DR.S.G.BALAMURUGAN M.Ch,

SURGICAL ONCOLOGIST

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GURU HOSPITAL

NEW CANCER TREATMENT WITH NEW TECHNOLOGY

Pandikovil Ring Road, Madurai

BREAST LUMP APPROACH

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This is a open discussion

Meant mainly for postgraduates & General practitioner

In case of queries , please come forward and participate in discussion

Historical Notes

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An old enemy:

Anthropologists offer evidence of tumorous growths in dinosaurs dating from 100-200 million years ago

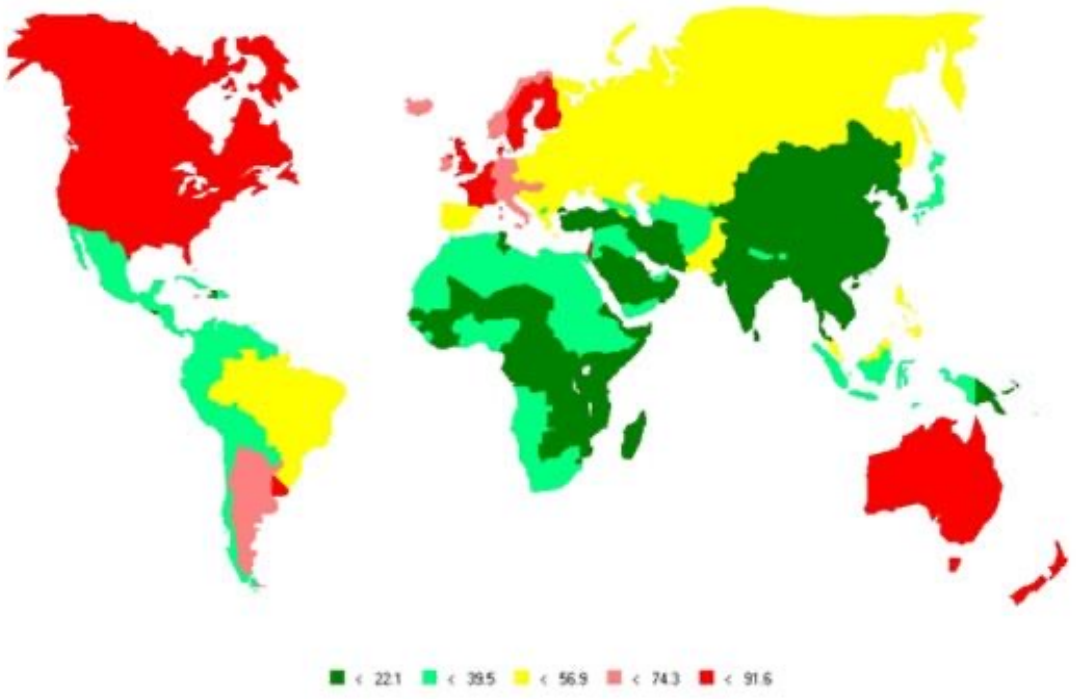
- Mummies from Egypt 5000 years

Edwin Smith Papyrus (1862):

Egypt 1500-3000 B.C. : describes breast tumors

Treatment: "fire drill"- non- curable

Breast cancer a Global Issue



Breast Cancer Research

- World: Commonest in female,
  30% of Total body cancer in female

- India: upto 2010
  2nd most commonest in women,

  2011 onwards - Commonest

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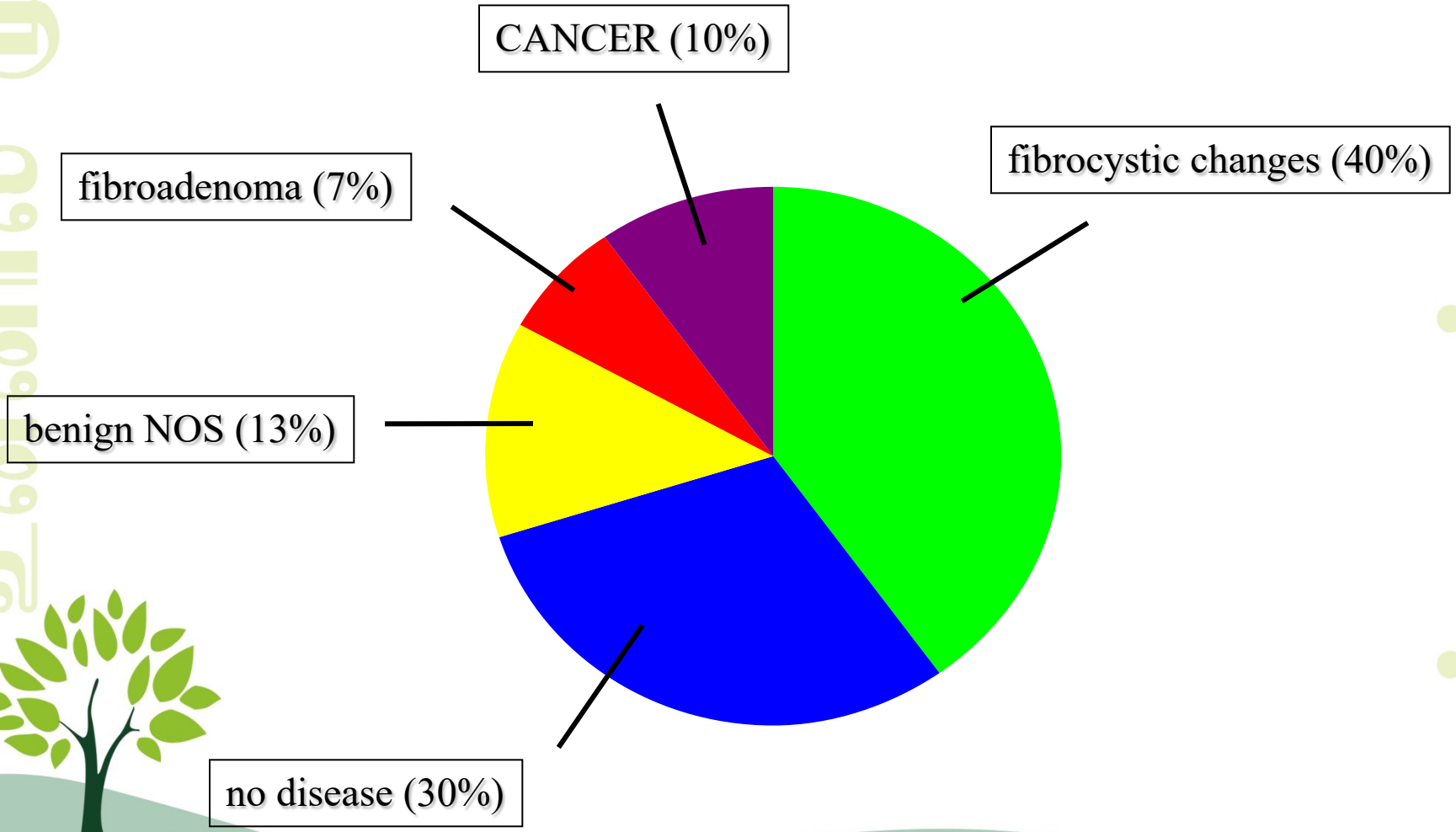
APPROACH

PALPABLE BREAST MASSES



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AIM – Malignant lesion should be identified from benign lesion

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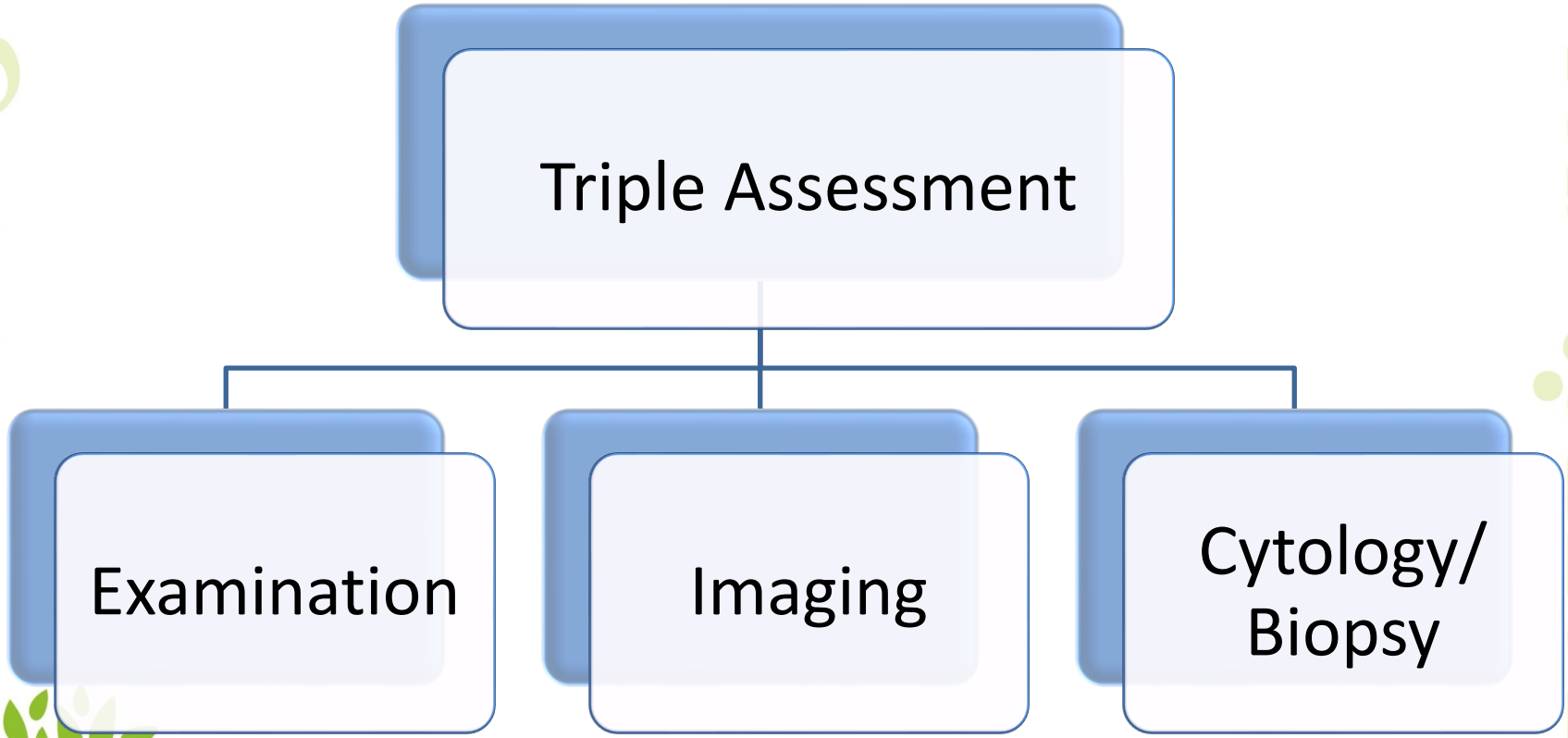

DIAGNOSIS

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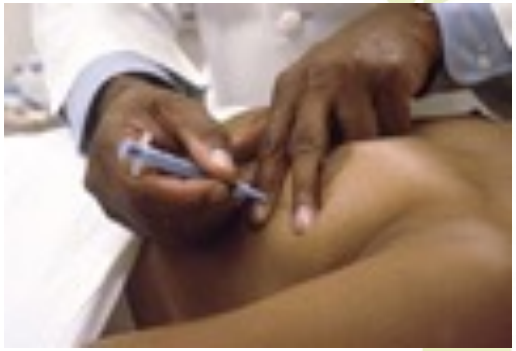
Triple assessment

Clinical examination

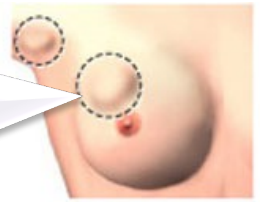
Imaging

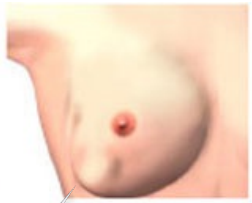
FNAC/Corebiopsy

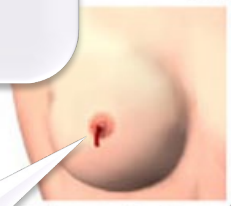


SIGNS AND SYMPTOMS

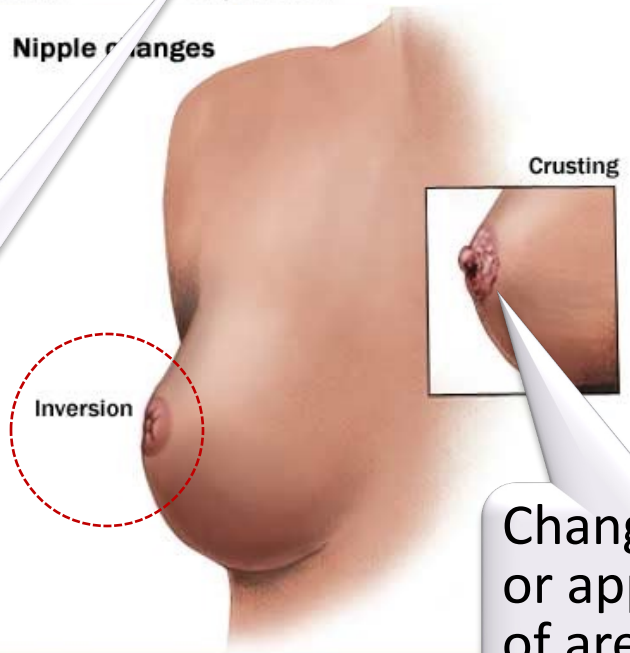
Most common: lump or thickening in breast. Often painless





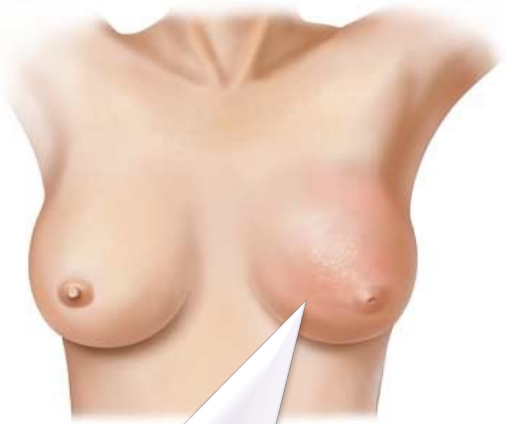


Discharge or bleeding

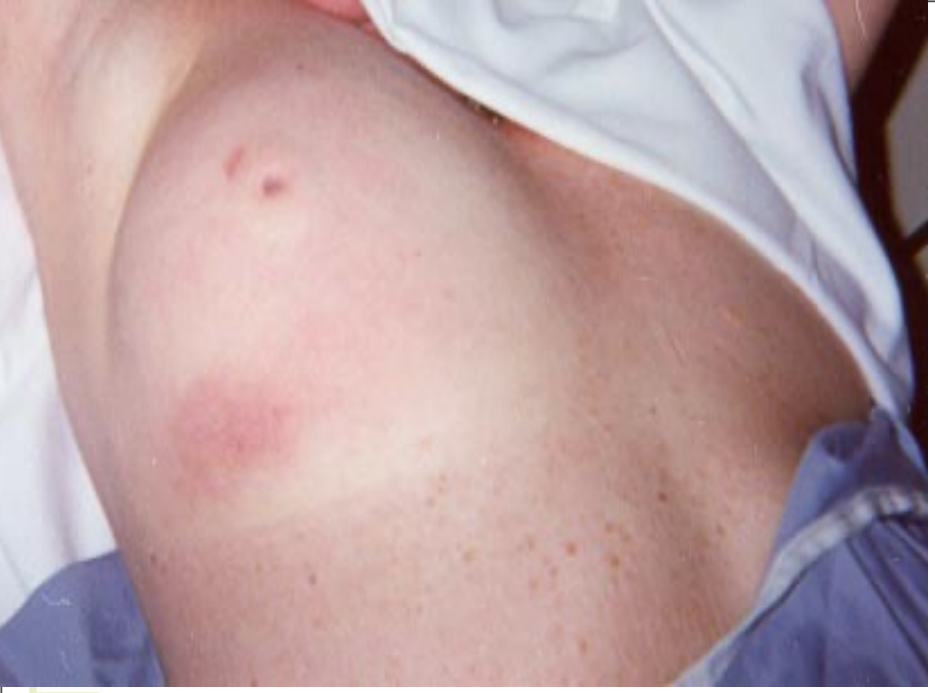


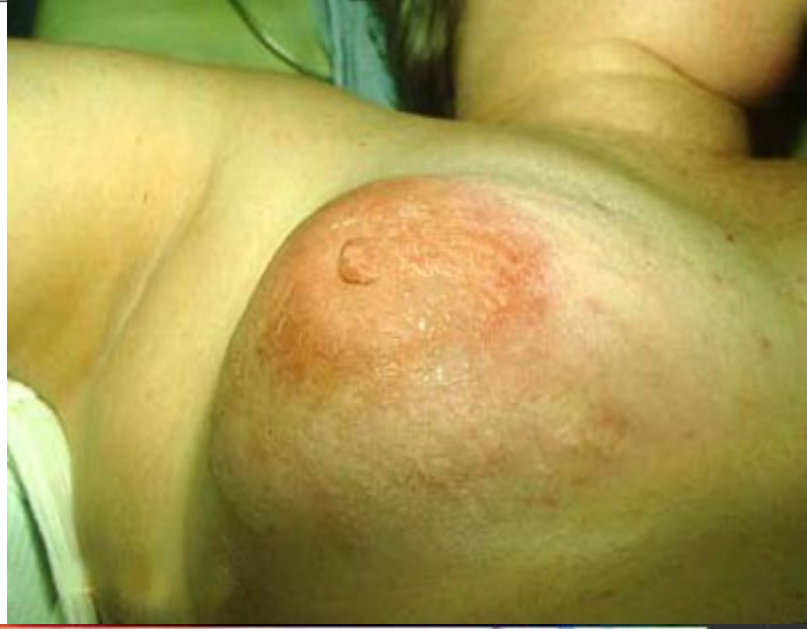
Change in size or contours of breast

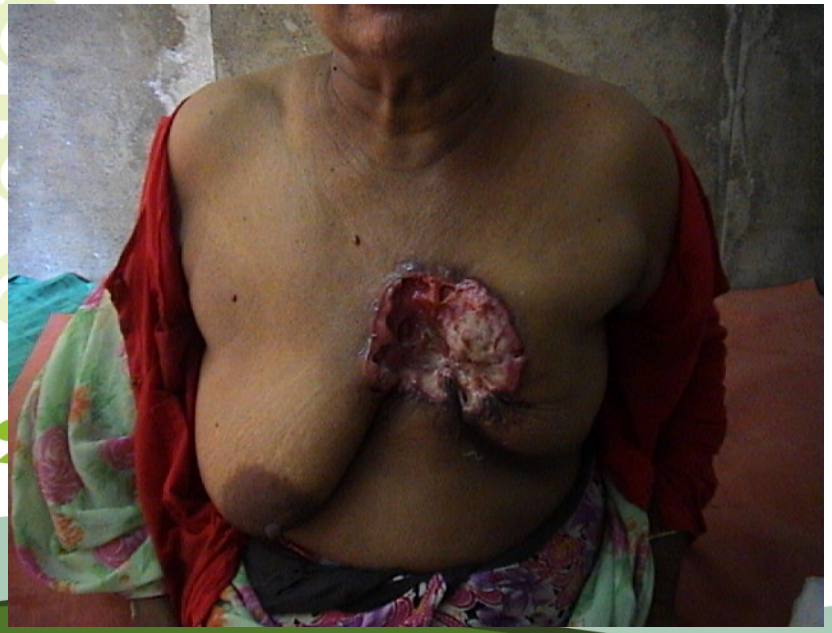
Change in color or appearance of areola

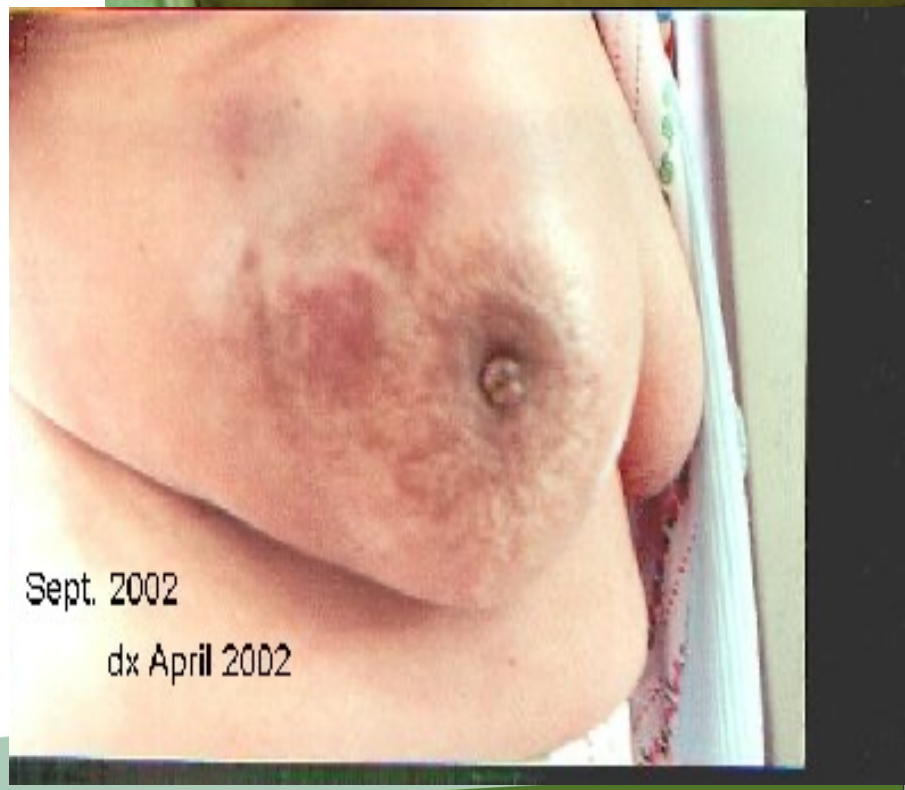


Redness or pitting of skin over the breast, like the skin of an orange








Sept. 2002
dx April 2002

MAMMOGRAM

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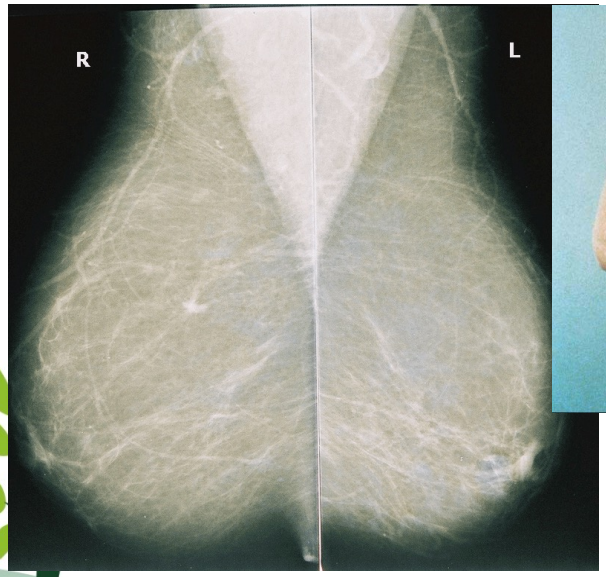
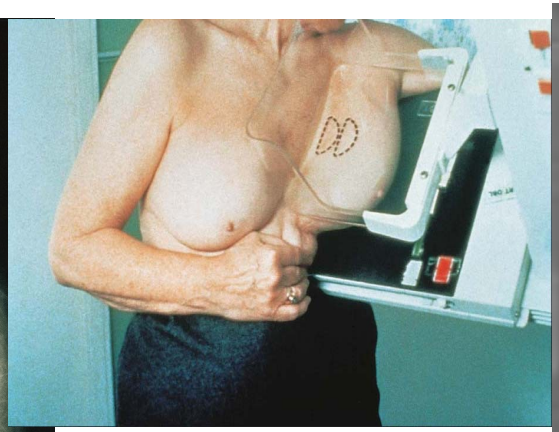
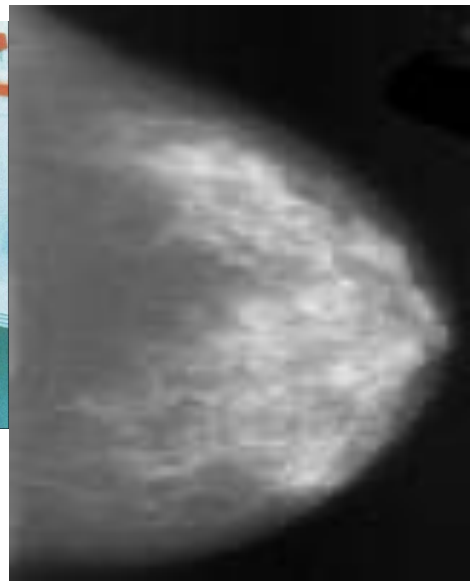
Mediolateral





Craniocaudal



If Axilla is seen it is Mediolateral

Mammographic appearance of Cancer

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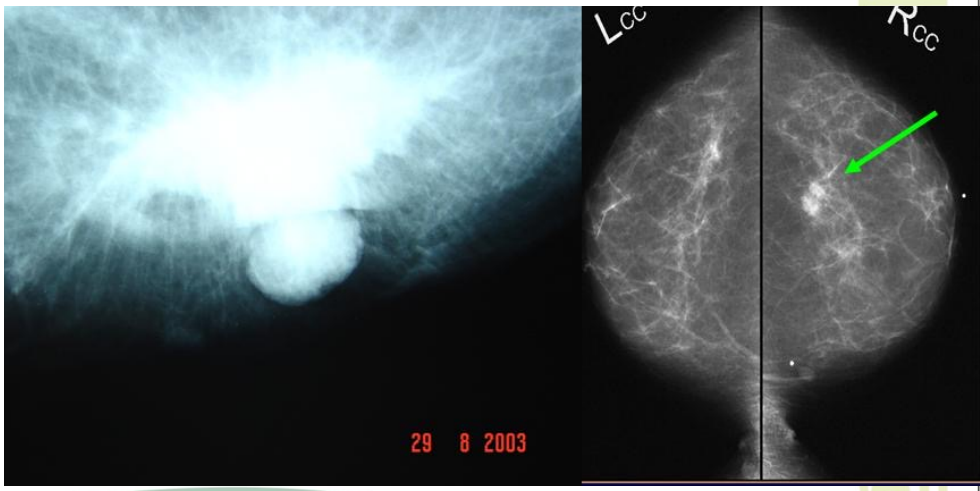
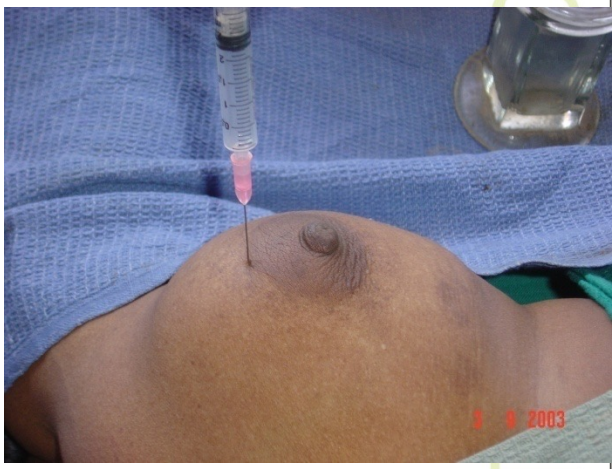
- A mass
- Associated calcification
- Architectural distortion
- Irregular border
- Skin or nipple change



BIOPSY



FNAC - if inconclusive

↓

Trucut biopsy - if inconclusive

↓

Small lesion – excision biopsy

Large lesion – incision biopsy

ROLE OF TRUCUT BOPSY

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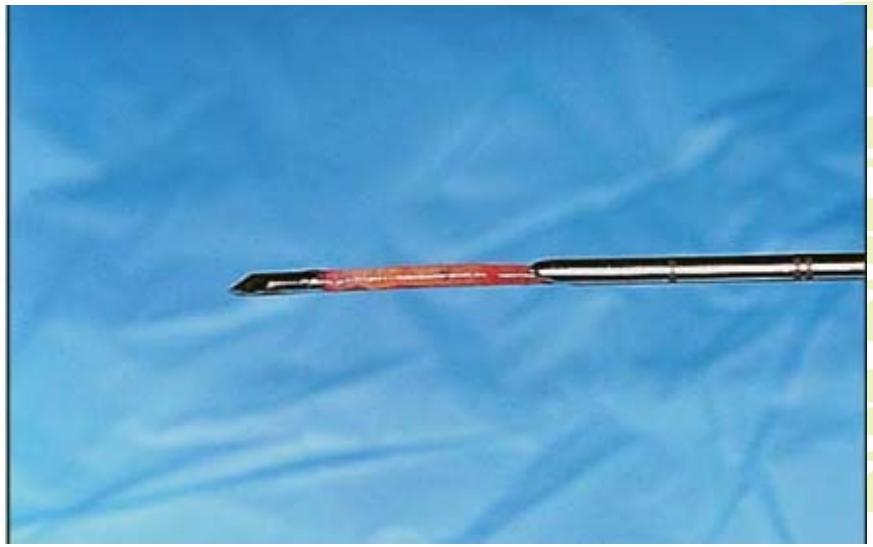
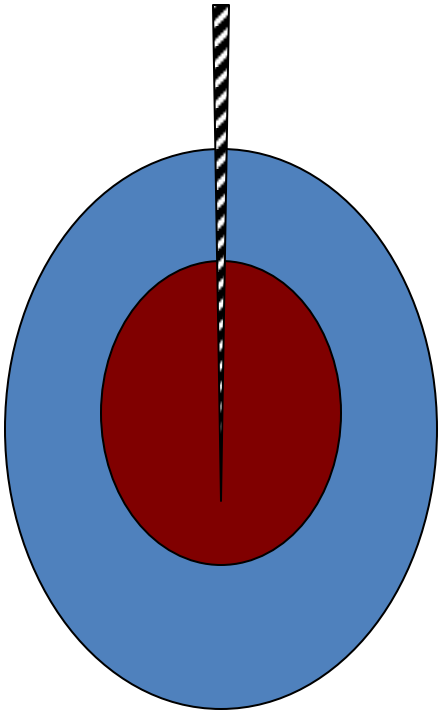
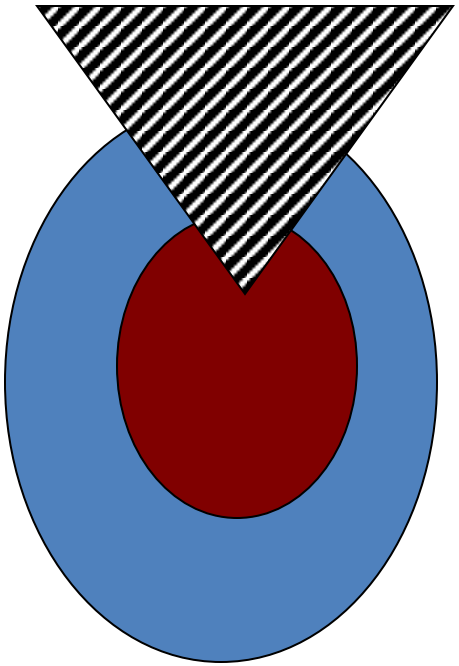
- FNAC - if inconclusive
- Before neo adjuvant treatment



TRUCUT VS OPEN



– trucut biopsy



open biopsy

EXCISION BIOPSY

- After excision biopsy

  Treatment is completed for benign lesion

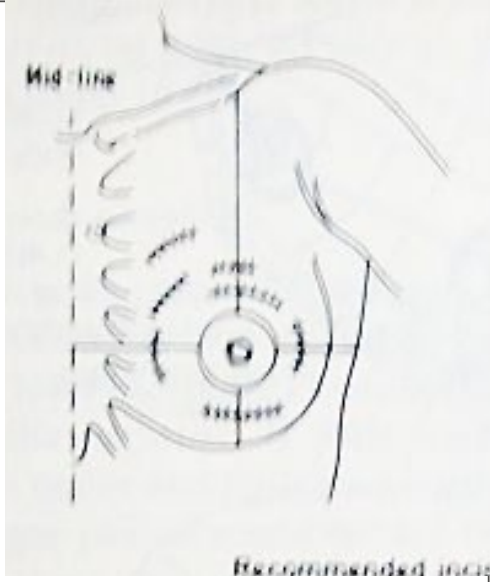
  But it should not be routinely done for malignant lesion, unless all other modality of biopsy reported as negative. It adversely affect the prognosis

Indication :

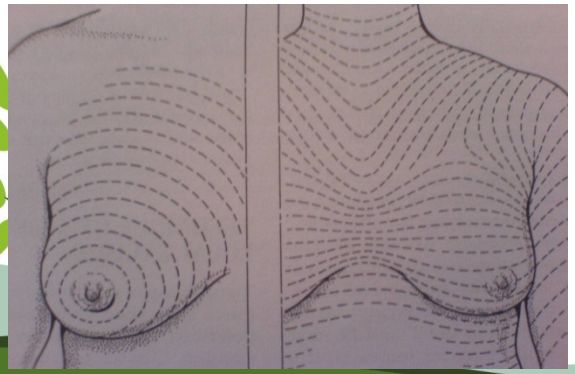
Benign lesion

Small suspected malignant lesion

BIOPSY INCISIONS



- Incision must be transverse or curvilinear
- Scars should be included in the future definitive incision
- . NO VERTICAL INCISION Adversely affects the plan of treatment both in definitive surgery & RT planning



NO VERTICAL INCISION

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ORDER OF INVESTIGATION

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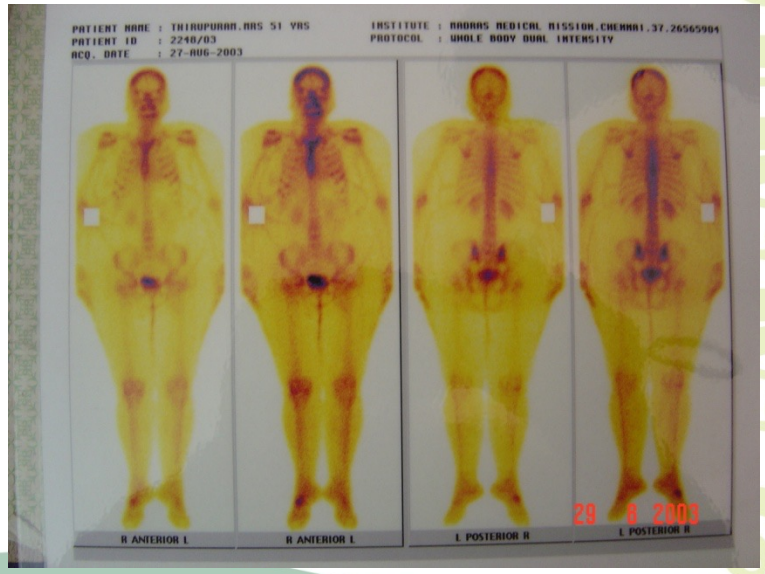
- CONFIRMATION OF DIAGNOSIS
  - fnac ⟶ trucut biopsy ⟶ incision biopsy

- METASTATIC WORKUP
  - X-ray chest
  - US abdomen
  - Bone scan



TNM STAGING

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- Tx – Primary can’t be assessed
- T0 – No evidence of primary
- Tis – Ca. in situ (DCIS, LCIS, PAGET)

TNM STAGING

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- T1 Tumor ≤ 2cm
- T2 Tumor > 2cm≤5cm
- T3 Tumor > 5cm
- T4a Extension to chestwall
- T4b Edema including peau d'orange or ulceration or satellite nodules in same breast
- T4c Both a & b
- T4d Inflammatory ca.

TNM STAGING

- Nx Regional nodes can't be assessed
- N0 No nodes

- N1 Metastasis in movable ipsilateral axillary nodes

- N2a Metastasis in axillary nodes fixed to one another or other structures
- N2b Only in Internal mammary nodes

- N3a Infraclavicular nodes
- N3b Internal mammary & ipsilateral axillary nodes
- N3c supraclavicular nodes

TNM STAGING

- Mx Can’t be assessed
- M0 No distant metastasis
- M1 Distant metastasis

STAGE GROUPING

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- 0 Tis N0 M0
- I T1 N0 M0
- IIA T0 N1 M0, T1 N1 M0, T2 N0 M0
- IIB T2 N1 M0, T3 N0 M0
- IIIA T0 N2 M0, T1 N2 M0, T2 N2 M0, T3 N1,2 M0
- IIIB T4 N0,1,2 M0
- IIIC Any T N3 M0
- IV Any T Any N M1

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BREAST CANCER MANAGEMENT

THE NEED OF THIS ERA

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Multidisciplinary Tumor Board

- Finalize Tumor staging
- Formulates treatment plan

MULTIMODAL

- Pt to be treated by all three weapons (surgery,RT,chemotherapy)

- BY APPROPRIATE SEQUENCE that results in high success rate and less complications

- Local control: surgery

- Distant “metastasis”

  macrometastasis -diagnosed by investigation

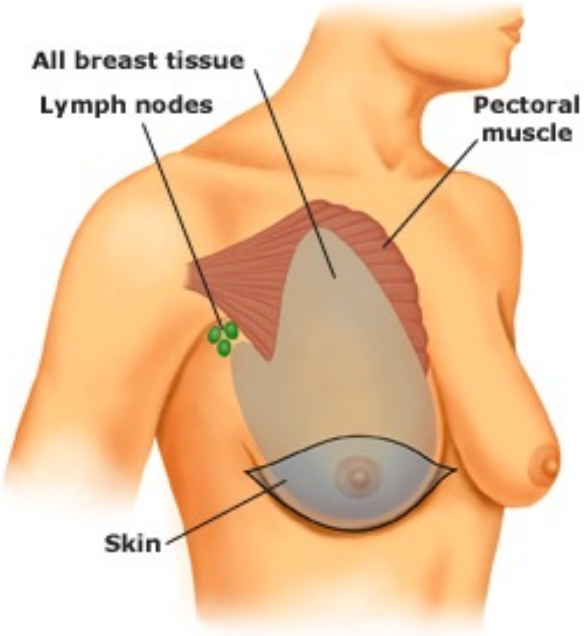
  micrometastasis” ”

  – Does exist at diagnosis

    - Adjuvant systemic treatment

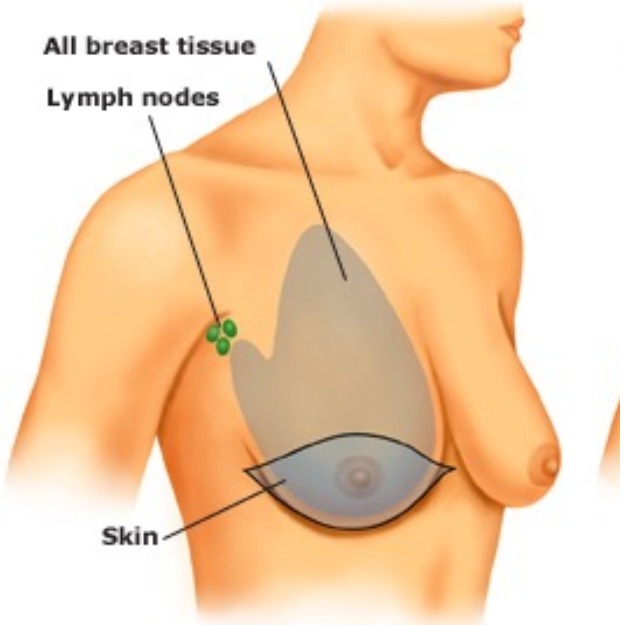
Local control: no survival benefit

- Local control: RM>MRM>BCT+RT>BCT
- Survival no different
  - Why? distant metastasis is the main cause

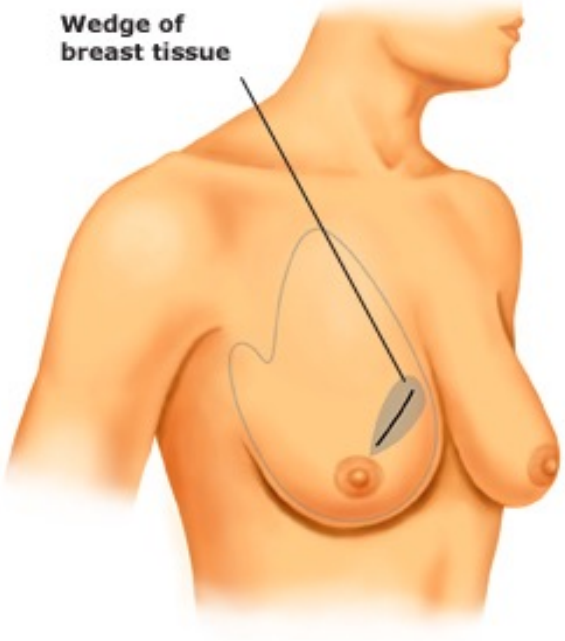


Radical mastectom

Partial mastectomy/lumpectomy



Modified radical mastectomy



MANAGEMENT CLASSIFICATION

- **EARLY CANCER**
  - Size < 5cm
  - Mobile axillary node
  - NO skin involment

- **LOCALLY ADVANCED CANCER**
  - Size > 5 cm
  - Fixed Axillary node / SCLN involvement
  - Skin involvement

- **METASTATIC CANCER**

MANAGEMENT CLASSIFICATION

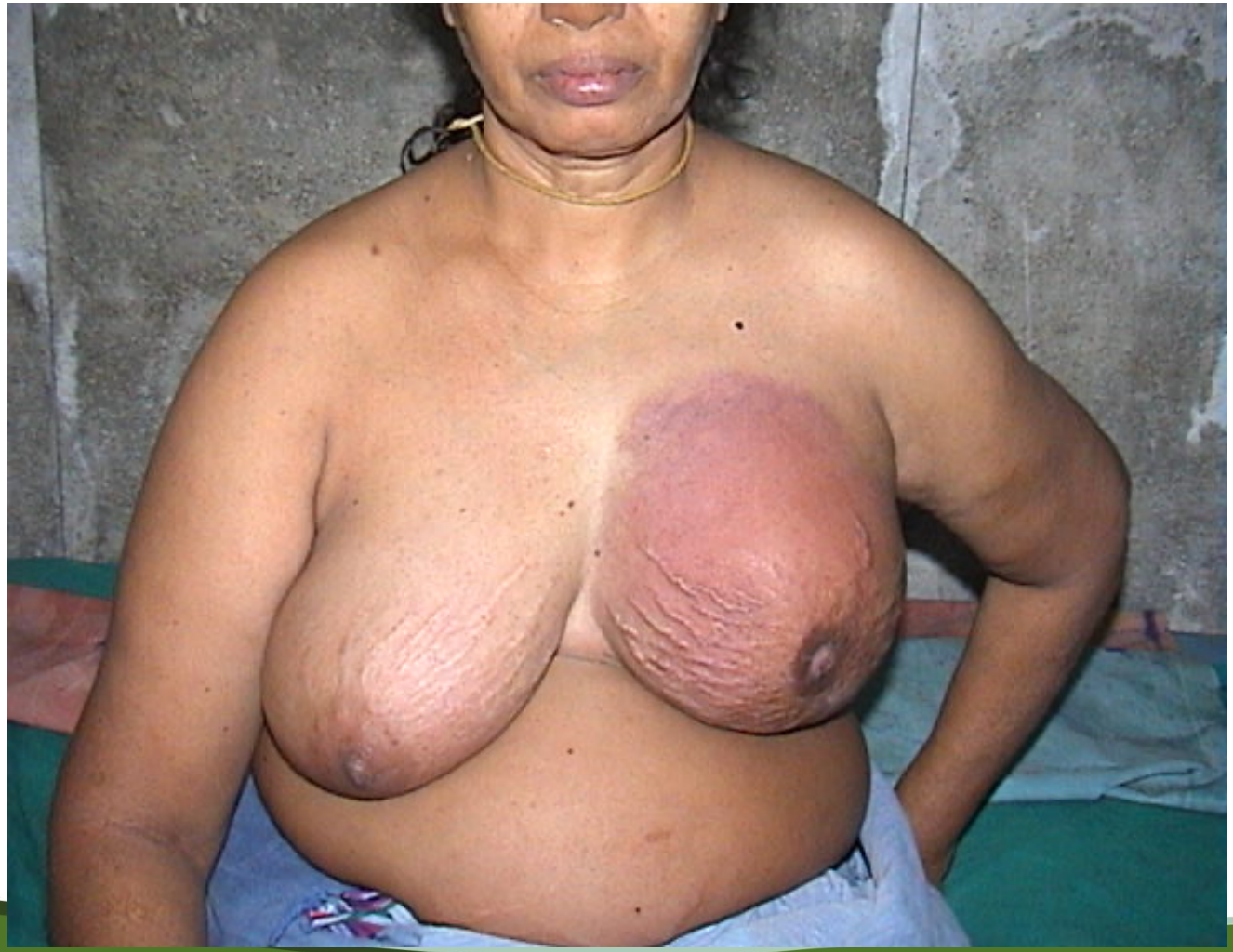
- **EARLY CANCER (INTENT – CURE)**

  SURGERY
- **LOCALLY ADVANCED CANCER (INTENT – CURE)** NEOADJUVANT CHEMO

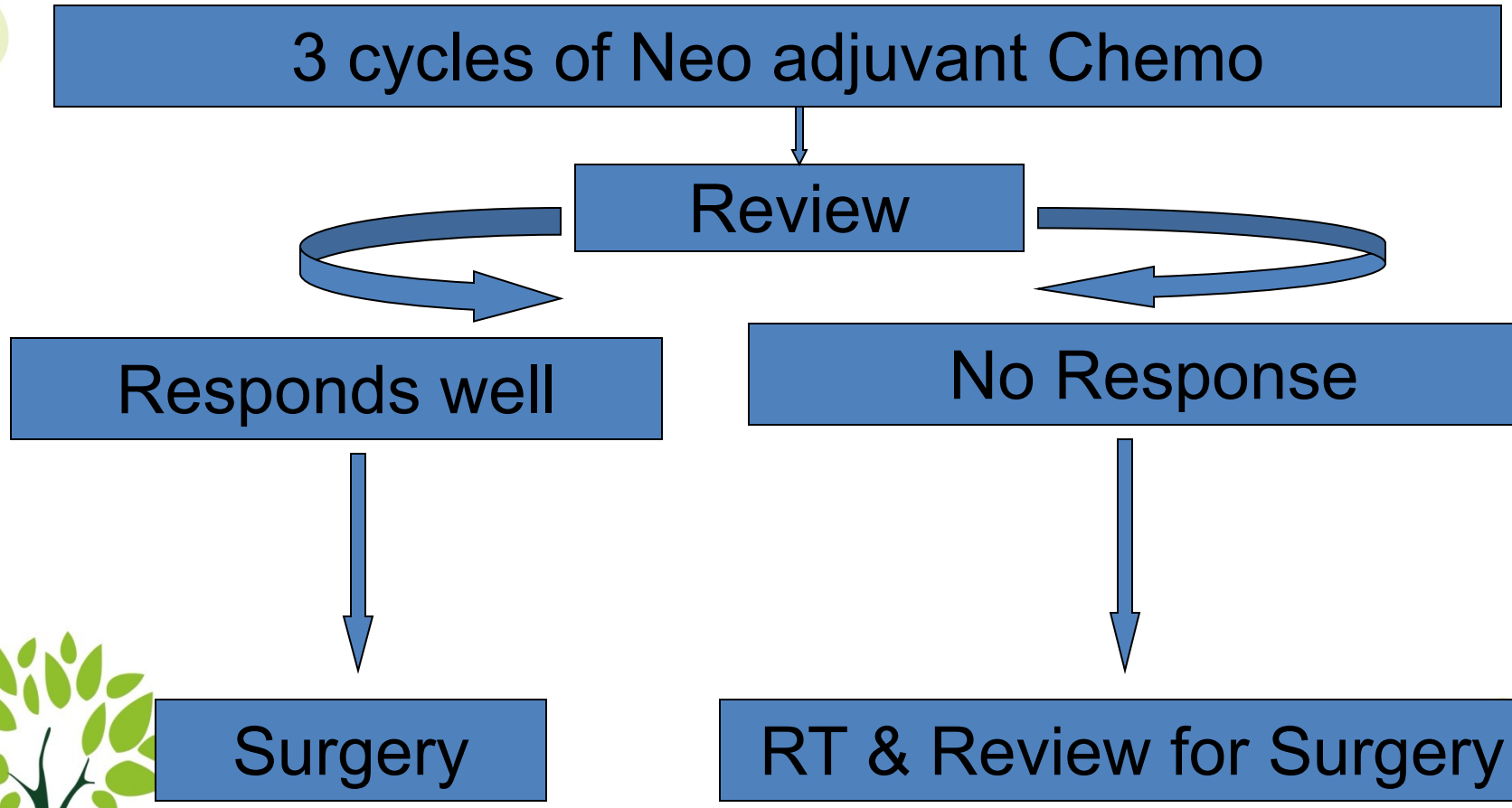
- **METASTATIC CANCER (INTENT –PALLIATION)**

  PALLIATIVE

LOCALLY ADVANCED BREAST CANCER

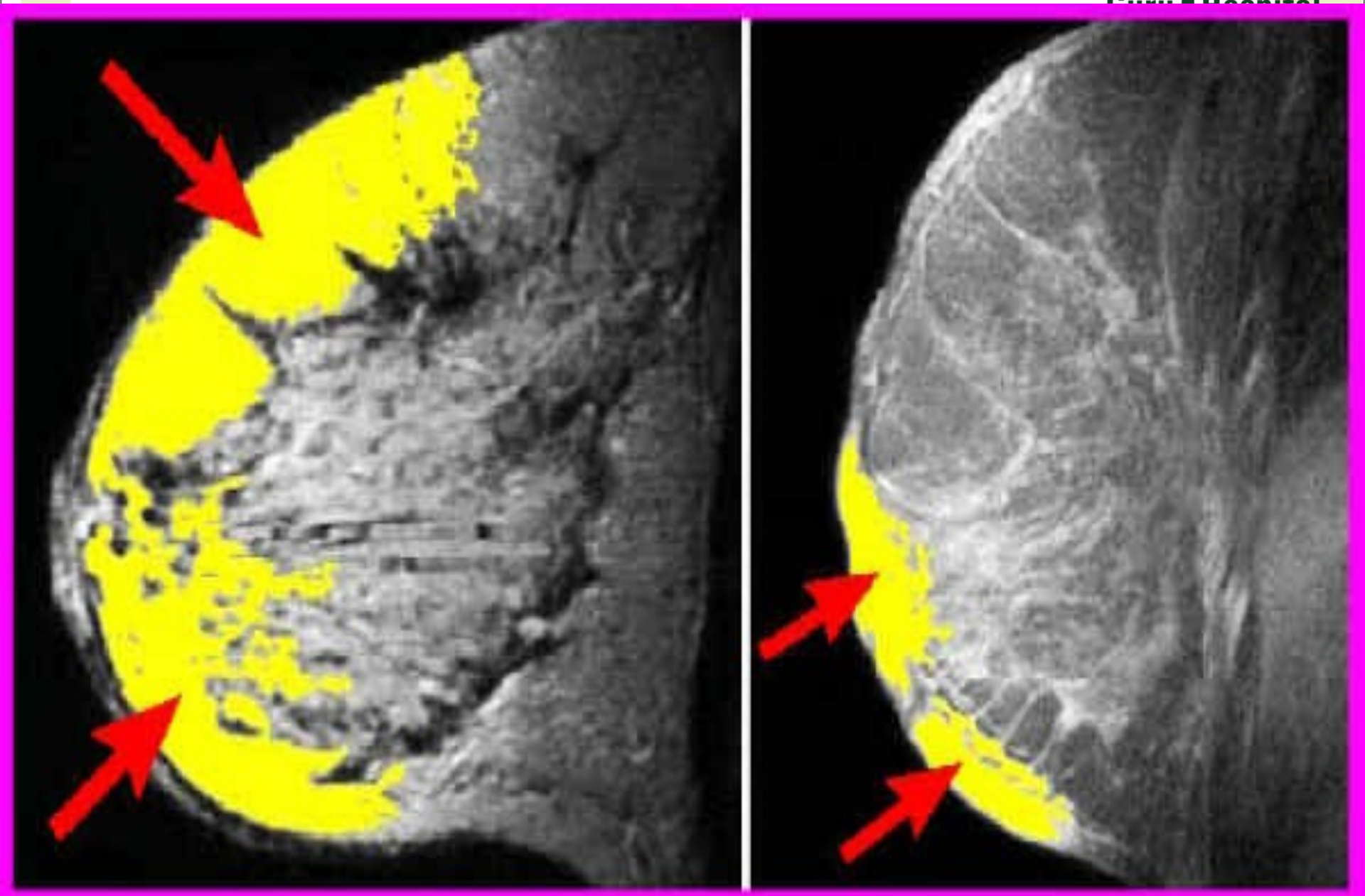


WHAT TO DO LABC?



MRI-before treatment

After treatment



LABC- POOR SURGICAL SELECTION

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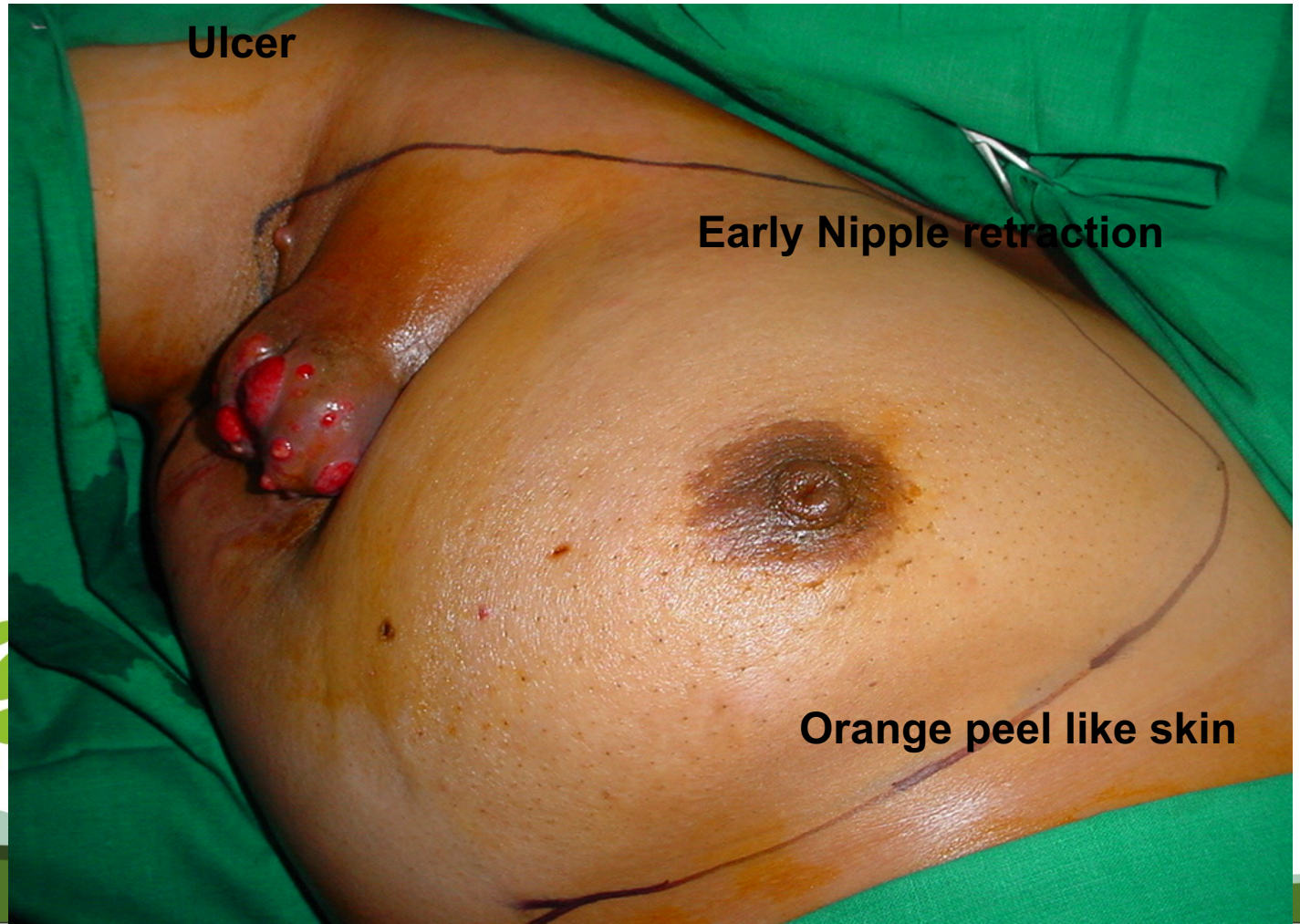

HOW TO MANAGE METASTATIC DISEASE?

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- Palliative treatment
  - Single site/Bone Mets – Hormonal therapy
  - Multiple site/Visceral Mets – Chemotherapy

- Commonest metastasic site – BONE
- Toilet mastectomy indicated only for bleeding and fungating tumor

TOILET MASTECTOMY

- NO ROLE IN METASTATIC DISEASE WITH OUT BLEEDING , FUNGATION

FOR WHOM ADJUVANT CHEMOTHERAPY TO BE GIVEN?

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For all cases except

1. Node negative status
2. Tumor size <1cm
3. Grade 1 – Well differentiated cancer

FOR WHOM ADJUVANT RADIOTHERAPY TO BE GIVEN?

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- Tumor size more than 5cm
- Node positive status
- Incomplete axillary dissection
- After neo adjuvant treatment

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FOR WHOM ADJUVANT HORMONAL THERAPY TO BE GIVEN?

ER and / or PR positive tumors

PREMENOPAUSAL – TAMOXIFEN

POSTMENOPAUSAL – A.I(LETROZOLE)

5 years

ENDOCRINE THERAPY

- Direct correlation between the response to endocrine therapy and hormone receptor status

- No documented benefit for patients with truly hormone receptor negative disease

TRASTUZUMAB (HERCEPTIN)

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- Her-2/neu overexpression in 20 to 25% of all invasive breast cancers

- 30% absolute increase (36% to 62%) in overall response (with chemotherapy)

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SURGICAL PRINCIPLE

EARLY CASES - OPTIONS OF SURGERY

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Modified radical mastectomy

OR

Breast Conservative surgery if facilities available

(Electron beam therapy (or) brachytherapy
for scar & tumor bed)

CHANGING TRENDS

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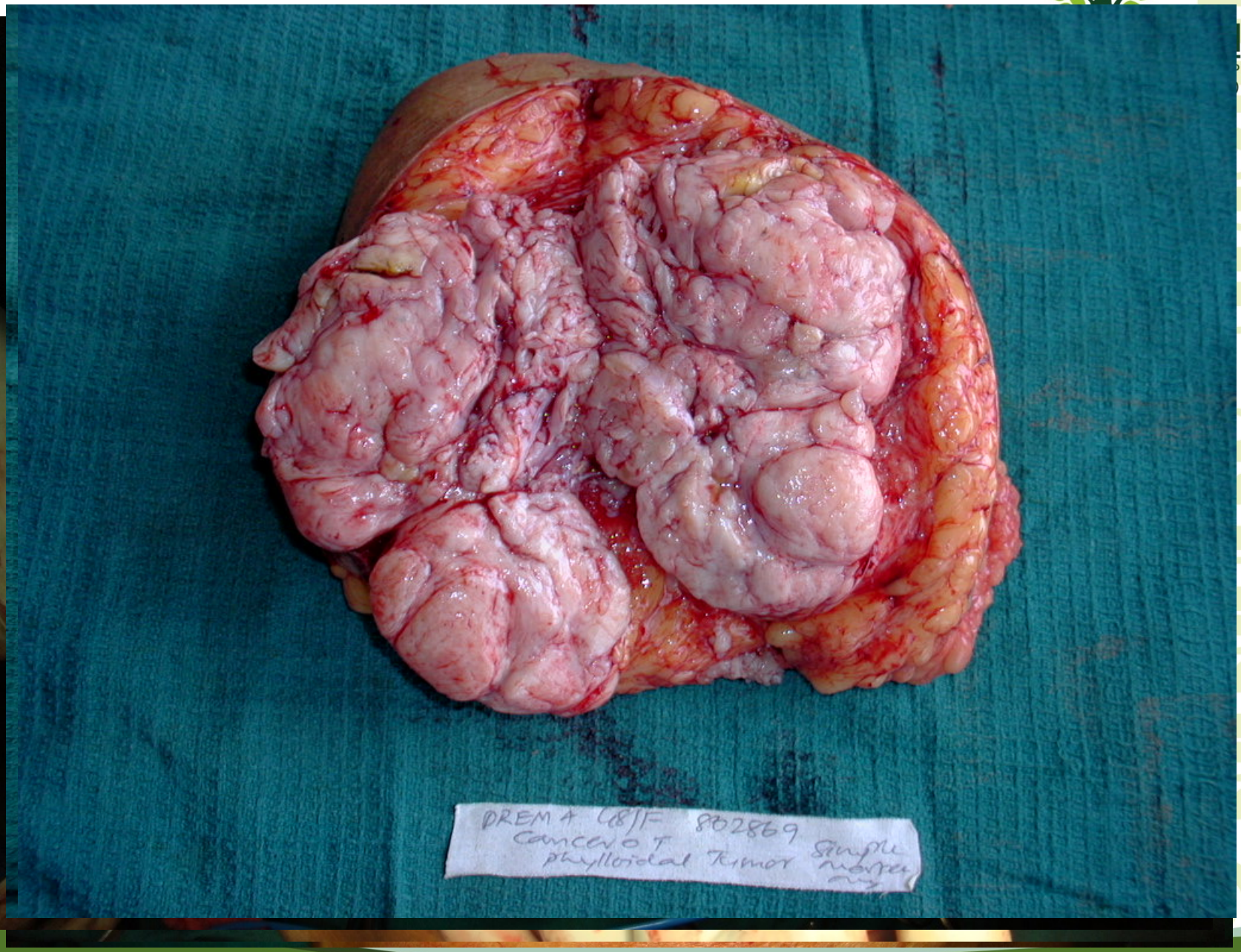
M.R.M =

W.L.E + RADIOTHERAPY


DREM 4 (8)F- 802869
Cancer of
phylloidal Tumor
Simple

EARLY CASES - OPTIONS OF SURGERY

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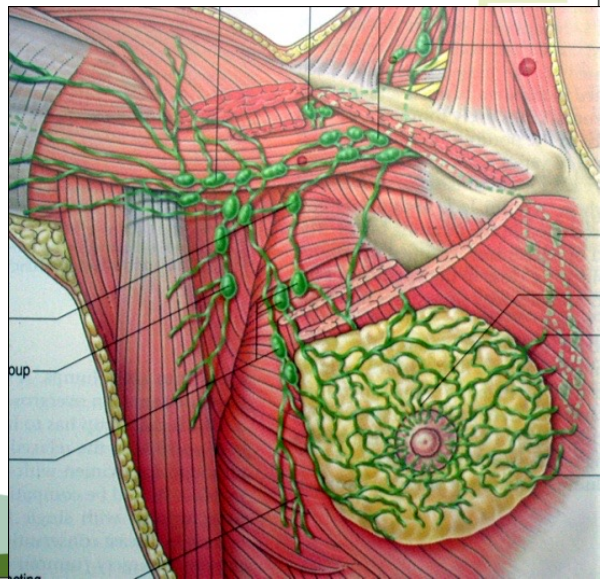
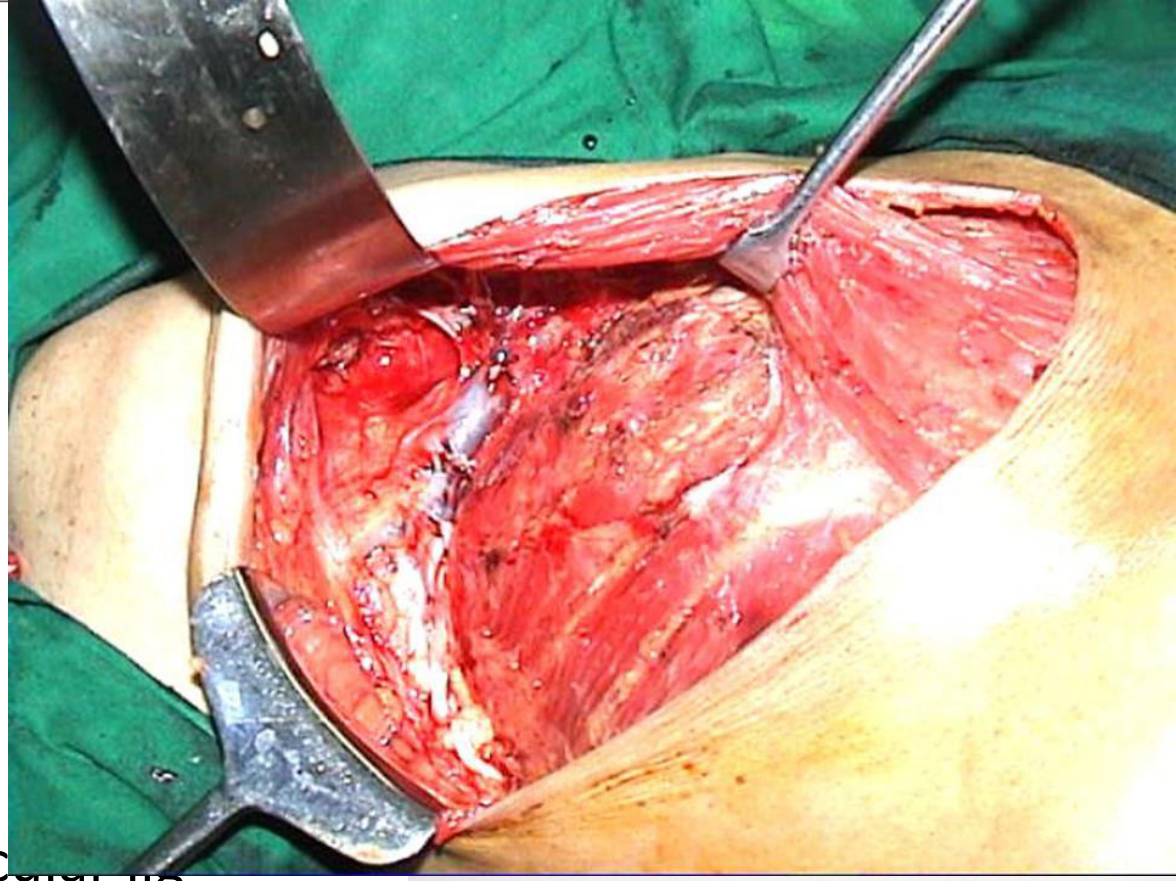
FOR AXILLA

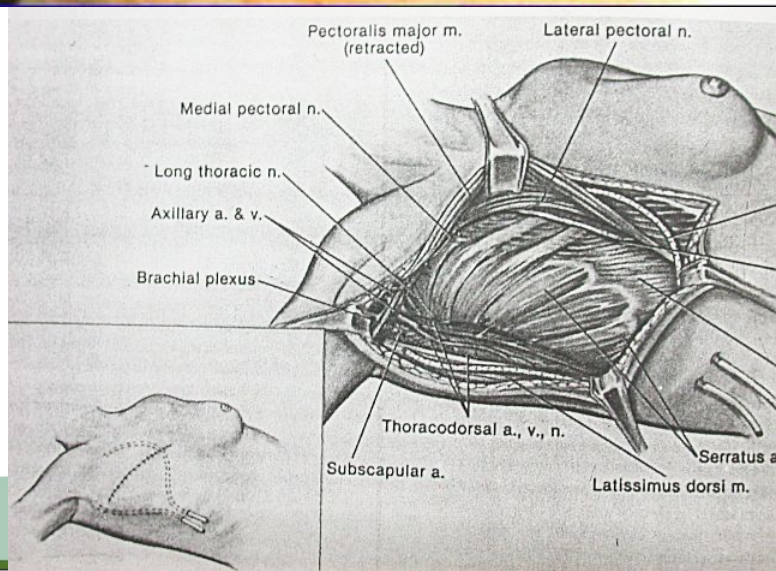
- Whether Modified radical Mastectomy or Breast conservative surgery
- Axillary dissection is mandatory



AXILLARY DISSECTION BOUNDARIES



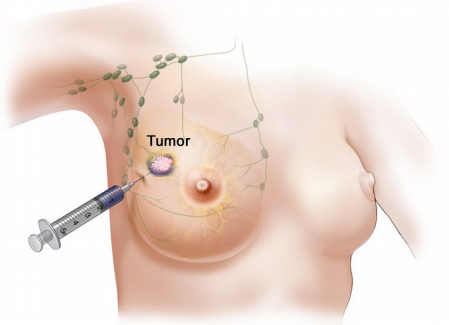
- Superior – axillary vein
- Medial – apex-costoclavicular lig
- Lateral – thoracodorsal vessels
- Inferior – angular vein
- Posterior – subscapularis muscle
- Anterior – pectoralis major muscle



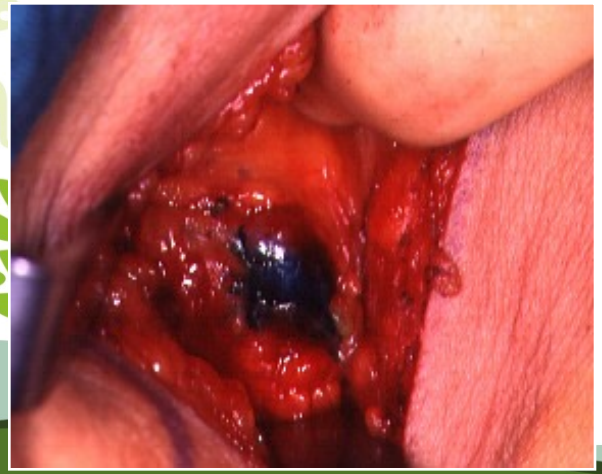
ALTERNATIVE

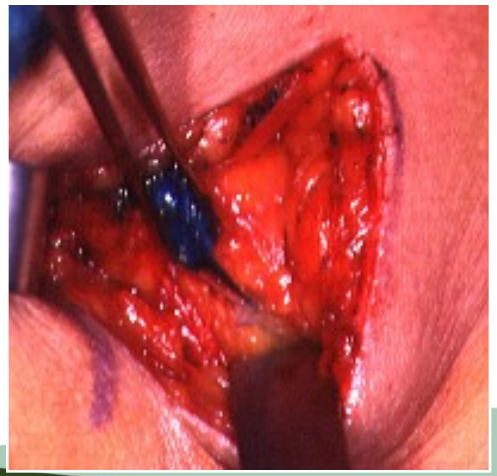
Sentinel Lymph node Dissection

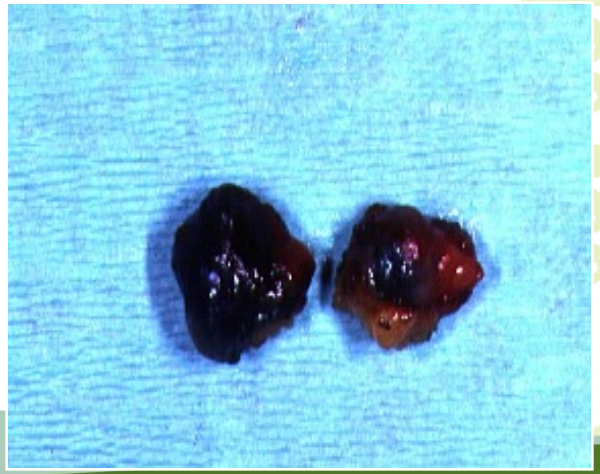
SLN CONCEPT



- SLN is the first node that meets tumor cells
- Positive node –convert to axillary dissection
  Negative node- observation







DATA EXPECTED FROM PATHOLOGIST

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- No. of lesion
- Site of lesion
- Histological type
- Margin status
- Lymphovascular invasion
- No. of nodes in specimen
- No. of nodes involved
- Extracapsular disease

ER/PR Status
her2new
Prognostic markers

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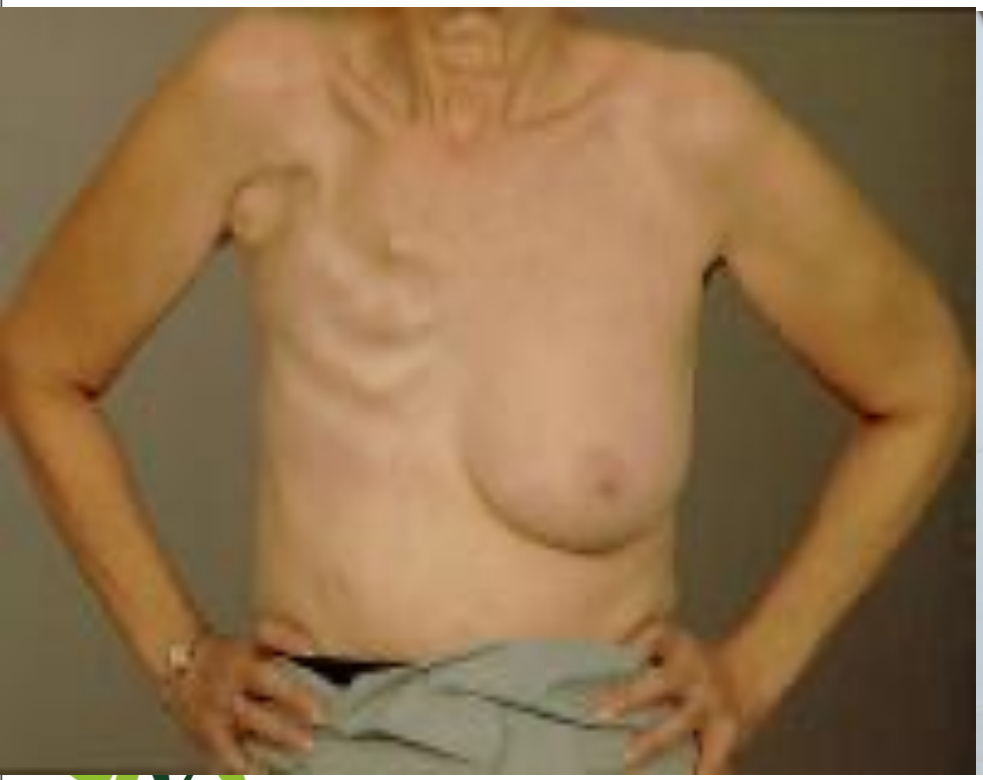
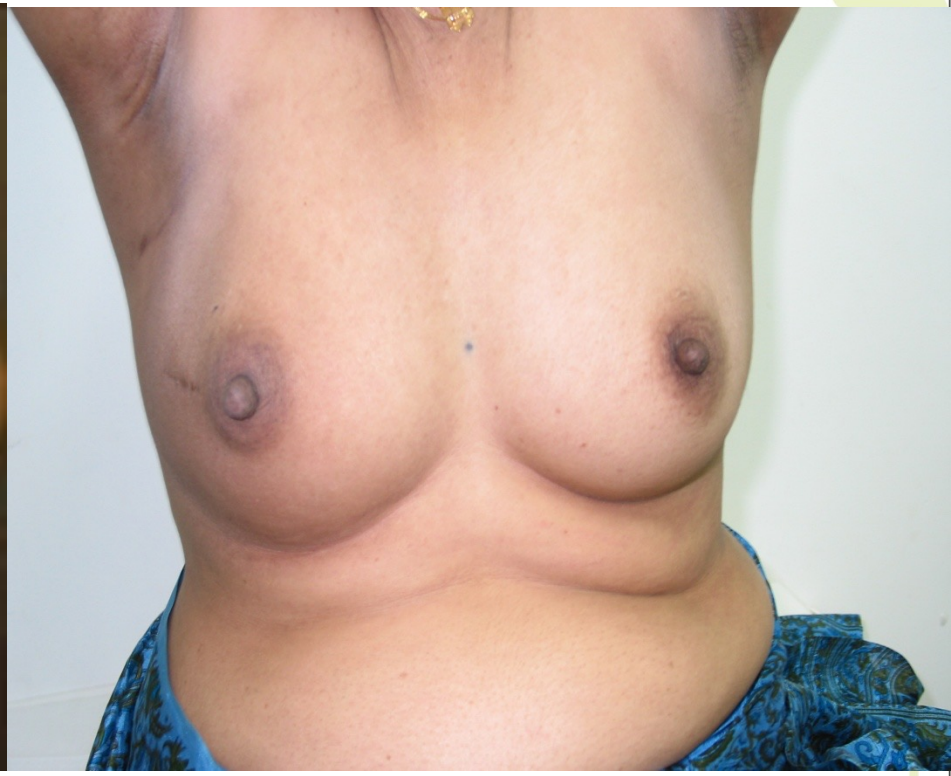
20TH CENTURY



21 CENTURY



BREAST CONSERVATION SURGERY CONTRAINDICATIONS

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- Poly -Multiple ca away from each other
- Pregnancy,if not terminated
- Persistent positive margins
- Previous RT to the breast region

BREAST CONSERVATIVE SURGERY

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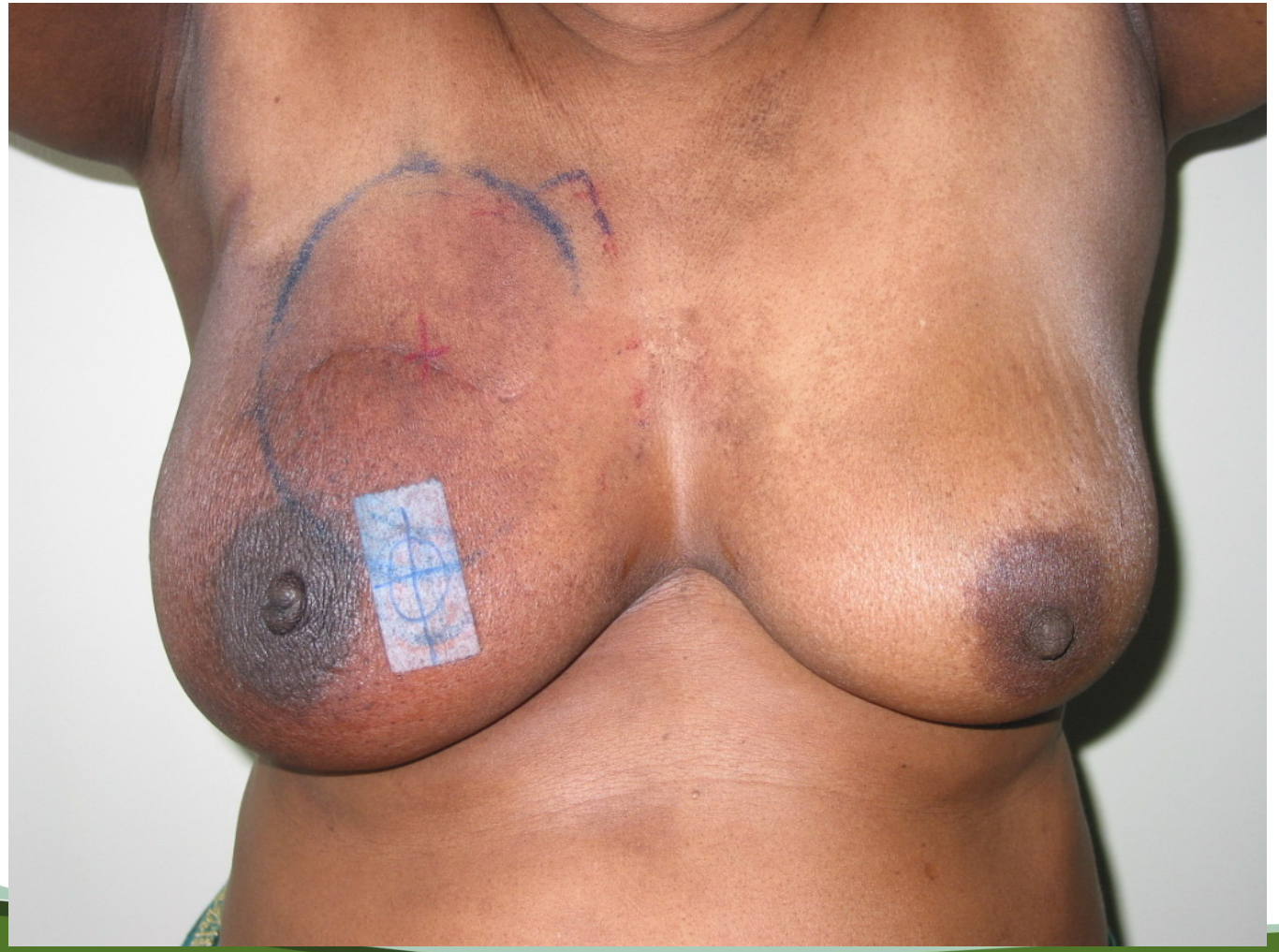
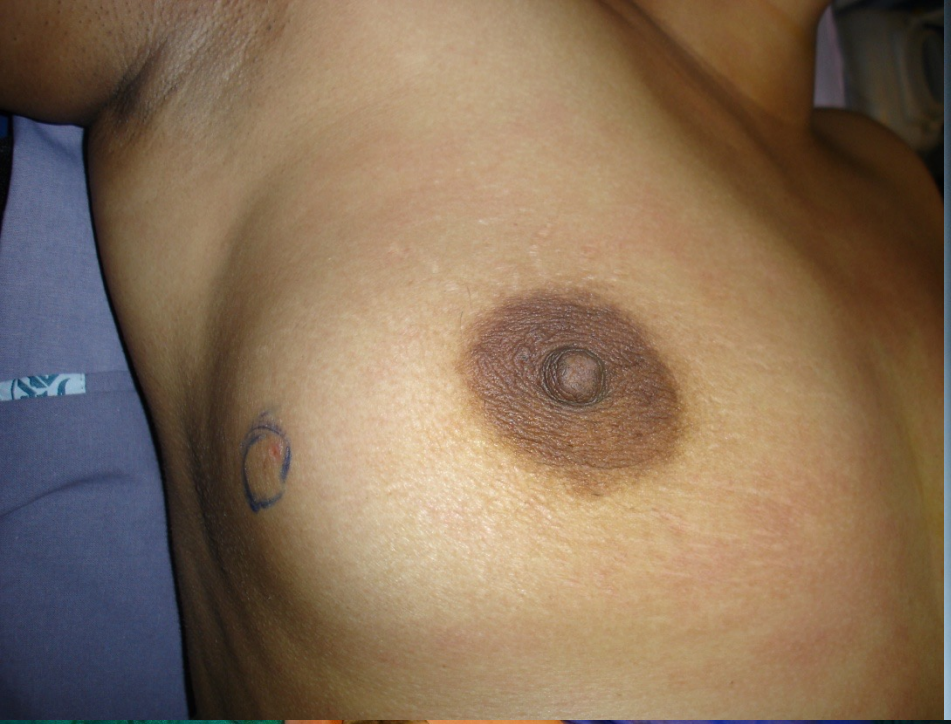
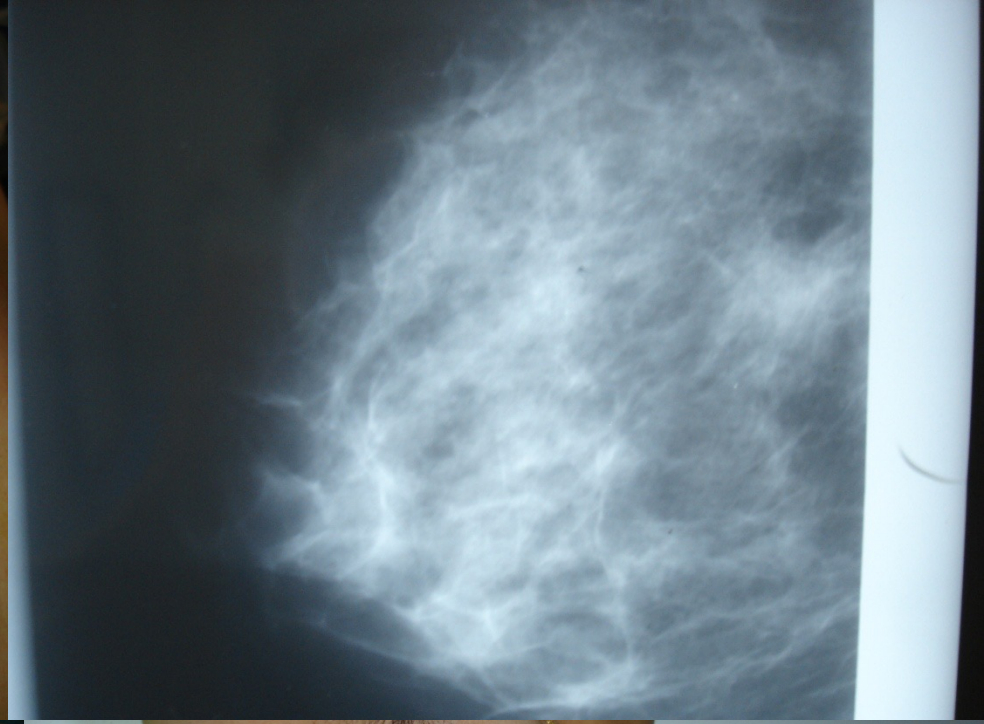
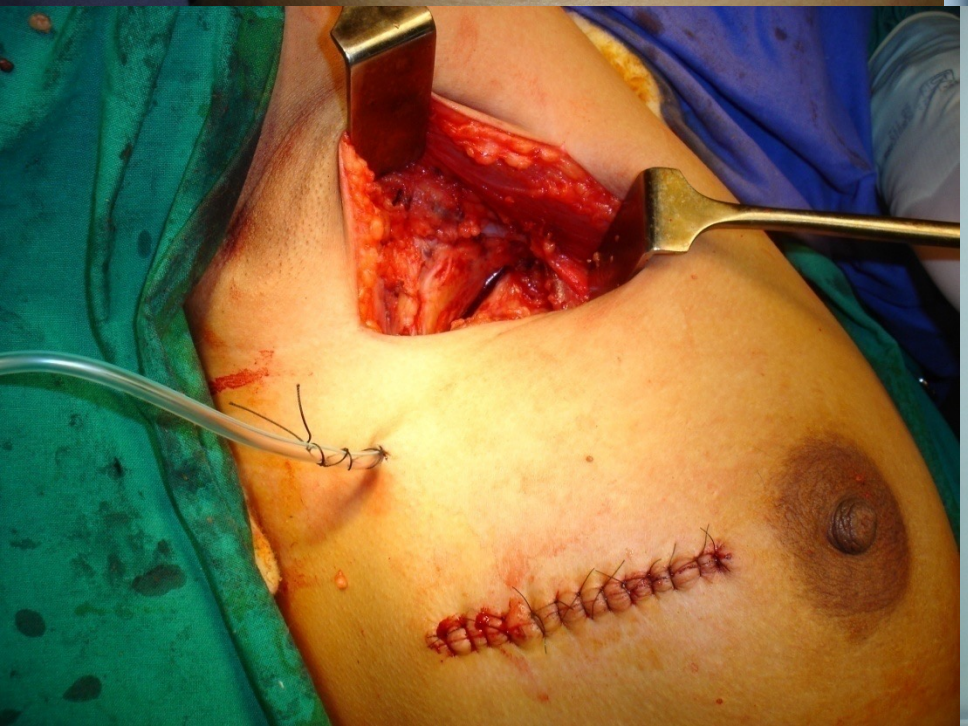
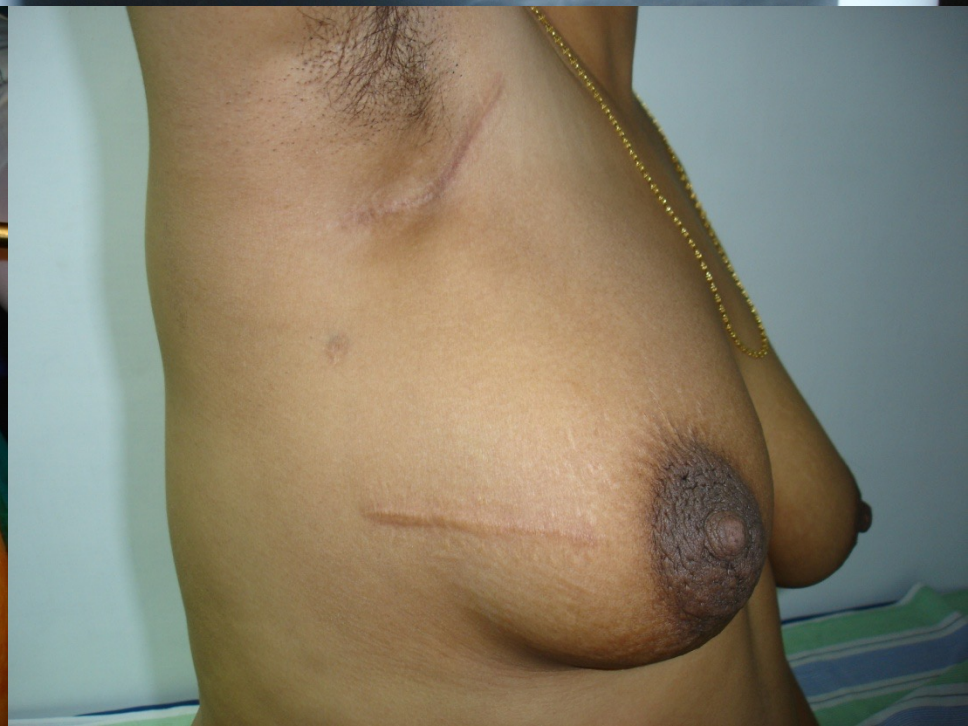
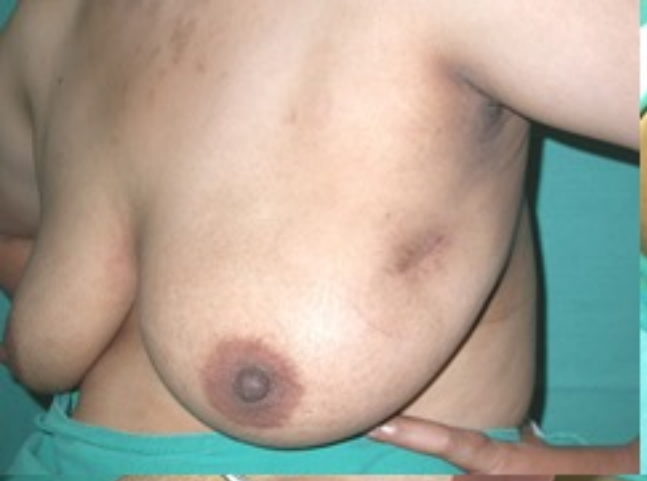


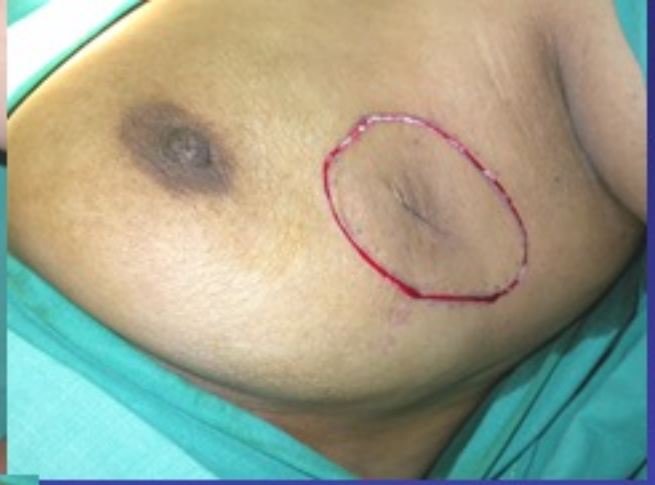


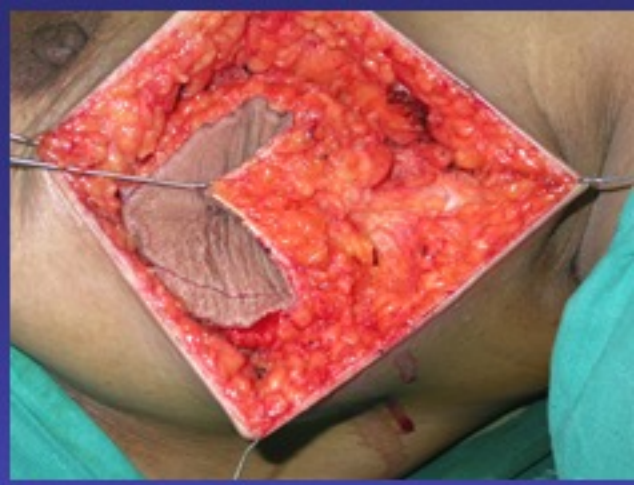


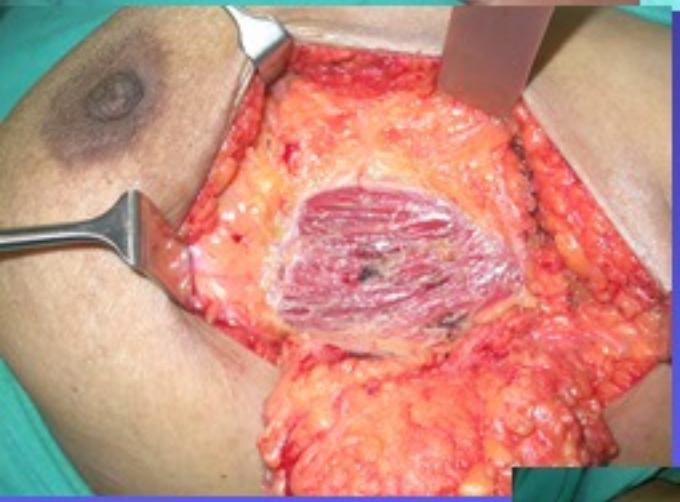




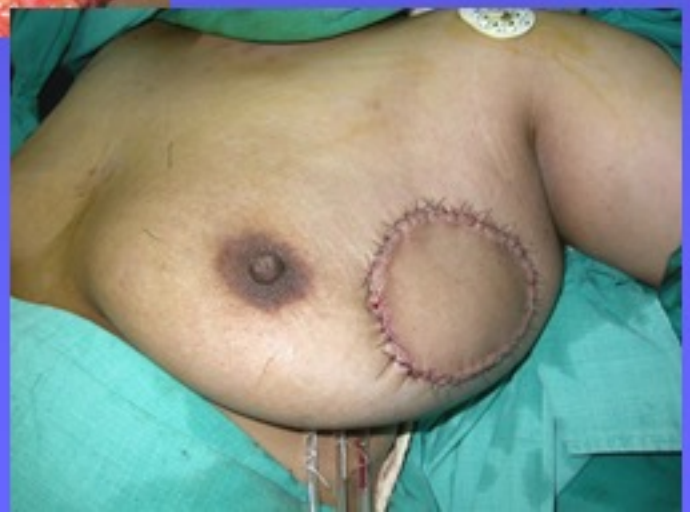


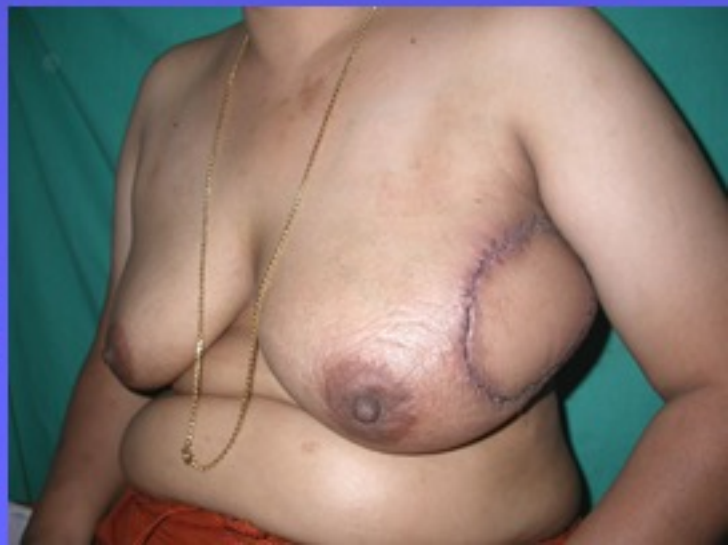






BCT+Reconstruction





Primary BCT is not possible

Alternative……

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SURGERY AFTER NEOADJUVANT THERAPY

- It DOWNSTAGE the tumour
- Organ preservation

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Breast

Reconstruction

Breast reconstruction

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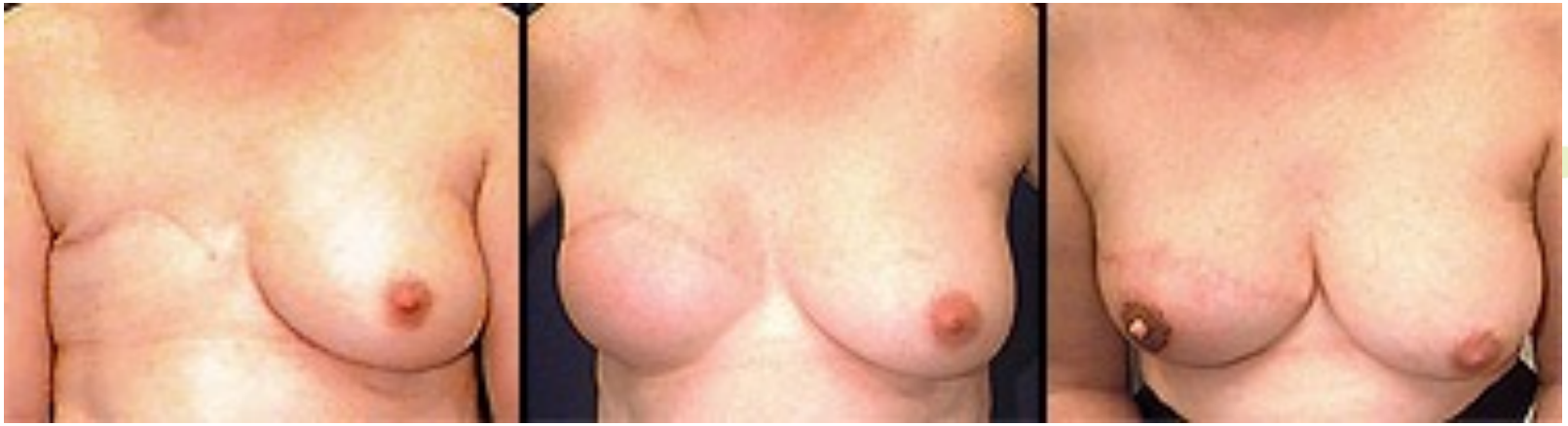

BREAST RECONSTRUCTION
TRAM FLAP

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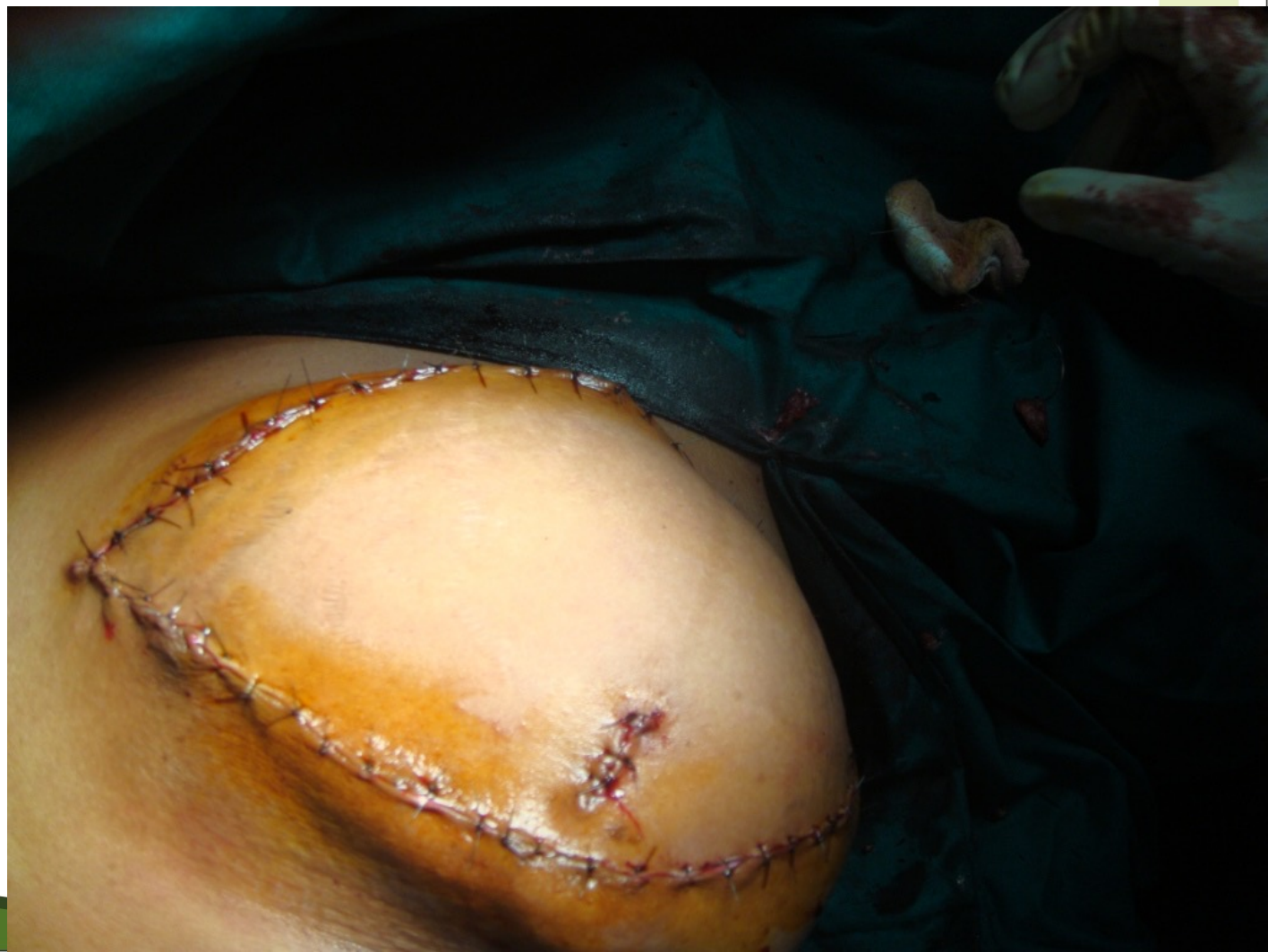

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QUALITY GUIDELINE

HOW TO ASSESS WHETHER THE SURGERY IS COMPLETE?

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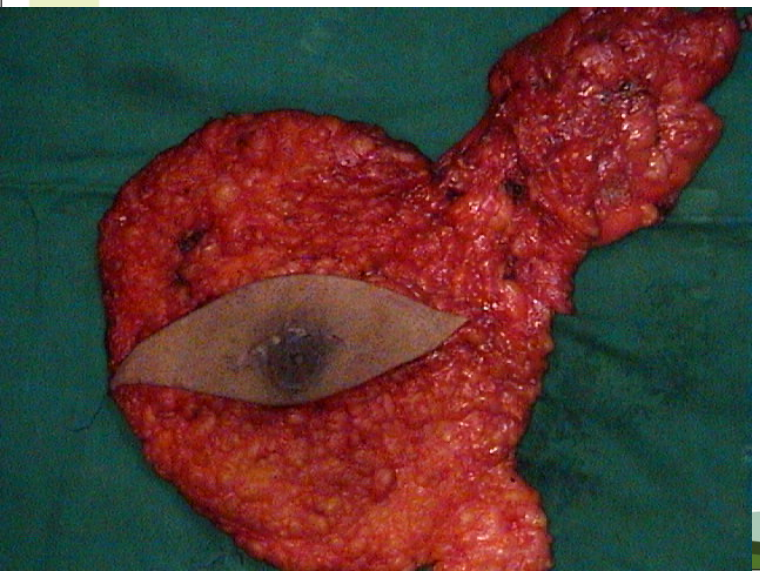
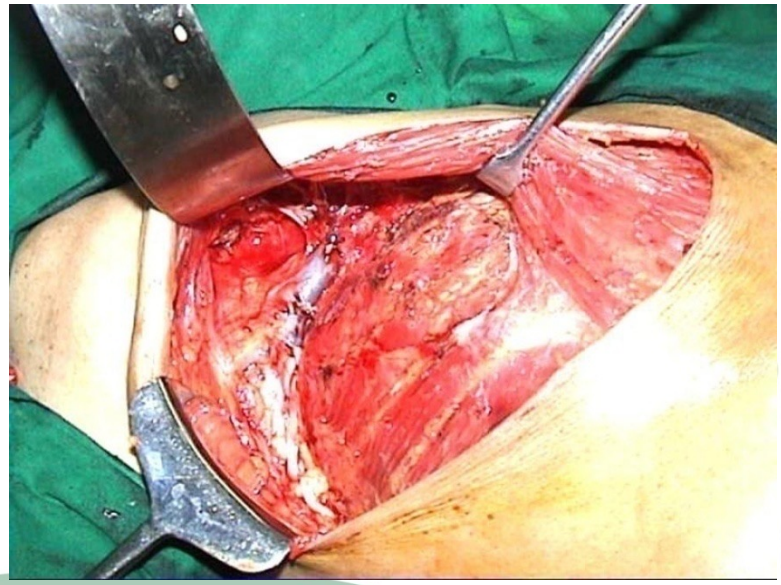
Specimen should contains atleast 10 axillary node





MISMANAGEMENT

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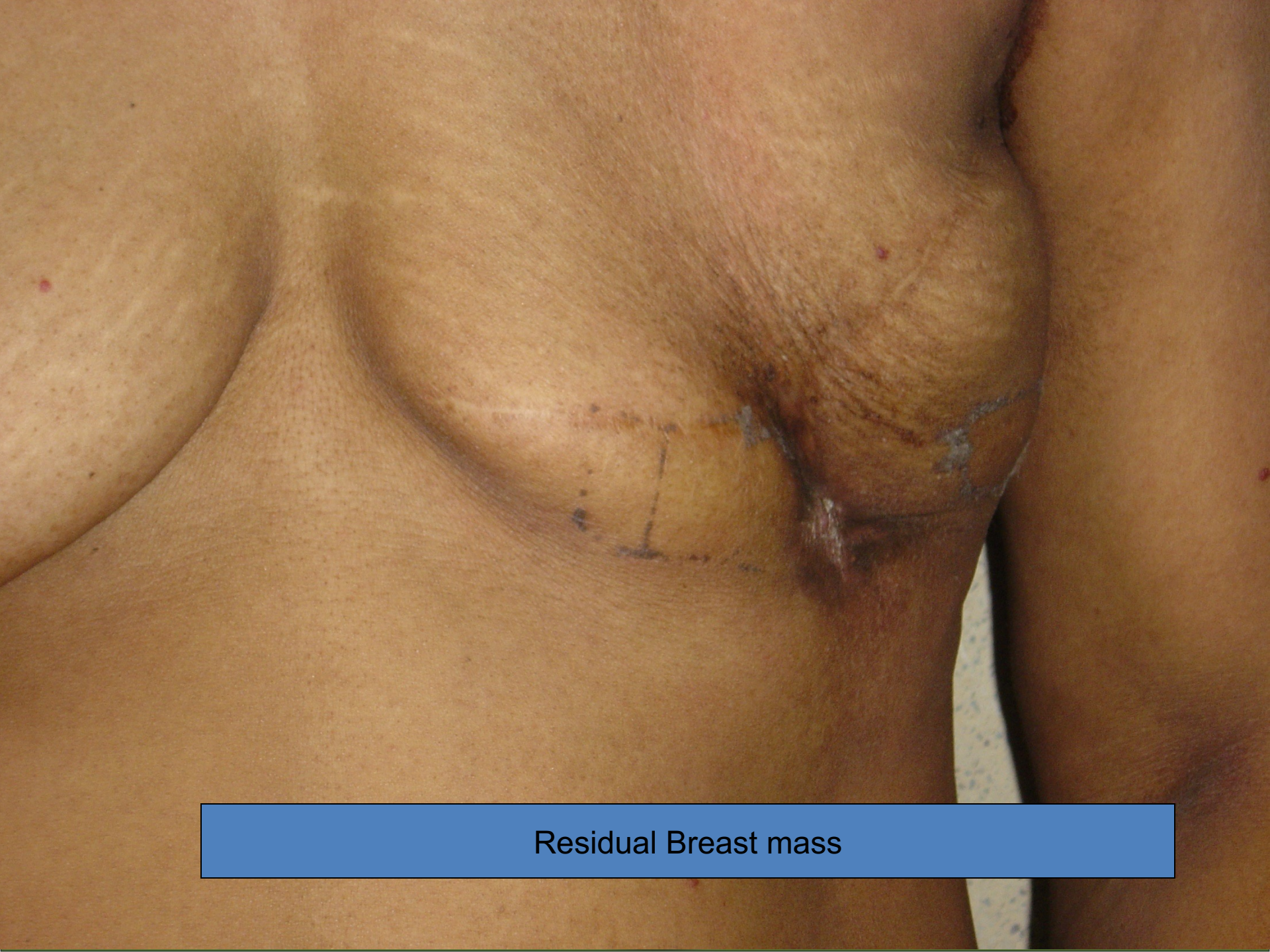
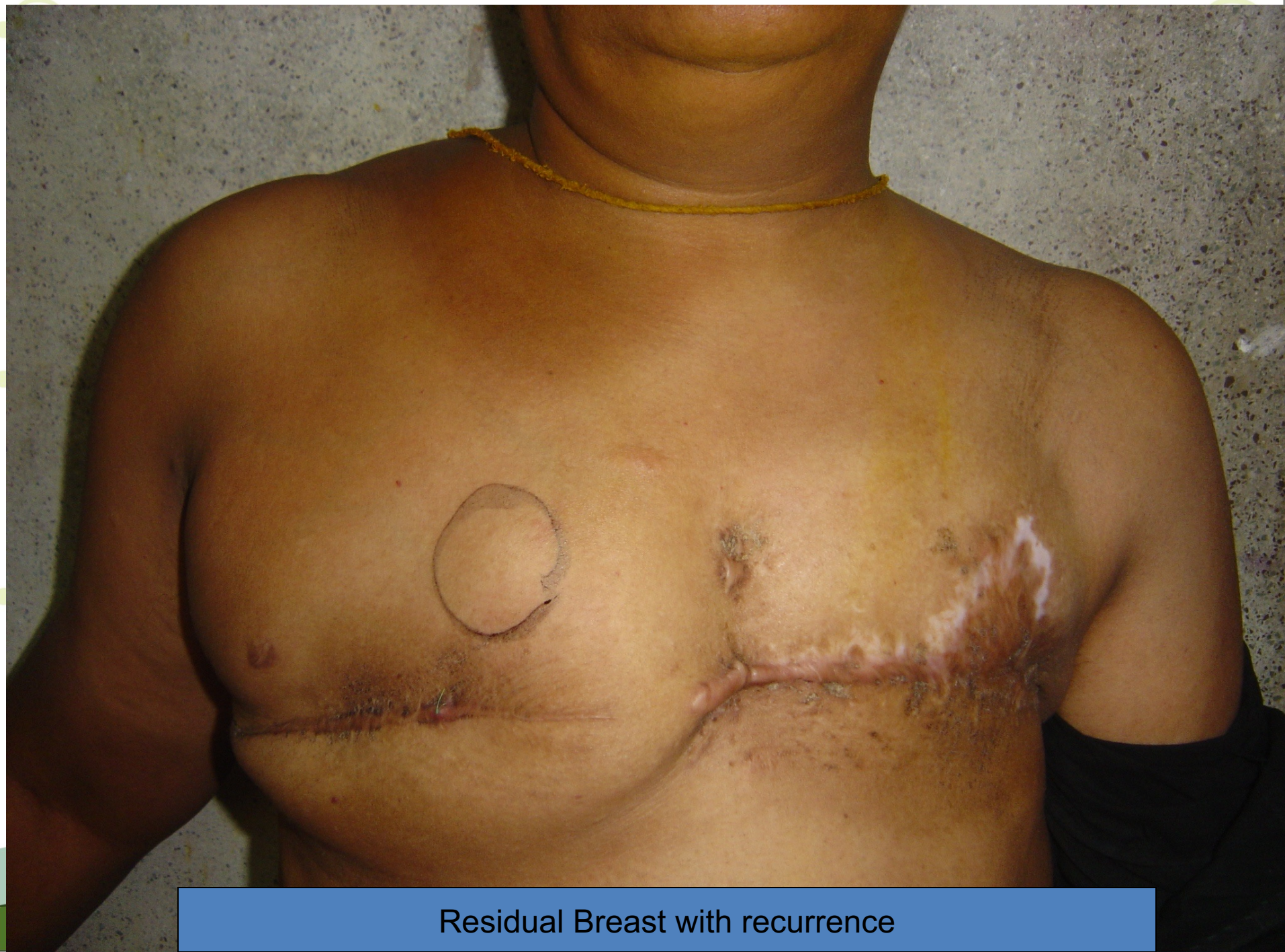
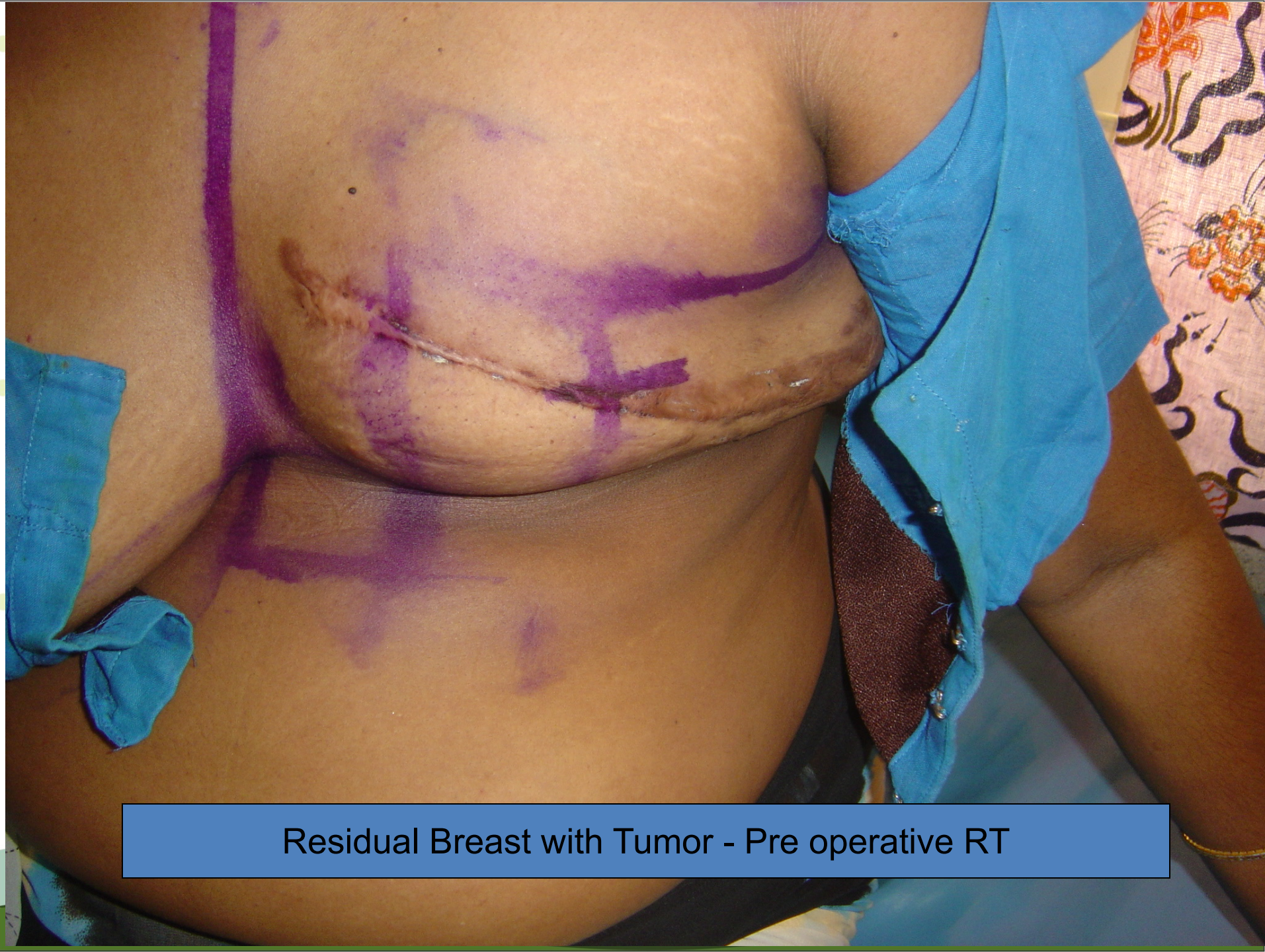
- Incomplete Mastectomy
- Inadequate or no axillary dissection
- Direct surgery in locally advanced cancers
- Lumpectomy without FNAC or Trucut
- Improperly placed incision
- Incomplete data while referring


Residual Breast mass



Residual Breast with recurrence



Residual Breast with Tumor - Pre operative RT

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POSITIVE ATTITUDE

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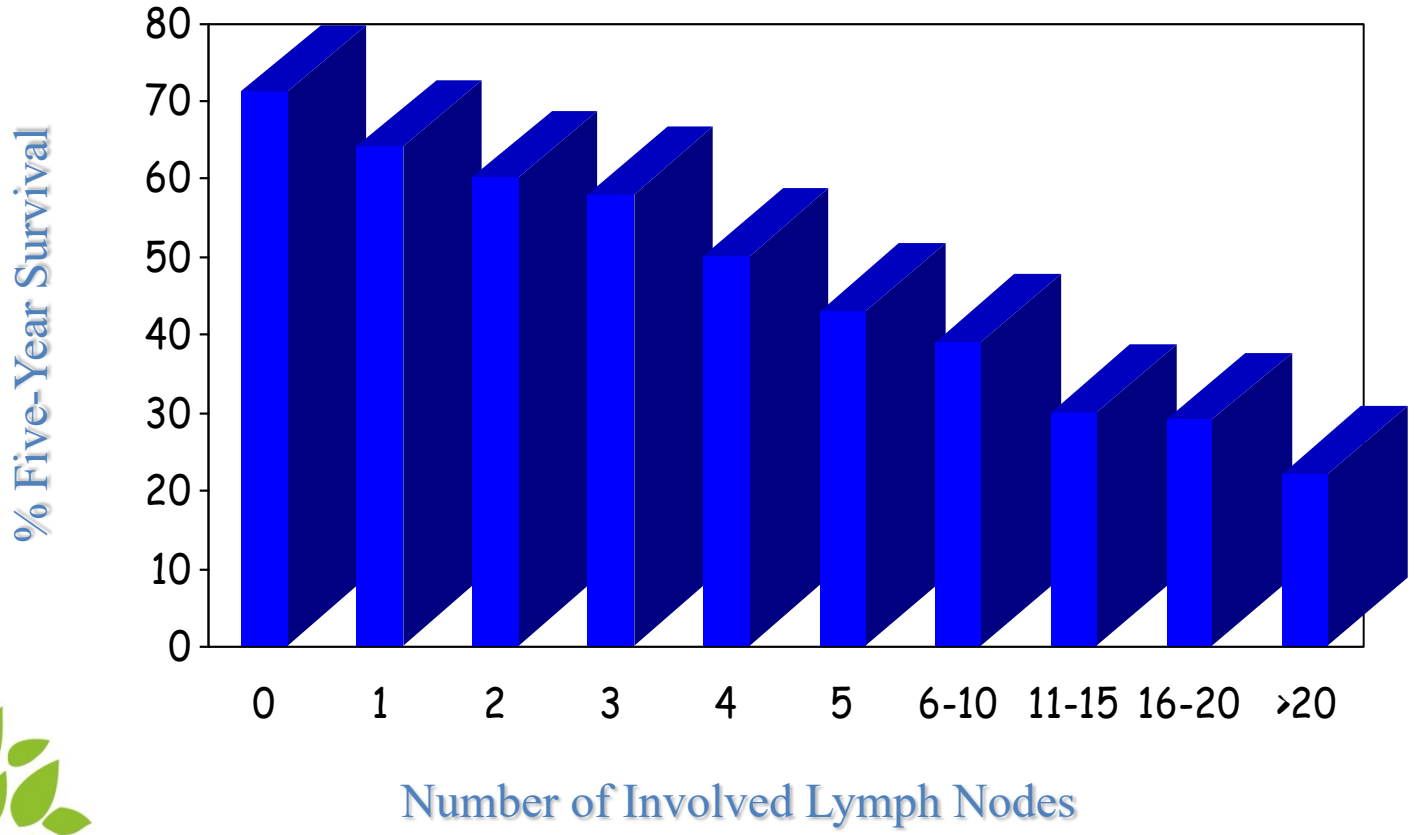
TODAY

- 50% of cancer is curable
- 25% it is possible to achieve long term survival

PROGNOSIS

disease state	5 year survival
noninvasive	97%
invasive, local	78%
invasive, metastatic	22%

PROGNOSIS: LYMPH NODES



(*adapted from* Harris et al. Cancer: Principles and Practice of Oncology. 5th ed.)

IS OPERATING SURGEON REALLY A PROGNOSTIC FACTOR?

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YES

Fact, always known but scientifically and statistically accepted only recently

THERAPY INDIVIDUALISED

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Cytotoxic therapy
Radiotherapy
Hormonal therapy
Surgery

Oncogene-based diagnosis
Targeted therapy
Patient-specific therapy

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Breast Cancer Awareness

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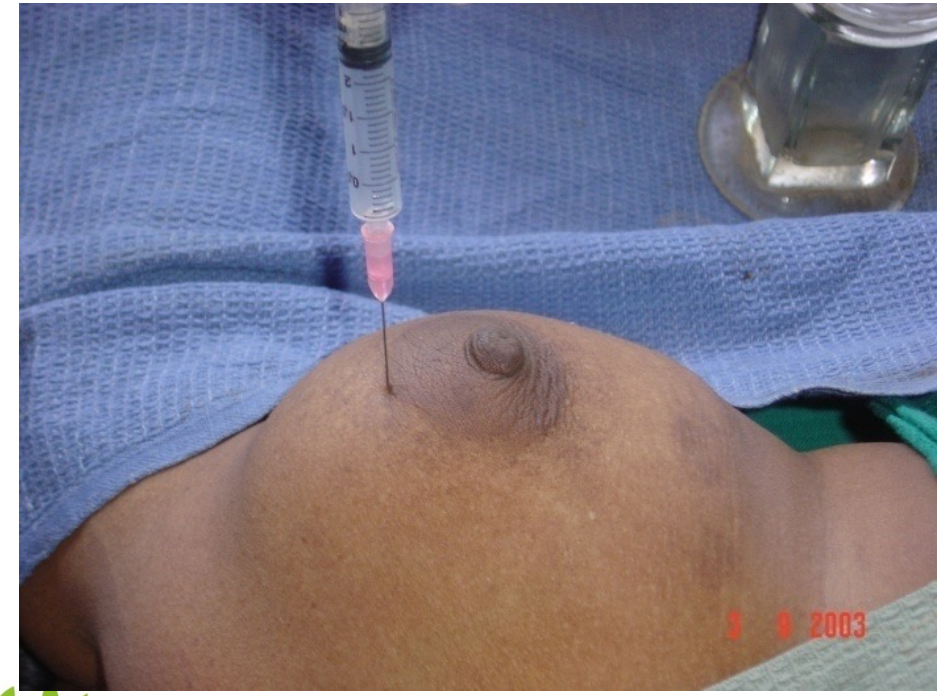
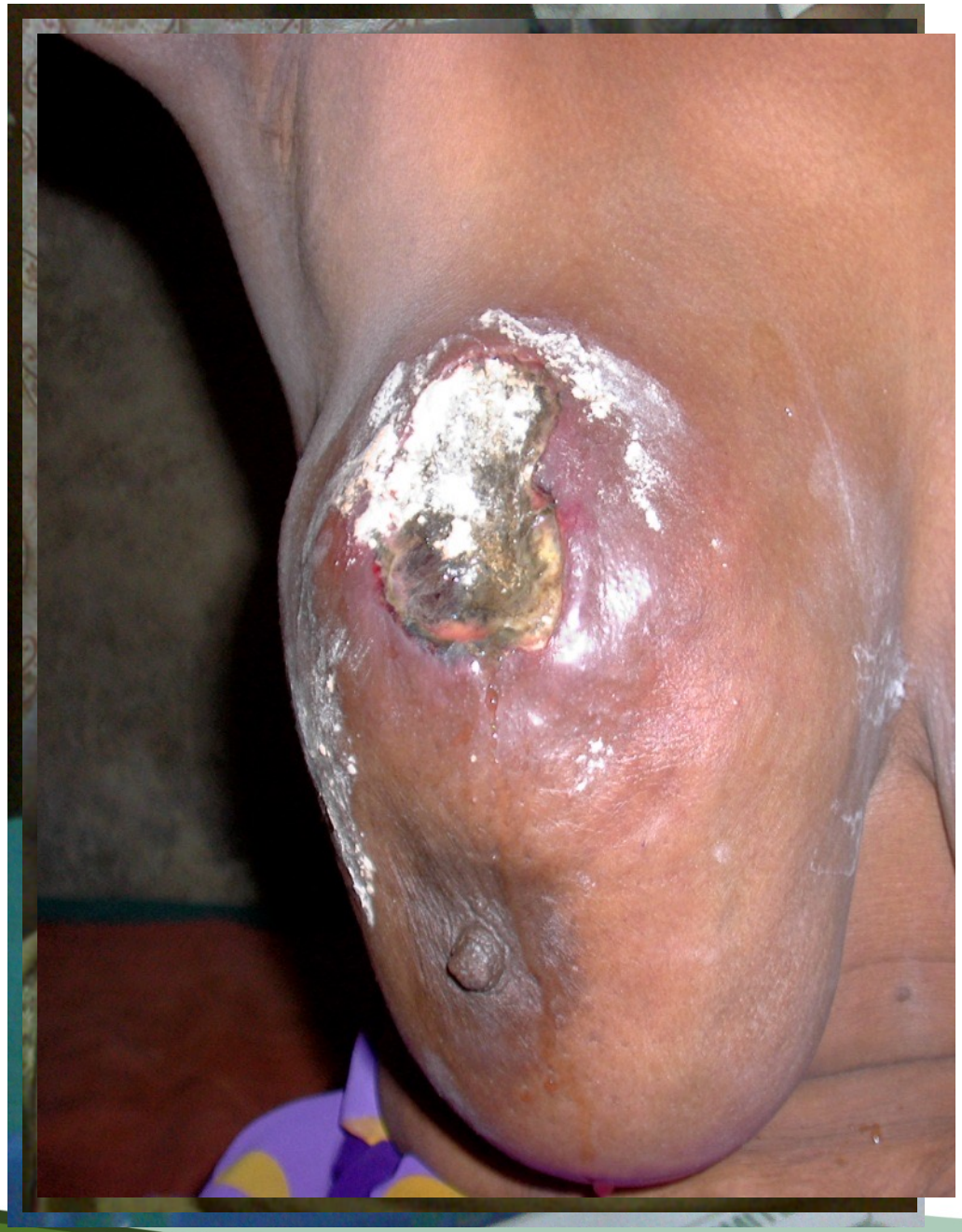
EARLY DIAGNOSIS



Dear surgeon,
Please do not
NEGLECT me



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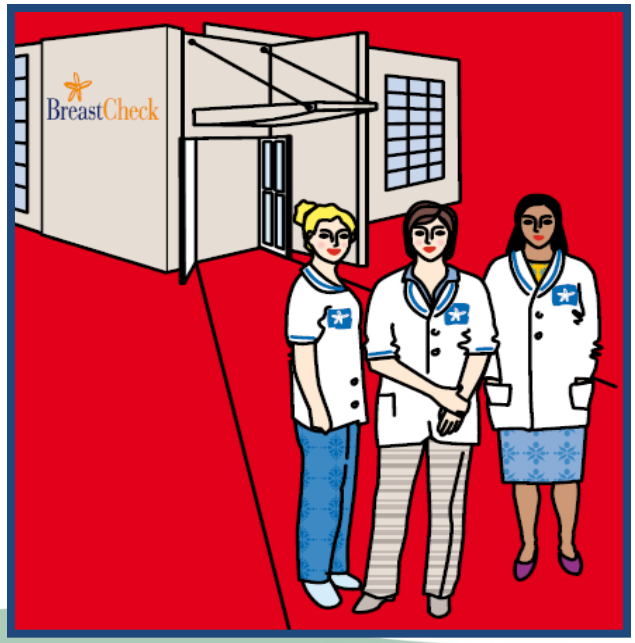
Screening

- 50-64 years
- Every 2 years



Breast cancer screening in women: the problem

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N= 1000

4 malignant Cancer

16 Benign lesions

N= 980

Normal


Florida
160,500
Kentucky
36,900
Why
must we
Bear?
Indiana
61,00
END THE BREAST
CANCER EPIDEMIC

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9 Million Cancer Survivors

“Progress with a Purpose: Eliminating the Death and Suffering from Cancer by 2015”

THANK YOU