# TRADITIONAL AND ONCOPLASTIC BREAST CONSERVING SURGERY

Marjut Leidenius
Comprehensive Cancer Center
Helsinki University Hospital

# ONCOPLASTIC APPROACH IN BREAST CONSERVATION- ADVANTAGES AND RISKS

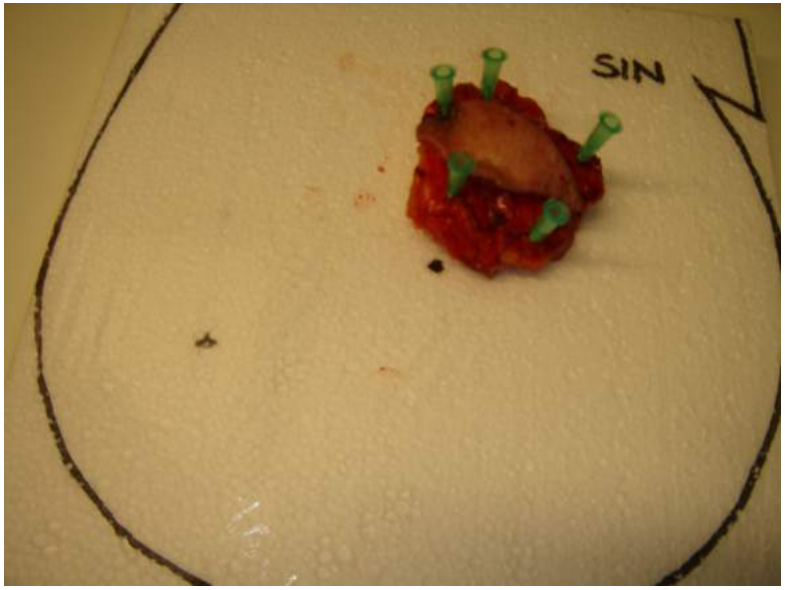
+ Better aesthetic outcome?
+ Extend the indications of breast conservation?
+ Less re-do surgeries because less patients with involved margins?
- More complications due more complex surgery? Delay in adjuvant treatments ???
- Large, multifocal and even multicentric tumours. More LRs???

# RESECTION MARGINS- ONCOPLASTIC BREAST CONSERVATION- A VARIETY OF TECHNIQUES

- according to the tumour extent
- according to the tumour location
- according to the breast size
- according to the breast shape
- according to the breast density
- according to the patient preference

# MOST LIKELY VERY EXTENSIVE MARGINS

# NOT SO EXTENSIVE MARGINS



# ONCOPLASTIC BREAST CONSERVATION- A VARIETY OF TECHNIQUES

LESS RE-DO SURGERIES DUE TO POSITIVE MARGINS?

Not only the size of the tumour and the size of the resected specimen, but also the location of the tumour in the resected specimen, matters

A positive margin is positive: no matter if the other margins are 5-10 cm

# RE-DO SURGERIES? 1800 PATIENTS WITH BCT HUCH 2010- 2012

| | WLE 1189 | OPS 611 | p |
|---|---|---|---|
| Palp | 36.9% | 58.3% | <.001 |
| T2-3 | 11.3% | 27.3% | <.001 |
| MF | 10.3% | 16.2% | <.001 |
| DCIS | 5.4% | 4.7% | .877 |
| EIC | 9.4% | 11.9% | .094 |
| Re-op | 8.1% | 9.2% | .430 |
| 2nd oper mastectomy | 56% | 70.0% | |

Niinikoski L et al EJSO 2019

# MORE COMPLEX SURGERY- DELAY IN ADJUVANT TREATMENTS DUE TO COMPLICATIONS?

**From surgery to adjuvant chemotherapy N= 1798**

| Days | Mastectomy | Lumpectomy | **OPS** | p=0.54 |
|---|---|---|---|---|
| (mean) | 34.3 | 34.9 | **34.2** | |

Tvedskov T et al Acta Oncologica 2017

**From surgery to the first adjuvant treatment N=1307**

| Days | BCS | **OPS** | Mastectomy | IBR |
|---|---|---|---|---|
| Median( range) | 47 (8-112) | **48 (19-90)** | 46 (11-95) | 54 (30-83) |

P= 0.011

Ojala K et al , The Breast 2016

# ONCOPLASTIC BREAST CONSERVATION- EXTENDING THE INDICATIONS OF BCS

BCT in large, multifocal and even multicentric tumours.

INCREASED RISK OF LRs?

HUS

# LR AFTER WLE AND OPS ? - HUCH 2010-2012

| | WLE(N=940) | OPS (N= 471) | p |
|---|---|---|---|
| **LR** | 25 (2,7%) | 7 (1,5%) | 0.188 |
| **DM** | 29 (3.1%) | 16 (3.4%) | 0.750 |
| Median FU | 76 mo | 73 mo | |

OPS: unfavourable tumour characteristics more frequent: tumour size, multifocality, higher grade, less N0…

Niinikoski L et al EJSO 2019

# BETTER AESTHETIC OUTCOME?

**Subjective**

Patient reported- questionnaires

**Objective**

Independent observer panel- photos

Computed models

**Subjective or objective-** Which is more important?

# FACTORS INFLUENCING AESTHETIC OUTCOME

Shape

Size

Position

Appearance and location of nipple areola complex

Texture

Scars

Symmetry

# HUCH 2010

- 664 patients undergoing breast conserving surgery during year 2010 in single hospital district
- BCTOS- questionnaires for patient-reported aesthetic and functional outcome **three years after surgery**
- 379 (57%) patients returned questionnaires
- 293 (77%) patients had conventional and 86 (23%) oncoplastic resection

Ojala K et al, EJSO 2017

HUS

# AESTHETIC OUTCOME

- Aesthetic result of the operated breast was excellent or good in 217 patients (75%) on conventional and 61 patients (72%) on oncoplastic resection groups, p=0.441
- BCTOS aesthetic status was worse after oncoplastic resection, mean 1,84 vs 1,62; p=0.002

Ojala K et al, EJSO 2017

HUS

# BUT: WE COMPARED APPLES WITH ORANGES

- Patients in oncoplastic resection group had
  - **more T2 tumours**: 31 patients (11%) vs 20 patients (23%), p=0.016
  - **greater tumour diameter**: 12.0mm vs 16.0mm; p<0.001
  - **more multifocal/multicentric tumours**: 5% vs 12%, p=0.032
  - **larger resection weight**: 61g vs 97g, p<0.001
  - Tumour **located** more often **in lower quadrants**: 19% vs 35% , p=0.007

Ojala K et al, EJSO 2017

HUS

# LIMITATIONS OF STUDY

- Selection bias: in the oncoplastic group tumours were larger, more often multifocal and located in lower quadrants, favouring the conventional resection group

- Conventional resection was, in fact, **level I OPS**

- Oncoplastic surgery was not fully established at the unit during the study period. Methods and patient selection have improved since study year.

Ojala K et al, EJSO 2017

# THE PATIENT DOES NOT KNOW THE WORST POSSIBLE AESTHETIC OUTCOME

The major goal is to avoid deformity

When no deformity, the patient focus is on scars and/or on symmetry

# PATIENT PERCEPTION NOT ALWAYS IN AGREEMENT WITH THE SURGEON PERCEPTION

HUS

# BUT EVEN WHEN THE IMMEDIATE POSTOPERATIVE OUTCOME IS GOOD OR EVEN EXCELLENT…

- Complications (infection, skin necrosis, fat necrosis)
- Re-operations
- Radiotherapy
- Time and gravity
- **Combination of 2 or more risk factors**

HUS

# RADIOTHERAPY

- Oedema
  - aesthetic outcome may seem too flattering, when evaluated one year after surgery
- Fibrosis and retraction occur later
- Tumour bed booster dose

HUS

# UNRELIABLE BUSINESS PARTNERS: RADIOTHERAPY, TIME AND GRAVITY

# CONCLUSIONS

**Oncolgical safety**

- No increased risk of LR, despite more frequent unfavourable tumour characteristics in patients with OPS
- No delay in adjuvant treatments

**Aesthetic outcome**

- patient selection and counselling are challenging but crucial
- the most simple technique providing good aesthetic outcome should be selected

HUS

# Thank you