

# Treatment of non-muscle invasive bladder cancer with BCG and EMDA MMC

This information sheet has been given to you to explain the combined use of BCG and EMDA MMC to treat your non-muscle invasive bladder cancer. BCG (Bacillus Calmette-Guérin) is used to prevent or reduce the reappearance of tumours. MMC (Mitomycin-C) is designed to stop the cancer cells from growing. EMDA (electromotive drug administration) uses an electric current to deliver MMC more efficiently to the bladder. It can also reduce the frequency of, or prevent, the tumour(s) from returning. If you have any questions about your treatment, please speak to a doctor or nurse caring for you.

## Why do I need this treatment?

You have, or have had, non-muscle invasive bladder cancer, which is the most common type of bladder cancer. You have already had a procedure (transurethral resection of bladder tumour or TURBT) to remove the tumour(s) from your bladder.

When you have a cystoscopy (procedure to look into your bladder), non-muscle invasive bladder tumours are usually visible, sitting on the innermost lining of the bladder.

You will now have regular cystoscopies. After each cystoscopy your doctor will inform you if the tumours have come back or not.

Although non-muscle invasive bladder tumours can usually be dealt with by surgery alone, your surgeon has suggested an additional form of treatment and will explain the reasons for their decision.

Your doctor has recommended that you have a course of intravesical (within the bladder) therapy using BCG and EMDA MMC. This treatment involves putting BCG or MMC directly into your bladder.

If you decide to have this treatment, you will receive it as an outpatient in a nurse-run clinic. This means you will not see a doctor on these visits.

## What is BCG?

Bacillus Calmette-Guérin (BCG) is a vaccine that can destroy cancer cells by stimulating the immune system (parts of the body that fight infection and disease) to become active in the bladder. It is also the vaccine used to protect people from tuberculosis (TB). It appears as a cloudy coloured solution.

## What is MMC?

Mitomycin-C (MMC) is a purple coloured solution that can destroy cells. It attacks cancer cells when put into the bladder but does little damage to your normal, healthy bladder lining.

MMC is a chemotherapy drug, but because it is put straight into your bladder and not injected into your veins you will **not** get the side effects people often associate with chemotherapy, such as hair loss, nausea and vomiting.

## The BCG and EMDA MMC treatment course

BCG and EMDA MMC treatment is given as an outpatient treatment. It involves coming to hospital once a week for nine weeks. The treatment sequence is as follows.

<b>Weeks 1 and 2:</b>	BCG	<b>Week 6:</b>	EMDA MMC
<b>Week 3:</b>	EMDA MMC	<b>Weeks 7 and 8:</b>	BCG
<b>Weeks 4 and 5:</b>	BCG	<b>Week 9:</b>	EMDA MMC

## What alternative treatment is there?

Alternative treatment programmes are either a six-week course of BCG or a six-week course of MMC. The combination of the two treatments is more effective, but a course of one of the drugs alone may be used if one of the drugs is not suitable for you.

## Giving my consent (permission)

We want to involve you in decisions about your care and treatment. If you decide to go ahead with this treatment, you will be asked to consent verbally, stating that you agree to have the treatment and you understand what it involves.

If you would like more information about our consent process, please speak to a member of staff caring for you.

## What do I have to do before each treatment?

Before starting treatment it is **important** to inform a member of staff if you have a pacemaker; if you are taking warfarin or if you have recently had or are thinking of having the influenza vaccine (flu jab) or any other vaccinations.

Each time you attend for treatment, you will be asked to pass urine to empty your bladder.

You should try not to drink very much for three or four hours before you come for your treatment, particularly if you tend to pass urine frequently. By restricting the amount you drink, your urine will be concentrated, preventing the drug from being diluted while it is in your bladder. This will make the drug more effective. You are also more likely to be able to hold onto the drug in your bladder for the full treatment time if you have not had much to drink beforehand.

It is also advisable to avoid tea, coffee and alcohol the evening before and the morning of your treatment. You can eat normally before and after each treatment.

When you attend for your appointment, you will be asked to produce a urine sample for us to test. This is because you cannot be given the treatment if you have a urinary tract infection (UTI, an infection in your tubes which carry urine) or blood visible in your urine. You will need to have the UTI treated or wait until the bleeding has stopped before your treatment can be re-started.

## What will happen at my BCG appointments?

At your BCG appointments the following will happen.

- A nurse will pass a catheter into your bladder via your urethra (tube linked to the bladder that allows urine to leave the body). Local anaesthetic gel may be used to temporarily numb the area. The catheter will drain away any remaining urine from your bladder.
- The nurse will pass 50ml of BCG solution through the catheter and into your bladder. Generally the catheter is then removed but in some cases it may remain in place until the treatment is finished.
- We will ask you not to pass urine for two hours in order to keep the drug in contact with the entire lining of your bladder, for the full treatment time.
- After two hours we will ask you to pass urine as normal into a toilet. In some cases the nurse will remove the BCG via the catheter (if this is still in place). Men will be asked to sit down to avoid the drug splashing onto their skin.

The first time you pass urine after the BCG treatment please:

- put 50ml of household bleach into the toilet and leave it to stand for 15 minutes, before flushing, in order to neutralise the drug
- wash your hands and private parts with soap and water after passing the BCG into the toilet.

For your first BCG treatment, please expect to stay in the outpatient department for over two hours. On following visits, you may be able to go straight home after the drug has been put into your bladder.

## What will happen at my EMDA MMC appointments?

At your EMDA MMC appointment the following will happen.

- A nurse will pass a special catheter with an electrode through the urethra and into the bladder. Local anaesthetic gel may be used to temporarily numb the area. The catheter will drain away any remaining urine from your bladder.
- The nurse will pass sterile water containing the MMC through the catheter and into your bladder.
- They will then place two electrode pads coated with gel on the skin of your lower belly.
- They will connect the catheter and electrodes to a generator that creates an electric current.
- The catheter is left in place for the whole time that the drug is in your bladder. The treatment time is 30 minutes and we ask you to try not to pass urine for 30 minutes in order to keep the drug in contact with the entire lining of your bladder for the full treatment.
- After 30 minutes, the nurse will drain the bladder and remove the catheter and the electrodes.

Please be aware that the treatment session takes about one hour.

## What do I do after each treatment?

It is important to avoid getting the BCG or MMC solutions in contact with your skin as it may cause a slight rash.

If it does get in contact with your skin, wash it off immediately with warm, soapy water.

Please note, BCG and MMC should not cause harm to your skin if you wash it off as instructed.

We recommend you increase your fluid intake after each treatment for a couple of days (aim for two litres a day). This will help to flush any remaining drug out of your bladder and reduce any

possible side effects. However, you may want to reduce the amount you drink after 8pm so you do not disturb your sleep by needing to go to the toilet.

If you notice that your urine is smelly or cloudy you should contact your GP as this may indicate a urine infection. You will need to provide a urine sample for your GP and you may possibly need antibiotics. This is unlikely to be due to the drugs, but can happen after catheterisation. **Please tell your nurse specialist of any side effects** you have at the time of your next visit or by telephone.

To prevent irritation for yourself or your partner, it is best not to have sexual intercourse for at least 24 hours after each treatment with BCG or EMDA MMC. Please use a condom throughout the course of your treatment and for one week after.

If you have any concerns please speak to a nurse or contact us - please refer to the 'Contact us' box at the end of this leaflet.

## What are the side effects?

Most patients do not experience any major problems with this treatment, but BCG or EMDA MMC treatment may irritate your bladder.

After each treatment you may notice:

- you have discomfort on passing urine
- you need to pass urine more frequently
- you have blood in your urine.

**If your symptoms do not improve after two to three days, contact your nurse specialist for advice.**

## Side effects after the BCG treatment

If you develop any of the following side effects following the BCG treatment please contact your nurse specialist, ward or doctor immediately.

- A high temperature (more than 38.5°C or 101°F) and chills or flu-like symptoms.
- Joint pain.
- A cough.
- A skin rash.
- Exhaustion.
- Nausea/vomiting.

These symptoms could indicate that you have an allergic reaction or that some of the BCG has got into your system, giving you TB like symptoms. These symptoms are rare but if they do occur you will need treatment. Please **do not** wait until your next visit to tell your nurse specialist.

## Side effects after the EMDA MMC treatment

If you notice a rash on the soles of your feet and/or the palms of your hands or the trunk of your body please contact your nurse specialist for advice (see the 'contact us' box at the end of this leaflet). This is a very rare sensitivity (allergic) reaction. It does not mean that the treatment will need to be stopped.

There is also a small risk of burns occurring on the skin at the sites where the skin electrodes are applied. We try to ensure good skin contact, and avoid air bubbles between the electrodes, and the skin to keep the risk to a minimum.

## What happens next?

Six to eight weeks after completing the course of BCG and EMDA MMC, we will see how successful your treatment has been by performing a check cystoscopy under general anaesthetic (where you are put to sleep for the duration of the procedure).

You will be sent an appointment for this in the post and your nurse will confirm these plans on your last treatment visit. You will also need to provide a urine sample to the urology department at Guy's hospital two weeks before you attend for your check cystoscopy.

It is important to remember that your tumour(s) may return. If this happens, you can be given further courses of these drugs, into the bladder, to prevent the progression of your tumour(s). Alternatively, another form of treatment may be recommended. Your doctor will discuss this with you in more detail if relevant.

## Cancer information



Dimbleby Cancer Care is the cancer support service for Guy's and St Thomas'. They have drop-in information centres, and also offer complementary therapies, psychological support and benefits advice.

Drop-in information centres are located at Guy's in Oncology Outpatients (Ground floor, Tabard Annexe) and at St Thomas' on the Lower Ground Floor, Lambeth Wing.

**t:** 020 7188 5918 **e:** [DimblebyCancerCare@gstt.nhs.uk](mailto:DimblebyCancerCare@gstt.nhs.uk)

### Macmillan Cancer Support (all numbers freephone)

**t:** 0808 808 2020 (information on living with cancer)

**t:** 0808 800 1234 (information on types of cancer and treatments)

**t:** 0808 801 0304 (benefits enquiry line)

**w:** [www.macmillan.org.uk](http://www.macmillan.org.uk)

### Cancer Research UK

A patient information website, with information on all types of cancer and treatment options.

**w:** [www.cancerhelp.org.uk](http://www.cancerhelp.org.uk)

## Contact us

If you want any further information or any help, do not hesitate to contact the urology department for advice **t:** 020 7188 7636 Monday to Friday, 9am-5pm.

You can speak to one of the nurses named below on this telephone number, and you can leave a message on the answering machine.

You can also call the hospital switchboard on **t:** 020 7188 7188 and ask for the bleep desk. Ask for the bleep numbers listed below and wait for a response. This will connect you to the relevant nurse directly:

- 2840 to speak to Sue Amery, bladder cancer clinical nurse specialist
- 1227 to speak to Kathryn Chatterton or Sithe Ncube, bladder cancer enhanced recovery nurse specialists

Outside of normal working hours, please call Aston Key Ward on **t:** 020 7188 8860 or Florence Ward on **t:** 020 7188 8818.

For more information leaflets on conditions, procedures, treatments and services offered at our hospitals, please visit **w:** [www.guysandstthomas.nhs.uk/leaflets](http://www.guysandstthomas.nhs.uk/leaflets)

## Pharmacy Medicines Helpline

If you have any questions or concerns about your medicines, please speak to the staff caring for you or call our helpline.

**t:** 020 7188 8748, Monday to Friday, 9am-5pm

## Your comments and concerns

For advice, support or to raise a concern, contact our Patient Advice and Liaison Service (PALS). To make a complaint, contact the complaints department.

**t:** 020 7188 8801 (PALS)      **e:** [pals@gstt.nhs.uk](mailto:pals@gstt.nhs.uk)

**t:** 020 7188 3514 (complaints)      **e:** [complaints2@gstt.nhs.uk](mailto:complaints2@gstt.nhs.uk)

## Language and accessible support services

If you need an interpreter or information about your care in a different language or format, please get in touch.

**t:** 020 7188 8815      **e:** [languagesupport@gstt.nhs.uk](mailto:languagesupport@gstt.nhs.uk)

## NHS 111

Offers medical help and advice from fully trained advisers supported by experienced nurses and paramedics. Available over the phone 24 hours a day.

**t:** 111

## NHS website

Online information and guidance on all aspects of health and healthcare, to help you take control of your health and wellbeing.

**w:** [www.nhs.uk](http://www.nhs.uk)

## Get involved and have your say: become a member of the Trust

Members of Guy's and St Thomas' NHS Foundation Trust contribute to the organisation on a voluntary basis. We count on them for feedback, local knowledge and support. Membership is free and it is up to you how much you get involved. To find out more, please get in touch.

**t:** 0800 731 0319      **e:** [members@gstt.nhs.uk](mailto:members@gstt.nhs.uk)      **w:** [www.guysandstthomas.nhs.uk/membership](http://www.guysandstthomas.nhs.uk/membership)

### Was this leaflet useful?

We want to make sure the information you receive is helpful to you. If you have any comments about this leaflet, we would be happy to hear from you, fill in our simple online form, **w:** [www.guysandstthomas.nhs.uk/leaflets](http://www.guysandstthomas.nhs.uk/leaflets), or **e:** [patientinformationteam@gstt.nhs.uk](mailto:patientinformationteam@gstt.nhs.uk)

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