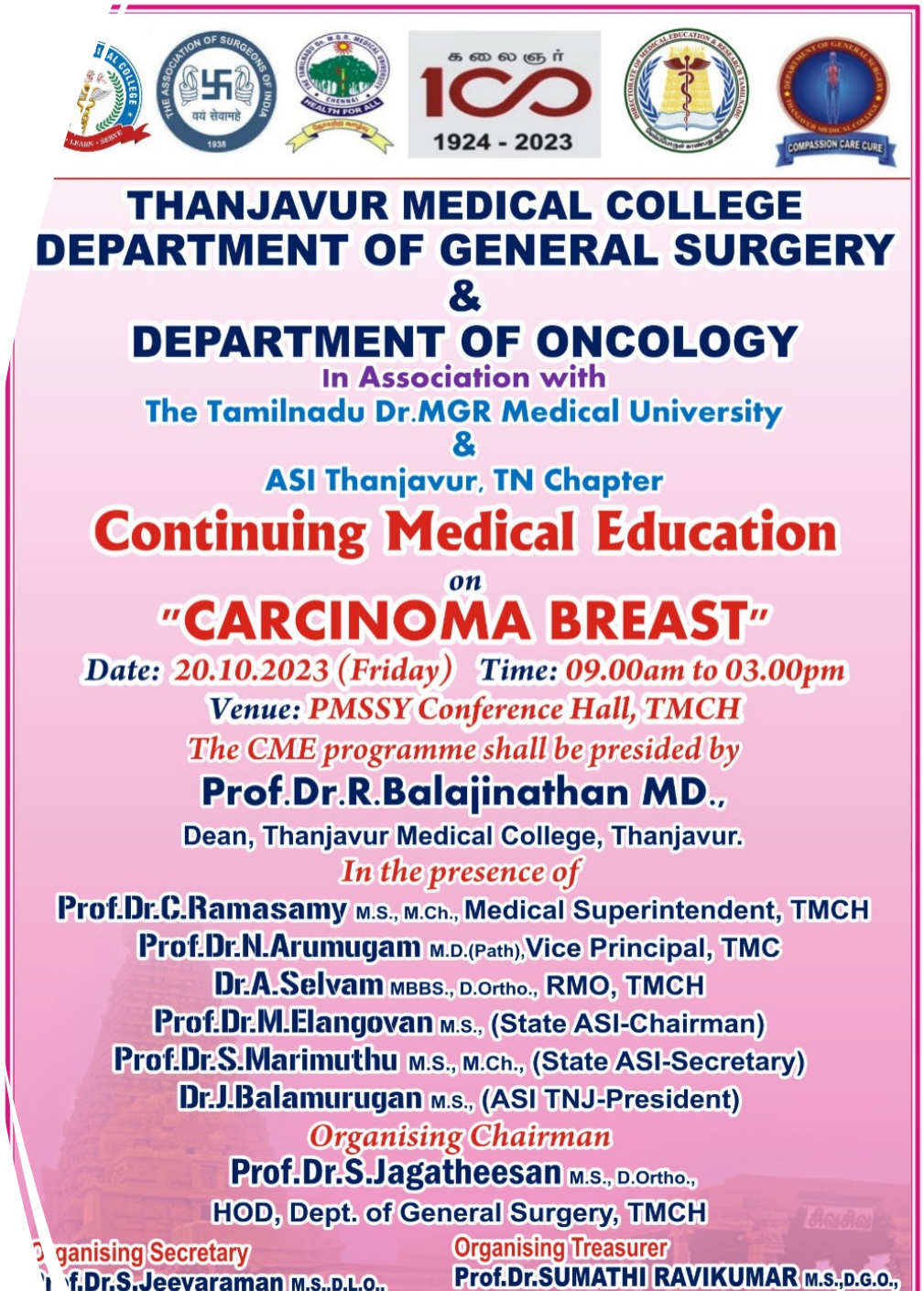
EARLY BREAST CANCER



Dr. S.G. Balamurugan

M.S , M.Ch, FRCS., Ph.D.,

- **SURGICAL ONCOLOGIST**, GURU HOSPITAL, MADURAI,
- **ADJUNCT PROFESSOR** THE TN DR M.G.R MEDICAL UNIVERSITY, CHENNAI,
- **EC MEMBER**, ASSOCIATION OF SURGEON OF INDIA,
- **FINANCE SECRETARY**, TAMILNADU ASSOCIATION SURGICAL ONCOLOGY

ACADEMIC QUALIFICATION

Qualification	Year Completed	College
M.B.B.S.	1991	Madurai Medical College
M.S. (Gen Surg)	1996	Madurai Medical College
M.Ch (Sur. Onco.)	2006	Kilpauk Medical College
M.A. (Yoga)	2011	Bharathiyar University Madurai
FRCS	2019	Royal College Of Physicians And Surgeons Of Glasgow
Ph.D	2019	Commonwealth Vocational University Tonga

FELLOWSHIPS OBTAINED

- **FIAGES** — **Fellow in INDIAN ASSOCIATION OF GASTROENTERAL ENDO SURGERY (Aug 2008)**
- **FMAS** — **Fellow in THE ASSOCIATION OF MINIMAL ACCESS SURGEONS OF INDIA (May 2011)**
- **FIAMS** — **Fellow in INDIAN ACADEMY OF MEDICAL SPECIALTY (Nov 2016)**
- **FIMSA** — **Fellow in INTERNATIONAL MEDICAL SCIENCE ACADEMY (June 2018)**
- **FICS** — **Fellow in INTERNATIONAL COLLEGE OF SURGEON (Sep 2018)**
- **FAIS** — **Fellow in THE ASSOCIATION OF SURGEONS OF INDIA (Dec 2018)**

Fact should know FIRST

Early breast cancer

Breast cancer that has not spread beyond the breast or the axillary lymph nodes.

This includes In Situ breast cancer (Stage 0) and
stage I, stage IIA breast cancers.

- I am a **BREAST SURGEON**
- When treating the Breast cancer what should I know?

SUCCESSFUL TREATMENT DEPENDS ON

- Sound knowledge of the disease
- Wise selection of the modality of treatment
- Accurate and skillful surgical technique

Stanford Cade

ONCOLOGICAL NORMS

Adequate Surgery + Adjuvant therapy
is the Standard treatment

Adjuvant treatment is not an answer to
incomplete surgery

I AM OPERATING SURGEON

AM I REALLY A **PROGNOSTIC FACTOR?**


YES

there is a difference.... ONCOLOGICAL OUTCOME

Surgeon as a prognostic factor
in the management of Cancer.

Why some pt having better prognosis than others ?

TUMOUR BIOLOGY

TUMOR BIOLOGY

WHAT IT IS?

- BEHAVIOUR OF THE TUMOUR (aggressive vs indolent)
- Dictated by the molecular genetics

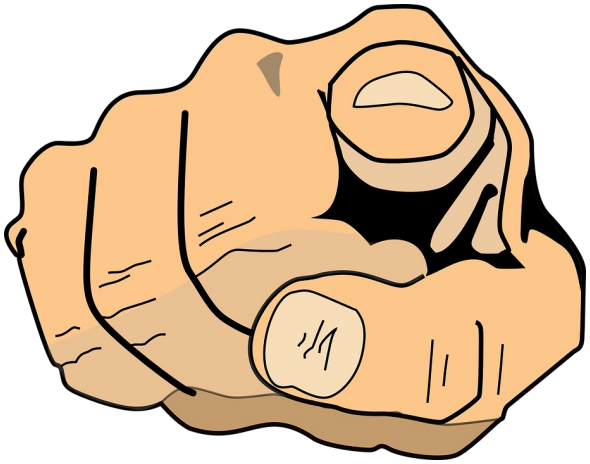
HOW TO EVALUATE?

- BY STUDYING THE TUMOR MARKER
- MOLECULAR GENETICS

HOW IT WILL BE HELPFUL?

- ASSESS THE PROGNOSIS
- PLAN FOR TARGETED THERAPY

YOUR RESPONSIBILITY



ACHIEVING BEST OUTCOME

AIM- ONCOLOGY

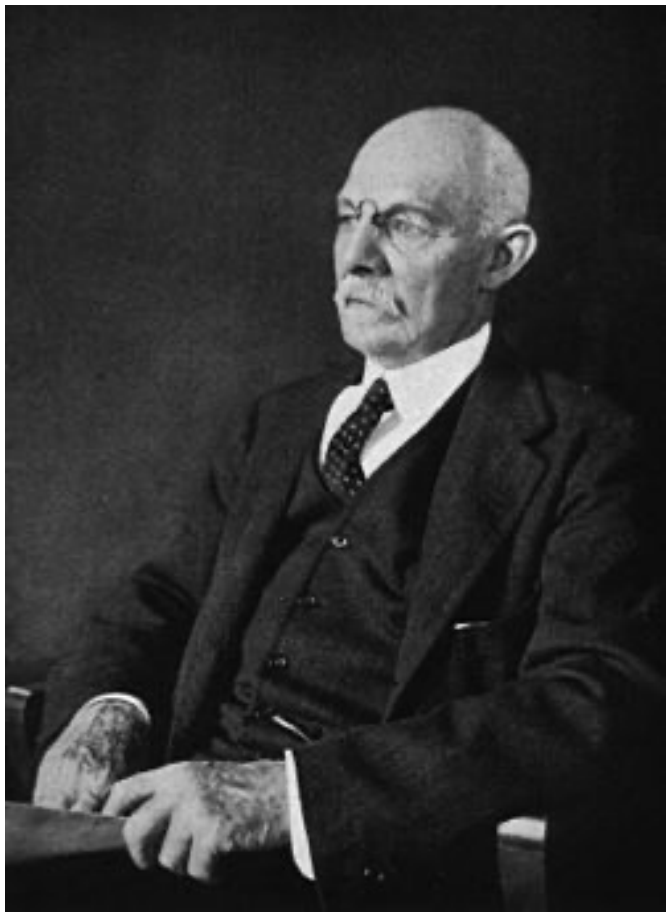
Cure the cancer

Minimize the treatment related complications

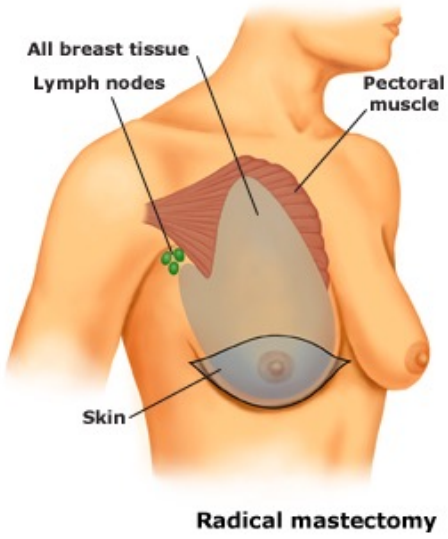
ROADMAP TO **BEST OUTCOME?**

SALUTE

WILLIAM STEWART HALSTED

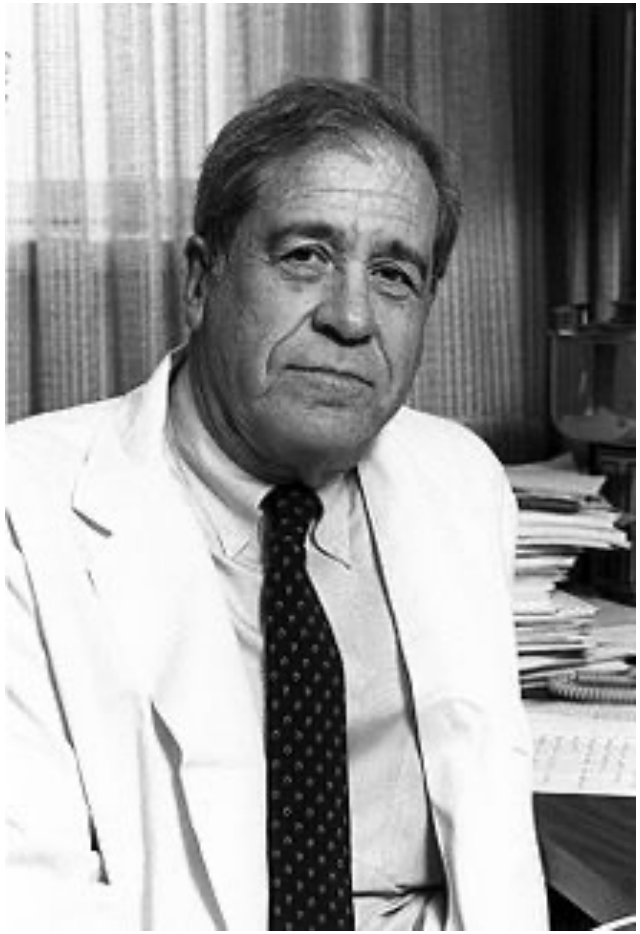


American surgeon, introduced the radical mastectomy for breast cancer



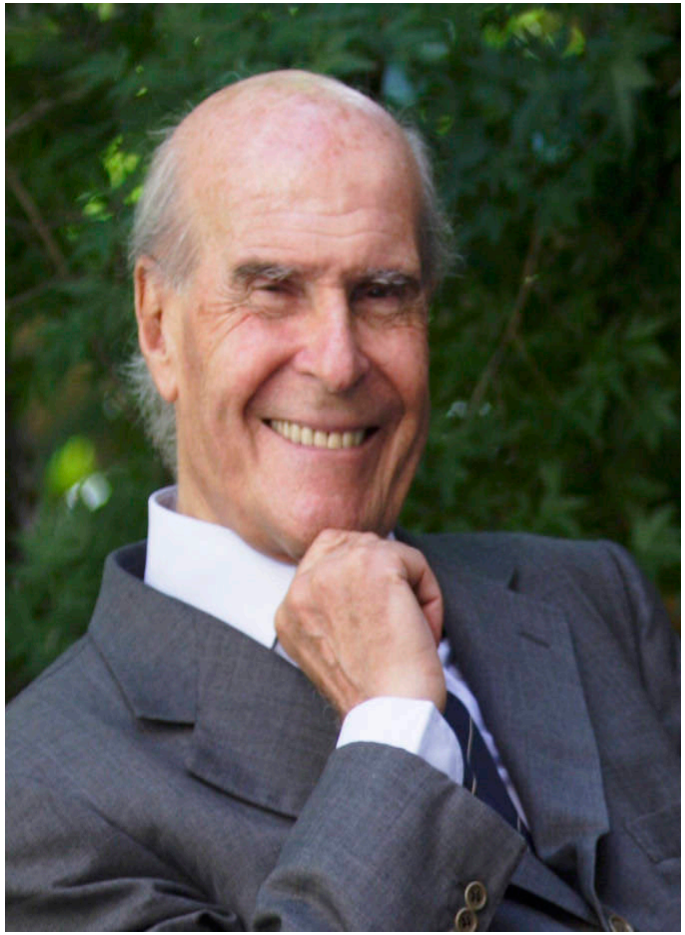
Radical mastectomy

BERNARD FISHER

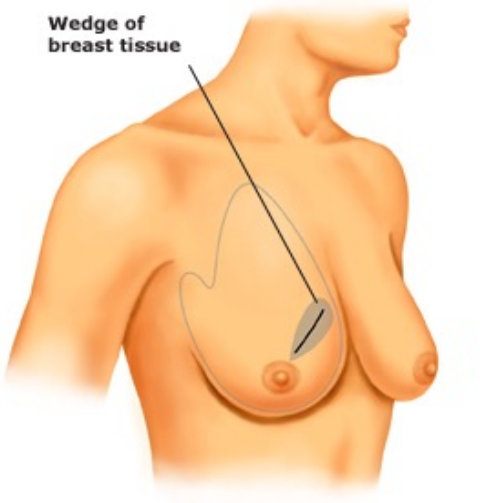


American surgeon, introduced the multi modal treatment for breast cancer.

UMBERTO VERONESI

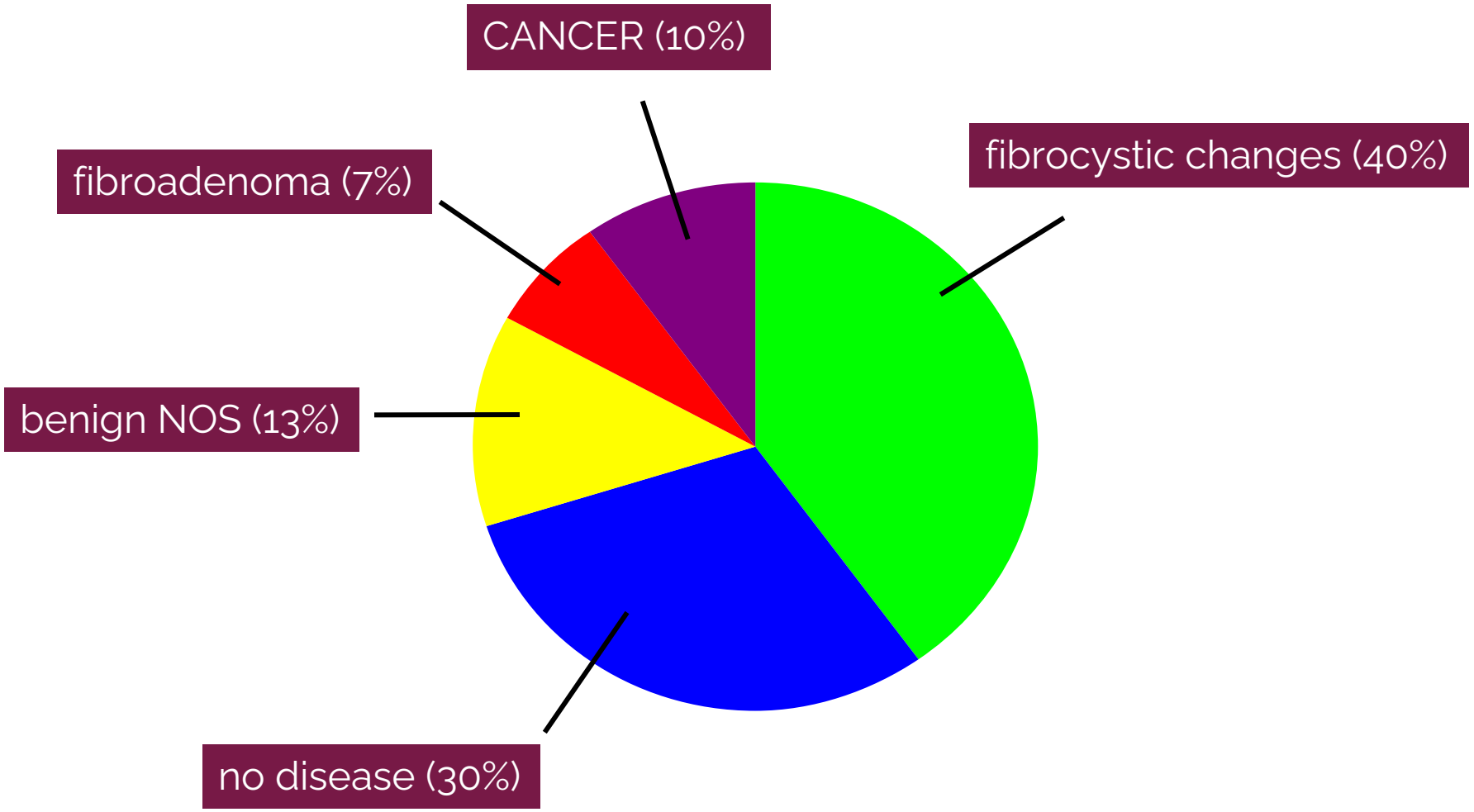


an Italian surgeon who introduced breast conservative surgery



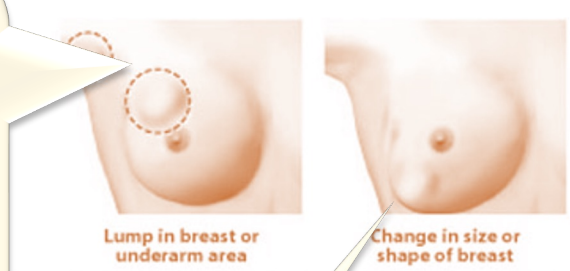
PRESENTATION

PALPABLE BREAST MASSES



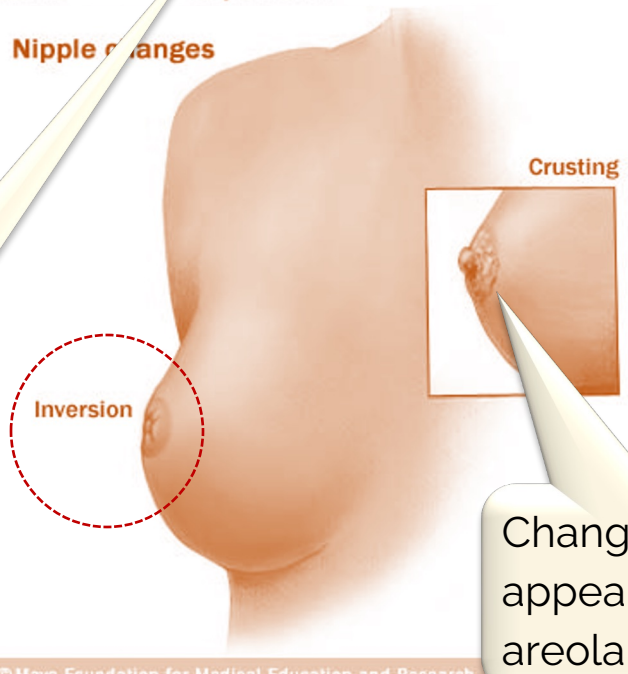
SIGNS AND SYMPTOMS OF ADVANCED DISEASE

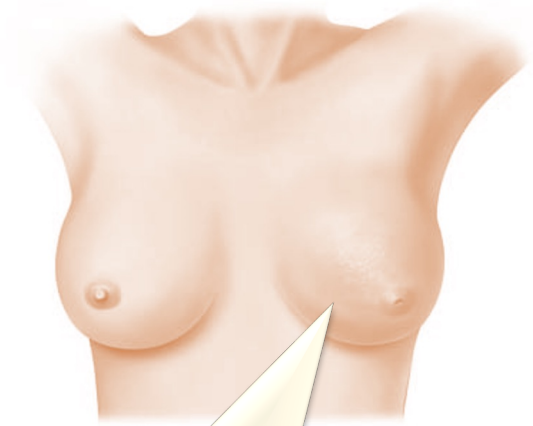
Most common: lump or thickening in breast. Often painless



Discharge or bleeding

Change in size or contours of breast





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

Change in color or appearance of areola

BREAST CANCER

EARLY DIAGNOSIS -HOW

In early presentation

Malignant lesion should be identified from benign lesion

HOW TO DIFFERENTIATE MALIGNANT LESION, FROM BENIGN LESION

DIAGNOSIS

Triple assessment

Clinical examination

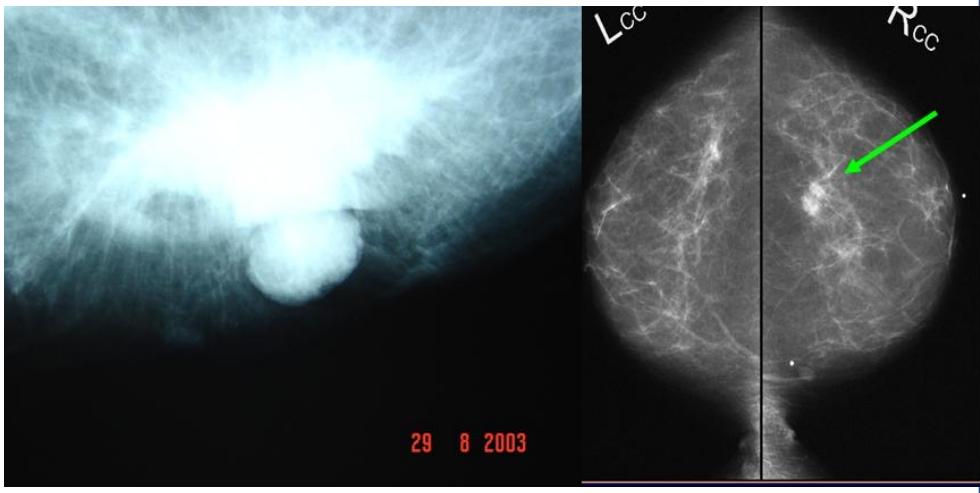
Imaging

FNAC/Core biopsy

MAMOGROM - DIAGNOSIS

MAMMOGRAPHIC APPEARANCE OF CANCER

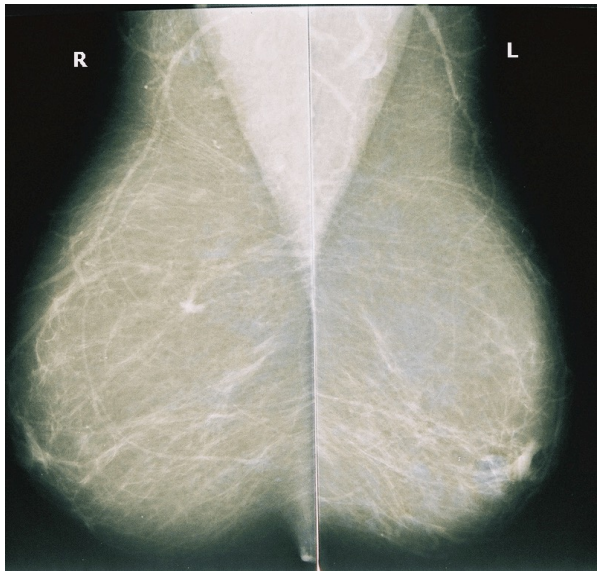
A mass
Associated calcification
Architectural distortion
Irregular border
Skin or nipple change

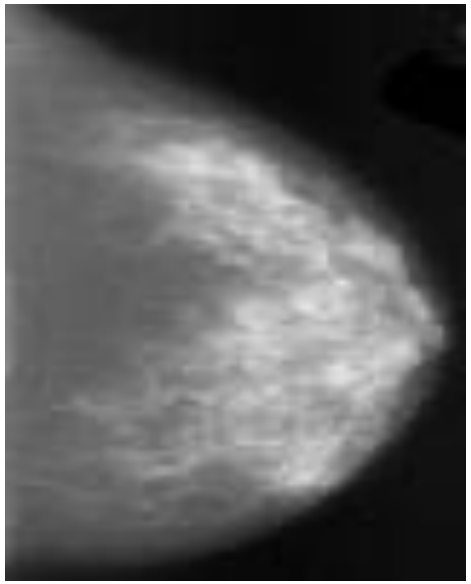


Always bilateral

Always both view craniocaudal & Mediolateral

If Axilla is seen it is Mediolateral





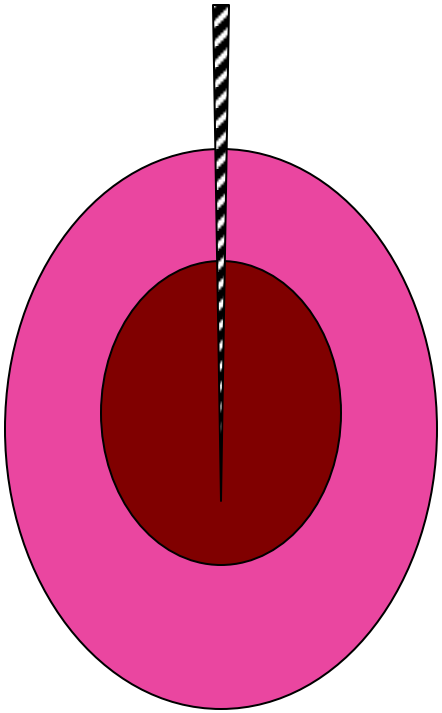
CONFIRMATION OF DIAGNOSIS-BIOPSY

FNAC Trucut biopsy Incision biopsy

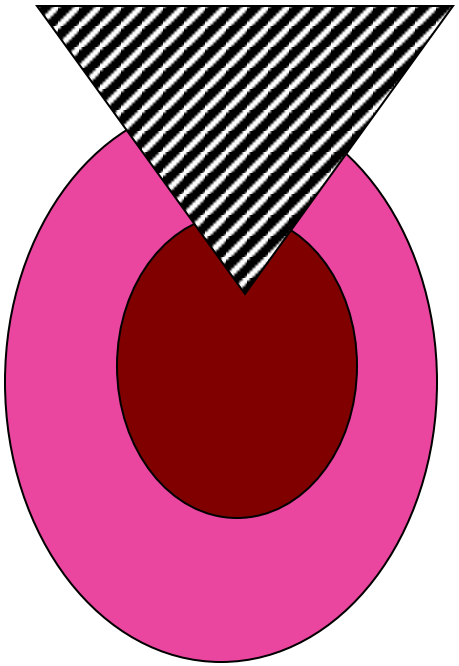
ROLE OF TRUCUT BOPSY

- FNAC - if inconclusive
- Before neo adjuvant treatment

TRUCUT VS OPEN



- trucut biopsy



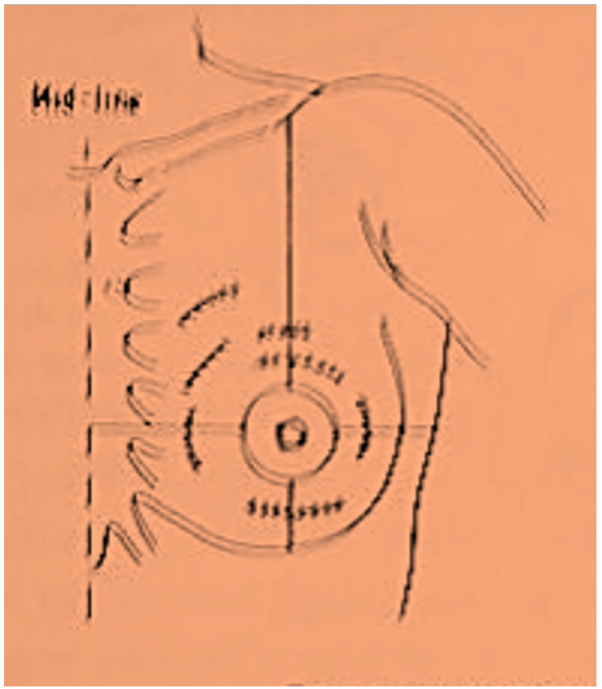
open biopsy

OPEN BIOPSY

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

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



METASTATIC WORKUP

X-ray chest/CT chest
US abdomen /CT abdomen
Bone scan

ONCOLOGY CONCEPT

TNM STAGING

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

TNM STAGING

- 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.

- 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

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

STAGE GROUPING

- 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

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

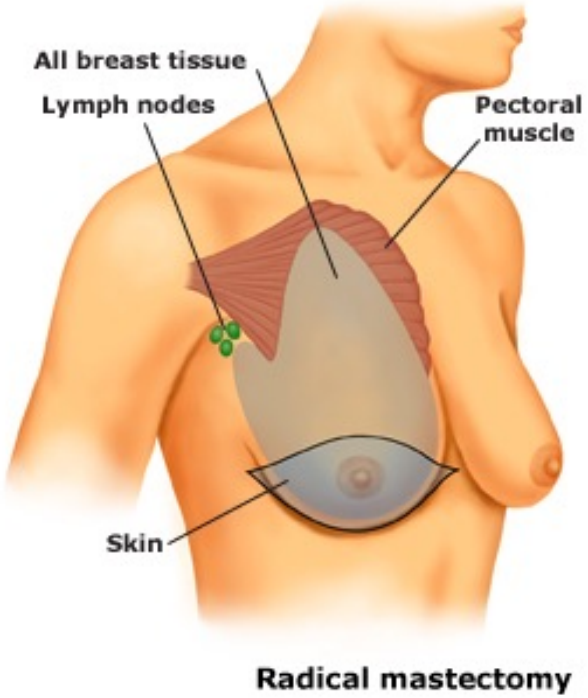
- **LOCALLY ADVANCED CANCER (INTENT – CURE)**

  NEOADJUVANT CHEMO

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

  PALLIATIVE

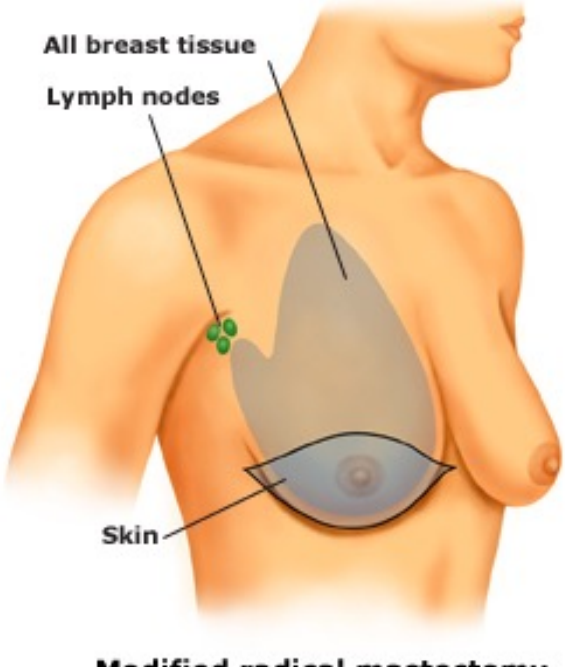
SURGERY PRINCIPLE

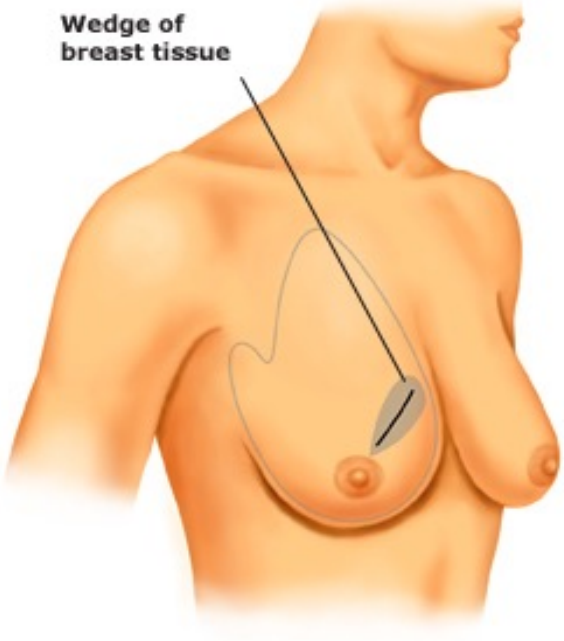


Radical mastectomy

Local control: no survival benefit

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





M.R,M

=

W.L.E + RADIOTHERAPY

20TH CENTURY

21ST CENTURY

- It does not compromise

Radicality of resection

BREAST CONSERVATIVE SURGERY PROCEDURE

- 1cm margin of surrounding normal breast tissue
- Incision along cosmetic lines
- Removal of skin , pectoral fascia ?
- No drains
- Orientation of specimen
- Generally separate incision for ALND
- Postoperative RT

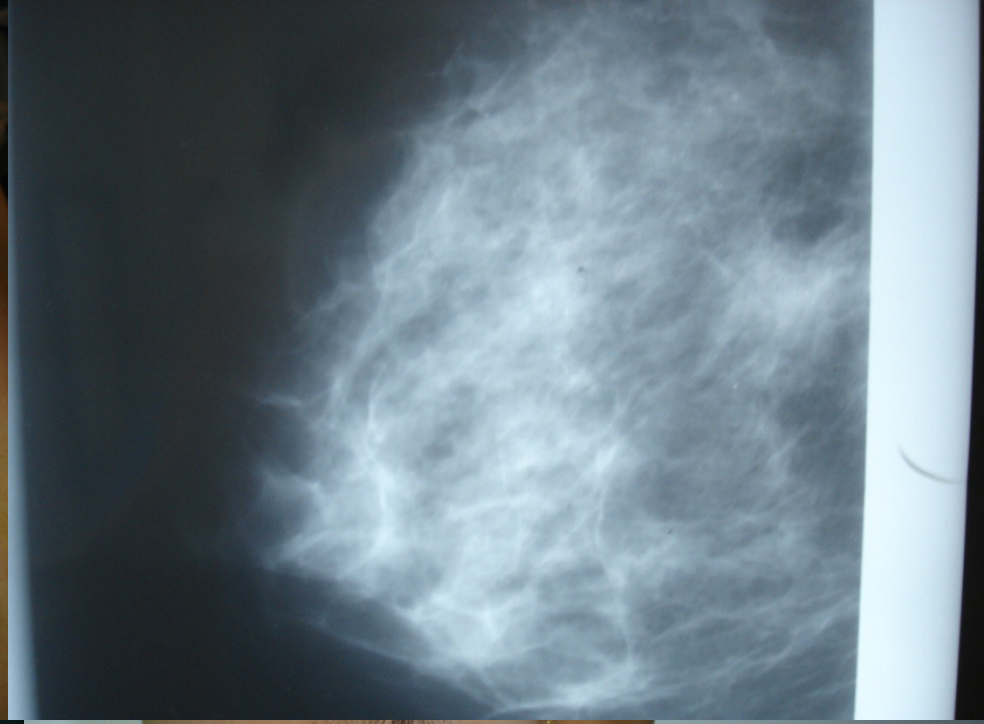
BREAST CONSERVATIVE SURGERY CONTRAINDICATIONS

Multiple ca away from each other

Pregnancy,if not terminated

Persistent positive margins

Previous RT to the breast region



PRIMARY CLOSURE – ONCOPLASTIC SURGERY







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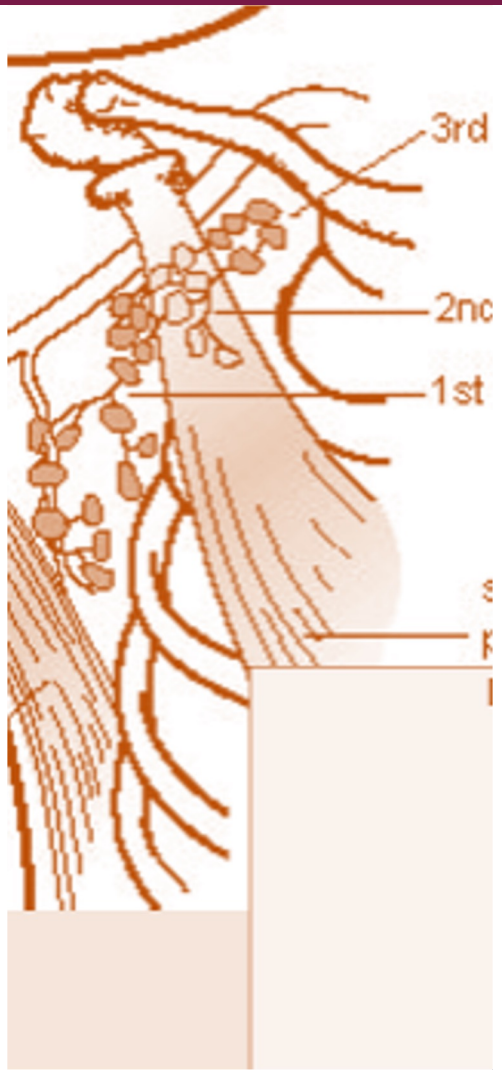
MRM. - TECHNIQUE ?

AXILLARY DISSECTION - PRINCIPLES



AXILLARY DISSECTION BOUNDARIES

Superior – axillary vein

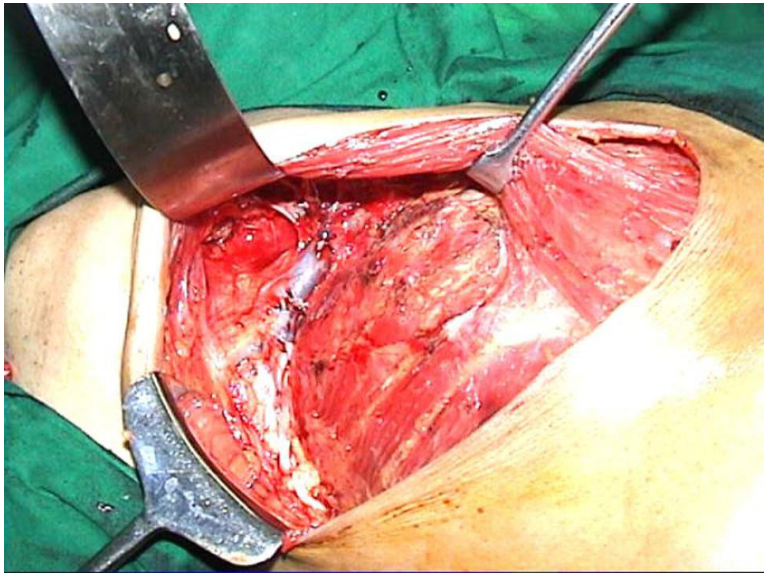
Medial – apex-costoclavicular lig

Lateral – thoracodorsal vessels

Inferior – angular vein

Posterior – subscapularis muscle

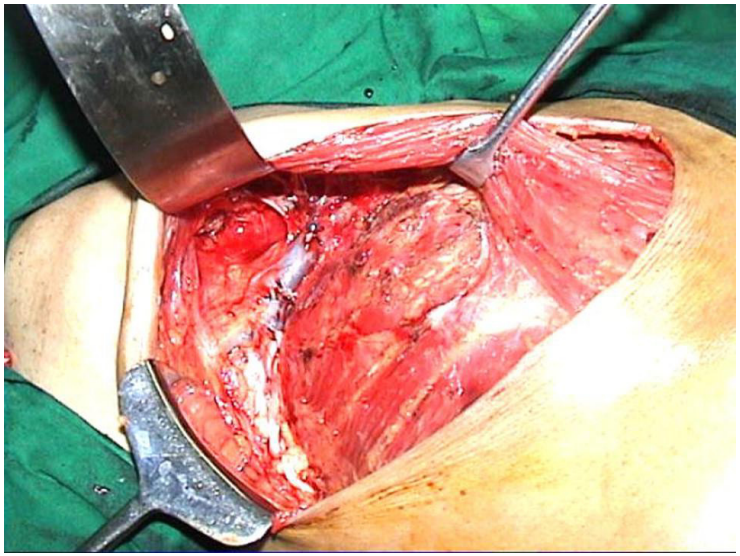
Anterior – pectoralis major muscle



AXILLARY DISSECTION

Level I. Level II dissection to be done

Level III dissection to be done selectively



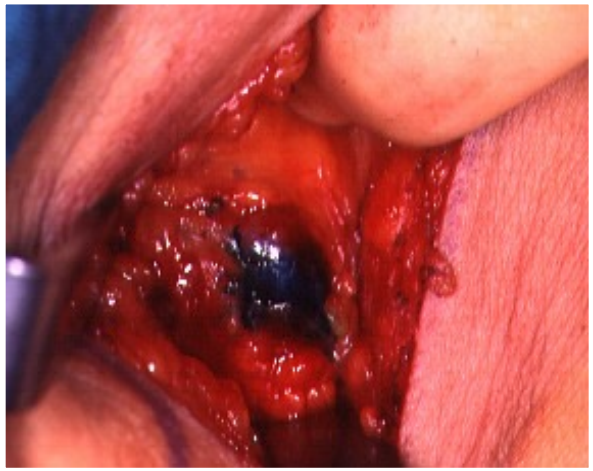
IN NEGATIVE AXILLA and T1. T2 LESION

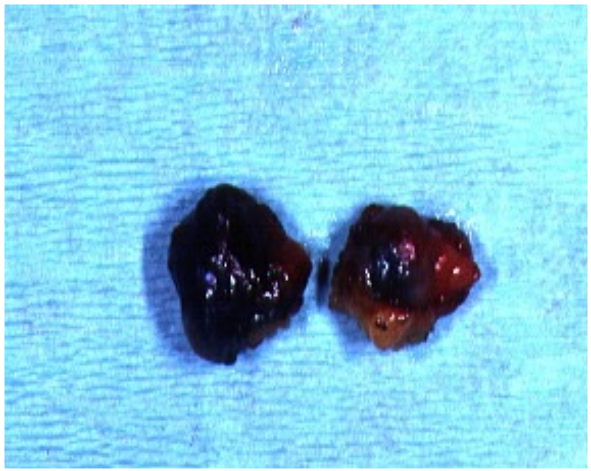
can we avoid axillary dissection

SENTINEL LYMPH NODE-CONCEPT

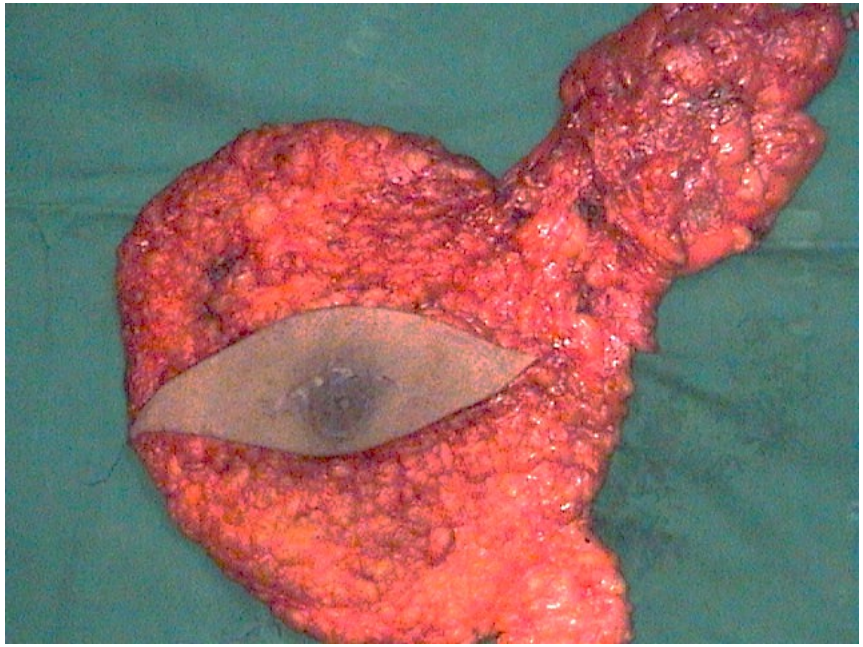
SLN is the first node that meets tumor cells

Positive node –convert to axillary dissection
Negative node- observation





COMPLETENESS OF SURGERY IN HPE?



Specimen should contains atleast 10 axillary node

DATA EXPECTED FROM PATHOLOGIST

- No. of lesion
- Size 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

WHY ADJUVANT TREATMENT TO BE GIVEN?

• DISTANT “METASTASIS”

- Local control: surgery

- Distant “metastasis”
- macro metastasis -diagnosed by investigation

- micro metastasis” ”
  - Does exist at diagnosis – not able to diagnosed by investigation
    - Adjuvant systemic treatment

WHAT ADJUVANT TREATMENT TO BE GIVEN?

FOR WHOM ADJUVANT CHEMOTHERAPY TO BE GIVEN?

For all cases except

1. Node negative status

2. Tumor size <1cm

3. Grade 1 – Well differentiated cancer

FOR WHOM ADJUVANT HORMONAL THERAPY TO BE GIVEN?

ER and / or PR positive tumors

PREMENOPAUSAL – TAMOXIFEN

POSTMENOPAUSAL – A.I(LETROZOLE)

5 years

FOR WHOM ADJUVANT CHEMOTHERAPY TO BE GIVEN?

Tumor size more than 5cm

Node positive status

Incomplete axillary dissection

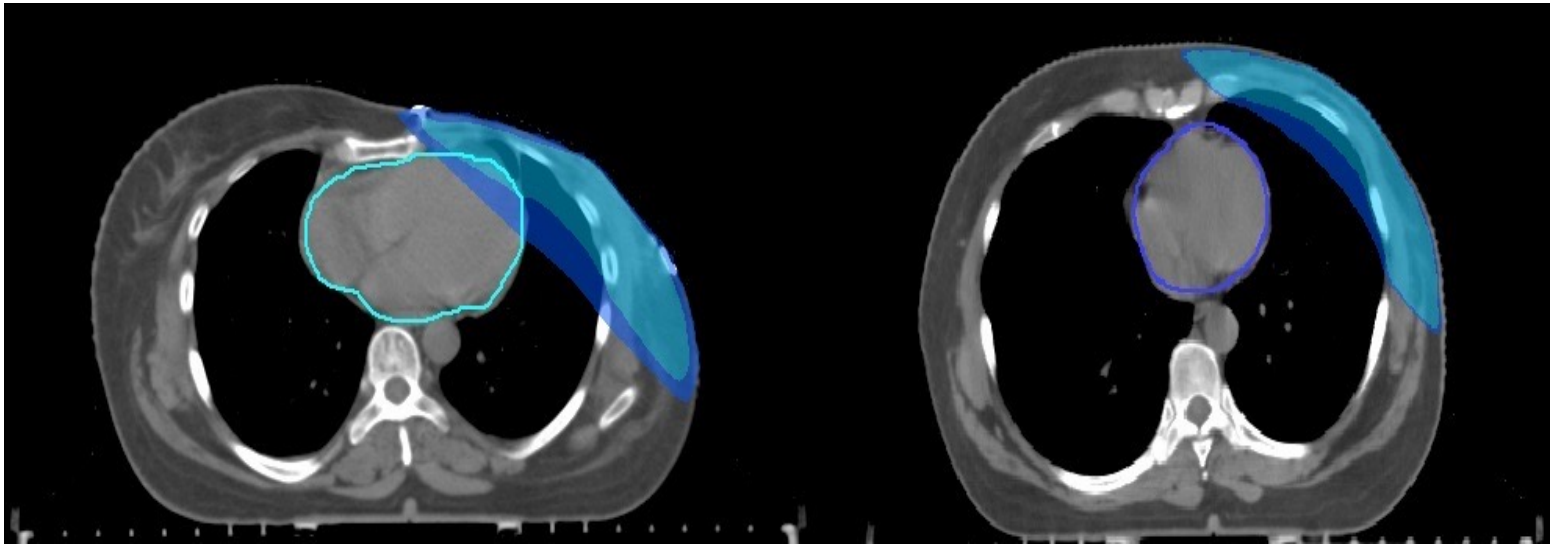
After neo adjuvant treatment

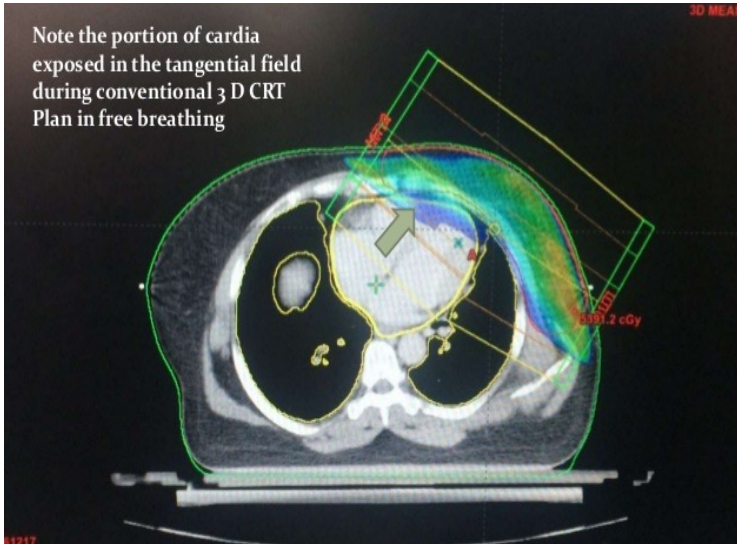
TRASTUZUMAB (HERCEPTIN)

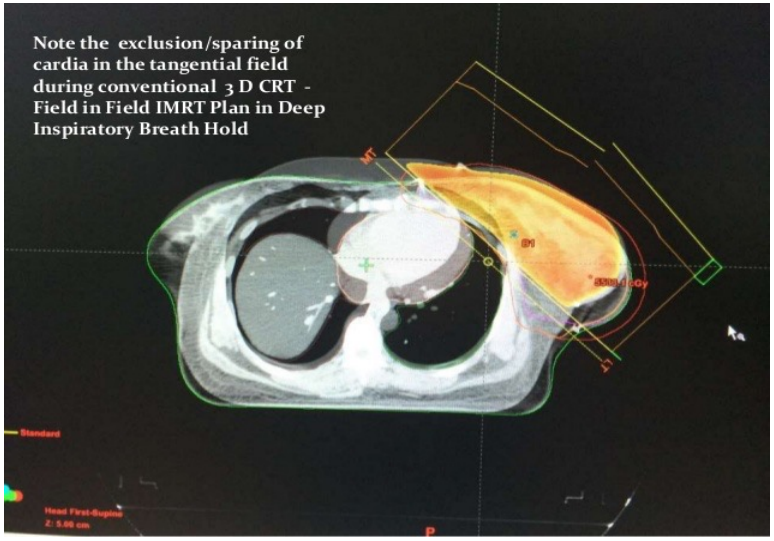
- Her-2/neu overexpression in 20 to 25% of all invasive breast cancers

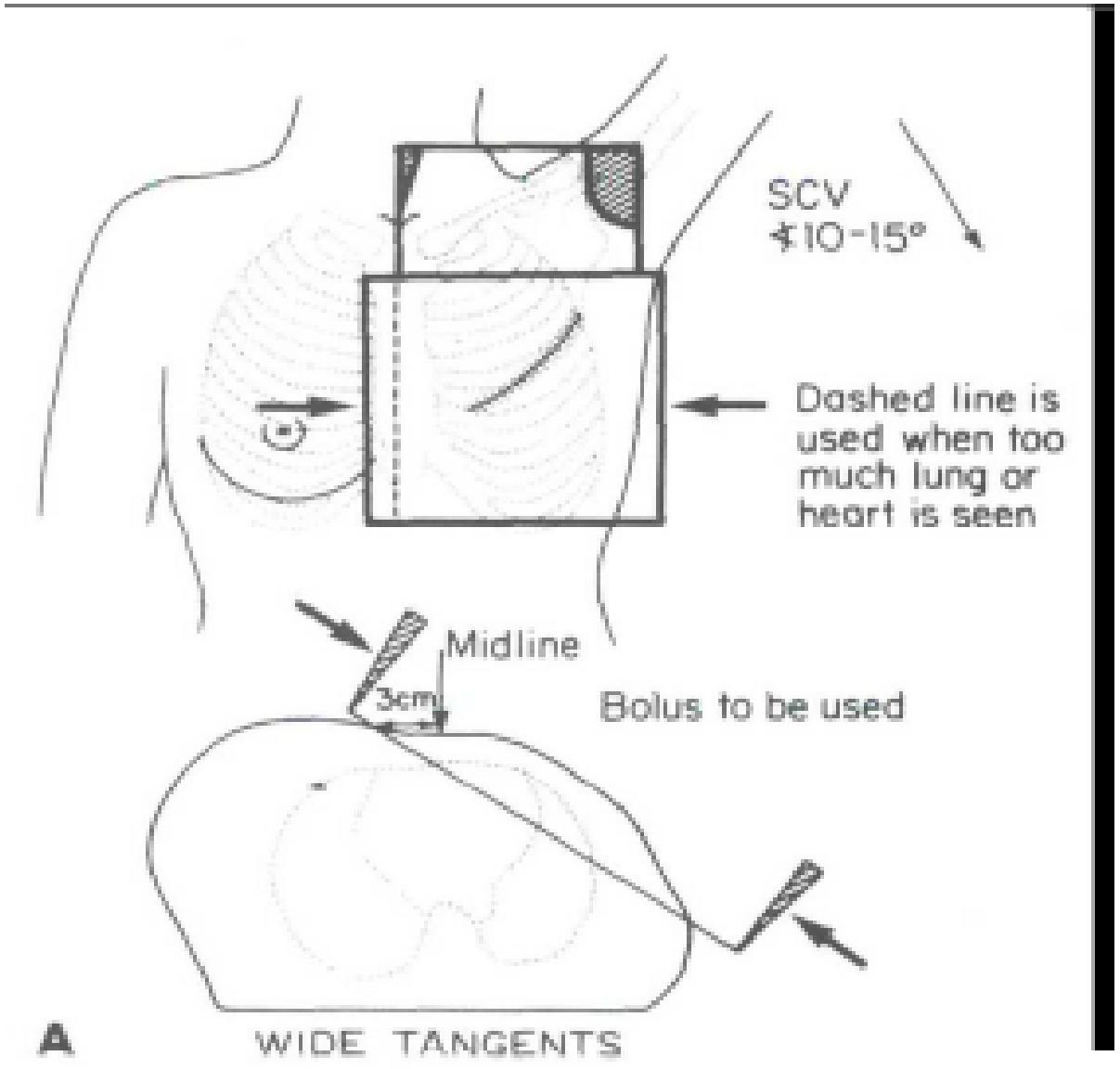
- 30% absolute increase (36% to 62%) in overall response (with chemotherapy)

- Radiotherapy techniques
- Advantages of IMRT conventional RT
- Regarding cure and quality of life



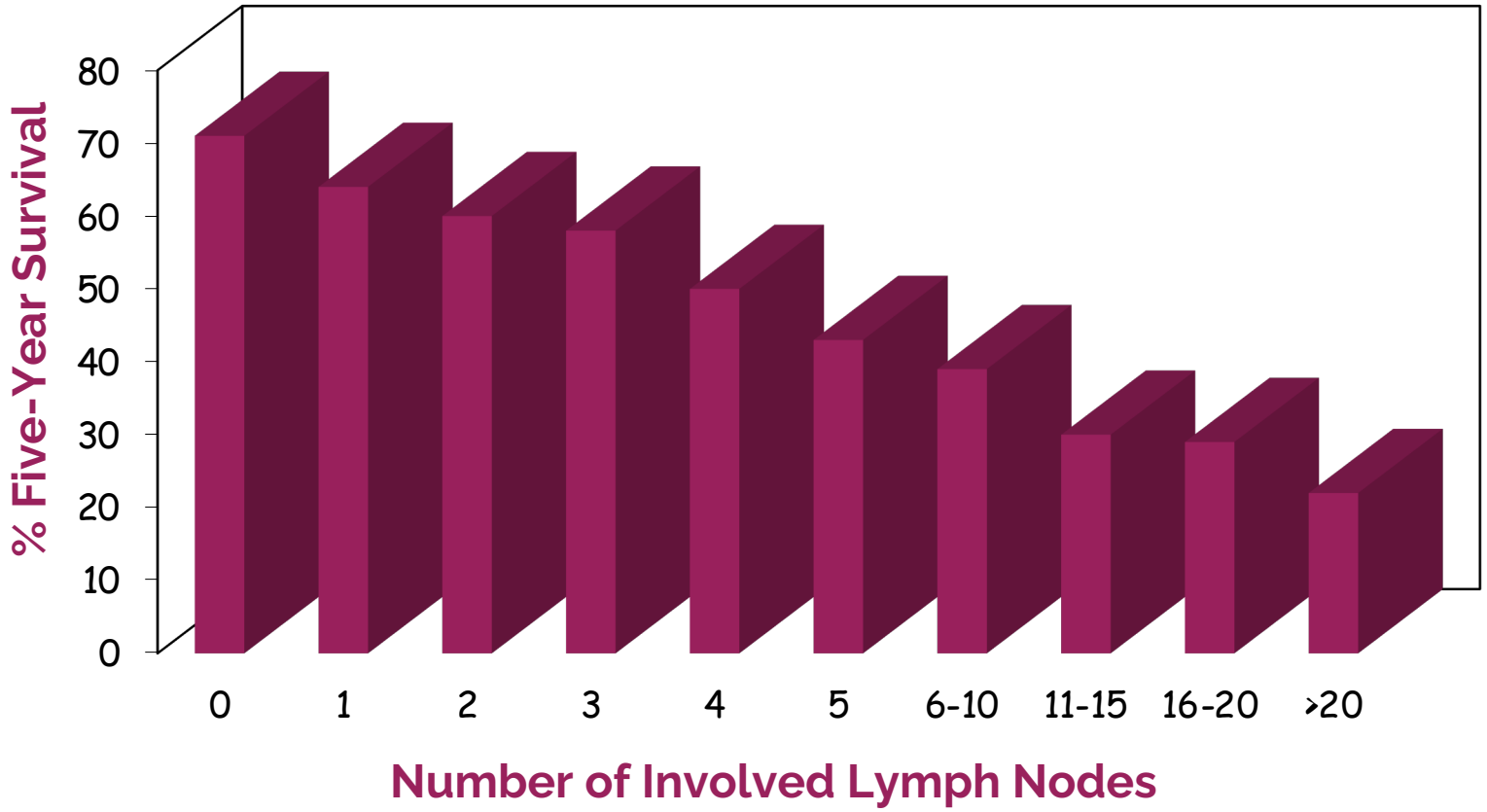

Note the portion of cardia exposed in the tangential field during conventional 3 D CRT Plan in free breathing


Note the exclusion/sparing of cardia in the tangential field during conventional 3 D CRT - Field in Field IMRT Plan in Deep Inspiratory Breath Hold


SCV
±10-15°
Dashed line is used when too much lung or heart is seen
Midline
3cm
Bolus to be used
A
WIDE TANGENTS

TAKE HOME

PROGNOSIS: LYMPH NODES

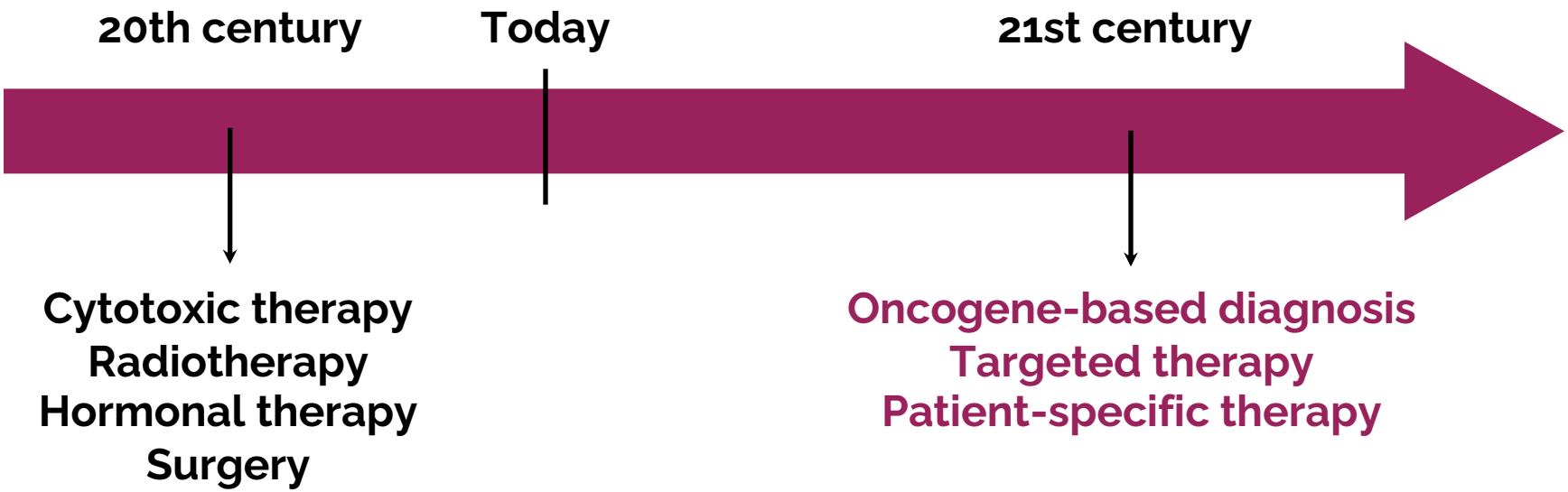


(*adapted from* Harris et al. Cancer: Principles and Practice of Oncology. 5th ed.)

PROGNOSIS

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

THERAPY INDIVIDUALISED



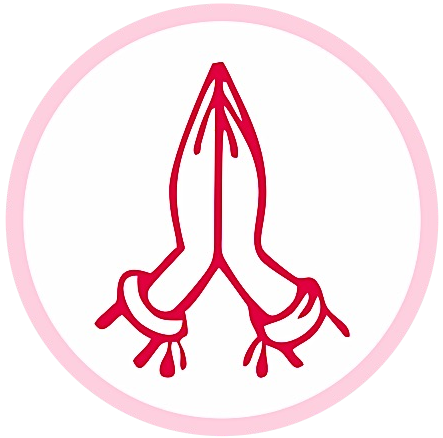
EARLY DIAGNOSIS

Dear surgeon,
Please do not
NEGLECT me

MISMANAGEMENT

- 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


உன்னால் முடியும்
குரு மருத்துவமனை
REACHING THE UNREACHED
அச்சம் வேண்டாம்
புற்றுநோயை அடியோடு அகற்ற முடியும்.



THANK YOU....