markings made during the lymphoscintigram and hand-held gamma detector to find the sentinel lymph node so it can be removed. The sentinel node/s are removed and sent to a pathologist who looks for melanoma cells in the lymph node. It may take up to two weeks to get the results back from the pathologist.

What if melanoma is found in the sentinel lymph node?

If the sentinel node contains melanoma then more surgery to remove all of the lymph nodes in the same part of the body may or may not be recommended. If further surgery to remove the lymph nodes is not advised, the surgeon may recommend close and regular observation using ultrasound to examine the lymph node region where the sentinel node was removed. There is no evidence that removal of these lymph nodes affects the long-term outcome in patients with a positive sentinel node biopsy.

If the sentinel lymph node is negative (it does not contain melanoma), then no more surgery is required. A negative SLNB is no guarantee the melanoma has not spread to other parts of the body through the bloodstream.

What are the side effects of sentinel lymph node biopsy?

- Pain and/or discomfort can occur where the lymph node was removed.
- Loss of sensation in and around the area where the lymph node was removed can occur.
- A small number of patients may have temporary swelling of the limb. Occasionally this may persist as a longer term problem that is known as lymphoedema.

In a small number of cases the results from the sentinel lymph node biopsy may indicate that cancer cells are present when they are not (false positive), or cancer cells are not present when they are (false negative).

The decision whether or not to proceed with SLNB is therefore one that should be made for each patient by weighing up the advantages against the risk for that particular patient.

Any questions?

Please discuss any questions with your doctor or alternatively call the Skin and Melanoma Cancer Nurse Coordinator on 0417 952 129.
What are lymph nodes?

Our lymphatic system is an important part of our immune system. It is made up of lymph vessels and lymph nodes. Lymph vessels are a network of thin tubes that are found throughout the body (see Diagram 1). Lymph nodes also known as lymph glands – are small bean-shaped structures that are found along the lymph vessels.

The lymphatic system has a number of important functions. As blood circulates around our body it leaks out from blood vessels into our tissues. This fluid is collected by the lymphatic vessels and returned back into the bloodstream. As it passes through the lymph nodes, they act as a filter removing bacteria, viruses and other debris from the body. Special immune cells, called white blood cells, attack any bacteria or viruses they find to stop them damaging the body.

If cancer cells break away from a tumour, they may become stuck in the nearest lymph nodes. This is why doctors check the lymph nodes first when they are working out how far a cancer has grown or spread. This helps the doctor determine how advanced the cancer is (stage) and how the patient should be treated.

What is a sentinel lymph node biopsy?

A sentinel lymph node biopsy (SLNB) is a procedure that is done to find out if cancer has spread to the lymph nodes. It involves surgery to remove one or more of the sentinel lymph nodes. Then the sentinel lymph nodes are examined to see if they contain cancer cells. If the biopsy is to be performed, it should be done at the same time as the wide excision of the melanoma.

What is the sentinel lymph node?

The sentinel lymph node is the lymph node closest to where the cancer began to develop. The place where the cancer first develops is known as the primary cancer or primary tumour. Sometimes there is more than one sentinel lymph node. Cancer cells may appear in the sentinel lymph node before spreading to other parts of the body.

What is the sentinel lymph node biopsy procedure?

a) Identifying the sentinel node

A procedure called a lymphoscintigram is performed in the Nuclear Medicine Department at the hospital either the day before or the day of surgery. A small amount of radioactive solution is injected around the site of the melanoma and a special camera is used to see how the radioactive solution travels to the lymph nodes. This helps the doctor find the sentinel node(s) and the skin over the node/s is marked. This procedure takes one to two hours.

b) Performing the sentinel lymph node biopsy

Within 24 hours of the lymphoscintigram, the patient is taken to an operating theatre for surgery. Under a general anaesthetic the surgeon injects a blue dye around the site of the melanoma. The dye is quickly absorbed into the lymphatic channels and moves to the sentinel nodes. The surgeon uses

For example, lymphatic fluid from the face or scalp may travel to a number of different lymph nodes, so it may be more difficult to reliably identify sentinel lymph nodes for melanoma on this part of the body. By contrast, the lymphatic fluid draining a melanoma on the arm would tend to travel to the armpit of that arm, making the sentinel node easy to identify. Melanomas on the main part of the body (trunk) may have several sentinel nodes in different sites.

Why have a sentinel lymph node biopsy?

A positive SLNB means that cancer is present in the sentinel lymph node and may be present in other lymph nodes in the same area. This information helps the doctor determine how advanced the cancer is (stage) and how the patient should be treated. Patients who have a positive sentinel node biopsy (cancer cells are found in the lymph node) tend to have more advanced cancer than if the sentinel node biopsy is negative (no cancer cells found in the lymph node).

Who is suitable for sentinel lymph node biopsy?

Patients who have a primary melanoma with a breslow thickness which is equal to or greater than 0.8mm, or, is less than 0.8mm thick and with ulceration should discuss the option of having a SLNB. Generally SLNB is not offered to people who are in poor health. Sometimes the location of the melanoma can make it hard to identify the sentinel lymph node.