

Repeat

(Breast + 14 Prostate + Testies)

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TEST PATHOLOGY
BREAST, PROSTATE, TESTES.
Total Marks 15

1-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?

- A Adenocarcinoma ✓
- B Nodular hyperplasia
- C Chronic prostatitis
- D Urothelial carcinoma
- E Recent infarction.

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 cup of tea. 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?

- A Adenocarcinoma
- B Acute inflammation
- C Multiple infarctions
- D Nodular hyperplasia ✓
- E Granulomas

3-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 Choriocarcinoma.

4-A pathologic study is performed in men ranging from 50 to 100 years of age who had serum prostate specific antigen levels above 15 ng/mL and who underwent prostatectomy following biopsies in which there was adenocarcinoma on microscopic examination. In which of the following regions of the prostate are these adenocarcinomas most likely to arise?

- A Anterior fibromuscular stroma
- B Central zone
- C Peripheral zone
- D Periurethral zone
- E Transitional zone

5-A double blind study is conducted involving men who have been symptomatic from urinary frequency and hesitancy for 5 or more years. One group men receive a pharmacologic agent designed to reduce the synthesis of dihydrotestosterone in prostatic stromal cells. Another group receives a placebo. The group receiving the drug has a statistically significant decrease in symptoms. Which of the following enzymes is this pharmacologic agent most likely to block?

- A 5-alpha-reductase type 2
- B Aromatase
- C 17-alpha-hydroxylase
- D Desmolase
- E 11-beta-hydroxylase

6-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 ✓

7-A 47-year-old woman undergoes routine mammographic screening and there are multiple small areas of increased density, though a single distinctive mass lesion is not detectable either by palpation or by mammography. A fine needle aspiration biopsy of an abnormal density reveals cells suspicious for a malignancy. An excisional breast biopsy yields a diagnosis of lobular carcinoma in situ of the breast. Which of the following is the most likely finding associated with this woman's carcinoma?

- A No residual carcinoma
- B Opposite breast involvement ✓
- C Absent family history of breast cancer
- D Concomitant Paget disease of the nipple
- E Negative estrogen receptor assay

8-A 20-year-old woman notes a mobile mass in her left breast. There is no nipple discharge and no pain. No axillary adenopathy is present. The overlying skin of the breast appears normal. Her left breast is slightly larger than the right, a condition she says has been present since puberty. Her urine pregnancy test is negative. Mammography confirms the presence of a rounded density, which has no microcalcifications, and reveals no lesions of the opposite breast. Which of the following is the most likely diagnosis?

- A Focus of fat necrosis
- B Fibroadenoma ✓
- C Intraductal papilloma
- D Infiltrating ductal carcinoma
- E Phyllodes tumor

9-A 19-year-old woman gave birth to a healthy male infant at term following an uncomplicated pregnancy. She has now been breast feeding the baby for a month, but notes that her left breast has gradually become swollen and painful to touch over the past week. On physical examination her temperature is 38.2°C. Which of the following is the most likely diagnosis?

- A Acute mastitis ✓
- B Fibrocystic disease
- C Fat necrosis
- D Intraductal papilloma
- E Galactocele

10-A 49-year-old woman notes increasing size to her right breast over the past year. This breast is not painful, but the heaviness causes some discomfort. On physical examination the overlying skin and nipple appear normal. There is no nipple discharge. There is no axillary lymphadenopathy. Mammography reveals a solid 12-cm circumscribed mass. The mass is biopsied, and on microscopic examination shows a cellular stromal component along with an epithelial component. Which of the following is the most likely diagnosis?

- A Fibroadenoma
- B Phyllodes tumor ✓
- C Sclerosing adenosis
- D Hamartoma
- E Medullary carcinoma

11-A 52-year-old woman feels a lump in her right breast on self-examination and goes to her physician. On physical examination the 4 cm mass is not freely movable and feels quite hard. A fine needle aspirate is performed and cytologic examination shows cells are present consistent with carcinoma. Which of the following features of this carcinoma is most likely to suggest a worse prognosis?

- A Estrogen receptor positivity
- B Family history of breast carcinoma
- C Presence of an in-situ component
- D Axillary lymph node metastases ✓
- E Lack of aneuploidy

12-A 39-year-old woman has noted red, scaling area on her breast for 3 months. On physical examination there is an eczematous 1 cm diameter area on the skin of the right breast areola. There is no palpable lump in this breast. Biopsy of the skin lesion is performed and on microscopic examination shows large cells at the dermal-epidermal junction that stain positively for mucin. Which of the following is the most likely diagnosis?

- A Nipple discharge
- B Paget disease of breast
- C Intraductal carcinoma
- D Dermatophyte infection
- E Inflammatory carcinoma
- F Eczematous dermatitis

13-A 41-year-old woman has felt a large breast lump that has increased slowly in size for the past 3 years. On physical examination there is a 9 cm firm, movable mass present in her left breast. The overlying skin appears normal; there is no axillary lymphadenopathy. The mass is excised and grossly appears soft and fleshy. On microscopic examination this mass has a lymphoid stroma with little fibrosis surrounding sheets of large vesicular cells with frequent mitoses. Which of the following is the most likely diagnosis?

- A Infiltrating ductal carcinoma
- B Colloid carcinoma
- C Medullary carcinoma
- D Lobular carcinoma
- E Phyllodes tumor

14-A 69 female presents to physician with complaint of lump in her breast. Biopsy of the lump revealed invasive ductal carcinoma. The stroma adjacent to malignant tubules was densely collagenous. This is an example of:

- A-Anplasia
- B-Desmoplasia
- C-Dysplasia
- D)Metaplasia
- E)hyperplasia

15-A 45-year-old woman has noted a mass in her right breast for 7 months. On physical examination there is a 5 cm diameter right breast mass. A biopsy of the mass is performed and on microscopic examination a carcinoma is present. Which of the following pathologic findings involving this lesion suggests a better prognosis for this woman?

- A Estrogen receptor negative
- B Axillary lymph node metastasis
- C Age at diagnosis
- D Aneuploidy by flow cytometry
- E Intraductal histologic pattern

1-a	11-e	21-b	31-a	41-b	51-b
2-d	12-a	22-a	32-b	42-d	52-c
3-b	13-c	23-c	33-b	43-a	53-e
4-d	14-e	24-d	34-d	44-b	54
5-a	15-b	25-c	35-a	45-b	55-c
6-b	16-a	26-e	36-a	46-d	56-e
7-b	17-b	27-c	37-d	47-b	57-c
8-e	18-c	28-b	38-c	48-c	58-d
9-b	19-a	29-e	39-a	49-d	59-c
10-b	20-e	30-b	40-b	50-d	60-a

1-b	11-d	21-c
2-e	12-b	22-e
3-b	13-e	23-c
4-c	14-a	24-
5-a	15-b	25-e
6-d	16-b	26-d
7-b	17-c	27-d
8-b	18-e	28-a
9-c	19-d	29-
		30-b

12. After intraductal papilloma, unilateral bloody nipple discharge from one duct orifice is most commonly caused by which of the following pathologic conditions?
- ✓ a. Paget's disease of the nipple.
 - ✓ b. Intraductal carcinoma.
 - c. Inflammatory carcinoma.
 - d. Subareolar mastitis
 - e. Macromastia
13. A lady presented with tumor which has lobulated and cystic on gross section exhibit leaf like clefts and slits. The most likely diagnosis is:
- a. Fibroadenoma
 - ✓ b. Phyllodes tumor
 - c. Intraductal papilloma
 - d. Carcinoma breast
 - e. Inflammatory carcinoma
14. A middle aged lady presents some antecedent trauma to breast which produces mass. Histologically, it consists of central focus of necrotic fat cells surrounded by neutrophils and lipid filled macrophages which are later enclosed by fibrous tissue and mononuclear leukocytes. The most likely diagnosis is:
- a. Mammary duct ectasia
 - b. Staphylococcal infection
 - c. Streptococcal infection
 - ✓ d. Traumatic fat necrosis
 - e. Fibroadenoma
15. A lady of 55 years of age presented in the surgical OPD with history of palpable lump in the breast. On examination there were no signs of inflammation and lymph nodes were not enlarged. Tissue biopsy was done & microscopic features were stromal fibrosis, epithelial hyperplasia & few cysts. The most probable diagnosis is:
- a. Paget's disease
 - ✓ b. Fibrocystic changes
 - c. Sclerosing adenosis
 - d. Phyllodes tumor
 - ✓ e. Intraductal papilloma
16. A 20 year old woman presents with solitary discrete, freely mobile, firm, rubbery, non tender, well circumscribed breast lesion. The most likely diagnosis is:
- a. Fibrocystic changes
 - ✓ b. Fibroadenoma
 - c. Medullary carcinoma
 - d. Colloid carcinoma
 - e. Intraductal carcinoma

17. A physician palpates an irregular 2cm firm area beneath the lateral edge of the breast areola of a 26 year old woman. After a biopsy increased number of ducts is realized. These ducts are compressed because of fibrous connective tissue proliferation. Dilated ducts with apocrine metaplasia are also present. Which of the following is the most likely diagnosis?

- a. Fibroadenoma
- b. Infiltrating lobular carcinoma
- c. Infiltrating ductal carcinoma
- d. Traumatic fat necrosis
- e. Fibrocystic changes ✓

18. A 63 Year old woman feels a small lump in her right breast the physician palpates a firm area and no lesion of skin is present and no axillary lymph node palpable. A Mammogram show microcalcification and biopsy show soft white material from duct when pressure is applied. On microscopic examination shows large atypical cells in cribriform pattern. What is most likely diagnosis?

- a. Colloid carcinoma
- b. Infiltrating ductal carcinoma ✓
- c. Infiltrating lobular carcinoma
- d. Medullary carcinoma
- e. Metaplastic carcinoma

19. A 26 year old woman has felt a breast lump for the past 1 month and is worried because she has a family history of early onset of breast carcinoma. On examination a firm 2 cm mass in upper outer quadrant of her left breast and biopsy shows carcinoma and genetic analysis is a carrier of BRCA 1 gene mutation in her mother and sister. Which one of the following carcinoma has the highest incidence in families?

- a. Lobular carcinoma
- b. Tubular carcinoma
- c. Metaplastic carcinoma
- d. Papillary carcinoma
- e. Medullary carcinoma ✓

20. The underlying lesion in Paget disease of breast most commonly is

- a. Invasive carcinoma ✓
- b. Mucinous carcinoma
- c. Lobular carcinoma
- d. Ductal carcinoma in-situ ✓
- e. Lobular carcinoma in-situ

21. The urinalysis of a 71-year-old man confirms the presence of blood. On cystoscopy, a 3 cm exophytic mass, microscopically composed of fibro-vascular cores covered by a thick layer of transitional cells is found. Which of the following risk factors is most likely led to development of this lesion?

- a. Diabetes mellitus
- b. Cigarette smoking ✓
- c. Recurrent urinary tract infection
- d. Therapy with methicillin
- e. Use of NSAIDs