

Breast

Q. No.01

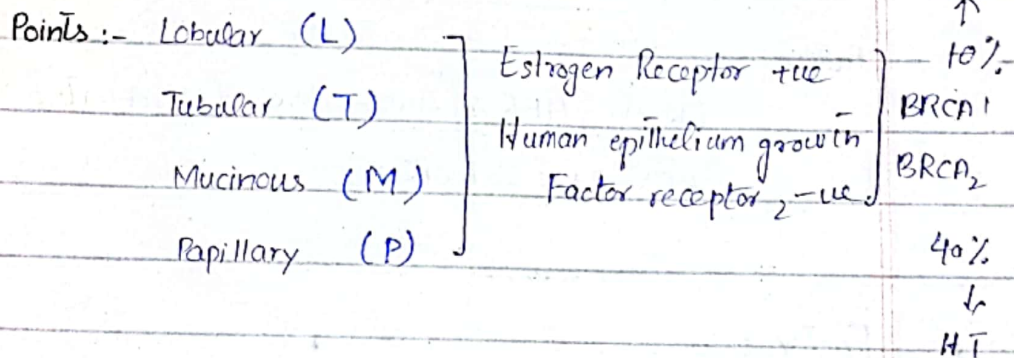
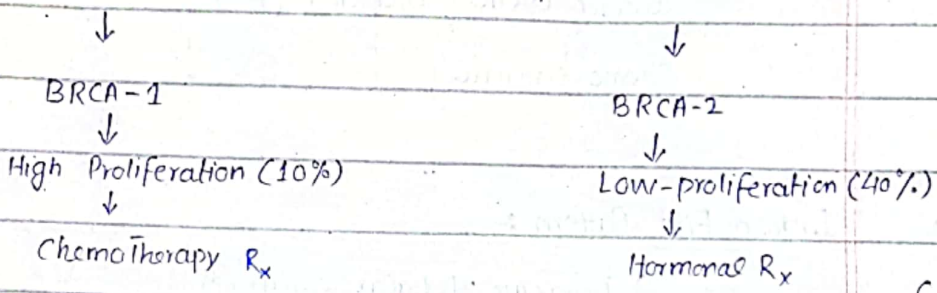
A 55 year female ill-defined lump with red hot-skin pseudo orange surface.

سرقة الجلد

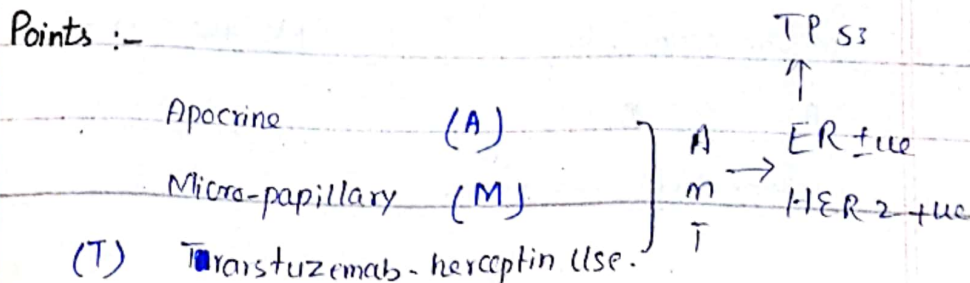
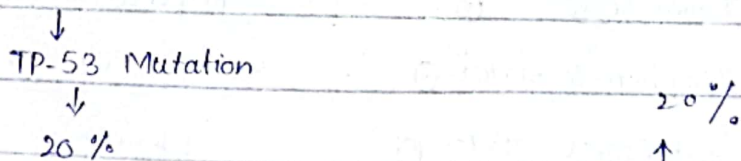
* Diagnosis :- Malignant
Invasive Carcinoma of breast

* Molecular Pattern :-

① ER +ve, HER 2 -ve :- ① - Estrogen Receptor +ve
② - Human epithelium growth factor receptor 2 -ve.



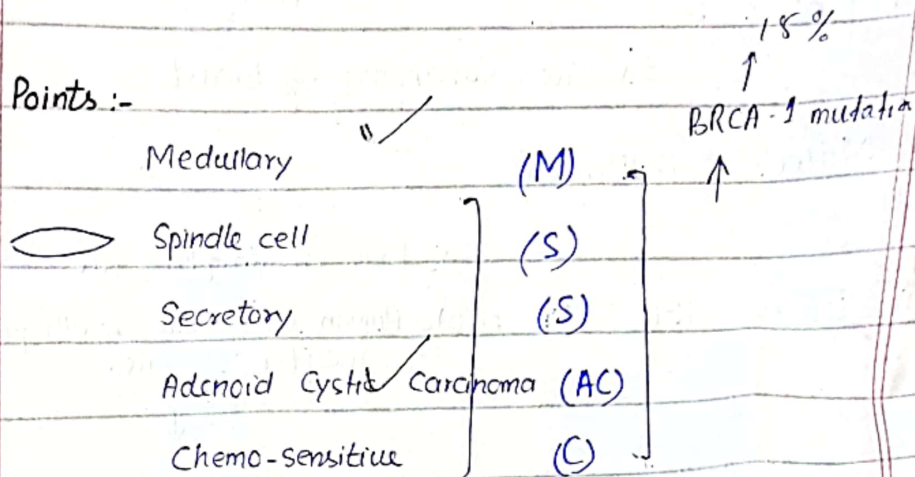
② ER ±ve, HER 2+ve :-



ER-ve, PR-ve, HER 2-ve :-

↓
BRCA-1 Mutation
↓
15%

Points :-



★ Indian File Pattern :-

Invasive Lobular carcinoma

Pattern →

ER +ve ✓, HER 2 -ve ✓ → Well-differentiated
✓ HER 2 +ve → Poorly

★ Factor :-

Prognostic Factor :-

- Tumor size ③
- Lymph-node status ④
- Histological grade ⑤
- Mitotic count ⑥
- Age ① ✓
- Distant Metastasis ② ✓

★ Predictive Factor :-

Response to hormonal therapy
HER +ve ✓ or -ve
ER +ve ✓ or -ve
PR +ve ✓ or -ve

D.No.02

Mastectomy, 42 years 2 cm tumor, differentiated CA
(2 of 14 axillary lymph-node), ER/PR-ve, HER2 +ve
No Metastasis.

* Molecular Pattern or classification :-

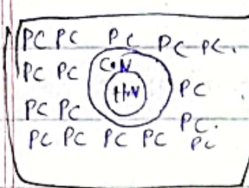
Written above

* Morphology of DCIS :- (Upper/Left side outer Quadrant)

Ductal carcinoma in situ. Scarcian

Comedo Type :-

Sheets of



Solid sheet of Pleomorphic cell

Pleomorphic cells.

Center Necrosis

Hyper-chromatic Nuclei

Non-Comedo Type :-

① → Cribriform :-



Regular spaces with less-secreting material

Like cheese / Cookie cutter

② → Solid :-

Completely Filled Spaces



③ → Papillary :-

Papillae are Fibro-vascular Core



④ → Micro-papillary :-

Papillary projection are cut fibro-vascular core.



Factors :-

① Age

② Lymph-node Status (Axillary) ↑

③ Tumor size < 2cm ↑ prognosis

Inflammatory CA - Poor Prognosis

Lympho-vascular Invasion - Poor Prognosis

CA in situ - Good Prognosis

Distant Metastize - Poor Prognosis

Predictive → HER2

ER - Proliferative Rate

PR - Molecular sub-type, Histological grade.

Q.No.03

50 years with ulcerative mass outer Quadrant of left-breast - sheet and nests of pleomorphic cells Abnormal mitosis.

* Diagnosis:-

DCIS (Ductal carcinoma in situ)

* Breast Tumor with genetic expression:- ✓

Molecular Expression (Pattern)

* Prognostic Factor :-

Same

Tumor character which effect on clinical :- (Prognosis)

Size of Tumor. → ↑

Prognosis ↓

Q.No.04

52 yr Pt e nipple discharge left sided breast mass nest of atypical-cell limited to basement of duct.

* Diagnosis :- Paget Disease of breast.

Microscopic Pattern :-

Paget cells → Malignant cell

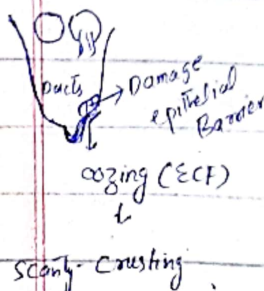
↓
Extend into duct

↓
e out Cross basement membrane

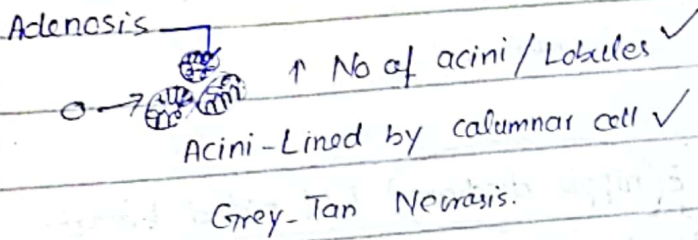
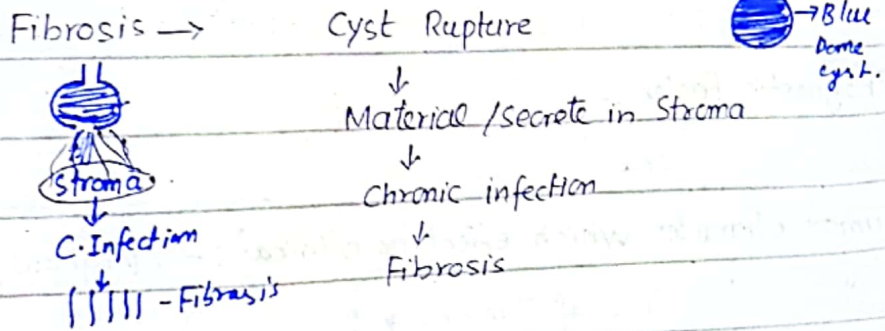
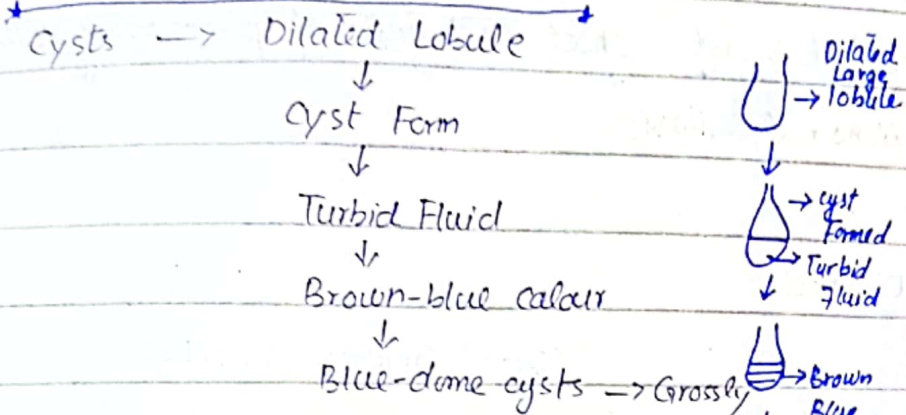
↓
Tumor cell destroy epithelial Barrier

↓
Coze ECF on surface

↓
Scanty crusting Forming



Change in Fibro-cystic Disease :-



D.NO-05

30 yr old-Female has F.mass in Rt. Breast

6 month . 5 cm Rt Breast mass, Firm non-tender .

Axillary Lymph-node dissect show poorly CA \bar{e} -ve

ER, -ve PR, -HER/2_{nc}

* Prognostic Factor :- ^{Age} Mitotic Activity ^{Condition of lymph-node} Carcinoma-in-situ ^{Tumor-size} Distant metastasis.
^{Histological grades.}

* Other Name of Tumor :-

* Grade ↓ (Tubular pattern, mitosis, Nuclear pleomorphism)

① - Nottingham Grading system

② - Bloom Richardson system ^{Depends upon} (3-5)

W-D Grade 01 - Tubular pattern, Round Nucleus, ↓ Proliferation (Mitosis)

M-D Grade 02 - Tubular pattern, ↑ Nuclear pleomorphism, Mild proliferation (Mitosis) (6-7)

P-P Grade 03 - ↑ Proliferation, ↑ Mitotic Rate, Necrosis. (8-9)
^{↑ mitosis} ^{↑ mitosis}

Etiological Factor of carcinoma of breast ^{QV*}

* Age 57-80 .

Gender - Female .

Race .

Radiation

Obesity .

Diet .

Breast Feeding .

Environment Toxin

Tobacco

cigarette smoking

Age at Menopause

Germ line Mutation.

Q.No.06

A 30 yr female breast lump in Rt. breast lump is slightly tender, lumpy lumpy

Fibro-cystic change.

D/D :-

DCIS (Ductal carcinoma in situ)

LCIS (Lobular carcinoma in situ)

Fibrocytic changes (FCG)

Fibroadenoma (FA)

Diagnosis :-

Fibrocytic change

Different Component :-

Cysts, Fibrosis, Adenosis

Q.No.07

24 years old breast surgeon with solitary discrete rubbery, freely movable 2 cm mass in upper-Quadrant of left-breast

* Benign

* Diagnosis :-

Fibro adenoma.

* Morphology :-

→ Radiology → Well-circumscribe mass

Rubbery

Free-movable mass

→ Histological → Myxoid Stroma

Stag-Horn appearance

Compress epithelium

Q.NO-08

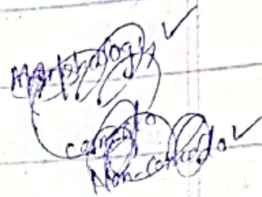
50 yr breast lump. Tumor is infiltrating the overlying skin. Tumor show tubule formation, central necrosis, Focal-invasion seen.

* Diagnosis:-

Invasive Ductal Carcinoma

* Molecular Classify:-

Molecular
LTP-21



* Type of Carcinoma:-

Invasive CA ✓

Non-Invasive Carcinoma ✓

Benign
↓

Invasive Ductal CA

DCIS

Fibroadenoma

Invasive lobular CA

LCIS

Phyllodes
Tumor

* Morphology of Invasive / Infiltrating Lobular Carcinoma

Histology:-

Indian file pattern

Signet Ring-cells

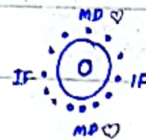
Round Nucleus

Small Nucleoli

Cell arrange in single file

Indian file appearance (Blue)

Mucin droplet present

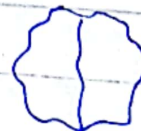
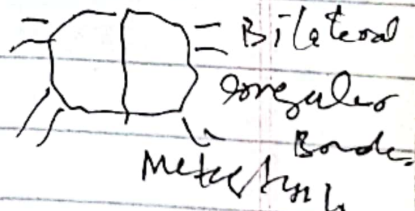


Gross:-

Irregular Border / Poor circumscribe

Metastasis

Bilateral



Q.No.09

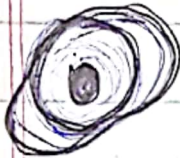
Invasive Ductal Carcinoma:-

* Gross:-

Hard-from Middle

Firm from Periphery

Irregular boader

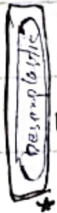


* Cut-Surface:-

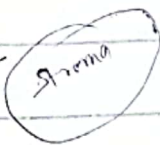


Grating Sound

* Micro-scopy:-



Desmo plastic



Chacky-white stroma

Desmoplastic stroma.

Gross
Cut surface
Microscopy
Undiff. - it's not
Poorly differentiated

Undifferentiated :-



cribriform pattern ✓

Space with cookie cutter shape & fluid

* Poorly Differentiated :-

Nests, of solid, sheet of cells ✓



Enlarge Nuclei

Neovasc. ✓

Q.No. 11

★

49 year woman ↑ size RT. breast, Breast not painful hairness cause discomfort over-lying skin, nipple normal, No Axillary node. No discharge
mammography has 12cm mass Tumor with stromal and epithelium component.

★ Diagnosis:-

Benign. ✓

Phyllodes Tumor (biphasic)

★ Fibro-adenoma

Phyllodes Tumor


Common benign ○

Less Common. 


Epithelial element + CT stroma ↓


Stromal over-growth + epithelium ↑.


Stag-horn appearance 

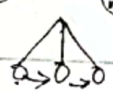
Leaf-like pattern 

Less cellularity 😊

More Cellularity 

Less Mitotic figure 

More Mitotic Figure 

Moveable Freely 

Firm

No Risk of Malignancy.

Risk of Malignancy

★ Grading System :- Q ✓ of Breast.

Nottingham Grading System

Depend on:

Tubular Formation (Ducts) ✓

Nuclear Pleomorphism ✓

Mitotic figure

★ Grade:-

01 Well-differentiated 3-5

02 Moderate 6-7

03 Poor 8-9

Variable score 1-3 ✓

Q. NO. 10

Classification of Breast-CA

Benign → Fibro-adenoma
Phyllodes tumor

Carcinoma in Situ → DCIS, LCIS

Invasive CA → Invasive Ductal CA ✓

Invasive lobular CA ✓

- Medullary CA

- Papillary CA, Micropapillary

- Adenoid Cystic CA

- Inflammatory CA ✓

- Tubular CA

- Mucinous

- Apocrine

Q. Breast Lesion with Risk of Tumor

Non-Proliferate Breast change:-

Cyst

Adenosis

1 (3%)

Fibrosis

well-differentiated

Duct Atresia

Proliferation without atypia :-

Epithelial metaplasia

Papilloma

(1.5-2) (5.7%)

well differentiated

Proliferation with atypia

Ductal hyper-plasia

(4-5) (13-17%)

Lobular hyperplasia

well-differentiated

Carcinoma in Situ

LCIS

8-10 (25-30%)

DCIS

Poor differentiated

1 - 3%

2 - 5.7%

4-5 13-17%

8-10 25-30%