

Comorbiditet og senfølger efter brystkræft

Marianne Ewertz og Maj-Britt Jensen

Definitioner



- Comorbiditet: andre sygdomme, som er eller har været tilstede ved diagnosen af brystkræft
- Senfølger: tilstande eller sygdomme, der opstår efter diagnosen af brystkræft, hvoraf nogle kan skyldes behandlingen for brystkræft.

Comorbiditet



Introduction

Preexisting diseases at breast cancer diagnosis, comorbidity, may influence the prognosis after breast cancer in several ways. If the comorbidity involves organ failure, like compromised respiratory, cardiac, or renal function, curative treatment may not be possible leading to an increased risk of dying from breast cancer due to insufficient treatment. On the other hand, the risk of dying from the comorbidity may be so high that the patients may not live for sufficiently long time to benefit from breast cancer treatment even if they receive guideline therapy [1].

Comorbidity and survival of Danish breast cancer patients from 1995 to 2005

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Study population

We identified all patients with a diagnosis of breast cancer (ICD-8 code 174.xx and ICD-10 code C50.x) from 1 January 1995 through 31 March 2004, using the hospital discharge registries of four Danish counties; North Jutland, Aarhus, Viborg, and Ringkjøbing.

N = 9.300



Charlson's comorbidity index

Table 3. Weighted index of comorbidity

Assigned weights for diseases	Conditions
1	Myocardial infarct Congestive heart failure Peripheral vascular disease Cerebrovascular disease Dementia Chronic pulmonary disease Connective tissue disease Ulcer disease Mild liver disease Diabetes
2	Hemiplegia Moderate or severe renal disease Diabetes with end organ damage Any tumor Leukemia Lymphoma
3	Moderate or severe liver disease
6	Metastatic solid tumor AIDS

Assigned weights for each condition that a patient has. The total equals the score. Example: chronic pulmonary (1) and lymphoma (2) = total score (3).

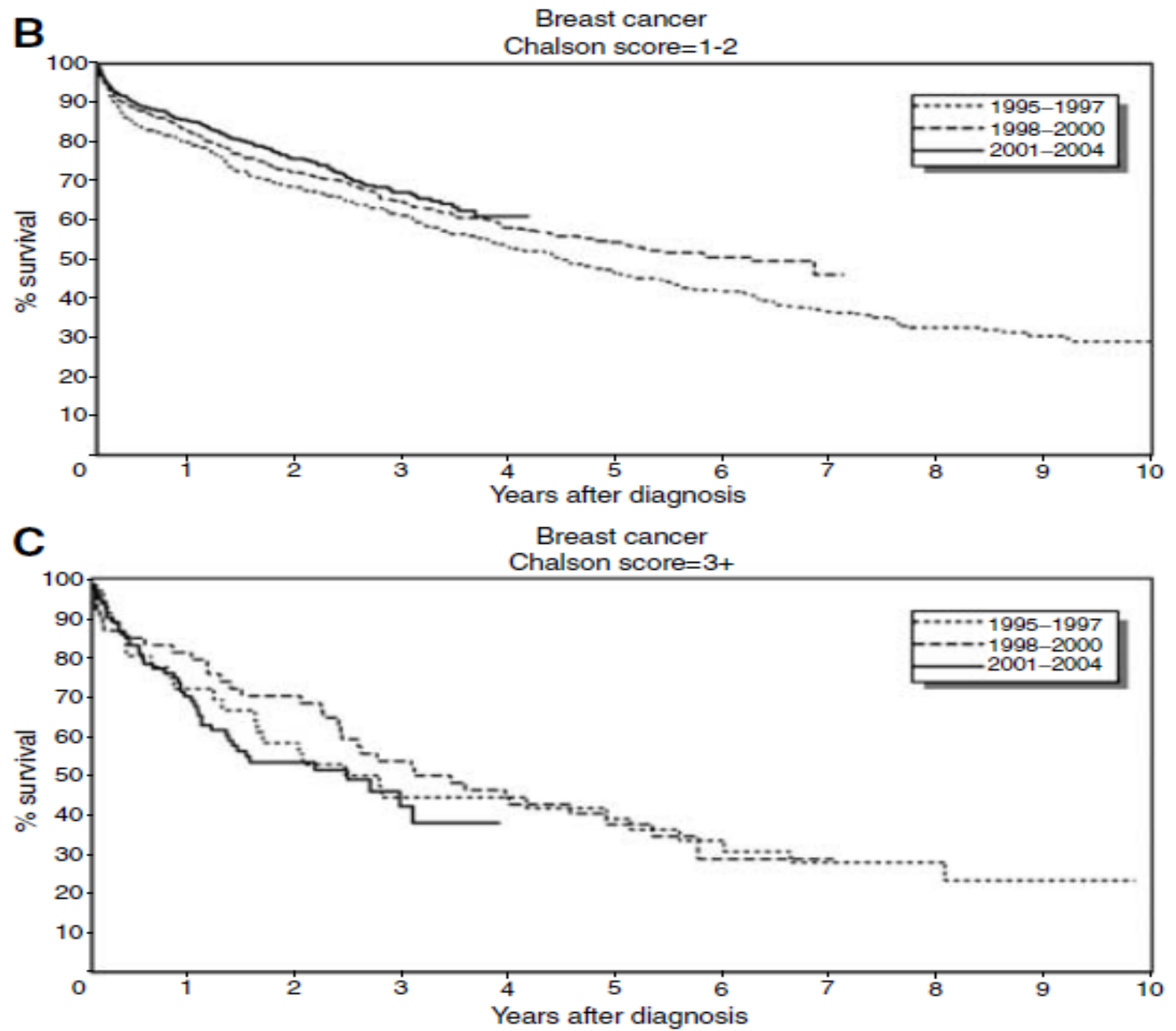
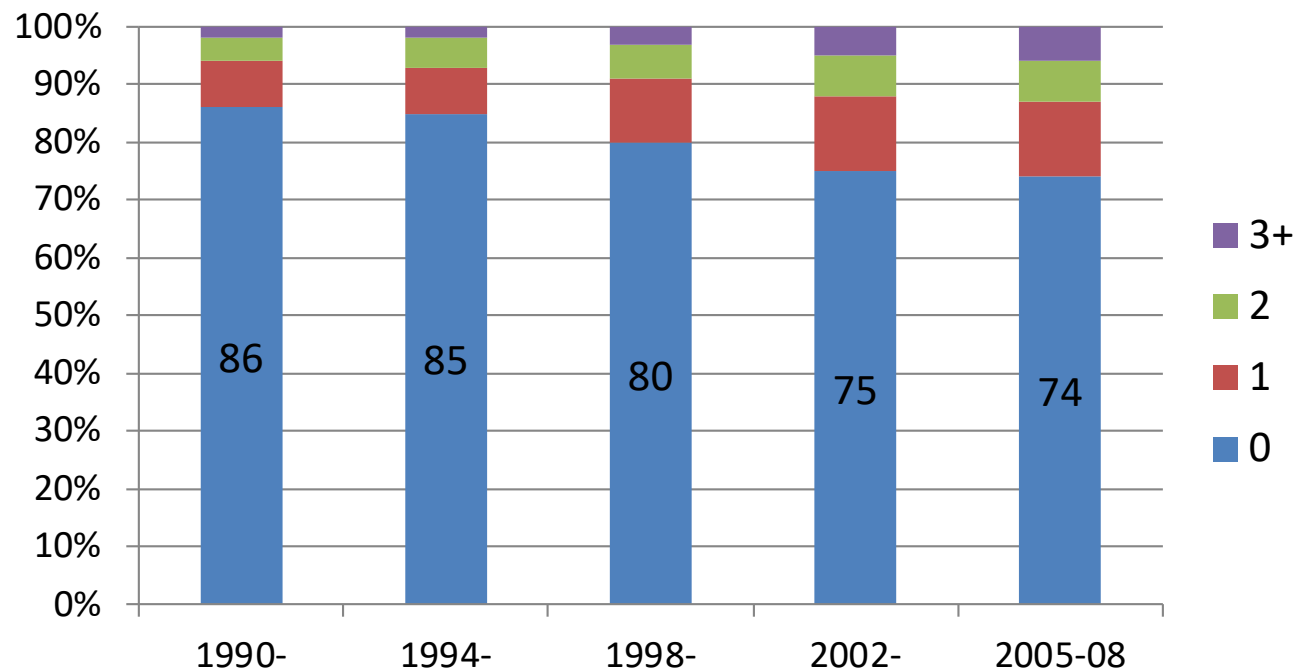


Figure 1 Kaplan–Meier survival curves for patients with breast cancer in Denmark for three time periods for (A) Charlson score = 0, (B) Charlson score = 1–2, and (C) Charlson score = 3+.

EPIDEMIOLOGY

Impact of comorbidity on mortality: a cohort study of 62,591 Danish women diagnosed with early breast cancer, 1990–2008

Lotte Holm Land · Susanne Oksbjerg Dalton ·
Maj-Britt Jensen · Marianne Ewertz



Multivariate analysis with hazard ratio and 95% confidence intervals

	Variable	Adjusted HR	95% CI
Breast cancer-specific mortality	CCI 0	Reference	
	CCI 1	1.30	1.24–1.36
	CCI 2	1.31	1.23–1.39
	CCI 3+	1.79	1.66–1.93
Non-breast cancer mortality	CCI 0	Reference	
	CCI 1	1.95	1.82–2.09
	CCI 2	2.14	1.97–2.33
	CCI 3+	3.56	3.22–3.93
All-cause mortality	CCI 0	Reference	
	CCI 1	1.45	1.40–1.51
	CCI 2	1.52	1.45–1.60
	CCI 3+	2.21	2.08–2.35

All *P* values < 0.0001

Influence of comorbidity on the effect of adjuvant treatment and age in patients with early-stage breast cancer

LH Land^{*,1,2}, SO Dalton³, M-B Jensen⁴ and M Ewertz^{1,2}

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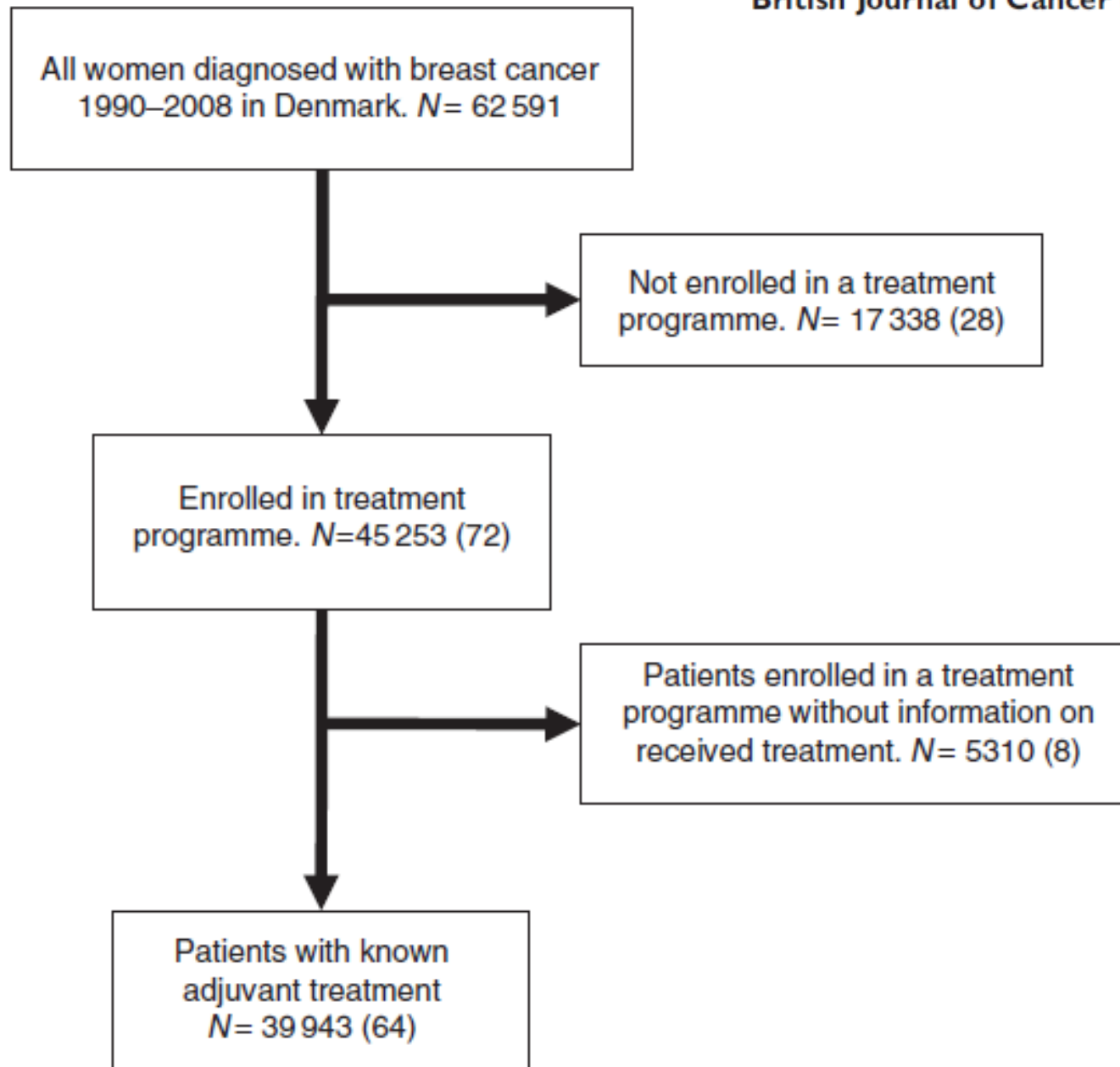
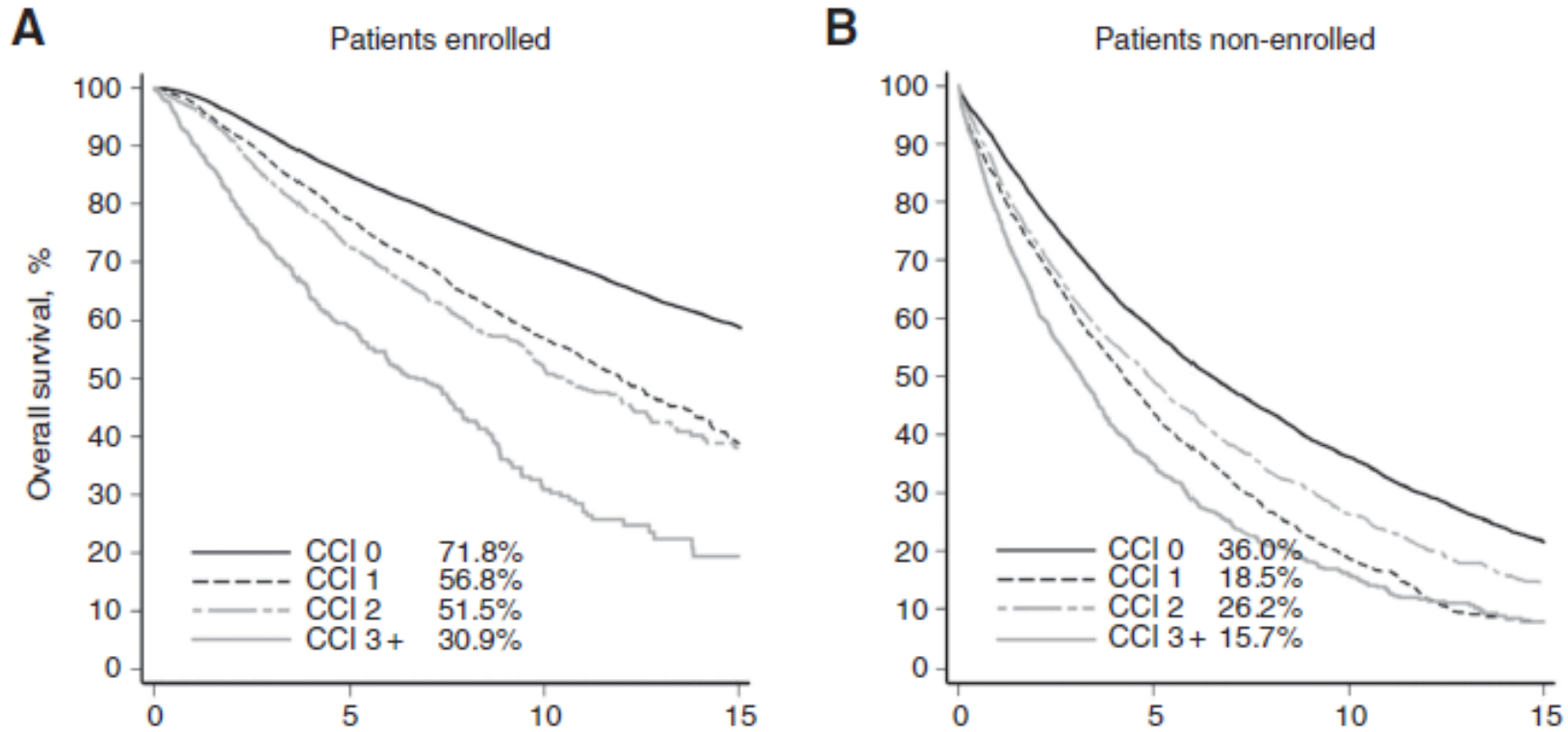


Figure 1 Diagram showing the study cohort according to received treatment. N , (%).

Comorbidity and early-stage breast cancer

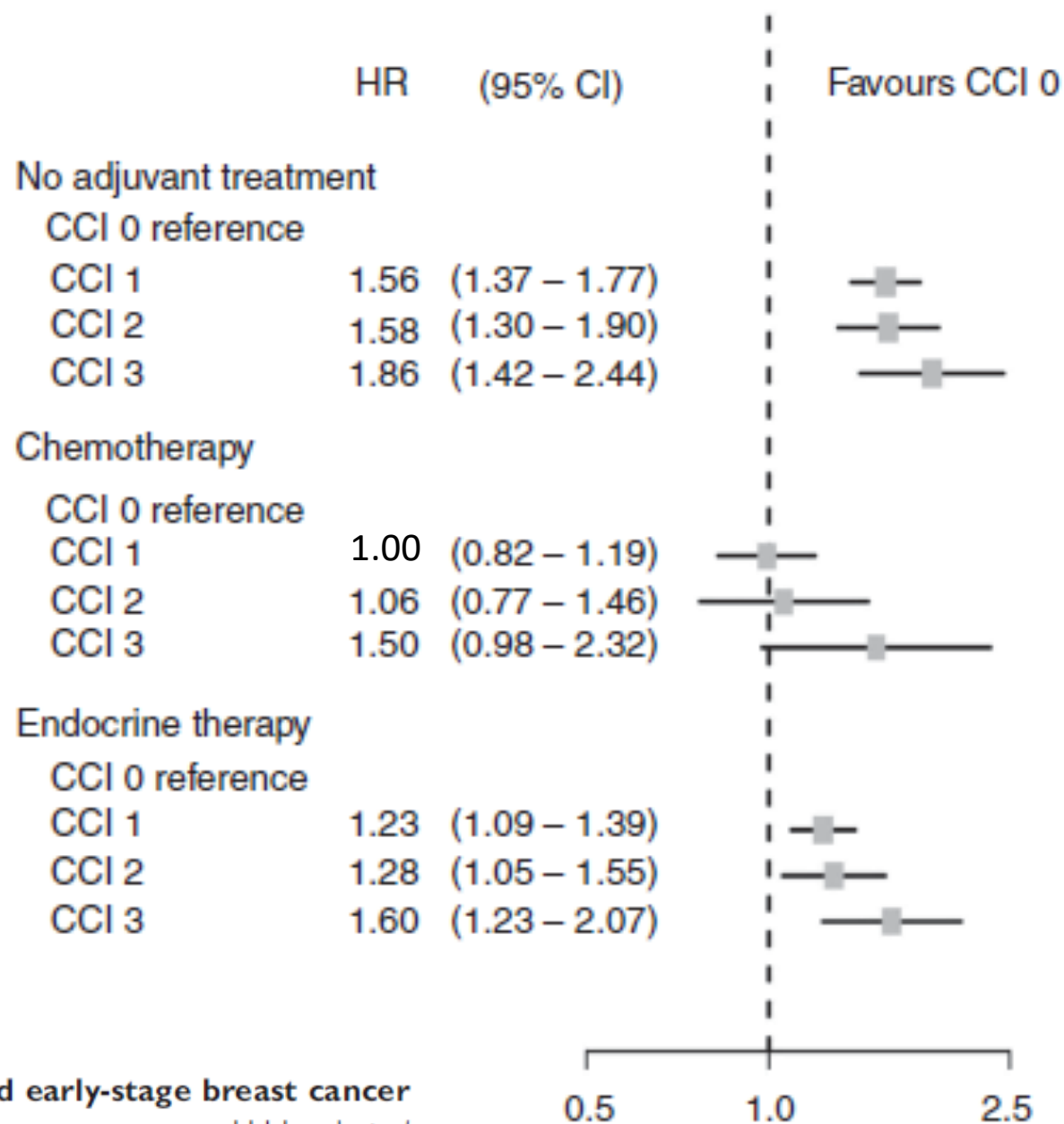
LH Land *et al*



Overall survival, numbers indicate 10-year estimates

A

Breast cancer death



Influence of comorbidity on the effect of adjuvant treatment and age in patients with early-stage breast cancer

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CONCLUSION: Comorbidity at breast cancer diagnosis is an independent adverse prognostic factor for death after breast cancer. We identified a subgroup of patients with mild to moderate comorbidity receiving chemotherapy who had similar breast cancer mortality as patients with no comorbidity.

Influence of specific comorbidities on survival after early-stage breast cancer

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Background: While comorbidity indices are useful for describing trends in survival, information on specific comorbidities is needed for the clinician advising the individual breast cancer patient on her treatment. Here we present an analysis of overall survival, breast cancer-specific mortality, and effect of medical adjuvant treatment among breast cancer patients suffering from 12 major comorbidities compared with breast cancer patients without comorbidities.

The study population included 59,673 breast cancer patients with a median age of 61 years and with an estimated median potential follow-up of 14 years and 10 months. A total of 31,029 patients had died, 66% from breast cancer and 34% from other causes

	No. of patients
Total	59673
None	49928
Myocardial infarction	831
Congestive heart failure	1168
Peripheral vascular disease	1076
Cerebrovascular disease	2154
Dementia	369
Chronic pulmonary disease	2497
Connective tissue disease	1236
Ulcer disease	1169
Liver disease	340
Diabetes	1843
Hemiplegia	71
Renal disease	328

84% without comorbidity

We grouped the diagnoses according to the time period in which the comorbidities were registered: within 5 years before the breast cancer diagnosis and from 10 to 5 years prior to the breast cancer diagnosis. Comorbidities can occur in both intervals for the same patient. The patients were followed from diagnosis to death, emigration or the end of December 2015 by linkage to the CPR. Information on cause of death was derived from RCD [11].

Hazard of death all causes

■ 5–0 years < BC ■ 10–5 years < BC

HR (95% CI) HR (95% CI)
5–0 years < BC 10–5 years < BC

Myocardial infarction

1.24 (1.13;1.37) 1.16 (1.02;1.32)

Congestive heart failure

1.40 (1.30;1.50) 1.30 (1.15;1.48)

Peripheral vascular disease

1.49 (1.37;1.61) 1.27 (1.12;1.44)

Cerebrovascular disease

1.30 (1.22;1.38) 1.11 (1.01;1.21)

Dementia

1.59 (1.41;1.78) 1.48 (1.14;1.93)

Chronic pulmonary disease

1.55 (1.46;1.65) 1.17 (1.07;1.28)

Connective tissue disease

1.23 (1.12;1.34) 1.16 (1.04;1.30)

Ulcer disease

1.33 (1.23;1.45) 1.13 (1.00;1.27)

Liver disease

2.12 (1.81;2.47) 1.74 (1.40;2.16)

Diabetes

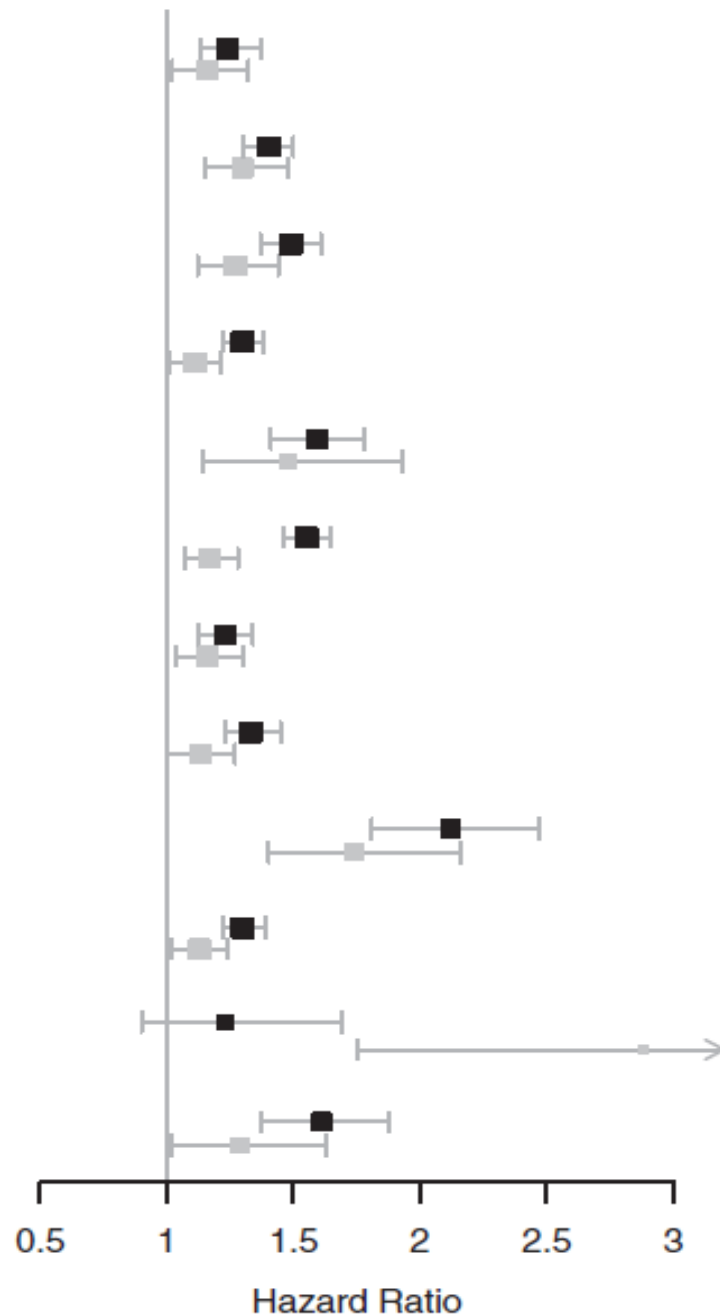
1.30 (1.22;1.39) 1.13 (1.02;1.24)

Hemiplegia

1.23 (0.90;1.69) 2.88 (1.75;4.72)

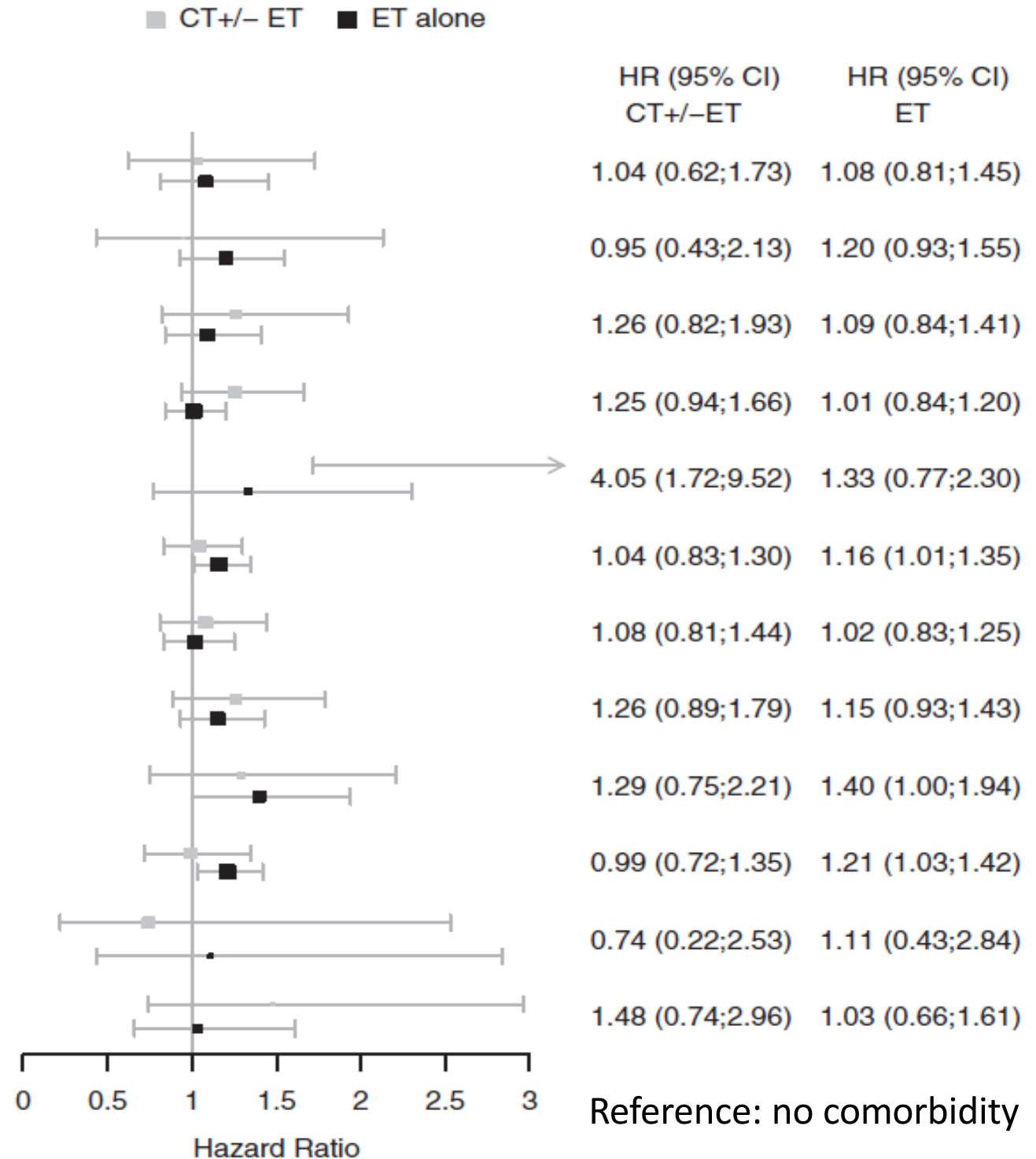
Renal disease

1.61 (1.37;1.88) 1.29 (1.02;1.63)



Reference: no comorbidity

Hazard of death from breast cancer





Influence of specific comorbidities on survival after early-stage breast cancer

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^bSurvivorship Unit, Danish Cancer Society Research Center, Copenhagen, Denmark; ^cDepartment of Clinical Epidemiology, Aarhus University, Aarhus, Denmark; ^dDanish Breast Cancer Cooperative Group Datacenter, Copenhagen University Hospital, Copenhagen, Denmark

Conclusion

This study confirmed that all-cause mortality was significantly increased for all the 12 comorbidities examined, but it also gave evidence that BC mortality was not significantly elevated for patients with prior myocardial infarction, congestive heart failure, cerebrovascular disease, connective tissue disease, ulcer disease, and diabetes. Our results suggest that more recent comorbidity, i.e., within 5 years, carries a greater risk of dying than comorbidity occurring more than 5 years before breast cancer. Finally, it was reassuring that with a few exceptions, the effectiveness of adjuvant treatment was similar for patients with and without comorbidity.

Definitioner

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- Senfølger: tilstande eller sygdomme, der opstår efter diagnosen af brystkræft, hvoraf nogle kan skyldes behandlingen for brystkræft.



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Relative mortality rates from incident chronic diseases among breast cancer survivors – A 14 year follow-up of five-year survivors diagnosed in Denmark between 1994 and 2007

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One third (30%) of all breast cancer survivors and 26% of comparison women were diagnosed with an incident CCI disease during follow-up. The proportion of patients reaching a CCI score ≥ 4 during follow-up was 9.4% among breast cancer survivors and 4.0% among comparison women. In calculating these scores, prevalent CCI diseases at the index date were excluded.

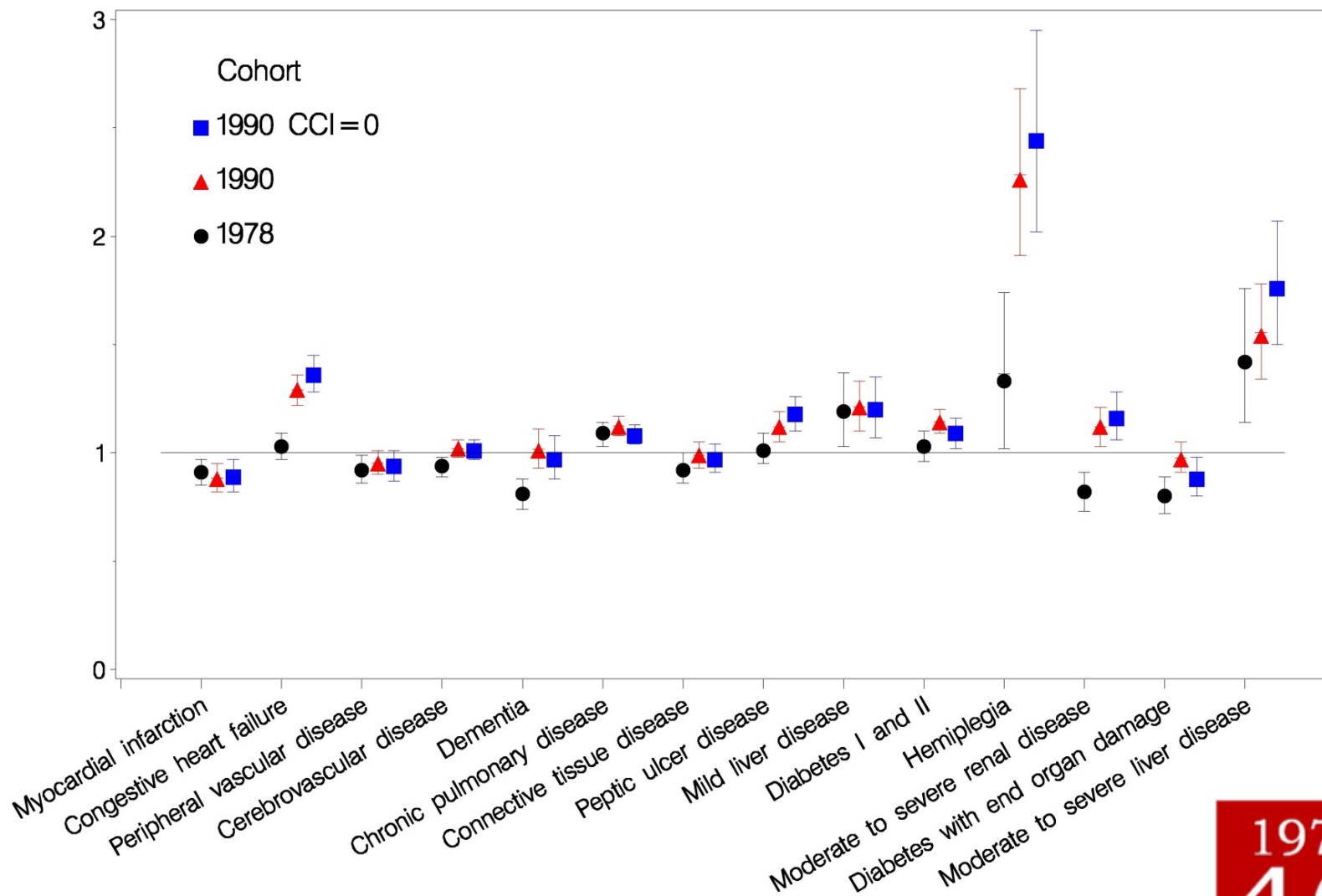
Conclusion: There were no marked differences in mortality of diseases among breast cancer survivors and women from the general population.

DBCG-data



- 1978-1989: 16.593 patienter og 824.224 kontroller
- 1990-2005: 32.795 patienter og 1.637.892 kontroller
- 1990-2005 CCI=0: 29.315 patienter og 732.875 kontroller
- Standardized incidence ratio (SIR) beregnet som observeret blandt patienter divideret med det forventede fra kontroller.

SIR



REVIEW ARTICLE

Late effects of breast cancer treatment and potentials for rehabilitation

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Focal problems related to local therapies:

Pain

Lymphedema

Other arm and shoulder problems

Systemic problems related to treatment:

Neuropathy

Fertility

Premature menopause

Cardiovascular disease

Psychosocial problems as consequences of diagnosis

and treatment:

Depression

Fear of recurrence

Sleep disturbances

Cognitive problems

Fatigue

Sexual problems

Social consequences of breast cancer

Prevalence of and Factors Associated With Persistent Pain Following Breast Cancer Surgery

Rune Gärtner, MD

Maj-Britt Jensen, MSc

Jeanette Nielsen, RN

Marianne Ewertz, MD, DMSc

Niels Kroman, MD, DMSc

Henrik Kehlet, MD, PhD

1.543/3.253 = 47% reported pain (13% severe, 39% moderate, 48% light).

1.882/3.253 = 58% reported sensory disturbances

Conclusion Two to 3 years after breast cancer treatment, persistent pain and sensory disturbances remain clinically significant problems among Danish women who received surgery in 2005 and 2006.

JAMA. 2009;302(18):1985-1992

www.jama.com



Contents lists available at [ScienceDirect](#)

The Breast

journal homepage: www.elsevier.com/brst



Original article

Development in self-reported arm-lymphedema in Danish women treated for early-stage breast cancer in 2005 and 2006 – A nationwide follow-up study



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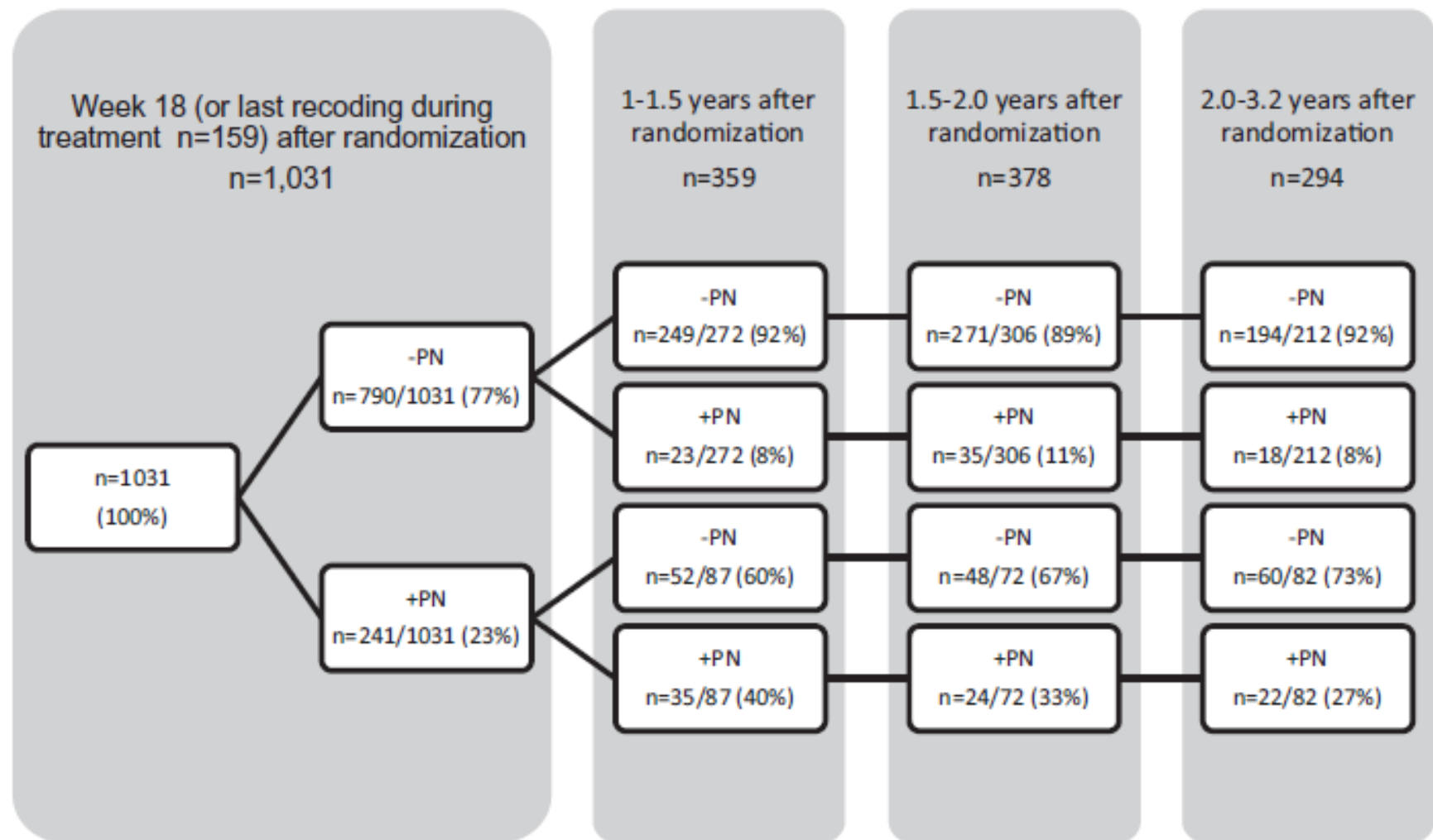
A B S T R A C T

The main purpose of this nationwide follow-up study was to examine the development of self-reported lymphedema in the population of women with early-stage breast cancer in Denmark. In 2008 and 2012 two identical questionnaires were sent to the women aged 18–70 years treated for unilateral primary breast cancer in 2005 and 2006. 2293 women (87%) reported on lymphedema in 2008 and 2012. Overall 37% reported lymphedema in 2008 while 31% reported lymphedema in 2012 and severity of symptoms decreased. 50% of women treated with SLNB and reporting lymphedema in 2008 did not report symptoms by 2012 in contrast to 30% treated with ALND. However, 19% of women treated with ALND and not reporting lymphedema in 2008 had developed lymphedema by 2012. In conclusion lymphedema remains a frequent problem, years after treatment for breast cancer, though, number of women reporting lymphedema and overall severity of symptoms decreased.

Persistence of docetaxel-induced neuropathy and impact on quality of life among breast cancer survivors

European Journal of Cancer (2015) 51, 292–300

L. Eckhoff^{a,*}, AS. Knoop^b, MB. Jensen^c, M. Ewertz^a



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Risk of Ischemic Heart Disease in Women after Radiotherapy for Breast Cancer

Sarah C. Darby, Ph.D., Marianne Ewertz, D.M.Sc., Paul McGale, Ph.D., Anna M. Bennet, Ph.D., Ulla Blom-Goldman, M.D., Dorthe Brønnum, R.N., Candace Correa, M.D., David Cutter, F.R.C.R., Giovanna Gagliardi, Ph.D., Bruna Gigante, Ph.D., Maj-Britt Jensen, M.Sc., Andrew Nisbet, Ph.D., Richard Peto, F.R.S., Kazem Rahimi, D.M., Carolyn Taylor, D.Phil., and Per Hall, Ph.D.

BACKGROUND

Radiotherapy for breast cancer often involves some incidental exposure of the heart to ionizing radiation. The effect of this exposure on the subsequent risk of ischemic heart disease is uncertain.

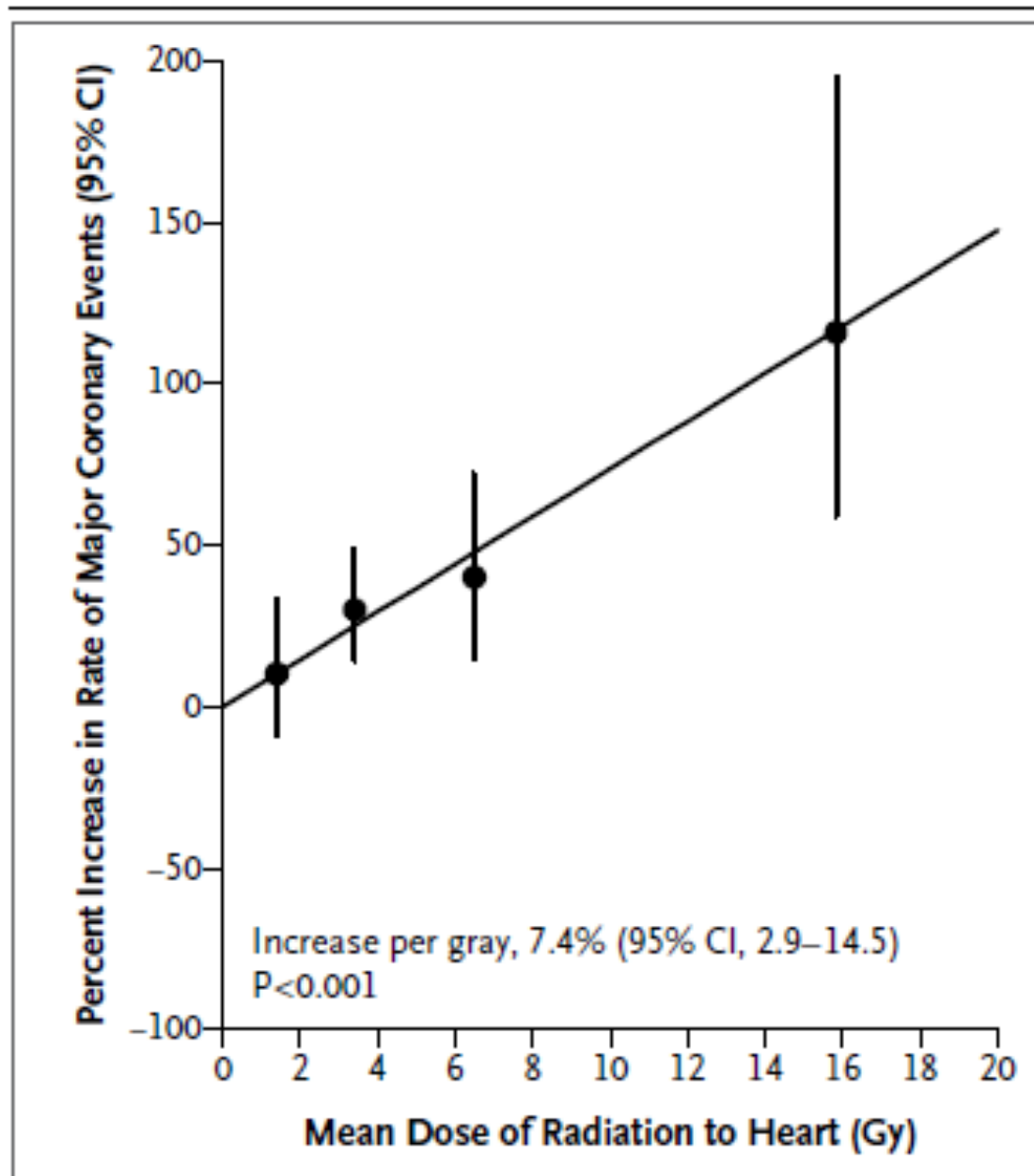


Figure 1. Rate of Major Coronary Events According to Mean Radiation Dose to the Heart, as Compared with the Estimated Rate with No Radiation Exposure to the Heart.



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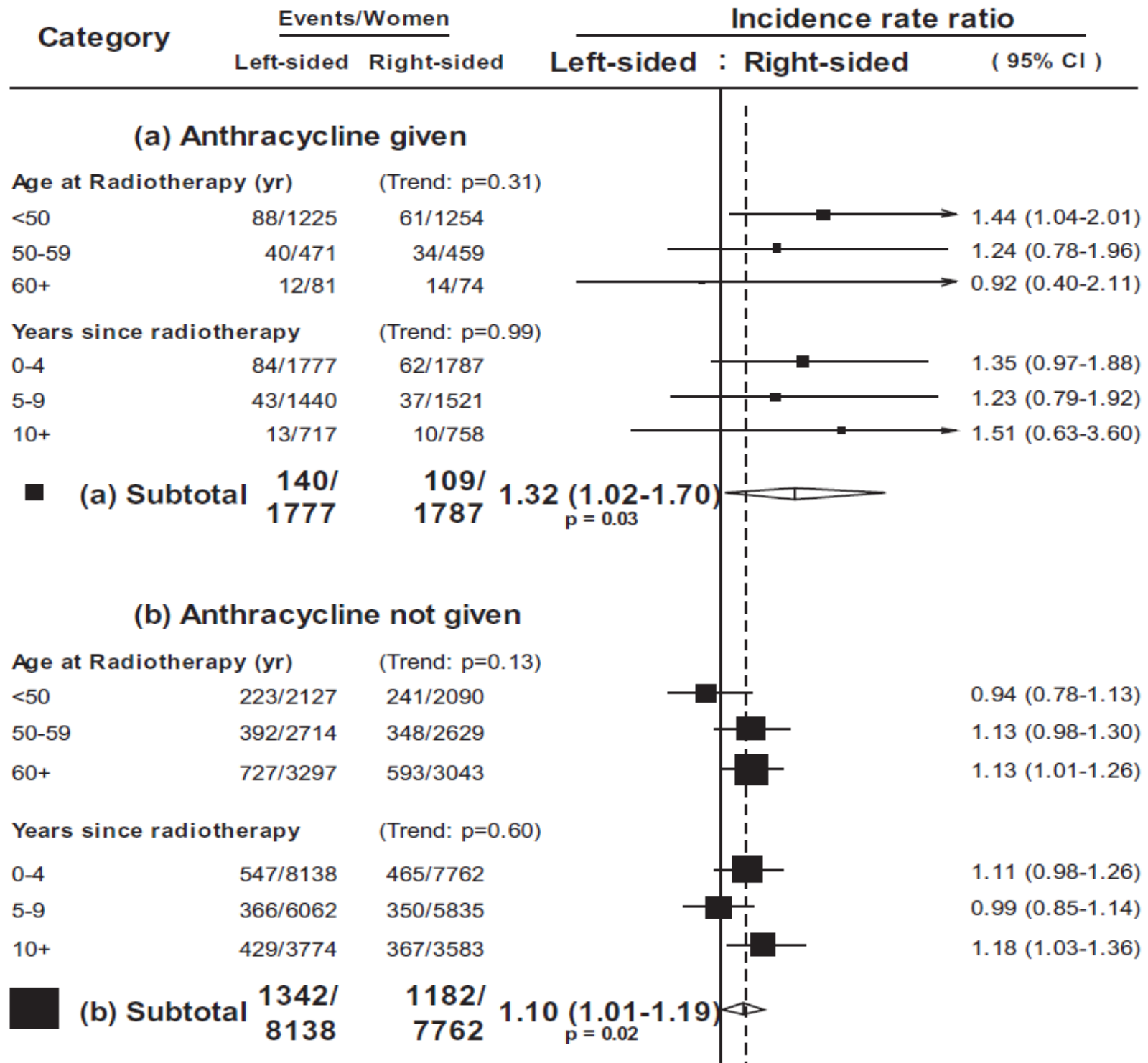
Heart disease after breast cancer

Risk of heart disease in relation to radiotherapy and chemotherapy with anthracyclines among 19,464 breast cancer patients in Denmark, 1977–2005



Jens Christian Rehammar^{a,b}, Maj-Britt Jensen^c, Paul McGale^d, Ebbe Laugaard Lorenzen^{a,b}, Carolyn Taylor^d, Sarah C. Darby^d, Lars Videbæk^e, Zhe Wang^{d,f,1}, Marianne Ewertz^{a,b,*,1}

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Tak for opmærksomheden !



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Der eksisterer endnu ikke en officiel dansk definition af senfølger på dansk. I denne rapport definerer vi senfølger efter kræft som:

Senfølger er helbredsproblemer, der opstår under primær behandling og bliver kroniske, eller som opstår og manifesterer sig måneder eller år efter behandlingen er afsluttet. Senfølgeme omfatter ny primær kræftsygdom og fysiske, psykiske eller sociale forandringer, der er en følge af kræftsygdommen og/eller behandlingen af denne.

Vidensopsamling på senfølger efter kræft hos voksne

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