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 Bacillus Calmette Guerin (BCG) and electrically stimulated Mitomycin-C (EMDA MMC) to treat your non-muscle invasive bladder cancer.

If you have any further questions, 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 to check if the tumours have returned and after each check cystoscopy, your doctor will tell you if your tumour(s) have returned. 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 this.

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

- **BCG** is used to prevent or reduce the reappearance of tumours.
- **MMC** is designed to stop the cancer cells from growing.
- **EMDA** uses an electric current to deliver MMC more efficiently and can reduce the frequency of or prevent the tumour(s) from returning.

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.

Before commencing treatment please inform a member of staff if you have a pacemaker.

What is BCG?

BCG is a cloudy, coloured solution that can destroy cancer cells by stimulating the immune system to become active in the bladder. It is also the vaccine used to prevent tuberculosis (TB).
What is MMC?
MMC is a purple coloured solution that can destroy cells. It attacks cancerous 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.

How is BCG treatment given?
BCG is inserted directly into your bladder through a fine tube (catheter) to treat the entire lining of your bladder. The drug itself stays in your bladder for one hour and is then taken out through the catheter, or leaves your bladder when you pass urine.

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

How is EMDA MMC treatment given?
MMC is inserted directly into your bladder through a fine tube (catheter) to treat the entire lining of your bladder. There is an electrode within the catheter. Two further electrodes are placed on the skin on your lower abdomen. The electrodes are connected to a generator which delivers a controlled electric current between the electrodes. The MMC itself stays in your bladder for 30 minutes and is then taken out through the catheter. The catheter and electrodes are then removed. The appointment takes about one hour.

The treatment course usually involves coming to hospital once a week for nine weeks as an outpatient. The treatment sequence is as follows:

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<td>EMDA MMC</td>
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What do I have to do before each treatment?
Before each treatment, you will be asked to pass urine to empty your bladder. You should try not to drink very much for the four hours before you come to the hospital 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. 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.

When you come in for your appointment, you will be asked to give a urine sample before your treatment. This is because you cannot be given the treatment if you have a urinary tract infection (UTI) 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 happens at each treatment?

**BCG**
A catheter is inserted into your urethra (tube linked to the bladder that allows urine to exit the body) with a local anaesthetic gel, to reduce some discomfort. Any remaining urine is drained away from your bladder and 50mls of BCG solution is passed through the catheter and into your bladder. This catheter is then either removed from your bladder or left in place until the treatment is finished. To keep the drug in contact with your bladder, you will be asked not to pass urine for an hour. After one hour, the BCG will be removed via the catheter, if this is still in place, or you will be asked to pass urine as normal into a toilet. Men will be asked to sit down to avoid the drug splashing onto the skin. The first time you pass urine after having the BCG, you will need to put 50ml of household bleach into the toilet and leave it to stand for 15 minutes. This neutralises the drug. It is important to remember to wash your hands and genitalia (reproductive organs) with soap and water after passing the BCG into the toilet.

**EMDA MMC**
A catheter with an electrode is inserted into the bladder and any remaining urine is drained away from your bladder. Two electrode pads are then placed on the skin of your lower abdomen. When the catheter and electrodes are in place, 100mls of sterile water containing the MMC solution is passed through the catheter and into your bladder. The catheter and electrodes are then connected 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. To keep the drug in contact with your bladder, you will be asked not to pass urine for half an hour. The treatment lasts 30 minutes, after which time the bladder is drained and the catheter and the electrodes are removed.

What do I do after each treatment?
It is important to avoid getting the BCG or MMC in contact with your skin. If it does, it may cause a slight rash. If you wash it off immediately with warm, soapy water however, it will not harm your skin.

What are the alternatives?
An alternative treatment is 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 all the decisions about your care and treatment. If you decide to go ahead, you will be asked to verbally give your consent that you agree to have the procedure and understand what it involves.

You should receive the leaflet, **Helping you decide: our consent policy** which gives you more information. If you do not, please ask a member of staff caring for you for a copy.

What are the side effects?
Most patients do not experience any major problems with this treatment, but it may irritate your bladder. After each treatment you may notice you:

- have discomfort on passing urine
- need to pass urine more frequently
- have blood in your urine.
These problems should get better within a few days. **If your symptoms do not improve after two to three days, contact your nurse specialist for advice.** To help prevent these problems, it is a good idea to 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 from your bladder. However, you may want to reduce the amount you drink after 8pm so you do not disturb your sleep.

**Following BCG treatment**

You should contact your nurse specialist, ward or doctor immediately if you develop:

- a 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 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.

**Following EMDA MMC treatment**

Very rarely you may notice a rash on the soles of your feet and/or the palms of your hands or the trunk of your body. If this happens, contact your nurse specialist for advice. This is a sensitivity (allergic) reaction and 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.

**Following either treatment**

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 give a urine sample 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.

**Finding out the success of your treatment**

A check cystoscopy is performed under general anaesthetic six to eight weeks after completing the course of BCG and EMDA MMC to find out how successful the treatment has been. You will be sent an appointment for this in the post and your nurse will confirm this date 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 shorter courses of these drugs, into the bladder, to prevent the progression of your tumour(s). 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:** RichardDimblebyCentre@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

**Cancer Research UK** has a patient information website, with information on all types of cancer and treatment options.

**w:** www.cancerhelp.org.uk

**Appointments at King’s**

We have teamed up with King’s College Hospital in a partnership known as King’s Health Partners Academic Health Sciences Centre. We are working together to give our patients the best possible care, so you might find we invite you for appointments at King’s. To make sure everyone you meet always has the most up-to-date information about your health, we may share information about you between the hospitals.

**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 to 5pm) to speak to one of the nurses named below or leave a message on the answering machine.

You can also call the hospital switchboard on 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
- 2752 to speak to Grace Zisengwe, bladder cancer nurse practitioner

Outside of normal working hours, please call Aston Key Ward on **020 7188 8860** or Florence Ward on **020 7188 8818**.
Pharmacy medicines helpline
For information about any medicines that you have been prescribed at Guy’s and St Thomas’ hospitals, you can speak to the staff caring for you or call our helpline.
t: 020 7188 8748 9am to 5pm, Monday to Friday

Patient Advice and Liaison Service (PALS)
To make comments or raise concerns about the Trust’s services, please contact PALS. Ask a member of staff to direct you to the PALS office or:
e: 020 7188 8801 at St Thomas’  
t: 020 7188 8803 at Guy’s  
e: pals@gstt.nhs.uk

Knowledge & Information Centre (KIC)
For more information about health conditions, support groups and local services, or to search the internet and send emails, please visit the KIC on the Ground Floor, North Wing, St Thomas’ Hospital.
t: 020 7188 3416

Language support services
If you need an interpreter or information about your care in a different language or format, please get in touch using the following contact details.
t: 020 7188 8815  
fax: 020 7188 5953

NHS Direct
Offers health information and advice from specially trained nurses over the phone 24 hours a day.
t: 0845 4647  
w: www.nhsdirect.nhs.uk

NHS Choices
Provides online information and guidance on all aspects of health and healthcare, to help you make choices about your health.
w: www.nhs.uk

Become a member of your local hospitals, and help shape our future
Membership is free and it is completely up to you how much you get involved. To become a member of our Foundation Trust, you need to be 18 years of age or over, live in Lambeth, Southwark, Lewisham, Wandsworth or Westminster or have been a patient at either hospital in the last five years. To join:
t: 0848 143 4017  
e: members@gstt.nhs.uk  
w: www.guysandstthomas.nhs.uk