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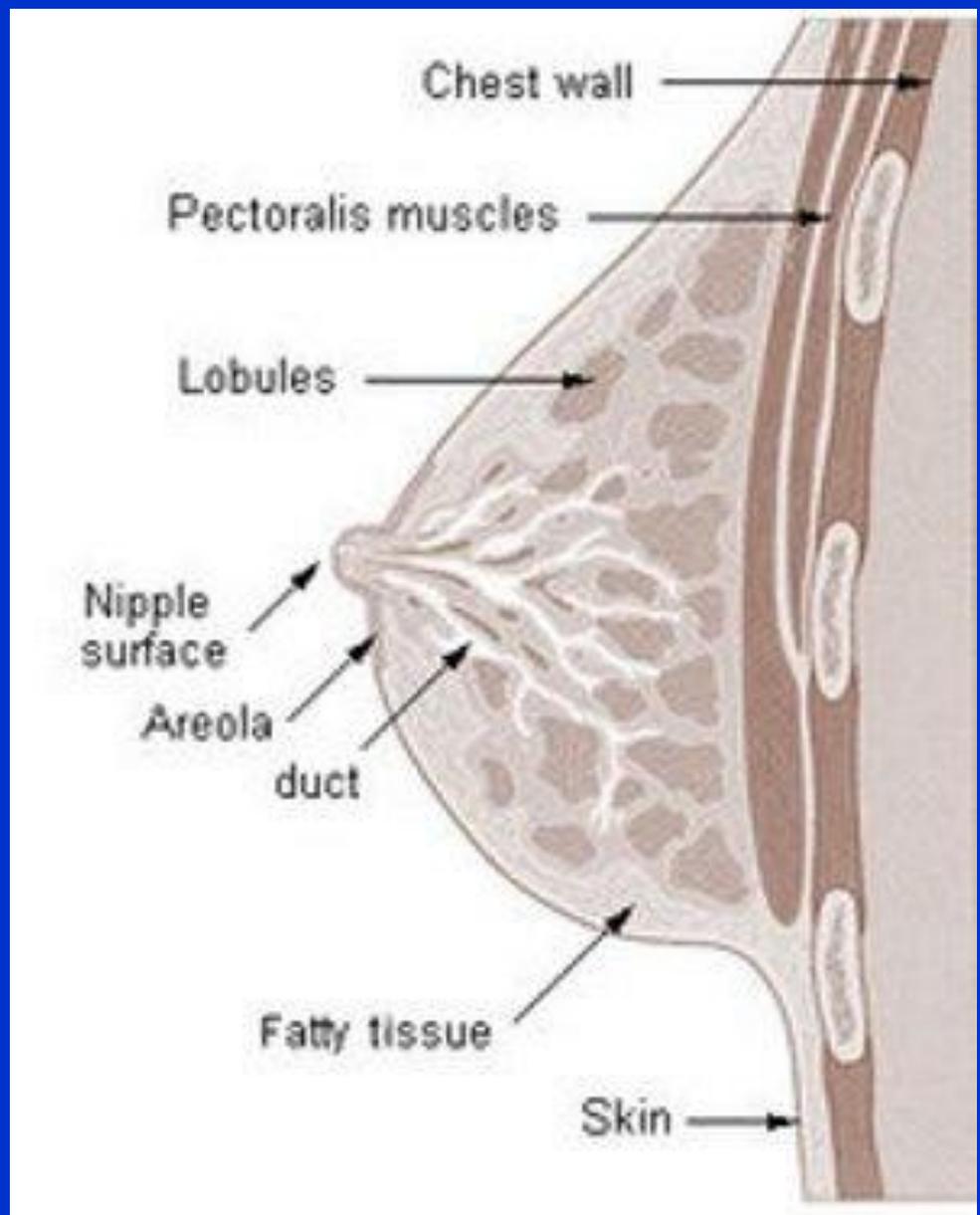
Canton Ticino, Switzerland

1° messaggio

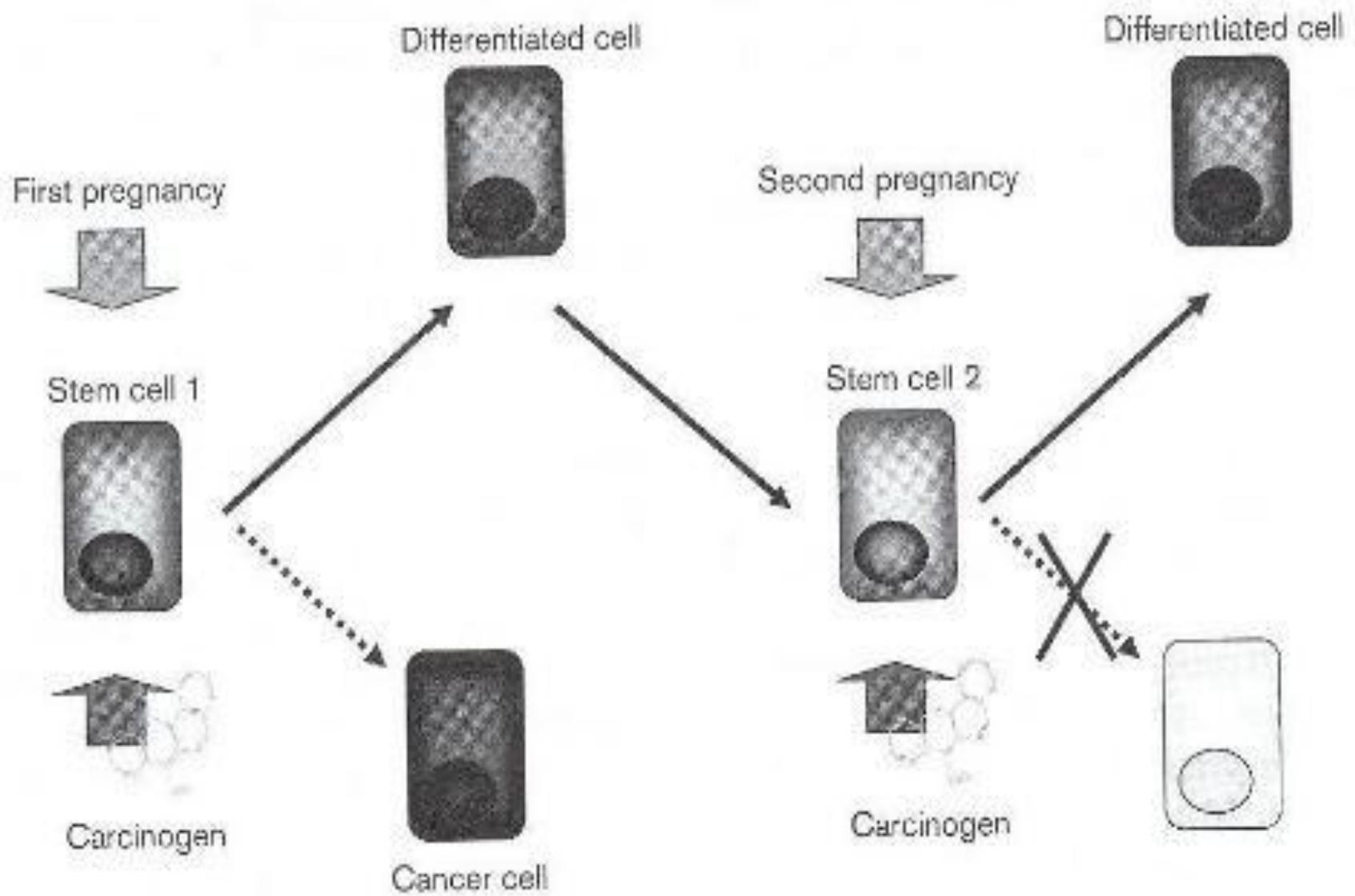
- La capacità di prevenire e curare il tumore al seno è oggi considerato una sorta di “indicatore di civiltà” per una società moderna

**A breast cancer is
a disease of
the mammary gland.**

**Understanding breast anatomy
is important.**



**The mammary gland is one
of the few organs
that is not fully developed
at birth.**

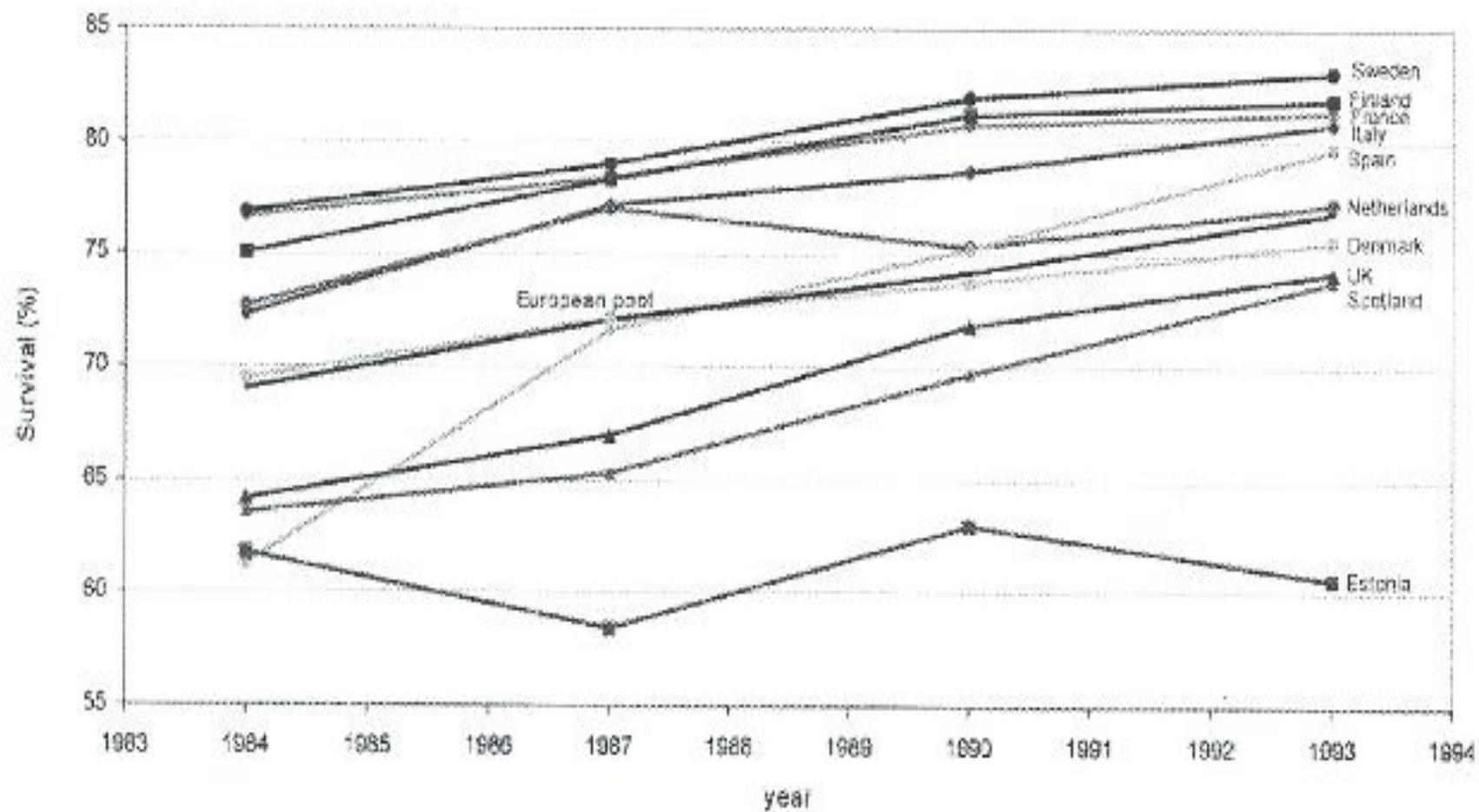


Breast cancer incidence continues to rise worldwide even in countries where it is relatively low, such as India, Vietnam, Korea, Thailand, China and Gambia.

In less than a century women have stopped to become pregnant at an early stage and have reduced the number of pregnancies and the length of breast grading.

Breast cancer mortality is declining in many Western countries, reflecting increased awareness, early detection and better treatment.

BREAST CANCER SURVIVAL IN EUROPE



2° messaggio

- Il cancro della mammella non compare di colpo nell'organismo femminile ma è il risultato di un processo biologico lungo e scandito da fasi diverse:
- Non esiste “il” cancro al seno ma una serie nutrita di varianti anche molto diverse fra loro.

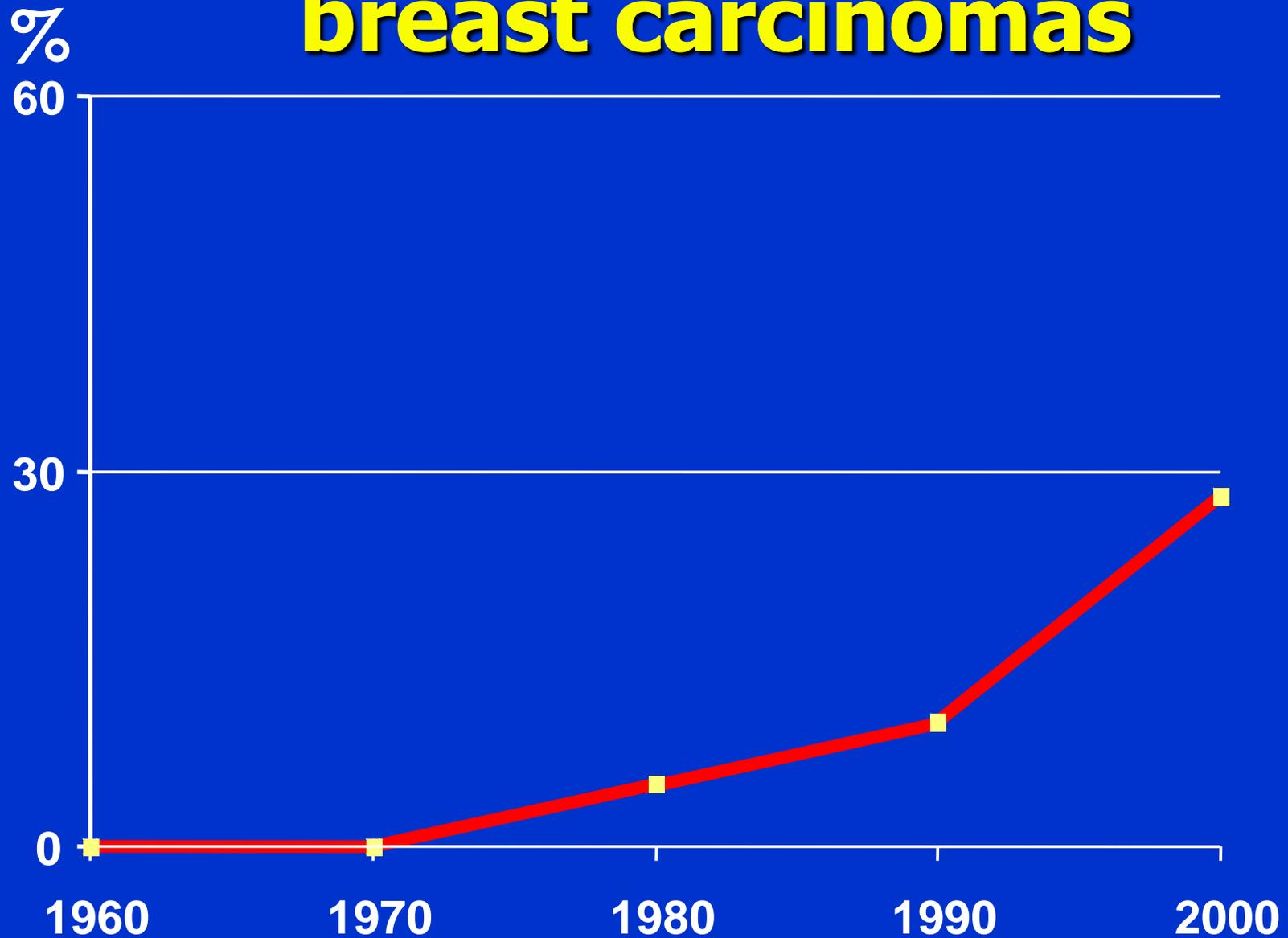
Precancerous lesions

- **Atypical ductal and lobular hyperplasia**
- **Ductal papillomatosis**
- **Proliferative radial scar**
- **Lobular carcinoma in situ**

A breast cancer can be

**palpable (a lump),
or non-palpable
(e.g. microcalcifications).**

Non-palpable breast carcinomas



Microcalcifications should never be underestimated and when suspicious (non present in previous mammograms, concentrated in a small area, etc.) they should be assessed by mean of a core biopsy or with diagnostic procedures like Mammotome.

**A breast cancer is
always a carcinoma**

**It can be in situ, or infiltrating,
lobular or ductal.**

The concept of risk assessment

- **In absence of disease: the Gail model**
- **After an early stage disease: the St.Gallen guidelines**
- **The possible future: gene profiles**

The Gail model

- Menarche (first period)
- Age at first pregnancy
- Number of pregnancies
- Lactation
- Family members with breast cancer
- Precancerous lesions (biopsies)

risk threshold: 1.65

Risk reducing procedures

- **Changes in lifestyle**
- **Personalized early detection programmes**
- **chemoprevention**
- **Prophylactic surgery**

Changing Concepts in Local Regional Treatments

1970

2000

from

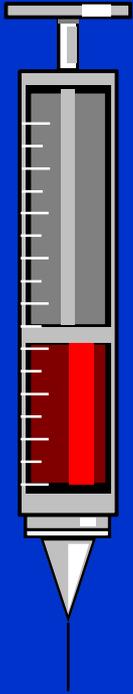


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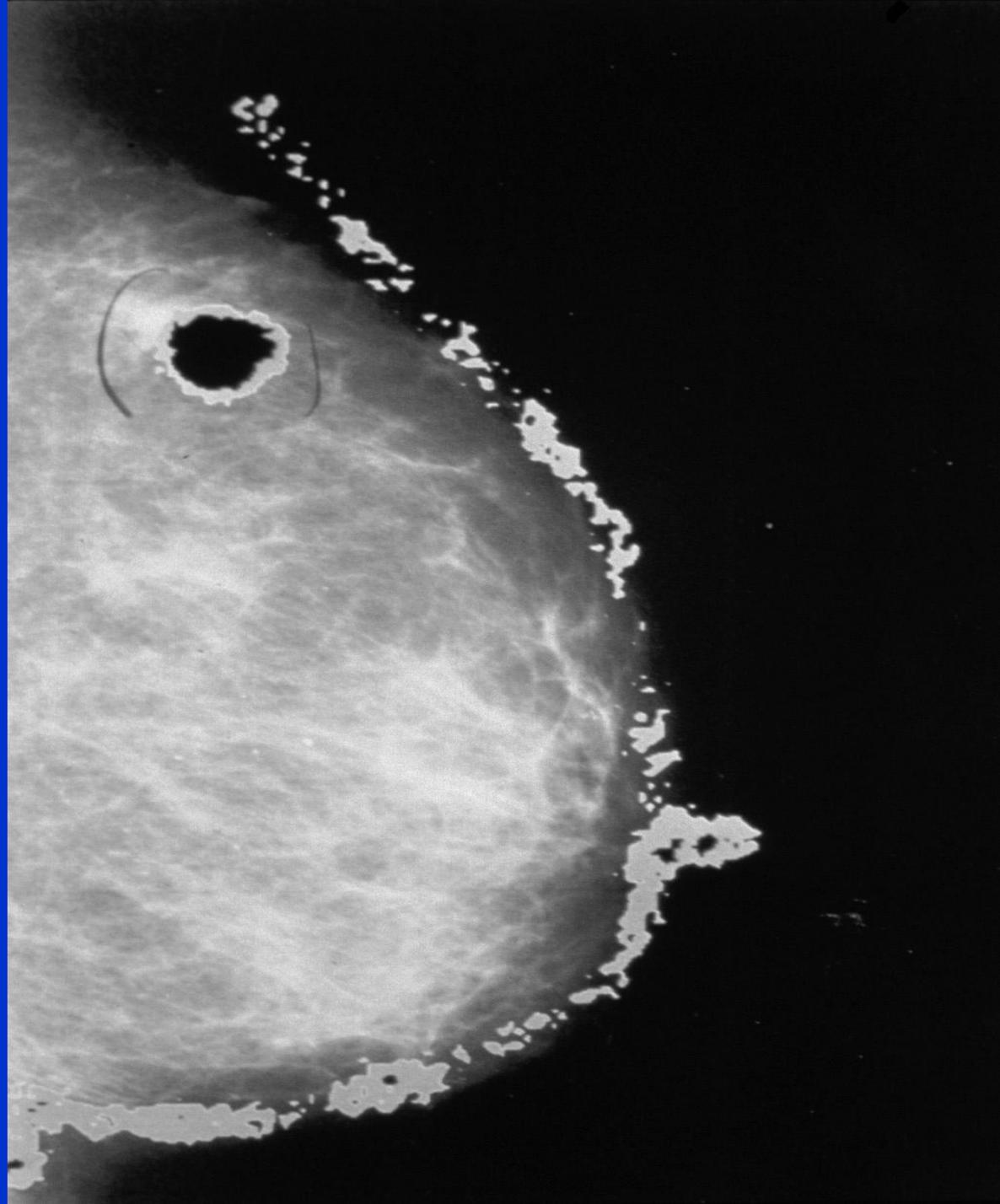
**Maximum
tolerable
treatment**

**Minimum
effective
treatment**

Radioguided Occult Lesion Localization (R.O.L.L.)



0.05mg. of serum albumin macroaggregates (**10 to 150 micron in diameter**) labeled with TC 99 injected into the lesion using sterotactic or ultrasound guidance.







Breast Cancer Surgery

- ✓ is rarely urgent
- ✓ requires general anaesthesia
- ✓ may become bilateral
- ✓ can benefit from plastic surgery
- ✓ is almost always irreversible

Breast surgery

**may be technically easy,
but it is conceptually difficult.**

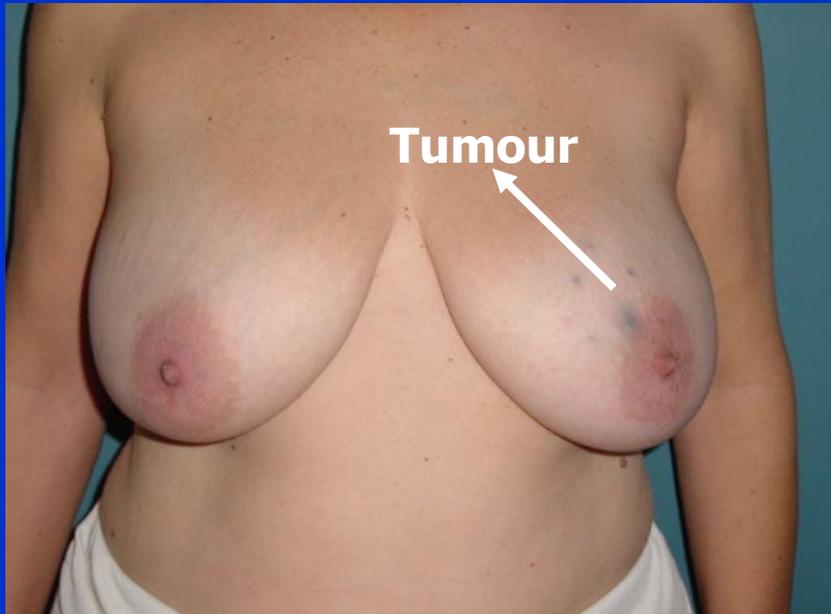
**The management of breast
cancer requires a TEAM.**

**Breast conserving surgery
is the major incentive
to early detection.**

**However mastectomy
still plays a crucial role
in diffuse DCIS,
in small breast,
in risk reduction.**

**Conservative surgery
and**

Reconstructive “mammoplasty”

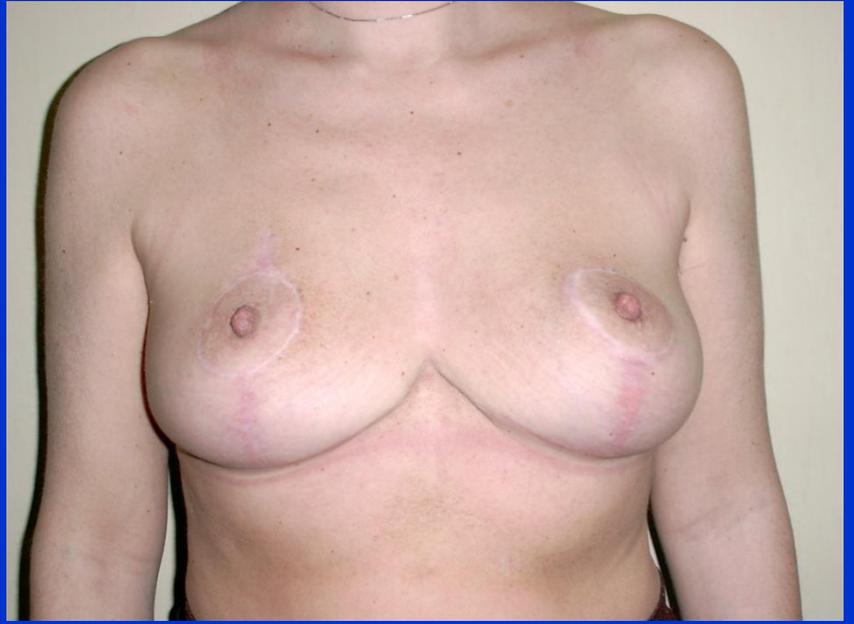
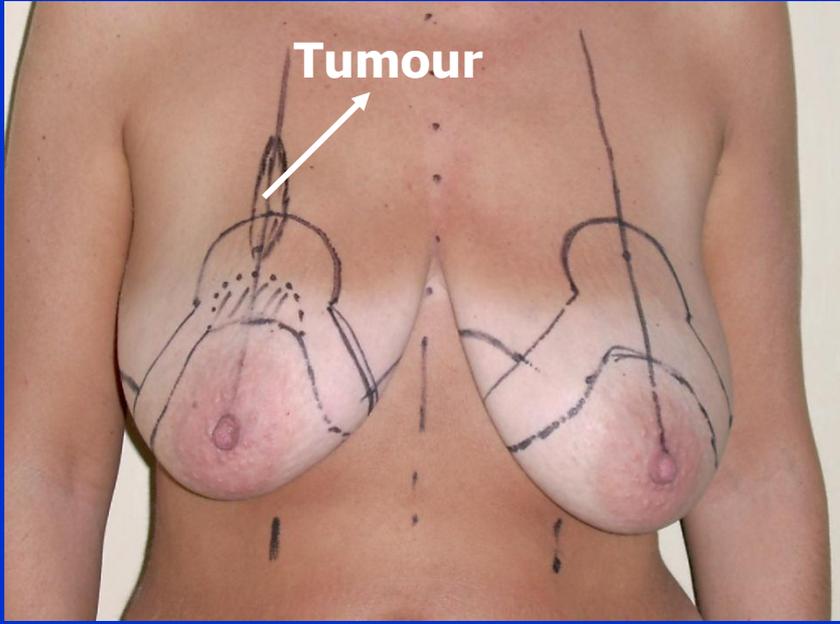


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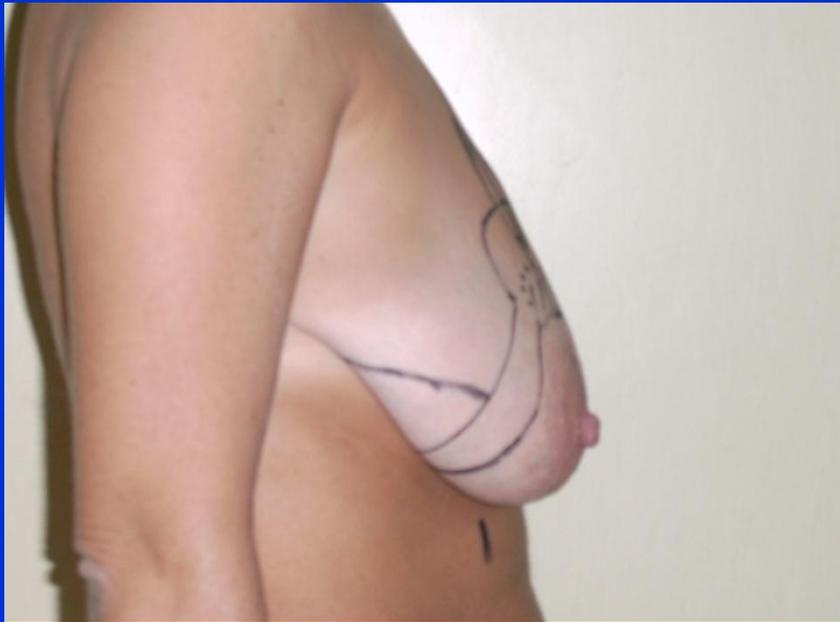


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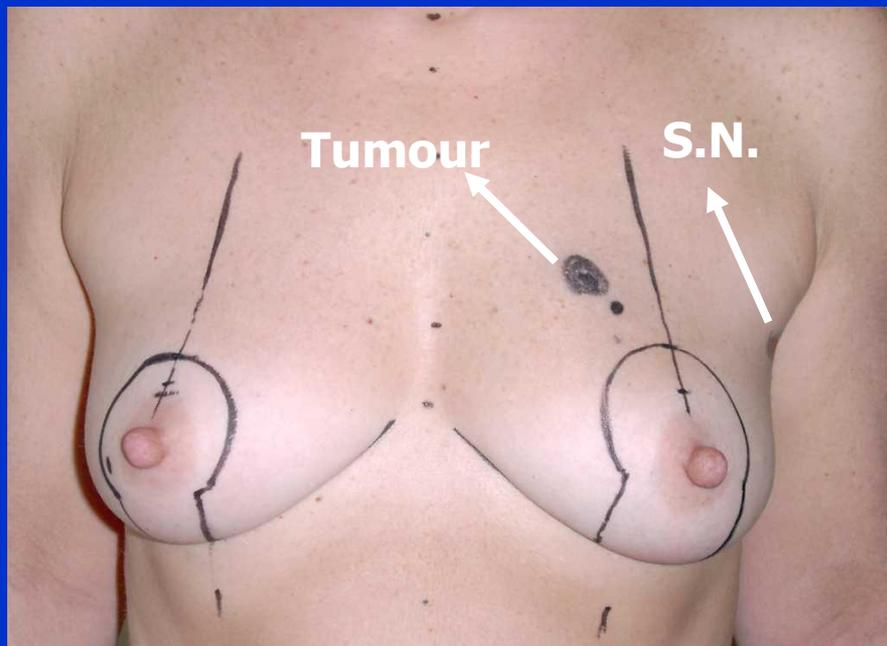
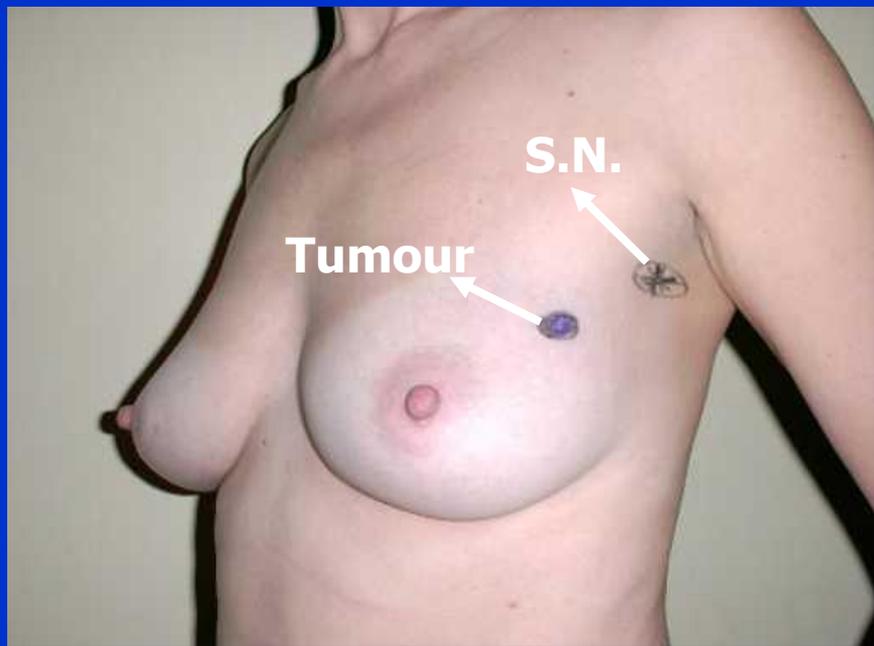




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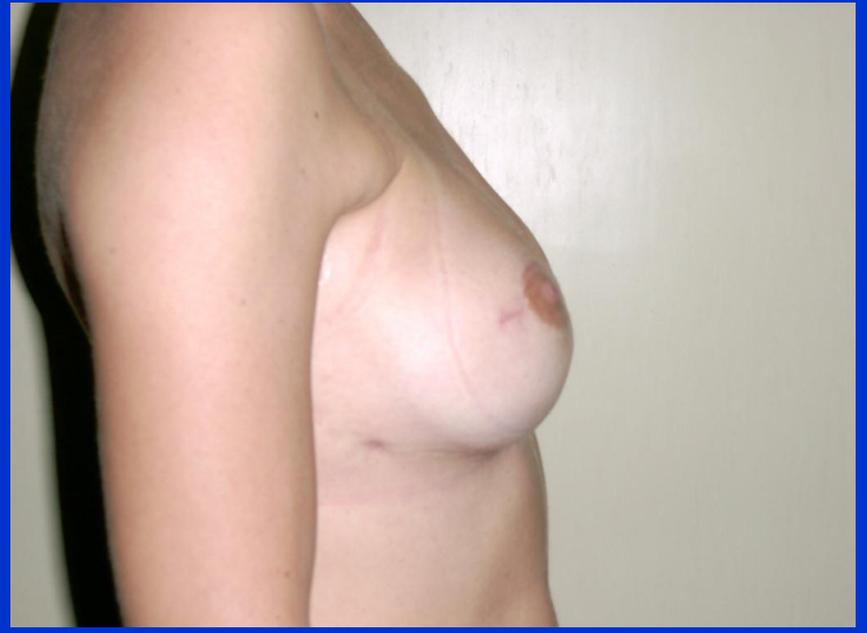
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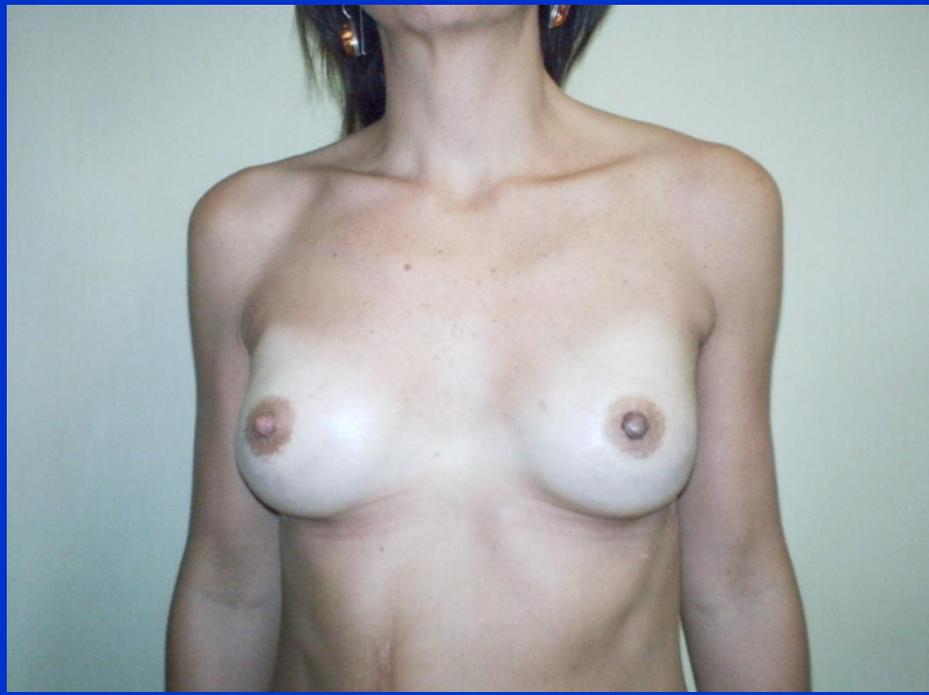
“Nipple sparing” Mastectomy

and

Reconstruction with prosthesis



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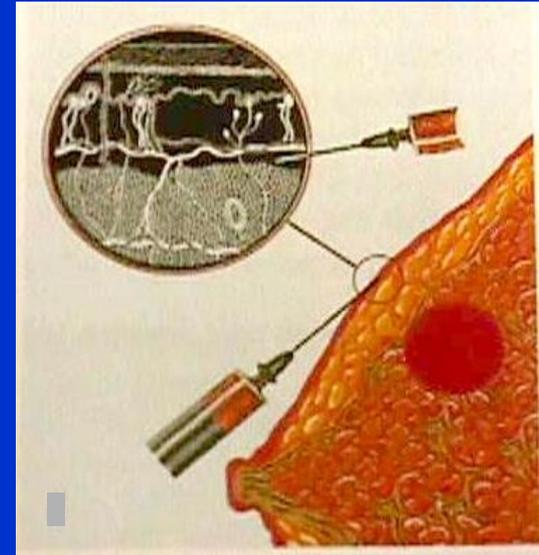


The sentinel node biopsy (SNB) has been developed to predict the status of axillary nodes.

INJECTION TECHNIQUE

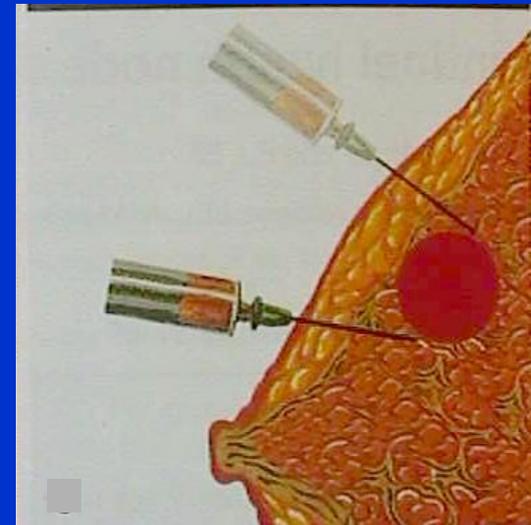
- **subdermal**

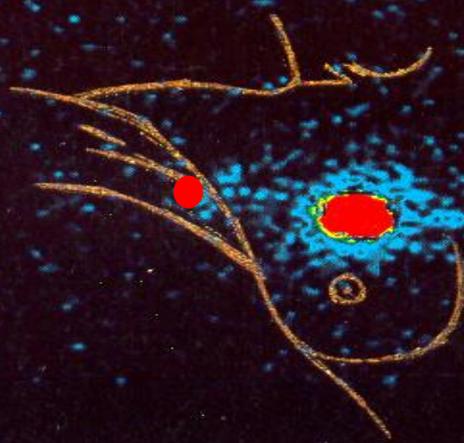
Injection above
the breast lesion



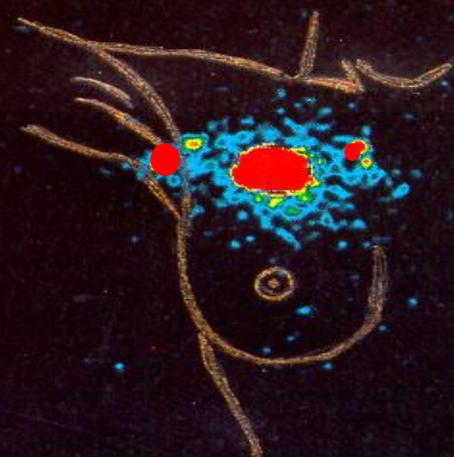
- **peritumoral**

Intraparenchymal
injection around the
breast mass

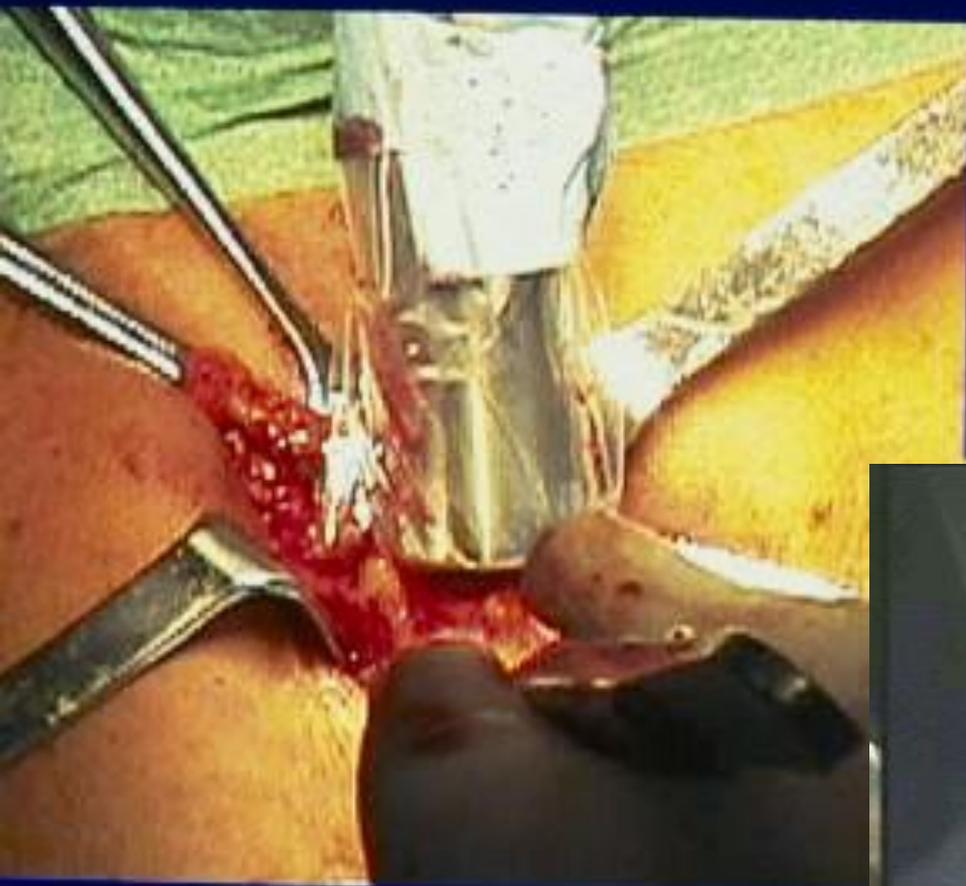




RIGHT OBLIQUE ANTERIOR



ANTERIOR



Radiation therapy in early breast cancer

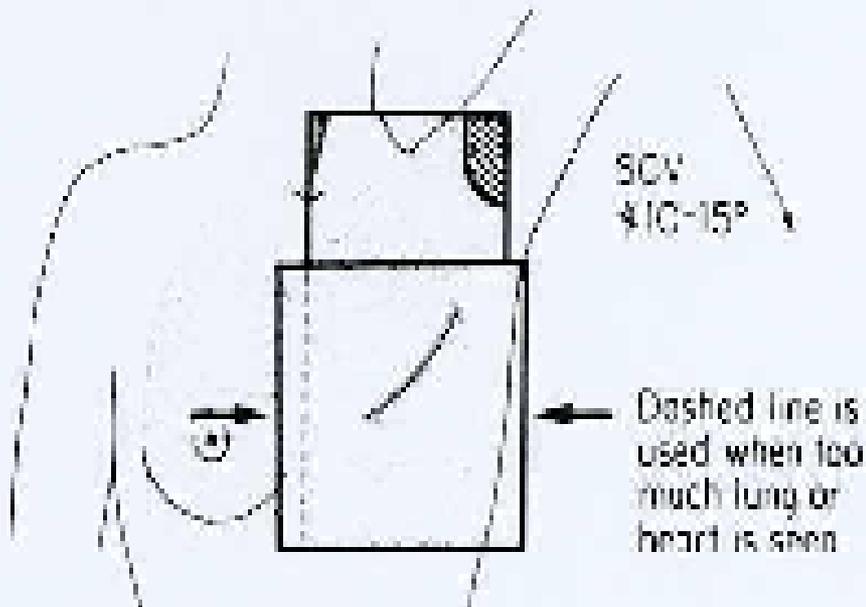
Breast radiation reduces relapses in the breast and chest wall. On average, for patients at high risk of local relapse, radiation therapy was also shown to improve survival.

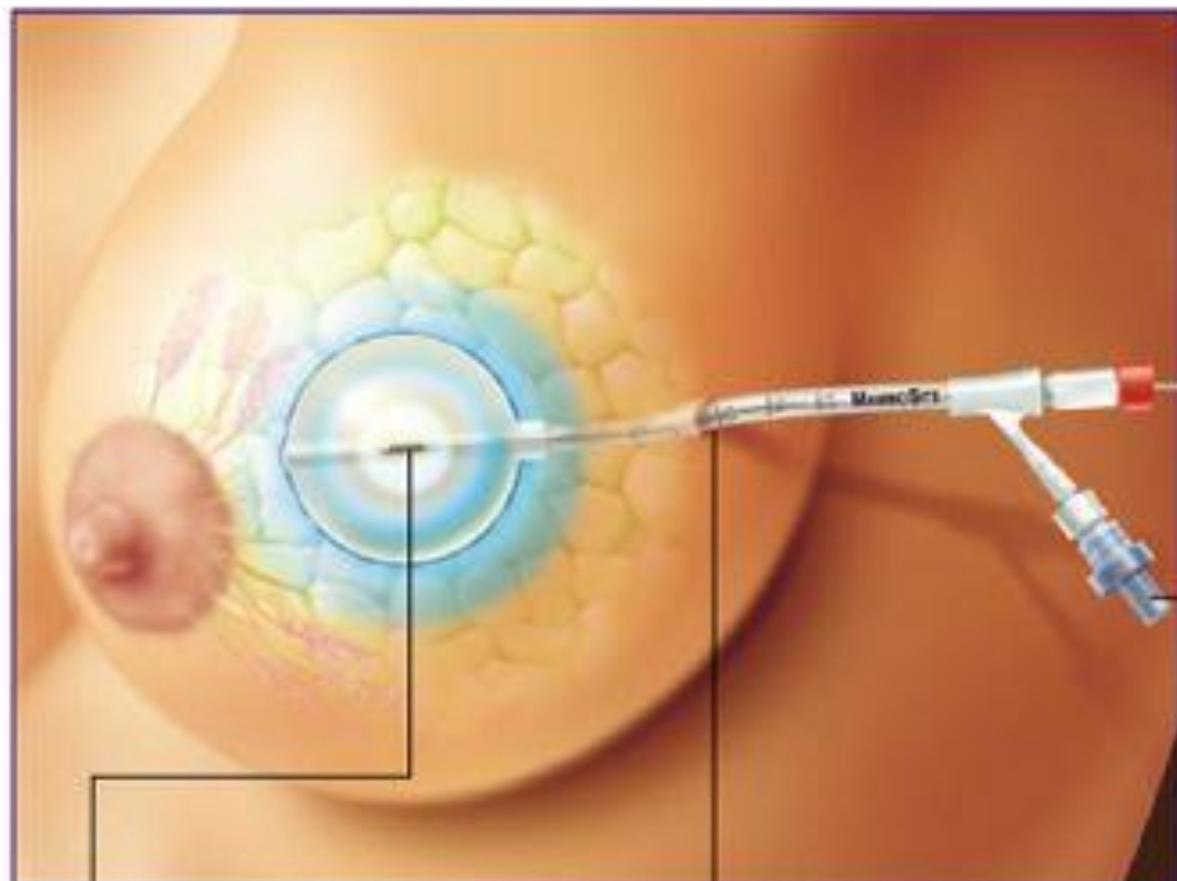
Radiotherapy

From extensive fields after mastectomy

to

Partial breast irradiation after breast conserving surgery

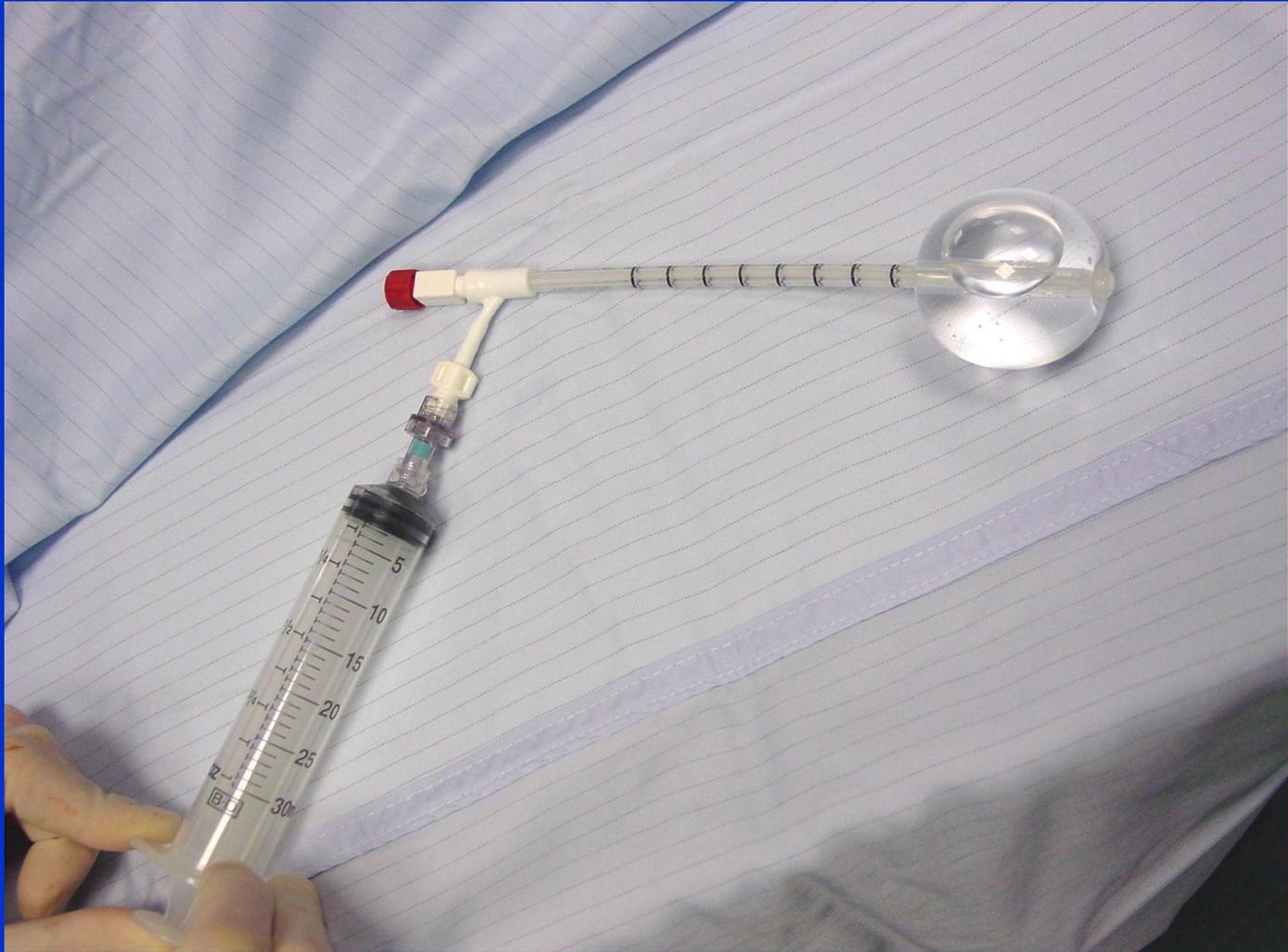




- Radiation is delivered via a high-dose rate (HDR) remote afterloader under precise computer control
- The MammoSite RTS is compatible with Nucletron, Varian, and GammaMed[®] HDR afterloader equipment

• An ^{192}Ir source (connected to HDR afterloader, above) is positioned within the center of the MammoSite balloon to deliver a highly conformal dose to the area immediately surrounding the resected tumor

- A trocar is used to create a pathway to the lumpectomy cavity for insertion of the catheter
- The MammoSite RTS is inflated with saline to allow the surrounding tissue to





A breast carcinoma is defined by

- 1)Size**
- 2)Histotype (30% less malignant)**
- 3)Lymphnode status**
- 4)Grading (1-3)**
- 5)Hormone receptor status (ER , PgR)**
- 6)Proliferation Index (Ki- 67)**
- 7)Vascular Invasion**
- 8)HER 2 (- , + , ++ , +++)**

Example A: Patient age 61, postmenopausal

- **Size 1.2 cm**
- **Node negative**
- **G1**
- **ER 90% , PgR 80%**
- **Ki 67: 5%**
- **No Vascular invasion**
- **c-erb B2 neg**

Example B : Patient age 45 , premenopausal

- **Size 2.5 cm**
- **4 positive nodes**
- **G3**
- **Ki 67: 60%**
- **ER neg. , PgR neg.**
- **cerb B2 +++**
- **Vascular invasion**

Patients should always been given a copy of the pathology report, have a first introduction to it and be invited to come back with a list of questions.