

**Pathology Repro**  
**(Male Genital system)**

**Past Y Exams**

<p>1. 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:-</p> <ul style="list-style-type: none"><li>a) Balanoposthitis</li><li>b) Epispadias</li><li>c) Exstrophy</li><li>d) Hypospadias</li><li>e) Phimosis</li></ul>	<b>E</b>
<p>2. 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:-</p> <ul style="list-style-type: none"><li>a) Hypospadias</li><li>b) Exstrophy</li><li>c) Phimosis</li><li>d) Epispadias</li><li>e) Cryptorchidism</li></ul>	<b>A</b>

<p><b>3. 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:-</b></p> <ul style="list-style-type: none"> <li>a) Hypospadias</li> <li>b) Bowen disease</li> <li>c) Balanoposthitis</li> <li>d) Epispadias</li> <li>e) Cryptorchidism</li> </ul>	<p><b>D</b></p>
<p><b>4. 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:-</b></p> <ul style="list-style-type: none"> <li>a) Put the mass into the scrotum surgically</li> <li>b) Remove the mass along with the opposite testis</li> <li>c) Remove the mass and biopsy the right testis</li> <li>d) Put the patient on testosterone therapy</li> <li>e) Put the patient on chemotherapy</li> </ul>	<p><b>C</b></p>
<p><b>5. Prostatic enlargement usually presents with:-</b></p> <ul style="list-style-type: none"> <li>a) Difficulty of urination</li> <li>b) Suddenly in middle age</li> <li>c) As a very painful mass</li> <li>d) With blood in urine</li> <li>e) None of the above</li> </ul>	<p><b>A</b></p>

<p><b>6. True statements about prostatic hyperplasia include all of the followings except:-</b></p> <ul style="list-style-type: none"> <li>a) It predisposes to carcinoma</li> <li>b) It produces urinary obstruction</li> <li>c) It predisposes to urinary tract infections</li> <li>d) It is the result of benign glandular and stromal proliferation</li> <li>e) Common in old age</li> </ul>	<p>A</p>
<p><b>7. Prostatic hyperplasia produces most of its complications by:-</b></p> <ul style="list-style-type: none"> <li>a) Causing obstruction to urethral flow of urine</li> <li>b) Invading the bladder</li> <li>c) Giving rise to prostate carcinoma</li> <li>d) Secretion of hormones</li> <li>e) All of the above</li> </ul>	<p>A</p>
<p><b>8. A 70-year-old healthy man has a routine check-up. On physical examination there is a firm nodule palpable in the prostate via digital rectal examination. Prostate biopsies are performed and on microscopic examination show small, crowded glands containing cells with prominent nucleoli within the nuclei. Which of the following is the most likely diagnosis:-</b></p> <ul style="list-style-type: none"> <li>a) Prostatic adenocarcinoma</li> <li>b) Nodular hyperplasia</li> <li>c) Chronic prostatitis</li> <li>d) Urothelial carcinoma</li> <li>e) Recent infarction</li> </ul>	<p>A</p>

<p>9. A 72-year-old man gets up several times during a football match to go to the restroom to urinate, even though he has had only one beer. This is a problem that has plagued him for 4 years. When he visits his physician for a checkup, on physical examination he has a diffusely enlarged prostate palpated on digital rectal examination. Laboratory studies show his serum prostate specific antigen is 6 ng/ml. Which of the following pathologic findings is most likely to be present in this man:-</p> <ul style="list-style-type: none"> <li>a) Adenocarcinoma</li> <li>b) Acute inflammation</li> <li>c) Multiple infarctions</li> <li>d) Nodular hyperplasia</li> <li>e) Granuloma</li> </ul>	<p>D</p>
<p>10. Metastatic spread of prostate carcinoma is usually to the:-</p> <ul style="list-style-type: none"> <li>a) Lymph nodes</li> <li>b) Bone</li> <li>c) Both</li> <li>d) Neither</li> </ul>	<p>C</p>
<p>11. A clinical study is conducted to determine the survival following treatment for testicular neoplasms utilizing subjects recorded into a hospital tumor registry. Treatments included surgery, chemotherapy, and radiation therapy. The patient records are reviewed to determine the pathologic diagnosis and the 5 year survivals for these patients. Which of the following types of testicular neoplasm is most likely to have responded best to radiation therapy:</p> <ul style="list-style-type: none"> <li>a) Choriocarcinoma</li> <li>b) Embryonal carcinoma</li> <li>c) Seminoma</li> <li>d) Teratoma</li> <li>e) Yolk sac tumor</li> </ul>	<p>C</p>

12. 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

13. 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

<p><b>14. 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. Which of the following neoplasms is this man most likely to have:-</b></p> <ul style="list-style-type: none"> <li>a) Choriocarcinoma</li> <li>b) Embryonal carcinoma</li> <li>c) Sertoli cell tumor</li> <li>d) Seminoma</li> <li>e) Yolk sac tumor</li> </ul>	<p><b>C</b></p>
<p><b>15. Which of the following is not true about the testicular tumor seminoma:-</b></p> <ul style="list-style-type: none"> <li>a) Originates in the germ cells</li> <li>b) Are late to metastasize</li> <li>c) Are generally very sensitive to radiation treatment</li> <li>d) Incidence increases with age</li> <li>e) The most common testicular tumor</li> </ul>	<p><b>D</b></p>
<p><b>16. A 23-year-old healthy man has been unable to father a child. He and his wife have a workup for infertility. His wife's reproductive function is normal. On physical examination both his testes are palpable in the scrotum and the testes and scrotum are normal in size, with no masses palpable. However, the spermatic cord on the left has the feel of a 'bag of worms". Laboratory studies show oligospermia. Which of the following conditions is this man most likely to have:-</b></p> <ul style="list-style-type: none"> <li>a) Hydrocele</li> <li>b) Testicular torsion</li> <li>c) Spermatocele</li> <li>d) Varicocele</li> <li>e) Seminoma</li> </ul>	<p><b>D</b></p>

<p><b>17. Which of the following is true about testicular tumor:-</b></p> <ul style="list-style-type: none"> <li>a) Is not often a radiation-sensitive seminoma</li> <li>b) Is a common cause of cancer death in older males greater than 50 years</li> <li>c) Usually occurs in young adult males (35-45 years)</li> <li>d) is usually detected because of hematuria</li> <li>e) All of the above</li> </ul>	<p>C</p>
<p><b>18. 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 on the left. This mass trans-illuminates. 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:-</b></p> <ul style="list-style-type: none"> <li>a) Seminoma</li> <li>b) Torsion</li> <li>c) Hydrocele</li> <li>d) Varicocele</li> <li>e) Hematocele</li> </ul>	<p>C</p>
<p><b>19. Infertility in males is caused by all of the following except:-</b></p> <ul style="list-style-type: none"> <li>a) Cryptorchidism</li> <li>b) Radiation damage to the testis</li> <li>c) Mumps</li> <li>d) Decreased temperature in the scrotum</li> <li>e) None of the above</li> </ul>	<p>D</p>

<p><b>20. Which one of the followings can define hypospadias:-</b></p> <ul style="list-style-type: none"> <li>a) Arrest of one or both testicles in a point during their descent to scrotum</li> <li>b) Inflammatory lesion of the testis</li> <li>c) Narrowing of opening of prepuce</li> <li>d) Urethra opens at dorsal surface of penis</li> <li>e) Urethra opens at ventral surface of penis</li> </ul>	<p><b>E</b></p>
<p><b>21. Which one of the following can define Phimosis:-</b></p> <ul style="list-style-type: none"> <li>a) Urethra opens at ventral surface of penis.</li> <li>b) Narrowing of opening of prepuce.</li> <li>c) Urethra opens at dorsal surface of penis.</li> <li>d) Arrest of one or both testicles in a point during their descent to scrotum.</li> <li>e) Inflammatory lesion of the testis.</li> </ul>	<p><b>B</b></p>
<p><b>22. The most common histologic type of prostatic carcinoma is:-</b></p> <ul style="list-style-type: none"> <li>a) Squamous cell carcinoma</li> <li>b) Basal cell carcinoma</li> <li>c) Baso-squamous carcinoma</li> <li>d) Adenocarcinoma</li> <li>e) Adenoid cystic carcinoma</li> </ul>	<p><b>D</b></p>

## Past Years Written Q

### 1. Definition or Write Scientific Name:-

- 1) **Phimosis:** Narrowing of the opening of the prepuce and inability to retract the foreskin over the glans
- 2) **Cryptorchidism:** Arrest of one or both testicles in a point during their descent to scrotum
- 3) **Varicocele:** Varicosity of Pampiniform plexus of veins in spermatic cord
- 4) **Spermatocele:** Small cysts filled with clear or milky fluid containing sperms in relation to epididymis
- 5) **Hydrocele:** Collection of Serous fluid within Tunica vaginalis
- 6) **Hematocele:** Collection of Blood within Tunica vaginalis
- 7) **Chylocele:** Collection of Lymphatic fluid within Tunica vaginalis

### 2. Enumerate:-

#### 1) Causes of Cryptorchidism:-

- a) Deficiency of gonadotrophic hormones of pituitary
- b) Organic obstruction
- c) Testicular defect

#### 2) Complications of Cryptorchidism:-

- a) Infertility (Bilateral cases)
- b) Malignancy (Precancerous to Seminoma)

#### 3) Complications of BPH:-

- a) Prostatism (Frequency, Nocturia, Dysuria, Incontinence)
- b) Gradual urinary tract obstruction (Compressed urethra, Trabeculae & Diverticulae of UB, Hydroureter, Hydronephrosis, Renal failure)

#### 4) Effects of UT obstruction on Urinary tract:-

- a) Urethra: Elongated - Compressed to a slit
- b) Urinary bladder: Trabeculations - Diverticulations - Cystitis - Stones
- c) Bilateral Hydroureter- Pyoureter
- d) Bilateral Hydronephrosis - Pyonephrosis
- e) Chronic Renal Failure

**5) Tumor markers of Prostatic carcinoma:-**

- a) Prostate Specific Antigen (PSA)
- b) Carcino-Embryonic Antigen (CEA)
- c) Acid phosphatase
- d) Alkaline phosphatase (In Bone Metastasis)

**6) Four Germ cell tumors:-**

- a) Seminoma
- b) Teratoma
- c) Yolk sac tumor
- d) Embryonal carcinoma
- e) Choriocarcinoma

**7) Two Non-germ cell tumors and their related hormone production:-**

- a) Leydig cell tumor: Produces Androgen (Precocious Puberty)
- b) Sertoli cell tumor: Produces Estrogen (Feminizing characters)

**3. Discuss:-**

**1) Benign Prostatic Hyperplasia (Cause - N/E-M/E):-**

<b>Causes</b>	Absolute or Relative increase of estrogen
<b>N/E</b>	Nodular-Firm-Greyish white-Small cystic spaces
<b>M/E</b>	Hyperplasia of both Glands & Stroma <input checked="" type="checkbox"/> Glands: Increased number - Variable in size & shape - Papillomatosis-Corpora amylicia <input checked="" type="checkbox"/> Stroma: Hyperplasia of Smooth muscles + Fibroblasts

**2) Prostatic carcinoma (N/E-M/E):-**

<b>N/E</b>	<input checked="" type="checkbox"/> Site: Posterior lobe <input checked="" type="checkbox"/> Greyish white - Firm - Irregular mass
<b>M/E</b>	Adenocarcinoma

### 3) Seminoma (Origin -N/E-M/E):-

Origin	Germ cells with Gonadal differentiation
N/E	Well defined - Fleshy-Homogenous cut section (Potato-like)
M/E	<input checked="" type="checkbox"/> Sheets & Cords of Spermatogenic cells with large central nuclei and pale to clear cytoplasm <input checked="" type="checkbox"/> Fibrous septa richly infiltrated by Lymphocytes

# Pathology Repro

## (Ovaries)

### Past Y Exams

<p>1. A 50 years old female had a pelvic mass. On operation, a huge ovarian mass was found showing areas of hemorrhage, necrosis and papillary formations. On microscopic examination, the tumor revealed the picture of adenocarcinoma with many psammoma bodies. The most possible diagnosis is:-</p> <ul style="list-style-type: none"><li>a) Mucinous adenocarcinoma</li><li>b) Serous adenocarcinoma</li><li>c) Endometrioid carcinoma</li><li>d) Clear cell carcinoma</li><li>e) Metastatic adenocarcinoma</li></ul>	<b>B</b>
<p>2. Which of the followings is true regarding ovarian neoplasms:-</p> <ul style="list-style-type: none"><li>a) Most are malignant</li><li>b) They usually present while still small (less than 1 cm)</li><li>c) They may interfere with fertility</li><li>d) They are very rare</li><li>e) Most arise from germ cells</li></ul>	<b>C</b>
<p>3. Endometrioma is:-</p> <ul style="list-style-type: none"><li>a) Sex cord stromal neoplasm</li><li>b) Granulosa cell neoplasm</li><li>c) Surface epithelial tumor</li><li>d) Metastasis to ovary</li><li>e) Germ cell tumor</li></ul>	<b>C</b>

<p><b>4. Benign germ cell tumor derived from three germ cell layers (skin, hair, bone, cartilage, gut, thyroid) is called:-</b></p> <ul style="list-style-type: none"> <li>a) Mature cystic teratoma (Dermoid cyst)</li> <li>b) Mucinous cystadenoma</li> <li>c) Granulosa cell tumor</li> <li>d) Immature teratoma</li> <li>e) Yolk sac tumor</li> </ul>	<p><b>A</b></p>
<p><b>5. A 50-year-old female with history of gastric malignancy complained of pelvic pain. Pelvic U/S showed an ovarian mass. This mass was removed and microscopically it consists of malignant signet ring cells. Possible diagnosis of this mass is:-</b></p> <ul style="list-style-type: none"> <li>a) Brenner tumor</li> <li>b) Mucinous cystadenocarcinoma</li> <li>c) Krukenberg's tumor</li> <li>d) Serous cystadenocarcinoma</li> <li>e) Granulosa cell tumor</li> </ul>	<p><b>C</b></p>
<p><b>6. Brenner tumor arises from the surface ovarian epithelium which undergoes differentiation into:-</b></p> <ul style="list-style-type: none"> <li>a) Cervical epithelium</li> <li>b) Intestinal epithelium</li> <li>c) Squamous epithelium</li> <li>d) Tubal epithelium</li> <li>e) Urothelial epithelium</li> </ul>	<p><b>E</b></p>

<p><b>7. Struma ovarii is characterized by overgrowth of:-</b></p> <ul style="list-style-type: none"> <li>a) Squamous epithelium</li> <li>b) Mucous glands</li> <li>c) Ovarian stroma</li> <li>d) Immature tissue</li> <li>e) Thyroid tissue</li> </ul>	<p><b>E</b></p>
<p><b>8. Ovarian Sertoli-Leydig cell tumor is:-</b></p> <ul style="list-style-type: none"> <li>a) Type of teratoma</li> <li>b) Type of epithelial tumors</li> <li>c) Type of germ cell tumors</li> <li>d) Type of sex cord stromal elements</li> <li>e) Soft tissue tumor</li> </ul>	<p><b>D</b></p>
<p><b>9. Which of the following ovarian tumors secretes alpha feto protein:-</b></p> <ul style="list-style-type: none"> <li>a) Choriocarcinoma</li> <li>b) Dysgerminoma</li> <li>c) Yolk sac tumor</li> <li>d) Teratoma</li> <li>e) Endometrioid tumor</li> </ul>	<p><b>C</b></p>
<p><b>10. Which one of the following is type 2 epithelial ovarian carcinoma:-</b></p> <ul style="list-style-type: none"> <li>a) High grade serous carcinoma</li> <li>b) Brenner cell carcinoma</li> <li>c) Clear cell carcinoma</li> <li>d) Mucinous carcinoma</li> <li>e) Low grade serous carcinoma</li> </ul>	<p><b>A</b></p>

<p><b>11. Which of the followings is a germ cell tumor:-</b></p> <ul style="list-style-type: none"><li>a) Clear cell carcinoma</li><li>b) Embryonal carcinoma</li><li>c) Endometrioid carcinoma</li><li>d) Mucinous carcinoma</li><li>e) Serous carcinoma</li></ul>	<b>C</b>
<p><b>12. Which one of the following is a non-neoplastic cyst of the ovary commonly associated with Oligomenorrhea, Hirsutism and infertility:-</b></p> <ul style="list-style-type: none"><li>a) Chocolate cysts</li><li>b) Dermoid cysts</li><li>c) Follicular cysts</li><li>d) Polycystic ovary</li><li>e) Theca lutein cysts</li></ul>	<b>E</b>

## Past Years Written Q

### 1. Definition or Write Scientific Name:-

- 1) **Struma ovarii:** Mono-dermal teratoma with one sided development toward thyroid tissue
- 2) **Krukenberg tumor:** Bilateral ovarian metastatic tumor showing signet ring cells in fibrous stroma. The primary tumor is present in GIT mainly Stomach

### 2. Enumerate:-

#### 1) Non-neoplastic Ovarian cysts:-

- a) Follicular cyst
- b) Polycystic ovarian syndrome
- c) Corpus luteum cyst
- d) Theca-lutein cyst
- e) Chocolate cyst "Endometriotic cyst"

#### 2) Surface Epithelial tumors of Ovary:-

- a) Serous tumors (Differentiation along Tubal pathway)
- b) Mucinous tumors (Differentiation along Endocervical pathway)
- c) Endometrioid tumors (Differentiation along Endometrial pathway)
- d) Brenner's tumor "Transitional cell tumor" (Differentiation along Urothelium)
- e) Clear cell carcinoma.

#### 3) Complications of Serous Cystadenoma of ovary:- زیاده لکن احتیاطی

- a) Torsion of pedicle
- b) Rupture
- c) Hemorrhage
- d) Recurrence
- e) Calcification
- f) Progression: From Benign to Borderline to Low Grade Serous Carcinoma

#### 4) Complications of Mucinous Cystadenoma of ovary: - زیادہ لکن احتیاطی

- a) Torsion of pedicle
- b) Rupture
- c) Hemorrhage
- d) Recurrence
- e) Abdominal distention with pressure on the surroundings
- f) Progression: From Benign to Borderline to Mucinous Carcinoma

#### 5) Germ cell tumors of Ovary: -

- a) Dysgerminoma
- b) Teratoma
- c) Choriocarcinoma
- d) Yolk sac tumor
- e) Embryonal carcinoma

#### 6) Ovarian Sex cord tumors: -

- a) Adult Granulosa cell tumor: Secretes Estrogen
- b) Juvenile Granulosa cell tumor
- c) Sertoli cell tumor: Secretes Estrogen

#### 7) Ovarian Stromal tumors: -

- a) Leydig cell tumor: Secretes Androgen
- b) Theca cell tumor (Thecoma): Secretes Estrogen
- c) Fibroma

### 3. Discuss: -

#### 1) Polycystic Ovarian Syndrome: -

- Affects young women
- Most common cause of Anovulatory Infertility
- Associated with: Hyperandrogenism - Irregular menstrual periods - Hirsutism - Acne - Obesity- Insulin resistance
- Elevated serum androgens are converted to estrogens, unopposed estrogen may lead to endometrial hyperplasia
- Multiple cystic follicles covered by a dense fibrous capsule lined by luteinized theca cells

## 2) Spread of Ovarian Cancer (Methods - Most common sites):-

<b>Methods</b>	<ul style="list-style-type: none"><li>☒ <b>Direct</b> spread to Uterus - Cervix-Vagina - Parametrium</li><li>☒ <b>Lymphatic</b> spread to Pelvic - Para-aortic LNs</li><li>☒ <b>Blood</b> spread (Uncommon) to Liver-Lung-Bone - Brain</li><li>☒ <b>Peritoneal</b> spread through the peritoneal cavity to Omentum- Pelvic organs</li></ul>
<b>Common sites</b>	<ol style="list-style-type: none"><li>1. Contralateral ovary</li><li>2. Peritoneal cavity</li><li>3. Pelvic &amp; Para-aortic LNs</li><li>4. Liver</li></ol>

## Pathology Repro (Uterus)

### Past Y Exams

<p>1. A 45-year-old woman has had an enlarged uterus. An ultrasound scan shows a 9 cm solitary, solid mass in the uterus. A total abdominal hysterectomy is performed. Gross examination of the irregular reddish-tan mass located in the myometrium shows bundles of smooth muscle cells and fibroblasts. Which of the following neoplasms is she most likely to have:-</p> <ul style="list-style-type: none"><li>a) Leiomyosarcoma</li><li>b) Sarcoma botryoides</li><li>c) Malignant Mixed Mullerian tumor</li><li>d) Endolymphatic stromal myosis</li><li>e) Leiomyoma</li></ul>	<b>E</b>
<p>2. A 40 years old female presents with a long history of dysmenorrhea. A hysterectomy was performed. Histologic examination of the uterus reveals areas of extensive adenomyosis. Which of the following describes this patient's uterine pathology?</p> <ul style="list-style-type: none"><li>a) Atypical endometrial hyperplasia</li><li>b) Displacement of endometrial glands and stroma</li><li>c) Proliferation of uterine smooth muscles</li><li>d) Benign tumor of uterine glandular epithelium</li><li>e) Malignant tumor of uterine glandular epithelium</li></ul>	<b>B</b>

<p><b>3. A 20 years old female presents with vaginal bleeding. A pregnancy test was positive. Evacuation of uterine content revealed grape like vesicles measuring 1-5 mm in diameter. The most likely diagnosis is:-</b></p> <ul style="list-style-type: none"> <li>a) Choriocarcinoma</li> <li>b) Abortion</li> <li>c) Hydatiform Mole</li> <li>d) Endometrial hyperplasia</li> <li>e) Endometrial carcinoma</li> </ul>	<p><b>C</b></p>
<p><b>4. The following is not a feature of endometrial hyperplasia:-</b></p> <ul style="list-style-type: none"> <li>a) Due to prolonged estrogen stimulation</li> <li>b) Results in abnormal uterine bleeding</li> <li>c) May predispose to carcinoma</li> <li>d) Decreased glands to stroma ratio</li> </ul>	<p><b>D</b></p>
<p><b>5. A 35 year old woman presents with masses in the endometrium. Gross the cut surface of the lesion appears as whorled masses. What are the chances of her lesion progressing to malignancy?</b></p> <ul style="list-style-type: none"> <li>a) High</li> <li>b) Low</li> <li>c) Very high, because most likely it will lead to leiomyosarcoma</li> <li>d) All of the above</li> <li>e) A and C</li> </ul>	<p><b>B</b></p>
<p><b>6. Choriocarcinoma can occur:-</b></p> <ul style="list-style-type: none"> <li>a) After abortion.</li> <li>b) Spontaneously.</li> <li>c) After Hydatiform mole</li> <li>d) After normal pregnancy.</li> <li>e) All of the above.</li> </ul>	<p><b>E</b></p>

<p><b>7. The leading theories in the pathogenesis of endometriosis include:-</b></p> <ul style="list-style-type: none"> <li>a) Retrograde menstruation with transport of endometrial cells</li> <li>b) Metaplasia of coelomic epithelium</li> <li>c) Hematogenous of lymphatic spread</li> <li>d) Direct transplantation of endometrial cells</li> <li>e) All of the above</li> </ul>	<p><b>E</b></p>
<p><b>8. The following are theories of endometriosis EXCEPT:-</b></p> <ul style="list-style-type: none"> <li>a) Retrograde menstruation</li> <li>b) Endometrial hyperplasia</li> <li>c) Coelomic metaplasia</li> <li>d) Lymphatic spread</li> </ul>	<p><b>B</b></p>
<p><b>9. A woman, upon taking a biopsy of her endometrial tissue, is said to present with a premalignant lesion atypia. After providing progesterone therapy, the lesion regressed. Which of the following is the most likely cause of her lesion?</b></p> <ul style="list-style-type: none"> <li>a) Increased estrogen levels</li> <li>b) Decreased estrogen levels</li> <li>c) Increased testosterone levels</li> <li>d) All of the above</li> <li>e) None of the above</li> </ul>	<p><b>A</b></p>
<p><b>10. Which of the following lesions of the female genital tract is considered precancerous:-</b></p> <ul style="list-style-type: none"> <li>a) Cystic atrophy of the endometrium</li> <li>b) Endocervical polyps</li> <li>c) Endometrial polyps</li> <li>d) Atypical hyperplasia of the endometrium</li> </ul>	<p><b>D</b></p>

<p><b>11. Endometriosis is defined as:-</b></p> <ul style="list-style-type: none"> <li>a) Presence of endometrial glands in abnormal sites</li> <li>b) Presence of endometrial stroma in abnormal sites</li> <li>c) Presence of endometrial glands and stroma in abnormal sites</li> <li>d) Presence of endometrial glands and stroma outside the uterine wall</li> </ul>	<p><b>C</b></p>
<p><b>12. Type II endometrial carcinoma includes:-</b></p> <ul style="list-style-type: none"> <li>a) Endometrioid carcinoma</li> <li>b) Serous carcinoma</li> <li>c) Choriocarcinoma</li> <li>d) Carcinosarcoma</li> <li>e) Adenoacanthoma</li> </ul>	<p><b>B</b></p>
<p><b>13. The predominant inflammatory cell in chronic endometritis is:-</b></p> <ul style="list-style-type: none"> <li>a) Lymphocyte.</li> <li>b) Plasma cell.</li> <li>c) Macrophage.</li> <li>d) Neutrophils.</li> <li>e) Eosinophils</li> </ul>	<p><b>B</b></p>
<p><b>14. A woman 40-year old complains of abnormal uterine bleeding which wasn't responding to medical treatment. Hysterectomy was done. On sectioning, the uterus shows multiple masses with whorled cut section. What is the most likely diagnosis:-</b></p> <ul style="list-style-type: none"> <li>a) Adenomyosis</li> <li>b) Fibroma</li> <li>c) Hemangioma</li> <li>d) Leiomyoma.</li> <li>e) Lymphangioma</li> </ul>	<p><b>D</b></p>

## Past Years Written Q

### 1. Definition or Write Scientific Name:-

- 1) **Endometriosis:** Presence of endometrial tissue (Glands & Stroma) outside the uterus
- 2) **Adenomyosis:** Presence of endometrial tissue (Glands & Stroma) in the myometrium of uterine wall

### 2. Enumerate:-

#### 1) Organic causes of Abnormal Uterine Bleeding:-

- a) Chronic endometritis
- b) Submucosal leiomyoma
- c) Endometrial polyp
- d) Endometrial neoplasms

#### 2) Functional causes of Abnormal Uterine Bleeding:-

- a) Disorders of endometrial origin
- b) Disorders of the hypothalamic-pituitary-ovarian axis
- c) Disorders of hemostasis (Coagulopathies)

#### 3) Classification (Grades) of Endometrial Hyperplasia:-

- a) Simple hyperplasia without atypia
- b) Simple hyperplasia with atypia
- c) Complex hyperplasia without atypia
- d) Complex hyperplasia with atypia

#### 4) Precancerous lesions (Precursors) of Endometrial Carcinoma:-

- a) Type I carcinoma: Atypical endometrial hyperplasia (Endometrial Intraepithelial Neoplasia, EIN)
- b) Type II carcinoma: Surface endometrial lesion is called Endometrial Intraepithelial Carcinoma, EIC (Minimal Serous Carcinoma)

### 3. Compare: - راجعهم من الكتاب

- 1) Endometriosis & Adenomyosis
- 2) Type 1 & Type 2 Endometrial Carcinomas
- 3) Complete Mole & Partial Molells

### 3. Discuss:-

#### 1) N/E & M/E of Ovarian Chocolate cyst:-

N/E	<ul style="list-style-type: none"><li>☒ Ovarian Endometriosis (Chocolate Cysts) appears as cyst with dark red brown altered blood content</li><li>☒ The blood may organize leading to fibrous adhesion with surroundings</li></ul>
M/E	<ul style="list-style-type: none"><li>☒ Lesion consists of endometrial glands and stroma with hemosiderin</li><li>☒ Fibrosis + Hemosiderin laden macrophage</li></ul>

#### 2) Adenomyosis (Pathogenesis-N/E-M/E):-

Pathogenesis	<ul style="list-style-type: none"><li>☒ The basal zone of endometrium dips into adjacent myometrium</li></ul>
N/E	<ul style="list-style-type: none"><li>☒ Uterus is symmetrically enlarged Thick uterine wall</li><li>☒ The lesions form dark red foci</li></ul>
M/E	<ul style="list-style-type: none"><li>☒ Nests of endometrial glands and stroma in myometrium between muscle bundles</li></ul>

#### 3) Uterine Leiomyoma (Site - N/E-M/E):-

Site	<ul style="list-style-type: none"><li>☒ Commonly arise in the body of uterus and cervix</li><li>☒ May be (Intramural-Submucous - Subserous - Leiomyomatous polyp - Parasitic)</li></ul>
N/E	<ul style="list-style-type: none"><li>☒ Rounded mass</li><li>☒ Pseudo-capsulated (Compressed uterine muscles &amp; Interstitial tissue)</li><li>☒ C/S: Whorly appearance</li></ul>
M/E	<ul style="list-style-type: none"><li>☒ Interlacing bundles of (Smooth muscle cells + Fibroblasts)</li><li>☒ Secondary changes: Hyaline degeneration - Cysts - Necrosis- Calcification</li><li>☒ Red degeneration (Hemorrhagic infarction) occurs during pregnancy</li></ul>

#### 4) Choriocarcinoma (N/E-M/E): -

<b>N/E</b>	<input checked="" type="checkbox"/> Uterus contains soft friable fleshy mass invading uterine wall <input checked="" type="checkbox"/> Very hemorrhagic & necrotic
<b>M/E</b>	<input checked="" type="checkbox"/> Tumor tissue consists of malignant Cytotrophoblasts & Syncytiotrophoblasts which do not keep their normal relation but occurs as separate large sheets

# Pathology Repro

## (Cervix)

### Past Y Exams

<p>1. A hysterectomy specimen is performed on a 38-year-old woman for resection of a large intramural leiomyoma, and the cervix is examined histologically by the pathologist. Microscopic sections of the cervix reveal atypical dysplastic squamous epithelial cells in the lower one third of the epithelium. Mitoses are present only in the basal one-third of the epithelium. No invasion into the underlying tissue is noted. What is the most likely diagnosis: -</p> <ul style="list-style-type: none"><li>a) CIN grade 1</li><li>b) CIN grade 2</li><li>c) CIN grade 3</li><li>d) Invasive SCC</li><li>e) Invasive adenocarcinoma</li></ul>	<b>A</b>
<p>2. A 36-year-old woman is evaluated for an abnormal pap smear. A cervical biopsy shows atypical squamous cells throughout the entire thickness of the epithelium with no evidence of epithelial maturation. The basal membrane appears intact. What is the most likely diagnosis:</p> <ul style="list-style-type: none"><li>a) Clear cell adenocarcinoma</li><li>b) Invasive SCC</li><li>c) CIN-1</li><li>d) CIN-3</li><li>e) Squamous metaplasia of the transformation zone</li></ul>	<b>D</b>

<p><b>3. A 35-year-old woman presents with a 6 week history of vaginal discharge which is occasionally blood tinged. Pelvic examination reveals a 2-cm pedunculated, lobulated, smooth cervical growth which is excised. Histologic examination of the specimen composed of a loose fibrous stroma containing dilated mucous secreting endocervical glands often accompanied by inflammation. The most likely diagnosis is:-</b></p> <ul style="list-style-type: none"> <li>a) Condyloma Accuminatum</li> <li>b) Embryonal Rhabdomyosarcoma</li> <li>c) Endocervical polyp</li> <li>d) Leiomyosarcoma</li> <li>e) Micro-glandular hyperplasia</li> </ul>	<p><b>C</b></p>
<p><b>4. High risk HPV types implicated in cervical intraepithelial lesions are:-</b></p> <ul style="list-style-type: none"> <li>a) 5 and 8</li> <li>b) 3 and 41</li> <li>c) 6 and 11</li> <li>d) 16 and 18</li> <li>e) 19 and 22</li> </ul>	<p><b>D</b></p>
<p><b>5. Which of the followings is risk factor for carcinoma of female cervix:-</b></p> <ul style="list-style-type: none"> <li>a) Late menarche</li> <li>b) Human Papilloma Virus type 16 &amp; 18</li> <li>c) Nullipara</li> <li>d) Hyperestrinism</li> <li>e) Low sexual activity</li> </ul>	<p><b>B</b></p>

<p><b>6. Which of the following characterizes carcinoma of the uterine cervix:-</b></p> <ul style="list-style-type: none"> <li>a) Is most commonly a squamous cell carcinoma.</li> <li>b) Is more common in nulliparous women.</li> <li>c) May arise due to Epstein-Barr virus</li> <li>d) Micro glandular hyperplasia is a precursor lesion.</li> <li>e) Endocervical polyp is precancerous lesion.</li> </ul>	<p>A</p>
<p><b>7. Which of the following non-neoplastic lesions of uterine cervix is strongly associated with oral contraceptive use:-</b></p> <ul style="list-style-type: none"> <li>a) Arias-Stella reaction</li> <li>b) Endocervical polyp</li> <li>c) Micro-glandular hyperplasia</li> <li>d) Nabothian cysts</li> <li>e) Tunnel clusters</li> </ul>	<p>C</p>
<p><b>8. 30-year-old woman is found to have atypical cells suggestive of HPV infection. Which of the following abnormalities describes the characteristic cytologic feature caused by HPV infection:-</b></p> <ul style="list-style-type: none"> <li>a) Acanthosis</li> <li>b) Hyperkeratosis</li> <li>c) Koilocytosis</li> <li>d) Papillomatosis</li> <li>e) Parakeratosis</li> </ul>	<p>زیاده C</p>

<p><b>9. A biopsy from the uterine cervix show almost complete absence of normal maturation of the squamous cells from the basal to the more superficial layers. Which one of the followings is the most appropriable diagnosis:-</b></p> <ul style="list-style-type: none"><li>a) Chronic cervicitis</li><li>b) Hyperplasia</li><li>c) In situ carcinoma.</li><li>d) Invasive carcinoma.</li><li>e) Transformation to transitional epithelium</li></ul>	<b>C</b>
<p><b>10. Which of the following Human papillomavirus (HPV) viruses are known to cause cervical cancer:-</b></p> <ul style="list-style-type: none"><li>a) HPV11</li><li>b) HPV12</li><li>c) HPV14</li><li>d) HPV15</li><li>e) HPV16</li></ul>	<b>E</b>

## Past Years Written Q

### **1. Enumerate:-**

#### **1) Risk factors of Cervical carcinoma:-**

- a) Smoking: Reduces local cervical immunity
- b) Multiple sexual partners - Early age at first intercourse
- c) Having a partner with sexually transmitted disease
- d) Presence of another sexually transmitted disease like HIV & Genital herpes
- e) Long term Oral Contraceptive pills-Multiple pregnancies

#### **2) Two precancerous lesions of Cervical Carcinoma & Type of developing malignancy:-**

- a) Cervical Intra-epithelial Neoplasia "CIN": Cervical Squamous cell carcinoma
- b) Adenocarcinoma In-Situ "AIS": Cervical Adenocarcinoma

#### **3) Grading of CIN:-**

- a) CIN I: Minimal dysplasia in basal layers involves 1/3 of epithelial thickness with Koilocytosis in superficial layers
- b) CIN II: Moderate dysplasia (Involves 1/3 to 2/3 of epithelial thickness)
- c) CIN III: Sever dysplasia (More than 2/3 thickness) or Full thickness  
(Carcinoma in situ)

#### **4) Modified Bethesda classification of CIN:-**

- a) Low-grade Squamous Intra-epithelial Lesion (LSIL) = CINI
- b) High-grade Squamous Intra-epithelial Lesion (HSIL) = CIN II and CIN III

### 3. Discuss:-

#### 1) Etiology of Cervical Carcinoma & Role of HPV:-

<b>Etiology</b>	<input checked="" type="checkbox"/> Human Papilloma Virus (HPV) is the most common in sexually active women
<b>Pathogenesis</b>	<input checked="" type="checkbox"/> High risk HPVs (16 & 18) are the single most important factor in cervical oncogenesis <input checked="" type="checkbox"/> HPVs infect immature basal cells of the squamous epithelium in areas of epithelial breaks, or immature squamous cells present at the squamo-columnar junction <input checked="" type="checkbox"/> Integration of HPV DNA interferes with the P53 & Rb genes

#### 2) Cervical Carcinoma (N/E-M/E-Spread):-

<b>N/E</b>	<input checked="" type="checkbox"/> Site: Squamo-columnar junction <input checked="" type="checkbox"/> Shape:- <ul style="list-style-type: none"><li>• Carcinoma in situ: Focal thickening</li><li>• Invasive carcinoma: Fungating "Exophytic"- Ulcerating-Infiltrating "Endophytic"</li></ul>
<b>M/E</b>	<input checked="" type="checkbox"/> Squamous cell carcinomas (80%): Either Keratinizing or Non-keratinizing <input checked="" type="checkbox"/> Adenocarcinomas (15% ) : Characterized by formation of irregular glandular structures <input checked="" type="checkbox"/> Other types (5%): Adeno-squamous carcinoma - Neuroendocrine carcinoma
<b>Spread</b>	<input checked="" type="checkbox"/> Local: Peritoneum - Bladder - Rectum <input checked="" type="checkbox"/> Lymphatic: Regional LNs <input checked="" type="checkbox"/> Distant metastasis: Lung-Liver-Bone

**Pathology Repro**  
**(Breast)**

**Past Y Exams**

<p><b>1. The commonest site of breast cancer:-</b></p> <p>a) Upper inner quadrant b) Upper outer quadrant c) Lower outer quadrant d) Lower inner quadrant e) Retro-areolar site</p>	<b>B</b>
<p><b>2. The most common benign breast tumor is:-</b></p> <p>a) Hemangioma b) Phylloides c) Fibroma d) Fibroadenoma e) Fibroadenosis</p>	<b>D</b>
<p><b>3. The most common breast disease is:-</b></p> <p>a) Mammary duct ectasia b) Fibrocystic disease c) Invasive duct carcinoma d) Invasive lobular carcinoma e) Fibroadenoma</p>	<b>B</b>
<p><b>4. Which one of the following is the most common benign breast tumor:-</b></p> <p>a) Fibroma. b) Fibroadenoma. c) Hemangioma. d) Fibroadenosis. e) Phylloides.</p>	<b>B</b>

<p><b>5. Genetic and familial predisposition of breast cancer is evidenced by mutation of which genes:-</b></p> <p>a) K-ras.  b) BRAF.  c) BRCA1 and BRCA2.  d) P53.  e) MLH1.</p>	<p>C</p>
<p><b>6. Breast cancer is most likely multicentric &amp; bilateral in:-</b></p> <p>a) Lobular carcinoma  b) Medullary carcinoma  c) Micropapillary carcinoma  d) Mucinous carcinoma  e) Tubular carcinoma</p>	<p>A</p>
<p><b>7. Which of the following lesion of the breast is the precancerous component of fibrocystic disease of breast:-</b></p> <p>a) Adenosis  b) Atypical hyperplasia  c) Cyst formation  d) Fibrosis  e) Usual hyperplasia</p>	<p>B</p>

<p><b>8. Which one of the following is the most common histologic type of breast cancer:-</b></p> <p>a) Lobular carcinoma  b) Infiltrating ductal carcinoma (NOS)  c) Medullary carcinoma  d) Mucinous carcinoma  e) Comedocarcinoma</p>	<p><b>B</b></p>
<p><b>9. The main inflammatory cell in mammary duct ectasia is:</b></p> <p>a) Neutrophil  b) Macrophage  c) Lymphocyte  d) Plasma cell  e) Eosinophil</p>	<p><b>D</b></p>
<p><b>10. Metastasis in phylloides tumor consists of:-</b></p> <p>a) Ductal epithelial cells  b) Stromal cells  c) Lobular epithelial cells  d) Myoepithelial cells  e) Squamous epithelial cells</p>	<p><b>B</b></p>

## Past Years Written Q

### 1- Definition

- 1) **Fibroadenoma:** Commonest benign breast tumor composed of mixed epithelial & fibrous elements
- 2) **Gynecomastia:** Enlargement of male Breasts

### 2. Enumerate:-

#### **1) Differential diagnosis (Causes) of Breast Lump (Mass):-**

- a) Traumatic: Hematoma - Traumatic Fat Necrosis
- b) Inflammatory: Breast abscess - Mammary Duct Ectasia-Granulomas as TB c)  
Fibrocystic Disease of the Breast
- d) Neoplastic: Fibroadenoma - Phylloides tumor-Duct papilloma - Breast cancer

#### **2) Pathological changes in Mammary Duct Ectasia:-**

- a) Dilatation of Mammary ducts
- b) Inspissation of breast secretion
- c) Periductal plasma cell infiltrate

#### **3) Risk factors of Breast Carcinoma:**

- a) Female sex
- b) Age
- c) Longer reproductive span
- d) Nulliparity
- e) Oral contraceptives
- f) Later age at first pregnancy
- g) Maternal relative with Breast cancer
- h) Obesity-High fat diet
- i) Atypical epithelial hyperplasia
- j) Previous Breast Cancer/Endometrial Cancer
- k) BRCA1 + BRCA2 genes

#### 4) Evidences of Familial Breast Carcinoma: -

- a) Younger age
- b) First degree relatives
- c) Bilaterality
- d) Associated with Endometrial & Ovarian Carcinoma
- e) Mutation: BRCA1 & BRCA2 Genes

#### 5) Classification of Breast Carcinoma: -

- a) Ductal carcinoma: ✓ Ductal CIS      ✓ Invasive Ductal carcinoma
- b) Lobular carcinoma: - ✓ Lobular CIS      ✓ Invasive Lobular carcinoma

#### 6) Types of Invasive Duct carcinoma: -

- a) Non-Otherwise Specified
- b) Medullary carcinoma
- c) Mucinous carcinoma
- d) Invasive duct carcinoma with Paget disease

#### 7) Skin manifestations of Breast Cancer: -

- a) Skin retraction.
- b) Retraction of nipple.
- c) Paget disease of nipple.
- d) Cancer en cuirasse.
- e) Peau-de Orange.

### **8) Causes of Gynecomastia:-**

- a) Physiological: Puberty.
- b) Liver cirrhosis
- c) Estrogen producing tumors
- d) Estrogen therapy
- e) Digitalis therapy
- f) Klinefelter's syndrome

### **3. Explain why:-**

- 1) Fibrocystic disease of the breast may be Premalignant?**
  - (Because, Atypical Epithelial Hyperplasia increases risk of breast cancer)
- 2) Invasive Lobular Carcinoma is worse than Invasive Duct Carcinoma?**
  - (Because, it is usually Bilateral & Multicentric)
- 3) Breast cancer may be manifested by Peau D'orange appearance?**
  - (Due to Lymphatic edema of the skin except at site of Hair follicles)
- 4) Carcinoma of male breast has a poor prognosis?**
  - (Because, the Tumor infiltrate Locally Early due to Small Breast Size)

#### 4. Discuss:-

##### 1) Fibrocystic Disease of Breast (Pathogenesis-N/E-M/E):-

<b>Pathogenesis</b>	<input checked="" type="checkbox"/> Derangement of cyclic breast changes that occur normally during menstrual cycle
<b>N / E</b>	<input checked="" type="checkbox"/> Number: Single - Multiple <input checked="" type="checkbox"/> Site: Unilateral - Bilateral <input checked="" type="checkbox"/> Shape: Ill-defined-Mobile <input checked="" type="checkbox"/> Consistency: Firm to Rubbery <input checked="" type="checkbox"/> Color: Greyish white <input checked="" type="checkbox"/> Capsule: Non-capsulated <input checked="" type="checkbox"/> C/S: Variable sized cysts containing Serous or Hemorrhagic fluid
<b>M / E</b>	<input checked="" type="checkbox"/> Adenosis <input checked="" type="checkbox"/> Epitheliosis <input checked="" type="checkbox"/> Cyst formation <input checked="" type="checkbox"/> Fibrosis

##### 2) Fibroadenoma of Breast (Etiology-N/E-M/E):-

<b>Etiology</b>	<input checked="" type="checkbox"/> Prolonged Estrogen stimulation
<b>N/E</b>	<input checked="" type="checkbox"/> Number: Usually Single <input checked="" type="checkbox"/> Shape: Well defined - Rounded or Oval <input checked="" type="checkbox"/> Consistency: Firm - Freely Mobile <input checked="" type="checkbox"/> Color: Greyish White <input checked="" type="checkbox"/> Capsule: Capsulated <input checked="" type="checkbox"/> C/S: Well circumscribed
<b>M/E</b>	<input checked="" type="checkbox"/> Neoplastic Acini & Ducts separated by Fibrous stroma <input checked="" type="checkbox"/> Surrounded by true capsule <input checked="" type="checkbox"/> It may be: Pericanalicular - Intracanalicular - Mixed

### 3) Invasive Duct Carcinoma "NOS" (Incidence - N/E-M/E):-

<b>Incidence</b>	<input checked="" type="checkbox"/> Commonest type (65-80%)
<b>N/E</b>	<input checked="" type="checkbox"/> Shape: Ill-defined Fixed mass. <input checked="" type="checkbox"/> Consistency: Stony hard. <input checked="" type="checkbox"/> Color: Greyish white. <input checked="" type="checkbox"/> C/S: Retracted Hard with Gritty sensation - Hge & Necrosis. <input checked="" type="checkbox"/> Covering Skin: Shows Peau d'orange.
<b>M/E</b>	<input checked="" type="checkbox"/> Small sheets of Malignant cells separated by abundant collagenous stroma (Desmoplasia)