



CARBON DIOXIDE (CO₂) LASER TREATMENT FOR PENILE CANCER

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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<https://bit.ly/3FALoVa>

KEY POINTS

- This is a treatment offered for pre-cancerous changes in the skin of your penis
- It may be performed as a combination treatment with a biopsy of the abnormal area, or as treatment for a pre-cancerous area that has already been biopsied
- It is usually performed under local anaesthetic, but we sometimes use a general anaesthetic; both techniques are normally day-case procedures

What does this procedure involve?

This procedure uses a medical laser to treat abnormal areas on your penis, that your team know, or strongly suspect, are pre-cancerous.

It may be performed in combination with a biopsy of the abnormal area.

What are the alternatives?

- [Local excision](#) – leaving the majority of your penis intact (when the cancer is very small)
- [Topical creams](#) – to treat pre-cancerous disease or any abnormal cells remaining after surgery

What happens on the day of the procedure?

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.

If you are not scheduled to have your procedure under local anaesthetic, an anaesthetist will see you to discuss the options of a general anaesthetic 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

- if your procedure is being performed under local anaesthetic, we will give you a series of injections (a penile block) to numb your penis
- we will check, before proceeding further, that the anaesthetic has taken effect
- if a biopsy sample is required, this will be the next step
- we will ask you to wear special protective spectacles whilst we are using the laser; members of the surgical staff will be wearing them too
- we will heat up & destroy the abnormal area using the laser
- you may feel some warming on your penis, and notice a small amount of smoke being generated; this is quite normal
- once we have completed the treatment, we put some ointment on the surface your penis to act as a temporary barrier

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	
Dissatisfaction with the cosmetic result		Between 1 in 10 & 1 in 20 patients
Infection of the lasered area requiring further treatment (e.g. with antibiotics)		Between 1 in 10 & 1 in 50 patients
Local recurrence of the cancer (on your penis) requiring further treatment		Between 1 in 10 & 1 in 50 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)

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 may get some scabbing over the treated area, but the scab normally falls off over the first post-operative week.

The treated area may scar, and appear a slightly different colour from, the rest of your penile skin.

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);
- 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 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.