Bladder Cancer Canada
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“Bladder Cancer 2018: A brighter light at the end of the cystoscope”

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**Bladder Cancer: The 5\textsuperscript{TH} Most Common Cancer in Canada**

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<th>ESTIMATED NEW CASES AND DEATHS, CANADA</th>
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<td><strong>NEW CASES</strong></td>
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<td><strong>DEATHS</strong></td>
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1 in 27 Canadians will be diagnosed with bladder cancer in their lifetime

Canadian Cancer Society 2016.
Bladder Cancer

- Abnormal growth of cells arising from the lining of the urinary bladder
- Approximately 80% of patients have non-muscle invasive tumours at first diagnosis
- 20% present with muscle invasive and advanced bladder cancer
- Most non-muscle invasive cancers are very treatable and recurrence is preventable
Your bladder sits deep in the pelvis behind the pubic bone.

- In front of the rectum
- Above the prostate in men
- In front of the uterus and vagina in women
Non-muscle invasive bladder cancer

- Main risk factor: Smoking. You have to quit!
  - Dyes, rubber, chemical, printers, hairstylists
  - Prior radiation, chemotherapy, arsenic
  - Family history
- Most common symptom: blood in urine
  - Can be visible or under the microscope
  - Urgency, frequency, painful urination
- Tests: ultrasound or CAT scan and cystoscopy
  - Urine analysis, culture (for infection)
  - Cytology (looks for cancer cells in urine specimen)
Cystoscopy

- Awake
- Freezing jelly in urethra
- 2 minutes
Bladder umours as seen through the cystoscope
Imaging

- Multiple options available
  - Important not only to image the bladder but also the kidneys
  - Options: CT scan, MRI, US

- Purpose:
  - Assess extent of local tumour in the bladder
  - Assess for involvement of adjacent organs
  - Assess for distant spread of disease
Next step: Remove the Tumour

This surgery is called a: TURBT (Trans Urethral Resection of Bladder Tumour)

- Done in the operating room through a scope as an outpatient
- Under anesthetic
- “Scraping”
- Includes a piece of the base of the tumour with some muscle from the bladder wall
- Pieces go to the pathologist for microscopic exam
- Pathology report generated in 3-4 weeks
• **Grade**: how aggressive the cells look like under the microscope
  - Grade 1 is non-aggressive
  - Grade 3 is more aggressive

• **Stage**: does it invade and how far
  - **CIS** – flat on surface
  - **TA** – raspberry growth on surface
  - **T1** – invades into the next layer, but not into muscle
Non-muscle invasive bladder cancer

carcinoma-in-situ (flat cancer)

TA: “raspberry” growth, no invasion

T1: invades top layer but not to muscle
Next Steps: Divide into 2 groups

- At risk of *Recurrence*: coming back requiring repeated scrapings
  - Low grade, not invasive (just on top layer), multiple tumours

- At risk of *Progression*: coming back and invading into the muscle layer
  - High grade, CIS (flat tumour), T1 (through top layer)
Tumours at risk of Recurrence

- Usually no threat to life
- Only 1-3% progress to riskier form
- Frequent need for scraping surgery
- Sometimes use a medication called Mitomycin-C to prevent recurrences
- Can be put into the bladder in the OR after a TURBT
- Cystoscopy regularly to monitor for recurrences
Tumours at risk for Progression

- 10-50% will become muscle invasive
- Treat with Immunotherapy drug called BCG to decrease the chance of progression
- Weakened TB bacteria mixed in water and put into the bladder by catheter
- Weekly for 6 weeks, then long term treatments for 3 years
- Reduces progression rates
BCG side effects

- Burning, frequency, urgency
- Fatigue
- Low grade fever
- Blood in the urine
- Urinary infection
- Long term bladder problems rare
- Blood borne BCG infection rare

- Time, Tylenol, skip a week, antibiotics, drugs to decrease bladder spasm, reduced dose of BCG, stop therapy, rarely anti-tuberculosis medications

Usually less than 24 hours
EMDA: ElectroMotive Drug Administration

The current pushes the Mitomycin drug into the bladder wall
Bluelight Cystoscopy

Regular cystoscopy using white light

Bluelight cystoscopy after instilling a chemical into the bladder “Cysview”
Tumours at risk for Progression

- Require repeat biopsies (TURBT) to monitor
- Regular cystoscopy and cytology lifelong
- Occasional CT scans of the kidneys and ureters to monitor for same tumours as in the bladder
- If can’t eradicate the high grade tumours with BCG and TURBT, have to consider moving to bladder removal (cystectomy) to prevent more invasion and spread of the cancer
Cancer invades into muscle or through it

Higher risk of spreading

Muscle Invasive Bladder Cancer
Treatment Options for Muscle Invasive Bladder Cancer

- Surgery to remove the bladder (cystectomy)
  - usually combined with chemotherapy first

- Radiation with Chemotherapy to preserve the bladder
  - Good option in some select patients (e.g. smaller tumours)
General Advice to Patients

- Ask questions, write them down, bring someone
- Understand your grade and stage (you are entitled to having the reports)
- Am I at risk of progression?
- Know your options, side effects, risks
- Report side effects to the nurse or doctor
- In some cases the riskiest thing is to continue to try to avoid major surgery
- Second opinion
- Make sure you get a follow up, don’t rely entirely on your urologist’s office (if you think you are due or overdue, call!)