



Curso de Radioterapia Intraoperatoria

Utilidad en Cirugía Oncoplástica

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ONCOPLASTIC SURGERY...

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The term 'oncoplastic surgery' is used to describe several volume displacement operations that are technically simple, in which the defect created by large partial breast excisions is covered by a breast flap mastopexy closure.

Incorporation of plastic surgery techniques in order to obtain good oncologic control with favorable cosmetic results .

Why Oncoplastic?

Why Oncoplastic?

- Bad selection or planning = 30% unsatisfactory result of BCS
- Bad results of BCS => mastectomy and reconstruction.
- Oncoplastic:
 - Reduction of mastectomy %
 - Better **cosmesis** and **margins**
 - Essential: **clipping** margins and/or **Boost with IORT**
 - More complex than conventional BCS
 - more complications
 - **better skills needed: training**
 - Avoid over indication
 - Minor asymmetries are well tolerated. Although they will increase with time.

Simple CLASSIFICATION

Oncoplastic surgery level	Description
1	Less than 20% of breast volume excised No skin excision required No mammoplasty required
2	Anticipation of 20–50% breast volume excision Excision of excess skin required to reshape breast Based on mammoplasty techniques

Clough KB. Ann Surg Oncol. 2010

*Level 2 might require contra-lateral breast reshaping for symmetry

ONCOPLASTIC SURGERY

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Mamoplastia Horizontal



Mamoplastias Verticales



Mamoplastia Lateral



Mamoplastia Rotación

ONCOPLASTIC SURGERY

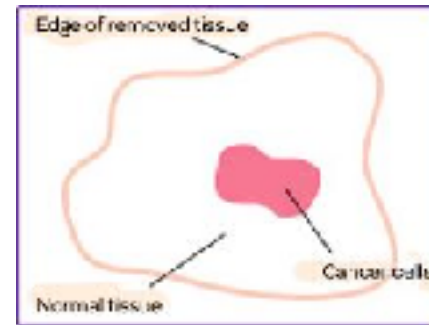


Mamoplastia Lateral

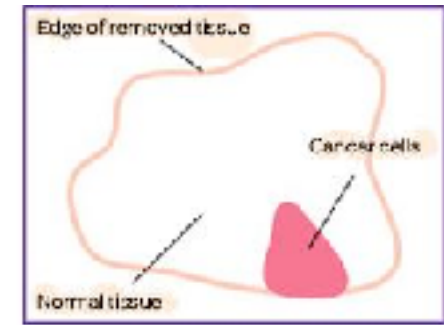
Mamoplastia Rotación

POSITIVE MARGIN...

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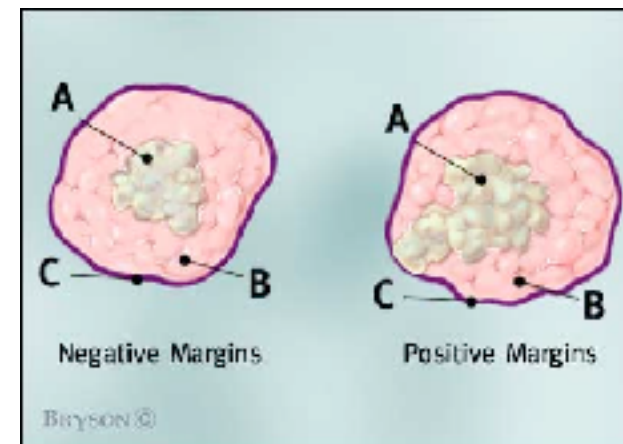


Negative margins



Positive margins

- PROBLEM IF “CONVENTIONAL” BREAST CONSERVING SURGERY
- **DRAMA IF ONCOPLASTIC**



Only REAL margins treated

Unpublished: External Boost 50% > Intrabeam

Less volume, equal results, less toxicity

Margins wider than 2-3 cm don't need Boost



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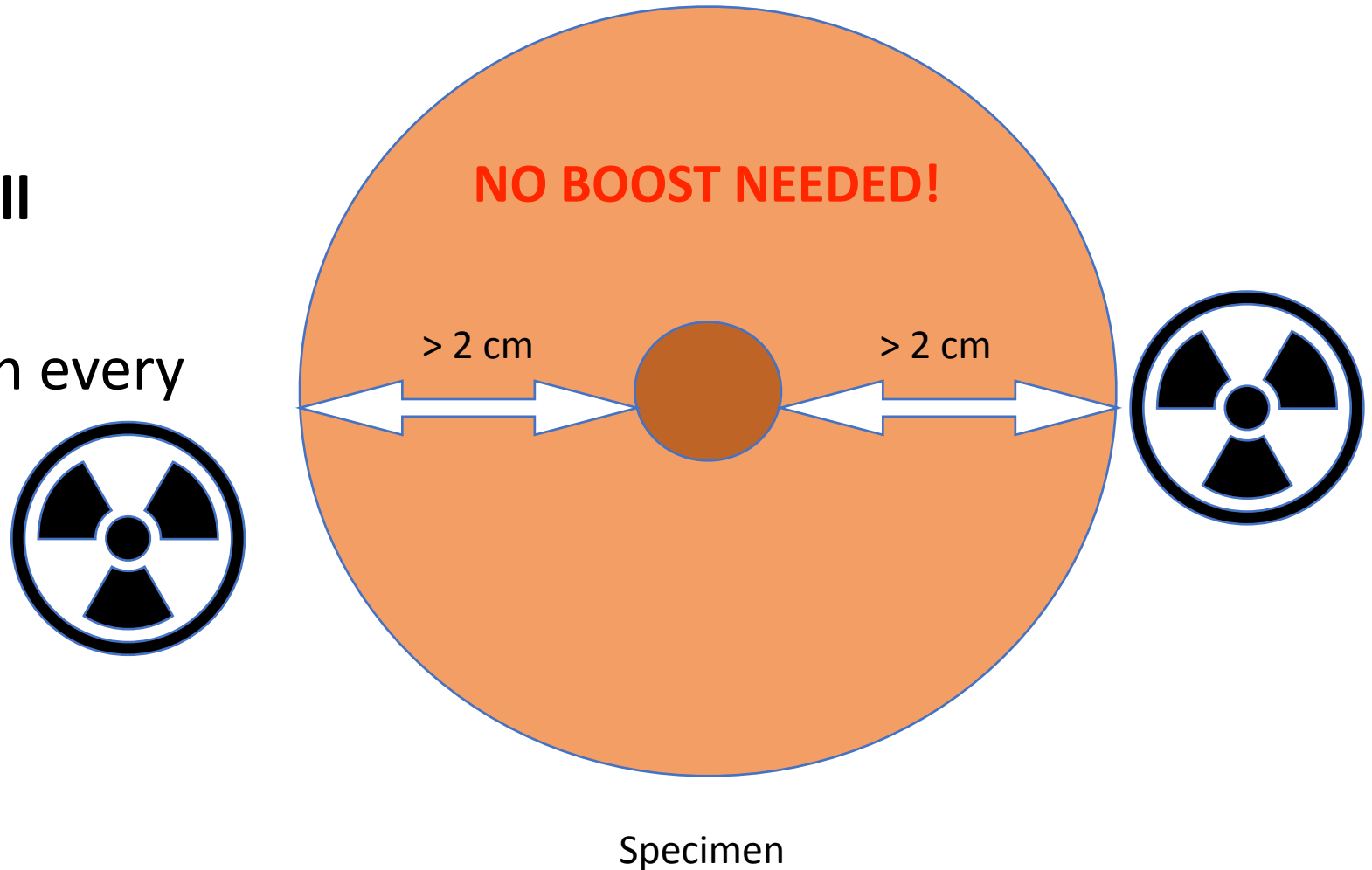
- » IOUS for margin assessment
- » **IOUS in oncoplastic procedures:**
 - » **exact margin location**
- » Pursestring:
 - » deep
 - » middle
 - » surface
- » Protect skin (wet gauze, spacers, needle trick...)
- » Protect Chest Wall (deep tumours, big applicators)

SITUATIONS IN ONCOPLASTIC SURGERY

- **Gland remodelling**
- Very wide margins in all directions
- No very wide margins in every direction
- **Boost is provided BEFORE remodelling, just after the tumour is excised. After the Boost, gland mobilisation and remodelling is performed.**

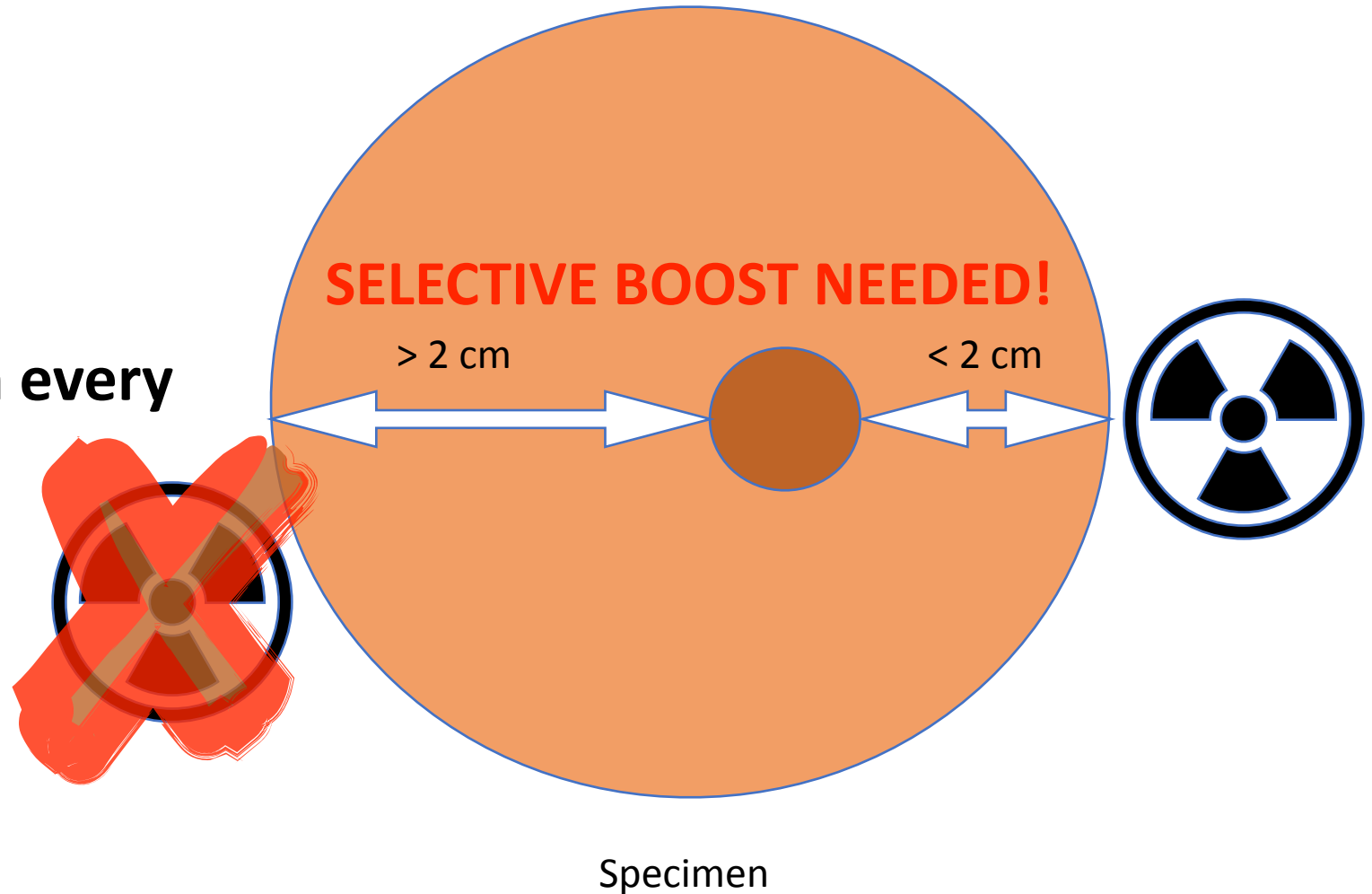
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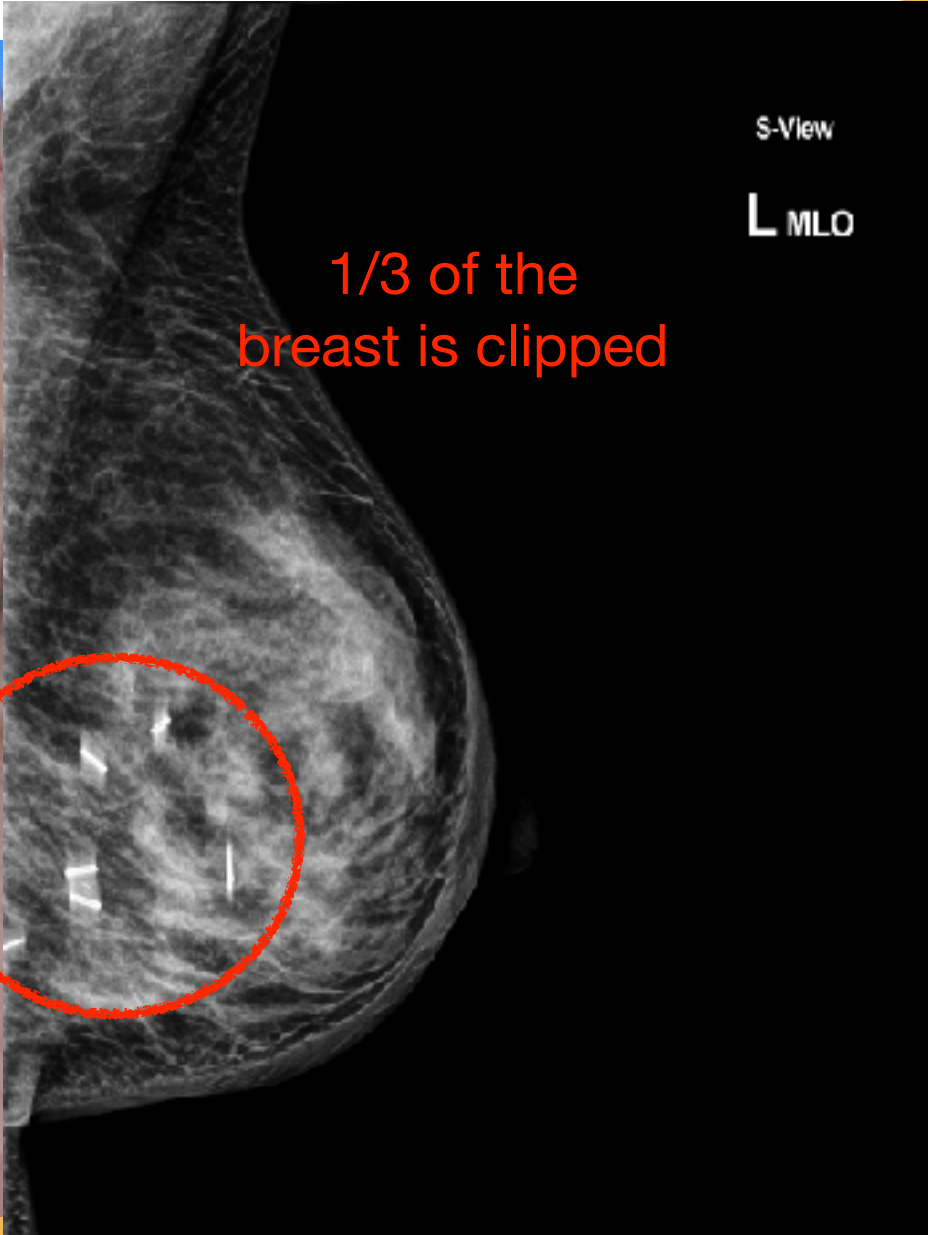
SITUATIONS IN ONCOPLASTIC SURGERY

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TARGET MISS

TARGET MISS



1/3 of the breast is clipped

S-View

L MLO



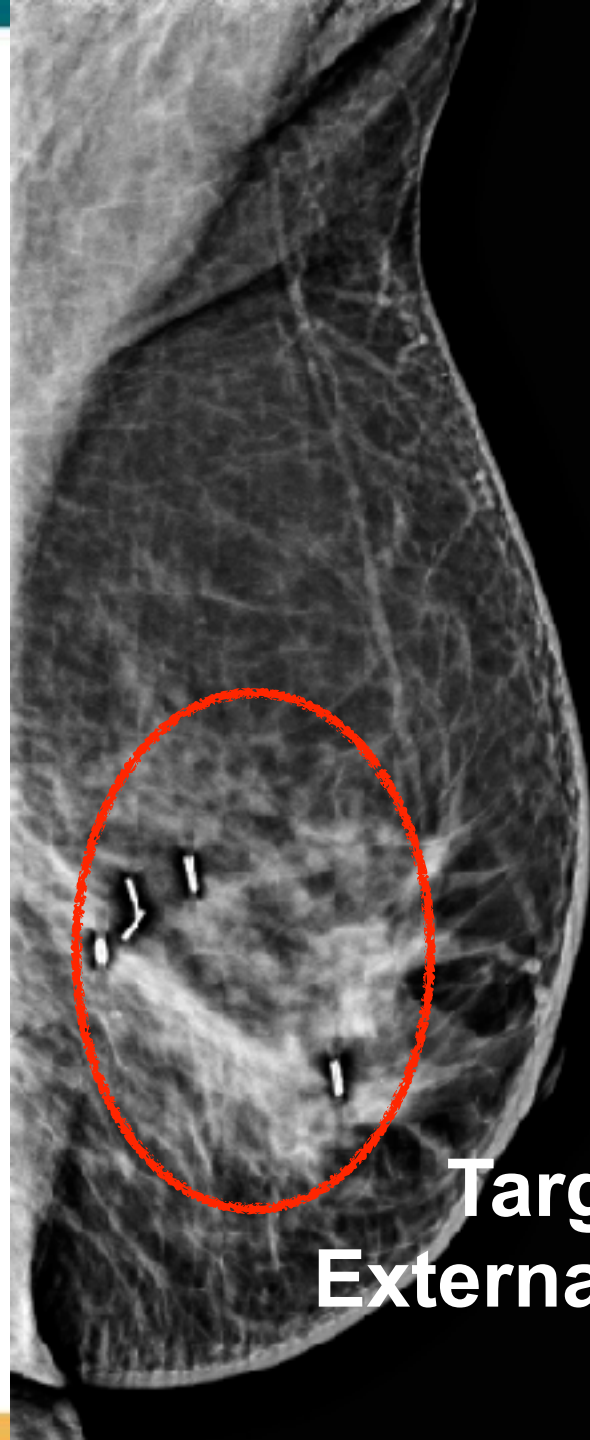
S-View

L MLO



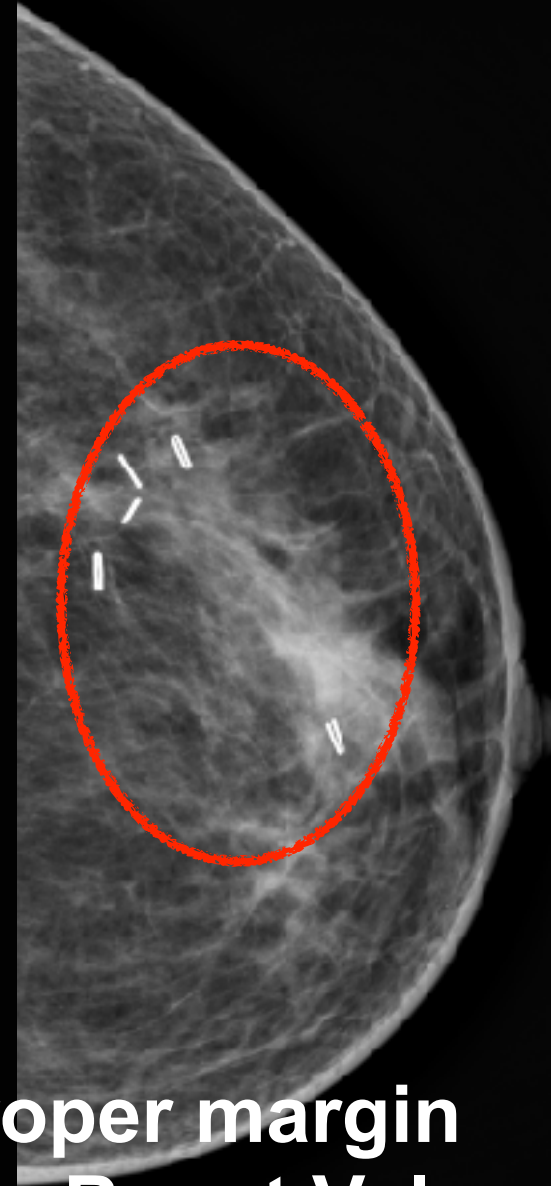
L CC

Targeting the proper margin
External Rt: very big Boost Volume



S-View

L MLO



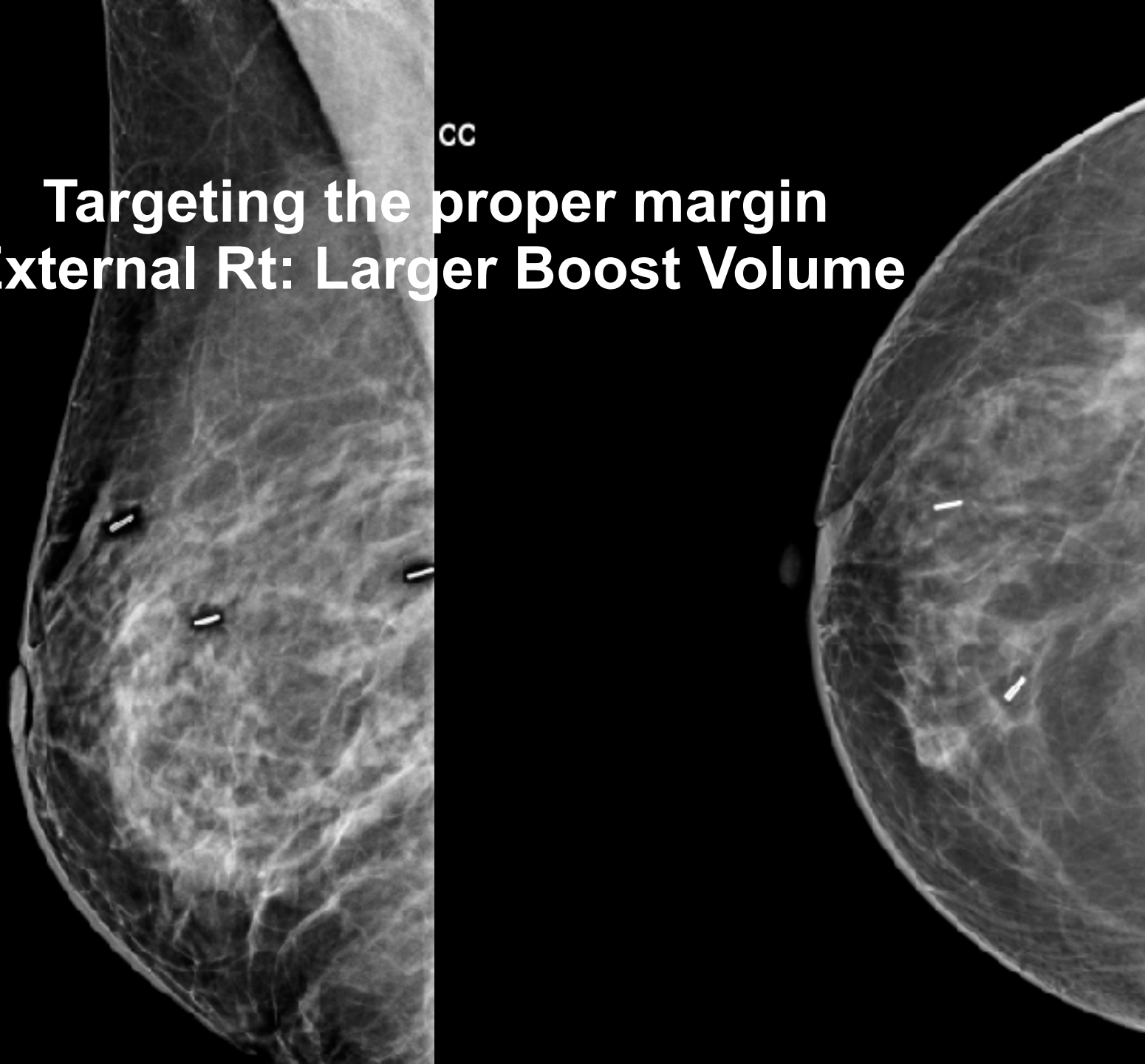
L CC

Targeting the proper margin
External Rt: very big Boost Volume

S-View
R MLO

CC

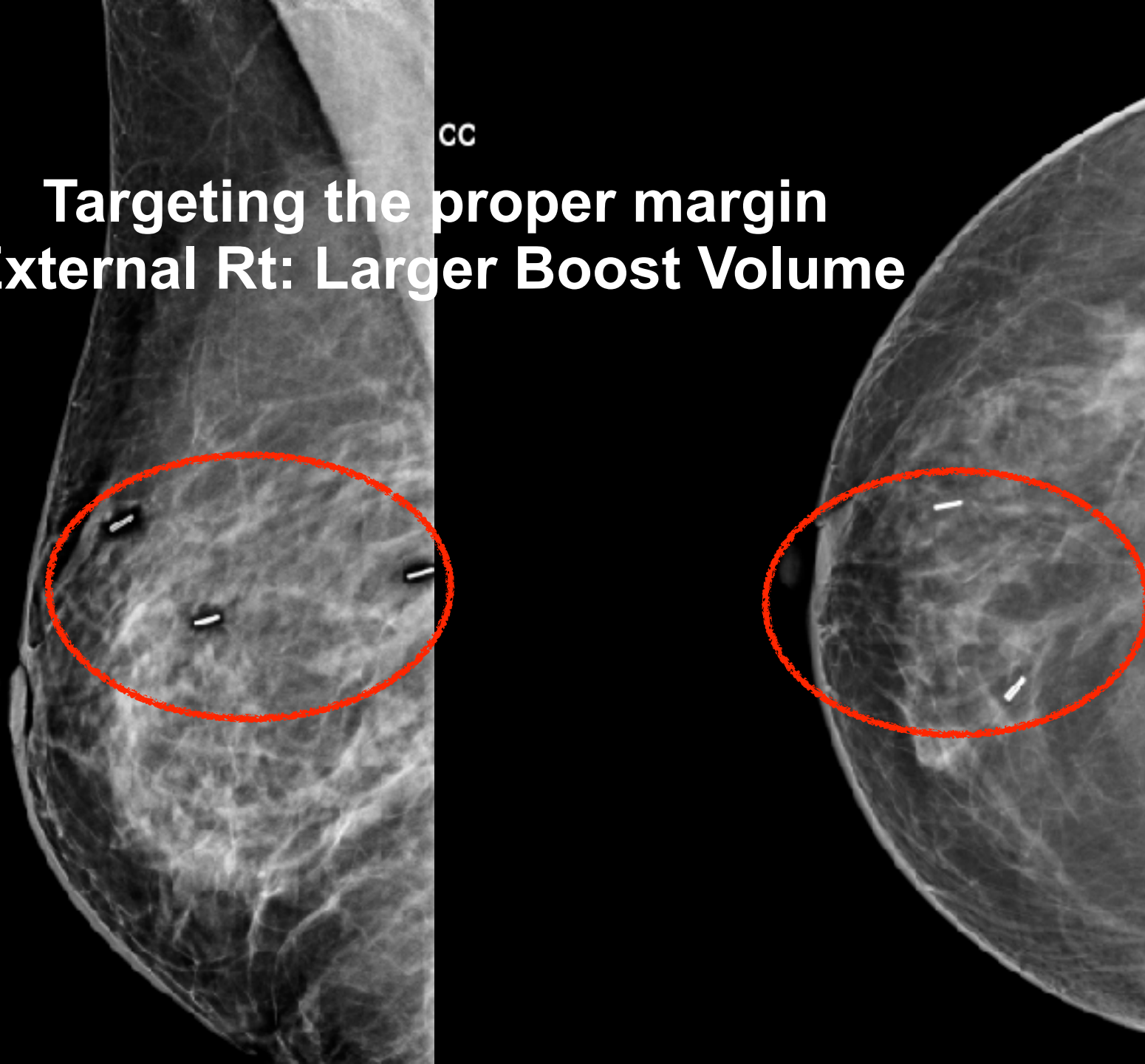
Targeting the proper margin
External Rt: Larger Boost Volume



S-View
R MLO

CC

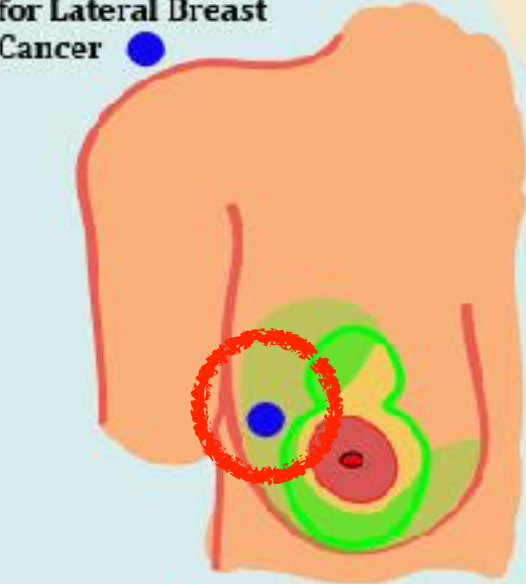
Targeting the proper margin
External Rt: Larger Boost Volume



Oncoplastic Breast Reduction Examples

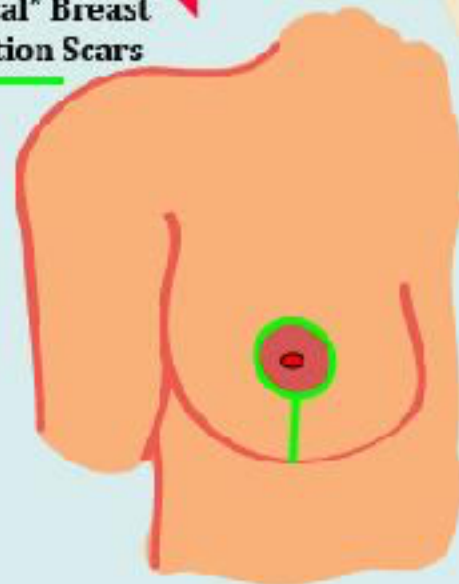
REAL MARGINS!

"Vertical" Breast Oncoplastic Reduction-Reconstruction for Lateral Breast Cancer

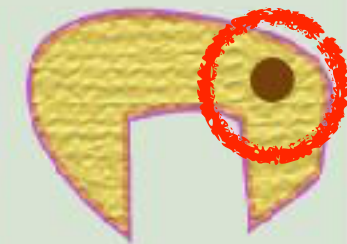
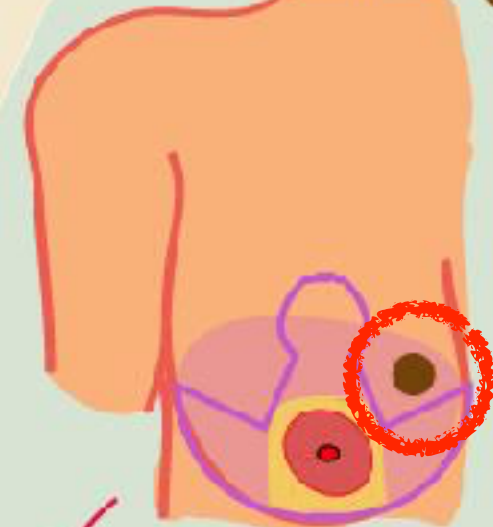


Removed Breast Tissue Includes Cancer + Margin

"Vertical" Breast Reduction Scars

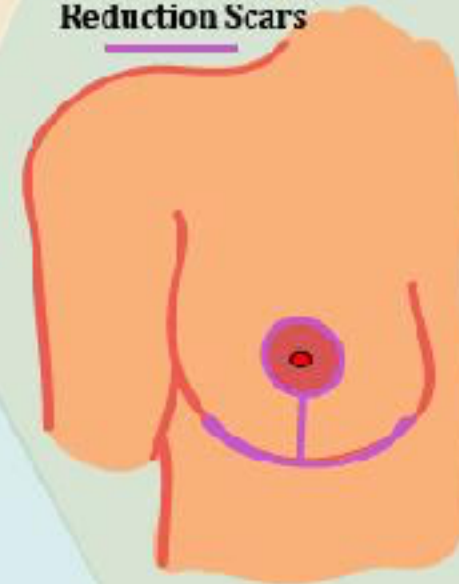


"Weiss" Breast Oncoplastic Reduction-Reconstruction for Medial Breast Cancer



Removed Breast Tissue Includes Cancer + Margin

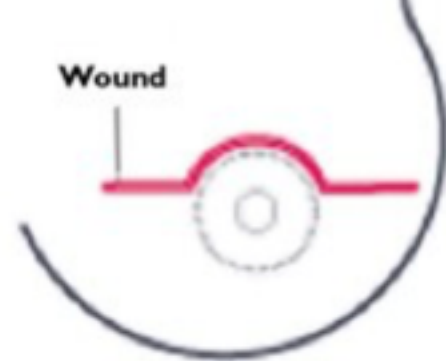
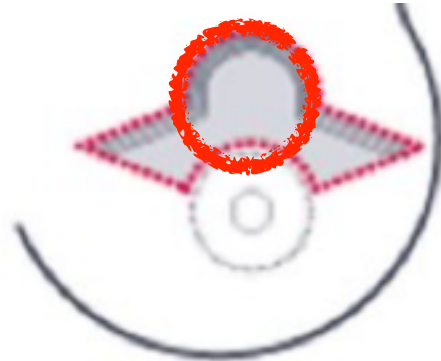
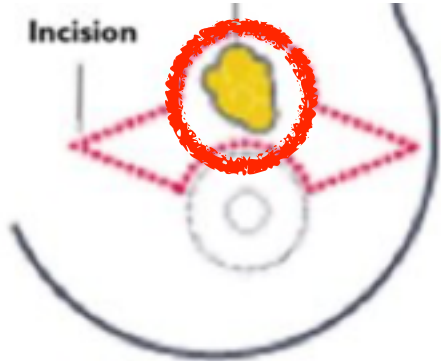
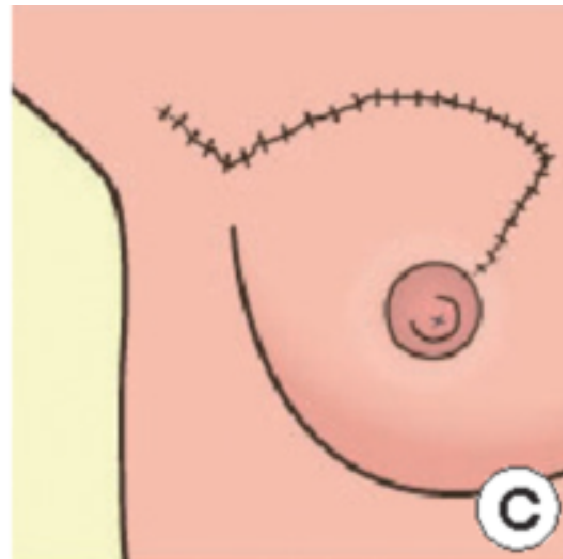
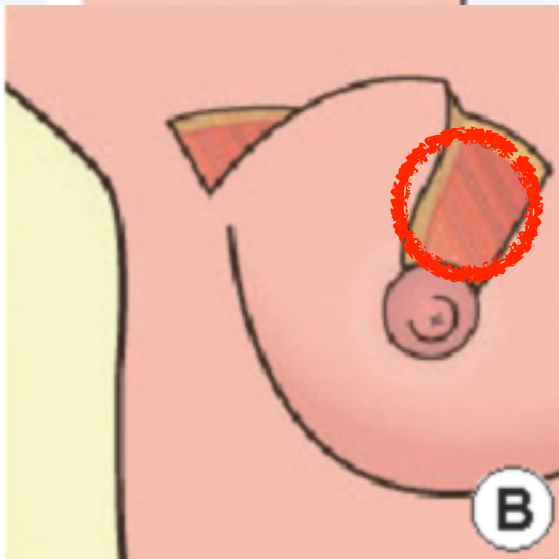
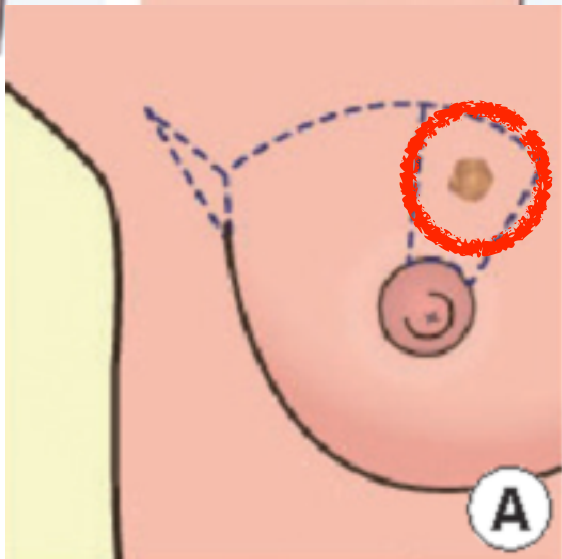
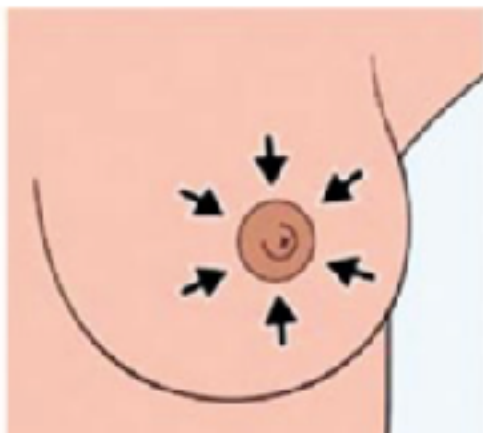
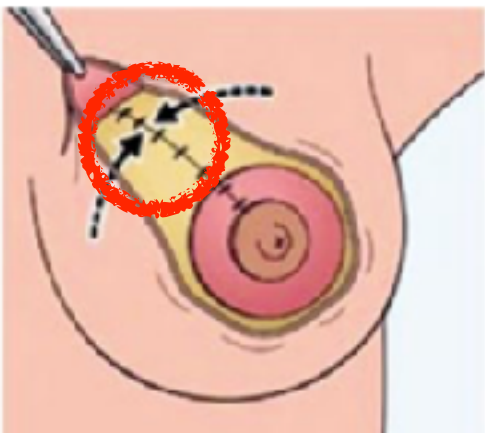
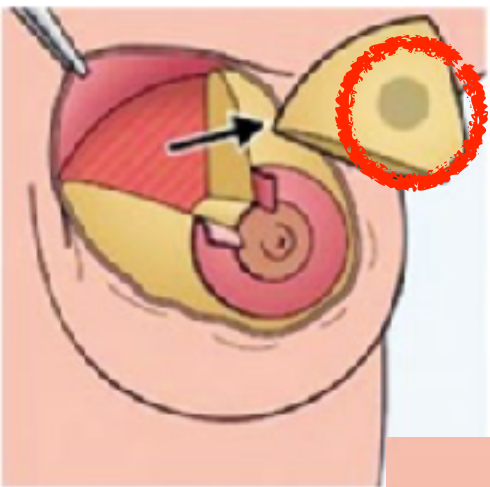
"Weiss" Breast Reduction Scars



Lateral Breast Cancer

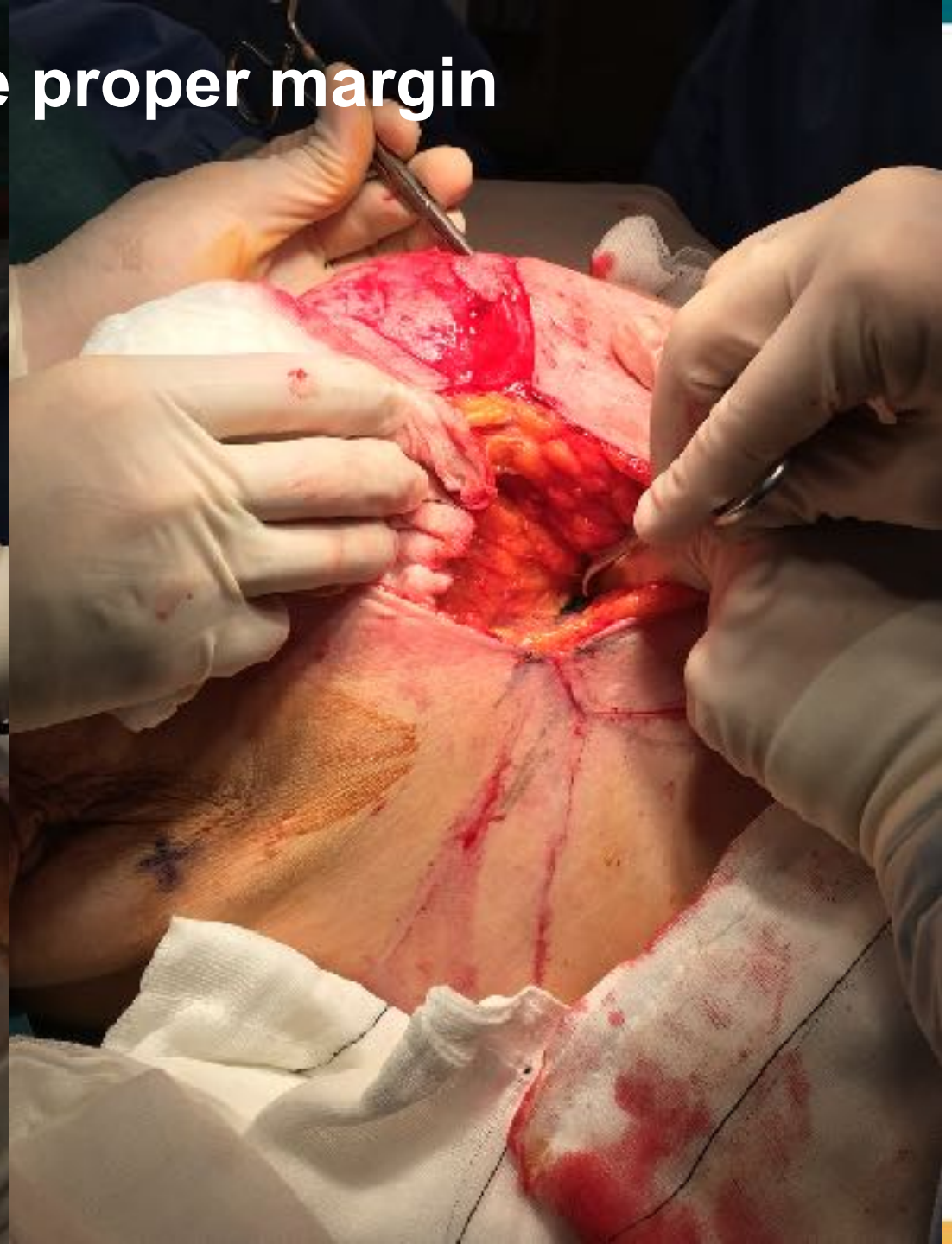
Medial Breast Cancer

REAL MARGINS!





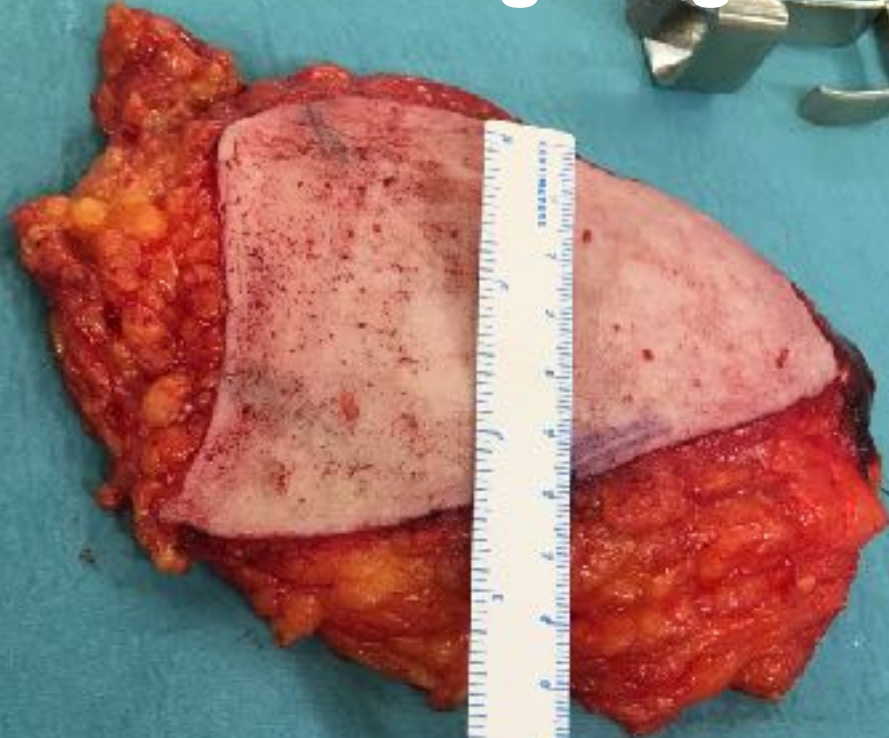
Targeting the proper margin



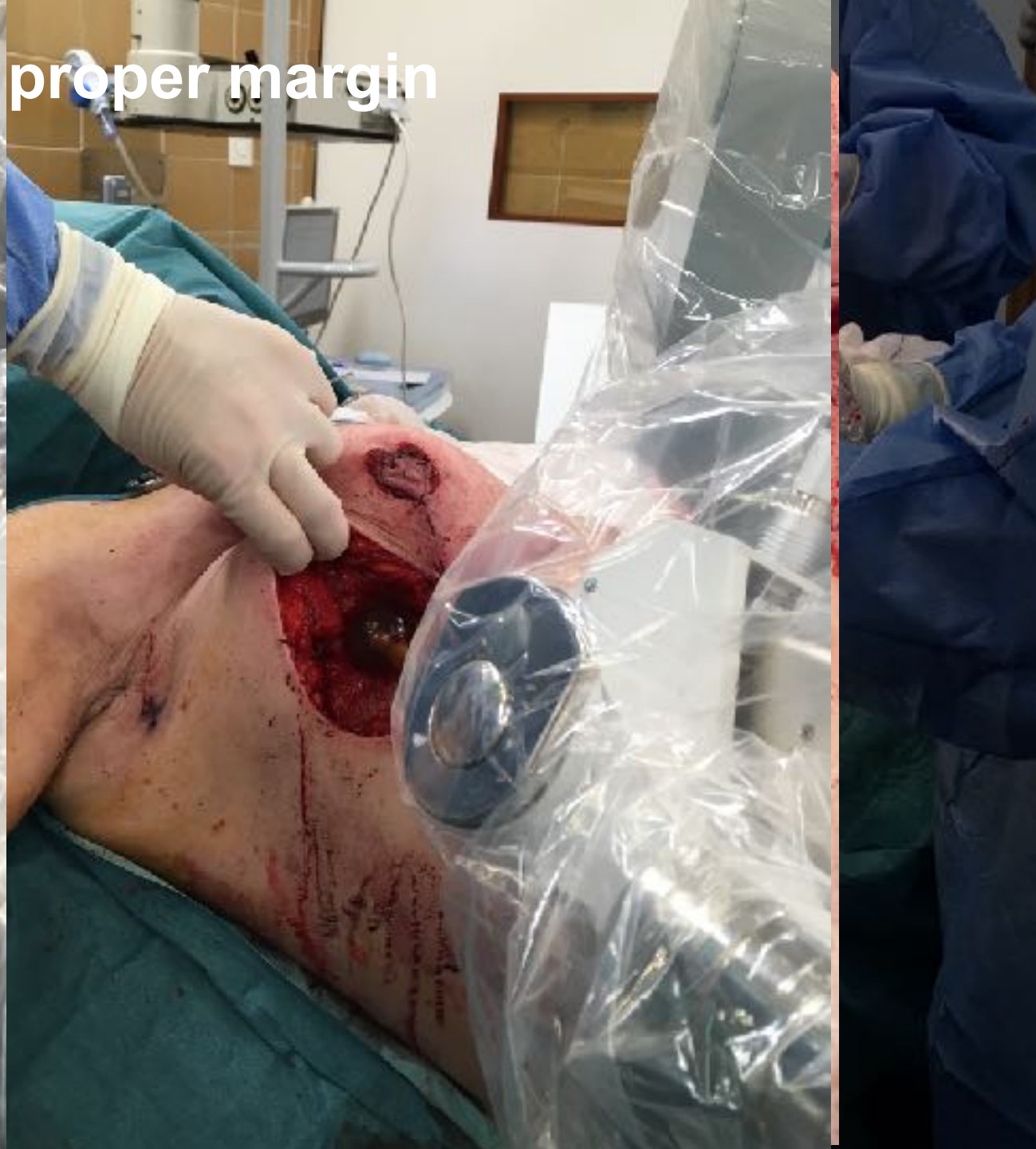
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Targeting the proper margin



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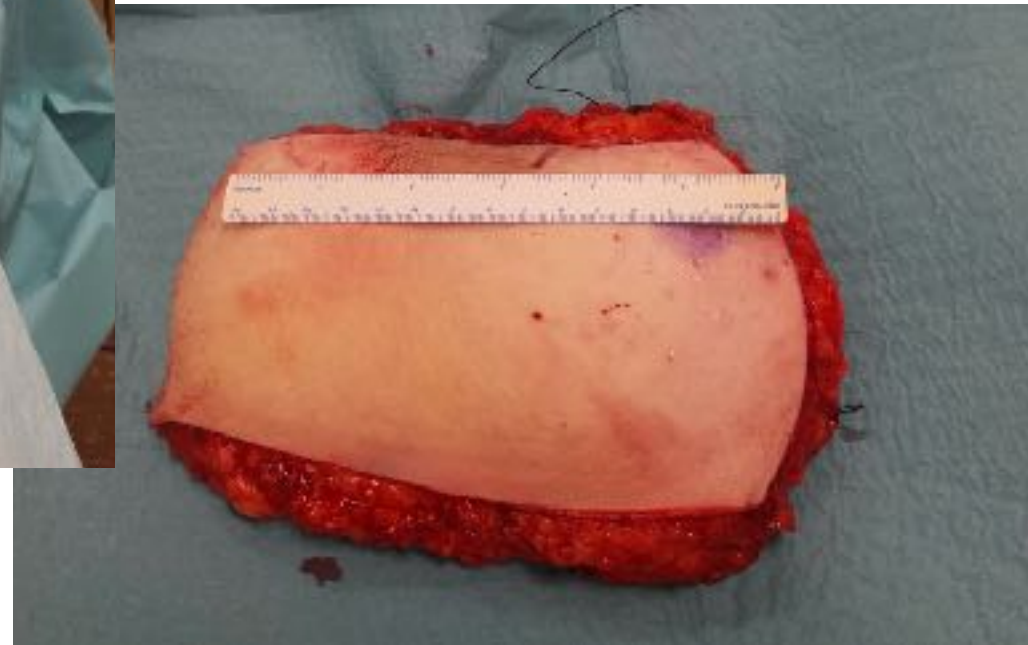


Targeting the proper margin



ONCOPLASTIC Surgery Margins

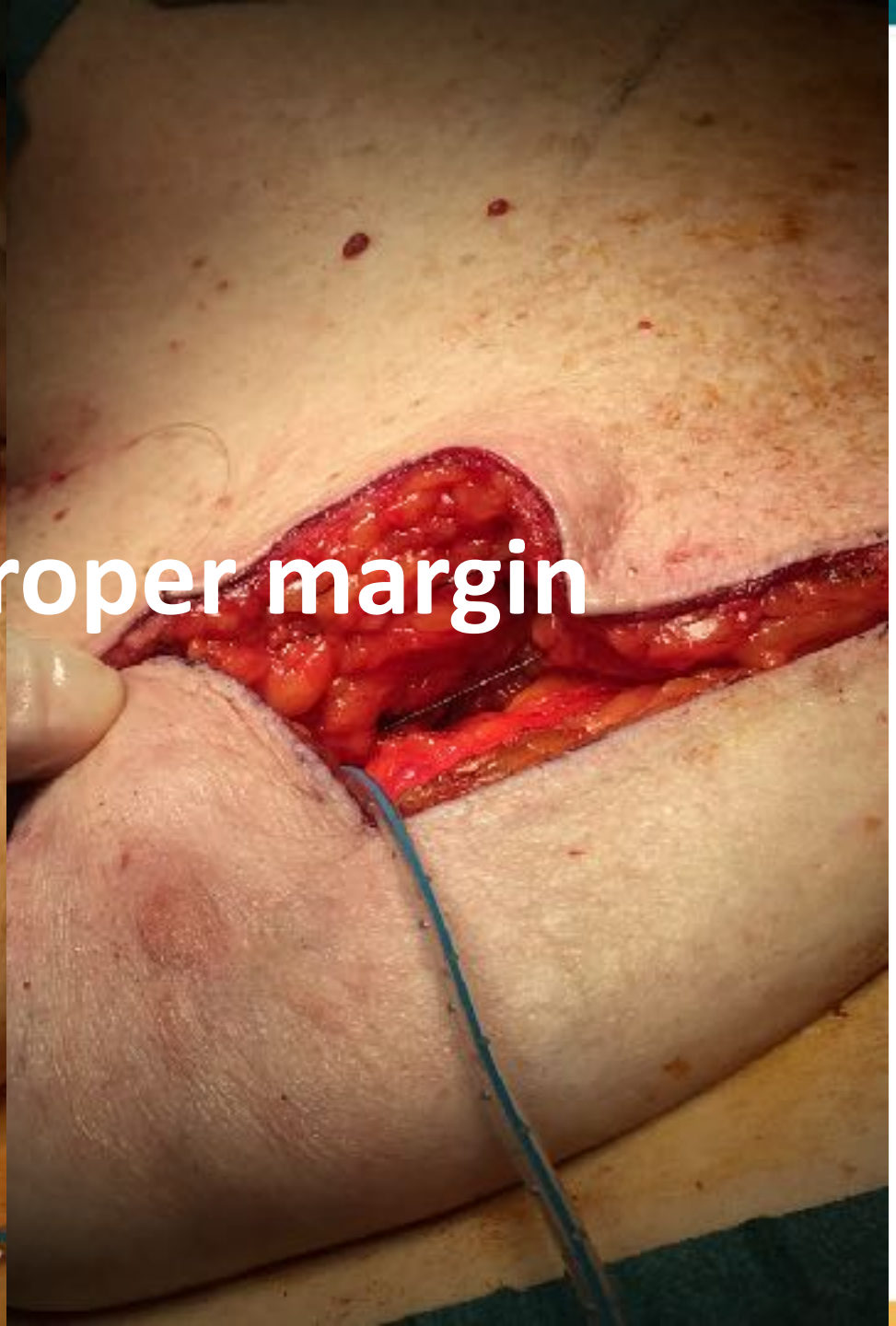
ONCOPLASTIC Surgery Margins



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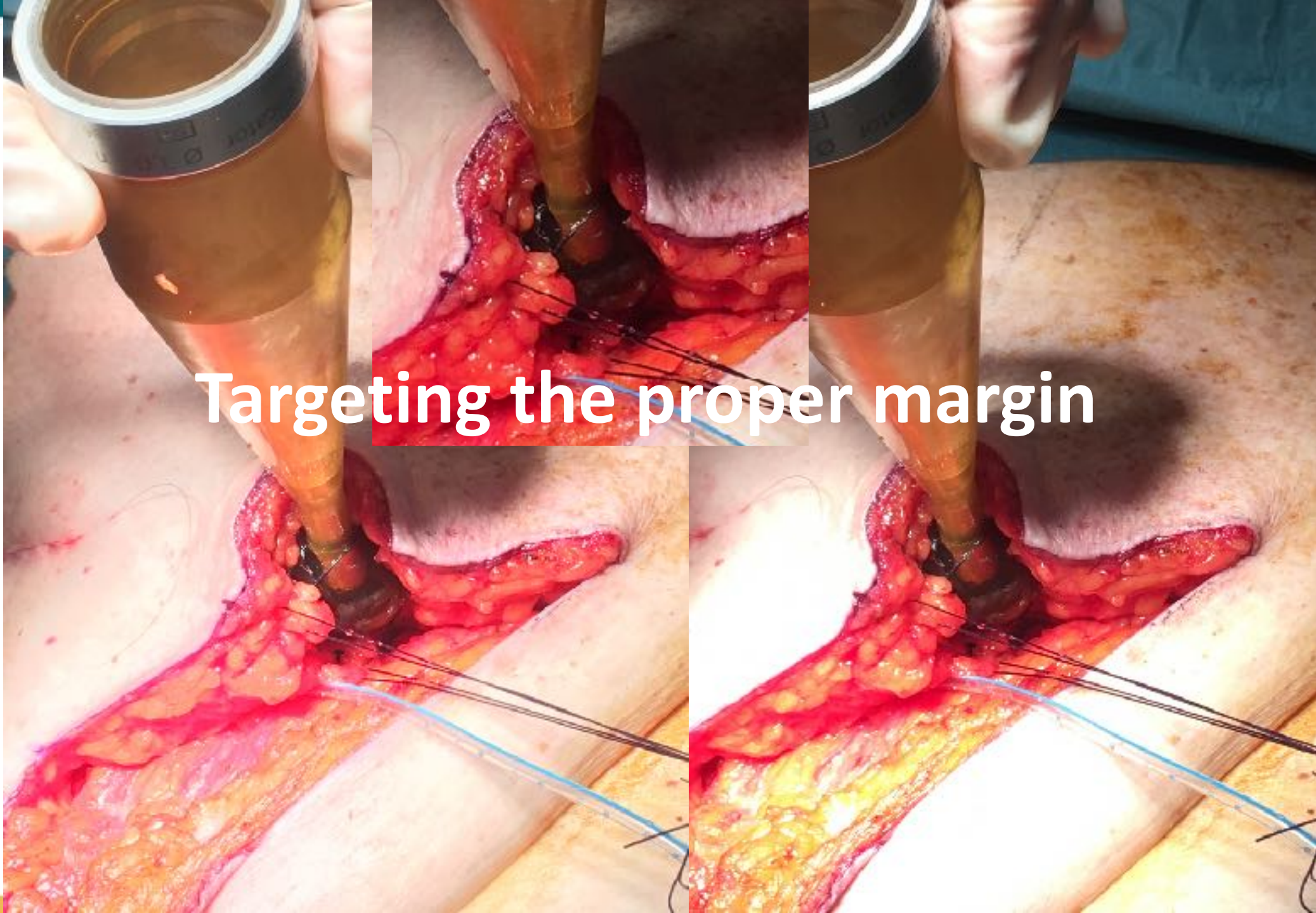






Targeting the proper margin

Targeting the proper margin



Excentric cavity (tumour + benign lesion)

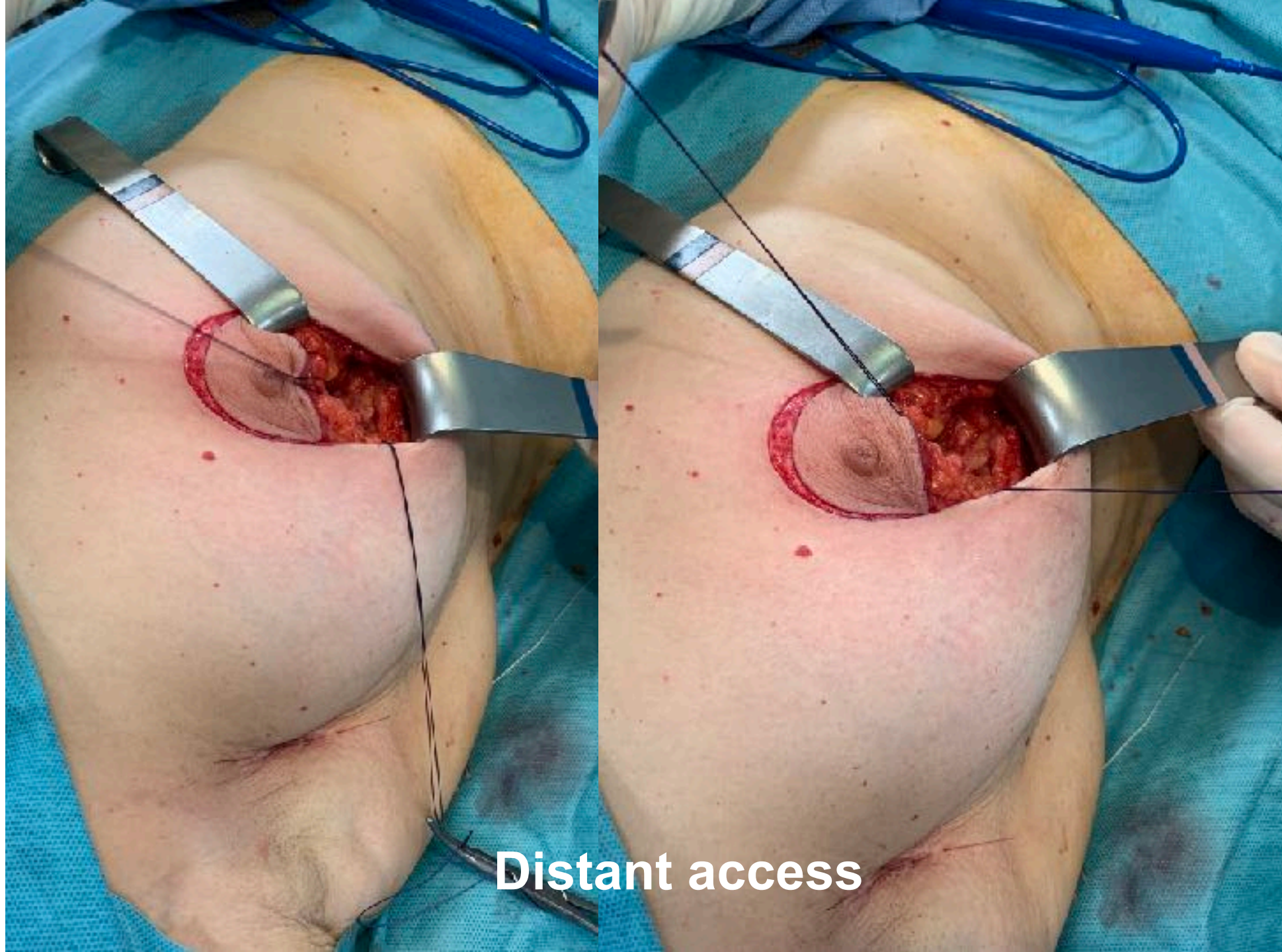


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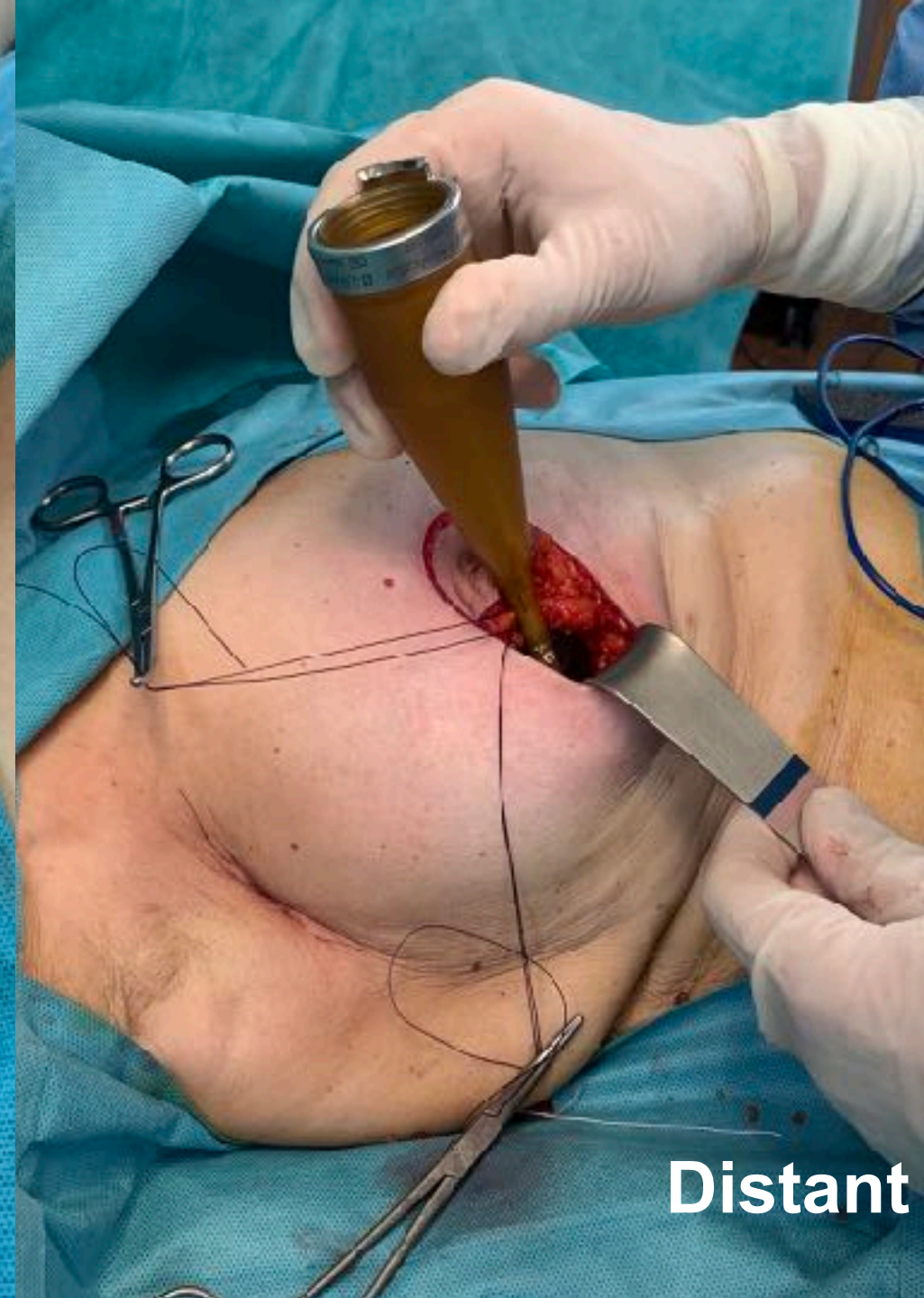


Tissue selective re-shaping:
***Glandular: easier reshaping, less seroma**
***Fatty: wider loops, external pressure, bigger applicator**





Distant access



Distant access



Distant access

“Needle trick”

Skin-applicator distance > 1 cm
More reliable than IOUS



GRISOTTI

GRISOTTI



RESULT

RESULT



RESULT



IORT

IORT

- **Conventional Rt has 20 to 80% “miss of target»**
- **Double volume of tissue irradiated with external Boost.**
- **External Boost for oncoplastic is difficult, even if margins were clipped.**
- **20 to 30% of all patients candidates to PBI.**
- **Less expensive, even lower CO2 print.**
- **Margins are provisional.**
- **Adds 40-60' to the procedure.**



TAKE-HOME MESSAGES

- **IORT:**
 - **Avoids «TARGET MISS»**
 - **Selective treatment in Oncoplastic Surgery**
 - **Less volume treated (50%), same effect (as a Boost)**
 - **In selected patients only treatment needed**



TAKE-HOME TIPS

- **IORT:**
 - **Skin protection**
 - **Cavity re-shaping for proper contact**
 - **Tissue selective re-shaping:**
 - **fatty versus glandular**
 - **Cavity closure, drains, but more seroma formation**
 - **Treat ONLY REAL MARGINS (<2 cm)**



**ANY QUESTIONS?
THANKS!!!**



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