Sentinel lymph node biopsy (using Magtrace)

Your operation explained

Introduction

This booklet is designed to give you information about having a sentinel lymph 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 help you to understand more about what is discussed. This operation may be performed at the same time as a breast operation, or occasionally on its own - called a standalone sentinel lymph node biopsy. This may be offered to you if your treatment plan involves some types of breast reconstruction operations.

What is the sentinel node?

The armpit (also called axilla) contains around 10–15 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 become enlarged if this happens. The sentinel node is the first lymph node in your armpit to which breast cancer cells can spread. Typically, between one and four lymph nodes are removed during the surgery for examination under the microscope. Knowing if the lymph nodes contain cancer helps to determine other treatments you may need.

What are the alternatives to this operation?

The main alternative is to have most of the nodes removed from your armpit in an operation known as an 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. If you have any questions or concerns, then please discuss them with the medical team treating you.

How is a sentinel lymph node biopsy performed?

Magtrace is a non-radioactive dark brown liquid containing iron oxide. Up to 2 millilitres is injected into the affected breast in clinic 1-2 weeks before surgery, occasionally it is injected on the day of surgery.

This injection is generally well tolerated but some patients have a stinging sensation during the injection which can last for a few minutes. You can drive yourself home after the injection and there are no limitations on what you can do.

As the injection also acts as a dye, you may notice some brown discolouration of the skin around the injection site. This fades in time and usually disappears within months, but occasionally it can last longer.

The Magtrace is a magnetic liquid tracer. It will travel through the lymphatics in the breast to the lymph nodes under your armpit. The particles then collect in the first few lymph nodes in the armpit – the sentinel lymph nodes.

The Magtrace is both a magnetic marker and a dye. During surgery, a magnetic sensing probe detects the Magtrace and directs the surgeon towards the nodes to be removed. The nodes are also dyed which helps identify them during surgery.

Usually between one and four lymph nodes are removed at the time of surgery. Please note, the Magtrace is just used to locate the nodes which need removing. It does not tell us if there is cancer in the nodes. This is done by a pathologist after the operation. The results will take a few weeks to come back.

What happens if we cannot find the sentinel node?

Occasionally (around 5% of cases) it is not possible to find the sentinel node. If this happens then a sample of up to four lymph nodes are removed to ensure that the sentinel node has been removed. Your surgeon will discuss this possibility with you prior to your planned surgery.

What are the risks of the Magtrace injection?

- Brown skin staining (at the injection site in the breast) – this will fade over time.
- Magtrace injection can potentially make future scans of the breast difficult to interpret, especially MRI scans. Few patients will require follow up with MRI scans.
- Magtrace should not be used for patients with allergies to iron oxide or dextran compounds, iron overload diseases or a metal implant in the chest or armpit. This will be discussed in more detail with you by your medical team if you have a pacemaker.

What are the risks of this operation?

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

- bleeding from the wound
- infection – If your wound becomes inflamed, red, hot, sore or oozes, you should contact your GP or the breast care nurses for advice.
- numbness/altered sensation – Typically you may notice a patch of skin on the back or underside of the arm becomes slightly numb. This should improve over time.
- lymphoedema – a long term (chronic) condition that causes swelling of the body’s tissues.
- discomfort and stiffness of the armpit/shoulder – you will be given shoulder exercises to start the day after surgery to help with this.
- blood clots - You will be fitted with support stockings on the day of surgery and these should be worn for two weeks. These are to minimise the risk of deep vein thrombosis (DVT). An anticoagulation injection may be prescribed daily for you to further reduce the chances of DVT for one week.

What happens after the operation?

The tissue removed during your operation will be taken to a laboratory and examined carefully under a microscope to see if the sentinel node/s contains cancer cells. The results usually take a few weeks to be available, and an appointment will be made for you to come back to the hospital to discuss them.

If cancer cells are found in the sentinel node, it is possible that the cancer has spread to other lymph nodes in your armpit.

This may mean you need a second operation to remove the rest of the lymph nodes in your axilla. For some people, radiotherapy may be given to the 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 likely 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. Stitches are usually dissolvable and wounds will be covered by a waterproof dressing for one week. Bathing and showering are possible during this time, but do not fully submerge the areas under water. 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.

Glossary of medical terms used in this information

Anticoagulant: any substance that prevents blood clotting.

General anaesthetic: Medicines that are used to send you to sleep, so you are unaware of the surgery and do not move or feel pain whilst it is carried out.

Lymph nodes: Bean shaped glands that occur throughout the body. They filter lymph or tissue fluid and are important in defence against infection.

Lymphoedema: Swelling caused by a blockage in the lymphatic system, which carries lymph fluid around the body. This can be caused by surgery or radiotherapy and can affect the arm following breast surgery.

Radiotherapy: X–ray treatment that uses high energy rays to damage or kill cancer cells.

Seroma: A fluid swelling that commonly occurs after surgery to the armpit of breast.

Thrombosis: a blood clot within a vein.

Local sources of further information:

Breast Care Nursing Team:
Solihull Hospital team: **0121 424 5306**
Queen Elizabeth Hospital team: **0121 371 4499** or **07771 940 368**

Further information is available from the **Patrick Room in the Cancer Centre Outpatients, Queen Elizabeth Hospital**. The telephone number is 0121 371 3537 or you can drop in for advice.

Cancer support workers are also available for advice in the oncology departments on all sites.

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