



Welsh Centre for Burns and Plastic Surgery

## Sentinel lymph node biopsy for melanoma

### 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 whether your cancer has spread from its original site.

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

The first node that receives lymph from any particular area of the body is called the sentinel node. Any cancer cell that becomes loose may move through the lymph vessels to the sentinel node where it becomes 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 stages, when there are fewer cancer cells, the lymph nodes cannot be felt through the skin making it impossible to tell whether the cancer has spread or not.

Sentinel node biopsy is a surgical procedure which allows us to identify (in the majority of cases) the first draining lymph node of a cancer, remove it and then examine it under the microscope to see whether there has been early spread of the cancer cells. The procedure is carried out under general anaesthetic at the same time as the wider excision of your melanoma scar.

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

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

If the biopsy does not show any cancer in the sentinel lymph node (called a negative result), it usually means that the cancer has not spread from its original 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 that the cancer has spread and the chance of it coming back is higher. If you have a positive result you are eligible to access new drug treatments have been licensed recently which offer survival benefits for those with a positive sentinel node. If you have a positive sentinel node you will be referred to the oncology team to determine which type of post-operative chemo/immunotherapy is the best option for you.

### **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 from a diagnosis of stage 1 or 2, to stage 3. It is important for you to be aware that this may have a potential 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 enroll 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 whether there are currently any trials open that you would be eligible for.

### **How is sentinel node biopsy carried out?**

There are 3 steps to 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 the 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 nodes. The approximate position of these nodes is marked on the skin surface. Please do not remove these marks.

This test is carried out in the Nuclear Medicine department in Singleton Hospital, Swansea and will take place on either the day before or the morning of your surgery. The dose of radiation from this test is similar to a chest x-ray.

**Step 2:**

The surgery to remove the sentinel node is carried out in the operating theatre under general anaesthetic, spinal anaesthesia or regional block. At the time of surgery blue dye is injected into the site of the primary cancer.

This dye then travels through the lymphatic vessels and is taken up by the sentinel node/nodes. The blue colour of the node helps to locate them. The sentinel node/s are located through a small cut in the skin at the area which was marked during the scan in step 1. These lymph nodes are then removed and sent for microscopic examination. Wider excision of the primary cancer is carried out at the same time.

**Step 3:**

The removed node/s are 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 consultants. This process usually takes 2-4 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 or lumpy in a few patients.

Some patients will develop a seroma: a small collection of fluid at the operation site. This can take weeks or sometimes months to settle.

A small number of patients may have an allergic reaction to the dye used.

There is a small risk (around 5%) 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. This is harmless and clears up within a day.

You will need a pre-operative assessment and may also need a discussion with the anaesthetist at the pre-operative assessment if you have 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 the 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. You will have to make an informed decision about 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 about this.

Your Dermatologist will often be the person discussing this with you in the first instance but if you decide to go ahead with surgery, you will be sent an appointment to see one of the Plastic Surgeons with a special interest in skin cancer, in the Welsh Centre for Burns & Plastic Surgery in Morriston Hospital in Swansea, as they will be the team carrying out the procedure for you. The operation will take place in one of the Swansea Bay hospitals, usually as a day case.

### **Before the surgery**

If you decide to go ahead with the surgery, following discussion with both your dermatologist and plastic surgeon, you will be given a date to come into hospital for the operation. You will receive an appointment to attend the nuclear Medicine department in Singleton Hospital in Swansea. You will also receive an appointment to see the pre-assessment team in Morriston Hospital in Swansea either in person or via a telephone consultation.

During the pre-operative assessment, clinical details will be taken from you about your current state of health, underlying medical conditions and current medications. You may need to have blood tests and/or an ECG (heart tracing). This ensures we have all the information that we need ready for your admission.

If you do not receive details of these appointments or you are in any way unsure about this please telephone your CNS or the consultant's secretary.

On the day of surgery the surgeon will see you again and answer any further questions for you. You will also see the anaesthetist.

### **Following surgery**

Following surgery you may experience a slight discomfort at the site of the operation, this should be easily controlled with simple pain killers.

Most patients are discharged home the same day but some people may require an overnight stay. If you have significant pain or bleeding at the site of the operation following discharge home please contact the ward on the telephone number at the end of this sheet.

Following surgery you will usually be asked to have light showers from day 1 post op and to remove your outer dressings at 10 – 14 days. The paper steristrips will then lift with showers, once they have lifted you should moisturize your scars. Sometimes we will ask you to return to a dressing clinic appointment but this is arranged on a case by case basis. Once the test results are available your consultant will either telephone or write to you with your results.

If you have a negative sentinel node (no cancer is found) then you will not need any further surgery at this stage. You will, however, need ongoing regular follow up for your melanoma. It is likely that this follow up will be arranged as near to home as possible for you, most likely this will be with the dermatology team whom you saw at the time of original diagnosis, once you have had a post-operative clinic check up.

If you have a positive sentinel node (cancer is seen within the node) the surgeon will arrange a staging CT scan (in the hospital closest to your home) and refer you to the oncology team in your home area to discuss further treatment options.

Any further questions?

Please Contact:

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