



## **BLADDER CANCER**

The urinary bladder is the organ in which urine (produced by the kidneys) is stored in before it is discharged from the body. This allows us to control when we want to pass urine, and allows one to pass urine at an appropriate time.

Cancer of the urinary bladder refers to abnormal, uncontrolled growth of cells within the urinary bladder with the potential to spread to other parts of the body. Bladder cancer is commonly categorised into Non-muscle Invasive Bladder Cancer (NMIBC) and Muscle Invasive Bladder Cancer (MIBC) depending on the extent of growth of the cancer within the urinary bladder.

SGH Urology delivers comprehensive, state of the art care to our patients. As part of our effort to provide you with the best care, we have designated clinics for high-risk bladder cancer patients aimed to closely monitor progress and deliver timely treatment. We are also the national trial site for new therapies to maintain a high standard of care for our patients.

### **NON-MUSCLE INVASIVE BLADDER CANCER (NMIBC)**

Non-muscle Invasive Bladder Cancer is a bladder cancer that affects the shallow (or more superficial) layers within the bladder. The main goal of treatment is organ (bladder) preservation whilst achieving maximal cancer free rates. As the disease can recur in the bladder without major surgery to remove the urinary bladder, close surveillance is necessary for patients after every treatment.

Treatment is instituted based on an individual's risk profile. This includes the grade, location, size of the tumour and whether or not the tumour has recurred before. All patients will undergo a Transurethral Resection of Bladder Tumour (TURBT) as part of the initial evaluation of NMIBC. Depending on risk, your Urologist may advise further treatment in the form of Intravesical therapy (this means instilling a drug into your bladder).

## CYSTOSCOPY

A cystoscopy is a simple, minimally-invasive procedure (typically performed in the clinic setting), where a small camera (scope) is inserted into the bladder via the urethra (urine passage) to allow your doctor to inspect the surface of the bladder to identify any tumours or suspicious growth. Narrow Band Imaging (NBI) is a high-resolution visual tool your doctor may utilise during cystoscopy to better identify suspicious growth.

## TRANSURETHRAL RESECTION OF BLADDER TUMOUR (TURBT)

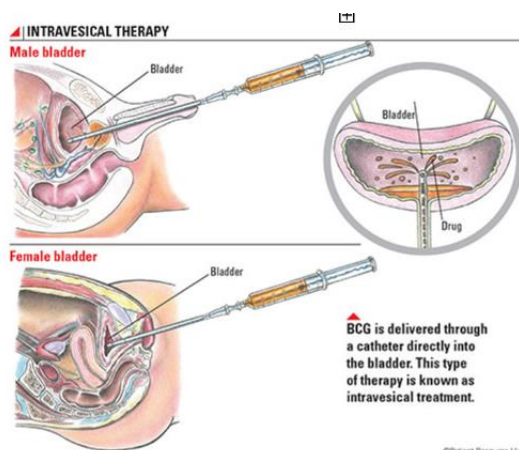
TURBT is a minimally-invasive form of surgery within the bladder. During this procedure, a small camera is introduced into the bladder together with other tools that allow your surgeon to remove superficial bladder tumours and obtain specimens for biopsy and testing. This is done via the urethra (urine passage) so no skin incisions are necessary.

## INTRAVESICAL THERAPY

Intravesical therapy involves introducing certain medications into your bladder. The medications should be held within the bladder for a period of time before being passed out in the urine. Intravesical therapy is an adjunct in the treatment of NMIBC after surgery to reduce the chance of cancer recurrence and maximise the effect of the surgery. The most common form of therapy is with Bacillus Calmette Guerin (BCG). Other medications include Mitomycin-C and Gemcitabine/Docetaxel.

## BACILLUS CALMETTE GUERIN

### WHAT TO EXPECT



- BCG is instilled into your bladder after your bladder surgery to decrease the recurrence and progression of Non-Muscle Invasive Bladder Cancer.
- To instil BCG, we insert a soft plastic tube through your urine passage (urethra) into your bladder (see above image)
- The BCG medication should ideally be left inside your bladder for 2 hours for maximal efficacy. Ensure you void completely after the treatment.

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- Common after effects of BCG include (but non exhaustive); infection in urine, bladder pain, flu like symptoms, urgency (in urination), inability to hold BCG for subsequent doses, blood in urine, sediments in urine,
- The first course is known as the induction course and lasts for 6 weeks
- You may continue for a maintenance treatment, lasting up to a year (consisting of 3 weekly instillations every 3, 6 and 12 months)

### HOW SHOULD I PREPARE FOR BCG

- Decrease fluid intake a 4-6 hours before the treatment
- On arrival, you will be asked to pass urine to test for any ongoing infection. If tests are suggestive of infection, you may have to postpone your BCG and be started on antibiotics
- Before instillation, we will clean your genital area with an antiseptic solution and apply some lubricant around your urine passage

### CAN I BE DISCHARGED EARLIER?

- After instillation, we will remove the plastic tube and allow the medication to dwell in your bladder for 2 hours
- If you have successfully held BCG in for the first time, you may be allowed to be discharged earlier for the subsequent visits provided you are able to make it back home in time by 2 hours
- You will need to pass urine into your own toilet at home. Cover the seat and flush twice to ensure the contents does not spill out, wash your hands after
- Approach our Urology nurses for further information regarding early discharge (expect to head home straight after BCG instillation and receive a call from us to ensure you have reached home within the time frame)

## **MUSCLE INVASIVE BLADDER CANCER (MIBC)**

In Muscle Invasive Bladder Cancers (MIBC), the tumour has spread to involve the muscle layers in the urinary bladder wall. The mainstay of treatment in such patients is a radical cystectomy - this is a surgical procedure where the entire urinary bladder is removed including the cancer.

A radical cystectomy is a major operation that involves 3 main steps.

1. Removal of the urinary bladder
2. Removal of surrounding lymph nodes
3. Creation of urinary diversion. This can either be an ileal conduit or a neobladder.
  - a. Ileal Conduit: your surgeon creates a tube from the intestine to collect urine from the kidneys, and drain out of the body through a hole called a stoma.

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- b. Neobladder: your surgeon uses a portion of your intestine to create your neobladder. Urine from your kidneys will be stored in the neobladder and you will use your abdominal muscles to empty your neobladder.

At SGH Urology, we perform approximately 30 radical cystectomies (RC) a year. We are currently the only centre that offers robotic assisted RC, with close to 80 cases performed. This minimally invasive approach achieves lower blood loss and transfusion, better pain control and shorter hospital stay. In female patients, we perform Transvaginal Natural Orifice Transluminal Endoscopic Surgery (NOTES) where the specimen is extracted through the vagina with minimal visible incisions on the abdominal wall.

Some patients with MIBC will not be suitable for a radical cystectomy. In such patients, the treatment of MIBC will be tri-modal with chemotherapy and radiation therapy. At SGH Urology, we work closely with the medical oncologists and radiation oncologists under the umbrella of National Cancer Centre Singapore (NCCS) to provide you with the treatment options most-suited to your condition.

### **CANCERS OF THE URETER**

Ureters are the tubes which carry urine produced in the kidney to the bladder. Ureteric cancers are uncommon in general. Treatment options for ureteral cancer depend on the location and extent of involvement, and usually involve a form of minimally invasive surgery to remove the tumour. In some patients, chemotherapy may also be recommended as part of your treatment regimen. Our team of urologists and medical oncologists will advise you of the best treatment options available to you.

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