

BCG Bladder Instillation Procedure, Medical Short Stay Unit

Site Applicability

St. Paul's Hospital Medical Short Stay Unit

Practice Level

Registered Nurses: Advanced Competency: additional education required

Requirements

- Prescriber orders are required for BCG instillation
- BCG is for intravesicular administration only
- All BCG solutions will be mixed by pharmacy
- A chemotherapy spill kit and liquid Cavicide or Cavicide wipes must be accessible in the clinic in case of accidental spill. See [OH &S](#) and [Code Brown](#)
- Any spilled BCG suspension should be cleaned by covering the area with paper towels soaked in Cavicide or Cavicide wipes for at least 10 minutes. Unused BCG and all equipment, supplies and receptacles in contact with BCG should be handled as biohazardous waste.

Need to Know

- BCG is a Group 1 Hazardous Drug
- BCG is a live, attenuated strain of *Mycobacterium bovis*
- BCG is instilled into the bladder for the treatment of bladder cancers.
- BCG should be handled as an infectious agent at all times as it is potentially pathogenic. After use, all BCG waste including bags, sets, tubing, catheters, gloves, etc. must be disposed of in the cytotoxic waste containers. Do not expose to direct or indirect sunlight, any exposure to artificial sunlight should be kept to a minimum.
- Standard induction of BCG instillation is given once weekly for 6 weeks. For maintenance, BCG is instilled once weekly for three weeks at 3 month, 6 months and every 6 months thereafter for 3 years.(3, 6, 12, 18, 24, 30 & 36 months) For severe cystitis ([Appendix A](#) – Non-infective cystitis as defined and graded by the National Cancer Institute's Common Terminology Criteria for Adverse Events), a 50% dose reduction may be required.
- **Contraindications/Cautions:**
 - It is recommended that intravesical BCG not be administered any sooner than 1 to 2 weeks following bladder biopsy, transurethral resection or traumatic catheterization

- Immunosuppressive therapy or patients with compromised immune systems - risk of overwhelming systemic mycobacterium sepsis
- Active TB - A Mantoux (PPD) test should be performed prior to the first BCG instillation; a positive result contraindicates proceeding only in the presence of supplemental evidence of an active tuberculosis infection.
- Urinary tract infections - risk of disseminated BCG infection and greater severity of bladder irritation
- Gross hematuria
- Burn Patients
- Active febrile illness

Equipment and Supplies

(From Pharmacy)

1. Medication as ordered (medications are prepared for instillation by Pharmacy)
2. Catheter tip adaptor

(On the Unit)

1. Sterile bladder catheterization tray
2. Sterile Foley catheter
3. Bed protector or soaker pad or blue pads
4. Sterile gloves
5. Sterile NS/Chlorhexidine 2% solution
6. Sterile 4X4 gauze
7. Urojet local anesthetic (Xylocaine Urojet), if ordered
8. Caviwipes (in case of spill)

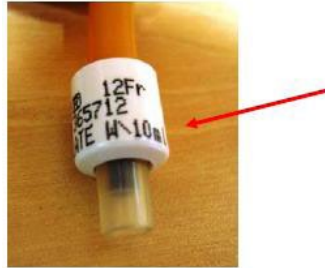
For incontinent patients include:

1. Blue clamp (non-toothed)
2. Foley catheter bag

Procedure

Patients should be advised to minimize oral fluids (especially those containing caffeine) for 6 hours before each treatment to minimize dilution of BCG in the bladder.

Steps

STEPS	RATIONALE
1. Don personal protective equipment: Long sleeve chemo gown, face mask with shield, blue nitrile gloves (double glove each hand).	
2. Explain procedure to patient and ensure privacy.	Adequate explanation will minimize anxiety
3. Set up supplies including medication	
4. Cleanse patient's perineum with NS.	
5. If ordered, instill Urojet local anesthetic and wait 2 to 3 minutes.	Urojet/ Xylocaine local anesthetic will make Foley insertion more comfortable. Waiting 2 to 3 minutes allows numbing to take effect
6. Catheterize patient per Urinary Catheterization DST to drain bladder. Ensure balloon is inflated to hold catheter in place. Inflate balloon, using correct amount of sterile water, check balloon valve for actual volume required for inflation. (VCH: may use Straight in/out catheter). 7. Allow bladder to empty of any residual urine	Emptying the bladder will allow for optimal effect of medication 
8. Connect adaptor* to medication syringe (*sterile Luer lock catheter tip adapter)	
9. Connect medication syringe to catheter drainage port and instill medication slowly.	
10. Deflate catheter balloon and remove catheter with syringe connected and dispose along with gloves in the chemotherapy waste bin.	
11. After instillation of medication, instruct patient to hold medication in bladder for 1 hour or more if ordered and to lie on their stomach for the first 15 minutes after treatment. Then ask patient to either: A. Lie on their back, left side and right side for 15 minutes each or	Doing either A. or B. Ensures that the BCG completely covers the inside of the bladder.

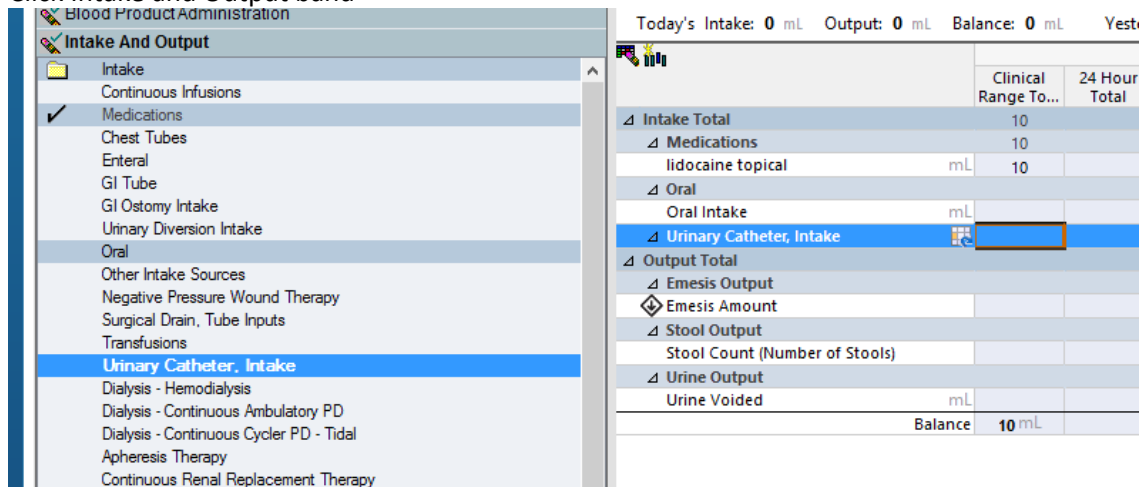
<p>B. Walk around for 15 minutes</p> <ul style="list-style-type: none"> ○ After the ordered time, patient may void. ○ While still in MSSU, after voiding instruct patient to cover toilet with blue pad and flush twice. <p>(For incontinent patients skip to step 14)</p>	
12. Provide patient education regarding common side effects and when to seek medical attention (Please see Patient/Family Education)	
13. Patient may go home.	
Incontinent Patient	
14. After instilling medication, clamp the catheter. Disconnect medication syringe and connect a Foley catheter bag and keep below patient's waist.	<p>Ensures medication remains in bladder. Maintains sterility of urinary drainage system permitting continued bladder drainage post procedure.</p> <p>Positioning below patient's waist prevents back flow.</p>
15. Keep catheter clamped for 1 hour or as ordered and instruct patient to lie in the following 4 positions for 15 minutes each: left side-lying, supine, right side-lying and prone. Advise patient to stand up and walk for 15 min following this (if possible).	Ensures medication remains in the bladder and adequate distribution all over the bladder
16. After allotted time, unclamp catheter and allow bladder to drain completely.	
17. Deflate balloon and remove catheter with drainage bag attached. Dispose of entire unit, along with gloves into the chemotherapy waste bin.	
18. Provide patient education regarding common side effects and when to seek medical attention. (Please see Patient/Family Education)	
19. Patient may go home	

Documentation

Document the procedure, including medication and dose, patient tolerance of procedure and any adverse reactions in the Interdisciplinary/Nurses Notes or unit flow sheet.

For Cerner Documentation:

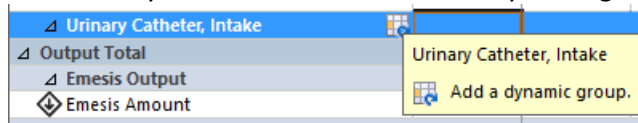
1. Go to Menu: Interactive View and I&O
2. Click Intake and Output band



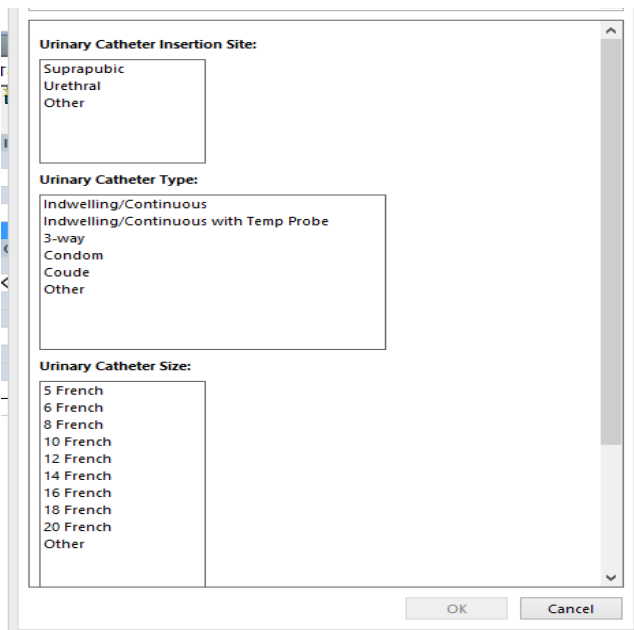
Today's Intake: 0 mL Output: 0 mL Balance: 0 mL Yes

	Clinical Range To...	24 Hour Total
Intake Total	10	
Medications	10	
lidocaine topical	mL 10	
Oral		
Oral Intake	mL	
Urinary Catheter, Intake		
Output Total		
Emesis Output		
Emesis Amount		
Stool Output		
Stool Count (Number of Stools)		
Urine Output		
Urine Voided	mL	
Balance	10 mL	

3. Click Urinary Catheter Intake and create dynamic group:



- a. Insertion site
- b. Catheter type
- c. Catheter size



Urinary Catheter Insertion Site:

Suprapubic
Urethral
Other

Urinary Catheter Type:

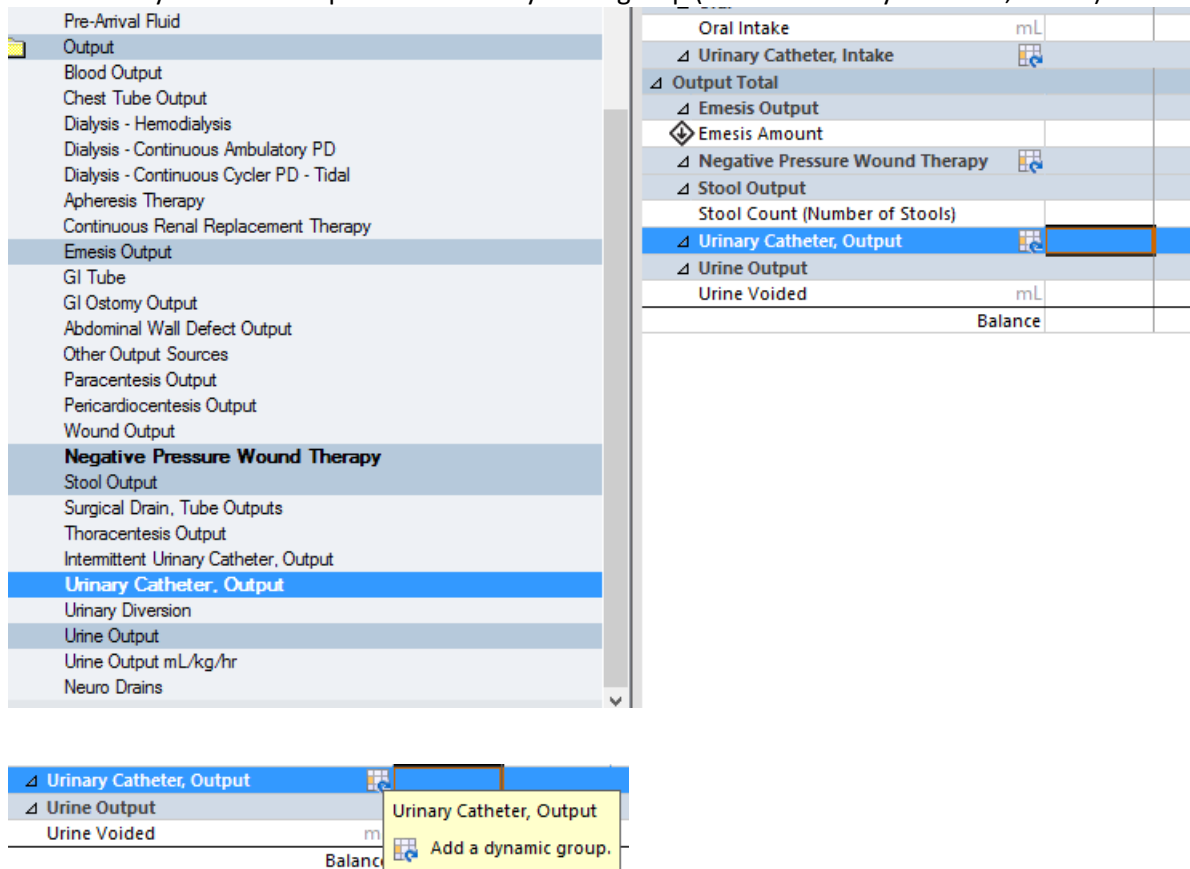
Indwelling/Continuous
Indwelling/Continuous with Temp Probe
3-way
Condom
Coude
Other

Urinary Catheter Size:

5 French
6 French
8 French
10 French
12 French
14 French
16 French
18 French
20 French
Other

OK Cancel

4. Click Urinary Catheter Output and create dynamic group (same as Urinary Catheter, Intake).



The screenshot shows two panes of a software interface. The left pane is a list of medical outputs, with 'Urinary Catheter, Output' highlighted in blue. The right pane displays a table with the following structure:

Oral Intake	mL	
Urinary Catheter, Intake		
Output Total		
Emesis Output		
Emesis Amount		
Negative Pressure Wound Therapy		
Stool Output		
Stool Count (Number of Stools)		
Urinary Catheter, Output		
Urine Output		
Urine Voided	mL	
Balance		

Below the table, a context menu is open for the 'Urinary Catheter, Output' row, showing options: 'Urinary Catheter, Output' and 'Add a dynamic group.'.

5. Enter urine amount voided in Urine output.

For additional nursing narrative documentation:

1. Go to Menu: Documentation and click Add
2. Select from drop down choices on Type (e.g. Nursing Narrative Note). Mandatory (yellow highlighted) field.
3. Scroll and choose among the different title/format of documentation for the appropriate one (e.g. Procedure Note).
4. Document free text or according to the format (e.g. SOP, DAR).
5. Click Sign and Submit.

Patient and Family Education

1. Provide the patient with the BCCA "For the Patient: BCG for Bladder" information prior to treatment

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2. Most side effects occur during the third instillation. Symptoms usually begin 2 to 4 hours after instillation and can persist for 24 to 72 hours.
3. Common side effects include:
 - a. Flu-like illness, shortly after treatment. Possible fever, chills, headache, muscle aches, joint aches. Such symptoms will usually disappear on their own and/or with bed rest and antipyretic treatment.
 - i. **If symptoms persist for longer than 48 hours or are worsening. Please seek emergency medical help.**
 - b. Bladder irritation including discomfort when urinating, urinating more frequently, blood in the urine and frequent urge to urinate.
 - c. Muscle or joint pain may occur (rarely).
 - d. Loss of appetite and weight loss may occur (rarely).
 - e. Tiredness and lack of energy may occur (rarely).
 - f. Hair loss does not occur with BCG.
 - g. Nausea does not usually occur with BCG.
4. Reasons to seek emergency medical help
 - a. Signs of systemic BCG infection:
 - i. Fever over 38°C or 100°F
 - ii. Shaking, chills, severe sore throat, productive cough
 - iii. Foul smelling urine
 - b. Signs of allergic reaction:
 - i. Dizziness, difficulty breathing, facial swelling, racing heartbeat
5. Advise patient to drink extra fluids for the next 24 hours, if not advised by their physician. This will help the patient to urinate frequently to help prevent bladder irritation and problems.
 - For 6 hours post treatment, patients should **sit** when urinating, close the lid of the toilet and then flush the toilet **twice** to safely dispose of BCG in the urine. Men should sit down to pass urine, to reduce the chance of splashing. Patients are to wash their hands and genital area well with soap and water after urinating.
 - For 6 hours post treatment, the toilet bowl may be disinfected after voiding by adding 1 to 2 cups of household bleach to the urine in the toilet, letting that sit for 15 minutes before flushing.
 - If it is necessary to decontaminate surfaces that have come into contact with urine containing BCG, a 1:20 dilution of household bleach may be used (1 ounce of bleach in 1 cup of warm water).
 - To protect their partner, advise patients to use a condom or abstain from sexual intercourse for one week after treatment.
 - Advise patients to check with their doctor or pharmacist before starting or stopping any other drugs, as they may interact with BCG.

- Advise patients to tell doctors, dentists, and other health professionals that they are being treated with BCG before receiving any treatment.
- It is not known if BCG may damage sperm or harm the baby if used during pregnancy. It is best to use birth control while being treated with BCG and to tell your doctor right away if you or your partner becomes pregnant. Do not breast feed during BCG treatment.

Related Documents

PHC:

1. [B-00-12-10099](#) - Urinary Catheterization, procedure
2. Occupational Health & Safety [Cytotoxic/Hazardous Drugs](#)

References

B.C. Cancer. Protocol Summary for Therapy for High Risk Superficial Transitional Cell Bladder Cancer using BCG (2012). Accessed February 1 2021

BC Cancer Agency – For the Patient: BCG for the Bladder (2008)

National Institutes of Health. National Cancer Institute - Common Terminology Criteria for Adverse Events (CTCAE) v.5.0 (2017). Accessed February 1 2021.

https://ctep.cancer.gov/protocoldevelopment/electronic_applications/ctc.htm#ctc_60

Merck Canada Inc. OncoTICE® product monograph. Kirkland, Quebec; 1 January 2011, revised April 29 2019.

PHC –VCH Parenteral Drug Therapy Manual, Product Monograph BCG (2019)

VCH BCG Bladder Instillation Procedure for Ambulatory Clinics (2012)

Appendix A: Defined and Graded Non-infective Cystitis

National Cancer Institute's Common Terminology Criteria for Adverse Events (CTCAE) v.5.0 (November 27 2017. P112.)

Adverse Event	Grade				
	1	2	3	4	5
Non-Infective Cystitis	Microscopic hematuria; minimal increase in frequency, urgency, dysuria, or nocturia; new onset of incontinence	Moderate hematuria; moderate increase in frequency, urgency, dysuria, nocturia or incontinence; urinary catheter placement or bladder irrigation indicated; limiting instrumental ADL	Gross hematuria; transfusion, IV medications, or hospitalization indicated; elective invasive intervention indicated	Life-threatening consequences; urgent invasive intervention indicated	Death

https://ctep.cancer.gov/protocoldevelopment/electronic_applications/docs/CTCAE_v5_Quick_Reference_8.5x11.pdf

Definition: A disorder characterized by inflammation of the bladder which is not caused by an infection of the urinary tract.

Persons/Groups Consulted

Clinical Pharmacist, Chemotherapy/TPN SPH

Clinical Nurse Specialist, – IV Therapy, Vascular Access and Chemotherapy, Heme/Onc

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