

# Pathology testbank

**DONE BY: SCIENTIFIC TEAM – HOPE**

**A 51-year-old man is hospitalized for acute myocardial infarction. He has decreased cardiac output with hypotension requiring multiple pressor agents. His urine output drops over the next 3 days. His serum urea nitrogen increases to 59 mg/dL, with creatinine of 2.9 mg/dL. Urinalysis reveals no protein or glucose, a trace blood, and numerous hyaline casts. Five days later, he develops polyuria and his serum urea nitrogen declines. Which of the following pathologic findings in his kidneys is most likely to have caused his azotemia?**

- A Patchy tubular necrosis
- B Podocyte foot process effacement
- C Glomerular crescent formation
- D Hyperplastic arteriosclerosis
- E Mesangial immune complex deposition

**A**

**A clinical study is performed to determine the value of percutaneous renal biopsy. The medical records of subjects with renal diseases are analyzed to note the circumstances in which the results of a renal biopsy facilitated choice of therapy that improved prognosis. In which of the following situations is a percutaneous needle biopsy of the kidney most useful?**

- A Fever and flank pain with suspected acute pyelonephritis
- B Prostatic hyperplasia with suspected hydronephrosis
- C Premature neonate with suspected polycystic kidney disease
- D Abdominal pain with suspected renal cyst
- E Acute renal failure with suspected systemic lupus erythematosus

**E**

**A 56-year-old man complains of dull flank pain for the past month. On physical examination he has tenderness to percussion at the right costovertebral angle. Laboratory studies show microscopic hematuria but no proteinuria or glucosuria. A urine cytology shows no atypical cells. A CBC shows WBC count 7800/microliter, Hgb 21.1 g/dL, Hct 63.5%, MCV 94 fL, and platelet count**

**195,000/microliter. His serum urea nitrogen is 15 mg/dL and creatinine 1 mg/dL. Which of the following radiographic findings is most likely to be present in this man?**

- A Hydronephrosis on intravenous pyelogram
- B Renal mass on abdominal CT scan
- C Radiopaque ureteral calculus on an abdominal plain film
- D Enlarged, multicystic kidneys on abdominal ultrasound
- E Pelvic abscess below the bladder on MR imaging

**B**

**A 43-year-old man goes to his physician for a routine check of his health status. He is found to have a blood pressure of 150/95 mm Hg. His urinalysis shows pH 6.5, specific gravity 1.015, no glucose, blood, or protein, and no casts. His serum creatinine is 1.4 mg/dL. If he is not treated, which of the following conditions will most likely cause his death?**

- A Intracerebral hemorrhage (stroke)
- B Aortic aneurysm rupture
- C Congestive heart failure
- D Chronic renal failure
- E Intracranial aneurysm rupture

**C**

**A 20-year-old previously healthy man has been feeling tired for the past 5 days. He then passes dark-colored urine. On physical examination his blood pressure is 160/90 mm Hg. Laboratory studies show his serum creatinine is 4.4 mg/dL and BUN 40 mg/dL. A urinalysis reveals pH 6, specific gravity 1.011, 3+ blood, 1+ protein, no glucose, and no ketones. On urine microscopic examination there are numerous RBC casts. Which of the following pathologic findings on renal biopsy is most likely to be present in this man?**

- A Glomerular crescents
- B Widened proximal tubules
- C Neutrophilic infiltrates

- D Basement membrane thickening
- E IgA deposited in glomerular capillaries

**A**

**A 43-year-old man has had increasing malaise for the past 3 weeks. On physical examination he has a blood pressure of 150/95 mm Hg and 1+ pitting edema of the lower extremities to the knees. Dipstick urinalysis shows no glucose, blood, ketones, nitrite, or urobilinogen, and the microscopic urinalysis reveals no RBC/hpf and only 1 WBC/hpf. Additional laboratory studies show a 24 hour urine protein of 4.1 gm. His serum creatinine is 3.5 mg/dL with urea nitrogen of 38 mg/dL. His hepatitis B surface antigen is positive. Which of the following is the most likely diagnosis?**

- A Membranous nephropathy
- B Systemic lupus erythematosus
- C Acute tubular necrosis
- D Diabetic nephropathy
- E Post-streptococcal glomerulonephritis

**A**

**A 60-year-old woman is admitted with sudden onset of chest pain and is diagnosed with an acute myocardial infarction. There is difficulty maintaining adequate blood pressure and tissue perfusion for 3 days. Her serum lactate becomes elevated. Her serum urea nitrogen increases to 44 mg/dL and creatinine to 2.2 mg/dL. Granular and hyaline casts are present on microscopic urinalysis. Which of the following renal lesions is most likely to be present in this situation?**

- A Chronic pyelonephritis
- B Acute tubular necrosis
- C Nodular glomerulosclerosis
- D Renal vein thrombosis
- E Minimal change disease

**B**

**A 53-year-old woman has had chronic arthritis pain for the past 3 years. She has taken 2 gm of phenacetin and acetaminophen a day for her pain over that time. She now has increasing fatigue. There are no abnormal findings on physical examination. Laboratory studies show her serum urea nitrogen is 52 mg/dL and creatinine 5.4 mg/dL. Which of the following pathologic findings is most likely to occur in her kidneys?**

- A Papillary necrosis
- B Focal segmental glomerulosclerosis
- C Nephrocalcinosis
- D Acute interstitial nephritis
- E Arteriosclerosis

**A**

**A 25-year-old woman has been hospitalized for treatment of a Staphylococcus aureus abscess of her left thigh complicating a puncture wound. The wound is incised and drained and she receives antibiotic therapy. She is improving and discharged home a week later, but the next day she develops a fever. On physical examination her temperature is 38.1°C and there is a diffuse erythematous skin rash of her trunk and extremities. A urinalysis shows sp gr 1.020, pH 6.5, 1+ blood, 1+ protein, no glucose, and no ketones. There are 10-20 WBCs/hpf and 1-5 RBCs/hpf, and a few eosinophils are noted on urine microscopic examination. Which of the following is the most likely diagnosis?**

- A Acute tubular necrosis
- B Septicemia with pyelonephritis
- C Drug-induced interstitial nephritis
- D Hemolytic-uremic syndrome
- E Post-infectious glomerulonephritis
- F Urinary tract infection

**C**

**A 39-year-old previously healthy man has the sudden onset of severe right flank pain that comes in waves all night long. When he is seen in the emergency room, after waiting for two hours, he is**

**exhausted. On physical examination there are no abnormal findings. Urinalysis reveals no ketones, glucose, protein, nitrite, or urobilinogen, but blood is present. Urine microscopic examination shows many RBCs but few WBCs. The specific gravity is 1.015 and the pH is 5.5. Which of the following is the most likely diagnosis?**

- A Nodular prostatic hyperplasia
- B Membranous nephropathy
- C Ureteral calculus
- D Renal angiomyolipoma
- E Urothelial carcinoma of bladder

**C**

**A 15-year-old girl has had increasing lethargy following a bout of the 'flu' 3 weeks ago. On physical examination there are no abnormal findings. Her condition does not improve after 3 weeks on corticosteroid therapy, so a renal biopsy is performed and microscopic examination shows segmental sclerosis of 3 of 10 glomeruli. Immunofluorescence studies and electron microscopy do not show immune deposits. Which of the following is the most likely outcome for this girl's condition?**

- A Progression to chronic renal failure
- B Improvement with additional corticosteroid therapy
- C Development of restrictive lung disease
- D Discovery of an underlying malignancy
- E Remission following dietary change

**A**

**A 59-year-old man notes blood in his urine for the past week. On physical examination there are no abnormal findings. A urinalysis confirms the presence of blood, but no proteinuria or glucosuria. A urine culture is negative. A cystoscopy is performed, and a 3 cm exophytic mass is seen in the dome of the bladder. A biopsy of this mass is performed and microscopic examination reveals fibrovascular cores covered by a thick layer of transitional cells. Which of the following risk factors is most likely to have led to development of this lesion?**

- A Diabetes mellitus

- B Recurrent urinary tract infection
- C Therapy with methicillin
- D Cigarette smoking
- E Tuberos sclerosi
- F Use of NSAIDS

**D**

**A 53-year-old woman has noted fever and right-sided flank pain for the past 3 days. On physical examination her temperature is 38.4°C and there is right costovertebral angle tenderness. A urinalysis reveals sp. gr. 1.010, pH 7.5, no glucose, no protein, no ketones, and 1+ blood. Many WBCs and WBC casts are seen on urine microscopic examination. An abdominal radiograph reveals a radiopaque calculus that forms a cast of a dilated right renal collecting system. A urine culture grows *Proteus vulgaris*. Which of the following crystals is most likely to be seen in large numbers on microscopic urinalysis in this woman?**

- A Calcium oxalate
- B Cystine
- C Calcium phosphate dihydrate
- D Uric acid
- E Magnesium ammonium phosphate

**E**

**A 60-year-old man was diagnosed last year with adenocarcinoma of the lung, and he underwent right lower lobectomy. For the past 3 weeks he has had increasing malaise. On physical examination he has pitting edema to his knees and presacral edema. Abdominal and chest CT scans show scattered hepatic mass lesions and hilar lymphadenopathy. A urinalysis reveals 4+ proteinuria, and his 24 hour urine protein is 2.7 gm. His serum urea nitrogen is 55 mg/dL with creatinine of 6.1 mg/dL. A renal biopsy is performed, and there is focal deposition of IgG and C3 with a granular pattern. Which of the following forms of glomerular disease is he most likely to have?**

- A Membranous nephropathy
- B Rapidly progressive glomerulonephritis

- C Nodular glomerulosclerosis
- D Chronic glomerulonephritis
- E Dense deposit disease

**A**

**A clinical study is performed with subjects born with congenital urinary tract anomalies. Their records are reviewed to assess the development of long term complications. One group of subjects is found to have an increased risk for both infection and development of a carcinoma. Which of the following congenital urinary tract anomalies is most likely to carry this risk?**

- A Unilateral renal agenesis
- B Bladder exstrophy
- C Bilateral ureteral duplication
- D Horseshoe kidney
- E Medullary sponge kidney

**B**

**A 57-year-old man has had dysuria for the past week. Over the past 2 days he has experienced shaking chills. On physical examination his temperature is 39.3°C. A urinalysis shows sp gr 1.016, pH 6, 1+ glucose, 1+ blood, no ketones, and no protein. Urine microscopic examination shows numerous WBCs and WBC casts. His serum creatinine is 1.5 mg/dL and glucose 155 mg/dL with hemoglobin A1C 8.7%. A renal ultrasound scan shows a 0.3 cm free floating echodense object in the left renal pelvis. Which of the following complications has this man most likely developed?**

- A Acute tubular necrosis
- B Aspergillusfungus ball
- C Cystine-containing calculus
- D Hematoma formation
- E Papillary necrosis
- F Renal cell carcinoma
- G Urothelial carcinoma

**E**

**A 49-year-old woman has been hospitalized for the past 10 days for treatment of bronchopneumonia. She has developed chills and fever over the past 2 days. On physical examination her temperature is 38.8°C and she has a diffuse erythematous skin rash. Laboratory studies show serum creatinine 2.2 mg/dL and glucose 73 mg/dL. A peripheral blood smear reveals eosinophilia. On urinalysis she has 2+ proteinuria but no blood, glucose, or ketones. Which of the following is the most likely diagnosis?**

- A Post-streptococcal glomerulonephritis
- B Drug-induced interstitial nephritis
- C IgA nephropathy
- D Acute tubular necrosis
- E Acute serum sickness

**B**

**A 5-year-old child has been noted by his mother to be lethargic for 2 weeks. On physical examination he has periorbital edema. He is afebrile. Dipstick urinalysis reveals no glucose, ketones, or blood, but he has 4+ proteinuria present. Microscopic urinalysis reveals no casts, but oval fat bodies are seen. He is treated with corticosteroid therapy and his condition improves. Which of the following renal electron micrographic findings is most characteristic for this child's disease?**

- A Fusion of podocyte foot processes
- B Subepithelial electron dense deposits
- C Duplication of glomerular capillary basement membranes
- D Irregular thickening of the glomerular basement membranes
- E Mesangial cell proliferation

**A**

**A 70-year-old man has noted passing darker urine for the past week. On physical examination he has vital signs with T 37.1°C, P 73/minute, RR 16/minute, and BP 130/80 mm Hg. Laboratory studies include urinalysis with sp gr 1.015, pH 7, 2+ blood, no glucose, no protein, and no ketones. Urine microscopic examination shows 10 to 15 RBC/hpf and no WBCs, casts, or crystals. Cystoscopy is performed and no lesions are noted. Intravenous urography shows a 2 cm filling defect in the left renal pelvis. Which of the following laboratory test findings is most likely to be present in this man?**



- A Elevated hemoglobin and hematocrit
- B Hemoglobin S on electrophoresis
- C Increased urine calcium
- D Positive serology for antinuclear antibody
- E Atypical cells with urine cytology

**E**

**An 11-year-old girl has increasing lethargy and has passed dark-coloured urine for the past week. She had a sore throat two weeks ago. On physical examination she is afebrile with blood pressure 140/90 mm Hg. Laboratory studies show her serum creatinine is 2.8 mg/dL and urea nitrogen 24 mg/dL. Urinalysis shows 2+ blood, 2+ protein, no glucose, and no ketones. Microscopic urinalysis shows dysmorphic RBC's. A renal biopsy is performed and on microscopic examination shows glomerular hypercellularity, with PMNs present. Electron microscopy shows subepithelial electron dense 'humps'. Which of the following laboratory test findings is most likely to be present in this girl?**

- A Elevated serum glucose
- B Antibody to double stranded DNA
- C Antiglomerular basement membrane antibody
- D Positive C3 nephritogenic factor
- E Elevated antistreptolysin O titer

**E**

**A 53-year-old man has passed darker urine for the past week. On physical examination there are no abnormal findings. A urinalysis shows pH 5.5, specific gravity 1.013, 2+ blood, no protein, and no glucose. A urine cytology is performed and there are atypical cells seen. A cystoscopy is performed, but no mucosal lesions are noted. He has a 60 pack year history of smoking cigarettes. Which of the following is the most likely diagnosis?**

- A Adenocarcinoma of prostate
- B Urothelial carcinoma of renal pelvis
- C Acute interstitial nephritis
- D Nodular glomerulosclerosis

E Squamous cell carcinoma of penis

**B**

**A 52-year-old previously healthy man has experienced episodes of discomfort with urination for 3 months. There are no remarkable findings on physical examination. Laboratory studies include a urinalysis that reveals 1+ blood. Microscopic urine examination shows numerous RBCs, a few WBCs, and no casts. A urine culture is negative. A plain film radiograph of the pelvis shows a rounded, 1 cm radiopaque lesion in the region of the bladder. Which of the following laboratory test findings is most likely to be present in this man?**

- A Albuminuria
- B Hypercalciuria
- C Transaminasemia
- D Hemoglobinuria
- E Hyperuricemia

**B**

**A 72-year-old man has been feeling tired and lethargic for 5 months. He has noted increasing hesitancy with urination. On physical examination his prostate is diffusely enlarged. Laboratory studies show sodium 139 mmol/L, potassium 4.0 mmol/L, chloride 104 mmol/L, CO<sub>2</sub> 25 mmol/L, creatinine 1.9 mg/dL, and glucose 81 mg/dL. Which of the following renal abnormalities is most likely to be present in this man?**

- A Cortical atrophy
- B Glomerulonephritis
- C Papillary necrosis
- D Polycystic change
- E Renal cell carcinoma

**A**

**A 36-year-old woman has urinary frequency with dysuria for the past 4 days. On physical examination she has no flank pain or tenderness. A urinalysis reveals sp. gr. 1.014, pH 7.5, no glucose, no protein, no blood, nitrite positive, and many WBC's. She has a serum creatinine of 0.9 mg/dL. Which of the following is the most likely diagnosis?**

- A Lupus nephritis

- B Urinary lithiasis
- C Acute cystitis
- D Malakoplakia
- E Urothelial carcinoma

**C**

**A 69-year-old man incurs blunt force trauma from a fall. On physical examination he has a contusion on his lower back. An abdominal CT scan shows 3 peripheral 1 to 2 cm cysts in his kidneys. The kidneys are normal in size. Laboratory studies show a serum urea nitrogen of 16 mg/dL and creatinine of 1.1 mg/dL. A urinalysis reveals no blood, ketones, protein, or glucose. Microscopic urinalysis reveals a few oxalate crystals. Which of the following is the most likely diagnosis?**

- A Polycystic kidney disease
- B Hydronephrosis
- C Renal atherosclerosis
- D Simple cortical cysts
- E Recurrent pyelonephritis infection

**D**

**A clinical study is performed with pediatric subjects who had a diagnosis of minimal change disease. These patients were observed to have prominent periorbital edema at diagnosis. Laboratory test findings from serum and urine tests were analyzed. Which of the following urinalysis test findings is most likely to have been consistently present in these subjects?.**

- A Nitrite positive
- B Proteinuria >3.5 gm/24 hours
- C Hematuria with >10 RBC/hpf
- D Calcium oxalate crystals
- E Renal tubular epithelial cells and casts

**B**

**A 12-year-old boy is a member of a family with a history of renal disease, with males more severely affected than females. He is found to have auditory nerve deafness, corneal dystrophy, and ocular lens dislocation. A urinalysis shows microscopic hematuria. A renal biopsy is performed. Microscopically, the glomeruli show glomerular capillaries with irregular basement membrane thickening and attenuation with splitting of the lamina densa. The mesangial matrix is increased and epithelial cells may appear foamy. Which of the following is the most likely diagnosis?**

- A Goodpasture syndrome
- B IgA nephropathy
- C Alport syndrome
- D Dominant polycystic kidney disease
- E Diabetes mellitus, type

**C**

**A clinical study is performed of laboratory findings in subjects with renal diseases. Loss of physiologic function accompanies many diseases. One renal physiologic function affects thirst. Loss of which of the following renal functions is most likely to be identified by laboratory measurement of the urine specific gravity following water deprivation?**

- A Filtration
- B Reabsorption
- C Secretion
- D Concentration
- E Blood flow

**D**

**A 45-year-old woman has had increasing malaise for the past year. On physical examination her blood pressure is 265/150 mm Hg. Laboratory studies show a plasma renin activity of 9 ng/mL/hr. She then suffers a 'stroke' with a right basal ganglia hemorrhage and dies. At autopsy the kidneys are bilaterally small with granular surfaces. Microscopically they show hyperplastic arteriosclerosis with fibrinoid necrosis, petechial hemorrhages, and microinfarcts in the cortices. Which of the following conditions is most likely to be her underlying cause of death?**

- A Diabetes mellitus, type II
- B Fibromuscular dysplasia

- C Factor V Leiden mutation
- D Analgesic abuse
- E Systemic sclerosis

**E**

**A 3-year-old child has become more irritable over the past two months and does not want to eat much at meals. On physical examination the pediatrician notes an enlarged abdomen and can palpate a mass on the right. An abdominal CT scan reveals a 10 cm solid mass involving the right kidney. The resected mass has a microscopic appearance with sheets of small blue cells along with primitive tubular structures. The child receives chemotherapy and radiation therapy, and there is no recurrence. Which of the following neoplasms is this child most likely to have had?**

- A Angiomyolipoma
- B Renal cell carcinoma
- C Urothelial carcinoma
- D Wilms tumor
- E Medullary fibroma

**D**

**A 5-year-old boy is noted to have increased puffiness around his eyes for the past week, and he has been less active than normal. On physical examination he has periorbital edema. Vital signs include T 37°C, P 75/minute, RR 22/minute, and BP 140/90 mm Hg. A urinalysis reveals sp. gr. 1.010, pH 6.5, no glucose, 4+ protein, no blood, no casts, and no ketones. Microscopic urinalysis reveals oval fat bodies, but no WBC's or RBC's. He improves following a course of corticosteroid therapy. Which of the following renal lesions is most likely to have been present in this boy?**

- A Glomerular crescent formation
- B Podocyte foot process effacement
- C Patchy acute tubular necrosis
- D Hyperplastic arteriosclerosis
- E Mesangial immune complex deposition

**B**

**A clinical study is performed involving subjects with glomerulonephritis. One group of subjects has a diagnosis of crescentic glomerulonephritis and another group has membranous nephropathy. Which one of the following laboratory findings is most likely to be found in the absence of other findings in subjects with membranous nephropathy?**

- A Rapid onset
- B Red blood cell casts
- C Oliguria
- D Albuminuria
- E Hypertension

**D**

**A 30-year-old man has had a feeling of heaviness in his left testis for the past 6 months. Physical examination reveals enlargement of the left testis, while the right testis appears normal. There is a palpable left inguinal lymph node. An ultrasound reveals a 4 cm solid mass within the body of the left testis. Laboratory findings included a serum beta-HCG of 5 IU/L and alpha-fetoprotein of 2 ng/mL. The left testis is removed and with on sectioning reveals a firm, lobulated light tan mass without hemorrhage or necrosis. He receives radiation therapy. Which of the following neoplasms is he most likely to have?**

- A Choriocarcinoma
- B Embryonal carcinoma
- C Seminoma
- D Yolk sac tumor
- E Leydig cell tumor

**C**

**A 35-year-old man goes to his physician for a routine examination. On physical examination there is a left inguinal mass. The right testis is palpated in the scrotum and is of normal size, but a left testis cannot be palpated in the scrotum. An ultrasound scan shows that there is a solid inguinal mass.**

**Which of the following approaches is most appropriate to deal with this patient's testicular abnormality?**

- A Put the mass into the scrotum surgically
- B Remove the mass along with the opposite testis
- C Remove the mass and biopsy the right testis
- D Put the patient on testosterone therapy
- E Put the patient on chemotherapy

**C**

**An epidemiologic study is performed to determine potential risk factors for development of penile squamous intraepithelial neoplasia. It is observed that persons who develop this disease are elderly men. The medical histories of these men are reviewed. Which of the following diseases is most likely to be found to precede development of penile neoplasia in these men?**

- A Phimosis
- B Herpes simplex virus infection
- C Lichen simplex chronicus
- D Balanitis xerotica obliterans
- E Epispadias

**A**

**A 31-year-old man has had a feeling of heaviness in his scrotum for over 6 months. On exam he has an enlarged right testis. An ultrasound reveals a solid 5 cm mass in the body of the right testis. Laboratory studies show a serum alpha-fetoprotein (AFP) of 81 ng/mL and human chorionic gonadotrophin (HCG) of 15 IU/L. A right orchiectomy is performed, and on gross examination the testicular mass is soft and reddish brown. Microscopic examination shows cords and sheets of primitive cells with large nuclei. Which of the following is the most likely diagnosis?**

- A Teratoma
- B Embryonal carcinoma
- C Mumps orchitis
- D Leydig cell tumor
- E Squamous cell carcinoma

F Choriocarcinoma

**B**

**A 22-year-old G2 P1 woman gives birth following an uncomplicated pregnancy to a term male infant weighing 2850 gm. On physical examination he has incomplete development of the dorsal aspect of the penile urethra, with the defect extending to the bladder, which is open onto the lower abdominal wall. Which of the following is the most likely diagnosis?**

A Hypospadias

B Bowen disease

C Balanoposthitis

D Epispadias

E Paraphimosis

**D**

**A 40-year-old man has noted gradual enlargement of his scrotum, more on the right side, for the past 2 years. There is no associated pain, but the size is becoming uncomfortable. Physical examination reveals that the right side of the scrotum is enlarged to three times the size of the testis palpable on the left. This mass transilluminates. There is no tenderness on palpation. There is no inguinal lymphadenopathy. An ultrasound reveals a 5 cm thin-walled cystic fluid-filled area in the region of the right testis. Which of the following is the most likely diagnosis?**

A Seminoma

B Torsion

C Hydrocele

D Varicocele

E Orchitis

**C**

**A healthy 17-year-old adolescent has a routine check of his health status. On physical examination pearly penile papules are noted at the edge of the glans penis. He is noted to be circumcised. There is no erythema or urethral discharge. He is not sexually active. Which of the following is the most likely diagnosis?**

A Bowen disease

B Human papillomavirus infection

C Normal variation



D Balanitis with Staphylococcus aureus

E Phimosi

**C**

**A 33-year-old G3 P2 woman gives birth at term following an uncomplicated pregnancy to a male infant. On physical examination he has an abnormal opening of the urethra onto the ventral surface of the penis for a distance of 0.3 cm. Which of the following is the most likely diagnosis?**

A Hypospadias

B Exstrophy

C Phimosi

D Epispadias

E Cryptorchidism

**A**

**A 35-year-old man has a routine check of his health status. On physical examination the prepuce cannot be fully retracted from the glans of his penis. No other abnormalities are noted. Which of the following is the most likely diagnosis?**

A Balanoposthiti

B Epispadias

C Exstrophy

D Hypospadias

E Phimosi

**E**

**A 2-year-old boy is brought to the physician because his mother (a geometry teacher) has observed that his scrotum is no longer symmetrical. On physical examination the child has enlargement of the left testis. An ultrasound scan shows a 2 cm solid mass within the body of the testis. Laboratory studies show a serum alpha-fetoprotein of 226 ng/mL. Which of the following neoplasms is this child most likely to have?**

A Leydig cell tumor

B Neuroblastoma

C Rhabdomyosarcoma

D Teratoma

E Yolk sac tumor

**E**

**A 43-year-old man has noted a lesion on his penis for the past year. On physical examination there is a 0.9 cm diameter rough, tan, firm, slightly raised area at the right lateral base of the glans. He is uncircumcised, and there is difficulty in retracting the foreskin. Which of the following is the most likely diagnosis?**

A Angiokeratoma

B Balanitis xerotica obliterans

C Bowen disease

D Hard chancre

E Lichen simplex chronicus

F Paraphimosis

**C**

**A 32-year-old has noted bilateral breast enlargement over the past 7 months. On physical examination there is bilateral gynecomastia without tenderness or masses. His external genitalia appear normal. An ultrasound scan reveals a 1 cm solid mass within the body of the right testis. Laboratory studies show a serum testosterone of 550 ng/dL and estradiol of 36 pg/mL. His serum alpha-fetoprotein is 9 ng/mL and HCG non-detectable. Which of the following neoplasms is this man most likely to have?**

A Choriocarcinoma

B Embryonal carcinoma

C Leydig cell tumor

D Seminoma

**C**