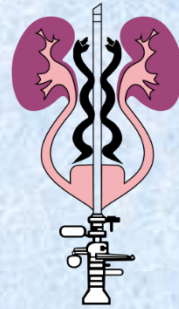


Bladder Tumours



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Bladder Cancer (TCC)



**The second most common cancer of the
genitourinary system**

The male-female ratio is 2.7/1

**The peak incidence is in persons between 50-
70 years**

Etiology

Cigarette smoking (most common)

Industrial toxins

Genetic events

Other risk factors

**(cyclophosphamide, alkylating agents,
radiotherapy of pelvis.)**

Pathology

Histopathology

transitional cell carcinoma 90%
squamous cell carcinoma 7-8%
adenocarcinoma 1-2%
other types

Grading

Grade 1 mild anaplasia
Grade 2 moderate anaplasia
Grade 3 marked anaplasia

Clinical Findings

A. Symptoms:

- Painless macroscopic hematuria 85-90%
- Irritative voiding symptoms
- Obstructive symptoms
- Metastatic symptoms

B. Signs:

- The majority of patients have no physical signs.

Symptoms/Signs of Bladder Cancer

- **Hematuria**
- Irritative voiding symptoms (frequency & urgency)
- Masses detected on bimanual examination
- Hepatomegaly or palpable lymphadenopathy, lymphedema of lower extremities in patients with metastatic disease

Clinical Findings

C. Lab tests:

- **Urine test——hematuria**
- **Urinary cytology——depend on grade and volume of the tumor**
- **Other markers in urine ——BTA, NMP22, telomerase (but not so sensitive)**

Lab Findings – Bladder Cancer

- Urinalysis: microscopic/gross hematuria, pyuria
- Anemia due to chronic blood loss or bone marrow metastases
- Urine cytology is sensitive in detecting higher grade and stage lesions but less so in detecting superficial, low-grade lesions
- Azotemia, ↑ creatinine due to ureteral obstruction

Clinical Findings

D. Imaging:

- **Ultrasonography—screen**
- **IVU—evaluation of upper urinary tract**
- **CT/MRI—assessment of the depth of infiltration and pelvic LN enlargement**

E. Cystoscopy

Diagnosis

Ultrasonography can be used as screening method to detect bladder tumors and upper urinary tract obstruction.

both CT and MRI are used to see the extent of bladder wall invasion and detect enlarged pelvic lymph node.

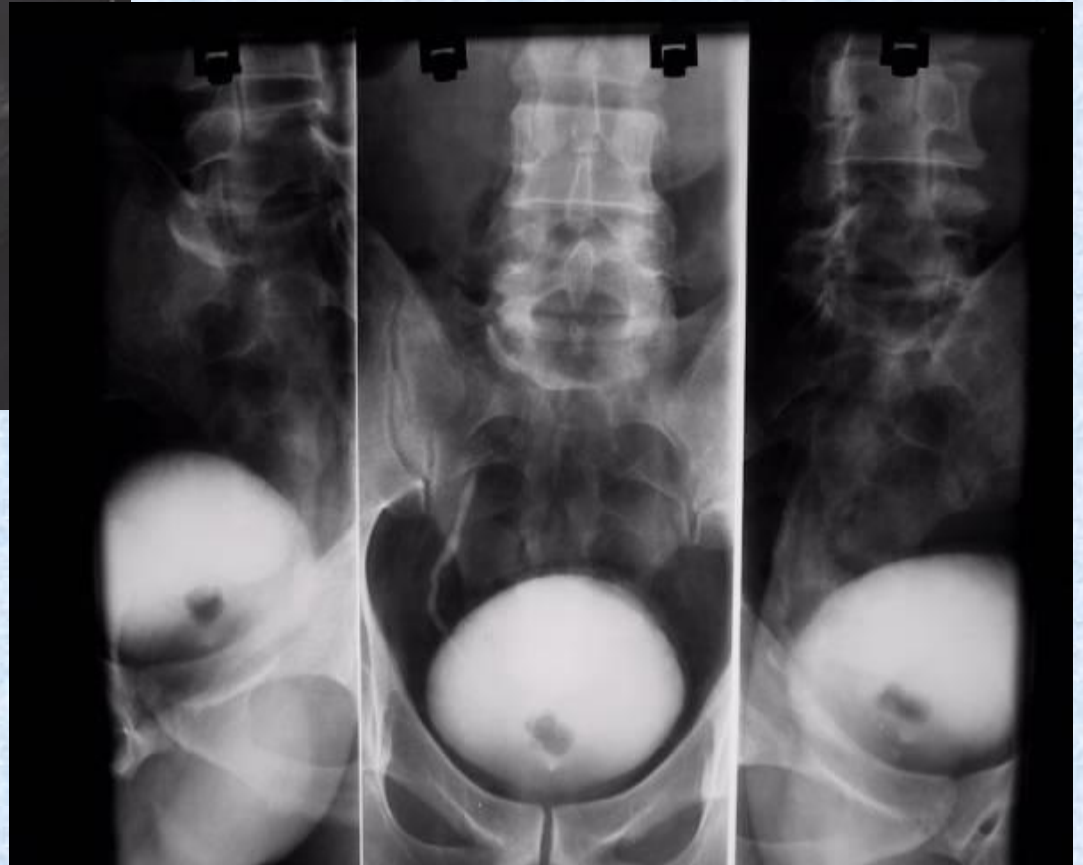
Diagnosis

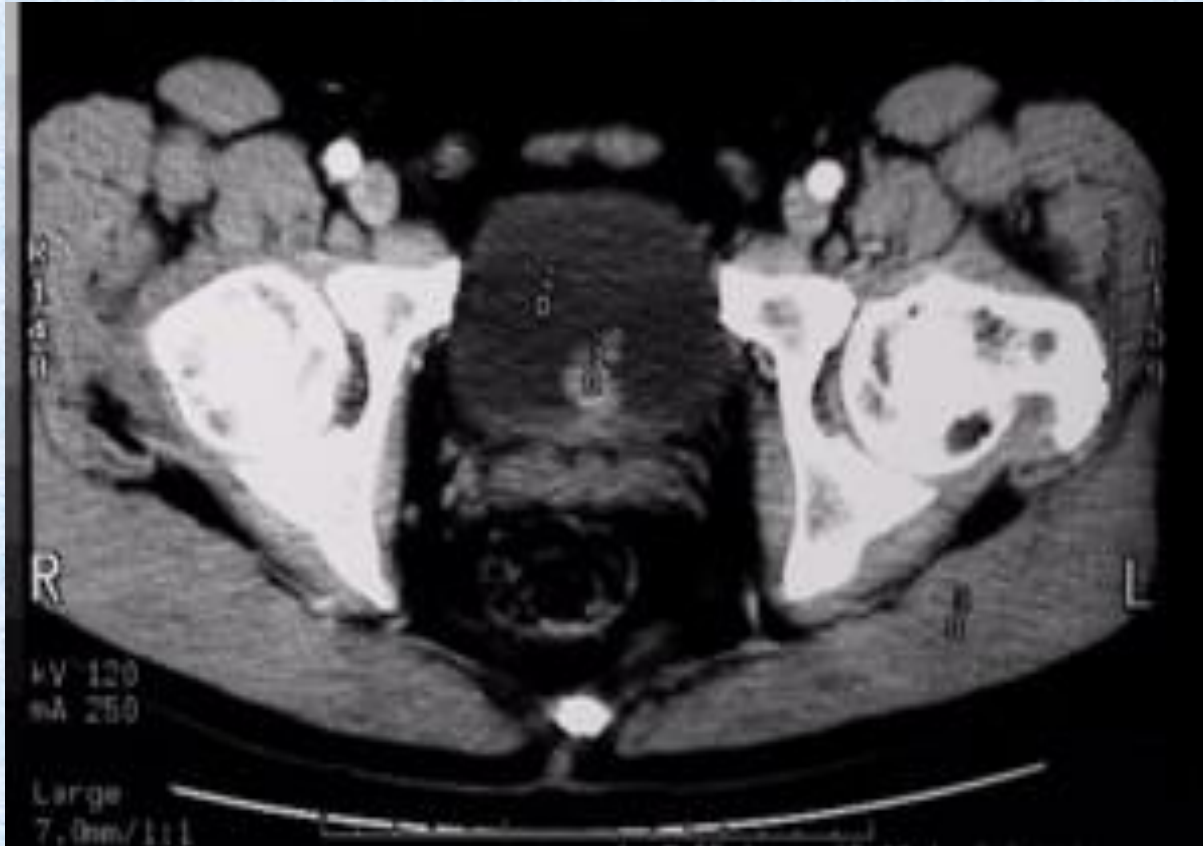
Cystoscopy

cystoscopy is the gold standard to detect the bladder cancer

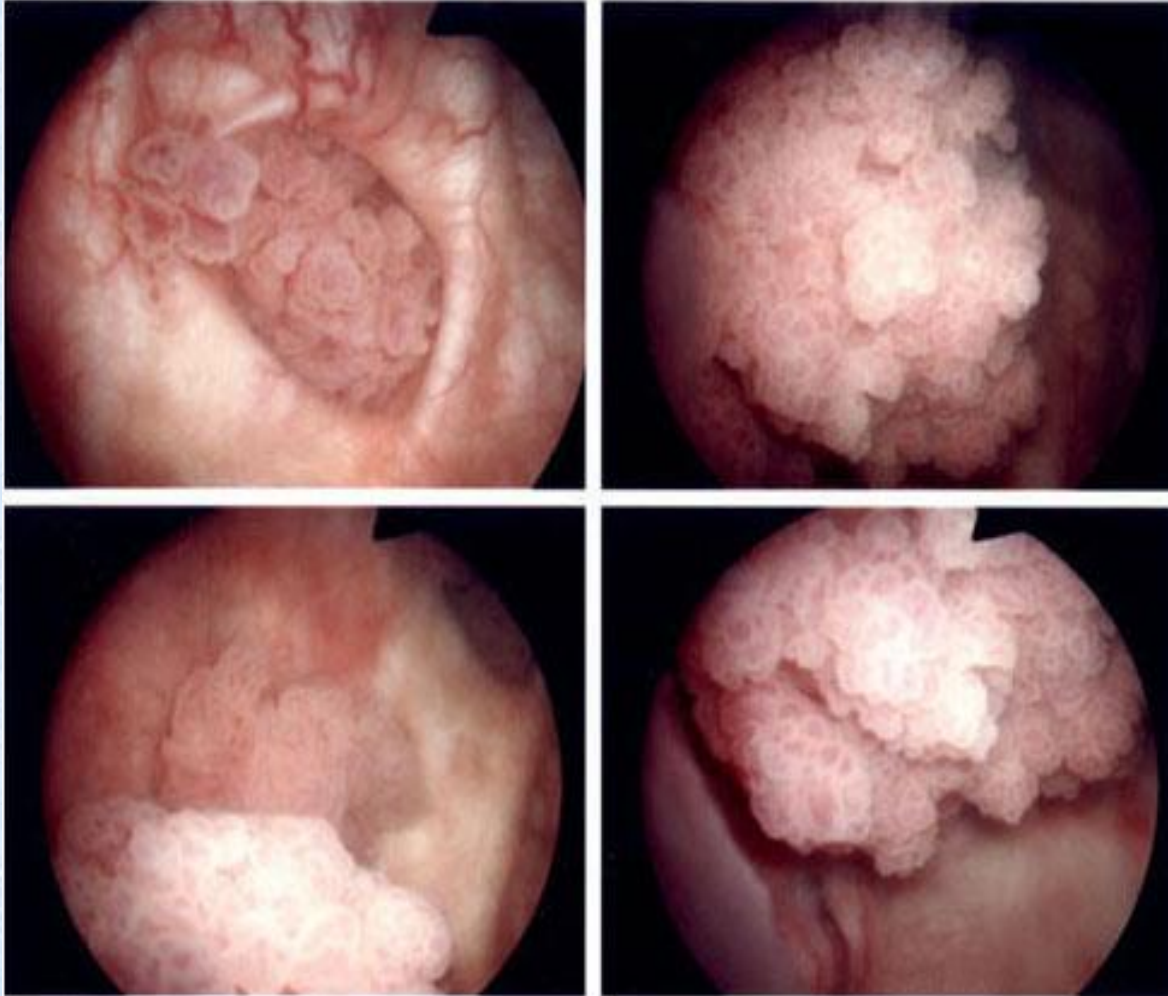
cystoscopy can provide good information on the extent of the tumour.

biopsy can be taken from suspicious area.





CT scan of bladder Ca



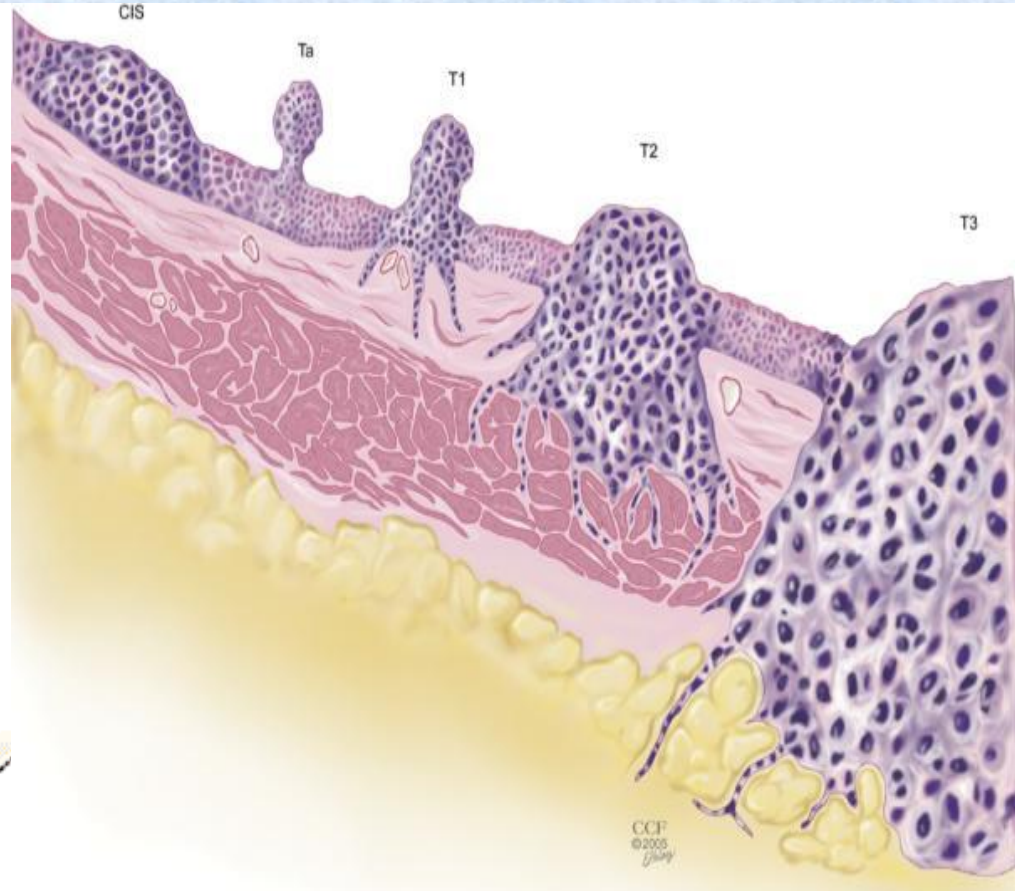
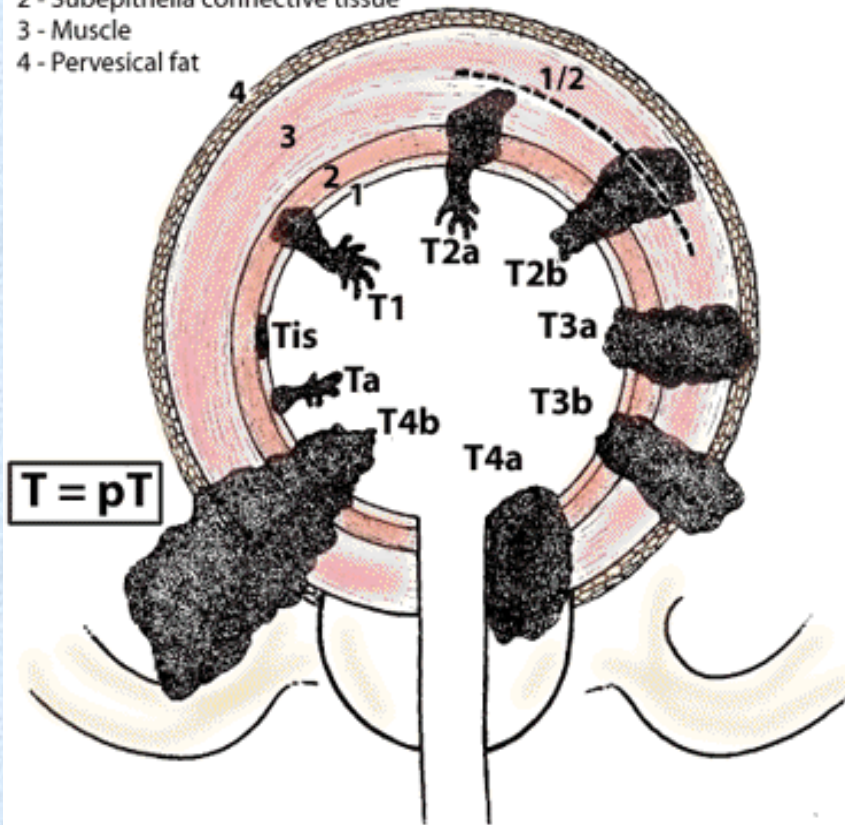
Cystoscopy of bladder Ca

Pathology of Bladder Cancer

- Most common: urothelial cell carcinomas
- Rare in the US: squamous cell carcinoma (associated with schistosomiasis, bladder calculi or chronic catheter use) & adenocarcinoma
- Bladder CA staging based on the extent of bladder wall penetration & either regional or distant metastases
- Bladder CA grading based on histologic appearance: size, pleomorphism, mitotic rate & hyperchromatism
- Frequency of recurrence & progression strongly correlated with grade

TNM Tumor Staging

- 1 - Epithelium
- 2 - Subepithelia connective tissue
- 3 - Muscle
- 4 - Perivesical fat



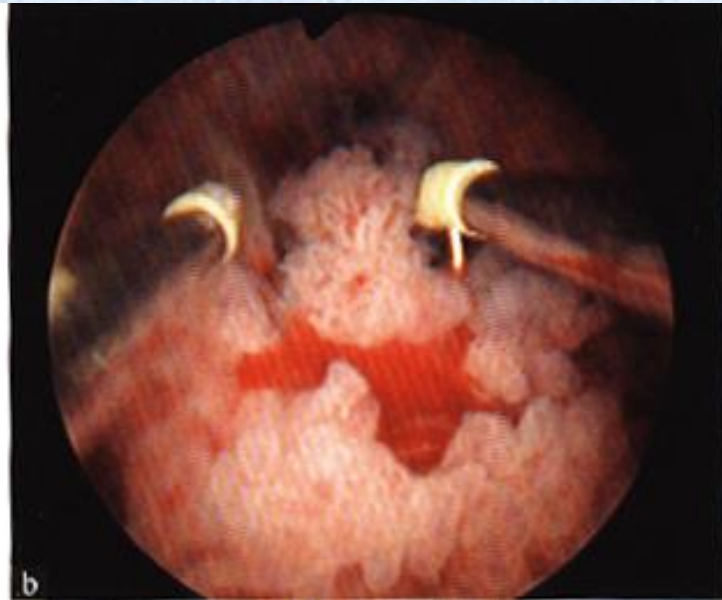
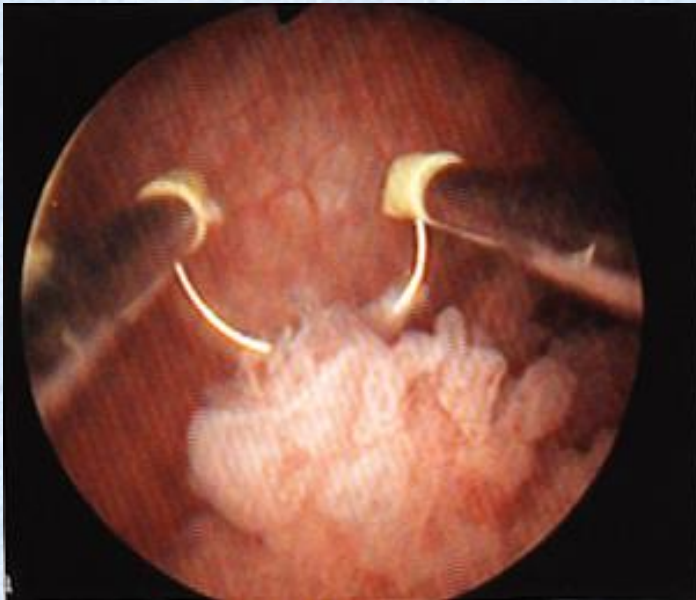
Treatment of Bladder Cancer

- Transurethral resection of bladder tumor
 - Initial tx for all bladder cancers
 - Diagnostic & allows for proper staging
 - Controls superficial cancers

Treatment

Superficial bladder cancer (Ta,T1,Tis)

- transurethral resection
- intravesical chemotherapy or immnotherapy(BCG)
- cystoscopic controls in every three months



Treatment

Invasive bladder cancer (T2-T4)

Partial cyctectomy

solitary, infiltrating tumors localized along the posterior lateral wall or dome of the bladder.

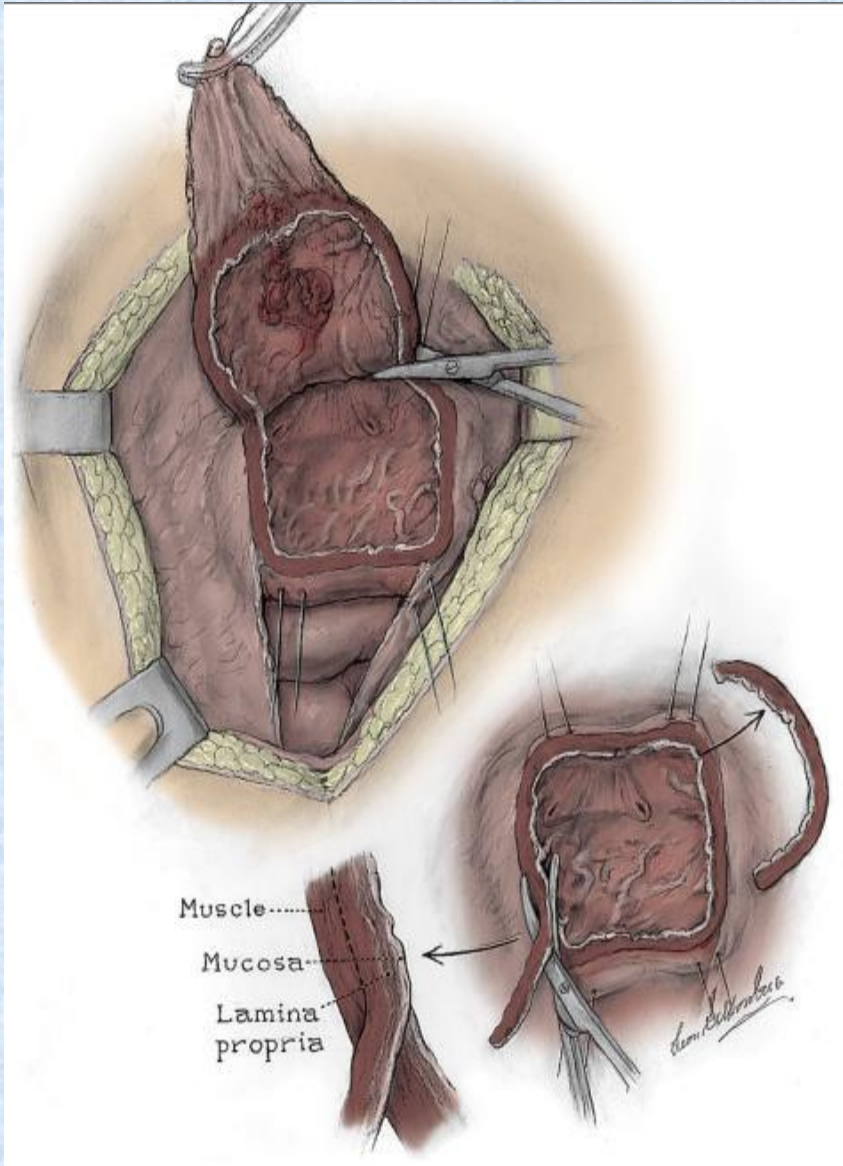
Radical cystectomy

1.muscle-invasive bladder cancer T2-T4

2.high-risk superficial tumours

3.extensive papillary disease

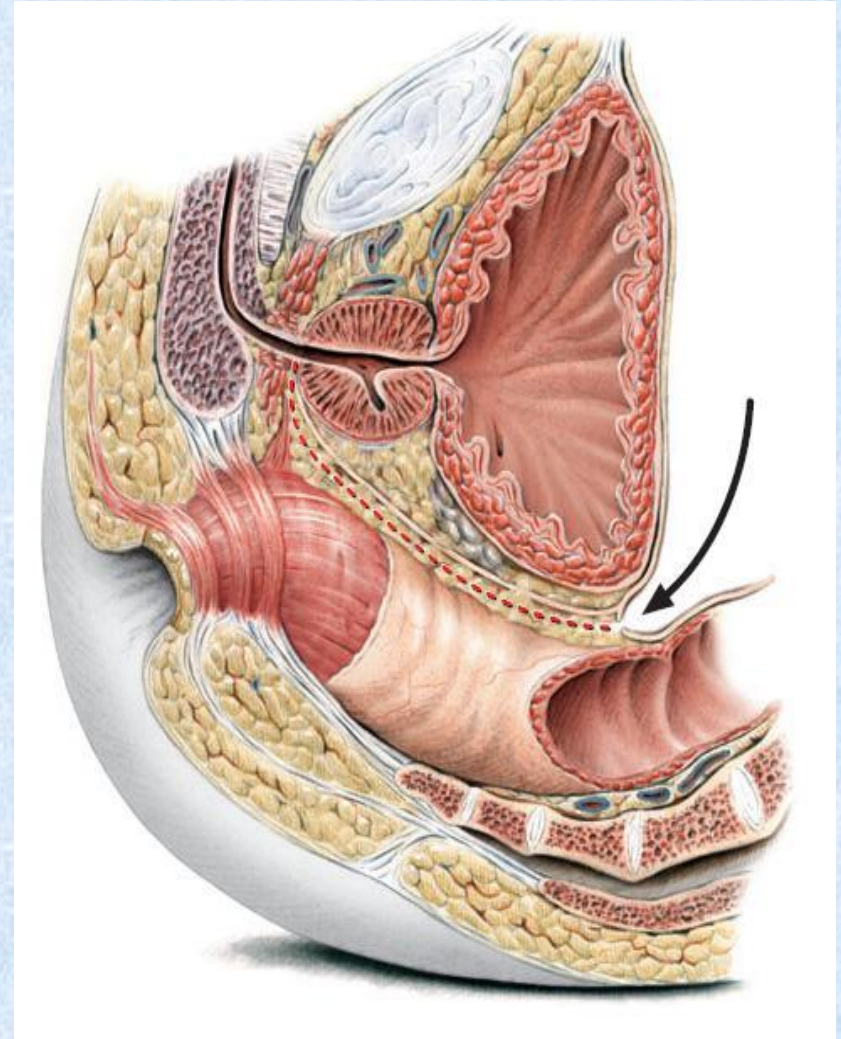
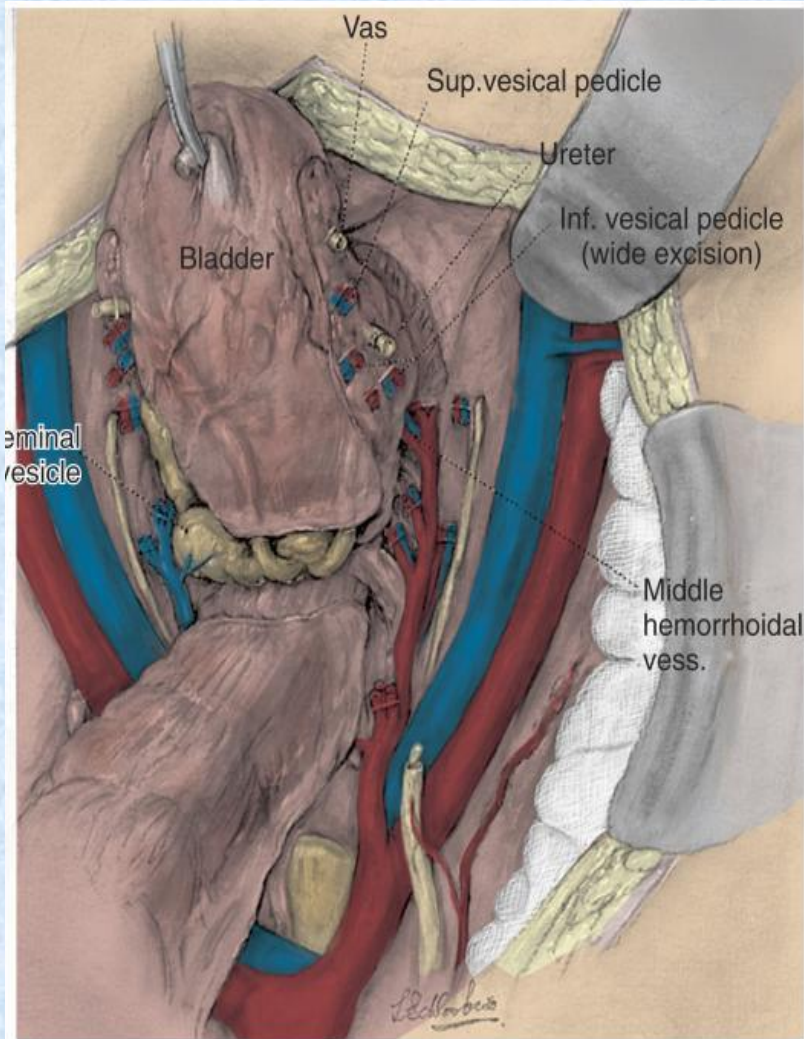
Urinary diversion after radical cystectomy



partial cyctectomy

Cystectomy

- Cystectomy
 - Treatment for muscle infiltrating cancers
 - Partial cystectomy: for pts with solitary lesions or cancers in a bladder diverticulum
 - Radical cystectomy: bilateral pelvic lymph node dissection, removal of bladder, prostate, seminal vesicles & surrounding fat/peritoneal attachments in men & in women also the uterus, cervix, urethra, anterior vaginal vault & usually the ovaries



Radical Cystectomy

Treatment

Radiotherapy

Modern 3D-radiotherapy is a reasonable treatment option in patients who wish to preserve their bladder

Chemotherapy

chemotherapy for metastatic disease.

Prognosis-Bladder Cancer

- At initial presentation, approximately 50-80% of bladder cancers are superficial
- Lymph node metastases & progression are uncommon in such patients when properly treated & survival is excellent at 81%
- Long-term survival for patients with metastatic disease at presentation is rare

For more information visit at:

<https://youtu.be/k-xtn71MUG4>

Teşekkürler