

## **Sentinel Lymph Node Biopsy Procedure**

Your Doctor has recommended that you have a sentinel lymph node biopsy as part of your treatment. The sentinel lymph node biopsy procedure involves three steps:

1. A scan, called a lymphoscintigram.
2. A map of the body's lymph drainage system using blue dye.
3. A biopsy of lymph node/s identified.

### **1. Lymphoscintigram:**

This is a nuclear medicine scan which is also referred to as a 'lymphatic drainage scan' (or a mapping test). The scan is usually done the day before your operation; you may eat and drink as normal for this test. Occasionally the scan will be completed on the same day as your operation, and you will be informed by the waiting list office, if this is the case eating and drinking may be restricted.

### **Why is this test needed?**

The purpose of the test is to accurately identify the location of the lymph node/s that drain the area of skin around the site of your original melanoma. These lymph nodes may be at risk of containing melanoma (also known as metastatic disease).

### **How is it done?**

A tiny dose of radioactive dye is injected into the skin around the site of the original melanoma. The radioactive dye moves through the skin's lymphatic channels, and scans are performed to determine the lymph node/s to which the skin around your original melanoma drains to. The scans are done immediately after the injection of radioactive dye and again around 1-2 hours later. The scan pictures look a little like a road map and guide the Surgeon to the location of the lymph node/s to be removed.

The first lymph node/s to drain the piece of skin around your original melanoma is called the "Sentinel Node/s" this is the lymph node/s that will be removed. Occasionally interval lymph nodes (lymph nodes along the path between the melanoma and the sentinel lymph node/s) are highlighted on the scan and these will be removed too. The radiologist who completes your scan will mark your skin with a small tattoo dot in the location of the lymph node/s highlighted by the scan. These are tiny, but permanent tattoo dots and will not rub off. By using the scan pictures, the blue tattoo dot and a radiosensitive probe (which identifies the tiny amount of radioactivity remaining from the lymphoscintigram), in theatres the Doctor will be able to locate the lymph node/s that need to be removed.

The sentinel lymph node biopsy procedure cannot be done after you have had a wide local excision (the removal of additional skin and tissue around the site of the original melanoma), because the surgery will disrupt the natural lymph drainage pathways from the melanoma site. The lymphoscintigram will not be able to accurately identify a sentinel lymph node/s.

Although the dye is radioactive, there is no significant risk to you from its use as the dose is very small and it loses its radioactivity very quickly.

Unfortunately the scan cannot tell us if there are melanoma cells present. We need to remove the highlighted lymph node/s and look at it/them under a microscope. The results of the removed lymph node/s take between 10-14 days.

### **Are there any side effects?**

You may experience slight discomfort or pain at the injection site during and shortly after the injection for the scan. The injections may sting as much as the local anaesthetic you had when the melanoma was removed. You may also experience some redness at the injection site for an hour or two afterwards.

### **2. A map of the body's lymph drainage system using blue dye:**

This procedure is performed in the operating theatre, once you are asleep under a general anaesthetic. A blue dye called Patent Blue V is injected into the skin around the site of the original melanoma. The blue dye travels into the lymphatic channels and moves into the lymph node/s highlighted by the lymphoscintigram. The blue colouring helps to identify the 'sentinel' lymph node/s more easily, along with the tattoo markings and radiosensitive probe. This is to ensure all relevant lymph nodes are removed.

### **Are there any side effects?**

You may get some blue/grey discolouration of the injected skin and sometimes discolouration of the lymphatic channels travelling from the injection site. Any discoloured skin and tissue is usually removed completely as part of the wide local excision procedure. Your urine may change colour to a shade of blue lasting no more than 48 hours. There is a small chance that you may have an allergic reaction to the blue dye, but this is very rare.

After the lymphatic mapping procedure is performed, the sentinel lymph node removal will be done. This consists of removing those lymph nodes which have been highlighted on the scan, are radiosensitive and contain blue dye. This lymph node/s is the sentinel node. It is the most likely to contain cancer cells if the melanoma has spread. The sentinel node biopsy does **not** tell us if the cancer cells have spread further afield, for example to other organs in the body.

### **3. A biopsy of lymph node/s identified**

This is performed in the operating theatre at the same time as the wide local excision. A cut is made in the lymph node/s area identified by the lymphoscintigram which are marked with the tattoo dot/s. The blue 'sentinel' node/s will show up and the radiosensitive probe will confirm that the radioactive lymph node/s are removed and sent to the laboratory. Lymph node/s removed will be looked at under a microscope. If melanoma cells are found further treatment may be necessary. We may phone you with the results of the sentinel lymph node biopsy if you wish us to, or we can arrange an outpatient appointment instead.

### **What are the side effects following sentinel lymph node biopsy?**

May include the following:

- Pain and/or discomfort at the wound/s site.
- Loss of feeling in and around the site of the wound/s as well as in the area immediately next to the wound.

- Occasionally a little fluid may collect at the wound site which may be accompanied by local infection. This is called a seroma and the fluid may need to be drained at the hospital.
- Occasionally some swelling of the limb or area nearest the wound may occur. This is called lymphoedema and may become a permanent problem, but is very rare.

This procedure is usually carried out as day case. If there are any complications then an overnight stay may be necessary. You will be given wound care advice by the ward staff on discharge.

### **Useful Contacts:**

Should you experience any of the problems following discharge listed in this leaflet please contact us on one of the numbers below:

**Skin cancer Clinical Nurse Specialists, 8am- 5pm Mon-Fri: 01603 288365**

**Plastics Dressing Clinic, 8am- 5pm Mon-Fri: 01603 288014**

**EAUS (Emergency Assessment Unit- Surgical),  
Out of hours/weekends/ bank holidays: 01603 286424**

**Emergency Out Of Hours Advice: Call NHS 111**

