



# Sentinel lymph node biopsy for early oral cancer

## Information for patients from the Oral and Maxillofacial Department

When cancer cells start to spread from the main cancer this represents an important step in cancer growth and more treatment is needed to control the tumour. Currently, scans cannot detect early spread (metastasis) of tiny clumps of cancer cells into the lymph nodes.

This leaflet describes a test, called a sentinel node biopsy (SNB), which can help to diagnose if there has been spread of cancer to lymph nodes in the neck of patients with oral cancer. Patients whose cancer has spread can then get extra treatment as necessary. This leaflet describes the definition of a sentinel node, the advantages of identifying the group of patients with early spread of cancer, what an SNB entails, and what side effects should be expected.

### What does sentinel node mean?

The most common way cancer cells spread is through tiny channels that drain to nearby lymph nodes. These lymph nodes act as a form of filter and are designed mainly to catch and destroy bacteria and viruses. They also catch the tumour cells.

The flow of fluid is not random but goes first to a single lymph node then later on to other nodes.

This first node is called the **sentinel node (SN)**. If the sentinel node is free of tumour you can safely assume all the other surrounding lymph nodes are also free of tumour.



## How can the sentinel node test help me?

When patients with early mouth cancer (smaller than 4cm) are first referred to the hospital about 20 to 25% (or 20 to 25 out of every 100 patients) will already have early spread of cancer to lymph nodes in the neck. We cannot identify the patients with early cancer spread using scans, so in order to protect these 25% with early cancer spread, all patients get more extensive treatment.

In many cases this means a neck dissection (removal of all the lymph nodes in one or both sides of the neck). This means that 75% of patients (or 75 out of every 100 patients) have surgery that is potentially unnecessary for them. A neck dissection is quite a big operation.

The SNB aims to avoid unnecessary surgery as it allows us to identify not only the patients who have early spread of cancer and offer them the correct treatment (neck dissection) but at the same time the SNB will highlight those patients without the spread of tumour who do not have to have major surgery. Basically, it allows us to tailor treatment to the individual and not a group of people.

## What are the risks of a sentinel node biopsy?

A large European trial found that the sentinel node biopsy was safe for patients with oral cancer and reliably detected very early deposits of cancer cells in the sentinel node. However, there are still some risks, which are outlined below.

- **Problems that may happen straightaway**

Rarely (about one in every 1000 patients) the patient has an **allergic reaction** to the blue dye which is used during the procedure to make it easier to see the lymph node; usually this is a mild effect.

In around eight of every 100 biopsies we **cannot find a sentinel node** and in this situation you may need to have a neck dissection.

- **Problems that may happen later**

The majority of patients will leave hospital the following day – this will be discussed with your doctor. This is usually while you recover from removal of the main tumour and not because of the SNB procedure. Any minor issues such as **pain, swelling, or minor bleeding** are dealt with in this period.

The biopsy is performed under a general anaesthetic (you will be asleep) through small cuts (incisions) in your neck. Usually these are about 2 to 3cm in length and will be hidden in the creases of your the neck. Sometimes there are two or three separate incisions. Usually these heal very well and leave **small scars** only.

Occasionally you may notice temporary **nerve weakness of the shoulder or lower lip** and some patients find they have a patch of **numb skin** on their neck or earlobe.

- **Problems that are rare, but serious**

Although the SNB test is very accurate, sometimes it **does not give the correct diagnosis**. In around eight out of every 100 biopsies the very early spread of cancer can be missed. This can mean that the spread of cancer to the lymph nodes in the neck becomes apparent at a later date. If this happens you would be recommended to undergo further treatment, usually surgery.

### What will happen if I choose not to have an SNB?

The recommendation by NICE (National Institute of Health and Care Excellence) is that any patient with early mouth cancer should be offered an SNB or a neck dissection. If you do not want an SNB you may be advised to have a neck dissection.

### What alternatives are available?

There are no alternative tests as accurate as a SNB.

The second best is called **Fine Needle Aspiration Cytology (FNAC)**. It consists of sampling nodes identified as unusual in appearance on CT or ultrasound scan with a needle. Cells in the node are sucked up into a syringe (you may have this test before your operation). During FNAC just a few cells from the lymph node can be examined under the microscope. This is in contrast with SNB where the whole node is removed and examined very carefully.

If you chose not to have an SNB you will be offered a **neck dissection**. This is an operation to remove about 30 to 40 lymph nodes from the neck. The incision is bigger than for SNB to allow your surgeon to find all the lymph nodes around the muscles and blood vessels in your neck and the operation will take longer.

Please note that even if you have an SNB, there is a one in four chance that you will need to have a neck dissection as well (because the biopsy found spread of the cancer).

### How should I prepare for SNB?

You will be invited to the nuclear medicine department either on the day before surgery or on the morning of your operation to have your scans. You do not have to bring anything special. It is always nice to have someone come with you and they should bring something to keep them occupied while you are having your scans.

If you are having surgery on the same day then you can have a light breakfast. There are no dietary restrictions if you are having your operation the next day except you should be starved on the morning of your surgery.

### Asking for your consent

We want to involve you in all the decisions about your care and treatment. If you decide to go ahead with treatment, by law we must ask for your consent and will ask you to sign a consent form. This confirms that you agree to have the procedure and understand what it involves.

On the morning of your surgery, a member of staff will sit down with you and go through what will happen during the procedure and will explain the risks, benefits, and alternatives with you. Please use this time to ask any last minute questions or to raise any concerns you may still have.

Please remember you can withdraw your consent for treatment at any time.

## What happens during an SNB?

In the nuclear medicine department you will have four small injections of a radioactive tracer around the cancer, which will identify the sentinel nodes. You will then be asked to lie still for some scans, similar to a CT scan.

The tracer flows to the sentinel node where it can be identified on scans and removed during your operation. We also inject a small dose of coloured (blue) dye during your operation to make it easier to see the lymph node. The radiation dose is very low; less than 10% of natural radiation that we get from the atmosphere each year.

Sometimes we take two or three scans at different times. The location of the nodes may then be marked on your neck with a pen. Please make sure that these pen marks are still visible and that you do not wash them off in the shower or bath when you go home after your scan.

All in all you should be prepared to spend two to three hours in the nuclear medicine department although you may not be having tests for all of this time. Once the scans are completed you can go home.

Once your surgeon has the results of the scan they will know which nodes to remove but they will not know if there is cancer in them.

In the majority of cases the tumour drains to the same side of the body that the tumour is located (right or left) but in one in 10 cases it drains to the other side of the neck as well, so it might be necessary to operate on both sides of your neck. We will have this information before you go for surgery, so it can be discussed with you.

On the day following your scans you will return to hospital and one node will be removed while you are asleep in theatre under general anaesthetic. When you have your operation the cancer in your mouth will be removed at the same time.

After your biopsy you will remain in hospital overnight.

## When will I get the results of my SNB?

The result of the SNB should be ready about one week after your operation, as the pathologists will examine the lymph nodes in great detail. Usually you will have been discharged home by this time and we will discuss the result with you at your follow-up appointment, which will be arranged before you leave hospital.

## The SNB found cancer, what happens next?

If the SNB found cancer in your sentinel node we will recommend that you have a neck dissection, and we aim to do this within three weeks of the diagnosis.

You do not have to have an SNB; you might prefer to have a neck dissection instead. These two approaches have not been compared directly but in terms of cure they give very similar results. The advantage with SNB is that about 75% of patients do not have to have a neck dissection. We are trying to refine our treatment regimens so that patients will get exactly the treatment needed to eradicate the cancer whilst helping them to get back to their normal activities as quickly as possible.

## What should I expect after the SNB?

- There will be some minor tenderness in your neck after the procedure.
  - You may have had a drain (a small plastic tube like a straw) placed under your skin during the operation. This is usually removed the following day and is not painful.
  - You may need some stitches to be removed after a week and your doctor will advise you about this before you go home.
  - Most of the recovery after your operation is focused on your mouth, where the cancer has been removed. Sometimes it takes a few days before you are ready to go home but this varies from person to person.
  - If there are any problems in the early period when you have gone home then you can contact:
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## Where can I get more information?

SNB of the mouth is a relatively new test and at the moment there is not a lot of information for patients on national websites. There is a lot of information on the general principals of treating mouth cancer on the Cancer Research UK web site ([www.cancerresearchuk.org/about-cancer/mouth-cancer](http://www.cancerresearchuk.org/about-cancer/mouth-cancer)) as well as the NHS web site ([www.nhs.uk/conditions/mouth-cancer/](http://www.nhs.uk/conditions/mouth-cancer/)).

If you use a search engine to find information on sentinel node biopsy then most results will be about SNB in breast cancer and skin cancer. This test has been used a lot in these two conditions and the process is very similar but not identical.

We hope you have found this information useful. If you feel we should include any other information then please let us know.

## How do I look after my wound at home?

Keep the wound dry for 48 hours after your procedure. Remove the dressing at this time. If stitches need to be removed the treating team will advise you when this will happen.

## What if I have any further questions or concerns?

If you have any questions or concerns regarding your treatment or after care, please contact William Harvey Hospital on 01233 633331 and ask the switchboard for Rotary Ward or the maxillofacial secretaries.

If you would like this information in **another language, audio, Braille, Easy Read, or large print** please ask a member of staff.

**Any complaints, comments, concerns, or compliments** please speak to your doctor or nurse, or contact the Patient Advice and Liaison Service (PALS) on 01227 783145, or email [ekh-tr.pals@nhs.net](mailto:ekh-tr.pals@nhs.net)

**Further patient leaflets** are available via the East Kent Hospitals web site [www.ekhuft.nhs.uk/patientinformation](http://www.ekhuft.nhs.uk/patientinformation)