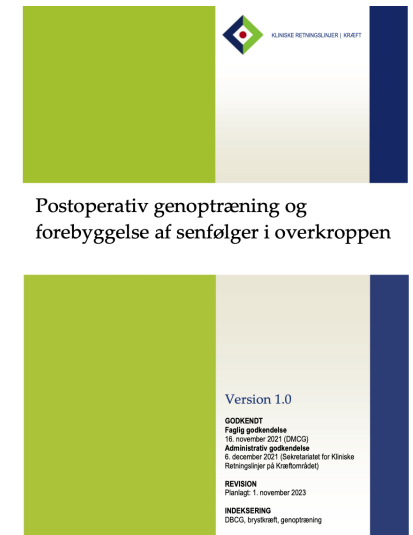


10<sup>th</sup> Aarhus Workshop in  
Breast Surgery  
May 18-19, 2022



# Postoperative rehabilitation of the upper limb - Danish clinical guideline

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# Collaborators

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# Panellist of patients

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- 3 women with a former diagnosis of breast cancer who had terminated their breast cancer treatment
- Focus group interview
- Perspective of the patients regarding:
  - Preferences
  - Rehabilitation
  - Education
  - Prospective systematic surveillance of late morbidity

# Background

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- Following breast cancer surgery, patients are at risk of developing late morbidity as:
  - Lymphoedema, pain, decreased mobility, decreased strength, and may affect the ability to conduct activities of daily living
- Postoperative rehabilitation with exercise intervention
  - decrease this risk

# Aim

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- To provide recommendations of high evidence regarding postoperative rehabilitation and prevention of late morbidity of the upper limb

# CLINICAL GUIDELINE 2021

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## Extension to a national guideline

- “National Kliniske Retningslinje for Følgevirkninger efter operation for tidlig brystkræft” (Danish Health Authority – 2015)

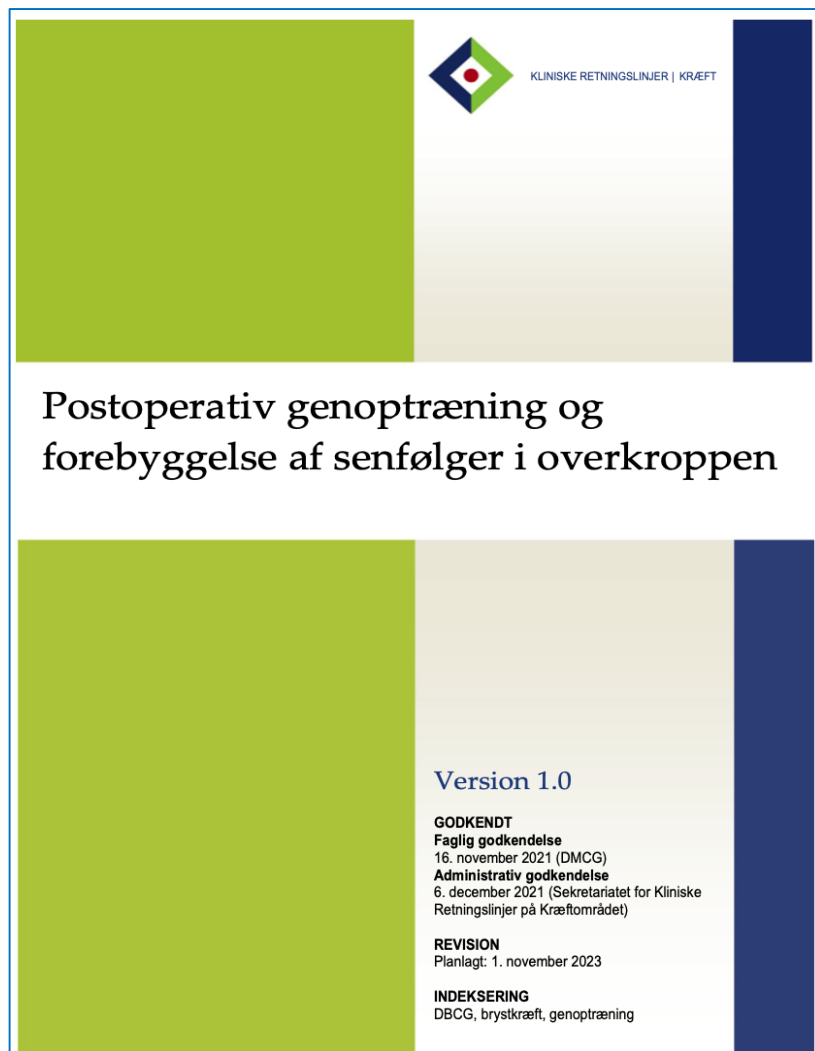
## Combination of 2 prior versions of clinical guidelines from DBCG

- “Anbefaling om bevægelse/træning til kvinder opereret for brystkræft indenfor de første 8 uger post-operativt” (DBCG - 2014)
- “Forløbsbeskrivelse for fysioterapi under brystkirurgiske patientforløb” (DBCG - 2005)

## Guideline regarding physical exercises during chemotherapy

- “Brystkræft - Fysisk træning under kemoterapi for brystkræft” (DBCG – 2020)

# Contents



Patient education

Postoperativ rehabilitation

Systematic surveillance of late morbidity in the upper limb

# PATIENT EDUCATION



# **PATIENT EDUCATION - Recommendation #1 and #2**

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- 1) Patient education with guidance in postoperative exercises and prevention of late morbidity should be offered in relation to the operation; either before or shortly thereafter (C)**
- 2) As a minimum, patient education should be in writing and a supplement of oral information and/or electronic access is preferred (B)**

# PATIENT EDUCATION – Evidence from 11 studies

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## **2 descriptions of experience**

Demand for education among breast cancer patients

## **2 qualitative studies**

Absence of patient education → More fear of developing late morbidity

## **2 cross-sectional studies**

More information/instruction → Less symptoms of lymph oedema, mobility restrictions, and less seroma

## **1 RCT-study**

N = 72. Web-based instruction → Less anxiety

## **3 case-control studies**

More information/instruction → Enhanced shoulder mobility, lower stage of lymph oedema, and short time for diagnosis of lymph oedema

## **1 consensus report from a panel of experts**

Recommendation of education in exercise program, restrictions, and risk of late morbidity

Recommendation of baseline registration for comparison at follow up

# PATIENT EDUCATION - Limitations

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Frequently divided in  
"patient education - YES or NO"



Risk of recall bias



The details of the contents or  
methods of patient educations are  
not further elaborated

# PATIENT EDUCATION

## - Input from the panellist of patients

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- Necessity of information and education
- Advantage if the information is available on-line
- Possibility to return to the information/instructions - also during the adjuvant therapy
- Inconvenient if the information was delivered preoperatively

# POSTOPERATIVE REHABILITATION

# POSTOPERATIVE REHABILITATION – Definitions

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## Postoperative rehabilitation:

- Stretching and mobility exercises
- Progressive resistance training
- Myofascial therapy (displacement)

## Postoperative period:

- From the BC operation → 12 weeks after

# POSTOPERATIVE REHABILITATION - Recommendation #3

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**3) Therapy with active exercises should be offered every women going through a BC operation.**

**Recovery of mobility and functionality should be the main target.**

**It is possible to begin the active exercises at the first day postoperatively (A).**

**Evidence:** Cochrane review based on 24 studies

# POSTOPERATIVE REHABILITATION - Recommendation #4

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**4) Progressive resistance training should be offered to women following their BC operation.**

**Recovery of muscle strength and functionality should be the main purpose.**

**It is possible to begin the resistance training 2 weeks postoperatively (A).**

**Evidence:** The benefit from progressive resistance training is well documented. Initiation 2-3 week postoperatively, does not increase the risk of lymphoedema or pain.



# POSTOPERATIVE REHABILITATION - Recommendation #5

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**5) It is considered "good clinical practice" to offer instruction or treatment by manual myofascial techniques following BC operation (D).**

## **Evidence:**

- No literature regarding start up in the early postoperative period.
- 1 systematic review: Myofascial release is effective in treating chronic musculoskeletal pain. Timing?
- 1 systematic review: No effect in the treatment of pain and mobility
- Experienced clinicians: Benefit in shoulder mobility, tightness, and pain. Safe to start up a few days after the BC operation without causing early complications.

# Postoperative rehabilitation

## - Input from the panellist of patients

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- Importance of early and thorough information concerning maintenance of mobility
- Instructions in exercises and physical training
- Important to understand the necessity / background
- Demand for a “patient friendly guideline”

SYSTEMATIC PROSPECTIVE SURVEILLANCE  
OF  
LATE MORBIDITY OF THE UPPER LIMB

# SYSTEMATIC PROSPECTIVE SURVEILLANCE OF LATE MORBIDITY OF THE UPPER LIMB - Definition

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- Measurements/evaluation before and repeated postoperatively at scheduled intervals
  - Examples: Arm volume, extracellular fluid, shoulder movements, muscle strength, functionality (DASH, Constant Shoulder score)
- Self measurements or objective evaluation
- Used to identify patients with early signs of late morbidity (subclinical)
- May lead to early treatment or interventions

# SYSTEMATIC PROSPECTIVE SURVEILLANCE OF LATE MORBIDITY OF THE UPPER LIMB –

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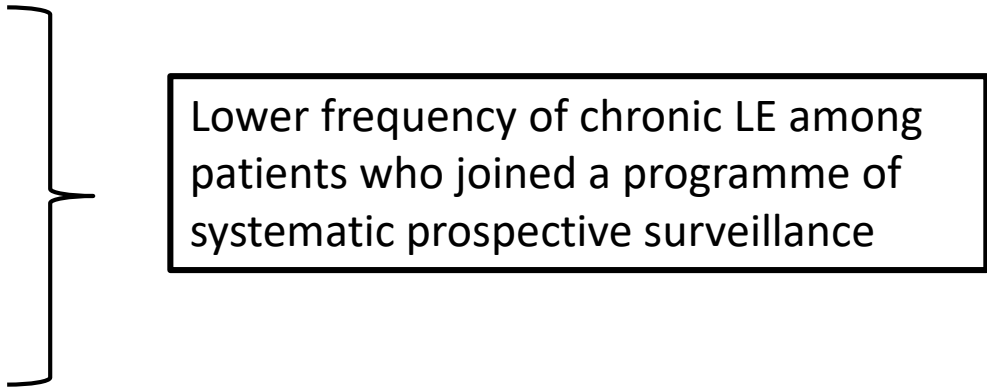
## Recommendation #6 og #7

- 6) In general, no recommendation of systematic surveillance of lymphoedema (C).**
- 7) In general, no recommendation of systematic surveillance of late morbidity of the upper limb (D).**

# SYSTEMATIC PROSPECTIVE SURVEILLANCE OF LATE MORBIDITY OF THE UPPER LIMB – Evidence from 22 studies

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- 3 RCT's
  - N=500; Risk of progression of lymphoedema; Bioimpedans vs. Tape measurement (Ridner – 2019)
- 8 prospective cohort studies
- 9 retrospective cohort studies
- 1 quasi-experimental study
- 1 case-control study



Lower frequency of chronic LE among patients who joined a programme of systematic prospective surveillance

# SYSTEMATIC PROSPECTIVE SURVEILLANCE OF LATE MORBIDITY OF THE UPPER LIMB

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- Input from the panellist of patients
  - Comfort in systematic surveillance to detect late morbidity
  - No risk of causing anxiety

# What's new?

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## **Prospective Surveillance for Breast Cancer-Related Arm**

**Lymphedema: A Systematic Review and Meta-Analysis.** Rafn BS, Christensen J, Larsen A, Bloomquist K. *Journal of Clinical Oncology*.

- “Participation in prospective surveillance with early management reduced the risk of chronic BCRaL vs. usual care (RR 0.31; 95% CI 0.10-0.95) (two RCTs, N=106).”

## **Ongoing RCT with self measurement: PROTECT**

- N=250. 5 hospital units in Denmark.



# What's next ?

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- Plastic surgery as oncoplastic surgery and reconstruction
- DCIS
- Male population
- Patient friendly guideline



**THANK YOU**

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