INGUINAL DYNAMIC SENTINEL LYMPH NODE BIOPSY (DSNB)

Information about your procedure from
The British Association of Urological Surgeons (BAUS)

This leaflet contains evidence-based information about your proposed urological procedure. We have consulted specialist surgeons during its preparation, so that it represents best practice in UK urology. You should use it in addition to any advice already given to you.

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KEY POINTS

- The aim of this procedure is to provide accurate staging of your penile cancer when the lymph nodes in your groin cannot be felt
- The principle of this procedure is that the first node in the lymph node chain acts as a filter so, if it is clear of cancer, the remaining nodes should not contain cancer and do not need removal
- The procedure is in two parts; first, a radio-active isotope injection & nuclear medicine scan then, second, a groin operation to remove the sentinel lymph node (the first in the chain)
- It is usually carried out as a day case procedure, and side effects are minimal (when compared with removal of all the lymph nodes)
- After you are discharged, you must avoid pregnant women, babies and small children for 24 hours due to the radiation from the isotope injection

What does this procedure involve?

The procedure involves removal of the sentinel node (the first node in the inguinal lymph node chain) in your groin.

The procedure has two parts; first, an injection of a radioactive isotope into your penis followed by a series of scans performed in the Nuclear Medicine Department of the hospital. Second, your surgeon will remove the sentinel node in the operating room.

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The two parts of the procedure normally take place on the same day but, sometimes, the nuclear medicine procedure needs to be done on the day before the surgery.

Most people are discharged on the same day or the day after the procedure.

What are the alternatives?

- **Monitoring** – the lymph nodes in your groin can be monitored by examination alone, or by repeating the Nuclear Meedicine scan. The risk of missing small area of cancer spread with monitoring alone is approximately 20% (1 in 5)
- **Inguinal lymph node dissection (ILND)** – click the title for a further information mleaflet about ILND

What happens on the day of the procedure?

On the day (or the day before) surgery, you will be asked to attend the Nuclear Medicine Department of your hospital. Here you will be given an injection of a radioactive substance (^{99m}Technetium) into the skin of your penis. This substance travels to the lymph nodes in your groin. A scan (lymphoscintigram) is then performed, and the positions of the sentinel nodes in each groin are marked on your skin. The scan and its analysis can take several hours.

Following the nuclear medicine scan, your urologist (or a member of their team) will briefly review your history and medications, and will discuss the surgery again with you to confirm your consent.

An anaesthetist will see you to discuss the options of a general or spinal anaesthetic. The anaesthetist will also discuss pain relief after the procedure with you.

We may provide you with a pair of TED stockings to wear, and we may give you an injection to thin your blood. These help to prevent blood clots from developing and passing into your lungs. Your medical team will decide whether you need to continue these after you go home.

Details of the procedure

- we use use either a full general anaesthetic (where you will be asleep throughout the procedure) or a spinal anaesthetic
- we first inject a blue dye into the skin of your penis
- we make two incisions, one in each groin, to expose the sentinel node(s)

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- the combination of the radioactivity seen on the nuclear medicine scans, and the blue staining of the lymph node(s) helps us to identify which lymph nodes need to be removed
- we close the incisions in your groins with absorbable sutures and apply a dressing to each groin

Are there any after-effects?

The possible after-effects and your risk of getting them are shown below. Some are self-limiting or reversible, but others are not. We have not listed very rare after-effects (occurring in less than 1 in 250 patients) individually. The impact of these after-effects can vary a lot from patient to patient; you should ask your surgeon's advice about the risks and their impact on you as an individual:

After-effect	Risk	
Swelling of your groin(s) & scrotum due to a collection of lymph fluid		Between 1 in 2 & 1 in 10 patients
Further treatment may be needed if cancer is found in the lymph nodes		Between 1 in 2 & 1 in 10 patients
Infection of your wound(s) requiring treatment with antibiotics		Between 1 in 10 & 1 in 50
Serious wound infection requiring further surgery for drainage or removal of infected tissue		Between 1 in 50 & 1 in 250 patients
Wound breakdown delaying healing		Between 1 in 50 & 1 in 250 patients
Anaesthetic or cardiovascular problems possibly requiring intensive care (including chest infection, pulmonary embolus, stroke, deep vein thrombosis, heart attack and death)		Between 1 in 50 & 1 in 250 patients (your anaesthetist can estimate your individual risk)

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What is my risk of a hospital-acquired infection?

Your risk of getting an infection in hospital is between 4 & 6%; this includes getting *MRSA* or a *Clostridium difficile* bowel infection. Individual hospitals may have different rates, and the medical staff can tell you the risk for your hospital. You have a higher risk if you have had:

- long-term drainage tubes (e.g. catheters);
- long hospital stays;
- multiple hospital admissions; or
- a compromised immune system (e.g. diabetes).

What should I ask before I go home?

You should be told how the procedure went and you may wish to:

- make sure you understand what has been done
- ask the surgeon if everything went as planned
- let the staff know if you have any discomfort
- ask what you can (and cannot) do at home
- make sure you know what happens next

You will be given advice about what to look out for when you get home. Your surgeon or nurse will also give you details of who to contact, and how to contact them, in the event of problems.

What can I expect when I get home?

You can expect some discomfort and oozing of blood from the operation site. Sometimes, the dressing does not stay in place but you do not need to worry about this. If there is no bleeding, a new dressing is not usually required.

It usually takes up to 14 days until the results of the pathology analysis are available; these will be discussed in a multi-disciplinary team (MDT) meeting before any further treatment decisions are made. We will let both you and your GP know the results.

General information about surgical procedures

Before your procedure

Please tell a member of the medical team if you have:

- an implanted foreign body (stent, joint replacement, pacemaker, heart valve, blood vessel graft);
- a regular prescription for a blood thinning agent (e.g. warfarin, aspirin, clopidogrel, rivaroxaban, dabigatran);

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- a present or previous MRSA infection; or
- a high risk of variant-CJD (e.g. if you have had a corneal transplant, a neurosurgical dural transplant or human growth hormone treatment).

Questions you may wish to ask
If you wish to learn more about what will happen, you can find a list of suggested questions called "Having An Operation" on the website of the Royal College of Surgeons of England. You may also wish to ask your surgeon for his/her personal results and experience with this procedure.

Before you go home
We will tell you how the procedure went and you should:

- make sure you understand what has been done;
- ask the surgeon if everything went as planned;
- let the staff know if you have any discomfort;
- ask what you can (and cannot) do at home;
- make sure you know what happens next; and
- ask when you can return to normal activities.

We will give you advice about what to look out for when you get home. Your surgeon or nurse will also give you details of who to contact, and how to contact them, in the event of problems.

Smoking and surgery
Ideally, we would prefer you to stop smoking before any procedure. Smoking can worsen some urological conditions and makes complications more likely after surgery. For advice on stopping, you can:

- contact your GP;
- access your local NHS Smoking Help Online; or
- ring the Smoke-Free National Helpline on **0300 123 1044**.

Driving after surgery
It is your responsibility to make sure you are fit to drive after any surgical procedure. You only need to contact the DVLA if your ability to drive is likely to be affected for more than three months. If it is, you should check with your insurance company before driving again.

What should I do with this information?

Thank you for taking the trouble to read this information. Please let your urologist (or specialist nurse) know if you would like to have a copy for

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your own records. If you wish, the medical or nursing staff can also arrange to file a copy in your hospital notes.

What sources have we used to prepare this leaflet?

This leaflet uses information from consensus panels and other evidence-based sources including:

- the Department of Health (England);
- the Cochrane Collaboration; and
- the National Institute for Health and Care Excellence (NICE).

It also follows style guidelines from:

- the Royal National Institute for Blind People (RNIB);
- the Information Standard;
- the Patient Information Forum; and
- the Plain English Campaign.

DISCLAIMER

Whilst we have made every effort to give accurate information, there may still be errors or omissions in this leaflet. BAUS cannot accept responsibility for any loss from action taken (or not taken) as a result of this information.

PLEASE NOTE: the staff at BAUS are not medically trained, and are unable to answer questions about the information provided in this leaflet. If you have any questions, you should contact your Urologist, Specialist Nurse or GP in the first instance.

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