



mammaprint™

*decoding breast cancer.*

» We need to know the exact risk of individual breast cancer recurrence.«



**For patients, relatives and friends.**

## »What does breast cancer recurrence mean?«

After diagnosis, everything is undertaken to remove all breast cancer tumor cells from the patient's body. Nevertheless, some breast cancers can still recur months or years later, others not. The tendency to spread is hard to judge from looking only at the outside of the removed tumor and current methods cannot predict the aggressiveness of a tumor precisely. Even though some breast cancer tumors have a small size and may appear harmless, they can indeed be very aggressive.

On the other hand, many of the given chemotherapies are unnecessary as only one woman out of a hundred low risk patients will benefit from it. The question is: how to find those who really need chemotherapy and those who do not?



## » Tailored treatment plans depend on further analysis.«

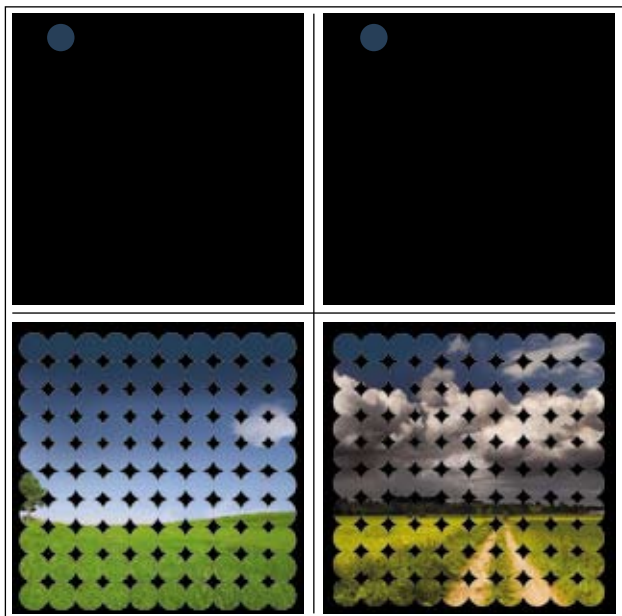
To help the doctor to decide on the correct further treatment after surgery and whether or not to apply chemotherapy, many laboratory tests will be performed on samples of the tumor tissue. Nevertheless, these standard tests do not precisely determine the aggressiveness of the tumor.



## »How can MammaPrint help?«

Tumors differ from one to the other. These differences can only be detected inside the cancer cells. This is why MammaPrint® analyses a small sample of the surgically removed cancer tissue and looks inside each individual tumor, at the activity of 70 most informative genes.

This activity is a measurement of the behavior of the tumor that indicates if a tumor is likely to spread or not. You get the clear answer: low or high risk of breast cancer recurrence within the next 10 years. Only this result can provide valuable assistance for doctors to decide on the right treatment plans for the patient.



Only when looking at many data points at a time you get the full picture. This is why MammaPrint looks at 70 most informative genes in each individual breast cancer tumor.

## »Why is it important to look into the tumor's gene activity?«

In all cells of a person's body the genes are the same. But in different tissues of the body different genes are switched on or off, depending on the normal function of the tissue. Cells in which this normal gene activity is heavily disturbed due to many possible reasons, we call cancer. This is why cancer is a disease of the genes: in cancer cells some genes are more active and others are less active than in healthy cells. Thus, cancer cells acquire the ability to build proteins which they should not build, e. g. those proteins which enable the cells to grow out of control or they do no any longer build proteins that the cell desperately needs, e. g. internal "police" proteins that prevent uncontrolled growth.

Proteins can be understood as tools; tools which enable cells to do things that keep the body alive or harm the body. If cancer cells move from their origin to other sites in the body (=metastasizes), they harm the body as the cancer cells destroy and displace healthy tissue. MammaPrint® provides reliable information as to how severe the disturbance of normal gene activity in an individual breast cancer tumor is and how likely the tumor is able to spread.



## »What is the benefit for the patient?«

Test results from MammaPrint® clarify the individual risk of recurrence of the disease. Compared to conventional methods, MammaPrint also significantly reduces the number of patients classified as high risk, thereby avoiding unnecessary chemotherapy treatments and minimizing toxicity and other potential side effects.

Conversely, even though some breast cancer tumors may appear small and harmless, they can be very aggressive. MammaPrint reliably classifies these tumors as high risk, so that a tailored treatment plan can be applied by the doctor.



## »Can I trust in the new technology?«

**CLEARED BY FDA  
2007**

U.S. Food and Drug Administration  
Rockville MD 20857-0001

MammaPrint® has been validated in several independent studies, as well as proven its clinical robustness in more than 6,000 performed tests. The U.S. organization FDA\*, the world's strictest patient safety regulatory organization, has cleared MammaPrint in early 2007 as the first test ever in this category of tests.

## »Which patient group can benefit from MammaPrint?«

MammaPrint should be used in all cases, when a breast cancer is diagnosed in a relatively early stage, namely stage I and II, that means the tumor is not bigger than 5 cm and lymph nodes are not affected by the disease.



## »How to get the MammaPrint test.«

MammaPrint® is performed on a small piece of removed tumor tissue. This needs to be collected by a physician shortly after surgery and sent to Agendia for analysis. 10 working days after receiving the sample, the test result will be sent to your physician.

MammaPrint can be ordered by email **customerservice@agendia.com**  
fax **+31 20 512 9162** or  
phone **+31 20 512 9161**.  
For more information, visit **www.agendia.com**.

MammaPrint is a product of Agendia, located in Amsterdam, The Netherlands. Agendia provides world's leading gene expression analysis-based diagnostics for the benefit of cancer patients and has a strong commitment to comply with the highest quality standards, as reflected in its ISO 17025 accreditation.

Contact  
Agendia BV  
Louwesweg 6, 9D  
1066 EC Amsterdam  
The Netherlands  
phone: +31 20 512 9161  
fax: +31 20 512 9162  
info@agendia.com  
www.agendia.com



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