

Exeter Breast Service

Sentinel Lymph Node Biopsy

Lymph nodes

Breasts contain a network of tiny tubes called lymph vessels. These drain into the lymph nodes (lymph glands) under the arm (axilla).

If you have invasive breast cancer, your treatment team will want to check if any of the lymph nodes under your arm contain cancer cells, as breast cancer can sometimes spread to these lymph nodes. This information will help the treatment team recommend the most beneficial treatment options.

Checking lymph nodes before surgery

Usually an ultrasound scan of your axilla is done before surgery to assess these lymph nodes. This is usually carried out at the same time as your mammogram and ultrasound scan of your breast.

Sentinel Lymph Node Biopsy

Even if the ultrasound scan tests before surgery show no evidence of breast cancer in the lymph nodes, the surgical removal of sentinel lymph nodes is recommended. This procedure is called a Sentinel Lymph Node Biopsy. During this procedure, the sentinel lymph nodes are identified, removed, and examined to determine whether cancer cells are present. The sentinel node is the first lymph node in the armpit to which breast cancer can spread. There can sometimes be more than one sentinel lymph node.

It is carried out as a day case procedure under a general anaesthetic. This is usually carried out at the same time as your breast surgery. In some cases it is carried out as a stand-alone operation.

You will usually receive the results of this at the same time as the results of your breast surgery when you meet your surgeon 10-14 days after your surgery.

If the sentinel node does not contain cancer cells, this means the other lymph nodes are clear too, so no more will need to be removed.

If the results show there are cancer cells in the sentinel node, depending on how much is found you may be recommended to have some additional scans and further treatment, to either surgically remove some or all of the remaining lymph nodes, or to have additional radiotherapy to your axilla. This information will also guide further decisions regarding whether chemotherapy treatment may be of benefit to you.

What happens during a Sentinel Lymph Node Biopsy?

In order to identify the sentinel node a small injection of a radioactive fluid is given close to the nipple before your operation. A scan may be performed before surgery to see if the injected fluid has shown up a sentinel node. This is done in the Nuclear Medicine department at the RD&E either on the day of surgery or the day before. The radioactivity is very low-dose, and it is safe to be around other people after the injection.

In addition to this, during your operation a blue dye will be injected into your breast to help stain the sentinel lymph node blue. The radioactivity and the blue dye together (dual tracer technique) gives the most accurate assessment of the lymph nodes.

As the dye leaves your body, you may notice your urine is a bluish-green colour for one or two days, your stools may also be discoloured. The skin around the injection site in your breast

may also be stained a blue colour. Your body will gradually reabsorb this blue stain but it can take a few weeks or months. It cannot be removed by washing the skin.

If you wear contact lenses you may notice that they will have a blue tinge to them so it is recommended that you don't wear them during your hospital admission.

Very rarely an allergic reaction to the dye may occur (in less than 1% of women) but this can be treated while you are under the general anaesthetic.

What to expect after a Sentinel Lymph Node Biopsy

Please also refer to the information in the leaflet 'Advice when you are at home'.

Wound care

You will have a waterproof dressing over your wound. You may also have some suture strips along the incision site. Your sutures will dissolve and do not need to be removed. You may shower or bathe (but do not lie down and soak in the bath). The dressings can be removed 10-14 days at your results appointment.

Moving your arm

For the first 10-14 days we recommend that you do not overuse the arm on the side you have had surgery to. Avoid heavy and repetitive use of this arm.

Following your operation you will need to perform a range of arm exercises and we will give you an exercise leaflet outlining these in more detail and tell you when to start. It is very important that you follow this advice and practice the exercises at frequent intervals.

The purpose of arm exercises is to avoid any arm or shoulder stiffness developing. It is tempting to over-protect your arm and shoulder but this is something that you should avoid. The exercises are to help you regain the full range of arm movements that you had before your operation. Doing your exercises little and often is the best advice.

Do not be alarmed if you ache or feel a pulling sensation during or after exercises. It is very unlikely that exercising will do any damage.

When you return to see your surgeon and breast care nurse around 10-14 days post-operatively they will assess your arm movement and can advise you further to aid your recovery. We would expect your arm movement to regain its pre-operative range of movement. If in the longer term your arm movement is not regaining its normal use we can also access specific physiotherapy advice.

You may return to driving as soon as you feel confident that you can use your arm to perform an emergency stop and swerve to avoid an accident. This is usually around 10-14 days. We advise that you do not drive until you have returned to see the surgeon in the follow-up clinic where you will have your dressings removed and arm movement checked. Having someone with you the first time you drive may help if you find it difficult or are feeling less confident since your operation.

You can return to normal activities after the first two weeks, gradually increasing the amount you do over the coming weeks and months.

Risk of lymphoedema

Lymphoedema is swelling of the arm, hand or breast area caused by a build-up of lymph fluid. Some swelling to your breast and axilla following surgery is to be expected and is part of the normal healing process but lymphoedema can develop in the weeks, months or even years following lymph node surgery.

This can occur as a result of damage to the lymphatic system following surgery. Although this type of swelling can be controlled it may never completely go away.

The risk of this occurring is very low following sentinel lymph node biopsy and your surgeon and breast care nurse can discuss with you your individual risk and talk you through strategies to reduce this further. Essentially you should avoid overloading the use of your affected arm in the first 2 weeks post-operatively. Take care not to overuse this arm initially; in particular, avoid heavy lifting/carrying/repetitive tasks. Once you

have been seen by your surgeon and breast care nurse and assessed you can slowly return to your normal, pre-operative level of activities.

Longer term it is advisable to avoid having vaccinations/injections/blood pressure readings taken from this arm. Take care to use appropriate sun screen on this arm. If you have lymph node surgery to both arms discuss risk reducing measures to take with your breast care nurse. Maintaining a healthy body weight reduces the strain on your body in general and specifically the strain on your lymphatic system. Regular care of your skin to the affected arm with regular moisturising can be helpful and continuing with regular exercises can also be beneficial.

See also the "Reducing the risk of Lymphoedema" booklet for short and long-term advice.

Pain

You may find that you are relatively pain free immediately after the operation and then begin to experience more discomfort as time goes on. You may experience pain and discomfort, particularly in your armpit and running down your arm. This is a normal part of healing and will improve. It is not unusual to experience nerve type pain which can feel like a burning sensation and can affect your arm and hand on the operated side. This will also improve with time, although you may need a more specific type of pain killer to manage the discomfort it can cause.

There are different types of pain relief available. For most people simple pain relief tablets such as paracetamol and ibuprofen are sufficient. If you feel your pain is not well controlled contact your GP or hospital team. One of the main benefits of taking regular analgesia, even if you do not experience very much pain, is that they enable you to maintain good arm movement which is particularly important if you have had lymph glands removed.

Numbness

It is normal for women who have undergone lymph node surgery to temporarily experience a feeling of numbness and/or pins and needles in the arm and armpit area. In most patients normal sensation will return, but this can take some months.

The risks of a general anaesthetic

General anaesthetics have some risks, which may be increased if you have chronic medical conditions, but in general they are as follows:

- **Common temporary side effects (risk of 1 in 10 to 1 in 100)** include bruising or pain in the area of injections, blurred vision and sickness. These can usually be treated and pass off quickly.
- **Infrequent complications (risk of 1 in 100 to 1 in 10,000)** include temporary breathing difficulties, muscle pains, headaches, damage to teeth, lip or tongue, sore throat and temporary problems speaking.
- **Extremely rare and serious complications (risk of less than 1 in 10,000).** These include severe allergic reactions and death, brain damage, kidney and liver failure, lung damage, permanent nerve or blood vessel damage, eye injury and damage to the voice-box. These are very rare and may depend on whether you have other serious medical conditions.

The Trust cannot accept any responsibility for the accuracy of the information given if the leaflet is not used by RD&E staff undertaking procedures at the RD&E hospitals.

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