



# SKIN SPARING MASTECTOMY-IMMEDIATE BREAST RECONSTRUCTION IN TREATMENT OF EARLY BREAST CANCER

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2. Patients and Methods
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4. Conclusion

# INTRODUCTION

Changes in treatment of breast cancer

Treatment for early breast cancer:

- \_ Modified radical mastectomy
- \_ Breast conserving therapy: lumpectomy + radiotherapy
- \_ Skin sparing mastectomy - Immediate breast reconstruction

# HISTORY

1894 : HALSTED : radical mastectomy

1948 : PATEY : modified radical mastectomy

1970 : modified radical mastectomy was popular

1980s : FISHER, VERONESI : breast conserving therapy

1980s : BOSTWICK, HARTRAMF: breast reconstruction following mastectomy

1991: TOTH & LAPPERT : skin sparing mastectomy – immediate breast reconstruction

1997- currently: many researches about complications, oncological outcomes, aesthetic outcomes of skin sparing mastectomy – immediate breast reconstruction <sup>4</sup>

# CONCEPTS

## Immediate breast reconstruction

- Breast reconstruction immediately after mastectomy
- Areola-nipple reconstruction 3 months after breast reconstruction

## Delayed breast reconstruction

- Breast reconstruction after complete treatment: 1 – 2 years
- Areola-nipple reconstruction 3 months after breast reconstruction

## Advantages

- Better functional and aesthetic outcome.
- Local recurrent rate: similar to conventional mastectomy
- Do not increase operative complications

# PATIENTS - METHODS

## Patients

One hundred and ten breast cancer cases stage 0, I, II treated by skin sparing mastectomy and immediate breast reconstruction at Surgery Department 4 – Ho Chi Minh City Oncology Hospital from 5-2003 to 10-2006

# Methods

## PATIENT SELECTION

### Indications

Stage 0, I, II breast cancer patients who request to be treated with breast reconstruction

### Contraindications

Patients with high risk for reconstruction surgery

Unhealthy patients

## Methods

### RECONSTRUCTION TECHNIQUE SELECTION

#### Skin sparing mastectomy + immediate reconstruction

Extended Latissimus dorsal flap: majority of patients

TRAM flap: patients with big breasts, thick abdomen fat

LD flap + implant: patients with big breasts, thin abdomen fat

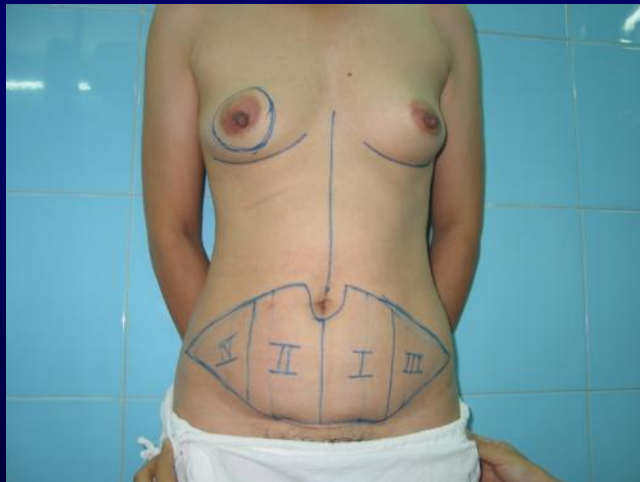
#### Nipple and Areola reconstruction

Local flap + tattoo



# Methods

## OPERATIVE TECHNIQUE



Marking before operation

# Methods

## OPERATIVE TECHNIQUE

### Skin sparing mastectomy

- Remove the whole breast tissue
- Remove the biopsy scar
- Remove the areola-nipple complex
- Axillary dissection

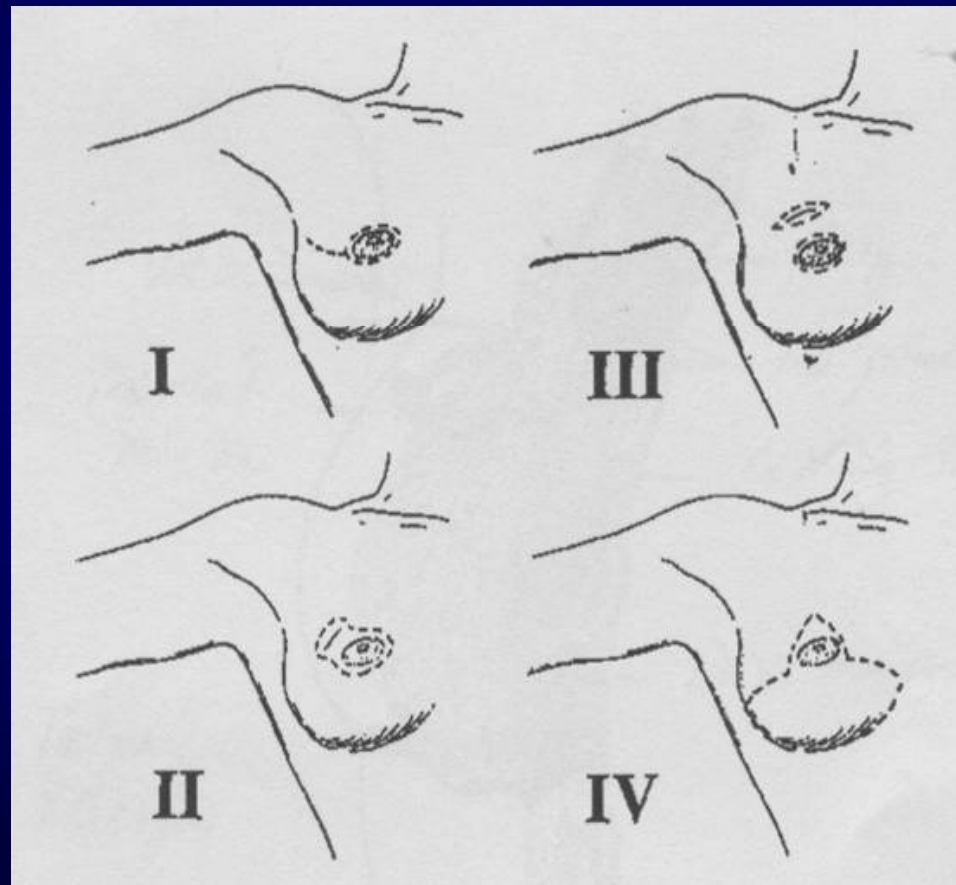
### Modified skin sparing mastectomy

- Nipple-sparing mastectomy
- Areola-sparing mastectomy

# Methods

## OPERATIVE TECHNIQUE

### Skin sparing mastectomy



Incision Selections

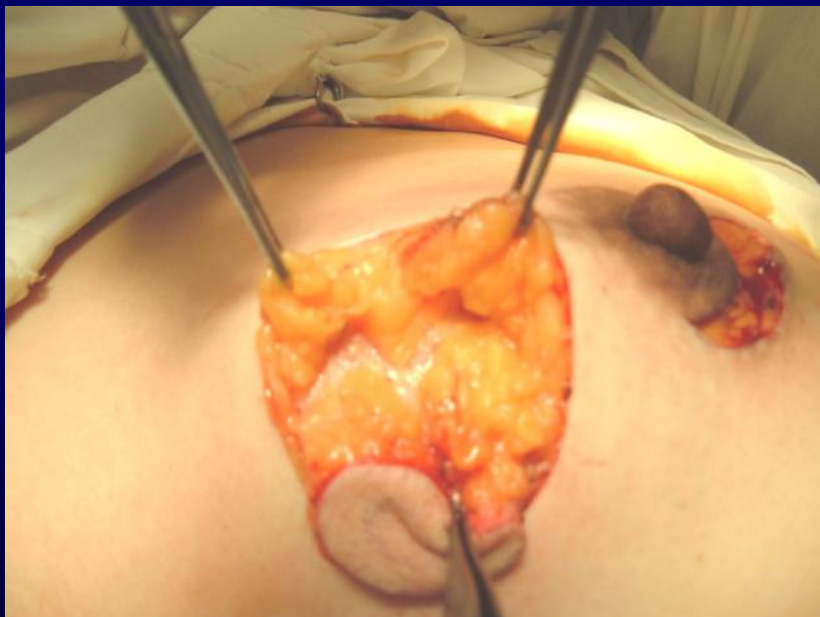
# Methods

## TECHNIQUE

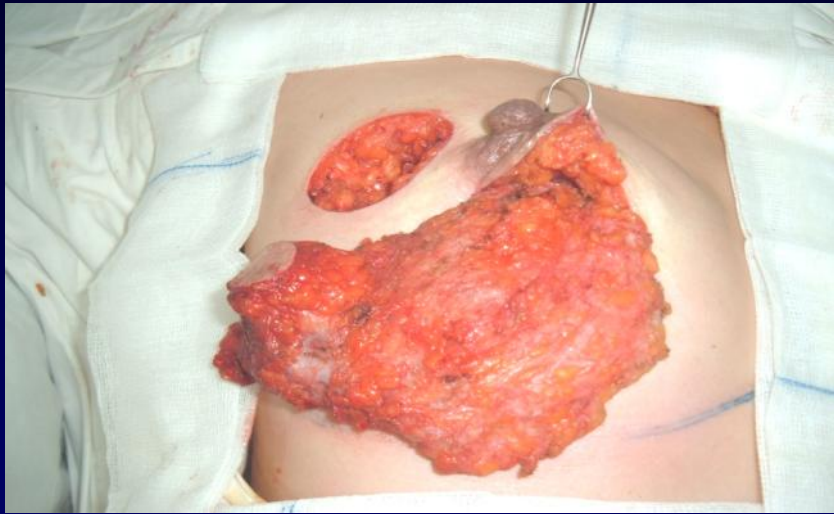


Skin sparing mastectomy

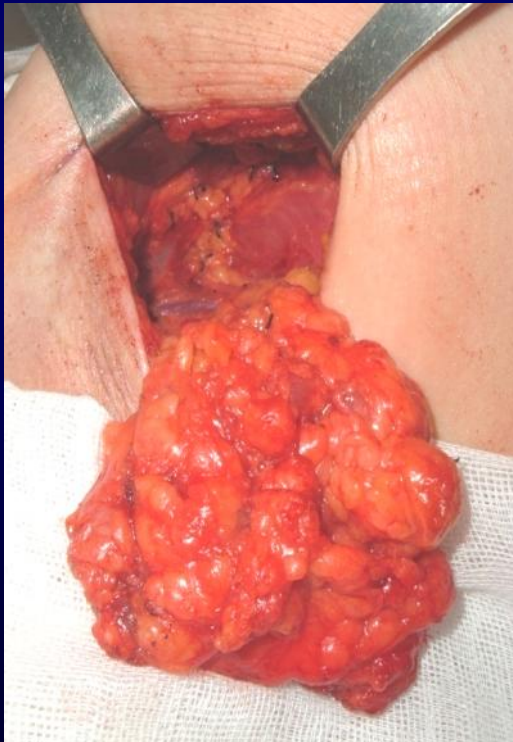




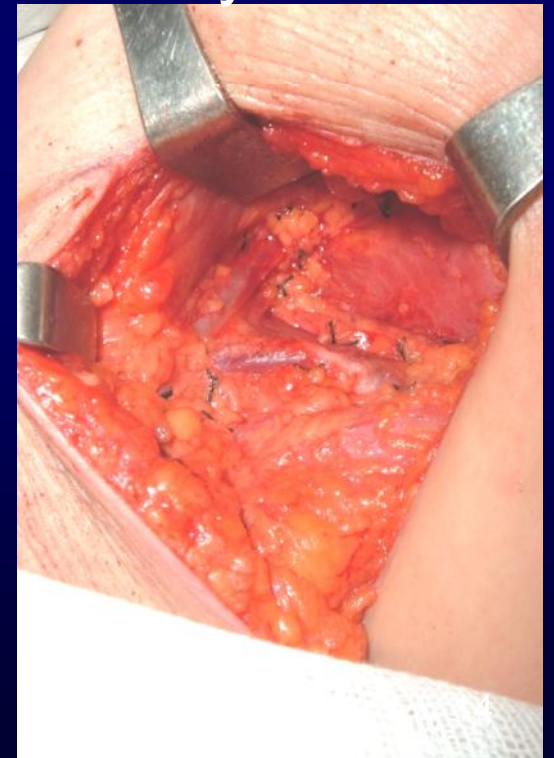
## Areola-nipple sparing mastectomy



Areola-nipple sparing mastectomy



Axillary Dissection





# Methods

## TECHNIQUE



The operative specimen

# Methods

## TECHNIQUE



Weigh and measure the volume of the operative specimen



# Methods

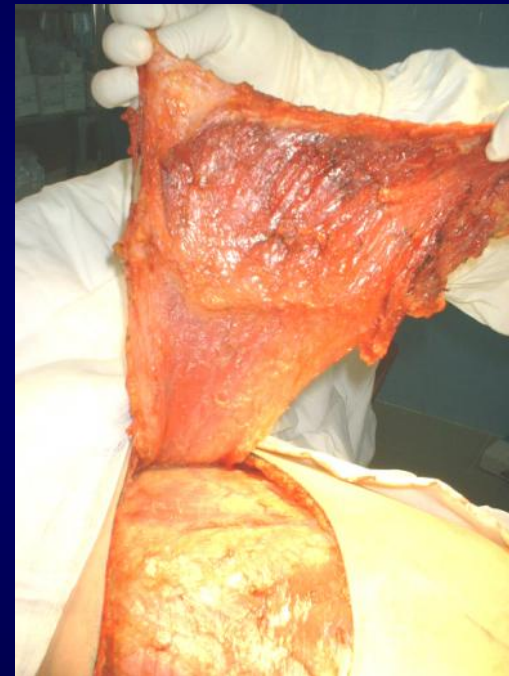
## TECHNIQUE



Weigh and shape the flap

# Methods

## TECHNIQUE



The LD flap

# Methods

## TECHNIQUE



Cut the insertion of the LD muscle

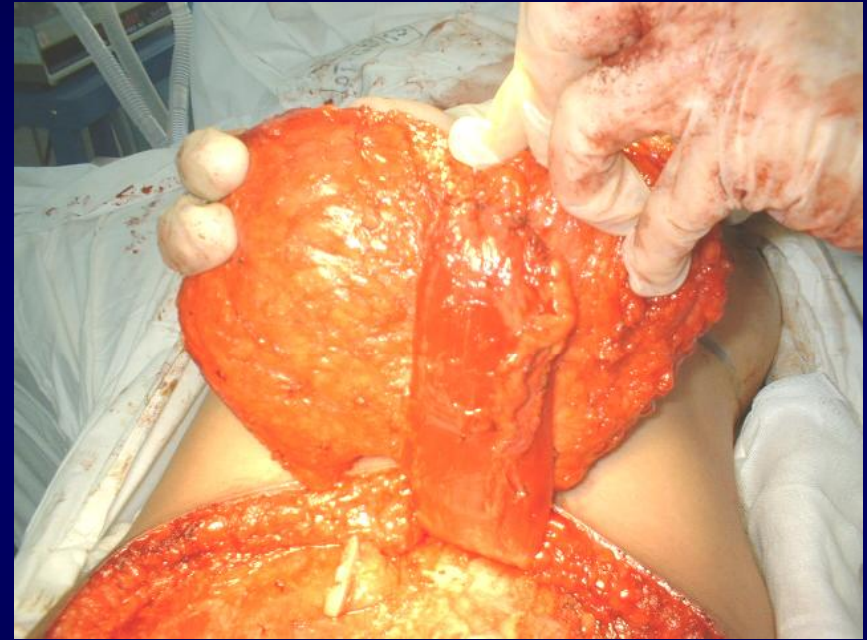
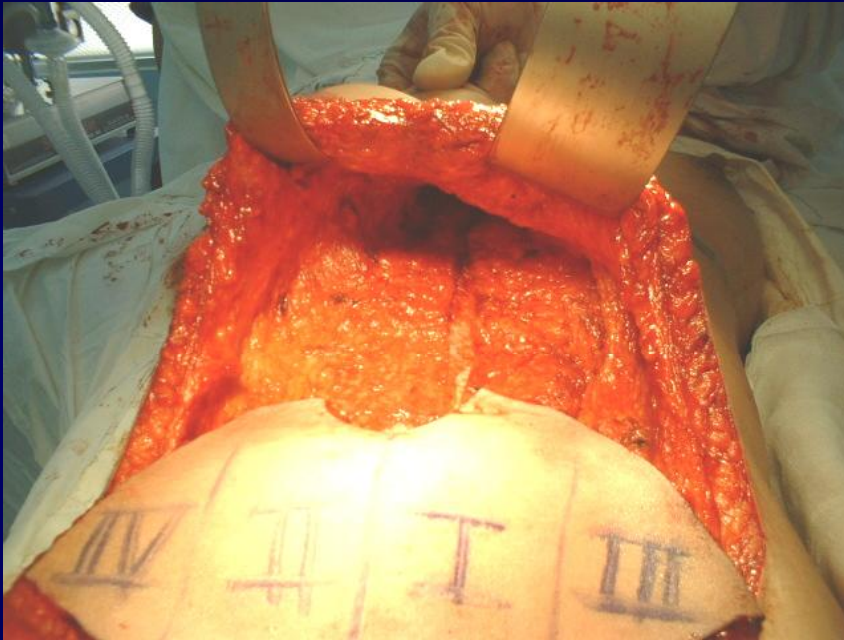


Rotate the flap and fill in the defect



# Methods

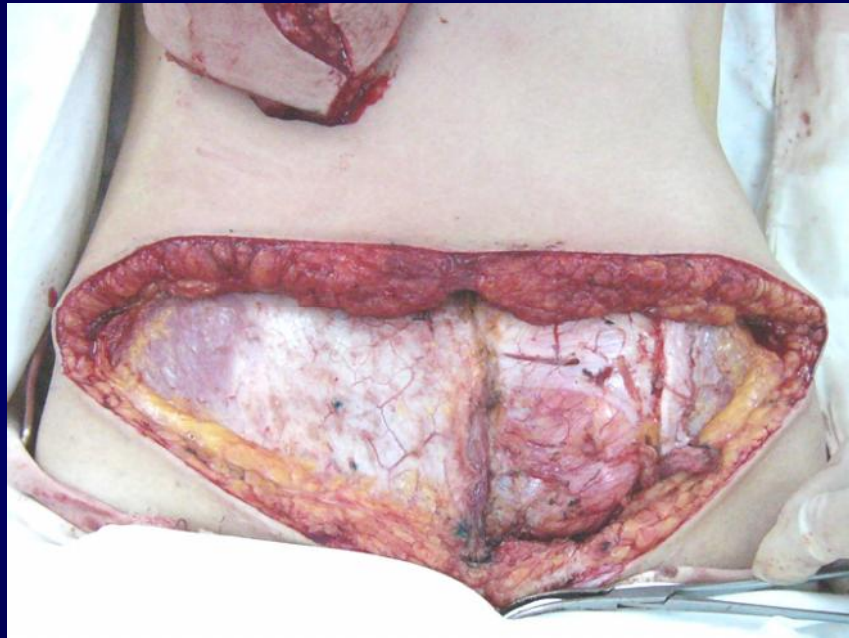
## TECHNIQUE



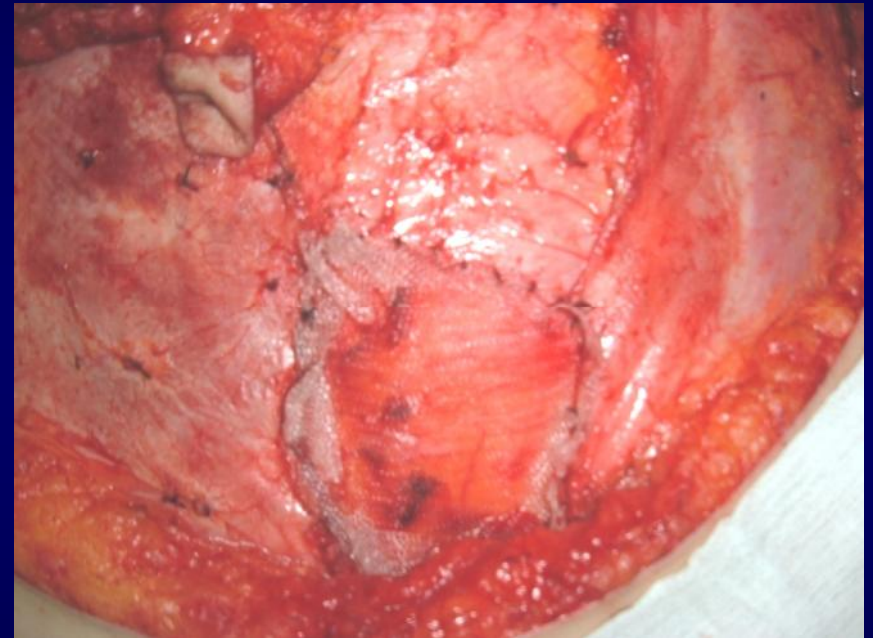
TRAM flap

# Methods

## TECHNIQUE



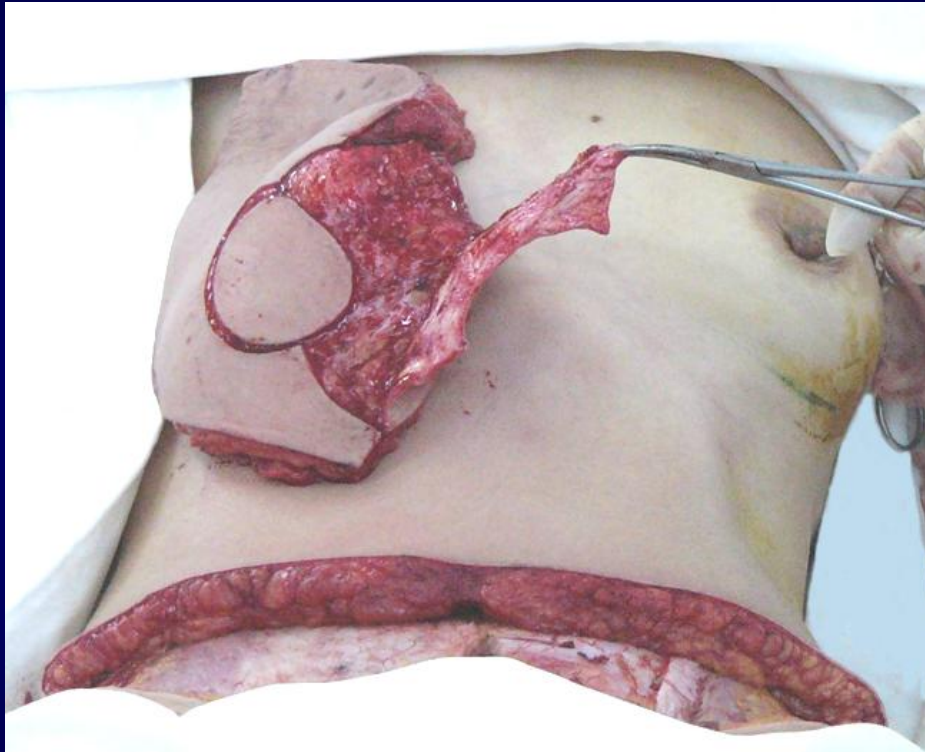
Abdominal reconstruction  
Spare the fascia



Abdominal reconstruction  
Use the mesh

# Methods

## TECHNIQUE

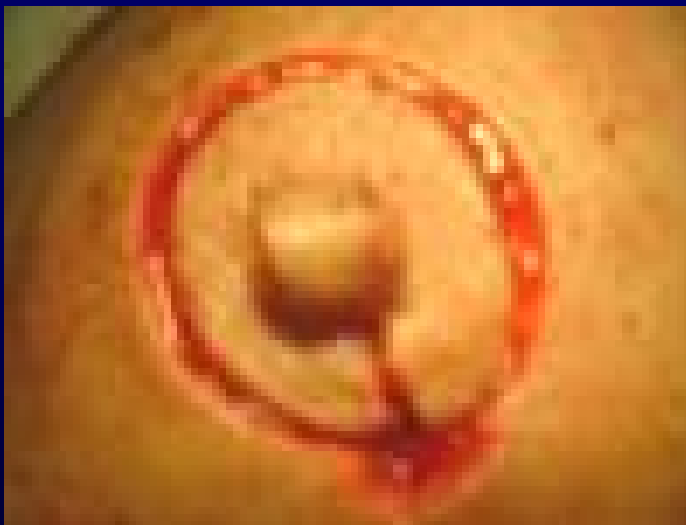


Shape the flap



# Methods

## TECHNIQUE



Nipple reconstruction with local flap

# Methods

## EVALUATION

Finishing: May 30, 2006

- Analyse operative techniques and complications
- Analyse oncological outcome
- Evaluate aesthetic outcome: 3 doctors



# SUBSCALE ANALYSIS OF AESTHETIC OUTCOME

## ❖ Evaluate:

- Volume: 2 pts
- Contour: 2 pts
- Placement: 2 pts
- IMF: 2 pts

## Classification

Excellent: 7 - 8 pts

Good: 6 – 6,9 pts

Fair: 5 – 5,9 pts

Poor: < 5 pts

Subscale	Category 0	Category 1	Category 2
<b>Volume of Breast mound</b>	Marked discrepancy relative to contralateral side	Mild discrepancy relative to contralateral side	Symmetrical volume
<b>Contour (shape) of breast mound</b>	Marked contour deformity or shape asymmetry	Mild contour deformity or shape asymmetry	Natural of symmetrical contour
<b>Placement of breast mound</b>	Marked displacement	Mild displacement	Symmetrical and aesthetic placement
<b>Inframammary fold</b>	Poorly defined/not identified	Defined but with asymmetry or lack of medial definition	Defined and symmetrical

# RESULTS & DISCUSSION

## RESULTS AND DISCUSSION

# PATIENT CHARACTERISTICS

Mean age: 39.3 (23-58)

Stage	Number	Percentage(%)
0	6	5.5
I	18	16.4
IIA	56	50.9
IIB	30	27.3
Total	110	100

## RESULTS AND DISCUSSION

# HISTOLOGY

- **Tumor**

DCIS: 6 cases (5.5%)

Invasive Ductal Carcinoma: 104 cases (94.6%)

NOS: 90/100 cases (90%)

- **Axillary nodes:** negative: 73/104 cases (70.2%)

Positive: 31/104 cases (29.8%)

- **Positive margin (+):** 3/110 (2.7%)

## RESULTS AND DISCUSSION

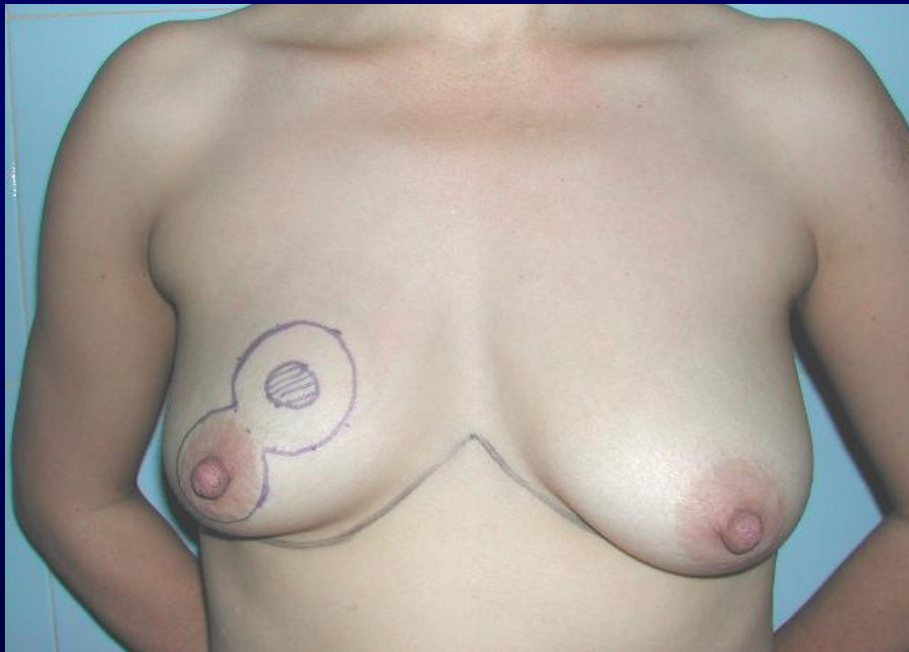
### INCISION SELECTIONS FOR SKIN SPARING MASTECTOMY

Incision	Number	Percentage (%)
I	24	35.8
II	37	55.2
III	2	3
IV	1	1.5
Others	3	4.5
Total	67	100

## RESULTS AND DISCUSSION

### INCISION SELECTIONS FOR AREOLA NIPPLE SPARING MASTECTOMY

Incision	Number	Percentage (%)
Peritumoral incision + periareolar omega incision	22	51.2
Peritumoral incision	21	48.8
Total	43	100



## Nipple sparing mastectomy incisions

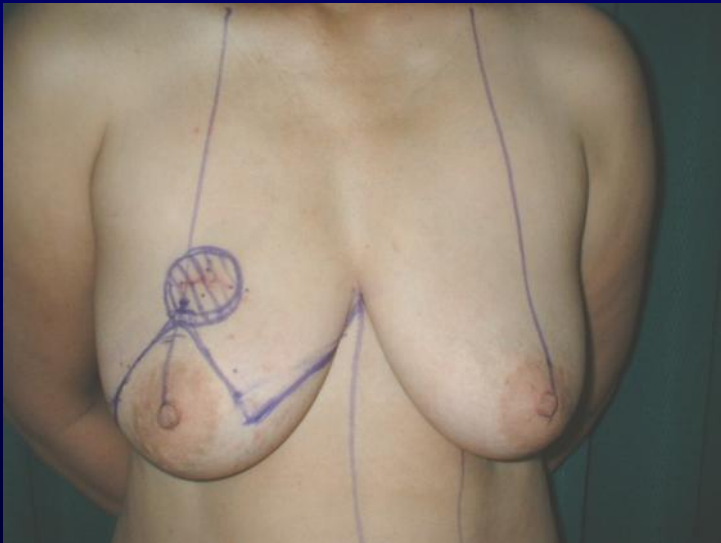
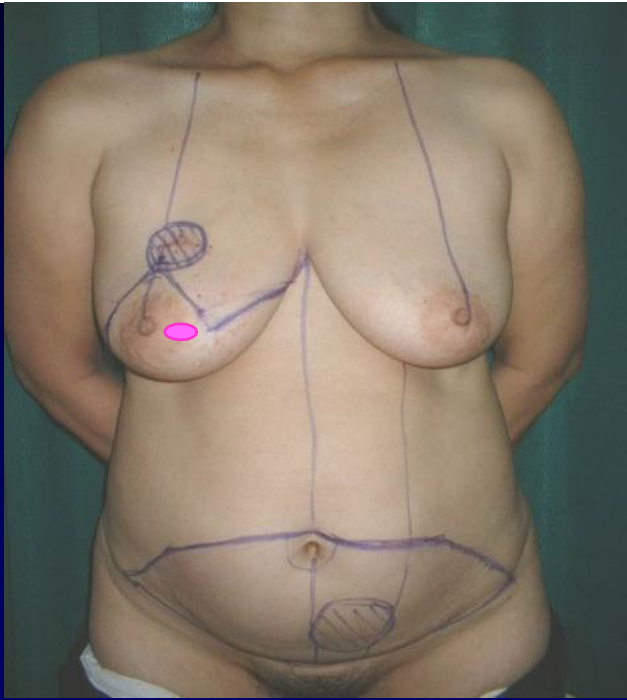
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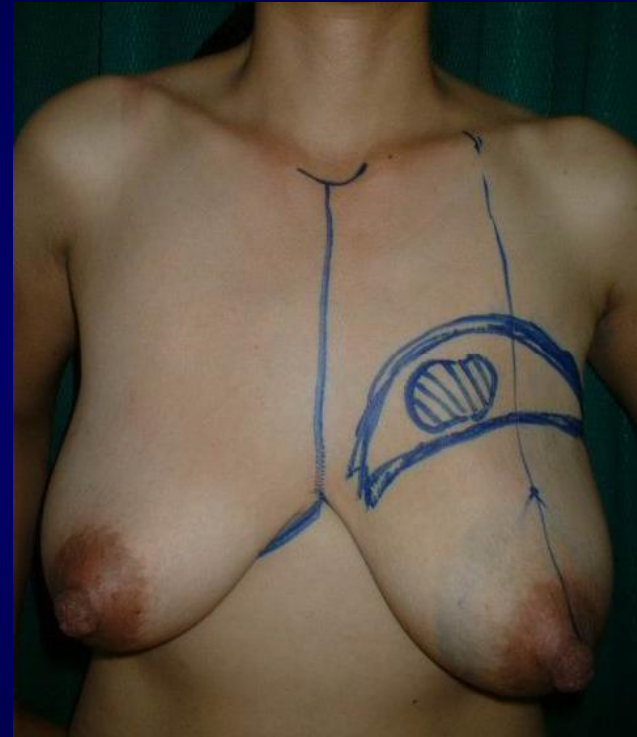
## Skin sparing mastectomy incisions

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## Skin sparing mastectomy incisions



## Other incisions

## RESULTS AND DISCUSSION

### Axillary Dissection

- Separate axillary incision: 101 cases
- Extend the mastectomy incision : 3 cases

Reconstruction technique	Number	Rate (%)
Extended LD flap	87	79
TRAM flap	17	15.5
LD flap + implant	6	5.5

## Areolar Nipple Reconstruction

Timing: 3 months after operation, or after complete treatment

A minor surgery

Areolar Nipple Reconstruction : 28/67 cases

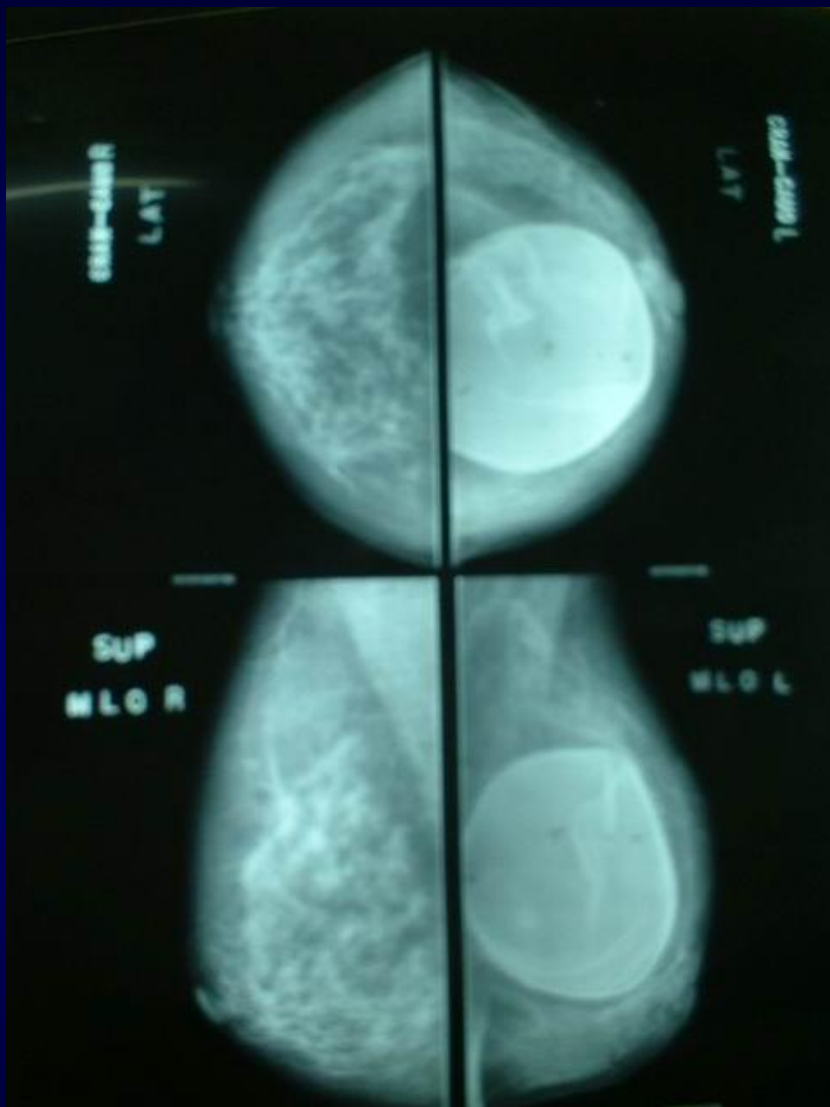


## LD flap reconstruction



TRAM flap





LD Flap + implant



3 months after reconstruction 39

# OPERATIVE CHARACTERISTICS

- Mean of operative duration:
  - LD: 407 minutes
  - TRAM: 451 minutes
- Blood loss: mean: 100ml
- Withdrawn of drainage: 5-10 days
- Post-op time: 10-14 days



## RESULTS AND DISCUSSION

# OPERATIVE COMPLICATIONS

COMPLICATION	SSM (%) n=43	NSM (%) n=67	TOTAL (%) n=110
Mastectomy flap necrosis	0	0	0
Skin splitting	2 (3)	1 (2.3)	3 (2.7)
Nipple necrosis		2 (4.6)	2 (1.8)
Infection		1 (2.3)	1 (0.9)
Hemorrhage	3 (4.5)	1 (2.3)	4 (3.6)
Hematoma	1 (1.5)	1 (2.3)	2 (1.8)
Seroma		2 (4.6)	2 (1.8)
Total	6 (9)	8 (18.6)	14 (12.6)

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## RESULTS AND DISCUSSION

# FLAP COMPLICATIONS

	LD	TRAM	Total (%)
Seroma	10	0	10 (9)
Skin splitting	4	1	5 (4,5)
Flap necrosis			
- Partial	3	1	4 (5,6%)
- Completely			
Hemorrhage	1		1 (1,1)
Hematoma	1	1	2 (4,8)
Infection		1	1 (0,9)
Abdominal bulge		4	4 (5,6)

## RESULTS AND DISCUSSION

# Complication: flap necrosis



## RESULTS AND DISCUSSION

### Adjuvant therapy

Adjuvant therapy	n	(%)
Chemotherapy	82/104	78.8
Radiotherapy	46/104	44.2
Hormonotherapy	69/110	62.7
None	3/93	2.7

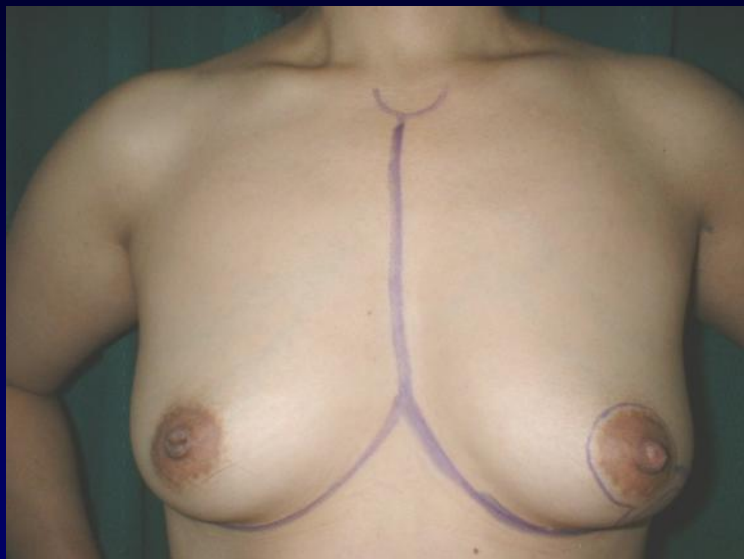
## RESULTS AND DISCUSSION

### Breast reconstruction and adjuvant therapy

Mean of duration from reconstruction and chemotherapy: **28,7 days.**

Radiotherapy: no complication increasing or aesthetic affection





Pre-operative



Post-operative



After chemotherapy



After radiotherapy

## RESULTS AND DISCUSSION

### Local recurrence after Skin Sparing mastectomy

Authors	Year	Number	Local Recurrence %	Duration of follow up (months)	Note
Slavin et al	1998	51	2.0	45	26 DCIS
Newman et al	1998	372	6.2	26	T1/T2
Simmons et al	1999	77	3.9	60	
Toth et al	1999	50	0	51.5	
Kroll et al	1999	114	7.0	72	T1/T2
Rivadeneria et al	2000	71	5.1	49	
Foster et al	2002	25	4.0	49	
Medina-Franco et al	2002	176	4.5	73	
Spiegel and Butler	2003	177	5.6	118	
Carlson et al	2003	539	5.5	65	30,6% DCIS
Gerber et al	2003	112	5.4	59	
HCM City Cancer Hospital	2008	110	3.6	40	5,4% DCIS

## RESULTS AND DISCUSSION

# Local recurrence after Skin-sparing mastectomy and non-skin sparing mastectomy

Authors	Number	Local recurrence rate	
		SSM	NSSM
SIMMON 2000	231	5.6%	3.9%
CARLSON 1998		4.8%	9.5 %
NEWMAN 1998	437	6.2%	7.4%
ĐẶNG HUY QUỐC THỊNH 2002	712	14.7% (stage I:2.5%, stagell: 12.2%)	

## RESULTS AND DISCUSSION

- Local recurrence: 4 cases(3,6%)
- **Location:** skin-subcutaneous tissue: 2 cases(1 wide excision, 1 mastectomy)

Chest wall:1 case (mastectomy)

Axillary node: 1 case (wide excision)



Naäg ThòTuyeãL. age: 46



Chest wall recurrence

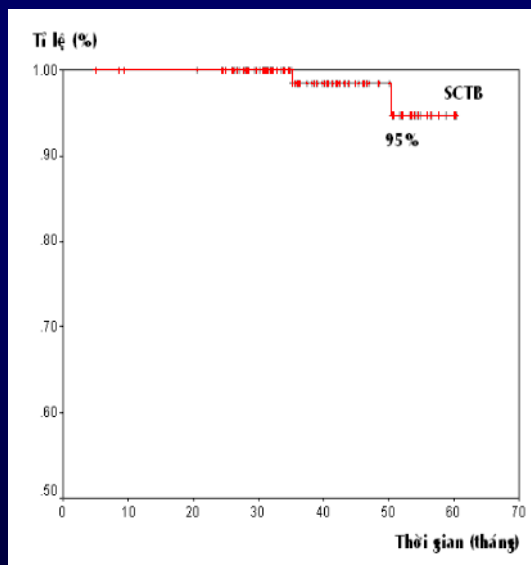
# Metastasis-Survival

- 10 cases (9.1%) with metastasis, one has local recurrence
- Mean of duration of metastasis:  
27.3months (9-58)

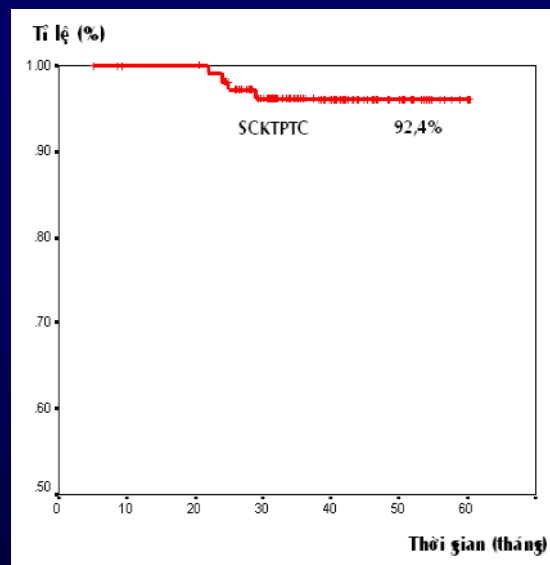
## RESULTS AND DISCUSSION

# Survival (4 years)

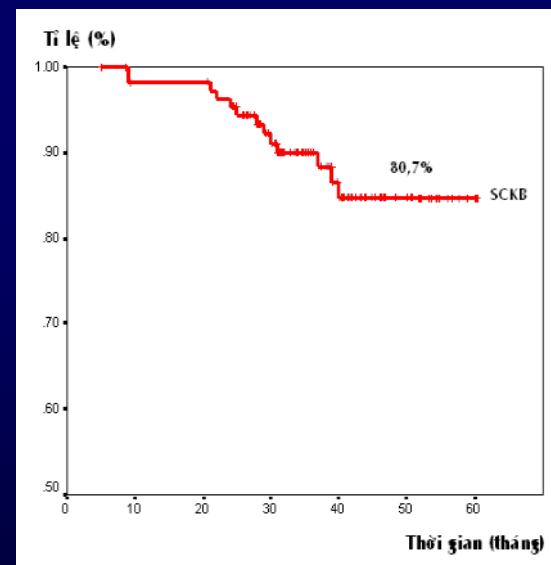
- 4 year OS: 95%
- 4 year DFRS : 92.4%
- 4 year DFS: 80.7%



Overall survival



Disease free recurrent survival



Disease free survival



## RESULTS AND DISCUSSION

# AESTHETIC RESULTS

- HIDALGO: 21 cases:Excellent-Good: 75%
- GABKA : 17 cases : Excellent-Good: 100%
- Ho Chi Minh City Oncology Hospital (2003 – 2008) :

	Number	Percentage
Excellent	65	61.9
Good	19	18.1
Fair	16	15.2
Poor	5	4.8
Total	105	100

Reduce revision rate

52

# CONCLUSION

Skin sparing mastectomy–immediate breast reconstruction is safe with low rate of complication and local recurrence, not affect adjuvant therapy

Extended LD flap is appropriate to majority of Vietnamese patients, TRAM flap is for women with big breast and thick abdominal fat, LD flap + implant is for women with big breast and thin abdominal fat

Good aesthetic result

# THANK YOU