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Sentinel Lymph Node Biopsy

This leaflet is designed to give you information about having a sentinel node biopsy and the care you will receive before, during and after your operation. We hope it will answer some of the questions that you or those who care for you may have at this time. It is not meant to replace the discussion between you and your surgeon, but helps you to understand more about what is discussed.



What is the sentinel node?

The armpit (also called axilla) contains around 15-20 small structures called lymph nodes. These are also known as 'glands'. Their main job is to help us deal with infections, but they also become involved in the spread of some cancers and may also become enlarged if this happens. The sentinel node is the first lymph node or nodes in your armpit to which breast cancer cells can spread. The sentinel node is connected to the other lymph nodes in the armpit.

What is a sentinel lymph node biopsy?

We test some of the nodes in the armpit to find out whether any breast cancer cells have spread to your armpit nodes. This information helps us decide on what additional treatments you may need after your operation. In the majority of cases, this procedure will be performed at the same time as your breast surgery.

Historically women undergoing surgery for breast cancer have had the majority of lymph nodes removed from the armpit at the same time as their breast operation. This operation is known as axillary node clearance. This is an accurate way of finding out whether cancer cells have spread to the armpit but does have some potential side effects. The newer technique of sentinel lymph node biopsy involves the removal of one to four sentinel nodes only. The same information is obtained by removing fewer nodes.

What are the benefits of this procedure?

Sentinel node biopsy has the following benefits:

- Less invasive surgery.
- Less time in hospital and a quicker overall recovery.
- Reduced risk of lymphoedema. This is swelling to the arm/hand that may be caused by armpit surgery.
- Less discomfort and fewer problems with movement in the shoulder/arm.
- No need to use a drain.

What are the alternatives to this operation?

The main alternative is to have the majority of the nodes removed from your armpit in an operation known as axillary clearance. Lymphoedema, pain, numbness and arm /shoulder problems can be more common with axillary node clearance. Your surgeon will advise you which procedure would be best for you.

What happens during the procedure?

Either on the day or surgery (or sometimes the day before) a small amount of radioactive liquid may be injected into the skin of the breast. This fluid then travels to the sentinel node. A scan of your breast may be taken in the



Nuclear Medicine Department to identify the sentinel node. The scans are completely painless and the total amount of radiation exposure is equivalent to receiving two mammograms. The scans do not tell us whether cancer cells have spread – only where the sentinel node(s) is located.

On the day of surgery you will be given a general anaesthetic. When you are asleep you will be taken into the theatre and the surgeon will inject a blue dye into the skin of your breast. The dye then travels to the sentinel node and stains it blue. The surgeon is then able to locate a blue +/- radioactive node which will then be surgically removed.

Some blue dye is left in the body and will be passed out in the urine over the next 24 to 48 hours. Some blue staining of the breast usually occurs but this is temporary and usually fades slowly. This usually takes a few weeks or months, but in some cases it can take longer.

Once the sentinel node has been removed the planned breast operation is performed whilst you are still asleep.

What happens if we cannot find the sentinel node?

Occasionally (around of 5% of cases) it is not possible to find the sentinel node. If this happens then during the same operation your surgeon can remove more, or all of the nodes in your armpit, to ensure that the sentinel node has been removed. This will not happen unless you give permission for it to take place before the operation begins, and your surgeon will discuss this possibility with you prior to your planned surgery.

What happens if the sentinel node looks cancerous or unusual during surgery?

Occasionally during your surgery it can be obvious that other lymph nodes in your armpit look abnormal. If this occurs your surgeon can remove as many of these lymph nodes as possible in the procedure known as axillary clearance, described above. This will only happen if you have given permission for it to occur before the operation begins, but it should save you needing a second operation to your armpit a few weeks later.

What are the risks of this operation?

Possible risks/complications of the sentinel lymph node biopsy include:

- The blue dye used will discolour urine, stools and tears for a few days. The skin of your breast will be discoloured for a few weeks or months and in very rare cases for a year or more.
- An allergic reaction to the dye used is possible. The reaction can be treated but very rarely can be severe.
- Bleeding from the wound.
- Infection. If your wound becomes inflamed, red, hot, and sore or oozes, you may require antibiotic treatment.



What happens after the operation?

The tissue removed in your operation will be taken to a laboratory and examined carefully under a microscope to see if the sentinel node contains cancer cells. If cancer cells are found in the sentinel node it is possible that cancer has spread to other lymph nodes in your armpit. This will mean that you will probably need a second operation to remove the rest of the armpit nodes. In some cases radiotherapy may be given to your armpit area. If the sentinel node shows no evidence of cancer cells, this means it is highly unlikely that the remaining armpit nodes contain cancer cells and no further treatment to the armpit is required.

False negative

In very few cases, the sentinel node may show no evidence of cancer cells but there may be cancer cells in other armpit nodes. This risk is small and your surgeon will be able to discuss this risk with you further and explain how you will be monitored after your operation to look for any recurrence.

How long will I take to recover from the operation?

You will probably be able to leave hospital the day of the operation. It is usual to have two incisions (cuts), one for the breast operation and one in the armpit for the sentinel node biopsy. Dissolvable stitches are usually used, but you will be advised about this. Both wounds will be covered by a dressing for up to 5 days. Bathing and showering are possible during this time. We recommend that you wear a good, well fitted bra during your recovery period. Your bra should be comfortable and supportive. You will be given some arm exercises to do and these will help your recovery.