

Pediatric Subspecialty Exam

1. **Core-General** – all basic science questions must have clinical relevance
 - a. Anatomy
 - b. Core Competency
 - c. Radiation Safety
 - d. Patient Safety include (DVT, antibiotic prophylaxis opioid addiction questions)
 - e. Ultrasound Techniques
 - f. Radiation Safety
 - g. Ethics
 - h. Basic Stats
 - i. Fluid and Electrolyte management in children
 - j. Infection & Inflammatory processes involving GU Tract
 - i. UTI- Dx and management
 - ii. Rx and significance of reinfection vs relapsing UTI
 - iii. Pyelonephritis – Dx and management
 - iv. Xanthogranulomatous pyelonephritis
 - v. Kidney Abscess
 - k. Kidney scarring –Dx & complications
 - l. Henoch- Schonlein -Urologic manifestations
 - m. Crohns Disease – Urologic manifestations
 - n. Lichen Sclerosus- Dx and treatment
 - o. Epididymitis Dx and Rx
 - p. Funguria Dx & Treatment
 - q. Balanoposthitis – Dx, Rx
 - r. Phimosis- Rx
 - s. Pediatric Vulvovaginitis
 - t. Vaginal adhesions - Rx
 - u. Sexual Transmitted Disease in adolescence
 - i. HPV vaccine
 - ii. Ethics of Rx (see core- competency)
 - v. Antibiotic prophylaxis
 - w. Trauma
 - x. Transplant (pre Tx-evaluations and Post Tx-urologic complications)

2. Congenital Anomalies and Embryological defects

Note: Excludes obstructive disorders e.g. UPJ, PUV, primary obstructive megaureter, ureterocele see topic below

- a. Cloacal anomalies- common UG sinus
- b. Congenital adrenal Hyperplasia
- c. Cryptorchidism (anorchia)

- d. Disorders of Sexual Differentiation
- e. Ectopic Ureters
- f. Epispadias-Exstrophy Complex
- g. Epididymal and Vasal anomalies
- h. Vasal agenesis- cystic fibrosis
- i. Gender dysmorphia
- j. Hydrocele
- k. Hydroculpos (Mullerian Duct abnormalities)
- l. Hypospadias
- m. Enlarged prostatic utricle
- n. Imperforate Anus – associated GU anomalies
- o. Prune Belly Syndrome
- p. Congenital megalourethra
- q. Testicular torsion (neonatal and Intravaginal)
- r. Renal Agenesis
- s. Renal Fusion anomalies
 - i. Horse shoe kidneys cross fused ectopy
- t. Renal cystic disease of childhood
 - i. Multicystic dysplastic kidneys
 - ii. Autosomal recessive kidney disease
 - iii. Autosomal dominant kidney disease
- u. Urachal Abnormalities
- v. Varicoceles
- w. Vesicoureteral reflux
- x.

3. Pediatric Obstructive Uropathy

- a. Antenatal Hydronephrosis
 - i. Differential Dx and Management
- b. Posterior and anterior urethral valves Dx and Management
 - i. Vesicostomy when to do
- c. Primary Obstructing Megaureter Dx and Management
- d. UPJ obstruction Dx and Management
- e. Ureterocele
 - i. Duplex
 - ii. Single system
- f. Physiologic alterations from obstruction
 - i. Post-obstructive diuresis Dx and Rx
- g. Nephrogenic Diabetes Insipidus

4. Neurogenic Bladder and Voiding Dysfunction

- a. Dx –UDS assessment of Neurogenic bladder
- b. Etiologies of Neurogenic bladder in children

- i. Cerebral palsy
 - 1. Dx and Management
 - ii. Spina bifida
 - 1. Dx and Management
 - iii. Spinal cord injuries
 - 1. Dx and Management
 - iv. Tethered Cord
 - 1. Dx and Management
- c. Pharmacologic and Surgical Rx Neurogenic bladder (Not augments – see below)
 - i. Antimuscuranics
 - ii. Onobotulinum Toxin
- d. Bladder and Bowel dysfunction
 - i. Dx and Management
- e. Neural Stimulation
 - i. Sacral Nerve stimulation
 - ii. Percutaneous Tibial nerve stimulation
- f. Management of Neurogenic Bowel
 - i. Bowel Irrigations
 - ii. ACE indications and complications

5. Pediatric Neoplasms and Urinary augmentation and diversion

- a. Neoplasms
 - i. Renal
 - 1. Mesoblastic Nephroma
 - 2. Wilms tumors Dx and Management
 - a. Congenital anomalies associated with Wilms Tumors e.g. Deny Drash, Aniridia, Hemihypertrophy
 - 3. Clear Cell Sarcoma of the kidney: Dx and management
 - 4. Rhabdoid tumor of kidney: dx and management
 - 5. Tuberous sclerosis- angiomyolipoma
 - 6. Von Hippel Landau
 - 7. Renal cell carcinoma of childhood
 - ii. Testicular tumors of childhood and adolescence: Dx and Management
 - 1. Yolk sac
 - 2. Teratoma
 - 3. NSGC tumors in post pubertal pt
 - 4. stromal tumors (Leydig cell tumors)
 - 5. Adrenal rest in congenital adrenal hyperplasia
 - 6. Epidermoid cysts
 - iii. Rhabdomyosarcoma: Dx and Management
 - 1. Bladder and prostate
 - 2. spermatic cord

- 3. vagina (sarcoma botyroides
- iv. NO NEUROBLASTOMAS!!!

- b. Urinary Diversions , Augmentations. BNR, AUS & Slings
 - i. Indications and segments used for bladder augmentation
 - ii. Complications of augmentations
 - 1. Rupture
 - 2. Electrolyte and vitamin abnormalities
 - 3. Bladder stones management and prevention
 - 4. Renal Preservation
 - iii. Assessment of post augment urinary incontinence
 - iv. Complications and management of continent stomas
 - v. Bladder Neck reconstruction or slings with or without augmentation
 - vi. Vesicostomy management of complications
 - vii. Indication and complications of urinary conduits.
 - viii. Artificial Urinary Sphincter- Indications and complications

6. Endourology, Nephrology and Laparoscopic-robotic complications

- a. Nephrolithiasis
 - i. Percutaneous nephrolithotomy – indications and technique
 - ii. ECSWL – indications
 - iii. Ureteroscopy indications and technique
 - iv. Recommended follow-up after stone removal
 - v. Metabolic work-up for stone disease
 - vi. Dx and Rx based on metabolic work up
 - vii. Heredity (genetic) causes for nephrolithiasis
 - viii. Urinary Crystal identification
- b. Nephrology
 - i. Microscopic hematuria(workup)
 - ii. Gross hematuria of Neonate
 - iii. Hypercalciuria of infancy
 - iv. Proteinuria (Dx and significance)
 - v. Identification of glomerulonephritis
 - vi. Casts- Crenated RBC
 - vii. Post infectious GMN
 - viii. Renal Vein thrombosis
 - ix. Renal Artery Thrombosis
- c. Complications of Endourology and Laparoscopy-Robotics 4 questions
 - i. Ureteral stricture post ureteroscopy Dx and Rx
 - ii. Ureteral perforation: Dx and Rx

- iii. PCN complications
 - 1. Bleed
 - 2. Bowel perforation
 - 3. Urinoma
- d. ECSWL- complications
- e. Robotic complications
 - i. Diminished blood flow
 - ii. Reduced urine output
 - iii. Air embolism
 - iv. Complications of trocar placement