

# Aims and Objectives

- Renal colic (nephrolithiasis)
- **Acute kidney injury (AKI)**
- **Chronic kidney disease (CKD)**
- **UTI - upper and lower**
- **Benign prostatic hyperplasia (BPH)**
- **Scrotal disease-** varicocele, testicular torsion, **epididymal cyst, hydrocele**
- **GU cancer-** prostate cancer, **testicular cancer, bladder cancer, kidney cancer**
- Nephritic syndromes- IgA nephropathy (Berger disease), post strep glomerulonephritis, **Goodpastures syndrome, SLE nephropathy**
- Nephrotic syndrome- Minimal change disease, focal segmental glomerulosclerosis, membranous nephropathy
- Polycystic kidney disease- dominant and recessive
- **LUTS symptoms** including causes of incontinence and **retention**
- **STI's- chlamydia, gonorrhoea, syphilis**

# UROLOGY

Phase 2a Revision Session

22nd February 2023- 6:30-7:30pm

Alicia Raybould & Emily Finbow



The Peer Teaching Society is not liable for false or misleading information...

# What we will not be covering:

- Renal colic (stones)
- Renal cancer
- Nephritic & nephrotic syndromes
- Polycystic kidney disease
- Incontinence
- Chronic urinary retention
- Syphilis

(wrap up session on 07/03 will aim to address some of these!)

# Function of the kidneys

- Filters waste/ toxins from the blood
- Regulate blood pH
- Regulates blood volume + pressure
  - ANP
  - RAAS - renin angiotensin aldosterone system
- Stimulate RBC production by producing EPO
- Responds to PTH to maintain Ca levels
- Regulate electrolyte balance and control osmolality
- Activate vit D

## Function of The Kidney (A WET BED)

- A** = Acid- Base Balance
- W** = Water Removal
- E** = Erythropoiesis
- T** = Toxin Removal
- B** = Blood Pressure Control
- E** = Electrolyte Balance
- D** = Vitamin D activation

# AKI



An **acute reduction in kidney function**, diagnosed by specific changes in **serum creatinine** and/ or **urine output**

## Risk factors:

- >65
- Previous AKI
- CKD with eGFR  $<60\text{mL/min/1.73m}^2$
- CVD eg HF, DM
- Liver disease
- Hx urological obstruction
- Sepsis
- Use of nephrotoxic drugs inc. contrast from scans + herbal remedies

## NICE DIAGNOSTIC CRITERIA (one of the below)

- Rise in **serum creatinine**  $>26\text{micromol/L}$  **within 48 hours**
- $\geq 50\%$  rise in **serum creatinine** within **last 7 days**
- Decrease in **urine output** to less than  $0.5\text{mL/kg/hour}$  for **more than 6 hours**

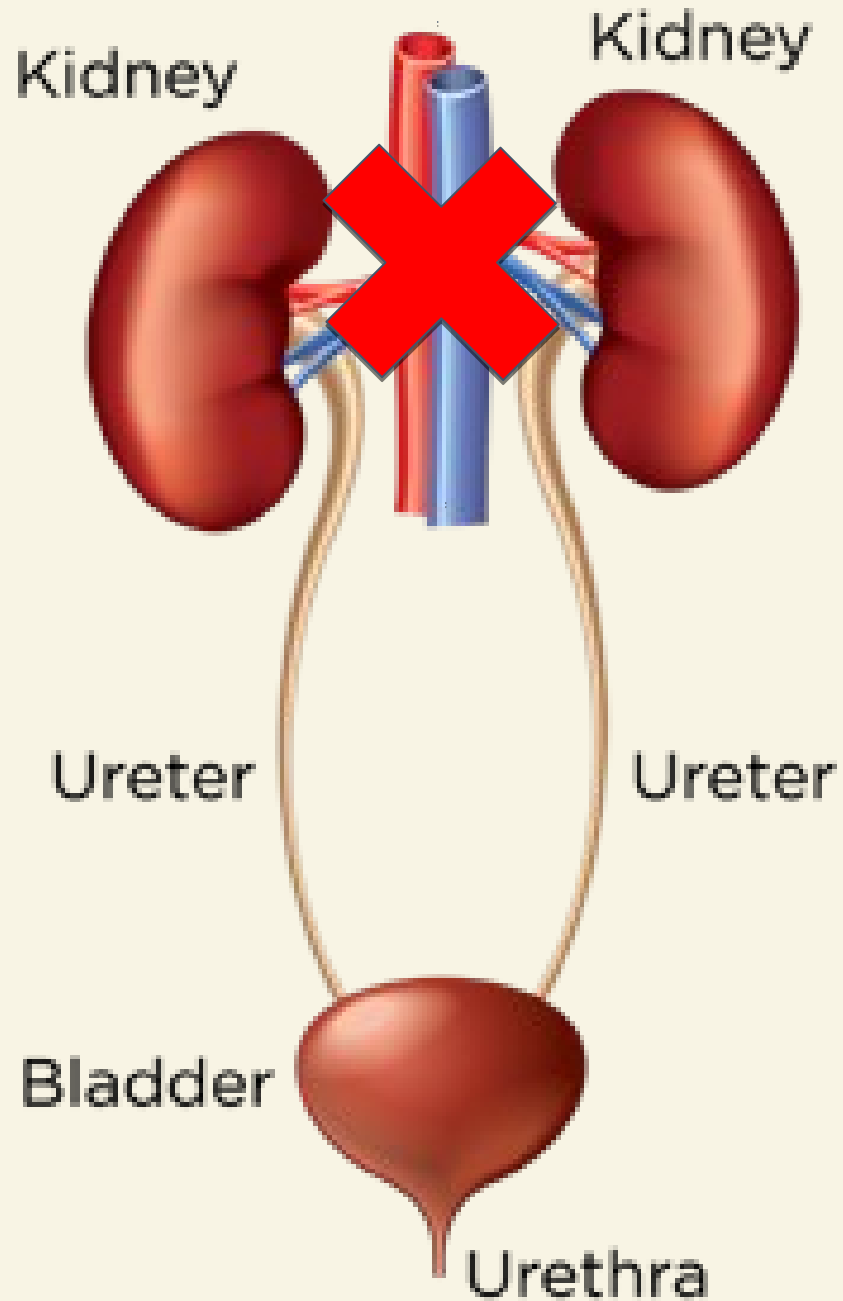
## KDIGO classification of AKI

Stage	Creatinine criteria		Urine criteria
<b>1</b> - (any 1 criteria)	Rise in creatinine >26micromol/L within 48 hours  OR  50- 99% rise in creatinine from baseline within 7 days	OR	Urine output less than 0.5mL/kg/hour for more than 6 hours
<b>2</b> -(any 1 criteria)	100-199% rise in creatinine from baseline within 7 days	OR	Urine output less than 0.5mL/kg/hour for more than 12 hours
<b>3</b> - (any 1 criteria)	Over 200% rise in creatinine from baseline within 7 days  OR  Creatinine of over 354 micromol/L AND one of <ul style="list-style-type: none"> <li>- Acute creatinine rise of over 26 micromol in 48 hours</li> <li>- Acute creatinine rise of over 50% in 7 days</li> </ul>	OR	Urine output less than 0.3mL/kg/hour for 24 hours  OR  Anuria for 12 hours

# Aetiology (causes) of AKI

3 categories;

- Pre renal
- Intrinsic
- Post renal

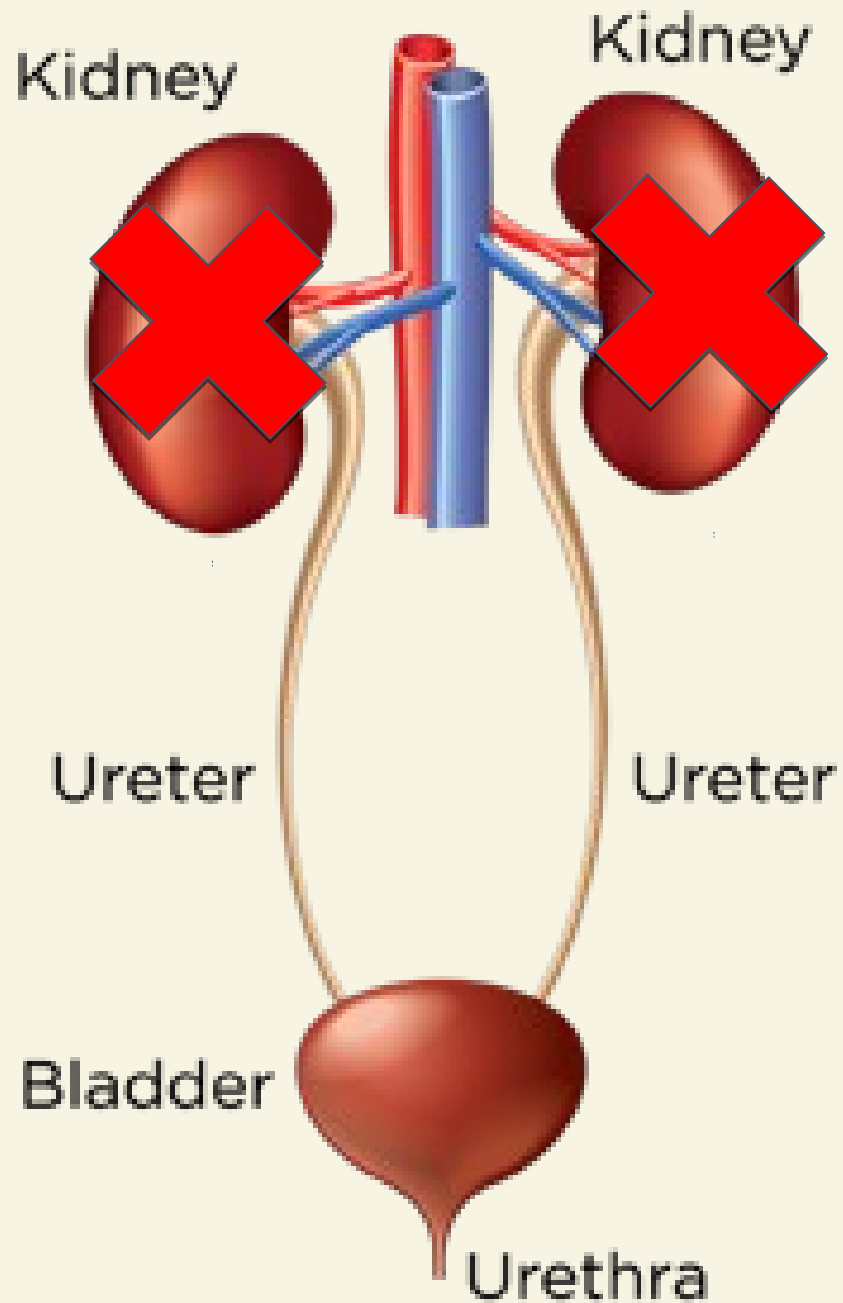


# Pre renal

Not enough blood to kidneys  
(hypoperfusion)

- Dehydration (think N+V, dementia !)
- Shock
  - Septic shock
  - Acute blood loss= hypovolemic shock
- Heart failure
- Renal artery stenosis
- Liver failure

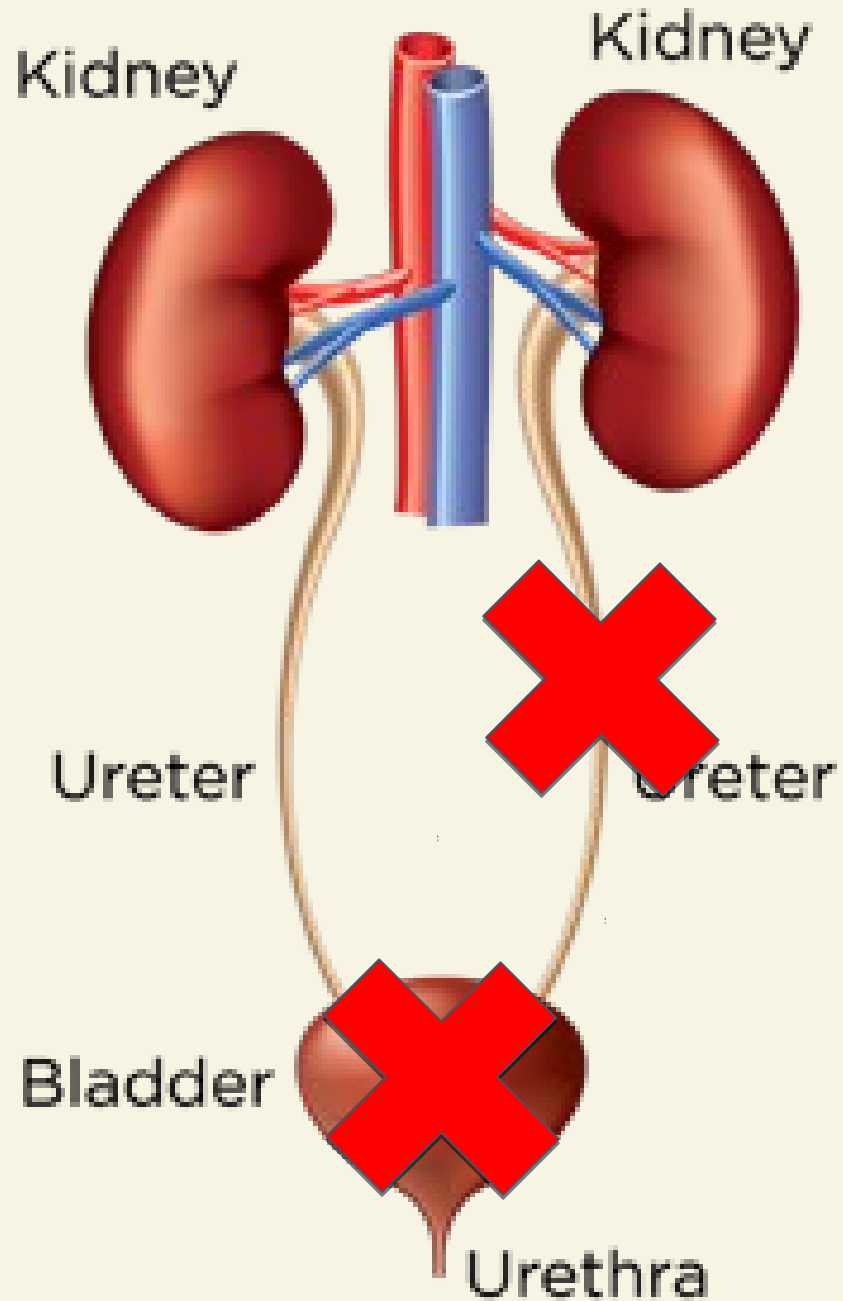




# Intrinsic

Disease of the kidney itself

- Acute tubular necrosis (most common)
- Glomerulonephritis
- Acute interstitial nephritis
- Haemolytic uremic syndrome
- Rhabdomyolysis
- Toxins and nephrotoxic drugs



# Post renal

Obstruction to the outflow of urine  
(obstructive uropathy)

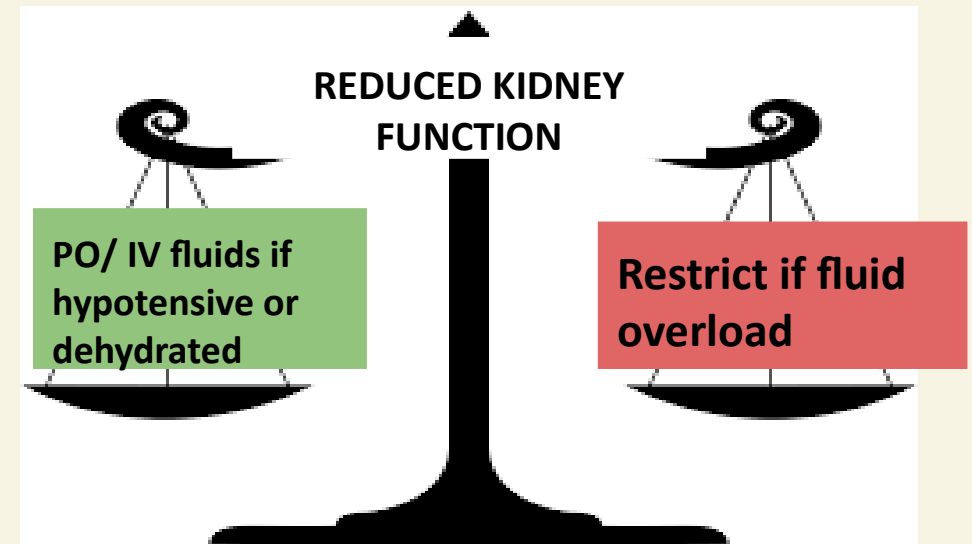
- Kidney stones in ureter
- Tumours eg bladder, prostate
- BPH
- Neurogenic bladder causing urinary retention

# AKI Management

## IDENTIFY + TREAT UNDERLYING CAUSE!

- eg If sepsis → sepsis 6, renal calculus → lithotripsy surgery to remove stones, BPH → insert catheter
- **Fluid balance**
- **Treat electrolyte imbalances**
  - Hyperkalemia → arrhythmia risk
  - Hyponatremia
  - Metabolic acidosis
  - Uremia
- **Stop or reduce nephrotoxic drugs**
  - Aminoglycoside abx eg gentamicin
  - ACE-I
  - ARB
  - Bisphosphonates
  - NSAIDs
  - Loop diuretics
  - Lithium

- **Stop/ reduce drugs that are renally excreted as may accumulate** eg metformin, opiates
- If not responding to medical tx → **renal replacement therapy**



You are the F1 doctor, and you have noticed someone on the ward who has risk factors for AKI. After monitoring serum creatinine and urine output, you establish that they do not currently have an AKI. What can you do to **reduce their risk** during their admission?

- Avoid/ reduce nephrotoxic drugs where possible
- Ensure adequate PO fluid intake
  - If oral intake inadequate → IV fluids
- Additional fluids before and after contrast agents
- Continue to monitor for AKI- creatinine levels, urine output



# Chronic Kidney Disease (CKD)

A chronic reduction in kidney function or structural damage (or both) present for 3+ months.

Usually permanent and progressive.

## What is eGFR?

The total amount of fluid filtered through all functioning kidney nephrons within a set unit of time.

GFR is estimated from a complex equation using serum creatinine and patient characteristics eg age, sex.

## NICE Diagnostic criteria (any 1 of the below):

- eGFR below 60mL/min/1.73m<sup>2</sup> for over 3 months
- Urine ACR (albumin: creatinine ratio) is sustained above 3mg/mmol
- Presence of other markers of kidney damage
  - Urine sediment abnormalities
  - Histological abnormalities
  - Structural abnormalities identified by imaging

# Classification of CKD

A score= based on urinary ACR (indicating proteinuria)

G score= based on eGFR

eGFR (mL/min/1.73 m <sup>2</sup> )		Urinary ACR categories (mg/mmol)		
		< 3 Normal to mildly increased	3–30 Moderately increased	> 30 Severely increased
		A1	A2	A3
>=90 Normal and high	G1 (stage 1)	Not CKD in the absence of markers of kidney damage†	G1 A2	G1 A3
60–89 Mild reduction related to normal range for a young adult	G2 (stage 2)		G2 A2	G2 A3
45–59 Mild to moderate reduction	G3a (stage 3a)	G3a A1	G3a A2	G3a A3
30–44 Moderate to severe reduction	G3b (stage 3b)	G3b A1	G3b A2	G3b A3
15–29 Severe reduction	G4 (stage 4)	G4 A1	G4 A2	G4 A3
<15 Kidney failure	G5 (stage 5)	G5 A1	G5 A2	G5 A3

# Risk factors for CKD

Similar to AKI RF!

- Conditions associated with intrinsic kidney damage
  - Hypertension
  - DM
  - Glomerular disease eg glomerulonephritis
- Prev/ current AKI
- Nephrotoxic drugs
- Multisystem disease- SLE, vasculitis, myeloma
- Autosomal dominant PCKD

- CVD
- Incidental finding of haematuria/ proteinuria
- Conditions associated with obstructive uropathy
  - Structural renal disease
  - BPH
  - neurogenic bladder
  - Recurrent urinary tract calculi (kidney stones)

# CKD management

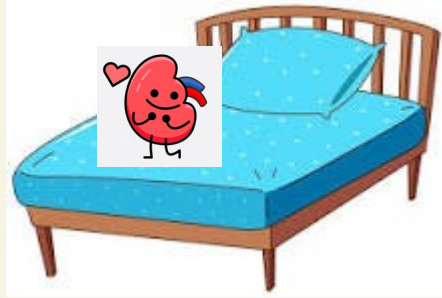
- Manage any RF
  - Control HTN +DM
  - Limit nephrotoxic drugs
  - Treat glomerulonephritis
- ALL pts with CKD -primary and secondary CVD prevention
  - Atorvastatin 20mg
  - Antiplatelet therapy.
  - Lifestyle advice Re smoking, alcohol, exercise, BMI
- Monitor eGFR + urinary ACR
- Manage complications of disease!

- **Refer to nephrology if**
  - Accelerated progression of CKD
  - 5 year risk of RRT >5% (measure using 4-variable Kidney Failure Risk equation)
  - Resistant hypertension
  - ACR >70mg/mmol
  - eGFR <30ml/min/1.73<sup>2</sup>



# Why is the function of the kidney so relevant?

## A WET BED



It can help you remember the *complications of CKD!*

- |                                   |  |
|-----------------------------------|--|
| <b>A</b> - Acid base balance      | → Metabolic acidosis                       |
| <b>W</b> - Water removal          | → Fluid overload (heart failure)           |
| <b>E</b> - Erythropoiesis         | → Renal Anaemia                            |
| <b>T</b> - Toxin removal          | → Uremia                                   |
| <b>B</b> - Blood pressure control | → Hypertension (+increased risk of stroke) |
| <b>E</b> - Electrolyte balance    | → Hyperkalemia                             |
| <b>D</b> - Vitamin D activation   | → Renal bone disease                       |

# LOWER URINARY TRACT SYMPTOMS (LUTS)

Urgency?

Hesitancy?

Nocturia?

Weak Stream?

Straining?

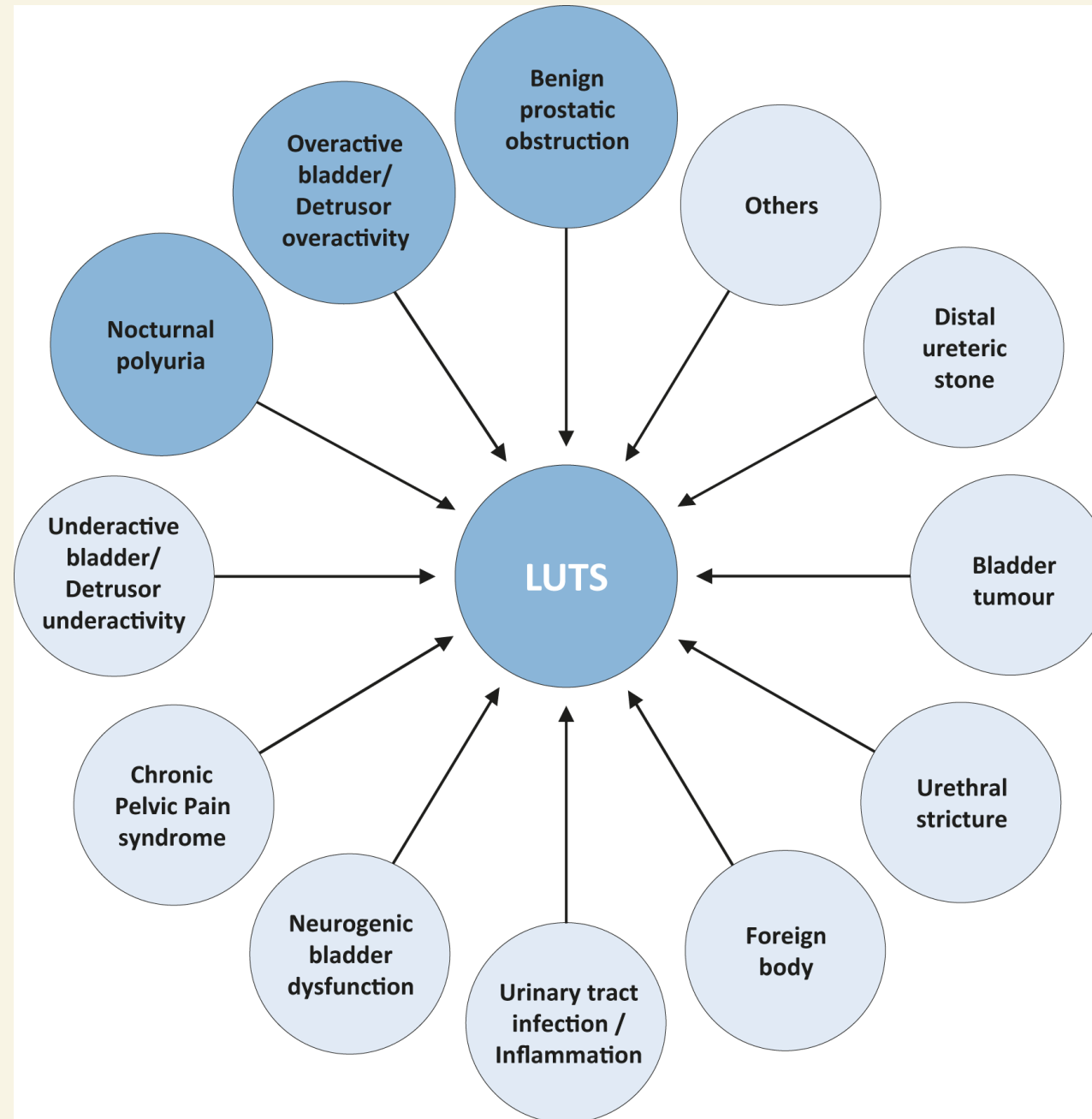
# LOWER URINARY TRACT SYMPTOMS (LUTS)

## STORAGE

- Urgency
- Daytime frequency
- Nocturia
- Urinary incontinence
- Feeling the need to urinate again straight after

## VOIDING

- Hesitancy
- Weak / intermittent urinary stream
- Splitting / spraying
- Straining
- Incomplete emptying
- Terminal dribbling



STI- Sexually transmitted infections

**MOST COMMON BACTERIAL STI IN THE UK?**

# Chlamydia

- Most common bacterial STI in the UK
- Caused by Chlamydia Trachomatis bacteria

## Risk factors:

- Age <25 years
- A new sexual partner
- More than one sexual partner in the last year
- Lack of consistent condom use

## How is it spread?

- Primarily penetrative sexual intercourse

## Investigations

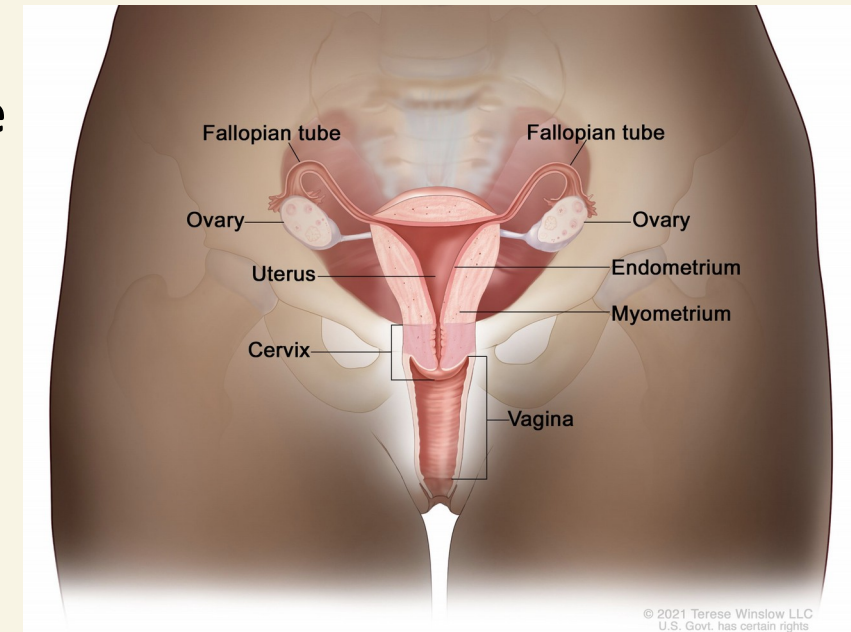
**All** samples are sent for NAATs (nucleic acid amplification testing).

### Women

- **Vulvovaginal swab**
- Endocervical swab
- First catch urine

### Men

- **First catch urine**
- Urethral swab



## Presentation

### Men- 50% asx

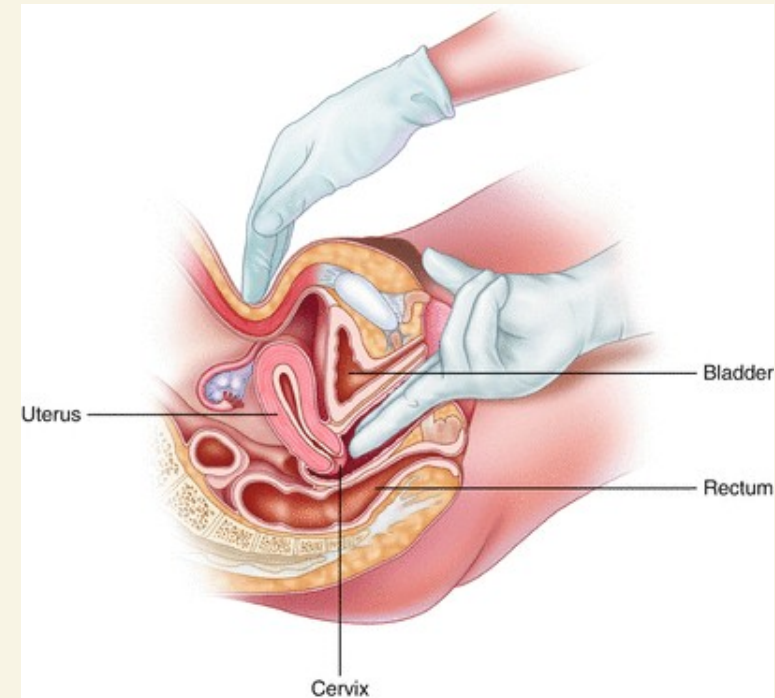
- Dysuria
- Purulent urethral discharge (green/yellow)
- Urethral discomfort

### Women- 70% asx

- Purulent vaginal discharge/ urethritis (green/yellow)
- Dysuria
- Post coital/ IMB
- Deep dyspareunia
- Cervical motion tenderness O/E
- Inflamed cervix O/E

**Uncomplicated infection** = not spread to upper genital tract

**Complicated infection**- spread to upper genital tract, presenting as PID in women, epididymo-orchitis in men



## Treatment

- **1st line** Doxycycline PO for 7 days (CI in pregnancy/ breastfeeding)
- **2nd line**- Azithromycin PO for 3 days

Contract trace and treat the patients current sexual partner(s).  
Sexual intercourse should be avoided until tx finished

# Gonorrhoea

- A bacterial STI caused by **Neisseria Gonorrhoeae**
- Transmitted by direct inoculation of secretions from one mucus membrane to another eg urethra, endocervix, rectum, pharynx, conjunctiva

## Risk factors:

- Young age (15-24)
- New sexual contact in last year
- More than 1 partner in the last year
- Deprivation
- Current or prior history of STI

## Investigations:

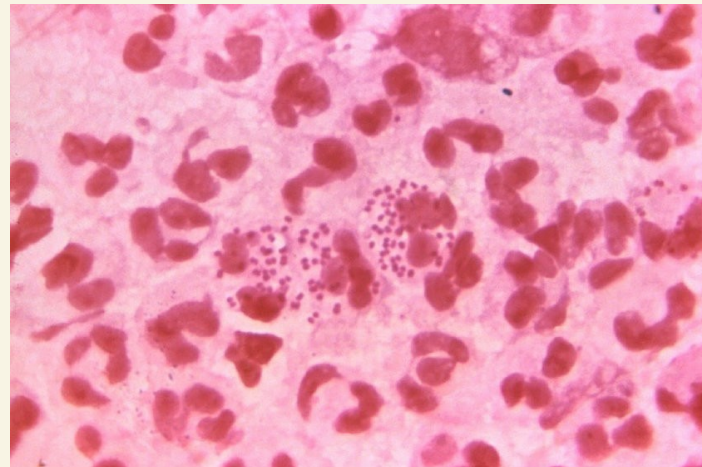
All samples are sent for NAAT testing and culture for sensitivity (as many strains now have antibiotic resistance).

### Women

- **Vulvovaginal swab- NAAT and cultures**

### Men

- **First catch urine- NAAT testing**
- **Urethral swab for cultures**



**How would N. gonorrhoeae appear on microscopy?**

Gram -ve diplococci



## Presentation

### Men- only 10% asx

- Dysuria
- Purulent urethral discharge (green/yellow)
- Urethral discomfort

### Women- 50% asx

- Dysuria
- Dyspareunia
- Lower abdominal pain
- Purulent vaginal discharge (yellow/green)

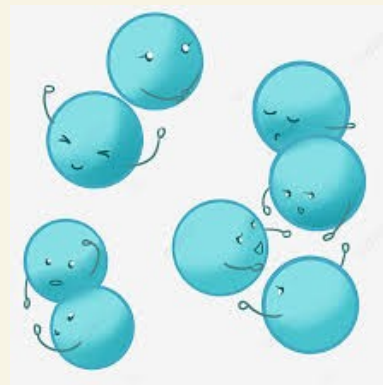
## Treatment:

If antimicrobial susceptibility known:  
1 dose Ciprofloxacin 500 mg orally

If antimicrobial susceptibility **not known**  
(most cases in exams!!):  
Ceftriaxone 1g IM injection- single dose

Sexual intercourse should be avoided until 7 days after tx finished.

Contact trace and tx the patients' current sexual partners



# STI Complications

## Men

- Epididymo-orchitis
- Prostatitis
- Infertility
- Urethral stricture (inflammation causes scarring that narrows urethra)

## Women

- Perihepatitis (Fitz-Hugh-Curtis syndrome)- inflammation of liver, RUQ pain, referred pain to right shoulder.
- Adverse outcome in pregnancy
  - Premature labour, low birth weight
  - Neonatal conjunctivitis
- PID



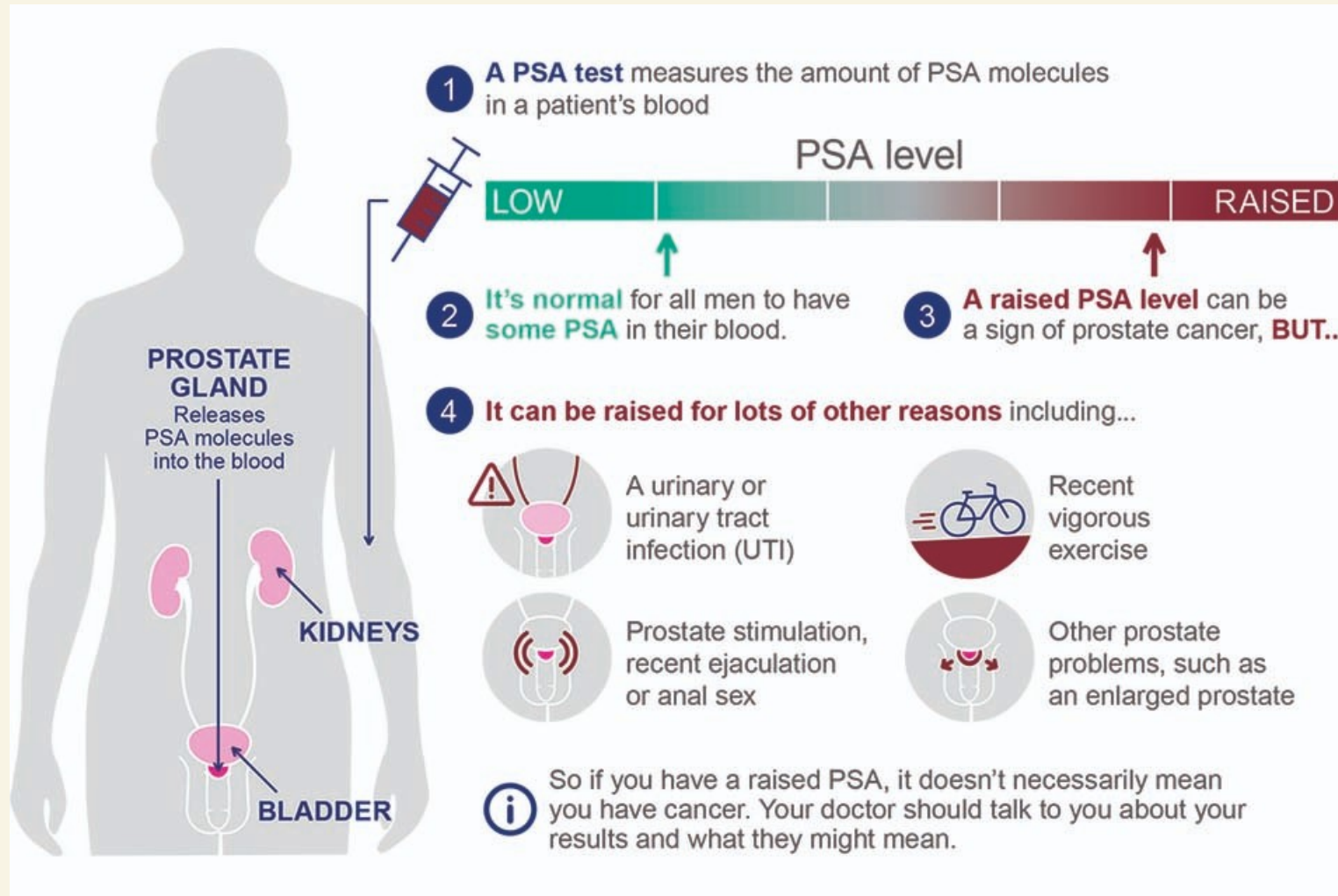
Can affect all:

- **Disseminated gonorrhoea-** bacteremia causing widespread multisystem infection and inflammation. Septic arthritis, petechial lesions, polyarthralgia, fever, fatigue etc.
- **SARA- sexually acquired reactive arthritis.** Inflammation of the synovial membranes and tendons, most commonly triggered by chlamydia infection.

# BPH vs Prostate Cancer

	Benign Prostatic Hyperplasia	Prostate cancer
<b>Definition</b>	Benign enlargement of the prostate, due to hyperplasia of epithelial and stromal cells	Mostly adenocarcinoma
<b>RF</b>	Age, Family history of BPH, Diabetes, Heart disease, Obesity	Age, Family history of PrCa, Black African or Caribbean origin
<b>Presentation</b>	LUTS - hesitancy, frequency, weak flow, terminal dribbling, nocturia, urgency, straining, incomplete emptying	Can be asymptomatic. LUTS - hesitancy, frequency, weak flow, terminal dribbling, nocturia, urgency, straining, incomplete emptying
<b>Investigations</b>	Urine dipstick (rule out UTI) DRE- enlarged but smooth and symmetrical PSA	DRE- asymmetrical, irregular, firm prostate PSA MRI- determine likelihood of benign vs malignant <b>Transrectal US biopsy of the prostate-</b> Gold standard
<b>Management</b>	<b>Tamsulosin-</b> alpha blocker. Relax smooth muscle, relieve sx. <b>Finasteride-</b> 5-alpha reductase inhibitor. Slowly reduce size of prostate <b>Surgery-</b> Transurethral resection of the prostate (TURP)	<b>Surveillance/ 'watchful waiting'</b> if early stages and slow progressing <b>Gnrh agonist-</b> Zoladex <b>Androgen receptor blocker-</b> bicalutamide <b>Radiotherapy</b> <b>Radical prostatectomy</b>

# PSA - worthwhile or waste of time?



- A major study showed that 1 in 7 men with a normal PSA level may have prostate cancer (*PSA may be normal even though you have cancer!*)

PSA could be raised for a number of reasons, potential for unnecessary investigations

Consider clinical context - *are there concerning features in history?* appropriate counselling?

# Staging and grading of Prostate cancer

**Grading** = how differentiated the cells are from 'normal', the amount of cell atypia.

In PrCa, Gleason's Grading Score is used.

**Staging** = size of the cancer and how far it has spread

In PrCa, TMN Staging System is used.

The **TNM staging system** can be used for prostate cancer, rating the **T (tumour)**, **N (lymph nodes)** and **M (metastasis)**.

**T for Tumour:**

- TX – unable to assess size
- T1 – too small to be felt on examination or seen on scans
- T2 – contained within the prostate
- T3 – extends out of the prostate
- T4 – spread to nearby organs

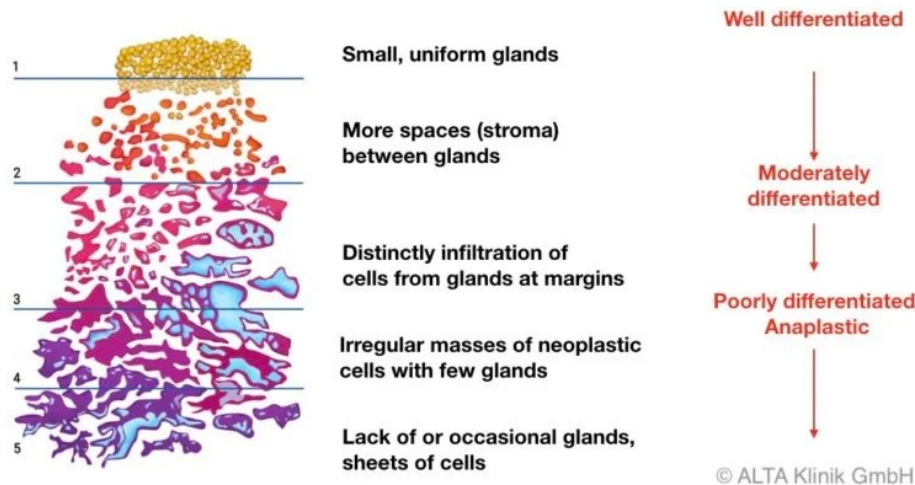
**N for Nodes:**

- NX – unable to assess nodes
- N0 – no nodal spread
- N1 – spread to lymph nodes

**M for Metastasis:**

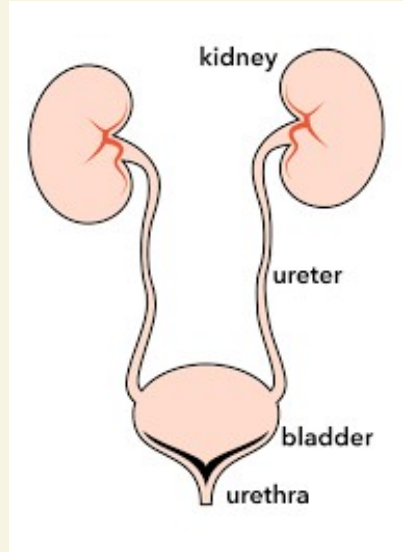
- M0 – no metastasis
- M1 – metastasis

## Gleason's Pattern Scale



# UTI

An infection of any part of the urinary tract.



Lower

Upper

Cystitis

Prostatitis

Urethritis

Pyelonephritis

# Most common pathogens implicated in UTI

**K** lebsiella

**E** . coli - most common cause. Up to 77% of lower UTI infections!!!

**E** nterococcus species

**P** roteus species/ Pseudomonas aeruginosa

**S** taphylococcus aureus/ staph. saprophyticus (=coagulase -ve staph)



# Complicated or non-complicated UTI?

You are in a GP practice and have seen the following patients, who have a confirmed UTI from urine cultures.

1. 28 y/o pregnant woman, 26 weeks into pregnancy. First UTI presentation- cloudy urine and dysuria.

Complicated UTI.  
Pregnant.

2. 50 y/o male with dysuria and frequency. Describes no obvious haematuria/ cloudy urine.

Complicated UTI- male patient.

3. 68 year old lady with dementia and an indwelling urinary catheter.

Complicated UTI-  
Catheterised



# Complicated vs uncomplicated UTI

## Uncomplicated:

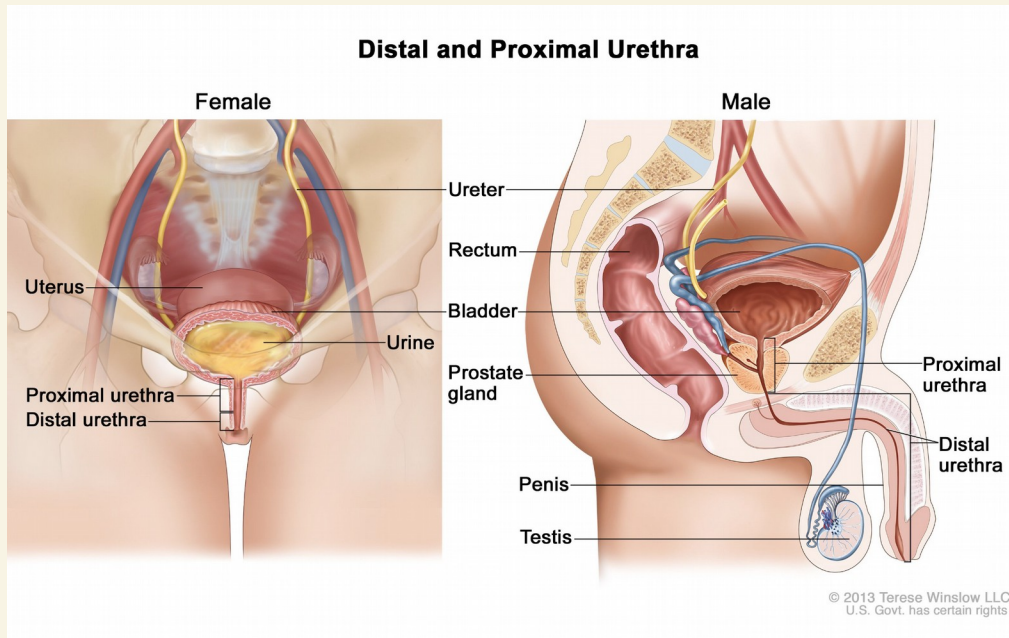
- Non-pregnant women, immunocompetent, typical organism is causing UTI eg klebsiella
- 'Normal' anatomy

## Complicated:

- Men
- Recurrent infection (2+ episodes in 6 months, 3+ in 1 year)
- Persistent infection
- Immunocompromised
- Structural abnormality of the urogenital tract
- Pregnant women
- Catheterised patients
- Atypical organisms causing UTI

# Cystitis

- Inflammation and infection of the bladder
- Women are more susceptible due to :
  - Shorter urethra than men
  - Closer proximity of urethral opening to the anus



## Presentation:

- **Dysuria** - discomfort, pain, burning, stinging
- **New nocturia**
- **Cloudy urine**
- Frequency
- Urgency
- Suprapubic pain/ tenderness
- Macroscopic (visible) haematuria

In **over 65's**, may present more ***non-specifically***;

- Fever
- New urinary incontinence
- New or worsening delirium

# Investigations



1st line- urine dipstick

- +ve leucocytes
- +ve blood
- +ve nitrates

GOLD STANDARD



- MSU/ CSU - Microscopy, culture, and sensitivity testing

**Ignore 1st line and skip to MSU** in patients who;

- Are pregnant
- >65 years
- Catheterised
- Has haematuria
- Has recurrent UTI
- Has persistent/ non resolving symptoms despite abx

# Treatment

**Empirical (sensitivity not known)**

One of;

- Nitrofurantoin
- Trimethoprim

3 days for Non complicated UTI

7 days for Complicated UTI - ALL men!

**If sent for Microscopy Culture+ Sensitivity (MC+S)**--> Treat empirically, change based on sensitivity/ resistance

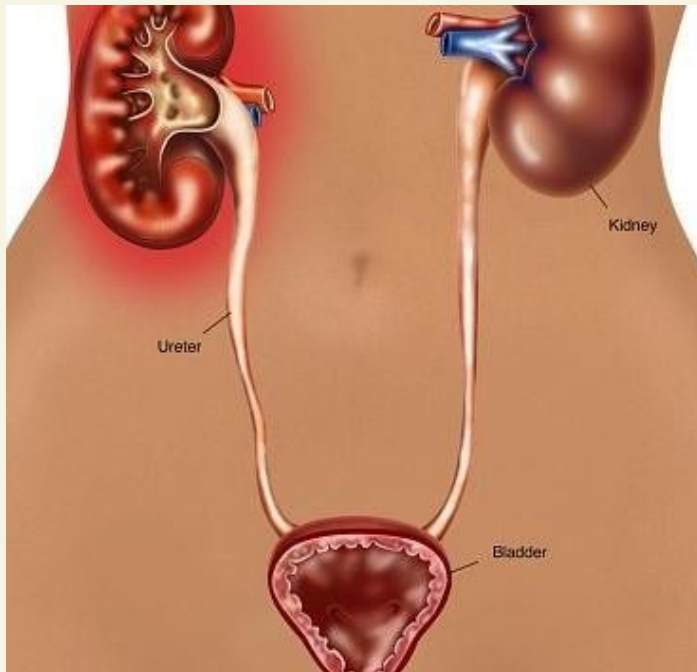
**In pregnancy - teratogenicity (causing functional/ structural birth defects)**

- Trimethoprim cannot be used in 1st trimester of pregnancy- inhibits folate.
- Nitrofurantoin cannot be used in 3rd trimester- risk of neonatal haemolysis.
- Can **use cefalexin**



# Pyelonephritis

- Infection and inflammation of the kidney
- A complication of cystitis-infection usually ascends from bladder



## Presentation

Unilateral flank pain

+/- Myalgia  
+/- Flu-like symptoms  
+/- Renal angle tenderness on examination

Fever

N+V

## Investigations

- Urinalysis
  - +ve leucocytes
  - +ve nitrites
- **MSU/ CSU** - Microscopy, sensitivity and culture
- Renal USS- rule out kidney stones (nephrolithiasis)

DIAGNOSIS MADE IF loin pain  
+- fever, and a positive urine  
culture.

## Treatment

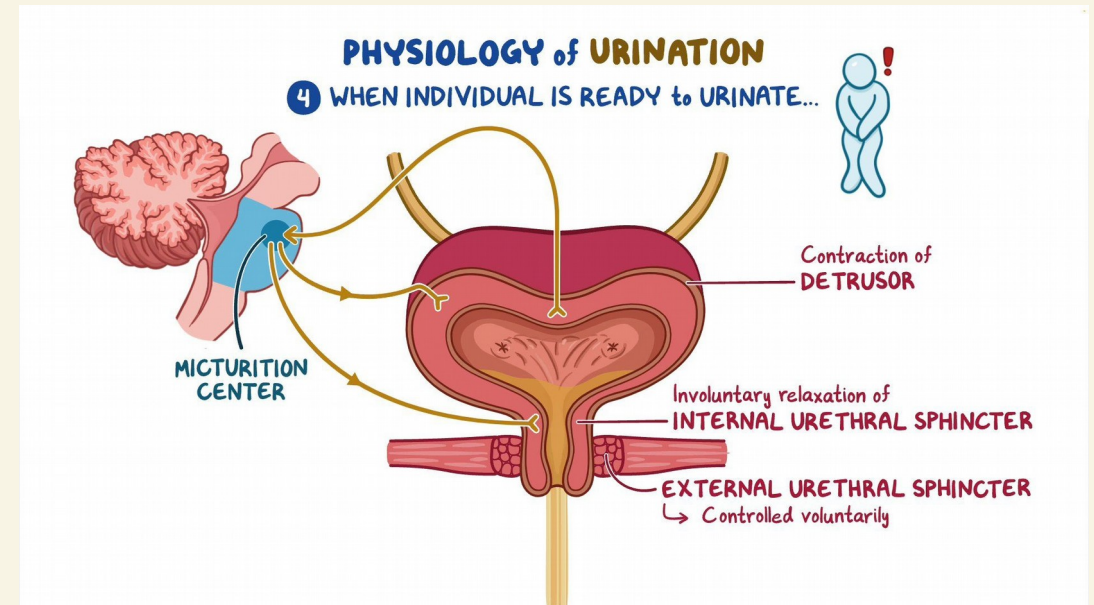
- Antibiotic tx
  - **Cefalexin for 7-10 days**
- IF pt has a catheter, remove/  
change catheter (remove a possible  
source of infection)
- Pain relief- paracetamol
- Drink sufficient fluids to avoid  
dehydration (due to N+V)

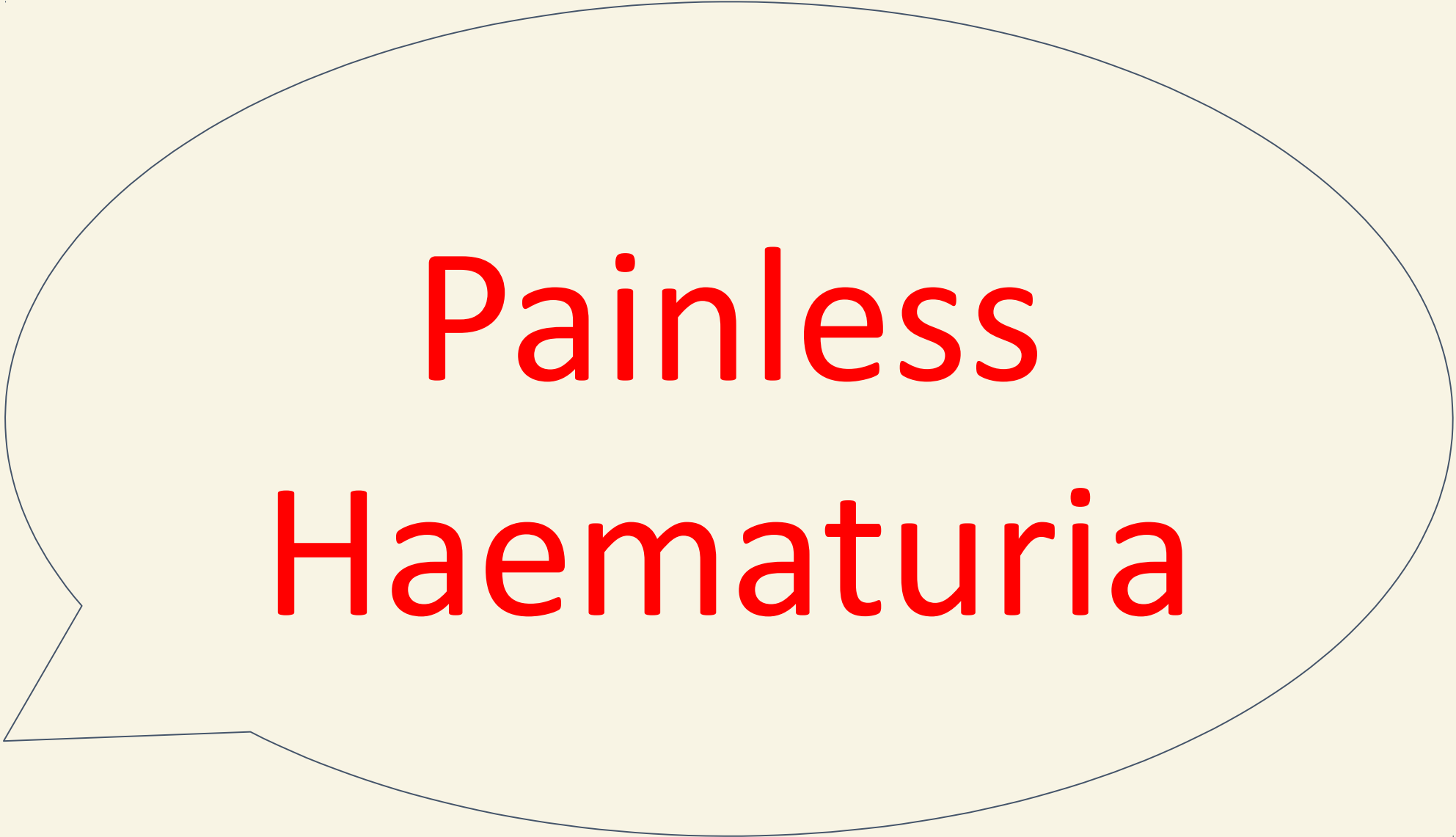
## Complications

- Sepsis
- Renal abscess

# Acute Urinary Retention

- New onset inability to pass urine / significant residual volumes → pain
- Obstructive uropathy (esp BPH)
- Acute suprapubic pain (+++)
- Palpably distended bladder, with suprapubic tenderness
- Post-void bladder scan, bloods, CSU, DRE, ?USS
- Catheterisation, treat underlying cause → TWOC





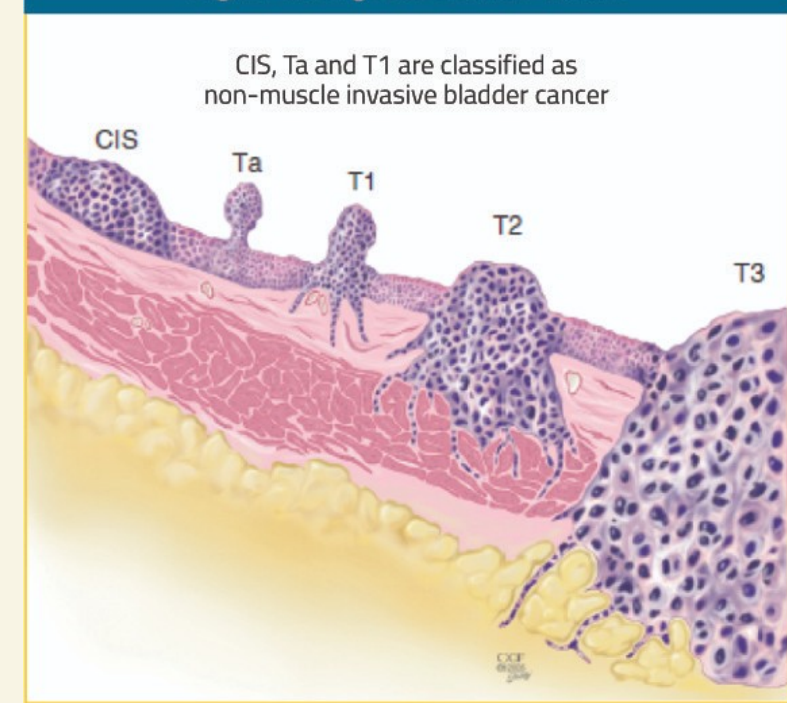
**Painless  
Haematuria**



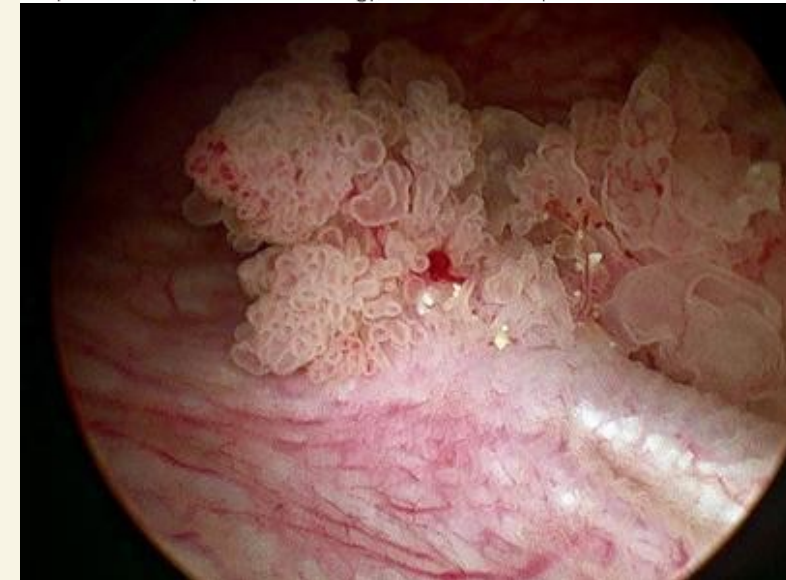
# Bladder Cancer

- 90% = transitional cell carcinomas
- Smoking, increased age, aromatic amines (**dye factory worker**)
- **Painless haematuria**
  - >45yos with unexplained visible haematuria without UTI / persisting after UTI treatment
  - >60yos with microscopic haematuria PLUS dysuria / raised white cell count
- **Cystoscopy + biopsy**
- CT urogram (upper tract)
- TNM: non-muscle invasive or invasive?
- TURBT (+/- intravesical chemo) for non-muscle invasive
- Intravesical BCG (immunotherapy)
- Radical cystectomy
- Radiotherapy / chemotherapy

Figure 1: Stages of Bladder Cancer



Adapted from Campbell-Walsh Urology, 11th edition, Chapter 93



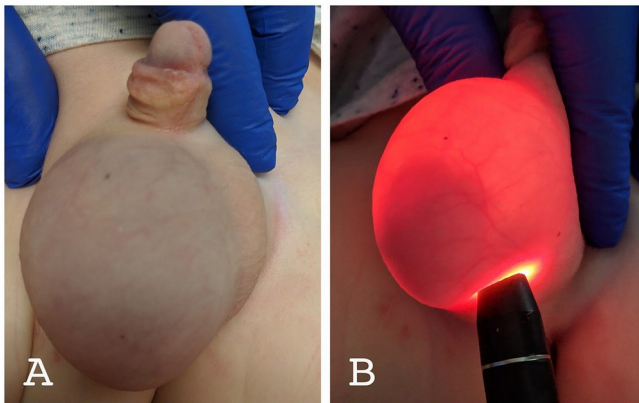
<https://www.nikkhoumd.com/contents/conditions-treated/bladder-tumor>

# Scrotal Lumps

Differentials: hydrocele / varicocele / epididymal cyst / testicular cancer / epididymo-orchitis / inguinal hernia / testicular torsion

?

- Collection of fluid within tunica vaginalis
- Idiopathic or **secondary to testicular cancer, torsion, epididymo-orchitis, trauma**
- Painless, soft swelling
- Testicle palpable within hydrocele, transilluminated
- Idiopathic hydroceles: conservative mx
- Surgery / aspiration / sclerotherapy in large or symptomatic cases

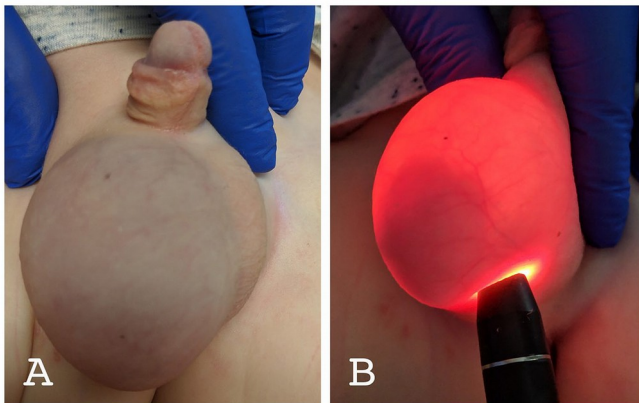


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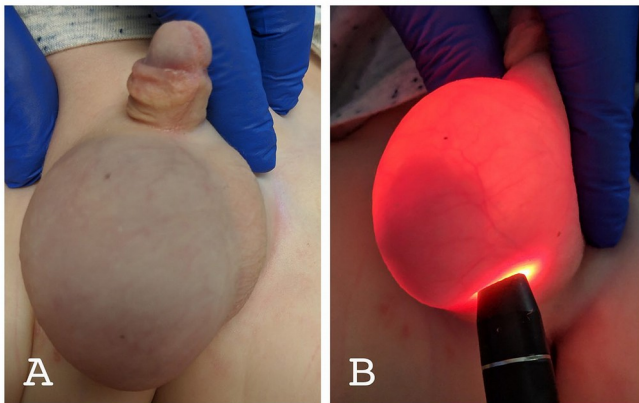


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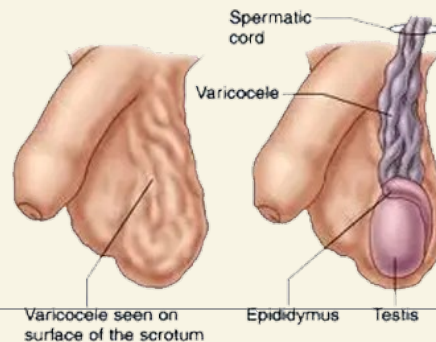
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- Testicle palpable within hydrocele, transilluminated
- Idiopathic hydroceles: conservative mx
- Surgery / aspiration / sclerotherapy in large or symptomatic cases



?

- Dilated pampiniform plexus (increased resistance + incompetent valves in testicular vein)
- **Left-sided varicocele can indicate left-sided renal cell carcinoma**
- Throbbing / dull pain worse on standing, dragging sensation
- “Bag of worms”, disappears when lying down
- Conservative mx unless very painful / atrophy / infertility
- Can → infertility (temperature)
- Can → testicular atrophy

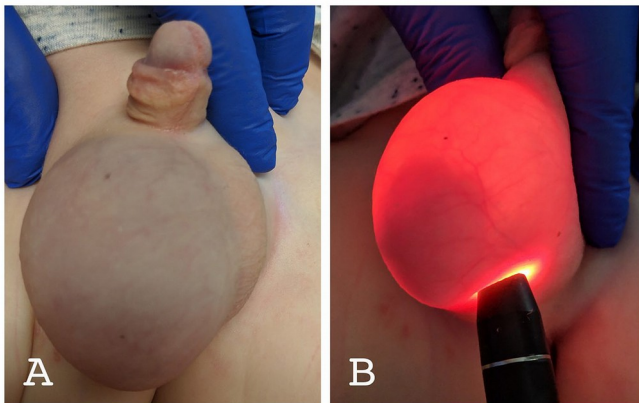


# Scrotal Lumps

Differentials: hydrocele / varicocele / epididymal cyst / testicular cancer / epididymo-orchitis / inguinal hernia / testicular torsion

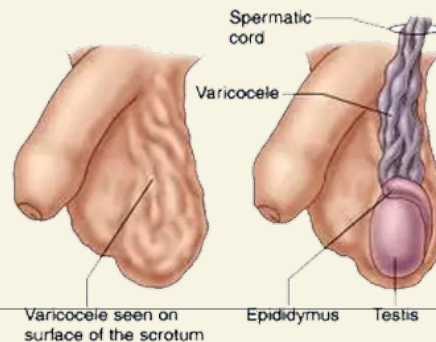
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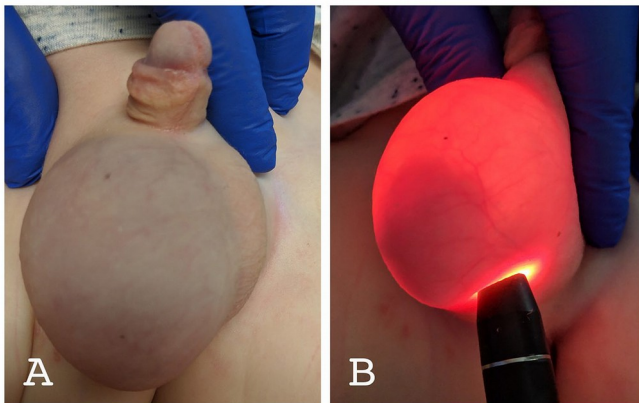


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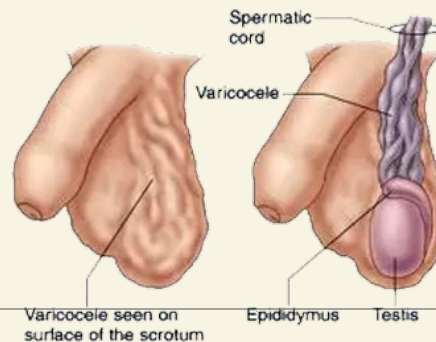
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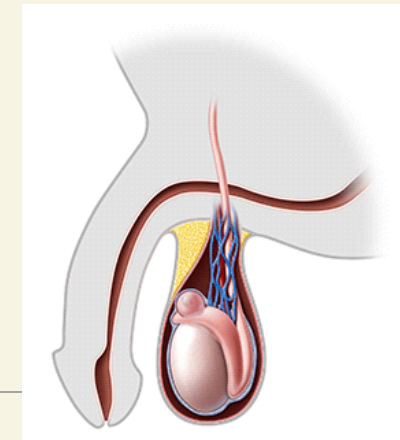
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## ?

- Occur at head of epididymis (top of testicle)
- ‘Spermatocele’ if contains sperm
- ~30% of men
- Mostly asymptomatic, may have felt lump
- Soft, round lump at top of testicle associated with epididymis + separate from the testicle
- Not associated with infertility or cancer
- Remove if very painful

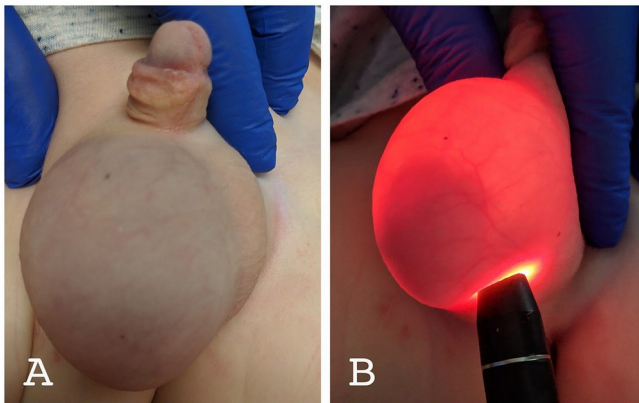


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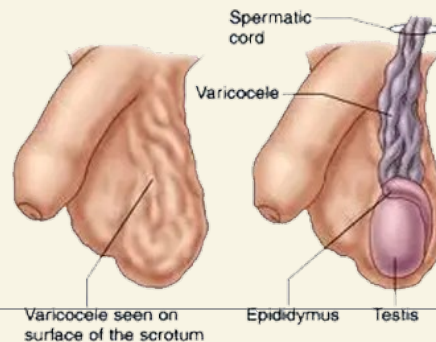
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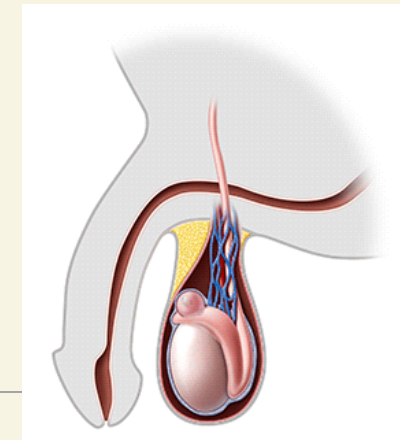
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## EPIDIDYMAL CYST

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- Mostly asymptomatic, may have felt lump
- Soft, round lump at top of testicle associated with epididymis + separate from the testicle
- Not associated with infertility or cancer
- Remove if very painful



# Testicular Cancer

Most testicular cancers develop from germ cells in the testicles - 2 main types:

- seminomas: 45% (aged 15 to 50)
- non-seminomas: 45% (15 to 35)
  - teratomas
  - embryonal tumours
  - yolk sac tumours
  - choriocarcinomas

Most common sx = **lump** (can have dull ache, pain or a feeling of heaviness in the scrotum)

RF: cryptorchidism, FHx, carcinoma in situ, African Caribbean or Asian ethnicity, HIV

USS

Tumour markers (not always raised):

- AFP: non-seminomas
- HCG: can be raised in either
- LDH: can be raised in either

**Definite diagnosis: histology after orchidectomy** (this is also main treatment +/- chemo)

Role for radiotherapy (seminomas), lymph node removal

→ infertility



# Acute Testicular Pain

## Epididymo-Orchitis

- STIs / UTI / mumps
- Acute onset unilateral scrotal pain + swelling
  - Bilateral in up to 10% of cases
- Other STI / UTI symptoms eg discharge / dysuria
- Find the bug
- Treat the bug
- Scrotal support



+ve

*Prehn's sign*

-ve

## Testicular Torsion

- Acute onset **severe** unilateral scrotal pain
- Nausea, vomiting
- Absence of cremasteric reflex
- (Decreased blood flow on Doppler imaging)
- In reality ?torsion → theatre for exploration



# Your turn...

22M: left-sided painless scrotal swelling noticed in the shower yesterday

PMH bilateral cryptorchidism treated with orchidopexy as a baby

O/E: firm, non-tender lump on left testis

Light held behind scrotum does not shine through

A: hydrocele

B: epididymal cyst

C: varicocele

D: testicular tumour

E: scrotal hernia

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<https://patient.info/patientplus>



## Armando Hasudungan

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