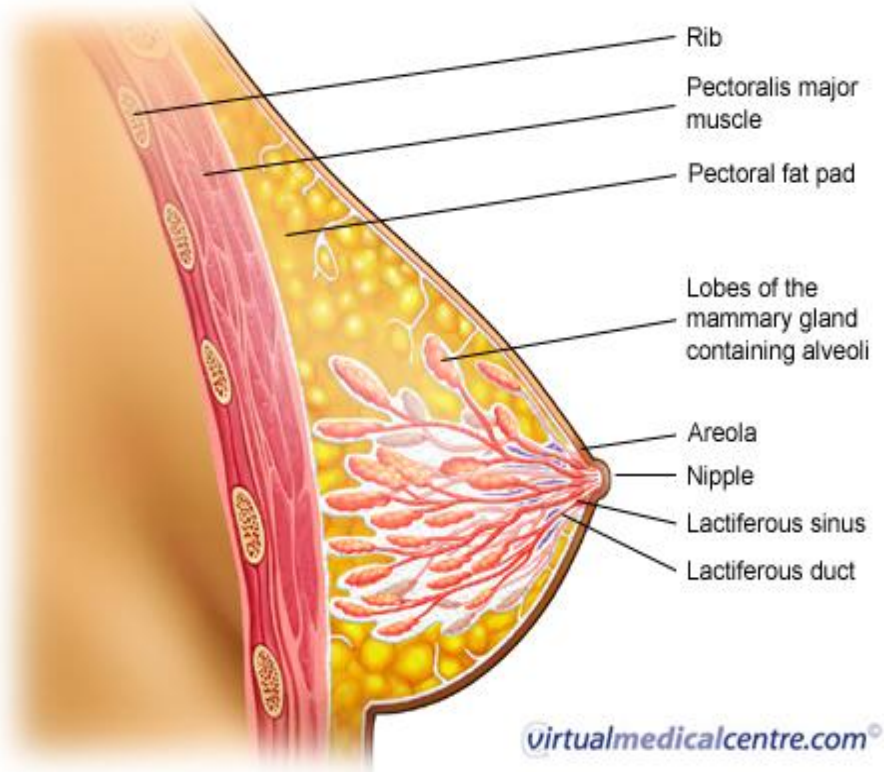
REPRODUCTIVE SYSTEM
4TH WEEK



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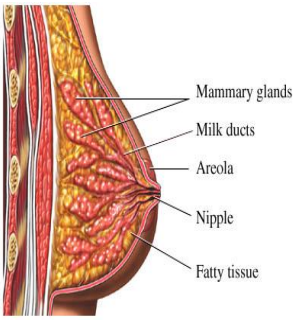


Anatomy

[5] Female Breast

Most of the female breast lies in which of the following muscles?

A. Serratus anterior
B. pectoralis minor
C. External oblique muscles
D. pectoralis major

Ans: D

The nipple lies opposite Which of the followings?

A. 2nd intercostal space
B. 4th intercostal space
C. 5th intercostal space
D. 6th intercostal space

Ans: B

Which one of the following is correct regarding the ligaments of cooper ?

A. They separate the mammary gland from the deep fascia covering the underlying muscles
B. They give the nipple the protruded shape
C. They connect the skin with deep fascia of pectoralis major.
D. They allow the breast to move freely

Ans: C

Mammary branches supply the breast and they come from?

A. internal mammary artery
B. Intercostal arteries
C. internal thoracic artery
D. lateral thoracic artery
E. Both B&D

Ans : E

Which on of the following lymp nodes lies on the pectoralis minor muscle ?

A. Apical group
B. Anterior group
C. Brachial group
D. Posterior group

Ans: B Anterior group = Pectoral group

pectoral group drains which part of the breast**?**

A. Medial part
B. inferomedial part
C. Upper part
D. lateral part

Ans: D It drains both Central & lateral parts

Genetics

1) ..... Of the population who have mutant BRAC gene will develop cancer by the age of 70:
A- 7%
B- 50%
C- > 90 %
Ans: C

2) Which one has a high affinity to HER2 receptors:
A- Tamoxifen
B- Herceptin
C- Quinolone
Ans: B

3) Which one is the proper classification of (positive HER2 protein expression and intense staining of the membrane > 30%:
A- +1
B- +2
C- +3
Ans: C

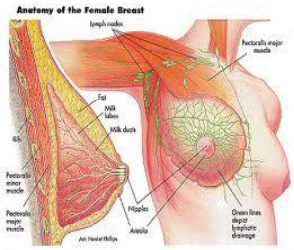
Biochemistry

1) Polycystic ovarian disease associated with which one of the following categories:
A- Obesity, Insulin resistance and high androgens level
B- Obesity, Insulin resistance and low androgens level
C- Obesity, Insulin resistance and low LH level
Ans: A

2) PCOS mostly diagnosed by :
A- LH/FSH ratio is low
B- LH/FSH ratio is high
C- Androgens are low
Ans: B

3) The most commonly inherited gene related to the ovarian cancer is :
A- p53
B- BRCA1/2
C- CA-125
Ans: B

4) CA-125 most useful use is :
A- Prognosis and monitoring
B- Diagnosis
C- Both
Ans: A



Physiology

[8] Hormones affecting female breast

Which one of the following hormones is controlled mainly by inhibitory hormone?

A. Human Placental lactogen
B. Progesterone
C. Glucocorticoids
D. Prolactin

Ans: D

Which one of the following is a function of Human Placental lactogen" somatomammotropin"?

A. Facilitate lactogenesis 1
B. Facilitate galactopoeisis
C. Facilitate mammogenesis
D. Facilitate lactogenesis 2

Ans: C

Which of the following hormones involves in the secretion of colostrums?

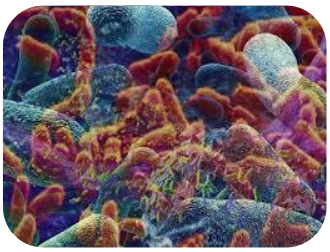
A. Glucocorticoids
B. Progesterone
C. Prolactin
D. Human Placental lactogen

Ans: C
The secretion of colostrums happens during Facilitate lactogenesis 2 which is done by Prolacin& Oxytocin.

Regarding lactation which one of the following statements is wrong?

A. Low Insulin level
B. Increased Thyroxin level
C. Increased Thyroid releasing hormone level
D. Decreased Thyroid stimulating hormone
E. Decreased Leptin level

Ans: B



Microbiology

[3] Genital Herpes &Genital Warts

When HSV-1 affect the brain it causes ?

A. Meningitis
B. Periventricular calcifications
C. Encephalitis
D. Intracranial calcifications

Ans: C

Pregnant woman has a primary HSV 2 infection. which one of the following would you do to avoid perinatal transmission?

A. You clean the vaginal area before delivary
B. You dive her Valacyclovir.
C. You do a Caesarean section.
D. You dive her Acyclovir.

Ans: C

Which of the following is a divalent vaccine, provides protection against HPV genotypes 16, and 18?

A. Cervarix
B. Gardasil

Ans: A

[4] HIV & AIDS

The most common mode of transmission of HIV is?

A. From mother to child
B. Sexually
C. Parenterally

Ans: B

Which one of the following Anti-reverse transcriptase is given during pregnancy to reduce transmission of the infection to the baby?

A. Acyclovir
B. Zidovudine
C. Ritonavir
D. Nevirapine

Ans: B

Which one of the following tells us that HIV reached the AIDS stage?

A. High Viral load
B. Fever of unknown origin that persists > 1 month
C. Rapid viral replication
D. CD4 cell coung < 200

Ans: D

Which one of the following is the first to e detected in HIV infected patient?

A. Viral load
B. Decreased CD4 level
C. Core antigen (p24 Antigen)
D. Anti-envelop antibodies (Anti-gp120)

Ans: A

Which one of the following tests is done to confirm the diagnosis of HIV?

A. Immunofourecent
B. Western Blot
C. ELISA Twice in duplicate

Ans: B

Family Medicine & Paediatrics

[1] breastfeeding

Which one of the following is not a contraindication for breast feeding?

A. Pain on the uterus during Breast feeding
B. Infectious Diseases of the mother
C. Life – threatening illnesses in the mother:
D. Medications taken by the mother.

Ans: A
It's normal to have a uterine pain at the beginning of breast feeding because of the oxytocin secretion and it helps actually in uterine involution.

breastfed infant has a low risk to develop which of the following?

A. Cardiac ischemic diseases
B. Crohn disease
C. Obesity
D. Osteoporosis when they get old

Ans: B & C

Which one of the following will not happen to a mother who breas-fed her baby?

A. reduced incidence of breast cancer.
B. Increase risk of osteoporosis since the baby took a nutrition from her
C. Protection against ovarian censer

Ans: B

[1] Premarital Counseling and Test

Which one of the following is not performed with a premariatal test?

A. Anti-HIV

B. Hemoglobin electrophoresis
C. Anti-HAV IgM
D. HBs Ag

Ans: C

What is your interpretation if you find one of the partners is β - Thalassemia minor (Trait):

A. s/he has symptomless homozygous carrier state
B. s/he has severe symptomatic homozygous Anemia.
C. s/he has symptomless heterozygous carrier state
D. s/he has severe symptomatic heterozygous Anemia

Ans: C

when Carrier marry a Carrier; the percentage of homozygous effected offspring will be?

A. 50% chance
B. 25% chance
C. 75% chance
D. 0% chance

Ans: B

Following an acute HBV infection, the patient will not clear the Virus and will become carrier of which of the following?

A. HBV-DNA
B. HBsAg
C. HBeAg

Ans: B HBsAg Hepatitis B surface antigen is the marker of infection.

Which one of the following has NO carrier state?

A. HBV
B. Sickle cell Anemia
C. β -Thalassemia
D. HCV

Ans: D

After doing a premariatal test we find that both couples are HIV negative. Which of the following is right?

A. We can confirm them that they don't have HIV
B. we can never confirm the diagnosis of HIV
C. If the exposed to the virus we should repeat the test 3 months later since the test might take up to 3months to become seropositive

Ans: C

If both couple are sickle cell trait positive. Which one of the following is wrong?

A. The decision will be for the future couple whether to go ahead with the marriage or not.
B. The physician will issue the premarital fitness certificate if they know it and decide to go ahead with the marriage
C. The future couple should be informed and advised that their children could suffer from Sickle Cell anemia.

Ans: B

In which of the following infections if we find one of the partners carrier we advise the other to take a vaccine?

A. HIV
B. HCV
C. HBV

Ans: C Hepatitis B Virus

What is the percentage of Saudi couples detected as carriers and did not follow the advice and went ahead with their marriages?

A. Half of them
B. 90% of them
C. 10% of them
D. Non of them

Ans: B

Pathology

[9] HIV

Which of the following enzymes converts the HIV genome into double-stranded DNA in host cells?
(A) DNA polymerase (Pol-1)
(B) DNA polymerase (Pol-2)
(C) Integrase
(D) Reverse transcriptase
(E) Topoisomerase

The answer is D: Reverse transcriptase.
The primary etiologic agent of AIDS is HIV-1, an enveloped RNA retrovirus that contains a reverse transcriptase (RNA-dependent DNA polymerase). The DNA derived from the virus is integrated into the host genome by the viral integrase protein (choice C), thereby producing the latent proviral form of HIV-1. Viral genes are replicated along with host chromosomes and, therefore, persist for the life of the cell.
Diagnosis: AIDS

A 31-year-old man with AIDS complains of diffi culty swallowing. Examination of his oral cavity demonstrates whitish membranes covering much of his tongue and palate. Endoscopy also reveals several whitish, ulcerated lesions in the esophagus. These pathologic findings are fundamentally caused by loss of which of the following immune cells in this patient?
(A) B lymphocytes
(B) Helper T lymphocytes
(C) Killer T lymphocytes
(D) Monocytes/macrophages
(E) Natural killer (NK) cells

The answer is B: Helper T lymphocytes.
The fundamental lesion is infection of CD4+ (helper) T lymphocytes, which leads to the depletion of this cell population and impaired immune function. As a result, patients with AIDS usually die of opportunistic infections. HIV does infect the monocyte/macrophage lineage (choice D), but infected cells exhibit little if any cytotoxicity. NK cell activity (choice E) is also decreased in AIDS. This defect may contribute to the appearance of malignant tumors and the viral infections that plague these patients. The suppression of NK cell activity has been related to a decrease in the number of NK cells and to a reduction in IL-2 levels due to the loss of CD4+ cells.
Diagnosis: AIDS

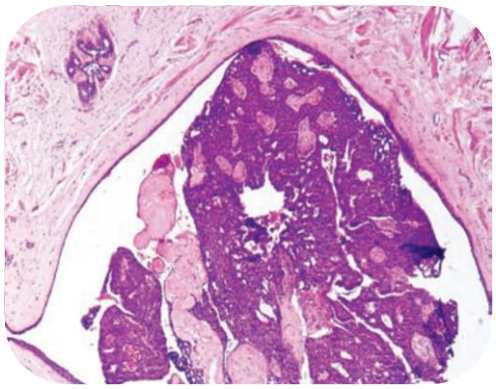
A 28-year-old woman with a history of drug abuse presents with an infectious mononucleosis-like syndrome and lymphadenopathy. Blood tests subsequently indicate that she is HIV-positive. Which of the following

lymphocyte-associated proteins mediates the entry of HIV into host cells in this patient?
(A) CD4
(B) CD8
(C) GP41
(D) GP120
(E) LFA-1

The answer is A: CD4.
The specific target cells for HIV-1 are $CD4^+$ helper T lymphocytes and mononuclear phagocytes, although infection of other cells occurs. The HIV envelope glycoprotein gp120 (either on the free virus or on the surface of an infected cell) binds CD4 on the surface of helper T lymphocytes. The binding of gp120 to CD4 allows gp41 to insert into the cell membrane of the lymphocyte, thereby promoting fusion of the viral envelope with the lymphocyte. Choices C and D (gp41 and gp120) are involved in viral replication, but they are present on the viral envelope. Choice E (LFA-1) is a member of the leukocyte integrin family that is involved in cell-cell adhesion.
Diagnosis: Acquired immunodefi ciency

[8] Breast Pathology

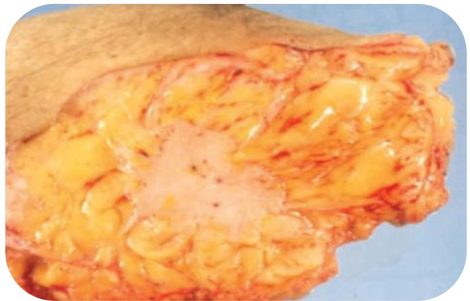
A 54-year-old woman complains of bloody discharge from her left nipple. Physical examination reveals a 0.5-cm nodule in the subareolar breast tissue, which is surgically excised. Histologic examination (shown in the image) reveals cuboidal and myoepithelial cell–lined vascular connective tissue cores, which project into the lumen of a major lactiferous duct. Which of the following is the appropriate diagnosis?



(A) Ductal carcinoma in situ
(B) Intraductal papilloma
(C) Lobular carcinoma in situ
(D) Medullary carcinoma
(E) Paget disease

The answer is B: Intraductal papilloma.
Intraductal papilloma is a benign breast tumor that occurs in the lactiferous ducts of middle-aged and older women. Because intraductal papilloma is situated in the large, subareolar ducts, **the lesion may be associated with a serous or bloody nipple discharge**. Intraductal papillomas are attached to the wall of the duct by a fi brovascular stalk. The papillomatous portion consists of a double layer of epithelial cells, an outer layer of cuboidal or columnar cells, and an inner layer of more rounded myoepithelial cells. Solitary intraductal papilloma is not a premalignant lesion or a marker for increased risk of cancer in the breast. Ductal carcinoma in situ (choice A) and lobular carcinoma in situ (choice C) feature neoplastic cells confi ned to ducts and lobules, respectively, and typically lack myoepithelial cells. Paget disease (choice E) is a form of carcinoma that involves the epidermis of the nipple and areola.
Diagnosis: Intraductal papilloma

A 53-year-old woman discovers a lump in her breast and physical examination confirms a mass in the

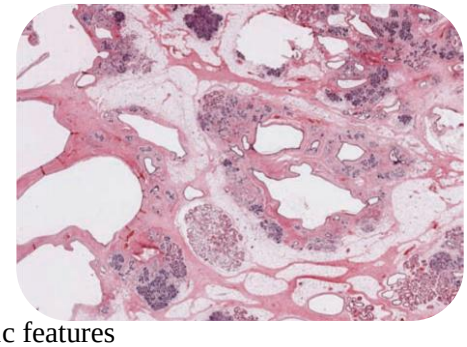


lower, outer quadrant of the left breast. Mammography demonstrates an ill-defi ned, stellate density measuring 1 cm. Needle aspiration reveals malignant ductal epithelial cells. A modifi ed radical mastectomy is performed. The surgical specimen reveals a firm irregular mass (arrows). Which of the following cellular markers would be the most useful to evaluate before considering therapeutic options for this patient?

(A) Collagenase
(B) Estrogen receptors
(C) Galactosyltransferase
(D) Lysosomal acid hydrolases
(E) Myeloperoxidase

The answer is B: Estrogen receptors.
Over half of breast cancers exhibit nuclear estrogen receptor protein. A slightly smaller proportion also has progesterone receptors. Women whose cancers possess hormone receptors have a longer disease-free survival and overall survival than those with early stage cancers who are negative for these receptors. The beneficial effects of oophorectomy(removal of ovaries) on survival in patients with breast cancer led to the use of estrogen antagonists in the treatment of breast cancer. In general, antiestrogen therapy seems to prolong disease-free survival. It also lowers the risk of cancer in the contralateral breast. The latter discovery has led to the use of antiestrogens as chemoprevention in women at high risk for developing breast cancer. None of the other choices are related prognostically to breast carcinoma.
Diagnosis: Invasive ductal carcinoma of the breast

A 35-year-old nulliparous woman complains that her breasts are swollen and nodular upon palpation. A mammogramdiscloses foci of calcification in both breasts. A breast biopsy reveals cystic duct dilation and ductal epithelial hyperplasia without atypia (shown in the image). What is the appropriate diagnosis?



(A) Ductal carcinoma in situ
(B) Fibroadenoma
(C) Fibrocystic change
(D) Granulomatous mastitis
(E) Intraductal papilloma

The answer is C: Fibrocystic change.
Fibrocystic change of the breast refers to a constellation of morphologic features characterized by (1) cystic dilation of terminal ducts, (2) relative increase in fi brous stroma, and (3) variable proliferation of terminal duct epithelial elements. Ductal carcinoma in situ (choice A) features apparently malignant epithelial cells that have not penetrated the basement membrane. Intraductal papilloma (choice E) occurs in the subareolar lactiferous ducts. None of the remaining incorrect choices feature cystic duct dilation.
Diagnosis: Fibrocystic change, proliferative

A 24-year-old woman delivers a 3.5-kg baby and begins breastfeeding her infant. The patient presents 2 weeks later with a fever of 38°C (101°F). Physical examination shows no abnormal vaginal discharge or evidence of pelvic pain but does reveal redness on the lower side of the left breast. The

patient stops nursing the infant temporarily, but the symptoms persist, and the entire breast becomes swollen and painful. What is the most likely diagnosis?
(A) Acute mastitis
(B) Chronic mastitis
(C) Duct ectasia
(D) Granulomatous mastitis
(E) Lactating adenoma

The answer is A: Acute mastitis.
Acute mastitis is a bacterial infection of the breast. It may be seen at any age, but by far the most frequent setting is in the postpartum lactating or involuting breast. This disorder is usually secondary to obstruction of the duct system by inspissated secretions. The other choices are not typically associated with fever.
Diagnosis: Acute mastitis

A 20-year-old woman asks for your advice regarding her risk of developing breast cancer. Her mother, maternal aunt, and maternal grandmother all developed breast cancer. She would like to know if she has a genetic predisposition. Laboratory tests for mutations in which of the following genes would be most likely to answer your patient's question?
(A) BRCA1
(B) C-myc
(C) Estrogen receptor
(D) HER2/neu
(E) Rb-1
The answer is A: BRCA1.
BRCA1 is a tumor suppressor gene that has been implicated in the pathogenesis of hereditary breast and ovarian cancers. Germline point mutations and deletions in *BRCA1* place a woman at a remarkable 60% to 85% lifetime risk for breast cancer. Moreover, breast cancer develops in more than half of these women before the age of 50 years. Estrogen receptor expression (choice C) is often increased in breast cancer cells, but the gene for the estrogen receptor is not mutated. Neither estrogen receptor status nor *HER2/neu* expression (choice D) predict genetic predisposition.

Diagnosis: Breast cancer
A 26-year-old woman presents with a breast mass that was detected on self-examination 1 week earlier. Mammography reveals a round, sharply demarcated 1-cm nodule in the right breast (shown in the image). Biopsy of the breast mass shows neoplastic epithelial ductal structures situated within a fibromyxoid stroma. The patient refuses further treatment and informs you that she wishes to become pregnant. Which of the following is the most likely effect of pregnancy on this breast lesion?

(A) Development of invasive ductal carcinoma within the lesion
(B) Fibrocystic change with sclerosing adenosis
(C) Formation of intraductal papilloma
(D) Metastasis to regional lymph nodes
(E) Rapid growth

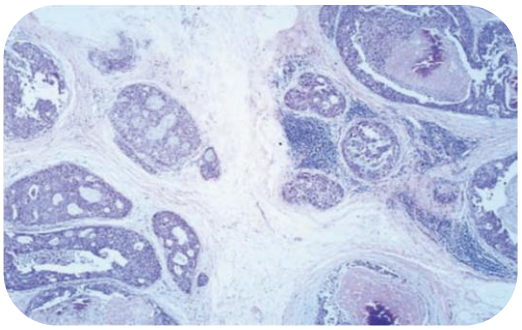
The answer is E: Rapid growth.
Fibroadenomas commonly enlarge more rapidly during pregnancy and cease to grow after the menopause. Although they are hormonally responsive, a causal

relationship between hormones and the pathogenesis of fibroadenoma has not been established. Development of invasive ductal carcinoma (choice A) in a fibroadenoma is rare.
Diagnosis: Fibroadenoma

Upon self-examination, a 53-year-old woman discovers a lump in her left breast. Physical examination reveals a palpable lump about 1 cm in diameter in the outer quadrant of the left breast. No palpable lymph nodes are found in the axilla. Mammography reveals an ill-defined, stellate density measuring 1 cm in the left breast. Fine-needle aspiration of the mass discloses malignant epithelial cells. A partial mastectomy is performed and shows invasive ductal adenocarcinoma. Which of the following is the most important prognostic factor for this patient? **(Important Question)**
(A) Estrogen receptor status of the tumor tissue
(B) Histologic grade of the tumor
(C) Inherited BRCA1 gene mutation
(D) Somatic mutation of the p53 tumor suppressor gene
(E) Status of the axillary lymph nodes

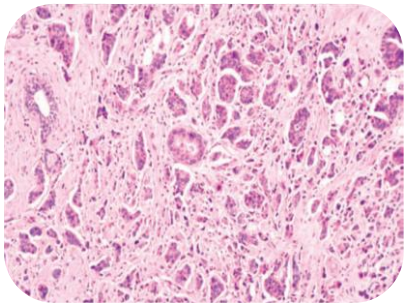
The answer is E: Status of the axillary lymph nodes.
Although all of the choices are prognostic indicators for breast cancer, the most important prognostic factor at the time of diagnosis is stage. A sentinel node assessment often is performed intraoperatively to assess the status of the ipsilateral lymph nodes. The sentinel lymph node is the most proximate lymph node and is assumed to be the initial site of nodal metastasis. It is identifi ed with a dye or radioactive material.
Diagnosis: Invasive ductal carcinoma of the breast

A 45-year-old woman discovers a solitary, freely movable mass in her right breast on self-examination, which is confirmed on physical examination. Mammography demonstrates focal calcification, with a linear configuration in the region of the breast mass. A breast biopsy (shown in the image) reveals large, pleomorphic epithelial cells confined to dilated ducts, with central zones of necrosis. What is the appropriate pathologic diagnosis?
(A) Colloid carcinoma
(B) Ductal carcinoma in situ, comedocarcinoma type
(C) Medullary carcinoma
(D) Phyllodes tumor
(E) Tubular carcinoma



The answer is B: Ductal carcinoma in situ, comedocarcinoma type.
Intraductal carcinoma in situ of the comedo type is composed of very large, pleomorphic cells that have abundant eosinophilic cytoplasm and irregular nuclei, commonly with prominent nucleoli, and typically grows in a solid pattern. Central necrosis is a prominent factor. The necrotic debris may undergo dystrophic calcification. The chances of local recurrence as either in situ or invasive cancer are substantially greater in the case of the comedo subtype than the noncomedo subtype. Colloid carcinoma (choice A) features abundant mucin production. Medullary carcinoma (choice C) is composed of sheets of invasive and pleomorphic cells. Phyllodes tumor (choice D) demonstrates proliferation of spindly stromal cells. Tubular carcinoma (choice E) is an invasive well-differentiated carcinoma with well-formed small duct structures.
Diagnosis: Comedocarcinoma, ductal carcinoma in situ

A 50-year-old woman has been aware of a mass in her left breast for the past 6 months. A 4-cm mass is palpated on examination. The mass is hard, tender, and fi xed to the overlying skin. A lumpectomy is performed. The surgical specimen is firm, has poorly defined margins, and cuts with a gritty sensation. The cut surface is gray, opaque, and slightly depressed. Streaks of gray connective tissue extend into the surrounding fibroadipose tissue. The tumor histology is shown in the image. Which of the following risk factors has the strongest association with this patient's tumor?



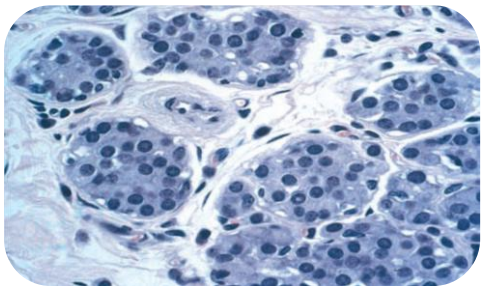
(A) Exposure to carcinogens
(B) Family history
(C) Fibrocystic change
(D) Obesity
(E) Smoking

The answer is B: Family history.

The strongest association with an increased risk for breast cancer is a family history, specifi cally breast cancer in fi rst-degree relatives (mother, sister, or daughter). The risk is greater when the relative is affl icted at a young age or with bilateral breast cancer. Fibrocystic change (choice C) also has an increased risk of breast cancer (proliferative lesions), but the relative risk does not approach that of family history.

Diagnosis: Invasive ductal carcinoma of the breast

A 58-year-old woman presents with an irregular nodularityn that has developed in her right breast over the past 3 months. Mammography demonstrates irregular densities in both breasts. A needle biopsy of one breast lesion is shown. An excisional biopsy of the contralateral breast shows similar histology. Which of the following is the most likely pathologic diagnosis?



(A) Colloid carcinoma
(B) Lobular carcinoma in situ
(C) Malignant phyllodes tumor
(D) Medullary carcinoma
(E) Tubular carcinoma

The answer is B: Lobular carcinoma in situ.

Lobular carcinoma in situ arises in the terminal duct lobular unit. Malignant cells appear as solid clusters that pack and distend the terminal ducts but not to the extent of ductal carcinoma in situ. The lesion is less likely to cause a detectable mass. It is not uncommon for lobular carcinoma in situ to be an "incidental" finding in a biopsy that was prompted by benign changes. About half of these invasive cancers will arise in the contralateral breast and may be either lobular or ductal cancers. Thus, lobular carcinoma in situ, more than ductal carcinoma in situ, serves as a marker for an enhanced risk of subsequent invasive cancer in both breasts. The histologic appearance is not consistent with any of the other choices.

Diagnosis: Lobular carcinoma in situ

A 22-year-old woman nursing her newborn develops a tender erythematous area around the nipple of her left breast. On physical examination, a purulent exudate is observed to drain from an open fissure. Culture of this exudate will most likely grow which of the following microorganisms?

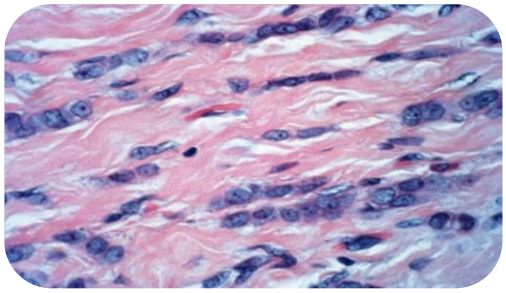
(A) Candida albicans
(B) Escherichia coli
(C) Haemophilus infl uenzae
(D) Lactobacillus acidophilus
(E) Staphylococcus aureus

The answer is E: Staphylococcus aureus.

This lactating patient has developed acute mastitis. The most common organisms isolated are *Staphylococcus* and *Streptococcus*. Untreated, the infection may progress to abscess formation, which is a complication that necessitates surgical intervention. Acute bacterial mastitis may be treated successfully by aggressive mechanical suction, with frequent emptying of the breasts, and by the administration of antibiotics. None of the other pathogens are ordinarily seen in acute mastitis.

Diagnosis: Acute mastitis

A 52-year-old woman presents with a 3-month history of a palpable breast mass. Physical examination confirms a 1-cmn nodule in the upper outer quadrant of the right breast. A biopsy reveals small cuboidal cells, with round nuclei and prominent nucleoli. The cells are arranged in single cell columns(single strands of malignant cells infiltrating between stromal fibers) “Indian filing”, between strands of connective tissue (shown in the image). Which of the following is the appropriate diagnosis?



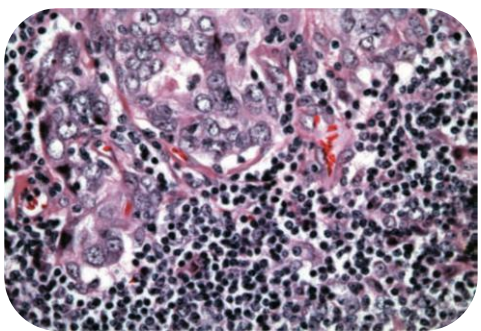
(A) Ductal carcinoma in situ
(B) Invasive ductal carcinoma, tubular type
(C) Invasive lobular carcinoma
(D) Lobular carcinoma in situ
(E) Medullary carcinoma

The answer is C: Invasive lobular carcinoma.

Invasive lobular carcinoma is the second most common form of invasive breast cancer. Because the amount of fibrosis is variable, the clinical presentation of invasive lobular carcinoma varies from a discrete firm mass, similar to ductal carcinoma, to a more subtle, diffuse, indurated area. Microscopically, classic invasive lobular carcinoma consists of single strands of malignant cells infiltrating between stromal fi bers, which is a feature termed “Indian fi ling” (see photomicrograph). Despite the innocuous cytologic characteristics of this form of invasive carcinoma, it is biologically as aggressive as the invasive ductal type. Lobular carcinoma in situ (choice D) is confined to the lobule. Invasive ductal carcinoma may share features of invasive lobular carcinoma, but it usually forms glands, particularly the tubular type (choice B).

Diagnosis: Invasive lobular carcinoma

A 58-year-old woman has a screening mammography and is found to have a 4-cm circumscribed mass, without calcifications, in her left breast. An excisional biopsy shows solid nests and sheets of highly pleomorphic cells, with many mitotic figures,



surrounded by a dense infiltrate of lymphocytes. Which of the following is the most likely diagnosis?
(A) Invasive ductal carcinoma
(B) Invasive lobular carcinoma
(C) Medullary carcinoma
(D) Paget disease
(E) Phyllodes tumor

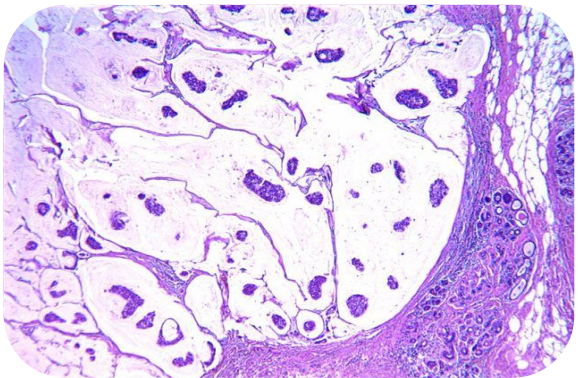
The answer is C: Medullary carcinoma.
Medullary carcinomas are generally larger at the time they are detected than infi trating ductal carcinomas (average size, 2 to 3 cm). This invasive tumor presents as a circumscribed mass that lacks calcifi cations. On gross examination, medullary carcinoma appears as a well-circumscribed, fl eshy, pale gray mass. Microscopically, it is composed of sheets of cells that are highly pleomorphic and have a high mitotic index. The pathologic definition of medullary carcinoma includes a lymphoid infiltrate encompassing the periphery of the tumor. Despite the highly malignant histologic appearance of this neoplasm, it has a distinctly better prognosis than infiltrating ductal or lobular carcinoma. A dense lymphoid infiltrate is not characteristic of the other choices.
Diagnosis: Medullary carcinoma of the breast

A 45-year-old woman presents with an oozing, reddish patch on her left nipple (patient shown in the image). The patient has a history of skin rashes and food allergies and believes this condition is due to an allergic reaction to her bra. Cytologic examination of fluid oozing from the skin lesion reveals neoplastic cells. Excisional biopsy shows large clear malignant cells in the epidermis of the areola. Which of the following is the most likely diagnosis?
(A) Chronic dermatitis
(B) Colloid carcinoma
(C) Intraductal papilloma
(D) Paget disease
(E) Phyllodes tumor

The answer is D: Paget disease
Paget disease of the nipple refers to an uncommon variant of ductal carcinoma, either in situ or invasive, that extends to involve the epidermis of the nipple and areola. This condition usually comes to medical attention because of an eczematous change in the skin of the nipple and areola. Microscopically, large cells with clear cytoplasm (Paget cells) are found singly or in groups within the epidermis. The prognosis of Paget disease is related to that of the underlying ductal cancer. Eczematous change in the skin of the nipple and areola are not features of the other choices.

Diagnosis: Paget disease of the breast

A 65-year-old woman presents with a palpable breast mass that she palpated 1 month earlier. Physical examination reveals a soft, jelly-like tumor measuring 5 cm in diameter. Histologic examination of a breast biopsy is shown in the image. What is the appropriate diagnosis?
(A) Colloid carcinoma



(B) Lobular carcinoma
(C) Medullary carcinoma
(D) Paget disease
(E) Phyllodes tumor

The answer is A: Colloid carcinoma.
Colloid (mucinous) carcinoma is an invasive variant that tends to occur in older women. On cut section colloid carcinoma has a glistening surface and mucoid consistency. Histologically, it is composed of small clusters of epithelial cells, occasionally forming glands, fl oating in pools of extracellular mucin. In its pure form, colloid carcinoma has a considerably better prognosis than infi ltrating ductal or lobular carcinoma. However, it is often admixed with infi ltrating ductal carcinoma, in which circumstance then prognosis is determined by the ductal component. Abundant mucin production is not a feature of the other choices.
Diagnosis: Mucinous carcinoma of the breast

If you have any questions you want to add, please send it to

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Good luck

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اللهم علّمنا ما ينفعنا وانفعنا بما علّمتنا وزدنا عِلماً وعملاً وأجعل ما علّمتنا حجةً لنا لا علينا