Ottawa Hospital

de l'Hôpital d'Ottawa

Bladder Cancer Canada

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"Bladder Cancer 2018: A brighter light at the end of the cystoscope"

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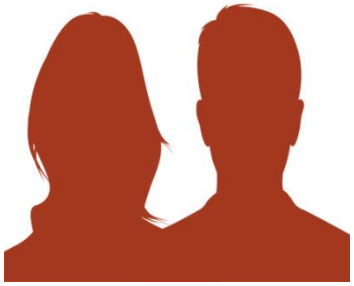
Bladder Cancer: The 5TH Most Common Cancer in Canada

ESTIMATED NEW CASES AND DEATHS, CANADA

NEW CASES

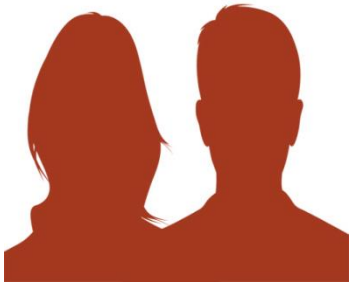
8,700



2,100 **6,600**

DEATHS

2,300



650 **1,650**

1 in 27 Canadians will be diagnosed with bladder cancer in their lifetime

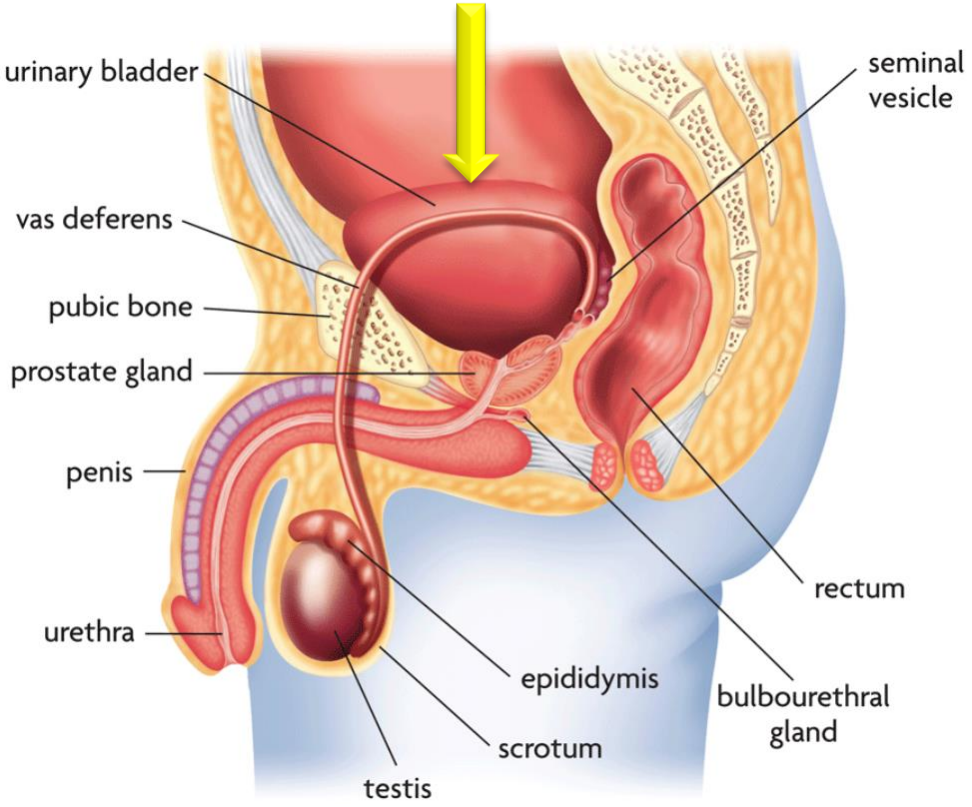
Canadian Cancer Society 2016.

Bladder Cancer

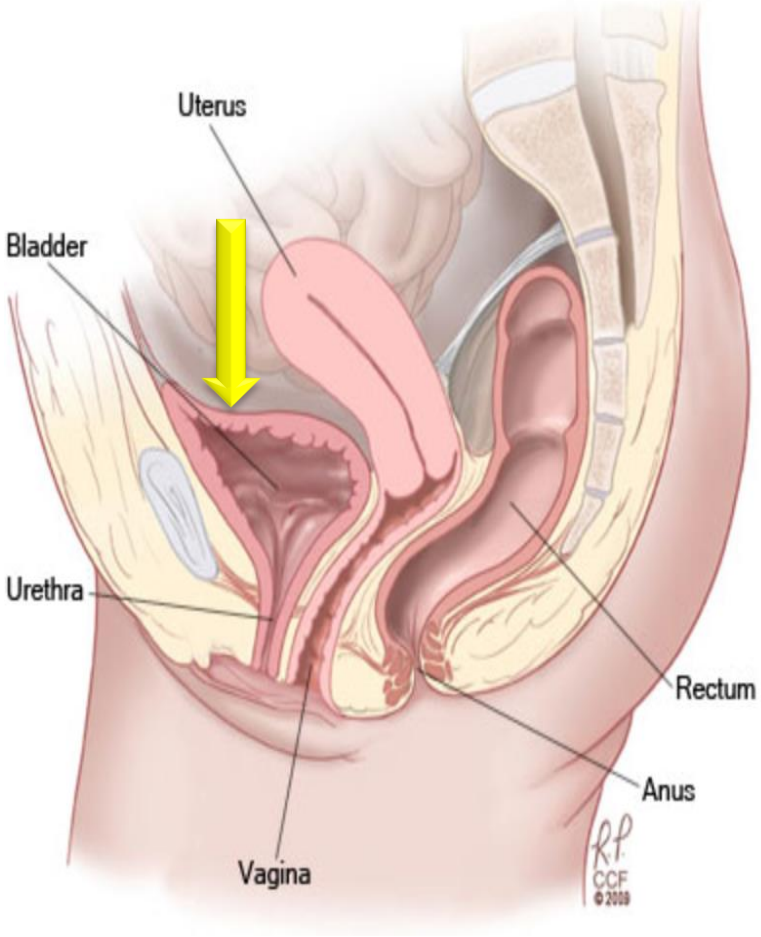
- Abnormal growth of cells arising from the lining of the urinary bladder
- Approximately 80% of patients have non-muscle invasive tumours at first diagnosis
- 20% present with muscle invasive and advanced bladder cancer
- Most non-muscle invasive cancers are very treatable and recurrence is preventable

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

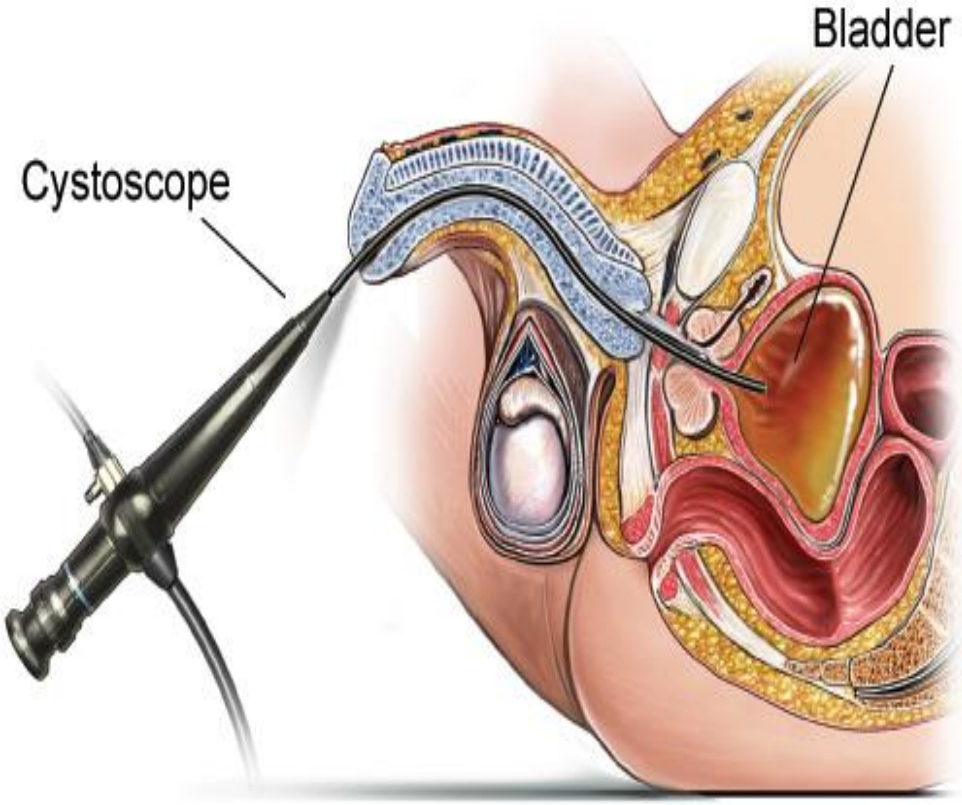


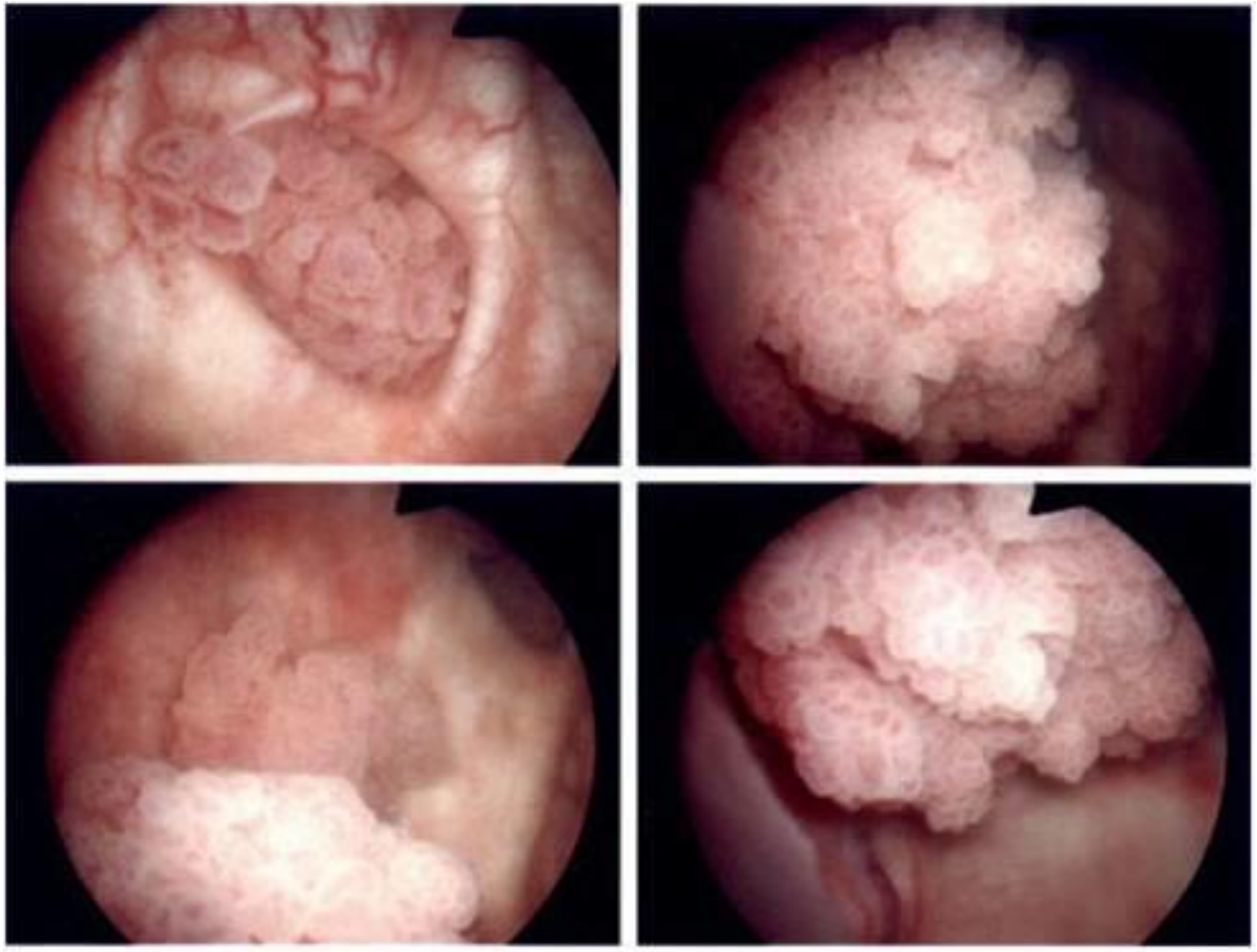
Non-muscle invasive bladder cancer

- 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

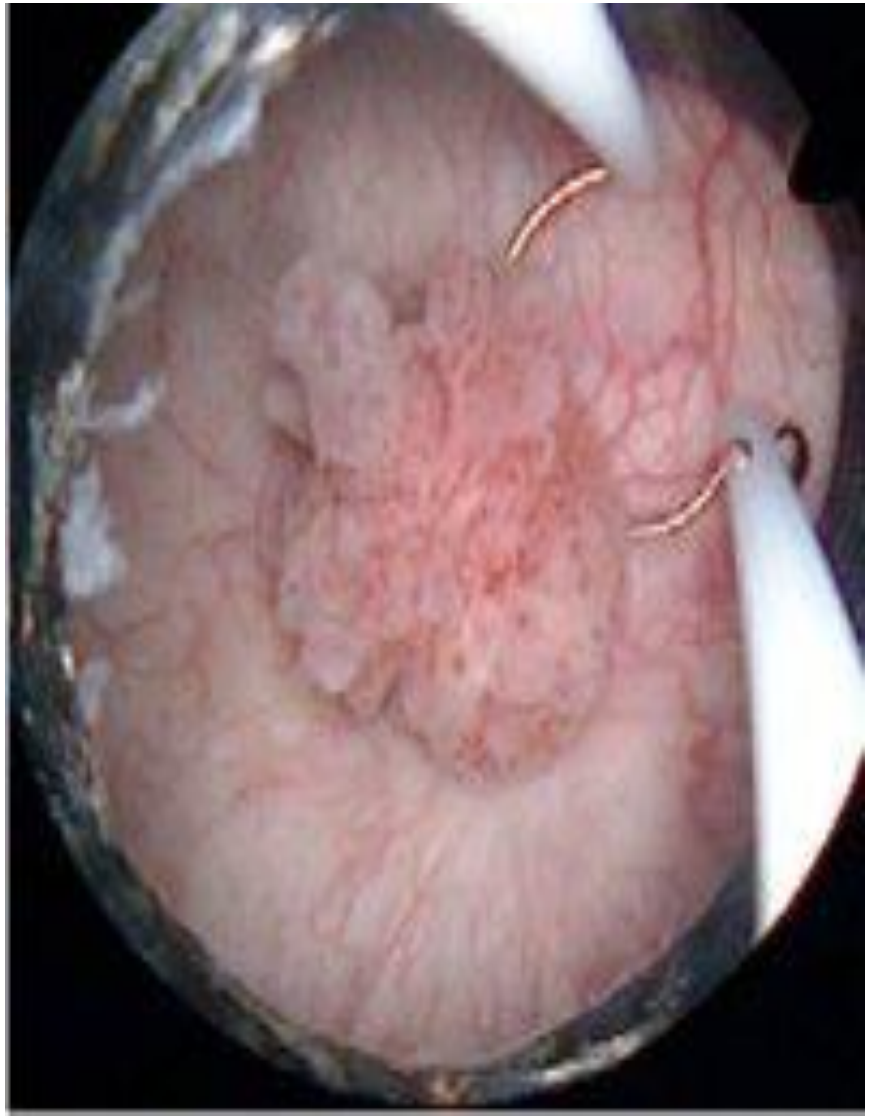
CT Scan

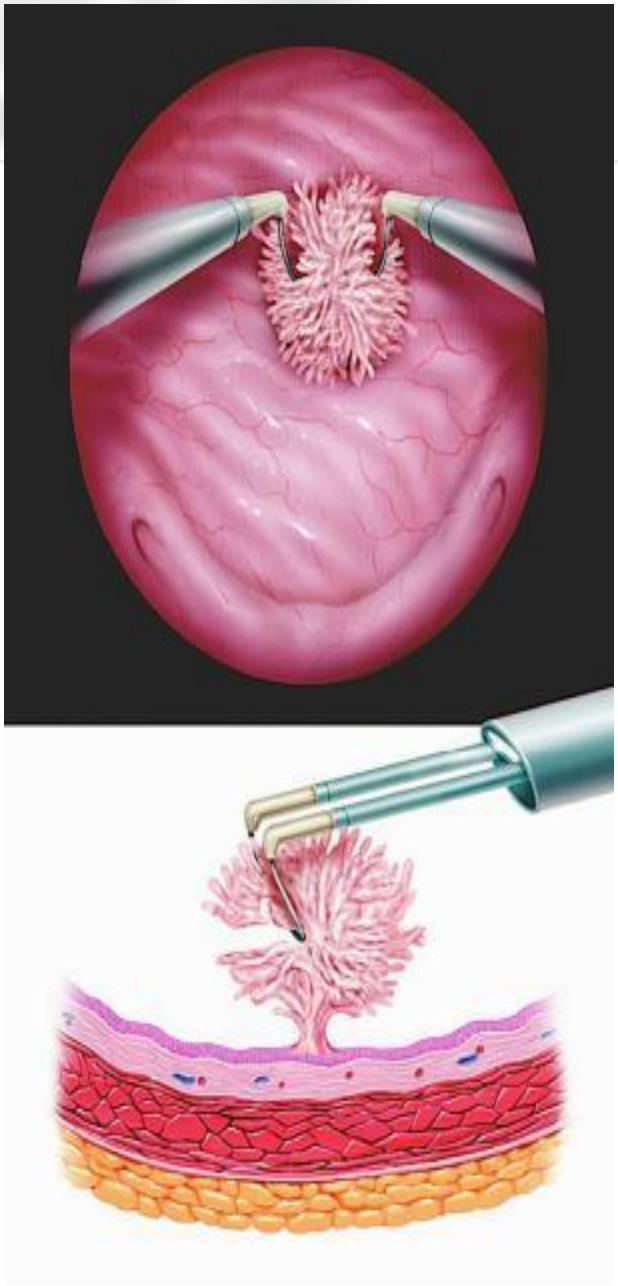
Next step: Remove the Tumour

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

TURBT





Grade and Stage: The keys

- 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

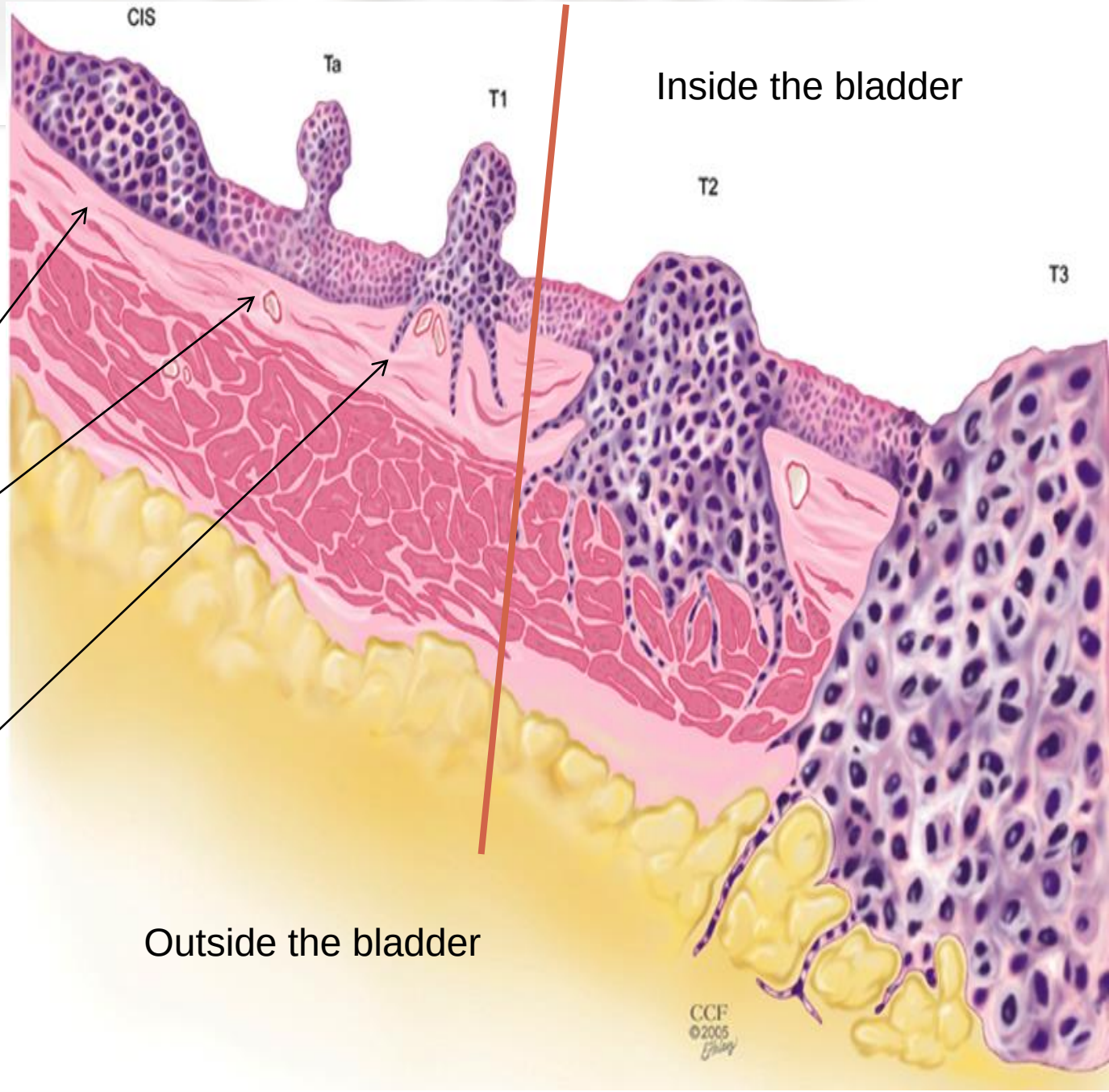
T1 – invades into the next layer, but not into muscle

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

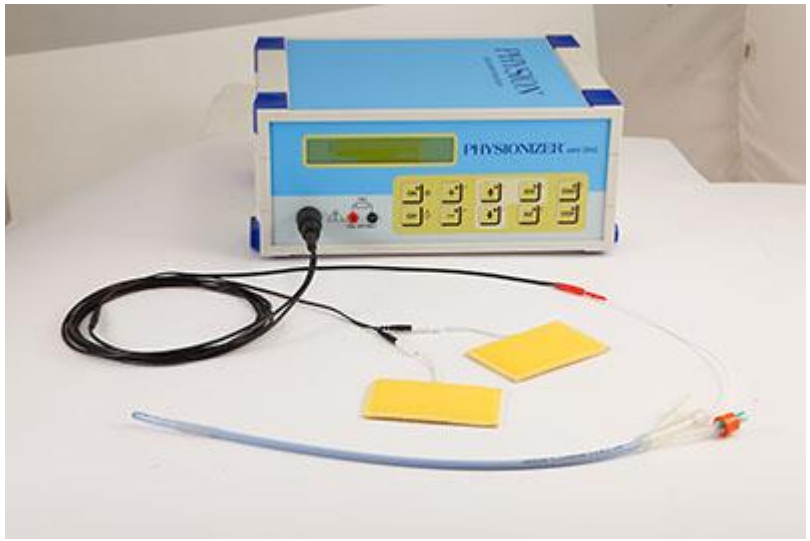
Usually less than 24 hours

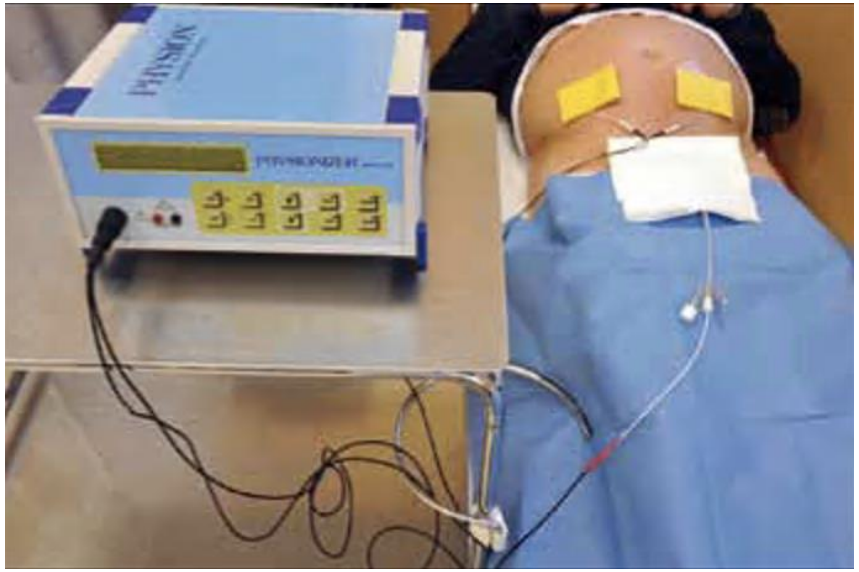
- Urinary infection
- Long term bladder problems rare
- Blood borne BCG infection rare

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

New technologies

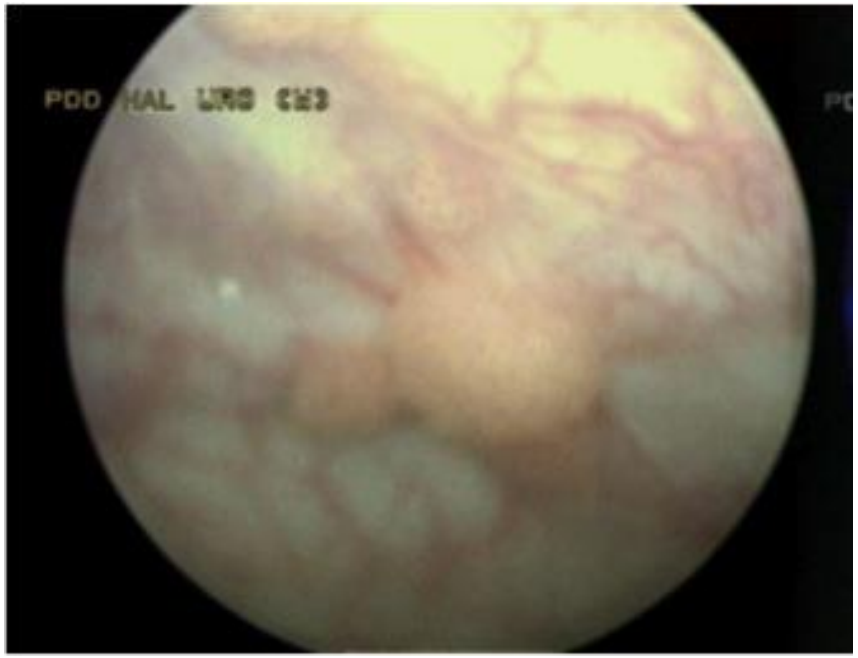
EMDA: ElectroMotive Drug Administration



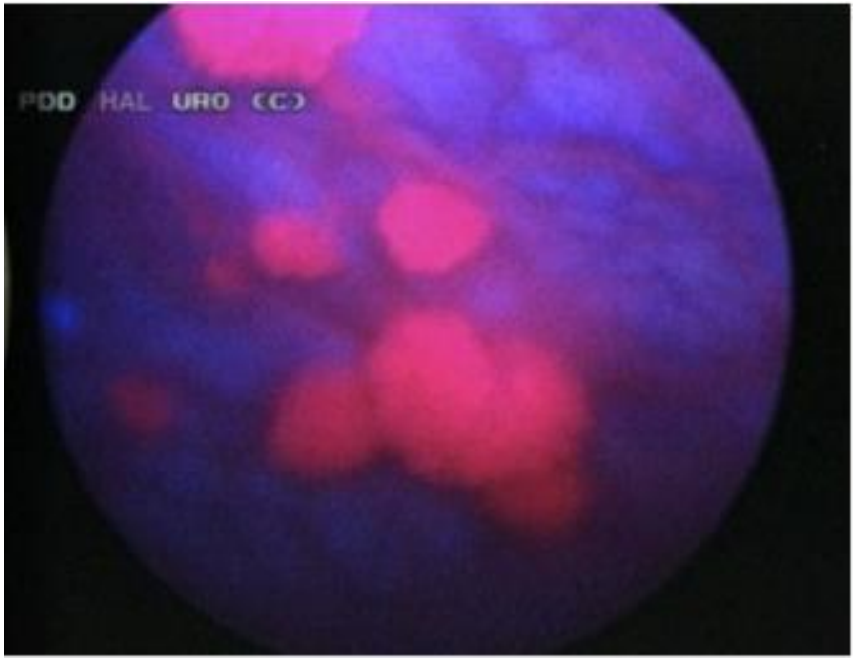


The current pushes the Mitomycin drug into the bladder wall

Bluelight Cystoscopy



Regular cystoscopy using white light

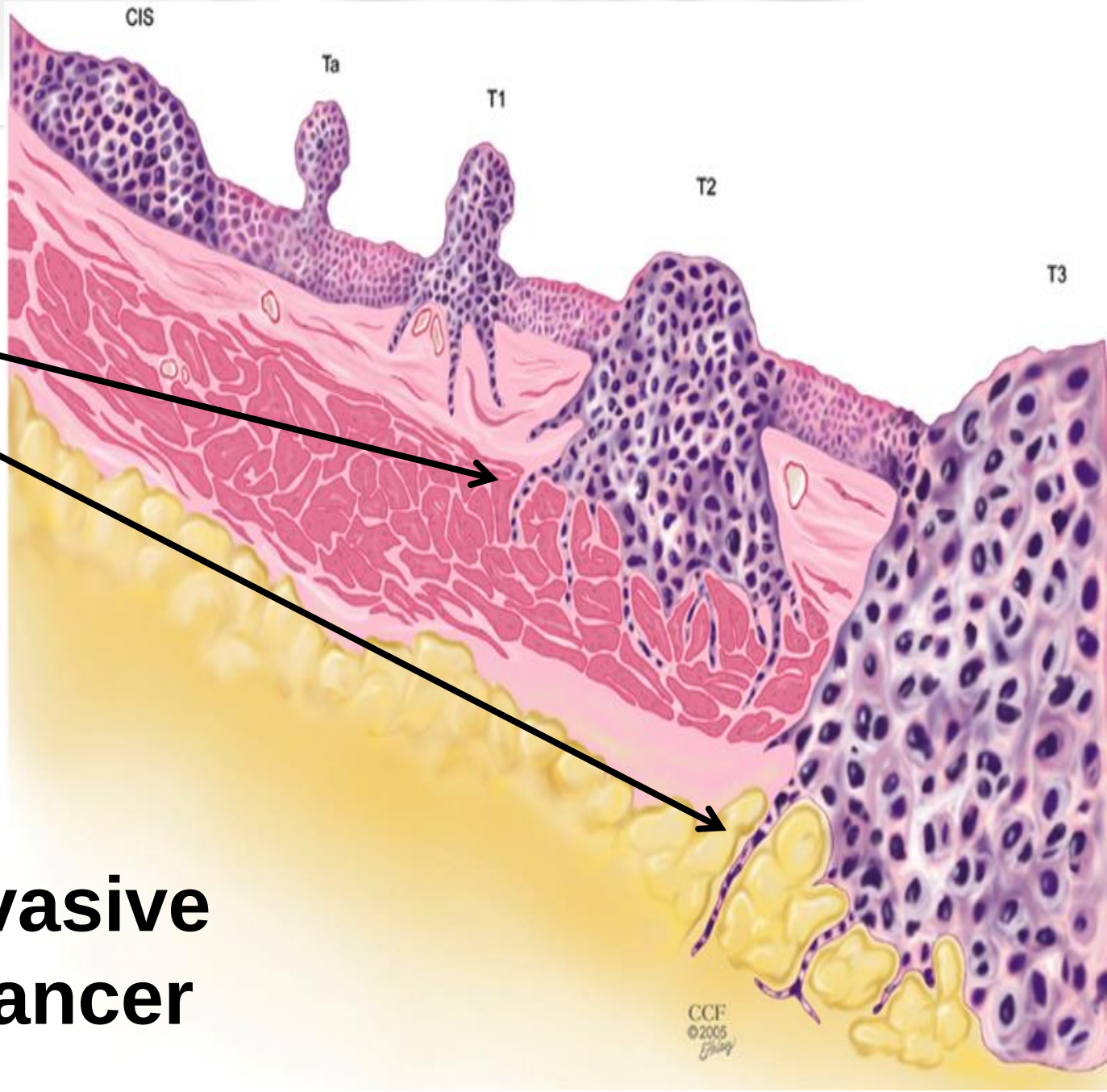


Bluelight cystoscopy after instilling a chemical into the bladder “Cysview”

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!)