**Diagnosis (Δx)**:
- Mammography - popcorn calcification
- ROC = FNAC

**TTE**:
- No treatment
- Complex fibroadenoma: cyst, painful
  - Excision
  - With subcutaneous incision
  - Inframammary incision
  - Supramammary incision

**Diagnosis**:
- Serosing adenosis
- Calcification
Phyllloid Tumour

Mistaken Giant Intracanalicular Fibroadenoma

C/E:
- Premenopausal women
- Rapid growth
- Stretched/shiny skin, red dilated veins over surface, warm to touch
- Bosselated surface

D/D from CA:
- No fixity to skin
- No fixity to pectoralis
- Nipple not involved
- No nipple retraction
- Nipple discharge: Serous fluid

Dx:
- Clinical
- USG
- Scout biopsy to rule out malignancy

T/E:
- Segmental wide excision (1-2 cm margin, not lumpectomy)

Chances of recurrence
Cystic swellings of Breast

- Inflammatory + Abscess
- Neoplastic - Benign - Phyloides
  - Malignant - Intracystic Carcinoma
- Non neoplastic - Fibroadenosi's
  - Simple Cyst
  - Cyst of Blood good
- Retention Cyst - Galactocele
- Rare - TB, Lymphatic, Haematoma
Discharge / Nipple

- May be physiological / pathological
- How to proceed

1) Nature of the discharge

Serous - Duct ectasia

Fibrocystic disease

Bloody - Duct papilloma
duct ectasia
duct carcinoma

Green - Duct ectasia

Milk - Lactation

Hyperprolactinemia
Oestrogen replacement therapy

Yellow - Breast abscess

Side: U/L = Duct papilloma

B/L = Fibrocystic disease

Hyperprolactinemia
3. Spontaneous = In duct papilloma
   On pressing = Duct Carcinoma

4. Discharge = mass = 
   Tender mass = Fibrocystic
   Non-tender = Carcinoma

Irr = Mammogram

USG

Cytology of discharge

RULE 1st:

- Duct papilloma:
  - Microdochectomy
  - Haafied's
  - Cone excision

Duct ectasia = Regional mastitis

♀ For Syn

Asymptomatic
NS-1↑
Antibiotic
♀ of Haafieds
Breast Abscess

Acute Bacterial

- Pus behind pect. major

Causes
- Hematoma 
- Sec. Bact. infection
- TB

CIE
- Multiple deratar abscess
- Sinuses
- Matted node in axilla

Empyema Necessitans
- Pus from eur

DR
- CPR
- FNAC
- 010284

MRI
- CPR to rule out TB

Drainage
- Gavitaled Thomas Incision
- Submandibular

A-AT-T
- Aspiration of pus
- Dnyprectomy
- Excision
Breast Abscess

**Etiology**
- **Dactational** - Staph.
- Hematoma inva - Staph
- Non dactational - Anaerobic Bact.
  - Suspect MRSA
  - In Recurrent or Persistent
    - Inquent ecias or periaductal mastitis

**Diabetes, AID**

**Clinical**
- Pain, Swollen, tender = Inflammatory phase
- Abscess - Fever, chills & Rigors
- Abscess stage
  - Deep fluctuation - Superficial

**Cellulitis stage**
- Stop breast feeding of affected side
- Drain express the milk out
- Good support to breast

**Initial**
- UOG guided Aspiration

**Antibiotics**
- Cefuroxime 500 & 750 X 3 days
For suspected MRSA
- vancomycin 1.5 gm BD x 10 days
- Good antibiotic cover
- If large abscess
  - Inflammatory I & D
  - Radical I & D
- Other quadrant

For non-lactational
- cezox + metronidazole 400 mg TID
- Do not wait for fluctuation

Residual Mastitis (Plasma Cell Masti)
- Residual plasma cells
- Infection by Anaerobes
- Mostly in smokers
Carcinoma Breast

Risk factors

1. Age = 35 yrs
2. Sex = F > M
3. Hereditary:
   - BRCA1 & 2
   - Cowden's syndrome
   - Multiple Hamartoma syndrome
   - Axial telangiectasia
   - Li Fraumeni

4. History
5. Benign ails = Proliferative lesions more
6. Diet: Saturated fat 1 risk, Vit C Phyto-estrogen 4 risk
7. Endometrial: Early menarche, late menopause, less child
   - HRT
   - OCP (No effect)
8. Radiation
9. White western
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- **Paget's**
  - Invasive ductal Ca
  - Invasive lobular Ca
  - Axeno
  - Medullary
  - Colloid
  - Papillary
  - Tubular

- **Intraductal Ca**
  - Nipple Ulceration, fissured cracked

**Assessment**

1. **History**
   - Nipple Discharge Retraction
2. **PE**
   - Hands by side
   - Arrector Pudendal
   - Skin Pucker
   - Hands above head
   - Lump
3. **Inpection**
   - Bending forward
4. **Palpation**
   - Local temperature
   - Lump description
   - Mobility
- Pectoralis major contraction test
- Chest wall fixation
- Axillary LN
- Distant Mets - Opposite Axilla
- Breast
- Abdomen
- Rectal

**Clinical**
- USG or MAMMO
- FNAC or FRAC

≥ 40 = USG
> 40 = MAMMO

**Triple Assess**
- Clinical
- Blood
- LFT

**Radiography + Mammography**
- Benign
- Malignant

**Calcification** - Macro (> 0.5 mm)
- Micro

**Parenchyma**
- 

**Nipple**
- Architecutral distortion
- Retracted
Cooper elast. - N
Subcutaneous space = N

2. USG Breast = Irregular. Calcification in CA.
Abnormal if

3. Chest x-ray

4. Bone Scan - Symptomatic NALP or Stage II or above
Pregnancy / dense breast
Breast & Intrauterine Tumour recurrence

3. FNAC / Biopsy

- FNAC -
- Trucut biopsy
- Incisional biopsy - Frozen Section
- USG Guided biopsy
- Wire guided in non-palpable lesion

Mammo - Wire put in lesion

O/P - Histo.
Stereotactic

Immunohistochemistry

Microarray

ER/PR

Prognostic indicator

guide to hormone therapy

Tamoxifen effective to

All except premenopausal

HER-2/new receptor

Associated with ER negativity

High grade tumour

Bad prognosis

Better response to anastrazol

Equivocal result of HER-2/new

Need to confirm by FISH

Respond to TRASTUZUMAB
Investigational Algorithm in a 40-year-old female with 5 cm lump in the outer upper quadrant
Clinical examination (suspicious of carcinoma) — no lymph nodes in axilla T2 N0 M0

Routine investigations
- Complete blood count
- It may show anaemia
- Chest X-ray may show bone ball metastasis
- Liver function tests — alkaline phosphatase

Diagnostic tests
- Mammography — suggestive of malignancy
- Ultrasound guided core biopsy
- FNAC — malignant
- TRUCUT or CORE biopsy
- IHC-ER, PR, HER-2/neu, SBR grade, Ki67 index
- DNA microarrays

No evidence of malignancy (clinically suspicious)

Fig. 21.71: Investigations in carcinoma breast

CARCINOMA BREAST STAGING

Ans. d. T3 N3 M0 (Ref: Schwartz 9/e p452; Sabiston 19/e p847; Bailey 25/e p841)

7th AJCC (2010) TNM Staging for Breast Cancer

T: Primary tumor

T1: Tumor ≤ 2 cm
T2: Tumor > 2 cm and ≤ 5 cm
T3: Tumor > 5 cm

T4a: Extension to chest wall, not including pectoralis muscle
T4b: Edema (including peau d'orange) or ulceration of skin, or satellite skin nodules confined to the same breast
T4c: Both T4a and T4b
T4d: Inflammatory carcinoma

N: Regional lymph nodes

N1: Metastasis to movable ipsilateral axillary LNs
N2a: Metastasis in ipsilateral axillary LNs fixed or matted
N2b: Metastasis in clinically apparent ipsilateral internal mammary LNs and in the absence of clinically evident axillary LNs metastasis
N3a: Metastasis in ipsilateral infraclavicular LNs
N3b: Metastasis in Ipsilateral internal mammary LNs and axillary LNs
N3c: Metastasis in ipsilateral suprACLavicular LNs

M: Distant metastases

M0: No distant metastasis; M1: Distant metastasis

[Note: Clinically apparent is defined as detected by imaging studies (excluding lymphoscintigraphy) or by clinical examination or grossly visible pathologically.]

<table>
<thead>
<tr>
<th>Stage I</th>
<th>Stage IIA</th>
<th>Stage IIB</th>
<th>Stage IIIA</th>
<th>Stage IIIB</th>
<th>Stage IIIC</th>
<th>Stage IV</th>
</tr>
</thead>
<tbody>
<tr>
<td>T1 N0 M0</td>
<td>T0 N1 M0</td>
<td>T2N1 M0</td>
<td>T0 N2 M0</td>
<td>T4 N0-2 M0</td>
<td>AnyT N3 M0</td>
<td>AnyT anyN M1</td>
</tr>
</tbody>
</table>
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Treatment → Local Recovery

- Early Invasive Stage I, II, III, IV
- Locally Advanced Breast C9 (IIIA, IIB, IIC)
- Met 

Mastectomy (MRM) → MRM + Axillary LN Assessment

- BCT + Axillary LN Assessed
- RT
- If on Sentinel LN Assessment: node+

Then Axillary dissection Level I & II

Lymphoma Involvement

- LN +
- Tumor > 1 cm
- LN-, But Blood Vessel Invasion
- High grade

For IIIA ≤ N1 who achieve good response to Neo-adjuvant chemo

BCT for IIIA ≤ N1 who achieve good response to Neo-adjuvant chemo

Hence, this is followed by surgery
Large lump displacing the nipple areola complex—core biopsy for receptor studies. MRM may not give margin. Hence, this is an ideal case for neoadjuvant therapy followed by surgery (T4 N1 M0).

**Fig. 21.87:** LABC *(Courtesy: Dr Satish Deshpande, Dr Murtaza Akhtar, NKP Salve Institute of Medical Sciences, Nagpur)*

**B. Inoperable (IIIB):** Extensive breast skin oedema, costal nodes, arm oedema, or inflammatory breast disease.

**Investigations**
- Tissue diagnosis is established by core biopsy.
- Core biopsy tissue is also evaluated for ER, PR, HER2 status, P53 overexpression, etc.
- Biological markers important because if positive axillary dissection is offered in the first place. Those who respond are subjected to mastectomy or BCS.

**NEOADJUVANT THERAPY IN BREAST CANCER**

This modality is used for treated locally advanced breast cancer (LABC) wherein due to the advanced nature of the disease...
Fig. 24.82: Treatment of early carcinoma of the breast
- Negative hormone receptor status
  - Her2 neu over expression

  Than chemo:
  - Tamoxifen = for hormone receptor +
  - Trastuzumab = for Her2 neu +

  mets = fora longer survival
  & quality of life.

  - Hormone therapy preferred over chemo
    due to less side effects.

  Kind of hormone = ER/PR +
  - Bone/soft tissue mets only
  - Asymptomatic visceral mets

  Such for systemic chemo:
  - Hormone refractory

  Symptomatic visceral mets.
For local regional recurrence:

- Who had mastectomy:
  - Resection
  - Reconstruction
  - Chemo
  - Hormone
  - RF

- Who had amputation:
  - Mastectomy
  - Chemo
  - Hormonal

- Q may be on mastectomy

- Prophylactic mastectomy

MRM

BCI

Breast reconstruction

Neoadjuvant chemotherapy

Hormonal Therapy