Queen Elizabeth Hospital Birmingham
Part of University Hospitals Birmingham
NHS Foundation Trust

Sentinel lymph node biopsy for melanoma

Delivering the **best** in care

UHB is a no smoking Trust

To see all of our current patient information leaflets please visit
www.uhb.nhs.uk/patient-information-leaflets.htm

Introduction

This leaflet aims to explain further what happens during a sentinel node biopsy. It should be read following discussion with your doctor.

A sentinel lymph node biopsy is a surgical technique used to find out if your cancer has spread from it's original site. This is sometimes also called staging.

Cancer can spread to the lymph nodes. These are small, round fleshy structures which usually lie in groups in the neck, axilla (armpit), groin, abdomen and chest. These nodes receive lymph, a clear or whitish fluid, from every part of the body through a network of fine tubes called lymph vessels. Our lymphatic system helps to transport substances around the body and is part of our natural defence against infection.

The first lymph node that receives the lymph from a particular area of body is called the sentinel node. Any cancer cell that becomes loose may move through the lymph vessels to the sentinel node where it gets trapped and may start growing. This is often the earliest spread (or metastasis) of the cancer from its original (primary) site. As the cancer grows in the lymph node, it becomes larger and the node can then be felt by the doctor or the patient. In the early stage, when there are relatively fewer cancer cells, the lymph nodes cannot be felt through the skin making it impossible to tell whether the cancer has spread or not.

If we can find the sentinel node that drains the primary cancer area, remove it by surgery and examine it under microscope, any early spread can be identified or ruled out. This is a sentinel lymph node biopsy.

The surgery to remove the sentinel node is carried out, under general anaesthetic, at the same time as the routine surgical treatment of your melanoma.

What is the benefit of doing a sentinel node biopsy in melanoma?

Removing the sentinel node is a reliable method for finding out if the melanoma has spread to the lymph nodes when melanoma is first detected.

If the biopsy does not show any cancer in the sentinel node (called a negative result), it usually means that the cancer has not spread from its primary site and the chance of it coming back is very low. This knowledge often gives people a sense of relief and reassurance.

If the sentinel node shows any presence of cancer (called a positive result), it means the cancer has spread and the chance of it coming back is higher. It may have spread to other nearby lymph nodes, therefore all the lymph nodes in that group can be removed by further surgery.

This further surgery will be discussed with you if you have a positive sentinel lymph node biopsy.

The sentinel lymph node biopsy is a recent test and, as yet, there is no documented evidence that performing it offers a definite survival benefit. A number of large clinical trials are in progress and within next few years this will become clearer. Until then, the sentinel node biopsy should be regarded purely as a diagnostic test, providing knowledge about the spread of the cancer.

What are the other implications of a melanoma diagnosis and a sentinel lymph node biopsy?

There are situations where you will be asked about your cancer diagnosis. Typically this is when taking out or renewing life assurance, a mortgage or travel insurance. Having a positive sentinel lymph node biopsy will change the stage of your cancer diagnosis from a Stage 1 or 2, to Stage 3 and it is important for

you to be aware that this may have an impact on you obtaining finance or insurance and potentially the cost of these.

Clinical trials of new treatments often require that you have had a sentinel node biopsy in order to be eligible to enrol on the trial. This may be an important consideration for you now or for any future trials. Your doctor and clinical nurse specialist (CNS) will be able to tell you if there are currently any trials open that you would be eligible for.

How is the sentinel node biopsy done?

There are three steps in a sentinel node biopsy:

Step 1

To find out where the sentinel node is located, a small amount of radioactive tracer is injected near the primary site of the cancer.

You are then positioned under a scanner. The tracer moves from this primary site through the lymph vessels to the lymph nodes.

This is seen on the scanner and recorded. The first node/nodes to take up the tracer are the sentinel node/s. The approximate position of the nodes is marked on the skin surface. Please do not remove these marks.

This test is done in the Nuclear Medicine department of the hospital on either the day of surgery or the day before and can take a couple of hours to complete. The radiation dose from the procedure is very low (similar to a spine X-ray).

Step 2

The surgery to remove the sentinel node is done in the operating room under general anaesthesia. When you are asleep, a blue dye is injected in the area of the primary cancer.

This dye travels through the lymph vessels and is taken up by the sentinel node/s turning them blue. The blue colour of the

node helps to locate them. The sentinel lymph node/s is located through a small cut in the skin at the area marked during the scan in Step 1. These lymph nodes are then removed and sent for microscopic examination. The wider removal of the primary cancer is also done at the same time.

Step 3

The removed node/s is thoroughly examined under a microscope in the laboratory. If any cancer is found in the node/s, its size and site are noted and reported to your consultant. This process usually takes 2 to 4 weeks.

Are there any side effects/disadvantages of this procedure?

- Yes. As it involves surgery there is a small risk of bleeding, collection of fluid in the wound and wound infection
- There will be a scar from surgery which can become itchy and lumpy in a few patients
- Some patients will develop a seroma: a small collection of fluid at the operation site. This can take many weeks or sometimes months to resolve
- A small number of patients may have an allergic reaction to the dyes used
- There is a small risk (1 in 100) of developing lymphoedema or swelling due to poor drainage of fluid in the leg or arm
- The urine may be coloured blue or green after surgery due to the dye used. This is harmless and clears up within a day
- The surgery is done under general anaesthesia and although it is very safe, complications may happen. You will need a preoperative assessment and may also need a discussion with an anaesthetist if you have any other medical conditions

Who decides whether I should have a sentinel node biopsy?

The decision is yours. The Consultant looking after you will decide whether this test is appropriate for the type of cancer you have. If it is, then they will discuss the procedure and its side effects with you in detail. As this is mainly a diagnostic test with no proven survival benefit, you have to make an informed decision whether you would like to have this done. Take your time to get as much information as you need from your doctor and the clinical nurse specialists.

Before the surgery

If you decide to go ahead with the sentinel node biopsy, you will be given a date to come into hospital for the operation. You will be told when to attend the Nuclear Medicine department and you will also be asked to attend for a pre-operative assessment appointment.

At the pre-operative assessment clinic details will be taken about your current health and past medical history. You may have blood tests and/or an ECG (heart tracing). This ensures that we have all the information needed ready for your admission.

The Nuclear Medicine appointment may be the day before surgery or on the day of your operation.

If you do not receive details of any of these appointments or you are unsure about them, please telephone your CNS or your consultant's secretary.

Before your surgery, the surgeon will see you and discuss about the surgery again in detail. Please do not hesitate to discuss any concerns you have. You may also be seen by the anaesthetist.

After the surgery

Following the surgery, there is usually some slight discomfort and pain in the operated area which can easily be controlled with mild painkillers.

Many patients are discharged home the same day but some may require an overnight, or longer, stay. If you have significant pain or bleeding in the operated area when you are at home, please contact the ward or the Plastic Surgery doctor on call at the hospital.

You will usually be seen in the dressing clinic either at the hospital or at your GP surgery about a week after your surgery Once the results are available, we will send you an outpatient appointment to discuss the findings with the surgeon. If no cancer was found in the sentinel node, then you will not need any further treatment at this stage. However, there is still a small risk of cancer coming back and we will give you a follow-up appointment at the hospital and advice about how to check yourself in future for any sign of the cancer returning. If there is cancer present in the sentinel node, the surgeon will discuss with you whether all the remaining lymph nodes in that area should be removed in a further, more involved, operation.

Where can I get further information?

1. From the consultant plastic surgeon or dermatologist looking after you
2. From the clinical nurse specialists on 0121 371 5111
3. From the following internet sites:
   a. http://www.cancerresearchuk.org
   b. http://www.macmillan.org.uk

The Trust provides free monthly health talks on a variety of medical conditions and treatments. For more information visit www.uhb.nhs.uk/health-talks.htm or call 0121 371 4957.

Department of Plastic Surgery

Queen Elizabeth Hospital Birmingham
Mindelsohn Way, Edgbaston, Birmingham B15 2GW

Telephone 0121 627 2000

PI14_1262_02 UHB/PI/1262 (Edition 2) Author: Helen Williams
Date: February 2015 Review date: February 2017