ARM LYMPHOEDEMA AND UPPER LIMB IMPAIRMENTS IN SENTINEL NODE-NEGATIVE BREAST CANCER PATIENTS: One Year Follow-up study

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Background

Currently, in patients with negative sentinel lymph nodes only a sentinel lymph node biopsy (SLNB) is performed. This less invasive SLNB decreases prevalence rates of lymphoedema, upper limb impairments, daily functioning (ADL) and quality of life (QOL). However, no large prospective longitudinal study has investigated this yet. (Verbelen 2014)

Objectives

- 1) To investigate the evolution of lymphoedema, upper limb impairments, ADL and QOL after SLNB for breast cancer over the course of one year
- 2) To define treatment- and patient-related predictive factors

Method

- **Patients**
 - 100 patients with a sentinel-node negative breast cancer
- **Evaluation:** before and one year after surgery
 - Arm lymphoedema: perimeter
 - Pain: Visual Analogue Scale
 - Range of motion (ROM): inclinometer
 - Handgrip strength (HGS): handheld dynamometer
 - ADL: DASH questionnaire
 - QOL: SF-36 questionnaire
- Wilcoxon Signed Ranks (evaluation of complications)
- Multivariable regression with continuous data (predictive factors)

Results

Patients Characteristics

- ✓ 100 women with mean age 60.5 (9.7) years and mean BMI 25.1 (4.7) kg/m²
- Prevalence rates of complications 1 year after surgery and evolution over 1 year:

	Prevalence 1y postop	Preop Median (IQR)	1y postop Median (IQR)	P-value
Arm lymphoedema (mL)	4%	-12 (-65-61)	-19 (-61-61)	0.476
Pain (VAS 0-100)	50%	0 (0-0)	5 (0-50)	0.000
Forward flexion ROM (°)	45%	160 (151-168)	149 (138-160)	0.000
Abduction ROM (°)	33%	150 (140-159)	141 (121-154)	0.000
Handgrip Strength (kg)	13%	25.5 (21.0-29.0)	23 (18.6-27.5)	0.000
ADL function (DASH %)	49%	0 (0-0)	16.6 (5.0-30.0)	0.000

Predictive factors for more upper-limb impairments are:

- ✓ Higher age, higher BMI, breast conserving surgery and surgery at dominant side,

Conclusion

In sentinel-node negative breast cancer patients:

- Pain, shoulder ROM, handgrip strength and ADL function change significantly over 1 year.
- Patients with higher age and BMI and surgery at the dominant side are at higher risk for upper-limb impairments