

## CH. 11 URINARY SYSTEM

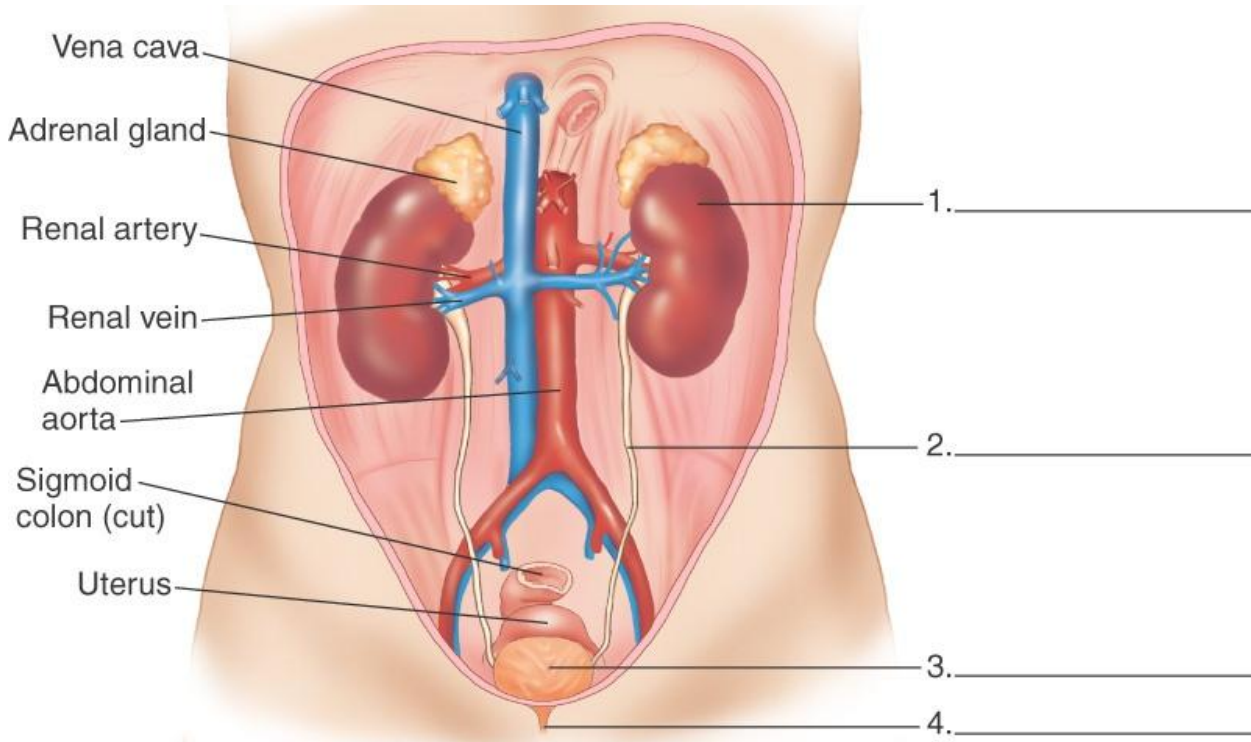
**\*\*BEFORE LECTURE Define the following word parts: Word Part quiz will be \_\_\_\_\_**

Prefixes	Combining forms	Suffixes
	Ur(o)	-uria
	Cyst(o)	
	Nephr(o), Ren(o)	
	Ureter(o)	
	Urethra(o)	
	Vesic(o)	
	Glomerul(o)	
	Pyel(o)	
	Urin(o)	
	Albumin(o)	
	Glyc(o), Glycos(o)	
	Hemat(o)	
	Ket(o), Keton(o)	
	Prote(o), Protein(o)	
	Py(o)	
	Noct(i), Nyct(o)	
	Olig(o)	
	Gon(o)	
	Thromb(o)	

**\*\*BEFORE LECTURE Define the following Abbreviations: Abbreviation quiz will be \_\_\_\_\_**

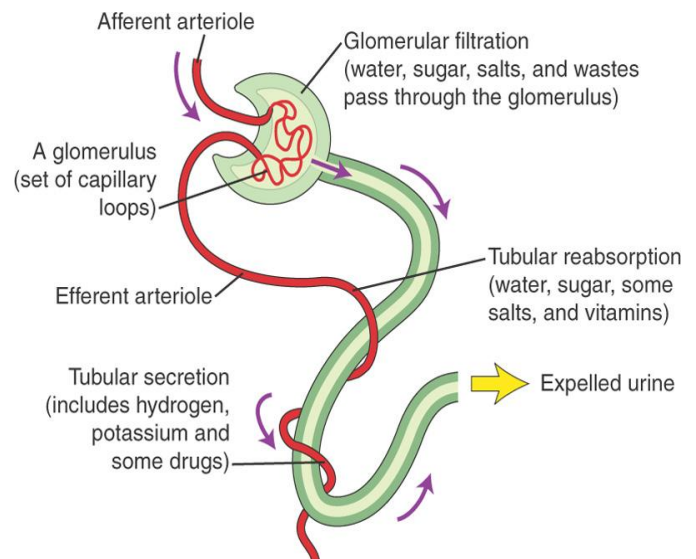
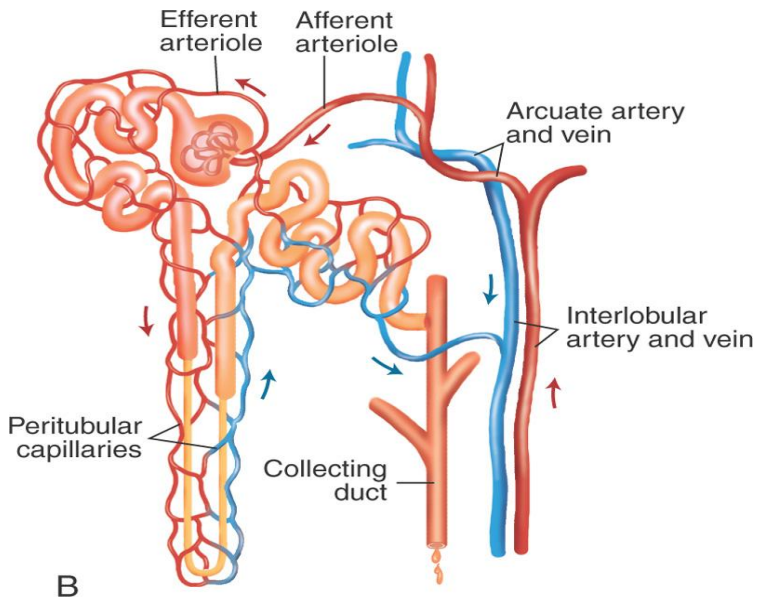
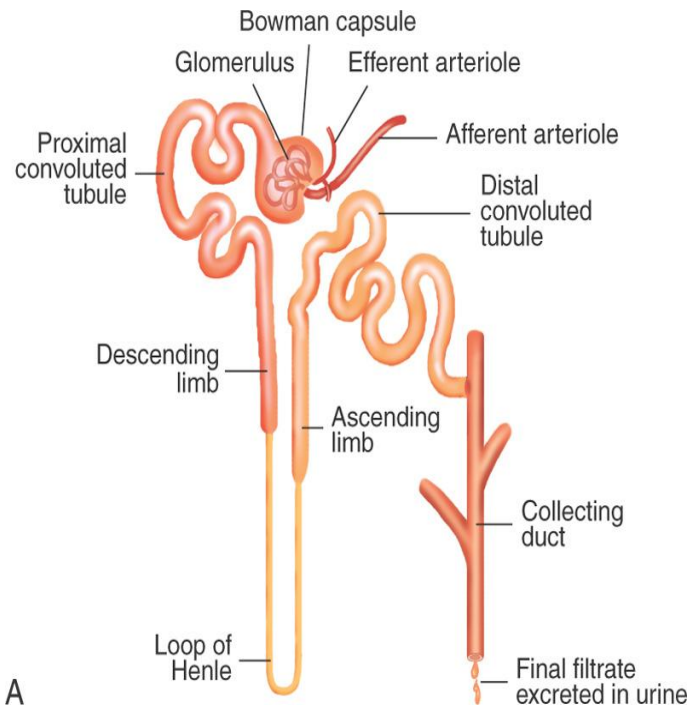
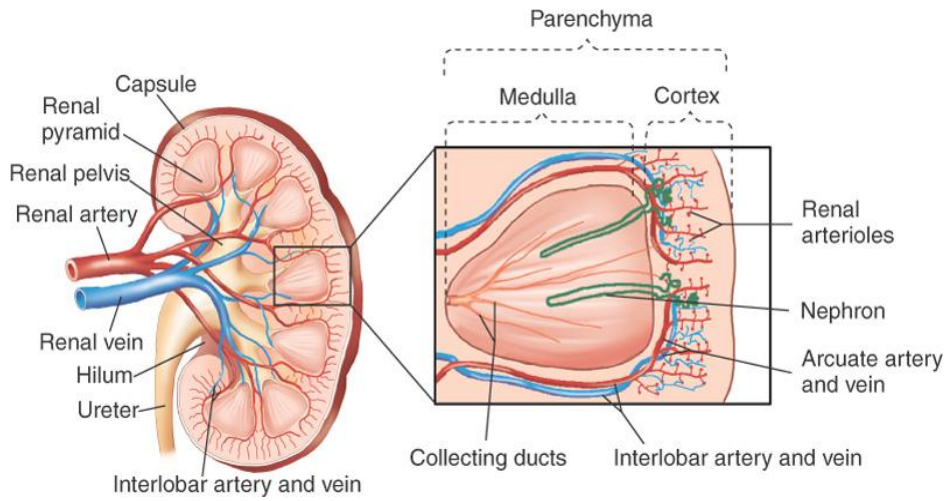
- ADH
- ARF
- BPH
- BUN
- C&S
- CRF
- EMG
- ESWL
- GFR
- GU
- I&O
- IVP
- KUB
- pH
- STD
- TUR
- TURP
- UA, U/A
- UTI
- VCUG
- VD

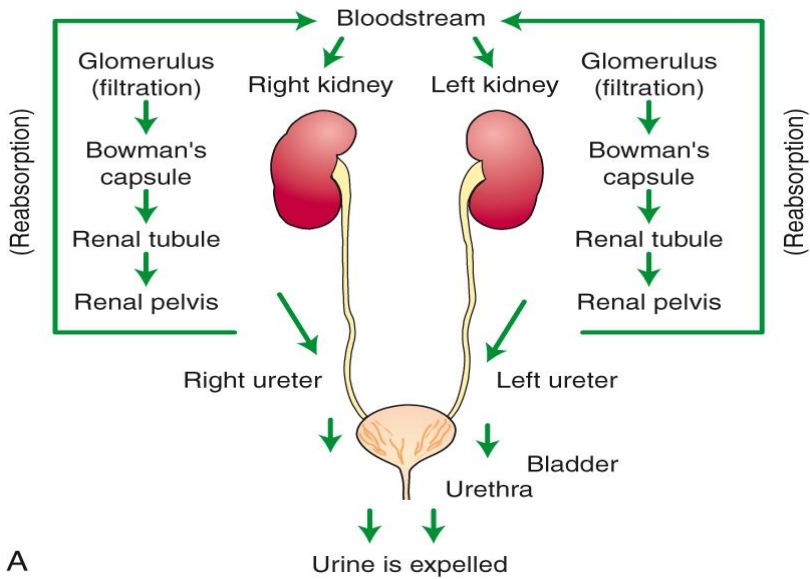
Functions of the Kidney



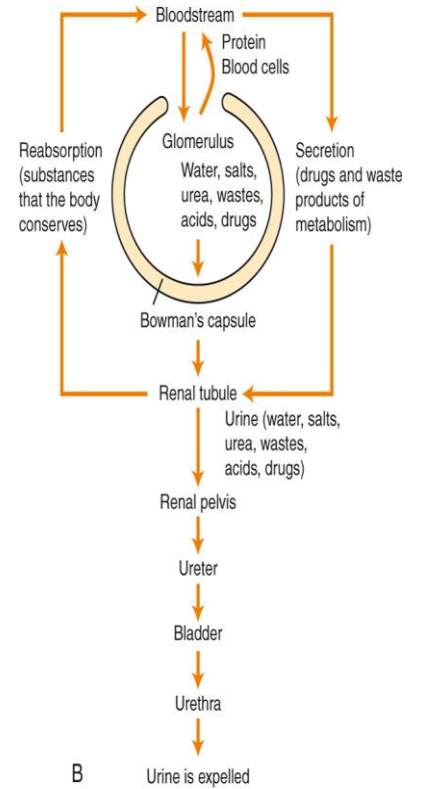
Terminology

- Vesicoureteral
- Vesicovaginal
- urethrovaginal
- extracystic
- abdominocystic
- abdominovesical
- Rectourethral
- urethrorectal
- Genitourinary
- urogenital





A



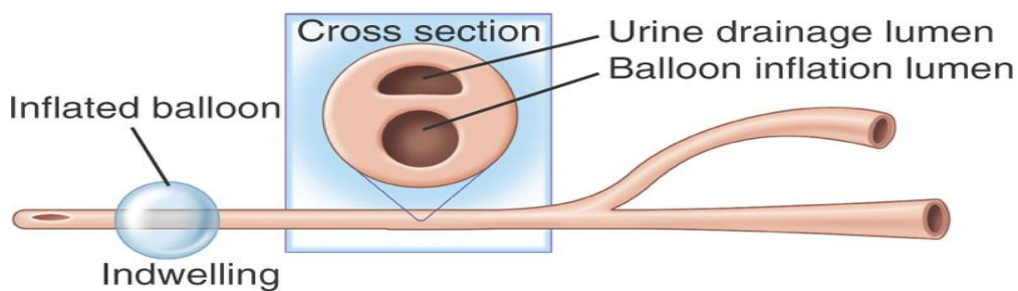
B

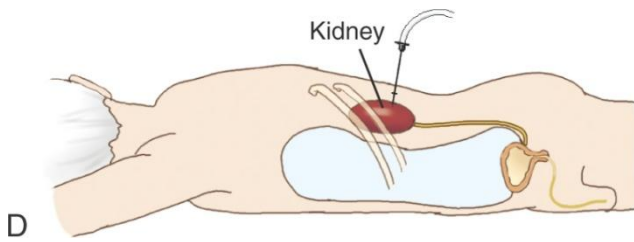
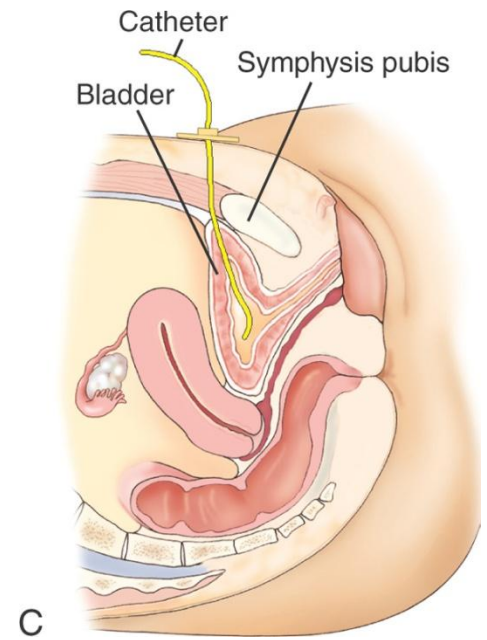
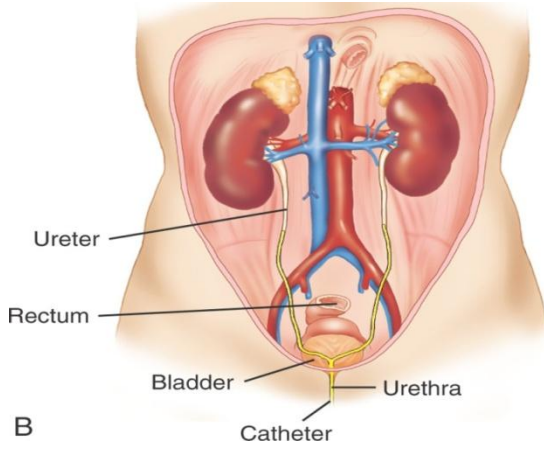
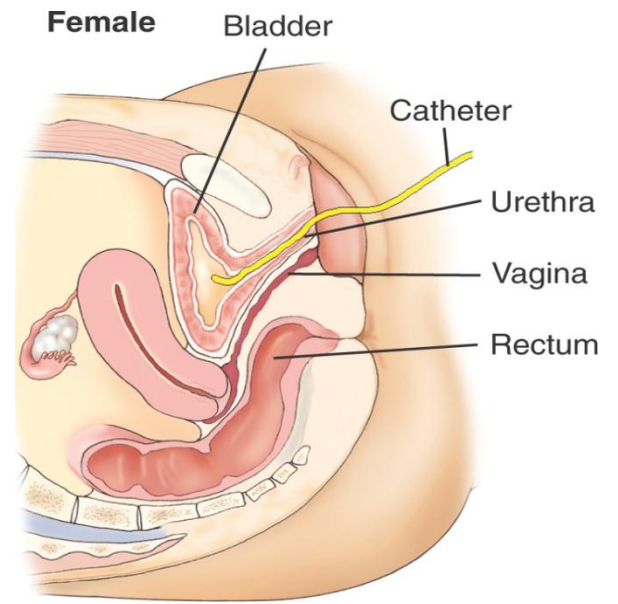
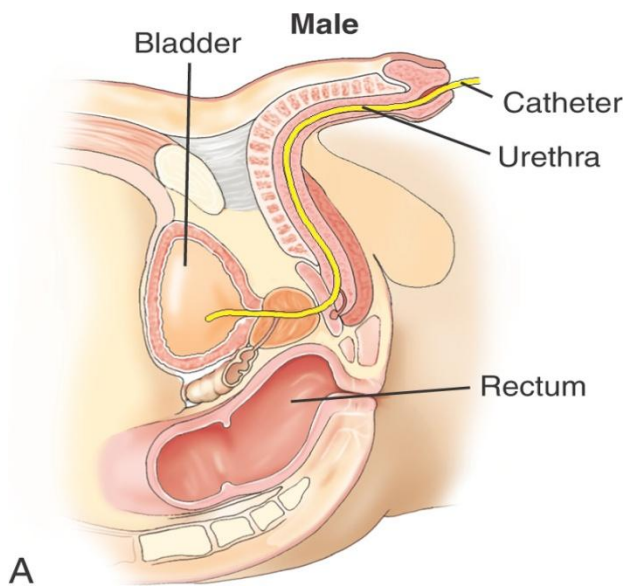
## Diagnostic Tests and Procedures

- Laboratory Tests
- Urinary Catheterization
- Urinary Radiography
- Endoscopy

## Laboratory Tests

- Urinalysis: physical, chemical and microscopic examination
  - pH
  - Abnormal substances in urine: ketones, sugar, protein, red blood cells and white blood cells
  - Specific gravity, urinometer or chemical dipstick
- Intake and output



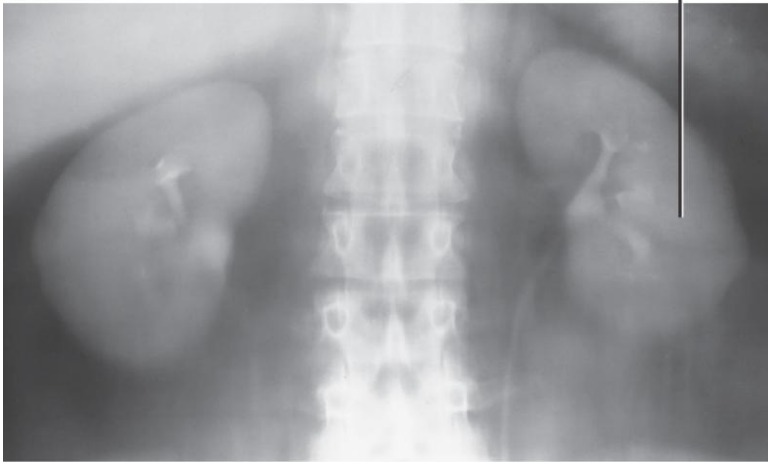


### Diagnostic Tests and Procedures

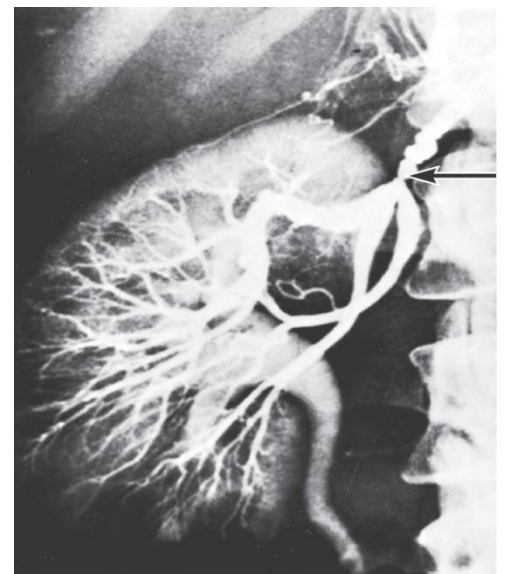
- Urodynamic studies:
  - Cystometrography
  - electromyography

- Urinary Radiography
  - nephrosonography
  - nephrotomography
  - nephrotomogram
  - intravenous urography
  - urogram
  - intravenous pyelography
  - pyelogram
  - Cystography
  - cystourethrography
  - voiding cystourethrogram
  - renal angiography
  - renal arteriogram
  - kidney scan
  - renography

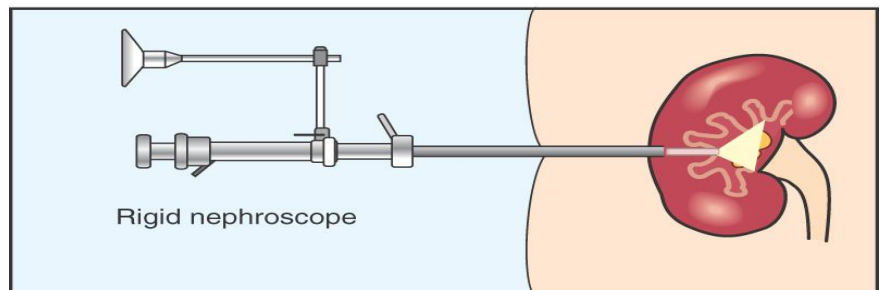
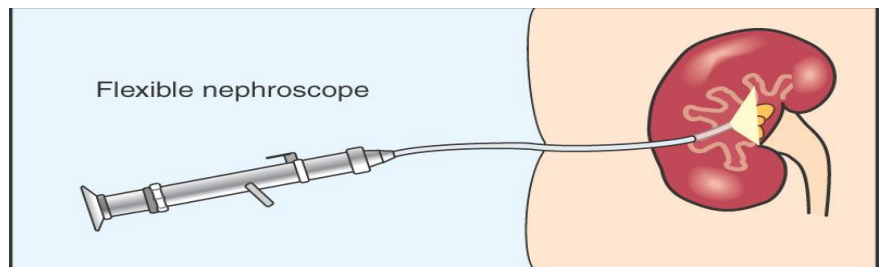
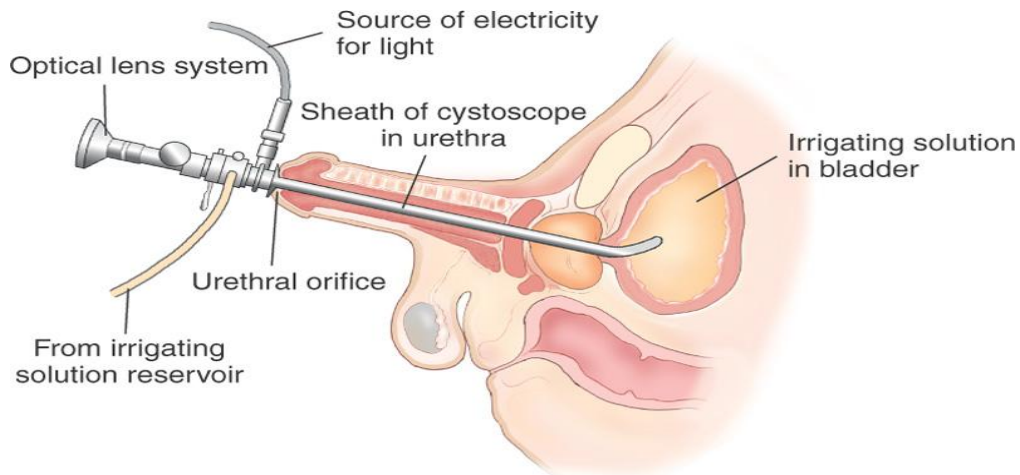
Kidney



Pelvis of kidney



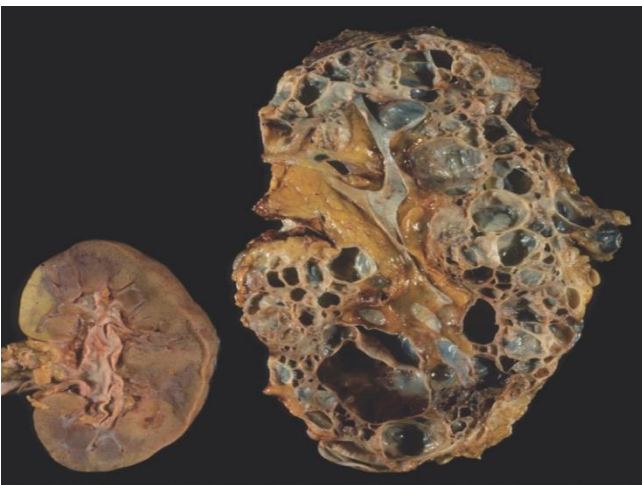
- Endoscopy
  - cystoscopy
  - cystoureteroscopy
  - urethroscopy
  - ureteroscopy
  - nephroscopy



## Pathologies

- uropathy
- renovascular disorders
- Disorders of urination:
  - dysuria,
  - polyuria
  - anuria (anuric)
  - Oliguria
  - Polyuria
  - Nocturia

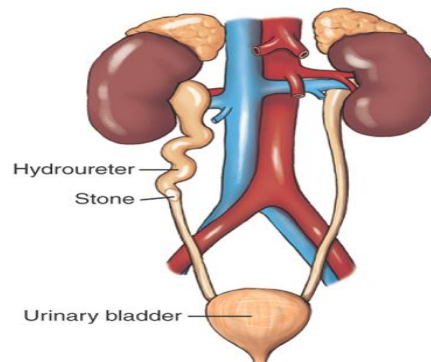
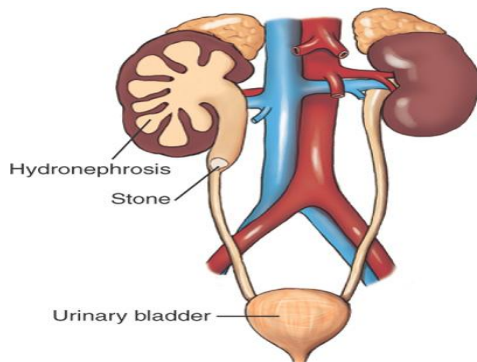
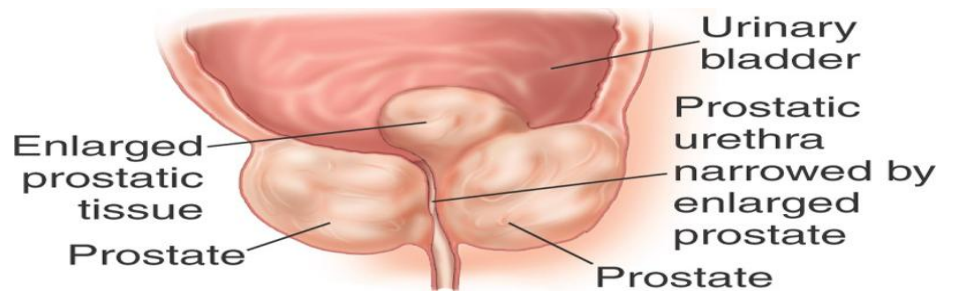
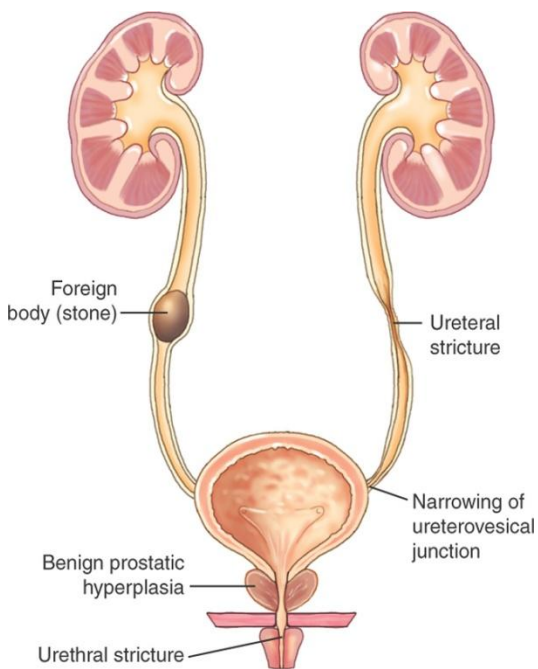
- Nycturia
- Urgency
- Frequency
- Hesitancy
- urinary reflux
- Incontinence
- enuresis
- Kidney disorders:
  - Uremia
  - renal failure (acute and chronic)
  - Nephromegaly
  - Nephrolysis
  - Nephromalacia
  - polycystic kidney disease
  - nephrotic syndrome
- Diabetes mellitus
- diabetic nephropathy
- nephrotic syndrome
- diabetes insipidus
- Renovascular diseases:
  - renal artery stenosis
  - renal hypertension
  - Nephrosclerosis
  - renal vein thrombosis



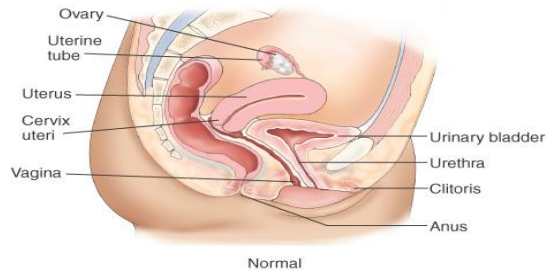
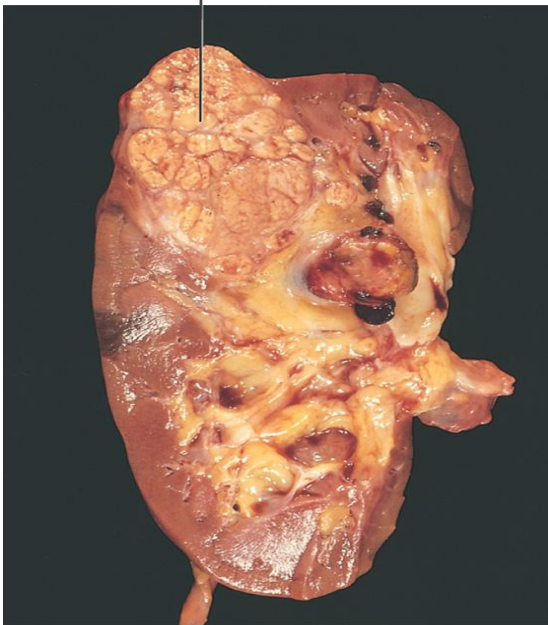
- *Uremia*
  - An accumulation of waste products in the blood, including urea
  - Caused by renal failure
  - Acute uremia can be characterized by oliguria and high blood urea nitrogen
  - Chronic uremia can require dialysis
- Obstructive nephropathies:
  - Hydronephrosis
  - hydroureter,
  - urolithiasis



- nephrolithiasis
- ureterolithiasis
- cystolithiasis
- Growths:
  - polyps (bladder polyp)
  - bladder cancer
  - Wilms tumor
- Structural alterations:
  - uterine prolapsed
  - ureterocele
  - Urethrocele
  - Cystocele
  - Urethrostenosis
  - ureterostenosis



Cancerous tumor

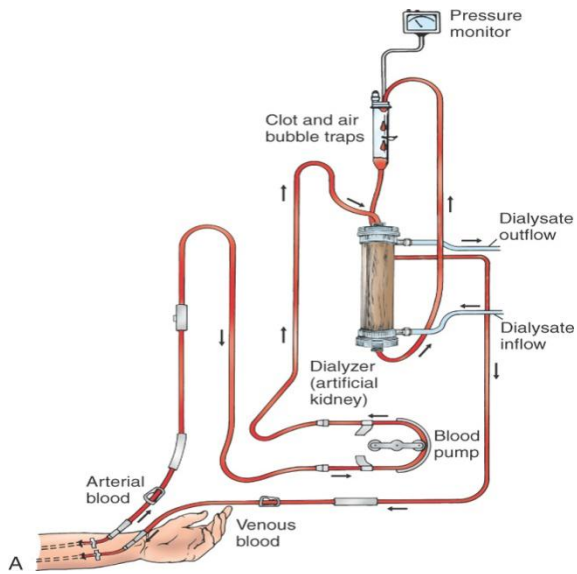


- Septicemia,
- Glomerulopathy
- ureteropathy
- UTIs:
  - Cystitis
  - Urethritis
  - Pyelonephritis
  - urethrocystitis/cystourethritis
  - Cystitis
  - Ureteritis
  - Ureteropyelonephritis
  - Pyelitis
  - Pyelonephritis
  - Nephritis
  - Glomerulonephritis
  - interstitial nephritis
- Sexually transmitted diseases:
  - Gonorrhea
  - urethritis
- Association of GU infections with STDs Gonorrhea
  - can produce urethrorrhea in both genders
  - may include urethritis, dysuria and pyuria

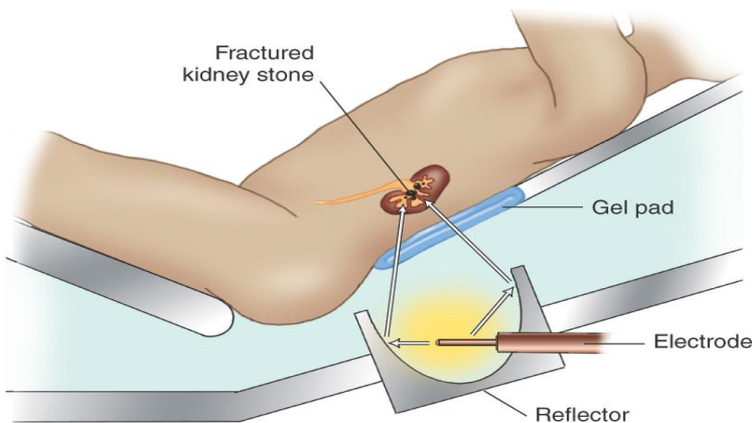


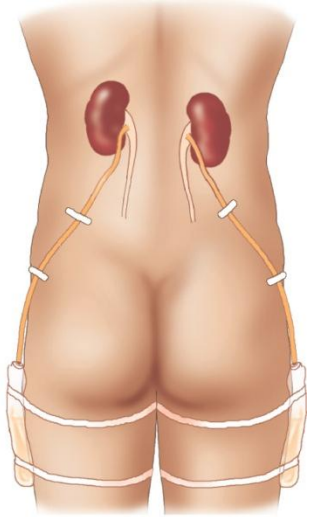
## Surgical and therapeutic Interventions

- Dialysis
  - kidney dialysis
  - hemodialysis
  - peritoneal dialysis

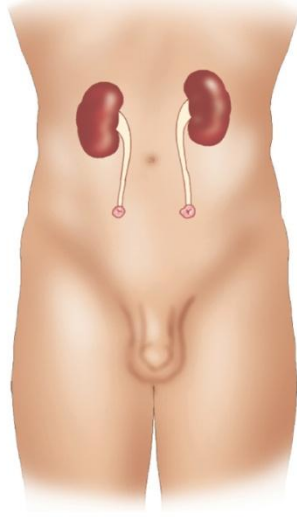


- Lithotripsy
- lithotomy:
  - Nephrolithotomy
  - Pyelolithotomy
  - Ureterolithotomy
  - Cystolithotomy
  - ESWL
- Urinary diversion:
  - Nephrostomy
  - Ureterostomy
  - Cystostomy
  - Transureteroureterostomy
  - Ureterocystostomy
  - ureterocystoneostomy

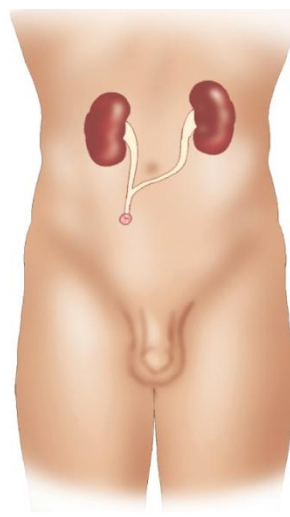




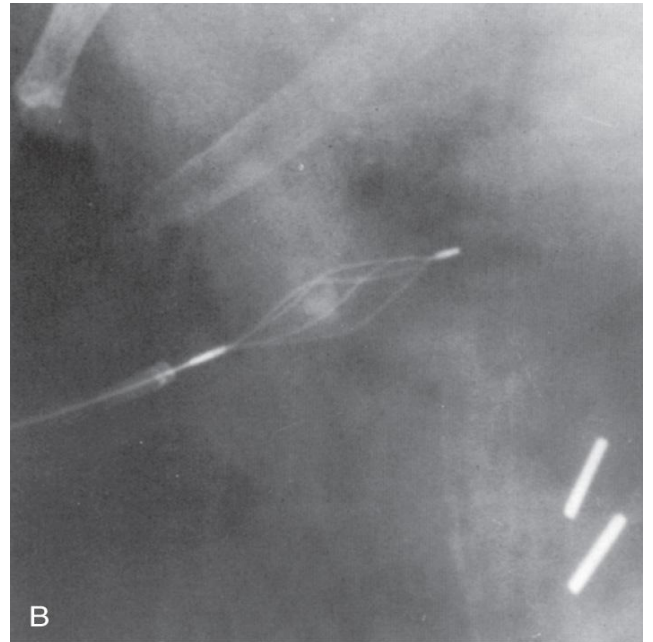
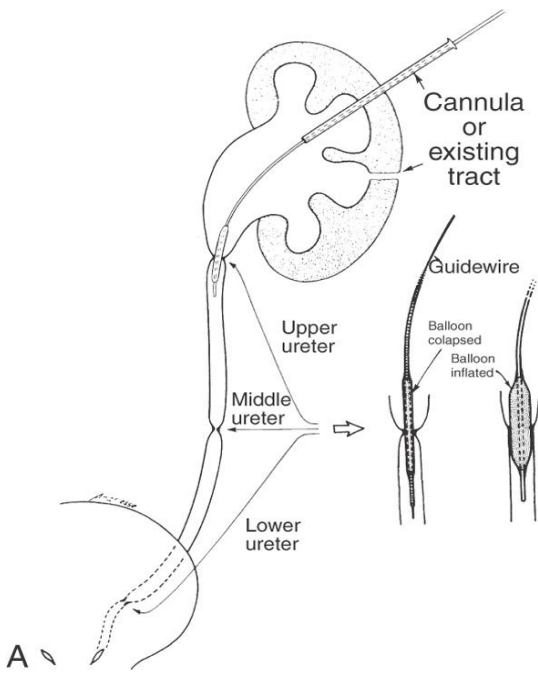
A Nephrostomy



B Bilateral ureterostomy



C Transureteroureterostomy



- Incision:
  - suprapubic cystotomy
  - cystotomy
  - urethrotomy
- Excision:
  - Nephrectomy
  - laparoscopic nephrectomy
  - Nephroureterectomy
  - Cystectomy
  - Ureterectomy
  - renal transplant
- Vascular therapy:
  - percutaneous transluminal renal angioplasty

- Reparative procedures:

- Ureteroplasty
- Pyeloplasty
- Cystoplasty
- nephropexy

- Other therapies:

- Antibiotics
- Analgesics
- Antispasmodics
- diuretics

