MDT Co-ordinators conference

Wed March 3rd
Renaissance Hotel
Heathrow

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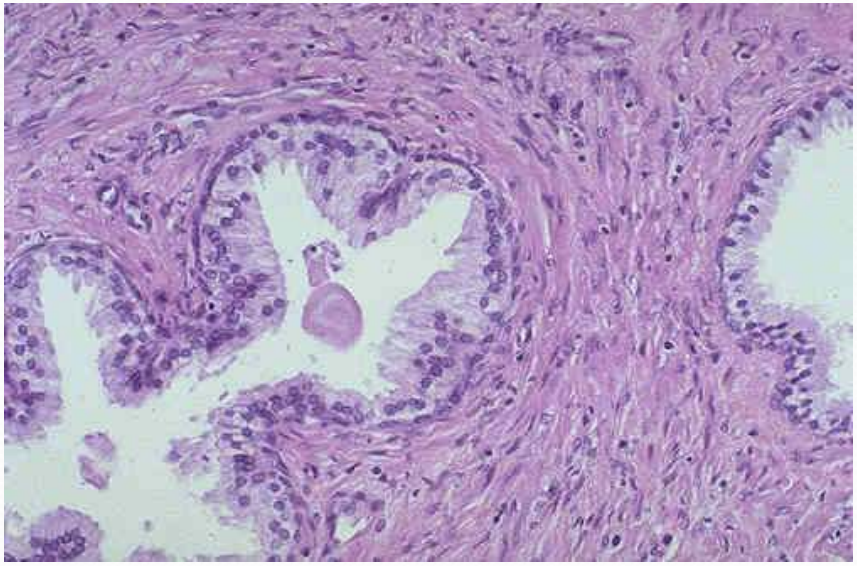
Prostate and bladder cancer

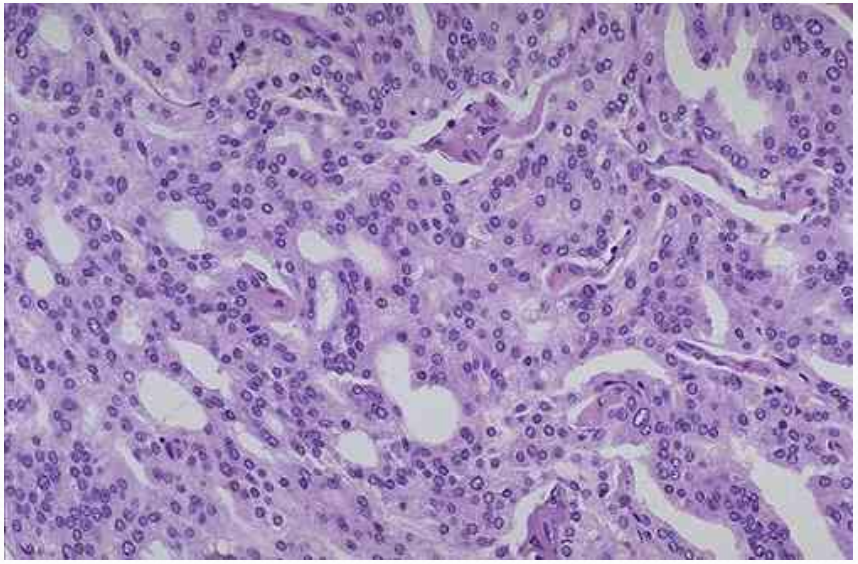
- What is it?
- How does it present?
- How do we make the diagnosis?
- How do we grade it?
- How do we stage it ?
- What are the treatment options in the MDT?

Prostate cancer

- Increasingly common with age
  - Familial inheritance in some
- Heterogeneous
  - [different tumours in the same prostate]
- Malignant transformation of prostatic glands
  - hence ADENO-carcinoma
  - ie gland forming

Normal and malignant prostate





Presentation

- [Symptoms]
- PSA testing
- Rectal examination
- Symptoms of metastatic disease
  - Bone pain
  - paralysis

Diagnosis

- Trans rectal biopsy under ultrasound [TRUS]
- Clinical picture + very high PSA

Grading of tumour [degree of malignancy]

- Gleason grade
- Dr. Donald F. Gleason, devised and, in 1966, first published the prostatic carcinoma grading system which bears his name.

Gleason Grading System

The Gleason Grading System is used to evaluate or "grade" prostate cancer cells obtained by needle biopsy. The cells are assigned a number between 1 and 5 — nearly normal cells are Grade 1 and the most abnormal are Grade 5. Then the scores of the two most common cell patterns are added together. Gleason scores range from 2 to 10. The higher the grade, the more aggressive the cancer.

1 Simple round glands, closely packed in rounded masses with well-defined edges.

2 Simple round glands, loosely packed in vague, rounded masses with loosely defined edges.

3A Medium-sized single glands of irregular shape and irregular spacing with ill-defined infiltrating edges.

3B Very similiar to 3A, but small to very small glands which must not form significant chains or cords.

3C Papillary and cribriform epithelium in smooth, rounded cylinders and masses; no necrosis.

4A Small, medium, or large glands fused into cords, chains, or ragged, infiltrating masses.

4B Very similiar to 4A, but with many large clear cells, sometimes resembling "hypernephroma."

5A No glandular differentiation, solid sheets, cords, single cells, or solid nests of tumor with central necrosis.

5B Anaplastic adenocarcinoma in ragged sheets.

Tiger or pussy cat?

- Can we distinguish a cancer that threatens a man from one that does not?
  - Possibly
  - No certainty
- Temptation to err on the side of caution

Staging [mapping]

- Is the tumour localised to the prostate?
- Are there secondaries?
- Options:
  - None [PSA <10]
  - Cross sectional imaging [MRI / CT]
  - Bone scanning [radio isotope scan]

MDT process

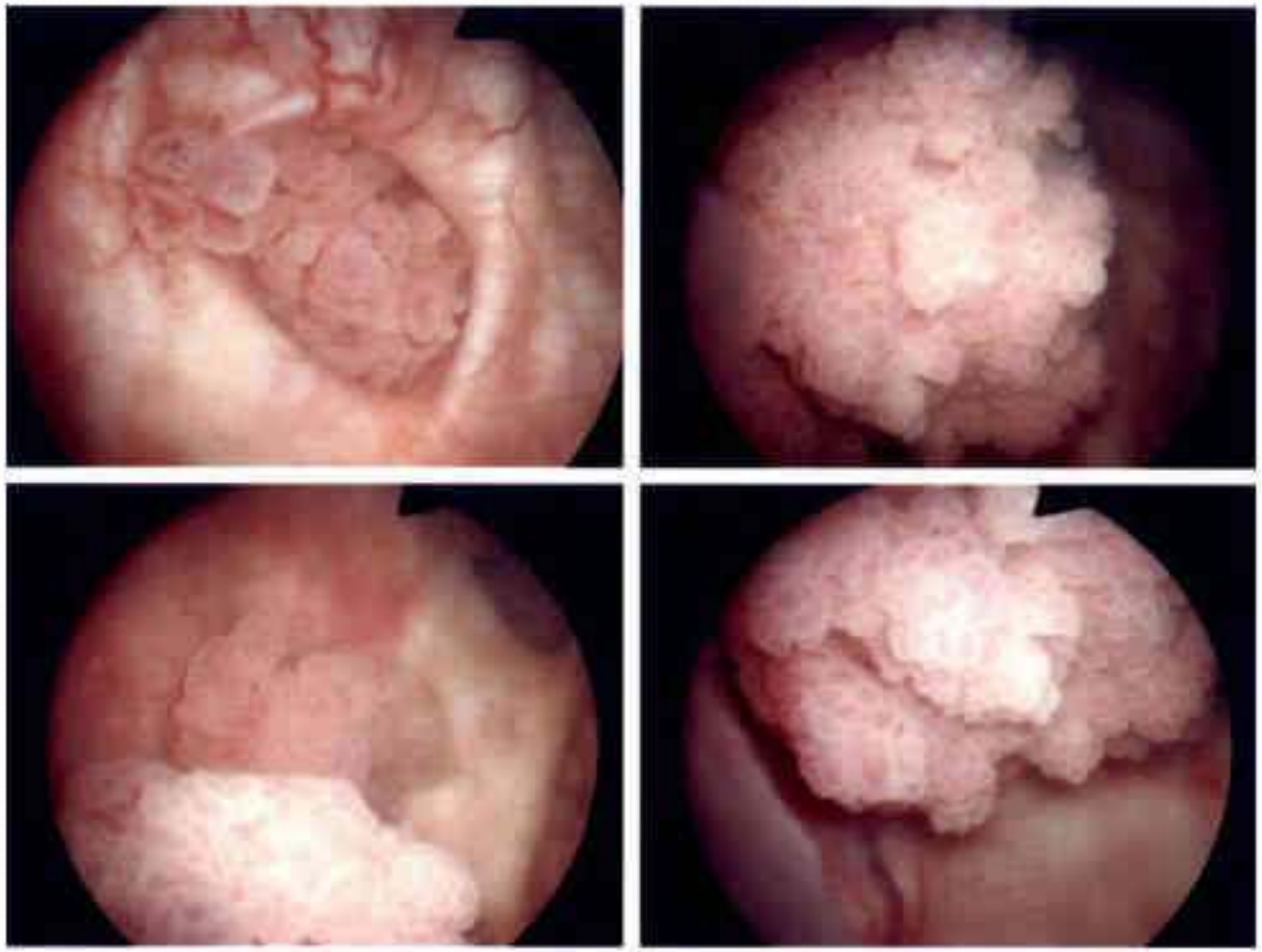
- Review the clinical picture / history
- Co-morbidities
- Review histology [grade =/- stage]
- Review imaging
- Consensus on OPTIONS to put to patient
- Where treatment will be carried out and who by

OPTIONS

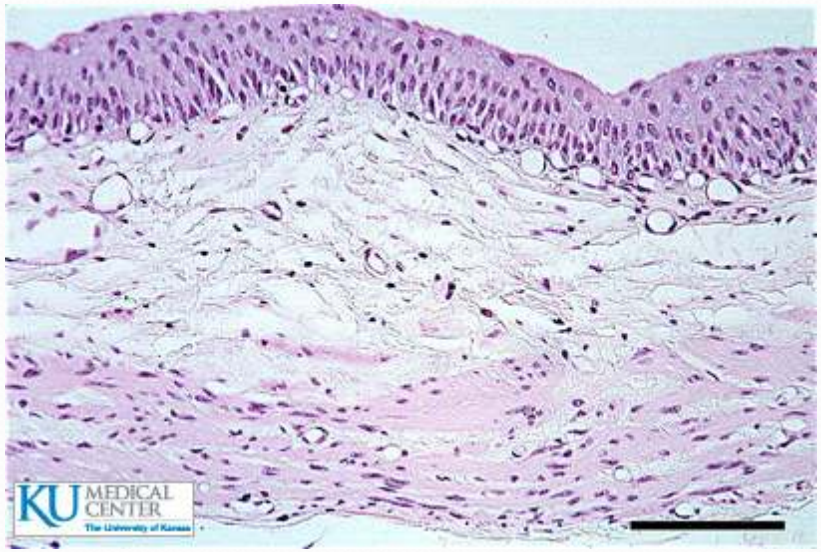
- Active surveillance / watchful waiting
- Surgery
- Radiotherapy
  - EBRT
  - Brachytherapy
- Hormone therapy
- Combination

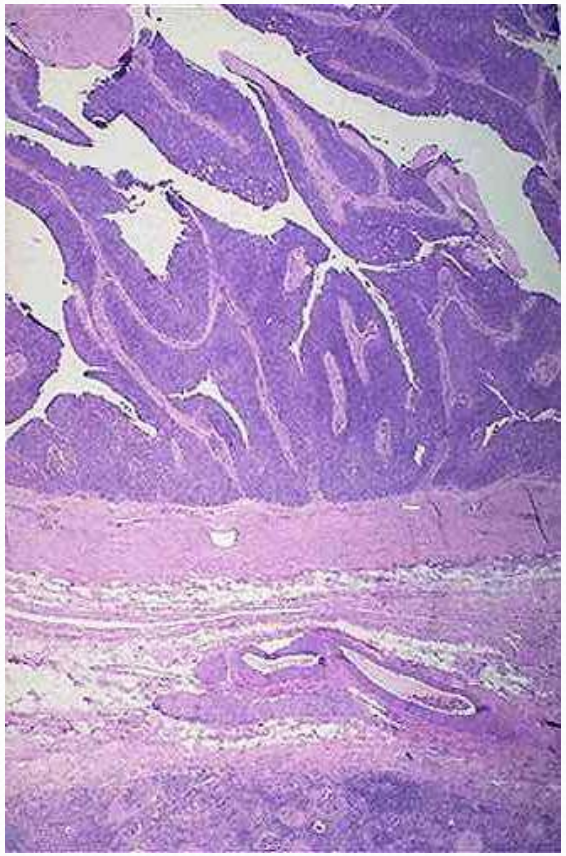
Bladder cancer

- Arises in urothelium
  - Bladder lining [transitional cells]
  - Hence "**T**ransitional **C**ell **C**ancer" [TCC]
  - Environmental disease
- Strong link to pollution / **smoking**
- 80% superficial / papillary
- 20% muscle invasive / solid
- May affect all parts of urinary tract

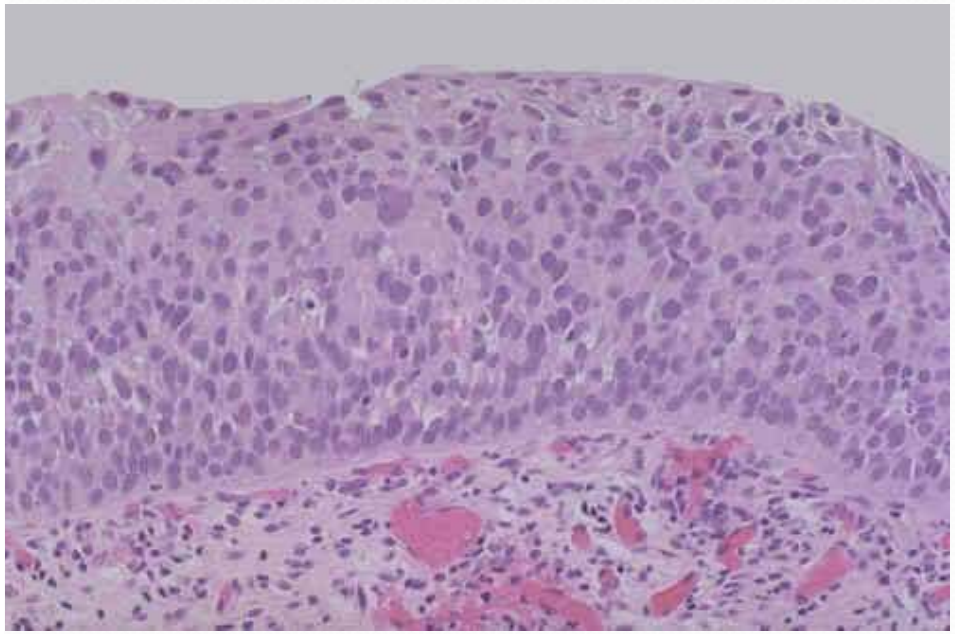


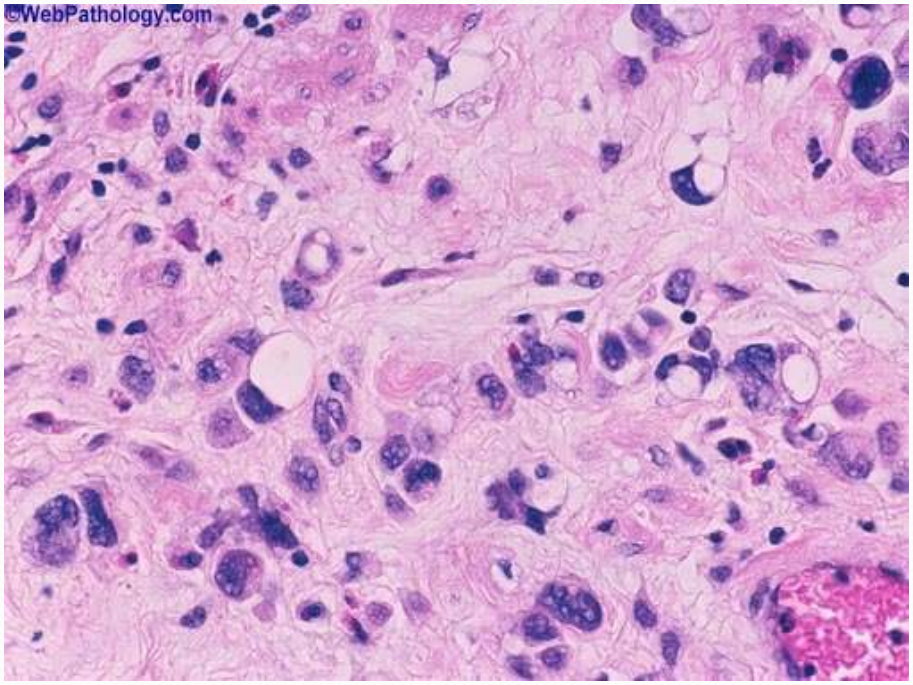
Normal and papillary bladder cancer





CIS and muscle invasive





Presentation

- Almost always with HAEMATURIA
- VISIBLE : 20% risk of cancer
- INVISIBLE : 5% risk of cancer
- Dysuria / UTIs
  - Abnormal cytology

Diagnosis

- Flexible cystoscopy
  - Look only / occasional biopsy
- **T**rans **U**rethral **R**esection **B**ladder **T**umour
  - TURBT / TURT
- Resect /biopsy tumour and base of tumour to sample muscle
  - Muscle invasion is the single most important finding

Grading [degree of malignancy]

- G1, G2, G3
  - Low grade [G1/G2]
  - Hi grade [G2/G3]
- BIOPSY may give STAGE if muscle is included

Staging

- On biopsy
- CT urogram / ultrasound/ IVP
- Cross sectional imaging [CT/ MRI]

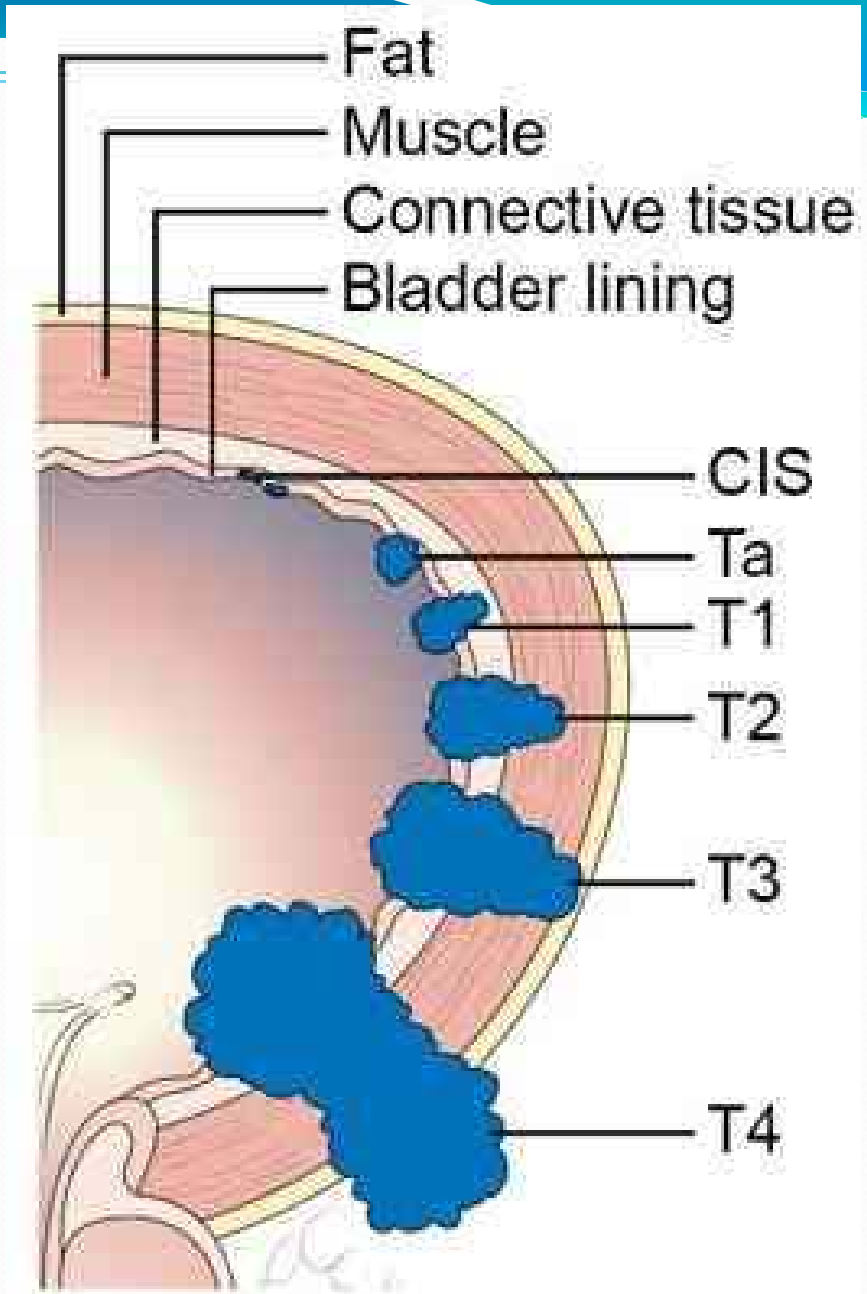


Diagram showing the T stages of bladder cancer

MDT process

- Review histology [grade =/- stage]
- Review imaging
- Consensus on OPTIONS to put to patient
- Where treatment will be carried out and who by

OPTIONS – non muscle invasive

- 3 month review cystoscopy [surveillance]
- Early re-resection for higher risk disease[T1/G3]
- Intravesical chemotherapy
  - Mitomycin C
  - BCG [others]
- Occasionally radical surgery

OPTIONS Carcinoma In Situ

- BCG
- Radical surgery

OPTIONS : muscle invasive

- Radical surgery
- Radiotherapy =/- neo-adjuvant [before] or adjuvant [after] chemotherapy

QUESTIONS……?