Urinary bladder cancer
Introduction

• The most common type of bladder cancer is transitional cell carcinoma (urothelial carcinoma)  
  More common in:
  ...males
  ...old adults (80% are between 50 & 80 years of age)
  ...smokers
  ...industrialized countries

• Other 2 types are far less common (Squamous cell carcinoma (remember Schistosoma infection and chronic bladder irritation) & adenocarcinoma (remember urachal remnants and intestinal metaplasia)
Remember that **urothelial neoplasms** (benign and malignant) of the urinary bladder are generally:

- **Flat**
  - Urothelial carcinoma in situ (no basement membrane invasion)
  - Flat urothelial carcinoma (The basement membrane is invaded)

- **Exophytic**
  - 1- Papilloma (benign)
  - 2- Papillary urothelial neoplasm of low malignant potential (unconfirmed behavior)
  - 3- Papillary urothelial carcinoma, low grade
  - 4- Papillary urothelial carcinoma, high grade

- **Others**
The most important (other than metastasis) in prognosis is: **Detrusor muscle (muscularis propria) invasion**

- In situ and high grade papillary urothelial carcinoma are more risky for muscle invasion than low grade papillary urothelial carcinoma

...when low grade papillary urothelial carcinoma acquires bad mutations, they become of high grade with more risk of invasion.

...in carcinoma in situ, the bad mutations are from the beginning so the risk of invasion is high from the beginning.
Cytopathology and histopathology of bladder tumors

- Cytopathology examination for a bladder tumor is by examining urine for the presence of suspicious cells.

- Histopathology is mostly when the urologist gets through the cystoscope to the tumor and send us the tissue he removes (transurethral resection of tumor…TURT)

- Urothelial carcinoma in situ is commonly multifocal and may appear in the ureters and urethra.
Bladder cancer, clinical notes

• Intermittent painless gross hematuria

• Recurrences are common

...more with:

Tumor size, stage, grade, multifocality, mitotic index, and associated dysplasia and/or CIS in the surrounding mucosa

Cytology is good for CIS & high-grade papillary carcinoma ...because of less cohesiveness between the cells...more to be shedded in urine

Treatment: surgery (TURT or radical cystectomy) & immunotherapy (BCG)

...follow up by cytology
Thank You