Sentinel lymph node biopsy

This factsheet has been designed to give you information about having a sentinel lymph node biopsy (SLNB) and the care you will receive before, during and after the operation.

It is not meant to replace discussion with your surgeon, but we hope it will help to answer some of the questions that you may have. If there is anything that you do not understand, a member of the breast care team will be happy to explain further.

What is a sentinel lymph node?
Sentinel lymph nodes are part of the lymphatic system. They are found in the axilla (armpit). The lymphatic system is an important part of the immune system, helping to fight infection and diseases and working as a drainage system to help remove excess fluid and waste products from the body. It is made up of lymph fluid (formed when excess fluid drains from the body), lymph vessels (tiny channels which carry lymph fluid) and lymph nodes (small glands which act as filters when lymph fluid drains through them). Sentinel lymph nodes are the first nodes to receive lymph fluid which drains from the breast.

What is a sentinel lymph node biopsy (SLNB)?
It’s an operation that helps to find out if breast cancer has spread to the lymph nodes.

The sentinel lymph node or nodes (there may be more than one) are removed and then analysed to see if there are any cancer cells present.

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It is done at the same time as breast surgery such as mastectomy (removing the breast), or wide excision (when the cancer is removed along with some healthy tissue around it).

**Before the operation**
Before the operation you will go to the nuclear medicine department at Southampton General Hospital where a small amount of a radioactive solution (isotope) will be injected into the affected breast. A special camera is used to map the flow of the solution to the lymph nodes. The number of sentinel lymph nodes identified is not related to the spread of breast cancer.

**Is the radioactive solution dangerous?**
No. The level of radiation in the solution used is low and less than in a conventional x-ray and is not dangerous to you or others. The radioactive solution disperses (goes away) on its own and is only in the body for a short period of time.

**During the operation**
On the day of surgery you will be given a general anaesthetic. While you are asleep the surgeon may inject a blue dye into your breast. The dye helps them to see the location of the sentinel lymph nodes. The surgeon scans the armpit area (axilla) with a probe in order to locate the radioactivity in the sentinel lymph nodes. A cut (incision) will be made in the armpit area (axilla) and the sentinel node or nodes will be identified and removed. Some of the tissue is sent to the pathology department (lab) for provisional analysis while you are under anaesthetic. If breast cancer has spread to the sentinel lymph node or nodes the surgeon will proceed to remove more lymph nodes from the armpit (axilla). This is called an axillary clearance.

The lab will also carry out a definitive analysis, when the tissue is analysed in much greater detail. These results take longer to come back – usually about two weeks.
After the operation
A small drainage tube may be inserted into your armpit after the surgery to remove any blood and fluid from under the scar. It’s often possible to go home on the same day as the surgery, whether a drain is inserted or not. If you do have a drain inserted, we will arrange for the district nurse to remove it for you once you are back home.

The results
Your surgeon will discuss the initial results of the sentinel lymph node analysis when you are awake after your operation. These initial results may occasionally turn out to be different from the final lymph node analysis (when the tissue taken away during your operation is analysed fully), but this is only in a minority of cases. The final results are usually available about two weeks after your surgery. If the final results show that the cancer has spread to the lymph nodes, your surgeon may recommend that you have another operation.

An appointment will be made for you to discuss the results with your surgeon and a letter confirming this will be posted to you.

Arm exercises
It’s important to do arm exercises to maintain shoulder mobility after axillary surgery. You will be given a leaflet to explain this in more detail.

Possible complications

The operation
Complications can include a bruise, a collection of fluid or infection, numbness under the arm, shoulder stiffness and lymphoedema (a condition that causes swelling in the body’s tissues).
These complications are less likely with sentinel lymph node biopsy than axillary clearance (when more lymph nodes are removed).

**Blue dye**
There is a small risk of allergic reaction to the dye used to locate the sentinel lymph nodes, affecting approximately 1% of patients (one in a hundred). Blue staining can affect the breast for several months after surgery, but it will fade in time.

The dye can also cause your skin, urine and faeces to turn a blue/green colour. This is temporary and will last for approximately 48 hours after surgery. If you wear contact lenses it’s possible that you may notice a blue tint appear on them, so it is recommended that you avoid wearing contact lenses until the dye has left your body.

**Notes**
Please make a note of any questions that you would like to ask your surgeon or breast care nurse next time you meet.
**Useful contacts**
If you need to contact your consultant:
Mr Cutress
Mr Rew
Mr Royle
Miss Simoes
Miss Summerhayes

Please get in touch via their secretary on telephone: **023 8120 6676**
or **023 8120 5033**.

**Breast care clinical nurse specialist team**
If there is anything in this factsheet that you would like to discuss or you have any other concerns or questions, the breast care clinical nurse specialists are available Monday to Thursday between 8am and 4pm and between 8am and 12noon on Friday. You can contact them by telephone on: **023 8120 3753**.

If you need a translation of this document, an interpreter or a version in large print, Braille or on audiotape, please telephone **023 8120 4688** for help.