapy, endocrine therapy and chemotherapy are given to reduce the likelihood of cancer recurrence.

As all breast cancers are not the same, treatment needs to be tailored to individual patients.

Many patients with **Breast Cancer**
can be safely treated with 5 years of
endocrine therapy alone.



Which is the Right Initial Treatment for You?

You have been diagnosed with a type of breast cancer that is **estrogen receptor positive (ER+)** and **HER2 receptor negative (HER2-)**.

Some patients with this type of breast cancer require endocrine therapy together with chemotherapy but some patients can be adequately treated with endocrine therapy alone. Since it provides no clinical benefit, these patients can safely avoid chemotherapy and the side effects from that treatment.

EndoPredict® can help you and your doctor decide which initial therapy treatment plan is best for you.

Traditionally, factors such as the size and grade of a tumor (a system used to classify the tumor based on how different the cancer cells are from normal breast cells and how quickly they are growing) along with other diagnostic measures (for example: ER and HER2 status, ki67, number of lymph nodes involved) have been used to help in making this decision.

It is now known that the precise analysis of genes relevant for tumor growth, through prognostic tests such as **EndoPredict**, can provide important information about the tumor's behavior. EndoPredict can help to assess the risk of cancer recurrence and the benefit of chemotherapy for the individual patient.

Traditional classification methods do not always provide definitive direction as to which treatment is appropriate.

EndoPredict provides additional information to help you and your doctor make a more informed treatment decision.





Which is the Right Long-Term Treatment for You?

Metastases can still arise years after the initial diagnosis of breast cancer. That is why regular aftercare examinations are so important. It is just as important to know your personal long-term risk of cancer recurrence.

If you have been able to forgo chemotherapy and are disease-free after five years of endocrine therapy, the question of further therapy after five years arises.

EndoPredict® can help you and your doctor decide which therapy is best for you after five years.

Some patients can benefit from prolonged endocrine therapy up to ten years but some patients can avoid this additional treatment and be safely treated with only 5 years of endocrine therapy.

A molecular test that can predict the long-term as well as early risk is important. EndoPredict® is the only gene expression test that indicates a risk beyond ten years. Having such a test at diagnosis of primary breast cancer can help you and your doctor make more informed decisions for both initial and long-term treatment.

It is important to know the long-term risk of recurrence.

EndoPredict is the only gene expression test that indicates a risk beyond ten years.

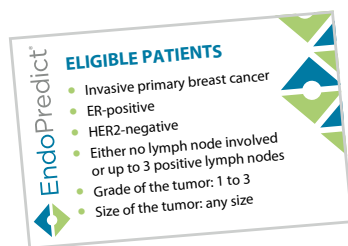
What is EndoPredict?

EndoPredict is a multi-gene expression test that determines the activity of the genes linked to both early and late recurrence of breast cancer. Therefore EndoPredict **provides significant information in addition to all other traditionally used methods.**

EndoPredict is performed on a small tumor sample. This tumor sample can be obtained from a surgical sample or a punch biopsy previously collected. EndoPredict is appropriate for the majority of patients with early stage breast cancer and with an ER+/HER2- tumor. It can be used for analysis of breast cancer patients who are lymph node negative or lymph node positive with up to 3 positive nodes.

EndoPredict will help you and your doctor decide whether you can safely avoid chemotherapy, how beneficial chemotherapy would be, and whether you can avoid extended endocrine therapy.

Once the sample has been sent to the laboratory, results are usually available within **1 week**.



- 1 Discuss with your doctor whether EndoPredict might be a good choice for you.
- 2 A sample of your tumor will be sent to the laboratory.
- 3 The EndoPredict report is provided to your doctor.
- 4 You and your doctor can decide which treatment is best for you based on the EndoPredict results and on the other available clinico-pathological information.

1 WEEK

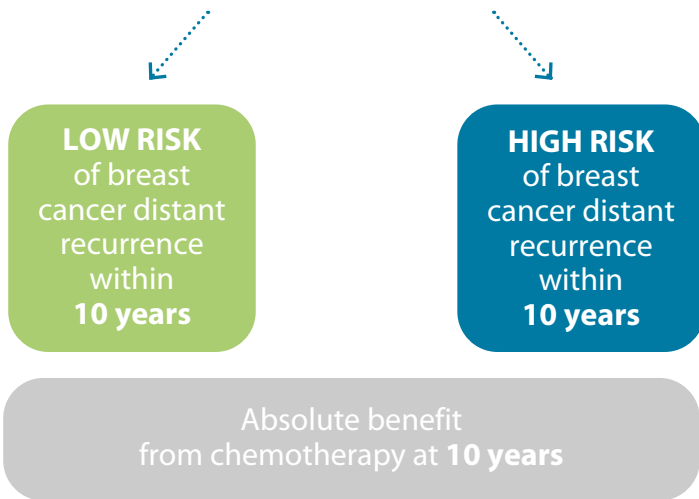
What Type of Information should

The activity of eight disease-relevant genes (*BIRC5*, *UBE2C*, *DHCR7*, *RBBP8*, *IL6ST*, *AZGP1*, *MGP*, *STC2*) and four control genes (*OAZ1*, *CALM2*, *RPL37A* and *HBB*) will be analyzed to determine a genetic fingerprint unique to you (called the 12-Gene Molecular Score).

Regarding your initial treatment

The EndoPredict test result will provide your **individual risk** of breast cancer distant recurrence within **10 years** and your estimated **absolute benefit from chemotherapy** at **10 years**.

EndoPredict Test Result



You Expect from an EndoPredict Test?

With the aid of a mathematical algorithm, the 12-Gene Molecular Score is then combined with the tumour size and the number of lymph nodes involved to calculate **your individual EPclin Risk Score**.

Regarding your long-term treatment

If you have been able to forgo chemotherapy and are disease-free after five years of endocrine therapy, the EndoPredict test result will provide your **individual risk** of breast cancer late distant recurrence within **years 5-15**.

EndoPredict Test Result



LOW RISK
of breast cancer
late distant
recurrence
within
years 5-15

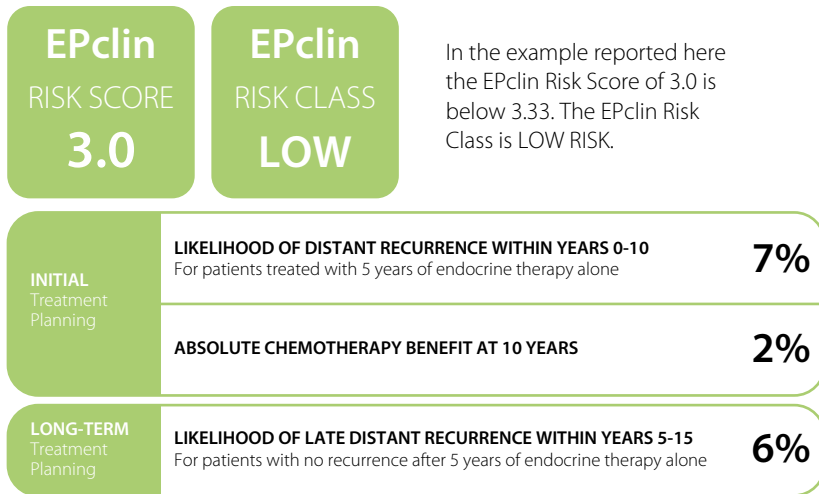


HIGH RISK
of breast cancer
late distant
recurrence
within
years 5-15

EndoPredict Test

The **EPclin Risk Score** is reported on a scale that reflects the risk of breast cancer distant recurrence. Higher values indicate a higher risk of recurrence. A value below 3.33 is considered low risk.

Low Risk



Initial treatment: In the example reported here, an EPclin 10 year risk of 7% means that the probability of breast cancer distant recurrence within 10 years is 7% when the patient is treated with 5 years of endocrine therapy alone. The absolute chemotherapy benefit for this patient is only 2%.

Long-term treatment: A likelihood of distant recurrence within years 5-15 of 6% means that in a recurrence-free patient treated with endocrine therapy alone for 5 years, the probability of breast cancer distant recurrence within the next 10 years is 6% without extended endocrine therapy.

For this patient, endocrine therapy alone without extension might be sufficient.

Important notice: A therapy decision is always based on many different clinical and pathological factors. Not only on the result of this test. The decision about your therapy must be made together with your physician.

Results Examples

The value of 3.33 is associated with 10% risk of breast cancer recurrence within 10 years. A value equal to or above 3.33 is considered high risk.

High Risk

EPclin
RISK SCORE
4.8

EPclin
RISK CLASS
HIGH

In the example reported here the EPclin Risk Score of 4.8 is above 3.33. The EPclin Risk Class is HIGH RISK.

INITIAL Treatment Planning	LIKELIHOOD OF DISTANT RECURRENCE WITHIN YEARS 0-10 For patients treated with 5 years of endocrine therapy alone	36%
	ABSOLUTE CHEMOTHERAPY BENEFIT AT 10 YEARS	17%
LONG-TERM Treatment Planning	LIKELIHOOD OF LATE DISTANT RECURRENCE WITHIN YEARS 5-15 For patients with no recurrence after 5 years of endocrine therapy alone	28%

Initial treatment: In the example reported here, an EPclin 10 year risk of 36% means that the probability of breast cancer distant recurrence within 10 years is 36% when the patient is treated with 5 years of endocrine therapy alone. The absolute chemotherapy benefit for this patient is 17%. This means that chemotherapy can reduce the risk by almost half.

Long term treatment: A likelihood of distant recurrence within years 5-15 of 28% means, if the patient should be disease-free after 5 years of endocrine therapy without chemotherapy, the risk of recurrence in the next 10 years is 28%.

This patient might consider chemotherapy and endocrine therapy as first line treatment rather than endocrine therapy alone.

Important notice: A therapy decision is always based on many different clinical and pathological factors. Not only on the result of this test. The decision about your therapy must be made together with your physician.

Why EndoPredict is the Test of Choice for You?

- EndoPredict provides **more tumor-specific information** than conventional clinical parameters alone.
- EndoPredict will clearly identify whether a breast cancer patient is at **Low Risk** or at **High Risk**. The result is usually available within one week.
- EndoPredict is the **only test** that answers the following three important clinical questions
 - Risk at 10 years: **Can chemotherapy be avoided?**
 - Chemotherapy benefit: **What is the absolute benefit from chemotherapy?**
 - Risk between 5 and 15 years: **Can the extension of endocrine therapy be avoided?**

However, the final decision on the right treatment choice for you should be made together with your doctor.

- EndoPredict is a **second generation gene expression test** that combines established clinical prognostic factors of tumor size and lymph node status with the genetic fingerprint of your tumor.
- EndoPredict has been developed by international experts based on years of research. The test has been validated in **four large clinical studies** with more than 3,100 patients.
- EndoPredict is **recommended by major international guidelines** (NCCN 2018, St. Gallen 2017, ASCO 2016, ESMO 2015).

It's Good to Know

"So many women are being over-treated with chemotherapy, the EndoPredict test allows each patient's needs to be considered in order to provide the necessary treatment."

BECCA

Incredible Relief

"EndoPredict stops you from being part of a group... and allows you to be seen as a person rather than a category."

TESSA

Other Questions You Might be Asking

Who is Myriad?

With over 25 years of experience and more than 2.5 million patients that have already benefited from Myriad's hereditary cancer genetic testing, Myriad Genetics is dedicated to saving lives and improving the quality of life of patients worldwide. Myriad's tests are known for quality and accuracy. The extensive knowledge base, a highly specialized professional staff and the commitment to support healthcare providers, makes Myriad the unquestioned leader in genetic testing.

Will my health insurance pay for my testing?

Healthcare reimbursement and coverage for EndoPredict varies greatly throughout the world. Please check with your physician, insurance, Myriad affiliate or distribution partner in your country for additional information.



References:

Buus R. et al.; Comparison of EndoPredict and EPclin With Oncotype DX Recurrence Score for prediction of Risk of Distant Recurrence After Endocrine Therapy. *J Natl Cancer Inst.* 2016 Jul 10;108(11).

Dubsky P. et al.; The EndoPredict Score provides prognostic information on the late distant metastases in ER+/HER2-breast cancer patient; *Br. J. Cancer*, (2013); 109(12):2959-64.

Filipits M. et al.; A New Molecular Predictor of Distant Recurrence in ER-Positive, HER2-Negative Breast Cancer Adds Independent Information to Conventional Clinical Risk Factors. *Clin Cancer Res*, (2011); 17(18); 6012–20.

Filipits M. et al.; Prediction of Distant Recurrence using EndoPredict among Women with ER+, HER2- Node- Positive and Node-Negative Breast Cancer Treated with Endocrine Therapy Only. *Clin Cancer Res.* 2019

Martin M. et al.; Clinical validation of the EndoPredict test in node-positive, chemotherapy-treated ER+/HER2- breast cancer patients: results from the GEICAM 9906 trial. *Breast Cancer Research* 2014. 16:R38.

Sestak I. et al.; Comparison of the Performance of 6 Prognostic Signatures for Estrogen Receptor – Positive Breast Cancer. A Secondary Analysis of a Randomized Clinical Trial. *JAMA Oncology*. Published online February 15, 2018.

Sestak I. et al.; Prediction of chemotherapy benefit by EndoPredict in patients with breast cancer who received adjuvant endocrine therapy plus chemotherapy or endocrine therapy alone. *Breast Cancer Res Treat.* 2019



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