NHS
Queen Victoria Hospital
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Having a sentinel lymph node biopsy and wide local excision for malignant melanoma

If you have recently been diagnosed with melanoma, you will most likely require further treatment called Wide Local Excision (WLE). In addition to this you may be eligible and benefit from an addition procedure called Sentinel Lymph Node Biopsy (SLNB). This leaflet explains what each surgical procedure involves and the benefits and risks of having them. If you have any further questions or concerns please feel free to speak to a member of the skin cancer team who would be happy to help.

What is a sentinel lymph node biopsy?

A sentinel lymph node biopsy is a surgical technique used to find out if melanoma cells have spread from the original site into your lymph glands. The cancer cells in these lymph glands can be so small that they cannot be felt or seen on a scan. A sentinel lymph node biopsy involves removing one or two of the lymph nodes which are then examined under a microscope. It is the most accurate way of detecting any spread of the melanoma cells.

What is the lymphatic system?

Lymph glands (or nodes) are fleshy structures that 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. Lymph is rich in the white cells which help us fight infections.
Each area of skin will drain lymph fluid into certain nodes, usually the group of nodes which is closest. The first node the fluid drains into is called the sentinel node. Sentinel nodes act like police officers within the lymphatic system, checking what is passing through the body. Any melanoma cells that become loose from the original site often travel in lymph channels and pass to the sentinel lymph node where they become trapped. As the melanoma cells grow and multiply in the lymph node, they can become larger and the node can be felt. However, in the early stages, there are very few melanoma cells present in the node and they cannot be felt through the skin which

is why we need to biopsy the sentinel lymph node and examine it under a microscope to see if the melanoma has spread.

What does a sentinel lymph node biopsy involve?

It involves a surgical procedure usually under a general anaesthetic (with you asleep) to remove one or more of the lymph nodes which are closest to the area where the melanoma has been found. For example, if the original melanoma is on the right calf of your leg, the sentinel lymph node is likely to be in your right groin. On the other hand, if the melanoma was on your right arm, the sentinel lymph node is likely to be in your right armpit. In areas like the trunk or head and neck there may be more than one group of lymph nodes involved.

Who does the sentinel lymph node biopsy?

A specially trained plastic surgeon will do it. The plastic surgeons at Queen Victoria Hospital are part of the melanoma multidisciplinary team (MDT).

The MDT is a team of health professionals, specialising in different areas of patient care, consisting of dermatologists, surgeons, pathologists, radiologists, a doctor specialising in cancer treatment and specialist nurses.

Your individual situation will be discussed by the team before your clinic appointment. Your consultant or clinical nurse specialist are available to talk to you about what is involved and answer any questions you may have before you decide whether to go ahead with any treatment.

Involving you in your care

We want to involve you in all the decisions about your care and

treatment. If you decide to go ahead, you will be asked to sign a consent form. This confirms that you agree to have a sentinel lymph node biopsy and you understand what this involves.

What happens before the sentinel lymph node biopsy?

You will be asked to come to the Nuclear Medicine department at either KIMS hospital in Maidstone or the Royal Sussex County Hospital in Brighton the day before your SLNB for a scan called lymphoscintigraphy. The aim of the scan is to identify the closest lymph node(s) which will be removed the next day. Approximately an hour before your appointment you will be given a local anaesthetic cream to apply to the area of the skin where you will be injected. This is to make the injection less painful.

You will be asked to lie down and small injections containing a substance called a 'tracer' will be injected around the original melanoma site. It is called a tracer because it is slightly radioactive and can be picked up or 'traced' using a special scanner called a gamma probe.

Although the word radioactive may sound alarming, it is completely safe, although it is recommended that you avoid close contact with pregnant ladies and babies for 24 hours after having the scan.

The tracer drains into your lymphatic channels and then to your lymph nodes. Whichever lymph node(s) the tracer drains into first is the sentinel lymph node(s). A type of x-ray picture is taken and the skin over the sentinel node is marked to help the plastic surgeon find the sentinel lymph node(s) easily and make his incision (cut) in the right place when you have your biopsy.

This scan normally takes about 90 minutes and you can drive yourself home afterwards.

What happens during the sentinel lymph node biopsy?

The day after your scan, you will have the SLNB procedure performed at Queen Victoria Hospital in East Grinstead. The biopsy is performed under general anaesthetic. This is a medicine that makes you unconscious (asleep) so you do not feel any pain. There can be risks involved with having a general anaesthetic. An anaesthetist will see you before the biopsy to make sure you are fit enough for a general anaesthetic.

Please do not **eat anything for six hours** or **drink anything for four hours** before your procedure.

If you have food or drink in your stomach when you have the anaesthetic, there is a higher risk of you being sick while unconscious.

During the operation you will have another injection around the original area of the melanoma, but this time with a blue dye. The blue dye travels along your lymphatic channels to the sentinel lymph node(s). The blue dye helps the plastic surgeon to see the sentinel lymph nodes and make sure the correct nodes are removed.

Sometimes (very rarely) we are unable to identify the sentinel lymph node during the procedure or it may not be possible to adequately analyse the node which has been removed.

After the lymph node(s) has been removed your surgeon will remove more tissue from around the area the melanoma was found. This is called a wide local excision.

What is a wide local excision?

At this stage, the original melanoma will have already been removed and there might be a small scar from the original skin biopsy.

It is important that the tissue around the original area of melanoma is also removed; this is called a wide local excision. Wide local excisions are important as they remove any stray cancer cells which may have been left behind. This lowers the risk of a melanoma returning in the future. Your doctor will discuss with you how much skin needs to be removed, as the recommended margin depends on the thickness of the original melanoma and how much tissue has already been removed.

Wide local excisions are normally done at the same time as the sentinel lymph node biopsy. Your plastic surgeon will explain how the wound will be repaired after having the wide local excision. Sometimes this involves moving some skin next to the wound to cover it (a skin flap), or taking skin from another area of your body, such as your thigh, to cover the wound. This is known as a skin graft.

What are the advantages of a sentinel lymph node biopsy?

Sentinel lymph node biopsy is not a treatment but it does give more information about the stage of your disease. It provides you and your doctor with the most accurate information about the risks of your melanoma returning and what the future may hold for you.

Are there any risks with sentinel lymph node biopsy and wider excision?

- Infection. As with all operations, there can be a risk of infection. The plastic surgeon and your medical team will do everything they can to reduce this risk. You may notice after surgery your wound becomes red, tender and swollen – this is not unusual and should

improve. If you notice signs of infection, such as inflammation, or your wound becomes very red and hot, or you have a raised temperature, please contact your doctor. You may need antibiotics to treat an infection.

- Seroma. Sometimes a pocket of fluid will collect in the area which has been operated on – this is called a seroma. It happens because your drainage system has been interrupted. Signs of a seroma can be swelling, a feeling of fluid moving in the area and discomfort. This usually settles down by itself after a couple of weeks. In some severe cases you may need to come back to the hospital to have it drained with a needle.
- Stiffness or limited movement in the affected arm or leg afterwards is common and will improve the wound heals. Your medical team will tell you how and when to move the limb.
- Scars. Treatment for melanoma requires different surgical methods such as incisions, excisions (cutting out), skin flaps and skin grafts, so it is quite common to have scarring left on your skin. Your plastic surgeon and nursing team will advise you about skin care before you go home.
- Numbness or tingling around the wound. This should return to normal as your body heals. If you become worried, please contact your medical team.
- Blue/green urine, this is normal. As the radioactive tracer and dye are flushed from your body, you may notice the blue/green dye when you pass urine. This will last for 24 to 48 hours before returning to normal.
- Allergy. There is a small risk of an allergic reaction to the blue dye. Your surgeon will look for signs of allergy while you are unconscious. If you do have a reaction, you will be given medication to reverse the effects of the dye and be closely monitored.
- Lymphoedema. Rarely, the affected arm or leg can become swollen. This is called lymphoedema and is diagnosed by a doctor or specialist nurse. It may be temporary or in some cases, permanent. There are lymphoedema specialist nurses available who will be able to help you manage and improve symptoms of lymphoedema and your medical team will refer you to the lymphoedema specialist

nurse, if needed.

- Lymphatic cording or axillary web syndrome (AWS) occasionally develops and refers to a ropelike structure appearing under the armpit, but can extend further down the arm to the elbow area. It is usually resolved with massage to the area.
- If you are worried about any of these risks, please do not hesitate to talk to a doctor or nurse involved in your care.

What happens if I decide not to have a sentinel lymph node biopsy?

Sentinel lymph node biopsy is not a treatment for melanoma and is done to gain more information. It is your choice whether or not you wish to go ahead with having a SLNB. If you would prefer not to have this done, you will still be offered the wide local excision which is the standard recommended treatment for melanoma. Whether or not you choose to have SLNB, you will still be offered regular follow-up appointments, so you can be monitored by the melanoma team. The doctors and skin cancer nurse specialists will be happy to answer any questions you may have to help you make the right choice for you.

What happens after the procedure?

Most people go home the same day after the surgery, however, some may stay one night. The anaesthetic may make you clumsy, slow and forgetful for about 24 hours. Although you may feel fine, your thought processes, reflexes, judgment and coordination can be affected for 48 hours after the biopsy.

The affected area(s) is likely to have stitches and be covered by a dressing. You will be advised how to care for your wound.
Before you leave the hospital the staff will either arrange an outpatient appointment for you to attend the plastics dressing clinic, or may suggest you visit your GP practice nurse for wound care management. You will have an outpatient appointment with your specialist team

at QVH within four to six weeks of leaving hospital. This is to discuss results from the surgery as well as to plan follow-up care and, if needed, any further treatment.

What happens to the sentinel lymph nodes when they have been removed?

The sentinel lymph nodes(s) are sent to our laboratory to be examined under a microscope. The results take between 10 to 14 days. They will be discussed with you during your next clinic appointment.
Your team of doctors or specialist nurse will be happy to discuss this with you in more detail.

What happens if the sentinel node contains melanoma cells?

If the sentinel node(s) contain melanoma cells your doctor will discuss your treatment options with you. This will help you to make an informed decision about what treatment to have. This could involve an operation called a 'lymph node dissection' or 'lymph node clearance', where the remaining lymph nodes are removed from the affected area and examined in our lab. The results and any further treatments would then be discussed with you. Alternatively, you may be offered the opportunity to be referred to an oncologist to consider further treatment such as immunotherapy, or to participate in a clinical trial.

Whichever treatment you have, your progress will be monitored with regular appointments at the QVH and/or your referring dermatology team as well as being discussed at the multidisciplinary team meetings.

What happens if the sentinel lymph node biopsy is negative?

If the sentinel lymph node(s) does not contain any melanoma cells, you will not need any further surgery. You will still need regular hospital appointments so we can closely monitor you.

Frequently asked questions post-surgery

When can I drive? - not for the first two weeks. After two weeks, if you can safely do an emergency stop (try this on the drive) and twist your neck round to look over your shoulder, you should be able to start with small journeys. You will need to check with your insurance company to ensure cover is valid at this stage of your recovery.

What exercise can I do? - Exercises provide by the physio team/leaflet can commence immediately. Gentle mobilising such as pottering around the house and garden, is advised for the first two weeks with no heavy lifting, pushing or pulling. After two weeks you can start to walk further but must listen to your body – allowing for rest periods. Aerobic exercise can commence from week 4 providing you feel comfortable. It is important not to over stretch your healing body.

When can I go back to work? – the type of operation and the kind of work you do will both affect how soon you can return to work. Your GP/Consultant will be able to advise you. Generally, an office-based role could recommence after two weeks if all areas have healed. A job involving heavy lifting should be avoided until 4-6 weeks post op.

When can I go swimming? Once the wounds have fully healed but ideally not before week 4.

Summary of Pros and Cons of sentinel lymph node biopsy

Possible advantages of sentinel lymph node biopsy	**Possible disadvantages of sentinel lymph node biopsy**
The operation helps to find out whether the cancer has spread to the lymph nodes. It is better than ultrasound scans at finding very small cancers in the lymph nodes.	The purpose of the operation is not to cure the cancer. There is no good evidence that people who have the operation live longer than people who do not have it.
If the SLNB result is negative, this will provide reassurance that there is no evidence that the melanoma has spread. If the SLNB result is positive, referral to an oncologist will be possible to discuss whether any further treatment is needed.	
People who have had the operation may be able to take part in clinical trials of new treatments for melanoma. These trials often cannot accept people who haven't had this operation.	A general anaesthetic is needed for the operation.
	The operation results in complications in between 4 and 10 out of every 100 people who have it.

Please ask if you would like this leaflet in larger print or an alternative format.

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