

HIVEC – Hyperthermic (heated) Intravesical (bladder) Chemotherapy

What is HIVEC?

HIVEC is a medical procedure used to treat non-muscle invasive bladder cancer (traditionally called superficial bladder cancer). During the procedure, a heated (43°C) solution of the chemotherapy drug mitomycin is instilled into the bladder. The heat helps the drug penetrate the bladder tissue more effectively and can improve its effectiveness in killing cancer cells.

The procedure is typically done under local anaesthesia and takes about an hour and a half to complete. The regime commences with one treatment a week for six weeks. After a surveillance cystoscopy there will be more treatments in groups of three a further three times in a year.

HIVEC is considered a safe and effective treatment option for certain non-muscle invasive bladder cancer types. However, like all medical procedures, it carries some risks and potential side effects, which should be discussed.

Why would I need this procedure?

This treatment is given after a superficial bladder tumour has been removed from your bladder.

What are the alternatives?

There are several alternative treatments for non-muscle invasive bladder cancer, including:

1. Transurethral resection of bladder tumour (TURBT): This surgical procedure involves removing the tumour or tumours from the bladder using a particular instrument inserted through the urethra.
2. Intravesical Bacillus Calmette-Guérin (BCG): This type of immunotherapy involves instilling a weakened form of tuberculosis bacteria into the bladder to stimulate the immune system to attack cancer cells.
3. Intravesical chemotherapy involves injecting chemotherapy drugs directly into the bladder to kill cancer cells.
4. Surveillance: In some cases, patients may choose to be monitored closely with regular cystoscopies (examinations of the bladder using a particular scope) and imaging tests to monitor for any changes in the bladder.
5. Surgical removal of the bladder (radical cystectomy)

Treatment choice depends on several factors, including the stage and grade of cancer, the patient's overall health, and personal preferences.

Patients should discuss their treatment options with their Consultant to determine the best course of action for their case.

What are the potential risks and side effects?

Some possible side effects of HIVEC include:

1. Bladder irritation, which can cause pain or a burning sensation when urinating. Some people notice an increased frequency of emptying the bladder and a higher sense of urgency. This occurs in around 10-20% of patients. These typically settle within 48 hours.
2. Bladder spasms, which can cause pain or discomfort. This occurs in around 5-10% of patients.
3. Urinary tract infections (UTIs), which can cause symptoms such as frequent urination, pain or burning when urinating, cloudy urine or foul-smelling urine. You may experience chills and rigors or fever. This occurs in around 5-10% of patients. ***If you experience any of these contact your GP immediately and inform the nursing team taking care of you.***
4. Haematuria, which is the presence of blood in the urine. This occurs in around 5% of patients.
5. Allergic reactions, which are rare but can occur in some patients. A rash, usually develops to the hands, feet and groin area. ***If this happens inform your nursing team.***
6. Systemic toxicity, which is a very rare but serious side effect that occurs in less than 1% of patients. It happens when the mitomycin is absorbed into the bloodstream and causes toxicity throughout the body. This is more likely to occur in patients with kidney problems.

What are the expected benefits of treatment?

The intended benefit is to minimise the risk of your bladder cancer returning.

What should I do before I come into the hospital?

On the day of your treatment, you should not drink any fluids for **4 hours** before your treatment time. This reduces the production of urine and improves treatment. Take any medication with as little water as possible.

If you are on a prescribed diuretic (water tablet), you should not take it on the morning of your treatment day. You should take the diuretic one hour after treatment or when you get home. You should not omit it altogether but take it later in the day.

Please bring a mid-stream urine sample with you. We need to check your urine for infection before each treatment.

Will I have an anaesthetic?

Local anaesthetic is used. This is in a gel form and is introduced into the urethra (water pipe) to help with catheterisation, lowering the risk of infection and making the catheter passage more tolerable.

How is the treatment given?

On arrival, your urine sample will be checked. The nurse briefly assesses your current health to ensure you are well enough to be treated.

Treatment is given with you are lying on a couch. You need to anticipate being lying down for around one hour and thirty minutes. Please bring something with you to help you pass the time, eg. Books, magazines, personal stereos.

A catheter will be inserted into your urethra. The catheter is connected via tubing to a machine that heats and circulates (pumps) the chemotherapy to the bladder and back again.

The treatment is slowly heated to 43°C and kept at that temperature for one hour. Patients' common feeling is '***it feels like a hot water bottle is on your tummy***'.

At the end of the one-hour treatment, the machine is switched off, the catheter removed, and you will be asked to empty your bladder into a toilet.

How will I feel afterwards?

You should feel well enough to drive home. You may experience some of the side effects listed above.

How long will I be in the hospital?

You should anticipate being in the hospital for at least one hour and thirty minutes to two hours.

What should I do after each treatment?

Immediately after each treatment

- Men to sit down to go to the toilet – to avoid accidental splashing
- Both men and women should wash the genital area with mild soap and water

For the next 6 hours

- Each time you urinate, add one cup of bleach to the toilet and leave for 10-15 minutes before flushing

For the first 24 hours

- Increase your fluid intake, ideal water to 2 ½ litres, about 12 glasses. This will flush your bladder, minimise bladder irritation, and reduce the risk of a urinary infection.

For the first 48 hours

- If you are sexually active, use “protected intercourse” (use a condom) or abstain for this period. This will protect your partner from contact with Mitomycin.

How soon will I be able to resume normal activities?

As soon as you are ready. Bear in mind that you need to be able to follow the post-procedure precautions.

Will I have to come back to the hospital?

You will initially be asked to attend treatment once a week for six weeks.

Once completed, you will be given dates for the following installations, which consist of repeated cycles of 3 once weekly instillations. You will have regular bladder surveillance/checks in between.

When can I return to work?

As soon as you are ready – you need to be able to follow the post-procedure precautions.

Consent

Although you consent to this treatment, you may at any time after that withdraw such consent. Please discuss this with your medical team.

Sources of information

You can contact the Uro-Oncology Clinical Nurse Specialist team on 0300 131 4523

Important information

The information in this leaflet is for guidance and is not provided to replace professional clinical advice from a qualified practitioner.

Your comments

We are always interested to hear your views about our leaflets. If you have any comments, please get in touch with the Patient Experience Team – Tel: 0300 131 4784 or by email at: esh-tr.patientexperience@nhs.net

Hand hygiene

We are committed to maintaining a clean, safe environment. Hand hygiene is very important in controlling infection. Alcohol gel is widely available at the patient bedside for staff use and at the entrance of each clinical area for visitors to clean their hands before and after entering.

Other formats

If you require any of the Trust leaflets in alternative formats, such as large print or alternative languages, please contact the Equality and Human Rights Department. Tel: 0300 131 4434 Email: esh-tr.AccessibleInformation@nhs.net

After reading this information are there any questions you would like to ask? Please list below and ask your nurse or doctor.

Reference

The following clinicians have been consulted and agreed this patient information:
Rebecca Rushton – Specialist Urology Diagnostic Nurse
Kelly Murrey – Specialist Urology Diagnostic Nurse
Edward Calleja – Urology Consultant, with interest in prostate and bladder cancer.
Sylvia Harris – Divisional Head of Nursing for Diagnostics and Anaesthetics

The directorate group that have agreed this patient information leaflet:
Diagnostics, Anaesthetics and Surgery

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