



# OSNA

for a better  
quality of life

Information brochure  
for breast cancer patients

*Systemx Life Science –  
Adding quality to life!*





## **Dear patient,**

If you have been diagnosed with breast cancer it is very important that your doctor plans the best possible treatment for you. Firstly, it is necessary for your doctor to establish whether the tumour has already spread beyond the breast. The initial spread of breast cancer is often via the lymph nodes of the armpit (axilla) on the side of the breast affected.

Your doctor will examine these lymph nodes to find out whether cancerous cells (metastases) are already present. A modern and frequently used method for determining this is examination of the sentinel lymph node. Your doctor will explain whether this type of diagnosis is applicable for you. The sentinel lymph node is the first node into which the breast tumour drains and therefore a metastasis is most likely to occur in this lymph node. During the operation, the sentinel lymph node is marked, removed and investigated for the presence of metastases. If a metastasis is found, the sentinel lymph node is classified as 'positive', and all lymph nodes on this side under the arm are removed. With conventional methods in use today, metastases can often only be discovered with time-consuming diagnostic tests, performed after the operation. In such cases the patient then requires a second operation. However, it is now possible to assess the status of the sentinel lymph node during the first operation and should the presence of metastases be confirmed all of the lymph nodes can be removed at the same time.

We would now like to inform you about osNA (One Step Nucleic Acid Amplification), a new diagnostic technique that allows an optimised diagnosis during the operation and which may help save you exposure to a second surgical procedure.

## **What is OSNA?**

OSNA is a new diagnostic technique based on a molecular, biological, testing method. The test is designed to detect lymph node metastases in breast cancer.

## **What advantages will OSNA offer you?**

OSNA helps avoid stressful second operations.

OSNA is a very precise method that allows, in contrast to conventional methods, the whole of the sentinel lymph node to be analysed in a single test.

OSNA is a quick test, which compared to previous methods, can also detect small metastases in the sentinel lymph node during the breast tumour operation.

On the basis of the OSNA results, your doctor can then decide the next step in your treatment during the course of the operation. If the result is positive the lymph nodes in the armpit will be removed or if the result is negative the lymph nodes can be left in place and the operation is completed.

## **Why are second operations often necessary when conventional diagnosis is used?**

To locate metastases in the sentinel lymph nodes, the lymph nodes are generally examined under the microscope more commonly following or increasingly during the operation. In both scenarios, this examination involves producing a few thin slices per lymph node, which are dyed and analysed. As such, only a small part of the lymph node is routinely investigated.



Additionally, if this initial investigation is performed during the operation and therefore under time pressure, it is often the case that smaller metastases are not found. Once the operation is completed, further tissue slices will be examined under the microscope to obtain a more precise and conclusive result. This result will only be available a few days after the operation. Should this final investigation identify metastases that were previously not detected, the lymph nodes in the armpit will need to be removed and this will require a second operation.

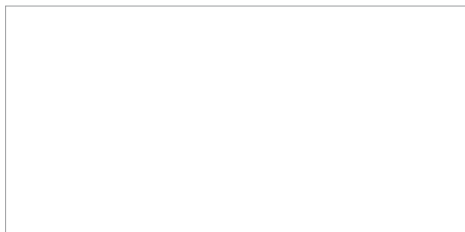
## **What problems are entailed with conventional diagnosis?**

Routinely, only a few sections of the lymph node removed are investigated under the microscope during the operation. So only a small part of the lymph node is considered, which can mean that metastases are overlooked. A second operation is then unavoidable.

## **How does OSNA work?**

OSNA is a new method which uses a molecular biological detection technique. A substance (marker) is produced in the cells of the breast tissue, which normally does not occur in a healthy lymph node. OSNA can detect and analyse very small quantities of this marker substance. OSNA has been tested in clinical trials which have shown that even small metastases can be detected and that OSNA is as accurate as an intensive final assessment under the microscope. This combination of accuracy with speed of result ensures that reliable results are available during the first operation allowing the surgeon to make a fully informed clinical decision.

In case of questions, please contact your doctor.





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