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# Aesthetic results and quality of life after breast-conserving surgery

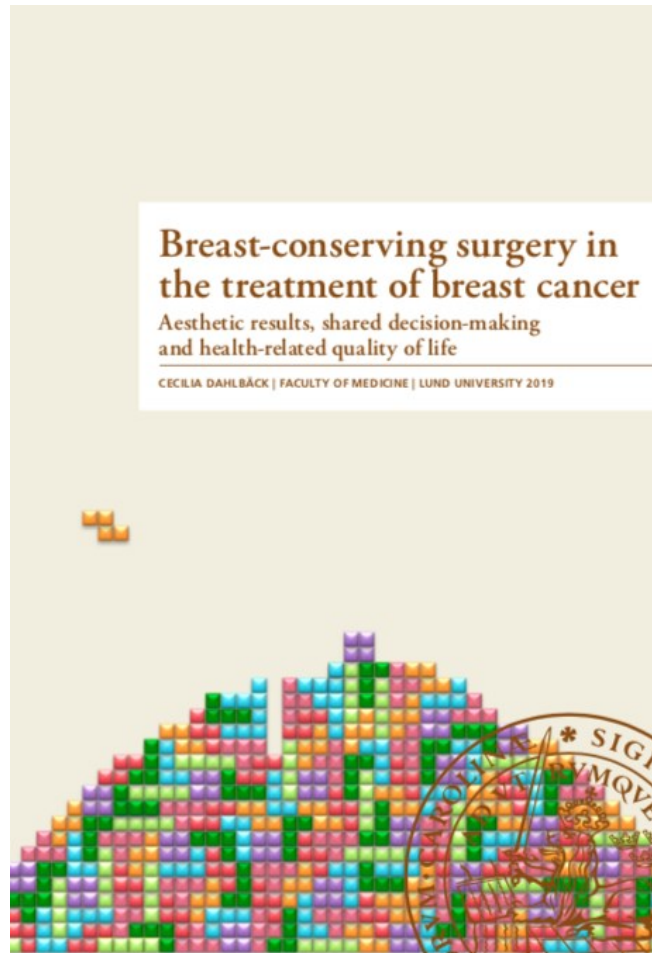
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# Dissertation May 2019



# Breast cancer

One in ten women diagnosed

Low mortality (>80% 10 year survival rate)

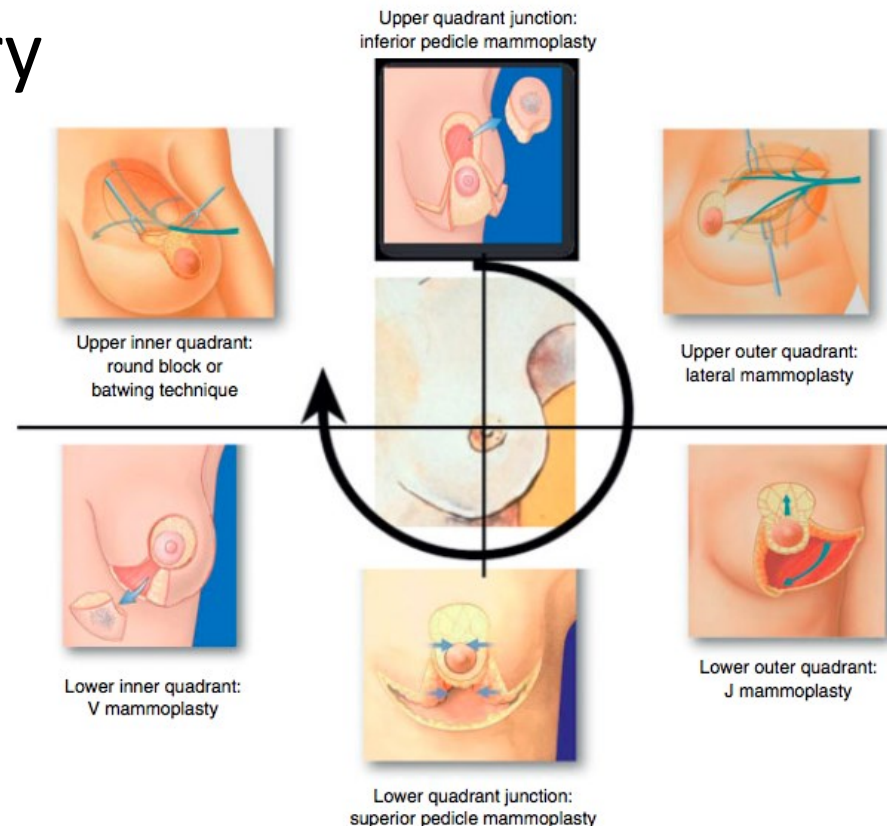
About 70% are treated with breast-conserving surgery (BCS) in Sweden

Aesthetic result after treatment can affect quality of life

# Breast-conserving surgery

Conventional  
Oncoplastic breast surgery

When to use which?



Clough et. al. Oncoplastic surgery for breast cancer based on tumour location and a quadrant-per-quadrant atlas. British Journal of Surgery. 2012 Oct; 99(10):1389-95. With permission. © John Wiley & Sons Ltd.

# Study population

Women offered breast-conserving surgery (BCS) for a suspected breast cancer 2008-2012 in Malmö (n=532)

Follow-up one year after operation and radiotherapy

- Study-specific questionnaire (SSQ)

- Photo documentation

2015 evaluation with the Breast-Q<sup>TM</sup> quality of life questionnaire

# Aesthetic result after conventional BCS

## Patient evaluation (SSQ)

	<b>Satisfied/very satisfied n (%)</b>
General appearance of the operated breast	249 (84%)
Symmetry between the breasts	202 (68%)

# Very satisfied

30 mm tumor left breast 6 o'clock



# Very dissatisfied

10 mm tumor left breast 9 o'clock





# Very satisfied

10 mm tumor left breast 7 o'clock



# Not entirely satisfied

35 mm tumor left breast 2 o'clock



# How may aesthetic results be assessed?

Patient reported outcome measures (PROMs)

Panel of assessors

Computerized assessment

SSQ

Photo panel evaluation

BCCT.core

# BCCT.core

**Aesthetical Assessment**

Scale: 25 cm

**Asymmetry measures**

	Dimension	Dimensionless
BRA	8.25734	0.270875
LBC	4.31167	0.140191
UNR	7.18326	0.265413
BCE	2.87159	0.777961
BCD	6.15759	0.141951
BAD	43.8214	0.17729
BOD	90.4935	0.366112

**Colour measures**

	Chi2	EMD
L	0.178912	2.61586
a	0.0446283	0.26816
b	0.306564	1.05261
Lab3D	0.299392	0.233405

**Scar measures**

	Chi2	EMD
L	0.354343	3.85254
a	0.0935447	0.367729
b	0.516744	1.75236
Lab3D	0.515992	0.312172

Overall Objective Evaluation: **FAIR**

Save Results

<http://medicalresearch.inescporto.pt/breastresearch/index.php/BCCT.core>

# Pros and cons with different methods

Study-specific questionnaire		Photo panel assessment		BCCT.core	
+	-	+	-	+	-
Patients who are to live with the results	Affected by other things in life?	More objective than the patient's assessment?	Low agreement between assessors	Reproducible	The software may misinterpret the photo
	Are the results reproducible?		Low agreement between the same assessor's evaluation at different sessions	Not time consuming	
			Very time consuming	Simple to use	
				Free	

# Aesthetic result after conventional BCS

	<b>Dissatisfied</b>	<b>Not entirely satisfied</b>	<b>Satisfied</b>	<b>Very satisfied</b>
SSQ aesthetic result	2%	9%	42%	41%
SSQ symmetry	5%	16%	43%	25%

	<b>Poor</b>	<b>Fair</b>	<b>Good</b>	<b>Excellent</b>
Panel aesthetic result	4%	10%	45%	41%
Panel symmetry	1%	20%	49%	31%

	<b>Poor</b>	<b>Fair</b>	<b>Good</b>	<b>Excellent</b>
BCCT.core	3%	24%	57%	16%

# Which factors affect aesthetic results after conventional BCS?

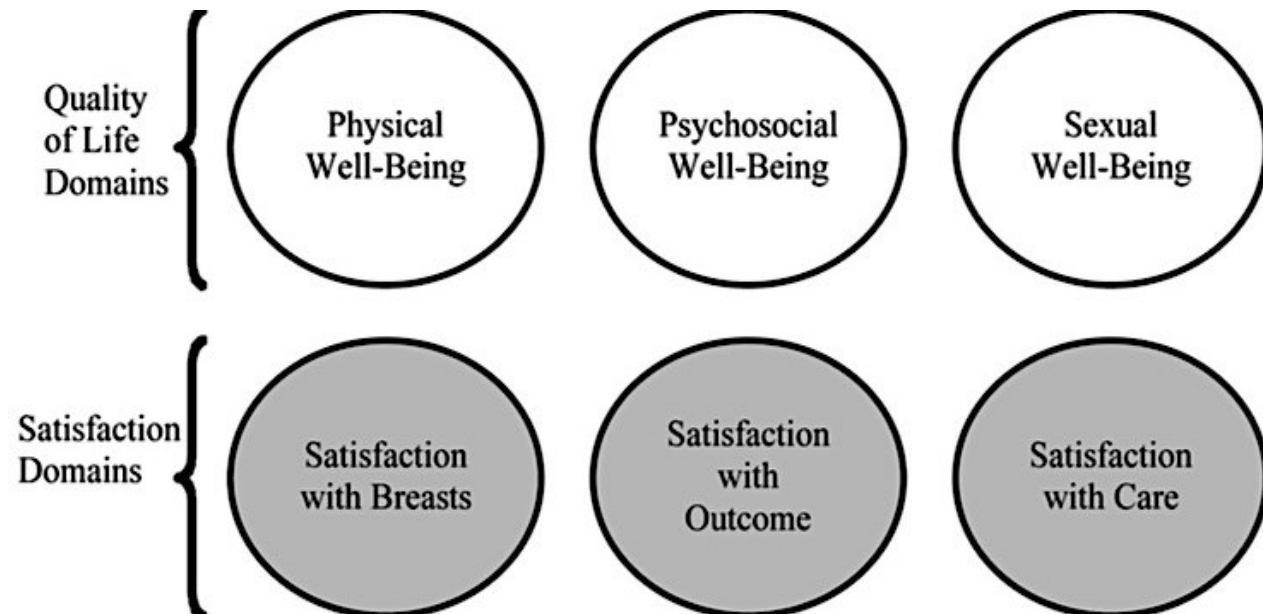
	SSQ aesthetic results	SSQ symmetry	Panel aesthetic result	Panel symmetry	BCCT.core
High BMI		X		X	X
Tumor location			X		
Excision >20% of preop breast volume	X		X	X	X
Axillary dissection	X				
Infection		X			
Reexcision		X	X		
Radiotherapy				X	

# Evaluation of quality of life: the Breast-Q™

Disease-specific

Specific questionnaire for breast-conserving  
surgery with adjuvant radiotherapy

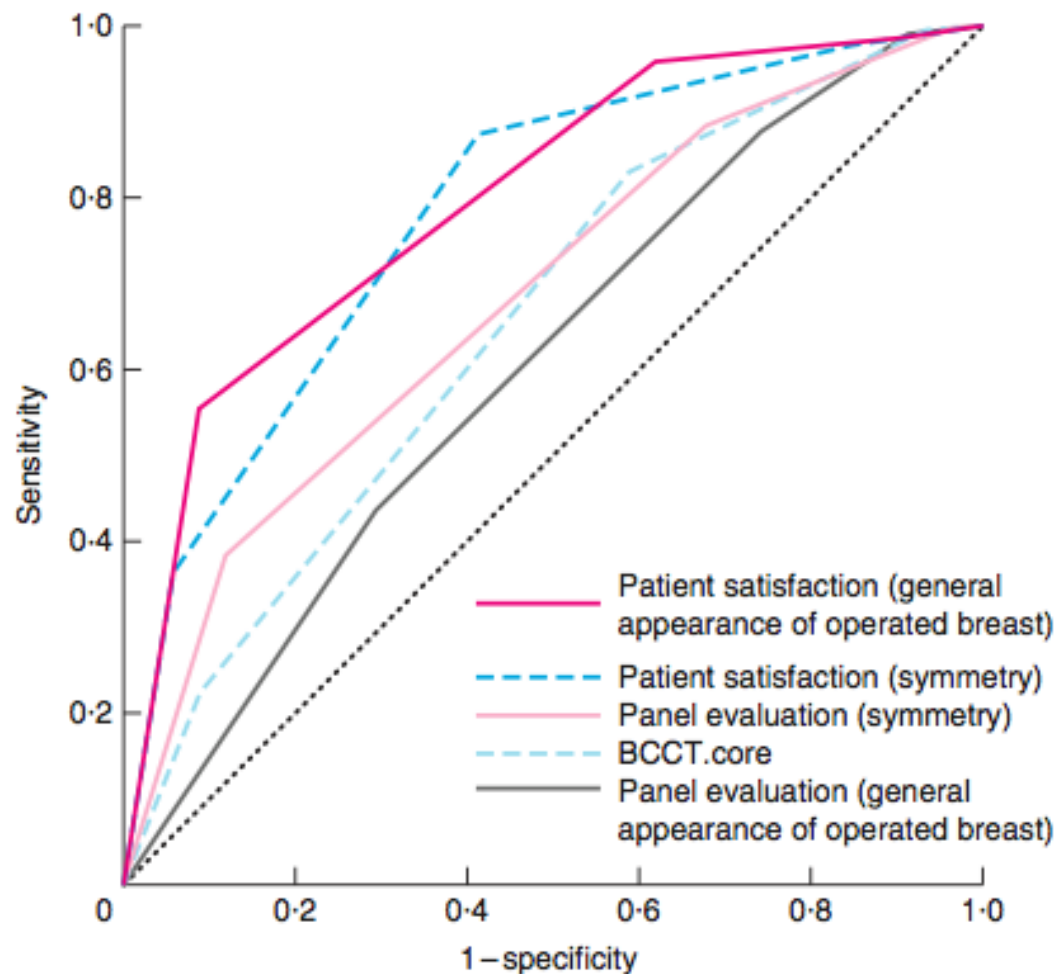
Different domains



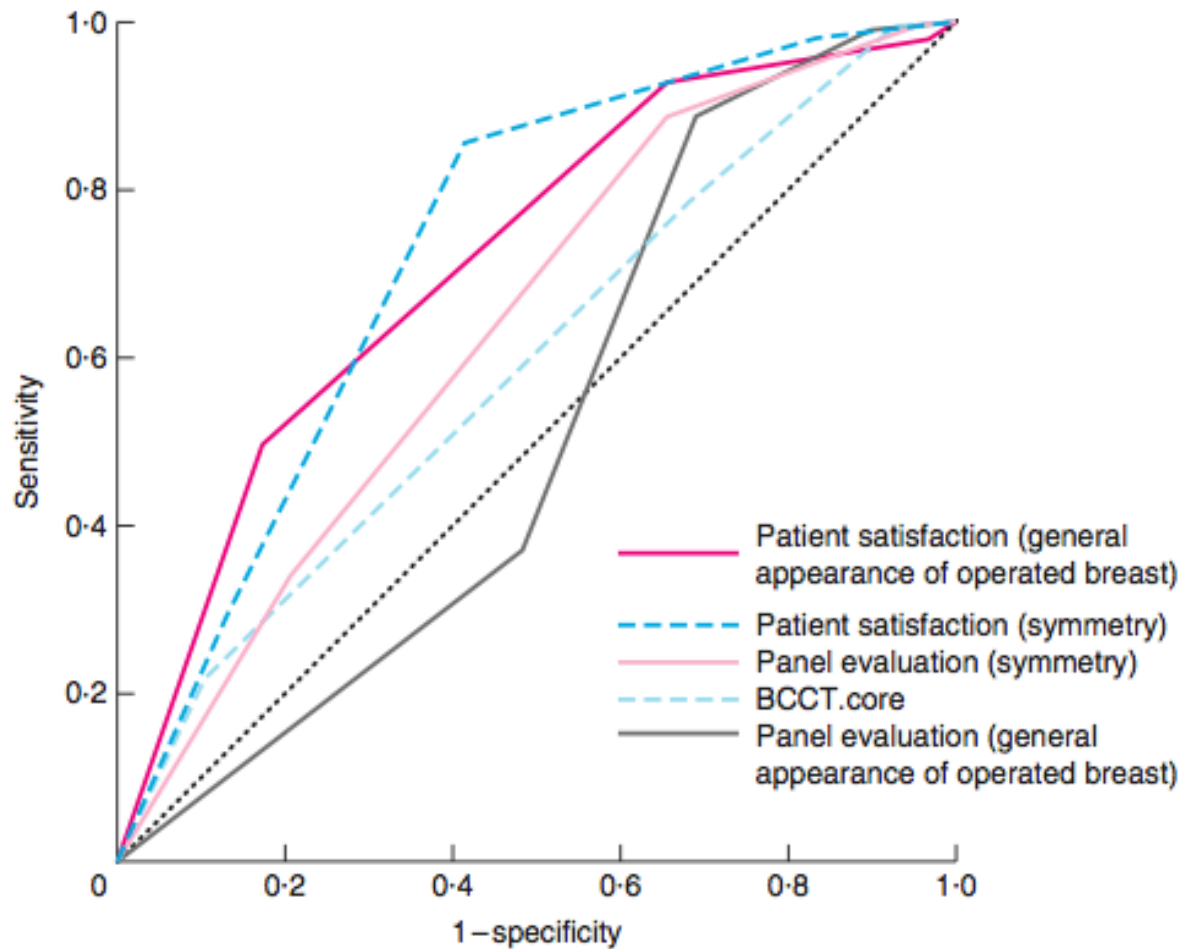


# Which method predicts quality of life best?

Satisfaction with breasts



## Psychosocial well-being



# Conclusion

**PROMs** most important to predict future quality of life

**BCCT.core** – valuable as a complement?

**Panel evaluation:** resource consuming and low agreement

Many may be treated with conventional BCS with good aesthetic results

If a large portion of the breast is to be excised –other treatment options available?

Thank you!